

AUXIER & ASSOCIATES, INC.

PAP-KAN

**STANDARD LEVEL IV
REPORT OF ANALYSIS**

WORK ORDER #15-10086-OR

November 16, 2015

**Eberline Analytical
Oak Ridge Laboratory
OAK RIDGE, TN**

TABLE OF CONTENTS

SECTION	DESCRIPTION	PAGE
I	Chain of Custody	0004
II	Sample Acknowledgement	0009
III	Case Narrative	0012
IV	Analytical Results Summary	0016
V	Analytical Standards	0029
VI	Quality Control Sample Results Summary	0046
VII	Laboratory Technician's Notes	0053
VIII	Analytical Data (Isotopic Uranium)	0076
IX	Analytical Data (Isotopic Thorium)	0185
X	Analytical Data (Gamma Spectroscopy)	0293
	Last Page	1012



**Eberline Services – Oak Ridge Laboratory
LABORATORY DATA SUPPORT CHECKLIST**

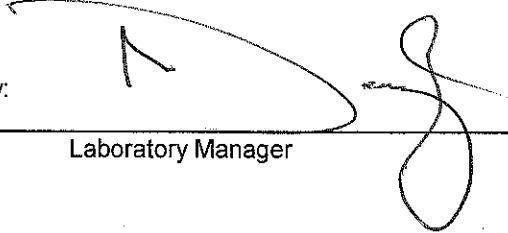
MP-001-3

Eberline Services Work Order # 15 - 10086

The checklist items listed below are to be initiated by appropriate staff upon completion/verification.

Date for Partial	Initials	Date	Initials	Checklist Items
		10-14-15	JEB	Sample Log-In
		11/9/15	JG	Data Compilation
		11-9-15	MLT	First Technical Data Review
		11/9/15	USA	Second Technical Data Review
		11/10/15		Data Entry/Electronic Deliverable
		11/10/15		Case Narrative
		11/13/15	ABG	Electronic Deliverable Proof
		11/16/15	USA	Samples Analyzed within Holding Time Yes? <input checked="" type="checkbox"/> No? <input type="checkbox"/>
		11/16/15	USA	QA/QC Review
				Client in Possession of Data Electronic or Hard Copy
				Invoiced by Laboratory

Technical/Clerical Corrections, Signatures Needed, Problems, Etc	Date/Initials

Date package approved by:  11/16/15

 Laboratory Manager Date

Copy No. _____

SECTION I
CHAIN OF CUSTODY

Chain of Custody Record

No 7127

Eberline Services
601 Scarboro Road
Oak Ridge, TN 37830
(865) 481-0683 Phone • (865) 483-4621 Fax



Project Name: PAP / IAW		Project Number:		Page _____ of _____			
Send Report To: Cecilia Greene		Sampler (Print Name): Ashley John		Purchase Order #: _____			
Address:		Sampler (Print Name):		Comments, Special Instructions, etc.			
9824 Cogdell Rd, Swivel		Shipment Method: Fedex		15-10086			
Knoxville, TN 37932		Airbill Number:		REC'D OCT 14 2015			
Phone: 865-675-3669		Laboratory Receiving:		21 Day Growth			
Fax: cgreene@auxiliary.com				21 Day Growth			
Field Sample ID		Sample Date	Sample Time	Sample Matrix	Number of Containers	Lab Sample ID (to be completed by lab)	
CP4105S01-02	4	10/6/15	1630	S	1		
CP4105S04-05	5	10/6/15	1640	S	1		
CP4105S06-07	6	10/6/15	1650	S	1		
CP4105S08-09	7	10/6/15	1700	S	1		
CP4105S10-11	8	10/6/15	1710	S	1		
CP4105S12-13	9	10/6/15	1720	S	1		
CP4105S14-15	10	10/6/15	1730	S	1		
CP4105S16-17	11	10/6/15	1740	S	1		
CP0404S03-04	12	10/8/15	0800	S	1		
CP0404S05-06	13	10/8/15	0810	S	1		
CP0404S07-08	14	10/8/15	0820	S	1		
CP0404S10-11	15	10/8/15	0830	S	1		
CP0404S12-13	16	10/8/15	0840	S	1		
CP0404S14-15	17	10/8/15	0900	S	1		
CP0404S17-18	18	10/8/15	0910	S	1		
Relinquished by: (Signature)		Received by: (Signature)		Date: 10/12/15		Time: 1300	
Relinquished by: (Signature)		Received by: (Signature)		Date: 10-14-15		Time:	
Relinquished by: (Signature)		Received by: (Signature)		Date:		Time:	
Sample Custodian Remarks (Completed By Laboratory):				Sample Receipt			
QA/QC Level				Turnaround			
Level I <input type="checkbox"/>				Routine <input type="checkbox"/>			
Level II <input type="checkbox"/>				24 Hour <input type="checkbox"/>			
Level III <input type="checkbox"/>				1 Week <input type="checkbox"/>			
Other <input type="checkbox"/>				Other _____			
Total # Containers Received?				COC Seals Present?			
COC Seals Intact?				Received Containers Intact?			
Temperature?							

Analysis Requested
Isotopic Uranium
Isotopic Thorium
Gamma Spec

21 Day Growth

21 Day Growth



EBERLINE
SERVICES
Oak Ridge Laboratory

Internal Chain of Custody

Work Order #

15-10086

Lab Deadline

11/6/2015

Analysis

UIISO - Level 4

Sample Matrix

Soil/Solid

Comments	Sample Fraction	HP 210 / 270 Detector Activity	Storage Location
	04	37	K1.2
	05	34	K1.2
	06	37	K1.2
	07	36	K1.2
	08	37	K1.2
	09	39	K1.2
	10	36	K1.2
	11	38	K1.2
	12	34	K1.2
	13	36	K1.2
	14	34	K1.2
	15	35	K1.2
	16	35	K1.2
	17	33	K1.2
	18	32	K1.2

	Location (circle one)						Initials	Date
Received by	Sample Storage	Rough Prep	Prep	Separations	Count Room	1150	Very Sci	10-15-15
Relinquished by	Sample Storage	Rough Prep	Prep	Separations	Count Room	1030	Very Sci	10-16-15
Received by	Sample Storage	Rough Prep	Prep	Separations	Count Room	1030	J. P. Kelly	10-16-15
Relinquished by	Sample Storage	Rough Prep	Prep	Separations	Count Room		W. P. Kelly	10-16-15
Received by	Sample Storage	Rough Prep	Prep	Separations	Count Room		W. P. Kelly	10-20-15
Relinquished by	Sample Storage	Rough Prep	Prep	Separations	Count Room		W. P. Kelly	11-2-15
Received by	Sample Storage	Rough Prep	Prep	Separations	Count Room		W. P. Kelly	11-2-15
Relinquished by	Sample Storage	Rough Prep	Prep	Separations	Count Room		W. P. Kelly	11-2-15
Received by	Sample Storage	Rough Prep	Prep	Separations	Count Room			
Relinquished by	Sample Storage	Rough Prep	Prep	Separations	Count Room			
Received by	Sample Storage	Rough Prep	Prep	Separations	Count Room			
Relinquished by	Sample Storage	Rough Prep	Prep	Separations	Count Room			
Received by	Sample Storage	Rough Prep	Prep	Separations	Count Room			
Relinquished by	Sample Storage	Rough Prep	Prep	Separations	Count Room			



EBERLINE
SERVICES
Oak Ridge Laboratory

Internal Chain of Custody

Work Order #

15-10086

Lab Deadline

11/6/2015

Analysis

ThISO - Level 4

Sample Matrix

Soil/Solid

Comments	Sample Fraction	HP 210 / 270 Detector Activity	Storage Location
	04	37	K1.2
	05	34	K1.2
	06	37	K1.2
	07	36	K1.2
	08	37	K1.2
	09	39	K1.2
	10	36	K1.2
	11	38	K1.2
	12	34	K1.2
	13	36	K1.2
	14	34	K1.2
	15	35	K1.2
	16	35	K1.2
	17	33	K1.2
	18	32	K1.2

	Location (circle one)						Initials	Date
Received by	Sample Storage	Rough Prep	Prep	Separations	Count Room	1150	Very say	10-15-15
Relinquished by	Sample Storage	Rough Prep	Prep	Separations	Count Room	1030	Very say	10-16-15
Received by	Sample Storage	Rough Prep	Prep	Separations	Count Room	1030	Pachell	10-16-15
Relinquished by	Sample Storage	Rough Prep	Prep	Separations	Count Room		JW OIP	10-21-15
Received by	Sample Storage	Rough Prep	Prep	Separations	Count Room		WU	10-20-15 0930
Relinquished by	Sample Storage	Rough Prep	Prep	Separations	Count Room		WU	11-2-15 0802
Received by	Sample Storage	Rough Prep	Prep	Separations	Count Room			11-2-15 0807
Relinquished by	Sample Storage	Rough Prep	Prep	Separations	Count Room		ICB	11/2/15 1435
Received by	Sample Storage	Rough Prep	Prep	Separations	Count Room			
Relinquished by	Sample Storage	Rough Prep	Prep	Separations	Count Room			
Received by	Sample Storage	Rough Prep	Prep	Separations	Count Room			
Relinquished by	Sample Storage	Rough Prep	Prep	Separations	Count Room			
Received by	Sample Storage	Rough Prep	Prep	Separations	Count Room			
Relinquished by	Sample Storage	Rough Prep	Prep	Separations	Count Room			



EBERLINE
SERVICES
Oak Ridge Laboratory

Internal Chain of Custody

Work Order #

15-10086

Lab Deadline

11/6/2015

Analysis

Gamma - Level 4

Sample Matrix


Soil/Solid

Comments	Sample Fraction	HP 210 / 270 Detector Activity	Storage Location
21 day ingrowth: Report Ac228, Bi214, Pb212/214, Ra226 from Bi214, Ra228 from Ac228, Tl208, Th234 & positives.	04	37	K1.2
	05	34	K1.2
	06	37	K1.2
	07	36	K1.2
	08	37	K1.2
	09	39	K1.2
	10	36	K1.2
	11	38	K1.2
	12	34	K1.2
	13	36	K1.2
	14	34	K1.2
	15	35	K1.2
	16	35	K1.2
	17	33	K1.2
	18	32	K1.2

	Location (circle one)						Initials	Date
Received by	Sample Storage	Rough Prep	Prep	Separations	Count Room	1150 Key sig	10-15-15	
Relinquished by	Sample Storage	Rough Prep	Prep	Separations	Count Room	1140 Key sig	10-16-15	
Received by	Sample Storage	Rough Prep	Prep	Separations	Count Room	Key sig 10/16/15	11-12	
Relinquished by	Sample Storage	Rough Prep	Prep	Separations	Count Room	Key sig 11/6/15	11-11	
Received by	Sample Storage	Rough Prep	Prep	Separations	Count Room			
Relinquished by	Sample Storage	Rough Prep	Prep	Separations	Count Room			
Received by	Sample Storage	Rough Prep	Prep	Separations	Count Room			
Relinquished by	Sample Storage	Rough Prep	Prep	Separations	Count Room			
Received by	Sample Storage	Rough Prep	Prep	Separations	Count Room			
Relinquished by	Sample Storage	Rough Prep	Prep	Separations	Count Room			
Received by	Sample Storage	Rough Prep	Prep	Separations	Count Room			
Relinquished by	Sample Storage	Rough Prep	Prep	Separations	Count Room			

SECTION II
SAMPLE ACKNOWLEDGEMENT

Client Name		Contract/PO		Project Type		Date Received		Required Turnaround Days		Eberline Services Work Order		
Auxier & Associates, Inc.		PAP-KAN		Environmental		10/14/2015		28		15-10086		
Project Name		Client WO		Sample Disp		Lab Deadline		Internal Deadline		Client Deadline		
PAP-KAN		PAP/KAN		H		11/06/2015		11/10/2015		11/11/2015		
Internal ID	Client ID	Sample Date	Matrix	Storage	Gamma	THIO	UNISO					
01	LCS	10/14/15	SO	K1.2	X	X	X				3	
02	BLANK	10/14/15	SO	K1.2	X	X	X				3	
03	DUP	10/14/15	SO	K1.2	X	X	X				3	
04	CP4105S01-02	10/06/15 16:30	SO	K1.2	X	X	X				3	
05	CP4105S04-05	10/06/15 16:40	SO	K1.2	X	X	X				3	
06	CP4105S06-07	10/06/15 16:50	SO	K1.2	X	X	X				3	
07	CP4105S08-09	10/06/15 17:00	SO	K1.2	X	X	X				3	
08	CP4105S10-11	10/06/15 17:10	SO	K1.2	X	X	X				3	
09	CP4105S12-13	10/06/15 17:20	SO	K1.2	X	X	X				3	
10	CP4105S14-15	10/06/15 17:30	SO	K1.2	X	X	X				3	
11	CP4105S16-17	10/06/15 17:40	SO	K1.2	X	X	X				3	
12	CP0404S03-04	10/08/15 08:00	SO	K1.2	X	X	X				3	
13	CP0404S05-06	10/08/15 08:10	SO	K1.2	X	X	X				3	
14	CP0404S07-08	10/08/15 08:20	SO	K1.2	X	X	X				3	
15	CP0404S10-11	10/08/15 08:30	SO	K1.2	X	X	X				3	
16	CP0404S12-13	10/08/15 08:40	SO	K1.2	X	X	X				3	
17	CP0404S14-15	10/08/15 09:00	SO	K1.2	X	X	X				3	
18	CP0404S17-18	10/08/15 09:10	SO	K1.2	X	X	X				3	
											0	
											0	
Totals Per Analysis (non QA samples)					15	15	15	0	0	0	0	0

 <p>EBERLINE SERVICES</p> <p>Sample Log In Report</p>	<p>Oak Ridge Laboratory 601 Scarboro Rd. Oak Ridge, TN 37830</p> <p>Voice: (865) 481-0683 Fax: (865) 483-4621</p>	<p>Accounts Payable Auxier & Associates, Inc. 9821 Cogdill Drive #1 Knoxville, TN 37632</p> <p>865-675-3869 865-675-3877</p>	<p>Report Data Cecilia Greene Auxier & Associates, Inc. 9821 Cogdill Road, Suite 1 Knoxville, TN 37830</p> <p>865-675-3869 865-675-3877</p>
	<p>Contact Harvey Cohen 301-716-8900 301-716-8909</p>		



Eberline Services – Oak Ridge Laboratory

SAMPLE RECEIPT CHECKLIST

MP-001-2

WORK ORDER # 15-10086

SAMPLE MATRIX/MATRICES:

(CIRCLE ONE OR BOTH)

AQUEOUS

NON-AQUEOUS

WERE SAMPLES:

(CIRCLE EITHER YES, NO, OR N/A)

Received in good condition?	<u>Y</u>	N	
If aqueous, properly preserved	Y	N	<u>N/A</u>

WERE CHAIN OF CUSTODY SEALS:

Present on outside of package?	<u>Y</u>	N
Unbroken on outside of package?	<u>Y</u>	N
Present on samples?	<u>Y</u>	N
Unbroken on samples?	<u>N</u>	N
Was chain of custody present upon sample receipt?	<u>N</u>	N

IF THE RESPONSE TO ANY OF THE ABOVE IS NO, A DISCREPANT SAMPLE RECEIPT REPORT (DSR) HAS BEEN ISSUED.

REMARKS: _____

SIGNATURE: _____

DATE: 10-14-15

SECTION III
CASE NARRATIVE



EBERLINE ANALYTICAL CORPORATION
601 SCARBORO ROAD
OAK RIDGE, TENNESSEE 37830
PHONE (865) 481-0683
FAX (865) 483-4621

EBS-OR-39961

November 16, 2015

Cecilia Greene
Auxier & Associates, Inc.
9821 Cogdill Road #1
Knoxville, TN 37932

CASE NARRATIVE
Work Order # 15-10086-OR

SAMPLE RECEIPT

This work order contains fifteen soil samples received 10/14/2015. These samples were analyzed for Isotopic Uranium, Isotopic Thorium and by Gamma Spectroscopy.

<u>CLIENT ID</u>	<u>LAB ID</u>	<u>CLIENT ID</u>	<u>LAB ID</u>
CP4105S01-02	15-10086-04	CP0404S03-04	15-10086-12
CP4105S04-05	15-10086-05	CP0404S05-06	15-10086-13
CP4105S06-07	15-10086-06	CP0404S07-08	15-10086-14
CP4105S08-09	15-10086-07	CP0404S10-11	15-10086-15
CP4105S10-11	15-10086-08	CP0404S12-13	15-10086-16
CP4105S12-13	15-10086-09	CP0404S14-15	15-10086-17
CP4105S14-15	15-10086-10	CP0404S17-18	15-10086-18
CP4105S16-17	15-10086-11		

ANALYTICAL METHODS

Isotopic Uranium was analyzed using Method EML U-02 Modified. Isotopic Thorium was analyzed using Method EML Th-01 Modified. Gamma Spectroscopy was performed using Method LANL ER-130 Modified.

ANALYTICAL RESULTS

Combined Standard Uncertainty is reported at 2-sigma value.

Minimum Detectable Activity (MDA) values for data represented in this report are sample-specific. MDA measurements are determined based on factors and conditions including instrument settings, aliquot size and matrix type.

ANALYTICAL RESULTS CONTINUED

ISOTOPIC URANIUM

Samples were prepared by removing a representative aliquot followed by mixed acid digestions as appropriate. Uranium was selectively extracted by ion exchange. Uranium was eluted, micro-precipitated and mounted on micro-porous filter media. Sample activities were then determined by alpha spectroscopy using energy specific regions of interest for Uranium-234, Uranium-235 and Uranium-238. Chemical recovery was determined by the use of a Uranium-232 tracer. Activity of the Uranium-232 tracer was determined by alpha spectroscopy using an energy specific region of interest.

Samples demonstrated acceptable results for all Uranium analyses. Chemical recovery was acceptable for all samples. The Uranium-234, Uranium-235 and Uranium-238 method blank demonstrated acceptable results. Results for the Uranium-234 and Uranium-235 duplicate demonstrated a high relative percent difference; however, normalized difference is within acceptable limits for the analytical technique. Results for the Uranium-238 duplicate demonstrated an acceptable relative percent difference and normalized difference. Results for the Uranium-234 and Uranium-238 laboratory control sample demonstrated an acceptable percent recovery.

ISOTOPIC THORIUM

Samples were prepared by removing representative aliquots followed by mixed acid digestions as appropriate. Thorium was selectively extracted by ion exchange. Thorium was eluted, micro-precipitated and mounted on micro-porous filter media. Sample activities were then determined by alpha spectroscopy using energy specific regions of interest for Thorium-228, Thorium-230 and Thorium-232. Chemical recovery was determined by the use of a Thorium-229 tracer. Activity of the Thorium-229 tracer was determined by alpha spectroscopy using an energy specific region of interest.

Samples demonstrated acceptable results for all Thorium analyses. Chemical recovery was acceptable for all samples. The Thorium-228, Thorium-230 and Thorium-232 method blank demonstrated acceptable results. Results for the Thorium-228, Thorium-230 and Thorium-232 duplicate demonstrated an acceptable relative percent difference and normalized difference. Results for the Thorium-228, Thorium-230 and Thorium-232 laboratory control sample demonstrated an acceptable percent recovery.

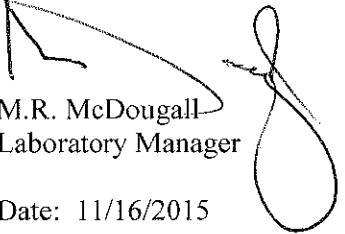
GAMMA SPECTROSCOPY

Samples were dried, homogenized and placed into appropriate gamma spectroscopy geometry containers. Samples were then sealed for 21 days to allow for ingrowth of Radon-222 and progeny. Samples were counted on High Purity Germanium (HPGe) gamma ray detectors. Energy lines from Lead-214 and Bismuth-214 were analyzed for determinations of Radium-226 activity.

Samples demonstrated acceptable results for all gamma-emitting radionuclides as reported. The method blank demonstrated acceptable results for all radionuclides as reported. Results for the Actinium-228 replicate demonstrated a high relative percent difference; however, normalized difference is within acceptable limits for the analytical technique. Results for the Bismuth-214 and Potassium-40 replicate demonstrated an acceptable relative percent difference and normalized difference. Results for the Cobalt-60 and Cesium-137 laboratory control sample demonstrated an acceptable percent recovery.

CERTIFICATION OF ACCURACY

I certify that this data report is in compliance with the terms and conditions of the Purchase Order, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the cognizant project manager or his/her designee to be accurate as verified by the following signature.


M.R. McDougall
Laboratory Manager

Date: 11/16/2015

Eberline Analytical wants and encourages your feedback regarding our performance providing radioanalytical services. Please visit <http://www.eberlineservices.com/client.htm> to provide us with feedback on our services.

SECTION IV
ANALYTICAL RESULTS SUMMARY

Eberline Analytical

Final Report of Analysis

Cecilia Greene
Auxier & Associates, Inc.
9821 Cogdill Road, Suite 1
Knoxville, TN 37932

SDG: 15-10086
Project: PAP-KAN
Analysis Category: ENVIRONMENTAL
Sample Matrix: SO

Work Order Details:

Report To:

Lab ID	Sample Type	Client ID	Sample Date	Receipt Date	Analysis Date	Batch ID	Analyte	Method	Result	CU	CSU	MDA	CV	Report Units
15-10086-01	LCS	KNOWN	10/14/15 00:00	10/14/2015	11/5/2015	15-10086	Cobalt-60	LANL ER-130 Modified	1.37E+02	5.48E+00				pCi/g
15-10086-01	LCS	KNOWN	10/14/15 00:00	10/14/2015	11/5/2015	15-10086	Cesium-137	LANL ER-130 Modified	8.69E+01	3.48E+00				pCi/g
15-10086-01	LCS	SPIKE	10/14/15 00:00	10/14/2015	11/5/2015	15-10086	Cobalt-60	LANL ER-130 Modified	1.36E+02	7.88E+00	1.05E+01	1.12E+00	8.21E-01	pCi/g
15-10086-01	LCS	SPIKE	10/14/15 00:00	10/14/2015	11/5/2015	15-10086	Cesium-137	LANL ER-130 Modified	9.01E+01	7.98E+00	9.22E+00	1.39E+00	6.89E-01	pCi/g
15-10086-02	MBL	BLANK	10/14/15 00:00	10/14/2015	11/5/2015	15-10086	Actinium-228	LANL ER-130 Modified	3.65E-02	1.28E-01	1.28E-01	2.40E-01	1.02E-01	pCi/g
15-10086-02	MBL	BLANK	10/14/15 00:00	10/14/2015	11/5/2015	15-10086	Bismuth-214	LANL ER-130 Modified	8.41E-02	7.29E-02	7.30E-02	1.46E-01	6.57E-02	pCi/g
15-10086-02	MBL	BLANK	10/14/15 00:00	10/14/2015	11/5/2015	15-10086	Potassium-40	LANL ER-130 Modified	-5.78E-02	3.87E-01	3.88E-01	6.41E-01	2.48E-01	pCi/g
15-10086-02	MBL	BLANK	10/14/15 00:00	10/14/2015	11/5/2015	15-10086	Lead-212	LANL ER-130 Modified	-3.50E-02	5.93E-02	5.94E-02	8.84E-02	4.11E-02	pCi/g
15-10086-02	MBL	BLANK	10/14/15 00:00	10/14/2015	11/5/2015	15-10086	Lead-214	LANL ER-130 Modified	7.63E-02	7.83E-02	7.84E-02	1.40E-01	6.48E-02	pCi/g
15-10086-02	MBL	BLANK	10/14/15 00:00	10/14/2015	11/5/2015	15-10086	Radium-226	LANL ER-130 Modified	8.41E-02	7.29E-02	7.30E-02	1.46E-01	6.57E-01	pCi/g
15-10086-02	MBL	BLANK	10/14/15 00:00	10/14/2015	11/5/2015	15-10086	Radium-228	LANL ER-130 Modified	3.65E-02	1.28E-01	1.28E-01	2.40E-01	1.02E-01	pCi/g
15-10086-02	MBL	BLANK	10/14/15 00:00	10/14/2015	11/5/2015	15-10086	Thorium-234	LANL ER-130 Modified	8.83E-01	4.19E-01	4.21E-01	7.43E-01	3.57E-01	pCi/g
15-10086-02	MBL	BLANK	10/14/15 00:00	10/14/2015	11/5/2015	15-10086	Thallium-208	LANL ER-130 Modified	-4.19E-02	1.18E-01	1.18E-01	1.84E-01	8.15E-02	pCi/g
15-10086-03	DUP	CP4105S01-02	10/06/15 16:30	10/14/2015	11/6/2015	15-10086	Actinium-228	LANL ER-130 Modified	1.22E+00	2.68E-01	2.75E-01	4.55E-01	2.15E-01	pCi/g
15-10086-03	DUP	CP4105S01-02	10/06/15 16:30	10/14/2015	11/6/2015	15-10086	Bismuth-214	LANL ER-130 Modified	1.37E+00	2.06E-01	2.18E-01	2.71E-01	1.30E-01	pCi/g
15-10086-03	DUP	CP4105S01-02	10/06/15 16:30	10/14/2015	11/6/2015	15-10086	Potassium-40	LANL ER-130 Modified	1.90E+01	2.35E+00	2.55E+00	1.32E+00	6.12E-01	pCi/g
15-10086-03	DUP	CP4105S01-02	10/06/15 16:30	10/14/2015	11/6/2015	15-10086	Lead-212	LANL ER-130 Modified	1.45E+00	1.74E-01	1.90E-01	2.44E-01	1.20E-01	pCi/g
15-10086-03	DUP	CP4105S01-02	10/06/15 16:30	10/14/2015	11/6/2015	15-10086	Lead-214	LANL ER-130 Modified	1.38E+00	1.74E-01	1.88E-01	2.77E-01	1.35E-01	pCi/g
15-10086-03	DUP	CP4105S01-02	10/06/15 16:30	10/14/2015	11/6/2015	15-10086	Radium-226	LANL ER-130 Modified	1.37E+00	2.06E-01	2.18E-01	2.71E-01	1.28E+00	pCi/g
15-10086-03	DUP	CP4105S01-02	10/06/15 16:30	10/14/2015	11/6/2015	15-10086	Radium-228	LANL ER-130 Modified	1.22E+00	2.68E-01	2.75E-01	4.55E-01	2.15E-01	pCi/g
15-10086-03	DUP	CP4105S01-02	10/06/15 16:30	10/14/2015	11/6/2015	15-10086	Thorium-234	LANL ER-130 Modified	1.63E+00	1.54E+00	1.55E+00	2.06E+00	1.01E+00	pCi/g
15-10086-03	DUP	CP4105S01-02	10/06/15 16:30	10/14/2015	11/6/2015	15-10086	Thallium-208	LANL ER-130 Modified	1.31E+00	1.92E-01	2.04E-01	2.31E-01	2.56E-01	pCi/g
15-10086-04	DO	CP4105S01-02	10/06/15 16:30	10/14/2015	11/6/2015	15-10086	Actinium-228	LANL ER-130 Modified	1.60E+00	2.37E-01	2.51E-01	4.83E-01	2.29E-01	pCi/g
15-10086-04	DO	CP4105S01-02	10/06/15 16:30	10/14/2015	11/6/2015	15-10086	Bismuth-214	LANL ER-130 Modified	1.42E+00	1.87E-01	2.01E-01	2.16E-01	1.03E-01	pCi/g
15-10086-04	DO	CP4105S01-02	10/06/15 16:30	10/14/2015	11/6/2015	15-10086	Potassium-40	LANL ER-130 Modified	1.93E+01	2.35E+00	2.55E+00	1.09E+00	4.99E-01	pCi/g
15-10086-04	DO	CP4105S01-02	10/06/15 16:30	10/14/2015	11/6/2015	15-10086	Lead-212	LANL ER-130 Modified	1.41E+00	1.68E-01	1.83E-01	2.81E-01	1.38E-01	pCi/g
15-10086-04	DO	CP4105S01-02	10/06/15 16:30	10/14/2015	11/6/2015	15-10086	Lead-214	LANL ER-130 Modified	1.47E+00	1.76E-01	1.91E-01	2.54E-01	1.23E-01	pCi/g
15-10086-04	DO	CP4105S01-02	10/06/15 16:30	10/14/2015	11/6/2015	15-10086	Radium-226	LANL ER-130 Modified	1.42E+00	1.87E-01	2.01E-01	2.16E-01	1.33E+00	pCi/g
15-10086-04	DO	CP4105S01-02	10/06/15 16:30	10/14/2015	11/6/2015	15-10086	Radium-228	LANL ER-130 Modified	1.60E+00	2.37E-01	2.51E-01	4.83E-01	2.29E-01	pCi/g
15-10086-04	DO	CP4105S01-02	10/06/15 16:30	10/14/2015	11/6/2015	15-10086	Thorium-234	LANL ER-130 Modified	2.04E+00	1.57E+00	1.57E+00	2.11E+00	1.03E+00	pCi/g
15-10086-04	DO	CP4105S01-02	10/06/15 16:30	10/14/2015	11/6/2015	15-10086	Thallium-208	LANL ER-130 Modified	1.20E+00	2.02E-01	2.11E-01	2.24E-01	1.75E-01	pCi/g

CU=Counting Uncertainty; CSU=Combined Standard Uncertainty (2-sigma); MDA=Minimal Detected Activity; LCS=Laboratory Control Sample; MBL=Blank; DUP=Duplicate; TRG=Normal Sample; DO=Duplicate Original; CV=Critical Value



EBERLINE
SERVICES

EBERLINE ANALYTICAL CORPORATION

601 SCARBORO ROAD OAK RIDGE, TN 37830 865/481-0683 FAX 865/483-4621

Eberline Analytical

Final Report of Analysis

Cecilia Greene
Auxier & Associates, Inc.
9821 Cogdill Road, Suite 1
Knoxville, TN 37932

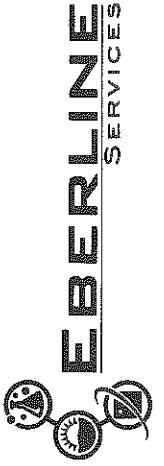
SDG: 15-10086
Project: PAP-KAN
Analysis Category: ENVIRONMENTAL
Sample Matrix: SO

Report To:

Work Order Details:

Lab ID	Sample Type	Client ID	Sample Date	Receipt Date	Analysis Date	Batch ID	Analyte	Method	Result	CU	CSU	MDA	CV	Report Units
15-10086-05	TRG	CP4105S04-05	10/06/15 16:40	10/14/2015	11/6/2015	15-10086	Actinium-228	LANL ER-130 Modified	1.34E+00	4.58E-01	4.64E-01	7.59E-01	3.52E-01	pCi/g
15-10086-05	TRG	CP4105S04-05	10/06/15 16:40	10/14/2015	11/6/2015	15-10086	Bismuth-214	LANL ER-130 Modified	1.66E+00	3.48E-01	3.58E-01	2.94E-01	2.63E-01	pCi/g
15-10086-05	TRG	CP4105S04-05	10/06/15 16:40	10/14/2015	11/6/2015	15-10086	Potassium-40	LANL ER-130 Modified	2.07E+00	3.67E+00	3.82E+00	2.44E+00	1.11E+00	pCi/g
15-10086-05	TRG	CP4105S04-05	10/06/15 16:40	10/14/2015	11/6/2015	15-10086	Lead-212	LANL ER-130 Modified	1.86E+00	3.69E-01	3.82E-01	4.70E-01	2.31E-01	pCi/g
15-10086-05	TRG	CP4105S04-05	10/06/15 16:40	10/14/2015	11/6/2015	15-10086	Lead-214	LANL ER-130 Modified	1.56E+00	2.87E-01	2.97E-01	3.61E-01	1.72E-01	pCi/g
15-10086-05	TRG	CP4105S04-05	10/06/15 16:40	10/14/2015	11/6/2015	15-10086	Radium-226	LANL ER-130 Modified	1.66E+00	3.48E-01	3.58E-01	2.94E-01	2.48E+00	pCi/g
15-10086-05	TRG	CP4105S04-05	10/06/15 16:40	10/14/2015	11/6/2015	15-10086	Radium-228	LANL ER-130 Modified	1.34E+00	4.58E-01	4.64E-01	7.59E-01	3.52E-01	pCi/g
15-10086-05	TRG	CP4105S04-05	10/06/15 16:40	10/14/2015	11/6/2015	15-10086	Thorium-234	LANL ER-130 Modified	2.07E+00	1.50E+00	1.51E+00	2.37E+00	1.16E+00	pCi/g
15-10086-05	TRG	CP4105S04-05	10/06/15 16:40	10/14/2015	11/6/2015	15-10086	Thallium-208	LANL ER-130 Modified	1.07E+00	3.43E-01	3.47E-01	6.39E-01	3.33E-01	pCi/g
15-10086-06	TRG	CP4105S06-07	10/06/15 16:50	10/14/2015	11/6/2015	15-10086	Actinium-228	LANL ER-130 Modified	1.33E+00	2.38E-01	2.47E-01	4.18E-01	2.00E-01	pCi/g
15-10086-06	TRG	CP4105S06-07	10/06/15 16:50	10/14/2015	11/6/2015	15-10086	Bismuth-214	LANL ER-130 Modified	1.33E+00	1.65E-01	1.78E-01	1.56E-01	7.54E-02	pCi/g
15-10086-06	TRG	CP4105S06-07	10/06/15 16:50	10/14/2015	11/6/2015	15-10086	Potassium-40	LANL ER-130 Modified	2.03E+01	2.28E+00	2.50E+00	1.01E+00	4.70E-01	pCi/g
15-10086-06	TRG	CP4105S06-07	10/06/15 16:50	10/14/2015	11/6/2015	15-10086	Lead-212	LANL ER-130 Modified	1.50E+00	1.72E-01	1.88E-01	2.16E-01	1.06E-01	pCi/g
15-10086-06	TRG	CP4105S06-07	10/06/15 16:50	10/14/2015	11/6/2015	15-10086	Lead-214	LANL ER-130 Modified	1.47E+00	1.59E-01	1.76E-01	2.45E-01	1.20E-01	pCi/g
15-10086-06	TRG	CP4105S06-07	10/06/15 16:50	10/14/2015	11/6/2015	15-10086	Radium-226	LANL ER-130 Modified	1.33E+00	1.65E-01	1.78E-01	1.58E-01	1.29E+00	pCi/g
15-10086-06	TRG	CP4105S06-07	10/06/15 16:50	10/14/2015	11/6/2015	15-10086	Radium-228	LANL ER-130 Modified	1.33E+00	2.38E-01	2.47E-01	4.18E-01	2.00E-01	pCi/g
15-10086-06	TRG	CP4105S06-07	10/06/15 16:50	10/14/2015	11/6/2015	15-10086	Thorium-234	LANL ER-130 Modified	1.94E+00	1.26E+00	1.27E+00	2.07E+00	1.02E+00	pCi/g
15-10086-06	TRG	CP4105S06-07	10/06/15 16:50	10/14/2015	11/6/2015	15-10086	Thallium-208	LANL ER-130 Modified	1.10E+00	1.56E-01	1.65E-01	1.40E-01	1.21E-01	pCi/g
15-10086-07	TRG	CP4105S08-09	10/06/15 17:00	10/14/2015	11/6/2015	15-10086	Actinium-228	LANL ER-130 Modified	1.27E+00	2.25E-01	2.35E-01	3.67E-01	1.74E-01	pCi/g
15-10086-07	TRG	CP4105S08-09	10/06/15 17:00	10/14/2015	11/6/2015	15-10086	Bismuth-214	LANL ER-130 Modified	1.28E+00	1.68E-01	1.80E-01	2.15E-01	1.04E-01	pCi/g
15-10086-07	TRG	CP4105S08-09	10/06/15 17:00	10/14/2015	11/6/2015	15-10086	Potassium-40	LANL ER-130 Modified	1.95E+01	2.48E+00	2.68E+00	9.66E-01	4.48E-01	pCi/g
15-10086-07	TRG	CP4105S08-09	10/06/15 17:00	10/14/2015	11/6/2015	15-10086	Lead-212	LANL ER-130 Modified	1.59E+00	1.98E-01	2.15E-01	1.77E-01	8.63E-02	pCi/g
15-10086-07	TRG	CP4105S08-09	10/06/15 17:00	10/14/2015	11/6/2015	15-10086	Lead-214	LANL ER-130 Modified	1.56E+00	1.77E-01	1.94E-01	2.53E-01	1.23E-01	pCi/g
15-10086-07	TRG	CP4105S08-09	10/06/15 17:00	10/14/2015	11/6/2015	15-10086	Radium-226	LANL ER-130 Modified	1.28E+00	1.68E-01	1.80E-01	2.15E-01	1.06E+00	pCi/g
15-10086-07	TRG	CP4105S08-09	10/06/15 17:00	10/14/2015	11/6/2015	15-10086	Radium-228	LANL ER-130 Modified	1.27E+00	2.25E-01	2.35E-01	3.67E-01	1.74E-01	pCi/g
15-10086-07	TRG	CP4105S08-09	10/06/15 17:00	10/14/2015	11/6/2015	15-10086	Thorium-234	LANL ER-130 Modified	1.42E+00	1.56E+00	1.57E+00	2.61E+00	1.29E+00	pCi/g
15-10086-07	TRG	CP4105S08-09	10/06/15 17:00	10/14/2015	11/6/2015	15-10086	Thallium-208	LANL ER-130 Modified	1.09E+00	1.57E-01	1.67E-01	1.08E-01	1.38E-01	pCi/g

CU=Counting Uncertainty; CSU=Combined Standard Uncertainty (2-sigma); MDA=Minimal Detected Activity; LCS=Laboratory Control Sample; MBL=Blank; DUP=Duplicate; TRG=Normal Sample; DO=Duplicate Original; CV=Critical Value



EBERLINE ANALYTICAL CORPORATION

601 SCARBORO ROAD OAK RIDGE, TN 37830 865/481-0683 FAX 865/483-4621

Eberline Analytical

Final Report of Analysis

Cecilia Greene
Auxier & Associates, Inc.
9821 Cogdill Road, Suite 1
Knoxville, TN 37932

SDG: 15-10086
Project: PAP-KAN
Analysis Category: ENVIRONMENTAL
Sample Matrix: SO

Report To:

Work Order Details:

Lab ID	Sample Type	Client ID	Sample Date	Receipt Date	Analysis Date	Batch ID	Analyte	Method	Result	CU	CSU	MDA	CV	Report Units
15-10086-08	TRG	CP4105S10-11	10/06/15 17:10	10/14/2015	11/6/2015	15-10086	Actinium-228	LANL ER-130 Modified	1.67E+00	4.17E-01	4.26E-01	7.54E-01	3.54E-01	pCi/g
15-10086-08	TRG	CP4105S10-11	10/06/15 17:10	10/14/2015	11/6/2015	15-10086	Bismuth-214	LANL ER-130 Modified	1.09E+00	2.57E-01	2.63E-01	2.53E-01	2.04E-01	pCi/g
15-10086-08	TRG	CP4105S10-11	10/06/15 17:10	10/14/2015	11/6/2015	15-10086	Potassium-40	LANL ER-130 Modified	2.03E+01	3.32E+00	3.48E+00	1.38E+00	5.98E-01	pCi/g
15-10086-08	TRG	CP4105S10-11	10/06/15 17:10	10/14/2015	11/6/2015	15-10086	Lead-212	LANL ER-130 Modified	1.74E+00	3.18E-01	3.30E-01	3.81E-01	1.88E-01	pCi/g
15-10086-08	TRG	CP4105S10-11	10/06/15 17:10	10/14/2015	11/6/2015	15-10086	Lead-214	LANL ER-130 Modified	9.39E-01	2.55E-01	2.60E-01	4.51E-01	2.19E-01	pCi/g
15-10086-08	TRG	CP4105S10-11	10/06/15 17:10	10/14/2015	11/6/2015	15-10086	Radium-226	LANL ER-130 Modified	1.08E+00	2.57E-01	2.63E-01	2.53E-01	1.68E+00	pCi/g
15-10086-08	TRG	CP4105S10-11	10/06/15 17:10	10/14/2015	11/6/2015	15-10086	Radium-228	LANL ER-130 Modified	1.67E+00	4.17E-01	4.26E-01	7.54E-01	3.54E-01	pCi/g
15-10086-08	TRG	CP4105S10-11	10/06/15 17:10	10/14/2015	11/6/2015	15-10086	Thorium-234	LANL ER-130 Modified	1.82E-02	1.32E+00	1.32E+00	2.01E+00	9.84E-01	pCi/g
15-10086-08	TRG	CP4105S10-11	10/06/15 17:10	10/14/2015	11/6/2015	15-10086	Thallium-208	LANL ER-130 Modified	1.63E+00	3.24E-01	3.34E-01	2.15E-01	2.64E-01	pCi/g
15-10086-09	TRG	CP4105S12-13	10/06/15 17:20	10/14/2015	11/6/2015	15-10086	Actinium-228	LANL ER-130 Modified	1.47E+00	2.28E-01	2.41E-01	3.77E-01	1.80E-01	pCi/g
15-10086-09	TRG	CP4105S12-13	10/06/15 17:20	10/14/2015	11/6/2015	15-10086	Bismuth-214	LANL ER-130 Modified	1.36E+00	1.95E-01	2.07E-01	3.25E-01	1.59E-01	pCi/g
15-10086-09	TRG	CP4105S12-13	10/06/15 17:20	10/14/2015	11/6/2015	15-10086	Potassium-40	LANL ER-130 Modified	2.08E+01	2.32E+00	2.56E+00	1.01E+00	4.71E-01	pCi/g
15-10086-09	TRG	CP4105S12-13	10/06/15 17:20	10/14/2015	11/6/2015	15-10086	Lead-212	LANL ER-130 Modified	1.43E+00	1.67E-01	1.82E-01	1.87E-01	9.15E-02	pCi/g
15-10086-09	TRG	CP4105S12-13	10/06/15 17:20	10/14/2015	11/6/2015	15-10086	Lead-214	LANL ER-130 Modified	1.35E+00	1.66E-01	1.80E-01	2.29E-01	1.11E-01	pCi/g
15-10086-09	TRG	CP4105S12-13	10/06/15 17:20	10/14/2015	11/6/2015	15-10086	Radium-226	LANL ER-130 Modified	1.36E+00	1.95E-01	2.07E-01	3.25E-01	1.08E+00	pCi/g
15-10086-09	TRG	CP4105S12-13	10/06/15 17:20	10/14/2015	11/6/2015	15-10086	Radium-228	LANL ER-130 Modified	1.47E+00	2.28E-01	2.41E-01	3.77E-01	1.80E-01	pCi/g
15-10086-09	TRG	CP4105S12-13	10/06/15 17:20	10/14/2015	11/6/2015	15-10086	Thorium-234	LANL ER-130 Modified	3.71E+00	1.34E+00	1.38E+00	1.90E+00	9.33E-01	pCi/g
15-10086-09	TRG	CP4105S12-13	10/06/15 17:20	10/14/2015	11/6/2015	15-10086	Thallium-208	LANL ER-130 Modified	1.28E+00	1.70E-01	1.82E-01	8.78E-02	1.38E-01	pCi/g
15-10086-10	TRG	CP4105S14-15	10/06/15 17:30	10/14/2015	11/6/2015	15-10086	Actinium-228	LANL ER-130 Modified	1.26E+00	2.56E-01	2.64E-01	4.84E-01	2.32E-01	pCi/g
15-10086-10	TRG	CP4105S14-15	10/06/15 17:30	10/14/2015	11/6/2015	15-10086	Bismuth-214	LANL ER-130 Modified	1.29E+00	1.75E-01	1.87E-01	2.16E-01	1.04E-01	pCi/g
15-10086-10	TRG	CP4105S14-15	10/06/15 17:30	10/14/2015	11/6/2015	15-10086	Potassium-40	LANL ER-130 Modified	1.98E+01	2.51E+00	2.71E+00	7.98E-01	3.62E-01	pCi/g
15-10086-10	TRG	CP4105S14-15	10/06/15 17:30	10/14/2015	11/6/2015	15-10086	Lead-212	LANL ER-130 Modified	1.08E+00	2.03E-01	2.10E-01	2.82E-01	1.39E-01	pCi/g
15-10086-10	TRG	CP4105S14-15	10/06/15 17:30	10/14/2015	11/6/2015	15-10086	Lead-214	LANL ER-130 Modified	1.44E+00	1.95E-01	2.09E-01	2.63E-01	1.28E-01	pCi/g
15-10086-10	TRG	CP4105S14-15	10/06/15 17:30	10/14/2015	11/6/2015	15-10086	Radium-226	LANL ER-130 Modified	1.29E+00	1.75E-01	1.87E-01	2.16E-01	1.34E+00	pCi/g
15-10086-10	TRG	CP4105S14-15	10/06/15 17:30	10/14/2015	11/6/2015	15-10086	Radium-228	LANL ER-130 Modified	1.26E+00	2.56E-01	2.64E-01	4.84E-01	2.32E-01	pCi/g
15-10086-10	TRG	CP4105S14-15	10/06/15 17:30	10/14/2015	11/6/2015	15-10086	Thorium-234	LANL ER-130 Modified	1.73E+00	1.61E+00	1.61E+00	2.68E+00	1.32E+00	pCi/g
15-10086-10	TRG	CP4105S14-15	10/06/15 17:30	10/14/2015	11/6/2015	15-10086	Thallium-208	LANL ER-130 Modified	1.12E+00	1.64E-01	1.74E-01	1.13E-01	1.50E-01	pCi/g

CU=Counting Uncertainty; CSU=Combined Standard Uncertainty (2-sigma); MDA=Minimal Detected Activity; LCS=Laboratory Control Sample; MBL=Blank; DUP=Duplicate; TRG=Normal Sample; DO=Duplicate Original; CV=Critical Value



EBERLINE
SERVICES

EBERLINE ANALYTICAL CORPORATION

601 SCARBORO ROAD OAK RIDGE, TN 37850 865/481-0683 FAX 865/483-4621

Eberline Analytical

Final Report of Analysis

Cecilia Greene
Auxier & Associates, Inc.
9821 Cogdill Road, Suite 1
Knoxville, TN 37932

SDG:
Project: PAP-KAN
Analysis Category: ENVIRONMENTAL
Sample Matrix: SO

Work Order Details:

Lab ID	Sample Type	Client ID	Sample Date	Receipt Date	Analysis Date	Batch ID	Analyte	Method	Result	CU	CSU	MDA	CV	Report Units
15-10086-11	TRG	CP4105S16-17	10/06/15 17:40	10/14/2015	11/6/2015	15-10086	Actinium-228	LANL ER-130 Modified	1.52E+00	2.82E-01	2.92E-01	5.49E-01	2.60E-01	pCi/g
15-10086-11	TRG	CP4105S16-17	10/06/15 17:40	10/14/2015	11/6/2015	15-10086	Bismuth-214	LANL ER-130 Modified	1.29E+00	2.18E-01	2.28E-01	3.30E-01	1.59E-01	pCi/g
15-10086-11	TRG	CP4105S16-17	10/06/15 17:40	10/14/2015	11/6/2015	15-10086	Potassium-40	LANL ER-130 Modified	2.10E+01	2.59E+00	2.81E+00	1.19E+00	5.41E-01	pCi/g
15-10086-11	TRG	CP4105S16-17	10/06/15 17:40	10/14/2015	11/6/2015	15-10086	Lead-212	LANL ER-130 Modified	1.61E+00	1.87E-01	2.04E-01	3.44E-01	1.69E-01	pCi/g
15-10086-11	TRG	CP4105S16-17	10/06/15 17:40	10/14/2015	11/6/2015	15-10086	Lead-214	LANL ER-130 Modified	1.42E+00	1.90E-01	2.03E-01	2.72E-01	1.31E-01	pCi/g
15-10086-11	TRG	CP4105S16-17	10/06/15 17:40	10/14/2015	11/6/2015	15-10086	Radium-226	LANL ER-130 Modified	1.29E+00	2.18E-01	2.28E-01	3.30E-01	1.10E+00	pCi/g
15-10086-11	TRG	CP4105S16-17	10/06/15 17:40	10/14/2015	11/6/2015	15-10086	Radium-228	LANL ER-130 Modified	1.52E+00	2.82E-01	2.92E-01	5.49E-01	2.60E-01	pCi/g
15-10086-11	TRG	CP4105S16-17	10/06/15 17:40	10/14/2015	11/6/2015	15-10086	Thorium-232	LANL ER-130 Modified	2.82E+00	1.94E+00	1.94E+00	3.20E+00	1.57E+00	pCi/g
15-10086-11	TRG	CP4105S16-17	10/06/15 17:40	10/14/2015	11/6/2015	15-10086	Thallium-208	LANL ER-130 Modified	1.36E+00	2.15E-01	2.26E-01	1.50E-01	1.47E-01	pCi/g
15-10086-12	TRG	CP0404S03-04	10/08/15 08:00	10/14/2015	11/6/2015	15-10086	Actinium-228	LANL ER-130 Modified	1.69E+00	3.91E-01	4.00E-01	6.60E-01	3.07E-01	pCi/g
15-10086-12	TRG	CP0404S03-04	10/08/15 08:00	10/14/2015	11/6/2015	15-10086	Bismuth-214	LANL ER-130 Modified	1.35E+00	3.04E-01	3.12E-01	4.58E-01	2.20E-01	pCi/g
15-10086-12	TRG	CP0404S03-04	10/08/15 08:00	10/14/2015	11/6/2015	15-10086	Potassium-40	LANL ER-130 Modified	1.79E+01	3.11E+00	3.24E+00	1.84E+00	8.29E-01	pCi/g
15-10086-12	TRG	CP0404S03-04	10/08/15 08:00	10/14/2015	11/6/2015	15-10086	Lead-212	LANL ER-130 Modified	1.72E+00	3.20E-01	3.32E-01	3.89E-01	1.91E-01	pCi/g
15-10086-12	TRG	CP0404S03-04	10/08/15 08:00	10/14/2015	11/6/2015	15-10086	Lead-214	LANL ER-130 Modified	1.47E+00	2.95E-01	3.05E-01	4.55E-01	2.21E-01	pCi/g
15-10086-12	TRG	CP0404S03-04	10/08/15 08:00	10/14/2015	11/6/2015	15-10086	Radium-226	LANL ER-130 Modified	1.35E+00	3.04E-01	3.12E-01	4.58E-01	2.39E+00	pCi/g
15-10086-12	TRG	CP0404S03-04	10/08/15 08:00	10/14/2015	11/6/2015	15-10086	Radium-228	LANL ER-130 Modified	1.65E+00	3.91E-01	4.00E-01	6.60E-01	3.07E-01	pCi/g
15-10086-12	TRG	CP0404S03-04	10/08/15 08:00	10/14/2015	11/6/2015	15-10086	Thorium-234	LANL ER-130 Modified	7.57E-01	1.35E+00	1.35E+00	2.09E+00	1.03E+00	pCi/g
15-10086-12	TRG	CP0404S03-04	10/08/15 08:00	10/14/2015	11/6/2015	15-10086	Thallium-208	LANL ER-130 Modified	1.18E+00	3.30E-01	3.35E-01	4.18E-01	3.72E-01	pCi/g
15-10086-13	TRG	CP0404S05-06	10/08/15 08:10	10/14/2015	11/6/2015	15-10086	Actinium-228	LANL ER-130 Modified	1.28E+00	2.08E-01	2.16E-01	3.38E-01	1.59E-01	pCi/g
15-10086-13	TRG	CP0404S05-06	10/08/15 08:10	10/14/2015	11/6/2015	15-10086	Bismuth-214	LANL ER-130 Modified	1.45E+00	1.74E-01	1.89E-01	2.16E-01	1.04E-01	pCi/g
15-10086-13	TRG	CP0404S05-06	10/08/15 08:10	10/14/2015	11/6/2015	15-10086	Potassium-40	LANL ER-130 Modified	1.67E+01	2.00E+00	2.17E+00	9.92E-01	4.61E-01	pCi/g
15-10086-13	TRG	CP0404S05-06	10/08/15 08:10	10/14/2015	11/6/2015	15-10086	Lead-212	LANL ER-130 Modified	1.41E+00	1.64E-01	1.79E-01	2.44E-01	1.20E-01	pCi/g
15-10086-13	TRG	CP0404S05-06	10/08/15 08:10	10/14/2015	11/6/2015	15-10086	Lead-214	LANL ER-130 Modified	1.67E+00	1.70E-01	1.90E-01	2.25E-01	1.09E-01	pCi/g
15-10086-13	TRG	CP0404S05-06	10/08/15 08:10	10/14/2015	11/6/2015	15-10086	Radium-226	LANL ER-130 Modified	1.45E+00	1.74E-01	1.89E-01	2.16E-01	1.41E+00	pCi/g
15-10086-13	TRG	CP0404S05-06	10/08/15 08:10	10/14/2015	11/6/2015	15-10086	Radium-228	LANL ER-130 Modified	1.29E+00	2.06E-01	2.16E-01	3.38E-01	1.59E-01	pCi/g
15-10086-13	TRG	CP0404S05-06	10/08/15 08:10	10/14/2015	11/6/2015	15-10086	Thorium-234	LANL ER-130 Modified	2.08E+00	1.61E+00	1.61E+00	2.66E+00	1.31E+00	pCi/g
15-10086-13	TRG	CP0404S05-06	10/08/15 08:10	10/14/2015	11/6/2015	15-10086	Thallium-208	LANL ER-130 Modified	1.25E+00	1.59E-01	1.71E-01	9.40E-02	1.78E-01	pCi/g

CU=Counting Uncertainty; CSU=Combined Standard Uncertainty (2-sigma); MDA=Minimal Detected Activity; LCS=Laboratory Control Sample; MBL=Blank; DUP=Duplicate; TRG=Normal Sample; DO=Duplicate Original; CV=Critical Value



EBERLINE
SERVICES

EBERLINE ANALYTICAL CORPORATION

601 SCARBORO ROAD OAK RIDGE, TN 37830 865/481-0683 FAX 865/483-4621

Eberline Analytical

Final Report of Analysis

Cecilia Greene
Auxier & Associates, Inc.
9821 Cogdill Road, Suite 1
Knoxville, TN 37932

SDG: 15-10086
Project: PAP-KAN
Analysis Category: ENVIRONMENTAL
Sample Matrix: SO

Work Order Details:

Report To:

Lab ID	Sample Type	Client ID	Sample Date	Receipt Date	Analysis Date	Batch ID	Analyte	Method	Result	CU	CSU	MDA	CV	Report Units
15-10086-14	TRG	CP0404S07-08	10/08/15 08:20	10/14/2015	11/6/2015	15-10086	Actinium-228	LANL ER-130 Modified	1.64E+00	2.47E-01	2.61E-01	4.00E-01	1.89E-01	pCi/g
15-10086-14	TRG	CP0404S07-08	10/08/15 08:20	10/14/2015	11/6/2015	15-10086	Bismuth-214	LANL ER-130 Modified	1.24E+00	1.73E-01	1.84E-01	2.01E-01	9.56E-02	pCi/g
15-10086-14	TRG	CP0404S07-08	10/08/15 08:20	10/14/2015	11/6/2015	15-10086	Potassium-40	LANL ER-130 Modified	2.23E+01	2.84E+00	3.06E+00	1.02E+00	4.66E-01	pCi/g
15-10086-14	TRG	CP0404S07-08	10/08/15 08:20	10/14/2015	11/6/2015	15-10086	Lead-212	LANL ER-130 Modified	1.42E+00	1.83E-01	1.97E-01	2.46E-01	1.20E-01	pCi/g
15-10086-14	TRG	CP0404S07-08	10/08/15 08:20	10/14/2015	11/6/2015	15-10086	Lead-214	LANL ER-130 Modified	1.44E+00	1.62E-01	1.96E-01	2.77E-01	1.34E-01	pCi/g
15-10086-14	TRG	CP0404S07-08	10/08/15 08:20	10/14/2015	11/6/2015	15-10086	Radium-226	LANL ER-130 Modified	1.24E+00	1.73E-01	1.84E-01	2.01E-01	1.44E+00	pCi/g
15-10086-14	TRG	CP0404S07-08	10/08/15 08:20	10/14/2015	11/6/2015	15-10086	Radium-228	LANL ER-130 Modified	1.64E+00	2.47E-01	2.61E-01	4.00E-01	1.89E-01	pCi/g
15-10086-14	TRG	CP0404S07-08	10/08/15 08:20	10/14/2015	11/6/2015	15-10086	Thorium-234	LANL ER-130 Modified	1.46E+00	1.00E+00	1.01E+00	1.62E+00	7.85E-01	pCi/g
15-10086-14	TRG	CP0404S07-08	10/08/15 08:20	10/14/2015	11/6/2015	15-10086	Thallium-208	LANL ER-130 Modified	1.17E+00	1.77E-01	1.87E-01	1.26E-01	1.67E-01	pCi/g
15-10086-15	TRG	CP0404S10-11	10/08/15 08:30	10/14/2015	11/6/2015	15-10086	Actinium-228	LANL ER-130 Modified	1.25E+00	2.67E-01	2.74E-01	5.30E-01	2.51E-01	pCi/g
15-10086-15	TRG	CP0404S10-11	10/08/15 08:30	10/14/2015	11/6/2015	15-10086	Bismuth-214	LANL ER-130 Modified	1.13E+00	1.97E-01	2.05E-01	2.64E-01	1.26E-01	pCi/g
15-10086-15	TRG	CP0404S10-11	10/08/15 08:30	10/14/2015	11/6/2015	15-10086	Potassium-40	LANL ER-130 Modified	1.97E+01	2.48E+00	2.68E+00	1.31E+00	6.01E-01	pCi/g
15-10086-15	TRG	CP0404S10-11	10/08/15 08:30	10/14/2015	11/6/2015	15-10086	Lead-212	LANL ER-130 Modified	1.70E+00	1.90E-01	2.09E-01	2.74E-01	1.34E-01	pCi/g
15-10086-15	TRG	CP0404S10-11	10/08/15 08:30	10/14/2015	11/6/2015	15-10086	Lead-214	LANL ER-130 Modified	1.44E+00	1.95E-01	2.08E-01	2.66E-01	1.28E-01	pCi/g
15-10086-15	TRG	CP0404S10-11	10/08/15 08:30	10/14/2015	11/6/2015	15-10086	Radium-226	LANL ER-130 Modified	1.13E+00	1.97E-01	2.05E-01	2.64E-01	1.27E+00	pCi/g
15-10086-15	TRG	CP0404S10-11	10/08/15 08:30	10/14/2015	11/6/2015	15-10086	Radium-228	LANL ER-130 Modified	1.25E+00	2.67E-01	2.74E-01	5.30E-01	2.51E-01	pCi/g
15-10086-15	TRG	CP0404S10-11	10/08/15 08:30	10/14/2015	11/6/2015	15-10086	Thorium-234	LANL ER-130 Modified	1.70E+00	1.67E+00	1.67E+00	2.22E+00	1.09E+00	pCi/g
15-10086-15	TRG	CP0404S10-11	10/08/15 08:30	10/14/2015	11/6/2015	15-10086	Thallium-208	LANL ER-130 Modified	1.21E+00	2.39E-01	2.47E-01	3.01E-01	2.25E-01	pCi/g
15-10086-16	TRG	CP0404S12-13	10/08/15 08:40	10/14/2015	11/6/2015	15-10086	Actinium-228	LANL ER-130 Modified	1.61E+00	3.65E-01	3.74E-01	1.03E+00	4.92E-01	pCi/g
15-10086-16	TRG	CP0404S12-13	10/08/15 08:40	10/14/2015	11/6/2015	15-10086	Bismuth-214	LANL ER-130 Modified	1.10E+00	3.21E-01	3.26E-01	5.52E-01	2.66E-01	pCi/g
15-10086-16	TRG	CP0404S12-13	10/08/15 08:40	10/14/2015	11/6/2015	15-10086	Potassium-40	LANL ER-130 Modified	1.94E+01	3.35E+00	3.50E+00	1.95E+00	8.79E-01	pCi/g
15-10086-16	TRG	CP0404S12-13	10/08/15 08:40	10/14/2015	11/6/2015	15-10086	Lead-212	LANL ER-130 Modified	2.07E+00	3.49E-01	3.65E-01	3.90E-01	1.91E-01	pCi/g
15-10086-16	TRG	CP0404S12-13	10/08/15 08:40	10/14/2015	11/6/2015	15-10086	Lead-214	LANL ER-130 Modified	9.24E-01	2.41E-01	2.46E-01	7.30E-01	6.10E-01	pCi/g
15-10086-16	TRG	CP0404S12-13	10/08/15 08:40	10/14/2015	11/6/2015	15-10086	Radium-226	LANL ER-130 Modified	1.10E+00	3.21E-01	3.26E-01	5.52E-01	1.52E+00	pCi/g
15-10086-16	TRG	CP0404S12-13	10/08/15 08:40	10/14/2015	11/6/2015	15-10086	Radium-228	LANL ER-130 Modified	1.61E+00	3.65E-01	3.74E-01	1.03E+00	4.92E-01	pCi/g
15-10086-16	TRG	CP0404S12-13	10/08/15 08:40	10/14/2015	11/6/2015	15-10086	Thorium-234	LANL ER-130 Modified	-4.22E-01	1.40E+00	1.40E+00	2.10E+00	1.03E+00	pCi/g
15-10086-16	TRG	CP0404S12-13	10/08/15 08:40	10/14/2015	11/6/2015	15-10086	Thallium-208	LANL ER-130 Modified	1.18E+00	3.25E-01	3.30E-01	4.49E-01	3.35E-01	pCi/g

CU=Counting Uncertainty; CSU=Combined Standard Uncertainty (2-sigma); MDA=Minimal Detected Activity; LCS=Laboratory Control Sample; MBL=Blank; DUP=Duplicate; TRG=Normal Sample; DO=Duplicate Original; CV=Critical Value



EBERLINE
SERVICES

EBERLINE ANALYTICAL CORPORATION

601 SCARBORO ROAD OAK RIDGE, TN 37830 865/481-0683 FAX 865/483-4621

Eberline Analytical

Final Report of Analysis

Cecilia Greene
Auxier & Associates, Inc.
9821 Cogdill Road, Suite 1
Knoxville, TN 37932

SDG: 15-10086

Project: PAP-KAN
Analysis Category: ENVIRONMENTAL
Sample Matrix: SO

Work Order Details:

Report To:

Lab ID	Sample Type	Client ID	Sample Date	Receipt Date	Analysis Date	Batch ID	Analyte	Method	Result	CU	CSU	MDA	CV	Report Units
15-10086-17	TRG	CP0404S14-15	10/08/15 09:00	10/14/2015	11/6/2015	15-10086	Actinium-228	LANL ER-130 Modified	1.57E+00	2.11E-01	2.26E-01	2.86E-01	1.33E-01	pCi/g
15-10086-17	TRG	CP0404S14-15	10/08/15 09:00	10/14/2015	11/6/2015	15-10086	Bismuth-214	LANL ER-130 Modified	1.29E+00	1.72E-01	1.84E-01	2.30E-01	1.11E-01	pCi/g
15-10086-17	TRG	CP0404S14-15	10/08/15 09:00	10/14/2015	11/6/2015	15-10086	Potassium-40	LANL ER-130 Modified	2.29E+01	2.57E+00	2.89E+00	1.19E+00	5.59E-01	pCi/g
15-10086-17	TRG	CP0404S14-15	10/08/15 09:00	10/14/2015	11/6/2015	15-10086	Lead-212	LANL ER-130 Modified	1.54E+00	1.79E-01	1.95E-01	2.12E-01	1.04E-01	pCi/g
15-10086-17	TRG	CP0404S14-15	10/08/15 09:00	10/14/2015	11/6/2015	15-10086	Lead-214	LANL ER-130 Modified	1.30E+00	1.52E-01	1.66E-01	2.14E-01	1.04E-01	pCi/g
15-10086-17	TRG	CP0404S14-15	10/08/15 09:00	10/14/2015	11/6/2015	15-10086	Radium-226	LANL ER-130 Modified	1.29E+00	1.72E-01	1.84E-01	2.30E-01	1.37E+00	pCi/g
15-10086-17	TRG	CP0404S14-15	10/08/15 09:00	10/14/2015	11/6/2015	15-10086	Radium-228	LANL ER-130 Modified	1.57E+00	2.11E-01	2.26E-01	2.86E-01	1.33E-01	pCi/g
15-10086-17	TRG	CP0404S14-15	10/08/15 09:00	10/14/2015	11/6/2015	15-10086	Thorium-234	LANL ER-130 Modified	2.19E+00	1.71E+00	1.71E+00	2.83E+00	1.39E+00	pCi/g
15-10086-17	TRG	CP0404S14-15	10/08/15 09:00	10/14/2015	11/6/2015	15-10086	Thallium-208	LANL ER-130 Modified	1.37E+00	1.78E-01	1.91E-01	9.76E-02	1.22E-01	pCi/g
15-10086-18	TRG	CP0404S17-18	10/08/15 09:10	10/14/2015	11/6/2015	15-10086	Actinium-228	LANL ER-130 Modified	1.24E+00	2.14E-01	2.23E-01	3.99E-01	1.90E-01	pCi/g
15-10086-18	TRG	CP0404S17-18	10/08/15 09:10	10/14/2015	11/6/2015	15-10086	Bismuth-214	LANL ER-130 Modified	1.30E+00	1.66E-01	1.79E-01	2.06E-01	9.87E-02	pCi/g
15-10086-18	TRG	CP0404S17-18	10/08/15 09:10	10/14/2015	11/6/2015	15-10086	Potassium-40	LANL ER-130 Modified	1.94E+01	2.52E+00	2.71E+00	1.26E+00	5.92E-01	pCi/g
15-10086-18	TRG	CP0404S17-18	10/08/15 09:10	10/14/2015	11/6/2015	15-10086	Lead-212	LANL ER-130 Modified	7.82E-01	1.95E-01	1.99E-01	2.65E-01	1.30E-01	pCi/g
15-10086-18	TRG	CP0404S17-18	10/08/15 09:10	10/14/2015	11/6/2015	15-10086	Lead-214	LANL ER-130 Modified	1.27E+00	1.51E-01	1.65E-01	2.10E-01	1.02E-01	pCi/g
15-10086-18	TRG	CP0404S17-18	10/08/15 09:10	10/14/2015	11/6/2015	15-10086	Radium-226	LANL ER-130 Modified	1.30E+00	1.66E-01	1.79E-01	2.06E-01	1.17E+00	pCi/g
15-10086-18	TRG	CP0404S17-18	10/08/15 09:10	10/14/2015	11/6/2015	15-10086	Radium-228	LANL ER-130 Modified	1.24E+00	2.14E-01	2.23E-01	3.99E-01	1.90E-01	pCi/g
15-10086-18	TRG	CP0404S17-18	10/08/15 09:10	10/14/2015	11/6/2015	15-10086	Thorium-234	LANL ER-130 Modified	1.86E+00	9.35E-01	9.40E-01	1.55E+00	7.46E-01	pCi/g
15-10086-18	TRG	CP0404S17-18	10/08/15 09:10	10/14/2015	11/6/2015	15-10086	Thallium-208	LANL ER-130 Modified	1.08E+00	1.57E-01	1.66E-01	1.52E-01	1.27E-01	pCi/g

CU=Counting Uncertainty; CSU=Combined Standard Uncertainty (2-sigma); MDA=Minimal Detected Activity; LCS=Laboratory Control Sample; MBL=Blank; DUP=Duplicate; TRG=Normal Sample; DO=Duplicate Original; CV=Critical Value



EBERLINE
SERVICES

EBERLINE ANALYTICAL CORPORATION

601 SCARBORO ROAD OAK RIDGE, TN 37830 865/481-0683 FAX 865/483-4621

Eberline Analytical

Final Report of Analysis

Cecilia Greene
Auxier & Associates, Inc.
9821 Cogdill Road, Suite 1
Knoxville, TN 37932

SDG: 15-10086
Project: PAP-KAN
Analysis Category: ENVIRONMENTAL
Sample Matrix: SO

Report To:

Work Order Details:

Lab ID	Sample Type	Client ID	Sample Date	Receipt Date	Analysis Date	Batch ID	Analyte	Method	Result	CU	CSU	MDA	CV	Report Units
15-10086-01	LCS	KNOWN	10/14/15 00:00	10/14/2015	11/2/2015	15-10086	Thorium-228	EML Th-01 Modified	4.71E+00	1.70E-01	1.03E+00	1.84E-01	1.11E-01	pCi/g
15-10086-01	LCS	SPIKE	10/14/15 00:00	10/14/2015	11/2/2015	15-10086	Thorium-228	EML Th-01 Modified	5.42E+00	8.96E-01	3.96E-02	5.87E-02	9.09E-03	pCi/g
15-10086-02	MBL	BLANK	10/14/15 00:00	10/14/2015	11/2/2015	15-10086	Thorium-228	EML Th-01 Modified	1.24E+00	3.04E-01	3.25E-01	6.58E-02	1.23E-02	pCi/g
15-10086-03	DUP	CP4105S01-02	10/06/15 16:30	10/14/2015	11/2/2015	15-10086	Thorium-228	EML Th-01 Modified	1.47E+00	3.57E-01	3.83E-01	5.57E-02	6.09E-03	pCi/g
15-10086-04	DO	CP4105S01-02	10/06/15 16:30	10/14/2015	11/2/2015	15-10086	Thorium-228	EML Th-01 Modified	1.14E+00	3.01E-01	3.19E-01	7.84E-02	1.73E-02	pCi/g
15-10086-05	TRG	CP4105S04-05	10/06/15 16:40	10/14/2015	11/2/2015	15-10086	Thorium-228	EML Th-01 Modified	1.37E+00	3.26E-01	3.51E-01	7.34E-02	1.84E-02	pCi/g
15-10086-06	TRG	CP4105S06-07	10/06/15 16:50	10/14/2015	11/2/2015	15-10086	Thorium-228	EML Th-01 Modified	1.41E+00	3.45E-01	3.70E-01	4.50E-02	2.61E-03	pCi/g
15-10086-07	TRG	CP4105S08-09	10/06/15 17:00	10/14/2015	11/2/2015	15-10086	Thorium-228	EML Th-01 Modified	1.37E+00	3.46E-01	3.69E-01	7.95E-02	1.75E-02	pCi/g
15-10086-08	TRG	CP4105S10-11	10/06/15 17:10	10/14/2015	11/2/2015	15-10086	Thorium-228	EML Th-01 Modified	1.14E+00	2.64E-01	2.85E-01	6.01E-02	1.32E-02	pCi/g
15-10086-09	TRG	CP4105S12-13	10/06/15 17:20	10/14/2015	11/2/2015	15-10086	Thorium-228	EML Th-01 Modified	1.65E+00	3.93E-01	4.23E-01	8.59E-02	2.40E-02	pCi/g
15-10086-10	TRG	CP4105S14-15	10/06/15 17:30	10/14/2015	11/2/2015	15-10086	Thorium-228	EML Th-01 Modified	1.24E+00	2.90E-01	3.12E-01	5.11E-02	6.70E-03	pCi/g
15-10086-11	TRG	CP4105S16-17	10/06/15 17:40	10/14/2015	11/2/2015	15-10086	Thorium-228	EML Th-01 Modified	1.20E+00	2.76E-01	2.98E-01	5.13E-02	7.77E-03	pCi/g
15-10086-12	TRG	CP0404S03-04	10/08/15 08:00	10/14/2015	11/2/2015	15-10086	Thorium-228	EML Th-01 Modified	1.12E+00	2.77E-01	2.96E-01	8.19E-02	2.71E-02	pCi/g
15-10086-13	TRG	CP0404S05-06	10/08/15 08:10	10/14/2015	11/2/2015	15-10086	Thorium-228	EML Th-01 Modified	1.19E+00	2.68E-01	2.91E-01	7.51E-02	2.76E-02	pCi/g
15-10086-14	TRG	CP0404S07-08	10/08/15 08:20	10/14/2015	11/2/2015	15-10086	Thorium-228	EML Th-01 Modified	1.33E+00	3.00E-01	3.25E-01	5.73E-02	1.07E-02	pCi/g
15-10086-15	TRG	CP0404S10-11	10/08/15 08:30	10/14/2015	11/2/2015	15-10086	Thorium-228	EML Th-01 Modified	1.14E+00	2.70E-01	2.90E-01	8.42E-02	3.36E-02	pCi/g
15-10086-16	TRG	CP0404S12-13	10/08/15 08:40	10/14/2015	11/2/2015	15-10086	Thorium-228	EML Th-01 Modified	1.18E+00	2.55E-01	2.78E-01	5.05E-02	1.03E-02	pCi/g
15-10086-17	TRG	CP0404S14-15	10/08/15 09:00	10/14/2015	11/2/2015	15-10086	Thorium-228	EML Th-01 Modified	1.25E+00	3.31E-01	3.51E-01	8.11E-02	1.66E-02	pCi/g
15-10086-18	TRG	CP0404S17-18	10/08/15 09:10	10/14/2015	11/2/2015	15-10086	Thorium-228	EML Th-01 Modified						pCi/g

CU=Counting Uncertainty; CSU=Combined Standard Uncertainty (2-sigma); MDA=Minimal Detected Activity; LCS=Laboratory Control Sample; MBL=Blank; DUP=Duplicate; TRG=Normal Sample; DO=Duplicate Original; CV=Critical Value



EBERLINE
SERVICES

EBERLINE ANALYTICAL CORPORATION

601 SCARBORO ROAD OAK RIDGE, TN 37830 865/481-0683 FAX 865/483-4621

Eberline Analytical

Final Report of Analysis

Cecilia Greene
Auxier & Associates, Inc.
9821 Cogdill Road, Suite 1
Knoxville, TN 37932

SDG: 15-10086
Project: PAP-KAN
Analysis Category: ENVIRONMENTAL
Sample Matrix: SO

Report To:

Work Order Details:

Lab ID	Sample Type	Client ID	Sample Date	Receipt Date	Analysis Date	Batch ID	Analyte	Method	Result	CU	CSU	MDA	CV	Report Units
15-10086-01	LCS	KNOWN	10/14/15 00:00	10/14/2015	11/2/2015	15-10086	Thorium-230	EML Th-01 Modified	5.37E+00	1.45E-01	1.27E+00	1.06E-01	1.00E-01	pCi/g
15-10086-01	LCS	SPIKE	10/14/15 00:00	10/14/2015	11/2/2015	15-10086	Thorium-230	EML Th-01 Modified	6.26E+00	1.00E+00	6.06E-02	5.54E-02	5.71E-02	pCi/g
15-10086-02	MBL	BLANK	10/14/15 00:00	10/14/2015	11/2/2015	15-10086	Thorium-230	EML Th-01 Modified	8.17E-02	5.97E-02	4.02E-01	5.49E-02	5.65E-02	pCi/g
15-10086-03	DUP	CP4105S01-02	10/06/15 16:30	10/14/2015	11/2/2015	15-10086	Thorium-230	EML Th-01 Modified	1.53E+00	3.54E-01	3.68E-01	4.32E-02	5.51E-02	pCi/g
15-10086-04	DO	CP4105S01-02	10/06/15 16:30	10/14/2015	11/2/2015	15-10086	Thorium-230	EML Th-01 Modified	1.33E+00	3.29E-01	3.12E-01	6.78E-02	6.65E-02	pCi/g
15-10086-05	TRG	CP4105S04-05	10/06/15 16:40	10/14/2015	11/2/2015	15-10086	Thorium-230	EML Th-01 Modified	1.22E+00	3.12E-01	3.46E-01	5.96E-02	5.93E-02	pCi/g
15-10086-06	TRG	CP4105S05-07	10/06/15 16:50	10/14/2015	11/2/2015	15-10086	Thorium-230	EML Th-01 Modified	1.38E+00	3.26E-01	3.68E-01	5.96E-02	5.80E-02	pCi/g
15-10086-07	TRG	CP4105S05-09	10/06/15 17:00	10/14/2015	11/2/2015	15-10086	Thorium-230	EML Th-01 Modified	1.52E+00	3.63E-01	4.09E-01	4.55E-02	5.80E-02	pCi/g
15-10086-08	TRG	CP4105S10-11	10/06/15 17:10	10/14/2015	11/2/2015	15-10086	Thorium-230	EML Th-01 Modified	1.20E+00	3.10E-01	3.44E-01	4.32E-02	4.65E-02	pCi/g
15-10086-09	TRG	CP4105S12-13	10/06/15 17:20	10/14/2015	11/2/2015	15-10086	Thorium-230	EML Th-01 Modified	1.12E+00	2.60E-01	2.95E-01	5.01E-02	5.76E-02	pCi/g
15-10086-10	TRG	CP4105S14-15	10/06/15 17:30	10/14/2015	11/2/2015	15-10086	Thorium-230	EML Th-01 Modified	1.30E+00	3.23E-01	3.61E-01	5.01E-02	5.45E-02	pCi/g
15-10086-11	TRG	CP4105S16-17	10/06/15 17:40	10/14/2015	11/2/2015	15-10086	Thorium-230	EML Th-01 Modified	1.29E+00	2.97E-01	3.37E-01	5.76E-02	5.45E-02	pCi/g
15-10086-12	TRG	CP0404S03-04	10/08/15 08:00	10/14/2015	11/2/2015	15-10086	Thorium-230	EML Th-01 Modified	1.33E+00	2.96E-01	3.38E-01	5.95E-02	5.59E-02	pCi/g
15-10086-13	TRG	CP0404S05-06	10/08/15 08:10	10/14/2015	11/2/2015	15-10086	Thorium-230	EML Th-01 Modified	1.40E+00	3.22E-01	3.66E-01	7.31E-02	6.72E-02	pCi/g
15-10086-14	TRG	CP0404S07-08	10/08/15 08:20	10/14/2015	11/2/2015	15-10086	Thorium-230	EML Th-01 Modified	1.29E+00	2.82E-01	3.24E-01	4.74E-02	4.76E-02	pCi/g
15-10086-15	TRG	CP0404S10-11	10/08/15 08:30	10/14/2015	11/2/2015	15-10086	Thorium-230	EML Th-01 Modified	1.44E+00	3.17E-01	3.64E-01	5.35E-02	5.23E-02	pCi/g
15-10086-16	TRG	CP0404S12-13	10/08/15 08:40	10/14/2015	11/2/2015	15-10086	Thorium-230	EML Th-01 Modified	1.15E+00	2.68E-01	3.03E-01	6.57E-02	6.06E-02	pCi/g
15-10086-17	TRG	CP0404S14-15	10/08/15 09:00	10/14/2015	11/2/2015	15-10086	Thorium-230	EML Th-01 Modified	1.18E+00	2.52E-01	2.92E-01	4.06E-02	4.19E-02	pCi/g
15-10086-18	TRG	CP0404S17-18	10/08/15 09:10	10/14/2015	11/2/2015	15-10086	Thorium-230	EML Th-01 Modified	1.38E+00	3.54E-01	3.93E-01	6.06E-02	6.55E-02	pCi/g

CU=Counting Uncertainty; CSU=Combined Standard Uncertainty (2-sigma); MDA=Minimal Detected Activity; LCS=Laboratory Control Sample; MBL=Blank; DUP=Duplicate; TRG=Normal Sample; DO=Duplicate Original; CV=Critical Value



EBERLINE
SERVICES

EBERLINE ANALYTICAL CORPORATION

601 SCARBORO ROAD OAK RIDGE, TN 37830 865/481-0683 FAX 865/483-4621

Eberline Analytical

Final Report of Analysis

Cecilia Greene
Auxier & Associates, Inc.
9821 Cogdill Road, Suite 1
Knoxville, TN 37932

Report To:

SDG: **15-10086**

Project: **PAP-KAN**

Analysis Category: **ENVIRONMENTAL**

Sample Matrix: **SO**

Lab ID	Sample Type	Client ID	Sample Date	Receipt Date	Analysis Date	Batch ID	Analyte	Method	Result	CU	CSU	MDA	CV	Report Units
15-10086-01	LCS	KNOWN	10/14/15 00:00	10/14/2015	11/2/2015	15-10086	Thorium-232	EML Th-01 Modified	4.71E+00	1.70E-01				pCi/g
15-10086-01	LCS	SPIKE	10/14/15 00:00	10/14/2015	11/2/2015	15-10086	Thorium-232	EML Th-01 Modified	5.46E+00	8.97E-01	1.02E+00	8.43E-02	1.12E-02	pCi/g
15-10086-02	MBL	BLANK	10/14/15 00:00	10/14/2015	11/2/2015	15-10086	Thorium-232	EML Th-01 Modified	-8.33E-03	2.06E-02	2.06E-02	5.87E-02	8.97E-03	pCi/g
15-10086-03	DUP	CP4105S01-02	10/06/15 16:30	10/14/2015	11/2/2015	15-10086	Thorium-232	EML Th-01 Modified	1.35E+00	3.22E-01	3.44E-01	5.48E-02	7.24E-03	pCi/g
15-10086-04	DO	CP4105S01-02	10/06/15 16:30	10/14/2015	11/2/2015	15-10086	Thorium-232	EML Th-01 Modified	1.36E+00	3.34E-01	3.55E-01	4.31E-02	2.46E-03	pCi/g
15-10086-05	TRG	CP4105S04-05	10/06/15 16:40	10/14/2015	11/2/2015	15-10086	Thorium-232	EML Th-01 Modified	1.33E+00	3.32E-01	3.52E-01	5.63E-02	6.21E-03	pCi/g
15-10086-06	TRG	CP4105S06-07	10/06/15 16:50	10/14/2015	11/2/2015	15-10086	Thorium-232	EML Th-01 Modified	1.20E+00	2.94E-01	3.13E-01	6.47E-02	1.35E-02	pCi/g
15-10086-07	TRG	CP4105S08-09	10/06/15 17:00	10/14/2015	11/2/2015	15-10086	Thorium-232	EML Th-01 Modified	1.38E+00	3.38E-01	3.59E-01	5.01E-02	4.26E-03	pCi/g
15-10086-08	TRG	CP4105S10-11	10/06/15 17:10	10/14/2015	11/2/2015	15-10086	Thorium-232	EML Th-01 Modified	1.39E+00	3.48E-01	3.69E-01	6.86E-02	1.18E-02	pCi/g
15-10086-09	TRG	CP4105S12-13	10/06/15 17:20	10/14/2015	11/2/2015	15-10086	Thorium-232	EML Th-01 Modified	1.16E+00	2.65E-01	2.84E-01	3.43E-02	1.95E-03	pCi/g
15-10086-10	TRG	CP4105S14-15	10/06/15 17:30	10/14/2015	11/2/2015	15-10086	Thorium-232	EML Th-01 Modified	1.45E+00	3.53E-01	3.76E-01	6.27E-02	7.05E-04	pCi/g
15-10086-11	TRG	CP4105S16-17	10/06/15 17:40	10/14/2015	11/2/2015	15-10086	Thorium-232	EML Th-01 Modified	1.29E+00	2.98E-01	3.19E-01	3.68E-02	2.10E-03	pCi/g
15-10086-12	TRG	CP0404S03-04	10/08/15 08:00	10/14/2015	11/2/2015	15-10086	Thorium-232	EML Th-01 Modified	1.17E+00	2.69E-01	2.89E-01	4.38E-02	4.83E-03	pCi/g
15-10086-13	TRG	CP0404S05-06	10/08/15 08:10	10/14/2015	11/2/2015	15-10086	Thorium-232	EML Th-01 Modified	1.29E+00	3.03E-01	3.24E-01	6.01E-02	1.15E-02	pCi/g
15-10086-14	TRG	CP0404S07-08	10/08/15 08:20	10/14/2015	11/2/2015	15-10086	Thorium-232	EML Th-01 Modified	1.14E+00	2.57E-01	2.76E-01	3.78E-02	3.23E-03	pCi/g
15-10086-15	TRG	CP0404S10-11	10/08/15 08:30	10/14/2015	11/2/2015	15-10086	Thorium-232	EML Th-01 Modified	1.18E+00	2.73E-01	2.92E-01	4.05E-02	3.45E-03	pCi/g
15-10086-16	TRG	CP0404S12-13	10/08/15 08:40	10/14/2015	11/2/2015	15-10086	Thorium-232	EML Th-01 Modified	1.13E+00	2.64E-01	2.82E-01	5.04E-02	7.73E-03	pCi/g
15-10086-17	TRG	CP0404S14-15	10/08/15 09:00	10/14/2015	11/2/2015	15-10086	Thorium-232	EML Th-01 Modified	1.35E+00	2.79E-01	3.03E-01	4.31E-02	4.83E-04	pCi/g
15-10086-18	TRG	CP0404S17-18	10/06/15 09:10	10/14/2015	11/2/2015	15-10086	Thorium-232	EML Th-01 Modified	1.27E+00	3.32E-01	3.50E-01	6.91E-02	7.78E-04	pCi/g

CU=Counting Uncertainty; CSU=Combined Standard Uncertainty (2-sigma); MDA=Minimal Detected Activity; LCS=Laboratory Control Sample; MBL=Blank; DUP=Duplicate; TRG=Normal Sample; DO=Duplicate Original; CV=Critical Value



EBERLINE
SERVICES

EBERLINE ANALYTICAL CORPORATION

601 SCARBORO ROAD OAK RIDGE, TN 37850 865/481-0683 FAX 865/483-4621

Eberline Analytical

Final Report of Analysis

Cecilia Greene
Auxier & Associates, Inc.
9821 Cogdill Road, Suite 1
Knoxville, TN 37932

SDG: 15-10086
Project: PAP-KAN
Analysis Category: ENVIRONMENTAL
Sample Matrix: SO

Report To:

Work Order Details:

Lab ID	Sample Type	Client ID	Sample Date	Receipt Date	Analysis Date	Batch ID	Analyte	Method	Result	CU	CSU	MDA	CV	Report Units
15-10086-01	LCS	KNOWN	10/14/15 00:00	10/14/2015	11/2/2015	15-10086	Uranium-234	EML U-02 Modified	8.06E+00	2.90E-01	1.30E+00	9.96E-02	1.50E-02	pCi/g
15-10086-01	LCS	SPIKE	10/14/15 00:00	10/14/2015	11/2/2015	15-10086	Uranium-234	EML U-02 Modified	7.72E+00	1.18E+00	3.85E-02	3.62E-02	2.91E-03	pCi/g
15-10086-02	MBL	BLANK	10/14/15 00:00	10/14/2015	11/2/2015	15-10086	Uranium-234	EML U-02 Modified	4.19E-02	3.84E-02	2.88E-01	3.67E-02	2.95E-03	pCi/g
15-10086-03	DUP	CP4105S01-02	10/06/15 16:30	10/14/2015	11/2/2015	15-10086	Uranium-234	EML U-02 Modified	1.30E+00	2.52E-01	2.14E-01	5.31E-02	7.94E-03	pCi/g
15-10086-04	DO	CP4105S01-02	10/06/15 16:30	10/14/2015	11/2/2015	15-10086	Uranium-234	EML U-02 Modified	8.89E-01	2.05E-01	2.29E-01	5.15E-02	5.44E-03	pCi/g
15-10086-05	TRG	CP4105S04-05	10/06/15 16:40	10/14/2015	11/2/2015	15-10086	Uranium-234	EML U-02 Modified	9.01E-01	2.20E-01	2.43E-01	4.07E-02	3.26E-03	pCi/g
15-10086-06	TRG	CP4105S08-07	10/06/15 16:50	10/14/2015	11/2/2015	15-10086	Uranium-234	EML U-02 Modified	1.05E+00	2.31E-01	2.18E-01	7.76E-02	2.41E-02	pCi/g
15-10086-07	TRG	CP4105S08-09	10/06/15 17:00	10/14/2015	11/2/2015	15-10086	Uranium-234	EML U-02 Modified	9.83E-01	2.18E-01	2.50E-01	4.38E-02	3.51E-03	pCi/g
15-10086-08	TRG	CP4105S10-11	10/06/15 17:10	10/14/2015	11/2/2015	15-10086	Uranium-234	EML U-02 Modified	1.05E+00	2.38E-01	2.28E-01	6.20E-02	1.17E-02	pCi/g
15-10086-09	TRG	CP4105S12-13	10/06/15 17:20	10/14/2015	11/2/2015	15-10086	Uranium-234	EML U-02 Modified	9.44E-01	2.18E-01	2.32E-01	4.35E-02	4.60E-03	pCi/g
15-10086-10	TRG	CP4105S14-15	10/06/15 17:30	10/14/2015	11/2/2015	15-10086	Uranium-234	EML U-02 Modified	1.03E+00	2.20E-01	2.17E-01	3.78E-02	3.99E-03	pCi/g
15-10086-11	TRG	CP4105S16-17	10/06/15 17:40	10/14/2015	11/2/2015	15-10086	Uranium-234	EML U-02 Modified	1.02E+00	2.05E-01	2.16E-01	3.80E-02	4.01E-03	pCi/g
15-10086-12	TRG	CP0404S03-04	10/08/15 08:00	10/14/2015	11/2/2015	15-10086	Uranium-234	EML U-02 Modified	1.01E+00	2.04E-01	2.84E-01	4.94E-02	5.22E-03	pCi/g
15-10086-13	TRG	CP0404S05-06	10/08/15 08:10	10/14/2015	11/2/2015	15-10086	Uranium-234	EML U-02 Modified	1.28E+00	2.69E-01	2.68E-01	5.48E-02	8.20E-03	pCi/g
15-10086-14	TRG	CP0404S07-08	10/08/15 08:20	10/14/2015	11/2/2015	15-10086	Uranium-234	EML U-02 Modified	1.22E+00	2.53E-01	2.36E-01	4.10E-02	4.34E-03	pCi/g
15-10086-15	TRG	CP0404S10-11	10/08/15 08:30	10/14/2015	11/2/2015	15-10086	Uranium-234	EML U-02 Modified	1.10E+00	2.22E-01	2.07E-01	5.11E-02	7.65E-03	pCi/g
15-10086-16	TRG	CP0404S12-13	10/08/15 08:40	10/14/2015	11/2/2015	15-10086	Uranium-234	EML U-02 Modified	8.63E-01	1.98E-01	2.10E-01	6.45E-02	1.21E-02	pCi/g
15-10086-17	TRG	CP0404S14-15	10/08/15 09:00	10/14/2015	11/2/2015	15-10086	Uranium-234	EML U-02 Modified	8.09E-01	2.02E-01	2.35E-01	5.20E-02	5.49E-03	pCi/g
15-10086-18	TRG	CP0404S17-18	10/08/15 09:10	10/14/2015	11/2/2015	15-10086	Uranium-234	EML U-02 Modified	9.32E-01	2.26E-01	2.35E-01	5.20E-02	5.49E-03	pCi/g

CU=Counting Uncertainty; CSU=Combined Standard Uncertainty (2-sigma); MDA=Minimal Detected Activity; LCS=Laboratory Control Sample; MBL=Blank; DUP=Duplicate; TRG=Normal Sample; DO=Duplicate Original; CV=Critical Value



EBERLINE
SERVICES

EBERLINE ANALYTICAL CORPORATION

601 SCARBORO ROAD OAK RIDGE, TN 37830 865/481-0683 FAX 865/483-4621

Eberline Analytical

Final Report of Analysis

Cecilia Greene
Auxier & Associates, Inc.
9821 Cogdill Road, Suite 1
Knoxville, TN 37932

15-10086

SDG: PAP-KAN
Project: ENVIRONMENTAL
Analysis Category: SO
Sample Matrix:

Work Order Details:

Report To:

Lab ID	Sample Type	Client ID	Sample Date	Receipt Date	Analysis Date	Batch ID	Analyte	Method	Result	CU	CSU	MDA	CV	Report Units
15-10086-01	LCS	SPIKE	10/14/15 00:00	10/14/2015	11/2/2015	15-10086	Uranium-235	EML U-02 Modified	6.50E-01	2.47E-01	2.51E-01	9.09E-02	4.19E-03	pCi/g
15-10086-02	MBL	BLANK	10/14/15 00:00	10/14/2015	11/2/2015	15-10086	Uranium-235	EML U-02 Modified	3.03E-02	3.66E-02	3.67E-02	4.46E-02	2.05E-03	pCi/g
15-10086-03	DUP	CP4105S01+02	10/06/15 16:30	10/14/2015	11/2/2015	15-10086	Uranium-235	EML U-02 Modified	8.67E-02	6.44E-02	6.47E-02	6.50E-02	5.90E-04	pCi/g
15-10086-04	DO	CP4105S01-02	10/06/15 16:30	10/14/2015	11/2/2015	15-10086	Uranium-235	EML U-02 Modified	1.49E-01	8.38E-02	8.45E-02	4.85E-02	2.23E-03	pCi/g
15-10086-05	TRG	CP4105S04-05	10/06/15 16:40	10/14/2015	11/2/2015	15-10086	Uranium-235	EML U-02 Modified	5.97E-02	5.92E-02	5.93E-02	6.97E-02	6.20E-03	pCi/g
15-10086-06	TRG	CP4105S06-07	10/06/15 16:50	10/14/2015	11/2/2015	15-10086	Uranium-235	EML U-02 Modified	9.42E-02	6.76E-02	6.80E-02	5.02E-02	2.30E-03	pCi/g
15-10086-07	TRG	CP4105S09-09	10/06/15 17:00	10/14/2015	11/2/2015	15-10086	Uranium-235	EML U-02 Modified	6.57E-02	6.68E-02	6.70E-02	9.58E-02	2.32E-02	pCi/g
15-10086-08	TRG	CP4105S10-11	10/06/15 17:10	10/14/2015	11/2/2015	15-10086	Uranium-235	EML U-02 Modified	9.91E-02	7.29E-02	7.33E-02	6.19E-02	4.26E-03	pCi/g
15-10086-09	TRG	CP4105S12-13	10/06/15 17:20	10/14/2015	11/2/2015	15-10086	Uranium-235	EML U-02 Modified	5.65E-02	5.38E-02	5.40E-02	5.80E-02	4.00E-03	pCi/g
15-10086-10	TRG	CP4105S14-15	10/06/15 17:30	10/14/2015	11/2/2015	15-10086	Uranium-235	EML U-02 Modified	7.48E-02	5.91E-02	5.93E-02	5.37E-02	3.70E-03	pCi/g
15-10086-11	TRG	CP4105S16-17	10/06/15 17:40	10/14/2015	11/2/2015	15-10086	Uranium-235	EML U-02 Modified	1.10E-01	6.75E-02	6.80E-02	5.50E-02	5.89E-03	pCi/g
15-10086-12	TRG	CP0404S03-04	10/08/15 08:00	10/14/2015	11/2/2015	15-10086	Uranium-235	EML U-02 Modified	1.63E-02	2.76E-02	2.76E-02	4.69E-02	3.22E-03	pCi/g
15-10086-13	TRG	CP0404S05-06	10/08/15 08:10	10/14/2015	11/2/2015	15-10086	Uranium-235	EML U-02 Modified	1.08E-01	7.63E-02	7.67E-02	6.69E-02	5.96E-03	pCi/g
15-10086-14	TRG	CP0404S07-08	10/08/15 08:20	10/14/2015	11/2/2015	15-10086	Uranium-235	EML U-02 Modified	5.77E-02	5.89E-02	5.90E-02	7.90E-02	1.22E-02	pCi/g
15-10086-15	TRG	CP0404S10-11	10/08/15 08:30	10/14/2015	11/2/2015	15-10086	Uranium-235	EML U-02 Modified	7.23E-02	5.55E-02	5.58E-02	4.42E-02	2.03E-03	pCi/g
15-10086-16	TRG	CP0404S12-13	10/08/15 08:40	10/14/2015	11/2/2015	15-10086	Uranium-235	EML U-02 Modified	1.12E-01	7.36E-02	7.41E-02	6.70E-02	6.09E-04	pCi/g
15-10086-17	TRG	CP0404S14-15	10/08/15 09:00	10/14/2015	11/2/2015	15-10086	Uranium-235	EML U-02 Modified	6.10E-02	5.60E-02	5.61E-02	5.27E-02	2.42E-03	pCi/g
15-10086-18	TRG	CP0404S17-18	10/08/15 09:10	10/14/2015	11/2/2015	15-10086	Uranium-235	EML U-02 Modified	6.71E-02	6.49E-02	6.51E-02	8.04E-02	7.30E-04	pCi/g

CU=Counting Uncertainty; CSU=Combined Standard Uncertainty (2-sigma); MDA=Minimal Detected Activity; LCS=Laboratory Control Sample; MBL=Blank; DUP=Duplicate; TRG=Normal Sample; DO=Duplicate Original; CV=Critical Value



EBERLINE
SERVICES

EBERLINE ANALYTICAL CORPORATION

601 SCARBORO ROAD OAK RIDGE, TN 37830 865/481-0683 FAX 865/483-4621

Eberline Analytical

Final Report of Analysis

Cecilia Greene
Auxier & Associates, Inc.
9821 Cogdill Road, Suite 1
Knoxville, TN 37932

SDG: 15-10086
Project: PAP-KAN
Analysis Category: ENVIRONMENTAL
Sample Matrix: SO

Work Order Details:

Report To:

Lab ID	Sample Type	Client ID	Sample Date	Receipt Date	Analysis Date	Batch ID	Analyte	Method	Result	CU	CSU	MDA	CV	Report Units
15-10086-01	LCS	KNOWN	10/14/15 00:00	10/14/2015	11/2/2015	15-10086	Uranium-238	EML U-02 Modified	7.86E+00	2.83E-01	1.41E+00	1.05E-01	1.33E-03	pC/g
15-10086-01	LCS	SPIKE	10/14/15 00:00	10/14/2015	11/2/2015	15-10086	Uranium-238	EML U-02 Modified	8.48E+00	1.27E+00	3.83E-02	3.60E-02	2.12E-03	pC/g
15-10086-02	MBL	BLANK	10/14/15 00:00	10/14/2015	11/2/2015	15-10086	Uranium-238	EML U-02 Modified	4.17E-02	3.82E-02	2.37E-01	4.94E-02	6.62E-03	pC/g
15-10086-03	DUP	CP4105S01-02	10/06/15 16:30	10/14/2015	11/2/2015	15-10086	Uranium-238	EML U-02 Modified	1.08E+00	2.24E-01	2.36E-01	5.62E-02	7.08E-04	pC/g
15-10086-04	DO	CP4105S01-02	10/06/15 16:30	10/14/2015	11/2/2015	15-10086	Uranium-238	EML U-02 Modified	1.03E+00	2.24E-01	2.36E-01	5.62E-02	7.08E-04	pC/g
15-10086-05	TRG	CP4105S04-05	10/06/15 16:40	10/14/2015	11/2/2015	15-10086	Uranium-238	EML U-02 Modified	1.08E+00	2.46E-01	2.58E-01	5.13E-02	4.48E-03	pC/g
15-10086-06	TRG	CP4105S08-07	10/06/15 16:50	10/14/2015	11/2/2015	15-10086	Uranium-238	EML U-02 Modified	1.05E+00	2.31E-01	2.43E-01	5.09E-02	5.68E-03	pC/g
15-10086-07	TRG	CP4105S08-09	10/06/15 17:00	10/14/2015	11/2/2015	15-10086	Uranium-238	EML U-02 Modified	1.04E+00	2.30E-01	2.42E-01	8.58E-02	3.13E-02	pC/g
15-10086-08	TRG	CP4105S10-11	10/06/15 17:10	10/14/2015	11/2/2015	15-10086	Uranium-238	EML U-02 Modified	1.47E+00	2.96E-01	3.14E-01	4.36E-02	2.58E-03	pC/g
15-10086-09	TRG	CP4105S12-13	10/06/15 17:20	10/14/2015	11/2/2015	15-10086	Uranium-238	EML U-02 Modified	9.70E-01	2.23E-01	2.33E-01	8.57E-02	2.91E-02	pC/g
15-10086-10	TRG	CP4105S14-15	10/06/15 17:30	10/14/2015	11/2/2015	15-10086	Uranium-238	EML U-02 Modified	1.02E+00	2.19E-01	2.31E-01	5.43E-02	8.40E-03	pC/g
15-10086-11	TRG	CP4105S16-17	10/06/15 17:40	10/14/2015	11/2/2015	15-10086	Uranium-238	EML U-02 Modified	1.01E+00	2.03E-01	2.16E-01	4.72E-02	5.93E-04	pC/g
15-10086-12	TRG	CP0404S03-04	10/08/15 08:00	10/14/2015	11/2/2015	15-10086	Uranium-238	EML U-02 Modified	1.06E+00	2.10E-01	2.23E-01	3.30E-02	1.94E-03	pC/g
15-10086-13	TRG	CP0404S05-06	10/08/15 08:10	10/14/2015	11/2/2015	15-10086	Uranium-238	EML U-02 Modified	1.65E+00	3.21E-01	3.42E-01	7.06E-02	1.48E-02	pC/g
15-10086-14	TRG	CP0404S07-08	10/08/15 08:20	10/14/2015	11/2/2015	15-10086	Uranium-238	EML U-02 Modified	1.02E+00	2.28E-01	2.40E-01	7.74E-02	2.21E-02	pC/g
15-10086-15	TRG	CP0404S10-11	10/08/15 08:30	10/14/2015	11/2/2015	15-10086	Uranium-238	EML U-02 Modified	9.13E-01	1.98E-01	2.08E-01	3.57E-02	2.10E-03	pC/g
15-10086-16	TRG	CP0404S12-13	10/08/15 08:40	10/14/2015	11/2/2015	15-10086	Uranium-238	EML U-02 Modified	9.81E-01	2.14E-01	2.25E-01	5.94E-02	1.14E-02	pC/g
15-10086-17	TRG	CP0404S14-15	10/08/15 09:00	10/14/2015	11/2/2015	15-10086	Uranium-238	EML U-02 Modified	8.70E-01	2.11E-01	2.20E-01	5.75E-02	7.70E-03	pC/g
15-10086-18	TRG	CP0404S17-18	10/08/15 09:10	10/14/2015	11/2/2015	15-10086	Uranium-238	EML U-02 Modified	8.75E-01	2.17E-01	2.26E-01	4.52E-02	2.68E-03	pC/g

CU=Counting Uncertainty; CSU=Combined Standard Uncertainty (2-sigma); MDA=Minimal Detected Activity; LCS=Laboratory Control Sample; MBL=Blank; DUP=Duplicate; TRG=Normal Sample; DO=Duplicate Original; CV=Critical Value



EBERLINE
SERVICES

EBERLINE ANALYTICAL CORPORATION

601 SCARBORO ROAD OAK RIDGE, TN 37830 865/481-0683 FAX 865/483-4621

SECTION V
ANALYTICAL STANDARD

U-8

QA/QC REVIEWED
Date 1/16/95 Initials WA

CERTIFICATE OF CALIBRATION ALPHA STANDARD SOLUTION

Radionuclide:	U-238NAT	Customer:	TMA EBERLINE
Half Life:	$(4.468 \pm 0.005) \times 10^9$ years	P.O.No.:	OR2778
Catalog No.:	7338	Reference Date:	January 1 1995 12:00 PST.
Source No.:	479-50	Contained Radioactivity:	(Total U) 8.016 μ Ci
		Contained Radioactivity:	(Total U) 297 kBq

Description of Solution

a. Mass of solution:	65.2896 g in a 50 ml flame sealed ampoule
b. Chemical form:	Uranyl Nitrate in H ₂ O
c. Carrier content:	None
d. Density:	Approximately 1.3202 g/ml @ 20°C.

Radioimpurities Refer to attached technical data sheet

Radioactive Daughters Refer to attached technical data sheet

Radionuclide Concentration (Total U) 0.1228 μ Ci/g.

Method of Calibration

Activity calculations are based upon known specific activity and mass.

Uncertainty of Measurement

- | | |
|--|-------------|
| a. Systematic uncertainty in instrument calibration: | $\pm 3.0\%$ |
| b. Random uncertainty in assay: | $\pm 0.0\%$ |
| c. Random uncertainty in weighing(s): | $\pm 2.0\%$ |
| d. Total uncertainty at the 99% confidence level: | $\pm 3.6\%$ |

NIST Traceability

This calibration is implicitly traceable to the National Institute of Standards and Technology.

Leak Test(s)

See reverse side for Leak Test(s) applied to this source.

Notes

- Nuclear data were taken from "Table of Radioactive Isotopes", edited by Virginia S. Shirley, 1986.
- IPL participates in an NIST measurement assurance program to establish and maintain implicit traceability for a number of nuclides, based on the blind assay (and later NIST certification) of Standard Reference Materials (As in NRC Regulatory Guide 4.15).

 ERIC ALLAS
QUALITY CONTROL

20 DECEMBER 1994
Date Signed



ISOTOPE PRODUCTS LABORATORIES
3017 N. SAN FERNANDO BLVD.
BURBANK, CALIFORNIA 91504
818-843-7000 FAX 818-843-6168



QUALITY CONTROL PROGRAM

MP-009

Rev.8; 11/01/03

Title: Radioactive Reference Standards Solutions & Records

EBERLINE SERVICES - OAK RIDGE LABORATORY RADIOACTIVE REFERENCE SOLUTIONS PRIMARY DILUTION RECERTIFICATION MP 009

SOLUTION REFERENCE # IPL 479-50 CURRENT DATE 10/1/2015 0:00
SOLUTION # U-8

Principal Radionuclide ^{234, 235, 238}U Half Life, Years 4.468E+09 Half Life, Days 1.632E+12

Radionuclide ^{234, 235, 238}U Reference Date 1/1/1995 0:00
Certified Activity 8.016E+00 μCi
Certified Concentration $\mu\text{Ci per gram}$

Ampoule /Solution Gross 97.6400 Weight, Grams
Empty Ampoule 32.5020 Weight, Grams
Solution Net 65.1380 Weight, Grams
Total Activity in Ampoule 8.0160 μCi

Chemical Composition of Standard Solution
Uranyl nitrate in dilute HNO₃

Dilution Instructions: Dilution Solvent Used 1M HNO₃

Dilute to a volume of 1000.00 milliliters

Certified Total Activity of 8.0160 μCi Which Equals 1.780E+07 dpm at the date listed above

And after dilution the activity of this solution is 1.77955E+04 dpm/ml
This activity concentration is based on the original reference date listed above. All activities are corrected to the date and time of analysis by the laboratory data processing software.

Expiration Date: July 27, 2016

Verified & Approved By [Signature]

Date: 10/1/2015 0:00

QC Approval [Signature]

Date: 10/1/15



QUALITY CONTROL PROGRAM
MP-009

Rev.8; 11/01/03
Title: Radioactive Reference Standards Solutions & Records

EBERLINE SERVICES - OAK RIDGE LABORATORY
RADIOACTIVE REFERENCE STANDARD SOLUTIONS
SECONDARY DILUTION RECERTIFICATION

Solution Reference # MP-009 Date 10/1/2015 0:00
IPL 479-50 Solution # U-8a

Principal Radionuclide ^{234, 235, 238}U Half Life, Years 4.468E+09 Half Life, Days 1.632E+12

Radionuclide of Interest ^{234, 235, 238}U Reference Date 1/1/1995 0:00
Parent Solution Conc. 1.7796E+04 dpm/ml

Chemical Composition of Standard Solution
Uranly Nitrate in 1M HNO₃

Dilution Instructions: Dilution Solvent Used 1M HNO₃

SECONDARY VOLUMETRIC DILUTION

Vol. Parent Solution: 4.0000 ml
Total Activity: 7.1182E+04 dpm Final Activity Concentration: 7.1182E+01 dpm/ml
Final Volume: 1000.00 ml

NOTES:

This activity concentration is based on the original reference date listed above. All activities are corrected to the date and time of analysis by the laboratory data processing software.

Isotopic Distribution as:
U-238 Atom % = 48.239 U-238 = 71.182 dpm/ml X 0.48249 = 34.345 dpm/ml
U-235 Atom % = 2.25 U-235 = 71.182 dpm/ml X 0.0225 = 1,602 dpm/ml
U-234 Atom % = 49.501 U-238 = 71.182 dpm/ml X 0.49501 = 35.236 dpm/ml
All values +/- 3.6%
Isotopic ratios from manufacturer's data sheet

Expiration Date: July 27, 2016

Verified & Approved By [Signature]
QC Approval [Signature]

Date: 10/1/2015 0:00
Date: 10/1/15


RECORD COPY

Tracer Solution for Environmental Analysis & Disequilibrium Studies

Product Description & Measurement Certificate

<i>Description</i>	Principal radionuclide: uranium 232 (U-232) Daughter Nuclide: Th-228	Product code: UDP10050 Batch Number: 92/232/67
<i>Measurement</i>	Reference date: Radioactive concentration U-232 which is equivalent to Mass of solution Volume of solution Total activity of U-232 which is equivalent to	01 March 2000 6.739E+03 becquerels per gram of solution 1.821E-01 microcuries per gram of solution 5.35E grams 5.035 millilitres 3.61E+04 becquerels 9.76E-01 microcuries
<i>Accuracy</i>	Method of measurement (see reverse of this certificate) Random uncertainty is: $\pm 0.7\%$ Systematic uncertainty: $\pm 0.5\%$ Overall uncertainty in the radioactive concentration quoted above: $\pm 1.7\%$ Overall uncertainty is defined on the reverse of this certificate.	
<i>Radionuclidic Purity</i>	Any radioactive impurities measured are listed below, expressed as percentages of the activity of the principle radionuclide at the reference date . Th-228 and daughter activity removed 2 Feb 2000 U-232 daughters activity will increase with time. By alpha 88% U-232, 12% daughters on 1/3/00	
<i>Isotopic Purity</i>	The isotopic composition, expressed as atom per cent at the reference date . Not measured	
<i>Chemical Composition</i>	Calculated weight of U-232, 4.42E-08 grams, as 2M HNO ₃ solution in a flame sealed glass vial. This Tracer solution has been produced 'carrier free'.	
<i>Physical Data</i>	Recommended half life of uranium 232: 6.980E+01 years Principle energies of alpha emissions (MeV): 5.263 31.7%, 5.320 68.0% Branching ratio for alpha emission: 100% Calculated specific activity of uranium 232: 8.167E+05 Bq per microgram U-232.	
<i>Remarks</i>	For safety information and notes to ensure correct usage by all persons handling this radioactive Tracer solution please read the instructions accompanying the package. AEA Technology operates a quality management system which has been independently audited and approved to ISO 9001.	

Approved
Signatory



Roger Wiltshire

Project Ref. AE2315

Prepared and characterised in the UK, for world wide distribution by **Isotrak, AEA Technology, QSA.**



QUALITY CONTROL PROGRAM
MP-009

Rev.8; 11/01/03
Title: Radioactive Reference Standards Solutions & Records

EBERLINE SERVICES - OAK RIDGE LABORATORY
RADIOACTIVE REFERENCE SOLUTIONS
PRIMARY DILUTION RECERTIFICATION
MP 009

CURRENT DATE 10/27/2015 0:00

SOLUTION REFERENCE # AEA/Amersham 92/232/67

SOLUTION # U-10

Principal Radionuclide

Half Life, Years

Half Life, Days

²³²U

7.200E+01

2.630E+04

Radionuclide

²³²U

Reference Date

3/1/2000 0:00

Certified Activity 9.760E-01 μCi

Certified Concentration μCi per gram

Ampoule /Solution Gross

Weight, Grams

Empty Ampoule

Weight, Grams

Solution Net

Weight, Grams

Total Activity in Ampoule 0.9760 μCi

Chemical Composition of Standard Solution

²³²U(NO₃)₆ in 2M HNO₃

Dilution Instructions:

Dilution Solvent Used

2M HNO₃

Dilute to a volume of 1000.00 milliliters

Certified Total Activity of 0.9760 μCi

Which Equals 2.167E+06 dpm at the date listed above

And after dilution the activity of this solution is 2.167E+03 dpm/ml

This activity concentration is based on the original reference date listed above. All activities are corrected to the date and time of analysis by the laboratory data processing software.

Expiration Date: October 26, 2016

Verified & Approved By

Date: 10/27/2015 0:00

QC Approval

Date: 10/28/15



QUALITY CONTROL PROGRAM
MP-009

Rev. 6; 11/01/03
Title: Radioactive Reference Standards Solutions & Records

EBERLINE SERVICES - OAK RIDGE LABORATORY
RADIOACTIVE REFERENCE STANDARD SOLUTIONS
SECONDARY DILUTION RECERTIFICATION

Solution Reference # MP-009 AEA/Amersham 92/232/67 Date 10/27/2015 0:00
Solution # U-10a

Principal Radionuclide ²³²U Half Life, Years 7.200E+01 Half Life, Days 2.630E+04

Radionuclide of Interest ²³²U Reference Date 3/1/2000 0:00
Parent Solution Conc. 2.167E+03 dpm/ml

Chemical Composition of Standard Solution
²³²U(NO₃)₆ in 2M HNO₃

Dilution Instructions: Dilution Solvent Used 2M HNO₃

SECONDARY VOLUMETRIC DILUTION

Vol. Parent Solution: 10.0000 ml
Total Activity: 2.1670E+04 dpm Final Activity Concentration: 2.1670E+01 dpm/ml
Final Volume: 1000.00 ml

NOTES:

This activity concentration is based on the original reference date listed above. All activities are corrected to the date and time of analysis by the laboratory data processing software.

Expiration Date: October 26, 2016

Verified & Approved By [Signature]

Date: 10/27/2015 0:00

QC Approval [Signature]

Date: 10/28/15

CERTIFICATE OF CALIBRATION ALPHA STANDARD SOLUTION

Radionuclide:	Th-232	Customer:	TMA EBERLINE
Half Life:	$(1.405 \pm 0.006) \times 10^{10}$ years	P.O.No.:	VH1632
Catalog No.:	7232	Reference Date:	November 1 1993 12:00 PST.
Source No.:	435-104-2	Contained Radioactivity:	(Th-232) 0.0933 μ Ci.
		Contained Radioactivity:	(Th-232) 3.45 kBq.

Description of Solution

a. Mass of solution:	11.9712 g (in a 10 ml flame sealed ampoule)	
b. Chemical form:	Th(NO ₃) ₄ in water	
c. Carrier content:	None added	
d. Density:	Approx. 1.21	g/ml @ 20°C.

Radioimpurities: None detected (other than daughters).

Radioactive Daughters

Ra-228, Ac-228, Th-228, Ra-224, Rn-220, Po-216, Pb-212, Bi-212, Po-212, Tl-208

Radionuclide Concentration

(Th-232) 0.00779 μ Ci/g.

Method of Calibration

Activity calculations are based upon known specific activity and mass.

Uncertainty of Measurement

a. Systematic uncertainty in instrument calibration:	±3.0%
b. Random uncertainty in assay:	±0.0%
c. Random uncertainty in weighing(s):	±2.0%
d. Total uncertainty at the 99% confidence level:	±3.6%

NIST Traceability

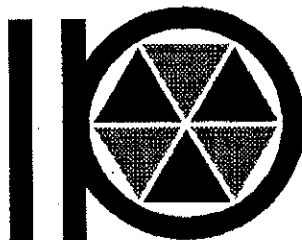
This calibration is implicitly traceable to the National Institute of Standards and Technology.

Leak Test(s)

See reverse side for Leak Test(s) applied to this source.

Notes

1. Nuclear data were taken from "Table of Radioactive Isotopes", edited by Virginia S. Shirley, 1986.
2. IPL participates in an NIST measurement assurance program to establish and maintain implicit traceability for a number of nuclides, based on the blind assay (and later NIST certification) of Standard Reference Materials (As in NRC Regulatory Guide 4.15).



ISOTOPE PRODUCTS LABORATORIES
1800 North Keystone Street
Burbank, California 91504
(818) 843 - 7000

Anna U. Khan
QUALITY CONTROL

Nov. 8, 1993
Date Signed



QUALITY CONTROL PROGRAM
MP-009

Rev.8; 1/10/03
Title: Radioactive Reference Standards Solutions & Records

EBERLINE SERVICES - OAK RIDGE LABORATORY
RADIOACTIVE REFERENCE SOLUTIONS
PRIMARY DILUTION RECERTIFICATION
MP 009

SOLUTION REFERENCE # IPL 435-104-2 **CURRENT DATE** 9/29/2015 0:00
SOLUTION # Th-8

Principal Radionuclide ²³²Th, ²²⁸Th **Half Life, Years** 1.405E+10 **Half Life, Days** 5.132E+12

Radionuclide ²³² & ²²⁸Th **Reference Date** 11/1/1993 0:00
Certified Activity 9.330E-02 μ Ci
Certified Concentration μ Ci per gram

Ampoule /Solution Gross	18.8415	Weight, Grams
Empty Ampoule	6.9296	Weight, Grams
Solution Net	11.9119	Weight, Grams
Total Activity in Ampoule	0.0933	μ Ci

Chemical Composition of Standard Solution
Th(NO₃)₄ in H₂O

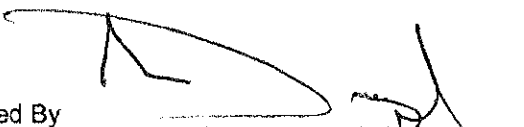
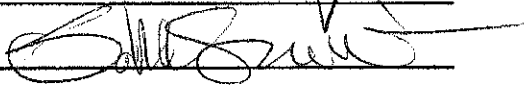
Dilution Instructions: **Dilution Solvent Used** 1% Nitric Acid

Dilute to a volume of 1000.00 milliliters

Certified Total Activity of 0.0933 μ Ci **Which Equals** 2.071E+05 dpm at the date listed above

And after dilution the activity of this solution is 2.071E+02 dpm/ml This activity concentration is based on the original reference date listed above. All activities are corrected to the date and time of analysis by the laboratory data processing software.

Expiration Date: August 25, 2016

Verified & Approved By  Date: 9/29/2015 0:00
QC Approval  Date: 9/30/15



QUALITY CONTROL PROGRAM
MP-009

Rev.8; 1/10/03
Title: Radioactive Reference Standards Solutions & Records

EBERLINE SERVICES - OAK RIDGE LABORATORY
RADIOACTIVE REFERENCE STANDARD SOLUTIONS
SECONDARY DILUTION RECERTIFICATION

Solution Reference # MP-009 IPL 435-104-2 Date 9/29/2015 0:00
Solution # Th-8b

Principal Radionuclide ^{228 & 232}Th Half Life, Years 1.405E+10 Half Life, Days 5.132E+12

Radionuclide of Interest ^{228 & 232}Th Reference Date 11/1/1993 0:00
Parent Solution Conc. 2.07E+02 dpm/ml

Chemical Composition of Standard Solution
Th(NO₃)₄ in 1% HNO₃

Dilution Instructions: Dilution Solvent Used 1% Nitric Acid

SECONDARY VOLUMETRIC DILUTION

Vol. Parent Solution: 500.0000 ml
Total Activity: 1.0355E+05 dpm Final Activity Concentration: 1.0355E+02 dpm/ml
Final Volume: 1000.00 ml

NOTES:

This activity concentration is based on the original reference date listed above. All activities are corrected to the date and time of analysis by the laboratory data processing software.

Expiration Date: August 25, 2016

Verified & Approved By [Signature]

Date: 9/29/2015 0:00

QC Approval [Signature]

Date: 9/30/15

QA/QC REVIEWED

Date 10/14/91 Initials wt

CERTIFICATE OF CALIBRATION ALPHA STANDARD SOLUTION

Received
OCT 14 1991
TMA/Eberline
Oak Ridge Lab

Radionuclide: Th-230
Half Life: $(7.54 \pm 0.03) \times 10^4$ years
Catalog No.: 7230
Source No.: 388-116

Customer: TMA EBERLINE
P.O.No.: TT4944
Reference Date: November 1 1991 12:00 PST.
Contained Radioactivity: 1.036 μ Ci.

Description of Solution

- a. Mass of solution: 5.0042 grams.
- b. Chemical form: Th(NO₃)₄ in 0.1N HNO₃
- c. Carrier content: None added
- d. Density: 1.0016 gram/ml @ 20°C.

Radioimpurities

See attached technical data sheet

Radioactive Daughters

See attached technical data sheet

Radionuclide Concentration

0.207 μ Ci/gram.

Method of Calibration

Weighed aliquots of the solution were assayed using a liquid scintillation counter.

Uncertainty of Measurement

- a. Systematic uncertainty in instrument calibration: $\pm 2.0\%$
- b. Random uncertainty in assay: $\pm 0.5\%$
- c. Random uncertainty in weighing(s): $\pm 0.2\%$
- d. Total uncertainty at the 99% confidence level: $\pm 2.7\%$

NIST Traceability

This calibration is implicitly traceable to the National Institute of Standards and Technology.

Notes

1. Nuclear data were taken from "Table of Isotopes", Seventh Edition, edited by Virginia S. Shirley.
2. IPL participates in an NIST measurement assurance program to establish and maintain implicit traceability for a number of nuclides, based on the blind assay (and later NIST certification) of Standard Reference Materials. (As in NRC Regulatory Guide 4.15)



ISOTOPE PRODUCTS LABORATORIES
 1800 No. Keystone Street.,
 Burbank, California 91504
 (818) 843 - 7000

[Signature]
QUALITY CONTROL



QUALITY CONTROL PROGRAM

MP-009

Rev.14; 10/10/2012

Title: Radioactive Reference Standards Solutions & Records

EBERLINE SERVICES - OAK RIDGE LABORATORY RADIOACTIVE REFERENCE SOLUTIONS PRIMARY DILUTION RECERTIFICATION MP 009

CURRENT DATE 4/15/2015 0:00

SOLUTION REFERENCE # IPL 388-116

SOLUTION # Th-1

Principal Radionuclide	Half Life, Years	Half Life, Days
²³⁰ Th	7.540E+04	2.754E+07

Radionuclide ²³⁰Thorium Reference Date 11/1/1991 0:00

Certified Activity 1.036E+00 μCi

Certified Concentration μCi per gram

Ampoule /Solution Gross	9.2660	Weight, Grams
Empty Ampoule	4.6218	Weight, Grams
Solution Net	4.6442	Weight, Grams
Total Activity in Ampoule	1.0360	μCi

Chemical Composition of Standard Solution

²³⁰Th(NO₃)₄ in 0.1N HNO₃

Dilution Instructions: Dilution Solvent Used 0.1N HNO₃

Dilute to a volume of 1000.00 milliliters

Certified Total Activity of 1.0360 μCi Which Equals 2.300E+06 dpm at the date listed above

And after dilution the activity of this solution is 2.300E+03 dpm/ml

This activity concentration is based on the original reference date listed above. All activities are corrected to the date and time of analysis by the laboratory data processing software.

Expiration Date: February 12, 2016

Recertified By

Date: 4/15/2015 0:00

QC Approval

Date: 4/15/15



QUALITY CONTROL PROGRAM
MP-009

Rev.14; 10/10/2012
Title: Radioactive Reference Standards Solutions & Records

EBERLINE SERVICES - OAK RIDGE LABORATORY
RADIOACTIVE REFERENCE STANDARD SOLUTIONS
SECONDARY DILUTION RECERTIFICATION

Solution Reference #		MP-009 IPL 388-116	Date	4/15/2015 0:00
Solution #				Th-1b
Principal Radionuclide	Half Life, Years	Half Life, Days		
²³⁰ Th	7.540E+04	2.754E+07		
Radionuclide of Interest	²³⁰ Thorium	Reference Date	11/1/1991 0:00	
Parent Solution Conc.	2.30E+03 dpm/ml			
Chemical Composition of Standard Solution				
²³⁰ Th(NO ₃) ₄ in 0.1N HNO ₃				

Dilution Instructions:	Dilution Solvent Used	0.1N HNO ₃	
SECONDARY VOLUMETRIC DILUTION			
Vol. Parent Solution:	10.0000 ml	Final Activity Concentration:	2.2999E+01 dpm/ml
Total Activity:	2.2999E+04 dpm		
Final Volume:	1000.00 ml		
NOTES:	This activity concentration is based on the original reference date listed above. All activities are corrected to the date and time of analysis by the laboratory data processing software.		
		Expiration Date:	February 12, 2016
Recertified By		Date:	4/15/2015 0:00
QC Approval		Date:	4/5/15



**Isotope Products
Laboratories**

An Eckert & Ziegler Company

24937 Avenue Tibbitts
Valencia, California 91355

Tel 661•309•1010
Fax 661•257•8303

Th-18

CERTIFICATE OF CALIBRATION ALPHA STANDARD SOLUTION

Radionuclide: Th-229	Customer: EBERLINE SERVICES
Half-life: 7340 ± 160 years	P.O. No.: 00009633
Catalog No.: 7229	Reference Date: 15-Jan-02 12:00 PST
Source No.: 867-54	Contained Radioactivity: 1.013 μCi 37.48 kBq (Th-229 only)

Physical Description:

A. Mass of solution:	5.0147 g in 5 mL flame-sealed ampoule
B. Chemical form:	Th(NO ₃) ₄ in 0.1M HNO ₃
C. Carrier content:	10μg Th/mL
D. Density:	1.0016 g/mL @ 20°C.

Radioimpurities:

None detected (daughters in equilibrium)

Radionuclide Concentration: 0.2020 μCi/g, 7.474 kBq/g

Method of Calibration:

This source was prepared from a weighed aliquot of solution whose activity in μCi/g was determined using gamma ray spectrometry.

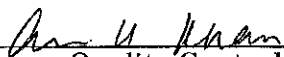
Peak energy used for integration:	193.5 keV
Branching ratio used:	0.0441 gammas per decay

Uncertainty of Measurement:

A. Type A (random) uncertainty:	± 0.7 %
B. Type B (systematic) uncertainty:	± 3.0 %
C. Uncertainty in aliquot weighing:	± 0.0 %
D. Total uncertainty at the 99% confidence level:	± 3.1 %

Notes:

- See reverse side for leak test(s) performed on this source.
- IPL participates in a NIST measurement assurance program to establish and maintain implicit traceability for a number of nuclides, based on the blind assay (and later NIST certification) of Standard Reference Materials (As in NRC Regulatory Guide 4.15).
- Nuclear data was taken from IAEA Technical Report Series No. 261.
- This solution has a working life of 5 years.


Quality Control

9-Jan-02
Date Signed

IPL Ref. No.: 867-54

ISO 9001 CERTIFIED

Medical Imaging Laboratory
24937 Avenue Tibbitts Valencia, California 91355

Industrial Gauging Laboratory
1800 North Keystone Street Burbank, California 91504

: 00042



QUALITY CONTROL PROGRAM

MP-009

Rev.8; 1/10/03

Title: Radioactive Reference Standards Solutions & Records

EBERLINE SERVICES - OAK RIDGE LABORATORY RADIOACTIVE REFERENCE SOLUTIONS PRIMARY DILUTION RECERTIFICATION MP 009

SOLUTION REFERENCE # IPL 867-54 CURRENT DATE 9/29/2015 0:00
SOLUTION # Th-18

Principal Radionuclide ²²⁹Th Half Life, Years 7.340E+03 Half Life, Days 2.681E+06

Radionuclide ²²⁹Th Reference Date 1/15/2002 0:00
Certified Activity 1.013E+00 μCi
Certified Concentration $\mu\text{Ci per gram}$

Ampoule /Solution Gross 8.7752 Weight, Grams
Empty Ampoule 3.7591 Weight, Grams
Solution Net 5.0161 Weight, Grams
Total Activity in Ampoule 1.0130 μCi

Chemical Composition of Standard Solution
²²⁹Th(NO₃)₄ in 0.1M HNO₃

Dilution Instructions: Dilution Solvent Used 0.1 M HNO₃

Dilute to a volume of 1000.00 milliliters

Certified Total Activity of 1.0130 μCi Which Equals 2.249E+06 dpm at the date listed above

And after dilution the activity of this solution is 2.249E+03 dpm/ml
This activity concentration is based on the original reference date listed above. All activities are corrected to the date and time of analysis by the laboratory data processing software.

Expiration Date: August 24, 2016

Verified & Approved By 

Date: 9/29/2015 0:00

QC Approval 

Date: 9/30/15



QUALITY CONTROL PROGRAM
MP-009

Rev.7; 9/29/99
Title: Radioactive Reference Standards Solutions & Records

EBERLINE SERVICES - OAK RIDGE LABORATORY
RADIOACTIVE REFERENCE STANDARD SOLUTIONS
SECONDARY DILUTION RECERTIFICATION

Solution Reference #		MP-009	Date	9/29/2015 0:00
IPL-867-54		Solution #	Th-18a	
Principal Radionuclide	Half Life, Years	Half Life, Days		
²²⁹ Th	7.340E+03	2.681E+06		
Radionuclide of Interest	Parent Solution Conc.	Reference Date		
²²⁹ Th	2.25E+03 dpm/ml	1/15/2002 0:00		
Chemical Composition of Standard Solution				
TH(NO ₃) ₄ in 0.1M HNO ₃				

Dilution Instructions: Dilution Solvent Used 0.1M HNO₃

SECONDARY VOLUMETRIC DILUTION

Vol. Parent Solution: 10.0000 ml
Total Activity: 2.2490E+04 dpm
Final Volume: 1000.00 ml
Final Activity Concentration: 2.2490E+01 dpm/ml

NOTES:

This activity concentration is based on the original reference date listed above. All activities are corrected to the date and time of analysis by the laboratory data processing software.

Expiration Date: August 24, 2016

Verified & Approved By

Date: 9/29/2015 0:00

QC Approval

Date: 9/30/15

CERTIFICATE OF CALIBRATION
Standard Radionuclide Source

GAS-1402

98503

Sand in 16 Ounce PP Taral Jar Filled to Capacity

Customer: Eberline Analytical Corporation
P.O. No.: OR-1405030, Item 6 **Product Code:** 8401-EG-SAN
Reference Date: 01-Oct-2014 12:00 PM EST **Grams of Master Source:** 0.017608

This standard radionuclide source was prepared using aliquots measured gravimetrically from master radionuclide solutions. Additional radionuclides were added gravimetrically from solutions calibrated by gamma-ray spectrometry, ionization chamber, or liquid scintillation counting. Calibration and purity were checked using a germanium gamma spectrometer system. At the time of calibration no interfering gamma-ray emitting impurities were detected. The gamma-ray emission rates for the most intense gamma-ray lines are given. Eckert & Ziegler Analytics (EZA) maintains traceability to the National Institute of Standards and Technology through a Measurements Assurance Program as described in USNRC Regulatory Guide 4.15, Revision 2, July 2007, and compliance with ANSI N42.22-1995, "Traceability of Radioactive Sources to NIST." EZA is accredited by the Health Physics Society (HPS) for the production of NIST-traceable sources, and this source was produced in accordance with the HPS accreditation requirements. Customers may report any concerns with the accreditation program to the HPS Secretariat, 1313 Dolley Madison Blvd., Ste. 402, McLean, VA 22101.

Nuclide	Gamma-Ray Energy (keV)	Half-Life, Days	Master Source* ypg/gram	This Source ypg	Uncertainty*, %			Calibration Method*
					Type	u _A	u _B		U
Am-241	59.5	1.580E+05	—	2.030E+03	0.1	1.8	3.6	4π LS
Cd-109	88.0	4.614E+02	1.663E+05	2.929E+03	0.5	2.0	4.1	HPGe
Co-57	122.1	2.717E+02	8.913E+04	1.569E+03	0.4	1.7	3.5	HPGe
Ce-139	165.9	1.376E+02	1.241E+05	2.185E+03	0.4	1.7	3.5	HPGe
Hg-203	279.2	4.659E+01	2.675E+05	4.710E+03	0.3	1.7	3.5	HPGe
Sn-113	391.7	1.151E+02	1.796E+05	3.163E+03	0.4	1.9	3.9	HPGe
Cs-137	661.7	1.099E+04	1.111E+05	1.956E+03	0.7	1.9	4.0	HPGe
Y-88	898.0	1.066E+02	4.223E+05	7.435E+03	0.7	1.7	3.7	HPGe
Co-60	1173.2	1.925E+03	2.091E+05	3.683E+03	0.7	1.8	3.9	HPGe
Co-60	1332.5	1.925E+03	2.094E+05	3.687E+03	0.7	1.8	3.9	HPGe
Y-88	1836.1	1.066E+02	4.471E+05	7.872E+03	0.7	1.7	3.7	HPGe

* Master Source refers to Analytics' 8-isotope mixture which is calibrated quarterly.

Calibration Methods: 4π LS - 4 pi Liquid Scintillation Counting, HPGe - High Purity Germanium Gamma-Ray Spectrometer, IC - Ionization Chamber. **Uncertainty:** U - Relative expanded uncertainty, k = 2. See NIST Technical Note 1297, "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Results."

(Certificate continued on reverse side)



SECTION VI
QUALITY CONTROL SAMPLE RESULTS SUMMARY

W/O	Analysis	Run	Activity Units	Aliquot Units	Client Name
15-10086	UUISO	1	pCi	g	Auxier & Associates, Inc.

Laboratory Control Sample

Analyte	LCS Measured	CSU Measured	LCS Expected	Uncert. Expected	Known	Known Error	Result	CSU	Standard ID	Standard ACT (dpm)	Standard Error	Standard Added (g)
U-234	95.83%	16.86%	100.00%	3.60%	8.06E+00	2.90E-01	7.72E+00	1.30E+00	U-8a	3.52E+01	3.60E+00	5.08E-01
U-238	107.89%	16.62%	100.00%	3.60%	7.86E+00	2.83E-01	8.48E+00	1.41E+00	U-8a	3.44E+01	3.60E+00	5.08E-01

Matrix Spike

Analyte	Normalized Difference	MS Actual % Rec	Expected MS Result	Expected MS Uncert	Actual MS Result	Actual MS CSU	Sample Result	Sample CSU	Sample Aliquot	Standard ID	Standard ACT (dpm)	Standard Error %	Standard Added (g)

Replicate Sample

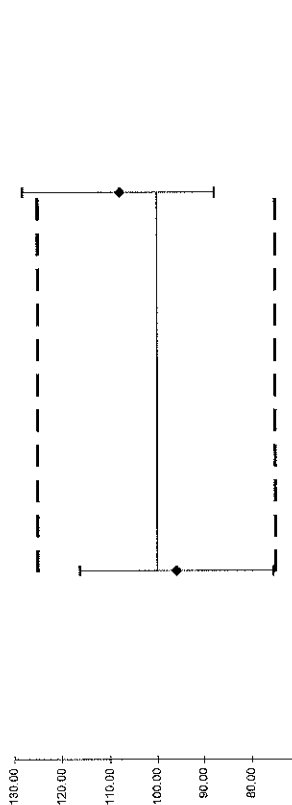
Analyte	Normalized Difference	RPD	Original Result	Original CSU	Replicate Result	Replicate CSU	LCS Relative Bias	LCS % R	MS % R	MS ND	Rep RPD	Rep ND
U-234	2.34	37.56	8.89E-01	2.14E-01	1.30E+00	2.69E-01	0.96	OK			INV	OK
U-238	0.28	4.50	1.03E+00	2.36E-01	1.08E+00	2.37E-01	1.08	OK			OK	OK
U-235	1.15	52.87	1.49E-01	8.45E-02	8.67E-02	6.47E-02		OK			NA	OK

QC Summary

Analyte	Normalized Difference	RPD	Original Result	Original CSU	Replicate Result	Replicate CSU	LCS Relative Bias	LCS % R	MS % R	MS ND	Rep RPD	Rep ND
U-234	2.34	37.56	8.89E-01	2.14E-01	1.30E+00	2.69E-01	0.96	OK			INV	OK
U-238	0.28	4.50	1.03E+00	2.36E-01	1.08E+00	2.37E-01	1.08	OK			OK	OK
U-235	1.15	52.87	1.49E-01	8.45E-02	8.67E-02	6.47E-02		OK			NA	OK

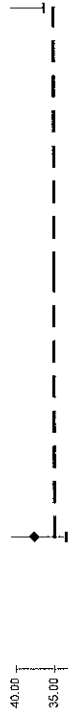
WO	Analysis	Run	Activity Units	Aliquot Units	Client Name
15-10086	UUIISO	1	pCi	g	Auxier & Associates, Inc.

LCS % Recovery



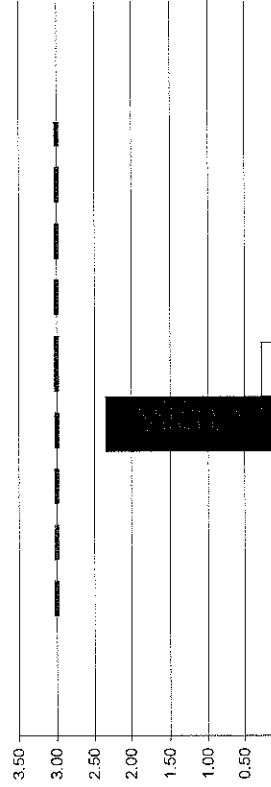
Lower Error	75.37	U-238	87.67
Upper Error	116.29		128.11
%R	95.83		107.89
LCL	75		75
Mean	100		100
UCL	125		125

Replicate Sample RPD



Lower Error	41.71	U-238	5.01	U-235	69.60
Upper Error	33.41		4.00		36.14
RPD	37.56		4.50		52.87
CL	35		35		35

Normalized Difference



LCS ND	REP ND	MS ND
0.00	2.34	0.00
0.00	0.28	0.00
0.00	0.00	0.00
3	3	3

No Matrix Spike

WO	Analysis	Run	Activity Units	Aliquot Units	Client Name
15-10086	ThISO	1	pCi	g	Auxier & Associates, Inc.

Laboratory Control Sample

Analyte	LCS Measured	CSU Measured	LCS Expected	Uncert. Expected	Known	Known Error	Result	CSU	Standard ID	Standard ACT (dpm)	Standard Error	Standard Added (g)
TH-228	115.10%	19.02%	100.00%	3.60%	4.71E+00	1.70E-01	5.42E+00	1.03E+00	Th-8b	1.04E+02	3.60E+00	1.01E-01
TH-230	116.55%	20.24%	100.00%	2.70%	5.37E+00	1.45E-01	6.26E+00	1.27E+00	Th-1b	2.35E+01	2.70E+00	5.07E-01
TH-232	115.86%	18.65%	100.00%	3.60%	4.71E+00	1.70E-01	5.46E+00	1.02E+00	Th-8b	1.04E+02	3.60E+00	1.01E-01

Matrix Spike

Analyte	Normalized Difference	MS Actual % Rec	Expected MS Result	Expected MS Uncert	Actual MS Result	Actual MS CSU	Sample Result	Sample CSU	Sample Aliquot	Standard ID	Standard ACT (dpm)	Standard Error %	Standard Added (g)

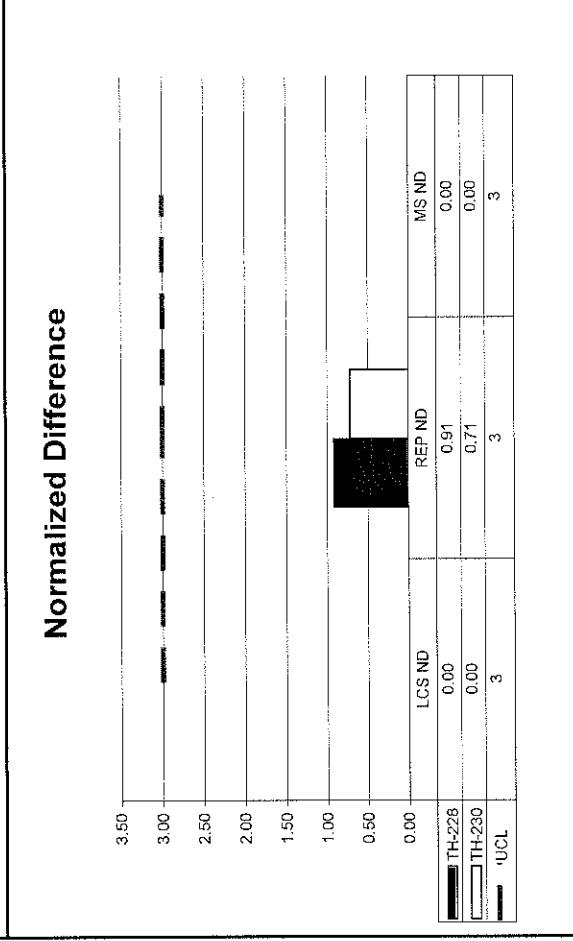
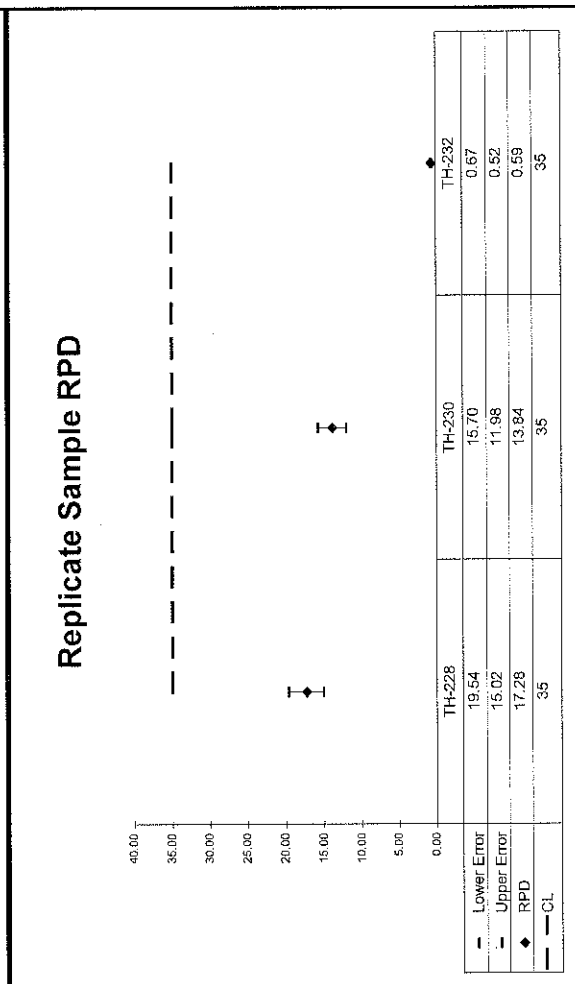
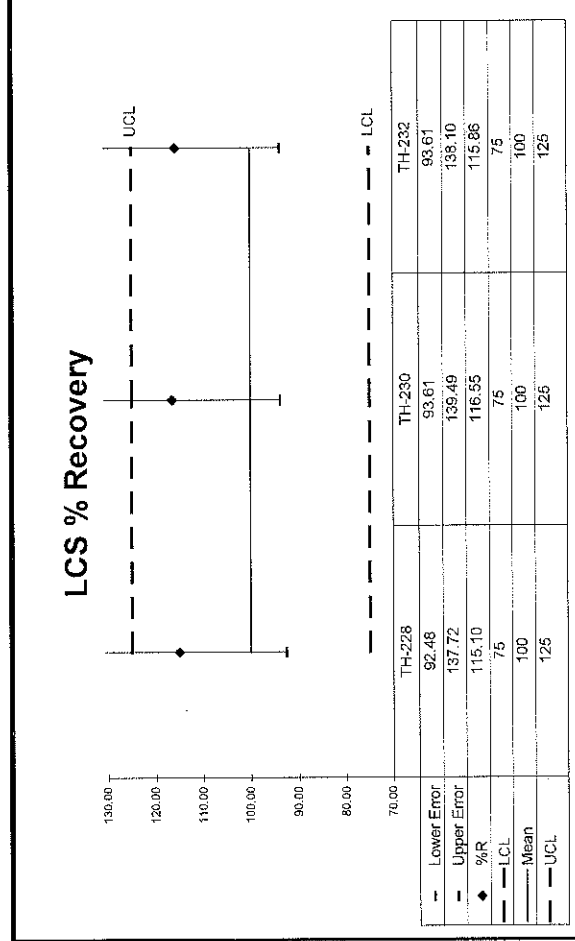
Replicate Sample

Analyte	Normalized Difference	RPD	Original Result	Expected MS Uncert	Replicate Result	Replicate CSU	LCS Relative Bias	LCS % R	MS % R	MS ND	Rep RPD	Rep ND
TH-228	0.91	17.28	1.47E+00	3.83E-01	1.24E+00	3.25E-01	1.15	OK			OK	OK
TH-230	0.71	13.84	1.33E+00	3.68E-01	1.53E+00	4.02E-01	1.17	OK			OK	OK
TH-232	0.03	0.59	1.36E+00	3.55E-01	1.35E+00	3.44E-01	1.16	OK			OK	OK

QC Summary

Analyte	Normalized Difference	RPD	Original Result	Expected MS Uncert	Replicate Result	Replicate CSU	LCS Relative Bias	LCS % R	MS % R	MS ND	Rep RPD	Rep ND
TH-228	0.91	17.28	1.47E+00	3.83E-01	1.24E+00	3.25E-01	1.15	OK			OK	OK
TH-230	0.71	13.84	1.33E+00	3.68E-01	1.53E+00	4.02E-01	1.17	OK			OK	OK
TH-232	0.03	0.59	1.36E+00	3.55E-01	1.35E+00	3.44E-01	1.16	OK			OK	OK

WO	Analysis	Run	Activity Units	Aliquot Units	Client Name
15-10086	ThISO	1	pCi	g	Auxier & Associates, Inc.



No Matrix Spike

WO	Analysis	Run	Activity Units	Aliquot Units	Client Name
15-10086	Gamma	1	pCi	g	Auxier & Associates, Inc.

Laboratory Control Sample

Analyte	LCS Measured	CSU Measured	LCS Expected	Uncert. Expected	Known	Known Error	Result	CSU	Standard ID	Standard ACT (dpm)	Standard Error	Standard Added (g)
CO-60	99.41%	7.73%	100.00%	4.00%	1.37E+02	5.48E+00	1.36E+02	1.05E+01	GAS-1302	1.37E+02	5.48E+00	7.36E+02
CS-137	103.63%	10.24%	100.00%	4.00%	8.69E+01	3.48E+00	9.01E+01	9.22E+00	GAS-1302	8.69E+01	3.48E+00	7.36E+02

Matrix Spike

Analyte	Normalized Difference	MS Actual % Rec	Expected MS Result	Expected MS Uncert	Actual MS Result	Actual MS CSU	Sample Result	Sample CSU	Sample Aliquot	Standard ID	Standard ACT (dpm)	Standard Error %	Standard Added (g)

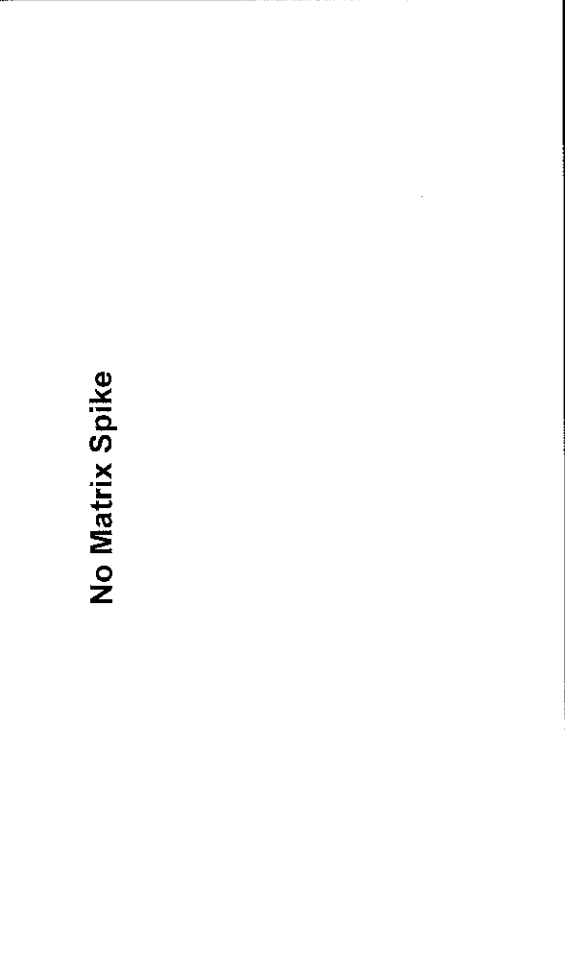
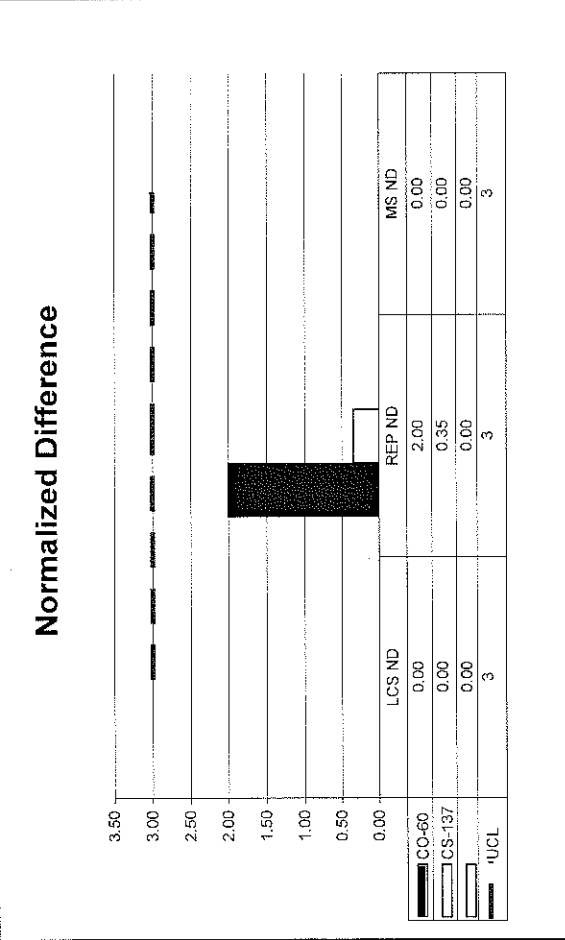
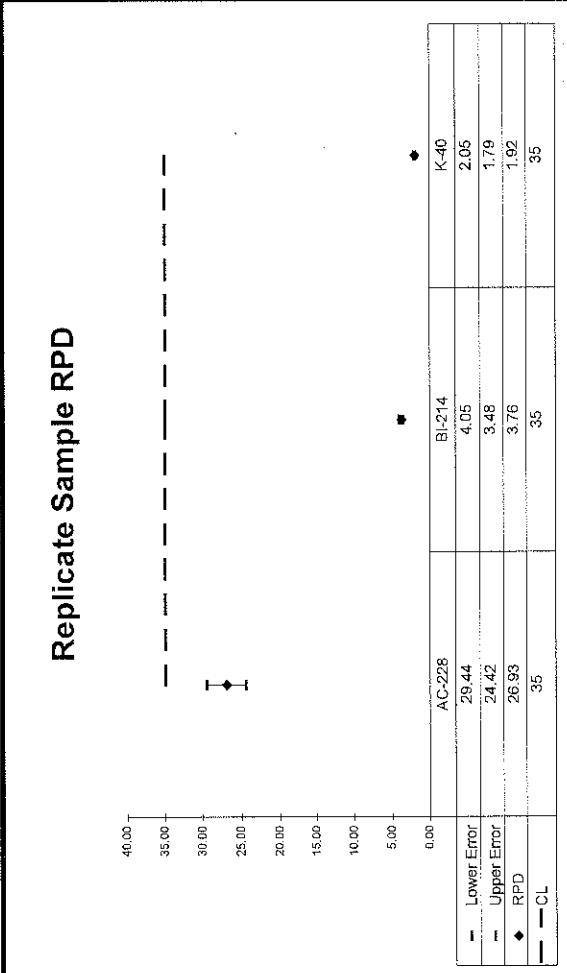
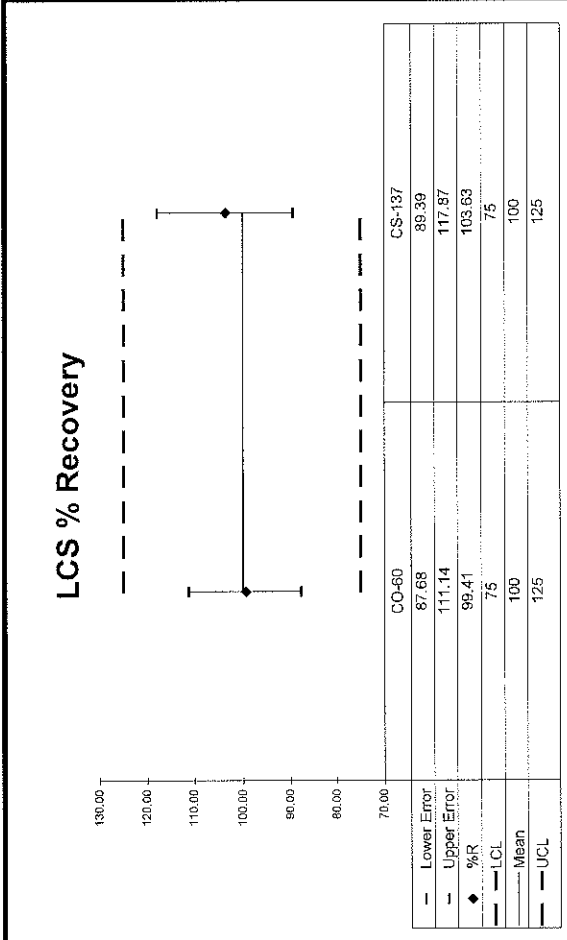
Replicate Sample

Analyte	Normalized Difference	RPD	Original Result	Original CSU	Replicate Result	Replicate CSU	LCS Relative Bias	LCS % R	MS % R	MS ND	Rep RPD	Rep ND
AC-228	2.00	26.93	1.60E+00	2.51E-01	1.22E+00	2.75E-01	0.99	OK	<CS-137	AC-228>	OK	
BI-214	0.35	3.76	1.42E+00	2.01E-01	1.37E+00	2.18E-01	1.04	OK	<CO-60	BI-214>	OK	OK
K-40	0.20	1.92	1.93E+01	2.55E+00	1.90E+01	2.55E+00				K-40>	OK	OK

QC Summary


Analyte	Normalized Difference	RPD	Original Result	Original CSU	Replicate Result	Replicate CSU	LCS Relative Bias	LCS % R	MS % R	MS ND	Rep RPD	Rep ND
AC-228	2.00	26.93	1.60E+00	2.51E-01	1.22E+00	2.75E-01	0.99	OK	<CS-137	AC-228>	OK	
BI-214	0.35	3.76	1.42E+00	2.01E-01	1.37E+00	2.18E-01	1.04	OK	<CO-60	BI-214>	OK	OK
K-40	0.20	1.92	1.93E+01	2.55E+00	1.90E+01	2.55E+00				K-40>	OK	OK

WO	Analysis	Run	Activity Units	Aliquot Units	Client Name
15-10086	Gamma	1	pCi	g	Auxier & Associates, Inc.




SECTION VII
LABORATORY TECHNICIAN'S NOTES
& RUN LOGS

ISO U NOTES

 EBERLINE SERVICES Work Order Analysis Notes	Oak Ridge Laboratory 601 Scarboro Rd. Oak Ridge, TN 37830 Voice: 865.481.0683 www.eberlineservices.com	Internal Work Order	15-10086
		Analysis Code	UUISO
		Run Number	1


#	Date	Dept	User	Notes
1	10/16/15 13:11	PREP	JPACHELLA	Samples were aliquoted, spiked and traced. Samples were digested with HF till dry. Samples were further digested in a mixed acid digestion till dry. Samples were submitted to separations.

10-16-15 JPachella

 EBERLINE <small>SERVICES</small> Work Order Analysis Notes	Oak Ridge Laboratory 601 Scarboro Rd. Oak Ridge, TN 37830 Voice: 865.481.0683 www.eberlineservices.com	Internal Work Order	15-10086
		Analysis Code	UUISO
		Run Number	1


#	Date	Dept	User	Notes
1	10/16/15 13:11	PREP	JPACHELLA	Samples were aliquoted, spiked and traced. Samples were digested with HF till dry. Samples were further digested in a mixed acid digestion till dry. Samples were submitted to separations.
2	10/30/15 16:24	CHEM	JDEMELAS	Added concentrated HCl to sample beakers and heated to dryness; Added 20 ml 8N HCL to samples and transferred to new, labeled C-Tubes, rinsing with 8N HCl to bring volume to ~35 ml; Preconditioned resin columns with 35 ml 8N HCl; Centrifuged samples and loaded onto columns; Rinsed C-Tubes with 20 ml 8N HCl, centrifuged as needed and loaded onto columns; Rinsed columns with 35 ml 8N HCl - 0.1N NH4I, 35 ml of 6.5N HCl - 0.04N HF, and 10 ml of 6.5N HCl; Eluted Uranium with 50 ml of 0.5N HCl into clean, labeled 100 ml beakers; Dried-down samples on hotplate; Dissolved samples in ~10 ml of concentrated HCl; Transferred to new, labeled C-Tubes with DI H2O. Set samples aside for later precipitation and filtering.

John Demelas
 10/30/15

 EBERLINE <small>SERVICES</small> Work Order Analysis Notes	Oak Ridge Laboratory 601 Scarboro Rd. Oak Ridge, TN 37830 Voice: 865.481.0683 www.eberlineservices.com	Internal Work Order	15-10086
		Analysis Code	UUISO
		Run Number	1

#	Date	Dept	User	Notes
1	10/16/15 13:11	PREP	JPACHELLA	Samples were aliquoted, spiked and traced. Samples were digested with HF till dry. Samples were further digested in a mixed acid digestion till dry. Samples were submitted to separations.
2	10/30/15 16:24	CHEM	JDEMELAS	Added concentrated HCl to sample beakers and heated to dryness; Added 20 ml 8N HCL to samples and transferred to new, labeled C-Tubes, rinsing with 8N HCl to bring volume to ~35 ml; Preconditioned resin columns with 35 ml 8N HCl; Centrifuged samples and loaded onto columns; Rinsed C-Tubes with 20 ml 8N HCl, centrifuged as needed and loaded onto columns; Rinsed columns with 35 ml 8N HCl - 0.1N NH4I, 35 ml of 6.5N HCl - 0.04N HF, and 10 ml of 6.5N HCl; Eluted Uranium with 50 ml of 0.5N HCl into clean, labeled 100-ml beakers; Dried-down samples on hotplate; Dissolved samples in ~10 ml of concentrated HCl; Transferred to new, labeled C-Tubes with DI H2O. Set samples aside for later precipitation and filtering.
3	11/02/15 05:06	CHEM	TSMITH	Followed steps 12.1.7 to 12.4.5 in AP-005 . (Precipitated and filtered samples for Uranium)

11/2/15
 JSM

 EBERLINE SERVICES		Internal Work Order		
		15-10086		
Reagents Used in an Analysis		Analysis Code		Run
		UUISO		1
Reagent ID	Reagent Name	Reagent Concentration	Analyst ID	Date Recorded
016569P	Hydrofluoric Acid	Reagent Grade	JPACHELLA	10/16/2015
016519P	Nitric Acid	Reagent Grade	JPACHELLA	10/16/2015
016158P	Perchloric Acid	Reagent Grade	JPACHELLA	10/16/2015
016679P	Sulfuric Acid	Reagent Grade	JPACHELLA	10/16/2015
016862P	Anion Exchange Resin	Reagent Grade	JDEMELAS	10/30/2015
016948S	HCl - HF	6.5N - 0.04N	JDEMELAS	10/30/2015
016745D03	Hydrochloric Acid	0.5N	JDEMELAS	10/30/2015
016803S	Hydrochloric Acid	6.5N	JDEMELAS	10/30/2015
016951S	Hydrochloric Acid	8N	JDEMELAS	10/30/2015
016796P	Hydrochloric Acid	Reagent Grade	JDEMELAS	10/30/2015
016958S	HCl - NH4I	8N - 0.1M	JDEMELAS	10/30/2015
016874D03	Hydrochloric Acid	0.5N	JDEMELAS	10/30/2015
016924S	Carbon substrate	Solution	TSMITH	11/2/2015
016569P	Hydrofluoric Acid	Reagent Grade	TSMITH	11/2/2015
016583S	Neodymium Carrier	1 mg/ml	TSMITH	11/2/2015
016514P	Reagent Alcohol	Reagent Grade	TSMITH	11/2/2015
016606P	Titanous Chloride	Reagent Grade	TSMITH	11/2/2015

Alpha # 3


Date	Project	Client	Start Time	End Time	Analysis	Fee
10/30/15	1510091A(6-19)	Auxier	1430	2hr50	ULL	KB
10/30/15	System Bkgd	Lab	1725	1hr40	-	KB
1112	Philypulse	UPS	0510	1hr	UT	-
1112	1510086AU18)	Auxier	0828	2hr	ULL750	-
1112	1510086AU10)	Auxier	0829	2hr	7hr50	-

ISO-TH NOTES

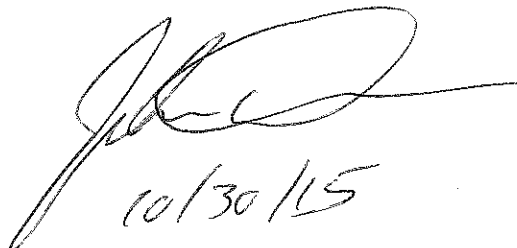
 EBERLINE <small>SERVICES</small> Work Order Analysis Notes	Oak Ridge Laboratory 601 Scarboro Rd. Oak Ridge, TN 37830 Voice: 865.481.0683 www.eberlineservices.com		Internal Work Order	15-10086
			Analysis Code	ThISO
			Run Number	1

#	Date	Dept	User	Notes
1	10/16/15 13:12	PREP	JPACHELLA	Samples were aliquoted, spiked and traced. Samples were digested with HF till dry. Samples were further digested in a mixed acid digestion till dry. Samples were submitted to separations.

10-16-15 JPachella

 EBERLINE <small>SERVICES</small> Work Order Analysis Notes	Oak Ridge Laboratory 601 Scarboro Rd. Oak Ridge, TN 37830 Voice: 865.481.0683 www.eberlineservices.com	Internal Work Order	15-10086
		Analysis Code	ThISO
		Run Number	1

#	Date	Dept	User	Notes
1	10/16/15 13:12	PREP	JPACHELLA	Samples were aliquoted, spiked and traced. Samples were digested with HF till dry. Samples were further digested in a mixed acid digestion till dry. Samples were submitted to separations.
2	10/30/15 16:25	CHEM	JDEMELAS	Added concentrated HNO3 to sample beakers and heated to dryness; Added 20 ml 8N HNO3 to samples and transferred to new, labeled C-Tubes, adding 8N HNO3 to bring volume to ~35 ml; Preconditioned resin columns with 50 ml 8N HNO3; Centrifuged samples as needed, and passed through columns; Rinsed C-Tubes with 20 ml 8N HNO3; Centrifuged rinsates and loaded onto columns; Rinsed columns with 40 ml 8N HNO3; Eluted Thorium with 50 ml of 8N HCl into clean, labeled 100-ml beakers; Dried-down samples on hotplate; Dissolved samples in ~10 ml of concentrated HCl; Transferred to new, labeled C-Tubes with deionized water, bringing volume to ~15ml. Set samples aside for later precipitation and filtering.


 10/30/15

 EBERLINE <small>SERVICES</small> Work Order Analysis Notes	Oak Ridge Laboratory 601 Scarboro Rd. Oak Ridge, TN 37830 Voice: 865.481.0683 www.eberlineservices.com	Internal Work Order	15-10086
		Analysis Code	ThISO
		Run Number	1

#	Date	Dept	User	Notes
1	10/16/15 13:12	PREP	JPACHELLA	Samples were aliquoted, spiked and traced. Samples were digested with HF till dry. Samples were further digested in a mixed acid digestion till dry. Samples were submitted to separations.
2	10/30/15 16:25	CHEM	JDEMELAS	Added concentrated HNO3 to sample beakers and heated to dryness; Added 20 ml 8N HNO3 to samples and transferred to new, labeled C-Tubes, adding 8N HNO3 to bring volume to ~35 ml; Preconditioned resin columns with 50 ml 8N HNO3; Centrifuged samples as needed, and passed through columns; Rinsed C-Tubes with 20 ml 8N HNO3; Centrifuged rinsates and loaded onto columns; Rinsed columns with 40 ml 8N HNO3; Eluted Thorium with 50 ml of 8N HCl into clean, labeled 100-ml beakers; Dried-down samples on hotplate; Dissolved samples in ~10 ml of concentrated HCl; Transferred to new, labeled C-Tubes with deionized water, bringing volume to ~15ml. Set samples aside for later precipitation and filtering.
3	11/02/15 05:08	CHEM	TSMITH	Followed steps 12.2.5 to 12.4.5 in AP-005 . (Precipitated and filtered samples for Thorium)

11-2-15
 JM



EBERLINE
SERVICES

Reagents Used in an Analysis

Internal Work Order

15-10086

Analysis Code

Run

ThISO

1

Reagent ID	Reagent Name	Reagent Concentration	Analyst ID	Date Recorded
016569P	Hydrofluoric Acid	Reagent Grade	JPACHELLA	10/16/2015
016519P	Nitric Acid	Reagent Grade	JPACHELLA	10/16/2015
016679P	Sulfuric Acid	Reagent Grade	JPACHELLA	10/16/2015
016158P	Perchloric Acid	Reagent Grade	JPACHELLA	10/16/2015
016862P	Anion Exchange Resin	Reagent Grade	JDEMELAS	10/30/2015
016951S	Hydrochloric Acid	8N	JDEMELAS	10/30/2015
016952S	Nitric Acid	8N	JDEMELAS	10/30/2015
016516P	Nitric Acid	Reagent Grade	JDEMELAS	10/30/2015
016796P	Hydrochloric Acid	Reagent Grade	JDEMELAS	10/30/2015
016924S	Carbon substrate	Solution	TSMITH	11/2/2015
016869S	Cerrium Carrier	0.1mg/ml	TSMITH	11/2/2015
016569P	Hydrofluoric Acid	Reagent Grade	TSMITH	11/2/2015
016514P	Reagent Alcohol	Reagent Grade	TSMITH	11/2/2015

Alpha # 1

Date	Sample #	Client	Trans Time	CT Time	Analysis	Result
10/17	56004(1215)	USA	1032	2hr	ALT	C
10/17	15101274(1-4)	UCON	0876	2hr	Am-241	C
10/17	15101274(1-7)	UCON	0876	2hr	Am-241	C
10/30/15	1510091(1C4-9)	USA ^{USA}	1057	2hr	Co-60	C
10/30/15	1510104(1-6)	ELL	1057	2hr	Rad	C
10/30/15	1510100A(1-7)	USACE Army	1413	2hr	Rad	ICB
10/30/15	System Bkgd	Lab	1725	1hr	2	ICB
11/2	Daily Pulse	USA	0510	1hr	Rad	C
11/2	1510105A(1-5)	Test America	0571	2hr	Rad	C
11/2	1510086A(11-17)	Ameris	0871	2hr	Rad	C

Alpha # 3

Date	Project #	Client	Start Time	C/T Time	Analysis	Total
10/30/15	1510091A(6-19)	Auxier	1430	2hr 50	UL	KB
10/30/15	System Bkgd	Lab	1725	16:40 hr	-	KB
11/2	Pulypulse	LTS	0510	1	NA	-
11/2	1510086AU-18)	Auxier	0828	2L5	UL750	-
11/2	1510086AU-10)	Auxier	0829	2L5	7L250	-

Alpha # 3

Date	Sample #	Client	Sample Time	C Time	Analysis	Tech
10/30/15	1510091A(6-19)	Auxier	1430	2hr50-	UU	KB
10/30/15	System Dkgd	Lab	1725	16:40 hr	-	KB
11/2	Philypson	LAB	0510	1-	NA	-
11/2	1510086A(1-18)	Auxier	0828	2L5-	U4250	-
11/2	1510086A(1-10)	Auxier	0829	2L5-	7L250	-
11/2/15	1510086A(15)	Auxier	1124	2hr50-	ISO-TN	KB
11/2/15	1510145A(1-4)	Washington	1125	2hr50-	ISO-P4	KB
11/2/16	1510091A(6-19)	Auxier	1128	2hr50-	UU	KB

GAMMA NOTES

GE 1

103

DATE	SAMPLE #	Client	Load Time	CT Time	Analysis	Tech
1115	CAF-14	UAB	0514	15	r	✓
1115	DailyA	UAB	0545	15	r	✓
1115	15110020-02	Unitech	0609	2h	r	✓
1115	1511018-03	UCON	0837	4h	r	✓
11/5/15	1511018-01	UCON	1234	30mins	r	KB
1115	1511018-04	UCON	1706	4h	r	✓
1116	EA714	UAB	0517	15	r	✓
1116	DailyA	UAB	0545	15	r	✓
1116	1510085-03	Auxier	0608	2h	r	✓
1116	1510085-04	Auxier	0711	2h	r	✓
1116	1510085-11	Auxier	0817	2h	r	✓
1116	1510085-15	Auxier	0920	2h	r	✓
1116	1510085-19	Auxier	1021	2h	r	✓
1116	1510086-06	Auxier	1127	2h	r	✓
11/6/15	1510086-09	Auxier	1224	1h	r	KB
11/6/15	1510086-13	Auxier	1337	1h	r	KB
11/6/15	1510086-17	Auxier	1440	1h	r	KB

GE 2

DATE	SAMPLE #	CLIENT	LoadTime	CT-Time	Analysis	Tech
11/15/15	1511021-02	Republic Secur.	1701	2hr	Y	KB
11/16	6481401	LAD	0517	1R	Y	KB
11/16	Dwyla	LAD	0545	1R	Y	KB
11/16	1510085-05	Auxier	0608	2L	Y	KB
11/16	1510085-08	Auxier	0711	2L	Y	KB
11/16	1510085-12	Auxier	0817	2L	Y	KB
11/16	1510085-16	Auxier	0920	2L	Y	KB
11/16	1510085-20	Auxier	1021	2L	Y	KB
11/16	1510086-07	Auxier	1127	2L	Y	KB
11/16/15	1510086-10	Auxier	1224	1hr	Y	KB
11/16/15	1510086-14	Auxier	1337	1hr	Y	KB
11/16/15	1510086-18	Auxier	1440	1hr	Y	KB

GE 3

DATE	SAMPLE #	Client	LoadTime	CTTime	Analysis	Tech
11/4	1510084-07	Auxier	0842	2L	✓	2
11/4	1510084-04	Auxier	0944	2L	✓	2
11/4	1510084-07	Auxier	0944	2L	✓	2
11/4	1510084-07	Auxier	1045	2L	✓	2
11/4/15	1510084-14	Auxier	1146	1hr	Y	1CB
11/4/15	1510084-17	Auxier	1343	1hr	Y	1CB
11/4/15	1510165-01	TBE	1247	15mins	Ba	1CB
11/4/15	1510169-01	Tetm	1307	15mins	Ba	1CB
11/4	1510169-06	Tetm	1326	15	✓	-
11/4/15	1511007-03	UCOR	1444	2hrs	Y	1CB
11/4/15	1511007-04	UCOR	1644	2hrs	Y	1CB
11/5	Gas 1402	LTS	0524	15	✓	2
11/5	Polym	LTS	0545	15	✓	2
11/5	1510085-01	Auxier	0609	2L	✓	-
11/5	1510086-01	Auxier	0641	2L	✓	-
11/5	1511018-02	UCOR	0834	4L	✓	-
11/5/15	1510170-02	ND	1246	15mins	Ba	1CB
11/5/15	1510177-01	ND	1703	15mins	Ba	1CB
11/5	1510177-04	Stop ND	1721	15	✓	-
11/5/15	1510167-02	TBE	1403	15mins	Ba	1CB
11/5/15	1510167-05	TBE	1419	15mins	Ba	1CB
11/5/15	1510167-09	TBE	1436	15mins	Ba	1CB
11/5/15	1511021-03	Republic Serv	1456	2hrs	Y	1CB
11/5/15	1511021-04	Republic Serv	1701	2hrs	Y	1CB
11/6	Gas 1402	LTS	0517	15	✓	2
11/6	Polym	LTS	0549	15	✓	2
11/6	1510085-06	Auxier	0608	2L	✓	2
11/6	1510085-09	Auxier	0741	2L	✓	2
11/6	1510085-12	Auxier	0817	2L	✓	2
11/6	1510085-17	Auxier	0925	2L	✓	2
11/6	1510086-07	Auxier	1021	2L	✓	2
11/6	1510086-04	Auxier	1127	2L	✓	2
11/6/15	1510086-11	Auxier	1226	1hr	Y	1CB

GE 3

73

DATE	SAMPLE #	Client	LoadTime	CT.Time	Analysis	Teck
------	----------	--------	----------	---------	----------	------

11/6/15

1510086-15

Auxer

1337

1hr

Y

103

DATE	SAMPLE #	Client	Load Time	CT Time	Analysis	Tech
11/4	1510084-07	Ampier	0812	2h	✓	S
11/4	1510084-04	Ampier	0944	2h	✓	S
11/4	1510084-12	Ampier	1045	2h	✓	S
11/4	1510084-11	Ampier	1045	2h	✓	S
11/4/15	1510084-14	Ampier	1146	1hr	✓	ICB
11/4/15	1510084-17	Ampier	1343	1hr	✓	ICB
11/4/15	1510165-01	TDE	1247	15mins	Ba	ICB
11/4/15	1510165-01	Tetra	1307	15mins	Ba	ICB
11/4	1510165-06	Tetra	1326	15	✓	—
11/4/15	1511007-03	UOR	1444	2hrs	✓	ICB
11/4/15	1511007-04	UOR	1644	2hrs	✓	ICB
11/5	1510085-01	UOB	0524	15	✓	S
11/5	1510085-01	UOB	0545	15	✓	S
11/5	1510085-01	Ampier	0609	2h	✓	—
11/5	1510086-01	Ampier	0641	2h	✓	—

GE 4

5

DATE	SAMPLE #	Client	Load Time	CT Time	Analysis	Tech
11/4/15	1510165-02	TBE	1247	15 mins	Ba	KB
11/4/15	1510169-02	Tetra	1707	15 mins	Ba	KB
11/4/15	1510169-07	Tetra	1726	15	Ba	—
11/4/15	1510084-18	Auxia	1343	1 hr	Y	KB
11/4/15	1520084-19	Auxia	1445	1 hr	Y	KB
11/4/15	1510084-20	Auxia	1546	1 hr	Y	KB
11/4/15	1511007-01	UCOR	1648	30 mins	Y	KB
11/4/16	1511002-01	Unitech	1720	30 mins	Y	KB
11/4/15	1511007-02	UCOR	1752	4 hrs	Y	KB
11/5	Chw 14	LAB	0514	15	Y	—
11/5	Prima	LAB	0545	15	Y	—
11/5	1510085-02	Auxia	0609	2L	Y	—
11/5	1510086-02	Auxia	0713	2L	Y	—
11/5	1511017-02	UCOR	0826	3L	Y	—
11/5	1511017-01	UCOR	1139	3L	Y	—
11/5/15	1510170-03	ND	1244	15 mins	Ba	KB
11/5/15	1510177-02	ND	1304	15 mins	Ba	KB
11/5/15	1510167-03	TBE	1403	15 mins	Ba	KB
11/6/15	1510167-06	TBE	1420	15 mins	Ba	KB
11/6/15	1510167-10	TBE	1436	15 mins	Ba	KB
11/5/15	1511021-01	Republic Sew.	1457	30 mins	Y	KB
11/6	CAF 1402	LAB	0517	15	Y	—
11/6	Prima	LAB	0545	15	Y	—
11/6	1510085-07	Auxia	0608	2L	Y	—
11/6	1510085-10	Auxia	0711	2L	Y	—
11/6	1510085-14	Auxia	0817	2L	Y	—
11/6	1510085-18	Auxia	0925	2L	Y	—
11/6	1510086-05	Auxia	1021	2L	Y	—
11/6	1510086-08	Auxia	1127	2L	Y	—
11/6/15	1511086-12	Auxia	1225	1 hr	Y	KB
11/6/15	1511086-16	Auxia	1338	1 hr	Y	KB

DATE	SAMPLE #	Client	LoadTime	CT Time	Analysis	Tech
11/2/15	1510165-02	TBE	1247	15 mins	Ba	KB
11/2/15	1510169-02	Tetra	1707	15 mins	Ba	KB
11/4	1510169-07	Tetra	1726	15	Ba	—
11/4/15	1510084-18	Auxin	1343	1hr	Y	KB
11/4/15	1520084-19	Auxin	1445	1hr	Y	KB
11/4/15	1510084-20	Auxin	1546	1hr	Y	KB
11/4/15	1511007-01	UCOR	1648	30mins	Y	KB
11/4/15	1511002-01	Unitech	1720	30mins	Y	KB
11/4/15	1511007-02	UCOR	1752	4hr	Y	KB
11/5	GTW 14	LAS	0544	15	Y	KB
11/5	Daily 2	LAS	0545	15	Y	KB
11/5	1510085-02	Auxin	0609	2L	Y	—
11/5	1510086-02	Auxin	0713	2L	Y	—

SECTION VIII
ANALYTICAL DATA (ISOTOPIC URANIUM)

Work Order	15-10086
Analysis Code	UIISO
Run	1
Date Received	10/14/2015
Lab Deadline	11/6/2015
Client	Auxier & Associates, Inc.
Project	PAP-KAN
Report Level	4
Activity Units	pCi
Aliquot Units	g
Matrix	SO
Method	EML U-02 Modified
Instrument Type	Alpha Spectroscopy
Radiometric Tracer	U-232
Radiometric Sol#	U-10a
Tracer Act (dpm/g)	18.64
Carrier	
Carrier Conc (mg/ml)	

Internal Fraction	Sample Desc	Client ID	Login CPM	Sample Date	Sample Aliquot
01	LCS	LCS		10/14/15 00:00	1.0000E+00
02	MBL	BLANK		10/14/15 00:00	1.5000E+00
03	DUP	CP4105S01-02	37	10/06/15 16:30	1.5530E+00
04	DO	CP4105S01-02	37	10/06/15 16:30	1.5153E+00
05	TRG	CP4105S04-05	34	10/06/15 16:40	1.5178E+00
06	TRG	CP4105S06-07	37	10/06/15 16:50	1.5334E+00
07	TRG	CP4105S08-09	36	10/06/15 17:00	1.5647E+00
08	TRG	CP4105S10-11	37	10/06/15 17:10	1.5095E+00
09	TRG	CP4105S12-13	39	10/06/15 17:20	1.5294E+00
10	TRG	CP4105S14-15	36	10/06/15 17:30	1.5216E+00
11	TRG	CP4105S16-17	38	10/06/15 17:40	1.5119E+00
12	TRG	CP0404S03-04	34	10/08/15 08:00	1.5335E+00
13	TRG	CP0404S05-06	36	10/08/15 08:10	1.5213E+00
14	TRG	CP0404S07-08	34	10/08/15 08:20	1.5077E+00
15	TRG	CP0404S10-11	35	10/08/15 08:30	1.5046E+00
16	TRG	CP0404S12-13	35	10/08/15 08:40	1.5290E+00
17	TRG	CP0404S14-15	33	10/08/15 09:00	1.5396E+00
18	TRG	CP0404S17-18	32	10/08/15 09:10	1.5233E+00

* SAF1 is used for Gross Alpha and all other radionuclides. SAF2 is used for Gross Beta only. ^ Indicates estimated SAF value.
** Actual mass exceeded the calibration curve range. Results should be qualified as appropriate.

Internal Fraction	Sample Desc	Rough Prep Date	Rough Prep By	Prep Date	Prep By	Sep 10 Date/Time	Sep 10 By	Sep 11 Date/Time	Sep 11 By
01	LCS			10/16/15 13:21	JPACHELLA				
02	MBL			10/16/15 13:21	JPACHELLA				
03	DUP			10/16/15 13:21	JPACHELLA				
04	DO	10/16/15 08:59	KSALLINGS	10/16/15 13:21	JPACHELLA				
05	TRG	10/16/15 08:59	KSALLINGS	10/16/15 13:21	JPACHELLA				
06	TRG	10/16/15 08:59	KSALLINGS	10/16/15 13:21	JPACHELLA				
07	TRG	10/16/15 08:59	KSALLINGS	10/16/15 13:21	JPACHELLA				
08	TRG	10/16/15 08:59	KSALLINGS	10/16/15 13:21	JPACHELLA				
09	TRG	10/16/15 08:59	KSALLINGS	10/16/15 13:21	JPACHELLA				
10	TRG	10/16/15 08:59	KSALLINGS	10/16/15 13:21	JPACHELLA				
11	TRG	10/16/15 08:59	KSALLINGS	10/16/15 13:21	JPACHELLA				
12	TRG	10/16/15 08:59	KSALLINGS	10/16/15 13:21	JPACHELLA				
13	TRG	10/16/15 08:59	KSALLINGS	10/16/15 13:21	JPACHELLA				
14	TRG	10/16/15 08:59	KSALLINGS	10/16/15 13:21	JPACHELLA				
15	TRG	10/16/15 08:59	KSALLINGS	10/16/15 13:21	JPACHELLA				
16	TRG	10/16/15 08:59	KSALLINGS	10/16/15 13:21	JPACHELLA				
17	TRG	10/16/15 08:59	KSALLINGS	10/16/15 13:21	JPACHELLA				
18	TRG	10/16/15 08:59	KSALLINGS	10/16/15 13:21	JPACHELLA				

* SAF1 is used for Gross Alpha and all other radionuclides. SAF2 is used for Gross Beta only. ^ Indicates estimated SAF value.
** Actual mass exceeded the calibration curve range. Results should be qualified as appropriate.

00070

Preliminary Data Report & Analytical Calculations
Work Order: 15-10086-UISO-1

Eberline Services
Oak Ridge Laboratory

Lab Fraction	Nuclide	Sample Desc	Client Identification	Activity Units	Results	Error Estimate	MDA	LCS Known	LCS %R	LCS Flag	RPD Flag	MDA Flag	Blank Flag
01	U-234	LCS	LCS	pCi/g	7.72E+00	1.18E+00	9.96E-02	8.06E+00	95.83	OK		OK	
02	U-234	MBL	BLANK	pCi/g	4.19E-02	3.84E-02	3.62E-02					OK	OK
03	U-234	DUP	CP4105S01-02	pCi/g	1.30E+00	2.52E-01	3.67E-02				INV	OK	
04	U-234	DO	CP4105S01-02	pCi/g	8.89E-01	2.05E-01	5.31E-02					OK	
05	U-234	TRG	CP4105S04-05	pCi/g	9.01E-01	2.20E-01	5.15E-02					OK	
06	U-234	TRG	CP4105S06-07	pCi/g	1.05E+00	2.31E-01	4.07E-02					OK	
07	U-234	TRG	CP4105S08-09	pCi/g	9.63E-01	2.18E-01	7.76E-02					OK	
08	U-234	TRG	CP4105S10-11	pCi/g	1.05E+00	2.38E-01	4.38E-02					OK	
09	U-234	TRG	CP4105S12-13	pCi/g	9.44E-01	2.18E-01	6.20E-02					OK	
10	U-234	TRG	CP4105S14-15	pCi/g	1.03E+00	2.20E-01	4.35E-02					OK	
11	U-234	TRG	CP4105S16-17	pCi/g	1.02E+00	2.05E-01	3.78E-02					OK	
12	U-234	TRG	CP0404S03-04	pCi/g	1.01E+00	2.04E-01	3.80E-02					OK	
13	U-234	TRG	CP0404S05-06	pCi/g	1.28E+00	2.69E-01	4.94E-02					OK	
14	U-234	TRG	CP0404S07-08	pCi/g	1.22E+00	2.53E-01	5.48E-02					OK	
15	U-234	TRG	CP0404S10-11	pCi/g	1.10E+00	2.22E-01	4.10E-02					OK	
16	U-234	TRG	CP0404S12-13	pCi/g	8.63E-01	1.98E-01	5.11E-02					OK	
17	U-234	TRG	CP0404S14-15	pCi/g	8.09E-01	2.02E-01	6.45E-02					OK	
18	U-234	TRG	CP0404S17-18	pCi/g	9.32E-01	2.26E-01	5.20E-02					OK	

	Run	1
	Analysis Code	UISO
Eberline Services Work Order	15-10086	
Client	Auxier & Associates, Inc.	

087000

Preliminary Data Report & Analytical Calculations
Work Order: 15-10086-UJISO-1

Eberline Services
Oak Ridge Laboratory

Lab Fraction	Nuclide	Sample Desc	Sample Date	Sample Aliquot	Radiometric % Rec	Grav % Rec	Mean % Rec	SAF	Sep 10 Date/Time	Sep 11 Date/Time
01	U-234	LCS	10/14/15 00:00	1.00E+00	83.31	0.00	0.00			
02	U-234	MBL	10/14/15 00:00	1.50E+00	114.13	0.00	0.00			
03	U-234	DUP	10/06/15 16:30	1.55E+00	118.06	0.00	0.00			
04	U-234	DO	10/06/15 16:30	1.52E+00	103.01	0.00	0.00			
05	U-234	TRG	10/06/15 16:40	1.52E+00	95.02	0.00	0.00			
06	U-234	TRG	10/06/15 16:50	1.53E+00	109.95	0.00	0.00			
07	U-234	TRG	10/06/15 17:00	1.56E+00	92.62	0.00	0.00			
08	U-234	TRG	10/06/15 17:10	1.51E+00	90.34	0.00	0.00			
09	U-234	TRG	10/06/15 17:20	1.53E+00	94.25	0.00	0.00			
10	U-234	TRG	10/06/15 17:30	1.52E+00	110.27	0.00	0.00			
11	U-234	TRG	10/06/15 17:40	1.51E+00	111.13	0.00	0.00			
12	U-234	TRG	10/08/15 08:00	1.53E+00	118.66	0.00	0.00			
13	U-234	TRG	10/08/15 08:10	1.52E+00	95.93	0.00	0.00			
14	U-234	TRG	10/08/15 08:20	1.51E+00	101.97	0.00	0.00			
15	U-234	TRG	10/08/15 08:30	1.50E+00	124.57	0.00	0.00			
16	U-234	TRG	10/08/15 08:40	1.53E+00	112.74	0.00	0.00			
17	U-234	TRG	10/08/15 09:00	1.54E+00	110.38	0.00	0.00			
18	U-234	TRG	10/08/15 09:10	1.52E+00	112.28	0.00	0.00			

	1	UJISO 15-10086 Auxier & Associates, Inc.	Eberline Services Work Order Client
	Run			Analysis Code

Preliminary Data Report & Analytical Calculations
Work Order: 15-10086-UJISO-1

Eberline Services
Oak Ridge Laboratory

Lab Fraction	Nuclide	Sample Desc	Counting Date/Time	Half-life (days)	Detect	Carrier	Count Time	Counts	Bkg CPM	Eff	A to B, Cor
01	U-234	LCS	11/02/15 08:28		A_Spec	Alpha_033	170	4.37 E+02	4.00 E-03	18	
02	U-234	MBL	11/02/15 08:28		A_Spec	Alpha_034	170	4.83 E+00	1.00 E-03	17.9	
03	U-234	DUP	11/02/15 08:28		A_Spec	Alpha_035	170	1.48 E+02	1.00 E-03	16.5	
04	U-234	DO	11/02/15 08:28		A_Spec	Alpha_036	170	9.43 E+01	4.00 E-03	18.1	
05	U-234	TRG	11/02/15 08:28		A_Spec	Alpha_037	170	8.37 E+01	2.00 E-03	17.1	
06	U-234	TRG	11/02/15 08:28		A_Spec	Alpha_038	170	1.08 E+02	1.00 E-03	16.2	
07	U-234	TRG	11/02/15 08:28		A_Spec	Alpha_039	170	1.02 E+02	1.40 E-02	19.3	
08	U-234	TRG	11/02/15 08:28		A_Spec	Alpha_040	170	9.98 E+01	1.00 E-03	18.6	
09	U-234	TRG	11/02/15 08:29		A_Spec	Alpha_041	170	9.60 E+01	6.00 E-03	18.7	
10	U-234	TRG	11/02/15 08:29		A_Spec	Alpha_042	170	1.13 E+02	2.00 E-03	17.4	
11	U-234	TRG	11/02/15 08:29		A_Spec	Alpha_043	170	1.29 E+02	2.00 E-03	20	
12	U-234	TRG	11/02/15 08:29		A_Spec	Alpha_044	170	1.27 E+02	2.00 E-03	18.4	
13	U-234	TRG	11/02/15 08:29		A_Spec	Alpha_045	170	1.24 E+02	2.00 E-03	17.6	
14	U-234	TRG	11/02/15 08:29		A_Spec	Alpha_046	170	1.25 E+02	4.00 E-03	17.8	
15	U-234	TRG	11/02/15 08:29		A_Spec	Alpha_047	170	1.28 E+02	2.00 E-03	16.5	
16	U-234	TRG	11/02/15 08:29		A_Spec	Alpha_048	170	9.53 E+01	4.00 E-03	17	
17	U-234	TRG	11/02/15 08:29		A_Spec	Alpha_049	170	7.90 E+01	6.00 E-03	15.3	
18	U-234	TRG	11/02/15 08:29		A_Spec	Alpha_050	170	8.57 E+01	2.00 E-03	14.3	

	Run	1
	Analysis Code	UJISO
Eberline Services Work Order	15-10086	
Client	Auxier & Associates, Inc.	

289200

Preliminary Data Report & Analytical Calculations
Work Order: 15-10086-UISO-1

Eberline Services
Oak Ridge Laboratory

Lab Fraction	Nuclide	Sample Desc	Client Identification	Activity Units	Results	Error Estimate	MDA	LCS Known	LCS %R	LCS Flag	RPD Flag	MDA Flag	Blank Flag
01	U-238	LCS	LCS	pCi/g	8.48E+00	1.27E+00	1.05E-01	7.86E+00	107.89	OK		OK	
02	U-238	MBL	BLANK	pCi/g	4.17E-02	3.82E-02	3.60E-02					OK	OK
03	U-238	DUP	CP4105S01-02	pCi/g	1.08E+00	2.24E-01	4.94E-02				OK	OK	
04	U-238	DO	CP4105S01-02	pCi/g	1.03E+00	2.24E-01	5.62E-02					OK	
05	U-238	TRG	CP4105S04-05	pCi/g	1.08E+00	2.46E-01	5.13E-02					OK	
06	U-238	TRG	CP4105S06-07	pCi/g	1.05E+00	2.31E-01	5.09E-02					OK	
07	U-238	TRG	CP4105S08-09	pCi/g	1.04E+00	2.30E-01	8.58E-02					OK	
08	U-238	TRG	CP4105S10-11	pCi/g	1.47E+00	2.96E-01	4.36E-02					OK	
09	U-238	TRG	CP4105S12-13	pCi/g	9.70E-01	2.23E-01	8.57E-02					OK	
10	U-238	TRG	CP4105S14-15	pCi/g	1.02E+00	2.19E-01	5.43E-02					OK	
11	U-238	TRG	CP4105S16-17	pCi/g	1.01E+00	2.03E-01	4.72E-02					OK	
12	U-238	TRG	CP0404S03-04	pCi/g	1.06E+00	2.10E-01	3.30E-02					OK	
13	U-238	TRG	CP0404S05-06	pCi/g	1.66E+00	3.21E-01	7.06E-02					OK	
14	U-238	TRG	CP0404S07-08	pCi/g	1.02E+00	2.28E-01	7.74E-02					OK	
15	U-238	TRG	CP0404S10-11	pCi/g	9.13E-01	1.98E-01	3.57E-02					OK	
16	U-238	TRG	CP0404S12-13	pCi/g	9.81E-01	2.14E-01	5.94E-02					OK	
17	U-238	TRG	CP0404S14-15	pCi/g	8.70E-01	2.11E-01	5.75E-02					OK	
18	U-238	TRG	CP0404S17-18	pCi/g	8.75E-01	2.17E-01	4.52E-02					OK	

	Run	1
	Analysis Code	UISO
Eberline Services Work Order	15-10086	
Client	Auxier & Associates, Inc.	

000000

	Run	1
Analysis Code	UISO	
Eberline Services Work Order	15-10086	
Client	Auxier & Associates, Inc.	

Lab Fraction	Nuclide	Sample Desc	Sample Date	Sample Aliquot	Radiometric % Rec	Grav % Rec	Mean % Rec	SAF	Sep 10 Date/Time	Sep 11 Date/Time
01	U-238	LCS	10/14/15 00:00	1.00E+00	83.31	0.00	0.00			
02	U-238	MBL	10/14/15 00:00	1.50E+00	114.13	0.00	0.00			
03	U-238	DUP	10/06/15 16:30	1.55E+00	118.06	0.00	0.00			
04	U-238	DO	10/06/15 16:30	1.52E+00	103.01	0.00	0.00			
05	U-238	TRG	10/06/15 16:40	1.52E+00	95.02	0.00	0.00			
06	U-238	TRG	10/06/15 16:50	1.53E+00	109.95	0.00	0.00			
07	U-238	TRG	10/06/15 17:00	1.56E+00	92.62	0.00	0.00			
08	U-238	TRG	10/06/15 17:10	1.51E+00	90.34	0.00	0.00			
09	U-238	TRG	10/06/15 17:20	1.53E+00	94.25	0.00	0.00			
10	U-238	TRG	10/06/15 17:30	1.52E+00	110.27	0.00	0.00			
11	U-238	TRG	10/06/15 17:40	1.51E+00	111.13	0.00	0.00			
12	U-238	TRG	10/08/15 08:00	1.53E+00	118.66	0.00	0.00			
13	U-238	TRG	10/08/15 08:10	1.52E+00	95.93	0.00	0.00			
14	U-238	TRG	10/08/15 08:20	1.51E+00	101.97	0.00	0.00			
15	U-238	TRG	10/08/15 08:30	1.50E+00	124.57	0.00	0.00			
16	U-238	TRG	10/08/15 08:40	1.53E+00	112.74	0.00	0.00			
17	U-238	TRG	10/08/15 09:00	1.54E+00	110.38	0.00	0.00			
18	U-238	TRG	10/08/15 09:10	1.52E+00	112.28	0.00	0.00			

Preliminary Data Report & Analytical Calculations
Work Order: 15-10086-UJISO-1

Eberline Services
Oak Ridge Laboratory

Lab Fraction	Nuclide	Sample Desc	Counting Date/Time	Half-life (days)	Detect	Carrier	Count Time	Counts	Bkg CPM	Eff	A to B, Cor
01	U-238	LCS	11/02/15 08:28		A_Spec	Alpha_033	170	4.82 E+02	0.00 E+00	18	
02	U-238	MBL	11/02/15 08:28		A_Spec	Alpha_034	170	4.83 E+00	1.00 E-03	17.9	
03	U-238	DUP	11/02/15 08:28		A_Spec	Alpha_035	170	1.23 E+02	4.00 E-03	16.5	
04	U-238	DO	11/02/15 08:28		A_Spec	Alpha_036	170	1.10 E+02	0.00 E+00	18.1	
05	U-238	TRG	11/02/15 08:28		A_Spec	Alpha_037	170	1.01 E+02	2.00 E-03	17.1	
06	U-238	TRG	11/02/15 08:28		A_Spec	Alpha_038	170	1.08 E+02	3.00 E-03	16.2	
07	U-238	TRG	11/02/15 08:28		A_Spec	Alpha_039	170	1.11 E+02	1.90 E-02	19.3	
08	U-238	TRG	11/02/15 08:28		A_Spec	Alpha_040	170	1.41 E+02	1.00 E-03	18.6	
09	U-238	TRG	11/02/15 08:29		A_Spec	Alpha_041	170	9.91 E+01	1.70 E-02	18.7	
10	U-238	TRG	11/02/15 08:29		A_Spec	Alpha_042	170	1.12 E+02	5.00 E-03	17.4	
11	U-238	TRG	11/02/15 08:29		A_Spec	Alpha_043	170	1.28 E+02	0.00 E+00	20	
12	U-238	TRG	11/02/15 08:29		A_Spec	Alpha_044	170	1.34 E+02	1.00 E-03	18.4	
13	U-238	TRG	11/02/15 08:29		A_Spec	Alpha_045	170	1.62 E+02	8.00 E-03	17.6	
14	U-238	TRG	11/02/15 08:29		A_Spec	Alpha_046	170	1.06 E+02	1.30 E-02	17.8	
15	U-238	TRG	11/02/15 08:29		A_Spec	Alpha_047	170	1.07 E+02	1.00 E-03	16.5	
16	U-238	TRG	11/02/15 08:29		A_Spec	Alpha_048	170	1.09 E+02	7.00 E-03	17	
17	U-238	TRG	11/02/15 08:29		A_Spec	Alpha_049	170	8.53 E+01	4.00 E-03	15.3	
18	U-238	TRG	11/02/15 08:29		A_Spec	Alpha_050	170	8.08 E+01	1.00 E-03	14.3	

	Run	1
	Analysis Code	UJISO
	Eberline Services Work Order	15-10086
	Client	Auxier & Associates, Inc.

Preliminary Data Report & Analytical Calculations
Work Order: 15-10086-UISO-1

Eberline Services
Oak Ridge Laboratory

Lab Fraction	Nuclide	Sample Desc	Client Identification	Activity Units	Results	Error Estimate	MDA	LCS Known	LCS %R	LCS Flag	RPD Flag	MDA Flag	Blank Flag
01	U-235	LCS	LCS	pCi/g	6.50E-01	2.47E-01	9.09E-02					OK	
02	U-235	MBL	BLANK	pCi/g	3.03E-02	3.66E-02	4.46E-02					OK	OK
03	U-235	DUP	CP4105S01-02	pCi/g	8.67E-02	6.44E-02	6.50E-02				NA	OK	
04	U-235	DO	CP4105S01-02	pCi/g	1.49E-01	8.38E-02	4.85E-02					OK	
05	U-235	TRG	CP4105S04-05	pCi/g	5.97E-02	5.92E-02	6.97E-02					OK	
06	U-235	TRG	CP4105S06-07	pCi/g	9.42E-02	6.76E-02	5.02E-02					OK	
07	U-235	TRG	CP4105S08-09	pCi/g	6.57E-02	6.68E-02	9.58E-02					OK	
08	U-235	TRG	CP4105S10-11	pCi/g	9.91E-02	7.29E-02	6.19E-02					OK	
09	U-235	TRG	CP4105S12-13	pCi/g	5.65E-02	5.38E-02	5.80E-02					OK	
10	U-235	TRG	CP4105S14-15	pCi/g	7.48E-02	5.91E-02	5.37E-02					OK	
11	U-235	TRG	CP4105S16-17	pCi/g	1.10E-01	6.76E-02	5.50E-02					OK	
12	U-235	TRG	CP0404S03-04	pCi/g	1.63E-02	2.76E-02	4.69E-02					OK	
13	U-235	TRG	CP0404S05-06	pCi/g	1.08E-01	7.63E-02	6.69E-02					OK	
14	U-235	TRG	CP0404S07-08	pCi/g	5.77E-02	5.89E-02	7.90E-02					OK	
15	U-235	TRG	CP0404S10-11	pCi/g	7.23E-02	5.55E-02	4.42E-02					OK	
16	U-235	TRG	CP0404S12-13	pCi/g	1.12E-01	7.36E-02	6.70E-02					OK	
17	U-235	TRG	CP0404S14-15	pCi/g	6.10E-02	5.60E-02	5.27E-02					OK	
18	U-235	TRG	CP0404S17-18	pCi/g	6.71E-02	6.49E-02	8.04E-02					OK	

	Run	1
	Analysis Code	UISO
	Eberline Services Work Order	15-10086
Client	Auxier & Associates, Inc.	

980002

Preliminary Data Report & Analytical Calculations
Work Order: 15-10086-UISO-1

Eberline Services
Oak Ridge Laboratory

Lab Fraction	Nuclide	Sample Desc	Sample Date	Sample Aliquot	Radiometric % Rec	Grav % Rec	Mean % Rec	SAF	Sep 10 Date/Time	Sep 11 Date/Time
01	U-235	LCS	10/14/15 00:00	1.00E+00	83.31	0.00	0.00			
02	U-235	MBL	10/14/15 00:00	1.50E+00	114.13	0.00	0.00			
03	U-235	DUP	10/06/15 16:30	1.55E+00	118.06	0.00	0.00			
04	U-235	DO	10/06/15 16:30	1.52E+00	103.01	0.00	0.00			
05	U-235	TRG	10/06/15 16:40	1.52E+00	95.02	0.00	0.00			
06	U-235	TRG	10/06/15 16:50	1.53E+00	109.95	0.00	0.00			
07	U-235	TRG	10/06/15 17:00	1.56E+00	92.62	0.00	0.00			
08	U-235	TRG	10/06/15 17:10	1.51E+00	90.34	0.00	0.00			
09	U-235	TRG	10/06/15 17:20	1.53E+00	94.25	0.00	0.00			
10	U-235	TRG	10/06/15 17:30	1.52E+00	110.27	0.00	0.00			
11	U-235	TRG	10/06/15 17:40	1.51E+00	111.13	0.00	0.00			
12	U-235	TRG	10/08/15 08:00	1.53E+00	118.66	0.00	0.00			
13	U-235	TRG	10/08/15 08:10	1.52E+00	95.93	0.00	0.00			
14	U-235	TRG	10/08/15 08:20	1.51E+00	101.97	0.00	0.00			
15	U-235	TRG	10/08/15 08:30	1.50E+00	124.57	0.00	0.00			
16	U-235	TRG	10/08/15 08:40	1.53E+00	112.74	0.00	0.00			
17	U-235	TRG	10/08/15 09:00	1.54E+00	110.38	0.00	0.00			
18	U-235	TRG	10/08/15 09:10	1.52E+00	112.28	0.00	0.00			

	Run	1
	Analysis Code	UISO
Client	Auxier & Associates, Inc.	
Eberline Services Work Order	15-10086	

78000

Preliminary Data Report & Analytical Calculations
Work Order: 15-10086-UUISO-1

	Run	1
Analysis Code	UUISO	
Eberline Services Work Order	15-10086	
Client	Auxier & Associates, Inc.	

Lab Fraction	Nuclide	Sample Desc	Counting Date/Time	Half-life (days)	Detect	Carrier	Count Time	Counts	Bkg CPM	Eff	A to B, Cor
01	U-235	LCS	11/02/15 08:28		A_Spec	Alpha_033	170	2.98 E+01	1.00 E-03	18	
02	U-235	MBL	11/02/15 08:28		A_Spec	Alpha_034	170	2.83 E+00	1.00 E-03	17.9	
03	U-235	DUP	11/02/15 08:28		A_Spec	Alpha_035	170	8.00 E+00	0.00 E+00	16.5	
04	U-235	DO	11/02/15 08:28		A_Spec	Alpha_036	170	1.28 E+01	1.00 E-03	18.1	
05	U-235	TRG	11/02/15 08:28		A_Spec	Alpha_037	170	4.49 E+00	3.00 E-03	17.1	
06	U-235	TRG	11/02/15 08:28		A_Spec	Alpha_038	170	7.83 E+00	1.00 E-03	16.2	
07	U-235	TRG	11/02/15 08:28		A_Spec	Alpha_039	170	5.62 E+00	1.40 E-02	19.3	
08	U-235	TRG	11/02/15 08:28		A_Spec	Alpha_040	170	7.66 E+00	2.00 E-03	18.6	
09	U-235	TRG	11/02/15 08:29		A_Spec	Alpha_041	170	4.66 E+00	2.00 E-03	18.7	
10	U-235	TRG	11/02/15 08:29		A_Spec	Alpha_042	170	6.66 E+00	2.00 E-03	17.4	
11	U-235	TRG	11/02/15 08:29		A_Spec	Alpha_043	170	1.13 E+01	4.00 E-03	20	
12	U-235	TRG	11/02/15 08:29		A_Spec	Alpha_044	170	1.66 E+00	2.00 E-03	18.4	
13	U-235	TRG	11/02/15 08:29		A_Spec	Alpha_045	170	8.49 E+00	3.00 E-03	17.6	
14	U-235	TRG	11/02/15 08:29		A_Spec	Alpha_046	170	4.81 E+00	7.00 E-03	17.8	
15	U-235	TRG	11/02/15 08:29		A_Spec	Alpha_047	170	6.83 E+00	1.00 E-03	16.5	
16	U-235	TRG	11/02/15 08:29		A_Spec	Alpha_048	170	1.00 E+01	0.00 E+00	17	
17	U-235	TRG	11/02/15 08:29		A_Spec	Alpha_049	170	4.83 E+00	1.00 E-03	15.3	
18	U-235	TRG	11/02/15 08:29		A_Spec	Alpha_050	170	5.00 E+00	0.00 E+00	14.3	

Internal Fraction	Sample Desc	Client ID	Sample Date	Sample Aliquot	Tracer Aliquot (g)	Tracer ACT (dpm)	Radiometric Tracer (pCi)	Radiometric % Rec	SAF 1*	SAF 2*
01	LCS	LCS	10/14/15 00:00	1.0000	0.6517	12.1477		0.00		
02	MBL	BLANK	10/14/15 00:00	1.5000	0.6564	12.2353		0.00		
03	DUP	CP4105S01-02	10/06/15 16:30	1.5530	0.6557	12.2222		0.00		
04	DO	CP4105S01-02	10/06/15 16:30	1.5153	0.6569	12.2446		0.00		
05	TRG	CP4105S04-05	10/06/15 16:40	1.5178	0.6563	12.2334		0.00		
06	TRG	CP4105S06-07	10/06/15 16:50	1.5334	0.6507	12.1290		0.00		
07	TRG	CP4105S08-09	10/06/15 17:00	1.5647	0.6577	12.2595		0.00		
08	TRG	CP4105S10-11	10/06/15 17:10	1.5095	0.6508	12.1309		0.00		
09	TRG	CP4105S12-13	10/06/15 17:20	1.5294	0.6507	12.1290		0.00		
10	TRG	CP4105S14-15	10/06/15 17:30	1.5216	0.6538	12.1868		0.00		
11	TRG	CP4105S16-17	10/06/15 17:40	1.5119	0.6509	12.1328		0.00		
12	TRG	CP0404S03-04	10/08/15 08:00	1.5335	0.6527	12.1663		0.00		
13	TRG	CP0404S05-06	10/08/15 08:10	1.5213	0.6521	12.1551		0.00		
14	TRG	CP0404S07-08	10/08/15 08:20	1.5077	0.6521	12.1551		0.00		
15	TRG	CP0404S10-11	10/08/15 08:30	1.5046	0.6623	12.3453		0.00		
16	TRG	CP0404S12-13	10/08/15 08:40	1.5290	0.6600	12.3024		0.00		
17	TRG	CP0404S14-15	10/08/15 09:00	1.5396	0.6527	12.1663		0.00		
18	TRG	CP0404S17-18	10/08/15 09:10	1.5233	0.6526	12.1645		0.00		

M

SP 50

Internal Work Order		Run	Analysis Code		Date		Technician		Technician Initials		Witness Initials		
15-10086		1	UUISO		10/16/2015 13:13		JPACHELLA		<i>JMP</i>				
LCS & Matrix Spikes													
Isotope	Sol #	Activity dpm/g	Solution Date	Approx Addition	LCS Volume Used (g)	MS Volume Used (g)	LCS Volume Used (g)	MSD Volume Used (g)	LCS Known pCi	MS Added pCi	LCS Error Estimate	MSD Error Estimate	
U-234	U-8a	35.240	10/16/2015	0.500	0.5077		8.06	0.290	0.00	0.00	0.000	0.000	
U-238	U-8a	34.350	10/16/2015	0.500	0.5077		7.86	0.283	0.00	0.00	0.000	0.000	
TC-99 MS C-2a 22043.636 7/5/2014 U-1													
Tracers													
fraction	Isotope	Sol #	Activity dpm/g	Solution Date	Volume Used (g)	Approx Addition	Tracer						LCS
01	U-232	U-10a	18.640	10/16/2015	0.6517	0.6500							
02	U-232	U-10a	18.640	10/16/2015	0.6564	0.6500							
03	U-232	U-10a	18.640	10/16/2015	0.6557	0.6500							
04	U-232	U-10a	18.640	10/16/2015	0.6569	0.6500							
05	U-232	U-10a	18.640	10/16/2015	0.6563	0.6500							
06	U-232	U-10a	18.640	10/16/2015	0.6507	0.6500							
07	U-232	U-10a	18.640	10/16/2015	0.6577	0.6500							
08	U-232	U-10a	18.640	10/16/2015	0.6508	0.6500							
09	U-232	U-10a	18.640	10/16/2015	0.6507	0.6500							
10	U-232	U-10a	18.640	10/16/2015	0.6538	0.6500							
11	U-232	U-10a	18.640	10/16/2015	0.6509	0.6500							
12	U-232	U-10a	18.640	10/16/2015	0.6527	0.6500							
13	U-232	U-10a	18.640	10/16/2015	0.6521	0.6500							
14	U-232	U-10a	18.640	10/16/2015	0.6521	0.6500							
15	U-232	U-10a	18.640	10/16/2015	0.6623	0.6500							
16	U-232	U-10a	18.640	10/16/2015	0.6600	0.6500							
17	U-232	U-10a	18.640	10/16/2015	0.6527	0.6500							
18	U-232	U-10a	18.640	10/16/2015	0.6526	0.6500							
Matrix Spike													

Aliquot Worksheet

Work Order	Run	Analysis Code	Rpt Units	Lab Deadline	Technician
15-10086	1	UUISO	grams	11/6/2015	JPACHELLA

Lab Fraction	Client ID	Sample Type	Muffle Data		Dilution Data			Aliquot Data		MS Aliquot Data		H-3 Solids Only	
			Ratio Post/Pre	No. of Dils	Dil. Factor	Ratio	Aliquot	Net Equiv	Aliquot	Net Equiv	Water Added (ml)	H3 Dist Aliq	
01	LCS	LCS						1.0000E+00	1.0000E+00				
02	BLANK	MBL						1.5000E+00	1.5000E+00				
03	CP4105S01-02	DUP						1.5530E+00	1.5530E+00				
04	CP4105S01-02	DO						1.5153E+00	1.5153E+00				
05	CP4105S04-05	TRG						1.5178E+00	1.5178E+00				
06	CP4105S06-07	TRG						1.5334E+00	1.5334E+00				
07	CP4105S08-09	TRG						1.5647E+00	1.5647E+00				
08	CP4105S10-11	TRG						1.5095E+00	1.5095E+00				
09	CP4105S12-13	TRG						1.5294E+00	1.5294E+00				
10	CP4105S14-15	TRG						1.5216E+00	1.5216E+00				
11	CP4105S16-17	TRG						1.5119E+00	1.5119E+00				
12	CP0404S03-04	TRG						1.5335E+00	1.5335E+00				
13	CP0404S05-06	TRG						1.5213E+00	1.5213E+00				
14	CP0404S07-08	TRG						1.5077E+00	1.5077E+00				
15	CP0404S10-11	TRG						1.5046E+00	1.5046E+00				
16	CP0404S12-13	TRG						1.5290E+00	1.5290E+00				
17	CP0404S14-15	TRG						1.5398E+00	1.5398E+00				
18	CP0404S17-18	TRG						1.5233E+00	1.5233E+00				

Comments

Technician: JPachella Date: 10/16/15

**Rough Sample Preparation
 Log Book**

Work Order	Lab Deadline	Date Received in Prep	Date Sealed	Date Returned	Technician
15-10086	11/6/2015	10/15/2015	10/16/2015	10/17/2015	KSALLINGS

Eberline Fraction	Auxier & Associates, Inc. Client ID	Tare (g)		Gross (g)		Net (g)		Percent		Gamma		Special Info
		Pan Wt	Dry Wt	Wet Wt.	Dry Wt.	Wet Wt.	Dry Wt.	Liquid	Solid	Dry Wt.	LEPS Wt.	
04	CP4105S01-02	14.1600	707.7300	857.2000	707.7300	843.0400	693.5700	17.73%	82.27%	0.0000	0.0000	
05	CP4105S04-05	28.4600	1015.1650	1236.3000	1015.1650	1207.8400	986.7050	18.31%	81.69%	0.0000	0.0000	
06	CP4105S06-07	14.1800	654.6500	805.4400	654.6500	791.2600	640.4700	19.06%	80.94%	0.0000	0.0000	
07	CP4105S08-09	14.2300	654.6800	822.4000	654.6800	808.1700	640.4500	20.75%	79.25%	0.0000	0.0000	
08	CP4105S10-11	14.1900	684.8000	870.7000	684.8000	856.5100	670.6100	21.70%	78.30%	0.0000	0.0000	
09	CP4105S12-13	14.2100	655.3900	834.0600	655.3900	819.8500	641.1800	21.79%	78.21%	0.0000	0.0000	
10	CP4105S14-15	14.3200	771.6000	997.5000	771.6000	983.1800	757.2800	22.98%	77.02%	0.0000	0.0000	
11	CP4105S16-17	14.3100	599.9500	771.5600	599.9500	757.2500	585.6400	22.66%	77.34%	0.0000	0.0000	
12	CP0404S03-04	28.6000	1108.5200	1368.4400	1108.5200	1339.8400	1079.9200	19.40%	80.60%	0.0000	0.0000	
13	CP0404S05-06	14.1800	617.6500	756.5800	617.6500	742.4000	603.4700	18.71%	81.29%	0.0000	0.0000	
14	CP0404S07-08	14.3300	567.2000	718.7200	567.2000	704.3900	552.8700	21.51%	78.49%	0.0000	0.0000	
15	CP0404S10-11	14.3000	699.1000	887.2200	699.1000	872.9200	684.8000	21.55%	78.45%	0.0000	0.0000	
16	CP0404S12-13	14.3300	749.2500	964.4400	749.2500	950.1100	734.9200	22.65%	77.35%	0.0000	0.0000	
17	CP0404S14-15	14.3800	591.4300	772.7200	591.4300	758.3400	577.0500	23.91%	76.09%	0.0000	0.0000	
18	CP0404S17-18	14.3900	734.7400	961.7000	734.7400	947.3100	720.3500	23.96%	76.04%	0.0000	0.0000	

Comments
Special Codes
H: Hot, O: Organic Hazard, P: PCB Hazard, R: Rush, T: Other (see comments)

Technician: Kerry Seeg

000002



11/2/15

Sample Description: SPIKE
 Spectrum File: \\OR-ALPHA1\Canberra\ApexAlpha\Root\Data\00001328
 Batch Identification: 1510086A-UU
 Sample Identification: 01
 Sample Geometry: Shelf 2
 Procedure Description: U iso

Detector Name: Alpha_033
 Chamber Serial Number: 04026479A
 Detector Serial Number: 91132
 Env. Background: System Bkgd 133263
 Reagent Blank: <not performed>

Sample Size: 1.000E+000 +/- 0.000E+000 gram
 Sample Date/Time: 11/2/2015 5:34:33 AM
 Acquisition Date/Time: 11/2/2015 8:28:47 AM
 Acquisition Live Time: 170.0 minutes
 Acquisition Real Time: 170.0 minutes

Tracer Certificate: U232_UU-10A
 Tracer Quantity: 0.652 mL
 Effective Efficiency: 0.1503 +/- 0.0092
 Counting Efficiency: 0.1805 +/- 0.0032 on 10/25/2014 2:26:39 PM
 Chem. Recovery Factor: 0.8331 +/- 0.0533

Control Certificate Name: NatU_U-8A
 Chem. Recov. of Control: U-238 1.051719 +/- 0.086475
 Peak Match Tolerance: 0.150 MeV

 PEAK AREA REPORT

Nuclide	Energy (MeV)	Net Pk Area	Pk Area Error %	Ambient Backgnd	Reagent Backgnd	FWHM (keV)
U-232	5.258	308.32	11.18	0.68	0.00E+000	16.4
U-234	4.709	437.32	9.38	0.68	0.00E+000	5.4
U-235	4.399	29.83	36.01	0.17	0.00E+000	3.0
U-238	4.134	482.00	8.94	0.00	0.00E+000	4.9

T = Tracer Peak used for Effective Efficiency

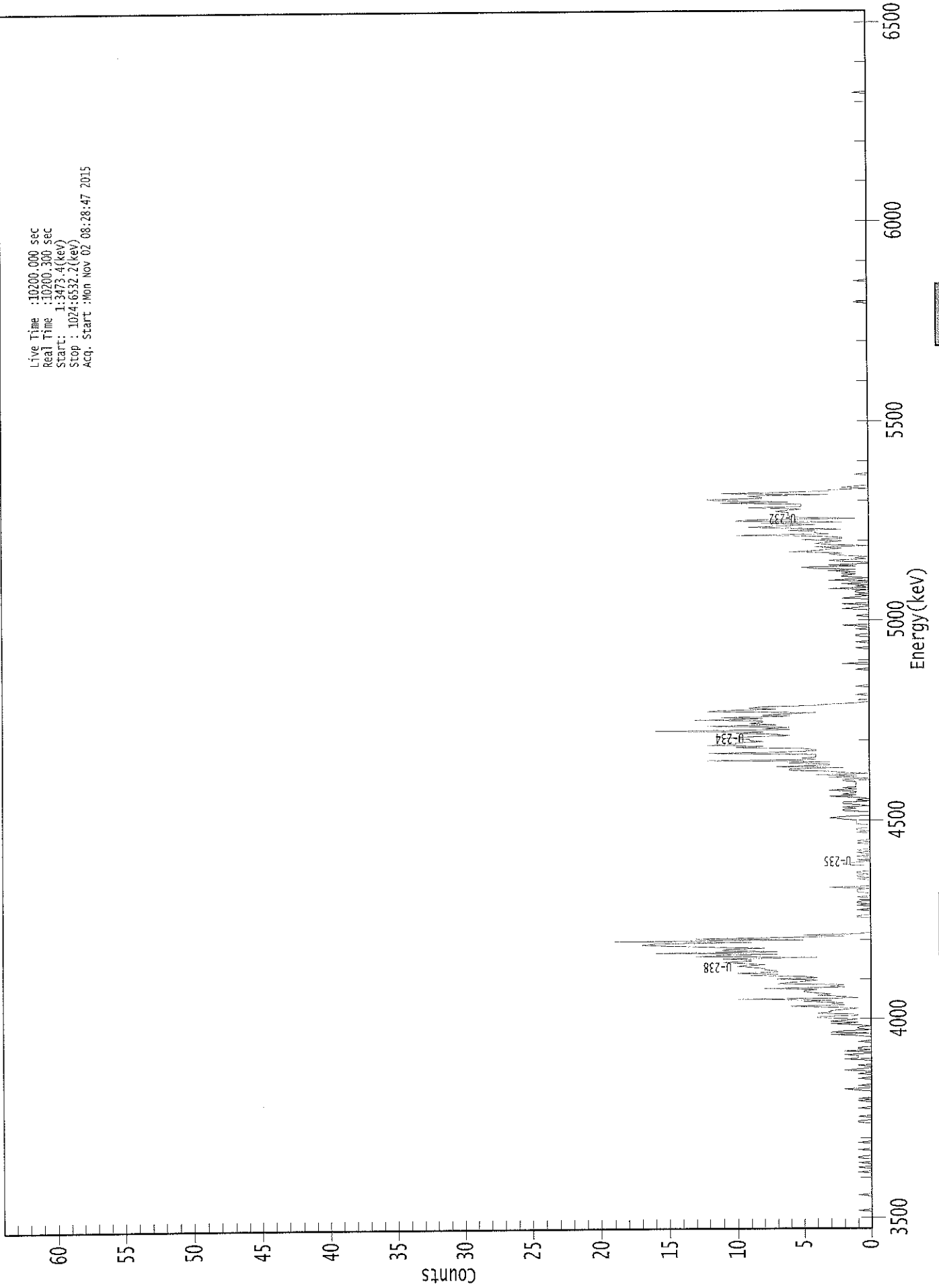
 NUCLIDE ANALYSIS RESULTS

Nuclide	Id Conf.	Energy (keV)	Activity (pCi/gram)	MDA (pCi/gram)
U-232	0.986	5302.50*	5.44E+000 +/- 6.56E-001	9.96E-002 +/- 1.20E-002
U-234	0.981	4761.50*	7.72E+000 +/- 1.18E+000	9.96E-002 +/- 1.20E-002
U-235	0.999	4385.50*	6.50E-001 +/- 2.47E-001	9.09E-002 +/- 1.10E-002
U-238	0.982	4184.40*	8.48E+000 +/- 1.27E+000	1.05E-001 +/- 1.27E-002

AG
 11/2/15

0000132882.CNF

Live Time :10200.000 sec
Real Time :10200.300 sec
Start : 1:3473.4(keV)
Stop : 1074:6532.2(keV)
Acq. Start : Mon Nov 02 08:28:47 2015



ROI Type: 3

ROI Type: 1

 ***** S P E C T R A L D A T A R E P O R T *****

Sample Title: 01

Elapsed Live time: 10200
 Elapsed Real Time: 10200

Channel	1	2	3	4	5	6	7	8	9
1:	0	0	0	0	0	0	0	0	0
9:	0	0	0	0	0	0	0	0	1
17:	0	0	0	0	0	0	0	0	0
25:	0	0	0	0	1	0	0	0	0
33:	0	0	0	0	0	0	0	0	0
41:	0	0	0	0	0	0	0	0	1
49:	0	0	0	1	0	0	0	0	1
57:	0	0	0	1	1	0	0	0	0
65:	0	0	1	0	0	0	0	0	0
73:	1	0	0	0	0	0	0	0	0
81:	0	0	0	0	0	0	0	0	0
89:	0	1	1	0	0	0	1	0	0
97:	0	0	0	0	0	1	0	0	0
105:	0	0	0	1	0	1	0	0	0
113:	0	0	0	0	1	2	0	0	0
121:	1	0	0	0	0	0	1	0	0
129:	0	0	1	0	0	2	1	0	0
137:	0	1	0	0	0	0	2	1	1
145:	1	1	2	0	0	2	0	1	1
153:	1	0	0	0	0	1	0	0	0
161:	0	0	1	3	0	3	2	0	0
169:	1	1	0	1	3	1	3	2	2
177:	1	4	4	1	1	4	3	3	3
185:	2	1	3	6	2	3	2	5	5
193:	3	10	1	2	4	3	4	5	5
201:	5	4	8	2	3	2	7	6	6
209:	5	4	7	4	5	9	7	10	10
217:	7	7	8	8	9	10	8	9	9
225:	11	9	9	11	4	13	11	7	7
233:	16	7	11	11	8	12	15	17	17
241:	16	9	19	5	13	7	2	5	5
249:	1	0	0	0	0	0	0	0	0
257:	0	0	0	0	0	0	1	1	1
265:	0	0	0	0	1	0	0	0	0
273:	1	0	1	1	0	0	0	1	1
281:	0	0	0	1	1	1	0	3	3
289:	0	0	0	0	0	0	1	0	0
297:	1	1	0	1	1	0	0	0	0
305:	0	0	2	2	1	0	1	0	0
313:	0	1	0	0	1	0	1	0	0
321:	0	0	0	0	1	0	1	0	0
329:	0	0	0	0	0	1	0	1	1
337:	1	0	0	0	1	1	1	1	1
345:	2	3	2	0	0	0	0	2	2
353:	2	1	2	0	1	2	2	0	0
361:	1	0	1	3	1	2	1	1	1

369: 3 1 2 1 1 1 1 1

Sample Title: 01

Channel	1	2	3	4	5	6	7	8
377:	2	2	0	3	1	4	0	2
385:	3	6	6	2	7	3	3	6
393:	3	12	4	5	4	4	4	12
401:	7	4	4	5	10	8	12	10
409:	10	8	9	9	11	9	6	7
417:	10	8	16	6	8	6	12	7
425:	9	8	8	13	8	11	6	8
433:	6	4	12	11	7	9	8	4
441:	3	1	0	0	0	0	0	0
449:	1	0	0	0	0	0	0	1
457:	0	0	0	0	0	0	0	0
465:	0	0	0	0	0	1	0	0
473:	0	0	2	0	0	0	0	0
481:	0	0	0	0	0	0	0	1
489:	0	0	0	0	1	0	0	0
497:	0	1	1	0	0	0	0	1
505:	0	0	2	0	0	0	0	0
513:	0	0	1	0	0	0	0	0
521:	2	1	0	0	2	0	0	0
529:	0	2	1	0	1	0	1	1
537:	0	3	0	1	0	2	0	0
545:	3	1	0	2	2	1	2	1
553:	3	1	4	5	1	3	0	0
561:	2	3	0	1	0	2	3	2
569:	6	4	3	2	4	0	3	4
577:	3	2	5	2	2	4	10	3
585:	4	4	6	2	7	9	6	4
593:	8	2	10	9	1	5	6	6
601:	6	6	7	6	5	9	5	5
609:	5	11	6	11	12	8	8	9
617:	3	11	7	3	3	0	2	1
625:	0	0	0	0	0	0	0	0
633:	0	1	0	0	0	0	0	0
641:	0	0	0	0	0	0	0	0
649:	0	0	0	0	0	0	0	0
657:	0	0	0	0	0	0	0	0
665:	0	0	0	0	0	0	0	0
673:	0	0	0	0	0	0	0	0
681:	0	0	0	0	0	0	0	0
689:	0	0	0	0	0	0	0	0
697:	0	0	0	0	0	0	0	0
705:	0	0	0	0	0	0	0	0
713:	0	0	0	0	0	0	0	0
721:	0	0	0	0	0	0	0	0
729:	0	0	0	0	0	0	0	0
737:	0	0	0	0	0	0	0	0
745:	0	0	0	0	0	0	0	0
753:	0	0	0	0	0	0	0	0
761:	0	0	0	0	0	0	0	0
769:	0	0	0	0	0	0	0	0
777:	0	1	0	0	0	0	0	0
785:	0	0	0	0	0	0	0	0
793:	0	0	0	1	0	0	0	0

801: 0 0 0 0 0 0 0 0 0

Sample Title: 01

Channel	-----	-----	-----	-----	-----	-----	-----	-----
809:	0	0	0	0	0	0	0	0
817:	0	0	0	0	0	0	0	0
825:	0	0	0	0	0	0	0	0
833:	0	0	0	0	0	0	0	0
841:	0	0	0	0	0	0	0	0
849:	0	0	0	0	0	0	0	0
857:	0	0	0	0	0	0	0	0
865:	0	0	0	0	0	0	0	0
873:	0	0	0	0	0	0	0	0
881:	0	0	0	0	0	0	0	0
889:	0	0	0	0	0	0	0	0
897:	0	0	0	0	0	0	0	0
905:	0	0	0	0	0	0	0	0
913:	0	0	0	0	0	0	0	0
921:	0	0	0	0	0	0	0	0
929:	0	0	0	0	0	0	0	0
937:	0	0	0	0	0	0	0	0
945:	0	0	0	0	0	0	0	0
953:	0	1	0	0	0	0	0	0
961:	0	0	0	0	0	0	0	0
969:	0	0	0	0	0	0	0	0
977:	0	0	0	0	0	0	0	0
985:	0	0	0	0	0	0	0	0
993:	0	0	0	0	0	0	0	0
1001:	0	0	0	0	0	0	0	0
1009:	0	0	0	0	0	0	0	0
1017:	0	0	0	0	0	0	0	0

KB
11/2/15

Sample Description: BLANK
 Spectrum File: \\OR-ALPHA1\Canberra\ApexAlpha\Root\Data\00001328
 Batch Identification: 1510086A-UU
 Sample Identification: 02
 Sample Geometry: Shelf 2
 Procedure Description: U iso

Detector Name: Alpha_034
 Chamber Serial Number: 04026479B
 Detector Serial Number: 91136
 Env. Background: System Bkgd 133264
 Reagent Blank: <not performed>

Sample Size: 1.500E+000 +/- 0.000E+000 gram
 Sample Date/Time: 11/2/2015 5:34:33 AM
 Acquisition Date/Time: 11/2/2015 8:28:49 AM
 Acquisition Live Time: 170.0 minutes
 Acquisition Real Time: 170.0 minutes

Tracer Certificate: U232_UU-10A
 Tracer Quantity: 0.656 mL
 Effective Efficiency: 0.2041 +/- 0.0110
 Counting Efficiency: 0.1789 +/- 0.0031 on 10/25/2014 2:30:05 PM
 Chem. Recovery Factor: 1.1413 +/- 0.0647

Peak Match Tolerance: 0.150 MeV

 PEAK AREA REPORT

Nuclide	Energy (MeV)	Net Pk Area	Pk Area Error %	Ambient Backgnd	Reagent Backgnd	FWHM (keV)
U-232	T 5.273	421.66	9.55	0.34	0.00E+000	19.9
U-234	4.748	4.83	91.00	0.17	0.00E+000	3.0
U-235	4.328	2.83	120.53	0.17	0.00E+000	6.0
U-238	4.085	4.83	91.00	0.17	0.00E+000	3.0

T = Tracer Peak used for Effective Efficiency

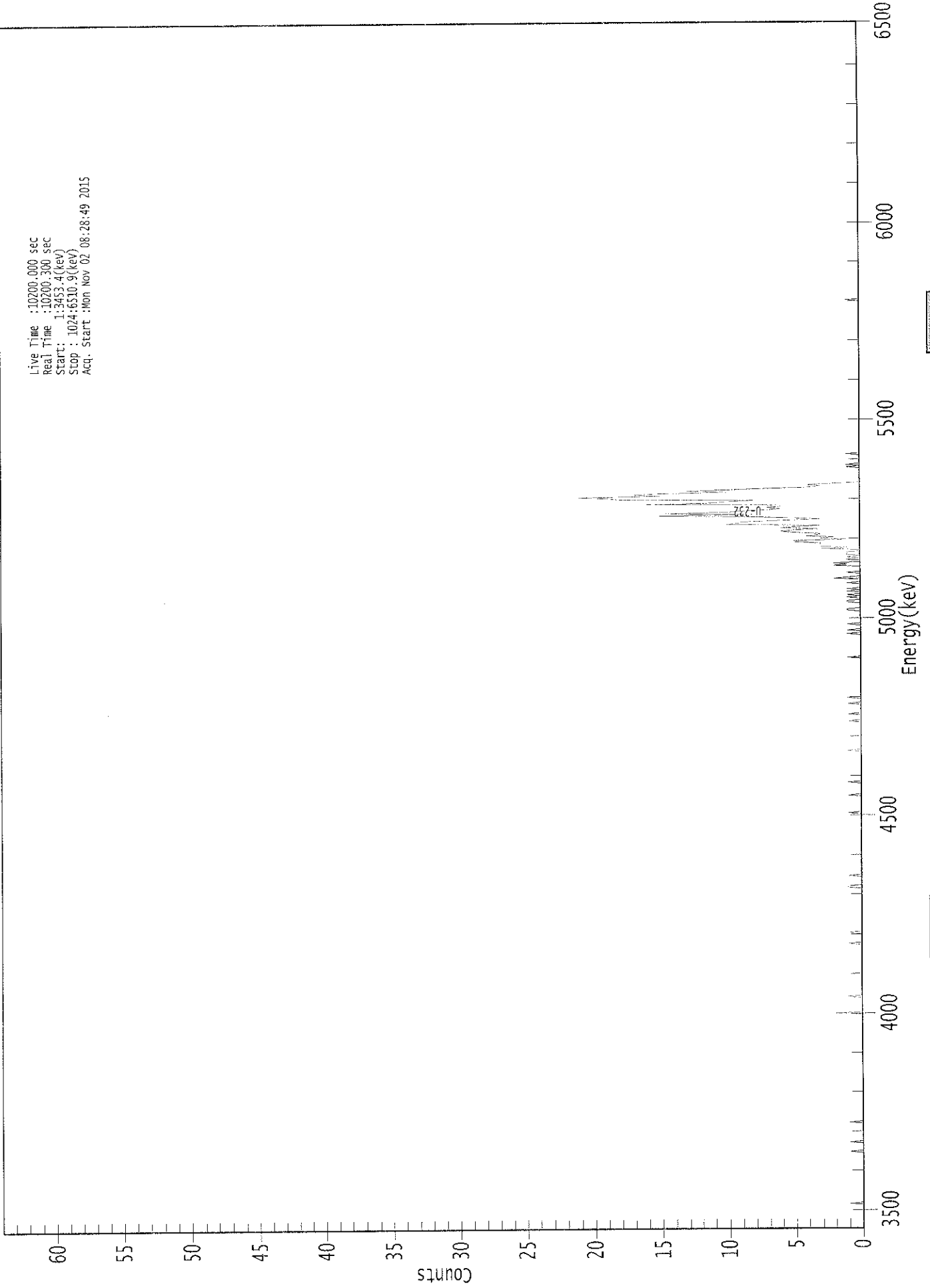
 NUCLIDE ANALYSIS RESULTS

Nuclide	Id Conf.	Energy (keV)	Activity (pCi/gram)	MDA (pCi/gram)
U-232	0.994	5302.50*	3.66E+000 +/- 3.86E-001	4.15E-002 +/- 4.38E-003
U-234	0.999	4761.50*	4.19E-002 +/- 3.84E-002	3.62E-002 +/- 3.82E-003
U-235	0.977	4385.50*	3.03E-002 +/- 3.66E-002	4.46E-002 +/- 4.71E-003
U-238	0.932	4184.40*	4.17E-002 +/- 3.82E-002	3.60E-002 +/- 3.81E-003

AG
11/2/15

0000132883.CNF

Live Time : 10200.000 sec
Real Time : 10200.300 sec
Start : 1:3453.4(keV)
Stop : 1024:6510.9(keV)
Acq. Start : Mon Nov 02 08:28:49 2015



ROI Type: 1

ROI Type: 3

 ***** S P E C T R A L D A T A R E P O R T *****

Sample Title: 02

Elapsed Live time: 10200

Elapsed Real Time: 10200

Channel	1	2	3	4	5	6	7	8	9
1:	0	0	0	0	0	0	0	0	0
9:	0	0	0	0	0	0	0	0	0
17:	0	0	0	0	0	1	0	0	0
25:	0	0	0	0	0	0	0	0	0
33:	0	0	0	0	0	0	0	0	0
41:	0	0	0	0	0	0	0	0	0
49:	0	0	0	0	0	0	0	0	0
57:	0	0	0	0	0	0	0	0	0
65:	0	1	0	0	0	0	0	0	0
73:	0	1	0	0	0	0	0	0	0
81:	0	0	0	0	0	0	0	0	0
89:	0	0	1	0	0	0	0	0	0
97:	0	0	0	0	0	0	0	0	0
105:	0	0	0	0	0	0	0	0	0
113:	0	0	0	0	0	0	0	0	0
121:	0	0	0	0	0	0	0	0	0
129:	0	0	0	0	0	0	0	0	0
137:	0	0	0	0	0	0	0	0	0
145:	0	0	0	0	0	0	0	0	0
153:	0	0	0	0	0	0	0	0	0
161:	0	0	0	0	0	0	0	0	0
169:	0	0	0	0	0	0	0	0	0
177:	0	0	0	0	0	0	0	0	2
185:	0	0	0	0	0	0	0	0	0
193:	0	0	0	0	0	1	0	0	0
201:	0	0	0	0	0	0	0	0	0
209:	0	0	0	0	0	0	0	0	0
217:	0	0	0	0	0	0	0	0	0
225:	0	0	0	0	0	0	0	0	0
233:	0	0	0	0	0	0	0	0	0
241:	0	0	1	0	0	0	0	0	0
249:	0	0	0	1	0	0	0	0	0
257:	0	0	0	0	0	0	0	0	0
265:	0	0	0	0	0	0	0	0	0
273:	0	0	0	0	0	0	0	0	0
281:	0	0	0	0	0	0	0	0	0
289:	0	1	1	0	0	0	0	0	0
297:	0	0	0	1	0	0	0	0	0
305:	0	0	0	0	0	0	0	0	0
313:	0	0	0	0	0	0	0	0	0
321:	0	0	0	0	0	0	0	0	0
329:	0	0	0	0	0	0	0	0	0
337:	0	0	0	0	0	0	0	0	0
345:	0	0	0	0	0	0	0	0	0
353:	1	0	0	0	0	0	0	0	0
361:	0	0	0	0	0	0	0	0	1

369: 0 0 0 0 0 0 0 0 0

Sample Title: 02

Channel	1	2	3	4	5	6	7	8	9
377:	0	0	1	0	0	0	0	0	0
385:	0	0	0	0	0	0	0	0	0
393:	0	0	0	0	0	0	0	0	0
401:	0	0	0	0	0	1	0	0	0
409:	0	0	0	0	0	0	0	0	0
417:	0	0	0	0	0	0	0	0	0
425:	0	0	0	0	0	0	1	0	0
433:	0	0	0	0	1	0	0	0	0
441:	0	0	0	0	0	1	0	0	0
449:	0	0	1	0	0	0	0	0	0
457:	0	0	0	0	0	0	0	0	0
465:	0	0	0	0	0	0	0	0	0
473:	0	0	0	0	0	0	0	0	0
481:	0	0	0	0	1	0	0	0	0
489:	0	0	0	0	0	0	0	0	0
497:	0	0	0	0	0	0	0	0	0
505:	1	0	0	1	0	0	0	0	0
513:	1	0	0	0	0	0	0	0	0
521:	0	0	0	0	1	1	0	0	0
529:	0	0	0	1	1	0	0	1	0
537:	0	1	0	0	1	0	1	0	0
545:	0	0	0	1	0	0	0	0	2
553:	1	0	0	0	1	0	0	0	0
561:	0	0	2	1	2	0	0	0	1
569:	0	1	0	1	1	1	0	0	0
577:	3	1	3	3	3	3	5	5	5
585:	1	3	2	4	3	3	5	6	6
593:	5	3	6	5	3	10	9	9	9
601:	6	3	5	8	15	8	15	10	10
609:	9	7	6	7	6	6	16	11	11
617:	10	8	18	19	21	15	17	15	15
625:	10	13	10	7	4	3	4	2	2
633:	0	0	0	0	0	0	0	0	0
641:	0	0	0	0	0	1	0	1	1
649:	0	0	0	0	0	0	0	0	0
657:	1	0	0	0	0	0	0	0	0
665:	0	0	0	0	0	0	0	0	0
673:	0	0	0	0	0	0	0	0	0
681:	0	0	0	0	0	0	0	0	0
689:	0	0	0	0	0	0	0	0	0
697:	0	0	0	0	0	0	0	0	0
705:	0	0	0	0	0	0	0	0	0
713:	0	0	0	0	0	0	0	0	0
721:	0	0	0	0	0	0	0	0	0
729:	0	0	0	0	0	0	0	0	0
737:	0	0	0	0	0	0	0	0	0
745:	0	0	0	0	0	0	0	0	0
753:	0	0	0	0	0	0	0	0	0
761:	0	0	0	0	0	0	0	0	0
769:	0	0	0	0	0	0	0	0	0
777:	0	0	0	0	0	0	0	0	0
785:	0	0	1	0	0	0	0	0	0
793:	0	0	0	0	0	0	0	0	0

801: 0 0 0 0 0 0 0 0

Sample Title: 02

Channel	-----	-----	-----	-----	-----	-----	-----	-----
809:	0	0	0	0	0	0	0	0
817:	0	0	0	0	0	0	0	0
825:	0	0	0	0	0	0	0	0
833:	0	0	0	0	0	0	0	0
841:	0	0	0	0	0	0	0	0
849:	0	0	0	0	0	0	0	0
857:	0	0	0	0	0	0	0	0
865:	0	0	0	0	0	0	0	0
873:	0	0	0	0	0	0	0	0
881:	0	0	0	0	0	0	0	0
889:	0	0	0	0	0	0	0	0
897:	0	0	0	0	0	0	0	0
905:	0	0	0	0	0	0	0	0
913:	0	0	0	0	0	0	0	0
921:	0	0	0	0	0	0	0	0
929:	0	0	0	0	0	0	0	0
937:	0	0	0	0	0	0	0	0
945:	0	0	0	0	0	0	0	0
953:	0	0	0	0	0	0	0	0
961:	0	0	0	0	0	0	0	0
969:	0	0	0	0	0	0	0	0
977:	0	0	0	0	0	0	0	0
985:	0	0	0	0	0	0	0	0
993:	0	0	0	0	0	0	0	0
1001:	0	0	0	0	0	0	0	0
1009:	0	0	0	0	0	0	0	0
1017:	0	0	0	0	0	0	0	0

108
11/2/15

Apex-Alpha™

Sample Description: CP4105S01-02-DUP
 Spectrum File: \\OR-ALPHA1\Canberra\ApexAlpha\Root\Data\00001328
 Batch Identification: 1510086A-UU
 Sample Identification: 03
 Sample Geometry: Shelf 2
 Procedure Description: U iso

Detector Name: Alpha_035
 Chamber Serial Number: 04026477A
 Detector Serial Number: 58771
 Env. Background: System Bkgd 133265
 Reagent Blank: <not performed>

Sample Size: 1.553E+000 +/- 0.000E+000 gram
 Sample Date/Time: 10/6/2015 5:34:33 AM
 Acquisition Date/Time: 11/2/2015 8:28:50 AM
 Acquisition Live Time: 170.0 minutes
 Acquisition Real Time: 170.0 minutes

Tracer Certificate: U232_UU-10A
 Tracer Quantity: 0.656 mL
 Effective Efficiency: 0.1945 +/- 0.0107
 Counting Efficiency: 0.1647 +/- 0.0029 on 10/25/2014 2:34:10 PM
 Chem. Recovery Factor: 1.1806 +/- 0.0682

Peak Match Tolerance: 0.150 MeV

 ----- PEAK AREA REPORT -----

Nuclide	Energy (MeV)	Net Pk Area	Pk Area Error %	Ambient Backgnd	Reagent Backgnd	FWHM (keV)
U-232	T 5.299	401.32	9.79	0.68	0.00E+000	26.5
U-234	4.749	147.83	16.13	0.17	0.00E+000	6.7
U-235	4.410	8.00	73.50	0.00	0.00E+000	3.0
U-238	4.182	123.32	17.71	0.68	0.00E+000	4.4

T = Tracer Peak used for Effective Efficiency

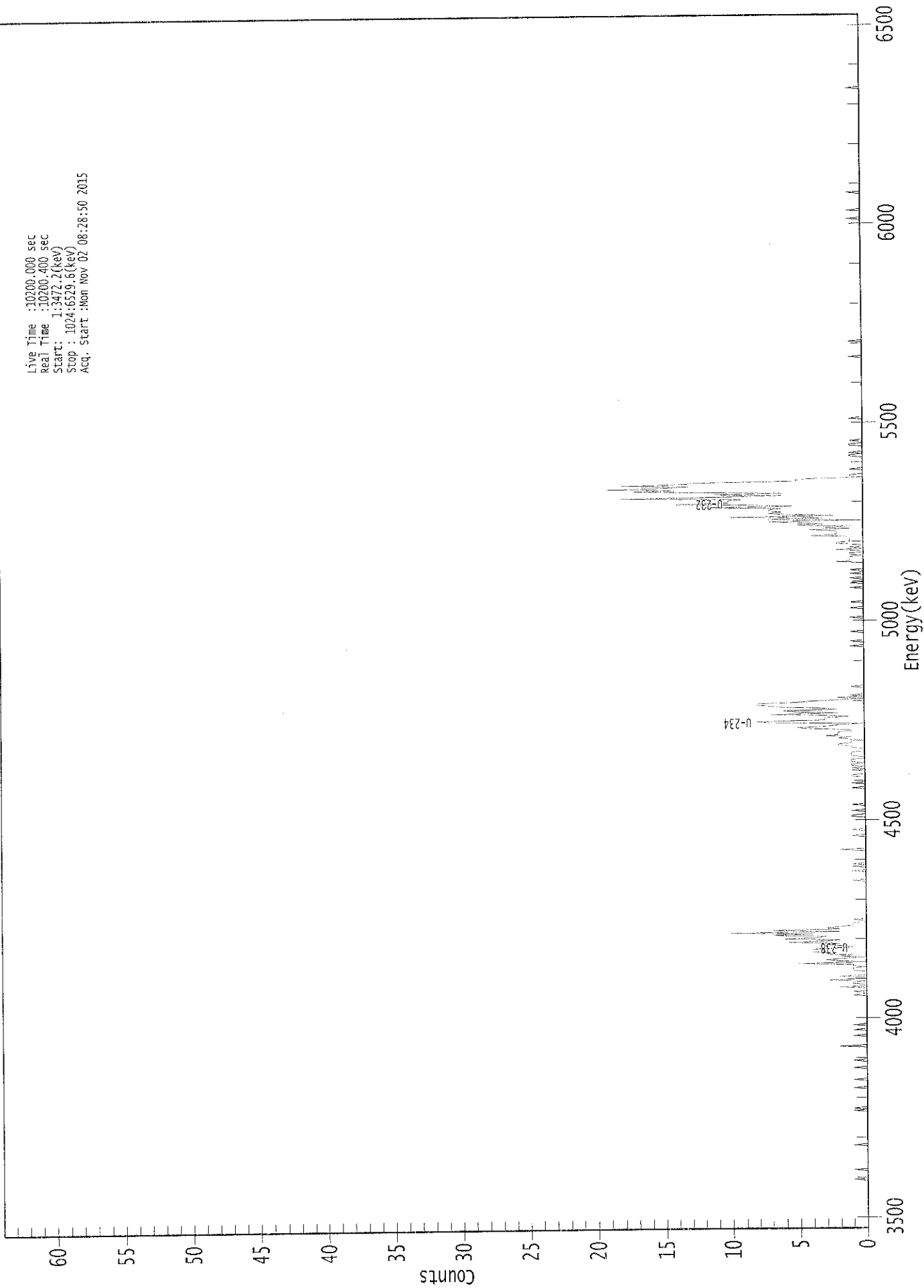
 ----- NUCLIDE ANALYSIS RESULTS -----

Nuclide	Id Conf.	Energy (keV)	Activity (pCi/gram)	MDA (pCi/gram)
U-232	1.000	5302.50*	3.53E+000 +/- 3.81E-001	4.96E-002 +/- 5.35E-003
U-234	0.999	4761.50*	1.30E+000 +/- 2.52E-001	3.67E-002 +/- 3.96E-003
U-235	0.996	4385.50*	8.67E-002 +/- 6.44E-002	6.50E-002 +/- 7.01E-003
U-238	1.000	4184.40*	1.08E+000 +/- 2.24E-001	4.94E-002 +/- 5.32E-003

AG
11/2/15

0000132884.CNF

Live Time : 10200.000 sec
Real Time : 10200.400 sec
Start : 1:3472.2(kev)
Stop : 1024:6529.6(kev)
Acq. Start : Mon Nov 02 08:28:50 2015



ROI Type: 3

ROI Type: 1

101001

369: 0 0 0 1 0 0 0 1

Sample Title: 03

Channel	1	2	3	4	5	6	7	8
377:	0	0	0	0	0	1	1	0
385:	0	0	1	0	1	0	1	1
393:	0	1	1	1	0	0	1	1
401:	1	1	0	0	0	1	1	2
409:	2	1	1	1	1	2	1	3
417:	2	2	2	1	1	4	5	3
425:	2	0	7	8	3	3	3	1
433:	3	7	2	5	6	2	3	6
441:	7	8	8	5	4	2	0	2
449:	0	1	0	0	0	0	0	0
457:	1	0	0	0	0	0	0	0
465:	0	0	0	0	0	0	0	0
473:	0	0	0	0	0	0	0	0
481:	0	0	0	0	0	0	0	0
489:	0	0	1	0	0	0	1	0
497:	0	0	0	0	0	0	1	0
505:	0	0	0	0	0	0	0	0
513:	0	0	1	0	0	0	0	0
521:	0	0	1	0	0	0	0	1
529:	0	0	0	0	0	0	0	0
537:	0	0	0	1	0	0	0	1
545:	0	0	0	1	0	0	0	1
553:	0	0	1	0	0	0	0	0
561:	0	2	1	1	1	1	0	1
569:	1	0	0	2	0	1	0	0
577:	2	2	1	1	1	1	1	4
585:	2	2	2	2	4	1	3	1
593:	5	3	5	7	0	7	3	10
601:	2	6	7	6	7	7	6	12
609:	5	8	14	10	10	10	9	18
617:	11	6	11	6	12	17	14	19
625:	15	13	18	13	13	5	5	4
633:	0	1	1	0	0	0	0	1
641:	0	0	0	0	0	0	0	0
649:	0	0	1	1	0	1	0	0
657:	0	0	0	1	1	0	0	1
665:	0	0	0	0	0	0	0	0
673:	0	0	0	0	0	0	0	0
681:	0	0	1	0	0	0	0	0
689:	0	0	0	0	0	0	0	0
697:	0	0	0	0	0	0	0	0
705:	0	0	0	0	0	0	0	0
713:	0	0	0	0	0	0	0	0
721:	0	0	0	0	0	0	0	0
729:	0	0	0	0	0	0	1	0
737:	0	0	0	0	0	0	0	0
745:	0	0	0	1	0	0	0	0
753:	0	0	0	0	0	0	0	0
761:	0	0	0	0	0	0	0	0
769:	0	0	0	0	0	0	0	0
777:	0	0	0	0	0	0	0	0
785:	0	0	0	0	0	0	0	0
793:	0	0	0	0	0	0	0	0

801: 0 0 0 0 0 0 0 0 0

Sample Title: 03

Channel	-----	-----	-----	-----	-----	-----	-----	-----
809:	0	0	0	0	0	0	0	0
817:	0	0	0	0	0	0	0	0
825:	0	0	0	0	0	0	0	0
833:	0	0	0	0	0	0	0	0
841:	0	0	0	0	0	0	0	0
849:	0	0	1	0	0	0	0	0
857:	0	1	0	0	0	0	0	0
865:	0	0	0	0	0	0	0	0
873:	1	0	0	0	0	0	0	0
881:	0	0	0	0	0	0	0	0
889:	0	0	0	0	0	0	0	0
897:	0	0	0	0	0	0	0	0
905:	0	0	0	0	0	0	0	0
913:	0	0	0	0	0	0	0	0
921:	0	0	0	0	0	0	0	0
929:	0	0	0	0	0	0	0	0
937:	0	0	0	0	0	0	0	0
945:	0	0	0	0	0	0	0	0
953:	0	0	0	0	0	0	0	0
961:	1	0	0	0	0	0	0	0
969:	0	0	0	0	0	0	0	0
977:	0	0	0	0	0	0	0	0
985:	0	0	0	0	0	0	0	0
993:	0	0	0	0	0	0	0	0
1001:	0	0	0	0	0	0	0	0
1009:	0	0	0	0	0	0	0	0
1017:	0	0	0	0	0	0	0	0



KB
11/2/15

Sample Description: CP4105S01-02
 Spectrum File: \\OR-ALPHA1\Canberra\ApexAlpha\Root\Data\00001328
 Batch Identification: 1510086A-UU
 Sample Identification: 04
 Sample Geometry: Shelf 2
 Procedure Description: U iso

Detector Name: Alpha_036
 Chamber Serial Number: 04026477B
 Detector Serial Number: 84167
 Env. Background: System Bkgd 133266
 Reagent Blank: <not performed>

Sample Size: 1.515E+000 +/- 0.000E+000 gram
 Sample Date/Time: 10/6/2015 5:34:33 AM
 Acquisition Date/Time: 11/2/2015 8:28:52 AM
 Acquisition Live Time: 170.0 minutes
 Acquisition Real Time: 170.0 minutes

Tracer Certificate: U232_UU-10A
 Tracer Quantity: 0.657 mL
 Effective Efficiency: 0.1860 +/- 0.0104
 Counting Efficiency: 0.1806 +/- 0.0032 on 10/25/2014 2:38:17 PM
 Chem. Recovery Factor: 1.0301 +/- 0.0604

Peak Match Tolerance: 0.150 MeV

 PEAK AREA REPORT

Nuclide	Energy (MeV)	Net Pk Area	Pk Area Error %	Ambient Backgnd	Reagent Backgnd	FWHM (keV)
U-232	T 5.285	384.49	10.00	0.51	0.00E+000	10.5
U-234	4.732	94.32	20.27	0.68	0.00E+000	6.0
U-235	4.406	12.83	55.14	0.17	0.00E+000	4.5
U-238	4.160	110.00	18.77	0.00	0.00E+000	5.5

T = Tracer Peak used for Effective Efficiency

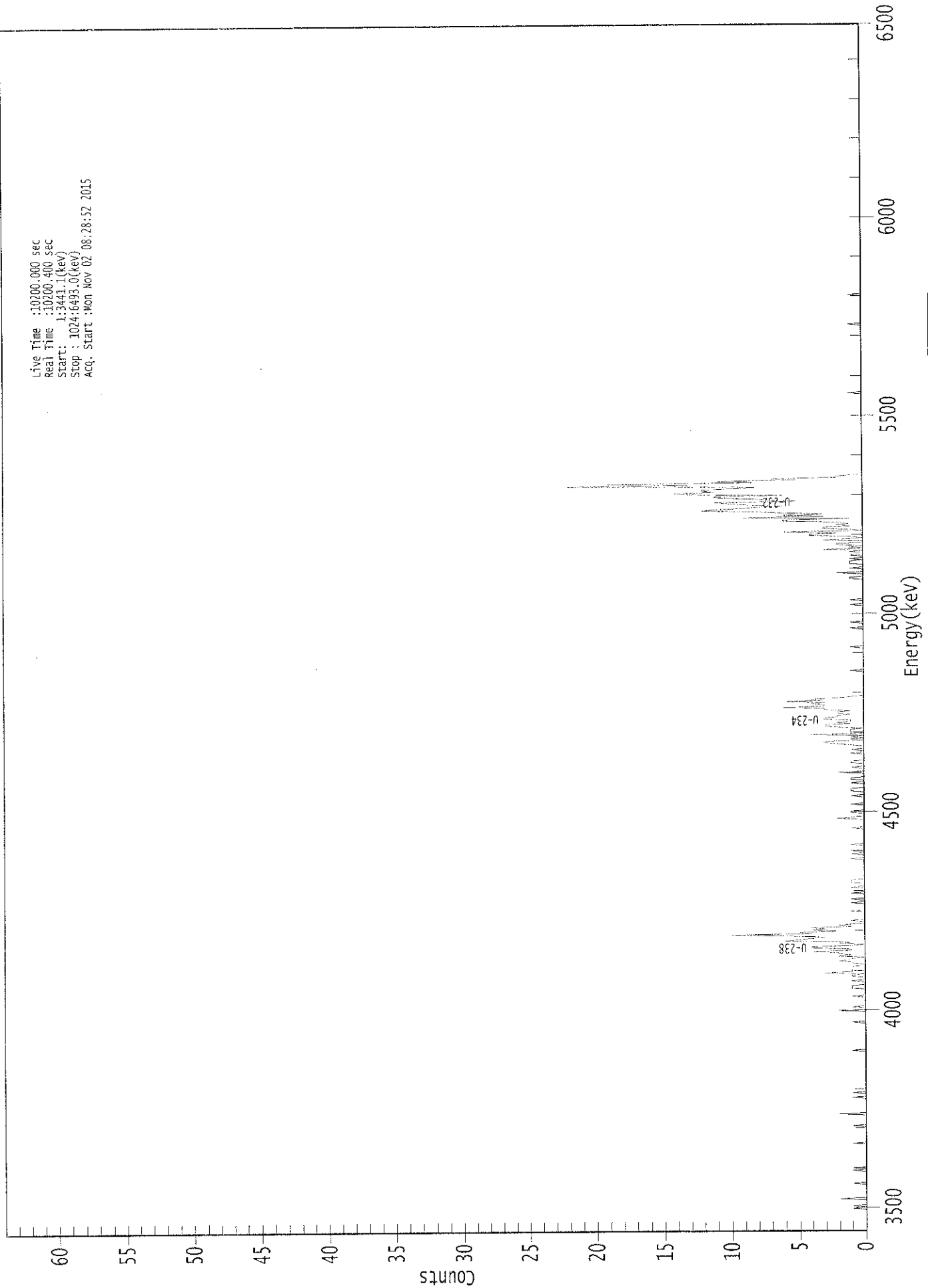
 NUCLIDE ANALYSIS RESULTS

Nuclide	Id Conf.	Energy (keV)	Activity (pCi/gram)	MDA (pCi/gram)
U-232	0.998	5302.50*	3.62E+000 +/- 3.98E-001	4.95E-002 +/- 5.43E-003
U-234	0.994	4761.50*	8.89E-001 +/- 2.05E-001	5.31E-002 +/- 5.83E-003
U-235	0.997	4385.50*	1.49E-001 +/- 8.38E-002	4.85E-002 +/- 5.32E-003
U-238	0.996	4184.40*	1.03E+000 +/- 2.24E-001	5.62E-002 +/- 6.17E-003

AG
11/2/15

0000132885.CNF

Live Time :10200.000 sec
Real Time :10200.400 sec
Start : 1:3441.1(kev)
Stop : 1024:6493.0(kev)
Acq. Start :Mon Nov 02 08:28:52 2015



00100

ROI Type: 1

ROI Type: 3

 ***** S P E C T R A L D A T A R E P O R T *****

Sample Title: 04

Elapsed Live time: 10200
 Elapsed Real Time: 10200

Channel	1	2	3	4	5	6	7	8	9
1:	0	0	0	0	0	0	0	0	0
9:	0	0	0	0	0	0	0	0	0
17:	0	0	0	1	0	1	0	0	0
25:	0	0	0	2	0	0	0	0	0
33:	0	0	0	0	0	0	0	0	0
41:	1	0	0	0	0	0	0	0	0
49:	0	0	0	1	0	1	0	0	0
57:	0	0	0	0	0	0	0	0	0
65:	0	0	0	0	0	0	0	0	0
73:	0	0	1	0	0	0	0	0	0
81:	0	0	0	0	0	0	0	0	0
89:	0	1	0	0	0	0	0	0	0
97:	0	0	0	2	0	0	0	0	0
105:	0	0	0	0	0	0	0	0	0
113:	0	1	0	0	0	1	0	0	0
121:	0	0	0	0	0	0	0	0	0
129:	0	0	0	0	0	0	0	0	0
137:	0	0	0	0	0	0	0	0	0
145:	0	0	0	0	0	0	0	0	0
153:	0	1	0	0	0	0	0	0	0
161:	0	0	0	0	0	0	0	0	0
169:	0	0	0	0	0	0	0	0	0
177:	0	1	0	0	0	0	0	0	0
185:	0	0	0	2	0	0	1	0	0
193:	0	0	0	0	0	0	0	1	1
201:	0	0	0	0	0	0	1	1	1
209:	1	0	0	0	1	0	0	0	0
217:	1	1	0	3	1	1	1	1	1
225:	1	0	0	1	1	2	1	1	1
233:	0	2	1	2	2	4	1	1	1
241:	4	4	1	0	2	1	6	5	5
249:	4	3	5	10	4	5	2	4	4
257:	3	4	1	2	1	0	0	1	1
265:	0	0	0	0	0	0	0	1	0
273:	0	0	0	0	0	0	1	0	0
281:	0	1	0	0	0	0	1	0	0
289:	0	0	0	1	0	0	0	1	0
297:	1	1	0	0	0	0	0	0	0
305:	0	0	0	0	0	0	0	0	0
313:	0	0	0	1	0	0	0	1	0
321:	0	0	1	0	0	0	0	1	0
329:	0	0	0	0	0	0	0	0	0
337:	0	0	0	0	0	1	0	0	0
345:	0	0	0	0	0	2	1	0	0
353:	0	0	1	1	0	0	0	0	0
361:	0	1	0	0	0	0	0	0	0

369: 1 0 0 0 1 1 1 0

Sample Title: 04

Channel	1	2	3	4	5	6	7	8
377:	0	0	0	1	0	0	1	1
385:	0	0	0	0	2	0	0	0
393:	1	0	0	0	1	1	0	0
401:	0	0	0	0	1	0	0	1
409:	0	0	0	1	2	3	3	0
417:	1	0	1	0	4	0	1	1
425:	1	0	2	3	3	1	2	1
433:	1	3	3	2	2	1	2	2
441:	1	3	3	6	3	3	4	3
449:	6	3	4	2	1	0	0	0
457:	0	0	0	0	0	0	0	0
465:	0	0	0	0	0	0	0	0
473:	0	0	1	0	0	0	0	0
481:	0	0	0	0	0	0	0	0
489:	0	0	0	0	0	0	1	0
497:	0	0	0	0	0	0	0	0
505:	0	0	0	0	0	0	1	0
513:	0	0	0	1	0	0	0	0
521:	0	0	0	0	0	0	0	0
529:	0	0	1	0	0	0	1	0
537:	0	0	0	0	0	0	0	0
545:	0	0	0	0	0	0	0	0
553:	1	1	0	0	0	2	0	0
561:	0	1	0	0	0	1	1	1
569:	0	1	0	0	1	0	0	1
577:	0	3	0	1	0	2	2	0
585:	0	3	1	0	1	4	4	2
593:	6	0	1	3	3	1	2	1
601:	2	6	6	1	9	3	6	3
609:	6	8	12	11	9	8	6	9
617:	10	11	5	7	8	11	11	6
625:	13	14	11	12	12	9	8	22
633:	13	19	8	11	5	7	2	2
641:	1	0	0	0	0	0	0	0
649:	0	0	0	0	0	0	0	0
657:	0	0	0	0	0	0	0	0
665:	0	0	0	0	0	0	0	0
673:	0	0	0	0	0	0	0	0
681:	0	0	0	0	0	0	0	0
689:	0	0	0	0	0	0	0	0
697:	0	0	0	0	0	0	0	0
705:	0	0	0	0	0	1	0	0
713:	0	0	0	0	0	0	0	0
721:	0	0	0	0	0	0	0	0
729:	0	0	0	0	0	0	0	0
737:	0	0	0	0	0	0	0	0
745:	0	0	0	0	0	0	0	0
753:	0	0	0	0	0	0	0	0
761:	0	0	0	0	0	0	0	1
769:	0	0	0	0	0	0	0	0
777:	0	0	0	0	0	0	0	0
785:	0	0	0	0	0	0	0	0
793:	1	0	0	0	0	0	0	0

801: 0 0 0 0 0 0 0 0 0

Sample Title: 04

Channel	-----	-----	-----	-----	-----	-----	-----	-----
809:	0	0	0	0	0	0	0	0
817:	0	0	0	0	0	0	0	0
825:	0	0	0	0	0	0	0	0
833:	0	0	0	0	0	0	0	0
841:	0	0	0	0	0	0	0	0
849:	0	0	0	0	0	0	0	0
857:	0	0	0	0	0	0	0	0
865:	0	0	0	0	0	0	0	0
873:	0	0	0	0	0	0	0	0
881:	0	0	0	0	0	0	0	0
889:	0	0	0	0	0	0	0	0
897:	0	0	0	0	0	0	0	0
905:	0	0	0	0	0	0	0	0
913:	0	0	0	0	0	0	0	0
921:	0	0	0	0	0	0	0	0
929:	0	0	0	0	0	0	0	0
937:	0	0	0	0	0	0	0	0
945:	0	0	0	0	0	0	0	0
953:	0	0	0	0	0	0	0	0
961:	0	0	0	0	0	0	0	0
969:	0	0	0	0	0	0	0	0
977:	0	0	0	0	0	0	0	0
985:	0	0	0	0	0	0	0	0
993:	0	0	0	0	0	0	0	0
1001:	0	0	0	0	0	0	0	0
1009:	0	0	0	0	0	0	0	0
1017:	0	0	0	0	0	0	0	0

KB
11/2/15

Apex-Alpha™

Sample Description: CP4105S04-05
 Spectrum File: \\OR-ALPHA1\Canberra\ApexAlpha\Root\Data\00001328
 Batch Identification: 1510086A-UU
 Sample Identification: 05
 Sample Geometry: Shelf 2
 Procedure Description: U iso

Detector Name: Alpha_037
 Chamber Serial Number: 04026478A
 Detector Serial Number: 91133
 Env. Background: System Bkgd 133267
 Reagent Blank: <not performed>

Sample Size: 1.518E+000 +/- 0.000E+000 gram
 Sample Date/Time: 10/6/2015 5:34:33 AM
 Acquisition Date/Time: 11/2/2015 8:28:54 AM
 Acquisition Live Time: 170.0 minutes
 Acquisition Real Time: 170.0 minutes

Tracer Certificate: U232_UU-10A
 Tracer Quantity: 0.656 mL
 Effective Efficiency: 0.1624 +/- 0.0096
 Counting Efficiency: 0.1709 +/- 0.0030 on 10/25/2014 2:46:09 PM
 Chem. Recovery Factor: 0.9502 +/- 0.0588

Peak Match Tolerance: 0.150 MeV

 PEAK AREA REPORT

Nuclide	Energy (MeV)	Net Pk Area	Pk Area Error %	Ambient Backgnd	Reagent Backgnd	FWHM (keV)
U-232	T 5.278	335.32	10.72	0.68	0.00E+000	15.9
U-234	4.730	83.66	21.48	0.34	0.00E+000	3.9
U-235	4.382	4.49	98.45	0.51	0.00E+000	6.0
U-238	4.163	100.66	19.57	0.34	0.00E+000	3.9

T = Tracer Peak used for Effective Efficiency

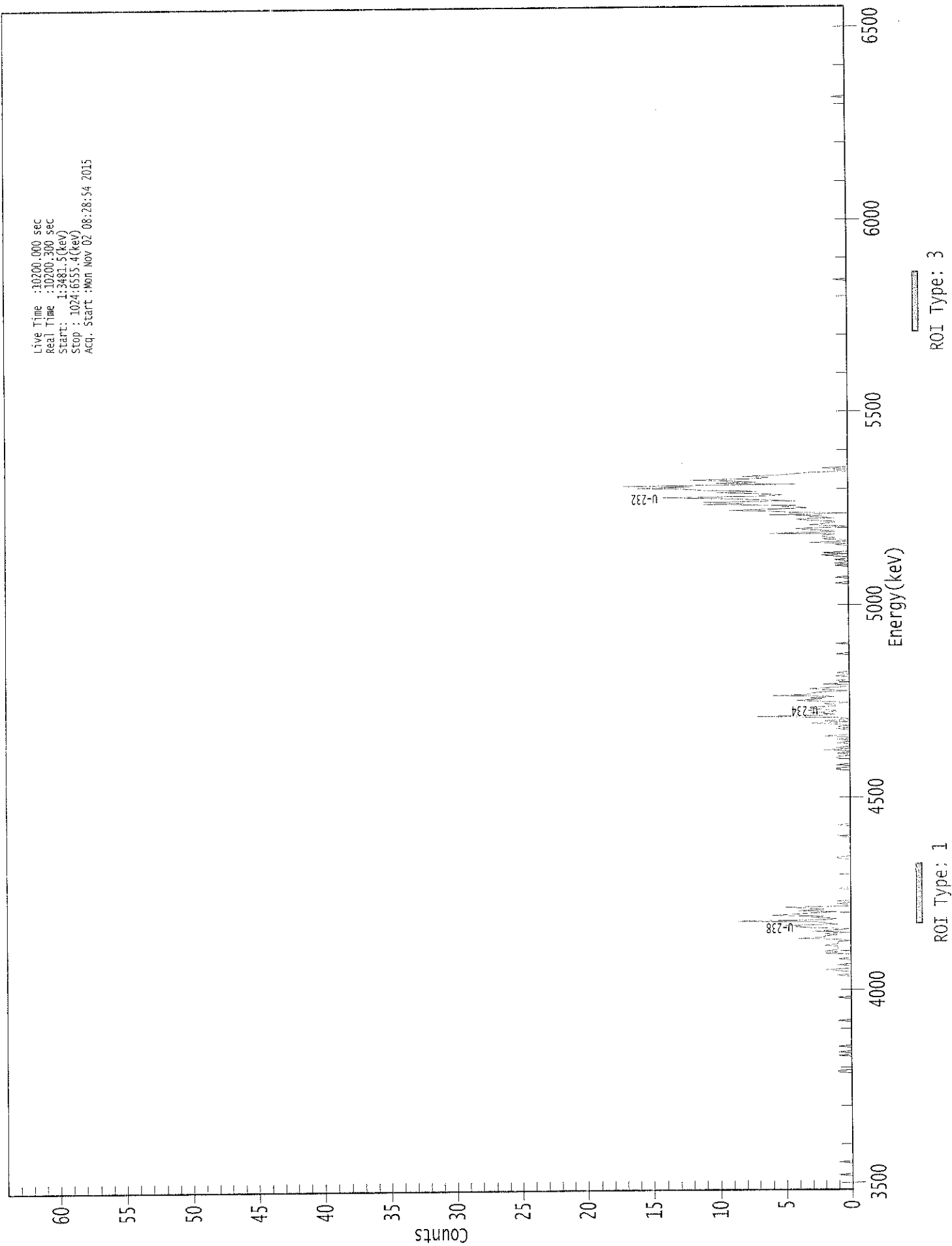
 NUCLIDE ANALYSIS RESULTS

Nuclide	Id Conf.	Energy (keV)	Activity (pCi/gram)	MDA (pCi/gram)
U-232	0.996	5302.50*	3.62E+000 +/- 4.20E-001	6.08E-002 +/- 7.07E-003
U-234	0.993	4761.50*	9.01E-001 +/- 2.20E-001	5.15E-002 +/- 5.99E-003
U-235	1.000	4385.50*	5.97E-002 +/- 5.92E-002	6.97E-002 +/- 8.11E-003
U-238	0.997	4184.40*	1.08E+000 +/- 2.46E-001	5.13E-002 +/- 5.96E-003

AG
11/2/15

0000132886.CNF

Live Time : 10200.000 sec
Real Time : 10200.300 sec
Start : 1:3481.5(keV)
Stop : 1024:6555.4(keV)
Acq. Start : Mon Nov 02 08:28:34 2015



71100

ROI Type: 1

ROI Type: 3

 ***** S P E C T R A L D A T A R E P O R T *****

Sample Title: 05

Elapsed Live time: 10200
 Elapsed Real Time: 10200

Channel	1	2	3	4	5	6	7	8	9
1:	0	0	0	0	0	0	0	0	0
9:	0	0	0	0	0	1	0	0	0
17:	0	0	0	0	0	0	0	0	0
25:	1	0	0	0	0	0	0	0	0
33:	0	0	0	0	0	0	0	0	0
41:	0	0	0	0	0	0	0	0	0
49:	0	0	0	0	0	0	0	0	0
57:	0	0	0	0	0	0	0	0	0
65:	0	0	0	0	0	0	0	0	0
73:	0	0	0	0	0	0	0	0	0
81:	0	0	0	0	0	0	0	0	0
89:	0	0	0	0	0	0	0	0	0
97:	0	0	0	0	0	0	1	1	1
105:	0	0	0	0	0	0	0	0	0
113:	0	0	0	0	1	0	0	1	1
121:	0	0	0	0	1	0	0	0	0
129:	0	0	0	0	0	0	0	0	0
137:	0	0	0	0	0	0	0	0	0
145:	0	0	1	0	0	0	0	0	0
153:	0	0	0	0	0	0	0	0	0
161:	0	0	0	0	0	0	1	0	0
169:	0	0	0	0	0	0	0	0	0
177:	0	0	0	0	0	0	0	0	0
185:	0	1	0	0	0	1	2	0	0
193:	0	0	1	0	0	0	0	1	1
201:	0	0	0	0	2	1	2	1	1
209:	1	1	1	2	1	1	1	0	0
217:	1	4	2	2	1	2	0	3	3
225:	1	0	3	4	5	1	2	2	2
233:	9	2	1	3	2	6	4	3	3
241:	1	4	2	3	5	0	0	1	1
249:	0	1	0	0	0	0	0	0	0
257:	0	0	0	0	1	0	0	0	0
265:	0	0	0	0	0	0	0	0	0
273:	0	0	0	0	0	0	0	0	0
281:	0	0	0	0	0	0	1	1	1
289:	0	0	0	0	0	0	0	0	0
297:	0	0	0	0	0	0	0	0	0
305:	0	1	1	0	0	0	0	0	0
313:	0	0	0	1	0	0	0	0	0
321:	0	0	0	0	0	0	0	0	0
329:	0	0	0	0	0	0	0	0	0
337:	0	0	0	0	0	0	0	0	0
345:	0	0	0	0	0	0	0	0	0
353:	0	0	0	0	0	0	0	0	0
361:	0	0	0	1	1	0	0	1	1

369: 0 0 0 0 0 1 1 0

Sample Title: 05

Channel	1	2	3	4	5	6	7	8
377:	0	1	0	0	2	0	1	0
385:	0	0	1	0	0	1	0	0
393:	2	0	0	0	0	0	1	0
401:	1	0	1	3	0	2	1	0
409:	1	7	2	1	3	1	1	2
417:	3	3	1	1	2	0	2	4
425:	2	3	1	6	3	3	2	0
433:	2	3	1	0	0	2	0	0
441:	1	0	0	0	1	0	0	1
449:	0	0	0	0	0	0	0	0
457:	0	0	0	0	0	0	0	1
465:	0	0	0	0	0	0	0	0
473:	1	0	0	0	0	0	0	0
481:	0	0	0	0	0	0	0	0
489:	0	0	0	0	0	0	0	0
497:	0	0	0	0	0	0	0	0
505:	0	0	0	0	0	0	0	0
513:	0	0	0	0	0	0	0	0
521:	0	0	0	0	1	0	0	0
529:	0	1	0	0	0	0	0	0
537:	0	0	0	1	0	1	0	0
545:	1	0	0	1	2	0	2	0
553:	0	0	0	0	0	1	0	3
561:	0	0	2	1	2	2	1	6
569:	1	1	3	4	1	0	3	2
577:	1	1	3	4	1	3	2	6
585:	0	4	6	9	5	3	5	4
593:	11	8	11	4	7	9	14	7
601:	5	7	10	7	11	12	16	12
609:	17	4	10	7	9	12	7	6
617:	8	5	4	3	0	1	0	2
625:	0	0	0	0	0	0	0	0
633:	0	0	0	0	0	0	0	0
641:	0	0	0	0	0	0	0	0
649:	0	0	0	0	0	0	0	0
657:	0	0	0	0	0	0	0	0
665:	0	0	0	0	0	0	0	0
673:	0	0	0	0	0	0	0	0
681:	0	0	0	0	0	0	0	0
689:	0	0	0	0	0	0	0	0
697:	0	0	0	0	0	0	0	0
705:	0	0	0	0	0	0	0	0
713:	0	0	0	0	0	0	0	0
721:	0	0	0	0	0	0	0	0
729:	0	0	0	0	0	0	0	0
737:	0	0	0	0	0	0	0	0
745:	0	0	0	0	0	0	0	0
753:	0	0	0	0	0	0	0	0
761:	0	0	0	0	0	0	0	0
769:	0	0	0	0	0	0	0	0
777:	0	0	0	0	0	0	0	0
785:	0	0	1	0	0	0	0	0
793:	0	0	0	0	0	0	0	0

801: 0 0 0 0 0 0 0 0 0

Sample Title: 05

Channel	-----	-----	-----	-----	-----	-----	-----	-----
809:	0	0	0	0	0	0	0	0
817:	0	0	0	0	0	0	0	0
825:	0	0	0	0	0	0	0	0
833:	0	0	0	0	0	0	0	0
841:	0	0	0	0	0	0	0	0
849:	0	0	0	0	0	0	0	0
857:	0	0	0	0	0	0	0	0
865:	0	0	0	0	0	0	0	0
873:	0	0	0	0	0	0	0	0
881:	0	0	0	0	0	0	0	0
889:	0	0	0	0	0	0	0	0
897:	0	0	0	0	0	0	0	0
905:	0	0	0	0	0	0	0	0
913:	0	0	0	0	0	0	0	0
921:	0	0	0	0	0	0	0	0
929:	0	0	0	0	0	0	0	0
937:	0	0	0	0	0	0	0	0
945:	1	0	0	0	0	0	0	0
953:	0	0	0	0	0	0	0	0
961:	0	0	0	0	0	0	0	0
969:	0	0	0	0	0	0	0	0
977:	0	0	0	0	0	0	0	0
985:	0	0	0	0	0	0	0	0
993:	0	0	0	0	0	0	0	0
1001:	0	0	0	0	0	0	0	0
1009:	0	0	0	0	0	0	0	0
1017:	0	0	0	0	0	0	0	0

KB
11/2/15

Sample Description: CP4105S06-07
 Spectrum File: \\OR-ALPHA1\Canberra\ApexAlpha\Root\Data\00001328
 Batch Identification: 1510086A-UU
 Sample Identification: 06
 Sample Geometry: Shelf 2
 Procedure Description: U iso

Detector Name: Alpha_038
 Chamber Serial Number: 04026478E
 Detector Serial Number: 91134
 Env. Background: System Bkgd 133268
 Reagent Blank: <not performed>

Sample Size: 1.533E+000 +/- 0.000E+000 gram
 Sample Date/Time: 10/6/2015 5:34:33 AM
 Acquisition Date/Time: 11/2/2015 8:28:55 AM
 Acquisition Live Time: 170.0 minutes
 Acquisition Real Time: 170.0 minutes

Tracer Certificate: U232_UU-10A
 Tracer Quantity: 0.651 mL
 Effective Efficiency: 0.1776 +/- 0.0102
 Counting Efficiency: 0.1615 +/- 0.0029 on 10/25/2014 2:50:18 PM
 Chem. Recovery Factor: 1.0995 +/- 0.0659

Peak Match Tolerance: 0.150 MeV

 PEAK AREA REPORT

Nuclide	Energy (MeV)	Net Pk Area	Pk Area Error %	Ambient Backgnd	Reagent Backgnd	FWHM (keV)
U-232	T 5.292	363.66	10.28	0.34	0.00E+000	7.7
U-234	4.743	107.83	18.89	0.17	0.00E+000	3.9
U-235	4.400	7.83	70.93	0.17	0.00E+000	3.0
U-238	4.163	108.49	18.87	0.51	0.00E+000	9.0

T = Tracer Peak used for Effective Efficiency

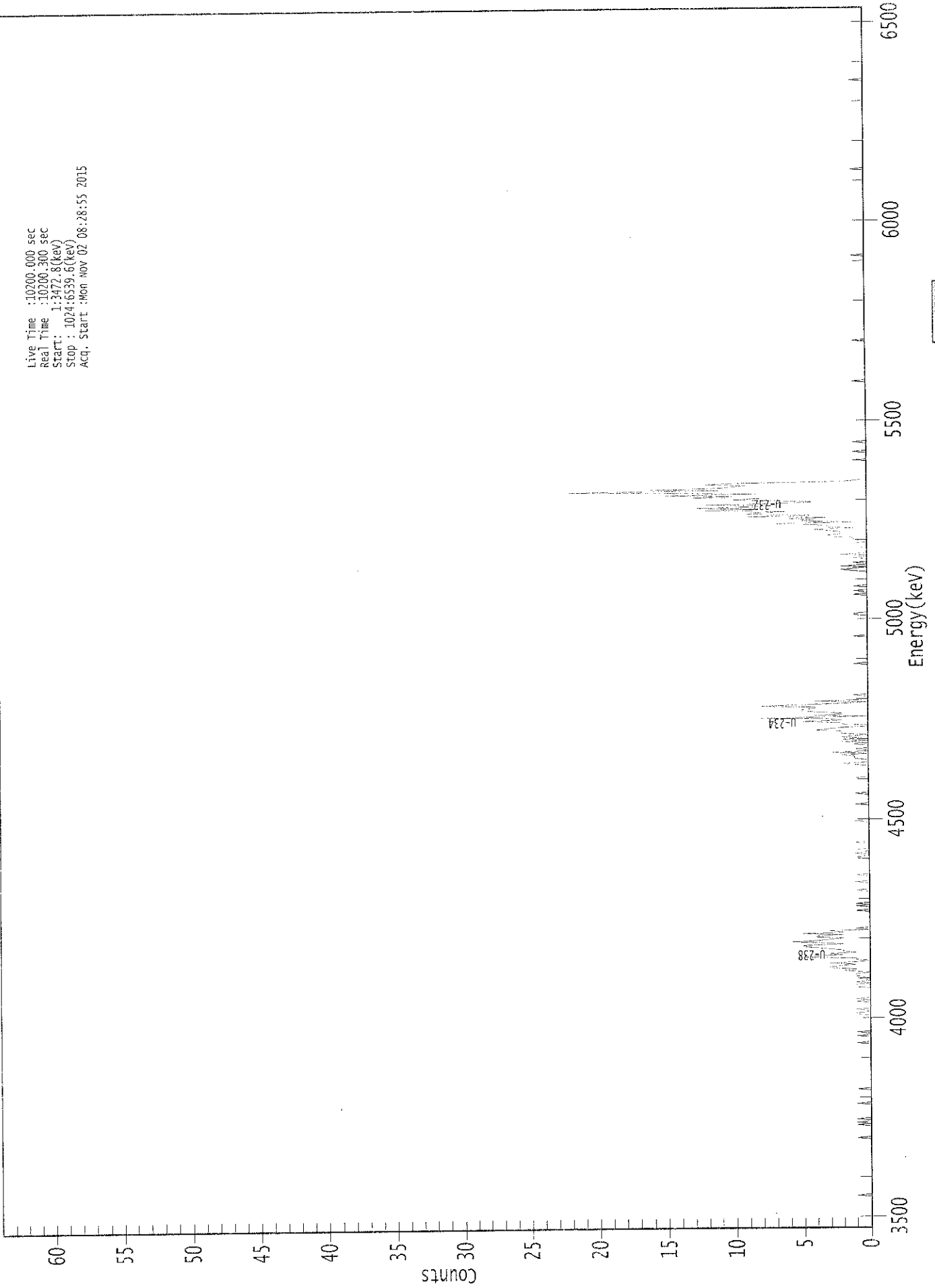
 NUCLIDE ANALYSIS RESULTS

Nuclide	Id Conf.	Energy (keV)	Activity (pCi/gram)	MDA (pCi/gram)
U-232	0.999	5302.50*	3.55E+000 +/- 3.98E-001	4.66E-002 +/- 5.24E-003
U-234	0.997	4761.50*	1.05E+000 +/- 2.31E-001	4.07E-002 +/- 4.57E-003
U-235	0.998	4385.50*	9.42E-002 +/- 6.76E-002	5.02E-002 +/- 5.64E-003
U-238	0.997	4184.40*	1.05E+000 +/- 2.31E-001	5.09E-002 +/- 5.72E-003

AG
11/2/15

0000132887.CNF

Live Time : 10200.000 sec
Real Time : 10200.300 sec
Start : 1:3422.8 (keV)
Stop : 1024:6539.6 (keV)
Acq. Start : Mon Nov 02 08:28:55 2015



 ***** S P E C T R A L D A T A R E P O R T *****

Sample Title: 06

Elapsed Live time: 10200
 Elapsed Real Time: 10200

Channel	1	2	3	4	5	6	7	8	9
1:	0	0	0	0	0	0	0	0	0
9:	0	0	0	0	0	0	0	0	0
17:	0	0	0	0	0	0	0	0	0
25:	0	0	0	1	0	0	0	0	0
33:	0	0	0	0	0	0	0	0	0
41:	0	0	0	0	0	0	0	0	0
49:	0	0	0	0	0	0	0	0	0
57:	0	0	0	0	0	0	0	0	0
65:	0	0	0	0	0	0	0	0	0
73:	0	0	0	1	0	0	0	0	0
81:	0	0	0	0	0	0	1	0	0
89:	1	0	0	1	0	0	0	0	0
97:	0	0	0	0	0	0	0	0	0
105:	1	0	0	0	0	0	0	0	0
113:	0	0	0	0	1	0	0	0	0
121:	0	0	0	0	0	0	0	0	0
129:	0	0	0	0	0	0	0	0	0
137:	0	0	0	0	0	0	0	0	0
145:	0	0	0	0	0	0	0	0	0
153:	0	0	0	1	0	0	0	0	0
161:	0	1	0	0	1	0	0	0	0
169:	0	0	0	0	0	0	0	0	0
177:	0	0	0	1	1	0	0	1	0
185:	0	0	0	0	0	0	1	0	0
193:	1	0	0	0	0	0	0	0	0
201:	0	0	1	1	1	0	1	0	0
209:	0	1	0	1	1	1	0	1	0
217:	2	1	3	3	2	1	3	1	0
225:	0	1	1	5	4	2	3	1	0
233:	2	2	3	4	5	5	2	3	0
241:	6	4	3	2	4	4	2	5	0
249:	2	3	0	1	0	0	0	0	0
257:	0	0	0	0	0	0	0	0	0
265:	0	0	1	0	0	0	1	0	0
273:	1	0	0	0	0	0	0	0	0
281:	0	0	0	1	0	0	0	0	0
289:	0	0	1	0	0	0	0	0	0
297:	1	0	0	0	0	0	0	0	0
305:	0	0	0	0	0	0	0	1	0
313:	0	0	1	0	0	1	0	0	0
321:	0	0	0	1	0	0	0	0	0
329:	0	0	0	0	0	0	0	0	0
337:	0	0	0	0	0	1	0	0	0
345:	0	0	0	0	0	0	0	0	0
353:	0	0	0	1	0	0	0	0	0
361:	0	0	0	0	1	0	0	0	0

369: 0 0 0 0 0 0 0 0 0

Sample Title: 06

Channel	1	2	3	4	5	6	7	8
377:	0	1	0	0	0	0	0	0
385:	0	0	0	0	1	2	0	0
393:	0	1	1	1	2	0	3	0
401:	0	1	0	0	0	1	0	2
409:	0	2	0	2	1	0	2	2
417:	2	4	3	2	0	0	2	2
425:	5	2	3	8	0	4	2	2
433:	4	5	5	4	4	8	5	2
441:	0	4	0	0	0	0	1	0
449:	0	0	0	0	0	0	0	0
457:	0	0	0	0	0	0	0	0
465:	0	0	0	0	0	0	0	0
473:	1	0	0	0	0	0	0	0
481:	0	0	0	0	0	0	0	0
489:	0	0	0	0	0	0	0	1
497:	0	0	0	0	0	0	0	0
505:	0	0	0	0	0	0	0	0
513:	0	1	1	0	0	0	0	0
521:	0	0	0	0	0	0	0	0
529:	0	0	1	0	0	1	0	0
537:	0	1	0	0	0	0	0	0
545:	0	0	0	0	0	0	1	2
553:	1	0	2	0	0	1	0	0
561:	0	1	0	0	2	0	0	0
569:	0	0	1	1	1	1	0	0
577:	1	1	1	3	3	2	2	2
585:	3	4	1	3	3	4	7	1
593:	5	4	6	3	9	4	9	9
601:	6	12	8	13	9	7	12	6
609:	4	7	10	8	13	10	15	8
617:	15	22	11	16	11	10	9	12
625:	10	2	1	0	0	0	0	0
633:	0	0	0	0	0	0	0	0
641:	0	0	0	1	0	0	0	0
649:	0	0	1	0	0	0	0	0
657:	0	0	1	0	0	0	0	0
665:	0	0	0	0	0	0	0	0
673:	0	0	0	0	0	0	0	0
681:	0	0	0	0	0	0	0	0
689:	0	0	0	0	0	0	0	0
697:	0	0	0	0	0	0	0	0
705:	0	0	0	0	0	1	0	0
713:	0	0	0	0	0	0	0	0
721:	0	0	0	0	0	0	0	0
729:	0	0	0	0	0	0	0	0
737:	0	0	0	0	0	0	0	1
745:	0	0	0	0	0	0	0	0
753:	0	0	0	0	0	0	0	0
761:	0	0	0	0	0	0	0	0
769:	0	0	0	0	0	0	0	0
777:	0	0	0	0	0	0	0	0
785:	0	0	0	0	0	0	0	0
793:	0	0	0	0	0	0	0	0

801: 0 0 0 0 0 0 0 0

Sample Title: 06

Channel								
809:	0	0	0	0	0	0	1	0
817:	0	0	0	0	0	0	0	0
825:	0	0	0	0	0	0	0	0
833:	0	0	0	0	0	0	0	0
841:	0	0	0	0	0	0	0	0
849:	0	0	0	0	0	0	0	0
857:	0	0	0	0	0	0	0	0
865:	0	0	0	0	0	0	0	0
873:	0	0	0	0	0	0	0	0
881:	0	0	0	0	0	0	1	0
889:	0	0	0	0	0	0	0	0
897:	0	0	0	0	0	0	0	0
905:	0	0	0	0	0	0	0	0
913:	0	0	0	0	0	0	0	0
921:	0	0	0	0	0	0	0	0
929:	0	0	0	0	0	0	0	0
937:	0	0	0	0	0	0	0	0
945:	0	0	0	0	0	0	0	0
953:	0	0	0	0	0	0	0	0
961:	0	1	0	0	0	0	0	0
969:	0	0	0	0	0	0	0	0
977:	0	0	0	0	0	0	0	0
985:	0	0	0	0	0	0	0	0
993:	0	0	0	0	0	0	0	0
1001:	0	0	0	0	0	0	0	0
1009:	0	0	0	0	0	0	0	0
1017:	0	0	0	0	0	0	0	0

100
11/2/15

Apex-Alpha™

Sample Description: CP4105S08-09
 Spectrum File: \\OR-ALPHA1\Canberra\ApexAlpha\Root\Data\00001328
 Batch Identification: 1510086A-UU
 Sample Identification: 07
 Sample Geometry: Shelf 2
 Procedure Description: U iso

Detector Name: Alpha_039
 Chamber Serial Number: 06027396A
 Detector Serial Number: 83109
 Env. Background: System Bkgd 133269
 Reagent Blank: <not performed>

Sample Size: 1.565E+000 +/- 0.000E+000 gram
 Sample Date/Time: 10/6/2015 5:34:33 AM
 Acquisition Date/Time: 11/2/2015 8:28:57 AM
 Acquisition Live Time: 170.0 minutes
 Acquisition Real Time: 170.0 minutes

Tracer Certificate: U232_UU-10A
 Tracer Quantity: 0.658 mL
 Effective Efficiency: 0.1791 +/- 0.0102
 Counting Efficiency: 0.1934 +/- 0.0034 on 10/25/2014 2:53:34 PM
 Chem. Recovery Factor: 0.9262 +/- 0.0552

Peak Match Tolerance: 0.150 MeV

 ----- PEAK AREA REPORT -----

Nuclide	Energy (MeV)	Net Pk Area	Pk Area Error %	Ambient Backgnd	Reagent Backgnd	FWHM (keV)
U-232	T 5.282	370.77	10.23	3.23	0.00E+000	10.8
U-234	4.738	101.62	19.71	2.38	0.00E+000	6.6
U-235	4.390	5.62	101.11	2.38	0.00E+000	3.0
U-238	4.159	110.77	18.94	3.23	0.00E+000	5.4

T = Tracer Peak used for Effective Efficiency

 ----- NUCLIDE ANALYSIS RESULTS -----

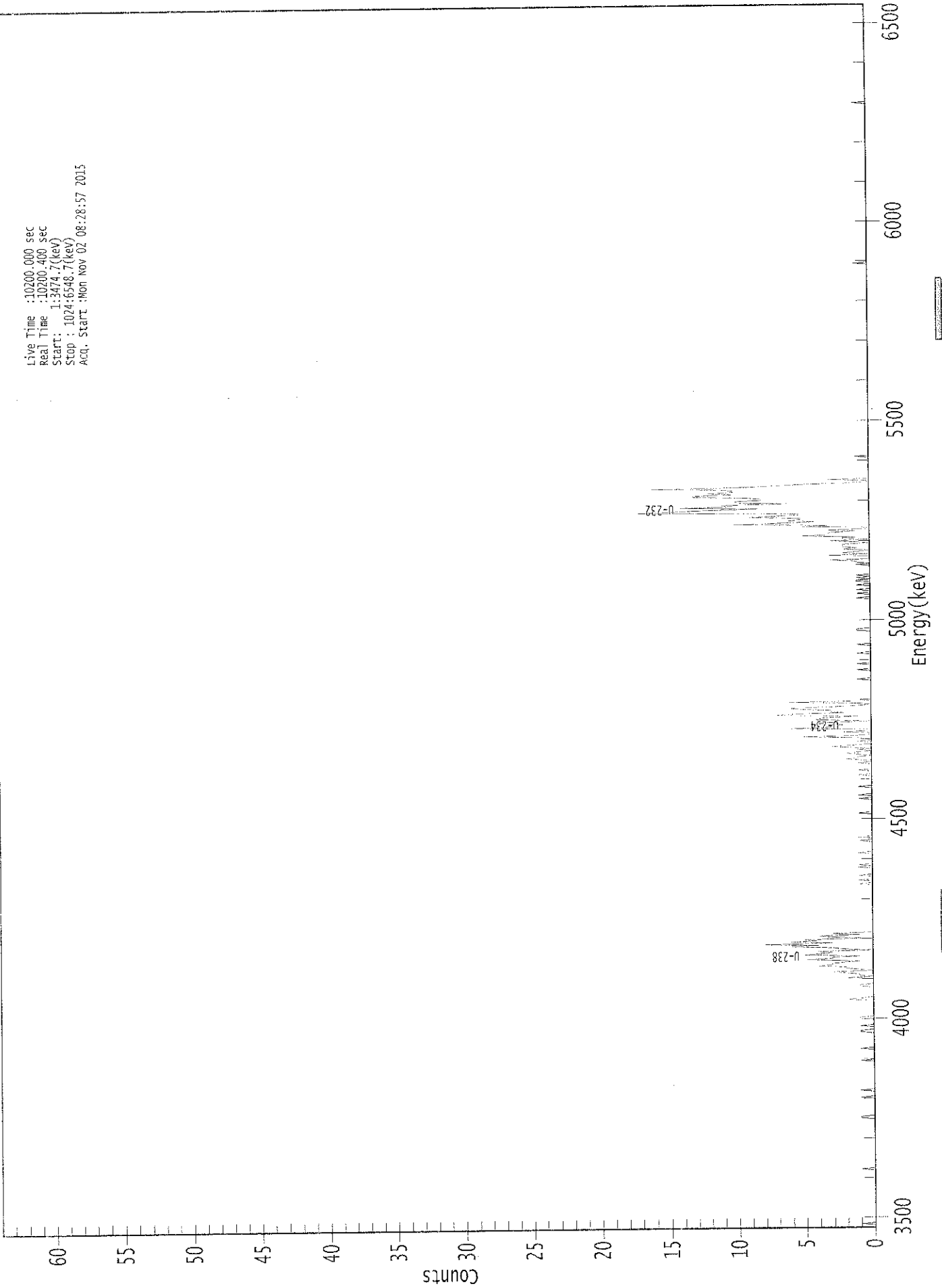
Nuclide	Id Conf.	Energy (keV)	Activity (pCi/gram)	MDA (pCi/gram)
U-232	0.997	5302.50*	3.51E+000 +/- 3.93E-001	8.63E-002 +/- 9.65E-003
U-234	0.996	4761.50*	9.63E-001 +/- 2.18E-001	7.76E-002 +/- 8.68E-003
U-235	1.000	4385.50*	6.57E-002 +/- 6.68E-002	9.58E-002 +/- 1.07E-002
U-238	0.996	4184.40*	1.04E+000 +/- 2.30E-001	8.58E-002 +/- 9.60E-003

AG
 11/2/15

0122A

0000132888.CNF

Live Time : 10200.000 sec
Real Time : 10200.400 sec
Start : 1:3474.7(kev)
Stop : 1024:6548.7(kev)
Acq. Start : Mon Nov 02 08:28:57 2015



00120

ROI Type: 1

ROI Type: 3

 ***** S P E C T R A L D A T A R E P O R T *****

Sample Title: 07

Elapsed Live time: 10200
 Elapsed Real Time: 10200

Channel	1	2	3	4	5	6	7	8	9
1:	0	0	0	1	0	0	0	0	0
9:	0	0	0	0	0	0	0	0	0
17:	0	0	0	0	0	0	0	0	0
25:	0	0	0	0	0	0	0	0	0
33:	0	0	0	0	0	0	0	0	0
41:	0	0	0	0	0	0	0	0	0
49:	0	1	0	0	0	0	0	0	0
57:	0	0	0	0	0	0	0	0	0
65:	0	0	0	0	0	0	0	0	0
73:	0	0	0	0	0	0	0	0	0
81:	0	0	0	0	0	0	0	0	0
89:	0	0	0	0	1	1	0	0	0
97:	0	0	0	0	0	0	0	0	0
105:	0	0	0	0	0	1	0	0	0
113:	0	0	0	1	0	0	0	0	0
121:	0	0	0	0	0	0	0	0	0
129:	0	0	0	0	0	0	0	0	0
137:	0	0	0	0	1	0	0	0	0
145:	0	0	0	0	0	0	1	0	0
153:	0	0	0	0	0	0	0	0	0
161:	0	0	0	0	1	1	0	0	0
169:	0	1	0	0	0	0	0	1	0
177:	1	0	0	0	0	0	0	0	0
185:	0	0	0	0	0	0	0	0	2
193:	1	0	0	0	0	0	0	0	0
201:	0	0	1	1	0	0	0	0	0
209:	0	2	0	1	1	2	3	0	0
217:	1	2	2	4	3	3	2	1	0
225:	5	3	3	1	5	4	3	4	0
233:	0	2	3	6	4	8	3	6	0
241:	4	5	0	3	4	1	3	0	0
249:	0	0	0	0	0	0	0	0	0
257:	0	0	0	0	0	0	0	0	0
265:	0	0	0	0	0	0	0	0	0
273:	0	0	0	0	0	0	0	0	0
281:	0	0	0	0	0	0	0	1	0
289:	0	0	1	0	0	0	1	0	0
297:	0	0	0	0	0	1	0	1	0
305:	0	0	0	0	0	0	0	0	0
313:	0	1	0	0	0	0	0	0	0
321:	0	0	0	1	0	0	1	0	0
329:	0	0	0	0	0	0	0	0	0
337:	0	0	0	0	0	0	0	0	0
345:	0	0	1	0	0	0	0	0	0
353:	0	0	0	0	0	0	1	0	0
361:	0	1	0	0	0	0	0	0	0

369: 1 0 0 0 0 0 0 0 0

Sample Title: 07

Channel	1	2	3	4	5	6	7	8	9
377:	0	0	1	0	0	0	1	0	
385:	0	0	0	0	1	0	0	2	
393:	1	1	0	1	2	1	0	1	
401:	0	2	3	1	0	0	1	0	
409:	0	1	5	1	0	0	2	0	
417:	0	6	3	3	2	4	3	0	
425:	4	4	3	1	7	6	2	3	
433:	3	5	6	3	1	0	1	6	
441:	0	0	0	0	0	0	0	0	
449:	0	0	0	0	0	0	0	0	
457:	0	0	1	0	0	0	0	0	
465:	0	0	1	0	0	0	0	1	
473:	0	0	0	0	0	0	0	0	
481:	1	0	0	0	0	0	0	1	
489:	0	0	0	0	0	0	0	0	
497:	0	0	0	1	1	0	0	0	
505:	0	0	0	0	0	0	0	0	
513:	0	0	0	0	0	0	0	0	
521:	0	0	0	0	0	0	1	0	
529:	0	0	1	0	0	1	0	0	
537:	0	1	0	0	1	1	0	1	
545:	0	1	0	0	0	0	0	0	
553:	0	0	1	0	1	1	3	0	
561:	0	0	3	0	2	1	0	2	
569:	1	2	2	2	0	1	3	0	
577:	2	1	5	3	3	3	1	3	
585:	0	0	5	3	10	7	4	6	
593:	5	5	9	7	5	5	17	15	
601:	12	8	14	10	11	6	10	10	
609:	8	8	9	13	13	10	12	10	
617:	10	11	16	9	7	5	2	0	
625:	0	3	0	0	0	0	0	0	
633:	0	0	0	0	0	0	0	0	
641:	0	0	0	0	1	0	0	0	
649:	0	0	0	0	0	0	0	0	
657:	0	0	0	0	0	0	0	0	
665:	0	0	0	0	0	0	0	0	
673:	0	0	0	0	0	0	0	0	
681:	0	0	0	0	0	0	0	0	
689:	0	0	0	0	0	0	0	0	
697:	0	0	0	0	0	0	0	0	
705:	0	0	0	0	0	0	0	0	
713:	0	0	0	0	0	0	0	0	
721:	0	0	0	0	0	0	0	0	
729:	0	0	0	0	0	0	0	0	
737:	0	0	0	0	0	0	0	0	
745:	0	0	0	0	0	0	0	0	
753:	0	0	0	0	0	0	0	0	
761:	0	0	0	0	0	0	0	0	
769:	0	0	0	0	0	0	0	0	
777:	0	0	0	0	0	0	0	0	
785:	0	0	0	0	0	0	0	0	
793:	0	0	0	0	0	0	0	0	

801: 0 0 0 0 0 1 0 0

Sample Title: 07

Channel								
809:	0	0	0	0	0	0	0	0
817:	0	0	0	0	0	0	0	0
825:	0	0	0	0	0	0	0	0
833:	0	0	0	0	0	0	0	0
841:	0	0	0	0	0	0	0	0
849:	0	0	0	0	0	0	0	0
857:	0	0	0	0	0	0	0	0
865:	0	0	0	0	0	0	0	0
873:	0	0	0	0	0	0	0	0
881:	0	0	0	0	0	0	0	0
889:	0	0	0	0	0	0	0	0
897:	0	0	0	0	0	0	0	0
905:	0	0	0	0	0	0	0	0
913:	0	0	0	0	0	0	0	0
921:	0	0	0	0	0	0	0	0
929:	0	0	0	0	0	0	0	0
937:	0	0	0	0	1	0	0	0
945:	0	0	0	0	0	0	0	0
953:	0	0	0	0	0	0	0	0
961:	0	0	0	0	0	0	0	0
969:	0	0	0	0	0	0	0	0
977:	0	0	0	0	0	0	0	0
985:	0	0	0	0	0	0	0	0
993:	0	0	0	0	0	0	0	0
1001:	0	0	0	0	0	0	0	0
1009:	0	0	0	0	0	0	0	0
1017:	0	0	0	0	0	0	0	0



ICB
11/2/15

Sample Description: CP4105S10-11
 Spectrum File: \\OR-ALPHA1\Canberra\ApexAlpha\Root\Data\00001328
 Batch Identification: 1510086A-UU
 Sample Identification: 08
 Sample Geometry: Shelf 2
 Procedure Description: U iso

Detector Name: Alpha_040
 Chamber Serial Number: 06027396B
 Detector Serial Number: 91135
 Env. Background: System Bkgd 133270
 Reagent Blank: <not performed>

Sample Size: 1.510E+000 +/- 0.000E+000 gram
 Sample Date/Time: 10/6/2015 5:34:33 AM
 Acquisition Date/Time: 11/2/2015 8:28:59 AM
 Acquisition Live Time: 170.0 minutes
 Acquisition Real Time: 170.0 minutes

Tracer Certificate: U232_UU-10A
 Tracer Quantity: 0.651 mL
 Effective Efficiency: 0.1676 +/- 0.0098
 Counting Efficiency: 0.1856 +/- 0.0032 on 10/25/2014 2:57:14 PM
 Chem. Recovery Factor: 0.9034 +/- 0.0553

Peak Match Tolerance: 0.150 MeV

 PEAK AREA REPORT

Nuclide	Energy (MeV)	Net Pk Area	Pk Area Error %	Ambient Backgnd	Reagent Backgnd	FWHM (keV)
U-232	T 5.277	343.32	10.59	0.68	0.00E+000	23.8
U-234	4.733	99.83	19.64	0.17	0.00E+000	12.2
U-235	4.412	7.66	72.63	0.34	0.00E+000	3.0
U-238	4.154	140.83	16.53	0.17	0.00E+000	11.2

T = Tracer Peak used for Effective Efficiency

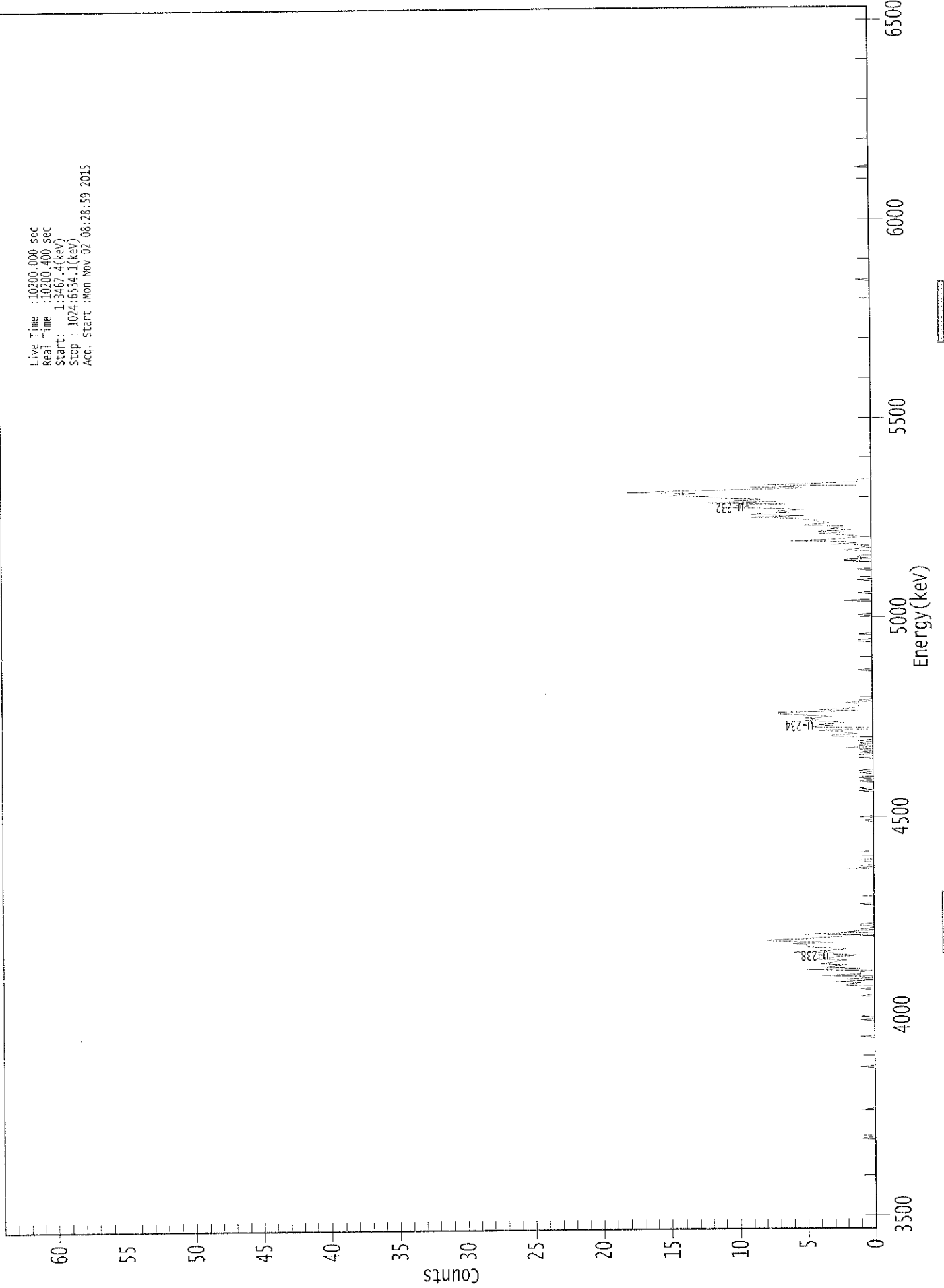
 NUCLIDE ANALYSIS RESULTS

Nuclide	Id Conf.	Energy (keV)	Activity (pCi/gram)	MDA (pCi/gram)
U-232	0.996	5302.50*	3.60E+000 +/- 4.15E-001	5.92E-002 +/- 6.82E-003
U-234	0.994	4761.50*	1.05E+000 +/- 2.38E-001	4.38E-002 +/- 5.04E-003
U-235	0.995	4385.50*	9.91E-002 +/- 7.29E-002	6.19E-002 +/- 7.12E-003
U-238	0.994	4184.40*	1.47E+000 +/- 2.96E-001	4.36E-002 +/- 5.02E-003

AG
11/2/15

0000132889.CNF

Live Time :10200.000 sec
Real Time :10200.400 sec
Start : 1:3467.4(keV)
Stop : 1024:6534.1(keV)
Acq. Start :Mon Nov 02 08:28:59 2015



ROI Type: 3

ROI Type: 1

 ***** S P E C T R A L D A T A R E P O R T *****

Sample Title: 08

Elapsed Live time: 10200
 Elapsed Real Time: 10200

Channel	1	2	3	4	5	6	7	8	9
1:	0	0	0	0	0	0	0	0	0
9:	0	0	0	0	0	0	0	0	0
17:	0	0	0	0	0	0	0	0	0
25:	0	0	0	0	0	0	0	0	0
33:	0	0	0	0	0	0	0	0	0
41:	0	0	0	0	0	0	0	0	0
49:	0	0	0	0	0	0	0	0	0
57:	0	0	0	0	0	0	0	0	0
65:	0	0	0	0	0	0	0	0	0
73:	0	0	0	1	0	0	0	0	0
81:	0	0	0	0	0	0	0	0	0
89:	0	0	0	0	0	0	0	0	0
97:	0	0	0	1	0	0	0	0	0
105:	0	0	0	0	0	0	0	0	0
113:	0	0	0	0	0	0	0	0	0
121:	0	0	0	0	0	0	0	0	0
129:	0	0	0	0	0	0	0	0	1
137:	0	0	0	0	0	0	0	0	0
145:	0	0	0	0	0	0	0	0	0
153:	0	0	0	0	0	0	0	0	0
161:	1	0	0	0	0	0	0	0	0
169:	0	0	0	0	0	0	0	1	0
177:	0	1	0	0	0	0	0	0	0
185:	0	0	0	0	0	0	0	0	0
193:	0	0	1	0	0	0	0	0	0
201:	1	0	0	2	2	1	3	0	0
209:	2	0	0	4	1	1	1	0	0
217:	5	1	4	3	2	4	3	3	3
225:	2	5	3	3	1	3	3	6	6
233:	4	2	3	5	5	5	6	3	3
241:	7	8	5	4	2	0	6	0	0
249:	2	0	1	0	0	1	1	0	0
257:	0	0	0	0	0	0	0	0	0
265:	0	0	0	0	0	0	0	1	1
273:	0	0	0	0	0	0	0	0	0
281:	0	0	0	0	0	0	0	0	0
289:	0	0	0	0	0	0	0	0	0
297:	0	0	0	0	0	2	0	1	1
305:	0	0	0	1	1	0	0	0	0
313:	0	0	0	1	0	0	0	0	0
321:	0	0	0	0	0	0	0	0	0
329:	0	0	0	0	0	0	0	0	0
337:	0	0	0	0	0	1	0	0	0
345:	1	0	0	0	0	0	0	0	0
353:	0	0	0	0	0	0	0	0	0
361:	0	0	0	0	0	0	1	0	0

369: 1 0 0 0 0 0 0 1 0

Sample Title: 08

Channel	1	2	3	4	5	6	7	8	9
377:	0	1	0	0	0	0	1	0	1
385:	0	0	0	0	0	0	0	0	0
393:	0	0	1	1	1	0	1	1	0
401:	1	0	2	0	1	0	1	0	0
409:	1	0	0	0	3	3	1	2	2
417:	2	4	0	0	5	3	4	2	2
425:	3	5	4	5	3	4	6	7	7
433:	7	1	4	2	1	1	1	1	1
441:	2	0	1	0	0	0	0	0	0
449:	0	0	0	0	0	0	0	0	0
457:	0	0	0	0	0	0	0	0	0
465:	0	0	0	1	0	0	0	0	0
473:	0	0	0	0	0	0	0	0	0
481:	0	0	0	0	0	0	0	0	0
489:	0	0	0	1	1	0	0	0	0
497:	0	1	0	0	0	0	0	0	0
505:	0	0	0	0	0	0	0	0	0
513:	0	1	0	0	0	0	0	0	0
521:	0	0	0	0	0	2	0	0	0
529:	0	0	0	1	0	0	0	0	0
537:	0	0	0	0	0	0	1	0	0
545:	0	0	0	0	0	0	0	1	1
553:	0	0	0	0	0	0	2	2	2
561:	0	1	1	0	0	0	0	2	2
569:	1	0	1	0	3	1	2	6	6
577:	3	2	1	1	2	4	2	4	4
585:	1	3	2	2	5	4	3	4	4
593:	4	5	6	9	5	9	8	6	6
601:	7	5	7	11	9	10	6	12	12
609:	7	10	8	12	12	15	14	13	13
617:	18	15	10	5	9	1	8	4	4
625:	1	1	1	0	0	0	0	0	0
633:	0	0	0	0	0	0	0	0	0
641:	0	0	0	0	0	0	0	0	0
649:	0	0	0	0	0	0	0	0	0
657:	0	0	0	0	0	0	0	0	0
665:	0	0	0	0	0	0	0	0	0
673:	0	0	0	0	0	0	0	0	0
681:	0	0	0	0	0	0	0	0	0
689:	0	0	0	0	0	0	0	0	0
697:	0	0	0	0	0	0	0	0	0
705:	0	0	0	0	0	0	0	0	0
713:	0	0	0	0	0	0	0	0	0
721:	0	0	0	0	0	0	0	0	0
729:	0	0	0	0	0	0	0	0	0
737:	0	0	0	0	0	0	0	0	0
745:	0	0	0	0	0	0	0	0	0
753:	0	0	0	0	0	0	0	0	0
761:	0	0	0	0	0	0	0	0	0
769:	0	0	0	0	0	0	0	0	0
777:	0	0	0	0	0	0	0	0	0
785:	0	0	0	0	0	0	0	0	0
793:	0	0	1	0	0	0	0	0	0

801: 0 0 0 0 0 0 0 0 0

Sample Title: 08

Channel	-----	-----	-----	-----	-----	-----	-----	-----
809:	0	0	0	0	0	0	0	0
817:	0	0	0	0	0	0	0	0
825:	0	0	0	0	0	0	0	0
833:	0	0	0	0	0	0	0	0
841:	0	0	0	0	0	0	0	0
849:	0	0	0	0	0	0	0	0
857:	0	0	0	0	0	0	0	0
865:	0	0	0	0	0	0	0	0
873:	0	0	0	0	0	0	0	0
881:	0	0	0	0	0	0	0	0
889:	1	0	0	0	0	0	0	0
897:	0	0	0	0	0	0	0	0
905:	0	0	0	0	0	0	0	0
913:	0	0	0	0	0	0	0	0
921:	0	0	0	0	0	0	0	0
929:	0	0	0	0	0	0	0	0
937:	0	0	0	0	0	0	0	0
945:	0	0	0	0	0	0	0	0
953:	0	0	0	0	0	0	0	0
961:	0	0	0	0	0	0	0	0
969:	0	0	0	0	0	0	0	0
977:	0	0	0	0	0	0	0	0
985:	0	0	0	0	0	0	0	0
993:	0	0	0	0	0	0	0	0
1001:	0	0	0	0	0	0	0	0
1009:	0	0	0	0	0	0	0	0
1017:	0	0	0	0	0	0	0	0

KB
11/2/15

Apex-Alpha™

Sample Description: CP4105S12-13
 Spectrum File: \\OR-ALPHA1\Canberra\ApexAlpha\Root\Data\00001328
 Batch Identification: 1510086A-UU
 Sample Identification: 09
 Sample Geometry: Shelf 2
 Procedure Description: U iso

Detector Name: Alpha_041
 Chamber Serial Number: 05026930A
 Detector Serial Number: 91087
 Env. Background: System Bkgd 133271
 Reagent Blank: <not performed>

Sample Size: 1.529E+000 +/- 0.000E+000 gram
 Sample Date/Time: 10/6/2015 5:34:33 AM
 Acquisition Date/Time: 11/2/2015 8:29:00 AM
 Acquisition Live Time: 170.0 minutes
 Acquisition Real Time: 170.0 minutes

Tracer Certificate: U232_UU-10A
 Tracer Quantity: 0.651 mL
 Effective Efficiency: 0.1765 +/- 0.0101
 Counting Efficiency: 0.1873 +/- 0.0033 on 10/25/2014 3:00:28 PM
 Chem. Recovery Factor: 0.9425 +/- 0.0566

Peak Match Tolerance: 0.150 MeV

 PEAK AREA REPORT

Nuclide	Energy (MeV)	Net Pk Area	Pk Area Error %	Ambient Backgnd	Reagent Backgnd	FWHM (keV)
U-232	T 5.277	361.49	10.32	0.51	0.00E+000	31.5
U-234	4.733	95.98	20.13	1.02	0.00E+000	5.4
U-235	4.393	4.66	94.59	0.34	0.00E+000	3.0
U-238	4.154	99.11	20.02	2.89	0.00E+000	4.1

T = Tracer Peak used for Effective Efficiency

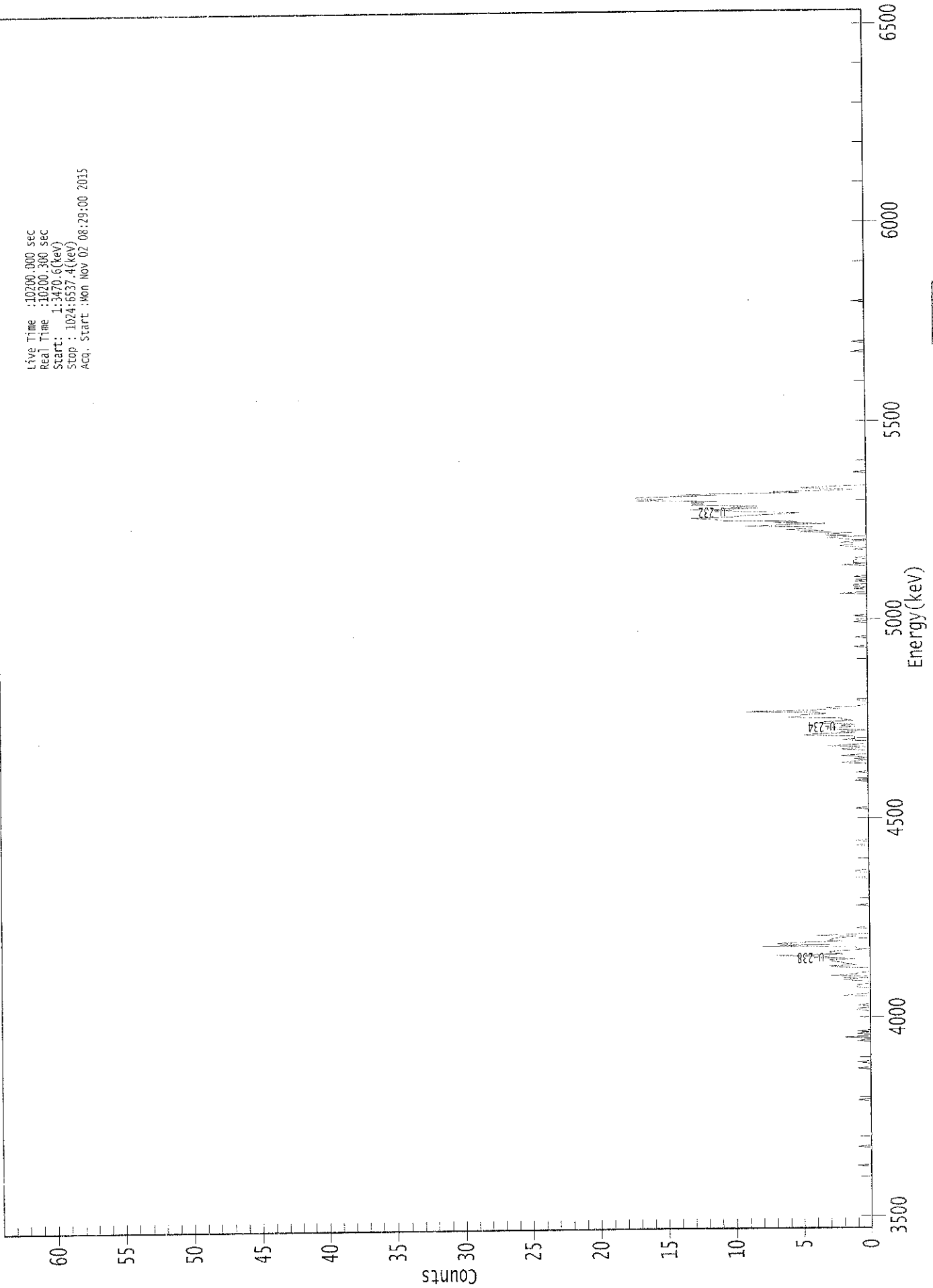
 NUCLIDE ANALYSIS RESULTS

Nuclide	Id Conf.	Energy (keV)	Activity (pCi/gram)	MDA (pCi/gram)
U-232	0.995	5302.50*	3.56E+000 +/- 4.01E-001	5.16E-002 +/- 5.81E-003
U-234	0.994	4761.50*	9.44E-001 +/- 2.18E-001	6.20E-002 +/- 6.98E-003
U-235	1.000	4385.50*	5.65E-002 +/- 5.38E-002	5.80E-002 +/- 6.53E-003
U-238	0.993	4184.40*	9.70E-001 +/- 2.23E-001	8.57E-002 +/- 9.65E-003

AG
11/2/15

0000132890.CNF

Live Time : 10200.000 sec
Real Time : 10200.300 sec
Start : 1:3470.6(keV)
Stop : 1024:6537.4(keV)
Acq. Start : Mon Nov 02 08:29:00 2015



ROI Type: 3

ROI Type: 1

369: 0 0 0 0 0 0 0 0 1

Sample Title: 09

Channel	1	2	3	4	5	6	7	8	9
377:	0	0	0	0	0	0	0	1	0
385:	0	0	0	0	0	0	0	2	1
393:	0	1	0	1	2	0	0	0	0
401:	0	2	1	0	3	1	0	0	0
409:	0	2	1	1	1	5	4	1	1
417:	2	0	3	3	1	2	1	4	4
425:	3	1	2	2	6	5	5	3	3
433:	4	9	4	2	3	1	0	0	0
441:	0	0	1	0	0	0	0	0	0
449:	0	0	0	0	0	0	0	0	0
457:	0	0	0	0	0	0	0	0	0
465:	0	0	0	0	0	0	0	0	0
473:	0	0	0	0	0	0	0	0	0
481:	0	0	0	0	0	0	0	1	1
489:	0	0	0	0	0	0	0	1	1
497:	0	0	0	0	0	0	0	0	0
505:	0	0	0	0	1	0	0	0	0
513:	0	1	0	0	0	0	0	0	0
521:	0	0	0	0	0	0	0	0	0
529:	0	0	0	0	2	0	0	0	0
537:	1	0	1	1	0	0	1	0	0
545:	0	0	1	0	0	0	0	0	0
553:	0	0	0	0	2	0	1	1	1
561:	1	0	1	0	0	0	0	0	0
569:	0	1	0	1	2	1	1	2	2
577:	0	1	2	3	0	3	3	1	1
585:	5	3	6	4	4	9	6	3	3
593:	7	5	11	11	13	10	9	7	7
601:	5	9	10	13	8	10	8	13	13
609:	12	13	11	17	15	17	17	11	11
617:	14	5	7	1	2	5	3	0	0
625:	0	0	0	0	0	0	0	0	0
633:	0	0	1	0	0	0	0	0	0
641:	0	0	0	0	0	0	0	0	0
649:	0	0	0	0	0	0	0	0	0
657:	0	0	0	0	0	0	0	0	0
665:	0	0	0	0	0	0	0	0	0
673:	0	0	0	0	0	0	0	0	0
681:	0	0	0	0	0	0	0	0	0
689:	0	0	0	0	0	0	0	0	0
697:	0	0	0	0	0	0	0	0	0
705:	0	0	0	0	0	0	0	0	0
713:	0	0	0	0	0	0	0	0	0
721:	0	0	0	0	0	0	0	0	0
729:	0	0	0	0	0	0	0	1	1
737:	0	0	0	0	0	0	0	1	1
745:	0	0	0	0	0	0	0	0	0
753:	0	0	0	0	0	0	0	0	0
761:	0	0	0	0	0	0	0	0	0
769:	0	0	0	0	0	0	0	0	0
777:	0	1	0	0	0	0	0	0	0
785:	0	0	0	0	0	0	0	0	0
793:	0	0	0	0	0	0	0	0	0

801: 0 0 0 0 0 0 0 0 0

Sample Title: 09

Channel								
809:	0	0	0	0	0	0	0	0
817:	0	0	0	0	0	0	0	0
825:	0	0	0	0	0	0	0	0
833:	0	0	0	0	0	0	0	0
841:	0	0	0	0	0	0	0	0
849:	0	0	0	0	0	0	0	0
857:	0	0	0	0	0	0	0	0
865:	0	0	0	0	0	0	0	0
873:	0	0	0	0	0	0	0	0
881:	0	0	0	0	0	0	0	0
889:	0	0	0	0	0	0	0	0
897:	0	0	0	0	0	0	0	0
905:	0	0	0	0	0	0	0	0
913:	0	0	0	0	0	0	0	0
921:	0	0	0	0	0	0	0	0
929:	0	0	0	0	0	0	0	0
937:	0	0	0	0	0	0	0	0
945:	0	0	0	0	0	0	0	0
953:	0	0	0	0	0	0	0	0
961:	0	0	0	0	0	0	0	0
969:	0	0	0	0	0	0	0	0
977:	0	0	0	0	0	0	0	0
985:	0	0	0	0	0	0	0	0
993:	0	0	0	0	0	0	0	0
1001:	0	0	0	0	0	0	0	0
1009:	0	0	0	0	0	0	0	0
1017:	0	0	0	0	0	0	0	0



*WPS
11/2/15*

Sample Description: CP4105S14-15
 Spectrum File: \\OR-ALPHA1\Canberra\ApexAlpha\Root\Data\00001328
 Batch Identification: 1510086A-UU
 Sample Identification: 10
 Sample Geometry: Shelf 2
 Procedure Description: U iso

Detector Name: Alpha_042
 Chamber Serial Number: 05026930B
 Detector Serial Number: 84185
 Env. Background: System Bkgd 133272
 Reagent Blank: <not performed>

Sample Size: 1.522E+000 +/- 0.000E+000 gram
 Sample Date/Time: 10/6/2015 5:34:33 AM
 Acquisition Date/Time: 11/2/2015 8:29:02 AM
 Acquisition Live Time: 170.0 minutes
 Acquisition Real Time: 170.0 minutes

Tracer Certificate: U232_UU-10A
 Tracer Quantity: 0.654 mL
 Effective Efficiency: 0.1916 +/- 0.0106
 Counting Efficiency: 0.1737 +/- 0.0030 on 10/25/2014 3:04:21 PM
 Chem. Recovery Factor: 1.1027 +/- 0.0641

Peak Match Tolerance: 0.150 MeV

 PEAK AREA REPORT

Nuclide	Energy (MeV)	Net Pk Area	Pk Area Error %	Ambient Backgnd	Reagent Backgnd	FWHM (keV)
U-232	T 5.278	394.15	9.88	0.85	0.00E+000	33.1
U-234	4.731	112.66	18.50	0.34	0.00E+000	8.3
U-235	4.405	6.66	78.18	0.34	0.00E+000	3.0
U-238	4.146	112.15	18.59	0.85	0.00E+000	4.8

T = Tracer Peak used for Effective Efficiency

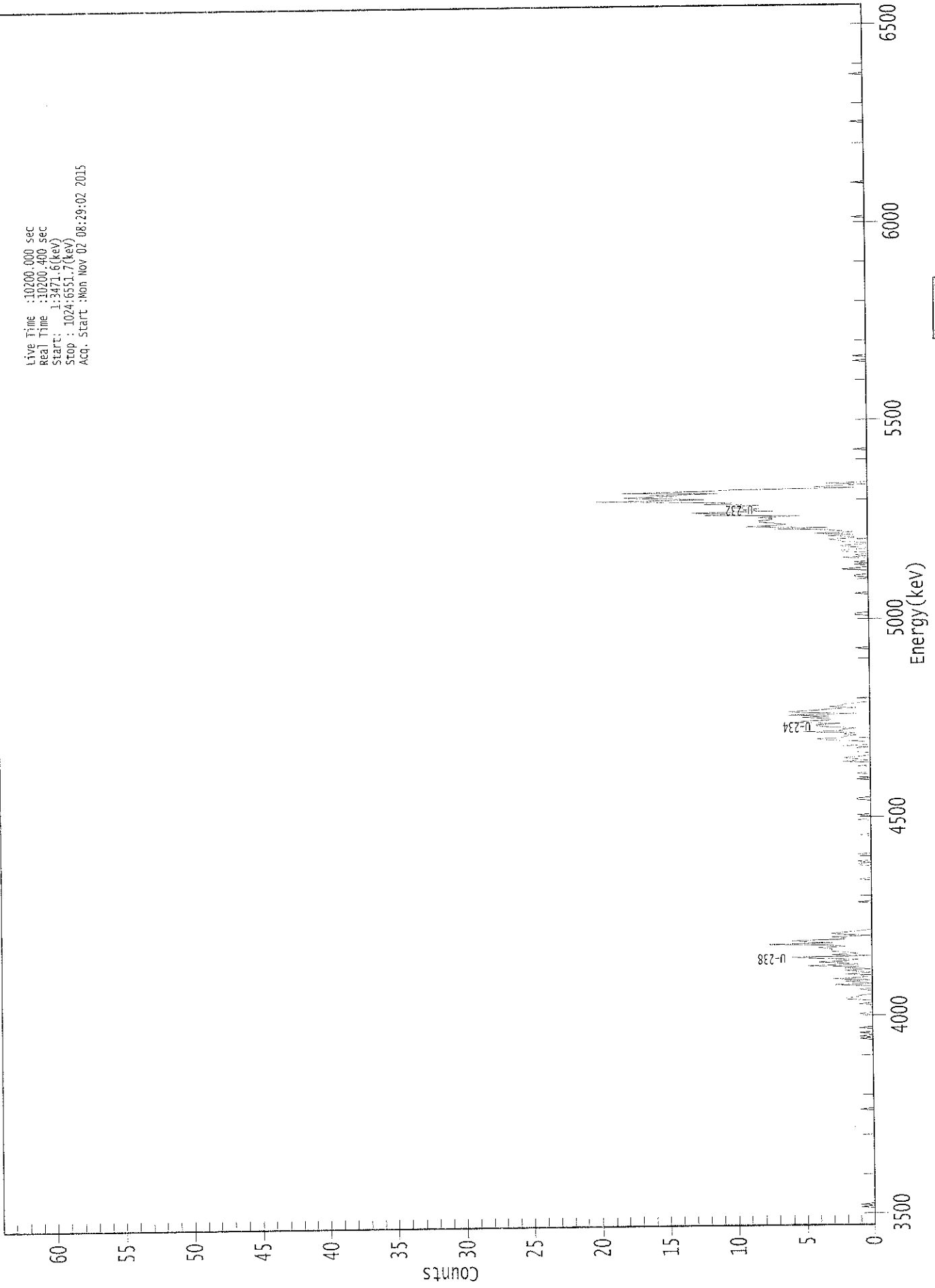
 NUCLIDE ANALYSIS RESULTS

Nuclide	Id Conf.	Energy (keV)	Activity (pCi/gram)	MDA (pCi/gram)
U-232	0.996	5302.50*	3.59E+000 +/- 3.90E-001	5.46E-002 +/- 5.93E-003
U-234	0.993	4761.50*	1.03E+000 +/- 2.20E-001	4.35E-002 +/- 4.73E-003
U-235	0.997	4385.50*	7.48E-002 +/- 5.91E-002	5.37E-002 +/- 5.84E-003
U-238	0.990	4184.40*	1.02E+000 +/- 2.19E-001	5.43E-002 +/- 5.90E-003

*AG
11/2/15*

0000132891.CNF

Live Time :10200.000 sec
Real Time :10200.400 sec
Start : 1:3471.6(kev)
Stop : 1024:6551.7(kev)
Acq. Start : Mon Nov 02 08:29:02 2015



ROI Type: 3

ROI Type: 1

 ***** S P E C T R A L D A T A R E P O R T *****

Sample Title: 10

Elapsed Live time: 10200
 Elapsed Real Time: 10200

Channel	1	2	3	4	5	6	7	8	9
1:	0	0	0	0	0	0	0	0	0
9:	0	0	0	0	0	0	0	0	1
17:	0	1	0	0	0	0	0	0	0
25:	0	0	0	0	0	0	0	0	0
33:	0	0	0	0	0	0	0	0	0
41:	0	0	0	0	0	0	0	0	0
49:	0	0	0	0	0	0	0	0	0
57:	0	0	0	0	0	0	0	0	0
65:	0	0	0	0	0	0	0	0	0
73:	0	0	0	0	0	0	0	0	0
81:	0	0	0	0	0	0	0	0	0
89:	0	0	0	0	0	0	0	0	0
97:	0	1	0	0	0	0	0	0	0
105:	0	0	0	0	0	0	0	0	0
113:	0	0	0	0	0	0	0	0	0
121:	0	0	0	0	0	0	0	0	0
129:	0	0	0	0	0	0	0	0	0
137:	0	0	0	0	0	0	0	0	0
145:	0	0	0	0	0	0	0	0	0
153:	0	0	0	0	1	0	1	0	0
161:	0	1	0	0	0	1	0	0	0
169:	0	0	0	0	0	0	0	0	0
177:	0	1	0	0	0	0	0	0	0
185:	0	1	0	0	0	2	2	1	0
193:	1	0	0	0	0	1	0	0	0
201:	0	3	0	1	2	0	3	1	0
209:	0	0	2	0	1	2	0	2	0
217:	1	5	1	2	4	2	1	4	0
225:	6	0	3	1	2	3	3	3	0
233:	4	2	3	8	3	5	6	2	0
241:	2	3	0	2	3	2	1	0	0
249:	0	0	0	0	0	0	0	0	0
257:	0	0	0	0	0	0	0	0	0
265:	0	0	0	0	0	0	1	0	0
273:	0	0	0	0	0	0	0	0	0
281:	0	0	0	0	0	0	0	0	0
289:	0	1	0	0	0	0	0	0	0
297:	0	0	0	0	0	1	1	0	0
305:	1	0	0	0	0	0	1	0	0
313:	0	0	0	0	0	0	0	0	0
321:	0	0	0	0	0	0	1	0	0
329:	0	0	0	0	0	0	0	0	0
337:	0	0	0	1	0	0	0	1	0
345:	0	0	0	0	0	0	0	0	0
353:	0	0	0	0	1	1	0	0	0
361:	0	0	0	0	0	0	0	0	0

369: 0 0 0 0 0 1 0 0

Sample Title: 10

Channel	1	2	3	4	5	6	7	8	9
377:	0	0	1	0	0	0	0	0	0
385:	1	0	0	0	2	0	1	2	
393:	1	0	0	0	1	1	1	1	
401:	0	2	0	0	0	1	3	4	
409:	2	2	1	2	1	5	2	2	
417:	1	3	4	4	2	6	5	3	
425:	3	5	3	6	1	5	6	4	
433:	3	1	3	2	2	1	0	0	
441:	0	1	0	0	0	0	0	0	
449:	0	0	0	0	0	0	0	0	
457:	0	0	0	0	0	0	0	0	
465:	0	0	0	0	0	0	0	0	
473:	0	0	0	0	0	0	0	0	
481:	0	0	0	1	0	0	0	0	
489:	0	0	0	0	0	0	0	0	
497:	0	0	0	0	0	0	0	0	
505:	0	0	0	0	0	0	0	1	
513:	1	0	0	0	0	0	0	0	
521:	0	0	0	0	0	0	0	0	
529:	0	1	0	0	0	0	0	0	
537:	0	0	0	0	0	0	0	1	
545:	1	0	0	0	0	2	1	0	
553:	0	1	0	1	0	0	0	2	
561:	0	1	0	0	2	2	0	0	
569:	2	2	0	0	2	2	3	1	
577:	1	3	1	4	1	2	3	7	
585:	3	9	7	6	7	8	8	7	
593:	7	8	5	12	10	13	7	9	
601:	8	10	10	8	12	10	14	20	
609:	12	15	18	14	16	11	18	12	
617:	10	1	4	2	0	3	0	0	
625:	0	0	0	0	0	0	0	0	
633:	0	0	0	0	0	0	0	0	
641:	0	0	0	0	0	0	0	0	
649:	0	1	0	0	0	0	0	0	
657:	0	0	0	0	0	0	0	0	
665:	0	0	0	0	0	0	0	0	
673:	0	0	0	0	0	0	0	0	
681:	0	0	0	0	0	0	0	0	
689:	0	0	0	0	0	0	0	0	
697:	0	0	0	0	0	0	0	0	
705:	0	0	0	0	0	0	0	0	
713:	0	0	0	0	0	0	0	0	
721:	0	0	0	1	0	0	0	1	
729:	0	0	0	0	0	0	0	0	
737:	0	0	0	0	0	0	0	0	
745:	0	0	0	0	0	0	0	0	
753:	0	0	0	0	0	0	0	0	
761:	0	0	0	0	0	0	0	0	
769:	0	0	0	0	0	0	0	0	
777:	0	0	0	0	0	0	0	0	
785:	0	0	0	0	0	0	0	0	
793:	0	0	0	0	0	0	0	0	

801: 0 0 0 0 0 0 0 0 0

Sample Title: 10

Channel	-----	-----	-----	-----	-----	-----	-----	-----
809:	0	0	0	0	0	0	0	0
817:	0	0	0	0	0	0	0	0
825:	0	0	0	0	0	0	0	0
833:	0	0	0	0	0	0	0	0
841:	0	0	0	0	1	0	0	0
849:	0	0	0	0	0	0	0	0
857:	0	0	0	0	0	0	0	0
865:	0	0	0	0	0	0	0	0
873:	0	1	0	0	0	0	0	0
881:	0	0	0	0	0	0	0	0
889:	0	0	0	0	0	0	0	0
897:	0	0	0	0	0	0	0	0
905:	0	0	0	0	0	0	0	0
913:	0	0	0	0	0	0	0	0
921:	0	0	0	0	1	0	0	0
929:	0	0	0	0	0	0	0	0
937:	0	0	0	0	0	0	0	0
945:	0	0	0	0	0	0	0	0
953:	0	0	0	0	0	0	0	0
961:	0	0	0	0	1	0	0	0
969:	0	0	0	0	0	0	0	0
977:	0	0	0	0	0	0	0	0
985:	0	0	0	0	0	0	0	0
993:	0	0	0	0	0	0	0	0
1001:	0	0	0	0	0	0	0	0
1009:	0	0	0	0	0	0	0	0
1017:	0	0	0	0	0	0	0	0

11/2/15

Apex-Alpha™

Sample Description: CP4105S16-17
 Spectrum File: \\OR-ALPHA1\Canberra\ApexAlpha\Root\Data\00001328
 Batch Identification: 1510086A-UU
 Sample Identification: 11
 Sample Geometry: Shelf 2
 Procedure Description: U iso

Detector Name: Alpha_043
 Chamber Serial Number: 04026481A
 Detector Serial Number: 91088
 Env. Background: System Bkgd 133273
 Reagent Blank: <not performed>

Sample Size: 1.512E+000 +/- 0.000E+000 gram
 Sample Date/Time: 10/6/2015 5:34:33 AM
 Acquisition Date/Time: 11/2/2015 8:29:04 AM
 Acquisition Live Time: 170.0 minutes
 Acquisition Real Time: 170.0 minutes

Tracer Certificate: U232_UU-10A
 Tracer Quantity: 0.651 mL
 Effective Efficiency: 0.2221 +/- 0.0116
 Counting Efficiency: 0.1998 +/- 0.0035 on 10/25/2014 3:08:45 PM
 Chem. Recovery Factor: 1.1113 +/- 0.0612

Peak Match Tolerance: 0.150 MeV

 PEAK AREA REPORT

Nuclide	Energy (MeV)	Net Pk Area	Pk Area Error %	Ambient Backgnd	Reagent Backgnd	FWHM (keV)
U-232	T 5.293	454.83	9.19	0.17	0.00E+000	29.3
U-234	4.742	128.66	17.31	0.34	0.00E+000	6.5
U-235	4.367	11.32	60.27	0.68	0.00E+000	3.8
U-238	4.169	128.00	17.39	0.00	0.00E+000	6.0

T = Tracer Peak used for Effective Efficiency

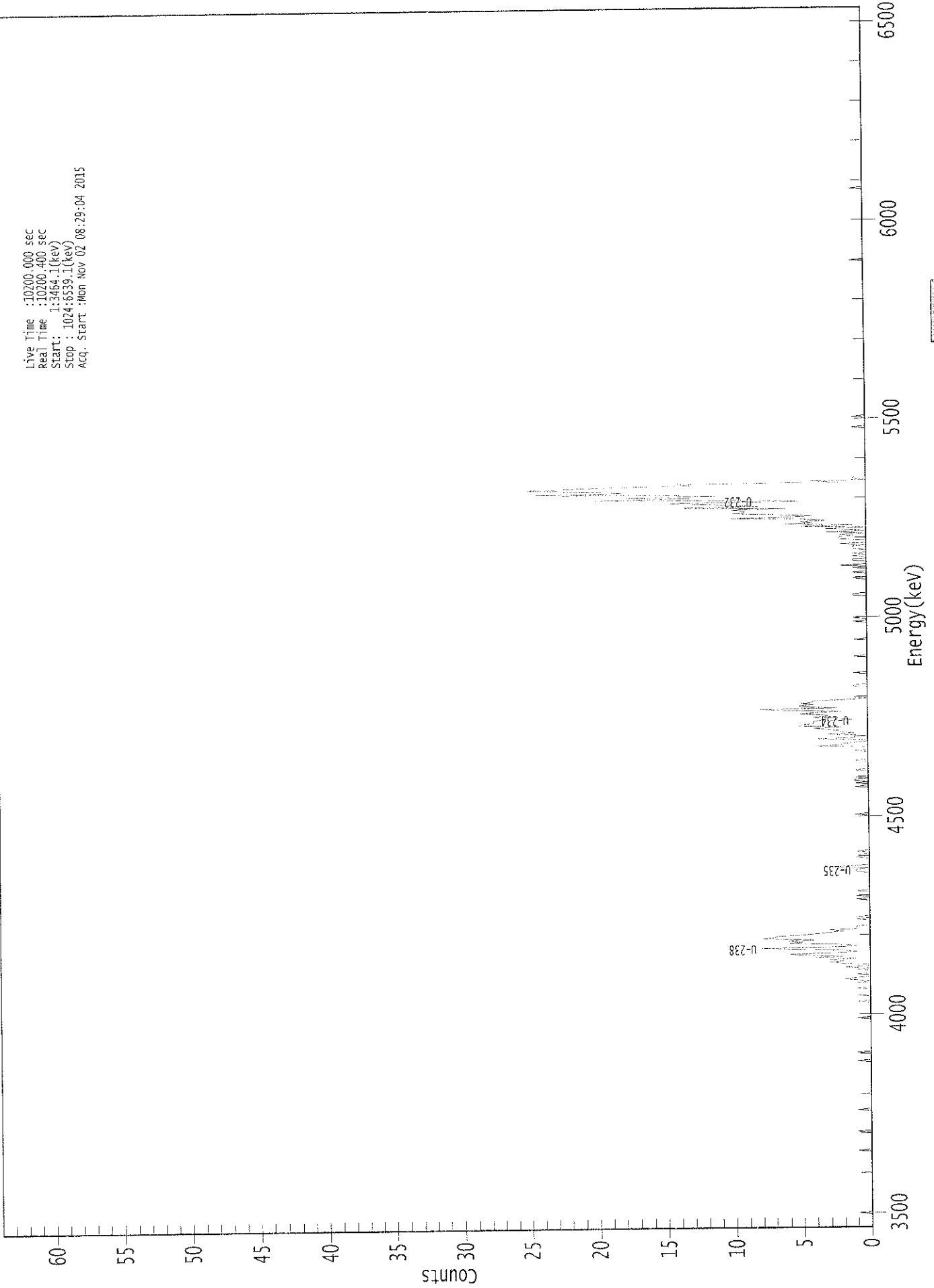
 NUCLIDE ANALYSIS RESULTS

Nuclide	Id Conf.	Energy (keV)	Activity (pCi/gram)	MDA (pCi/gram)
U-232	0.999	5302.50*	3.60E+000 +/- 3.69E-001	3.30E-002 +/- 3.38E-003
U-234	0.997	4761.50*	1.02E+000 +/- 2.05E-001	3.78E-002 +/- 3.87E-003
U-235	0.997	4385.50*	1.10E-001 +/- 6.75E-002	5.50E-002 +/- 5.63E-003
U-238	0.998	4184.40*	1.01E+000 +/- 2.03E-001	4.72E-002 +/- 4.83E-003

AG
 11/2/15

0000132892.CNF

Live Time : 10200.000 sec
Real Time : 10200.400 sec
Start : 1:3464.1(keV)
Stop : 1024:6539.1(keV)
Acq. Start : Mon Nov 02 08:29:04 2015



ROI Type: 1

ROI Type: 3

 ***** S P E C T R A L D A T A R E P O R T *****

Sample Title: 11

Elapsed Live time: 10200
 Elapsed Real Time: 10200

Channel	1	2	3	4	5	6	7	8	9
1:	0	0	0	0	0	0	0	0	0
9:	0	0	0	0	0	1	0	0	0
17:	0	0	0	0	0	0	0	0	0
25:	0	0	0	0	0	0	0	0	0
33:	0	0	0	0	0	0	0	0	0
41:	0	0	0	0	0	0	0	0	0
49:	0	0	0	0	0	0	0	0	0
57:	0	0	0	0	0	0	0	0	0
65:	1	0	0	0	0	0	0	0	0
73:	0	0	0	0	0	0	0	0	0
81:	1	0	0	0	0	0	0	0	0
89:	0	0	0	0	0	0	0	0	0
97:	0	0	1	0	0	0	0	0	0
105:	0	0	0	0	0	0	0	0	0
113:	0	0	0	0	0	0	0	0	0
121:	0	0	0	0	0	0	0	0	0
129:	0	0	0	0	0	0	0	0	0
137:	0	0	0	1	0	0	0	0	0
145:	0	0	1	0	0	0	0	0	0
153:	0	0	0	0	0	0	0	0	0
161:	0	0	0	0	0	0	0	0	0
169:	0	0	0	0	0	0	0	0	1
177:	0	0	0	0	0	0	0	0	0
185:	0	0	0	0	0	0	1	0	0
193:	0	0	1	0	0	0	0	0	0
201:	1	0	0	0	0	0	1	0	1
209:	2	1	0	0	0	1	0	0	0
217:	1	0	2	0	0	2	3	2	1
225:	3	1	4	2	5	6	2	6	5
233:	2	5	8	2	1	2	6	4	3
241:	6	4	8	7	7	5	4	3	0
249:	2	3	1	1	1	0	0	0	0
257:	0	0	1	0	1	0	0	0	0
265:	0	0	0	0	0	0	0	0	0
273:	0	0	0	1	0	0	1	0	0
281:	0	0	1	0	0	0	0	0	0
289:	0	0	0	0	0	0	0	0	0
297:	0	0	1	1	1	0	3	1	0
305:	0	0	0	0	0	0	1	0	0
313:	1	0	0	1	0	0	0	0	0
321:	0	0	0	0	0	0	0	0	0
329:	0	0	0	0	0	0	0	0	0
337:	0	0	0	0	0	0	0	0	0
345:	0	0	1	0	0	0	0	0	0
353:	0	0	0	0	0	0	0	0	0
361:	0	0	0	0	0	0	0	0	0

369: 0 1 0 0 1 0 1 1

Sample Title: 11

Channel	0	1	0	0	1	0	1	1
377:	0	1	0	0	0	0	0	1
385:	0	0	0	0	0	0	0	1
393:	0	0	0	0	0	0	0	1
401:	0	0	0	4	2	2	1	0
409:	0	4	1	1	0	3	1	2
417:	2	3	4	2	5	5	4	4
425:	4	1	2	4	3	3	5	4
433:	2	6	8	2	5	5	4	5
441:	4	4	1	0	1	0	0	0
449:	0	0	0	0	0	1	1	0
457:	0	0	0	0	0	0	0	0
465:	1	0	0	0	0	0	0	0
473:	0	0	0	0	0	0	1	0
481:	0	0	0	0	0	0	0	0
489:	0	0	0	0	1	0	0	0
497:	0	0	0	0	0	0	0	0
505:	0	0	0	1	0	0	1	0
513:	0	0	0	0	0	0	0	0
521:	0	0	0	0	0	0	0	0
529:	0	1	1	0	0	0	0	0
537:	0	0	0	0	0	0	0	1
545:	0	0	0	0	1	0	0	0
553:	1	0	2	0	0	0	1	1
561:	0	0	1	0	1	0	0	0
569:	1	1	1	0	2	0	0	0
577:	2	2	2	1	2	0	3	0
585:	1	3	0	5	1	6	4	5
593:	3	4	10	6	4	6	10	9
601:	9	10	6	14	8	10	12	15
609:	5	8	20	13	18	11	15	25
617:	18	19	22	25	22	19	13	14
625:	2	4	0	1	1	0	0	0
633:	0	0	0	0	0	0	0	0
641:	0	0	0	0	0	0	0	0
649:	0	0	0	0	0	0	0	0
657:	0	0	0	0	0	0	0	0
665:	0	0	0	0	0	0	1	0
673:	0	0	0	0	0	0	0	1
681:	0	0	0	0	0	0	0	0
689:	0	0	0	0	0	0	0	0
697:	0	0	0	0	0	0	0	0
705:	0	0	0	0	0	0	0	0
713:	0	0	0	0	0	0	0	0
721:	0	0	0	0	0	0	0	0
729:	0	0	0	0	0	0	0	0
737:	0	0	0	0	0	0	0	0
745:	0	0	0	0	0	0	0	0
753:	0	0	0	0	0	0	0	0
761:	0	0	0	0	0	0	0	0
769:	0	0	0	0	0	0	0	0
777:	0	0	0	0	0	0	0	0
785:	0	0	0	0	0	0	0	0
793:	0	0	0	0	0	0	0	0

801: 0 0 0 0 0 0 0 0 0

Sample Title: 11

Channel	-----	-----	-----	-----	-----	-----	-----	-----
809:	0	0	1	0	0	0	0	0
817:	0	0	0	0	0	0	0	0
825:	0	0	0	0	0	0	0	0
833:	0	0	0	0	0	0	0	0
841:	0	0	0	0	0	0	0	0
849:	0	0	0	0	0	0	0	0
857:	0	0	0	0	0	0	0	0
865:	0	0	0	0	0	0	1	0
873:	0	0	0	0	0	0	0	0
881:	0	0	0	0	0	0	0	0
889:	0	0	0	0	0	0	0	0
897:	0	0	0	0	0	0	0	0
905:	0	0	0	0	0	0	0	0
913:	0	0	0	0	0	0	0	0
921:	0	0	0	0	0	0	0	0
929:	0	0	0	0	0	0	0	0
937:	0	0	0	0	0	0	0	0
945:	0	0	0	0	0	0	0	0
953:	0	0	0	0	0	0	0	0
961:	0	0	0	0	0	0	0	0
969:	0	0	0	0	0	0	0	0
977:	0	0	0	0	0	0	0	0
985:	0	0	0	0	0	0	0	0
993:	0	0	0	0	0	0	0	0
1001:	0	0	0	0	0	0	0	0
1009:	0	0	0	0	0	0	0	0
1017:	0	0	0	0	0	0	0	0



*KB
11/2/15*

Sample Description: CP0404S03-04
 Spectrum File: \\OR-ALPHA1\Canberra\ApexAlpha\Root\Data\00001328
 Batch Identification: 1510086A-UU
 Sample Identification: 12
 Sample Geometry: Shelf 2
 Procedure Description: U iso

Detector Name: Alpha_044
 Chamber Serial Number: 04026481B
 Detector Serial Number: 84168
 Env. Background: System Bkgd 133274
 Reagent Blank: <not performed>

Sample Size: 1.533E+000 +/- 0.000E+000 gram
 Sample Date/Time: 10/8/2015 5:34:33 AM
 Acquisition Date/Time: 11/2/2015 8:29:06 AM
 Acquisition Live Time: 170.0 minutes
 Acquisition Real Time: 170.0 minutes

Tracer Certificate: U232_UU-10A
 Tracer Quantity: 0.653 mL
 Effective Efficiency: 0.2180 +/- 0.0115
 Counting Efficiency: 0.1837 +/- 0.0032 on 10/25/2014 3:13:11 PM
 Chem. Recovery Factor: 1.1866 +/- 0.0658

Peak Match Tolerance: 0.150 MeV

 PEAK AREA REPORT

Nuclide	Energy (MeV)	Net Pk Area	Pk Area Error %	Ambient Backgnd	Reagent Backgnd	FWHM (keV)
U-232	T 5.293	447.66	9.27	0.34	0.00E+000	34.4
U-234	4.737	126.66	17.44	0.34	0.00E+000	7.4
U-235	4.395	1.66	169.38	0.34	0.00E+000	3.0
U-238	4.168	133.83	16.96	0.17	0.00E+000	7.5

T = Tracer Peak used for Effective Efficiency

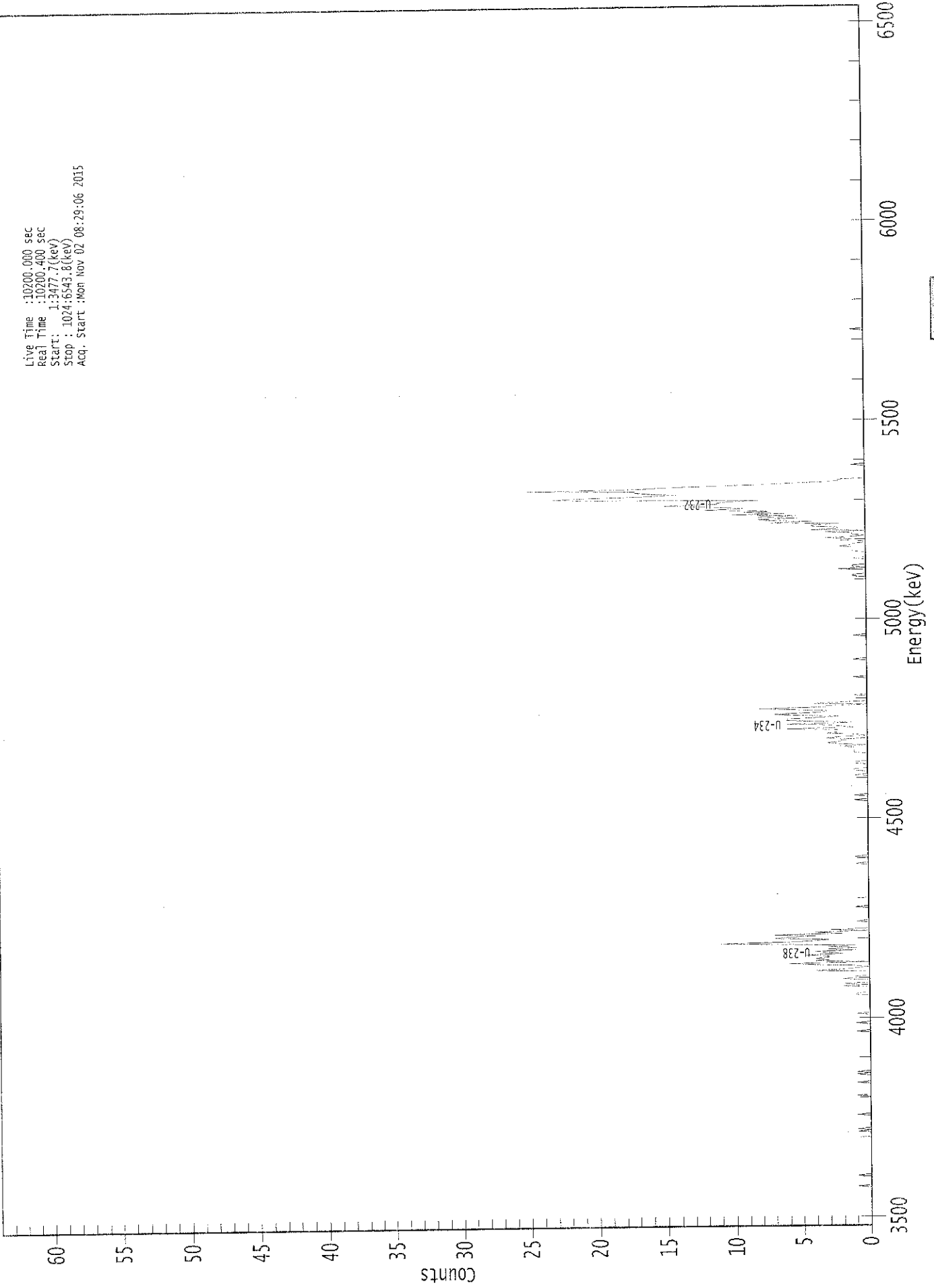
 NUCLIDE ANALYSIS RESULTS

Nuclide	Id Conf.	Energy (keV)	Activity (pCi/gram)	MDA (pCi/gram)
U-232	0.999	5302.50*	3.56E+000 +/- 3.67E-001	3.80E-002 +/- 3.92E-003
U-234	0.996	4761.50*	1.01E+000 +/- 2.04E-001	3.80E-002 +/- 3.91E-003
U-235	0.999	4385.50*	1.63E-002 +/- 2.76E-002	4.69E-002 +/- 4.83E-003
U-238	0.998	4184.40*	1.06E+000 +/- 2.10E-001	3.30E-002 +/- 3.40E-003

*AG
11/2/15*

0000132893.CNF

Live Time : 10200.000 sec
Real Time : 10200.400 sec
Start : 1:3477.7 (keV)
Stop : 1024:6543.8 (keV)
Acq. Start : Mon Nov 02 08:29:06 2015



ROI Type: 3

ROI Type: 1

00140

 ***** S P E C T R A L D A T A R E P O R T *****

Sample Title: 12

Elapsed Live time: 10200
 Elapsed Real Time: 10200

Channel	1	2	3	4	5	6	7	8	9
1:	0	0	0	0	0	0	0	0	0
9:	0	0	0	0	0	0	0	0	0
17:	0	0	0	0	0	0	0	0	0
25:	0	0	0	0	0	0	0	0	0
33:	0	1	0	0	0	0	0	0	0
41:	0	0	1	0	0	0	0	0	0
49:	0	0	0	0	0	0	0	0	0
57:	0	0	0	0	0	0	0	0	0
65:	0	0	0	0	0	0	0	0	0
73:	0	0	0	0	0	0	0	0	1
81:	0	1	0	0	0	0	0	0	0
89:	0	0	0	0	0	0	1	0	0
97:	0	0	0	0	0	0	0	0	0
105:	0	0	0	0	0	0	1	0	0
113:	0	0	0	0	0	0	0	0	0
121:	1	0	0	0	0	0	0	0	1
129:	0	1	0	0	0	0	0	0	0
137:	0	0	0	0	0	0	0	0	0
145:	0	0	0	0	0	0	0	0	0
153:	0	0	0	0	0	0	0	0	0
161:	0	0	0	1	0	0	0	0	0
169:	0	0	1	0	0	0	0	0	0
177:	0	0	1	0	0	0	0	0	0
185:	0	0	0	0	0	0	0	0	0
193:	0	0	1	1	0	0	0	0	0
201:	0	2	0	2	0	0	0	0	2
209:	1	1	0	0	0	0	0	4	2
217:	1	0	1	4	6	0	0	4	3
225:	4	3	3	5	2	3	3	4	1
233:	3	1	3	1	7	11	6	6	4
241:	3	7	6	4	7	2	4	4	0
249:	3	0	0	0	0	0	0	0	1
257:	0	0	0	0	0	0	0	0	0
265:	0	0	0	1	0	0	0	0	0
273:	0	0	0	0	0	0	0	0	0
281:	0	0	0	0	0	0	0	0	0
289:	0	0	0	0	0	0	0	0	0
297:	0	0	0	0	0	0	0	0	1
305:	0	0	0	0	0	0	1	0	0
313:	0	0	0	0	0	0	0	0	0
321:	0	0	0	0	0	0	0	0	0
329:	0	0	0	0	0	0	0	0	0
337:	0	0	0	0	0	0	0	0	0
345:	0	0	0	0	0	0	0	0	0
353:	0	0	0	0	1	0	0	0	0
361:	1	0	0	0	0	0	0	0	0

369: 0 0 0 0 0 0 0 0 0

Sample Title: 12

Channel	1	2	3	4	5	6	7	8	9
377:	0	1	0	0	0	1	1	0	0
385:	0	0	0	1	1	0	0	0	0
393:	0	0	0	0	1	1	1	1	1
401:	1	2	0	2	3	2	2	2	1
409:	3	2	0	1	3	2	2	2	2
417:	6	1	2	3	6	1	3	6	6
425:	6	4	2	5	7	5	3	3	3
433:	6	8	3	3	0	4	2	0	0
441:	0	0	0	0	1	0	0	0	0
449:	0	0	0	0	0	0	0	0	0
457:	0	0	0	1	0	0	0	0	0
465:	0	0	0	0	0	0	0	0	0
473:	0	0	1	0	0	0	0	0	0
481:	0	0	0	0	0	0	0	0	0
489:	0	0	0	0	0	0	1	0	0
497:	0	0	0	0	0	0	0	0	0
505:	0	0	0	0	0	0	0	0	0
513:	0	0	0	0	0	0	0	0	0
521:	0	0	0	0	0	0	0	0	0
529:	0	0	0	0	0	0	0	0	0
537:	0	0	0	0	0	0	0	0	0
545:	1	1	0	0	0	0	2	0	0
553:	1	1	0	0	0	0	0	1	1
561:	0	0	0	0	0	1	1	1	1
569:	1	2	1	1	0	0	2	1	1
577:	3	1	0	1	1	3	0	4	4
585:	2	2	4	4	2	7	4	7	7
593:	8	5	8	5	10	6	9	7	7
601:	12	9	10	13	15	11	11	10	10
609:	8	21	23	20	16	14	16	17	17
617:	17	25	17	15	12	8	6	3	3
625:	2	2	0	0	0	0	0	0	0
633:	0	0	0	0	0	1	0	0	0
641:	0	0	0	0	0	0	0	0	0
649:	0	0	0	0	0	0	0	0	0
657:	0	0	0	0	0	0	0	0	0
665:	0	0	0	0	0	0	0	0	0
673:	0	0	0	0	0	0	0	0	0
681:	0	0	0	0	0	0	0	0	0
689:	0	0	0	0	0	0	0	0	0
697:	0	0	0	0	0	0	0	0	0
705:	0	0	0	0	0	0	0	0	0
713:	0	0	0	0	0	0	0	0	0
721:	0	0	0	0	0	0	0	0	0
729:	0	0	0	0	0	0	0	0	0
737:	0	0	0	0	0	0	0	0	0
745:	0	0	0	0	0	0	1	0	0
753:	0	0	0	0	0	0	0	0	0
761:	0	0	0	0	0	0	0	0	0
769:	0	0	0	0	0	0	0	0	0
777:	0	0	0	0	0	0	0	0	0
785:	0	0	0	0	0	0	0	0	0
793:	0	0	0	0	0	0	0	0	0

801: 0 0 0 0 0 0 0 0 0

Sample Title: 12

Channel								
809:	0	0	0	0	0	0	0	0
817:	0	0	0	0	0	0	0	0
825:	0	0	0	0	0	0	0	0
833:	0	0	0	0	0	0	0	0
841:	0	0	0	0	0	0	0	0
849:	0	0	0	0	0	0	0	0
857:	0	0	0	0	0	0	0	0
865:	0	0	0	0	0	0	0	0
873:	0	0	0	0	0	0	0	0
881:	0	0	0	0	0	0	0	0
889:	0	0	0	0	0	0	0	0
897:	0	0	0	0	0	0	0	0
905:	0	0	0	0	0	0	0	0
913:	0	0	0	0	0	0	0	0
921:	0	0	0	0	0	0	0	0
929:	0	0	0	0	0	0	0	0
937:	0	0	0	0	0	0	0	0
945:	0	0	0	0	0	0	0	0
953:	0	0	0	0	0	0	0	0
961:	0	0	0	0	0	0	0	0
969:	0	0	0	0	0	0	0	0
977:	0	0	0	0	0	0	0	0
985:	0	0	0	0	0	0	0	0
993:	0	0	0	0	0	0	0	0
1001:	0	0	0	0	0	0	0	0
1009:	0	0	0	0	0	0	0	0
1017:	0	0	0	0	0	0	0	0

UP
11/2/15

Apex-Alpha™

Sample Description: CP0404S05-06
 Spectrum File: \\OR-ALPHA1\Canberra\ApexAlpha\Root\Data\00001328
 Batch Identification: 1510086A-UU
 Sample Identification: 13
 Sample Geometry: Shelf 2
 Procedure Description: U iso

Detector Name: Alpha_045
 Chamber Serial Number: 04026482A
 Detector Serial Number: 91131
 Env. Background: System Bkgd 133275
 Reagent Blank: <not performed>

Sample Size: 1.521E+000 +/- 0.000E+000 gram
 Sample Date/Time: 10/8/2015 5:34:33 AM
 Acquisition Date/Time: 11/2/2015 8:29:08 AM
 Acquisition Live Time: 170.0 minutes
 Acquisition Real Time: 170.0 minutes

Tracer Certificate: U232_UU-10A
 Tracer Quantity: 0.652 mL
 Effective Efficiency: 0.1689 +/- 0.0099
 Counting Efficiency: 0.1760 +/- 0.0031 on 10/25/2014 3:16:42 PM
 Chem. Recovery Factor: 0.9593 +/- 0.0586

Peak Match Tolerance: 0.150 MeV

 PEAK AREA REPORT

Nuclide	Energy (MeV)	Net Pk Area	Pk Area Error %	Ambient Backgnd	Reagent Backgnd	FWHM (keV)
U-232	T 5.294	346.49	10.54	0.51	0.00E+000	22.0
U-234	4.749	123.66	17.65	0.34	0.00E+000	5.9
U-235	4.377	8.49	69.59	0.51	0.00E+000	3.0
U-238	4.162	161.64	15.49	1.36	0.00E+000	9.0

T = Tracer Peak used for Effective Efficiency

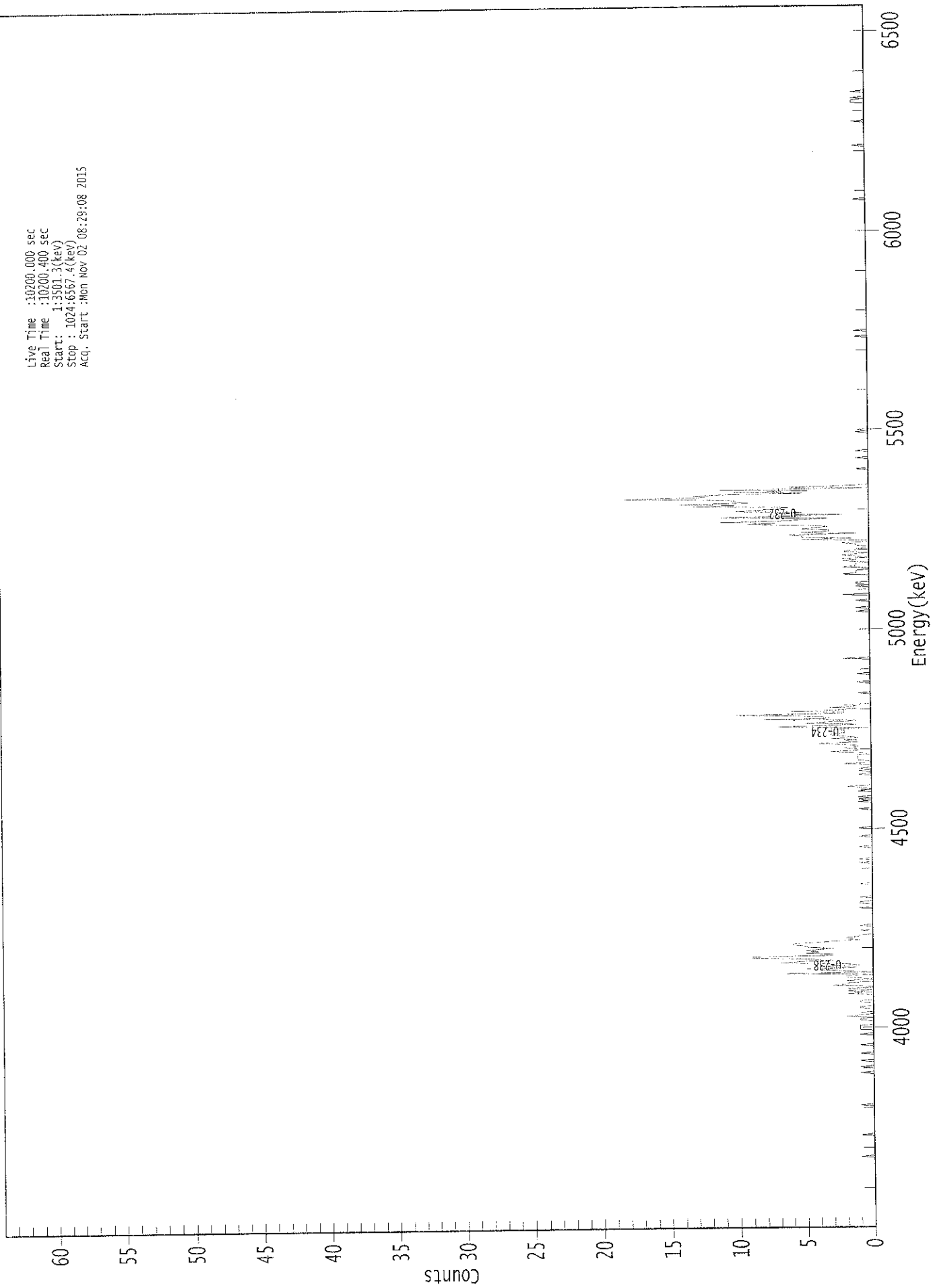
 NUCLIDE ANALYSIS RESULTS

Nuclide	Id Conf.	Energy (keV)	Activity (pCi/gram)	MDA (pCi/gram)
U-232	0.999	5302.50*	3.58E+000 +/- 4.11E-001	5.43E-002 +/- 6.22E-003
U-234	0.999	4761.50*	1.28E+000 +/- 2.69E-001	4.94E-002 +/- 5.66E-003
U-235	1.000	4385.50*	1.08E-001 +/- 7.63E-002	6.69E-002 +/- 7.67E-003
U-238	0.996	4184.40*	1.66E+000 +/- 3.21E-001	7.06E-002 +/- 8.09E-003

AG
11/2/15

0000132894.CNF

Live Time : 10200.000 sec
Real Time : 10200.400 sec
Start : 1:3501.3 (keV)
Stop : 1024:6567.4 (keV)
Acq. Start : Mon Nov 02 08:29:08 2015



ROI Type: 3

ROI Type: 1

 ***** S P E C T R A L D A T A R E P O R T *****

Sample Title: 13

Elapsed Live time: 10200
 Elapsed Real Time: 10200

Channel	1	2	3	4	5	6	7	8	9
1:	0	0	0	0	0	0	0	0	0
9:	0	0	0	0	0	0	0	0	0
17:	0	0	0	0	0	0	0	0	0
25:	0	0	0	0	0	0	0	0	0
33:	0	0	0	0	0	0	0	0	0
41:	0	0	0	0	0	0	0	0	0
49:	0	0	0	0	0	0	0	0	0
57:	0	0	0	1	0	0	0	0	0
65:	0	0	0	0	0	0	0	0	0
73:	0	0	0	0	0	1	0	0	0
81:	0	0	0	0	0	0	0	0	0
89:	0	0	0	0	0	0	0	0	0
97:	0	0	0	0	0	0	1	0	0
105:	0	0	0	0	0	0	0	0	0
113:	0	0	0	0	0	0	0	0	0
121:	0	0	0	0	0	0	0	0	0
129:	0	1	0	0	0	0	1	0	0
137:	0	0	0	1	0	0	0	0	0
145:	0	1	0	0	0	0	0	0	0
153:	1	0	0	0	0	0	0	0	0
161:	0	1	0	0	0	1	1	1	1
169:	1	0	0	0	0	1	1	0	0
177:	2	1	0	1	0	0	0	1	1
185:	1	0	0	0	1	1	0	0	0
193:	0	0	0	2	0	2	0	2	2
201:	1	0	3	2	2	0	2	0	0
209:	1	2	2	0	7	0	2	4	4
217:	5	1	4	1	2	7	5	3	3
225:	5	9	9	3	3	5	4	5	5
233:	4	3	5	5	6	6	4	3	3
241:	1	2	2	1	1	0	0	0	0
249:	1	0	0	0	1	0	0	0	0
257:	0	0	0	0	0	0	0	0	0
265:	0	0	0	1	0	0	0	1	1
273:	1	0	0	0	1	0	0	0	0
281:	0	0	0	0	0	0	0	1	1
289:	0	0	0	0	0	0	0	0	0
297:	0	0	0	0	0	0	0	0	0
305:	0	1	0	0	1	0	0	0	0
313:	0	0	0	0	0	0	1	0	0
321:	0	0	0	0	0	0	0	1	1
329:	0	0	0	0	0	0	1	0	0
337:	0	0	0	0	0	0	0	0	0
345:	0	0	0	0	0	0	1	0	0
353:	0	0	0	0	1	0	1	0	0
361:	1	0	0	0	0	1	0	0	0

369: 1 2 0 0 0 0 0 0

Sample Title: 13

Channel	1	2	3	4	5	6	7	8
377:	0	0	0	1	0	0	1	0
385:	1	0	0	0	2	0	0	1
393:	1	1	1	1	0	1	3	1
401:	1	2	1	1	2	4	1	2
409:	1	3	1	2	3	3	2	2
417:	2	3	0	7	4	1	5	3
425:	1	8	3	3	6	10	2	2
433:	6	2	1	3	1	2	0	0
441:	0	0	0	0	0	0	0	1
449:	0	0	0	0	0	0	0	0
457:	1	0	0	0	0	0	0	1
465:	0	0	0	0	0	0	0	0
473:	0	0	0	0	2	0	0	0
481:	0	0	0	0	0	0	0	0
489:	0	0	0	0	0	0	0	0
497:	0	0	0	0	0	0	0	0
505:	0	0	0	0	0	0	0	0
513:	0	0	0	1	0	0	1	0
521:	0	0	0	0	1	0	0	0
529:	0	2	0	0	0	0	0	0
537:	1	0	1	1	0	0	0	0
545:	0	0	2	1	1	1	0	0
553:	2	1	1	1	0	2	1	2
561:	0	1	2	1	0	2	1	1
569:	0	0	1	1	2	0	0	5
577:	1	5	5	6	1	5	3	3
585:	5	4	3	5	9	7	11	6
593:	5	3	11	6	2	7	5	10
601:	8	7	6	13	10	14	9	10
609:	10	13	18	12	13	11	5	10
617:	4	11	0	6	2	0	0	0
625:	0	0	0	0	0	0	0	0
633:	0	0	1	0	0	0	0	0
641:	0	0	0	1	0	0	0	0
649:	0	1	0	0	0	0	0	0
657:	0	0	0	0	0	0	0	0
665:	0	1	0	0	0	0	0	0
673:	0	0	0	0	0	0	0	0
681:	0	0	0	0	0	0	0	0
689:	0	0	0	0	0	0	0	0
697:	0	0	0	0	0	0	0	0
705:	0	0	0	0	0	0	0	0
713:	0	0	0	0	0	0	0	0
721:	0	0	0	0	0	0	0	0
729:	0	0	0	0	0	0	0	0
737:	0	0	0	0	0	0	0	0
745:	0	1	0	0	0	0	1	0
753:	0	0	0	0	0	0	0	0
761:	0	0	0	0	0	0	0	0
769:	0	0	0	0	0	0	0	0
777:	0	0	0	0	0	0	0	0
785:	0	0	0	0	0	0	0	0
793:	0	0	0	0	0	0	0	0

801: 0 0 0 0 0 0 0 0 0

Sample Title: 13

Channel								
809:	0	0	0	0	0	0	0	0
817:	0	0	0	0	0	0	0	0
825:	0	0	0	0	0	0	0	0
833:	0	0	0	0	0	0	0	0
841:	0	0	0	0	0	0	0	0
849:	0	0	0	0	0	0	0	0
857:	0	0	0	0	1	0	0	0
865:	0	0	0	0	0	0	0	0
873:	0	0	0	0	0	0	0	0
881:	0	0	0	0	0	0	0	0
889:	0	0	0	0	0	0	0	0
897:	0	0	0	0	0	0	0	0
905:	0	1	0	0	0	0	0	0
913:	0	0	0	0	0	0	0	0
921:	0	0	0	0	0	1	0	0
929:	0	0	0	0	0	0	0	0
937:	0	0	0	0	0	1	1	1
945:	0	1	0	0	0	0	1	0
953:	0	0	0	0	0	0	0	0
961:	0	0	0	0	0	0	0	0
969:	0	0	0	0	0	0	0	0
977:	0	0	0	0	0	0	0	0
985:	0	0	0	0	0	0	0	0
993:	0	0	0	0	0	0	0	0
1001:	0	0	0	0	0	0	0	0
1009:	0	0	0	0	0	0	0	0
1017:	0	0	0	0	0	0	0	0

10/25/2014

Apex-Alpha™

Sample Description: CP0404S07-08
 Spectrum File: \\OR-ALPHA1\Canberra\ApexAlpha\Root\Data\00001328
 Batch Identification: 1510086A-UU
 Sample Identification: 14
 Sample Geometry: Shelf 2
 Procedure Description: U iso

Detector Name: Alpha_046
 Chamber Serial Number: 04026482B
 Detector Serial Number: 58762
 Env. Background: System Bkgd 133276
 Reagent Blank: <not performed>

Sample Size: 1.508E+000 +/- 0.000E+000 gram
 Sample Date/Time: 10/8/2015 5:34:33 AM
 Acquisition Date/Time: 11/2/2015 8:29:10 AM
 Acquisition Live Time: 170.0 minutes
 Acquisition Real Time: 170.0 minutes

Tracer Certificate: U232_UU-10A
 Tracer Quantity: 0.652 mL
 Effective Efficiency: 0.1811 +/- 0.0103
 Counting Efficiency: 0.1776 +/- 0.0031 on 10/25/2014 3:20:08 PM
 Chem. Recovery Factor: 1.0197 +/- 0.0607

Peak Match Tolerance: 0.150 MeV

 PEAK AREA REPORT

Nuclide	Energy (MeV)	Net Pk Area	Pk Area Error %	Ambient Backgnd	Reagent Backgnd	FWHM (keV)
U-232	T 5.279	371.64	10.19	1.36	0.00E+000	17.4
U-234	4.735	125.32	17.56	0.68	0.00E+000	7.4
U-235	4.396	4.81	101.48	1.19	0.00E+000	3.0
U-238	4.147	105.79	19.29	2.21	0.00E+000	5.0

T = Tracer Peak used for Effective Efficiency

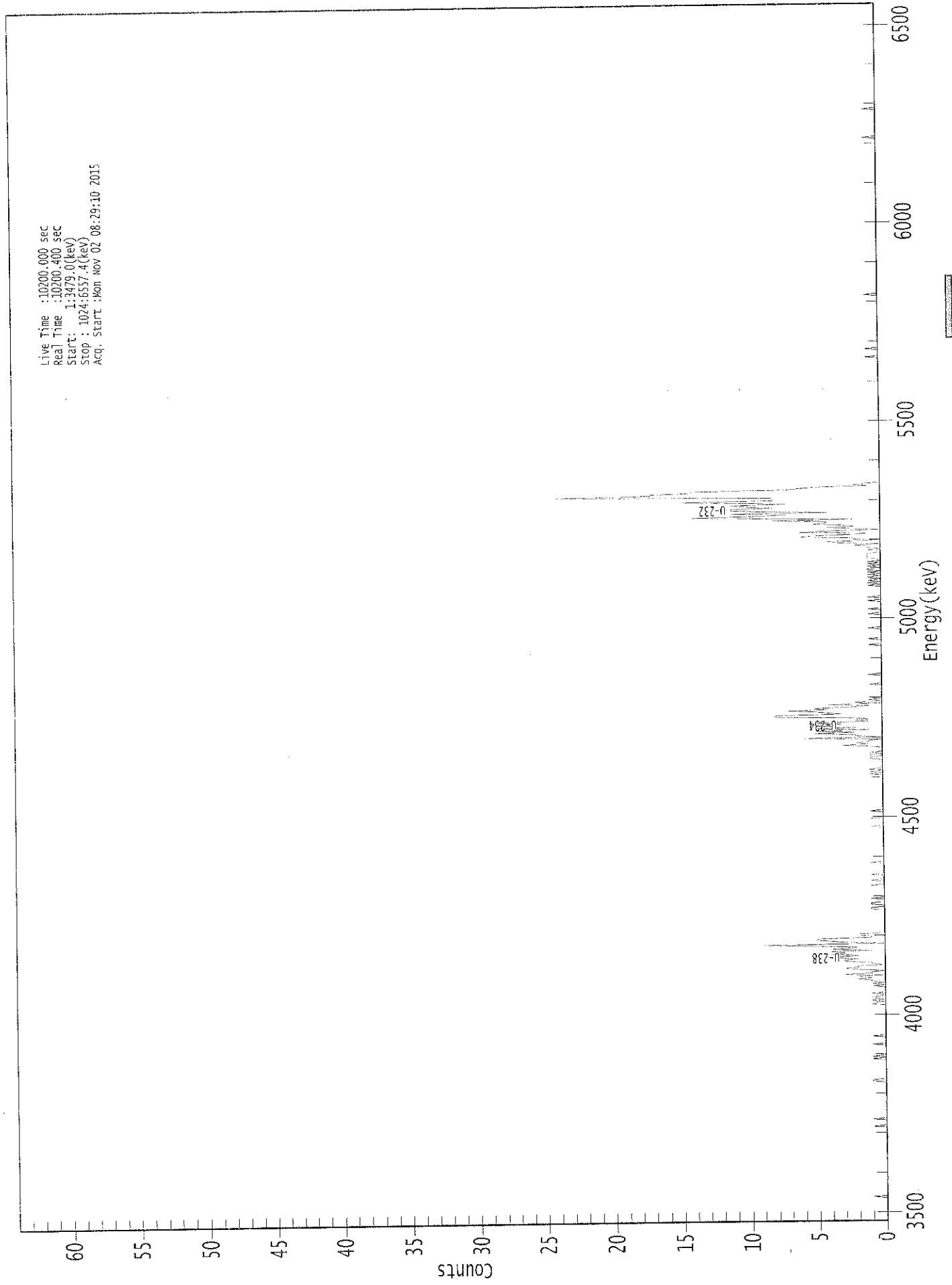
 NUCLIDE ANALYSIS RESULTS

Nuclide	Id Conf.	Energy (keV)	Activity (pCi/gram)	MDA (pCi/gram)
U-232	0.996	5302.50*	3.62E+000 +/- 4.03E-001	6.67E-002 +/- 7.43E-003
U-234	0.995	4761.50*	1.22E+000 +/- 2.53E-001	5.48E-002 +/- 6.11E-003
U-235	0.999	4385.50*	5.77E-002 +/- 5.89E-002	7.90E-002 +/- 8.81E-003
U-238	0.990	4184.40*	1.02E+000 +/- 2.28E-001	7.74E-002 +/- 8.63E-003

AG
11/2/15

0000132873.CNF

Live Time :10200.000 sec
Real Time :10200.400 sec
Start : 1:3479.0(keV)
Stop : 1024:6557.4(keV)
Acq. Start :Mon Nov 02 08:29:10 2015



: 00158

ROI Type: 1

ROI Type: 3

 ***** S P E C T R A L D A T A R E P O R T *****

Sample Title: 14

Elapsed Live time: 10200

Elapsed Real Time: 10200

Channel	1	2	3	4	5	6	7	8	9
1:	0	0	0	0	0	0	0	0	0
9:	0	0	0	0	0	0	0	0	0
17:	0	0	0	0	1	0	0	0	0
25:	0	0	0	0	0	0	0	0	0
33:	0	0	0	0	0	0	0	0	0
41:	0	0	0	0	0	0	0	0	0
49:	0	0	0	0	0	0	0	0	0
57:	0	0	0	0	0	0	0	0	0
65:	0	0	0	0	0	0	0	0	0
73:	0	0	0	0	0	0	0	0	1
81:	0	0	0	0	0	1	0	0	0
89:	0	0	0	0	0	0	0	0	0
97:	0	0	0	0	0	0	0	0	0
105:	0	0	0	0	0	0	0	0	0
113:	0	0	0	0	0	1	1	0	0
121:	0	0	0	0	0	0	0	0	0
129:	0	0	0	0	0	0	0	0	0
137:	1	0	1	0	0	0	0	0	0
145:	0	0	0	0	1	0	0	0	0
153:	0	0	0	1	0	0	0	0	0
161:	0	0	0	0	0	0	0	0	0
169:	0	0	0	0	0	0	0	0	0
177:	0	0	0	0	0	0	1	1	1
185:	0	1	0	1	1	0	0	0	1
193:	0	0	0	0	0	1	0	1	1
201:	0	1	1	2	1	2	1	3	3
209:	1	1	0	2	3	2	2	0	0
217:	1	1	3	3	2	4	3	2	5
225:	4	3	4	1	4	3	2	1	1
233:	9	0	3	4	5	5	1	1	1
241:	2	2	0	0	0	0	0	0	0
249:	0	0	0	0	0	0	0	0	0
257:	0	0	0	0	0	0	1	1	1
265:	0	0	1	1	0	0	0	1	1
273:	0	0	0	0	0	0	0	0	0
281:	0	0	1	0	0	0	1	0	0
289:	0	0	0	1	0	0	0	0	0
297:	0	0	0	0	0	1	0	0	0
305:	0	0	0	0	0	0	0	0	0
313:	0	0	0	0	0	0	0	0	0
321:	0	0	0	0	0	0	0	0	0
329:	0	0	0	1	0	0	0	0	0
337:	0	0	1	0	0	0	0	0	0
345:	1	0	0	0	0	0	0	0	0
353:	0	0	0	0	0	0	0	0	0
361:	0	0	0	0	0	0	0	0	0

369: 0 0 0 0 0 0 0 0 1

Sample Title: 14

Channel	1	2	3	4	5	6	7	8	9
377:	0	1	0	1	0	0	0	0	0
385:	0	0	0	0	1	1	0	1	1
393:	0	1	0	0	0	0	1	3	3
401:	1	2	1	1	0	6	0	2	2
409:	2	5	2	5	1	5	2	5	5
417:	5	3	5	1	2	1	2	8	8
425:	8	3	4	5	7	4	5	2	2
433:	1	4	0	2	0	1	0	1	1
441:	0	0	0	0	0	0	0	0	0
449:	0	0	1	0	0	0	0	0	0
457:	0	0	1	0	0	0	0	0	0
465:	0	0	0	0	0	0	0	0	0
473:	0	0	0	0	0	0	0	0	0
481:	0	0	0	1	0	0	0	0	0
489:	1	0	0	0	0	0	0	0	0
497:	0	1	0	0	0	0	0	0	0
505:	0	0	0	0	0	1	0	0	0
513:	0	1	0	0	0	0	0	0	0
521:	1	0	0	1	0	0	0	0	0
529:	0	0	0	0	0	1	0	1	1
537:	0	1	0	0	1	0	1	0	0
545:	1	0	1	1	0	1	0	1	1
553:	0	1	0	0	1	1	1	1	1
561:	1	0	0	1	0	1	1	2	2
569:	0	3	4	0	2	2	6	5	5
577:	2	1	6	4	0	2	4	2	2
585:	3	5	4	4	8	2	9	14	14
593:	9	7	11	4	9	11	11	8	8
601:	10	11	7	10	15	8	8	8	8
609:	16	24	17	17	14	14	7	6	6
617:	5	1	2	1	0	0	0	0	0
625:	0	0	0	0	0	0	0	0	0
633:	0	0	0	0	0	0	0	0	0
641:	0	0	0	0	0	0	0	0	0
649:	0	0	0	0	0	0	0	0	0
657:	0	0	0	0	0	0	0	0	0
665:	0	0	0	0	0	0	0	0	0
673:	0	0	0	0	0	0	0	0	0
681:	0	0	0	0	0	0	0	0	0
689:	0	0	0	0	0	0	0	0	0
697:	0	0	0	0	0	0	0	0	0
705:	0	0	0	0	0	0	0	0	0
713:	0	0	0	0	0	0	0	0	0
721:	0	0	0	0	0	1	0	0	0
729:	0	0	0	0	1	0	0	0	0
737:	0	0	0	0	0	0	0	0	0
745:	0	0	0	0	0	0	0	0	0
753:	0	0	0	0	0	0	0	0	0
761:	0	0	0	0	0	0	0	0	0
769:	0	0	0	0	0	0	0	0	0
777:	0	1	0	0	0	0	0	0	0
785:	0	0	0	0	0	0	0	0	0
793:	0	0	0	0	0	0	0	0	0

801: 0 0 0 0 0 0 0 0 0

Sample Title: 14

Channel	-----	-----	-----	-----	-----	-----	-----	-----
809:	0	0	0	0	0	0	0	0
817:	0	0	0	0	0	0	0	0
825:	0	0	0	0	0	0	0	0
833:	0	0	0	0	0	0	0	0
841:	0	0	0	0	0	0	0	0
849:	0	0	0	0	0	0	0	0
857:	0	0	0	0	0	0	0	0
865:	0	0	0	0	0	0	0	0
873:	0	0	0	0	0	0	0	0
881:	0	0	0	0	0	0	0	0
889:	0	0	0	0	0	0	0	0
897:	0	0	0	0	0	0	0	0
905:	0	0	0	0	0	1	0	0
913:	0	0	0	0	0	0	0	0
921:	0	0	0	0	0	0	0	0
929:	0	0	0	0	0	1	0	0
937:	0	0	0	0	0	0	0	0
945:	0	0	0	0	0	0	0	0
953:	0	0	0	0	0	0	0	0
961:	0	0	0	0	0	0	0	0
969:	0	0	0	0	0	0	0	0
977:	0	0	0	0	0	0	0	0
985:	0	0	0	0	0	0	0	0
993:	0	0	0	0	0	0	0	0
1001:	0	0	0	0	0	0	0	0
1009:	0	0	0	0	0	0	0	0
1017:	0	0	0	0	0	0	0	0

10/11/15

Apex-Alpha™

Sample Description: CP0404S10-11
 Spectrum File: \\OR-ALPHA1\Canberra\ApexAlpha\Root\Data\00001328
 Batch Identification: 1510086A-UU
 Sample Identification: 15
 Sample Geometry: Shelf 2
 Procedure Description: U iso

Detector Name: Alpha_047
 Chamber Serial Number: 02030596A
 Detector Serial Number: 91086
 Env. Background: System Bkgd 133277
 Reagent Blank: <not performed>

Sample Size: 1.505E+000 +/- 0.000E+000 gram
 Sample Date/Time: 10/8/2015 5:34:33 AM
 Acquisition Date/Time: 11/2/2015 8:29:11 AM
 Acquisition Live Time: 170.0 minutes
 Acquisition Real Time: 170.0 minutes

Tracer Certificate: U232_UU-10A
 Tracer Quantity: 0.662 mL
 Effective Efficiency: 0.2056 +/- 0.0110
 Counting Efficiency: 0.1650 +/- 0.0029 on 10/25/2014 3:23:35 PM
 Chem. Recovery Factor: 1.2457 +/- 0.0703

Peak Match Tolerance: 0.150 MeV

 PEAK AREA REPORT

Nuclide	Energy (MeV)	Net Pk Area	Pk Area Error %	Ambient Backgnd	Reagent Backgnd	FWHM (keV)
U-232 T	5.275	428.49	9.48	0.51	0.00E+000	10.8
U-234	4.722	127.66	17.37	0.34	0.00E+000	13.4
U-235	4.397	6.83	76.08	0.17	0.00E+000	3.0
U-238	4.144	106.83	18.98	0.17	0.00E+000	4.2

T = Tracer Peak used for Effective Efficiency

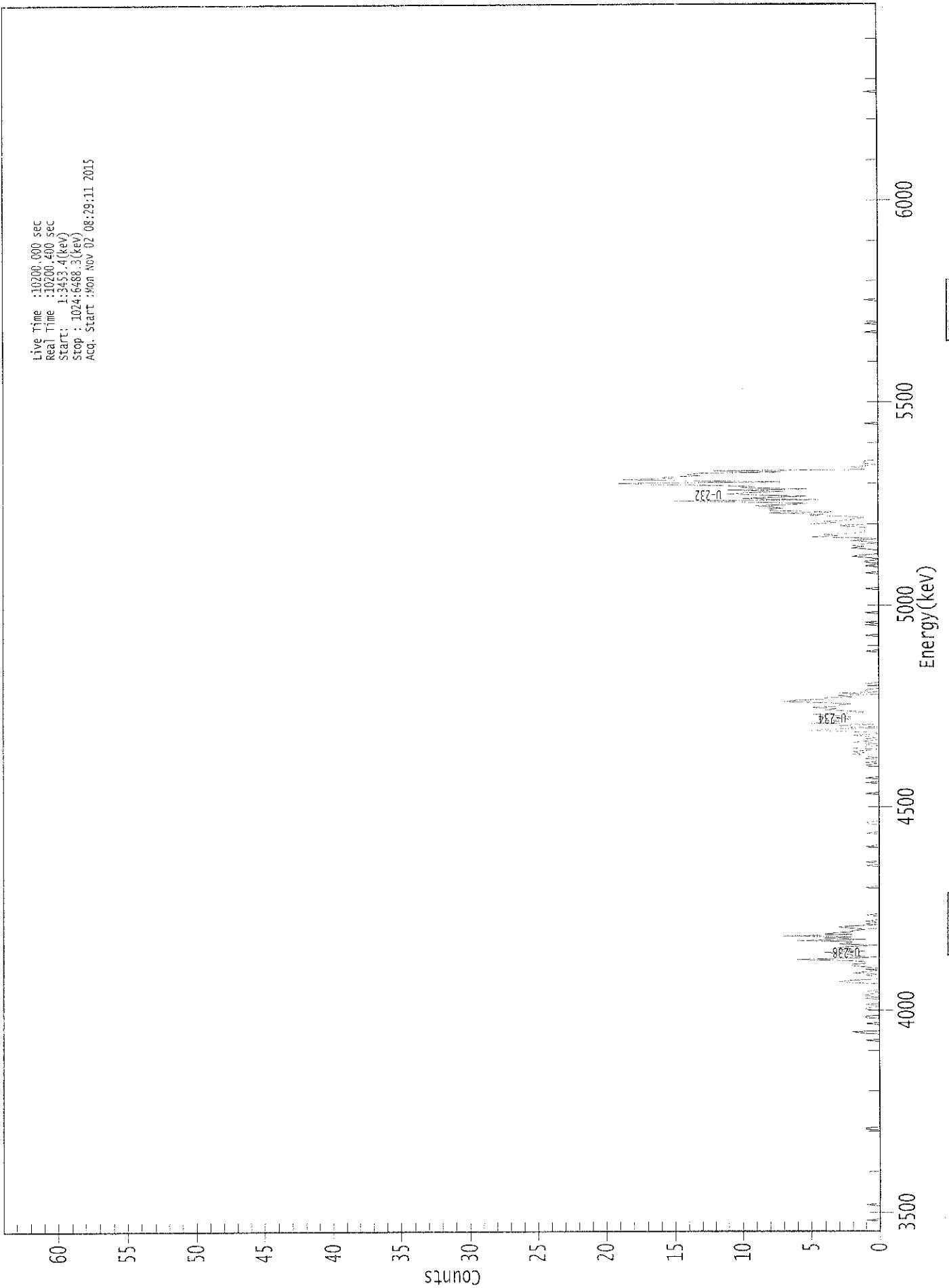
 NUCLIDE ANALYSIS RESULTS

Nuclide	Id Conf.	Energy (keV)	Activity (pCi/gram)	MDA (pCi/gram)
U-232	0.995	5302.50*	3.68E+000 +/- 3.86E-001	4.51E-002 +/- 4.73E-003
U-234	0.989	4761.50*	1.10E+000 +/- 2.22E-001	4.10E-002 +/- 4.31E-003
U-235	0.999	4385.50*	7.23E-002 +/- 5.55E-002	4.42E-002 +/- 4.64E-003
U-238	0.988	4184.40*	9.13E-001 +/- 1.98E-001	3.57E-002 +/- 3.74E-003

AG
 11/2/15

0000132895.CNF

Live Time :10200.000 sec
Real Time :10200.400 sec
Start : 1:3453.4(kev)
Stop : 1024:6488.3(kev)
Acq. Start :Mon Nov 02 08:29:11 2015



000163

 ***** S P E C T R A L D A T A R E P O R T *****

Sample Title: 15

Elapsed Live time: 10200

Elapsed Real Time: 10200

Channel	-----	-----	-----	-----	-----	-----	-----	-----
1:	0	0	0	0	0	0	0	0
9:	0	1	0	0	0	0	0	0
17:	0	0	0	0	0	0	1	0
25:	0	0	0	0	0	0	0	0
33:	0	0	0	0	0	0	0	0
41:	0	0	0	0	0	0	0	0
49:	0	0	0	0	0	0	0	0
57:	0	0	0	0	0	0	0	0
65:	0	0	0	0	0	0	0	0
73:	0	0	0	0	0	0	0	0
81:	0	0	0	0	0	1	1	0
89:	0	0	0	0	0	0	0	0
97:	0	0	0	0	0	0	0	0
105:	0	0	0	0	0	0	0	0
113:	0	0	0	0	0	0	0	0
121:	0	0	0	0	0	0	0	0
129:	0	0	0	0	0	0	0	0
137:	0	0	0	0	0	0	0	0
145:	0	0	0	0	0	0	0	0
153:	0	0	0	0	0	0	0	1
161:	0	0	0	0	0	1	2	0
169:	0	0	0	0	0	1	0	0
177:	0	0	1	1	0	0	0	0
185:	0	1	1	0	0	1	0	0
193:	0	0	1	0	1	1	0	0
201:	1	0	0	0	0	0	0	2
209:	3	2	0	0	0	1	0	2
217:	1	0	1	0	1	2	2	1
225:	1	2	6	3	0	2	2	3
233:	4	1	3	2	3	2	0	3
241:	2	2	6	1	4	2	7	2
249:	4	2	2	1	2	3	2	0
257:	1	0	1	0	0	0	0	1
265:	0	0	0	0	0	0	0	0
273:	0	0	0	0	0	0	0	0
281:	0	0	0	0	0	0	1	0
289:	0	0	0	0	0	0	0	0
297:	0	0	0	0	0	0	0	0
305:	1	0	0	1	0	0	0	0
313:	0	0	0	0	0	0	0	0
321:	1	0	0	0	0	0	0	0
329:	0	0	0	1	0	0	0	0
337:	0	0	0	1	1	0	0	0
345:	0	0	0	0	0	0	0	0
353:	0	0	0	0	0	0	0	0
361:	0	0	0	0	1	0	0	0

369: 0 0 0 0 0 1 0 0

Sample Title: 15

Channel	-----	-----	-----	-----	-----	-----	-----	-----
377:	0	1	0	0	0	0	0	0
385:	0	0	0	0	1	0	1	0
393:	0	1	0	1	1	2	1	2
401:	1	0	2	1	0	1	0	2
409:	1	0	1	0	1	2	0	0
417:	2	5	4	0	3	3	0	5
425:	3	4	2	3	2	3	5	3
433:	1	2	4	3	5	3	3	2
441:	4	7	6	4	4	2	3	0
449:	3	0	1	1	0	0	0	0
457:	1	0	0	0	0	0	0	0
465:	0	0	0	0	0	0	0	0
473:	0	0	0	0	0	0	0	0
481:	0	0	0	1	0	0	0	0
489:	0	0	0	0	0	0	0	0
497:	1	0	0	0	0	0	0	0
505:	0	1	0	1	0	0	0	0
513:	0	0	0	1	0	0	0	0
521:	0	0	0	0	0	0	0	0
529:	0	0	0	0	0	0	0	1
537:	0	0	0	0	0	0	0	0
545:	0	0	0	0	1	0	0	0
553:	0	0	1	0	0	1	1	0
561:	0	1	2	1	0	0	0	0
569:	1	2	1	2	1	0	1	2
577:	0	1	5	3	4	2	1	1
585:	1	1	1	3	1	5	3	4
593:	2	2	1	2	5	4	8	3
601:	8	8	7	8	9	6	5	10
609:	15	4	10	8	5	9	11	9
617:	7	11	5	10	9	12	17	19
625:	7	14	19	15	16	13	14	13
633:	7	12	1	1	2	1	0	1
641:	1	1	0	0	0	0	0	0
649:	0	0	0	0	0	0	0	0
657:	0	0	0	0	0	0	0	0
665:	0	0	0	0	0	0	0	0
673:	1	0	0	0	0	0	0	0
681:	0	0	0	0	0	0	0	0
689:	0	0	0	0	0	0	0	0
697:	0	0	0	0	0	0	0	0
705:	0	0	0	0	0	0	0	0
713:	0	0	0	0	0	0	0	0
721:	0	0	0	0	0	0	0	0
729:	0	0	0	0	0	0	0	0
737:	0	0	0	0	0	0	0	0
745:	0	0	0	0	1	0	0	0
753:	0	0	0	1	0	0	0	0
761:	0	0	0	0	0	0	0	0
769:	0	0	0	0	0	0	0	1
777:	0	0	0	0	0	0	0	0
785:	0	0	0	0	0	0	0	0
793:	0	0	0	0	0	0	0	0

801: 0 0 0 0 0 0 0 0 0

Sample Title: 15

Channel								
809:	0	0	0	0	0	0	0	0
817:	0	0	0	0	0	0	0	0
825:	0	0	0	0	0	0	0	0
833:	0	0	0	0	0	0	0	0
841:	0	0	0	0	0	0	0	0
849:	0	0	0	0	0	0	0	0
857:	0	0	0	0	0	0	0	0
865:	0	0	0	0	0	0	0	0
873:	0	0	0	0	0	0	0	0
881:	0	0	0	0	0	0	0	0
889:	0	0	0	0	0	0	0	0
897:	0	0	0	0	0	0	0	0
905:	0	0	0	0	0	0	0	0
913:	0	0	0	0	0	0	0	0
921:	0	0	0	0	0	0	0	0
929:	0	0	0	0	0	0	0	0
937:	0	0	0	0	0	0	0	0
945:	0	0	0	0	0	1	0	0
953:	0	0	0	0	0	0	0	0
961:	0	0	0	0	0	0	0	0
969:	0	0	0	0	0	0	0	0
977:	0	0	0	0	0	0	0	0
985:	0	0	0	0	0	0	0	0
993:	0	0	0	0	0	0	0	0
1001:	0	0	0	0	0	0	0	0
1009:	0	0	0	0	0	0	0	0
1017:	0	0	0	0	0	0	0	0

FB
11/2/15

Sample Description: CP0404S12-13
 Spectrum File: \\OR-ALPHA1\Canberra\ApexAlpha\Root\Data\00001328
 Batch Identification: 1510086A-UU
 Sample Identification: 16
 Sample Geometry: Shelf 2
 Procedure Description: U iso

Detector Name: Alpha_048
 Chamber Serial Number: 02030596B
 Detector Serial Number: 831111
 Env. Background: System Bkgd 133278
 Reagent Blank: <not performed>

Sample Size: 1.529E+000 +/- 0.000E+000 gram
 Sample Date/Time: 10/8/2015 5:34:33 AM
 Acquisition Date/Time: 11/2/2015 8:29:13 AM
 Acquisition Live Time: 170.0 minutes
 Acquisition Real Time: 170.0 minutes

Tracer Certificate: U232_UU-10A
 Tracer Quantity: 0.660 mL
 Effective Efficiency: 0.1917 +/- 0.0106
 Counting Efficiency: 0.1700 +/- 0.0030 on 10/25/2014 3:27:02 PM
 Chem. Recovery Factor: 1.1274 +/- 0.0653

Peak Match Tolerance: 0.150 MeV

 PEAK AREA REPORT

Nuclide	Energy (MeV)	Net Pk Area	Pk Area Error %	Ambient Backgnd	Reagent Backgnd	FWHM (keV)
U-232	T 5.280	398.15	9.84	0.85	0.00E+000	9.7
U-234	4.731	95.32	20.16	0.68	0.00E+000	11.9
U-235	4.380	10.00	65.01	0.00	0.00E+000	3.0
U-238	4.156	108.81	18.91	1.19	0.00E+000	7.7

T = Tracer Peak used for Effective Efficiency

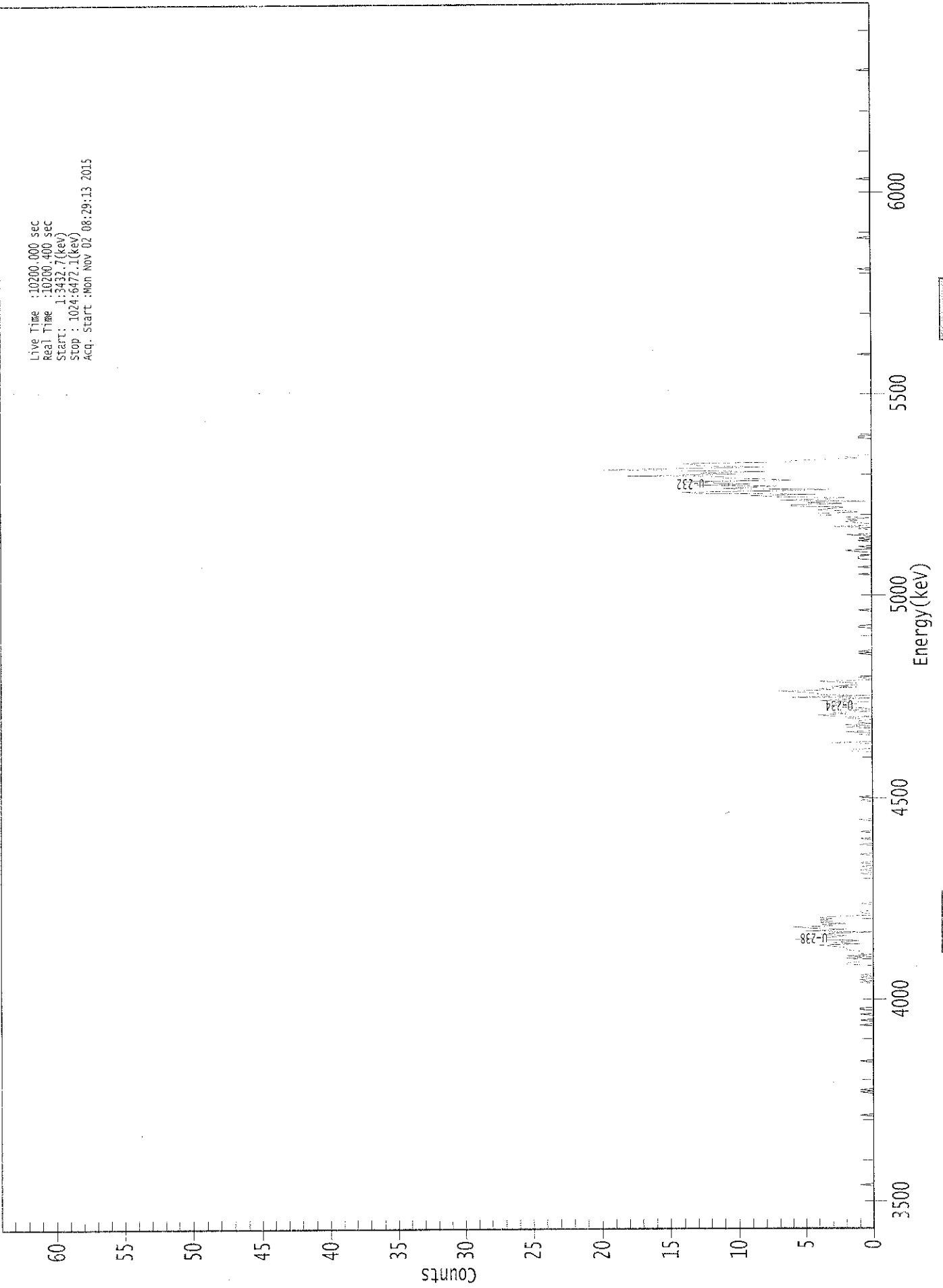
 NUCLIDE ANALYSIS RESULTS

Nuclide	Id Conf.	Energy (keV)	Activity (pCi/gram)	MDA (pCi/gram)
U-232	0.996	5302.50*	3.61E+000 +/- 3.90E-001	5.43E-002 +/- 5.87E-003
U-234	0.993	4761.50*	8.63E-001 +/- 1.98E-001	5.11E-002 +/- 5.53E-003
U-235	1.000	4385.50*	1.12E-001 +/- 7.36E-002	6.70E-002 +/- 7.25E-003
U-238	0.994	4184.40*	9.81E-001 +/- 2.14E-001	5.94E-002 +/- 6.43E-003

AG
11/2/15

0000132896.CNF

Live Time :10200.000 sec
Real Time :10200.400 sec
Start : 1:3432.7(kev)
Stop : 1024:6472.1(kev)
Acq. Start :Mon Nov 02 08:29:13 2015



ROI Type: 1

ROI Type: 3

 ***** S P E C T R A L D A T A R E P O R T *****

Sample Title: 16

Elapsed Live time: 10200
 Elapsed Real Time: 10200

Channel	1	2	3	4	5	6	7	8	9
1:	0	0	0	0	0	0	0	0	0
9:	0	0	0	0	0	0	0	0	0
17:	0	0	0	0	0	0	0	0	0
25:	0	0	0	0	0	0	0	0	0
33:	0	0	0	0	1	0	0	0	0
41:	0	0	0	0	0	0	0	0	0
49:	0	0	0	0	0	0	0	0	0
57:	0	0	0	0	0	0	0	0	0
65:	0	0	0	0	0	0	0	0	0
73:	0	0	0	0	0	0	0	0	0
81:	0	0	0	0	0	0	0	0	0
89:	0	0	0	0	0	0	1	0	0
97:	0	0	0	0	0	0	0	0	0
105:	0	0	0	0	0	0	0	0	0
113:	0	1	0	1	0	0	0	0	0
121:	0	0	0	0	0	0	0	0	0
129:	0	0	0	0	0	0	0	0	0
137:	0	0	0	1	0	0	0	0	0
145:	0	0	0	0	0	0	0	0	0
153:	0	0	0	0	0	0	0	0	0
161:	0	0	0	0	0	0	0	0	0
169:	0	1	0	0	0	1	0	0	0
177:	0	0	1	0	0	0	1	1	1
185:	0	0	0	0	0	0	0	0	0
193:	0	0	0	0	0	0	0	0	0
201:	0	0	0	0	0	1	0	1	1
209:	0	1	0	1	0	0	0	0	0
217:	0	0	0	0	2	2	1	1	1
225:	1	2	0	2	0	1	1	1	1
233:	2	2	2	3	4	1	3	2	2
241:	1	6	4	3	2	4	3	0	0
249:	5	2	4	6	3	4	2	4	4
257:	3	4	3	4	3	0	0	1	1
265:	1	0	0	0	0	0	0	1	1
273:	0	0	0	0	0	0	0	0	0
281:	0	0	0	0	0	0	0	0	0
289:	0	0	0	0	0	0	0	0	0
297:	1	0	0	1	0	0	1	0	0
305:	0	1	0	0	0	0	0	0	0
313:	1	0	0	0	0	0	0	0	0
321:	1	0	0	0	0	1	0	0	0
329:	0	0	0	1	0	0	0	0	0
337:	0	0	0	0	0	1	0	0	0
345:	0	0	0	0	0	0	0	0	0
353:	0	0	0	0	0	1	0	0	0
361:	1	0	0	0	0	0	0	0	0

369: 0 0 0 0 0 0 0 0 0

Sample Title: 16

Channel	-----	-----	-----	-----	-----	-----	-----	-----
377:	0	0	0	0	0	0	0	0
385:	0	0	0	0	0	0	0	0
393:	0	0	0	0	0	0	2	2
401:	0	0	0	0	0	3	0	0
409:	0	0	0	0	1	0	2	0
417:	0	0	2	0	2	0	1	1
425:	0	2	1	3	4	2	3	0
433:	2	0	1	3	3	1	3	0
441:	4	2	0	6	0	4	4	5
449:	7	3	4	1	3	1	1	2
457:	4	0	0	1	0	0	0	0
465:	0	0	0	0	0	0	0	0
473:	0	0	0	0	0	0	0	1
481:	0	1	0	0	0	0	0	0
489:	0	0	0	0	0	0	0	0
497:	0	0	0	0	0	1	1	0
505:	0	0	0	0	0	0	0	0
513:	0	0	0	1	0	0	0	0
521:	0	0	0	0	0	0	0	0
529:	0	0	0	0	0	0	0	0
537:	0	0	0	0	0	0	0	0
545:	0	1	0	0	0	0	0	1
553:	0	0	0	0	0	0	1	1
561:	1	0	0	0	1	2	0	0
569:	1	0	0	0	0	1	0	1
577:	0	0	2	0	0	0	0	1
585:	0	3	0	0	1	2	1	2
593:	0	2	2	4	4	1	2	4
601:	3	2	6	6	2	5	0	7
609:	3	2	7	9	4	13	14	7
617:	3	11	9	7	13	9	12	14
625:	6	8	11	11	18	10	13	8
633:	13	20	14	8	13	13	14	6
641:	6	4	1	2	1	0	0	0
649:	0	0	0	0	0	0	0	0
657:	0	0	0	1	1	0	0	0
665:	0	0	0	0	0	0	0	0
673:	0	0	0	0	0	0	0	0
681:	0	0	0	0	0	0	0	0
689:	0	0	0	0	0	0	0	0
697:	0	0	0	0	0	0	0	0
705:	0	0	0	0	0	0	0	0
713:	0	0	0	0	0	0	0	0
721:	0	0	0	0	0	0	0	0
729:	0	1	0	0	0	0	0	0
737:	0	0	0	0	0	0	0	0
745:	0	0	0	0	0	0	0	0
753:	0	0	0	0	0	0	0	0
761:	0	0	0	0	0	0	0	0
769:	0	0	0	0	0	0	0	0
777:	0	0	0	0	0	0	0	0
785:	0	0	0	0	0	0	0	0
793:	0	0	0	0	0	0	0	0

801: 1 0 0 0 0 0 0 0 0

Sample Title: 16

Channel	-----	-----	-----	-----	-----	-----	-----	-----
809:	0	0	0	0	0	0	0	0
817:	0	0	0	0	0	0	0	0
825:	0	0	1	0	0	0	0	0
833:	0	0	0	0	0	0	0	0
841:	0	0	0	0	0	0	0	0
849:	0	0	0	0	0	0	0	0
857:	0	0	0	0	0	0	0	0
865:	0	0	0	0	0	0	0	0
873:	0	0	0	1	0	0	0	0
881:	0	0	0	0	0	0	0	0
889:	0	0	0	0	0	0	0	0
897:	0	0	0	0	0	0	0	0
905:	0	0	0	0	0	0	0	0
913:	0	0	0	0	0	0	0	0
921:	0	0	0	0	0	0	0	0
929:	0	0	0	0	0	0	0	0
937:	0	0	0	0	0	0	0	0
945:	0	0	0	0	0	0	0	0
953:	0	0	0	0	0	0	0	0
961:	0	0	0	0	0	0	1	0
969:	0	0	0	0	0	0	0	0
977:	0	0	0	0	0	0	0	0
985:	0	0	0	0	0	0	0	0
993:	0	0	0	0	0	0	0	0
1001:	0	0	0	0	0	0	0	0
1009:	0	0	0	0	0	0	0	0
1017:	0	0	0	0	0	0	0	0

KB
11/2/15

Apex-Alpha™

Sample Description: CP0404S14-15
 Spectrum File: \\OR-ALPHA1\Canberra\ApexAlpha\Root\Data\00001328
 Batch Identification: 1510086A-UU
 Sample Identification: 17
 Sample Geometry: Shelf 2
 Procedure Description: U iso

Detector Name: Alpha_049
 Chamber Serial Number: 10006121A
 Detector Serial Number: 49
 Env. Background: System Bkgd 133279
 Reagent Blank: <not performed>

Sample Size: 1.540E+000 +/- 0.000E+000 gram
 Sample Date/Time: 10/8/2015 5:34:33 AM
 Acquisition Date/Time: 11/2/2015 8:29:15 AM
 Acquisition Live Time: 170.0 minutes
 Acquisition Real Time: 170.0 minutes

Tracer Certificate: U232_UU-10A
 Tracer Quantity: 0.653 mL
 Effective Efficiency: 0.1684 +/- 0.0099
 Counting Efficiency: 0.1525 +/- 0.0027 on 12/13/2014 2:45:02 PM
 Chem. Recovery Factor: 1.1038 +/- 0.0676

Peak Match Tolerance: 0.150 MeV

 PEAK AREA REPORT

Nuclide	Energy (MeV)	Net Pk Area	Pk Area Error %	Ambient Backgnd	Reagent Backgnd	FWHM (keV)
U-232	T 5.286	345.83	10.54	0.17	0.00E+000	6.7
U-234	4.747	78.98	22.22	1.02	0.00E+000	4.7
U-235	4.394	4.83	91.00	0.17	0.00E+000	3.0
U-238	4.166	85.32	21.32	0.68	0.00E+000	6.9

T = Tracer Peak used for Effective Efficiency

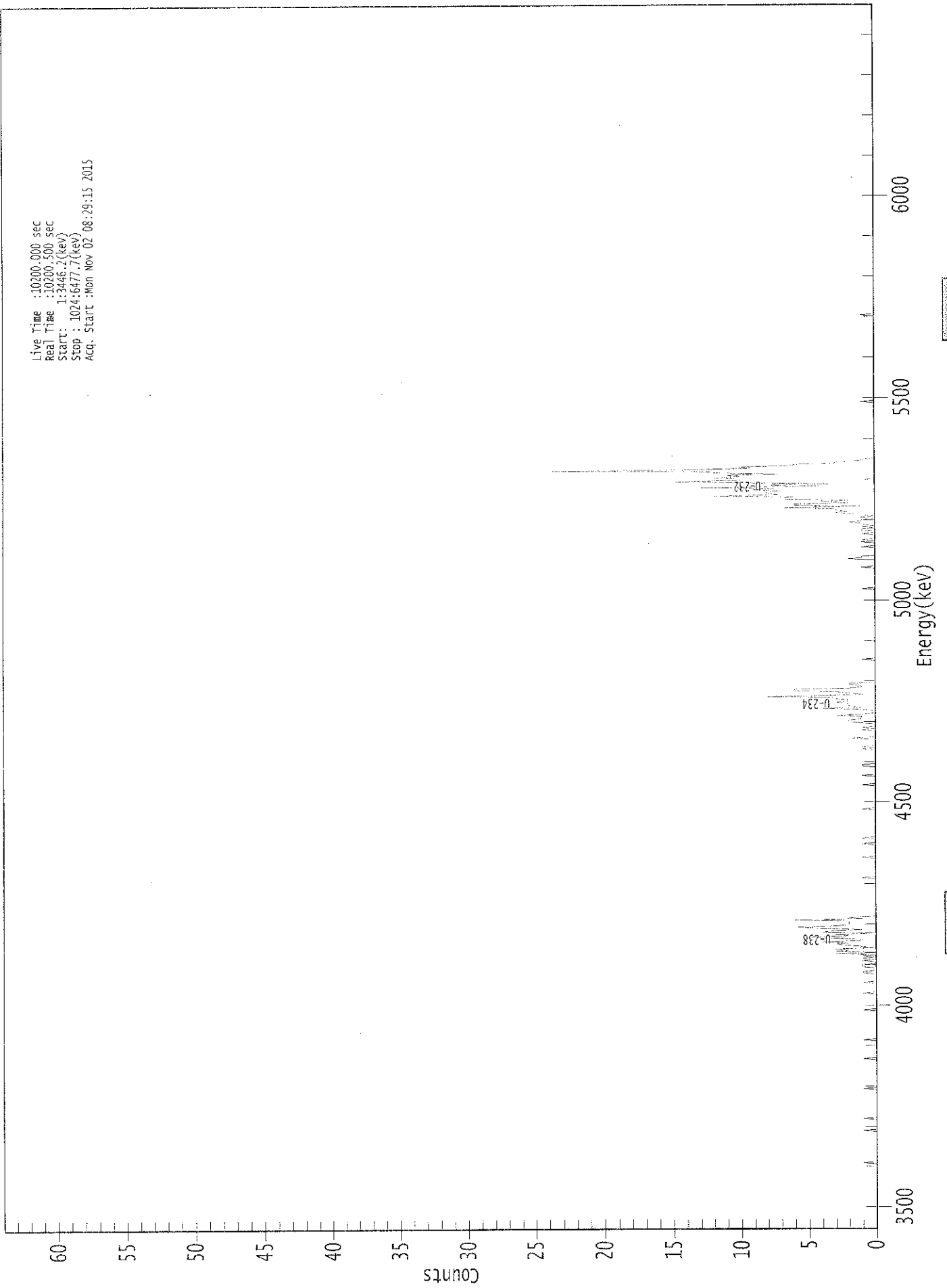
 NUCLIDE ANALYSIS RESULTS

Nuclide	Id Conf.	Energy (keV)	Activity (pCi/gram)	MDA (pCi/gram)
U-232	0.998	5302.50*	3.54E+000 +/- 4.06E-001	4.28E-002 +/- 4.90E-003
U-234	0.998	4761.50*	8.09E-001 +/- 2.02E-001	6.45E-002 +/- 7.40E-003
U-235	0.999	4385.50*	6.10E-002 +/- 5.60E-002	5.27E-002 +/- 6.05E-003
U-238	0.998	4184.40*	8.70E-001 +/- 2.11E-001	5.75E-002 +/- 6.60E-003

AG
 11/2/15

0000132897.CNF

Live Time : 10200.000 sec
Real Time : 10200.500 Sec
Start : 1:3446.2 (keV)
Stop : 1024.6477.7 (keV)
Acq. Start : Mon Nov 02 08:29:15 2015



ROI Type: 1

ROI Type: 3

369: 0 0 1 0 0 0 0 0 0

Sample Title: 17

Channel	-----	-----	-----	-----	-----	-----	-----	-----
377:	0	0	1	0	0	0	0	0
385:	0	0	1	1	0	0	0	0
393:	0	0	0	0	0	0	0	0
401:	1	0	1	0	0	0	0	0
409:	0	2	0	0	0	0	0	0
417:	1	0	1	0	0	0	1	2
425:	2	1	1	1	3	1	0	0
433:	0	1	4	1	2	2	2	3
441:	2	2	3	3	8	3	1	2
449:	3	6	6	2	1	1	2	2
457:	0	0	0	0	0	0	0	0
465:	0	0	0	0	0	0	0	0
473:	0	0	0	1	0	0	0	0
481:	0	0	0	0	0	0	0	0
489:	0	0	0	0	0	0	0	0
497:	0	0	0	0	0	0	0	0
505:	0	0	0	0	0	0	0	0
513:	0	0	0	0	0	0	0	0
521:	0	0	0	0	0	0	0	0
529:	0	0	0	0	0	0	1	0
537:	0	0	0	0	0	0	0	0
545:	0	0	0	0	0	0	0	0
553:	1	0	0	0	0	0	0	2
561:	1	1	0	0	0	0	0	0
569:	0	1	0	0	0	1	0	1
577:	0	0	0	0	1	0	0	1
585:	1	0	1	0	1	1	2	1
593:	1	0	1	0	1	2	3	2
601:	3	3	7	1	6	6	2	4
609:	2	7	7	6	12	7	8	8
617:	7	9	7	13	4	8	3	11
625:	15	10	10	12	10	11	7	12
633:	12	24	13	9	10	6	6	3
641:	3	1	1	0	0	0	0	0
649:	0	0	0	0	0	0	0	0
657:	0	0	0	0	0	0	0	0
665:	0	0	0	0	0	0	0	0
673:	0	0	0	0	0	0	0	0
681:	0	0	0	0	0	0	0	0
689:	0	0	1	0	0	0	0	0
697:	0	0	0	0	0	0	0	0
705:	0	0	0	0	0	0	0	0
713:	0	0	0	0	0	0	0	0
721:	0	0	0	0	0	0	0	0
729:	0	0	0	0	0	0	0	0
737:	0	0	0	0	0	0	0	0
745:	0	0	0	0	0	0	0	0
753:	0	0	0	0	0	0	0	0
761:	0	0	1	0	0	0	0	0
769:	0	0	0	0	0	0	0	0
777:	0	0	0	0	0	0	0	0
785:	0	0	0	0	0	0	0	0
793:	0	0	0	0	0	0	0	0

801: 0 0 0 0 0 0 0 0 0

Sample Title: 17

Channel	-----	-----	-----	-----	-----	-----	-----	-----
809:	0	0	0	0	0	0	0	0
817:	0	0	0	0	0	0	0	0
825:	0	0	0	0	0	0	0	0
833:	0	0	0	0	0	0	0	0
841:	0	0	0	0	0	0	0	0
849:	0	0	0	0	0	0	0	0
857:	0	0	0	0	0	0	0	0
865:	0	0	0	0	0	0	0	0
873:	0	0	0	0	0	0	0	0
881:	0	0	0	0	0	0	0	0
889:	0	0	0	0	0	0	0	0
897:	0	0	0	0	0	0	0	0
905:	0	0	0	0	0	0	0	0
913:	0	0	0	0	0	0	0	0
921:	0	0	0	0	0	0	0	0
929:	0	0	0	0	0	0	0	0
937:	0	0	0	0	0	0	0	0
945:	0	0	0	0	0	0	0	0
953:	0	0	0	0	0	0	0	0
961:	0	0	0	0	0	0	0	0
969:	0	0	0	0	0	0	0	0
977:	0	0	0	0	0	0	0	0
985:	0	0	0	0	0	0	0	0
993:	0	0	0	0	0	0	0	0
1001:	0	0	0	0	0	0	0	0
1009:	0	0	0	0	0	0	0	0
1017:	0	0	0	0	0	0	0	0



*KS
11/2/15*

Sample Description: CP0404S17-18
 Spectrum File: \\OR-ALPHA1\Canberra\ApexAlpha\Root\Data\00001328
 Batch Identification: 1510086A-UU
 Sample Identification: 18
 Sample Geometry: Shelf 2
 Procedure Description: U iso

Detector Name: Alpha_050
 Chamber Serial Number: 10006121B
 Detector Serial Number: 50
 Env. Background: System Bkgd 133280
 Reagent Blank: <not performed>

Sample Size: 1.523E+000 +/- 0.000E+000 gram
 Sample Date/Time: 10/8/2015 5:34:33 AM
 Acquisition Date/Time: 11/2/2015 8:29:18 AM
 Acquisition Live Time: 170.0 minutes
 Acquisition Real Time: 170.0 minutes

Tracer Certificate: U232_UU-10A
 Tracer Quantity: 0.653 mL
 Effective Efficiency: 0.1603 +/- 0.0096
 Counting Efficiency: 0.1428 +/- 0.0026 on 12/13/2014 2:43:59 PM
 Chem. Recovery Factor: 1.1228 +/- 0.0701

Peak Match Tolerance: 0.150 MeV

 PEAK AREA REPORT

Nuclide	Energy (MeV)	Net Pk Area	Pk Area Error %	Ambient Backgnd	Reagent Backgnd	FWHM (keV)
U-232	T 5.284	329.15	10.82	0.85	0.00E+000	23.2
U-234	4.740	85.66	21.23	0.34	0.00E+000	5.9
U-235	4.357	5.00	96.02	0.00	0.00E+000	3.0
U-238	4.157	80.83	21.83	0.17	0.00E+000	8.1

T = Tracer Peak used for Effective Efficiency

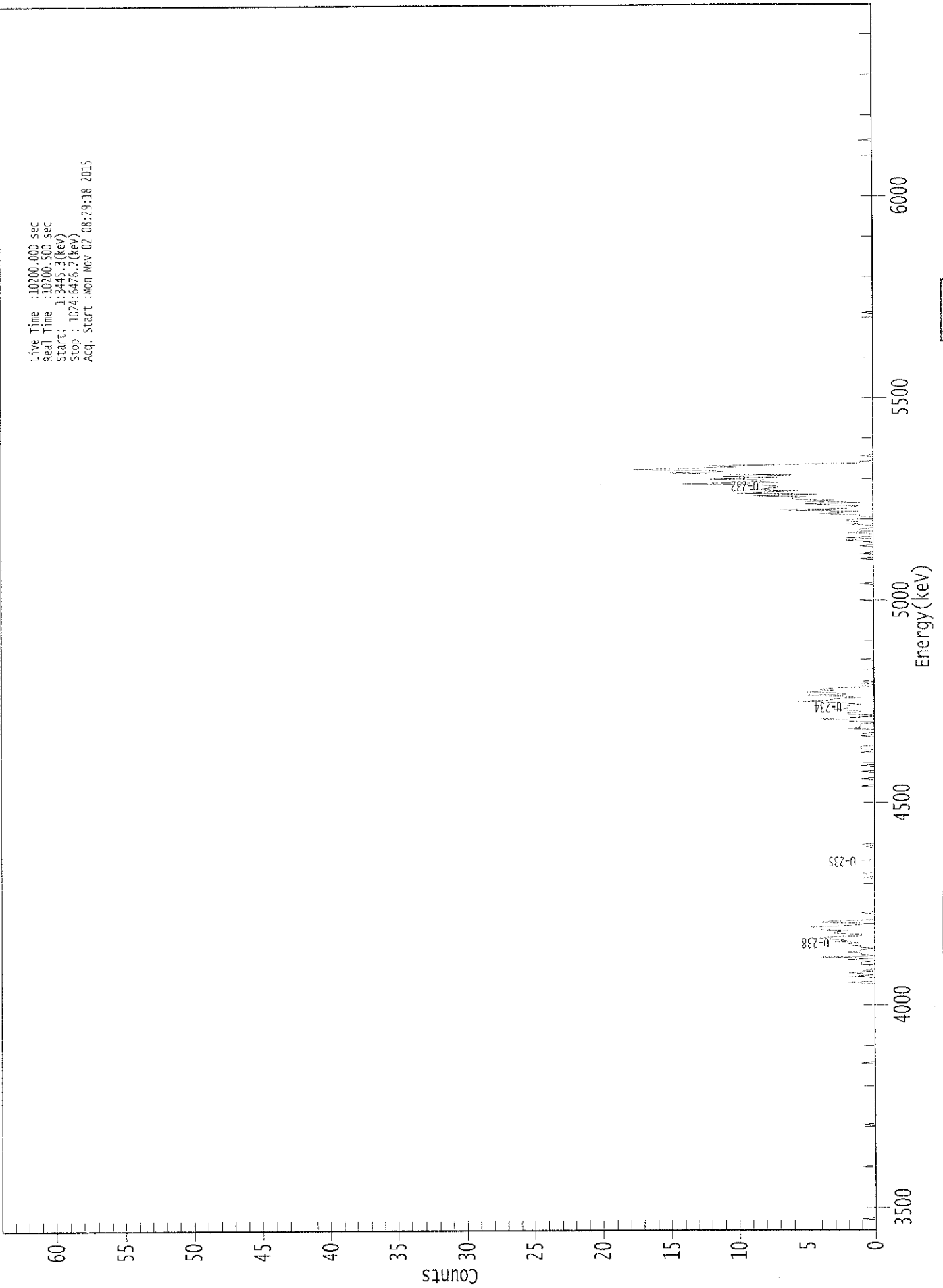
 NUCLIDE ANALYSIS RESULTS

Nuclide	Id Conf.	Energy (keV)	Activity (pCi/gram)	MDA (pCi/gram)
U-232	0.998	5302.50*	3.58E+000 +/- 4.20E-001	6.51E-002 +/- 7.64E-003
U-234	0.997	4761.50*	9.32E-001 +/- 2.26E-001	5.20E-002 +/- 6.09E-003
U-235	0.994	4385.50*	6.71E-002 +/- 6.49E-002	8.04E-002 +/- 9.43E-003
U-238	0.995	4184.40*	8.75E-001 +/- 2.17E-001	4.52E-002 +/- 5.30E-003

*AG
11/2/15*

0000132898.CNF

Live Time :10200.000 sec
Real Time :10200.500 sec
Start : 1:3445.3(keV)
Stop : 1024:6476.2(keV)
Acq. Start :Mon Nov 02 08:29:18 2015



ROI Type: 3

ROI Type: 1

 ***** S P E C T R A L D A T A R E P O R T *****

Sample Title: 18

Elapsed Live time: 10200

Elapsed Real Time: 10201

Channel	1	2	3	4	5	6	7	8	9
1:	0	0	0	0	0	0	0	0	0
9:	0	1	0	0	0	0	0	0	0
17:	0	0	0	0	0	0	0	0	0
25:	0	0	0	0	0	0	0	0	0
33:	0	0	0	0	0	0	0	0	0
41:	0	0	0	0	0	0	0	0	0
49:	0	0	0	0	0	1	0	0	0
57:	0	0	0	0	0	0	0	0	0
65:	0	0	0	0	0	0	0	0	0
73:	0	0	0	0	0	0	0	0	0
81:	0	0	0	0	0	0	0	0	0
89:	1	0	0	0	0	0	0	0	0
97:	0	0	0	0	0	0	0	0	0
105:	0	0	0	0	0	0	0	0	0
113:	0	0	0	0	0	0	0	0	0
121:	0	0	0	0	0	0	0	0	0
129:	0	0	0	0	0	0	0	0	0
137:	0	0	0	1	0	0	0	0	0
145:	0	0	0	0	0	0	0	0	0
153:	0	0	0	0	0	0	0	0	0
161:	0	0	0	0	0	0	0	0	0
169:	0	0	0	0	0	0	0	0	0
177:	0	0	0	0	0	0	0	0	0
185:	0	0	0	0	0	0	0	0	0
193:	0	0	0	0	0	0	0	0	0
201:	0	0	0	0	0	0	2	0	0
209:	0	0	0	2	0	1	2	0	0
217:	1	0	0	0	0	1	1	1	1
225:	0	2	0	4	0	1	1	2	2
233:	1	1	0	1	1	2	2	1	1
241:	3	2	3	5	3	1	1	3	3
249:	3	2	4	4	5	2	1	1	1
257:	4	3	0	0	0	0	0	0	0
265:	1	0	0	0	0	0	0	0	0
273:	0	0	0	0	0	0	0	0	0
281:	0	0	0	0	0	0	0	0	0
289:	0	0	0	0	0	1	0	0	0
297:	0	1	0	0	0	0	0	0	0
305:	0	0	0	0	1	0	0	0	0
313:	0	0	0	0	0	0	0	1	1
321:	0	1	0	0	0	0	0	0	0
329:	0	0	0	0	0	0	0	0	0
337:	0	0	0	0	0	0	0	0	0
345:	0	0	0	0	0	0	0	0	0
353:	0	0	0	0	0	0	0	0	0
361:	0	0	0	0	0	0	0	0	0

369: 0 0 1 0 0 0 0 0 0

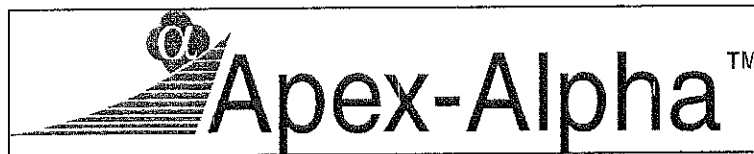
Sample Title: 18

Channel	1	2	3	4	5	6	7	8	9
377:	1	0	0	0	0	0	0	1	0
385:	0	0	0	0	1	0	0	0	0
393:	0	0	0	0	0	0	0	1	0
401:	0	1	1	1	0	0	0	0	0
409:	0	0	0	0	1	0	0	1	0
417:	0	0	2	1	1	1	1	1	0
425:	2	2	4	2	0	0	0	2	2
433:	1	1	3	2	2	2	2	1	2
441:	3	6	3	3	1	2	2	5	2
449:	3	5	3	4	3	0	0	1	0
457:	1	0	0	0	0	0	0	0	0
465:	0	0	0	1	0	0	0	0	0
473:	0	0	0	0	1	0	0	0	0
481:	0	0	0	0	0	0	0	0	0
489:	0	0	0	0	0	0	0	0	0
497:	0	0	0	0	0	0	0	0	0
505:	0	0	0	0	0	0	0	0	0
513:	0	0	0	0	0	0	0	0	0
521:	0	0	0	0	0	0	1	0	0
529:	0	0	0	0	0	0	0	0	0
537:	0	0	0	1	0	0	0	0	0
545:	0	0	0	0	0	0	0	0	0
553:	0	0	0	0	0	0	0	0	0
561:	1	0	0	0	1	0	0	0	0
569:	0	0	1	0	0	0	0	1	2
577:	0	2	0	0	0	2	0	0	1
585:	1	0	0	0	2	1	1	1	2
593:	2	0	0	1	1	4	2	2	1
601:	7	2	2	1	3	5	1	1	5
609:	3	6	6	5	9	4	10	8	8
617:	5	9	8	7	7	8	14	7	7
625:	9	8	12	7	11	6	11	15	15
633:	11	12	18	13	10	12	5	1	1
641:	1	0	0	0	0	1	0	0	0
649:	0	0	0	0	0	0	0	0	0
657:	0	0	0	0	0	0	0	0	0
665:	0	0	0	0	0	0	0	0	0
673:	0	0	0	0	0	0	0	0	0
681:	0	0	0	0	0	0	0	0	0
689:	0	0	0	0	0	0	0	0	0
697:	0	0	0	0	0	0	0	0	0
705:	0	0	0	0	0	0	0	0	0
713:	0	0	0	0	0	0	0	0	0
721:	0	0	0	0	0	0	0	0	0
729:	0	0	0	0	0	0	0	0	0
737:	0	0	0	0	0	0	0	0	0
745:	0	0	0	0	0	0	0	0	0
753:	0	0	0	0	0	0	0	0	0
761:	0	0	0	0	0	1	0	0	0
769:	0	0	0	0	0	0	0	0	0
777:	0	0	0	0	0	0	0	0	0
785:	0	0	0	0	0	0	0	0	0
793:	0	0	0	0	0	0	0	0	0

801: 0 0 0 0 0 0 0 0

Sample Title: 18

Channel	-----	-----	-----	-----	-----	-----	-----	-----
809:	0	0	0	0	0	0	0	0
817:	0	0	0	0	0	0	0	0
825:	0	0	0	0	0	0	0	0
833:	0	0	0	0	0	0	0	0
841:	0	0	0	0	0	0	0	0
849:	0	0	0	0	0	0	0	0
857:	0	0	0	0	0	0	0	0
865:	0	0	0	0	0	0	0	0
873:	0	0	0	0	0	0	0	0
881:	0	0	0	0	0	0	0	0
889:	0	0	0	0	0	0	0	0
897:	0	0	0	0	0	0	0	0
905:	0	0	0	0	0	1	0	0
913:	0	0	0	0	0	0	0	0
921:	0	0	0	0	0	0	0	0
929:	0	0	0	0	0	0	0	0
937:	0	0	0	0	0	0	0	0
945:	0	0	0	0	0	0	0	0
953:	0	0	0	0	0	0	0	0
961:	0	0	0	0	0	0	0	0
969:	0	0	0	0	0	0	0	0
977:	0	0	0	0	0	0	0	0
985:	0	0	0	0	0	0	0	0
993:	0	0	0	0	0	0	0	0
1001:	0	0	0	0	0	0	0	0
1009:	0	0	0	0	0	0	0	0
1017:	0	0	0	0	0	0	0	0



QA SUMMARY REPORT
Review Of QA Results - Pulsar Check

Date : 11/2/2015
Time : 5:31:34 AM

CHAMBER	DEVICE	PARAMETER	FLAG	DATE
Alpha 001	21f	ALL	Not Done	
Alpha 002	21f	ALL	Not Done	
Alpha 003	21f	ALL	Passed	11/2/2015 5:10:08 AM
Alpha 004	21f	ALL	Passed	11/2/2015 5:10:08 AM
Alpha 005	21f	ALL	Not Done	
Alpha 006	21f	ALL	Not Done	
Alpha 007	21f	ALL	Not Done	
Alpha 008	21f	ALL	Not Done	
Alpha 009	21f	ALL	Not Done	
Alpha 010	21f	ALL	Passed	11/2/2015 5:10:09 AM
Alpha 011	21f	ALL	Passed	11/2/2015 5:10:10 AM
Alpha 012	21f	ALL	Passed	11/2/2015 5:10:11 AM
Alpha 013	21f	ALL	Not Done	
Alpha 014	21f	ALL	Passed	11/2/2015 5:10:12 AM
Alpha 015	21f	ALL	Passed	11/2/2015 5:10:13 AM
Alpha 016	21f	ALL	Not Done	
Alpha 033	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:10:14 AM
Alpha 034	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:10:15 AM
Alpha 035	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:10:17 AM
Alpha 036	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:10:18 AM
Alpha 037	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:10:20 AM
Alpha 038	Alpha Analyst100DC	Peak Energy	Action	11/2/2015 5:10:21 AM
Alpha 039	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:10:23 AM
Alpha 040	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:10:24 AM
Alpha 041	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:10:26 AM
Alpha 042	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:10:27 AM
Alpha 043	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:10:29 AM
Alpha 044	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:10:30 AM
Alpha 045	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:10:32 AM
Alpha 046	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:10:34 AM
Alpha 047	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:10:36 AM
Alpha 048	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:10:37 AM
Alpha 049	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:10:39 AM
Alpha 050	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:10:41 AM
Alpha 051	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:10:43 AM
Alpha 052	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:10:45 AM
Alpha 053	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:10:47 AM
Alpha 054	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:10:50 AM
Alpha 055	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:10:52 AM
Alpha 056	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:10:55 AM
Alpha 057	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:10:57 AM
Alpha 058	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:11:00 AM

***** LIBRARY LISTING REPORT *****

Nuclide Library Title: Uranium

Nuclide Library Description: U-232,-234,-235,-238

Nuclide Name	Half-Life (Seconds)	Energy (keV)	Energy Uncert. (keV)	Yield (%)	Yield Uncert.(Abs.+/-)
U-232	2.174E+009	5302.500*	0.000	99.8000	0.0000
U-234	7.731E+012	4761.500*	0.000	99.8000	0.0000
U-235	2.221E+016	4385.500*	0.000	80.9000	0.0000
U-238	1.410E+017	4184.400*	0.000	100.2300	0.0000

* = key line

TOTALS: 4 Nuclides 4 Energy Lines

SECTION IX
ANALYTICAL DATA (ISOTOPIC THORIUM)

Work Order	15-10086
Analysis Code	ThISO
Run	1
Date Received	10/14/2015
Lab Deadline	11/6/2015
Client	Auxier & Associates, Inc.
Project	PAP-KAN
Report Level	4
Activity Units	pCi
Aliquot Units	g
Matrix	SO
Method	EML Th-01 Modified
Instrument Type	Alpha Spectroscopy
Radiometric Tracer	Th-229
Radiometric Sol#	Th-18a
Tracer Act (dpm/g)	22.46
Carrier	
Carrier Conc (mg/ml)	

Internal Fraction	Sample Desc	Cifent ID	Login CPM	Sample Date	Sample Aliquot
01	LCS	LCS		10/14/15 00:00	1.0000E+00
02	MBL	BLANK		10/14/15 00:00	1.5000E+00
03	DUP	CP4105S01-02	37	10/06/15 16:30	1.5215E+00
04	DO	CP4105S01-02	37	10/06/15 16:30	1.5543E+00
05	TRG	CP4105S04-05	34	10/06/15 16:40	1.5172E+00
06	TRG	CP4105S06-07	37	10/06/15 16:50	1.5607E+00
07	TRG	CP4105S08-09	36	10/06/15 17:00	1.5134E+00
08	TRG	CP4105S10-11	37	10/06/15 17:10	1.5405E+00
09	TRG	CP4105S12-13	39	10/06/15 17:20	1.5335E+00
10	TRG	CP4105S14-15	36	10/06/15 17:30	1.5456E+00
11	TRG	CP4105S16-17	38	10/06/15 17:40	1.5328E+00
12	TRG	CP0404S03-04	34	10/08/15 08:00	1.5120E+00
13	TRG	CP0404S05-06	36	10/08/15 08:10	1.5137E+00
14	TRG	CP0404S07-08	34	10/08/15 08:20	1.5126E+00
15	TRG	CP0404S10-11	35	10/08/15 08:30	1.5179E+00
16	TRG	CP0404S12-13	35	10/08/15 08:40	1.5290E+00
17	TRG	CP0404S14-15	33	10/08/15 09:00	1.5125E+00
18	TRG	CP0404S17-18	32	10/08/15 09:10	1.5074E+00

* SAF1 is used for Gross Alpha and all other radionuclides. SAF2 is used for Gross Beta only. ^ Indicates estimated SAF value.
** Actual mass exceeded the calibration curve range. Results should be qualified as appropriate.

Internal Fraction	Sample Desc	Tracer Aliquot (g)	Tracer Total ACT (dpm)	Radiometric Tracer (pCi)	Radiometric % Rec	Grav Carrier Added (ml)	Grav Filter Tare (g)	Grav Filter Final (g)	Grav Filter Net (g)	Grav % Rec	Mean % Rec	SAF 1*	SAF 2*
01	LCS	0.4467	10.0		0.00								
02	MBL	0.2232	5.0		0.00								
03	DUP	0.2238	5.0		0.00								
04	DO	0.2235	5.0		0.00								
05	TRG	0.2248	5.0		0.00								
06	TRG	0.2236	5.0		0.00								
07	TRG	0.2240	5.0		0.00								
08	TRG	0.2251	5.1		0.00								
09	TRG	0.2234	5.0		0.00								
10	TRG	0.2241	5.0		0.00								
11	TRG	0.2242	5.0		0.00								
12	TRG	0.2236	5.0		0.00								
13	TRG	0.2235	5.0		0.00								
14	TRG	0.2249	5.1		0.00								
15	TRG	0.2240	5.0		0.00								
16	TRG	0.2248	5.0		0.00								
17	TRG	0.2242	5.0		0.00								
18	TRG	0.2238	5.0		0.00								

* SAF1 is used for Gross Alpha and all other radionuclides. SAF2 is used for Gross Beta only. ^ Indicates estimated SAF value.
 *** Actual mass exceeded the calibration curve range. Results should be qualified as appropriate.

Internal Fraction	Sample Desc	Rough Prep Date	Rough Prep By	Prep Date	Prep By	Sep t0 Date/Time	Sep t0 By	Sep t1 Date/Time	Sep t1 By
01	LCS			10/16/15 14:39	JPACHELLA				
02	MBL			10/16/15 14:39	JPACHELLA				
03	DUP			10/16/15 14:39	JPACHELLA				
04	DO	10/16/15 08:59	KSALLINGS	10/16/15 14:39	JPACHELLA				
05	TRG	10/16/15 08:59	KSALLINGS	10/16/15 14:39	JPACHELLA				
06	TRG	10/16/15 08:59	KSALLINGS	10/16/15 14:39	JPACHELLA				
07	TRG	10/16/15 08:59	KSALLINGS	10/16/15 14:39	JPACHELLA				
08	TRG	10/16/15 08:59	KSALLINGS	10/16/15 14:39	JPACHELLA				
09	TRG	10/16/15 08:59	KSALLINGS	10/16/15 14:39	JPACHELLA				
10	TRG	10/16/15 08:59	KSALLINGS	10/16/15 14:39	JPACHELLA				
11	TRG	10/16/15 08:59	KSALLINGS	10/16/15 14:39	JPACHELLA				
12	TRG	10/16/15 08:59	KSALLINGS	10/16/15 14:39	JPACHELLA				
13	TRG	10/16/15 08:59	KSALLINGS	10/16/15 14:39	JPACHELLA				
14	TRG	10/16/15 08:59	KSALLINGS	10/16/15 14:39	JPACHELLA				
15	TRG	10/16/15 08:59	KSALLINGS	10/16/15 14:39	JPACHELLA				
16	TRG	10/16/15 08:59	KSALLINGS	10/16/15 14:39	JPACHELLA				
17	TRG	10/16/15 08:59	KSALLINGS	10/16/15 14:39	JPACHELLA				
18	TRG	10/16/15 08:59	KSALLINGS	10/16/15 14:39	JPACHELLA				

* SAF1 is used for Gross Alpha and all other radionuclides. SAF2 is used for Gross Beta only. ^ Indicates estimated SAF value.
*** Actual mass exceeded the calibration curve range. Results should be qualified as appropriate.

		Run	1
Eberline Services Work Order		Analysis Code	THISO
Client		Auxier & Associates, Inc.	

Lab Fraction	Nuclide	Sample Desc	Client Identification	Activity Units	Results	Error Estimate	MDA	LCS Known	LCS %R	LCS Flag	RPD Flag	MDA Flag	Blank Flag
01	TH-228	LCS	LCS	pCi/g	5.42E+00	8.96E-01	1.84E-01	4.71E+00	115.10	OK		OK	
02	TH-228	MBL	BLANK	pCi/g	3.09E-02	3.95E-02	5.87E-02					OK	OK
03	TH-228	DUP	CP4105S01-02	pCi/g	1.24E+00	3.04E-01	6.58E-02				OK	OK	
04	TH-228	DO	CP4105S01-02	pCi/g	1.47E+00	3.57E-01	5.57E-02					OK	
05	TH-228	TRG	CP4105S04-05	pCi/g	1.14E+00	3.01E-01	7.84E-02					OK	
06	TH-228	TRG	CP4105S06-07	pCi/g	1.37E+00	3.26E-01	7.34E-02					OK	
07	TH-228	TRG	CP4105S08-09	pCi/g	1.41E+00	3.45E-01	4.50E-02					OK	
08	TH-228	TRG	CP4105S10-11	pCi/g	1.37E+00	3.46E-01	7.95E-02					OK	
09	TH-228	TRG	CP4105S12-13	pCi/g	1.14E+00	2.64E-01	6.01E-02					OK	
10	TH-228	TRG	CP4105S14-15	pCi/g	1.65E+00	3.93E-01	8.59E-02					OK	
11	TH-228	TRG	CP4105S16-17	pCi/g	1.24E+00	2.90E-01	5.11E-02					OK	
12	TH-228	TRG	CP0404S03-04	pCi/g	1.20E+00	2.76E-01	5.13E-02					OK	
13	TH-228	TRG	CP0404S05-06	pCi/g	1.12E+00	2.77E-01	8.19E-02					OK	
14	TH-228	TRG	CP0404S07-08	pCi/g	1.19E+00	2.68E-01	7.51E-02					OK	
15	TH-228	TRG	CP0404S10-11	pCi/g	1.33E+00	3.00E-01	5.73E-02					OK	
16	TH-228	TRG	CP0404S12-13	pCi/g	1.14E+00	2.70E-01	8.42E-02					OK	
17	TH-228	TRG	CP0404S14-15	pCi/g	1.18E+00	2.55E-01	5.05E-02					OK	
18	TH-228	TRG	CP0404S17-18	pCi/g	1.25E+00	3.31E-01	8.11E-02					OK	

		Run	1
Eberline Services Work Order		Analysis Code	THISO
Client		Auxier & Associates, Inc.	

Lab Fraction	Nuclide	Sample Desc	Counting Date/Time	Half-life (days)	Detect	Carrier	Count Time	Counts	Bkg CPM	Eff
01	TH-228	LCS	11/02/15 08:29		A_Spec	Alpha_051	170	3.63 E+02	4.30 E-02	15.2
02	TH-228	MBL	11/02/15 08:29		A_Spec	Alpha_052	170	3.15 E+00	5.00 E-03	16.1
03	TH-228	DUP	11/02/15 08:29		A_Spec	Alpha_053	170	1.24 E+02	7.00 E-03	14.6
04	TH-228	DO	11/02/15 08:29		A_Spec	Alpha_054	170	1.38 E+02	3.00 E-03	14.5
05	TH-228	TRG	11/02/15 08:29		A_Spec	Alpha_055	170	1.03 E+02	9.00 E-03	15.6
06	TH-228	TRG	11/02/15 08:29		A_Spec	Alpha_056	170	1.41 E+02	1.10 E-02	16
07	TH-228	TRG	11/02/15 08:29		A_Spec	Alpha_057	170	1.31 E+02	1.00 E-03	15.8
08	TH-228	TRG	11/02/15 08:29		A_Spec	Alpha_058	170	1.22 E+02	9.00 E-03	16.4
09	TH-228	TRG	11/02/15 08:30		A_Spec	Alpha_059	170	1.34 E+02	9.00 E-03	17.2
10	TH-228	TRG	11/02/15 08:30		A_Spec	Alpha_060	170	1.54 E+02	1.30 E-02	15.4
11	TH-228	TRG	11/02/15 08:30		A_Spec	Alpha_003	170	1.36 E+02	4.00 E-03	17.4
12	TH-228	TRG	11/02/15 08:30		A_Spec	Alpha_004	170	1.40 E+02	5.00 E-03	18.9
13	TH-228	TRG	11/02/15 08:30		A_Spec	Alpha_010	170	1.20 E+02	1.70 E-02	19.2
14	TH-228	TRG	11/02/15 08:30		A_Spec	Alpha_011	170	1.47 E+02	2.00 E-02	20
15	TH-228	TRG	11/02/15 08:30		A_Spec	Alpha_012	170	1.53 E+02	7.00 E-03	19.4
16	TH-228	TRG	11/02/15 08:30		A_Spec	Alpha_014	170	1.32 E+02	2.30 E-02	18.4
17	TH-228	TRG	11/02/15 08:30		A_Spec	Alpha_015	170	1.61 E+02	8.00 E-03	23.5
18	TH-228	TRG	11/02/15 11:24		A_Spec	Alpha_033	170	1.06 E+02	8.00 E-03	18

		15-10086 Eberline Services Work Order	Analysis Code THISO	Run 1
Client Auxier & Associates, Inc.				

Lab Fraction	Nuclide	Sample Desc	Client Identification	Activity Units	Results	Error Estimate	MDA	LCS Known	LCS %R	LCS Flag	RPD Flag	MDA Flag	Blank Flag
01	TH-230	LCS	LCS	pCi/g	6.26E+00	1.00E+00	1.06E-01	5.37E+00	116.55	OK		OK	
02	TH-230	MBL	BLANK	pCi/g	8.17E-02	5.97E-02	5.54E-02					OK	OK
03	TH-230	DUP	CP4105S01-02	pCi/g	1.53E+00	3.54E-01	5.49E-02				OK	OK	
04	TH-230	DO	CP4105S01-02	pCi/g	1.33E+00	3.29E-01	4.32E-02					OK	
05	TH-230	TRG	CP4105S04-05	pCi/g	1.22E+00	3.12E-01	6.78E-02					OK	
06	TH-230	TRG	CP4105S06-07	pCi/g	1.38E+00	3.26E-01	5.96E-02					OK	
07	TH-230	TRG	CP4105S08-09	pCi/g	1.52E+00	3.63E-01	5.51E-02					OK	
08	TH-230	TRG	CP4105S10-11	pCi/g	1.20E+00	3.10E-01	4.55E-02					OK	
09	TH-230	TRG	CP4105S12-13	pCi/g	1.12E+00	2.60E-01	4.32E-02					OK	
10	TH-230	TRG	CP4105S14-15	pCi/g	1.30E+00	3.23E-01	5.01E-02					OK	
11	TH-230	TRG	CP4105S16-17	pCi/g	1.29E+00	2.97E-01	5.57E-02					OK	
12	TH-230	TRG	CP0404S03-04	pCi/g	1.33E+00	2.96E-01	5.95E-02					OK	
13	TH-230	TRG	CP0404S05-06	pCi/g	1.40E+00	3.22E-01	7.31E-02					OK	
14	TH-230	TRG	CP0404S07-08	pCi/g	1.29E+00	2.82E-01	4.74E-02					OK	
15	TH-230	TRG	CP0404S10-11	pCi/g	1.44E+00	3.17E-01	5.35E-02					OK	
16	TH-230	TRG	CP0404S12-13	pCi/g	1.15E+00	2.68E-01	6.57E-02					OK	
17	TH-230	TRG	CP0404S14-15	pCi/g	1.18E+00	2.52E-01	4.06E-02					OK	
18	TH-230	TRG	CP0404S17-18	pCi/g	1.38E+00	3.54E-01	6.06E-02					OK	

		Run	1
Eberline Services Work Order		Analysis Code	THISO
Client		Auxier & Associates, Inc.	
15-10086			

Lab Fraction	Nuclide	Sample Desc	Sample Date	Sample Aliquot	Radiometric % Rec	Grav % Rec	Mean % Rec	SAF	Sep 10 Date/Time	Sep 11 Date/Time
01	TH-230	LCS	10/14/15 00:00	1.00E+00	116.37	0.00	0.00			
02	TH-230	MBL	10/14/15 00:00	1.50E+00	112.22	0.00	0.00			
03	TH-230	DUP	10/06/15 16:30	1.52E+00	123.17	0.00	0.00			
04	TH-230	DO	10/06/15 16:30	1.55E+00	113.66	0.00	0.00			
05	TH-230	TRG	10/06/15 16:40	1.52E+00	104.02	0.00	0.00			
06	TH-230	TRG	10/06/15 16:50	1.56E+00	112.43	0.00	0.00			
07	TH-230	TRG	10/06/15 17:00	1.51E+00	105.89	0.00	0.00			
08	TH-230	TRG	10/06/15 17:10	1.54E+00	96.36	0.00	0.00			
09	TH-230	TRG	10/06/15 17:20	1.53E+00	122.43	0.00	0.00			
10	TH-230	TRG	10/06/15 17:30	1.55E+00	106.29	0.00	0.00			
11	TH-230	TRG	10/06/15 17:40	1.53E+00	112.55	0.00	0.00			
12	TH-230	TRG	10/08/15 08:00	1.51E+00	110.90	0.00	0.00			
13	TH-230	TRG	10/08/15 08:10	1.51E+00	99.91	0.00	0.00			
14	TH-230	TRG	10/08/15 08:20	1.51E+00	110.60	0.00	0.00			
15	TH-230	TRG	10/08/15 08:30	1.52E+00	106.35	0.00	0.00			
16	TH-230	TRG	10/08/15 08:40	1.53E+00	111.80	0.00	0.00			
17	TH-230	TRG	10/08/15 09:00	1.51E+00	103.88	0.00	0.00			
18	TH-230	TRG	10/08/15 09:10	1.51E+00	84.50	0.00	0.00			

ES100

Preliminary Data Report & Analytical Calculations
Work Order: 15-10086-THISO-1

	Run	1
Eberline Services Work Order	Analysis Code	THISO
Client	Auxier & Associates, Inc.	

Lab Fraction	Nuclide	Sample Desc	Counting Date/Time	Half-life (days)	Detect	Carrier	Count Time	Counts	Bkg CPM	Eff
01	TH-230	LCS	11/02/15 08:29		A_Spec	Alpha_051	170	4.18 E+02	9.00 E-03	15.2
02	TH-230	MBL	11/02/15 08:29		A_Spec	Alpha_052	170	8.32 E+00	4.00 E-03	16.1
03	TH-230	DUP	11/02/15 08:29		A_Spec	Alpha_053	170	1.57 E+02	4.00 E-03	14.6
04	TH-230	DO	11/02/15 08:29		A_Spec	Alpha_054	170	1.29 E+02	1.00 E-03	14.5
05	TH-230	TRG	11/02/15 08:29		A_Spec	Alpha_055	170	1.13 E+02	6.00 E-03	15.6
06	TH-230	TRG	11/02/15 08:29		A_Spec	Alpha_056	170	1.46 E+02	6.00 E-03	16
07	TH-230	TRG	11/02/15 08:29		A_Spec	Alpha_057	170	1.44 E+02	3.00 E-03	15.8
08	TH-230	TRG	11/02/15 08:29		A_Spec	Alpha_058	170	1.10 E+02	1.00 E-03	16.4
09	TH-230	TRG	11/02/15 08:30		A_Spec	Alpha_059	170	1.36 E+02	3.00 E-03	17.2
10	TH-230	TRG	11/02/15 08:30		A_Spec	Alpha_060	170	1.24 E+02	2.00 E-03	15.4
11	TH-230	TRG	11/02/15 08:30		A_Spec	Alpha_003	170	1.46 E+02	6.00 E-03	17.4
12	TH-230	TRG	11/02/15 08:30		A_Spec	Alpha_004	170	1.58 E+02	9.00 E-03	18.9
13	TH-230	TRG	11/02/15 08:30		A_Spec	Alpha_010	170	1.53 E+02	1.30 E-02	19.2
14	TH-230	TRG	11/02/15 08:30		A_Spec	Alpha_011	170	1.63 E+02	5.00 E-03	20
15	TH-230	TRG	11/02/15 08:30		A_Spec	Alpha_012	170	1.70 E+02	6.00 E-03	19.4
16	TH-230	TRG	11/02/15 08:30		A_Spec	Alpha_014	170	1.36 E+02	1.20 E-02	18.4
17	TH-230	TRG	11/02/15 08:30		A_Spec	Alpha_015	170	1.64 E+02	4.00 E-03	23.5
18	TH-230	TRG	11/02/15 11:24		A_Spec	Alpha_033	170	1.19 E+02	3.00 E-03	18

15100

		15-10086 Eberline Services Work Order	THISO Analysis Code	1 Run
Client Auxier & Associates, Inc.				

Lab Fraction	Nuclide	Sample Desc	Client Identification	Activity Units	Results	Error Estimate	MDA	LCS Known	LCS %R	LCS Flag	RPD Flag	MDA Flag	Blank Flag
01	TH-232	LCS	LCS	pCi/g	5.46E+00	8.97E-01	8.43E-02	4.71E+00	115.86	OK		OK	
02	TH-232	MBL	BLANK	pCi/g	-8.33E-03	2.06E-02	5.87E-02					OK	OK
03	TH-232	DUP	CP4105S01-02	pCi/g	1.35E+00	3.22E-01	5.48E-02				OK	OK	
04	TH-232	DO	CP4105S01-02	pCi/g	1.36E+00	3.34E-01	4.31E-02					OK	
05	TH-232	TRG	CP4105S04-05	pCi/g	1.33E+00	3.32E-01	5.63E-02					OK	
06	TH-232	TRG	CP4105S06-07	pCi/g	1.20E+00	2.94E-01	6.47E-02					OK	
07	TH-232	TRG	CP4105S08-09	pCi/g	1.38E+00	3.38E-01	5.01E-02					OK	
08	TH-232	TRG	CP4105S10-11	pCi/g	1.39E+00	3.48E-01	6.86E-02					OK	
09	TH-232	TRG	CP4105S12-13	pCi/g	1.16E+00	2.65E-01	3.43E-02					OK	
10	TH-232	TRG	CP4105S14-15	pCi/g	1.45E+00	3.53E-01	6.27E-02					OK	
11	TH-232	TRG	CP4105S16-17	pCi/g	1.29E+00	2.98E-01	3.68E-02					OK	
12	TH-232	TRG	CP0404S03-04	pCi/g	1.17E+00	2.69E-01	4.38E-02					OK	
13	TH-232	TRG	CP0404S05-06	pCi/g	1.29E+00	3.03E-01	6.01E-02					OK	
14	TH-232	TRG	CP0404S07-08	pCi/g	1.14E+00	2.57E-01	3.78E-02					OK	
15	TH-232	TRG	CP0404S10-11	pCi/g	1.18E+00	2.73E-01	4.05E-02					OK	
16	TH-232	TRG	CP0404S12-13	pCi/g	1.13E+00	2.64E-01	5.04E-02					OK	
17	TH-232	TRG	CP0404S14-15	pCi/g	1.35E+00	2.79E-01	4.31E-02					OK	
18	TH-232	TRG	CP0404S17-18	pCi/g	1.27E+00	3.32E-01	6.91E-02					OK	

10105

	Run	1
Analysis Code	THISO	
Eberline Services Work Order	15-10086	
Client	Auxier & Associates, Inc.	

Lab Fraction	Nuclide	Sample Desc	Sample Date	Sample Aliquot	Radiometric % Rec	Grav % Rec	Mean % Rec	SAF	Sep 10 Date/Time	Sep 11 Date/Time
01	TH-232	LCS	10/14/15 00:00	1.00E+00	116.37	0.00	0.00			
02	TH-232	IMBL	10/14/15 00:00	1.50E+00	112.22	0.00	0.00			
03	TH-232	DUP	10/06/15 16:30	1.52E+00	123.17	0.00	0.00			
04	TH-232	DO	10/06/15 16:30	1.55E+00	113.66	0.00	0.00			
05	TH-232	TRG	10/06/15 16:40	1.52E+00	104.02	0.00	0.00			
06	TH-232	TRG	10/06/15 16:50	1.56E+00	112.43	0.00	0.00			
07	TH-232	TRG	10/06/15 17:00	1.51E+00	105.89	0.00	0.00			
08	TH-232	TRG	10/06/15 17:10	1.54E+00	96.36	0.00	0.00			
09	TH-232	TRG	10/06/15 17:20	1.53E+00	122.43	0.00	0.00			
10	TH-232	TRG	10/06/15 17:30	1.55E+00	106.29	0.00	0.00			
11	TH-232	TRG	10/06/15 17:40	1.53E+00	112.55	0.00	0.00			
12	TH-232	TRG	10/08/15 08:00	1.51E+00	110.90	0.00	0.00			
13	TH-232	TRG	10/08/15 08:10	1.51E+00	99.91	0.00	0.00			
14	TH-232	TRG	10/08/15 08:20	1.51E+00	110.60	0.00	0.00			
15	TH-232	TRG	10/08/15 08:30	1.52E+00	106.35	0.00	0.00			
16	TH-232	TRG	10/08/15 08:40	1.53E+00	111.80	0.00	0.00			
17	TH-232	TRG	10/08/15 09:00	1.51E+00	103.88	0.00	0.00			
18	TH-232	TRG	10/08/15 09:10	1.51E+00	84.50	0.00	0.00			

Internal Fraction	Sample Desc	Client ID	Sample Date	Sample Aliquot	Tracer Aliquot (g)	Tracer ACT (dpm)	Radiometric Tracer (pCi)	Radiometric % Rec	SAF 1*	SAF 2*
01	LCS	LCS	10/14/15 00:00	1.0000	0.4467	10.0329		0.00		
02	MBL	BLANK	10/14/15 00:00	1.5000	0.2232	5.0131		0.00		
03	DUP	CP4105S01-02	10/06/15 16:30	1.5215	0.2238	5.0265		0.00		
04	DO	CP4105S01-02	10/06/15 16:30	1.5543	0.2235	5.0198		0.00		
05	TRG	CP4105S04-05	10/06/15 16:40	1.5172	0.2248	5.0490		0.00		
06	TRG	CP4105S06-07	10/06/15 16:50	1.5607	0.2236	5.0221		0.00		
07	TRG	CP4105S08-09	10/06/15 17:00	1.5134	0.2240	5.0310		0.00		
08	TRG	CP4105S10-11	10/06/15 17:10	1.5405	0.2251	5.0557		0.00		
09	TRG	CP4105S12-13	10/06/15 17:20	1.5335	0.2234	5.0176		0.00		
10	TRG	CP4105S14-15	10/06/15 17:30	1.5456	0.2241	5.0333		0.00		
11	TRG	CP4105S16-17	10/06/15 17:40	1.5328	0.2242	5.0355		0.00		
12	TRG	CP0404S03-04	10/08/15 08:00	1.5120	0.2236	5.0221		0.00		
13	TRG	CP0404S05-06	10/08/15 08:10	1.5137	0.2235	5.0198		0.00		
14	TRG	CP0404S07-08	10/08/15 08:20	1.5126	0.2249	5.0513		0.00		
15	TRG	CP0404S10-11	10/08/15 08:30	1.5179	0.2240	5.0310		0.00		
16	TRG	CP0404S12-13	10/08/15 08:40	1.5290	0.2248	5.0490		0.00		
17	TRG	CP0404S14-15	10/08/15 09:00	1.5125	0.2242	5.0355		0.00		
18	TRG	CP0404S17-18	10/08/15 09:10	1.5074	0.2238	5.0265		0.00		

5

10

16

0000

Internal Work Order		Run	Analysis Code	Date	Technician	Technician Initials	Witness Initials									
15-10086		1	ThISO	10/16/2015 14:35	JPACHELLA	<i>[Signature]</i>										
LCS & Matrix Spikes																
Isotope	Sol #	Activity dpm/g	Solution Date	Approx Addition	LCS Volume Used (g)	MS Volume Used (g)	LCSD Volume Used (g)	MSD Volume Used (g)	LCS Known pCi	LCS Error Estimate	MS Added pCi	MS Error Estimate	LCSD Known pCi	LCSD Error Estimate	MSD Added pCi	MSD Error Estimate
Th-228	Th-8b	103.560	10/16/2015	0.100	0.1010				4.71	0.170	0.00	0.000	0.00	0.000	0.00	0.000
Th-230	Th-1b	23.520	10/16/2015	0.500	0.5073				5.37	0.145	0.00	0.000	0.00	0.000	0.00	0.000
Th-232	Th-8b	103.560	10/16/2015	0.100	0.1010				4.71	0.170	0.00	0.000	0.00	0.000	0.00	0.000
TC-99 MS		IC-2a	22043.636	7/5/2014	0.1											
Tracers																
fraction	isotope	Sol #	Activity dpm/g	Solution Date	Volume Used (g)	Approx Addition	Tracer									
01	Th-229	Th-18a	22.460	10/16/2015	0.4467	0.2200	LCS									
02	Th-229	Th-18a	22.460	10/16/2015	0.2232	0.2200	LCS									
03	Th-229	Th-18a	22.460	10/16/2015	0.2238	0.2200	LCS									
04	Th-229	Th-18a	22.460	10/16/2015	0.2235	0.2200	LCS									
05	Th-229	Th-18a	22.460	10/16/2015	0.2248	0.2200	LCS									
06	Th-229	Th-18a	22.460	10/16/2015	0.2236	0.2200	LCS									
07	Th-229	Th-18a	22.460	10/16/2015	0.2240	0.2200	LCS									
08	Th-229	Th-18a	22.460	10/16/2015	0.2251	0.2200	LCS									
09	Th-229	Th-18a	22.460	10/16/2015	0.2234	0.2200	LCS									
10	Th-229	Th-18a	22.460	10/16/2015	0.2241	0.2200	LCS									
11	Th-229	Th-18a	22.460	10/16/2015	0.2242	0.2200	LCS									
12	Th-229	Th-18a	22.460	10/16/2015	0.2236	0.2200	LCS									
13	Th-229	Th-18a	22.460	10/16/2015	0.2235	0.2200	LCS									
14	Th-229	Th-18a	22.460	10/16/2015	0.2249	0.2200	LCS									
15	Th-229	Th-18a	22.460	10/16/2015	0.2240	0.2200	LCS									
16	Th-229	Th-18a	22.460	10/16/2015	0.2248	0.2200	LCS									
17	Th-229	Th-18a	22.460	10/16/2015	0.2242	0.2200	LCS									
18	Th-229	Th-18a	22.460	10/16/2015	0.2238	0.2200	LCS									
								Matrix Spike								

Aliquot Worksheet

Work Order		Run	Analysis Code	Rpt Units	Lab Deadline	Technician	
15-10086		1	THISO	grams	11/6/2015	JPACHELLA	

Lab Fraction	Auxter & Associates, Inc.		Sample Type	Muffle Data		Dilution Data			Aliquot Data		MS Aliquot Data		H-3 Solids Only	
	Client ID			Ratio Post/Pre	No of Dils	Dil Factor	Ratio	Aliquot	Net Equiv	Aliquot	Net Equiv	Water Added (ml)	H3 Dist Aliq	
01	LCS		LCS					1.0000E+00	1.0000E+00					
02	BLANK		MBL					1.5000E+00	1.5000E+00					
03	CP4105S01-02		DUP					1.5215E+00	1.5215E+00					
04	CP4105S01-02		DO					1.5543E+00	1.5543E+00					
05	CP4105S04-05		TRG					1.5172E+00	1.5172E+00					
06	CP4105S06-07		TRG					1.5607E+00	1.5607E+00					
07	CP4105S08-09		TRG					1.5134E+00	1.5134E+00					
08	CP4105S10-11		TRG					1.5405E+00	1.5405E+00					
09	CP4105S12-13		TRG					1.5335E+00	1.5335E+00					
10	CP4105S14-15		TRG					1.5456E+00	1.5456E+00					
11	CP4105S16-17		TRG					1.5328E+00	1.5328E+00					
12	CP0404S03-04		TRG					1.5120E+00	1.5120E+00					
13	CP0404S05-06		TRG					1.5137E+00	1.5137E+00					
14	CP0404S07-08		TRG					1.5120E+00	1.5120E+00					
15	CP0404S10-11		TRG					1.5179E+00	1.5179E+00					
16	CP0404S12-13		TRG					1.5290E+00	1.5290E+00					
17	CP0404S14-15		TRG					1.5125E+00	1.5125E+00					
18	CP0404S17-18		TRG					1.5074E+00	1.5074E+00					

Comments

Technician JPachella Date: 10/16/15

**Rough Sample Preparation
 Log Book**

Work Order	Lab Deadline	Date Received in Prep	Date Sealed	Date Returned	Technician
15-10086	11/6/2015	10/15/2015	10/16/2015	10/17/2015	KSALLINGS

Eberline Fraction	Auxier & Associates, Inc. Client ID	Tare (g)		Gross (g)		Net (g)		Percent		Gamma		Special Info
		Pan Wt.	Wet Wt.	Dry Wt.	Wet Wt.	Dry Wt.	Liquid	Solid	Dry Wt.	LEPS Wt.		
04	CP4105S01-02	14.1600	857.2000	707.7300	843.0400	693.5700	17.73%	82.27%	0.0000	0.0000		
05	CP4105S04-05	28.4600	1236.3000	1015.1650	1207.8400	986.7050	18.31%	81.69%	0.0000	0.0000		
06	CP4105S06-07	14.1800	805.4400	654.6500	791.2600	640.4700	19.06%	80.94%	0.0000	0.0000		
07	CP4105S08-09	14.2300	822.4000	654.6800	808.1700	640.4500	20.75%	79.25%	0.0000	0.0000		
08	CP4105S10-11	14.1900	870.7000	684.8000	856.5100	670.6100	21.70%	78.30%	0.0000	0.0000		
09	CP4105S12-13	14.2100	834.0600	655.3900	819.3500	641.1800	21.79%	78.21%	0.0000	0.0000		
10	CP4105S14-15	14.3200	997.5000	771.6000	983.1800	757.2800	22.98%	77.02%	0.0000	0.0000		
11	CP4105S16-17	14.3100	771.5600	599.9500	757.2500	585.6400	22.66%	77.34%	0.0000	0.0000		
12	CP0404S03-04	28.6000	1368.4400	1108.5200	1339.8400	1079.9200	19.40%	80.60%	0.0000	0.0000		
13	CP0404S05-06	14.1800	756.5800	617.6500	742.4000	603.4700	18.71%	81.29%	0.0000	0.0000		
14	CP0404S07-08	14.3300	718.7200	567.2000	704.3900	552.8700	21.51%	78.49%	0.0000	0.0000		
15	CP0404S10-11	14.3000	887.2200	699.1000	872.9200	684.8000	21.55%	78.45%	0.0000	0.0000		
16	CP0404S12-13	14.3300	964.4400	749.2500	950.1100	734.9200	22.65%	77.35%	0.0000	0.0000		
17	CP0404S14-15	14.3800	772.7200	591.4300	758.3400	577.0500	23.91%	76.09%	0.0000	0.0000		
18	CP0404S17-18	14.3900	961.7000	734.7400	947.3100	720.3500	23.96%	76.04%	0.0000	0.0000		

Comments
Special Codes
H: Hot, O: Organic Hazard, P: PCB Hazard, R: Rush, T: Other (see comments)

Technician: *Kenny Seis*

Apex-Alpha™

KB
11/2/15

Sample Description: SPIKE
 Spectrum File: \\OR-ALPHA1\Canberra\ApexAlpha\Root\Data\00001328
 Batch Identification: 1510086A-TH
 Sample Identification: 01
 Sample Geometry: Shelf 2
 Procedure Description: Th iso

Detector Name: Alpha_051
 Chamber Serial Number: 10006123A
 Detector Serial Number: 51
 Env. Background: System Bkgd 133281
 Reagent Blank: <not performed>

Sample Size: 1.000E+000 +/- 0.000E+000 gram
 Sample Date/Time: 11/2/2015 5:58:14 AM
 Acquisition Date/Time: 11/2/2015 8:29:48 AM
 Acquisition Live Time: 170.0 minutes
 Acquisition Real Time: 170.0 minutes

Tracer Certificate: Th229_S_TH-18A
 Tracer Quantity: 0.447 mL
 Effective Efficiency: 0.1773 +/- 0.0116
 Counting Efficiency: 0.1524 +/- 0.0027 on 12/13/2014 2:42:37 PM
 Chem. Recovery Factor: 1.1637 +/- 0.0790

Control Certificate Name: NatTh_Th-8
 Chem. Recov. of Control: TH-232 1.158557 +/- 0.103170
 Peak Match Tolerance: 0.175 MeV

 PEAK AREA REPORT

Nuclide	Energy (MeV)	Net Pk Area	Pk Area Error %	Ambient Backgnd	Reagent Backgnd	FWHM (keV)
TH-227	5.748	44.77	30.50	3.23	0.00E+000	3.0
TH-228	5.380	362.69	10.41	7.31	0.00E+000	7.1
TH-229 T	4.879	302.47	11.30	1.53	0.00E+000	5.0
TH-230	4.640	418.47	9.60	1.53	0.00E+000	47.1
TH-232	3.976	365.32	10.27	0.68	0.00E+000	32.3

T = Tracer Peak used for Effective Efficiency

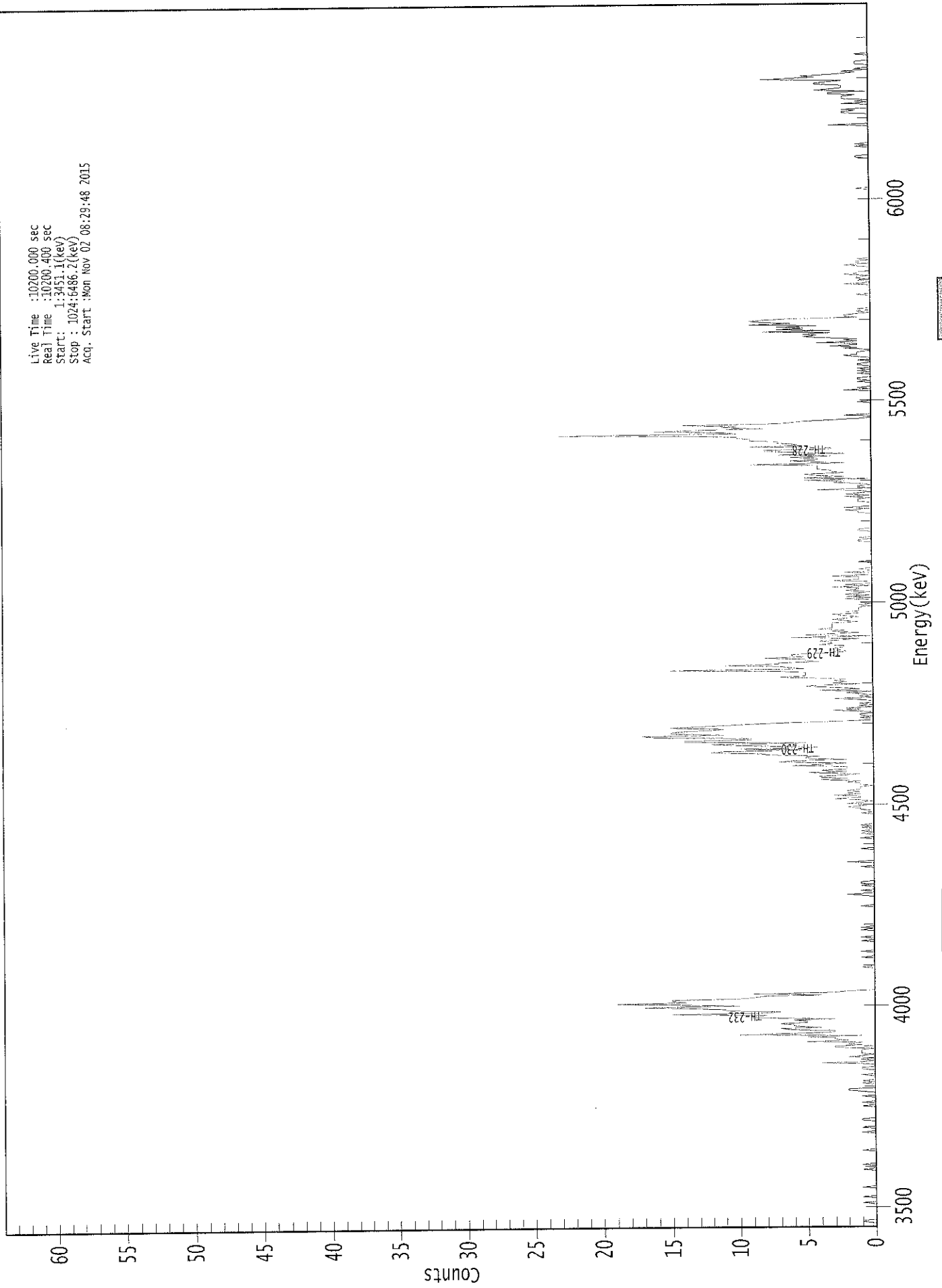
 NUCLIDE ANALYSIS RESULTS

Nuclide	Id Conf.	Energy (keV)	Activity (pCi/gram)	MDA (pCi/gram)
TH-227	0.947	5850.00*	6.86E-001 +/- 2.27E-001	1.39E-001 +/- 1.79E-002
TH-228	0.998	5400.00*	5.42E+000 +/- 8.96E-001	1.84E-001 +/- 2.37E-002
TH-229	1.000	4872.00*	4.54E+000 +/- 5.83E-001	1.07E-001 +/- 1.37E-002
TH-230	0.995	4672.00*	6.26E+000 +/- 1.00E+000	1.06E-001 +/- 1.37E-002
TH-232	0.998	3997.00*	5.46E+000 +/- 8.97E-001	8.43E-002 +/- 1.08E-002

AG
11/2/15

0000132874.CNF

Live Time : 10200.000 sec
Real Time : 10200.400 sec
Start : 1:3451.1(keV)
Stop : 1024:6486.2(keV)
Acq. Start : Mon Nov 02 08:29:48 2015



ROI Type: 3

ROI Type: 1

 ***** S P E C T R A L D A T A R E P O R T *****

Sample Title: 01

Elapsed Live time: 10200
Elapsed Real Time: 10200

Channel	1	2	3	4	5	6	7	8	9
1:	0	0	0	0	1	1	0	0	
9:	0	0	0	0	0	0	0	0	0
17:	0	0	0	0	1	0	0	0	0
25:	0	1	0	0	0	0	0	0	0
33:	0	1	0	0	0	0	0	0	0
41:	0	0	0	0	0	0	0	0	0
49:	1	0	0	0	1	0	0	0	0
57:	0	0	0	0	0	0	0	0	0
65:	1	0	0	0	0	0	0	0	0
73:	0	0	0	0	0	0	0	0	1
81:	0	0	0	1	0	0	0	0	0
89:	0	1	1	0	0	0	0	0	0
97:	0	0	0	0	0	1	0	0	0
105:	1	0	0	0	0	1	0	0	0
113:	0	1	2	2	0	0	0	0	0
121:	1	0	1	0	0	0	0	0	1
129:	0	0	0	0	1	1	0	0	0
137:	0	4	1	0	1	0	2	1	
145:	0	1	1	1	1	0	3	3	
153:	1	2	1	5	2	3	3	5	
161:	1	10	6	3	3	6	7	4	
169:	6	6	7	5	5	6	3	9	
177:	9	8	15	8	7	11	11	14	
185:	17	10	14	19	14	15	15	10	
193:	9	8	4	9	3	2	0	0	
201:	0	0	0	0	0	0	0	0	
209:	0	0	0	0	0	0	0	0	
217:	0	1	0	0	0	0	0	0	
225:	0	1	0	0	0	0	1	0	
233:	0	0	0	0	0	0	0	1	
241:	0	0	1	0	0	0	0	0	
249:	1	0	1	0	0	0	0	0	
257:	0	0	0	0	0	0	0	0	
265:	0	0	0	0	1	0	0	0	
273:	0	0	0	0	0	1	2	0	
281:	0	1	0	0	0	1	0	1	
289:	1	0	0	0	0	0	0	0	
297:	0	0	0	0	0	1	0	0	
305:	0	2	0	0	0	0	0	0	
313:	0	0	0	0	1	0	0	0	
321:	0	0	0	0	0	1	0	0	
329:	0	1	0	1	0	0	1	0	
337:	1	0	0	0	0	0	0	0	
345:	0	0	1	0	0	1	1	2	
353:	1	0	2	1	0	1	3	1	
361:	1	3	1	2	1	2	1	1	

369: 1 0 1 1 2 1 4 2

Sample Title: 01

Channel	1	2	3	4	5	6	7	8
377:	4	4	2	1	5	2	4	2
385:	2	2	6	4	2	7	6	2
393:	5	5	4	8	8	12	11	5
401:	10	4	6	10	12	5	14	14
409:	9	9	16	17	11	15	15	14
417:	12	11	15	13	11	9	7	3
425:	0	0	1	0	1	1	0	0
433:	3	1	2	0	1	0	1	0
441:	0	1	3	0	1	0	1	2
449:	0	4	1	2	4	5	1	3
457:	2	3	2	4	7	5	5	5
465:	5	7	15	5	6	7	11	7
473:	7	4	5	5	8	5	6	6
481:	4	2	2	3	3	2	2	4
489:	3	3	4	2	1	6	0	5
497:	3	1	3	2	4	3	3	3
505:	3	3	1	2	3	2	1	2
513:	3	1	2	1	1	1	1	0
521:	1	0	1	0	0	2	0	2
529:	0	2	1	0	2	1	1	3
537:	0	2	0	0	3	1	1	1
545:	3	0	0	2	0	0	1	0
553:	0	0	0	0	1	0	0	0
561:	0	0	0	0	0	0	0	0
569:	0	0	0	0	0	1	1	0
577:	1	0	0	0	0	0	1	1
585:	0	0	0	0	0	0	0	0
593:	0	0	0	0	0	1	1	2
601:	0	2	0	0	0	0	1	1
609:	1	0	2	0	2	1	0	1
617:	4	0	1	1	0	1	3	2
625:	5	0	5	2	4	5	2	3
633:	3	4	4	4	4	9	2	4
641:	6	4	4	6	3	7	2	5
649:	8	8	3	3	9	5	6	7
657:	7	9	9	10	10	13	23	10
665:	11	16	13	8	11	10	14	7
673:	6	5	3	1	0	0	2	0
681:	0	0	0	0	0	0	0	0
689:	0	1	0	0	0	0	0	0
697:	0	0	0	2	0	1	0	0
705:	0	0	1	0	1	1	0	0
713:	0	1	0	1	0	1	0	0
721:	1	1	0	0	1	0	0	1
729:	2	1	1	1	0	0	2	1
737:	3	1	1	4	1	2	1	4
745:	5	4	5	3	8	3	7	5
753:	7	4	9	6	8	9	8	6
761:	1	2	2	1	0	1	0	1
769:	0	0	0	0	0	0	0	0
777:	0	0	0	1	0	0	0	0
785:	0	0	0	0	2	0	0	1
793:	0	1	1	0	2	1	1	0

801: 0 0 0 1 2 0 1 1

Sample Title: 01

Channel	1	2	3	4	5	6	7	8
809:	0	1	0	0	0	0	0	0
817:	0	0	0	0	0	0	0	0
825:	0	0	0	0	0	0	0	0
833:	0	0	0	0	0	0	0	0
841:	0	0	0	0	0	0	0	0
849:	0	0	0	0	0	0	0	0
857:	0	0	0	0	0	0	0	0
865:	0	0	0	0	1	0	0	0
873:	0	0	0	0	0	0	0	0
881:	0	0	0	0	0	0	0	0
889:	0	0	0	0	0	0	1	1
897:	0	0	0	0	0	0	0	1
905:	0	1	0	0	0	0	0	0
913:	0	0	0	0	0	0	0	0
921:	0	3	0	0	0	0	0	0
929:	0	0	0	2	2	1	2	0
937:	0	0	0	2	0	1	0	2
945:	2	2	1	3	3	0	4	3
953:	2	2	2	4	4	3	2	8
961:	6	4	5	3	2	1	2	0
969:	1	0	0	0	1	1	1	0
977:	0	0	0	0	1	0	0	0
985:	0	0	0	0	0	0	0	0
993:	0	0	0	0	0	0	0	0
1001:	0	0	0	0	0	0	0	0
1009:	0	0	0	0	0	0	0	0
1017:	0	0	0	0	0	0	0	0



KB
11/2/15

Sample Description: BLANK
 Spectrum File: \\OR-ALPHA1\Canberra\ApexAlpha\Root\Data\00001328
 Batch Identification: 1510086A-TH
 Sample Identification: 02
 Sample Geometry: Shelf 2
 Procedure Description: Th iso

Detector Name: Alpha_052
 Chamber Serial Number: 10006123B
 Detector Serial Number: 52
 Env. Background: System Bkgd 133282
 Reagent Blank: <not performed>

Sample Size: 1.500E+000 +/- 0.000E+000 gram
 Sample Date/Time: 11/2/2015 5:58:14 AM
 Acquisition Date/Time: 11/2/2015 8:29:51 AM
 Acquisition Live Time: 170.0 minutes
 Acquisition Real Time: 170.0 minutes

Tracer Certificate: Th229_S_TH-18A
 Tracer Quantity: 0.223 mL
 Effective Efficiency: 0.1803 +/- 0.0156
 Counting Efficiency: 0.1607 +/- 0.0029 on 12/13/2014 2:40:57 PM
 Chem. Recovery Factor: 1.1222 +/- 0.0991

Peak Match Tolerance: 0.175 MeV

 PEAK AREA REPORT

Nuclide	Energy (MeV)	Net Pk Area	Pk Area Error %	Ambient Backgnd	Reagent Backgnd	FWHM (keV)
TH-227	5.775	4.32	102.62	0.68	0.00E+000	2.9
TH-228	5.411	3.15	126.67	0.85	0.00E+000	2.9
TH-229 T	4.879	153.66	15.83	0.34	0.00E+000	13.6
TH-230	4.635	8.32	71.13	0.68	0.00E+000	2.9
TH-232	3.948	-0.85	246.69	0.85	0.00E+000	0.0

T = Tracer Peak used for Effective Efficiency

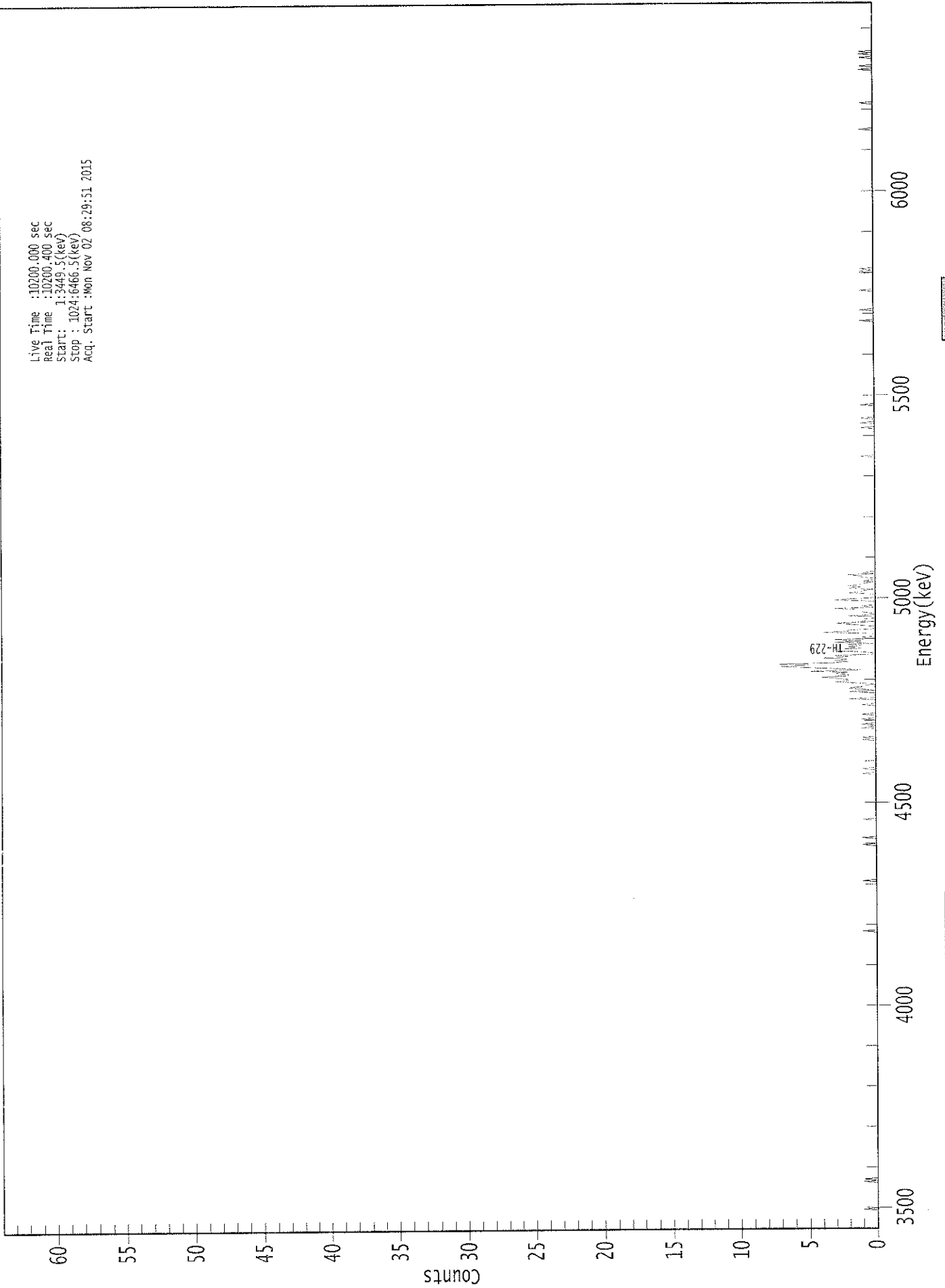
 NUCLIDE ANALYSIS RESULTS

Nuclide	Id Conf.	Energy (keV)	Activity (pCi/gram)	MDA (pCi/gram)
TH-227	0.971	5850.00*	4.34E-002 +/- 4.52E-002	5.67E-002 +/- 9.61E-003
TH-228	0.999	5400.00*	3.09E-002 +/- 3.95E-002	5.87E-002 +/- 9.95E-003
TH-229	1.000	4872.00*	1.51E+000 +/- 2.57E-001	4.71E-002 +/- 7.98E-003
TH-230	0.993	4672.00*	8.17E-002 +/- 5.97E-002	5.54E-002 +/- 9.39E-003
TH-232	0.987	3997.00*	-8.33E-003 +/- 2.06E-002	5.87E-002 +/- 9.95E-003

AG
11/2/15

0000132875.CNF

Live Time :10200.000 sec
Real Time :10200.400 sec
Start : 1:3449.5(keV)
Stop : 1024:6466.5(keV)
Acq. Start :Mon Nov 02 08:29:51 2015



ROI Type: 1

ROI Type: 3

 ***** S P E C T R A L D A T A R E P O R T *****

Sample Title: 02

Elapsed Live time: 10200
 Elapsed Real Time: 10200

Channel	-----	-----	-----	-----	-----	-----	-----	-----
1:	0	0	0	0	0	0	0	0
9:	0	0	0	0	0	0	0	0
17:	1	0	0	0	0	0	0	0
25:	0	0	0	0	0	0	0	0
33:	0	0	0	0	0	0	0	1
41:	0	1	0	0	0	0	0	0
49:	0	0	0	0	0	0	0	0
57:	0	0	0	0	0	0	0	0
65:	0	0	0	0	0	0	0	0
73:	0	0	0	0	0	0	0	0
81:	0	0	0	0	0	0	0	0
89:	0	0	0	0	0	0	0	0
97:	0	0	0	0	0	0	0	0
105:	0	0	0	0	0	0	0	0
113:	0	0	0	0	0	0	0	0
121:	0	0	0	0	0	0	0	0
129:	0	0	0	0	0	0	0	0
137:	0	0	0	0	0	0	0	0
145:	0	0	0	0	0	0	0	0
153:	0	0	0	0	0	0	0	0
161:	0	0	0	0	0	0	0	0
169:	0	0	0	0	0	0	0	0
177:	0	0	0	0	0	0	0	0
185:	0	0	0	0	0	0	0	0
193:	0	0	0	0	0	0	0	0
201:	0	0	0	0	0	0	0	0
209:	0	0	0	0	0	0	0	0
217:	0	0	0	0	0	0	0	0
225:	0	0	0	0	0	0	0	0
233:	0	0	0	0	0	0	0	0
241:	0	0	0	0	0	0	0	0
249:	0	1	0	0	0	0	0	0
257:	0	0	0	0	0	0	0	0
265:	0	0	0	0	0	0	0	0
273:	0	0	0	0	0	0	0	0
281:	0	0	0	0	0	0	0	0
289:	0	0	0	1	0	0	0	0
297:	0	0	0	0	0	0	0	0
305:	0	0	0	0	0	0	0	0
313:	0	0	0	0	0	0	0	0
321:	0	1	0	0	0	0	0	1
329:	0	0	0	0	0	0	0	0
337:	0	0	0	0	0	0	1	0
345:	0	0	0	0	0	0	0	0
353:	0	0	0	0	0	0	0	0
361:	0	0	0	0	0	0	0	0

369: 0 0 0 0 0 0 0 0 0

Sample Title: 02

Channel								
377:	0	0	0	0	1	0	0	0
385:	1	0	0	0	0	0	0	0
393:	0	0	0	0	0	0	0	0
401:	0	0	0	0	0	0	0	0
409:	1	0	1	0	0	0	0	0
417:	0	0	1	0	0	1	0	0
425:	0	1	0	0	0	1	0	0
433:	0	0	0	0	0	1	0	0
441:	0	0	2	0	0	0	0	0
449:	2	0	1	2	1	1	0	1
457:	3	2	2	3	4	2	2	3
465:	2	5	1	3	5	7	5	7
473:	3	2	3	2	4	2	3	0
481:	0	1	3	3	1	2	1	2
489:	0	3	1	3	0	1	0	0
497:	0	4	2	2	0	0	0	1
505:	2	3	0	1	1	0	0	2
513:	0	0	1	1	1	3	0	1
521:	0	0	0	0	3	2	0	0
529:	0	0	2	1	1	0	2	1
537:	2	1	1	0	1	0	0	1
545:	1	2	0	1	0	0	0	0
553:	0	0	0	0	0	0	0	0
561:	0	0	0	0	0	0	0	0
569:	0	0	0	0	0	0	0	0
577:	0	0	0	0	0	0	0	0
585:	0	0	0	0	0	0	0	0
593:	0	0	0	0	0	0	0	0
601:	0	0	0	0	0	0	0	0
609:	0	0	0	0	0	0	0	0
617:	0	0	0	0	0	0	0	0
625:	0	0	0	0	0	0	0	0
633:	0	0	0	0	0	0	0	0
641:	0	0	0	0	1	0	0	0
649:	0	0	0	0	0	0	0	0
657:	0	0	0	0	0	0	0	0
665:	0	0	0	0	1	0	0	0
673:	1	0	0	0	1	0	0	0
681:	0	0	0	0	0	0	0	1
689:	0	0	0	0	0	0	0	0
697:	0	0	0	0	0	0	0	0
705:	0	0	0	0	0	0	0	0
713:	0	0	0	0	0	0	0	0
721:	0	0	0	0	0	0	0	0
729:	0	0	0	0	0	0	0	0
737:	0	0	0	0	0	0	0	0
745:	0	0	0	0	0	0	0	0
753:	0	0	0	0	0	1	0	0
761:	0	0	0	0	0	0	1	0
769:	0	0	0	0	0	0	0	0
777:	0	0	0	0	0	0	1	0
785:	0	0	0	0	0	0	0	0
793:	0	0	0	0	0	1	1	0

801: 1 0 0 0 0 0 0 0 0

Sample Title: 02

Channel	-----	-----	-----	-----	-----	-----	-----	-----
809:	0	0	0	0	0	0	0	0
817:	0	0	0	0	0	0	0	0
825:	0	0	0	0	0	0	0	0
833:	0	0	0	0	0	0	0	0
841:	0	0	0	0	0	0	0	0
849:	0	0	0	0	0	0	0	0
857:	0	0	0	0	0	0	0	0
865:	0	0	0	0	0	0	0	0
873:	0	0	0	0	0	0	0	0
881:	0	0	0	0	0	0	0	0
889:	0	0	0	0	0	0	0	0
897:	0	0	0	0	0	0	0	0
905:	0	0	0	0	0	0	0	0
913:	0	0	0	0	1	0	0	0
921:	0	0	0	0	0	0	0	0
929:	0	0	0	0	0	0	0	0
937:	0	0	1	0	0	0	0	0
945:	0	0	0	0	0	0	0	0
953:	0	0	0	0	0	0	0	0
961:	0	0	0	0	0	0	1	0
969:	0	1	0	0	0	0	0	0
977:	1	0	0	1	0	1	0	0
985:	0	0	0	0	0	0	0	0
993:	0	0	0	0	0	0	0	0
1001:	0	0	0	0	0	0	0	0
1009:	0	0	0	0	0	0	0	0
1017:	0	0	0	0	0	0	0	0

Apex-Alpha™

KS
11/2/15

Sample Description: CP4105S01-02-DUP
 Spectrum File: \\OR-ALPHA1\Canberra\ApexAlpha\Root\Data\00001328
 Batch Identification: 1510086A-TH
 Sample Identification: 03
 Sample Geometry: Shelf 2
 Procedure Description: Th iso

Detector Name: Alpha_053
 Chamber Serial Number: 10006122A
 Detector Serial Number: 53
 Env. Background: System Bkgd 133283
 Reagent Blank: <not performed>

Sample Size: 1.521E+000 +/- 0.000E+000 gram
 Sample Date/Time: 10/6/2015 5:58:14 AM
 Acquisition Date/Time: 11/2/2015 8:29:54 AM
 Acquisition Live Time: 170.0 minutes
 Acquisition Real Time: 170.0 minutes

Tracer Certificate: Th229_S_TH-18A
 Tracer Quantity: 0.224 mL
 Effective Efficiency: 0.1792 +/- 0.0156
 Counting Efficiency: 0.1455 +/- 0.0026 on 12/13/2014 2:39:33 PM
 Chem. Recovery Factor: 1.2317 +/- 0.1092

Peak Match Tolerance: 0.175 MeV

 PEAK AREA REPORT

Nuclide	Energy (MeV)	Net Pk Area	Pk Area Error %	Ambient Backgnd	Reagent Backgnd	FWHM (keV)
TH-227	5.800	24.81	40.44	1.19	0.00E+000	5.9
TH-228	5.384	123.81	17.71	1.19	0.00E+000	12.9
TH-229 T	4.894	153.15	15.89	0.85	0.00E+000	4.8
TH-230	4.644	157.32	15.67	0.68	0.00E+000	9.3
TH-232	3.969	139.32	16.65	0.68	0.00E+000	5.9

T = Tracer Peak used for Effective Efficiency

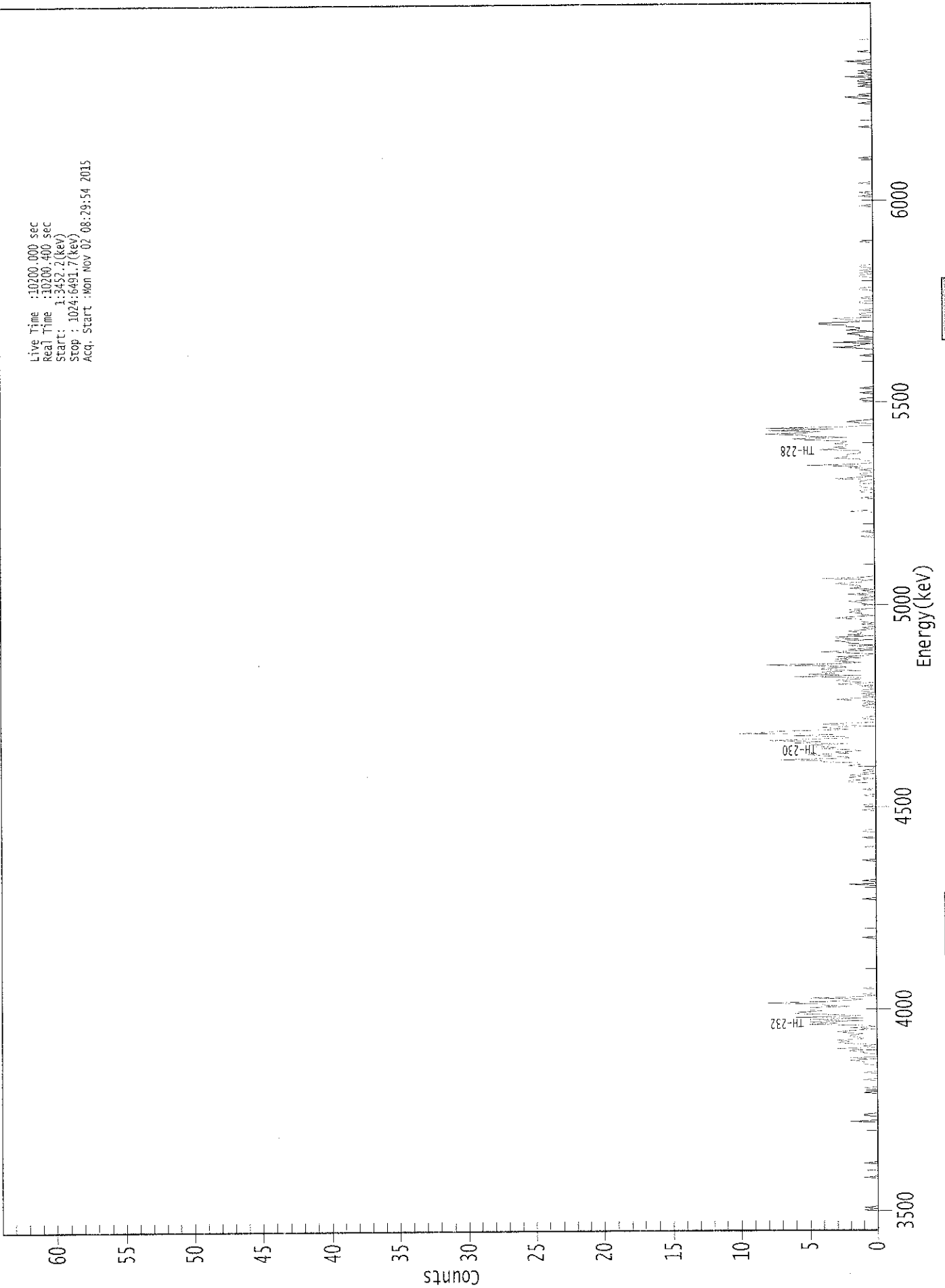
 NUCLIDE ANALYSIS RESULTS

Nuclide	Id Conf.	Energy (keV)	Activity (pCi/gram)	MDA (pCi/gram)
TH-227	0.987	5850.00*	2.48E-001 +/- 1.09E-001	6.58E-002 +/- 1.12E-002
TH-228	0.999	5400.00*	1.24E+000 +/- 3.04E-001	6.58E-002 +/- 1.12E-002
TH-229	0.998	4872.00*	1.50E+000 +/- 2.54E-001	5.85E-002 +/- 9.94E-003
TH-230	0.996	4672.00*	1.53E+000 +/- 3.54E-001	5.49E-002 +/- 9.34E-003
TH-232	0.996	3997.00*	1.35E+000 +/- 3.22E-001	5.48E-002 +/- 9.32E-003

AG
11/2/15

0000132876.CNF

Live Time :10200.000 sec
Real Time :10200.400 sec
Start : 1:34:52.2(keV)
Stop : 1024:6491.7(keV)
Acq. START :Mon Nov 02 08:29:54 2015



ROI Type: 1

ROI Type: 3

 ***** S P E C T R A L D A T A R E P O R T *****

Sample Title: 03

Elapsed Live time: 10200
 Elapsed Real Time: 10200

Channel	1	0	0	0	0	0	0	0	0
1:	1	0	0	0	0	0	0	0	0
9:	0	0	0	0	0	0	0	0	0
17:	0	1	0	1	0	0	0	0	0
25:	0	0	0	0	0	0	0	0	0
33:	0	0	0	0	0	0	0	0	0
41:	0	0	0	0	1	0	0	0	0
49:	0	0	0	0	0	0	0	0	0
57:	1	0	0	0	0	0	0	0	0
65:	0	0	0	0	0	0	0	0	0
73:	0	0	0	0	0	0	0	0	0
81:	0	0	0	0	0	0	0	0	0
89:	0	0	0	2	0	0	0	0	0
97:	1	1	0	0	0	0	0	0	0
105:	0	0	0	0	0	0	0	0	0
113:	0	0	0	1	0	0	0	0	1
121:	0	0	0	0	0	0	1	0	0
129:	0	0	0	0	1	0	0	0	0
137:	0	0	0	1	1	1	2	0	0
145:	2	0	0	0	1	1	2	1	1
153:	3	0	1	0	2	3	2	3	3
161:	1	1	2	2	1	2	3	2	2
169:	0	2	0	1	5	3	5	1	1
177:	5	1	6	1	3	6	6	4	4
185:	5	5	5	2	4	4	8	4	4
193:	2	1	5	1	0	1	0	0	0
201:	0	0	1	0	0	0	0	0	0
209:	0	0	0	0	0	0	0	0	0
217:	0	0	0	0	0	0	0	0	0
225:	0	0	0	0	0	0	0	0	0
233:	0	0	0	0	0	0	0	0	0
241:	0	0	0	0	1	0	0	0	0
249:	0	0	0	0	0	0	0	0	0
257:	0	0	0	0	0	0	0	0	0
265:	0	0	0	0	0	0	0	0	0
273:	0	0	0	0	1	0	0	0	0
281:	0	0	0	0	0	0	0	0	0
289:	2	0	0	1	0	0	0	0	0
297:	0	0	0	0	0	0	0	0	0
305:	0	0	0	0	1	0	0	0	0
313:	0	0	0	0	0	0	0	0	0
321:	0	0	0	0	0	0	0	0	1
329:	0	0	0	0	1	1	0	0	0
337:	0	0	0	0	0	0	0	0	0
345:	0	0	0	0	0	0	1	0	0
353:	0	0	1	0	0	0	0	0	0
361:	0	0	1	0	0	0	0	0	1

369: 0 0 0 0 0 2 2 1

Sample Title: 03

Channel	-----	-----	-----	-----	-----	-----	-----	-----
377:	0	2	1	2	0	1	0	1
385:	0	0	1	2	1	1	4	4
393:	7	2	2	4	5	2	3	1
401:	2	4	3	5	5	2	6	4
409:	8	5	2	2	6	3	10	8
417:	7	2	3	4	0	3	4	0
425:	0	0	1	1	0	0	0	0
433:	0	0	0	0	1	1	0	1
441:	0	1	3	2	0	1	0	1
449:	0	1	1	0	0	1	1	3
457:	0	2	3	1	1	6	1	5
465:	3	4	1	4	4	2	3	8
473:	3	1	3	2	3	1	3	0
481:	0	2	4	0	2	0	0	2
489:	0	2	2	3	0	3	3	0
497:	2	1	1	2	1	0	1	0
505:	0	1	0	1	1	1	3	2
513:	0	1	1	2	1	2	0	0
521:	0	0	1	1	2	0	1	1
529:	0	0	2	0	0	1	0	2
537:	1	1	2	3	1	1	0	4
545:	1	0	0	0	0	0	0	0
553:	0	0	0	0	0	0	0	0
561:	0	0	0	0	0	0	0	0
569:	0	0	0	0	0	0	0	0
577:	0	0	1	0	0	0	1	0
585:	0	0	0	0	0	0	0	0
593:	0	0	0	0	0	0	0	2
601:	0	0	0	0	0	0	0	0
609:	0	0	1	0	0	0	0	1
617:	1	0	0	1	1	1	1	1
625:	1	0	3	1	0	1	1	0
633:	0	1	0	2	1	5	1	0
641:	0	1	1	3	2	2	2	1
649:	1	1	4	2	3	2	2	3
657:	2	2	5	6	2	5	5	8
665:	5	4	8	3	8	2	0	0
673:	1	2	1	0	0	0	0	0
681:	0	0	0	0	0	0	0	0
689:	0	0	0	1	1	0	0	0
697:	0	1	0	0	0	1	0	0
705:	0	0	0	0	0	0	0	0
713:	0	0	0	0	0	0	0	0
721:	0	0	0	0	0	0	0	0
729:	1	0	0	0	0	0	1	3
737:	1	1	0	3	0	0	1	0
745:	1	1	2	1	0	2	1	1
753:	2	2	4	4	1	1	2	3
761:	0	0	1	1	0	0	1	0
769:	0	0	0	0	1	1	0	0
777:	1	0	0	0	0	0	0	1
785:	1	0	0	0	0	0	0	0
793:	0	0	1	1	0	1	0	1

801: 0 0 1 1 0 0 0 0

Sample Title: 03

Channel	-----	-----	-----	-----	-----	-----	-----	-----
809:	0	0	0	0	0	0	0	0
817:	0	0	0	0	0	0	0	1
825:	0	0	0	0	0	0	0	0
833:	0	0	0	0	0	0	0	0
841:	0	0	0	0	0	0	0	0
849:	0	0	0	0	0	1	0	0
857:	0	0	0	0	0	1	0	0
865:	1	0	0	0	0	0	0	0
873:	1	0	0	0	0	0	0	0
881:	0	0	0	0	0	0	0	0
889:	0	0	0	0	0	1	0	0
897:	0	0	0	0	0	0	0	0
905:	0	0	0	0	0	0	0	0
913:	0	0	0	0	0	0	0	1
921:	0	0	0	0	0	0	0	0
929:	0	0	0	0	0	0	0	0
937:	0	0	0	1	0	0	0	1
945:	2	0	1	0	0	0	0	0
953:	0	1	0	1	0	1	1	0
961:	0	2	0	0	1	0	1	0
969:	0	0	0	0	1	0	2	0
977:	0	0	0	0	0	0	1	0
985:	0	0	0	0	0	0	0	0
993:	0	0	0	0	0	0	0	0
1001:	0	0	0	0	0	0	0	0
1009:	0	0	0	0	0	0	0	0
1017:	0	0	0	0	0	0	0	0

Apex-Alpha™

11/2/15

Sample Description: CP4105S01-02
 Spectrum File: \\OR-ALPHA1\Canberra\ApexAlpha\Root\Data\00001328
 Batch Identification: 1510086A-TH
 Sample Identification: 04
 Sample Geometry: Shelf 2
 Procedure Description: Th iso

Detector Name: Alpha_054
 Chamber Serial Number: 10006122B
 Detector Serial Number: 54
 Env. Background: System Bkgd 133284
 Reagent Blank: <not performed>

Sample Size: 1.554E+000 +/- 0.000E+000 gram
 Sample Date/Time: 10/6/2015 5:58:14 AM
 Acquisition Date/Time: 11/2/2015 8:29:46 AM
 Acquisition Live Time: 170.0 minutes
 Acquisition Real Time: 170.0 minutes

Tracer Certificate: Th229_S_TH-18A
 Tracer Quantity: 0.223 mL
 Effective Efficiency: 0.1650 +/- 0.0148
 Counting Efficiency: 0.1452 +/- 0.0026 on 12/13/2014 2:38:19 PM
 Chem. Recovery Factor: 1.1366 +/- 0.1041

Peak Match Tolerance: 0.175 MeV

 PEAK AREA REPORT

Nuclide	Energy (MeV)	Net Pk Area	Pk Area Error %	Ambient Backgnd	Reagent Backgnd	FWHM (keV)
TH-227	5.831	17.66	47.16	0.34	0.00E+000	3.0
TH-228	5.372	138.49	16.69	0.51	0.00E+000	7.0
TH-229 T	4.862	140.83	16.53	0.17	0.00E+000	4.0
TH-230	4.626	128.83	17.28	0.17	0.00E+000	4.1
TH-232	3.945	131.83	17.08	0.17	0.00E+000	4.7

T = Tracer Peak used for Effective Efficiency

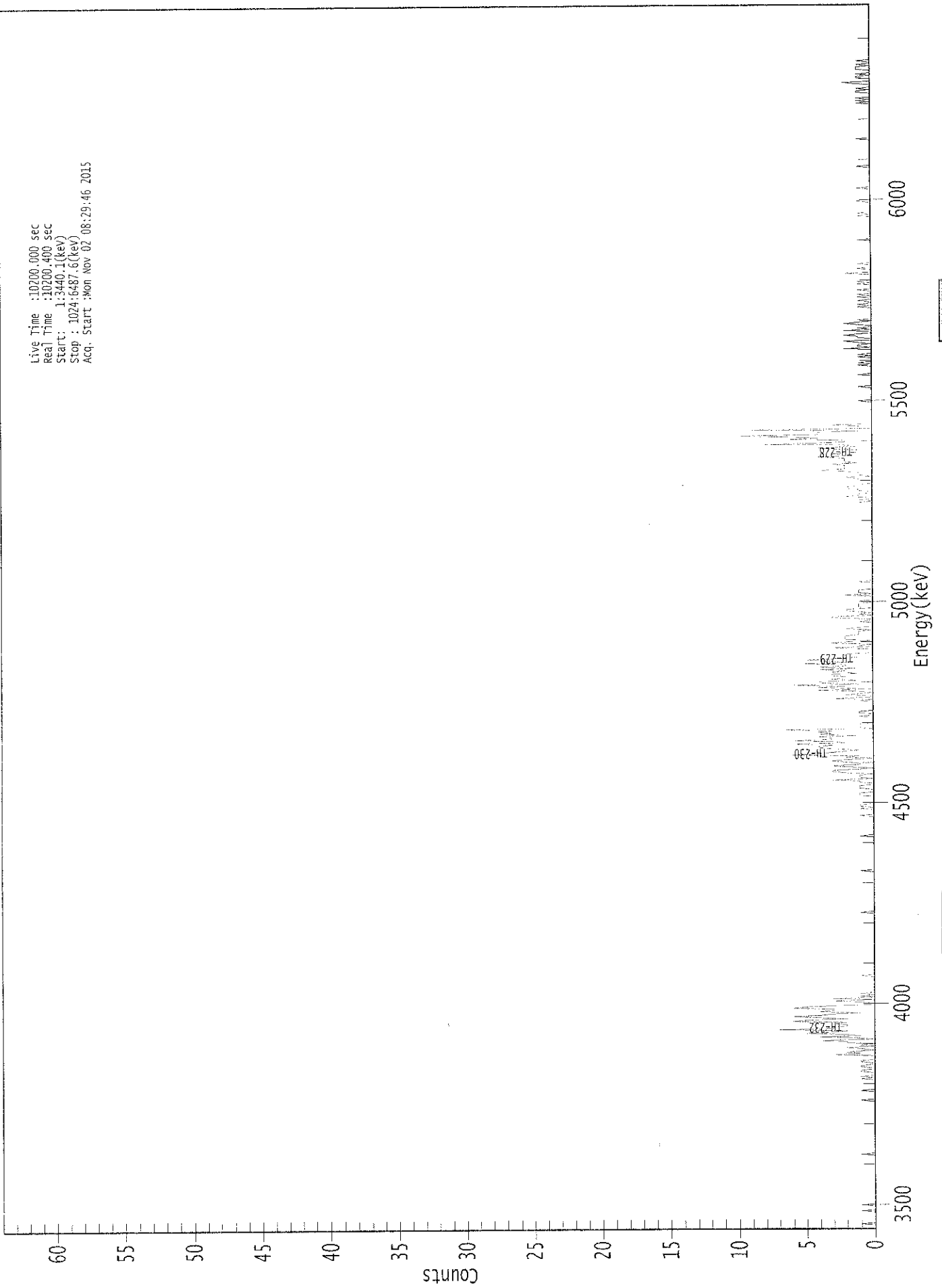
 NUCLIDE ANALYSIS RESULTS

Nuclide	Id Conf.	Energy (keV)	Activity (pCi/gram)	MDA (pCi/gram)
TH-227	0.998	5850.00*	1.88E-001 +/- 9.44E-002	5.08E-002 +/- 8.94E-003
TH-228	0.996	5400.00*	1.47E+000 +/- 3.57E-001	5.57E-002 +/- 9.81E-003
TH-229	0.999	4872.00*	1.46E+000 +/- 2.57E-001	4.33E-002 +/- 7.63E-003
TH-230	0.989	4672.00*	1.33E+000 +/- 3.29E-001	4.32E-002 +/- 7.61E-003
TH-232	0.986	3997.00*	1.36E+000 +/- 3.34E-001	4.31E-002 +/- 7.59E-003

AG
 11/2/15

0000132877.CNF

Live Time :10200.000 sec
Real Time :10200.400 sec
Start: 1:3440.1(kev)
Stop : 1024:6487.6(kev)
Acq. Start :Mon Nov 02 08:29:46 2015



ROI Type: 1

ROI Type: 3

 ***** S P E C T R A L D A T A R E P O R T *****

Sample Title: 04

Elapsed Live time: 10200
 Elapsed Real Time: 10200

Channel	1	2	3	4	5	6	7	8	9
1:	0	0	0	0	1	0	0	0	0
9:	0	0	0	0	0	0	0	0	1
17:	0	0	0	0	1	0	0	0	0
25:	0	0	0	0	0	0	0	0	0
33:	0	0	0	0	0	0	0	0	0
41:	0	0	0	0	0	0	0	0	0
49:	0	0	0	0	0	0	0	0	0
57:	0	0	0	0	0	0	1	0	0
65:	0	0	0	0	0	0	0	0	0
73:	0	0	0	0	0	0	0	0	0
81:	0	0	0	0	0	0	0	0	0
89:	0	0	0	0	0	0	0	0	0
97:	0	0	0	0	0	0	0	0	0
105:	0	0	0	1	0	0	0	0	0
113:	0	0	0	1	0	0	0	0	0
121:	0	0	0	0	0	1	0	1	1
129:	0	0	0	1	1	0	0	0	1
137:	1	0	0	1	1	0	0	0	0
145:	0	3	1	2	1	0	1	2	2
153:	0	1	0	2	2	4	0	1	1
161:	4	1	2	5	3	2	7	3	3
169:	3	2	2	3	2	6	5	2	2
177:	4	6	4	3	1	4	3	3	3
185:	6	5	3	0	0	1	3	0	0
193:	3	0	1	0	1	0	0	0	0
201:	0	0	0	0	0	0	0	0	0
209:	0	0	0	1	0	0	0	0	0
217:	0	0	0	0	0	0	0	0	0
225:	0	0	0	0	0	0	0	0	0
233:	0	0	0	0	0	0	0	0	0
241:	0	0	0	0	0	0	0	0	0
249:	0	0	0	0	0	0	0	0	0
257:	0	0	0	0	0	0	0	0	0
265:	1	0	0	0	0	0	0	0	0
273:	0	0	0	0	0	0	0	0	0
281:	0	0	0	0	0	0	0	0	0
289:	0	0	0	0	0	0	0	0	0
297:	0	0	0	1	0	0	0	0	0
305:	0	0	0	0	0	0	0	0	0
313:	0	0	0	0	0	0	0	0	0
321:	0	0	0	0	0	0	0	0	0
329:	1	0	0	0	0	0	0	0	0
337:	0	0	0	0	0	0	0	0	0
345:	0	1	0	0	0	0	0	1	1
353:	0	1	1	0	0	0	0	0	0
361:	0	0	1	1	1	0	0	0	0

369: 1 1 1 0 0 1 1 3

Sample Title: 04

Channel	1	2	3	4	5	6	7	8
377:	0	1	1	1	0	2	3	3
385:	1	0	2	3	1	1	2	3
393:	2	0	2	1	6	4	3	2
401:	1	3	4	4	3	6	2	3
409:	6	3	3	4	1	4	3	4
417:	3	7	0	1	1	1	1	0
425:	0	0	0	0	1	0	0	1
433:	1	0	0	0	0	0	0	0
441:	0	1	0	3	0	0	2	1
449:	0	1	4	0	4	2	6	1
457:	4	4	1	3	2	2	3	3
465:	1	3	2	4	1	4	2	2
473:	5	2	3	5	3	1	2	2
481:	2	0	0	0	0	3	0	1
489:	0	3	2	0	2	2	2	2
497:	1	1	1	1	0	2	1	0
505:	0	0	0	1	0	0	3	3
513:	0	1	0	1	2	2	0	1
521:	1	1	1	0	1	0	0	0
529:	0	2	0	1	1	1	0	0
537:	0	0	0	0	1	0	0	0
545:	0	0	0	0	0	0	0	0
553:	0	0	0	0	0	0	0	0
561:	0	0	0	0	0	0	0	0
569:	0	0	0	0	0	0	0	0
577:	0	0	0	0	0	0	0	0
585:	0	0	0	0	0	0	0	0
593:	0	0	0	0	0	0	0	0
601:	0	0	0	0	0	0	1	0
609:	1	0	0	2	1	1	0	0
617:	1	1	2	2	1	1	0	0
625:	0	1	1	2	0	1	1	1
633:	2	4	2	2	2	2	3	1
641:	2	2	2	2	4	2	2	3
649:	1	1	1	3	4	1	2	8
657:	3	2	2	6	4	6	10	4
665:	4	4	1	9	0	1	1	3
673:	0	0	0	0	0	0	0	0
681:	0	0	0	0	0	0	0	0
689:	0	0	0	1	0	0	0	0
697:	0	0	0	0	0	0	0	1
705:	0	0	0	0	0	0	0	0
713:	0	1	0	0	0	0	0	0
721:	0	1	0	1	0	0	0	0
729:	1	0	1	0	0	0	0	2
737:	0	1	1	0	1	2	0	0
745:	1	1	2	1	0	0	2	0
753:	1	0	0	1	2	1	0	1
761:	0	0	0	0	0	0	0	0
769:	0	0	1	0	1	0	0	1
777:	0	0	1	0	1	0	0	0
785:	1	0	0	0	0	1	0	1
793:	0	0	0	0	0	0	2	0

801: 0 0 1 0 0 0 1 0

Sample Title: 04

Channel	-----	-----	-----	-----	-----	-----	-----	-----
809:	0	0	0	0	0	0	0	0
817:	0	0	0	0	0	0	0	0
825:	0	0	1	0	0	0	0	0
833:	0	0	0	0	0	0	0	0
841:	0	0	0	0	0	0	1	0
849:	1	0	0	0	0	0	0	0
857:	0	0	1	0	0	0	0	0
865:	0	0	0	0	0	1	0	0
873:	0	0	0	0	0	0	0	0
881:	0	0	0	0	0	0	0	1
889:	0	0	0	0	0	0	0	0
897:	0	0	0	0	0	0	0	0
905:	0	0	0	0	0	0	1	0
913:	0	0	0	0	0	0	0	0
921:	0	0	0	0	0	0	0	0
929:	0	0	0	0	0	0	0	0
937:	0	0	0	0	1	0	1	0
945:	1	0	0	0	0	1	1	0
953:	1	0	0	0	1	2	0	0
961:	0	1	1	0	1	0	0	0
969:	1	1	1	0	1	0	0	1
977:	0	0	0	0	0	0	0	0
985:	0	0	0	0	0	0	0	0
993:	0	0	0	0	0	0	0	0
1001:	0	0	0	0	0	0	0	0
1009:	0	0	0	0	0	0	0	0
1017:	0	0	0	0	0	0	0	0

Apex-Alpha™

KB
11/2/15

Sample Description: CP4105S04-05
 Spectrum File: \\OR-ALPHA1\Canberra\ApexAlpha\Root\Data\00001328
 Batch Identification: 1510086A-TH
 Sample Identification: 05
 Sample Geometry: Shelf 2
 Procedure Description: Th iso

Detector Name: Alpha_055
 Chamber Serial Number: 10006124A
 Detector Serial Number: 55
 Env. Background: System Bkgd 133285
 Reagent Blank: <not performed>

Sample Size: 1.517E+000 +/- 0.000E+000 gram
 Sample Date/Time: 10/6/2015 5:58:14 AM
 Acquisition Date/Time: 11/2/2015 8:29:56 AM
 Acquisition Live Time: 170.0 minutes
 Acquisition Real Time: 170.0 minutes

Tracer Certificate: Th229_S_TH-18A
 Tracer Quantity: 0.225 mL
 Effective Efficiency: 0.1627 +/- 0.0147
 Counting Efficiency: 0.1564 +/- 0.0028 on 12/13/2014 2:35:48 PM
 Chem. Recovery Factor: 1.0402 +/- 0.0960

Peak Match Tolerance: 0.175 MeV

 PEAK AREA REPORT

Nuclide	Energy (MeV)	Net Pk Area	Pk Area Error %	Ambient Backgnd	Reagent Backgnd	FWHM (keV)
TH-227	5.810	11.49	59.30	0.51	0.00E+000	3.0
TH-228	5.362	103.47	19.43	1.53	0.00E+000	5.9
TH-229 T	4.877	139.64	16.68	1.36	0.00E+000	9.9
TH-230	4.629	112.98	18.54	1.02	0.00E+000	5.2
TH-232	3.956	123.49	17.68	0.51	0.00E+000	3.0

T = Tracer Peak used for Effective Efficiency

 NUCLIDE ANALYSIS RESULTS

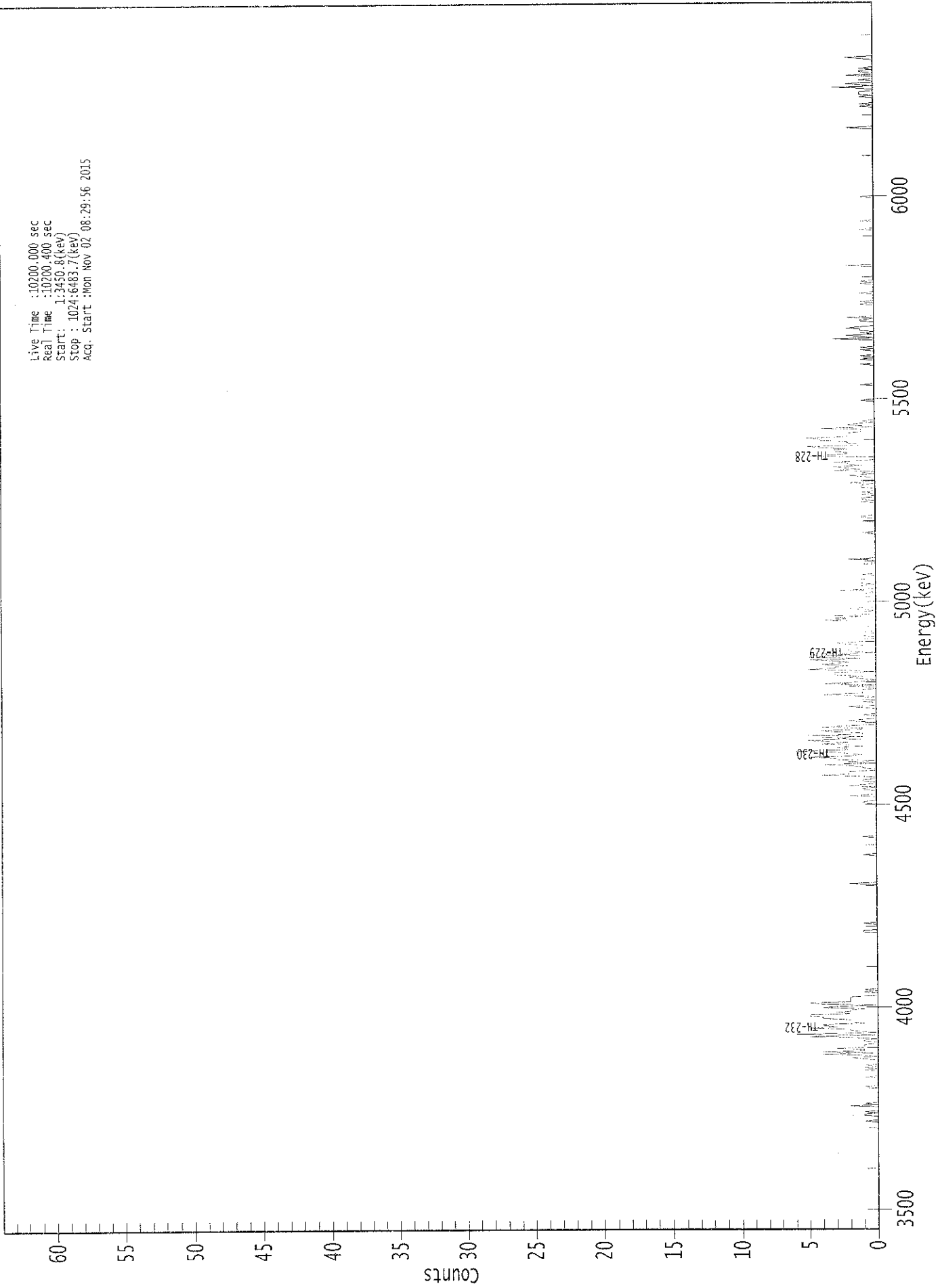
Nuclide	Id Conf.	Energy (keV)	Activity (pCi/gram)	MDA (pCi/gram)
TH-227	0.992	5850.00*	1.27E-001 +/- 7.85E-002	5.79E-002 +/- 1.03E-002
TH-228	0.992	5400.00*	1.14E+000 +/- 3.01E-001	7.84E-002 +/- 1.39E-002
TH-229	1.000	4872.00*	1.51E+000 +/- 2.67E-001	7.40E-002 +/- 1.31E-002
TH-230	0.990	4672.00*	1.22E+000 +/- 3.12E-001	6.78E-002 +/- 1.20E-002
TH-232	0.991	3997.00*	1.33E+000 +/- 3.32E-001	5.63E-002 +/- 1.00E-002

AG
11/2/15

0000132878.CNF

: 00223

Live Time :10200.000 sec
Real Time :10200.400 sec
Start : 1:3450.8(kev)
Stop : 1074:6483.7(kev)
Acq. Start :Mon Nov 02 08:29:56 2015



ROI Type: 1

ROI Type: 3

 ***** S P E C T R A L D A T A R E P O R T *****

Sample Title: 05

Elapsed Live time: 10200

Elapsed Real Time: 10200

Channel	1	2	3	4	5	6	7	8	9
1:	0	0	0	0	0	0	0	0	0
9:	0	0	0	0	0	0	0	0	0
17:	0	0	0	0	0	0	0	0	0
25:	0	0	0	0	0	0	0	0	0
33:	0	0	0	0	0	0	0	0	0
41:	0	0	0	0	0	0	0	0	0
49:	0	0	0	0	0	0	0	0	0
57:	0	0	0	0	0	0	0	0	0
65:	0	0	0	0	0	0	0	0	0
73:	0	0	0	0	0	0	0	0	0
81:	0	0	0	0	0	0	0	0	0
89:	0	0	1	0	0	0	0	0	1
97:	1	0	1	0	0	0	0	0	2
105:	0	1	0	0	0	0	0	0	0
113:	0	0	0	0	0	0	0	0	1
121:	0	0	0	0	0	0	0	0	1
129:	0	0	0	0	0	0	1	0	1
137:	0	1	0	0	0	0	1	1	2
145:	0	1	4	0	4	1	1	1	3
153:	1	1	1	0	0	1	1	1	0
161:	2	5	0	6	0	1	2	2	2
169:	5	3	4	4	1	2	2	2	2
177:	4	4	5	5	2	3	2	2	2
185:	1	4	3	0	4	5	2	2	2
193:	2	2	2	0	0	0	1	0	0
201:	1	0	0	0	0	0	0	0	0
209:	0	0	0	0	0	0	0	0	0
217:	0	0	0	0	0	0	0	0	0
225:	0	0	0	0	0	0	0	0	0
233:	0	0	0	0	0	0	0	0	0
241:	0	0	0	0	0	0	0	0	0
249:	1	1	0	0	0	0	0	0	1
257:	0	0	0	0	0	0	0	0	0
265:	0	0	0	0	0	0	0	0	0
273:	0	0	0	0	0	0	0	0	0
281:	0	0	0	0	0	0	0	0	0
289:	2	0	0	0	0	0	0	0	0
297:	0	0	0	0	0	0	0	0	0
305:	0	0	0	0	0	0	0	0	0
313:	1	0	0	0	0	0	0	0	0
321:	0	0	0	0	0	0	0	0	1
329:	0	0	0	0	0	0	0	0	0
337:	0	0	0	0	0	0	0	0	0
345:	0	0	0	0	0	0	0	0	0
353:	0	0	0	1	1	0	0	0	0
361:	0	2	0	0	0	0	1	1	1

369: 0 2 1 0 0 1 1 0

Sample Title: 05

Channel	1	2	3	4	5	6	7	8	9
377:	0	1	4	2	2	2	0	0	
385:	1	1	2	4	0	2	0	3	
393:	3	5	2	1	2	3	6	2	
401:	2	3	1	2	4	2	4	5	
409:	1	4	1	5	1	1	3	4	
417:	1	1	4	2	0	0	0	2	
425:	1	0	0	0	1	0	0	0	
433:	0	0	1	2	0	0	0	1	
441:	0	1	1	0	2	4	1	1	
449:	1	1	0	0	2	0	4	2	
457:	1	0	1	2	1	3	3	3	
465:	0	2	5	3	3	2	4	3	
473:	2	3	5	1	5	4	1	4	
481:	0	2	2	2	1	1	1	2	
489:	3	1	1	1	0	0	1	0	
497:	0	1	0	0	0	0	1	1	
505:	1	1	1	4	2	3	1	3	
513:	0	0	1	0	1	2	0	0	
521:	0	0	0	0	0	0	0	1	
529:	1	1	0	0	3	0	1	1	
537:	1	0	1	1	1	1	0	0	
545:	0	1	0	0	0	0	0	0	
553:	0	0	1	0	0	0	2	0	
561:	0	0	0	0	0	0	0	0	
569:	0	0	0	0	0	0	0	0	
577:	0	0	0	0	1	0	0	0	
585:	0	0	0	0	0	0	1	0	
593:	0	1	1	0	0	0	0	0	
601:	0	0	0	0	0	0	1	0	
609:	1	1	0	0	1	0	1	0	
617:	0	0	1	1	1	0	2	0	
625:	1	0	0	1	2	0	1	0	
633:	3	1	2	3	1	2	2	3	
641:	1	0	0	0	5	3	2	2	
649:	3	3	2	4	5	1	1	2	
657:	2	4	4	5	2	2	2	2	
665:	1	1	1	4	0	1	2	1	
673:	0	1	0	0	0	0	0	0	
681:	0	0	0	0	0	0	0	0	
689:	0	0	1	0	0	0	0	0	
697:	0	0	0	0	0	0	0	1	
705:	0	0	0	0	0	0	0	0	
713:	0	0	0	0	0	0	0	0	
721:	1	0	0	0	1	0	0	1	
729:	0	0	0	0	1	0	1	0	
737:	0	0	0	0	0	3	0	1	
745:	2	0	1	0	1	1	2	1	
753:	0	0	0	0	1	1	0	2	
761:	0	0	0	0	0	0	0	0	
769:	0	0	1	0	1	0	0	0	
777:	0	0	0	1	0	0	0	0	
785:	0	0	0	1	0	1	0	0	
793:	0	0	0	0	0	0	0	0	

801: 0 0 2 0 0 0 0 0

Sample Title: 05

Channel	-----	-----	-----	-----	-----	-----	-----	-----
809:	0	0	0	0	0	0	0	0
817:	0	0	0	0	0	0	0	0
825:	0	0	0	0	0	0	0	0
833:	1	0	0	0	0	0	0	1
841:	0	0	0	0	0	0	0	0
849:	0	0	0	0	0	0	0	0
857:	0	0	0	1	0	0	0	0
865:	0	0	0	0	0	0	0	0
873:	0	0	0	0	0	0	0	0
881:	0	0	0	0	0	0	0	0
889:	0	0	0	0	0	0	0	0
897:	0	0	0	0	0	0	0	0
905:	0	0	0	0	0	0	0	0
913:	0	0	0	0	0	2	0	0
921:	0	0	0	0	0	0	0	0
929:	0	0	0	0	0	0	0	1
937:	0	1	0	0	0	0	0	1
945:	0	1	1	1	0	0	1	3
953:	0	1	2	0	0	1	0	0
961:	0	2	0	0	1	1	0	1
969:	0	0	0	0	0	0	0	1
977:	2	0	0	0	0	0	0	0
985:	0	0	0	0	0	0	0	0
993:	0	0	0	0	0	0	0	0
1001:	0	0	0	0	0	0	0	0
1009:	0	0	0	0	0	0	0	0
1017:	0	0	0	0	0	0	0	0

11/2/15

Apex-Alpha™

Sample Description: CP4105S06-07
 Spectrum File: \\OR-ALPHA1\Canberra\ApexAlpha\Root\Data\00001328
 Batch Identification: 1510086A-TH
 Sample Identification: 06
 Sample Geometry: Shelf 2
 Procedure Description: Th iso

Detector Name: Alpha_056
 Chamber Serial Number: 10006124B
 Detector Serial Number: 56
 Env. Background: System Bkgd 133286
 Reagent Blank: <not performed>

Sample Size: 1.561E+000 +/- 0.000E+000 gram
 Sample Date/Time: 10/6/2015 5:58:14 AM
 Acquisition Date/Time: 11/2/2015 8:29:59 AM
 Acquisition Live Time: 170.0 minutes
 Acquisition Real Time: 170.0 minutes

Tracer Certificate: Th229_S_TH-13A
 Tracer Quantity: 0.224 mL
 Effective Efficiency: 0.1799 +/- 0.0157
 Counting Efficiency: 0.1600 +/- 0.0028 on 12/13/2014 2:30:22 PM
 Chem. Recovery Factor: 1.1243 +/- 0.0999

Peak Match Tolerance: 0.175 MeV

 PEAK AREA REPORT

Nuclide	Energy (MeV)	Net Pk Area	Pk Area Error %	Ambient Backgnd	Reagent Backgnd	FWHM (keV)
TH-227	5.788	12.47	59.35	1.53	0.00E+000	3.0
TH-228	5.371	141.13	16.63	1.87	0.00E+000	5.9
TH-229 T	4.863	153.62	15.96	2.38	0.00E+000	6.9
TH-230	4.640	145.98	16.29	1.02	0.00E+000	4.6
TH-232	3.962	127.64	17.46	1.36	0.00E+000	6.5

T = Tracer Peak used for Effective Efficiency

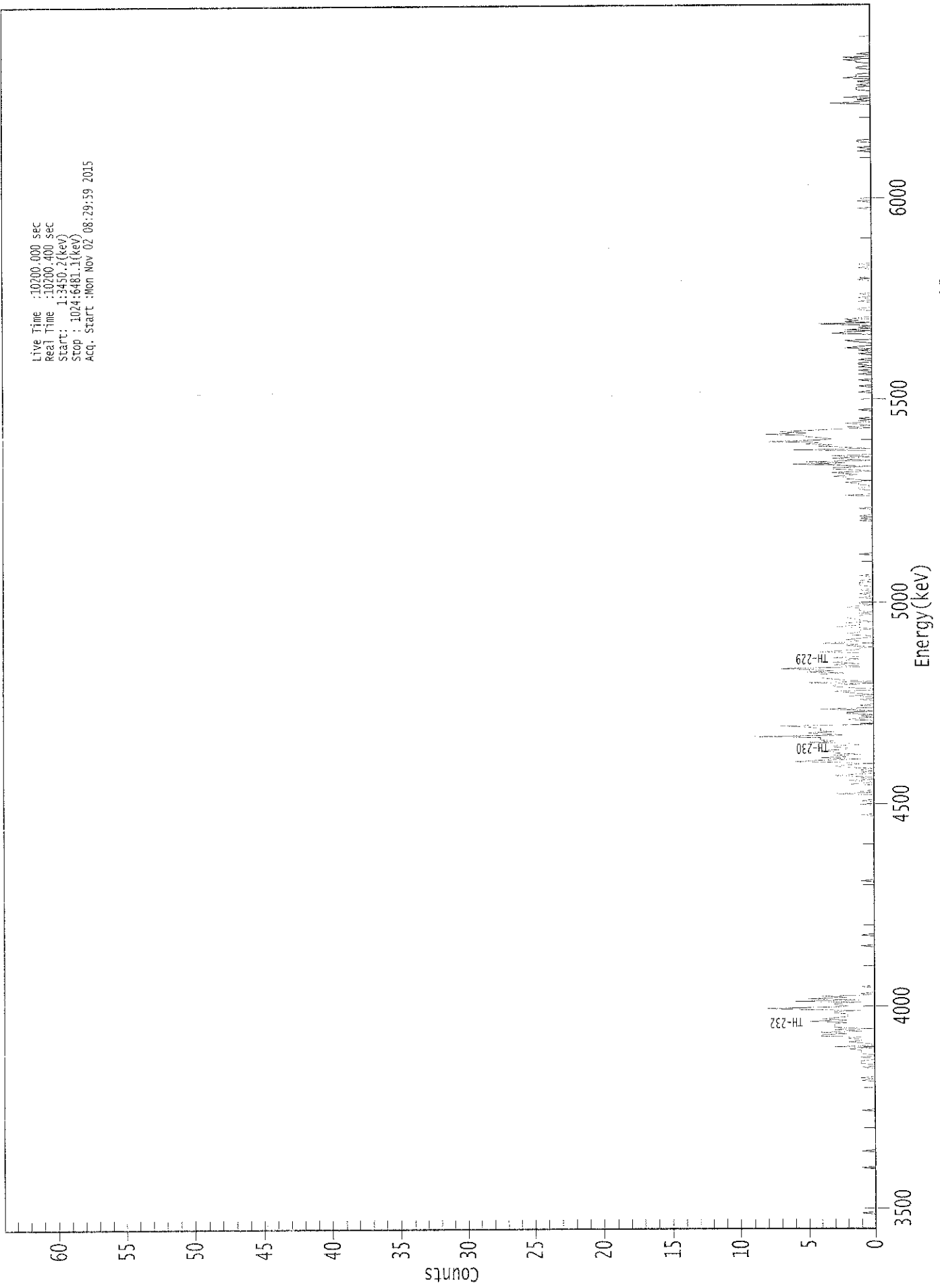
 NUCLIDE ANALYSIS RESULTS

Nuclide	Id Conf.	Energy (keV)	Activity (pCi/gram)	MDA (pCi/gram)
TH-227	0.980	5850.00*	1.21E-001 +/- 7.47E-002	6.90E-002 +/- 1.18E-002
TH-228	0.996	5400.00*	1.37E+000 +/- 3.26E-001	7.34E-002 +/- 1.25E-002
TH-229	1.000	4872.00*	1.46E+000 +/- 2.49E-001	7.77E-002 +/- 1.33E-002
TH-230	0.995	4672.00*	1.38E+000 +/- 3.26E-001	5.96E-002 +/- 1.02E-002
TH-232	0.994	3997.00*	1.20E+000 +/- 2.94E-001	6.47E-002 +/- 1.10E-002

AG
11/2/15

0000132879.CNF

Live Time :10700.000 sec
Real Time :10700.400 Sec
Start : 1:3430.2(keV)
Stop : 1024:6481.1(keV)
Acq. Start :Mon Nov 02 08:29:59 2015



ROI Type: 1

ROI Type: 3

00220

 ***** S P E C T R A L D A T A R E P O R T *****

Sample Title: 06

Elapsed Live time: 10200

Elapsed Real Time: 10200

Channel	1	2	3	4	5	6	7	8	9
1:	0	0	0	0	0	0	0	0	0
9:	0	0	0	0	0	0	1	0	0
17:	0	0	0	0	0	0	0	0	0
25:	0	0	0	0	0	0	0	0	0
33:	0	0	0	0	0	0	0	0	0
41:	0	0	0	0	0	0	0	0	0
49:	0	0	0	1	0	0	0	0	0
57:	0	0	0	0	0	0	0	0	0
65:	0	1	0	0	0	0	0	0	0
73:	0	0	0	0	0	0	0	0	0
81:	0	0	0	0	0	0	0	0	0
89:	0	0	0	0	0	0	0	0	0
97:	0	0	0	1	0	0	0	0	0
105:	0	0	0	0	0	0	0	0	0
113:	0	0	0	0	0	0	0	0	0
121:	0	0	0	0	1	0	1	0	0
129:	0	0	0	0	0	0	0	0	1
137:	0	0	1	1	1	0	0	0	1
145:	0	0	1	1	1	1	2	0	0
153:	3	0	0	1	2	1	1	2	0
161:	1	4	4	2	4	1	3	0	0
169:	3	3	3	3	2	5	2	4	0
177:	3	2	2	2	3	3	1	6	1
185:	8	3	2	3	3	1	6	1	0
193:	5	2	4	0	1	0	0	0	0
201:	0	0	1	0	0	0	0	0	0
209:	0	0	0	0	0	0	0	0	0
217:	0	0	0	0	0	0	0	0	0
225:	0	0	0	0	0	0	0	0	0
233:	0	0	0	0	1	0	0	0	0
241:	0	0	0	0	0	1	0	0	0
249:	0	0	0	0	0	0	0	0	0
257:	0	0	0	0	0	0	0	0	0
265:	0	0	0	0	0	0	0	0	0
273:	0	0	0	0	0	0	0	0	0
281:	0	0	0	0	0	0	0	0	0
289:	0	0	1	0	0	0	0	0	0
297:	0	0	0	0	0	0	0	0	0
305:	0	0	0	0	0	0	0	0	0
313:	0	0	0	0	0	0	0	0	0
321:	0	0	0	0	0	0	0	0	0
329:	0	0	0	0	0	0	0	0	0
337:	0	0	0	0	0	0	0	0	0
345:	0	1	0	0	0	0	0	0	0
353:	0	0	1	0	0	1	0	0	0
361:	0	0	0	3	0	1	0	0	0

369: 0 0 0 2 0 0 2 0

Sample Title: 06

Channel	1	2	3	4	5	6	7	8	9
377:	1	0	3	2	0	1	0	1	
385:	0	2	3	2	1	2	6	4	
393:	1	4	2	3	1	3	3	4	
401:	2	2	3	3	1	2	5	3	
409:	4	4	4	9	2	4	5	3	
417:	4	4	4	5	7	0	1	0	
425:	0	2	1	0	1	0	2	2	
433:	0	1	4	0	0	1	0	0	
441:	0	0	1	0	0	2	0	1	
449:	2	3	0	0	2	3	3	1	
457:	5	0	2	3	4	4	4	4	
465:	2	5	3	5	7	1	1	3	
473:	1	3	2	2	1	3	1	1	
481:	1	1	4	2	1	1	0	2	
489:	1	4	2	1	2	1	0	0	
497:	2	2	1	1	1	0	1	3	
505:	1	1	2	0	1	1	2	1	
513:	1	0	1	0	1	1	1	2	
521:	1	0	1	1	0	0	0	1	
529:	0	0	1	0	0	1	0	0	
537:	0	1	1	1	0	1	0	0	
545:	0	1	0	0	0	0	0	0	
553:	0	0	0	0	0	0	0	0	
561:	0	0	0	1	0	0	0	0	
569:	0	0	0	0	0	0	0	0	
577:	0	0	0	0	0	0	0	0	
585:	0	0	0	0	0	0	0	1	
593:	0	1	0	1	0	0	0	0	
601:	0	1	0	0	0	0	0	0	
609:	0	0	0	0	2	0	0	0	
617:	0	1	1	0	0	1	1	2	
625:	0	1	2	2	3	1	2	3	
633:	0	1	3	3	0	2	6	2	
641:	5	0	2	3	0	3	0	0	
649:	0	0	6	0	2	4	3	5	
657:	4	8	4	3	4	5	5	8	
665:	5	7	5	3	0	2	0	1	
673:	2	0	1	0	1	0	0	0	
681:	0	0	0	1	0	0	0	0	
689:	0	0	0	0	0	0	0	0	
697:	0	0	1	0	0	0	0	1	
705:	0	0	0	0	1	0	0	0	
713:	0	1	0	0	1	0	0	1	
721:	0	1	1	0	0	1	0	0	
729:	0	0	1	0	0	1	0	2	
737:	1	0	0	0	1	2	0	0	
745:	0	0	0	3	2	0	2	0	
753:	1	0	1	4	0	2	1	2	
761:	1	0	0	0	0	0	0	1	
769:	1	0	0	0	0	0	1	0	
777:	0	1	0	0	1	0	0	0	
785:	0	0	0	0	0	0	0	0	
793:	1	0	1	0	0	0	0	0	

801: 0 0 1 0 0 1 0 0

Sample Title: 06

Channel	-----	-----	-----	-----	-----	-----	-----	-----
809:	0	0	0	0	0	0	0	0
817:	0	0	0	0	0	0	0	0
825:	0	0	0	0	0	0	0	0
833:	0	0	0	0	0	0	0	0
841:	0	0	0	0	0	0	0	0
849:	0	0	0	0	1	0	0	0
857:	0	0	1	0	0	0	0	0
865:	0	0	0	0	0	0	0	0
873:	0	0	0	0	0	0	0	0
881:	0	0	0	0	0	0	0	0
889:	0	0	0	0	0	0	0	0
897:	0	0	0	0	1	0	0	1
905:	0	0	0	0	1	1	0	0
913:	0	0	0	0	0	0	0	0
921:	0	0	0	0	0	0	0	0
929:	0	0	0	0	0	0	0	0
937:	0	0	0	0	3	1	0	1
945:	0	2	0	0	0	0	0	1
953:	1	1	0	1	0	0	1	0
961:	0	2	1	1	1	0	0	0
969:	0	1	1	0	0	0	1	1
977:	2	0	2	0	0	1	0	0
985:	0	0	0	0	0	0	0	0
993:	0	0	0	0	0	0	0	0
1001:	0	0	0	0	0	0	0	0
1009:	0	0	0	0	0	0	0	0
1017:	0	0	0	0	0	0	0	0

Apex-Alpha™

*10
11/2/15*

Sample Description: CP4105S08-09
 Spectrum File: \\OR-ALPHA1\Canberra\ApexAlpha\Root\Data\00001328
 Batch Identification: 1510086A-TH
 Sample Identification: 07
 Sample Geometry: Shelf 2
 Procedure Description: Th iso

Detector Name: Alpha_057
 Chamber Serial Number: 01017326A
 Detector Serial Number: 57
 Env. Background: System Bkgd 133287
 Reagent Blank: <not performed>

Sample Size: 1.513E+000 +/- 0.000E+000 gram
 Sample Date/Time: 10/6/2015 5:58:14 AM
 Acquisition Date/Time: 11/2/2015 8:29:40 AM
 Acquisition Live Time: 170.0 minutes
 Acquisition Real Time: 170.0 minutes

Tracer Certificate: Th229_S_TH-18A
 Tracer Quantity: 0.224 mL
 Effective Efficiency: 0.1670 +/- 0.0149
 Counting Efficiency: 0.1577 +/- 0.0028 on 12/13/2014 2:27:38 PM
 Chem. Recovery Factor: 1.0589 +/- 0.0964

Peak Match Tolerance: 0.175 MeV

 PEAK AREA REPORT

Nuclide	Energy (MeV)	Net Pk Area	Pk Area Error %	Ambient Backgnd	Reagent Backgnd	FWHM (keV)
TH-227	5.756	14.49	52.54	0.51	0.00E+000	3.7
TH-228	5.365	130.83	17.15	0.17	0.00E+000	9.7
TH-229 T	4.864	142.83	16.41	0.17	0.00E+000	4.2
TH-230	4.625	144.49	16.34	0.51	0.00E+000	4.2
TH-232	3.959	131.66	17.11	0.34	0.00E+000	6.0

T = Tracer Peak used for Effective Efficiency

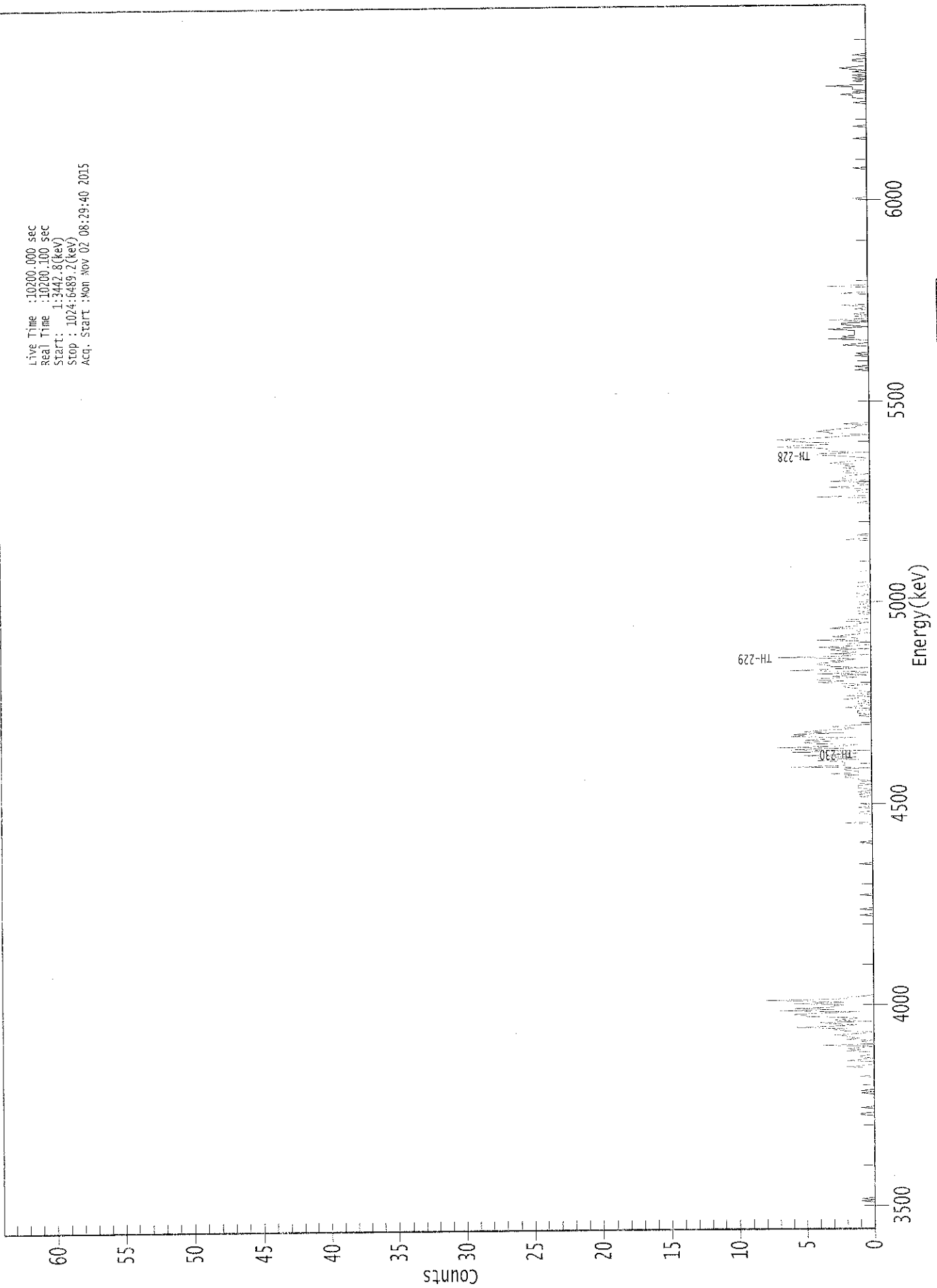
 NUCLIDE ANALYSIS RESULTS

Nuclide	Id Conf.	Energy (keV)	Activity (pCi/gram)	MDA (pCi/gram)
TH-227	0.955	5850.00*	1.56E-001 +/- 8.65E-002	5.66E-002 +/- 9.90E-003
TH-228	0.994	5400.00*	1.41E+000 +/- 3.45E-001	4.50E-002 +/- 7.87E-003
TH-229	1.000	4872.00*	1.50E+000 +/- 2.63E-001	4.40E-002 +/- 7.69E-003
TH-230	0.988	4672.00*	1.52E+000 +/- 3.63E-001	5.51E-002 +/- 9.65E-003
TH-232	0.992	3997.00*	1.38E+000 +/- 3.38E-001	5.01E-002 +/- 8.77E-003

*AG
11/2/15*

0000132880.CNF

Live Time : 10200.000 sec
Real Time : 10200.100 sec
Start : 1:3442.8(kev)
Stop : 1024:0489.2(kev)
Acq. Start : Mon Nov 02 08:29:40 2015



ROI Type: 3

ROI Type: 1

00200

 ***** S P E C T R A L D A T A R E P O R T *****

Sample Title: 07

Elapsed Live time: 10200

Elapsed Real Time: 10200

Channel	1	2	3	4	5	6	7	8	9
1:	0	0	0	0	0	0	0	0	0
9:	0	0	0	0	0	0	0	0	0
17:	0	0	0	0	0	0	0	0	1
25:	0	1	0	0	0	0	0	0	0
33:	0	0	0	0	0	0	0	0	0
41:	0	0	0	0	0	0	0	0	0
49:	0	0	0	0	0	0	0	0	0
57:	0	0	0	0	0	0	0	0	0
65:	0	0	0	0	0	0	0	0	0
73:	0	0	0	0	0	0	0	0	0
81:	0	0	0	0	0	0	0	0	0
89:	0	0	0	0	0	0	0	0	1
97:	1	0	0	0	0	1	0	0	0
105:	0	0	0	0	0	0	0	0	0
113:	0	1	0	1	0	0	0	0	0
121:	0	0	0	0	0	0	0	0	1
129:	0	0	0	0	0	0	0	0	2
137:	1	0	0	0	2	1	0	0	1
145:	1	0	0	0	2	1	2	0	1
153:	0	4	0	0	1	0	2	0	1
161:	2	2	3	1	0	2	3	0	2
169:	6	3	1	3	4	0	3	0	2
177:	1	5	5	6	4	1	7	0	3
185:	6	3	3	2	6	2	5	0	8
193:	2	2	1	0	0	0	0	0	0
201:	0	0	0	0	0	0	0	0	0
209:	0	0	0	0	0	0	0	0	0
217:	0	0	0	0	0	0	0	0	0
225:	0	0	0	0	0	0	0	0	0
233:	0	0	0	0	0	0	0	0	0
241:	0	0	0	0	0	0	0	0	0
249:	0	0	0	0	0	0	0	0	0
257:	0	0	0	0	0	0	1	0	0
265:	0	0	0	1	0	0	0	0	0
273:	0	0	0	0	0	0	0	0	1
281:	0	0	0	0	0	0	0	0	0
289:	0	0	0	0	0	0	0	0	0
297:	0	0	0	0	0	0	0	0	0
305:	0	1	0	0	0	0	0	0	0
313:	0	0	0	0	0	0	0	0	0
321:	0	0	0	1	0	0	0	0	0
329:	0	0	0	0	0	0	0	0	0
337:	0	0	0	2	0	0	0	0	0
345:	0	0	0	1	1	0	0	0	0
353:	1	0	0	1	0	0	0	0	0
361:	0	1	0	1	0	1	0	0	0

369: 1 1 1 0 1 1 0 1

Sample Title: 07

Channel	1	2	3	4	5	6	7	8	9
377:	1	2	2	1	3	1	1	2	
385:	2	0	6	2	2	2	2	4	
393:	1	4	1	5	2	1	6	0	
401:	6	2	7	2	1	4	5	3	
409:	5	3	1	6	5	6	2	5	
417:	4	2	1	3	2	0	0	0	
425:	0	0	0	0	1	0	1	1	
433:	1	0	0	2	1	0	1	0	
441:	1	0	2	1	0	2	0	1	
449:	0	1	1	1	2	2	0	2	
457:	4	2	4	4	1	3	0	4	
465:	0	1	6	3	0	3	3	4	
473:	4	2	3	1	2	7	2	0	
481:	3	1	2	3	0	4	2	0	
489:	2	0	0	4	1	1	3	2	
497:	1	0	1	1	0	3	2	1	
505:	1	1	0	2	2	0	0	0	
513:	0	1	0	1	0	0	1	0	
521:	0	1	0	0	0	1	1	1	
529:	1	0	1	1	1	0	0	0	
537:	1	0	0	1	0	0	0	0	
545:	0	0	0	0	1	0	0	0	
553:	0	0	0	0	0	0	0	0	
561:	0	0	0	0	0	0	0	0	
569:	0	0	0	0	0	0	0	2	
577:	0	0	0	1	0	0	0	0	
585:	0	0	0	0	0	0	0	0	
593:	0	0	0	0	0	0	0	0	
601:	0	0	0	0	0	0	1	0	
609:	0	0	0	4	0	0	0	1	
617:	1	0	1	3	1	0	1	0	
625:	3	0	2	2	2	1	0	2	
633:	2	1	1	2	1	2	1	3	
641:	2	1	0	0	1	2	4	4	
649:	0	3	3	3	4	7	5	3	
657:	3	5	6	7	4	3	1	0	
665:	3	3	4	3	2	1	1	0	
673:	2	0	0	0	0	0	0	0	
681:	0	0	0	0	0	0	0	0	
689:	0	0	0	0	0	0	0	0	
697:	0	0	0	0	0	0	0	0	
705:	0	0	0	0	0	0	0	0	
713:	0	0	0	0	0	1	0	0	
721:	1	0	0	0	0	0	0	0	
729:	0	1	0	1	0	0	0	0	
737:	0	0	2	1	0	0	0	3	
745:	1	2	1	1	1	1	1	3	
753:	2	0	1	2	2	0	1	3	
761:	0	0	1	0	1	0	0	0	
769:	1	0	0	2	0	0	0	0	
777:	0	0	0	0	0	2	0	0	
785:	0	0	0	3	0	0	0	0	
793:	0	0	0	0	0	0	0	0	

801: 0 0 0 0 0 0 0 0 0

Sample Title: 07

Channel	-----	-----	-----	-----	-----	-----	-----	-----
809:	0	0	0	0	0	0	0	0
817:	0	0	0	0	0	0	0	0
825:	0	0	0	0	0	0	0	0
833:	0	0	0	0	0	0	0	0
841:	0	0	0	0	0	0	0	0
849:	0	0	0	0	0	0	0	0
857:	0	0	0	0	1	0	0	0
865:	0	0	0	0	0	0	0	0
873:	0	0	0	0	0	0	0	0
881:	0	0	0	0	0	1	0	0
889:	0	0	0	0	0	0	0	0
897:	0	0	0	0	0	0	0	0
905:	0	0	0	0	0	0	1	0
913:	0	0	0	0	0	0	0	0
921:	1	0	0	0	0	0	0	0
929:	0	0	0	0	0	0	0	0
937:	0	0	0	0	1	0	0	0
945:	1	1	1	2	0	1	0	1
953:	1	1	3	0	0	0	1	0
961:	0	1	0	1	0	0	1	0
969:	1	2	1	0	0	0	0	1
977:	1	0	0	0	1	0	0	0
985:	0	0	0	0	0	0	0	0
993:	0	0	0	0	0	0	0	0
1001:	0	0	0	0	0	0	0	0
1009:	0	0	0	0	0	0	0	0
1017:	0	0	0	0	0	0	0	0

Apex-Alpha™

*KB
11/2/15*

Sample Description: CP4105S10-11
 Spectrum File: \\OR-ALPHA1\Canberra\ApexAlpha\Root\Data\00001328
 Batch Identification: 1510086A-TH
 Sample Identification: 08
 Sample Geometry: Shelf 2
 Procedure Description: Th iso

Detector Name: Alpha_058
 Chamber Serial Number: 01017326B
 Detector Serial Number: 58
 Env. Background: System Bkgd 133288
 Reagent Blank: <not performed>

Sample Size: 1.541E+000 +/- 0.000E+000 gram
 Sample Date/Time: 10/6/2015 5:58:14 AM
 Acquisition Date/Time: 11/2/2015 8:29:44 AM
 Acquisition Live Time: 170.0 minutes
 Acquisition Real Time: 170.0 minutes

Tracer Certificate: Th229_S_TH-18A
 Tracer Quantity: 0.225 mL
 Effective Efficiency: 0.1580 +/- 0.0144
 Counting Efficiency: 0.1640 +/- 0.0029 on 12/13/2014 2:26:06 PM
 Chem. Recovery Factor: 0.9636 +/- 0.0896

Peak Match Tolerance: 0.175 MeV

 PEAK AREA REPORT

Nuclide	Energy (MeV)	Net Pk Area	Pk Area Error %	Ambient Backgnd	Reagent Backgnd	FWHM (keV)
TH-227	5.850	7.49	74.41	0.51	0.00E+000	3.0
TH-228	5.358	122.47	17.84	1.53	0.00E+000	7.7
TH-229 T	4.859	135.83	16.83	0.17	0.00E+000	4.7
TH-230	4.618	109.83	18.72	0.17	0.00E+000	3.7
TH-232	3.948	127.98	17.41	1.02	0.00E+000	3.1

T = Tracer Peak used for Effective Efficiency

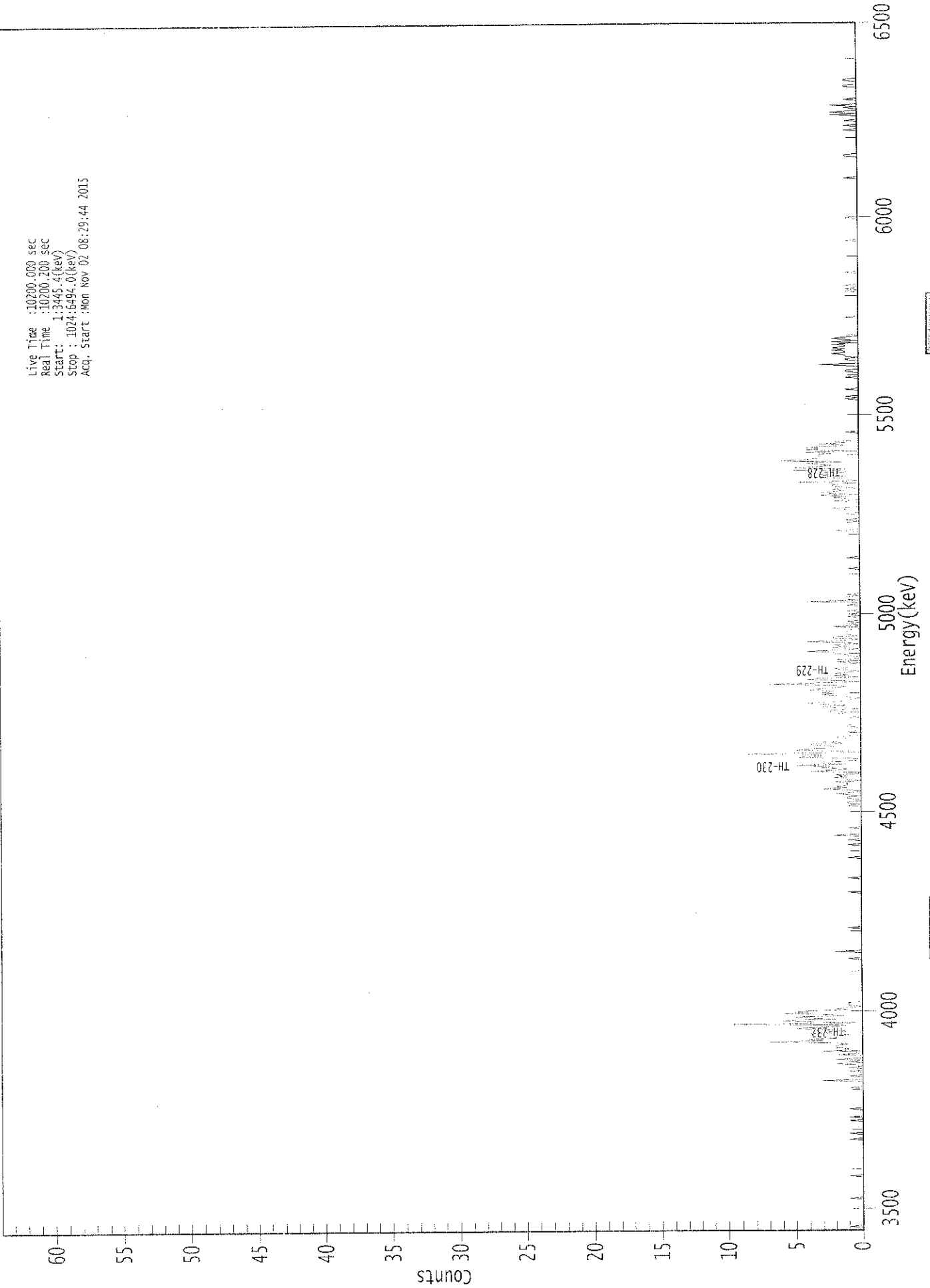
 NUCLIDE ANALYSIS RESULTS

Nuclide	Id Conf.	Energy (keV)	Activity (pCi/gram)	MDA (pCi/gram)
TH-227	1.000	5850.00*	8.38E-002 +/- 6.41E-002	5.87E-002 +/- 1.05E-002
TH-228	0.991	5400.00*	1.37E+000 +/- 3.46E-001	7.95E-002 +/- 1.42E-002
TH-229	0.999	4872.00*	1.49E+000 +/- 2.66E-001	4.56E-002 +/- 8.17E-003
TH-230	0.985	4672.00*	1.20E+000 +/- 3.10E-001	4.55E-002 +/- 8.14E-003
TH-232	0.988	3997.00*	1.39E+000 +/- 3.48E-001	6.86E-002 +/- 1.23E-002

*AG
11/2/15*

0000132881.CNF

Live Time :10200.000 sec
Real Time :10200.200 sec
Start : 1:3445.4(keV)
Stop : 1024:649.0(keV)
Acq. Start :Mon Nov 02 08:29:44 2015



ROI Type: 1

ROI Type: 3

: 00230

369: 1 2 0 0 1 3 1 2

Sample Title: 08

Channel	1	2	3	4	5	6	7	8
377:	1	1	1	2	0	1	1	2
385:	1	2	0	0	4	2	1	3
393:	2	5	1	3	3	0	0	1
401:	5	3	3	9	0	1	5	4
409:	2	2	3	4	1	3	1	1
417:	1	2	1	0	0	0	1	0
425:	0	0	1	1	0	0	0	0
433:	1	1	0	1	1	2	0	3
441:	2	0	2	3	1	3	4	2
449:	1	1	0	1	1	3	2	3
457:	2	4	3	2	1	2	7	3
465:	0	2	4	3	0	2	1	2
473:	1	0	1	2	1	1	1	1
481:	0	2	0	2	0	0	1	1
489:	2	2	4	1	0	2	1	2
497:	0	1	4	1	0	2	2	0
505:	1	1	1	1	1	0	0	2
513:	0	1	0	1	0	0	0	1
521:	0	1	1	0	1	0	0	0
529:	0	1	0	0	4	0	1	1
537:	1	0	1	0	0	0	0	0
545:	0	0	0	0	0	0	0	0
553:	0	0	0	0	0	0	0	0
561:	1	0	0	0	0	0	0	0
569:	0	1	0	0	0	0	0	0
577:	0	0	0	0	0	0	0	0
585:	0	0	0	0	0	0	0	0
593:	2	0	0	0	0	0	0	1
601:	0	1	0	0	0	0	1	0
609:	1	1	1	2	0	0	0	0
617:	0	2	0	1	2	1	3	1
625:	3	2	1	2	0	2	2	2
633:	0	5	0	1	1	3	1	3
641:	2	1	1	5	1	5	3	2
649:	3	4	1	6	4	3	3	3
657:	3	2	4	0	4	3	4	2
665:	1	3	1	2	0	0	0	0
673:	0	0	0	1	0	0	0	0
681:	0	0	0	0	0	0	0	0
689:	0	0	0	0	0	0	0	0
697:	0	0	0	0	0	0	0	1
705:	0	1	0	0	0	0	0	1
713:	0	0	0	0	0	0	0	0
721:	0	1	0	0	0	0	1	1
729:	0	0	0	1	3	0	0	0
737:	1	1	0	1	1	2	1	1
745:	2	1	2	1	1	2	0	2
753:	0	1	2	1	0	0	0	0
761:	0	0	0	0	0	0	0	0
769:	0	0	0	0	1	0	0	0
777:	0	0	0	0	0	0	0	0
785:	0	0	0	0	0	0	1	0
793:	0	0	1	0	1	0	0	1

801: 0 0 0 0 0 0 0 0 0

Sample Title: 08

Channel	-----	-----	-----	-----	-----	-----	-----	-----
809:	0	0	1	0	0	0	0	0
817:	0	0	0	0	0	0	0	0
825:	0	0	0	0	0	0	0	0
833:	0	0	0	0	0	1	0	0
841:	0	0	0	0	0	0	0	0
849:	0	0	0	0	0	0	0	0
857:	1	0	0	0	0	0	0	0
865:	0	0	0	0	0	0	0	0
873:	0	0	0	0	0	0	0	0
881:	0	0	0	0	0	0	0	0
889:	0	0	1	0	0	0	0	0
897:	0	0	0	0	0	0	0	0
905:	0	0	0	0	0	1	1	0
913:	0	0	0	0	0	0	0	0
921:	0	0	0	0	0	0	0	0
929:	0	0	0	1	0	0	0	1
937:	0	0	0	1	0	0	0	0
945:	2	0	2	1	0	0	1	0
953:	2	0	0	0	0	1	0	0
961:	0	0	0	0	0	0	0	0
969:	1	1	0	0	0	1	1	0
977:	0	0	0	0	0	0	0	0
985:	0	0	0	0	0	0	0	0
993:	0	0	0	0	0	0	0	0
1001:	0	0	0	0	0	0	0	0
1009:	0	0	0	0	0	0	0	0
1017:	0	0	0	0	0	0	0	0

100
11/2/15

Apex-Alpha™

Sample Description: CP4105S12-13
 Spectrum File: \\OR-ALPHA1\Canberra\ApexAlpha\Root\Data\00001328
 Batch Identification: 1510086A-TH
 Sample Identification: 09
 Sample Geometry: Shelf 2
 Procedure Description: Th iso

Detector Name: Alpha_059
 Chamber Serial Number: 10006125A
 Detector Serial Number: 59
 Env. Background: System Bkgd 133289
 Reagent Blank: <not performed>

Sample Size: 1.533E+000 +/- 0.000E+000 gram
 Sample Date/Time: 10/6/2015 5:58:14 AM
 Acquisition Date/Time: 11/2/2015 8:30:02 AM
 Acquisition Live Time: 170.0 minutes
 Acquisition Real Time: 170.0 minutes

Tracer Certificate: Th229_S_TH-18A
 Tracer Quantity: 0.223 mL
 Effective Efficiency: 0.2102 +/- 0.0170
 Counting Efficiency: 0.1717 +/- 0.0030 on 12/13/2014 2:24:23 PM
 Chem. Recovery Factor: 1.2243 +/- 0.1015

Peak Match Tolerance: 0.175 MeV

 PEAK AREA REPORT

Nuclide	Energy (MeV)	Net Pk Area	Pk Area Error %	Ambient Backgnd	Reagent Backgnd	FWHM (keV)
TH-227	5.856	14.32	53.21	0.68	0.00E+000	3.0
TH-228	5.368	134.47	17.01	1.53	0.00E+000	4.3
TH-229 T	4.862	179.32	14.67	0.68	0.00E+000	4.7
TH-230	4.627	136.49	16.81	0.51	0.00E+000	6.7
TH-232	3.956	140.83	16.53	0.17	0.00E+000	7.6

T = Tracer Peak used for Effective Efficiency

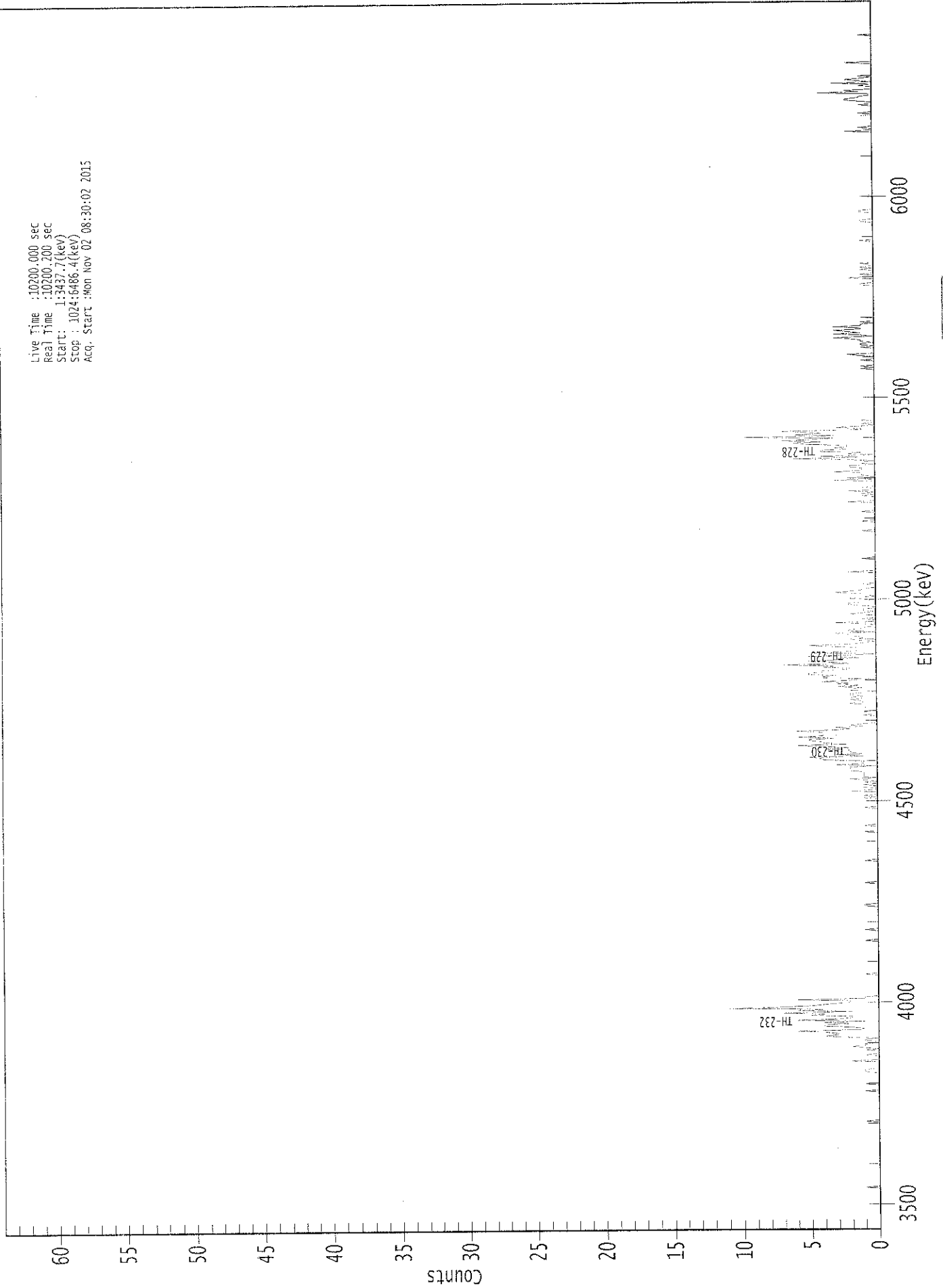
 NUCLIDE ANALYSIS RESULTS

Nuclide	Id Conf.	Energy (keV)	Activity (pCi/gram)	MDA (pCi/gram)
TH-227	1.000	5850.00*	1.21E-001 +/- 6.72E-002	4.77E-002 +/- 7.57E-003
TH-228	0.995	5400.00*	1.14E+000 +/- 2.64E-001	6.01E-002 +/- 9.53E-003
TH-229	0.999	4872.00*	1.48E+000 +/- 2.35E-001	4.66E-002 +/- 7.40E-003
TH-230	0.989	4672.00*	1.12E+000 +/- 2.60E-001	4.32E-002 +/- 6.86E-003
TH-232	0.991	3997.00*	1.16E+000 +/- 2.65E-001	3.43E-002 +/- 5.45E-003

AG
 11/2/15

0000132899.CNF

Live Time :10200.000 sec
Real Time :10200.700 sec
Start: 1:3437.7(kev)
Stop : 1024:6486.4(kev)
Acq. Start :Mon Nov 02 08:30:02 2015



ROI Type: 3

ROI Type: 1

369: 1 0 1 0 1 0 1 2

Sample Title: 09

Channel	1	0	1	0	1	0	1	2
377:	0	1	1	1	1	1	2	2
385:	2	2	0	3	1	1	1	4
393:	4	5	1	3	1	2	2	2
401:	4	2	4	6	2	4	4	5
409:	5	3	6	4	4	4	4	6
417:	3	2	3	1	2	1	0	0
425:	0	0	0	0	1	0	0	1
433:	0	0	0	1	1	1	2	1
441:	1	2	1	2	1	2	2	1
449:	0	2	2	1	3	1	3	2
457:	4	2	0	4	4	3	5	5
465:	4	4	2	2	4	3	7	2
473:	3	5	3	3	1	5	2	0
481:	5	2	1	1	1	3	5	2
489:	1	0	1	2	1	1	2	2
497:	3	0	2	2	1	1	0	0
505:	1	3	0	0	1	0	0	0
513:	2	1	0	1	1	0	0	1
521:	2	2	1	1	0	2	1	0
529:	1	1	3	2	1	1	0	0
537:	0	1	0	0	0	0	0	0
545:	0	0	0	2	0	0	0	0
553:	0	0	0	0	0	0	1	0
561:	0	0	0	0	0	0	0	0
569:	0	0	0	0	0	0	0	0
577:	0	0	0	0	0	1	0	0
585:	0	0	0	0	0	1	0	0
593:	0	0	0	0	0	1	0	0
601:	0	0	0	0	0	2	0	0
609:	0	0	1	0	1	0	2	0
617:	0	1	0	0	0	0	0	3
625:	0	2	0	1	1	1	3	1
633:	1	1	2	2	0	1	1	0
641:	2	6	1	4	0	2	1	4
649:	4	2	3	2	2	5	6	4
657:	7	5	3	10	3	6	4	5
665:	7	1	1	3	1	0	1	0
673:	0	1	0	0	0	0	0	0
681:	0	0	0	0	0	0	0	0
689:	0	0	0	0	0	0	0	0
697:	0	0	0	0	0	0	0	0
705:	0	0	0	0	0	0	0	0
713:	0	0	0	0	1	0	1	0
721:	0	0	0	1	0	0	0	1
729:	2	0	0	0	0	0	1	0
737:	1	1	0	1	1	2	3	0
745:	1	3	1	2	3	1	1	3
753:	1	1	0	1	0	0	0	1
761:	0	0	0	0	0	0	0	0
769:	0	0	0	0	0	0	0	0
777:	0	0	0	0	0	0	0	0
785:	0	0	1	1	0	0	0	0
793:	2	0	0	1	0	0	0	1

801: 0 1 0 0 1 0 0 0

Sample Title: 09

Channel	-----	-----	-----	-----	-----	-----	-----	-----
809:	0	0	0	0	0	0	0	0
817:	0	0	0	0	0	0	0	1
825:	0	0	0	0	0	0	0	0
833:	0	0	0	0	0	0	0	1
841:	1	0	0	0	0	0	0	1
849:	1	0	0	0	0	0	0	0
857:	0	0	0	0	1	0	0	0
865:	0	0	0	0	0	0	0	0
873:	0	0	0	0	0	0	0	0
881:	0	0	0	0	0	0	0	0
889:	0	0	0	0	0	0	0	0
897:	0	0	0	0	0	0	0	0
905:	0	0	0	0	0	0	0	0
913:	0	0	2	0	0	1	0	0
921:	0	0	0	0	0	0	0	0
929:	0	1	0	0	0	0	0	0
937:	1	0	0	1	2	2	1	1
945:	0	0	4	1	2	0	0	0
953:	1	0	3	0	1	2	1	0
961:	1	0	0	0	0	0	0	0
969:	0	0	0	2	0	0	0	0
977:	0	0	0	0	0	0	0	0
985:	0	0	0	0	0	0	0	0
993:	0	0	1	0	0	0	0	0
1001:	0	0	0	0	0	0	0	0
1009:	0	0	0	0	0	0	0	0
1017:	0	0	0	0	0	0	0	0

Apex-Alpha™

105
11/2/15

Sample Description: CP4105S14-15
 Spectrum File: \\OR-ALPHA1\Canberra\ApexAlpha\Root\Data\00001329
 Batch Identification: 1510086A-TH
 Sample Identification: 10
 Sample Geometry: Shelf 2
 Procedure Description: Th iso

Detector Name: Alpha_060
 Chamber Serial Number: 10006125B
 Detector Serial Number: 60
 Env. Background: System Bkgd 133290
 Reagent Blank: <not performed>

Sample Size: 1.546E+000 +/- 0.000E+000 gram
 Sample Date/Time: 10/6/2015 5:58:14 AM
 Acquisition Date/Time: 11/2/2015 8:30:05 AM
 Acquisition Live Time: 170.0 minutes
 Acquisition Real Time: 170.0 minutes

Tracer Certificate: Th229_S_TH-18A
 Tracer Quantity: 0.224 mL
 Effective Efficiency: 0.1640 +/- 0.0148
 Counting Efficiency: 0.1543 +/- 0.0028 on 12/13/2014 2:22:05 PM
 Chem. Recovery Factor: 1.0629 +/- 0.0977

Peak Match Tolerance: 0.175 MeV

----- PEAK AREA REPORT -----						
Nuclide	Energy (MeV)	Net Pk Area	Pk Area Error %	Ambient Backgnd	Reagent Backgnd	FWHM (keV)
TH-227	5.825	10.49	62.21	0.51	0.00E+000	4.5
TH-228	5.387	153.79	15.94	2.21	0.00E+000	13.1
TH-229 T	4.878	140.32	16.59	0.68	0.00E+000	11.1
TH-230	4.638	123.66	17.65	0.34	0.00E+000	9.7
TH-232	3.972	139.00	16.68	0.00	0.00E+000	8.8

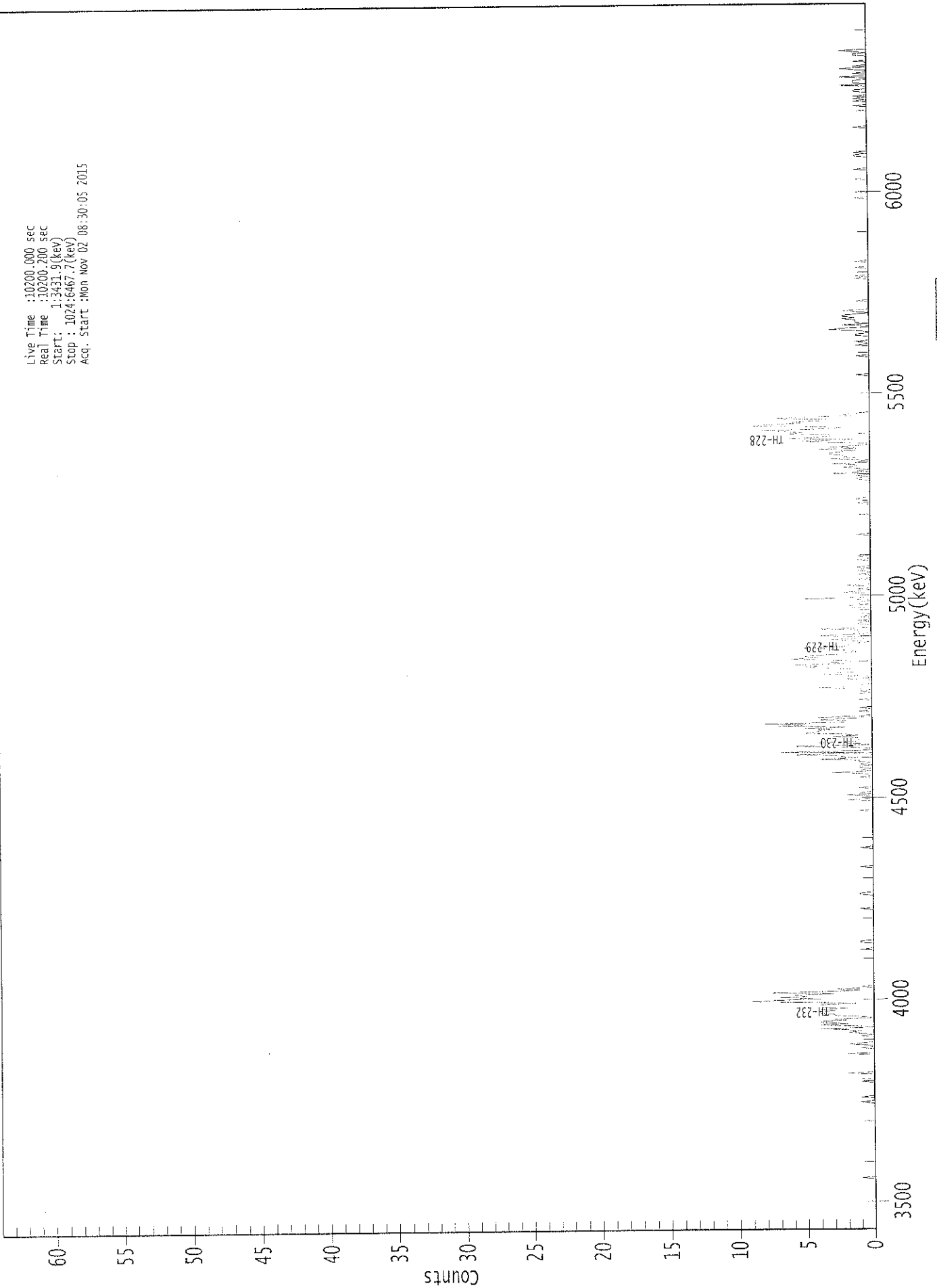
T = Tracer Peak used for Effective Efficiency

----- NUCLIDE ANALYSIS RESULTS -----						
Nuclide	Id Conf.	Energy (keV)	Activity (pCi/gram)	MDA (pCi/gram)		
TH-227	0.997	5850.00*	1.13E-001 +/- 7.29E-002	5.64E-002	+/-	9.97E-003
TH-228	0.999	5400.00*	1.65E+000 +/- 3.93E-001	8.59E-002	+/-	1.52E-002
TH-229	1.000	4872.00*	1.47E+000 +/- 2.60E-001	5.93E-002	+/-	1.05E-002
TH-230	0.994	4672.00*	1.30E+000 +/- 3.23E-001	5.01E-002	+/-	8.85E-003
TH-232	0.997	3997.00*	1.45E+000 +/- 3.53E-001	6.27E-002	+/-	1.11E-002

AG
11/2/15

0000132900.CNF

Live Time : 10200.000 sec
Real Time : 10200.200 sec
Start : 1:3431.9 (rev)
Stop : 1024:6467.7 (kev)
Acq. Start : Mon Nov 02 08:30:05 2015



ROI Type: 1

ROI Type: 3

 ***** S P E C T R A L D A T A R E P O R T *****

Sample Title: 10

Elapsed Live time: 10200
 Elapsed Real Time: 10200

Channel	1	2	3	4	5	6	7	8	9
1:	0	0	0	0	0	0	0	0	0
9:	0	0	0	0	0	0	0	0	0
17:	0	0	0	0	0	0	0	0	0
25:	0	0	0	0	0	0	0	0	0
33:	0	0	0	0	0	0	0	0	0
41:	0	0	0	1	0	0	0	0	0
49:	0	0	0	0	0	0	0	0	0
57:	0	0	0	0	0	0	0	0	0
65:	0	0	0	0	0	0	0	0	0
73:	0	0	0	0	0	0	0	0	0
81:	0	0	0	0	0	0	0	0	0
89:	0	0	0	0	0	0	0	0	0
97:	0	0	0	0	0	0	0	0	0
105:	0	0	1	0	0	0	1	0	0
113:	0	0	0	0	0	0	0	0	0
121:	0	0	0	1	0	1	0	0	0
129:	0	0	2	0	0	0	0	0	0
137:	0	0	0	0	0	0	0	0	0
145:	0	0	2	0	0	0	0	0	1
153:	0	0	2	1	0	0	0	0	0
161:	0	1	0	1	2	1	2	4	4
169:	0	1	4	2	4	4	2	3	3
177:	0	1	3	3	4	4	3	4	4
185:	2	4	4	4	1	5	9	7	7
193:	4	7	5	6	3	8	3	1	1
201:	3	0	1	0	0	0	0	0	0
209:	0	0	0	0	0	0	0	0	0
217:	0	0	0	0	0	0	0	0	0
225:	0	0	0	0	0	0	0	0	0
233:	0	1	0	0	0	0	0	1	1
241:	1	0	0	0	0	0	0	0	0
249:	0	0	0	0	0	0	0	0	0
257:	0	0	0	0	0	0	0	0	0
265:	0	0	0	1	0	0	0	0	0
273:	0	0	0	0	0	0	0	1	1
281:	1	0	0	0	0	0	0	0	0
289:	0	0	0	0	0	0	0	0	0
297:	0	0	0	0	0	0	1	0	0
305:	0	0	0	0	0	0	0	0	0
313:	0	0	0	0	0	0	1	0	0
321:	0	0	0	0	0	0	0	0	0
329:	0	0	0	0	0	0	0	0	0
337:	0	0	0	0	0	0	0	0	0
345:	0	0	0	0	0	1	0	0	0
353:	0	0	0	0	0	0	2	0	0
361:	0	0	2	0	1	0	0	0	0

369: 1 0 0 0 0 0 0 0 0

Sample Title: 10

Channel	1	2	3	4	5	6	7	8	9
377:	0	1	0	0	1	3	0	1	
385:	0	1	1	0	1	0	1	1	
393:	4	1	2	3	6	0	7	1	
401:	0	0	2	6	0	1	4	1	
409:	1	1	1	3	1	2	5	4	
417:	4	3	5	2	7	5	8	2	
425:	2	4	1	4	1	0	0	0	
433:	1	0	0	1	0	0	0	0	
441:	0	0	1	0	0	0	0	1	
449:	0	1	0	1	4	1	1	0	
457:	0	0	0	2	0	2	1	4	
465:	3	1	1	1	3	5	4	6	
473:	2	3	0	4	6	4	5	4	
481:	2	2	1	2	3	5	2	2	
489:	1	1	0	2	3	0	0	4	
497:	2	0	1	1	1	4	0	0	
505:	0	1	1	0	1	0	0	1	
513:	0	0	1	1	1	0	0	2	
521:	2	0	1	1	0	0	5	0	
529:	0	0	0	2	1	0	1	0	
537:	0	2	0	0	0	0	1	0	
545:	0	0	1	0	0	1	1	0	
553:	1	0	0	0	0	0	1	0	
561:	0	1	0	0	0	0	0	0	
569:	0	0	0	0	0	0	0	0	
577:	0	0	0	1	0	0	0	0	
585:	0	0	0	0	0	0	0	0	
593:	0	0	0	0	0	0	0	0	
601:	0	0	0	0	0	1	0	0	
609:	1	1	0	0	0	0	0	0	
617:	0	0	0	0	0	0	0	0	
625:	0	1	1	0	1	0	3	0	
633:	1	0	1	2	1	1	3	0	
641:	1	0	3	1	2	2	3	3	
649:	2	1	4	1	3	1	0	0	
657:	4	5	1	6	4	3	3	6	
665:	5	6	8	4	2	4	9	7	
673:	5	6	3	3	7	5	1	2	
681:	1	0	0	0	0	0	0	0	
689:	0	0	0	0	0	0	0	0	
697:	0	0	0	0	0	0	0	0	
705:	0	0	0	0	0	0	0	0	
713:	1	0	0	0	0	0	0	0	
721:	0	0	0	0	0	0	0	0	
729:	1	0	0	0	0	0	0	0	
737:	0	1	0	0	1	0	0	0	
745:	0	1	1	0	0	1	3	2	
753:	0	0	2	0	1	1	1	2	
761:	1	2	2	1	0	1	2	0	
769:	0	0	0	0	0	0	1	0	
777:	0	0	0	0	0	0	0	0	
785:	0	0	0	0	0	0	0	0	
793:	0	1	0	1	0	0	0	0	

801: 0 0 1 0 0 0 0 0 1

Sample Title: 10

Channel	1	2	3	4	5	6	7	8
809:	0	0	0	0	0	0	0	0
817:	0	0	0	0	0	0	0	0
825:	0	0	0	0	0	0	0	0
833:	0	0	0	0	0	0	0	0
841:	0	0	0	0	0	0	0	0
849:	0	0	0	0	0	0	0	0
857:	0	0	0	0	1	0	0	0
865:	0	1	0	0	0	0	0	0
873:	0	0	0	0	1	0	0	0
881:	0	0	0	0	1	0	0	0
889:	0	0	0	0	0	0	0	1
897:	1	0	1	0	0	0	0	0
905:	0	0	0	0	0	0	0	0
913:	0	0	0	0	0	0	0	1
921:	0	0	0	0	0	0	0	0
929:	0	0	0	0	0	0	0	0
937:	0	1	0	0	0	1	0	1
945:	0	1	0	0	0	1	1	0
953:	0	0	2	0	1	1	1	0
961:	0	2	0	0	1	0	0	1
969:	2	0	1	0	0	0	1	0
977:	0	0	0	1	1	0	1	2
985:	0	0	0	0	0	0	0	0
993:	0	0	0	0	0	0	0	0
1001:	0	0	0	0	0	0	0	0
1009:	0	0	0	0	0	0	0	0
1017:	0	0	0	0	0	0	0	0

108
11/2/15

Apex-Alpha™

Sample Description: CP4105S16-17
 Spectrum File: \\OR-ALPHA1\Canberra\ApexAlpha\Root\Data\00001329
 Batch Identification: 1510086A-TH
 Sample Identification: 11
 Sample Geometry: Shelf 2
 Procedure Description: Th iso

Detector Name: Alpha_003
 Chamber Serial Number:
 Detector Serial Number: 3
 Env. Background: System Bkgd 133256
 Reagent Blank: <not performed>

Sample Size: 1.533E+000 +/- 0.000E+000 gram
 Sample Date/Time: 10/6/2015 5:58:14 AM
 Acquisition Date/Time: 11/2/2015 8:30:51 AM
 Acquisition Live Time: 170.0 minutes
 Acquisition Real Time: 170.0 minutes

Tracer Certificate: Th229_S_TH-18A
 Tracer Quantity: 0.224 mL
 Effective Efficiency: 0.1960 +/- 0.0163
 Counting Efficiency: 0.1742 +/- 0.0031 on 10/25/2014 6:43:48 PM
 Chem. Recovery Factor: 1.1255 +/- 0.0957

Peak Match Tolerance: 0.175 MeV

 PEAK AREA REPORT

Nuclide	Energy (MeV)	Net Pk Area	Pk Area Error %	Ambient Backgnd	Reagent Backgnd	FWHM (keV)
TH-227	5.806	23.32	41.27	0.68	0.00E+000	3.0
TH-228	5.368	136.32	16.84	0.68	0.00E+000	22.4
TH-229 T	4.867	167.83	15.14	0.17	0.00E+000	18.3
TH-230	4.628	145.98	16.29	1.02	0.00E+000	18.7
TH-232	3.947	146.83	16.19	0.17	0.00E+000	9.2

T = Tracer Peak used for Effective Efficiency

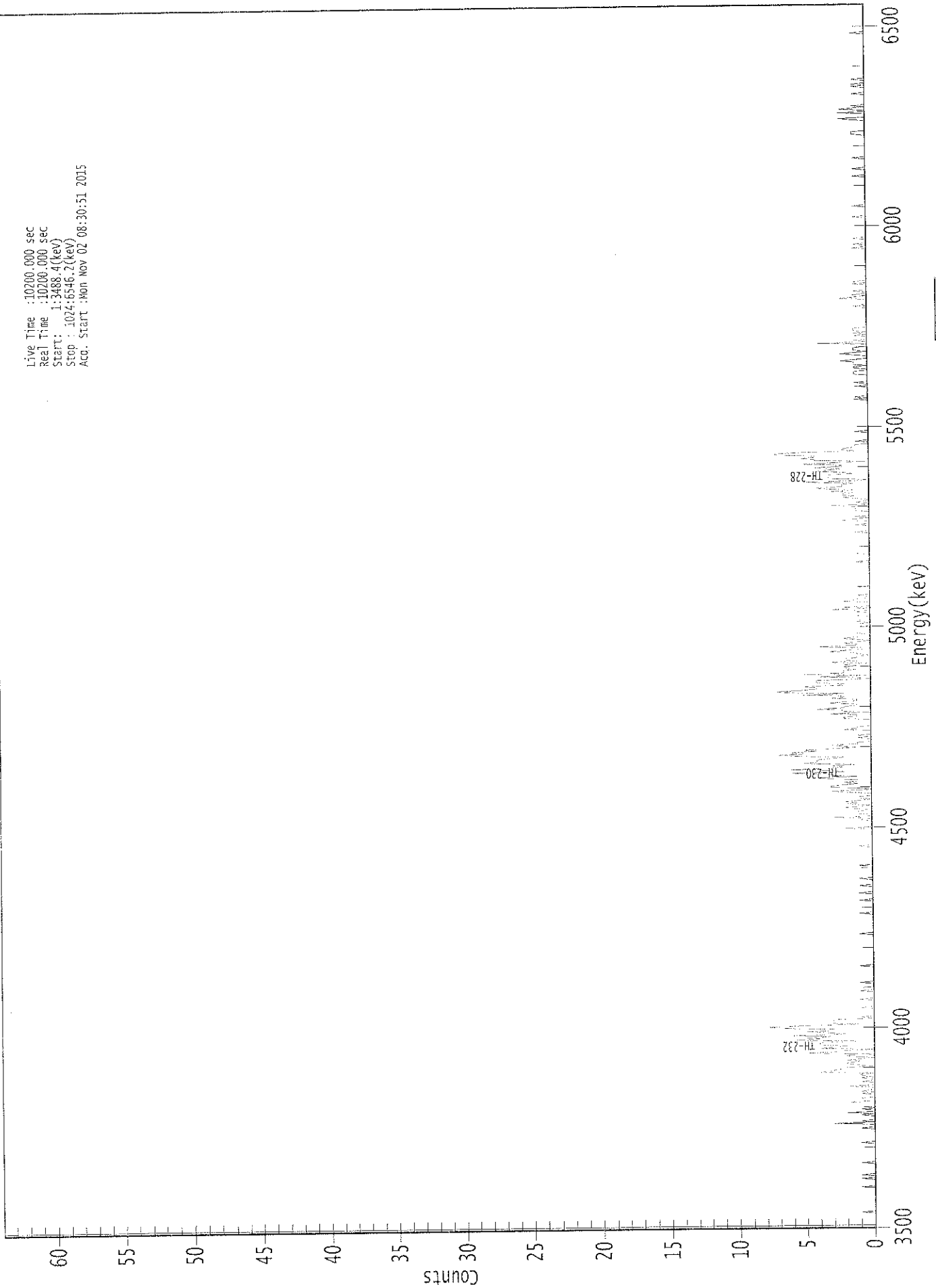
 NUCLIDE ANALYSIS RESULTS

Nuclide	Id Conf.	Energy (keV)	Activity (pCi/gram)	MDA (pCi/gram)
TH-227	0.990	5850.00*	2.11E-001 +/- 9.38E-002	5.11E-002 +/- 8.34E-003
TH-228	0.995	5400.00*	1.24E+000 +/- 2.90E-001	5.11E-002 +/- 8.34E-003
TH-229	1.000	4872.00*	1.49E+000 +/- 2.43E-001	3.70E-002 +/- 6.03E-003
TH-230	0.990	4672.00*	1.29E+000 +/- 2.97E-001	5.57E-002 +/- 9.08E-003
TH-232	0.987	3997.00*	1.29E+000 +/- 2.98E-001	3.68E-002 +/- 6.00E-003

AG
11/2/15

0000132901.CNF

Live Time : 10200.000 sec
Real Time : 10200.000 sec
Start : 1:34:88.4(keV)
Stop : 1024:6546.2(keV)
Acq. Start : Mon Nov 02 08:30:31 2015



002000

ROI Type: 1

ROI Type: 3

 ***** S P E C T R A L D A T A R E P O R T *****

Sample Title: 11

Elapsed Live time: 10200
 Elapsed Real Time: 10200

Channel	10200	10200	0	0	0	0	0	0
1:	10200	10200	0	0	0	0	0	0
9:	0	0	0	0	0	1	0	0
17:	0	0	0	0	0	0	0	0
25:	0	0	0	0	0	0	0	0
33:	0	0	1	0	0	0	0	0
41:	0	1	0	0	1	0	0	0
49:	0	0	0	0	0	0	1	0
57:	0	0	0	0	0	0	0	0
65:	0	0	0	0	0	0	0	1
73:	0	0	0	0	0	0	0	0
81:	0	0	0	1	0	0	0	3
89:	0	1	0	0	0	0	1	0
97:	2	0	0	1	0	0	0	0
105:	0	2	0	0	1	0	0	0
113:	1	0	1	0	0	0	2	0
121:	0	0	1	0	0	1	0	1
129:	1	0	4	3	3	2	2	0
137:	1	2	2	1	2	1	0	2
145:	2	0	5	3	2	0	4	3
153:	2	4	4	4	1	6	4	5
161:	3	6	2	3	5	3	3	6
169:	8	6	1	3	3	3	3	0
177:	1	0	0	0	0	0	0	0
185:	1	0	0	0	0	0	0	1
193:	0	0	0	0	0	0	1	0
201:	0	0	0	0	0	1	0	0
209:	0	0	0	0	0	0	0	0
217:	0	0	0	1	0	0	0	0
225:	0	0	0	0	0	0	0	0
233:	0	0	0	0	0	0	0	0
241:	0	0	0	0	0	0	1	0
249:	0	0	0	0	0	0	0	0
257:	0	0	0	0	0	0	0	1
265:	0	0	0	0	0	0	0	0
273:	0	0	1	0	0	0	0	0
281:	1	0	0	0	0	0	1	0
289:	0	0	0	0	1	0	0	0
297:	0	0	0	0	0	0	0	1
305:	0	0	0	0	0	0	0	0
313:	0	0	0	0	0	0	0	1
321:	0	0	0	0	0	0	0	0
329:	0	0	0	0	0	0	2	0
337:	0	0	0	0	0	1	0	3
345:	0	0	1	1	1	0	1	2
353:	1	0	2	1	2	1	0	1
361:	1	0	0	0	2	3	0	0

369: 3 3 2 1 2 1 1 3

Sample Title: 11

Channel	1	2	3	4	5	6	7	8	9
377:	4	1	3	3	6	2	3	6	
385:	3	2	3	1	5	4	4	4	
393:	3	2	5	7	5	6	4	5	
401:	3	1	2	3	1	1	0	0	
409:	0	1	0	1	0	0	0	0	
417:	2	1	1	0	0	0	0	0	
425:	0	2	2	1	1	3	0	2	
433:	2	4	2	2	1	1	3	2	
441:	1	1	3	2	2	5	2	6	
449:	7	5	4	4	5	2	2	4	
457:	4	4	0	1	4	0	5	2	
465:	2	2	1	2	2	1	2	0	
473:	3	1	2	2	1	1	0	1	
481:	1	3	2	0	0	4	1	1	
489:	2	1	0	1	2	1	0	0	
497:	1	0	0	0	0	0	1	1	
505:	1	0	1	1	0	0	0	1	
513:	0	0	1	0	3	0	2	0	
521:	0	0	0	2	1	1	0	0	
529:	1	0	0	0	0	0	0	1	
537:	0	0	0	0	0	0	0	0	
545:	0	0	0	0	0	0	0	0	
553:	0	0	0	0	1	0	0	0	
561:	0	0	0	1	0	0	0	0	
569:	0	0	0	0	0	0	0	0	
577:	0	0	0	0	0	1	0	0	
585:	0	0	0	1	0	0	0	2	
593:	1	0	1	0	0	0	0	1	
601:	1	1	1	3	0	0	1	0	
609:	0	1	2	1	2	2	1	3	
617:	1	3	4	2	2	2	1	5	
625:	1	0	3	3	3	3	1	2	
633:	4	3	2	4	2	2	5	3	
641:	0	4	4	5	4	4	7	7	
649:	5	1	2	2	1	1	1	0	
657:	0	1	0	0	0	0	0	0	
665:	0	1	0	0	0	0	0	0	
673:	0	0	0	0	0	0	0	0	
681:	0	0	0	0	0	0	0	0	
689:	0	0	0	0	1	0	1	0	
697:	0	0	0	0	0	0	0	1	
705:	0	0	1	0	0	0	0	0	
713:	0	1	1	1	0	0	1	1	
721:	0	1	1	1	2	1	0	0	
729:	0	1	2	1	0	1	1	1	
737:	0	0	0	4	0	1	0	0	
745:	0	1	0	1	0	1	1	1	
753:	0	0	0	0	0	0	0	0	
761:	0	0	0	0	0	0	0	0	
769:	0	1	1	0	0	0	0	0	
777:	2	1	0	1	0	0	1	0	
785:	0	0	0	0	1	0	1	0	
793:	0	0	0	0	0	0	0	0	

801: 0 0 0 0 0 0 0 0 0

Sample Title: 11

Channel	1	2	3	4	5	6	7	8	9
809:	0	0	0	0	0	0	0	0	0
817:	0	0	1	0	0	0	1	0	0
825:	0	0	1	0	0	0	0	0	0
833:	0	0	0	0	0	0	0	0	0
841:	0	0	0	0	0	1	0	0	0
849:	0	0	0	0	0	0	1	0	0
857:	0	0	0	0	0	0	0	0	0
865:	0	0	0	0	0	0	0	0	0
873:	0	0	0	0	0	0	0	1	0
881:	0	0	0	0	0	1	0	0	0
889:	0	0	0	0	0	0	1	0	0
897:	0	0	0	0	0	0	0	0	0
905:	0	0	0	0	0	0	0	0	0
913:	0	1	1	1	0	0	0	0	0
921:	0	0	0	0	0	0	1	2	0
929:	0	0	0	2	0	0	0	2	1
937:	0	1	0	0	0	0	0	0	0
945:	0	0	0	1	0	0	0	0	0
953:	0	1	0	1	0	0	0	0	1
961:	0	0	0	0	0	0	0	0	0
969:	0	0	0	0	0	0	0	0	0
977:	0	0	0	0	0	0	0	0	0
985:	0	0	0	0	0	0	0	0	0
993:	0	0	0	0	0	0	0	1	0
1001:	0	0	0	0	0	0	0	0	0
1009:	0	0	0	0	0	0	0	0	0
1017:	0	0	0	0	0	0	0	0	0

Apex-Alpha™

KB
11/2/15

Sample Description: CP040S03-04
 Spectrum File: \\OR-ALPHA1\Canberra\ApexAlpha\Root\Data\00001329
 Batch Identification: 1510086A-TH
 Sample Identification: 12
 Sample Geometry: Shelf 2
 Procedure Description: Th iso

Detector Name: Alpha_004
 Chamber Serial Number:
 Detector Serial Number: 4
 Env. Background: System Bkgd 133257
 Reagent Blank: <not performed>

Sample Size: 1.512E+000 +/- 0.000E+000 gram
 Sample Date/Time: 10/8/2015 5:58:14 AM
 Acquisition Date/Time: 11/2/2015 8:30:52 AM
 Acquisition Live Time: 170.0 minutes
 Acquisition Real Time: 170.0 minutes

Tracer Certificate: Th229_S_TH-18A
 Tracer Quantity: 0.224 mL
 Effective Efficiency: 0.2098 +/- 0.0170
 Counting Efficiency: 0.1892 +/- 0.0033 on 10/25/2014 6:43:53 PM
 Chem. Recovery Factor: 1.1090 +/- 0.0920

Peak Match Tolerance: 0.175 MeV

 PEAK AREA REPORT

Nuclide	Energy (MeV)	Net Pk Area	Pk Area Error %	Ambient Backgnd	Reagent Backgnd	FWHM (keV)
TH-227	5.826	13.66	53.80	0.34	0.00E+000	2.9
TH-228	5.376	140.15	16.61	0.85	0.00E+000	5.0
TH-229 T	4.873	179.15	14.68	0.85	0.00E+000	5.3
TH-230	4.628	158.47	15.66	1.53	0.00E+000	11.8
TH-232	3.954	140.49	16.57	0.51	0.00E+000	5.1

T = Tracer Peak used for Effective Efficiency

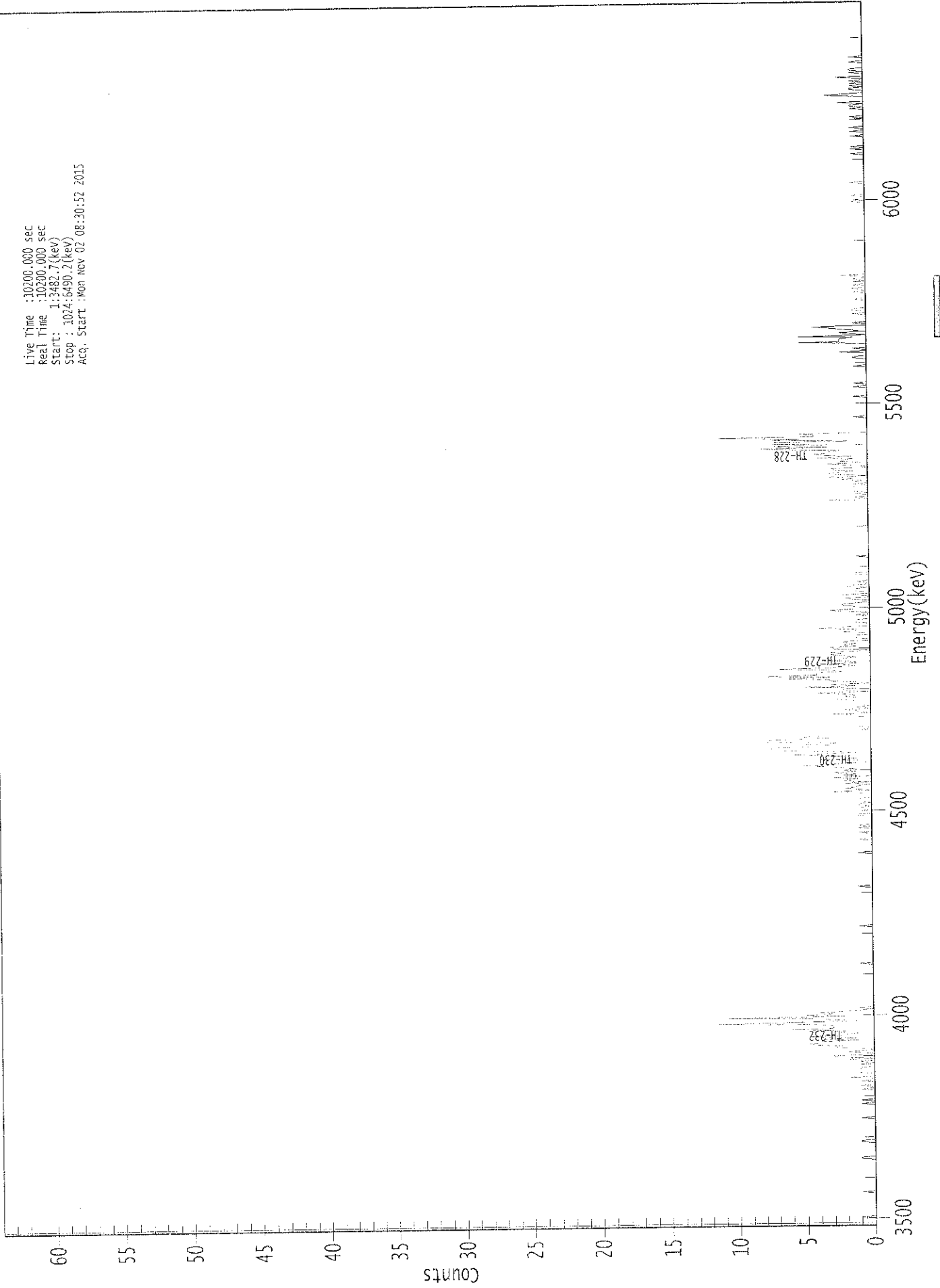
 NUCLIDE ANALYSIS RESULTS

Nuclide	Id Conf.	Energy (keV)	Activity (pCi/gram)	MDA (pCi/gram)
TH-227	0.997	5850.00*	1.17E-001 +/- 6.58E-002	4.10E-002 +/- 6.52E-003
TH-228	0.997	5400.00*	1.20E+000 +/- 2.76E-001	5.13E-002 +/- 8.15E-003
TH-229	1.000	4872.00*	1.50E+000 +/- 2.39E-001	5.02E-002 +/- 7.98E-003
TH-230	0.990	4672.00*	1.33E+000 +/- 2.96E-001	5.95E-002 +/- 9.45E-003
TH-232	0.990	3997.00*	1.17E+000 +/- 2.69E-001	4.38E-002 +/- 6.96E-003

AG
11/2/15

0000132902.CNF

Live Time : 10200.000 sec
Real Time : 10200.000 sec
Start : 1:3482.7(keV)
Stop : 1024.6490.2(keV)
Acq. Start : Mon Nov 02 08:30:52 2015



ROI Type: 1

ROI Type: 3

 ***** S P E C T R A L D A T A R E P O R T *****

Sample Title: 12

Elapsed Live time: 10200
 Elapsed Real Time: 10200

Channel	-----	-----	-----	-----	-----	-----	-----	-----
1:	10200	10200	0	0	0	0	0	1
9:	0	0	0	0	0	0	0	0
17:	0	0	0	0	0	0	0	0
25:	0	0	0	0	1	0	0	0
33:	0	0	0	0	0	0	0	0
41:	0	0	0	0	0	0	0	0
49:	0	0	0	0	0	0	0	0
57:	1	1	0	0	0	0	0	0
65:	0	0	0	0	0	0	1	1
73:	0	0	0	0	0	0	0	0
81:	0	0	0	0	0	0	0	0
89:	0	0	1	0	0	0	0	0
97:	0	0	0	0	0	0	1	0
105:	0	1	0	0	0	0	0	0
113:	0	0	1	0	0	1	0	0
121:	0	1	0	0	2	0	0	0
129:	1	1	1	1	1	0	0	1
137:	0	1	0	2	0	3	3	0
145:	0	2	1	0	1	3	2	4
153:	5	4	4	1	4	1	5	2
161:	2	1	3	2	6	3	3	3
169:	4	12	6	1	3	4	11	2
177:	5	3	4	2	1	0	1	0
185:	0	0	0	0	0	0	0	0
193:	0	0	0	0	0	0	0	0
201:	0	0	0	0	0	0	0	0
209:	0	0	0	0	0	0	0	0
217:	0	0	0	1	0	0	0	0
225:	0	0	0	0	0	0	0	0
233:	0	0	0	0	0	0	0	0
241:	0	0	0	0	0	0	0	0
249:	0	0	1	0	0	0	0	0
257:	0	0	0	0	0	0	0	0
265:	0	0	0	0	0	0	0	0
273:	0	0	0	0	0	0	0	0
281:	0	0	0	1	0	0	0	0
289:	0	0	0	0	0	0	0	0
297:	0	0	0	0	0	0	0	0
305:	0	0	0	0	0	0	0	1
313:	0	0	0	0	0	0	0	0
321:	0	0	1	0	0	0	0	0
329:	1	0	0	0	1	0	1	0
337:	0	0	0	0	0	0	1	1
345:	0	0	0	0	0	1	0	1
353:	1	0	1	1	1	0	0	0
361:	0	1	3	0	1	2	1	1

369: 0 2 0 2 2 1 3 0

Sample Title: 12

Channel	1	2	3	4	5	6	7	8
377:	2	1	3	1	2	1	2	3
385:	5	3	2	0	0	4	1	4
393:	2	6	3	1	4	7	7	8
401:	4	3	5	2	8	8	7	3
409:	5	4	3	3	1	0	0	0
417:	0	1	0	0	0	0	0	0
425:	0	1	1	3	0	1	1	2
433:	0	1	0	1	1	1	1	2
441:	3	1	2	1	2	4	0	2
449:	2	1	5	1	3	0	1	3
457:	3	6	3	8	4	4	4	2
465:	3	7	3	2	1	4	1	1
473:	3	2	2	1	2	3	2	3
481:	1	0	3	3	1	2	1	2
489:	2	0	0	1	1	1	0	0
497:	2	1	1	4	2	0	0	0
505:	1	1	1	0	0	0	1	0
513:	0	2	3	1	1	1	2	2
521:	1	0	0	1	2	0	0	2
529:	0	0	1	1	1	0	2	1
537:	0	0	1	0	0	0	0	0
545:	1	1	0	0	0	0	0	0
553:	0	0	0	0	0	0	0	1
561:	0	0	0	0	0	0	0	0
569:	0	0	0	0	0	0	0	0
577:	0	0	0	0	0	0	0	0
585:	0	0	0	0	0	0	0	0
593:	0	0	0	0	0	0	0	0
601:	0	0	0	0	0	0	3	0
609:	1	0	0	1	0	1	1	1
617:	1	1	1	1	0	1	0	2
625:	1	3	0	2	3	2	1	3
633:	3	0	0	2	3	0	2	2
641:	1	4	1	3	4	3	3	2
649:	6	8	3	7	3	7	7	1
657:	7	5	11	4	4	5	0	0
665:	0	0	0	0	0	0	0	0
673:	0	0	0	1	0	0	0	0
681:	0	0	0	0	0	0	0	0
689:	0	0	0	0	1	0	0	0
697:	0	0	0	0	1	0	0	1
705:	0	0	0	0	0	0	0	0
713:	0	0	0	0	0	1	0	0
721:	0	0	0	0	1	1	0	0
729:	0	2	0	0	1	0	0	0
737:	0	5	2	2	2	1	5	0
745:	1	2	0	1	2	3	4	0
753:	0	1	0	0	0	0	0	0
761:	0	1	0	0	1	1	0	0
769:	0	0	0	0	0	1	0	0
777:	0	0	0	1	0	0	1	0
785:	0	1	0	0	1	0	1	0
793:	0	2	0	0	0	0	0	0

801: 0 0 0 0 0 0 0 0 0

Sample Title: 12

Channel	-----	-----	-----	-----	-----	-----	-----	-----
809:	0	0	0	0	0	0	0	0
817:	0	0	0	0	0	0	0	0
825:	0	0	0	0	0	0	0	0
833:	0	0	0	0	0	0	0	0
841:	0	0	0	0	0	0	0	0
849:	0	0	0	0	0	0	0	1
857:	0	0	0	0	1	0	0	0
865:	0	0	0	0	0	0	0	1
873:	0	0	0	0	0	0	0	0
881:	0	0	0	0	0	0	0	0
889:	0	0	0	0	0	0	0	1
897:	0	0	0	1	0	1	0	0
905:	0	0	0	0	0	0	1	0
913:	0	0	1	0	0	1	0	0
921:	0	0	0	0	1	0	1	0
929:	0	0	0	0	0	1	0	1
937:	1	0	2	0	0	0	0	0
945:	3	2	0	0	0	1	1	0
953:	1	0	1	0	1	0	0	2
961:	0	0	0	1	0	1	1	0
969:	0	0	0	0	1	0	0	0
977:	1	0	0	0	0	0	0	0
985:	0	0	0	0	0	0	0	0
993:	0	0	0	0	0	0	0	0
1001:	0	0	0	0	0	0	0	0
1009:	0	0	0	0	0	0	0	0
1017:	0	0	0	0	0	0	0	0



KB
11/2/15

Sample Description: CP0404S05-06
 Spectrum File: \\OR-ALPHA1\Canberra\ApexAlpha\Root\Data\00001329
 Batch Identification: 1510086A-TH
 Sample Identification: 13
 Sample Geometry: Shelf 2
 Procedure Description: Th iso

Detector Name: Alpha_010
 Chamber Serial Number:
 Detector Serial Number: 10
 Env. Background: System Bkgd 133258
 Reagent Blank: <not performed>

Sample Size: 1.514E+000 +/- 0.000E+000 gram
 Sample Date/Time: 10/8/2015 5:58:14 AM
 Acquisition Date/Time: 11/2/2015 8:30:54 AM
 Acquisition Live Time: 170.0 minutes
 Acquisition Real Time: 170.0 minutes

Tracer Certificate: Th229_S_TH-18A
 Tracer Quantity: 0.223 mL
 Effective Efficiency: 0.1919 +/- 0.0163
 Counting Efficiency: 0.1921 +/- 0.0033 on 10/25/2014 6:44:30 PM
 Chem. Recovery Factor: 0.9991 +/- 0.0866

Peak Match Tolerance: 0.175 MeV

 PEAK AREA REPORT

Nuclide	Energy (MeV)	Net Pk Area	Pk Area Error %	Ambient Backgnd	Reagent Backgnd	FWHM (keV)
TH-227	5.800	13.96	56.77	2.04	0.00E+000	2.9
TH-228	5.382	120.11	18.13	2.89	0.00E+000	8.0
TH-229 T	4.879	163.77	15.49	3.23	0.00E+000	3.2
TH-230	4.637	152.79	15.99	2.21	0.00E+000	9.7
TH-232	3.964	141.81	16.54	1.19	0.00E+000	8.8

T = Tracer Peak used for Effective Efficiency

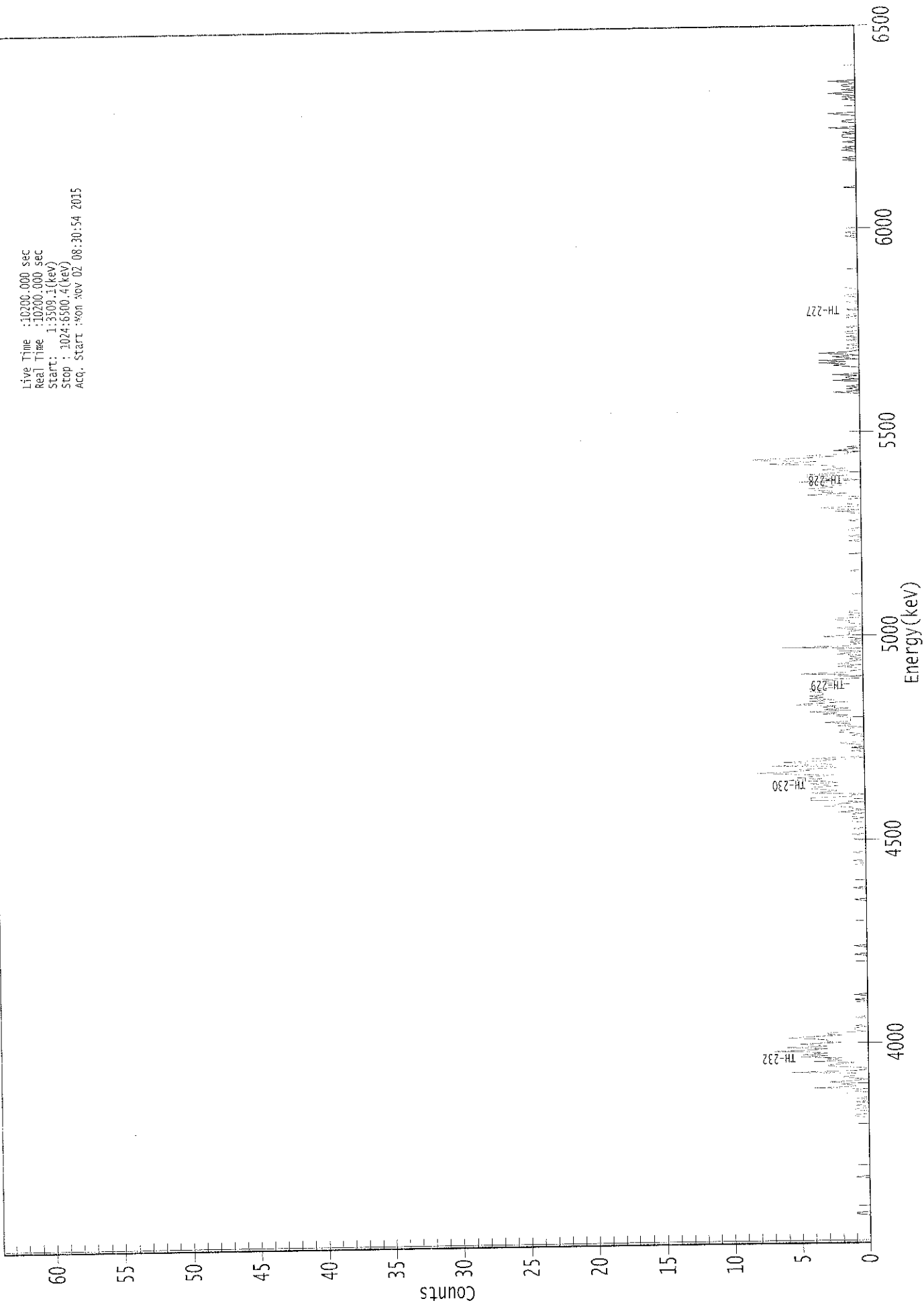
 NUCLIDE ANALYSIS RESULTS

Nuclide	Id Conf.	Energy (keV)	Activity (pCi/gram)	MDA (pCi/gram)
TH-227	0.987	5850.00*	1.31E-001 +/- 7.74E-002	7.30E-002 +/- 1.22E-002
TH-228	0.998	5400.00*	1.12E+000 +/- 2.77E-001	8.19E-002 +/- 1.36E-002
TH-229	1.000	4872.00*	1.50E+000 +/- 2.50E-001	8.34E-002 +/- 1.39E-002
TH-230	0.993	4672.00*	1.40E+000 +/- 3.22E-001	7.31E-002 +/- 1.22E-002
TH-232	0.994	3997.00*	1.29E+000 +/- 3.03E-001	6.01E-002 +/- 1.00E-002

AG
11/2/15

0000132903.CNF

Live Time :10200.000 sec
Real Time :10200.000 sec
Start: 1:3309.1(kev)
Stop : 3024:6300.4(kev)
Acq. Start :Mon Nov 02 08:30:54 2015



ROI Type: 3

ROI Type: 1

 ***** S P E C T R A L D A T A R E P O R T *****

Sample Title: 13

Elapsed Live time: 10200

Elapsed Real Time: 10200

Channel	10200	10200	0	0	0	0	0	0	0
1:	10200	10200	0	0	0	0	0	0	0
9:	0	0	0	0	0	0	0	0	0
17:	0	0	0	0	0	0	0	0	0
25:	1	1	0	0	0	0	0	0	0
33:	0	0	0	0	0	0	0	0	0
41:	0	0	0	0	0	0	0	0	0
49:	0	0	0	0	0	0	0	0	1
57:	0	0	0	0	0	0	0	0	0
65:	0	0	0	0	0	0	0	0	0
73:	0	0	0	0	0	0	0	0	0
81:	0	0	0	0	0	0	0	0	0
89:	0	0	0	0	0	0	0	0	0
97:	0	0	0	0	0	0	0	0	0
105:	0	0	1	1	0	0	0	0	1
113:	1	0	0	1	0	0	0	1	0
121:	0	1	0	0	0	0	0	0	1
129:	1	0	4	1	1	2	1	1	3
137:	1	0	1	2	1	1	1	1	6
145:	1	0	0	1	3	3	2	2	1
153:	4	2	3	2	5	3	5	3	3
161:	4	7	4	3	6	3	4	5	5
169:	2	3	3	4	6	4	2	3	3
177:	3	0	1	1	1	0	1	0	0
185:	0	0	0	0	0	0	1	0	0
193:	0	0	0	0	0	0	0	0	0
201:	0	0	0	0	0	1	0	0	0
209:	1	0	0	0	0	0	0	0	0
217:	0	0	0	0	0	0	0	0	0
225:	0	0	0	0	0	0	0	0	0
233:	0	0	0	0	0	0	0	0	0
241:	0	0	1	0	0	0	0	0	0
249:	0	1	0	0	0	0	0	0	0
257:	0	0	0	0	0	0	0	0	0
265:	0	0	0	0	0	0	0	0	0
273:	0	0	0	0	0	0	0	0	0
281:	0	0	0	0	0	0	0	0	0
289:	1	0	0	0	0	0	0	0	0
297:	0	0	1	0	0	0	0	0	0
305:	0	0	0	0	0	0	0	0	0
313:	0	0	0	0	0	0	0	1	0
321:	0	1	0	0	0	0	0	0	0
329:	1	0	0	0	0	0	0	0	0
337:	0	0	0	1	0	0	0	0	1
345:	0	0	0	0	1	0	0	0	0
353:	0	0	1	1	1	0	1	1	1
361:	1	0	2	1	0	1	1	3	3

369: 2 2 0 1 4 4 4 1

Sample Title: 13

Channel	1	2	3	4	5	6	7	8
377:	1	0	4	3	2	3	4	4
385:	2	3	4	2	3	6	3	5
393:	4	2	5	8	6	4	5	2
401:	2	7	2	4	6	3	2	4
409:	1	0	0	0	0	1	0	0
417:	1	0	0	1	2	0	0	0
425:	0	0	1	0	1	2	2	1
433:	1	0	2	1	1	3	1	1
441:	1	1	2	1	3	2	4	1
449:	3	1	3	2	5	4	1	4
457:	2	4	3	4	3	3	3	4
465:	3	4	2	2	2	1	3	3
473:	2	3	0	0	2	1	5	1
481:	1	0	0	1	2	0	2	1
489:	1	0	1	0	1	0	2	1
497:	0	2	2	0	6	1	1	0
505:	1	0	1	0	1	3	1	1
513:	1	1	0	1	2	0	0	0
521:	1	1	1	2	2	0	0	1
529:	0	1	1	0	0	0	0	0
537:	0	0	0	0	0	0	0	0
545:	0	0	0	0	0	0	0	0
553:	0	0	0	0	0	0	0	0
561:	0	0	0	0	1	0	0	0
569:	0	0	0	0	0	0	0	0
577:	0	0	1	0	0	0	0	0
585:	0	0	0	0	0	1	0	0
593:	0	1	0	0	0	0	1	1
601:	0	0	0	0	0	0	1	0
609:	0	0	0	0	0	0	2	0
617:	2	3	0	0	1	1	1	1
625:	1	0	0	2	4	1	3	2
633:	4	4	2	3	1	1	2	5
641:	0	1	3	4	1	4	2	1
649:	1	3	1	2	2	3	7	5
657:	3	7	8	4	2	4	1	1
665:	0	2	1	0	1	0	0	0
673:	0	0	0	0	0	0	0	0
681:	0	0	0	0	0	0	0	0
689:	0	0	0	0	0	0	0	0
697:	0	0	0	0	0	0	0	0
705:	0	0	0	0	0	0	0	0
713:	0	0	2	0	0	1	0	1
721:	0	0	0	0	2	0	1	1
729:	0	2	0	0	0	0	0	0
737:	1	2	1	3	1	3	0	1
745:	2	0	1	3	1	0	0	1
753:	0	0	1	0	0	0	1	0
761:	0	1	0	0	1	1	0	0
769:	0	1	0	0	0	0	0	0
777:	0	1	0	1	0	0	0	0
785:	1	0	0	0	0	0	1	0
793:	0	0	0	1	1	0	0	0

801: 0 0 1 0 0 0 0 0 0

Sample Title: 13

Channel	-----	-----	-----	-----	-----	-----	-----	-----
809:	0	0	0	0	0	0	0	0
817:	0	0	0	0	0	0	0	0
825:	0	0	0	0	0	0	0	0
833:	0	0	0	0	0	0	0	0
841:	0	0	0	0	0	1	0	0
849:	1	0	0	0	0	0	0	0
857:	0	0	0	0	0	0	0	0
865:	0	0	0	0	0	0	0	0
873:	0	0	0	0	0	0	0	0
881:	0	0	0	0	0	0	1	0
889:	0	0	0	0	0	0	0	0
897:	0	0	0	0	0	0	0	0
905:	0	0	0	0	0	1	0	1
913:	0	0	0	0	0	1	0	1
921:	0	0	0	0	1	0	0	0
929:	1	1	1	0	1	0	0	0
937:	2	0	0	0	0	1	1	0
945:	0	0	0	1	2	0	0	0
953:	0	0	0	0	0	0	0	0
961:	1	0	1	0	1	2	0	0
969:	1	0	0	1	1	0	0	2
977:	0	0	0	0	0	0	0	0
985:	0	0	0	0	0	0	0	0
993:	0	0	0	0	0	0	0	0
1001:	0	0	0	0	0	0	0	0
1009:	0	0	0	0	0	0	0	0
1017:	0	0	0	0	0	0	0	0



108
11/2/15

Sample Description: CP0404S07-08
 Spectrum File: \\OR-ALPHA1\Canberra\ApexAlpha\Root\Data\00001329
 Batch Identification: 1510086A-TH
 Sample Identification: 14
 Sample Geometry: Shelf 2
 Procedure Description: Th iso

Detector Name: Alpha_011
 Chamber Serial Number:
 Detector Serial Number: 11
 Env. Background: System Bkgd 133259
 Reagent Blank: <not performed>

Sample Size: 1.513E+000 +/- 0.000E+000 gram
 Sample Date/Time: 10/8/2015 5:58:14 AM
 Acquisition Date/Time: 11/2/2015 8:30:55 AM
 Acquisition Live Time: 170.0 minutes
 Acquisition Real Time: 170.0 minutes

Tracer Certificate: Th229_S_TH-18A
 Tracer Quantity: 0.225 mL
 Effective Efficiency: 0.2216 +/- 0.0175
 Counting Efficiency: 0.2004 +/- 0.0035 on 10/25/2014 6:44:33 PM
 Chem. Recovery Factor: 1.1060 +/- 0.0894

Peak Match Tolerance: 0.175 MeV

 PEAK AREA REPORT

Nuclide	Energy (MeV)	Net Pk Area	Pk Area Error %	Ambient Backgnd	Reagent Backgnd	FWHM (keV)
TH-227	5.812	19.98	45.14	1.02	0.00E+000	3.9
TH-228	5.362	146.60	16.41	3.40	0.00E+000	3.5
TH-229 T	4.881	190.32	14.24	0.68	0.00E+000	3.6
TH-230	4.635	163.15	15.39	0.85	0.00E+000	9.6
TH-232	3.965	144.66	16.32	0.34	0.00E+000	11.8

T = Tracer Peak used for Effective Efficiency

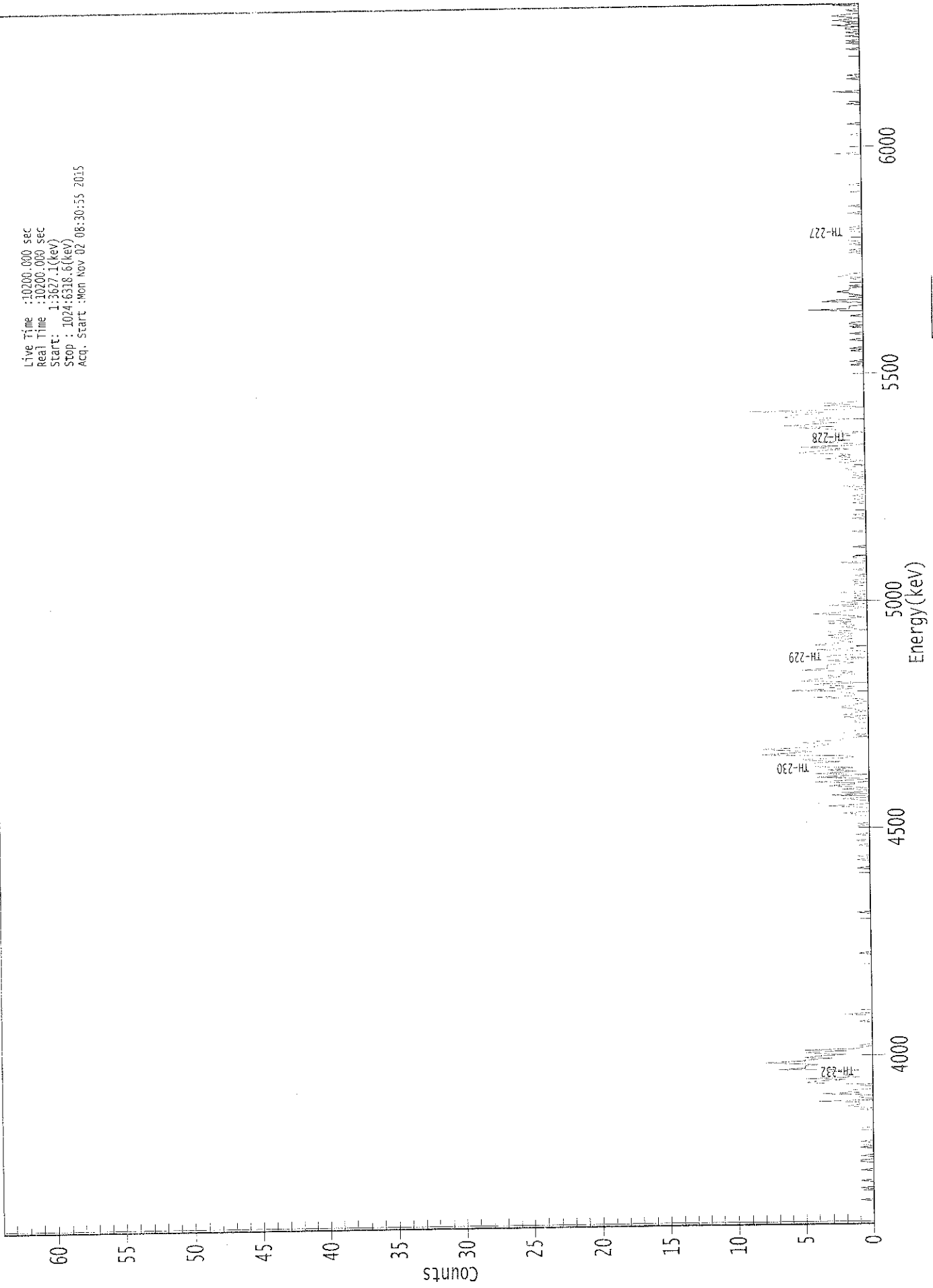
 NUCLIDE ANALYSIS RESULTS

Nuclide	Id Conf.	Energy (keV)	Activity (pCi/gram)	MDA (pCi/gram)
TH-227	0.993	5850.00*	1.62E-001 +/- 7.75E-002	5.12E-002 +/- 7.92E-003
TH-228	0.993	5400.00*	1.19E+000 +/- 2.68E-001	7.51E-002 +/- 1.16E-002
TH-229	1.000	4872.00*	1.51E+000 +/- 2.34E-001	4.48E-002 +/- 6.93E-003
TH-230	0.993	4672.00*	1.29E+000 +/- 2.82E-001	4.74E-002 +/- 7.34E-003
TH-232	0.995	3997.00*	1.14E+000 +/- 2.57E-001	3.78E-002 +/- 5.85E-003

AG
11/2/15

0000132904.CNF

Live Time :10209.000 sec
Real Time :10200.000 sec
Start : 1:3627.1(kev)
Stop : 1024:6318.6(kev)
Acq. Start : Mon Nov 02 08:30:55 2015



 ***** S P E C T R A L D A T A R E P O R T *****

Sample Title: 14

Elapsed Live time: 10200
 Elapsed Real Time: 10200

Channel	10200	10200	0	0	0	0	0	0	0
1:	10200	10200	0	0	0	0	0	0	0
9:	0	0	0	0	0	0	0	0	0
17:	0	0	0	0	1	0	0	0	0
25:	0	0	0	0	0	0	1	0	0
33:	0	0	0	0	1	0	0	0	0
41:	0	0	0	0	0	1	0	0	0
49:	0	0	0	0	1	1	0	0	0
57:	0	1	0	0	0	0	0	0	0
65:	1	0	0	0	0	1	0	0	0
73:	0	0	0	0	0	0	0	1	0
81:	1	0	0	0	0	0	0	0	0
89:	0	0	0	0	0	0	0	0	0
97:	1	0	1	2	1	1	1	1	4
105:	0	0	1	1	0	4	1	1	2
113:	2	0	0	0	1	0	4	5	5
121:	4	2	5	1	2	2	2	2	2
129:	3	1	7	5	5	5	4	6	6
137:	8	5	5	3	5	4	2	4	4
145:	5	2	5	1	1	0	1	0	0
153:	0	0	0	0	0	0	0	0	0
161:	0	0	0	0	0	0	0	0	0
169:	0	0	1	0	0	0	0	0	0
177:	2	0	0	0	0	0	0	0	0
185:	0	0	0	0	0	0	0	0	0
193:	0	0	0	0	0	0	0	0	0
201:	0	0	0	0	0	0	0	0	0
209:	0	0	0	0	0	0	0	0	0
217:	0	0	0	0	0	0	0	0	0
225:	0	0	0	1	0	0	0	0	0
233:	0	0	0	0	0	0	0	0	0
241:	0	0	0	0	0	0	0	0	0
249:	0	0	0	0	0	0	0	0	0
257:	0	0	0	0	0	1	0	0	0
265:	0	0	0	0	0	0	0	0	0
273:	0	0	0	0	0	0	0	0	0
281:	0	0	0	0	0	0	0	0	0
289:	0	0	0	0	0	0	0	0	0
297:	0	0	1	0	0	0	0	0	0
305:	0	1	0	0	1	0	0	0	0
313:	0	0	0	0	0	1	0	0	0
321:	0	1	0	0	0	0	1	0	0
329:	0	0	0	0	0	1	0	1	1
337:	0	0	0	0	0	0	1	1	1
345:	2	0	0	0	0	1	3	1	1
353:	0	0	0	1	2	0	0	3	3
361:	0	2	0	0	2	0	2	3	3

369: 1 1 4 2 0 1 4 2

Sample Title: 14

Channel	1	2	3	4	5	6	7	8
377:	0	4	2	1	3	2	1	4
385:	4	4	4	2	4	5	2	1
393:	2	8	7	5	4	7	8	4
401:	4	3	3	5	4	2	2	1
409:	0	1	0	2	1	1	1	0
417:	0	0	0	0	1	1	1	0
425:	2	0	2	1	1	0	1	1
433:	2	2	1	1	0	0	1	0
441:	2	4	1	1	1	2	2	6
449:	1	3	1	3	4	0	3	5
457:	4	3	2	3	1	2	1	2
465:	5	3	3	3	3	2	1	2
473:	3	1	0	3	3	0	0	0
481:	1	4	1	1	0	4	3	1
489:	2	2	1	3	1	3	1	2
497:	3	0	1	1	2	1	1	3
505:	1	3	1	2	0	1	2	4
513:	2	2	1	1	0	1	3	0
521:	1	2	0	0	1	0	1	0
529:	1	2	0	0	0	0	0	1
537:	1	0	1	1	0	0	0	1
545:	0	0	0	0	1	0	0	0
553:	0	0	2	0	0	0	1	1
561:	0	0	0	0	0	0	0	1
569:	0	0	0	0	0	0	0	0
577:	0	0	0	0	1	0	0	0
585:	0	0	0	0	0	0	0	1
593:	0	0	1	0	0	0	0	0
601:	0	0	0	0	1	0	0	1
609:	0	0	1	0	0	0	0	1
617:	0	0	2	0	0	0	0	0
625:	0	1	0	1	0	1	0	0
633:	2	1	1	0	1	1	2	0
641:	1	3	1	2	1	2	5	4
649:	3	1	3	5	1	0	2	4
657:	1	2	2	3	1	2	1	0
665:	2	2	3	5	2	6	4	2
673:	4	4	1	3	6	6	5	3
681:	3	9	1	1	0	3	1	3
689:	1	0	0	0	0	0	0	0
697:	0	0	0	0	0	0	0	0
705:	0	0	0	0	0	0	0	0
713:	0	0	0	0	0	0	0	1
721:	0	0	1	0	0	0	0	0
729:	0	0	0	1	0	1	0	0
737:	0	0	0	0	1	0	0	0
745:	0	1	0	0	0	0	0	1
753:	0	1	1	0	0	0	0	0
761:	1	0	0	0	0	4	1	1
769:	1	0	0	0	3	2	0	0
777:	1	0	1	1	2	1	1	1
785:	0	1	0	0	1	0	0	1
793:	0	2	1	1	0	0	0	0

801: 0 0 0 0 0 0 0 0 0

Sample Title: 14

Channel	-----	-----	-----	-----	-----	-----	-----	-----
809:	0	0	0	0	0	1	0	1
817:	0	0	0	0	1	0	0	1
825:	1	1	0	0	0	0	0	1
833:	1	0	1	0	0	0	0	0
841:	0	0	0	0	0	0	1	0
849:	0	0	0	0	1	0	0	0
857:	0	0	0	0	0	0	0	0
865:	0	0	0	0	0	0	1	0
873:	0	0	0	0	0	0	0	0
881:	0	0	0	0	0	0	0	0
889:	0	0	0	0	0	0	0	0
897:	2	0	0	0	0	0	0	0
905:	0	0	0	0	0	0	0	0
913:	1	0	0	0	0	0	0	0
921:	0	1	0	0	0	0	0	0
929:	0	0	0	0	0	0	0	0
937:	0	0	1	0	0	0	0	0
945:	0	0	0	0	2	0	0	0
953:	0	0	0	0	0	0	0	1
961:	0	0	1	0	0	0	0	0
969:	0	0	0	0	0	0	0	0
977:	0	0	0	0	0	0	0	0
985:	1	0	0	0	0	1	0	1
993:	0	0	0	1	0	0	1	0
1001:	0	1	1	0	2	0	1	0
1009:	2	1	0	1	2	1	0	0
1017:	0	1	0	0	0	2	0	0

KB
11/2/15

Apex-Alpha™

Sample Description: CP0404S10-11
 Spectrum File: \\OR-ALPHA1\Canberra\ApexAlpha\Root\Data\00001329
 Batch Identification: 1510086A-TH
 Sample Identification: 15
 Sample Geometry: Shelf 2
 Procedure Description: Th iso

Detector Name: Alpha_012
 Chamber Serial Number:
 Detector Serial Number: 12
 Env. Background: System Bkgd 133260
 Reagent Blank: <not performed>

Sample Size: 1.518E+000 +/- 0.000E+000 gram
 Sample Date/Time: 10/8/2015 5:58:14 AM
 Acquisition Date/Time: 11/2/2015 8:30:56 AM
 Acquisition Live Time: 170.0 minutes
 Acquisition Real Time: 170.0 minutes

Tracer Certificate: Th229_S_TH-18A
 Tracer Quantity: 0.224 mL
 Effective Efficiency: 0.2060 +/- 0.0168
 Counting Efficiency: 0.1936 +/- 0.0034 on 10/25/2014 6:44:33 PM
 Chem. Recovery Factor: 1.0635 +/- 0.0888

Peak Match Tolerance: 0.175 MeV

 PEAK AREA REPORT

Nuclide	Energy (MeV)	Net Pk Area	Pk Area Error %	Ambient Backgnd	Reagent Backgnd	FWHM (keV)
TH-227	5.822	17.64	48.73	1.36	0.00E+000	5.9
TH-228	5.379	152.81	15.93	1.19	0.00E+000	9.8
TH-229 T	4.886	176.15	14.81	0.85	0.00E+000	4.9
TH-230	4.636	169.98	15.09	1.02	0.00E+000	8.7
TH-232	3.964	139.66	16.61	0.34	0.00E+000	8.3

T = Tracer Peak used for Effective Efficiency

 NUCLIDE ANALYSIS RESULTS

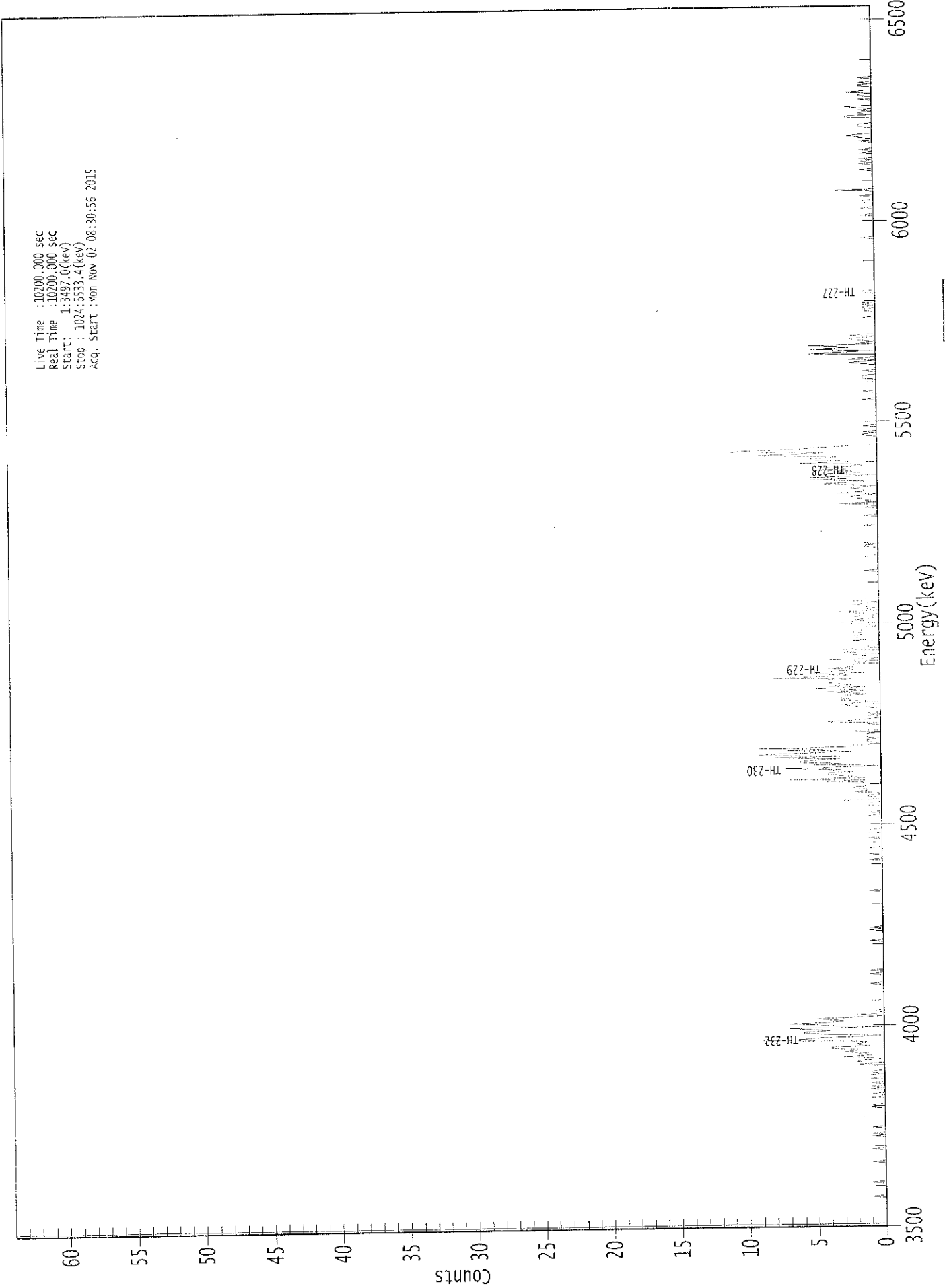
Nuclide	Id Conf.	Energy (keV)	Activity (pCi/gram)	MDA (pCi/gram)
TH-227	0.996	5850.00*	1.54E-001 +/- 7.88E-002	5.97E-002 +/- 9.56E-003
TH-228	0.998	5400.00*	1.33E+000 +/- 3.00E-001	5.73E-002 +/- 9.17E-003
TH-229	0.999	4872.00*	1.50E+000 +/- 2.40E-001	5.10E-002 +/- 8.16E-003
TH-230	0.993	4672.00*	1.44E+000 +/- 3.17E-001	5.35E-002 +/- 8.56E-003
TH-232	0.994	3997.00*	1.18E+000 +/- 2.73E-001	4.05E-002 +/- 6.49E-003

AG
11/2/15

0000132905.CNF

Live Time :10200.000 sec
Real Time :10200.000 sec
Start : 1:3497.0(keV)
Stop : 1024:6533.4(keV)
Acq. Start : Mon Nov 02 08:30:56 2015

: 00272



 ***** S P E C T R A L D A T A R E P O R T *****

Sample Title: 15

Elapsed Live time: 10200
 Elapsed Real Time: 10200

Channel	-----	-----	-----	-----	-----	-----	-----	-----
1:	10200	10200	0	0	0	0	0	0
9:	0	0	0	0	0	0	0	0
17:	0	0	0	0	0	0	0	0
25:	0	1	0	0	0	0	0	0
33:	0	0	0	0	0	1	0	0
41:	0	0	0	0	0	0	0	0
49:	0	0	0	0	0	0	1	0
57:	0	0	0	0	0	0	0	0
65:	0	1	0	0	0	0	0	0
73:	0	0	0	0	1	0	1	0
81:	0	0	0	1	0	0	0	0
89:	0	0	0	0	0	0	0	0
97:	0	0	0	0	1	0	1	0
105:	0	0	0	0	1	0	0	1
113:	0	0	0	1	0	1	0	0
121:	1	0	0	0	1	0	0	1
129:	0	1	1	0	0	0	0	0
137:	2	0	2	2	0	1	3	1
145:	2	1	3	2	2	4	4	1
153:	2	2	1	2	9	6	5	2
161:	0	4	6	6	4	5	7	0
169:	4	5	7	4	3	4	5	2
177:	0	2	0	0	1	0	0	0
185:	0	0	0	0	0	1	0	0
193:	0	0	0	0	0	0	0	0
201:	0	0	0	1	0	0	0	0
209:	0	0	0	1	0	0	1	0
217:	0	0	0	0	0	0	0	0
225:	0	0	0	0	0	0	0	0
233:	0	0	0	0	0	0	0	1
241:	0	0	0	0	0	0	0	0
249:	1	0	1	0	0	0	0	0
257:	0	0	0	0	0	0	0	0
265:	0	0	0	0	0	0	0	0
273:	0	0	0	0	0	0	0	0
281:	0	1	0	0	0	0	0	0
289:	0	0	0	0	0	0	0	0
297:	0	0	0	0	0	0	0	0
305:	0	0	0	1	0	0	0	0
313:	1	0	0	0	0	1	0	0
321:	0	0	1	0	0	1	0	0
329:	0	0	1	1	1	0	0	0
337:	0	0	0	0	0	0	0	0
345:	1	0	0	1	0	0	0	0
353:	0	1	1	0	1	3	0	0
361:	1	1	0	0	2	1	1	2

369: 2 1 2 2 1 4 1 7

Sample Title: 15

Channel	1	2	3	4	4	2	4	3
377:	1	2	3	4	4	2	4	3
385:	7	3	0	5	3	6	6	5
393:	3	8	3	9	9	5	2	7
401:	4	9	2	2	0	0	1	1
409:	1	0	1	1	1	1	0	2
417:	0	0	0	0	0	1	0	4
425:	2	1	0	0	1	0	1	0
433:	0	0	0	1	2	3	2	2
441:	0	3	2	3	3	3	1	2
449:	4	1	2	5	1	4	2	3
457:	4	4	4	2	8	4	2	5
465:	1	5	2	2	4	2	2	2
473:	1	2	0	4	0	1	1	2
481:	0	3	2	0	3	0	1	0
489:	0	0	0	2	0	1	2	2
497:	1	1	2	2	1	1	1	0
505:	1	2	3	1	2	1	0	2
513:	0	0	2	3	0	1	0	1
521:	1	2	1	0	2	1	1	0
529:	0	0	0	0	0	0	0	0
537:	0	0	0	0	0	0	0	0
545:	0	0	0	0	0	1	0	0
553:	0	0	0	0	0	0	0	0
561:	0	1	0	0	0	0	0	0
569:	0	1	1	0	1	0	0	0
577:	0	0	0	0	0	0	0	0
585:	0	0	0	1	0	0	0	0
593:	0	0	0	1	0	0	0	0
601:	0	0	1	0	0	3	0	0
609:	1	1	2	2	1	0	3	1
617:	1	1	2	1	0	3	4	1
625:	1	5	2	5	2	0	4	1
633:	2	5	2	4	2	1	2	6
641:	2	3	5	5	3	4	9	6
649:	4	11	10	6	5	3	0	0
657:	0	0	0	0	0	0	1	1
665:	0	1	0	0	0	0	1	0
673:	0	0	0	0	0	0	0	0
681:	0	0	0	0	0	0	0	0
689:	0	0	0	0	1	0	0	0
697:	0	0	0	1	0	0	0	0
705:	0	0	0	0	0	0	1	1
713:	1	0	0	0	1	0	0	0
721:	0	0	1	2	1	0	2	1
729:	0	0	0	5	3	0	3	5
737:	2	3	5	0	1	0	1	2
745:	1	0	2	0	0	0	0	0
753:	0	0	0	0	0	0	0	0
761:	0	1	0	0	0	0	0	1
769:	1	0	1	0	1	0	1	0
777:	0	0	0	0	0	0	1	1
785:	0	0	0	0	0	0	0	0
793:	0	0	0	0	0	0	0	0

801: 0 0 0 0 0 0 0 0

Sample Title: 15

Channel								
809:	0	0	0	0	0	0	0	0
817:	0	0	0	0	0	0	0	0
825:	0	0	0	0	1	0	0	0
833:	0	0	0	0	0	0	0	0
841:	0	0	0	0	0	0	0	1
849:	0	0	0	0	0	1	0	0
857:	0	0	1	1	0	0	0	1
865:	0	0	0	0	3	0	0	0
873:	0	0	0	0	0	0	0	0
881:	0	0	0	0	0	1	0	0
889:	0	0	1	0	1	0	1	0
897:	0	0	0	1	0	0	1	0
905:	0	0	0	0	0	1	0	0
913:	1	1	2	1	0	0	0	0
921:	0	1	1	1	0	0	0	0
929:	0	2	2	0	1	1	0	1
937:	0	1	2	0	0	0	0	0
945:	1	0	0	1	1	0	2	1
953:	0	0	0	1	1	0	1	0
961:	0	0	1	0	0	0	0	0
969:	0	0	0	0	0	0	0	0
977:	0	0	0	0	0	0	0	0
985:	0	0	0	0	0	0	0	0
993:	0	0	0	0	0	0	0	0
1001:	0	0	0	0	0	0	0	0
1009:	0	0	0	0	0	0	0	0
1017:	0	0	0	0	0	0	0	0

VCS
11/2/15

Apex-Alpha™

Sample Description: CP0404S12-13
 Spectrum File: \\OR-ALPHA1\Canberra\ApexAlpha\Root\Data\00001329
 Batch Identification: 1510086A-TH
 Sample Identification: 16
 Sample Geometry: Shelf 2
 Procedure Description: Th iso

Detector Name: Alpha_014
 Chamber Serial Number:
 Detector Serial Number: 14
 Env. Background: System Bkgd 133261
 Reagent Blank: <not performed>

Sample Size: 1.529E+000 +/- 0.000E+000 gram
 Sample Date/Time: 10/8/2015 5:58:14 AM
 Acquisition Date/Time: 11/2/2015 8:30:57 AM
 Acquisition Live Time: 170.0 minutes
 Acquisition Real Time: 170.0 minutes

Tracer Certificate: Th229_S_TH-18A
 Tracer Quantity: 0.225 mL
 Effective Efficiency: 0.2058 +/- 0.0169
 Counting Efficiency: 0.1840 +/- 0.0032 on 10/25/2014 6:45:28 PM
 Chem. Recovery Factor: 1.1180 +/- 0.0937

Peak Match Tolerance: 0.175 MeV

 PEAK AREA REPORT

Nuclide	Energy (MeV)	Net Pk Area	Pk Area Error %	Ambient Backgnd	Reagent Backgnd	FWHM (keV)
TH-227	5.822	11.75	68.21	4.25	0.00E+000	4.4
TH-228	5.376	132.09	17.35	3.91	0.00E+000	4.4
TH-229 T	4.882	176.62	14.86	2.38	0.00E+000	10.0
TH-230	4.637	135.96	16.96	2.04	0.00E+000	14.7
TH-232	3.958	134.15	16.98	0.85	0.00E+000	11.0

T = Tracer Peak used for Effective Efficiency

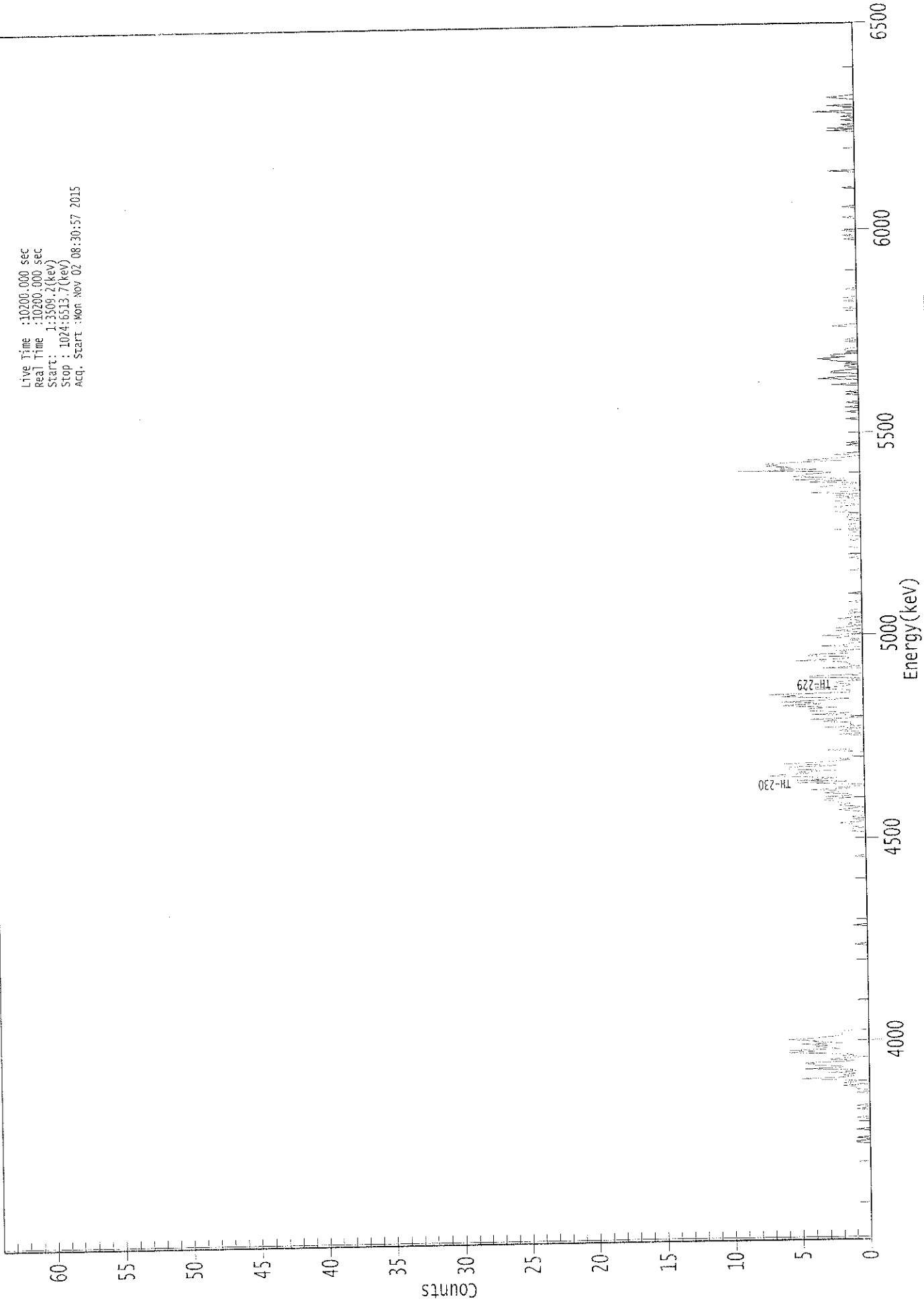
 NUCLIDE ANALYSIS RESULTS

Nuclide	Id Conf.	Energy (keV)	Activity (pCi/gram)	MDA (pCi/gram)
TH-227	0.996	5850.00*	1.02E-001 +/- 7.13E-002	8.69E-002 +/- 1.40E-002
TH-228	0.997	5400.00*	1.14E+000 +/- 2.70E-001	8.42E-002 +/- 1.35E-002
TH-229	1.000	4872.00*	1.49E+000 +/- 2.40E-001	6.94E-002 +/- 1.11E-002
TH-230	0.994	4672.00*	1.15E+000 +/- 2.68E-001	6.57E-002 +/- 1.06E-002
TH-232	0.992	3997.00*	1.13E+000 +/- 2.64E-001	5.04E-002 +/- 8.10E-003

AG
11/2/15

0000132906.CNF

Live Time : 10200.000 sec
Real Time : 10200.000 sec
Start : 1:3509.2(keV)
Stop : 1024:5513.7(keV)
Acq. Start : Mon Nov 02 08:30:57 2015



ROI Type: 3

ROI Type: 1

 ***** S P E C T R A L D A T A R E P O R T *****

Sample Title: 16

Elapsed Live time: 10200
 Elapsed Real Time: 10200

Channel	-----	-----	-----	-----	-----	-----	-----	-----
1:	10200	10200	0	0	0	0	0	0
9:	0	0	0	0	0	0	0	0
17:	0	0	0	0	0	0	0	0
25:	0	0	0	0	0	0	0	0
33:	0	0	0	0	0	0	0	0
41:	0	0	0	0	0	0	0	0
49:	0	0	0	0	0	0	0	0
57:	0	0	0	0	0	0	0	0
65:	0	0	0	0	0	0	0	0
73:	0	0	0	0	0	0	0	0
81:	0	1	1	0	0	1	0	0
89:	0	0	0	0	1	0	0	0
97:	0	0	0	0	0	0	1	0
105:	0	0	0	0	0	1	0	0
113:	1	0	0	0	0	0	0	0
121:	0	0	0	1	0	0	1	1
129:	1	2	0	2	1	1	3	5
137:	2	1	2	1	3	1	1	5
145:	2	2	4	4	5	2	1	3
153:	2	0	2	1	3	6	4	6
161:	2	3	4	3	5	2	4	4
169:	6	4	3	2	2	2	2	2
177:	0	0	0	0	0	0	0	0
185:	0	0	0	0	0	0	0	0
193:	0	0	0	0	0	0	0	0
201:	0	1	0	0	0	0	0	0
209:	0	0	0	0	0	0	0	0
217:	0	0	0	0	0	0	0	0
225:	0	0	0	0	0	0	0	0
233:	0	0	0	0	0	0	0	0
241:	0	0	0	0	0	0	0	0
249:	1	0	0	0	0	0	0	0
257:	0	0	0	0	0	0	0	0
265:	1	0	0	0	0	0	0	0
273:	0	0	0	0	0	0	0	0
281:	0	0	0	0	0	0	0	0
289:	0	0	0	0	0	0	0	0
297:	0	0	0	0	0	0	0	0
305:	0	0	0	0	0	0	0	0
313:	0	0	0	0	0	0	0	0
321:	0	0	1	0	0	0	0	0
329:	0	0	0	0	0	0	0	0
337:	0	0	0	0	0	0	0	1
345:	1	1	0	1	1	1	2	0
353:	0	1	0	1	0	0	0	0
361:	1	2	1	0	1	2	1	2

369: 2 3 3 1 3 1 1 3

Sample Title: 16

Channel	2	3	3	1	3	1	1	3
377:	2	2	4	1	2	0	0	2
385:	5	1	5	3	2	5	7	6
393:	4	5	2	5	6	6	2	4
401:	6	3	2	1	2	0	1	0
409:	0	0	1	3	0	0	0	0
417:	0	0	0	0	0	0	0	0
425:	2	0	0	2	1	0	3	0
433:	1	1	1	3	2	4	0	1
441:	0	4	1	2	4	4	4	2
449:	5	6	3	4	6	3	1	3
457:	6	5	7	1	1	1	3	5
465:	2	1	1	2	2	0	1	0
473:	4	4	1	0	0	0	0	0
481:	3	0	1	1	1	2	5	2
489:	1	1	4	4	1	1	2	0
497:	0	0	3	1	1	0	0	1
505:	0	2	1	3	1	0	1	2
513:	0	2	1	0	1	1	0	0
521:	1	2	0	1	1	1	0	1
529:	1	0	0	0	0	0	0	1
537:	0	0	0	0	0	0	1	0
545:	0	0	0	0	0	0	0	0
553:	0	0	0	0	0	0	0	0
561:	0	0	1	0	0	0	0	0
569:	0	0	0	0	1	0	0	1
577:	0	0	0	0	0	1	0	0
585:	0	0	0	1	0	0	0	1
593:	1	1	0	0	2	0	0	1
601:	1	0	0	0	1	0	1	1
609:	1	0	0	2	1	1	1	2
617:	1	0	1	2	2	0	0	2
625:	0	2	0	4	1	0	0	1
633:	3	2	1	0	4	1	5	1
641:	3	5	4	4	2	3	9	3
649:	6	5	7	6	7	5	1	4
657:	2	1	0	2	1	0	0	0
665:	0	0	0	1	0	1	0	0
673:	0	0	0	0	0	0	0	0
681:	0	0	0	0	0	0	0	0
689:	0	1	0	0	0	0	0	1
697:	0	0	0	1	0	0	0	1
705:	0	0	0	0	0	0	1	0
713:	1	0	0	0	0	0	2	0
721:	0	0	0	3	2	0	0	0
729:	2	2	1	0	0	1	1	0
737:	1	0	2	2	3	1	2	2
745:	0	1	0	1	1	0	0	0
753:	0	0	1	0	1	0	0	0
761:	0	0	0	0	0	0	0	2
769:	1	0	0	0	0	0	0	0
777:	0	0	0	0	0	0	1	0
785:	0	0	0	0	1	0	0	1
793:	0	0	0	0	0	0	1	0

801: 0 0 0 0 0 0 0 0 0

Sample Title: 16

Channel								
809:	0	0	0	0	0	0	0	0
817:	0	0	0	0	0	0	0	0
825:	0	0	0	0	0	0	0	0
833:	0	0	0	0	0	0	0	0
841:	1	0	0	1	0	0	0	1
849:	0	0	0	0	0	0	0	0
857:	0	0	1	0	0	0	0	0
865:	0	0	0	1	0	0	0	0
873:	0	0	0	0	0	0	0	0
881:	0	0	0	1	0	0	0	0
889:	0	0	0	0	0	0	0	0
897:	0	2	0	0	0	0	0	0
905:	0	0	0	0	0	0	0	0
913:	0	0	0	0	0	0	0	0
921:	0	0	0	0	0	0	0	0
929:	0	0	0	2	0	2	0	0
937:	1	0	0	0	1	0	0	1
945:	0	0	1	3	0	0	0	0
953:	2	0	0	0	0	0	1	2
961:	1	0	0	0	0	0	0	0
969:	0	0	0	0	0	0	0	0
977:	0	0	0	0	0	0	0	0
985:	0	0	0	0	0	0	0	0
993:	0	0	0	0	0	0	0	0
1001:	0	0	0	0	0	0	0	0
1009:	0	0	0	0	0	0	0	0
1017:	0	0	0	0	0	0	0	0

11/2/15

Apex-Alpha™

Sample Description: CP0404S14-15
 Spectrum File: \\OR-ALPHA1\Canberra\ApexAlpha\Root\Data\00001329
 Batch Identification: 1510086A-TH
 Sample Identification: 17
 Sample Geometry: Shelf 2
 Procedure Description: Th iso

Detector Name: Alpha_015
 Chamber Serial Number:
 Detector Serial Number: 15
 Env. Background: System Bkgd 133262
 Reagent Blank: <not performed>

Sample Size: 1.513E+000 +/- 0.000E+000 gram
 Sample Date/Time: 10/8/2015 5:58:14 AM
 Acquisition Date/Time: 11/2/2015 8:30:58 AM
 Acquisition Live Time: 170.0 minutes
 Acquisition Real Time: 170.0 minutes

Tracer Certificate: Th229_S_TH-18A
 Tracer Quantity: 0.224 mL
 Effective Efficiency: 0.2439 +/- 0.0185
 Counting Efficiency: 0.2348 +/- 0.0040 on 5/1/2015 2:28:00 PM
 Chem. Recovery Factor: 1.0388 +/- 0.0808

Peak Match Tolerance: 0.175 MeV

 PEAK AREA REPORT

Nuclide	Energy (MeV)	Net Pk Area	Pk Area Error %	Ambient Backgnd	Reagent Backgnd	FWHM (keV)
TH-227	5.837	14.49	52.54	0.51	0.00E+000	6.0
TH-228	5.359	160.64	15.54	1.36	0.00E+000	5.0
TH-229 T	4.870	208.83	13.57	0.17	0.00E+000	4.4
TH-230	4.622	164.32	15.33	0.68	0.00E+000	4.0
TH-232	3.945	188.00	14.33	0.00	0.00E+000	4.0

T = Tracer Peak used for Effective Efficiency

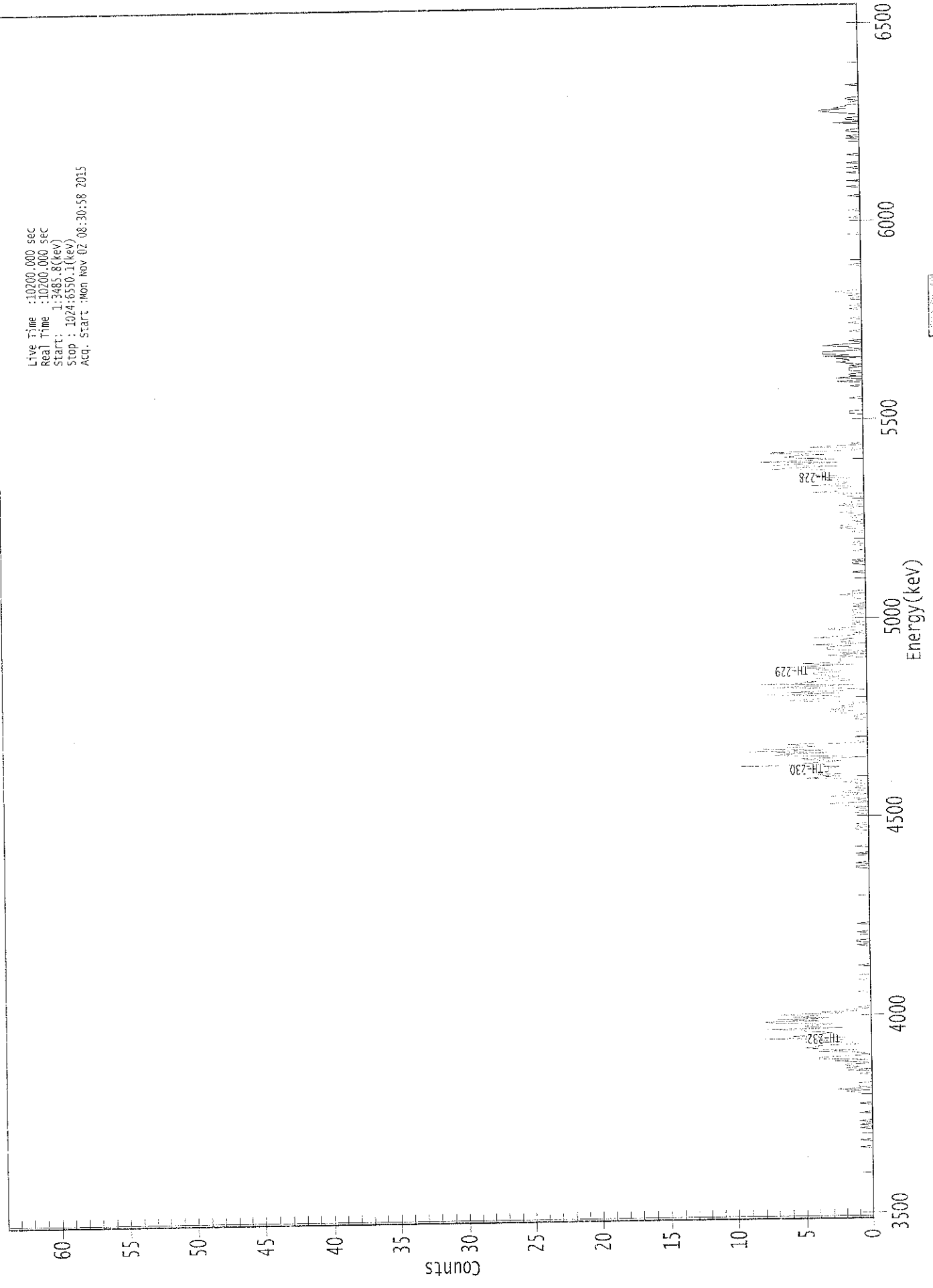
 NUCLIDE ANALYSIS RESULTS

Nuclide	Id Conf.	Energy (keV)	Activity (pCi/gram)	MDA (pCi/gram)
TH-227	0.999	5850.00*	1.07E-001 +/- 5.84E-002	3.87E-002 +/- 5.76E-003
TH-228	0.991	5400.00*	1.18E+000 +/- 2.55E-001	5.05E-002 +/- 7.51E-003
TH-229	1.000	4872.00*	1.51E+000 +/- 2.24E-001	3.01E-002 +/- 4.48E-003
TH-230	0.987	4672.00*	1.18E+000 +/- 2.52E-001	4.06E-002 +/- 6.03E-003
TH-232	0.986	3997.00*	1.35E+000 +/- 2.79E-001	4.31E-002 +/- 6.40E-003

AG
 11/2/15

0000132907.CNF

Live Time :10200.000 sec
Real Time :10200.000 sec
Start : 1:3485.8(kev)
Stop : 1024:6550.1(kev)
Acq. Start :Mon Nov 02 08:30:58 2015



ROI Type: 1

ROI Type: 3

 ***** S P E C T R A L D A T A R E P O R T *****

Sample Title: 17

Elapsed Live time: 10200
 Elapsed Real Time: 10200

Channel	10200	10200	0	0	0	0	0	0	0
1:	10200	10200	0	0	0	0	0	0	0
9:	0	0	0	0	0	0	0	0	0
17:	0	0	0	0	0	0	0	0	0
25:	0	0	0	0	0	0	0	0	0
33:	0	0	0	0	0	0	0	0	0
41:	0	0	0	0	0	0	0	0	0
49:	0	0	0	0	0	0	0	0	0
57:	0	0	0	0	1	0	0	0	0
65:	0	0	1	0	0	0	0	0	0
73:	0	0	0	0	1	0	0	0	1
81:	0	0	1	0	0	0	0	0	0
89:	0	1	0	0	0	0	0	0	0
97:	0	1	0	0	0	0	0	0	0
105:	0	0	1	2	0	3	0	0	1
113:	1	1	1	0	0	0	0	0	0
121:	0	0	1	0	0	2	0	0	2
129:	1	2	2	0	1	3	0	0	4
137:	4	2	0	0	1	4	1	0	4
145:	5	4	4	1	1	5	4	0	2
153:	8	2	6	4	4	3	5	0	5
161:	8	2	5	5	3	7	8	0	4
169:	7	3	6	4	7	2	4	0	1
177:	2	0	1	0	0	0	0	0	0
185:	0	0	0	0	0	0	0	0	1
193:	0	0	0	0	0	0	0	0	0
201:	0	1	0	0	0	0	0	0	0
209:	0	0	0	0	0	1	0	0	0
217:	0	0	0	0	0	0	0	0	0
225:	0	0	0	0	0	0	1	0	0
233:	0	1	1	0	0	0	0	0	0
241:	0	1	0	0	0	0	0	0	0
249:	1	0	0	0	0	0	0	0	0
257:	0	0	0	0	0	0	0	0	0
265:	0	0	0	0	0	0	0	0	0
273:	0	0	0	0	0	0	0	0	0
281:	0	0	0	0	0	0	0	0	0
289:	0	0	0	0	0	0	0	0	1
297:	1	0	0	1	0	0	0	0	0
305:	0	0	0	1	0	0	0	0	0
313:	0	1	0	0	0	0	0	0	0
321:	0	0	0	0	0	0	0	0	1
329:	1	0	1	0	1	0	0	0	0
337:	0	0	0	1	0	1	1	0	0
345:	0	1	0	2	2	3	0	0	0
353:	1	0	2	3	1	0	2	0	2
361:	0	0	1	1	0	0	1	0	2

369: 0 0 5 4 2 4 2 4

Sample Title: 17

Channel	1	2	3	4	5	6	7	8
377:	3	3	3	3	2	10	3	5
385:	3	2	5	5	0	4	7	6
393:	3	9	3	8	7	4	5	6
401:	0	1	0	0	0	1	0	0
409:	0	1	0	0	0	0	0	0
417:	0	0	0	0	1	0	1	1
425:	0	2	3	1	3	2	1	2
433:	1	1	0	4	6	4	3	2
441:	3	8	2	6	2	0	2	7
449:	5	1	8	4	5	1	2	4
457:	2	3	4	4	2	2	4	3
465:	6	4	1	5	2	2	2	2
473:	2	1	3	0	2	0	1	3
481:	3	3	1	4	0	2	1	2
489:	1	4	2	1	0	1	0	1
497:	3	2	0	0	1	1	0	1
505:	1	1	1	1	1	0	1	1
513:	1	0	0	1	0	1	0	0
521:	0	0	1	1	1	2	0	1
529:	1	0	0	0	0	0	0	0
537:	0	0	0	0	0	0	0	0
545:	1	0	0	0	0	0	0	1
553:	1	0	1	0	0	0	0	0
561:	0	0	1	0	0	0	0	1
569:	0	1	0	0	0	0	0	0
577:	0	0	1	0	0	2	1	2
585:	1	0	0	1	0	0	1	1
593:	0	0	2	1	1	1	1	0
601:	2	0	1	1	0	0	1	0
609:	2	2	0	4	2	2	2	1
617:	1	4	2	1	2	2	2	1
625:	5	2	4	4	3	3	3	7
633:	5	2	7	5	2	8	4	2
641:	5	6	5	3	7	7	1	0
649:	1	4	2	0	1	0	0	0
657:	0	0	0	0	0	0	0	0
665:	0	0	0	0	0	0	0	0
673:	0	0	0	0	0	1	1	1
681:	0	0	0	0	0	0	0	0
689:	0	0	1	0	0	0	0	0
697:	0	0	0	0	1	0	0	0
705:	2	0	0	2	0	1	1	0
713:	0	1	1	1	0	1	0	1
721:	2	1	1	2	0	3	1	3
729:	3	3	0	0	1	1	3	2
737:	0	0	1	0	0	0	0	0
745:	0	0	1	0	0	0	0	0
753:	0	1	0	0	0	1	0	0
761:	0	0	0	0	0	1	0	0
769:	1	0	0	0	0	0	1	0
777:	1	0	1	2	1	0	0	0
785:	0	0	0	0	0	0	0	0
793:	0	0	0	0	0	0	0	0

801: 0 0 1 0 0 0 0 0

Sample Title: 17

Channel	1	2	3	4	5	6	7	8	9
809:	0	0	0	0	0	0	0	0	0
817:	0	0	0	0	0	0	0	0	0
825:	0	0	0	0	1	0	0	0	0
833:	0	0	0	0	0	0	0	0	0
841:	0	0	1	0	0	0	0	0	0
849:	1	0	0	0	0	0	0	0	0
857:	0	0	0	0	1	0	0	0	0
865:	0	0	0	0	1	0	0	0	0
873:	0	1	0	0	0	0	0	0	0
881:	1	0	0	0	1	0	0	0	0
889:	1	0	0	0	0	0	0	0	1
897:	0	0	0	0	0	0	0	0	0
905:	0	0	0	0	0	1	0	0	1
913:	0	0	0	1	1	0	0	0	0
921:	0	0	2	0	0	1	1	1	0
929:	0	0	1	2	3	3	1	1	2
937:	1	1	0	0	0	0	1	1	1
945:	0	0	0	0	0	0	0	0	0
953:	0	0	1	0	0	0	0	0	0
961:	0	0	0	0	0	0	0	0	0
969:	0	0	0	0	0	0	0	0	0
977:	0	0	0	0	0	0	0	0	0
985:	0	0	0	0	0	0	0	0	0
993:	0	0	0	0	0	0	0	0	0
1001:	0	0	0	0	0	0	0	0	0
1009:	0	0	0	0	0	0	0	0	0
1017:	0	0	0	0	0	0	0	0	0

Apex-Alpha™

KB
11/2/15

Sample Description: CP0404S17-18
 Spectrum File: \\OR-ALPHA1\Canberra\ApexAlpha\Root\Data\00001329
 Batch Identification: 1510086A-TH
 Sample Identification: 18
 Sample Geometry: Shelf 2
 Procedure Description: Th iso

Detector Name: Alpha_033
 Chamber Serial Number: 04026479A
 Detector Serial Number: 91132
 Env. Background: System Bkgd 133263
 Reagent Blank: <not performed>

Sample Size: 1.507E+000 +/- 0.000E+000 gram
 Sample Date/Time: 10/8/2015 5:58:14 AM
 Acquisition Date/Time: 11/2/2015 11:24:48 AM
 Acquisition Live Time: 170.0 minutes
 Acquisition Real Time: 170.0 minutes

Tracer Certificate: Th229_S_TH-18A
 Tracer Quantity: 0.224 mL
 Effective Efficiency: 0.1525 +/- 0.0142
 Counting Efficiency: 0.1805 +/- 0.0032 on 10/25/2014 2:26:39 PM
 Chem. Recovery Factor: 0.8450 +/- 0.0801

Peak Match Tolerance: 0.175 MeV

 PEAK AREA REPORT

Nuclide	Energy (MeV)	Net Pk Area	Pk Area Error %	Ambient Backgnd	Reagent Backgnd	FWHM (keV)
TH-227	5.880	20.66	43.53	0.34	0.00E+000	3.0
TH-228	5.341	105.64	19.21	1.36	0.00E+000	7.2
TH-229 T	4.862	130.32	17.22	0.68	0.00E+000	3.7
TH-230	4.601	119.49	17.98	0.51	0.00E+000	3.4
TH-232	3.951	110.00	18.77	0.00	0.00E+000	4.8

T = Tracer Peak used for Effective Efficiency

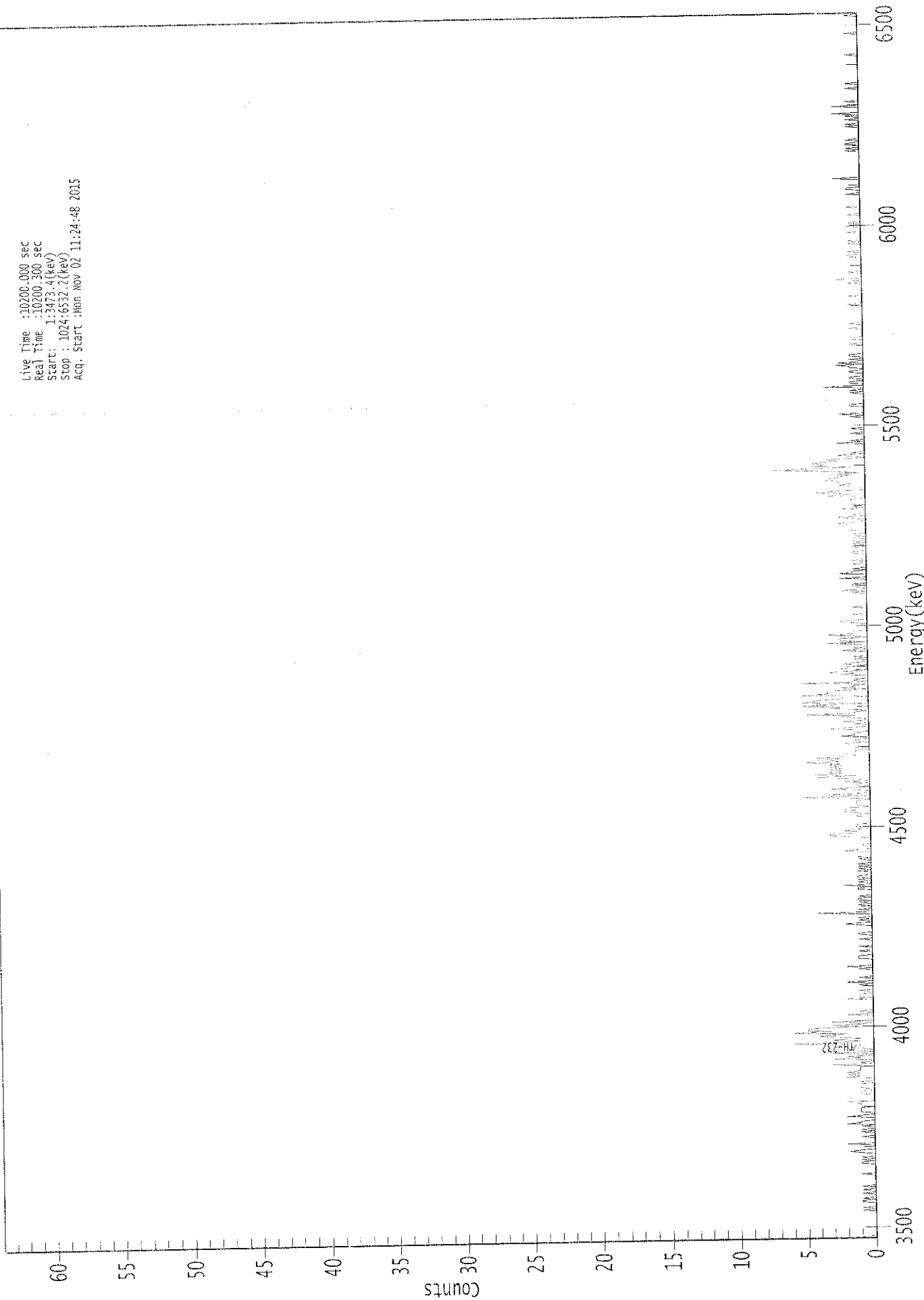
 NUCLIDE ANALYSIS RESULTS

Nuclide	Id Conf.	Energy (keV)	Activity (pCi/gram)	MDA (pCi/gram)
TH-227	0.995	5850.00*	2.45E-001 +/- 1.16E-001	5.66E-002 +/- 1.03E-002
TH-228	0.982	5400.00*	1.25E+000 +/- 3.31E-001	8.11E-002 +/- 1.48E-002
TH-229	0.999	4872.00*	1.51E+000 +/- 2.76E-001	6.53E-002 +/- 1.19E-002
TH-230	0.974	4672.00*	1.38E+000 +/- 3.54E-001	6.06E-002 +/- 1.11E-002
TH-232	0.989	3997.00*	1.27E+000 +/- 3.32E-001	6.91E-002 +/- 1.26E-002

AG
11/2/15

0000132908.CNF

Live Time : 10200.000 sec
Real Time : 10200.300 sec
Start : 1:3473.4(kev)
Stop : 1024.6532.2(kev)
Acq. Start : Mon Nov 02 11:24:48 2015



00287

ROI Type: 1

ROI Type: 3

 ***** S P E C T R A L D A T A R E P O R T *****

Sample Title: 18

Elapsed Live time: 10200
 Elapsed Real Time: 10200

Channel	1	2	3	4	5	6	7	8	9
1:	1	1	0	0	0	0	0	0	0
9:	0	0	0	0	0	0	0	0	1
17:	0	0	0	0	0	0	0	1	1
25:	0	1	0	0	0	0	1	0	0
33:	0	1	0	0	0	0	0	0	0
41:	1	0	0	1	0	0	0	0	0
49:	0	0	0	0	0	0	1	0	0
57:	0	0	0	0	0	0	0	1	1
65:	0	1	0	1	0	0	0	0	1
73:	2	1	0	0	0	0	0	2	0
81:	0	0	0	0	1	0	0	0	0
89:	1	0	1	0	0	0	1	0	2
97:	1	1	0	0	0	0	2	1	0
105:	0	1	1	1	1	1	0	1	1
113:	1	2	0	0	0	0	0	0	0
121:	1	1	1	0	0	0	1	1	1
129:	1	0	1	0	0	0	0	2	1
137:	2	1	2	1	1	1	1	1	0
145:	3	0	1	0	0	0	3	1	2
153:	0	0	3	0	1	0	0	1	3
161:	1	1	6	3	1	3	3	1	2
169:	4	3	2	6	3	5	5	5	4
177:	1	3	1	0	3	0	0	0	0
185:	0	0	2	0	0	0	1	0	0
193:	0	0	0	0	0	0	0	0	2
201:	0	1	1	1	0	0	0	1	0
209:	0	0	0	1	0	0	2	0	0
217:	0	1	0	0	0	0	0	0	0
225:	1	0	2	0	0	0	0	0	0
233:	0	1	1	1	0	0	0	0	1
241:	0	0	0	1	0	0	0	0	0
249:	0	1	0	0	0	0	1	1	0
257:	0	0	0	0	0	0	1	2	0
265:	0	1	0	1	0	0	0	0	4
273:	0	0	1	0	0	0	0	1	0
281:	1	0	1	1	0	0	1	0	0
289:	0	0	0	1	1	1	0	2	0
297:	0	1	0	1	0	0	1	1	0
305:	0	0	1	0	1	0	0	1	0
313:	1	0	0	0	1	0	0	1	0
321:	0	0	0	2	1	0	0	0	0
329:	1	0	0	0	0	0	0	0	2
337:	3	3	1	1	2	1	0	0	1
345:	1	1	0	0	0	0	0	0	0
353:	1	1	0	1	2	1	2	2	2
361:	0	1	1	1	1	1	0	0	1

369: 5 0 3 1 0 0 1 3

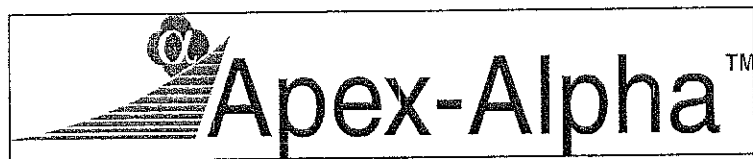
Sample Title: 18

Channel	1	2	3	4	5	6	7	8
377:	1	0	1	1	0	2	0	1
385:	2	4	1	4	2	3	2	3
393:	2	3	2	3	2	5	2	4
401:	2	4	1	1	2	1	1	1
409:	0	1	0	1	1	2	0	1
417:	1	0	0	1	1	1	1	0
425:	1	3	1	0	0	1	0	2
433:	0	0	1	2	1	5	1	1
441:	0	1	3	2	5	4	0	5
449:	4	4	2	2	0	5	3	3
457:	3	2	0	2	1	1	0	5
465:	0	1	1	0	0	0	2	1
473:	3	1	0	2	2	1	0	2
481:	1	0	0	1	0	1	0	0
489:	0	0	2	0	1	0	0	1
497:	3	0	2	2	2	0	1	3
505:	1	1	1	0	0	0	0	0
513:	0	1	2	1	0	0	0	0
521:	1	0	0	0	0	0	0	0
529:	0	0	0	0	0	0	0	0
537:	0	0	1	0	2	0	0	1
545:	1	1	0	0	0	0	2	0
553:	0	0	2	1	1	0	1	0
561:	0	0	1	0	0	1	0	0
569:	0	0	0	1	1	0	0	0
577:	1	0	0	1	0	1	0	0
585:	1	0	1	1	2	1	0	0
593:	1	1	1	1	0	0	0	0
601:	1	2	0	1	1	1	1	1
609:	2	0	1	0	1	2	4	2
617:	1	0	0	3	1	2	2	2
625:	0	0	1	1	2	1	2	2
633:	3	3	2	2	1	2	0	2
641:	4	7	4	1	4	3	4	3
649:	2	3	1	0	1	2	0	1
657:	0	0	0	0	0	0	0	2
665:	0	1	0	0	0	0	0	1
673:	0	0	0	1	0	0	0	0
681:	0	0	0	0	0	1	0	2
689:	0	0	0	0	0	0	1	1
697:	0	0	0	0	0	0	0	0
705:	0	1	0	1	0	0	3	0
713:	0	1	1	0	0	1	1	0
721:	0	0	1	1	0	0	1	1
729:	2	0	2	0	0	1	0	0
737:	1	1	0	0	0	0	0	0
745:	0	0	1	0	0	0	1	1
753:	0	0	0	0	0	0	0	1
761:	0	0	0	1	0	0	0	0
769:	0	0	0	0	0	0	0	0
777:	0	0	0	1	0	0	0	0
785:	0	0	1	0	0	0	0	0
793:	0	0	0	0	0	1	0	0

801: 2 0 0 0 0 0 0 1 0

Sample Title: 18

Channel									
809:	0	0	0	0	0	0	0	0	0
817:	0	0	0	1	1	0	0	1	0
825:	0	0	0	0	0	0	0	0	1
833:	1	0	0	0	0	0	0	0	1
841:	0	0	0	0	1	0	0	1	0
849:	0	0	0	0	0	0	0	1	0
857:	0	0	0	0	1	0	0	0	0
865:	0	0	0	0	0	0	0	0	1
873:	0	0	0	1	1	0	0	0	0
881:	0	0	0	0	2	0	0	0	0
889:	0	0	0	0	0	0	0	0	0
897:	0	0	0	0	0	0	0	0	0
905:	0	0	0	1	0	1	0	0	0
913:	1	1	0	0	1	0	0	0	0
921:	0	0	0	0	0	0	0	0	1
929:	0	1	0	0	0	1	0	0	0
937:	1	0	2	0	0	0	0	0	0
945:	2	0	0	0	1	0	0	0	0
953:	0	0	0	0	0	0	0	0	1
961:	0	0	0	1	0	0	0	0	0
969:	0	0	0	0	0	0	0	0	0
977:	0	0	0	0	0	0	0	0	0
985:	0	0	0	1	0	0	0	0	0
993:	0	0	0	0	0	0	0	0	0
1001:	0	0	0	0	0	1	0	0	0
1009:	0	0	0	0	0	0	0	0	0
1017:	0	0	0	0	1	0	0	0	0



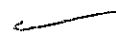
QA SUMMARY REPORT

Review Of QA Results - Pulser Check

Date : 11/2/2015
Time : 5:31:34 AM

CHAMBER	DEVICE	PARAMETER	FLAG	DATE
Alpha 001	21f	ALL	Not Done	
Alpha 002	21f	ALL	Not Done	
Alpha 003	21f	ALL	Passed	11/2/2015 5:10:08 AM
Alpha 004	21f	ALL	Passed	11/2/2015 5:10:08 AM
Alpha 005	21f	ALL	Not Done	
Alpha 006	21f	ALL	Not Done	
Alpha 007	21f	ALL	Not Done	
Alpha 008	21f	ALL	Not Done	
Alpha 009	21f	ALL	Not Done	
Alpha 010	21f	ALL	Passed	11/2/2015 5:10:09 AM
Alpha 011	21f	ALL	Passed	11/2/2015 5:10:10 AM
Alpha 012	21f	ALL	Passed	11/2/2015 5:10:11 AM
Alpha 013	21f	ALL	Not Done	
Alpha 014	21f	ALL	Passed	11/2/2015 5:10:12 AM
Alpha 015	21f	ALL	Passed	11/2/2015 5:10:13 AM
Alpha 016	21f	ALL	Not Done	
Alpha 033	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:10:14 AM
Alpha 034	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:10:15 AM
Alpha 035	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:10:17 AM
Alpha 036	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:10:18 AM
Alpha 037	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:10:20 AM
Alpha 038	Alpha Analyst100DC	Peak Energy	Action	11/2/2015 5:10:21 AM
Alpha 039	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:10:23 AM
Alpha 040	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:10:24 AM
Alpha 041	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:10:26 AM
Alpha 042	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:10:27 AM
Alpha 043	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:10:29 AM
Alpha 044	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:10:30 AM
Alpha 045	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:10:32 AM
Alpha 046	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:10:34 AM
Alpha 047	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:10:36 AM
Alpha 048	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:10:37 AM
Alpha 049	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:10:39 AM
Alpha 050	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:10:41 AM
Alpha 051	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:10:43 AM
Alpha 052	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:10:45 AM
Alpha 053	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:10:47 AM
Alpha 054	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:10:50 AM
Alpha 055	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:10:52 AM
Alpha 056	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:10:55 AM
Alpha 057	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:10:57 AM
Alpha 058	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:11:00 AM

CHAMBER	DEVICE	PARAMETER	FLAG	DATE
Alpha 059	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:11:03 AM
Alpha 060	Alpha Analyst100DC	ALL	Passed	11/2/2015 5:11:06 AM

APPROVED BY: _____ 

APPROVAL DATE: _____ 11/2

***** LIBRARY LISTING REPORT *****

Nuclide Library Title: Thorium

Nuclide Library Description: Th-227,-228,-229,-230,-232

Nuclide Name	Half-Life (Seconds)	Energy (keV)	Energy Uncert. (keV)	Yield (%)	Yield Uncert. (Abs.+)
TH-227	6.873E+008	5850.000*	0.000	97.5000	0.0000
TH-228	6.034E+007	5400.000*	0.000	99.9400	0.0000
TH-229	2.487E+011	4872.000*	0.000	99.5200	0.0000
TH-230	2.379E+012	4672.000*	0.000	99.8200	0.0000
TH-232	4.434E+017	3997.000*	0.000	100.0000	0.0000

* = key line

TOTALS: 5 Nuclides 5 Energy Lines

SECTION X
ANALYTICAL DATA (GAMMA SPECTROSCOPY)

Work Order	15-10086
Analysis Code	Gamma
Run	1
Date Received	10/14/2015
Lab Deadline	11/6/2015
Client	Auxier & Associates, Inc.
Project	PAP-KAN
Report Level	4
Activity Units	pCi
Aliquot Units	g
Matrix	SO
Method	LANL ER-130 Modified
Instrument Type	Gamma Spectroscopy
Radiometric Tracer	
Radiometric Sol#	
Tracer Act (dpm/g)	
Carrier	
Carrier Conc (mg/ml)	

Internal Fraction	Sample Desc	Client ID	Login CPM	Sample Date	Sample Aliquot
01	LCS	LCS		10/14/15 00:00	1.0000E+00
02	MBL	BLANK		10/14/15 00:00	1.0000E+00
03	DUP	CP4105S01-02	37	10/06/15 16:30	6.1277E+02
04	DO	CP4105S01-02	37	10/06/15 16:30	6.1277E+02
05	TRG	CP4105S04-05	34	10/06/15 16:40	5.2364E+02
06	TRG	CP4105S06-07	37	10/06/15 16:50	5.7904E+02
07	TRG	CP4105S08-09	36	10/06/15 17:00	5.7412E+02
08	TRG	CP4105S10-11	37	10/06/15 17:10	6.0893E+02
09	TRG	CP4105S12-13	39	10/06/15 17:20	5.8456E+02
10	TRG	CP4105S14-15	36	10/06/15 17:30	5.4739E+02
11	TRG	CP4105S16-17	38	10/06/15 17:40	5.2734E+02
12	TRG	CP0404S03-04	34	10/08/15 08:00	6.1619E+02
13	TRG	CP0404S05-06	36	10/08/15 08:10	5.4614E+02
14	TRG	CP0404S07-08	34	10/08/15 08:20	4.9334E+02
15	TRG	CP0404S10-11	35	10/08/15 08:30	5.4247E+02
16	TRG	CP0404S12-13	35	10/08/15 08:40	5.7320E+02
17	TRG	CP0404S14-15	33	10/08/15 09:00	5.2575E+02
18	TRG	CP0404S17-18	32	10/08/15 09:10	5.7124E+02

* SAF1 is used for Gross Alpha and all other radionuclides. SAF2 is used for Gross Beta only. ^ Indicates estimated SAF value.
** Actual mass exceeded the calibration curve range. Results should be qualified as appropriate.

Internal Fraction	Sample Desc	Rough Prep Date	Rough Prep By	Prep Date	Prep By	Sep t0 Date/Time	Sep t0 By	Sep t1 Date/Time	Sep t1 By
01	LCS								
02	MBL								
03	DUP								
04	DO	10/16/15 08:59	KSALLINGS						
05	TRG	10/16/15 08:59	KSALLINGS						
06	TRG	10/16/15 08:59	KSALLINGS						
07	TRG	10/16/15 08:59	KSALLINGS						
08	TRG	10/16/15 08:59	KSALLINGS						
09	TRG	10/16/15 08:59	KSALLINGS						
10	TRG	10/16/15 08:59	KSALLINGS						
11	TRG	10/16/15 08:59	KSALLINGS						
12	TRG	10/16/15 08:59	KSALLINGS						
13	TRG	10/16/15 08:59	KSALLINGS						
14	TRG	10/16/15 08:59	KSALLINGS						
15	TRG	10/16/15 08:59	KSALLINGS						
16	TRG	10/16/15 08:59	KSALLINGS						
17	TRG	10/16/15 08:59	KSALLINGS						
18	TRG	10/16/15 08:59	KSALLINGS						

* SAF1 is used for Gross Alpha and all other radionuclides. SAF2 is used for Gross Beta only. ^ Indicates estimated SAF value.
** Actual mass exceeded the calibration curve range. Results should be qualified as appropriate.

Lab Fraction	Nuclide	Sample Desc	Client Identification	Activity Units	Results	Error Estimate	MDA	LSC Known	LCS %R	LCS Flag	RPD Flag	Sample Date	Sample Aliquot	Counting Date/Time	Identified
01	CO-60	LCS	LCS	pCi/g	1.36E+02	7.88E+00	1.12E+00	1.37E+02	99.41	OK		10/14/15 00:00	1.00E+00	11/05/15 06:40	YES
01	CS-137	LCS	LCS	pCi/g	9.01E+01	7.98E+00	1.39E+00	8.69E+01	103.63	OK		10/14/15 00:00	1.00E+00	11/05/15 06:40	YES
02	AC-228	MBL	BLANK	pCi/g	3.65E-02	1.28E-01	2.40E-01					10/14/15 00:00	1.00E+00	11/05/15 07:13	NO
02	BI-214	MBL	BLANK	pCi/g	8.41E-02	7.29E-02	1.46E-01					10/14/15 00:00	1.00E+00	11/05/15 07:13	NO
02	K-40	MBL	BLANK	pCi/g	-5.78E-02	3.87E-01	6.41E-01					10/14/15 00:00	1.00E+00	11/05/15 07:13	NO
02	PB-212	MBL	BLANK	pCi/g	-3.50E-02	5.93E-02	8.84E-02					10/14/15 00:00	1.00E+00	11/05/15 07:13	NO
02	PB-214	MBL	BLANK	pCi/g	7.63E-02	7.83E-02	1.40E-01					10/14/15 00:00	1.00E+00	11/05/15 07:13	NO
02	RA-226	MBL	BLANK	pCi/g	8.41E-02	7.29E-02	1.46E-01					10/14/15 00:00	1.00E+00	11/05/15 07:13	NO
02	RA-228	MBL	BLANK	pCi/g	3.66E-02	1.28E-01	2.40E-01					10/14/15 00:00	1.00E+00	11/05/15 07:13	NO
02	TH-234	MBL	BLANK	pCi/g	8.83E-01	4.19E-01	7.43E-01					10/14/15 00:00	1.00E+00	11/05/15 07:13	NO
02	TL-208	MBL	BLANK	pCi/g	-4.19E-02	1.18E-01	1.84E-01				OK	10/14/15 00:00	1.00E+00	11/05/15 07:13	NO
03	AC-228	DUP	CP4105S01-02	pCi/g	1.22E+00	2.68E-01	4.56E-01				OK	10/06/15 16:30	6.13E+02	11/06/15 10:21	YES
03	BI-214	DUP	CP4105S01-02	pCi/g	1.37E+00	2.06E-01	2.71E-01				OK	10/06/15 16:30	6.13E+02	11/06/15 10:21	YES
03	K-40	DUP	CP4105S01-02	pCi/g	1.90E+01	2.35E+00	1.32E+00				OK	10/06/15 16:30	6.13E+02	11/06/15 10:21	YES
03	PB-212	DUP	CP4105S01-02	pCi/g	1.45E+00	1.74E-01	2.44E-01					10/06/15 16:30	6.13E+02	11/06/15 10:21	YES
03	PB-214	DUP	CP4105S01-02	pCi/g	1.38E+00	1.74E-01	2.77E-01					10/06/15 16:30	6.13E+02	11/06/15 10:21	YES
03	RA-226	DUP	CP4105S01-02	pCi/g	1.37E+00	2.06E-01	2.71E-01					10/06/15 16:30	6.13E+02	11/06/15 10:21	YES
03	RA-228	DUP	CP4105S01-02	pCi/g	1.22E+00	2.68E-01	4.56E-01					10/06/15 16:30	6.13E+02	11/06/15 10:21	YES
03	TH-234	DUP	CP4105S01-02	pCi/g	1.63E+00	1.54E+00	2.06E+00					10/06/15 16:30	6.13E+02	11/06/15 10:21	NO
03	TL-208	DUP	CP4105S01-02	pCi/g	1.31E+00	1.92E-01	2.31E-01					10/06/15 16:30	6.13E+02	11/06/15 10:21	YES
04	AC-228	DO	CP4105S01-02	pCi/g	1.60E+00	2.37E-01	4.83E-01					10/06/15 16:30	6.13E+02	11/06/15 11:22	YES
04	BI-214	DO	CP4105S01-02	pCi/g	1.42E+00	1.87E-01	2.18E-01					10/06/15 16:30	6.13E+02	11/06/15 11:22	YES
04	K-40	DO	CP4105S01-02	pCi/g	1.93E+01	2.35E+00	1.09E+00					10/06/15 16:30	6.13E+02	11/06/15 11:22	YES
04	PB-212	DO	CP4105S01-02	pCi/g	1.41E+00	1.68E-01	2.81E-01					10/06/15 16:30	6.13E+02	11/06/15 11:22	YES
04	PB-214	DO	CP4105S01-02	pCi/g	1.47E+00	1.76E-01	2.54E-01					10/06/15 16:30	6.13E+02	11/06/15 11:22	YES
04	RA-226	DO	CP4105S01-02	pCi/g	1.42E+00	1.87E-01	2.16E-01					10/06/15 16:30	6.13E+02	11/06/15 11:22	YES
04	RA-228	DO	CP4105S01-02	pCi/g	1.60E+00	2.37E-01	4.83E-01					10/06/15 16:30	6.13E+02	11/06/15 11:22	NO
04	TH-234	DO	CP4105S01-02	pCi/g	2.04E+00	1.57E+00	2.11E+00					10/06/15 16:30	6.13E+02	11/06/15 11:22	YES
04	TL-208	DO	CP4105S01-02	pCi/g	1.20E+00	2.02E-01	2.24E-01					10/06/15 16:30	6.13E+02	11/06/15 11:22	YES
05	AC-228	TRG	CP4105S04-05	pCi/g	1.34E+00	4.58E-01	7.59E-01					10/06/15 16:40	5.24E+02	11/06/15 10:21	YES
05	BI-214	TRG	CP4105S04-05	pCi/g	1.66E+00	3.48E-01	2.94E-01					10/06/15 16:40	5.24E+02	11/06/15 10:21	YES
05	K-40	TRG	CP4105S04-05	pCi/g	2.07E+01	3.67E+00	2.44E+00					10/06/15 16:40	5.24E+02	11/06/15 10:21	YES
05	PB-212	TRG	CP4105S04-05	pCi/g	1.86E+00	3.69E-01	4.70E-01					10/06/15 16:40	5.24E+02	11/06/15 10:21	YES
05	PB-214	TRG	CP4105S04-05	pCi/g	1.56E+00	2.87E-01	3.61E-01					10/06/15 16:40	5.24E+02	11/06/15 10:21	YES
05	RA-226	TRG	CP4105S04-05	pCi/g	1.66E+00	3.48E-01	2.94E-01					10/06/15 16:40	5.24E+02	11/06/15 10:21	YES
05	RA-228	TRG	CP4105S04-05	pCi/g	1.34E+00	4.58E-01	7.59E-01					10/06/15 16:40	5.24E+02	11/06/15 10:21	NO
05	TH-234	TRG	CP4105S04-05	pCi/g	2.07E+00	1.50E+00	2.37E+00					10/06/15 16:40	5.24E+02	11/06/15 10:21	YES
05	TL-208	TRG	CP4105S04-05	pCi/g	1.07E+00	3.43E-01	6.39E-01					10/06/15 16:40	5.24E+02	11/06/15 10:21	YES

Lab Fraction	Nuclide	Sample Desc	Client Identification	Activity Units	Results	Error Estimate	MDA	LSC Known	LCS %R	LCS Flag	RPD Flag	Sample Date	Sample Aliquot	Counting Date/Time	Identified
06	AC-228	TRG	CP4105S06-07	pCi/g	1.33E+00	2.38E-01	4.18E-01					10/06/15 16:50	5.79E+02	11/06/15 11:22	YES
06	BI-214	TRG	CP4105S06-07	pCi/g	1.33E+00	1.65E-01	1.58E-01					10/06/15 16:50	5.79E+02	11/06/15 11:22	YES
06	K-40	TRG	CP4105S06-07	pCi/g	2.03E+01	2.28E+00	1.01E+00					10/06/15 16:50	5.79E+02	11/06/15 11:22	YES
06	PB-212	TRG	CP4105S06-07	pCi/g	1.50E+00	1.72E-01	2.16E-01					10/06/15 16:50	5.79E+02	11/06/15 11:22	YES
06	PB-214	TRG	CP4105S06-07	pCi/g	1.47E+00	1.59E-01	2.45E-01					10/06/15 16:50	5.79E+02	11/06/15 11:22	YES
06	RA-226	TRG	CP4105S06-07	pCi/g	1.33E+00	1.65E-01	1.58E-01					10/06/15 16:50	5.79E+02	11/06/15 11:22	YES
06	RA-228	TRG	CP4105S06-07	pCi/g	1.33E+00	2.38E-01	4.18E-01					10/06/15 16:50	5.79E+02	11/06/15 11:22	YES
06	TH-234	TRG	CP4105S06-07	pCi/g	1.94E+00	1.26E+00	2.07E+00					10/06/15 16:50	5.79E+02	11/06/15 11:22	YES
06	TL-208	TRG	CP4105S06-07	pCi/g	1.10E+00	1.56E-01	1.40E-01					10/06/15 16:50	5.79E+02	11/06/15 11:22	YES
07	AC-228	TRG	CP4105S08-09	pCi/g	1.27E+00	2.25E-01	3.67E-01					10/06/15 17:00	5.74E+02	11/06/15 11:23	YES
07	BI-214	TRG	CP4105S08-09	pCi/g	1.28E+00	1.68E-01	2.15E-01					10/06/15 17:00	5.74E+02	11/06/15 11:23	YES
07	K-40	TRG	CP4105S08-09	pCi/g	1.95E+01	2.48E+00	9.66E-01					10/06/15 17:00	5.74E+02	11/06/15 11:23	YES
07	PB-212	TRG	CP4105S08-09	pCi/g	1.59E+00	1.98E-01	1.77E-01					10/06/15 17:00	5.74E+02	11/06/15 11:23	YES
07	PB-214	TRG	CP4105S08-09	pCi/g	1.56E+00	1.77E-01	2.53E-01					10/06/15 17:00	5.74E+02	11/06/15 11:23	YES
07	RA-226	TRG	CP4105S08-09	pCi/g	1.28E+00	1.68E-01	2.15E-01					10/06/15 17:00	5.74E+02	11/06/15 11:23	YES
07	RA-228	TRG	CP4105S08-09	pCi/g	1.27E+00	2.25E-01	3.67E-01					10/06/15 17:00	5.74E+02	11/06/15 11:23	YES
07	TH-234	TRG	CP4105S08-09	pCi/g	1.42E+00	1.56E+00	2.61E+00					10/06/15 17:00	5.74E+02	11/06/15 11:23	YES
07	TL-208	TRG	CP4105S08-09	pCi/g	1.09E+00	1.57E-01	1.08E-01					10/06/15 17:00	5.74E+02	11/06/15 11:23	YES
08	AC-228	TRG	CP4105S10-11	pCi/g	1.67E+00	4.17E-01	7.54E-01					10/06/15 17:10	6.09E+02	11/06/15 11:23	YES
08	BI-214	TRG	CP4105S10-11	pCi/g	1.09E+00	2.57E-01	2.53E-01					10/06/15 17:10	6.09E+02	11/06/15 11:23	YES
08	K-40	TRG	CP4105S10-11	pCi/g	2.03E+01	3.32E+00	1.38E+00					10/06/15 17:10	6.09E+02	11/06/15 11:23	YES
08	PB-212	TRG	CP4105S10-11	pCi/g	1.74E+00	3.18E-01	3.81E-01					10/06/15 17:10	6.09E+02	11/06/15 11:23	YES
08	PB-214	TRG	CP4105S10-11	pCi/g	9.39E-01	2.55E-01	4.51E-01					10/06/15 17:10	6.09E+02	11/06/15 11:23	YES
08	RA-226	TRG	CP4105S10-11	pCi/g	1.09E+00	2.57E-01	2.53E-01					10/06/15 17:10	6.09E+02	11/06/15 11:23	YES
08	RA-228	TRG	CP4105S10-11	pCi/g	1.67E+00	4.17E-01	7.54E-01					10/06/15 17:10	6.09E+02	11/06/15 11:23	YES
08	TH-234	TRG	CP4105S10-11	pCi/g	1.82E-02	1.32E+00	2.01E+00					10/06/15 17:10	6.09E+02	11/06/15 11:23	NO
08	TL-208	TRG	CP4105S10-11	pCi/g	1.63E+00	3.24E-01	2.15E-01					10/06/15 17:10	6.09E+02	11/06/15 11:23	YES
09	AC-228	TRG	CP4105S12-13	pCi/g	1.47E+00	2.28E-01	3.77E-01					10/06/15 17:20	5.85E+02	11/06/15 12:24	YES
09	BI-214	TRG	CP4105S12-13	pCi/g	1.36E+00	1.95E-01	3.25E-01					10/06/15 17:20	5.85E+02	11/06/15 12:24	NO
09	K-40	TRG	CP4105S12-13	pCi/g	2.08E+01	2.32E+00	1.01E+00					10/06/15 17:20	5.85E+02	11/06/15 12:24	YES
09	PB-212	TRG	CP4105S12-13	pCi/g	1.43E+00	1.67E-01	1.87E-01					10/06/15 17:20	5.85E+02	11/06/15 12:24	YES
09	PB-214	TRG	CP4105S12-13	pCi/g	1.33E+00	1.66E-01	2.29E-01					10/06/15 17:20	5.85E+02	11/06/15 12:24	YES
09	RA-226	TRG	CP4105S12-13	pCi/g	1.36E+00	1.95E-01	3.25E-01					10/06/15 17:20	5.85E+02	11/06/15 12:24	NO
09	RA-228	TRG	CP4105S12-13	pCi/g	1.47E+00	2.28E-01	3.77E-01					10/06/15 17:20	5.85E+02	11/06/15 12:24	YES
09	TH-234	TRG	CP4105S12-13	pCi/g	3.71E+00	1.34E+00	1.90E+00					10/06/15 17:20	5.85E+02	11/06/15 12:24	NO
09	TL-208	TRG	CP4105S12-13	pCi/g	1.28E+00	1.70E-01	8.79E-02					10/06/15 17:20	5.85E+02	11/06/15 12:24	YES
10	AC-228	TRG	CP4105S14-15	pCi/g	1.26E+00	2.56E-01	4.84E-01					10/06/15 17:30	5.47E+02	11/06/15 12:26	YES
10	BI-214	TRG	CP4105S14-15	pCi/g	1.29E+00	1.75E-01	2.16E-01					10/06/15 17:30	5.47E+02	11/06/15 12:26	YES

Preliminary Data Report & Analytical Calculations
Work Order: 15-10086-Gamma-1

Lab Fraction	Nuclide	Sample Desc	Client Identification	Activity Units	Results	Error Estimate	MDA	LSC Known	LCS %R	LCS Flag	RPD Flag	Sample Date	Sample Aliquot	Counting Date/Time	Identified
10	K-40	TRG	CP4105S14-15	pCi/g	1.98E+01	2.51E+00	7.98E-01					10/06/15 17:30	5.47E+02	11/06/15 12:26	YES
10	PB-212	TRG	CP4105S14-15	pCi/g	1.08E+00	2.03E-01	2.82E-01					10/06/15 17:30	5.47E+02	11/06/15 12:26	NO
10	PB-214	TRG	CP4105S14-15	pCi/g	1.44E+00	1.95E-01	2.83E-01					10/06/15 17:30	5.47E+02	11/06/15 12:26	YES
10	RA-226	TRG	CP4105S14-15	pCi/g	1.29E+00	1.75E-01	2.16E-01					10/06/15 17:30	5.47E+02	11/06/15 12:26	YES
10	RA-228	TRG	CP4105S14-15	pCi/g	1.26E+00	2.56E-01	4.84E-01					10/06/15 17:30	5.47E+02	11/06/15 12:26	YES
10	TH-234	TRG	CP4105S14-15	pCi/g	1.73E+00	1.61E+00	2.68E+00					10/06/15 17:30	5.47E+02	11/06/15 12:26	YES
10	TL-208	TRG	CP4105S14-15	pCi/g	1.12E+00	1.64E-01	1.13E-01					10/06/15 17:30	5.47E+02	11/06/15 12:26	YES
11	AC-228	TRG	CP4105S16-17	pCi/g	1.52E+00	2.82E-01	5.49E-01					10/06/15 17:40	5.27E+02	11/06/15 12:25	YES
11	BI-214	TRG	CP4105S16-17	pCi/g	1.29E+00	2.18E-01	3.30E-01					10/06/15 17:40	5.27E+02	11/06/15 12:25	YES
11	K-40	TRG	CP4105S16-17	pCi/g	2.10E+01	2.59E+00	1.19E+00					10/06/15 17:40	5.27E+02	11/06/15 12:25	YES
11	PB-212	TRG	CP4105S16-17	pCi/g	1.61E+00	1.87E-01	3.44E-01					10/06/15 17:40	5.27E+02	11/06/15 12:25	YES
11	PB-214	TRG	CP4105S16-17	pCi/g	1.42E+00	1.90E-01	2.72E-01					10/06/15 17:40	5.27E+02	11/06/15 12:25	YES
11	RA-226	TRG	CP4105S16-17	pCi/g	1.29E+00	2.18E-01	3.30E-01					10/06/15 17:40	5.27E+02	11/06/15 12:25	YES
11	RA-228	TRG	CP4105S16-17	pCi/g	1.52E+00	2.82E-01	5.49E-01					10/06/15 17:40	5.27E+02	11/06/15 12:25	YES
11	TH-234	TRG	CP4105S16-17	pCi/g	2.82E+00	1.94E+00	3.20E+00					10/06/15 17:40	5.27E+02	11/06/15 12:25	YES
11	TL-208	TRG	CP4105S16-17	pCi/g	1.36E+00	2.15E-01	1.50E-01					10/06/15 17:40	5.27E+02	11/06/15 12:25	YES
12	AC-228	TRG	CP0404S03-04	pCi/g	1.65E+00	3.91E-01	6.60E-01					10/08/15 08:00	6.16E+02	11/06/15 12:25	YES
12	BI-214	TRG	CP0404S03-04	pCi/g	1.35E+00	3.04E-01	4.58E-01					10/08/15 08:00	6.16E+02	11/06/15 12:25	YES
12	K-40	TRG	CP0404S03-04	pCi/g	1.79E+01	3.11E+00	1.84E+00					10/08/15 08:00	6.16E+02	11/06/15 12:25	YES
12	PB-212	TRG	CP0404S03-04	pCi/g	1.72E+00	3.20E-01	3.89E-01					10/08/15 08:00	6.16E+02	11/06/15 12:25	YES
12	PB-214	TRG	CP0404S03-04	pCi/g	1.47E+00	2.95E-01	4.55E-01					10/08/15 08:00	6.16E+02	11/06/15 12:25	YES
12	RA-226	TRG	CP0404S03-04	pCi/g	1.35E+00	3.04E-01	4.58E-01					10/08/15 08:00	6.16E+02	11/06/15 12:25	YES
12	RA-228	TRG	CP0404S03-04	pCi/g	1.65E+00	3.91E-01	6.60E-01					10/08/15 08:00	6.16E+02	11/06/15 12:25	YES
12	TH-234	TRG	CP0404S03-04	pCi/g	7.57E-01	1.35E+00	2.09E+00					10/08/15 08:00	6.16E+02	11/06/15 12:25	NO
12	TL-208	TRG	CP0404S03-04	pCi/g	1.18E+00	3.30E-01	4.18E-01					10/08/15 08:00	6.16E+02	11/06/15 12:25	YES
13	AC-228	TRG	CP0404S05-06	pCi/g	1.29E+00	2.06E-01	3.38E-01					10/08/15 08:10	5.46E+02	11/06/15 13:37	YES
13	BI-214	TRG	CP0404S05-06	pCi/g	1.45E+00	1.74E-01	2.16E-01					10/08/15 08:10	5.46E+02	11/06/15 13:37	YES
13	K-40	TRG	CP0404S05-06	pCi/g	1.67E+01	2.00E+00	9.92E-01					10/08/15 08:10	5.46E+02	11/06/15 13:37	YES
13	PB-212	TRG	CP0404S05-06	pCi/g	1.41E+00	1.64E-01	2.44E-01					10/08/15 08:10	5.46E+02	11/06/15 13:37	YES
13	PB-214	TRG	CP0404S05-06	pCi/g	1.67E+00	1.70E-01	2.25E-01					10/08/15 08:10	5.46E+02	11/06/15 13:37	YES
13	RA-226	TRG	CP0404S05-06	pCi/g	1.45E+00	1.74E-01	2.16E-01					10/08/15 08:10	5.46E+02	11/06/15 13:37	YES
13	RA-228	TRG	CP0404S05-06	pCi/g	1.29E+00	2.06E-01	3.38E-01					10/08/15 08:10	5.46E+02	11/06/15 13:37	YES
13	TH-234	TRG	CP0404S05-06	pCi/g	2.08E+00	1.61E+00	2.66E+00					10/08/15 08:10	5.46E+02	11/06/15 13:37	YES
13	TL-208	TRG	CP0404S05-06	pCi/g	1.25E+00	1.59E-01	9.40E-02					10/08/15 08:10	5.46E+02	11/06/15 13:37	YES
14	AC-228	TRG	CP0404S07-08	pCi/g	1.64E+00	2.47E-01	4.00E-01					10/08/15 08:20	4.93E+02	11/06/15 13:37	YES
14	BI-214	TRG	CP0404S07-08	pCi/g	1.24E+00	1.73E-01	2.01E-01					10/08/15 08:20	4.93E+02	11/06/15 13:37	YES
14	K-40	TRG	CP0404S07-08	pCi/g	2.23E+01	2.84E+00	1.02E+00					10/08/15 08:20	4.93E+02	11/06/15 13:37	YES
14	PB-212	TRG	CP0404S07-08	pCi/g	1.42E+00	1.83E-01	2.46E-01					10/08/15 08:20	4.93E+02	11/06/15 13:37	YES

Lab Fraction	Nuclide	Sample Desc	Client Identification	Activity Units	Results	Error Estimate	MDA	LSC Known	LSC %R	LCS Flag	RPD Flag	Sample Date	Sample Aliquot	Counting Date/Time	Identified
14	PB-214	TRG	CP0404S07-08	pCi/g	1.44E+00	1.82E-01	2.77E-01					10/08/15 08:20	4.93E+02	11/06/15 13:37	YES
14	RA-226	TRG	CP0404S07-08	pCi/g	1.24E+00	1.73E-01	2.01E-01					10/08/15 08:20	4.93E+02	11/06/15 13:37	YES
14	RA-228	TRG	CP0404S07-08	pCi/g	1.64E+00	2.47E-01	4.00E-01					10/08/15 08:20	4.93E+02	11/06/15 13:37	YES
14	TH-234	TRG	CP0404S07-08	pCi/g	1.46E+00	1.00E+00	1.62E+00					10/08/15 08:20	4.93E+02	11/06/15 13:37	NO
14	TL-208	TRG	CP0404S07-08	pCi/g	1.17E+00	1.77E-01	1.26E-01					10/08/15 08:20	4.93E+02	11/06/15 13:37	YES
15	AC-228	TRG	CP0404S10-11	pCi/g	1.25E+00	2.67E-01	5.30E-01					10/08/15 08:30	5.42E+02	11/06/15 13:37	YES
15	BI-214	TRG	CP0404S10-11	pCi/g	1.13E+00	1.97E-01	2.64E-01					10/08/15 08:30	5.42E+02	11/06/15 13:37	YES
15	K-40	TRG	CP0404S10-11	pCi/g	1.97E+01	2.48E+00	1.31E+00					10/08/15 08:30	5.42E+02	11/06/15 13:37	YES
15	PB-212	TRG	CP0404S10-11	pCi/g	1.70E+00	1.90E-01	2.74E-01					10/08/15 08:30	5.42E+02	11/06/15 13:37	YES
15	PB-214	TRG	CP0404S10-11	pCi/g	1.44E+00	1.95E-01	2.66E-01					10/08/15 08:30	5.42E+02	11/06/15 13:37	YES
15	RA-226	TRG	CP0404S10-11	pCi/g	1.13E+00	1.97E-01	2.64E-01					10/08/15 08:30	5.42E+02	11/06/15 13:37	YES
15	RA-228	TRG	CP0404S10-11	pCi/g	1.25E+00	2.67E-01	5.30E-01					10/08/15 08:30	5.42E+02	11/06/15 13:37	YES
15	TH-234	TRG	CP0404S10-11	pCi/g	1.70E+00	1.67E+00	2.22E+00					10/08/15 08:30	5.42E+02	11/06/15 13:37	NO
15	TL-208	TRG	CP0404S10-11	pCi/g	1.21E+00	2.39E-01	3.01E-01					10/08/15 08:30	5.42E+02	11/06/15 13:37	YES
16	AC-228	TRG	CP0404S12-13	pCi/g	1.61E+00	3.65E-01	1.03E+00					10/08/15 08:40	5.73E+02	11/06/15 13:37	YES
16	BI-214	TRG	CP0404S12-13	pCi/g	1.10E+00	3.21E-01	5.52E-01					10/08/15 08:40	5.73E+02	11/06/15 13:37	YES
16	K-40	TRG	CP0404S12-13	pCi/g	1.94E+01	3.35E+00	1.95E+00					10/08/15 08:40	5.73E+02	11/06/15 13:37	YES
16	PB-212	TRG	CP0404S12-13	pCi/g	2.07E+00	3.49E-01	3.90E-01					10/08/15 08:40	5.73E+02	11/06/15 13:37	YES
16	PB-214	TRG	CP0404S12-13	pCi/g	9.24E-01	2.41E-01	7.30E-01					10/08/15 08:40	5.73E+02	11/06/15 13:37	YES
16	RA-226	TRG	CP0404S12-13	pCi/g	1.10E+00	3.21E-01	5.52E-01					10/08/15 08:40	5.73E+02	11/06/15 13:37	YES
16	RA-228	TRG	CP0404S12-13	pCi/g	1.61E+00	3.65E-01	1.03E+00					10/08/15 08:40	5.73E+02	11/06/15 13:37	YES
16	TH-234	TRG	CP0404S12-13	pCi/g	-4.22E-01	1.40E+00	2.10E+00					10/08/15 08:40	5.73E+02	11/06/15 13:37	NO
16	TL-208	TRG	CP0404S12-13	pCi/g	1.18E+00	3.25E-01	4.49E-01					10/08/15 09:00	5.26E+02	11/06/15 14:40	YES
17	AC-228	TRG	CP0404S14-15	pCi/g	1.57E+00	2.11E-01	2.89E-01					10/08/15 09:00	5.26E+02	11/06/15 14:40	YES
17	BI-214	TRG	CP0404S14-15	pCi/g	1.29E+00	1.72E-01	2.30E-01					10/08/15 09:00	5.26E+02	11/06/15 14:40	YES
17	K-40	TRG	CP0404S14-15	pCi/g	2.29E+01	2.57E+00	1.19E+00					10/08/15 09:00	5.26E+02	11/06/15 14:40	YES
17	PB-212	TRG	CP0404S14-15	pCi/g	1.54E+00	1.79E-01	2.12E-01					10/08/15 09:00	5.26E+02	11/06/15 14:40	YES
17	PB-214	TRG	CP0404S14-15	pCi/g	1.30E+00	1.52E-01	2.14E-01					10/08/15 09:00	5.26E+02	11/06/15 14:40	YES
17	RA-226	TRG	CP0404S14-15	pCi/g	1.29E+00	1.72E-01	2.30E-01					10/08/15 09:00	5.26E+02	11/06/15 14:40	YES
17	RA-228	TRG	CP0404S14-15	pCi/g	1.57E+00	2.11E-01	2.89E-01					10/08/15 09:00	5.26E+02	11/06/15 14:40	YES
17	TH-234	TRG	CP0404S14-15	pCi/g	2.19E+00	1.71E+00	2.83E+00					10/08/15 09:00	5.26E+02	11/06/15 14:40	NO
17	TL-208	TRG	CP0404S14-15	pCi/g	1.37E+00	1.78E-01	9.76E-02					10/08/15 09:00	5.26E+02	11/06/15 14:40	YES
18	AC-228	TRG	CP0404S17-18	pCi/g	1.24E+00	2.14E-01	3.99E-01					10/08/15 09:10	5.71E+02	11/06/15 14:40	YES
18	BI-214	TRG	CP0404S17-18	pCi/g	1.30E+00	1.66E-01	2.06E-01					10/08/15 09:10	5.71E+02	11/06/15 14:40	YES
18	K-40	TRG	CP0404S17-18	pCi/g	1.94E+01	2.52E+00	1.26E+00					10/08/15 09:10	5.71E+02	11/06/15 14:40	YES
18	PB-212	TRG	CP0404S17-18	pCi/g	7.82E-01	1.95E-01	2.66E-01					10/08/15 09:10	5.71E+02	11/06/15 14:40	NO
18	PB-214	TRG	CP0404S17-18	pCi/g	1.27E+00	1.51E-01	2.10E-01					10/08/15 09:10	5.71E+02	11/06/15 14:40	YES
18	RA-226	TRG	CP0404S17-18	pCi/g	1.30E+00	1.66E-01	2.08E-01					10/08/15 09:10	5.71E+02	11/06/15 14:40	YES

Lab Fraction	Nuclide	Sample Desc	Client Identification	Activity Units	Results	Error Estimate	MDA	LSC Known	LCS %R	LCS Flag	RPD Flag	Sample Date	Sample Aliquot	Counting Date/Time	Identified
18	RA-228	TRG	CP0404S17-18	pCi/g	1.24E+00	2.14E-01	3.99E-01					10/08/15 09:10	5.71E+02	11/06/15 14:40	YES
18	TH-234	TRG	CP0404S17-18	pCi/g	1.86E+00	9.35E-01	1.53E+00					10/08/15 09:10	5.71E+02	11/06/15 14:40	NO
18	TL-208	TRG	CP0404S17-18	pCi/g	1.08E+00	1.57E-01	1.52E-01					10/08/15 09:10	5.71E+02	11/06/15 14:40	YES

W *AK*

Internal Fraction	Sample Desc	Client ID	Sample Date	Sample Aliquot	Tracer Aliquot (g)	Tracer ACT (dpm)	Radiometric Tracer (pCi)	Radiometric % Rec	SAF 1*	SAF 2*
01	LCS	LCS	10/14/15 00:00	1.0000				0.00		
02	MBL	BLANK	10/14/15 00:00	1.0000				0.00		
03	DUP	CP4105S01-02	10/06/15 16:30	612.7700				0.00		
04	DO	CP4105S01-02	10/06/15 16:30	612.7700				0.00		
05	TRG	CP4105S04-05	10/06/15 16:40	523.6400				0.00		
06	TRG	CP4105S06-07	10/06/15 16:50	579.0400				0.00		
07	TRG	CP4105S08-09	10/06/15 17:00	574.1200				0.00		
08	TRG	CP4105S10-11	10/06/15 17:10	608.9300				0.00		
09	TRG	CP4105S12-13	10/06/15 17:20	584.5600				0.00		
10	TRG	CP4105S14-15	10/06/15 17:30	547.3900				0.00		
11	TRG	CP4105S16-17	10/06/15 17:40	527.3400				0.00		
12	TRG	CP0404S03-04	10/08/15 08:00	616.1900				0.00		
13	TRG	CP0404S05-06	10/08/15 08:10	546.1400				0.00		
14	TRG	CP0404S07-08	10/08/15 08:20	493.3400				0.00		
15	TRG	CP0404S10-11	10/08/15 08:30	542.4700				0.00		
16	TRG	CP0404S12-13	10/08/15 08:40	573.2000				0.00		
17	TRG	CP0404S14-15	10/08/15 09:00	525.7500				0.00		
18	TRG	CP0404S17-18	10/08/15 09:10	571.2400				0.00		

Aliquot Worksheet

Work Order	Run	Analysis Code	Rpt Units	Lab Deadline	Technician
15-10086	1	Gamma	grams	11/6/2015	KSALLINGS

Lab Fraction	Auxier & Associates, Inc.		Muffle Data		Dilution Data			Aliquot Data		MS Aliquot Data		H-3 Solids Only	
	Client ID	Sample Type	Ratio Post/Pre	No of Dils	Dil Factor	Ratio	Aliquot	Net Equiv	Aliquot	Net Equiv	Water Added (ml)	H3 Dist Aliq	
01	LCS	LCS					1.0000E+00	1.0000E+00					
02	BLANK	MBL					1.0000E+00	1.0000E+00					
03	CP4105S01-02	DUP					6.1277E+02	6.1277E+02					
04	CP4105S01-02	DO					6.1277E+02	6.1277E+02					
05	CP4105S04-05	TRG					5.2364E+02	5.2364E+02					
06	CP4105S06-07	TRG					5.7904E+02	5.7904E+02					
07	CP4105S08-09	TRG					5.7412E+02	5.7412E+02					
08	CP4105S10-11	TRG					6.0893E+02	6.0893E+02					
09	CP4105S12-13	TRG					5.8456E+02	5.8456E+02					
10	CP4105S14-15	TRG					5.4739E+02	5.4739E+02					
11	CP4105S16-17	TRG					5.2734E+02	5.2734E+02					
12	CP0404S03-04	TRG					6.1619E+02	6.1619E+02					
13	CP0404S05-06	TRG					5.4614E+02	5.4614E+02					
14	CP0404S07-08	TRG					4.9334E+02	4.9334E+02					
15	CP0404S10-11	TRG					5.4247E+02	5.4247E+02					
16	CP0404S12-13	TRG					5.7320E+02	5.7320E+02					
17	CP0404S14-15	TRG					5.2575E+02	5.2575E+02					
18	CP0404S17-18	TRG					5.7124E+02	5.7124E+02					

Comments

Technician: Kenny Sees Date: 10.16.15

**Rough Sample Preparation
 Log Book**

Work Order 15-10086	Lab Deadline 11/6/2015	Date Received in Prep 10/15/2015	Date Sealed 10/16/2015	Date Returned 10/17/2015	Technician KSALLINGS
-------------------------------	----------------------------------	--	----------------------------------	------------------------------------	--------------------------------

Eberline Fraction	Auxier & Associates, Inc. Client ID	Tare (g)		Gross (g)		Net (g)		Percent		Gamma		Special Info
		Pan Wt	Dry Wt	Wet Wt	Dry Wt	Wet Wt	Dry Wt	Liquid	Solid	Dry Wt	LEPS Wt	
04	CP4105S01-02	14.1600	707.7300	857.2000	707.7300	843.0400	693.5700	17.73%	82.27%	0.0000	0.0000	
05	CP4105S04-05	28.4600	1015.1650	1236.3000	1015.1650	1207.8400	986.7050	18.31%	81.69%	0.0000	0.0000	
06	CP4105S06-07	14.1800	654.6500	805.4400	654.6500	791.2600	640.4700	19.06%	80.94%	0.0000	0.0000	
07	CP4105S08-09	14.2300	654.6800	822.4000	654.6800	808.1700	640.4500	20.75%	79.25%	0.0000	0.0000	
08	CP4105S10-11	14.1900	684.8000	870.7000	684.8000	856.5100	670.6100	21.70%	78.30%	0.0000	0.0000	
09	CP4105S12-13	14.2100	655.3900	834.0600	655.3900	819.8500	641.1800	22.98%	77.02%	0.0000	0.0000	
10	CP4105S14-15	14.3200	771.6000	997.5000	771.6000	983.1800	757.2800	22.66%	77.34%	0.0000	0.0000	
11	CP4105S16-17	14.3100	599.9500	771.5600	599.9500	757.2500	585.6400	19.40%	80.60%	0.0000	0.0000	
12	CP0404S03-04	28.6000	1108.5200	1368.4400	1108.5200	1339.8400	1079.9200	18.71%	81.29%	0.0000	0.0000	
13	CP0404S05-06	14.1800	617.6500	756.5800	617.6500	742.4000	603.4700	21.51%	78.49%	0.0000	0.0000	
14	CP0404S07-08	14.3300	567.2000	718.7200	567.2000	704.3900	552.8700	21.55%	78.45%	0.0000	0.0000	
15	CP0404S10-11	14.3000	699.1000	887.2200	699.1000	872.9200	684.8000	22.65%	77.35%	0.0000	0.0000	
16	CP0404S12-13	14.3300	749.2500	964.4400	749.2500	950.1100	734.9200	23.91%	76.09%	0.0000	0.0000	
17	CP0404S14-15	14.3800	591.4300	772.7200	591.4300	758.3400	577.0500	23.96%	76.04%	0.0000	0.0000	
18	CP0404S17-18	14.3900	734.7400	961.7000	734.7400	947.3100	720.3500					

Comments
Special Codes
H: Hot, O: Organic Hazard, P: PCB Hazard, R: Rush, T: Other (see comments)

Technician: Kerry Sees

CERTIFICATE OF CALIBRATION
Standard Radionuclide Source

GAS-1302

94268

Sand in 16 Ounce PP Taral Jar Filled to Top

Customer: Eberline Analytical Corporation
P.O. No.: 1304009, Item 7 **Product Code:** 8401-EG-SAN
Reference Date: 01-Jul-2013 12:00 PM EST **Grams of Master Source:** 0.017994

This standard radionuclide source was prepared using aliquots measured gravimetrically from master radionuclide solutions. Additional radionuclides were added gravimetrically from solutions calibrated by gamma-ray spectrometry, ionization chamber, or liquid scintillation counting. Calibration and purity were checked using a germanium gamma spectrometer system. At the time of calibration no interfering gamma-ray emitting impurities were detected. The gamma-ray emission rates for the most intense gamma-ray lines are given. Eckert & Ziegler Analytics (EZA) maintains traceability to the National Institute of Standards and Technology through a Measurements Assurance Program as described in USNRC Regulatory Guide 4.15, Revision 2, July 2007, and compliance with ANSI N42.22-1995, "Traceability of Radioactive Sources to NIST." EZA is accredited by the Health Physics Society (HPS) for the production of NIST-traceable sources, and this source was produced in accordance with the HPS accreditation requirements. Customers may report any concerns with the accreditation program to the HPS Secretariat, 1313 Dolley Madison Blvd., Ste. 402, McLean, VA 22101.

Nuclide	Gamma-Ray Energy (keV)	Half-Life, Days	Master Source* γ ps/gram	This Source γ ps	Uncertainty* , %			Calibration Method*
					u_A	u_B	U	
Am-241	59.5	1.580E+05	—	2.094E+03	0.1	1.7	3.5	4 π LS
Cd-109	88.0	4.626E+02	1.641E+05	2.952E+03	0.5	2.3	4.7	HPGe
Co-57	122.1	2.718E+02	8.865E+04	1.595E+03	0.4	2.0	4.1	HPGe
Ce-139	165.9	1.376E+02	1.243E+05	2.236E+03	0.4	1.9	3.9	HPGe
Hg-203	279.2	4.661E+01	2.627E+05	4.727E+03	0.3	1.9	3.8	HPGe
Sn-113	391.7	1.151E+02	1.736E+05	3.124E+03	0.4	1.9	3.9	HPGe
Cs-137	661.7	1.098E+04	1.120E+05	2.015E+03	0.7	1.9	4.0	HPGe
Y-88	898.0	1.066E+02	4.197E+05	7.553E+03	0.5	1.9	3.9	HPGe
Co-60	1173.2	1.925E+03	2.074E+05	3.732E+03	0.6	1.9	4.0	HPGe
Co-60	1332.5	1.925E+03	2.074E+05	3.732E+03	0.7	1.9	4.0	HPGe
Y-88	1836.1	1.066E+02	4.444E+05	7.996E+03	0.7	1.9	4.0	HPGe

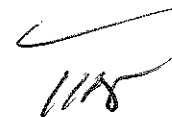
* Master Source refers to Analytics' 8-isotope mixture which is calibrated quarterly.

Calibration Methods: 4 π LS - 4 π Liquid Scintillation Counting, HPGe - High Purity Germanium Gamma-Ray Spectrometer, IC - Ionization Chamber. **Uncertainty:** U - Relative expanded uncertainty, k = 2. See NIST Technical Note 1297, "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Results."

(Certificate continued on reverse side)



Analysis Report for 1510086-01
GAS-1302



GAMMA SPECTRUM ANALYSIS

Sample Identification : 1510086-01
Sample Description : GAS-1302
Sample Type : SOIL

Sample Size : 7.360E+02 grams
Facility : Countroom

Sample Taken On : 7/1/2013 6:02:01AM
Acquisition Started : 11/5/2015 6:40:52AM

Procedure : GAS-1402 pCi
Operator : Administrator
Detector Name : GE3
Geometry : GAS-1402
Live Time : 1800.0 seconds
Real Time : 1848.0 seconds

Dead Time : 2.60 %

Peak Locate Threshold : 2.50
Peak Locate Range (in channels) : 1 - 4096
Peak Area Range (in channels) : 9 - 4096
Identification Energy Tolerance : 1.000 keV

Energy Calibration Used Done On : 10/25/2014
Efficiency Calibration Used Done On : 10/25/2014
Efficiency Calibration Description :

Sample Number : 29172

PEAK-TO-TOTAL CALIBRATION REPORT

Peak-to-Total Efficiency Calibration Equation

Acg
11/9/15

Analysis Report for 1510086-01

GAS-1302

PEAK LOCATE REPORT

Peak Locate Performed on : 11/5/2015 7:11:44AM
 Peak Locate From Channel : 1
 Peak Locate To Channel : 4096
 Peak Search Sensitivity : 2.50

Peak No.	Energy (keV)	Centroid Channel	Centroid Uncertainty	Peak Significance
1	22.02	22.26	0.0000	0.00
2	24.71	24.96	0.0000	0.00
3	32.12	32.36	0.0000	0.00
4	52.10	52.33	0.0000	0.00
5	59.47	59.69	0.0000	0.00
6	67.67	67.89	0.0000	0.00
7	84.87	85.08	0.0000	0.00
8	88.09	88.30	0.0000	0.00
9	122.11	122.30	0.0000	0.00
10	136.60	136.78	0.0000	0.00
11	146.24	146.42	0.0000	0.00
12	165.81	165.98	0.0000	0.00
13	238.61	238.74	0.0000	0.00
14	392.06	392.11	0.0000	0.00
15	503.84	503.84	0.0000	0.00
16	584.35	584.30	0.0000	0.00
17	661.89	661.81	0.0000	0.00
18	702.43	702.33	0.0000	0.00
19	840.82	840.65	0.0000	0.00
20	898.30	898.11	0.0000	0.00
21	1168.74	1168.44	0.0000	0.00
22	1173.56	1173.25	0.0000	0.00
23	1332.88	1332.51	0.0000	0.00
24	1836.88	1836.32	0.0000	0.00
25	1918.01	1917.42	0.0000	0.00
26	1977.52	1976.92	0.0000	0.00
27	2387.39	2386.67	0.0000	0.00
28	2484.80	2484.05	0.0000	0.00
29	2506.11	2505.35	0.0000	0.00
30	2614.76	2613.98	0.0000	0.00

? = Adjacent peak noted
 Errors quoted at 2.000sigma

Analysis Report for 1510086-01

GAS-1302

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 11/5/2015 7:11:44AM

Peak Analysis From Channel : 1

Peak Analysis To Channel : 4096

	Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	FWHM (keV)
M	1	22.02	19 -	29	22.26	1.11E+05	733.96	1.69E+04	1.55
m	2	24.71	19 -	29	24.96	3.40E+04	780.94	1.29E+04	1.69
	3	32.12	30 -	35	32.36	1.83E+03	266.74	1.28E+04	1.75
M	4	52.10	45 -	64	52.33	1.27E+04	666.41	4.51E+04	3.79
m	5	59.47	45 -	64	59.69	9.32E+04	686.77	1.91E+04	1.67
	6	67.67	65 -	72	67.89	1.02E+03	439.51	3.17E+04	3.67
M	7	84.87	83 -	92	85.08	9.15E+02	249.50	1.62E+04	1.95
m	8	88.09	83 -	92	88.30	3.89E+04	455.56	1.32E+04	1.49
	9	122.11	118 -	125	122.30	8.38E+03	358.57	1.58E+04	1.80
	10	136.60	134 -	140	136.78	1.05E+03	266.67	1.21E+04	1.67
	11	146.24	144 -	149	146.42	2.21E+02	225.79	1.00E+04	2.97
	12	165.81	162 -	169	165.98	1.11E+03	286.33	1.29E+04	1.43
	13	238.61	236 -	242	238.74	3.10E+02	237.84	1.00E+04	2.85
	14	392.06	389 -	395	392.11	2.05E+02	191.83	6.51E+03	1.46
	15	503.84	502 -	507	503.84	1.22E+02	141.93	3.94E+03	1.33
	16	584.35	582 -	587	584.30	1.44E+02	124.45	3.00E+03	3.49
	17	661.89	656 -	667	661.81	2.28E+04	368.73	5.61E+03	1.90
	18	702.43	700 -	706	702.33	1.07E+02	125.83	2.80E+03	3.66
	19	840.82	838 -	844	840.65	1.30E+02	135.39	3.24E+03	2.16
	20	898.30	895 -	901	898.11	2.78E+02	151.32	3.97E+03	1.92
M	21	1168.74	1167 -	1179	1168.44	4.60E+01	37.08	4.36E+02	2.05
m	22	1173.56	1167 -	1179	1173.25	1.93E+04	288.50	1.24E+03	2.11
	23	1332.88	1326 -	1339	1332.51	1.73E+04	276.62	7.98E+02	2.32
	24	1836.88	1830 -	1843	1836.32	1.68E+02	43.82	1.33E+02	2.75
	25	1918.01	1912 -	1922	1917.42	4.14E+01	19.27	2.72E+01	8.33
	26	1977.52	1971 -	1983	1976.92	2.61E+01	28.59	8.19E+01	4.93
	27	2387.39	2384 -	2389	2386.67	9.00E+00	6.00	0.00E+00	3.70
	28	2484.80	2479 -	2487	2484.05	6.61E+00	7.50	4.78E+00	3.74
	29	2506.11	2500 -	2509	2505.35	1.73E+02	27.00	5.32E+00	2.42
	30	2614.76	2609 -	2616	2613.98	1.15E+01	8.25	3.00E+00	2.63

M = First peak in a multiplet region

m = Other peak in a multiplet region

F = Fitted singlet

Errors quoted at 2.000sigma

Analysis Report for 1510086-01

GAS-1302

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 11/5/2015 7:11:44AM

Peak Analysis From Channel : 1

Peak Analysis To Channel : 4096

	Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
M	1	22.02	19 -	29	1.11E+05	733.96	1.69E+04	2.14E+02
m	2	24.71	19 -	29	3.40E+04	780.94	1.29E+04	1.86E+02
	3	32.12	30 -	35	1.83E+03	266.74	1.28E+04	2.08E+02
M	4	52.10	45 -	64	1.27E+04	666.41	4.51E+04	3.49E+02
m	5	59.47	45 -	64	9.32E+04	686.77	1.91E+04	2.27E+02
	6	67.67	65 -	72	1.02E+03	439.51	3.17E+04	3.57E+02
M	7	84.87	83 -	92	9.15E+02	249.50	1.62E+04	2.10E+02
m	8	88.09	83 -	92	3.89E+04	455.56	1.32E+04	1.89E+02
	9	122.11	118 -	125	8.38E+03	358.57	1.58E+04	2.53E+02
	10	136.60	134 -	140	1.05E+03	266.67	1.21E+04	2.13E+02
	11	146.24	144 -	149	2.21E+02	225.79	1.00E+04	1.84E+02
	12	165.81	162 -	169	1.11E+03	286.33	1.29E+04	2.29E+02
	13	238.61	236 -	242	3.10E+02	237.84	1.00E+04	1.93E+02
	14	392.06	389 -	395	2.05E+02	191.83	6.51E+03	1.56E+02
	15	503.84	502 -	507	1.22E+02	141.93	3.94E+03	1.15E+02
	16	584.35	582 -	587	1.44E+02	124.45	3.00E+03	1.00E+02
	17	661.89	656 -	667	2.28E+04	368.73	5.61E+03	1.74E+02
	18	702.43	700 -	706	1.07E+02	125.83	2.80E+03	1.02E+02
	19	840.82	838 -	844	1.30E+02	135.39	3.24E+03	1.10E+02
	20	898.30	895 -	901	2.78E+02	151.32	3.97E+03	1.21E+02
M	21	1168.74	1167 -	1179	4.60E+01	37.08	4.36E+02	3.43E+01
m	22	1173.56	1167 -	1179	1.93E+04	288.50	1.24E+03	5.79E+01
	23	1332.88	1326 -	1339	1.73E+04	276.62	7.98E+02	7.01E+01
	24	1836.88	1830 -	1843	1.68E+02	43.82	1.33E+02	2.90E+01
	25	1918.01	1912 -	1922	4.14E+01	19.27	2.72E+01	1.18E+01
	26	1977.52	1971 -	1983	2.61E+01	28.59	8.19E+01	2.19E+01
	27	2387.39	2384 -	2389	9.00E+00	6.00	0.00E+00	0.00E+00
	28	2484.80	2479 -	2487	6.61E+00	7.50	4.78E+00	4.49E+00
	29	2506.11	2500 -	2509	1.73E+02	27.00	5.32E+00	4.91E+00
	30	2614.76	2609 -	2616	1.15E+01	8.25	3.00E+00	3.86E+00

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

Analysis Report for 1510086-01
 GAS-1302

PEAK WITH NID REPORT

Peak Analysis Performed on : 11/5/2015 7:11:44AM

Peak Analysis From Channel : 1
 Peak Analysis To Channel : 4096

Tentative NID Library : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB
 Peak Match Tolerance : 1.000 keV

	Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
M	1	22.02	19 -	29	22.26	1.11E+05	733.96	1.69E+04	.....
m	2	24.71	19 -	29	24.96	3.40E+04	780.94	1.29E+04	TH-231
	3	32.12	30 -	35	32.36	1.83E+03	266.74	1.28E+04	.....
M	4	52.10	45 -	64	52.33	1.27E+04	666.41	4.51E+04	.....
m	5	59.47	45 -	64	59.69	9.32E+04	686.77	1.91E+04	AM-241
	6	67.67	65 -	72	67.89	1.02E+03	439.51	3.17E+04	TH-230 TA-182 TI-44 TM-171
M	7	84.87	83 -	92	85.08	9.15E+02	249.50	1.62E+04	TH-231
m	8	88.09	83 -	92	88.30	3.89E+04	455.56	1.32E+04	CD-109 LU-176 SN-126
	9	122.11	118 -	125	122.30	8.38E+03	358.57	1.58E+04	CO-57 EU-152 EU-154 SE-75
	10	136.60	134 -	140	136.78	1.05E+03	266.67	1.21E+04	CO-57 SE-75
	11	146.24	144 -	149	146.42	2.21E+02	225.79	1.00E+04	CE-141
	12	165.81	162 -	169	165.98	1.11E+03	286.33	1.29E+04	CE-139
	13	238.61	236 -	242	238.74	3.10E+02	237.84	1.00E+04	PB-212
	14	392.06	389 -	395	392.11	2.05E+02	191.83	6.51E+03	SN-113
	15	503.84	502 -	507	503.84	1.22E+02	141.93	3.94E+03	.....
	16	584.35	582 -	587	584.30	1.44E+02	124.45	3.00E+03	.....
	17	661.89	656 -	667	661.81	2.28E+04	368.73	5.61E+03	CS-137
	18	702.43	700 -	706	702.33	1.07E+02	125.83	2.80E+03	NB-94
	19	840.82	838 -	844	840.65	1.30E+02	135.39	3.24E+03	.....
	20	898.30	895 -	901	898.11	2.78E+02	151.32	3.97E+03	Y-88
M	21	1168.74	1167 -	1179	1168.44	4.60E+01	37.08	4.36E+02	.....
m	22	1173.56	1167 -	1179	1173.25	1.93E+04	288.50	1.24E+03	CO-60
	23	1332.88	1326 -	1339	1332.51	1.73E+04	276.62	7.98E+02	CO-60
	24	1836.88	1830 -	1843	1836.32	1.68E+02	43.82	1.33E+02	Y-88
	25	1918.01	1912 -	1922	1917.42	4.14E+01	19.27	2.72E+01	.....
	26	1977.52	1971 -	1983	1976.92	2.61E+01	28.59	8.19E+01	.....
	27	2387.39	2384 -	2389	2386.67	9.00E+00	6.00	0.00E+00	.....
	28	2484.80	2479 -	2487	2484.05	6.61E+00	7.50	4.78E+00	.....
	29	2506.11	2500 -	2509	2505.35	1.73E+02	27.00	5.32E+00	.....
	30	2614.76	2609 -	2616	2613.98	1.15E+01	8.25	3.00E+00	TL-208

Analysis Report for 1510086-01
GAS-1302

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

PEAK EFFICIENCY REPORT

Peak Analysis Performed on : 11/5/2015 7:11:44AM

	Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
M	1	22.02	1.11E+05	733.96	1.16E-03	1.58E-03
m	2	24.71	3.40E+04	780.94	2.13E-03	1.58E-03
	3	32.12	1.83E+03	266.74	6.12E-03	1.58E-03
M	4	52.10	1.27E+04	666.41	1.78E-02	1.58E-03
m	5	59.47	9.32E+04	686.77	2.05E-02	1.58E-03
	6	67.67	1.02E+03	439.51	2.25E-02	1.85E-03
M	7	84.87	9.15E+02	249.50	2.43E-02	2.42E-03
m	8	88.09	3.89E+04	455.56	2.44E-02	2.52E-03
	9	122.11	8.38E+03	358.57	2.30E-02	1.73E-03
	10	136.60	1.05E+03	266.67	2.20E-02	1.66E-03
	11	146.24	2.21E+02	225.79	2.12E-02	1.61E-03
	12	165.81	1.11E+03	286.33	1.97E-02	1.51E-03
	13	238.61	3.10E+02	237.84	1.52E-02	1.18E-03
	14	392.06	2.05E+02	191.83	1.01E-02	8.37E-04
	15	503.84	1.22E+02	141.93	8.11E-03	7.25E-04
	16	584.35	1.44E+02	124.45	7.13E-03	6.45E-04
	17	661.89	2.28E+04	368.73	6.39E-03	5.68E-04
	18	702.43	1.07E+02	125.83	6.07E-03	5.35E-04
	19	840.82	1.30E+02	135.39	5.20E-03	4.21E-04
	20	898.30	2.78E+02	151.32	4.91E-03	3.75E-04
M	21	1168.74	4.60E+01	37.08	3.94E-03	3.24E-04
m	22	1173.56	1.93E+04	288.50	3.92E-03	3.23E-04
	23	1332.88	1.73E+04	276.62	3.54E-03	2.88E-04
	24	1836.88	1.68E+02	43.82	2.78E-03	2.13E-04
	25	1918.01	4.14E+01	19.27	2.70E-03	2.13E-04
	26	1977.52	2.61E+01	28.59	2.64E-03	2.13E-04
	27	2387.39	9.00E+00	6.00	2.35E-03	2.13E-04
	28	2484.80	6.61E+00	7.50	2.30E-03	2.13E-04
	29	2506.11	1.73E+02	27.00	2.29E-03	2.13E-04
	30	2614.76	1.15E+01	8.25	2.24E-03	2.13E-04

Analysis Report for 1510086-01

GAS-1302

M = First peak in a multiplet region
 m = Other peak in a multiplet region
 F = Fitted singlet
 Errors quoted at 2.000 sigma

BACKGROUND SUBTRACT REPORT

Peak Analysis Performed on : 11/5/2015 7:11:44AM

Env. Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000028943.CNF

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
M	1	22.02	1.11E+05	733.96	1.21E+01	5.69E+00	1.11E+05	7.34E+02
m	2	24.71	3.40E+04	780.94			3.40E+04	7.81E+02
	3	32.12	1.83E+03	266.74			1.83E+03	2.67E+02
M	4	52.10	1.27E+04	666.41			1.27E+04	6.66E+02
m	5	59.47	9.32E+04	686.77	8.89E+00	3.82E+00	9.32E+04	6.87E+02
	6	67.67	1.02E+03	439.51			1.02E+03	4.40E+02
M	7	84.87	9.15E+02	249.50	4.34E+00	2.22E+00	9.11E+02	2.50E+02
m	8	88.09	3.89E+04	455.56	7.62E+00	2.68E+00	3.89E+04	4.56E+02
	9	122.11	8.38E+03	358.57			8.38E+03	3.59E+02
	10	136.60	1.05E+03	266.67			1.05E+03	2.67E+02
	11	146.24	2.21E+02	225.79			2.21E+02	2.26E+02
	12	165.81	1.11E+03	286.33			1.11E+03	2.86E+02
	13	238.61	3.10E+02	237.84	6.70E+00	1.07E+00	3.04E+02	2.38E+02
	14	392.06	2.05E+02	191.83			2.05E+02	1.92E+02
	15	503.84	1.22E+02	141.93			1.22E+02	1.42E+02
	16	584.35	1.44E+02	124.45	2.98E+00	1.73E+00	1.41E+02	1.24E+02
	17	661.89	2.28E+04	368.73	3.38E+00	1.70E+00	2.28E+04	3.69E+02
	18	702.43	1.07E+02	125.83			1.07E+02	1.26E+02
	19	840.82	1.30E+02	135.39			1.30E+02	1.35E+02
	20	898.30	2.78E+02	151.32			2.78E+02	1.51E+02
M	21	1168.74	4.60E+01	37.08			4.60E+01	3.71E+01
m	22	1173.56	1.93E+04	288.50	3.60E+00	1.29E+00	1.93E+04	2.89E+02
	23	1332.88	1.73E+04	276.62	2.12E+00	1.11E+00	1.73E+04	2.77E+02
	24	1836.88	1.68E+02	43.82			1.68E+02	4.38E+01
	25	1918.01	4.14E+01	19.27			4.14E+01	1.93E+01
	26	1977.52	2.61E+01	28.59			2.61E+01	2.86E+01
	27	2387.39	9.00E+00	6.00			9.00E+00	6.00E+00
	28	2484.80	6.61E+00	7.50			6.61E+00	7.50E+00
	29	2506.11	1.73E+02	27.00			1.73E+02	2.70E+01
	30	2614.76	1.15E+01	8.25			1.15E+01	8.25E+00

Analysis Report for 1510086-01
 GAS-1302

M = First peak in a multiplet region
 m = Other peak in a multiplet region
 F = Fitted singlet
 Errors quoted at 2.00sigma

AREA CORRECTION REPORT REFERENCE PEAK / BKG. SUBTRACT

Peak Analysis Performed on : 11/5/2015 7:11:44AM
 Ref. Peak Energy : 0.00 Reference Date :
 Peak Ratio : 0.00 Uncertainty : 0.00
 Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000028943.CNF

Corrected Area is: Original * Peak Ratio - Background

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.	
M	1	22.02	1.11E+05	733.96	1.21E+01	5.69E+00	1.11E+05	7.34E+02
m	2	24.71	3.40E+04	780.94			3.40E+04	7.81E+02
	3	32.12	1.83E+03	266.74			1.83E+03	2.67E+02
M	4	52.10	1.27E+04	666.41			1.27E+04	6.66E+02
m	5	59.47	9.32E+04	686.77	8.89E+00	3.82E+00	9.32E+04	6.87E+02
	6	67.67	1.02E+03	439.51			1.02E+03	4.40E+02
M	7	84.87	9.15E+02	249.50	4.34E+00	2.22E+00	9.11E+02	2.50E+02
m	8	88.09	3.89E+04	455.56	7.62E+00	2.68E+00	3.89E+04	4.56E+02
	9	122.11	8.38E+03	358.57			8.38E+03	3.59E+02
	10	136.60	1.05E+03	266.67			1.05E+03	2.67E+02
	11	146.24	2.21E+02	225.79			2.21E+02	2.26E+02
	12	165.81	1.11E+03	286.33			1.11E+03	2.86E+02
	13	238.61	3.10E+02	237.84	6.70E+00	1.07E+00	3.04E+02	2.38E+02
	14	392.06	2.05E+02	191.83			2.05E+02	1.92E+02
	15	503.84	1.22E+02	141.93			1.22E+02	1.42E+02
	16	584.35	1.44E+02	124.45	2.98E+00	1.73E+00	1.41E+02	1.24E+02
	17	661.89	2.28E+04	368.73	3.38E+00	1.70E+00	2.28E+04	3.69E+02
	18	702.43	1.07E+02	125.83			1.07E+02	1.26E+02
	19	840.82	1.30E+02	135.39			1.30E+02	1.35E+02
	20	898.30	2.78E+02	151.32			2.78E+02	1.51E+02
M	21	1168.74	4.60E+01	37.08			4.60E+01	3.71E+01
m	22	1173.56	1.93E+04	288.50	3.60E+00	1.29E+00	1.93E+04	2.89E+02
	23	1332.88	1.73E+04	276.62	2.12E+00	1.11E+00	1.73E+04	2.77E+02
	24	1836.88	1.68E+02	43.82			1.68E+02	4.38E+01
	25	1918.01	4.14E+01	19.27			4.14E+01	1.93E+01
	26	1977.52	2.61E+01	28.59			2.61E+01	2.86E+01
	27	2387.39	9.00E+00	6.00			9.00E+00	6.00E+00
	28	2484.80	6.61E+00	7.50			6.61E+00	7.50E+00
	29	2506.11	1.73E+02	27.00			1.73E+02	2.70E+01
	30	2614.76	1.15E+01	8.25			1.15E+01	8.25E+00

Analysis Report for 1510086-01
GAS-1302

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

NUCLIDE IDENTIFICATION REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

IDENTIFIED NUCLIDES

Nuclide Name	Id Confidence	Energy (keV)		Yield(%)	Activity (pCi/grams)	Activity Uncertainty
CO-57	0.951	122.06	*	85.51	7.77E+01	6.78E+00
		136.48	*	10.60	8.28E+01	2.21E+01
CO-60	0.977	1173.22	*	100.00	1.37E+02	1.14E+01
		1332.49	*	100.00	1.36E+02	1.13E+01
Y-88	0.676	898.02	*	93.40	3.25E+02	1.79E+02
		1836.01	*	99.38	3.28E+02	8.89E+01
CD-109	0.983	88.03	*	3.72	3.14E+03	3.76E+02
SN-113	0.700	255.12		1.93		
		391.69	*	64.90	1.11E+02	1.05E+02
SN-126	0.958	87.57	*	37.00	8.78E+01	9.14E+00
CS-137	0.991	661.65	*	85.12	9.01E+01	8.14E+00
CE-139	0.824	165.85	*	80.35	1.07E+02	2.88E+01
TM-171	0.860	66.72	*	0.14	1.54E+03	6.75E+02
PB-212	0.896	238.63	*	44.60	9.13E-01	7.18E-01
		300.09		3.41		
TH-231	0.890	25.64	*	14.70	2.22E+03	1.65E+03
		84.21	*	6.40	1.19E+01	3.48E+00
AM-241	0.999	59.54	*	35.90	2.59E+02	2.01E+01

* = Energy line found in the spectrum.

- = Manually added nuclide.

? = Manually edited nuclide.

Energy Tolerance : 1.000 keV

Nuclide confidence index threshold = 0.30

Errors quoted at 2.000sigma

Analysis Report for 1510086-01
 GAS-1302

UNIDENTIFIED PEAKS

Peak Locate Performed on : 11/5/2015 7:11:44AM
 Peak Locate From Channel : 1
 Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
M 1	22.02	6.15669E+01	0.33		
3	32.12	1.01762E+00	7.28		
M 4	52.10	7.03439E+00	2.63		
11	146.24	1.23053E-01	50.97	Sum	
15	503.84	6.77758E-02	58.17		
16	584.35	7.83758E-02	44.11		
18	702.43	5.93442E-02	58.90	Tol.	NB-94
19	840.82	7.24814E-02	51.89		
M 21	1168.74	2.55342E-02	40.34		
25	1918.01	2.29950E-02	23.28		
26	1977.52	1.44776E-02	54.85		
27	2387.39	5.00000E-03	33.33		
28	2484.80	3.67284E-03	56.72		
29	2506.11	9.62989E-02	7.79	Sum	
30	2614.76	6.38889E-03	35.85	Tol.	TL-208

M = First peak in a multiplet region
 m = Other peak in a multiplet region
 F = Fitted singlet
 Errors quoted at 2.000sigma

NUCLIDE IDENTIFICATION REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

IDENTIFIED NUCLIDES

Nuclide Name	Id Confidence	Energy (keV)	Yield(%)	Activity (pCi/grams)	Activity Uncertainty
CO-57	0.95	122.06 *	85.51	7.77E+01	6.78E+00
		136.48 *	10.60	8.28E+01	2.21E+01
CO-60	0.97	1173.22 *	100.00	1.37E+02	1.14E+01
		1332.49 *	100.00	1.36E+02	1.13E+01

Analysis Report for 1510086-01
GAS-1302

Nuclide Name	Id Confidence	Energy (keV)		Yield(%)	Activity (pCi/grams)	Activity Uncertainty
Y-88	0.67	898.02 *		93.40	3.25E+02	1.79E+02
		1836.01 *		99.38	3.28E+02	8.89E+01
CD-109	0.98	88.03 *		3.72	3.14E+03	3.76E+02
SN-113	0.70	255.12		1.93		
		391.69 *		64.90	1.11E+02	1.05E+02
SN-126	0.95	87.57 *		37.00	8.78E+01	9.14E+00
CS-137	0.99	661.65 *		85.12	9.01E+01	8.14E+00
CE-139	0.82	165.85 *		80.35	1.07E+02	2.88E+01
TM-171	0.86	66.72 *		0.14	1.54E+03	6.75E+02
PB-212	0.89	238.63 *		44.60	9.13E-01	7.18E-01
		300.09		3.41		
TH-231	0.89	25.64 *		14.70	2.22E+03	1.65E+03
		84.21 *		6.40	1.19E+01	3.48E+00
AM-241	0.99	59.54 *		35.90	2.59E+02	2.01E+01

* = Energy line found in the spectrum.
 - = Manually added nuclide.
 ? = Manually edited nuclide.
 @ = Energy line not used for Weighted Mean Activity
 Energy Tolerance : 1.000 keV
 Nuclide confidence index threshold = 0.30
 Errors quoted at 2.000sigma

INTERFERENCE CORRECTED REPORT

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
CO-57	0.951	7.82E+01	6.49E+00	
CO-60	0.977	1.36E+02	8.04E+00	
Y-88	0.676	3.27E+02	7.96E+01	
? CD-109	0.983	3.14E+03	3.76E+02	
SN-113	0.700	1.11E+02	1.05E+02	
? SN-126	0.958	8.78E+01	9.14E+00	
CS-137	0.991	9.01E+01	8.14E+00	
CE-139	0.824	1.07E+02	2.88E+01	
TM-171	0.860	1.54E+03	6.75E+02	
PB-212	0.896	9.13E-01	7.18E-01	
TH-231	0.890	1.19E+01	3.48E+00	
AM-241	0.999	2.59E+02	2.01E+01	

Analysis Report for 1510086-01
GAS-1302

- ? = nuclide is part of an undetermined solution
- X = nuclide rejected by the interference analysis
- @ = nuclide contains energy lines not used in Weighted Mean Activity

Errors quoted at 2.000sigma

Analysis Report for 1510086-01
GAS-1302

UNIDENTIFIED PEAKS

Peak Locate Performed on : 11/5/2015 7:11:44AM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
M 1	22.02	6.15669E+01	0.33		
3	32.12	1.01762E+00	7.28		
M 4	52.10	7.03439E+00	2.63		
11	146.24	1.23053E-01	50.97	Sum	
15	503.84	6.77758E-02	58.17		
16	584.35	7.83758E-02	44.11		
18	702.43	5.93442E-02	58.90	Tol.	NB-94
19	840.82	7.24814E-02	51.89		
M 21	1168.74	2.55342E-02	40.34		
25	1918.01	2.29950E-02	23.28		
26	1977.52	1.44776E-02	54.85		
27	2387.39	5.00000E-03	33.33		
28	2484.80	3.67284E-03	56.72		
29	2506.11	9.62989E-02	7.79	Sum	
30	2614.76	6.38889E-03	35.85	Tol.	TL-208

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

NUCLIDE MDA REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	BE-7	477.59	10.42	9.62E+04	3.96E+05	3.96E+05
+	NA-22	1274.54	99.94	-4.26E-01	8.23E-01	8.23E-01

Analysis Report for 1510086-01
GAS-1302

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	@ NA-24	1368.53	99.99	1.00E+26	1.00E+26	1.00E+26
	@	2754.09	99.86	0.00E+00		1.00E+26
+	AL-26	1808.65	99.76	-5.91E-02	2.26E-01	2.26E-01
+	K-40	1460.81	10.67	6.72E-01	2.89E+00	2.89E+00
+	@ AR-41	1293.64	99.16	1.00E+26	1.00E+26	1.00E+26
+	TI-44	67.88	94.40	7.83E-01	4.38E-01	4.78E-01
		78.34	96.00	4.91E-02		4.38E-01
+	SC-46	889.25	99.98	-1.19E+02	1.01E+03	1.03E+03
		1120.51	99.99	1.71E+02		1.01E+03
+	V-48	983.52	99.98	1.22E+15	6.56E+15	1.25E+16
		1312.10	97.50	-9.91E+14		6.56E+15
+	CR-51	320.08	9.83	-6.34E+09	9.81E+09	9.81E+09
+	MN-54	834.83	99.97	2.34E-02	5.00E+00	5.00E+00
+	CO-56	846.75	99.96	-2.45E+02	2.74E+02	1.47E+03
		1037.75	14.03	-2.55E+03		1.19E+04
		1238.25	67.00	6.38E+02		1.34E+03
		1771.40	15.51	-3.05E+02		2.77E+03
		2598.48	16.90	0.00E+00		2.74E+02
+	CO-57	122.06	* 85.51	7.77E+01	4.73E+00	4.73E+00
		136.48	* 10.60	8.28E+01		3.36E+01
+	CO-58	810.76	99.40	-5.69E+02	3.17E+03	3.17E+03
+	FE-59	1099.22	56.50	2.70E+05	6.34E+05	9.80E+05
		1291.56	43.20	-1.45E+04		6.34E+05
+	CO-60	1173.22	* 100.00	1.37E+02	1.12E+00	1.66E+00
		1332.49	* 100.00	1.36E+02		1.12E+00
+	ZN-65	1115.52	50.75	4.98E+00	2.01E+01	2.01E+01
+	@ GA-67	93.31	35.70	1.00E+26	1.00E+26	1.00E+26
	@	208.95	2.24	1.00E+26		1.00E+26
	@	300.22	16.00	1.00E+26		1.00E+26
+	SE-75	121.11	16.70	6.17E+03	7.71E+01	4.06E+02
		136.00	59.20	2.29E+02		7.71E+01
		264.65	59.80	1.40E+01		1.07E+02
		279.53	25.20	-9.14E+01		2.55E+02
		400.65	11.40	2.40E+02		7.04E+02
+	RB-82	776.52	13.00	2.46E+10	6.58E+10	6.58E+10
+	RB-83	520.41	46.00	1.75E+02	1.23E+03	1.23E+03
		529.64	30.30	-5.54E+01		1.85E+03
		552.65	16.40	7.45E+02		3.41E+03
+	KR-85	513.99	0.43	3.79E+00	1.58E+02	1.58E+02
+	SR-85	513.99	99.27	1.36E+02	5.65E+03	5.65E+03
+	Y-88	898.02	* 93.40	3.25E+02	1.18E+02	2.87E+02
		1836.01	* 99.38	3.28E+02		1.18E+02
+	NB-93M	16.57	9.43	2.29E+03	7.05E+02	7.05E+02
+	NB-94	702.63	100.00	2.22E-01	6.16E-01	6.16E-01
		871.10	100.00	1.45E-01		8.19E-01
+	NB-95	765.79	99.81	1.06E+07	1.55E+07	1.55E+07
+	@ NB-95M	235.69	25.00	1.00E+26	1.00E+26	1.00E+26

Analysis Report for 1510086-01
GAS-1302

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	ZR-95	724.18	43.70	-4.02E+03	1.26E+04	1.52E+04
		756.72	55.30	-3.44E+03		1.26E+04
+	@ MO-99	181.06	6.20	1.00E+26	1.00E+26	1.00E+26
	@	739.58	12.80	1.00E+26		1.00E+26
	@	778.00	4.50	1.00E+26		1.00E+26
+	RU-103	497.08	89.00	9.67E+05	2.36E+06	2.36E+06
+	RU-106	621.84	9.80	-9.61E+00	3.02E+01	3.02E+01
+	AG-108M	433.93	89.90	-2.38E-01	6.63E-01	6.63E-01
		614.37	90.40	-3.23E-01		6.64E-01
		722.95	90.50	-4.49E-01		6.91E-01
+	CD-109	88.03	* 3.72	3.14E+03	5.83E+01	5.83E+01
+	AG-110M	657.75	93.14	-1.73E+02	1.21E+01	1.66E+01
		677.61	10.53	-3.53E+01		5.96E+01
		706.67	16.46	9.53E+00		3.96E+01
		763.93	21.98	1.10E+01		3.31E+01
		884.67	71.63	-7.01E+00		1.26E+01
		1384.27	23.94	-3.91E+00		1.21E+01
+	CD-113M	263.70	0.02	-2.90E+02	2.19E+03	2.19E+03
+	SN-113	255.12	1.93	-1.26E+03	1.71E+02	4.05E+03
		391.69	* 64.90	1.11E+02		1.71E+02
+	TE123M	159.00	84.10	-5.97E+00	5.12E+01	5.12E+01
+	SB-124	602.71	97.87	2.03E+02	9.34E+03	1.14E+04
		645.85	7.26	-2.95E+04		1.62E+05
		722.78	11.10	-6.97E+04		1.07E+05
		1691.02	49.00	-7.28E+03		9.34E+03
+	I-125	35.49	6.49	3.72E+05	2.68E+05	2.68E+05
+	SB-125	176.33	6.89	4.55E+00	3.64E+00	8.18E+00
		427.89	29.33	-3.28E-01		3.64E+00
		463.38	10.35	1.97E+00		1.12E+01
		600.56	17.80	2.39E-01		5.86E+00
		635.90	11.32	2.76E-01		9.75E+00
+	@ SB-126	414.70	83.30	1.00E+26	1.00E+26	1.00E+26
	@	666.33	99.60	1.00E+26		1.00E+26
	@	695.00	99.60	1.00E+26		1.00E+26
	@	720.50	53.80	1.00E+26		1.00E+26
+	SN-126	87.57	* 37.00	8.78E+01	1.63E+00	1.63E+00
+	@ SB-127	473.00	25.00	1.00E+26	1.00E+26	1.00E+26
	@	685.20	35.70	1.00E+26		1.00E+26
	@	783.80	14.70	1.00E+26		1.00E+26
+	I-129	29.78	57.00	-2.90E+01	2.86E+00	2.86E+00
		33.60	13.20	1.99E+01		8.77E+00
		39.58	7.52	-3.33E+01		9.64E+00
+	@ I-131	284.30	6.05	1.00E+26	1.00E+26	1.00E+26
	@	364.48	81.20	1.00E+26		1.00E+26
	@	636.97	7.26	1.00E+26		1.00E+26
	@	722.89	1.80	1.00E+26		1.00E+26
+	@ TE-132	49.72	13.10	1.00E+26	1.00E+26	1.00E+26
	@	228.16	88.00	1.00E+26		1.00E+26

Analysis Report for 1510086-01

GAS-1302

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	BA-133	81.00	33.00	-4.34E-01	9.80E-01	1.44E+00
		302.84	17.80	-1.57E+00		3.04E+00
		356.01	60.00	-1.24E-01		9.80E-01
+	@ I-133	529.87	86.30	1.00E+26	1.00E+26	1.00E+26
+	@ XE-133	81.00	38.00	1.00E+26	1.00E+26	1.00E+26
+	CS-134	563.23	8.38	-5.31E+00	1.30E+00	1.45E+01
		569.32	15.43	-7.35E-01		8.11E+00
		604.70	97.60	-8.42E-01		1.30E+00
		795.84	85.40	8.70E-02		1.82E+00
		801.93	8.73	1.83E-01		1.80E+01
+	CS-135	268.24	16.00	-4.46E-01	2.81E+00	2.81E+00
+	@ I-135	1131.51	22.50	1.00E+26	1.00E+26	1.00E+26
	@	1260.41	28.60	1.00E+26		1.00E+26
	@	1678.03	9.54	1.00E+26		1.00E+26
+	CS-136	153.22	7.46	-3.60E+19	2.99E+19	1.58E+20
		163.89	4.61	5.33E+20		2.95E+20
		176.55	13.56	2.48E+19		9.29E+19
		273.65	12.66	3.02E+19		1.44E+20
		340.57	48.50	4.99E+18		4.07E+19
		818.50	99.70	1.22E+18		2.99E+19
		1048.07	79.60	1.89E+18		4.49E+19
		1235.34	19.70	7.36E+19		1.01E+20
+	CS-137	661.65	* 85.12	9.01E+01	1.39E+00	1.39E+00
+	LA-138	788.74	34.00	-1.27E-01	4.32E-01	2.05E+00
		1435.80	66.00	-1.26E-01		4.32E-01
+	CE-139	165.85	* 80.35	1.07E+02	4.44E+01	4.44E+01
+	@ BA-140	162.64	6.70	1.00E+26	1.00E+26	1.00E+26
	@	304.84	4.50	1.00E+26		1.00E+26
	@	423.70	3.20	1.00E+26		1.00E+26
	@	437.55	2.00	1.00E+26		1.00E+26
	@	537.32	25.00	1.00E+26		1.00E+26
+	@ LA-140	328.77	20.50	1.00E+26	1.00E+26	1.00E+26
	@	487.03	45.50	1.00E+26		1.00E+26
	@	815.85	23.50	1.00E+26		1.00E+26
	@	1596.49	95.49	1.00E+26		1.00E+26
+	CE-141	145.44	48.40	3.15E+07	5.34E+07	5.34E+07
+	@ CE-143	57.36	11.80	1.00E+26	1.00E+26	1.00E+26
	@	293.26	42.00	1.00E+26		1.00E+26
	@	664.55	5.20	1.00E+26		1.00E+26
+	CE-144	133.54	10.80	3.59E+00	2.25E+01	2.25E+01
+	PM-144	476.78	42.00	3.54E+00	3.10E+00	7.59E+00
		618.01	98.60	8.11E-01		3.10E+00
		696.49	99.49	-9.39E-01		3.12E+00
+	PM-145	36.85	21.70	3.39E+00	2.23E+00	4.09E+00
		37.36	39.70	2.38E-01		2.23E+00
		42.30	15.10	-5.23E+00		5.25E+00
		72.40	2.31	1.37E+00		1.99E+01
+	PM-146	453.90	39.94	-9.40E-01	2.07E+00	2.07E+00

Analysis Report for 1510086-01

GAS-1302

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	PM-146	735.90	14.01	-1.02E+00	2.07E+00	6.06E+00
		747.13	13.10	-1.56E-01		6.68E+00
+	@ ND-147	91.11	28.90	1.00E+26	1.00E+26	1.00E+26
	@	531.02	13.10	1.00E+26		1.00E+26
+	@ PM-149	285.90	3.10	1.00E+26	1.00E+26	1.00E+26
+	EU-152	121.78	20.50	4.07E+01	2.19E+00	2.62E+00
		244.69	5.40	-1.57E+00		9.32E+00
		344.27	19.13	-2.30E+00		2.88E+00
		778.89	9.20	-1.21E+00		8.40E+00
		964.01	10.40	-4.25E-01		1.01E+01
		1085.78	7.22	-2.29E+00		1.39E+01
		1112.02	9.60	3.61E+00		1.07E+01
		1407.95	14.94	6.81E-02		2.19E+00
+	GD-153	97.43	31.30	-2.94E+00	1.05E+01	1.05E+01
		103.18	22.20	-2.26E+00		1.48E+01
+	EU-154	123.07	40.50	2.13E+01	1.41E+00	1.41E+00
		723.30	19.70	-2.45E+00		3.77E+00
		873.19	11.50	-1.51E+00		8.60E+00
		996.32	10.30	-7.85E+00		9.86E+00
		1004.76	17.90	1.67E+00		5.94E+00
		1274.45	35.50	-7.72E-01		1.49E+00
+	EU-155	86.50	30.90	1.44E+02	1.89E+00	3.83E+00
		105.30	20.70	-7.25E-01		1.89E+00
+	EU-156	811.77	10.40	1.16E+16	5.27E+17	6.66E+17
		1153.47	7.20	5.02E+17		9.83E+17
		1230.71	8.90	-6.16E+15		5.27E+17
+	HO-166M	184.41	72.60	-6.33E-02	4.55E-01	4.55E-01
		280.45	29.60	2.17E-01		1.53E+00
		410.94	11.10	-7.20E-01		5.01E+00
		711.69	54.10	-3.87E-01		1.13E+00
+	TM-171	66.72	* 0.14	1.54E+03	1.08E+03	1.08E+03
+	HF-172	81.75	4.52	-5.53E+00	6.15E+00	2.16E+01
		125.81	11.30	1.77E+00		6.15E+00
+	@ LU-172	181.53	20.60	1.00E+26	1.00E+26	1.00E+26
	@	810.06	16.63	1.00E+26		1.00E+26
	@	912.12	15.25	1.00E+26		1.00E+26
	@	1093.66	62.50	1.00E+26		1.00E+26
+	LU-173	100.72	5.24	1.16E+01	7.02E+00	1.78E+01
		272.11	21.20	8.82E-01		7.02E+00
+	HF-175	343.40	84.00	-1.28E+03	2.83E+03	2.83E+03
+	LU-176	88.34	13.30	2.42E+02	4.83E-01	6.28E+00
		201.83	86.00	1.50E-02		4.83E-01
		306.78	94.00	-1.64E-01		4.96E-01
+	TA-182	67.75	41.20	3.15E+02	1.92E+02	1.92E+02
		1121.30	34.90	4.65E+01		4.25E+02
		1189.05	16.23	-3.92E+02		6.68E+02
		1221.41	26.98	2.34E-01		3.29E+02
		1231.02	11.44	-2.84E+02		7.52E+02
+	IR-192	308.46	29.68	2.88E+03	4.10E+03	4.88E+03

Analysis Report for 1510086-01

GAS-1302

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	IR-192	468.07	48.10	8.10E+02	4.10E+03	4.10E+03
+	HG-203	279.19	77.30	-8.09E+04	2.01E+05	2.01E+05
+	BI-207	569.67	97.72	-4.70E-01	6.05E-01	6.05E-01
		1063.62	74.90	-6.33E-01		1.22E+00
+	TL-208	583.14	30.22	-4.07E-01	5.11E-01	1.93E+00
		860.37	4.48	1.55E+01		1.84E+01
		2614.66	35.85	-8.47E-03		5.11E-01
+	BI-210M	262.00	45.00	2.78E-01	1.00E+00	1.00E+00
		300.00	23.00	8.23E-01		2.04E+00
+	PB-210	46.50	4.25	-1.19E+02	2.00E+01	2.00E+01
+	PB-211	404.84	2.90	8.18E+00	1.94E+01	1.94E+01
		831.96	2.90	4.10E+00		2.56E+01
+	BI-212	727.17	11.80	-3.12E+00	5.29E+00	5.29E+00
		1620.62	2.75	-2.64E+00		1.02E+01
+	PB-212	238.63	* 44.60	9.13E-01	1.17E+00	1.17E+00
		300.09	3.41	5.55E+00		1.38E+01
+	BI-214	609.31	46.30	4.47E-01	1.28E+00	1.28E+00
		1120.29	15.10	9.47E-01		5.58E+00
		1764.49	15.80	3.54E-01		1.57E+00
		2204.22	4.98	2.61E+00		5.53E+00
+	PB-214	295.21	19.19	7.12E-02	1.36E+00	2.44E+00
		351.92	37.19	3.74E-01		1.36E+00
+	RN-219	401.80	6.50	5.86E+00	8.72E+00	8.72E+00
+	RA-223	323.87	3.88	3.94E+00	1.25E+01	1.25E+01
+	RA-224	240.98	3.95	1.70E+00	1.16E+01	1.16E+01
+	RA-225	40.00	31.00	-2.13E+18	6.18E+17	6.18E+17
+	RA-226	186.21	3.28	2.03E+00	1.03E+01	1.03E+01
+	TH-227	50.10	8.40	4.96E+01	3.99E+00	1.03E+01
		236.00	11.50	-8.28E-01		3.99E+00
		256.20	6.30	3.02E+00		7.14E+00
+	AC-228	338.32	11.40	1.42E+00	3.24E+00	4.33E+00
		911.07	27.70	-1.14E+00		3.24E+00
		969.11	16.60	3.77E-01		5.38E+00
+	TH-230	48.44	16.90	1.88E+01	5.11E+00	5.11E+00
		62.85	4.60	-1.01E+03		1.25E+01
		67.67	0.37	1.95E+02		1.19E+02
+	PA-231	283.67	1.60	1.55E+01	2.02E+01	2.88E+01
		302.67	2.30	-1.04E+01		2.02E+01
+	TH-231	25.64	* 14.70	2.22E+03	9.60E+00	5.04E+01
		84.21	* 6.40	1.19E+01		9.60E+00
+	PA-233	311.98	38.60	1.61E+09	4.42E+09	4.42E+09
+	PA-234	131.20	20.40	-2.78E-01	1.41E+00	1.41E+00
		733.99	8.80	1.19E+00		7.25E+00
		946.00	12.00	2.14E+00		8.03E+00
+	PA-234M	1001.03	0.92	-6.43E+00	9.43E+01	9.43E+01
+	TH-234	63.29	3.80	-4.02E+02	1.13E+01	1.13E+01
+	U-235	143.76	10.50	-3.15E-01	2.80E+00	2.80E+00

Analysis Report for 1510086-01
GAS-1302

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
U-235	163.35	4.70	1.30E+01	2.80E+00	7.18E+00
	205.31	4.70	-2.23E+00		8.86E+00
+ NP-237	86.50	12.60	2.54E+02	6.76E+00	6.76E+00
+ @ NP-239	106.10	22.70	1.00E+26	1.00E+26	1.00E+26
@	228.18	10.70	1.00E+26		1.00E+26
@	277.60	14.10	1.00E+26		1.00E+26
+ AM-241	59.54 *	35.90	2.59E+02	4.42E+00	4.42E+00
+ AM-243	74.67	66.00	-1.89E-01	6.26E-01	6.26E-01
+ CM-243	209.75	3.29	-6.92E+00	3.40E+00	1.37E+01
	228.14	10.60	2.41E-02		4.51E+00
	277.60	14.00	-1.71E+00		3.40E+00

- + = Nuclide identified during the nuclide identification
- * = Energy line found in the spectrum
- > = MDA value not calculated
- @ = Half-life too short to be able to perform the decay correction
- ? = CAUTION: MDA value is inconsistent with Currie MDA at 95% confidence level

NUCLIDE MDA REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
BE-7	477.59	10.42	3.96E+05	3.96E+05	9.62E+04	1.96E+05
NA-22	1274.54	99.94	8.23E-01	8.23E-01	-4.26E-01	3.97E-01
@ NA-24	1368.53	99.99	1.00E+26	1.00E+26	1.00E+26	1.00E+20
@	2754.09	99.86	1.00E+26		0.00E+00	1.00E+20
AL-26	1808.65	99.76	2.26E-01	2.26E-01	-5.91E-02	1.03E-01
K-40	1460.81	10.67	2.89E+00	2.89E+00	6.72E-01	1.36E+00
@ AR-41	1293.64	99.16	1.00E+26	1.00E+26	1.00E+26	1.00E+20
TI-44	67.88	94.40	4.78E-01	4.38E-01	7.83E-01	2.38E-01
	78.34	96.00	4.38E-01		4.91E-02	2.18E-01
SC-46	889.25	99.98	1.03E+03	1.01E+03	-1.19E+02	5.08E+02
	1120.51	99.99	1.01E+03		1.71E+02	4.95E+02

Analysis Report for 1510086-01
 GAS-1302

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
V-48	983.52	99.98	1.25E+16	6.56E+15	1.22E+15	6.16E+15
	1312.10	97.50	6.56E+15		-9.91E+14	3.17E+15
CR-51	320.08	9.83	9.81E+09	9.81E+09	-6.34E+09	4.86E+09
MN-54	834.83	99.97	5.00E+00	5.00E+00	2.34E-02	2.47E+00
CO-56	846.75	99.96	1.47E+03	2.74E+02	-2.45E+02	7.22E+02
	1037.75	14.03	1.19E+04		-2.55E+03	5.86E+03
	1238.25	67.00	1.34E+03		6.38E+02	6.49E+02
	1771.40	15.51	2.77E+03		-3.05E+02	1.27E+03
	2598.48	16.90	2.74E+02		0.00E+00	0.00E+00
+ CO-57	122.06	* 85.51	4.73E+00	4.73E+00	7.77E+01	2.35E+00
	136.48	* 10.60	3.36E+01		8.28E+01	1.67E+01
CO-58	810.76	99.40	3.17E+03	3.17E+03	-5.69E+02	1.56E+03
FE-59	1099.22	56.50	9.80E+05	6.34E+05	2.70E+05	4.83E+05
	1291.56	43.20	6.34E+05		-1.45E+04	3.06E+05
+ CO-60	1173.22	* 100.00	1.66E+00	1.12E+00	1.37E+02	8.21E-01
	1332.49	* 100.00	1.12E+00		1.36E+02	5.51E-01
ZN-65	1115.52	50.75	2.01E+01	2.01E+01	4.98E+00	9.90E+00
@ GA-67	93.31	35.70	1.00E+26	1.00E+26	1.00E+26	1.00E+20
@	208.95	2.24	1.00E+26		1.00E+26	1.00E+20
@	300.22	16.00	1.00E+26		1.00E+26	1.00E+20
SE-75	121.11	16.70	4.06E+02	7.71E+01	6.17E+03	2.02E+02
	136.00	59.20	7.71E+01		2.29E+02	3.82E+01
	264.65	59.80	1.07E+02		1.40E+01	5.33E+01
	279.53	25.20	2.55E+02		-9.14E+01	1.26E+02
	400.65	11.40	7.04E+02		2.40E+02	3.49E+02
RB-82	776.52	13.00	6.58E+10	6.58E+10	2.46E+10	3.24E+10
RB-83	520.41	46.00	1.23E+03	1.23E+03	1.75E+02	6.07E+02
	529.64	30.30	1.85E+03		-5.54E+01	9.15E+02
	552.65	16.40	3.41E+03		7.45E+02	1.68E+03
KR-85	513.99	0.43	1.58E+02	1.58E+02	3.79E+00	7.80E+01
SR-85	513.99	99.27	5.65E+03	5.65E+03	1.36E+02	2.79E+03
+ Y-88	898.02	* 93.40	2.87E+02	1.18E+02	3.25E+02	1.42E+02
	1836.01	* 99.38	1.18E+02		3.28E+02	5.65E+01
NB-93M	16.57	9.43	7.05E+02	7.05E+02	2.29E+03	3.51E+02
NB-94	702.63	100.00	6.16E-01	6.16E-01	2.22E-01	3.04E-01
	871.10	100.00	8.19E-01		1.45E-01	4.04E-01
NB-95	765.79	99.81	1.55E+07	1.55E+07	1.06E+07	7.66E+06
@ NB-95M	235.69	25.00	1.00E+26	1.00E+26	1.00E+26	1.00E+20
ZR-95	724.18	43.70	1.52E+04	1.26E+04	-4.02E+03	7.50E+03
	756.72	55.30	1.26E+04		-3.44E+03	6.19E+03
@ MO-99	181.06	6.20	1.00E+26	1.00E+26	1.00E+26	1.00E+20
@	739.58	12.80	1.00E+26		1.00E+26	1.00E+20
@	778.00	4.50	1.00E+26		1.00E+26	1.00E+20
RU-103	497.08	89.00	2.36E+06	2.36E+06	9.67E+05	1.17E+06
RU-106	621.84	9.80	3.02E+01	3.02E+01	-9.61E+00	1.49E+01
AG-108M	433.93	89.90	6.63E-01	6.63E-01	-2.38E-01	3.28E-01
	614.37	90.40	6.64E-01		-3.23E-01	3.27E-01
	722.95	90.50	6.91E-01		-4.49E-01	3.40E-01
+ CD-109	88.03	* 3.72	5.83E+01	5.83E+01	3.14E+03	2.90E+01
AG-110M	657.75	93.14	1.66E+01	1.21E+01	-1.73E+02	8.24E+00
	677.61	10.53	5.96E+01		-3.53E+01	2.94E+01
	706.67	16.46	3.96E+01		9.53E+00	1.95E+01
	763.93	21.98	3.31E+01		1.10E+01	1.63E+01

0323A

Analysis Report for 1510086-01

GAS-1302

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
AG-110M	884.67	71.63	1.26E+01	1.21E+01	-7.01E+00	6.21E+00
	1384.27	23.94	1.21E+01		-3.91E+00	5.70E+00
CD-113M	263.70	0.02	2.19E+03	2.19E+03	-2.90E+02	1.09E+03
+ SN-113	255.12	1.93	4.05E+03	1.71E+02	-1.26E+03	2.01E+03
	391.69	* 64.90	1.71E+02		1.11E+02	8.48E+01
TE123M	159.00	84.10	5.12E+01	5.12E+01	-5.97E+00	2.54E+01
SB-124	602.71	97.87	1.14E+04	9.34E+03	2.03E+02	5.62E+03
	645.85	7.26	1.62E+05		-2.95E+04	7.97E+04
	722.78	11.10	1.07E+05		-6.97E+04	5.29E+04
	1691.02	49.00	9.34E+03		-7.28E+03	4.30E+03
I-125	35.49	6.49	2.68E+05	2.68E+05	3.72E+05	1.33E+05
SB-125	176.33	6.89	8.18E+00	3.64E+00	4.55E+00	4.05E+00
	427.89	29.33	3.64E+00		-3.28E-01	1.80E+00
	463.38	10.35	1.12E+01		1.97E+00	5.53E+00
	600.56	17.80	5.86E+00		2.39E-01	2.89E+00
	635.90	11.32	9.75E+00		2.76E-01	4.81E+00
@ SB-126	414.70	83.30	1.00E+26	1.00E+26	1.00E+26	1.00E+20
@	666.33	99.60	1.00E+26		1.00E+26	1.00E+20
@	695.00	99.60	1.00E+26		1.00E+26	1.00E+20
@	720.50	53.80	1.00E+26		1.00E+26	1.00E+20
+ SN-126	87.57	* 37.00	1.63E+00	1.63E+00	8.78E+01	8.12E-01
@ SB-127	473.00	25.00	1.00E+26	1.00E+26	1.00E+26	1.00E+20
@	685.20	35.70	1.00E+26		1.00E+26	1.00E+20
@	783.80	14.70	1.00E+26		1.00E+26	1.00E+20
I-129	29.78	57.00	2.86E+00	2.86E+00	-2.90E+01	1.42E+00
	33.60	13.20	8.77E+00		1.99E+01	4.36E+00
	39.58	7.52	9.64E+00		-3.33E+01	4.79E+00
@ I-131	284.30	6.05	1.00E+26	1.00E+26	1.00E+26	1.00E+20
@	364.48	81.20	1.00E+26		1.00E+26	1.00E+20
@	636.97	7.26	1.00E+26		1.00E+26	1.00E+20
@	722.89	1.80	1.00E+26		1.00E+26	1.00E+20
@ TE-132	49.72	13.10	1.00E+26	1.00E+26	1.00E+26	1.00E+20
@	228.16	88.00	1.00E+26		1.00E+26	1.00E+20
BA-133	81.00	33.00	1.44E+00	9.80E-01	-4.34E-01	7.16E-01
	302.84	17.80	3.04E+00		-1.57E+00	1.51E+00
	356.01	60.00	9.80E-01		-1.24E-01	4.85E-01
@ I-133	529.87	86.30	1.00E+26	1.00E+26	1.00E+26	1.00E+20
@ XE-133	81.00	38.00	1.00E+26	1.00E+26	1.00E+26	1.00E+20
CS-134	563.23	8.38	1.45E+01	1.30E+00	-5.31E+00	7.18E+00
	569.32	15.43	8.11E+00		-7.35E-01	4.00E+00
	604.70	97.60	1.30E+00		-8.42E-01	6.40E-01
	795.84	85.40	1.82E+00		8.70E-02	8.96E-01
	801.93	8.73	1.80E+01		1.83E-01	8.86E+00
CS-135	268.24	16.00	2.81E+00	2.81E+00	-4.46E-01	1.39E+00
@ I-135	1131.51	22.50	1.00E+26	1.00E+26	1.00E+26	1.00E+20
@	1260.41	28.60	1.00E+26		1.00E+26	1.00E+20
@	1678.03	9.54	1.00E+26		1.00E+26	1.00E+20
CS-136	153.22	7.46	1.58E+20	2.99E+19	-3.60E+19	7.85E+19
	163.89	4.61	2.95E+20		5.33E+20	1.46E+20
	176.55	13.56	9.29E+19		2.48E+19	4.60E+19
	273.65	12.66	1.44E+20		3.02E+19	7.12E+19
	340.57	48.50	4.07E+19		4.99E+18	2.02E+19
	818.50	99.70	2.99E+19		1.22E+18	1.48E+19

: 00324

Analysis Report for 1510086-01
GAS-1302

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
CS-136	1048.07	79.60	4.49E+19	2.99E+19	1.89E+18	2.21E+19
	1235.34	19.70	1.01E+20		7.36E+19	4.88E+19
+ CS-137	661.65 *	85.12	1.39E+00	1.39E+00	9.01E+01	6.89E-01
LA-138	788.74	34.00	2.05E+00	4.32E-01	-1.27E-01	1.01E+00
	1435.80	66.00	4.32E-01		-1.26E-01	2.03E-01
+ CE-139	165.85 *	80.35	4.44E+01	4.44E+01	1.07E+02	2.21E+01
@ BA-140	162.64	6.70	1.00E+26	1.00E+26	1.00E+26	1.00E+20
@	304.84	4.50	1.00E+26		1.00E+26	1.00E+20
@	423.70	3.20	1.00E+26		1.00E+26	1.00E+20
@	437.55	2.00	1.00E+26		1.00E+26	1.00E+20
@	537.32	25.00	1.00E+26		1.00E+26	1.00E+20
@ LA-140	328.77	20.50	1.00E+26	1.00E+26	1.00E+26	1.00E+20
@	487.03	45.50	1.00E+26		1.00E+26	1.00E+20
@	815.85	23.50	1.00E+26		1.00E+26	1.00E+20
@	1596.49	95.49	1.00E+26		1.00E+26	1.00E+20
CE-141	145.44	48.40	5.34E+07	5.34E+07	3.15E+07	2.65E+07
@ CE-143	57.36	11.80	1.00E+26	1.00E+26	1.00E+26	1.00E+20
@	293.26	42.00	1.00E+26		1.00E+26	1.00E+20
@	664.55	5.20	1.00E+26		1.00E+26	1.00E+20
CE-144	133.54	10.80	2.25E+01	2.25E+01	3.59E+00	1.11E+01
PM-144	476.78	42.00	7.59E+00	3.10E+00	3.54E+00	3.75E+00
	618.01	98.60	3.10E+00		8.11E-01	1.53E+00
	696.49	99.49	3.12E+00		-9.39E-01	1.54E+00
PM-145	36.85	21.70	4.09E+00	2.23E+00	3.39E+00	2.03E+00
	37.36	39.70	2.23E+00		2.38E-01	1.11E+00
	42.30	15.10	5.25E+00		-5.23E+00	2.61E+00
	72.40	2.31	1.99E+01		1.37E+00	9.90E+00
PM-146	453.90	39.94	2.07E+00	2.07E+00	-9.40E-01	1.02E+00
	735.90	14.01	6.06E+00		-1.02E+00	2.98E+00
	747.13	13.10	6.68E+00		-1.56E-01	3.29E+00
@ ND-147	91.11	28.90	1.00E+26	1.00E+26	1.00E+26	1.00E+20
@	531.02	13.10	1.00E+26		1.00E+26	1.00E+20
@ PM-149	285.90	3.10	1.00E+26	1.00E+26	1.00E+26	1.00E+20
EU-152	121.78	20.50	2.62E+00	2.19E+00	4.07E+01	1.30E+00
	244.69	5.40	9.32E+00		-1.57E+00	4.62E+00
	344.27	19.13	2.88E+00		-2.30E+00	1.43E+00
	778.89	9.20	8.40E+00		-1.21E+00	4.14E+00
	964.01	10.40	1.01E+01		-4.25E-01	4.97E+00
	1085.78	7.22	1.39E+01		-2.29E+00	6.84E+00
	1112.02	9.60	1.07E+01		3.61E+00	5.25E+00
	1407.95	14.94	2.19E+00		6.81E-02	1.04E+00
GD-153	97.43	31.30	1.05E+01	1.05E+01	-2.94E+00	5.21E+00
	103.18	22.20	1.48E+01		-2.26E+00	7.36E+00
EU-154	123.07	40.50	1.41E+00	1.41E+00	2.13E+01	7.02E-01
	723.30	19.70	3.77E+00		-2.45E+00	1.86E+00
	873.19	11.50	8.60E+00		-1.51E+00	4.24E+00
	996.32	10.30	9.86E+00		-7.85E+00	4.86E+00
	1004.76	17.90	5.94E+00		1.67E+00	2.93E+00
	1274.45	35.50	1.49E+00		-7.72E-01	7.20E-01
EU-155	86.50	30.90	3.83E+00	1.89E+00	1.44E+02	1.91E+00
	105.30	20.70	1.89E+00		-7.25E-01	9.36E-01
EU-156	811.77	10.40	6.66E+17	5.27E+17	1.16E+16	3.28E+17
	1153.47	7.20	9.83E+17		5.02E+17	4.82E+17

Analysis Report for 1510086-01

GAS-1302

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
EU-156	1230.71	8.90	5.27E+17	5.27E+17	-6.16E+15	2.55E+17
HO-166M	184.41	72.60	4.55E-01	4.55E-01	-6.33E-02	2.26E-01
	280.45	29.60	1.53E+00		2.17E-01	7.58E-01
	410.94	11.10	5.01E+00		-7.20E-01	2.48E+00
	711.69	54.10	1.13E+00		-3.87E-01	5.56E-01
+ TM-171	66.72	* 0.14	1.08E+03	1.08E+03	1.54E+03	5.39E+02
HF-172	81.75	4.52	2.16E+01	6.15E+00	-5.53E+00	1.07E+01
	125.81	11.30	6.15E+00		1.77E+00	3.05E+00
@ LU-172	181.53	20.60	1.00E+26	1.00E+26	1.00E+26	1.00E+20
@	810.06	16.63	1.00E+26		1.00E+26	1.00E+20
@	912.12	15.25	1.00E+26		1.00E+26	1.00E+20
@	1093.66	62.50	1.00E+26		1.00E+26	1.00E+20
LU-173	100.72	5.24	1.78E+01	7.02E+00	1.16E+01	8.80E+00
	272.11	21.20	7.02E+00		8.82E-01	3.48E+00
HF-175	343.40	84.00	2.83E+03	2.83E+03	-1.28E+03	1.40E+03
LU-176	88.34	13.30	6.28E+00	4.83E-01	2.42E+02	3.13E+00
	201.83	86.00	4.83E-01		1.50E-02	2.40E-01
	306.78	94.00	4.96E-01		-1.64E-01	2.46E-01
TA-182	67.75	41.20	1.92E+02	1.92E+02	3.15E+02	9.55E+01
	1121.30	34.90	4.25E+02		4.65E+01	2.09E+02
	1189.05	16.23	6.68E+02		-3.92E+02	3.26E+02
	1221.41	26.98	3.29E+02		2.34E-01	1.59E+02
	1231.02	11.44	7.52E+02		-2.84E+02	3.64E+02
IR-192	308.46	29.68	4.88E+03	4.10E+03	2.88E+03	2.42E+03
	468.07	48.10	4.10E+03		8.10E+02	2.03E+03
HG-203	279.19	77.30	2.01E+05	2.01E+05	-8.09E+04	9.94E+04
BI-207	569.67	97.72	6.05E-01	6.05E-01	-4.70E-01	2.99E-01
	1063.62	74.90	1.22E+00		-6.33E-01	6.00E-01
TL-208	583.14	30.22	1.93E+00	5.11E-01	-4.07E-01	9.51E-01
	860.37	4.48	1.84E+01		1.55E+01	9.06E+00
	2614.66	35.85	5.11E-01		-8.47E-03	2.21E-01
BI-210M	262.00	45.00	1.00E+00	1.00E+00	2.78E-01	4.96E-01
	300.00	23.00	2.04E+00		8.23E-01	1.01E+00
PB-210	46.50	4.25	2.00E+01	2.00E+01	-1.19E+02	9.94E+00
PB-211	404.84	2.90	1.94E+01	1.94E+01	8.18E+00	9.61E+00
	831.96	2.90	2.56E+01		4.10E+00	1.26E+01
BI-212	727.17	11.80	5.29E+00	5.29E+00	-3.12E+00	2.61E+00
	1620.62	2.75	1.02E+01		-2.64E+00	4.75E+00
+ PB-212	238.63	* 44.60	1.17E+00	1.17E+00	9.13E-01	5.82E-01
	300.09	3.41	1.38E+01		5.55E+00	6.82E+00
BI-214	609.31	46.30	1.28E+00	1.28E+00	4.47E-01	6.29E-01
	1120.29	15.10	5.58E+00		9.47E-01	2.75E+00
	1764.49	15.80	1.57E+00		3.54E-01	7.21E-01
	2204.22	4.98	5.53E+00		2.61E+00	2.54E+00
PB-214	295.21	19.19	2.44E+00	1.36E+00	7.12E-02	1.21E+00
	351.92	37.19	1.36E+00		3.74E-01	6.74E-01
RN-219	401.80	6.50	8.72E+00	8.72E+00	5.86E+00	4.32E+00
RA-223	323.87	3.88	1.25E+01	1.25E+01	3.94E+00	6.17E+00
RA-224	240.98	3.95	1.16E+01	1.16E+01	1.70E+00	5.74E+00
RA-225	40.00	31.00	6.18E+17	6.18E+17	-2.13E+18	3.07E+17
RA-226	186.21	3.28	1.03E+01	1.03E+01	2.03E+00	5.09E+00
TH-227	50.10	8.40	1.03E+01	3.99E+00	4.96E+01	5.11E+00
	236.00	11.50	3.99E+00		-8.28E-01	1.98E+00

Analysis Report for 1510086-01

GAS-1302

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
TH-227	256.20	6.30	7.14E+00	3.99E+00	3.02E+00	3.54E+00
AC-228	338.32	11.40	4.33E+00	3.24E+00	1.42E+00	2.14E+00
	911.07	27.70	3.24E+00		-1.14E+00	1.60E+00
	969.11	16.60	5.38E+00		3.77E-01	2.65E+00
TH-230	48.44	16.90	5.11E+00	5.11E+00	1.88E+01	2.55E+00
	62.85	4.60	1.25E+01		-1.01E+03	6.24E+00
	67.67	0.37	1.19E+02		1.95E+02	5.92E+01
PA-231	283.67	1.60	2.88E+01	2.02E+01	1.55E+01	1.43E+01
	302.67	2.30	2.02E+01		-1.04E+01	9.99E+00
+ TH-231	25.64 *	14.70	5.04E+01	9.60E+00	2.22E+03	2.51E+01
	84.21 *	6.40	9.60E+00		1.19E+01	4.78E+00
PA-233	311.98	38.60	4.42E+09	4.42E+09	1.61E+09	2.19E+09
PA-234	131.20	20.40	1.41E+00	1.41E+00	-2.78E-01	6.98E-01
	733.99	8.80	7.25E+00		1.19E+00	3.57E+00
	946.00	12.00	8.03E+00		2.14E+00	3.96E+00
PA-234M	1001.03	0.92	9.43E+01	9.43E+01	-6.43E+00	4.65E+01
TH-234	63.29	3.80	1.13E+01	1.13E+01	-4.02E+02	5.63E+00
U-235	143.76	10.50	2.80E+00	2.80E+00	-3.15E-01	1.39E+00
	163.35	4.70	7.18E+00		1.30E+01	3.56E+00
	205.31	4.70	8.86E+00		-2.23E+00	4.40E+00
NP-237	86.50	12.60	6.76E+00	6.76E+00	2.54E+02	3.37E+00
@ NP-239	106.10	22.70	1.00E+26	1.00E+26	1.00E+26	1.00E+20
@	228.18	10.70	1.00E+26		1.00E+26	1.00E+20
@	277.60	14.10	1.00E+26		1.00E+26	1.00E+20
+ AM-241	59.54 *	35.90	4.42E+00	4.42E+00	2.59E+02	2.21E+00
AM-243	74.67	66.00	6.26E-01	6.26E-01	-1.89E-01	3.11E-01
CM-243	209.75	3.29	1.37E+01	3.40E+00	-6.92E+00	6.77E+00
	228.14	10.60	4.51E+00		2.41E-02	2.24E+00
	277.60	14.00	3.40E+00		-1.71E+00	1.69E+00

- + = Nuclide identified during the nuclide identification
 * = Energy line found in the spectrum
 > = MDA value not calculated
 @ = Half-life too short to be able to perform the decay correction

No Action Level results available for reporting purposes.

DATA REVIEW COMMENTS REPORT

Creation Date

Comment

User

: 00327

Analysis Report for 1510086-01
GAS-1302

No Data Review Comments Entered.

 ***** S P E C T R A L D A T A R E P O R T *****

Sample Title: GAS-1302

Elapsed Live time: 1800
 Elapsed Real Time: 1848

Channel	-----	-----	-----	-----	-----	-----	-----	-----
1:	0	0	0	0	0	0	0	0
9:	339	1801	3242	6682	4600	2329	2743	2085
17:	2077	2602	1764	2697	12490	64029	37456	7983
25:	21772	11207	2328	1058	1000	1047	1137	2168
33:	1787	1153	947	1250	1349	1267	1209	1338
41:	1494	1556	1857	2023	2194	2426	2676	3554
49:	4589	5378	4895	4820	4906	4980	5111	5333
57:	5646	6749	30409	53410	9481	1980	1806	1783
65:	1820	2063	2164	2260	2232	2110	2132	2091
73:	2161	2048	2087	2059	2093	2130	2116	2056
81:	2181	2132	2119	2252	2344	2269	4946	23444
89:	14646	1750	1167	1107	1221	1063	1068	1043
97:	1014	996	1048	1029	994	1068	1032	974
105:	986	977	1042	1005	1046	1012	1016	1021
113:	1052	1040	1066	1045	1038	1059	1038	1102
121:	1592	5533	4008	1061	895	972	972	900
129:	896	879	889	939	903	896	901	1201
137:	1461	960	863	832	851	837	851	822
145:	914	879	908	849	858	809	850	782
153:	786	783	819	831	783	806	851	751
161:	850	797	820	872	960	1474	1045	798
169:	794	793	859	736	748	755	778	780
177:	758	774	742	724	777	778	723	772
185:	822	875	828	827	847	864	830	848
193:	846	855	849	800	857	831	809	822
201:	775	832	783	799	798	792	746	766
209:	786	818	759	797	871	851	818	949
217:	879	830	890	806	844	810	820	828
225:	813	786	774	796	799	797	770	799
233:	732	759	772	752	798	784	831	749
241:	718	678	682	768	747	655	663	659
249:	698	721	654	648	651	670	707	641
257:	654	595	656	646	598	636	653	625
265:	606	587	643	608	610	616	582	584
273:	608	611	610	591	562	570	553	549
281:	577	596	571	572	569	539	636	570
289:	553	520	545	589	535	548	586	540
297:	567	542	571	579	536	540	502	519
305:	498	521	559	528	502	528	555	538
313:	491	527	538	487	485	493	490	497
321:	491	497	496	517	528	521	531	516
329:	490	504	507	484	486	506	474	514
337:	503	493	486	517	478	488	455	476
345:	443	475	488	505	502	460	478	494
353:	499	487	483	453	466	442	477	480
361:	462	505	453	454	439	430	474	458

369: 427 404 468 459 450 488 433 467

Sample Title: GAS-1302

Channel	427	404	468	459	450	488	433	467
377:	412	477	448	453	443	432	488	452
385:	398	450	464	509	471	465	509	616
393:	515	456	429	465	496	432	506	485
401:	507	509	464	478	459	464	452	488
409:	439	418	434	483	443	443	474	432
417:	492	432	455	458	454	445	476	489
425:	476	462	464	520	464	473	486	472
433:	489	423	423	435	480	487	462	456
441:	449	485	494	471	438	502	505	525
449:	476	494	479	483	470	418	478	459
457:	460	497	460	515	487	490	480	470
465:	477	497	519	447	482	477	486	466
473:	487	448	493	448	450	380	394	417
481:	367	379	371	338	375	372	373	335
489:	375	379	379	384	346	354	337	350
497:	359	374	358	348	321	323	392	355
505:	350	330	341	324	367	379	342	365
513:	347	339	311	321	362	335	297	328
521:	324	300	279	324	299	314	325	294
529:	295	312	273	307	321	271	336	323
537:	278	296	312	266	273	304	269	307
545:	310	282	291	283	301	303	266	304
553:	295	243	271	271	258	259	268	231
561:	278	212	256	270	267	281	292	247
569:	284	260	241	252	245	290	287	220
577:	266	261	274	248	247	223	316	270
585:	268	296	269	252	253	259	293	271
593:	239	255	244	278	250	269	235	252
601:	258	271	241	233	239	241	246	242
609:	268	269	252	257	260	239	257	241
617:	259	272	256	240	239	250	232	253
625:	238	252	235	227	247	254	260	234
633:	248	250	247	246	255	269	265	260
641:	257	242	246	239	236	257	233	225
649:	265	244	250	240	245	267	258	215
657:	261	274	285	1027	6977	11515	3754	485
665:	254	274	255	207	225	233	199	241
673:	211	199	191	213	187	207	226	198
681:	210	237	225	220	195	222	211	200
689:	179	209	221	214	208	211	205	211
697:	242	196	199	199	238	243	215	234
705:	191	188	214	210	191	210	187	211
713:	225	208	214	213	223	234	226	195
721:	197	224	219	180	208	217	207	226
729:	208	212	222	228	223	211	190	210
737:	212	218	200	194	216	209	210	215
745:	218	221	204	221	208	229	235	211
753:	222	211	216	225	209	213	209	187
761:	221	214	238	240	221	230	197	228
769:	224	196	203	216	215	207	241	208
777:	239	212	236	201	229	238	210	249
785:	231	228	222	250	222	198	203	249
793:	222	210	226	249	221	252	213	221

801: 232 255 217 237 231 222 225 220

Sample Title: GAS-1302

Channel	-----	-----	-----	-----	-----	-----	-----	-----
809:	224	251	219	238	205	226	232	241
817:	221	252	228	250	256	283	231	256
825:	232	254	271	230	229	211	217	245
833:	249	204	279	213	211	250	243	252
841:	259	277	235	234	230	238	255	257
849:	239	283	279	265	238	262	282	252
857:	271	296	239	264	295	276	259	231
865:	232	275	259	229	270	252	296	260
873:	254	283	248	255	294	273	277	292
881:	273	265	237	234	295	265	303	264
889:	302	254	290	285	306	291	266	287
897:	334	442	384	280	268	306	259	275
905:	291	305	290	309	291	283	314	293
913:	290	272	313	304	281	287	284	307
921:	298	291	312	310	308	320	322	339
929:	321	311	300	315	352	331	342	304
937:	327	346	350	319	307	297	317	336
945:	294	308	297	329	338	310	317	316
953:	330	312	327	330	343	297	318	314
961:	320	316	283	275	295	271	237	253
969:	280	267	252	268	228	251	261	255
977:	269	242	232	232	259	257	219	220
985:	288	229	260	227	246	238	247	252
993:	223	212	204	226	220	240	230	232
1001:	245	202	233	248	236	251	271	240
1009:	227	228	222	252	217	231	224	218
1017:	256	254	226	258	243	238	254	232
1025:	228	262	229	217	229	201	238	239
1033:	229	256	234	238	227	241	221	216
1041:	213	231	221	216	200	223	244	223
1049:	244	228	217	241	217	222	220	204
1057:	210	213	238	237	202	221	202	195
1065:	213	202	210	235	233	217	217	256
1073:	220	238	219	203	216	237	217	228
1081:	204	222	223	202	212	232	200	204
1089:	218	229	212	242	185	236	199	221
1097:	208	226	225	233	223	220	189	237
1105:	220	201	206	200	218	253	181	211
1113:	193	231	208	194	218	196	188	190
1121:	161	168	145	164	158	135	149	150
1129:	140	152	155	142	128	125	163	123
1137:	126	128	133	128	141	121	155	132
1145:	121	133	128	116	124	151	121	138
1153:	128	123	134	116	127	112	116	113
1161:	136	132	131	132	132	112	106	135
1169:	119	107	460	3348	8469	6119	1380	209
1177:	167	124	87	106	105	80	87	106
1185:	86	81	89	73	78	78	99	83
1193:	87	93	77	78	72	71	75	64
1201:	81	71	64	62	71	86	74	72
1209:	62	73	58	65	47	70	56	54
1217:	57	40	49	60	53	67	54	44
1225:	49	51	58	61	43	42	41	56

1233: 50 47 54 51 51 50 45 39

Sample Title: GAS-1302

Channel	-----	-----	-----	-----	-----	-----	-----	-----
1241:	43	39	35	38	39	35	43	35
1249:	37	38	37	21	40	41	37	27
1257:	30	35	42	31	29	31	29	33
1265:	30	35	33	36	24	26	44	36
1273:	19	27	35	24	24	35	41	35
1281:	36	34	35	27	26	33	32	30
1289:	30	31	29	25	43	34	27	36
1297:	30	27	34	33	31	22	35	35
1305:	30	26	26	25	30	31	24	33
1313:	30	34	25	34	35	35	35	33
1321:	26	35	34	34	35	37	32	41
1329:	39	218	2047	6508	6432	1968	255	49
1337:	33	23	27	17	10	14	19	20
1345:	20	12	13	9	18	12	13	16
1353:	12	10	18	14	10	7	12	14
1361:	8	16	7	8	15	7	10	12
1369:	17	12	9	13	9	13	10	5
1377:	11	8	11	11	8	12	10	11
1385:	7	9	8	8	9	15	7	11
1393:	16	8	5	11	11	15	15	12
1401:	13	9	12	5	11	15	8	10
1409:	8	12	13	14	15	6	7	11
1417:	7	9	12	7	12	9	9	7
1425:	10	9	10	9	13	4	11	16
1433:	8	8	7	8	13	9	9	17
1441:	10	9	8	4	10	10	10	10
1449:	12	7	7	11	8	11	13	11
1457:	7	14	16	10	13	10	10	11
1465:	9	8	9	12	6	8	11	10
1473:	10	10	6	5	6	8	17	12
1481:	5	4	8	8	7	10	6	7
1489:	10	8	5	6	9	10	8	12
1497:	11	9	3	7	7	9	11	10
1505:	5	9	8	10	5	6	9	10
1513:	8	12	9	9	8	11	9	9
1521:	6	5	13	7	9	7	12	12
1529:	5	15	8	6	8	7	9	11
1537:	10	9	13	12	10	6	9	8
1545:	8	12	8	4	9	5	7	5
1553:	8	14	12	5	14	11	14	10
1561:	8	7	14	9	6	14	9	10
1569:	8	8	18	8	10	7	11	9
1577:	8	7	10	8	6	11	7	5
1585:	13	4	14	6	14	9	3	8
1593:	11	8	9	6	7	13	3	6
1601:	5	11	6	7	8	6	8	4
1609:	10	7	6	5	7	10	10	4
1617:	7	4	15	8	1	10	16	5
1625:	6	10	9	8	6	4	12	6
1633:	7	4	4	4	11	10	11	5
1641:	4	9	4	7	11	5	9	5
1649:	6	8	10	8	4	7	9	10
1657:	6	7	12	10	5	7	3	8

1665: 2 4 12 7 2 7 2 6

Sample Title: GAS-1302

Channel	-----	-----	-----	-----	-----	-----	-----	-----
1673:	9	4	5	10	8	5	8	6
1681:	13	3	7	8	8	11	6	3
1689:	7	7	4	3	3	6	7	7
1697:	8	7	8	8	9	6	2	4
1705:	8	7	8	5	9	7	4	4
1713:	10	5	9	10	8	9	2	13
1721:	5	5	13	6	6	12	3	11
1729:	4	4	8	4	8	8	4	4
1737:	5	7	4	9	2	4	4	4
1745:	9	12	4	1	2	5	5	1
1753:	6	2	4	3	8	3	1	4
1761:	5	6	3	5	7	7	4	6
1769:	6	6	2	4	4	5	2	4
1777:	2	5	3	5	6	4	5	6
1785:	9	5	6	5	5	6	3	8
1793:	11	4	4	5	5	7	5	5
1801:	8	6	5	4	2	4	3	6
1809:	3	3	4	8	5	3	3	2
1817:	4	5	3	6	4	1	7	6
1825:	3	3	2	3	10	4	5	7
1833:	6	16	44	64	49	14	5	5
1841:	7	6	3	3	2	7	5	6
1849:	4	1	5	6	4	4	4	2
1857:	4	2	0	4	7	7	8	4
1865:	8	7	2	6	4	7	11	2
1873:	2	6	4	8	3	2	11	2
1881:	2	2	2	7	3	1	1	8
1889:	5	7	6	8	6	7	5	4
1897:	3	2	5	3	2	5	4	2
1905:	10	3	6	8	5	4	1	2
1913:	7	2	3	9	8	2	5	10
1921:	6	1	1	3	6	4	3	4
1929:	3	3	4	3	8	7	6	1
1937:	4	4	6	4	4	3	4	5
1945:	8	5	5	5	7	5	7	6
1953:	5	2	5	7	3	7	3	2
1961:	7	1	6	5	4	2	3	5
1969:	6	5	3	4	9	5	3	5
1977:	12	6	6	5	5	2	2	3
1985:	2	4	7	4	3	4	3	5
1993:	8	3	6	3	4	3	5	2
2001:	9	5	5	4	5	6	7	1
2009:	5	6	5	1	3	9	4	8
2017:	6	5	2	3	2	6	2	3
2025:	1	7	4	5	8	5	6	4
2033:	6	1	8	5	2	2	2	1
2041:	2	5	2	4	2	5	3	0
2049:	4	3	1	4	3	1	5	3
2057:	5	3	4	5	2	2	3	4
2065:	6	3	6	1	6	2	3	2
2073:	4	4	4	6	5	10	2	1
2081:	6	2	4	3	7	4	3	3
2089:	3	7	1	2	1	6	0	3

2097: 2 7 4 3 3 6 3 4

Sample Title: GAS-1302

Channel	1	2	3	4	5	6	7	8
2105:	3	2	3	3	5	3	2	4
2113:	1	4	4	3	3	4	3	5
2121:	3	9	2	2	6	8	3	5
2129:	1	4	3	2	4	3	2	5
2137:	5	3	3	0	2	4	4	6
2145:	3	1	7	2	3	3	7	1
2153:	5	3	4	5	0	2	7	0
2161:	3	3	3	3	6	5	5	3
2169:	7	5	6	4	5	0	4	3
2177:	5	1	4	4	4	5	0	2
2185:	3	6	7	1	3	2	4	1
2193:	2	3	3	4	4	2	2	4
2201:	5	6	3	6	3	8	5	3
2209:	3	2	5	3	6	6	4	5
2217:	3	3	2	4	6	4	1	4
2225:	7	0	7	3	2	3	2	3
2233:	4	4	3	1	5	4	4	1
2241:	4	3	2	2	4	1	7	4
2249:	3	8	6	5	4	2	4	4
2257:	2	1	4	4	3	2	4	3
2265:	2	2	3	2	6	2	6	3
2273:	5	3	5	5	5	3	4	4
2281:	1	2	6	2	7	6	5	6
2289:	3	2	9	5	4	3	2	1
2297:	3	4	5	1	5	0	6	1
2305:	1	0	2	1	0	6	5	1
2313:	3	3	2	3	1	2	3	3
2321:	3	2	3	0	3	2	1	4
2329:	4	1	2	2	3	3	6	1
2337:	1	1	1	1	3	3	1	5
2345:	2	2	1	4	1	1	3	3
2353:	1	2	2	3	1	2	3	5
2361:	1	2	1	0	1	1	0	1
2369:	3	0	2	1	3	2	0	1
2377:	2	1	2	3	3	1	0	0
2385:	2	2	2	3	0	0	1	0
2393:	2	0	0	1	0	4	0	0
2401:	0	1	2	0	1	0	2	0
2409:	0	0	1	0	0	0	1	1
2417:	0	0	1	2	2	1	0	0
2425:	0	0	3	1	0	2	1	1
2433:	1	0	0	0	1	1	1	0
2441:	0	1	1	0	0	0	1	1
2449:	1	0	1	1	0	0	1	0
2457:	2	0	1	2	0	0	1	1
2465:	1	3	2	0	0	1	1	0
2473:	1	0	0	2	0	0	1	0
2481:	0	0	3	1	2	2	0	0
2489:	0	1	1	0	0	0	0	0
2497:	1	0	1	0	2	1	9	24
2505:	61	54	19	6	0	0	0	0
2513:	1	0	0	1	0	0	0	0
2521:	0	0	0	0	0	0	0	0

2529: 0 0 0 0 0 0 0 0 0

Sample Title: GAS-1302

Channel	1	2	3	4	5	6	7	8	9
2537:	0	0	0	0	0	0	0	0	0
2545:	1	0	0	0	0	0	0	0	0
2553:	0	0	0	0	0	1	0	0	0
2561:	0	0	0	0	1	0	0	0	0
2569:	0	0	0	0	0	0	0	0	0
2577:	0	0	0	1	0	0	0	0	0
2585:	0	0	0	0	0	0	0	0	1
2593:	0	0	0	0	0	0	0	0	0
2601:	0	0	1	0	0	0	0	0	0
2609:	0	0	0	1	3	4	5	0	0
2617:	1	0	0	1	1	0	0	0	0
2625:	0	0	0	0	0	0	0	0	0
2633:	0	0	0	0	0	2	0	0	0
2641:	0	0	0	0	0	0	0	0	0
2649:	0	0	0	0	0	0	0	0	0
2657:	0	0	0	0	0	0	0	0	0
2665:	0	0	1	0	1	0	0	0	0
2673:	0	0	0	0	0	0	1	0	0
2681:	0	0	0	0	0	0	0	0	0
2689:	1	1	0	1	1	0	0	0	1
2697:	1	0	0	0	0	0	1	0	0
2705:	1	1	0	0	0	0	0	0	0
2713:	0	0	0	0	1	0	2	0	0
2721:	0	1	0	0	0	2	0	0	0
2729:	0	0	0	0	0	1	1	0	0
2737:	0	0	0	0	0	0	0	0	0
2745:	0	0	0	0	0	0	0	0	0
2753:	0	0	0	0	0	0	0	0	0
2761:	0	0	0	0	0	0	0	0	0
2769:	0	0	1	0	0	0	0	0	0
2777:	0	0	0	0	0	0	0	0	1
2785:	1	0	0	0	0	0	0	0	1
2793:	0	0	0	0	0	0	0	0	1
2801:	0	0	1	0	0	0	0	0	0
2809:	1	0	0	0	0	0	0	0	0
2817:	0	0	0	0	0	0	0	0	0
2825:	0	0	0	0	0	0	0	0	0
2833:	0	0	0	0	0	0	0	0	0
2841:	1	0	0	0	0	0	0	0	0
2849:	1	1	0	0	0	0	0	0	0
2857:	0	0	0	0	0	0	0	0	0
2865:	0	0	0	0	1	0	0	0	0
2873:	0	0	0	0	0	0	0	0	0
2881:	0	0	0	1	1	0	1	0	0
2889:	0	0	0	0	0	0	0	0	0
2897:	0	0	0	0	0	0	0	0	0
2905:	0	0	1	0	0	1	0	0	0
2913:	0	0	1	0	0	2	0	0	0
2921:	1	0	0	0	0	0	0	0	0
2929:	0	1	0	0	0	0	0	0	0
2937:	0	0	0	0	1	0	0	0	0
2945:	0	0	0	0	0	0	0	0	0
2953:	0	0	0	0	0	0	0	0	0

2961: 0 0 0 0 0 0 0 0 0

Sample Title: GAS-1302

Channel	1	0	0	0	0	0	1	0
2969:	1	0	0	0	0	0	1	0
2977:	0	0	0	1	0	0	0	0
2985:	0	1	0	0	0	0	0	0
2993:	0	0	0	0	0	0	0	1
3001:	0	0	0	0	0	0	0	0
3009:	0	0	0	1	1	0	0	0
3017:	0	0	0	0	0	0	0	0
3025:	0	0	0	0	0	0	0	0
3033:	0	1	0	0	0	0	0	0
3041:	0	0	0	1	0	0	0	0
3049:	0	0	1	0	0	0	0	0
3057:	0	1	0	0	0	0	0	0
3065:	0	0	0	0	1	0	0	0
3073:	0	0	0	0	0	0	0	0
3081:	0	0	0	0	0	0	0	0
3089:	0	0	0	0	0	0	0	0
3097:	0	0	1	0	0	0	0	0
3105:	0	0	0	0	0	0	0	0
3113:	0	0	0	0	0	0	0	0
3121:	0	0	0	0	0	0	0	0
3129:	0	0	0	0	0	0	0	0
3137:	0	0	0	0	0	0	0	0
3145:	0	0	0	0	0	0	0	0
3153:	0	0	0	1	0	0	0	0
3161:	0	0	0	1	0	0	0	0
3169:	0	0	0	1	0	0	1	0
3177:	0	0	0	0	1	0	1	0
3185:	0	0	0	0	0	0	0	0
3193:	1	0	0	0	0	0	0	0
3201:	0	0	1	1	1	0	0	0
3209:	0	1	0	0	0	0	0	0
3217:	0	0	0	0	0	0	0	2
3225:	0	0	0	0	0	0	0	0
3233:	0	0	0	0	0	0	0	0
3241:	0	0	0	0	0	0	0	0
3249:	0	0	0	0	0	0	0	0
3257:	0	0	0	0	0	0	0	0
3265:	0	0	0	0	0	0	0	0
3273:	0	0	0	0	0	1	0	0
3281:	0	0	0	0	1	0	0	0
3289:	0	0	0	0	0	0	0	0
3297:	0	0	0	0	0	0	0	0
3305:	0	0	0	0	0	0	0	0
3313:	0	0	0	0	0	0	0	0
3321:	0	0	0	0	0	0	0	0
3329:	1	0	1	0	0	0	1	0
3337:	0	0	0	0	0	0	0	0
3345:	0	0	0	0	0	0	0	0
3353:	0	1	0	0	1	0	0	0
3361:	0	0	0	0	0	0	0	0
3369:	0	0	0	0	0	0	0	0
3377:	0	1	0	0	0	0	0	0
3385:	0	0	0	0	0	0	0	0

3393: 0 0 1 0 0 0 0 0 0

Sample Title: GAS-1302

Channel	1	2	3	4	5	6	7	8	9
3401:	0	0	0	0	0	0	0	0	0
3409:	0	0	0	0	0	0	0	0	0
3417:	1	0	0	0	0	0	0	0	0
3425:	0	0	0	0	0	0	0	0	0
3433:	0	0	0	0	0	0	0	0	0
3441:	1	0	0	0	0	0	0	0	0
3449:	0	0	0	0	0	0	0	0	0
3457:	0	0	0	0	0	0	0	0	0
3465:	0	0	0	0	0	0	0	0	0
3473:	0	0	0	0	0	0	0	0	0
3481:	0	0	0	0	0	0	0	0	0
3489:	0	0	0	0	0	0	0	0	0
3497:	0	0	0	0	0	0	0	0	0
3505:	0	0	0	0	0	0	0	1	0
3513:	0	0	0	0	0	0	0	0	0
3521:	0	0	0	0	0	0	0	0	0
3529:	1	0	0	0	0	0	2	0	0
3537:	0	0	0	0	0	1	0	0	0
3545:	0	0	0	0	0	0	0	0	0
3553:	0	0	0	0	0	1	0	0	0
3561:	0	0	0	0	0	0	0	0	0
3569:	0	0	0	0	0	0	0	0	0
3577:	0	0	0	0	0	0	0	0	0
3585:	0	0	0	0	0	0	0	0	0
3593:	0	0	0	0	0	0	0	1	0
3601:	0	0	0	0	0	0	0	0	0
3609:	0	0	0	0	0	0	0	0	0
3617:	0	0	0	0	0	0	0	0	0
3625:	0	0	0	0	0	0	0	0	0
3633:	0	0	0	0	0	0	0	0	0
3641:	0	0	0	0	0	0	0	0	0
3649:	0	0	0	0	0	0	0	0	0
3657:	0	0	0	0	0	0	0	0	0
3665:	0	0	0	0	0	0	0	1	0
3673:	0	0	0	0	0	0	0	0	0
3681:	0	0	0	0	0	0	0	0	0
3689:	0	0	0	0	0	0	0	0	0
3697:	0	0	0	0	0	0	0	0	0
3705:	0	0	0	0	0	0	0	0	0
3713:	0	0	0	0	0	0	0	0	0
3721:	0	0	1	0	0	0	0	1	0
3729:	0	0	0	0	0	0	0	0	0
3737:	0	0	1	1	0	0	0	0	0
3745:	0	0	0	0	0	0	0	0	0
3753:	0	0	0	0	0	0	0	0	0
3761:	0	1	0	0	0	0	0	0	0
3769:	0	0	1	0	0	0	0	0	0
3777:	0	0	0	0	0	0	0	0	0
3785:	1	0	0	0	0	0	0	0	0
3793:	0	0	0	0	0	0	0	0	0
3801:	0	0	0	0	0	0	0	0	0
3809:	0	0	0	0	0	0	0	0	0
3817:	0	0	0	0	0	0	0	0	0

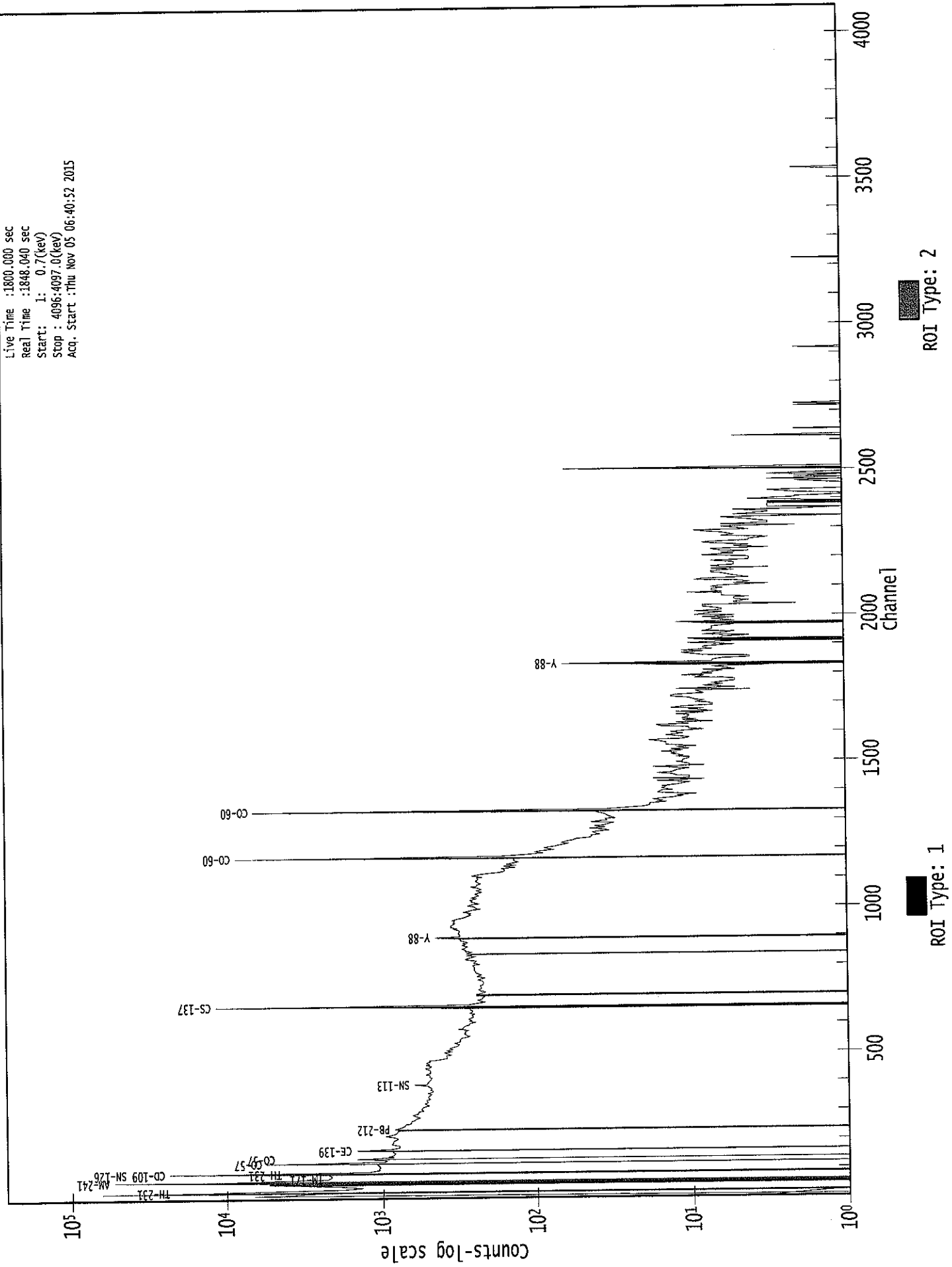
3825: 0 0 0 0 0 0 0 0 0

Sample Title: GAS-1302

Channel								
3833:	0	0	0	0	0	0	0	0
3841:	0	0	0	0	0	0	0	0
3849:	0	0	0	0	0	0	0	0
3857:	0	0	0	0	0	0	0	0
3865:	0	0	0	0	0	0	0	0
3873:	0	0	0	0	0	0	0	0
3881:	0	0	0	0	0	0	0	0
3889:	0	0	0	0	0	0	0	0
3897:	0	0	0	0	0	1	0	0
3905:	0	0	0	0	0	0	1	0
3913:	0	0	0	0	0	0	0	0
3921:	0	0	0	0	0	0	0	0
3929:	0	0	0	0	0	0	0	0
3937:	0	0	0	0	0	0	0	0
3945:	0	1	0	0	0	0	0	0
3953:	0	0	0	0	0	0	0	0
3961:	0	0	0	0	0	0	0	0
3969:	1	0	0	0	0	0	0	0
3977:	0	0	0	1	0	0	0	0
3985:	1	0	0	0	0	0	0	0
3993:	0	0	0	0	0	0	0	0
4001:	0	0	0	0	0	0	0	0
4009:	0	0	0	1	0	0	0	0
4017:	0	1	0	0	1	0	0	0
4025:	0	0	0	0	0	0	0	0
4033:	0	0	0	0	0	0	0	1
4041:	0	0	0	0	1	0	0	0
4049:	0	0	0	0	0	0	0	0
4057:	0	0	0	0	0	0	0	0
4065:	0	0	0	0	0	0	0	0
4073:	0	0	0	0	1	0	0	0
4081:	0	0	0	0	0	0	0	0
4089:	0	0	0	0	0	0	0	0

0000029172.CNF

Live Time :1800.000 sec
Real Time :1848.040 sec
Start: I: 0.7(keV)
Stop : 4096:4097.0(keV)
Acq. Start :Thu Nov 05 06:40:52 2015



Analysis Report for 1510086-02
BLANK

11/5

GAMMA SPECTRUM ANALYSIS

Sample Identification : 1510086-02
Sample Description : BLANK
Sample Type : SOIL

Sample Size : 7.834E+02 grams
Facility : Countroom

Sample Taken On : 11/5/2015 6:02:22AM
Acquisition Started : 11/5/2015 7:13:05AM

Procedure : GAS-1402 pCi
Operator : Administrator
Detector Name : GE4
Geometry : GAS-1402
Live Time : 3600.0 seconds
Real Time : 3644.8 seconds

Dead Time : 1.23 %

Peak Locate Threshold : 2.50
Peak Locate Range (in channels) : 1 - 4096
Peak Area Range (in channels) : 15 - 4096
Identification Energy Tolerance : 1.000 keV

Energy Calibration Used Done On : 10/25/2014
Efficiency Calibration Used Done On : 11/8/2014
Efficiency Calibration Description :

Sample Number : 29173

PEAK-TO-TOTAL CALIBRATION REPORT

Peak-to-Total Efficiency Calibration Equation

AG
11/9/15

Analysis Report for 1510086-02

BLANK

PEAK LOCATE REPORT

Peak Locate Performed on : 11/5/2015 8:13:51AM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096
Peak Search Sensitivity : 2.50

<i>Peak No.</i>	<i>Energy (keV)</i>	<i>Centroid Channel</i>	<i>Centroid Uncertainty</i>	<i>Peak Significance</i>
1	64.39	63.65	0.0000	0.00
2	75.27	74.54	0.0000	0.00
3	84.27	83.54	0.0000	0.00
4	118.05	117.34	0.0000	0.00
5	186.99	186.30	0.0000	0.00
6	198.21	197.53	0.0000	0.00
7	319.90	319.27	0.0000	0.00
8	371.19	370.58	0.0000	0.00
9	422.45	421.87	0.0000	0.00
10	511.28	510.74	0.0000	0.00
11	565.92	565.41	0.0000	0.00
12	710.32	709.88	0.0000	0.00
13	751.19	750.77	0.0000	0.00
14	851.78	851.41	0.0000	0.00
15	860.33	859.97	0.0000	0.00
16	895.85	895.50	0.0000	0.00
17	947.95	947.63	0.0000	0.00

? = Adjacent peak noted

Errors quoted at 2.000sigma

Analysis Report for 1510086-02

BLANK

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 11/5/2015 8:13:51AM

Peak Analysis From Channel : 1

Peak Analysis To Channel : 4096

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	FWHM (keV)
1	64.39	57 -	69	63.65	9.74E+01	54.64	3.05E+02	4.13
2	75.27	71 -	78	74.54	4.55E+01	36.22	1.81E+02	2.16
3	84.27	79 -	88	83.54	5.68E+01	39.05	1.86E+02	6.81
4	118.05	113 -	121	117.34	2.73E+01	32.06	1.35E+02	5.00
5	186.99	182 -	193	186.30	5.19E+01	34.76	1.22E+02	3.18
6	198.21	194 -	201	197.53	2.30E+01	24.98	8.99E+01	2.53
7	319.90	313 -	324	319.27	3.03E+01	26.38	7.14E+01	1.51
8	371.19	366 -	376	370.58	2.86E+01	21.12	4.48E+01	6.18
9	422.45	417 -	428	421.87	1.76E+01	22.45	5.48E+01	7.29
10	511.28	506 -	515	510.74	5.97E+01	21.98	3.46E+01	3.29
11	565.92	561 -	568	565.41	1.31E+01	10.00	7.76E+00	2.02
12	710.32	705 -	714	709.88	1.12E+01	13.42	1.76E+01	7.80
13	751.19	743 -	757	750.77	1.55E+01	14.30	1.50E+01	12.37
M 14	851.78	848 -	864	851.41	1.35E+01	7.50	5.69E+00	3.78
m 15	860.33	848 -	864	859.97	1.06E+01	10.31	3.38E+00	3.78
16	895.85	892 -	898	895.50	1.13E+01	8.02	3.46E+00	1.48
17	947.95	943 -	952	947.63	1.32E+01	12.29	1.17E+01	1.86

M = First peak in a multiplet region

m = Other peak in a multiplet region

F = Fitted singlet

Errors quoted at 2.000sigma

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 11/5/2015 8:13:51AM

Peak Analysis From Channel : 1

Peak Analysis To Channel : 4096

Analysis Report for 1510086-02

BLANK

Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
1	64.39	57 -	69	9.74E+01	54.64	3.05E+02	4.19E+01
2	75.27	71 -	78	4.55E+01	36.22	1.81E+02	2.76E+01
3	84.27	79 -	88	5.68E+01	39.05	1.86E+02	2.96E+01
4	118.05	113 -	121	2.73E+01	32.06	1.35E+02	2.49E+01
5	186.99	182 -	193	5.19E+01	34.76	1.22E+02	2.60E+01
6	198.21	194 -	201	2.30E+01	24.98	8.99E+01	1.90E+01
7	319.90	313 -	324	3.03E+01	26.38	7.14E+01	1.97E+01
8	371.19	366 -	376	2.86E+01	21.12	4.48E+01	1.50E+01
9	422.45	417 -	428	1.76E+01	22.45	5.48E+01	1.71E+01
10	511.28	506 -	515	5.97E+01	21.98	3.46E+01	1.28E+01
11	565.92	561 -	568	1.31E+01	10.00	7.76E+00	5.67E+00
12	710.32	705 -	714	1.12E+01	13.42	1.76E+01	9.56E+00
13	751.19	743 -	757	1.55E+01	14.30	1.50E+01	9.81E+00
M 14	851.78	848 -	864	1.35E+01	7.50	5.69E+00	3.92E+00
m 15	860.33	848 -	864	1.06E+01	10.31	3.38E+00	3.02E+00
16	895.85	892 -	898	1.13E+01	8.02	3.46E+00	3.60E+00
17	947.95	943 -	952	1.32E+01	12.29	1.17E+01	8.15E+00

M = First peak in a multiplet region

m = Other peak in a multiplet region

F = Fitted singlet

Errors quoted at 2.000sigma

PEAK WITH NID REPORT

Peak Analysis Performed on : 11/5/2015 8:13:51AM

Peak Analysis From Channel : 1

Peak Analysis To Channel : 4096

Tentative NID Library : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

Peak Match Tolerance : 1.000 keV

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
1	64.39	57 -	69	63.65	9.74E+01	54.64	3.05E+02	.....
2	75.27	71 -	78	74.54	4.55E+01	36.22	1.81E+02	AM-243
3	84.27	79 -	88	83.54	5.68E+01	39.05	1.86E+02	TH-231
4	118.05	113 -	121	117.34	2.73E+01	32.06	1.35E+02	.....
5	186.99	182 -	193	186.30	5.19E+01	34.76	1.22E+02	RA-226
6	198.21	194 -	201	197.53	2.30E+01	24.98	8.99E+01	.....
7	319.90	313 -	324	319.27	3.03E+01	26.38	7.14E+01	CR-51
8	371.19	366 -	376	370.58	2.86E+01	21.12	4.48E+01	.....

: 00343

Analysis Report for 1510086-02

BLANK

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
	9	422.45	417 - 428	421.87	1.76E+01	22.45	5.48E+01	.....
	10	511.28	506 - 515	510.74	5.97E+01	21.98	3.46E+01	.....
	11	565.92	561 - 568	565.41	1.31E+01	10.00	7.76E+00	.....
	12	710.32	705 - 714	709.88	1.12E+01	13.42	1.76E+01	.....
	13	751.19	743 - 757	750.77	1.55E+01	14.30	1.50E+01	.....
M	14	851.78	848 - 864	851.41	1.35E+01	7.50	5.69E+00	.....
m	15	860.33	848 - 864	859.97	1.06E+01	10.31	3.38E+00	TL-208
	16	895.85	892 - 898	895.50	1.13E+01	8.02	3.46E+00	.....
	17	947.95	943 - 952	947.63	1.32E+01	12.29	1.17E+01	.....

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

PEAK EFFICIENCY REPORT

Peak Analysis Performed on : 11/5/2015 8:13:51AM

Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
	1	9.74E+01	54.64	2.31E-02	1.75E-03
	2	4.55E+01	36.22	2.14E-02	1.70E-03
	3	5.68E+01	39.05	2.01E-02	1.65E-03
	4	2.73E+01	32.06	1.63E-02	1.54E-03
	5	5.19E+01	34.76	1.16E-02	1.15E-03
	6	2.30E+01	24.98	1.10E-02	1.11E-03
	7	3.03E+01	26.38	7.23E-03	8.16E-04
	8	2.86E+01	21.12	6.28E-03	7.59E-04
	9	1.76E+01	22.45	5.55E-03	6.91E-04
	10	5.97E+01	21.98	4.61E-03	5.61E-04
	11	1.31E+01	10.00	4.17E-03	4.81E-04
	12	1.12E+01	13.42	3.33E-03	3.13E-04
	13	1.55E+01	14.30	3.15E-03	2.90E-04
M	14	1.35E+01	7.50	2.79E-03	2.34E-04
m	15	1.06E+01	10.31	2.76E-03	2.29E-04
	16	1.13E+01	8.02	2.65E-03	2.09E-04
	17	1.32E+01	12.29	2.51E-03	2.02E-04

Analysis Report for 1510086-02

BLANK

M = First peak in a multiplet region
 m = Other peak in a multiplet region
 F = Fitted singlet
 Errors quoted at 2.000 sigma

BACKGROUND SUBTRACT REPORT

Peak Analysis Performed on : 11/5/2015 8:13:51AM

Env. Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000028944.CNF

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
1	64.39	9.74E+01	54.64			9.74E+01	5.46E+01
2	75.27	4.55E+01	36.22			4.55E+01	3.62E+01
3	84.27	5.68E+01	39.05			5.68E+01	3.91E+01
4	118.05	2.73E+01	32.06			2.73E+01	3.21E+01
5	186.99	5.19E+01	34.76			5.19E+01	3.48E+01
6	198.21	2.30E+01	24.98			2.30E+01	2.50E+01
7	319.90	3.03E+01	26.38			3.03E+01	2.64E+01
8	371.19	2.86E+01	21.12			2.86E+01	2.11E+01
9	422.45	1.76E+01	22.45			1.76E+01	2.24E+01
10	511.28	5.97E+01	21.98	4.21E+01	4.92E+00	1.75E+01	2.25E+01
11	565.92	1.31E+01	10.00			1.31E+01	1.00E+01
12	710.32	1.12E+01	13.42			1.12E+01	1.34E+01
13	751.19	1.55E+01	14.30			1.55E+01	1.43E+01
M 14	851.78	1.35E+01	7.50			1.35E+01	7.50E+00
m 15	860.33	1.06E+01	10.31			1.06E+01	1.03E+01
16	895.85	1.13E+01	8.02			1.13E+01	8.02E+00
17	947.95	1.32E+01	12.29			1.32E+01	1.23E+01

M = First peak in a multiplet region
 m = Other peak in a multiplet region
 F = Fitted singlet
 Errors quoted at 2.000sigma

Analysis Report for 1510086-02

BLANK

AREA CORRECTION REPORT REFERENCE PEAK / BKG. SUBTRACT

Peak Analysis Performed on : 11/5/2015 8:13:51AM
 Ref. Peak Energy : 0.00 Reference Date :
 Peak Ratio : 0.00 Uncertainty : 0.00
 Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000028944.CNF

Corrected Area is: Original * Peak Ratio - Background

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
1	64.39	9.74E+01	54.64			9.74E+01	5.46E+01
2	75.27	4.55E+01	36.22			4.55E+01	3.62E+01
3	84.27	5.68E+01	39.05			5.68E+01	3.91E+01
4	118.05	2.73E+01	32.06			2.73E+01	3.21E+01
5	186.99	5.19E+01	34.76			5.19E+01	3.48E+01
6	198.21	2.30E+01	24.98			2.30E+01	2.50E+01
7	319.90	3.03E+01	26.38			3.03E+01	2.64E+01
8	371.19	2.86E+01	21.12			2.86E+01	2.11E+01
9	422.45	1.76E+01	22.45			1.76E+01	2.24E+01
10	511.28	5.97E+01	21.98	4.21E+01	4.92E+00	1.75E+01	2.25E+01
11	565.92	1.31E+01	10.00			1.31E+01	1.00E+01
12	710.32	1.12E+01	13.42			1.12E+01	1.34E+01
13	751.19	1.55E+01	14.30			1.55E+01	1.43E+01
M 14	851.78	1.35E+01	7.50			1.35E+01	7.50E+00
m 15	860.33	1.06E+01	10.31			1.06E+01	1.03E+01
16	895.85	1.13E+01	8.02			1.13E+01	8.02E+00
17	947.95	1.32E+01	12.29			1.32E+01	1.23E+01

M = First peak in a multiplet region
 m = Other peak in a multiplet region
 F = Fitted singlet
 Errors quoted at 2.000sigma

NUCLIDE IDENTIFICATION REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

IDENTIFIED NUCLIDES

Nuclide Name	Id Confidence	Energy (keV)	Yield(%)	Activity (pCi/grams)	Activity Uncertainty
CR-51	0.995	320.08 *	9.83	4.09E-01	3.60E-01

: 00346

Analysis Report for 1510086-02

BLANK

<i>Nuclide Name</i>	<i>Id Confidence</i>	<i>Energy (keV)</i>	<i>Yield(%)</i>	<i>Activity (pCi/grams)</i>	<i>Activity Uncertainty</i>
RA-226	0.908	186.21 *	3.28	1.31E+00	2.56E+00
AM-243	0.944	74.67 *	66.00	3.09E-02	2.47E-02

* = Energy line found in the spectrum.

- = Manually added nuclide.

? = Manually edited nuclide.

Energy Tolerance : 1.000 keV

Nuclide confidence index threshold = 0.30

Errors quoted at 2.000sigma

UNIDENTIFIED PEAKS

Peak Locate Performed on : 11/5/2015 8:13:51AM
 Peak Locate From Channel : 1
 Peak Locate To Channel : 4096

<i>Peak No.</i>	<i>Energy (keV)</i>	<i>Peak Size (CPS)</i>	<i>Peak CPS (%) Uncertainty</i>	<i>Peak Type</i>	<i>Tolerance Nuclide</i>
1	64.39	2.70556E-02	28.05		
3	84.27	1.57833E-02	34.36	Tol.	TH-231
4	118.05	7.57310E-03	58.80		
6	198.21	6.39706E-03	54.23		
8	371.19	7.94118E-03	36.94		
9	422.45	4.89197E-03	63.74		
10	511.28	4.87298E-03	64.19		
11	565.92	3.64379E-03	38.12		
12	710.32	3.11111E-03	59.89		
13	751.19	4.30556E-03	46.13		
M 14	851.78	3.74708E-03	27.80		
m 15	860.33	2.93157E-03	48.84	Tol.	TL-208
16	895.85	3.13034E-03	35.56		
17	947.95	3.65497E-03	46.70		

M = First peak in a multiplet region

m = Other peak in a multiplet region

F = Fitted singlet

Errors quoted at 2.000sigma

Analysis Report for 1510086-02
BLANK

NUCLIDE IDENTIFICATION REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

IDENTIFIED NUCLIDES

Nuclide Name	Id Confidence	Energy (keV)		Yield(%)	Activity (pCi/grams)	Activity Uncertainty
CR-51	0.99	320.08	*	9.83	4.09E-01	3.60E-01
RA-226	0.90	186.21	*	3.28	1.31E+00	2.56E+00
AM-243	0.94	74.67	*	66.00	3.09E-02	2.47E-02

* = Energy line found in the spectrum.

- = Manually added nuclide.

? = Manually edited nuclide.

@ = Energy line not used for Weighted Mean Activity

Energy Tolerance : 1.000 keV

Nuclide confidence index threshold = 0.30

Errors quoted at 2.000sigma

INTERFERENCE CORRECTED REPORT

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
CR-51	0.995	4.09E-01	3.60E-01	
RA-226	0.908	1.31E+00	2.56E+00	
AM-243	0.944	3.09E-02	2.47E-02	

? = nuclide is part of an undetermined solution

X = nuclide rejected by the interference analysis

@ = nuclide contains energy lines not used in Weighted Mean Activity

Errors quoted at 2.000sigma

Analysis Report for 1510086-02

BLANK

UNIDENTIFIED PEAKS

Peak Locate Performed on : 11/5/2015 8:13:51AM
 Peak Locate From Channel : 1
 Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
1	64.39	2.70556E-02	28.05		
3	84.27	1.57833E-02	34.36	Tol.	TH-231
4	118.05	7.57310E-03	58.80		
6	198.21	6.39706E-03	54.23		
8	371.19	7.94118E-03	36.94		
9	422.45	4.89197E-03	63.74		
10	511.28	4.87298E-03	64.19		
11	565.92	3.64379E-03	38.12		
12	710.32	3.11111E-03	59.89		
13	751.19	4.30556E-03	46.13		
M 14	851.78	3.74708E-03	27.80		
m 15	860.33	2.93157E-03	48.84	Tol.	TL-208
16	895.85	3.13034E-03	35.56		
17	947.95	3.65497E-03	46.70		

M = First peak in a multiplet region
 m = Other peak in a multiplet region
 F = Fitted singlet
 Errors quoted at 2.000sigma

NUCLIDE MDA REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	BE-7	477.59	10.42	1.35E-01	5.35E-01	5.35E-01
+	NA-22	1274.54	99.94	-1.76E-02	8.00E-02	8.00E-02
+	NA-24	1368.53	99.99	3.24E-02	2.71E-02	9.21E-02

: 00349

Analysis Report for 1510086-02

BLANK

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	NA-24	2754.09	99.86	0.00E+00	2.71E-02	2.71E-02
+	AL-26	1808.65	99.76	-4.56E-03	7.36E-02	7.36E-02
+	K-40	1460.81	10.67	-5.78E-02	6.41E-01	6.41E-01
+	AR-41	1293.64	99.16	2.91E-02	1.62E-01	1.62E-01
+	TI-44	67.88	94.40	9.13E-03	2.75E-02	2.98E-02
		78.34	96.00	-1.02E-02		2.75E-02
+	SC-46	889.25	99.98	3.76E-03	5.98E-02	5.98E-02
		1120.51	99.99	2.09E-02		8.11E-02
+	V-48	983.52	99.98	3.57E-02	6.39E-02	7.46E-02
		1312.10	97.50	-2.66E-02		6.39E-02
+	CR-51	320.08	*	9.83	4.09E-01	5.69E-01
+	MN-54	834.83	99.97	5.50E-02	8.10E-02	8.10E-02
+	CO-56	846.75	99.96	3.42E-03	5.14E-02	5.14E-02
		1037.75	14.03	-1.94E-01		5.17E-01
		1238.25	67.00	1.47E-02		1.16E-01
		1771.40	15.51	-7.21E-02		4.65E-01
		2598.48	16.90	-1.17E-01		5.68E-01
+	CO-57	122.06	85.51	7.03E-04	3.29E-02	3.29E-02
		136.48	10.60	9.84E-02		2.87E-01
+	CO-58	810.76	99.40	1.71E-02	6.64E-02	6.64E-02
+	FE-59	1099.22	56.50	-2.72E-02	9.35E-02	9.35E-02
		1291.56	43.20	-3.06E-03		1.97E-01
+	CO-60	1173.22	100.00	2.93E-02	7.40E-02	8.46E-02
		1332.49	100.00	5.24E-03		7.40E-02
+	ZN-65	1115.52	50.75	1.27E-02	1.46E-01	1.46E-01
+	GA-67	93.31	35.70	6.31E-02	9.11E-02	9.11E-02
		208.95	2.24	-2.98E-01		1.77E+00
		300.22	16.00	-2.67E-02		2.74E-01
+	SE-75	121.11	16.70	3.58E-03	5.08E-02	1.67E-01
		136.00	59.20	1.04E-02		5.08E-02
		264.65	59.80	-1.76E-02		6.76E-02
		279.53	25.20	-2.33E-02		1.62E-01
		400.65	11.40	8.24E-02		4.00E-01
+	RB-82	776.52	13.00	-5.46E-02	4.72E-01	4.72E-01
+	RB-83	520.41	46.00	-8.47E-03	1.24E-01	1.24E-01
		529.64	30.30	-3.42E-03		1.91E-01
		552.65	16.40	4.01E-02		3.36E-01
+	KR-85	513.99	0.43	-8.03E-02	2.08E+01	2.08E+01
+	SR-85	513.99	99.27	-3.51E-04	9.12E-02	9.12E-02
+	Y-88	898.02	93.40	-2.26E-02	7.55E-02	7.55E-02
		1836.01	99.38	2.70E-02		9.80E-02
+	NB-93M	16.57	9.43	2.00E-01	2.06E-01	2.06E-01
+	NB-94	702.63	100.00	2.05E-02	7.69E-02	8.14E-02
		871.10	100.00	3.86E-03		7.69E-02
+	NB-95	765.79	99.81	-7.77E-03	6.25E-02	6.25E-02
+	NB-95M	235.69	25.00	3.85E-02	1.66E-01	1.66E-01
+	ZR-95	724.18	43.70	-2.42E-02	1.04E-01	1.17E-01

Analysis Report for 1510086-02

BLANK

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	ZR-95	756.72	55.30	-2.46E-03	1.04E-01	1.04E-01
+	MO-99	181.06	6.20	-1.42E-01	4.32E-01	5.80E-01
		739.58	12.80	5.41E-02		4.32E-01
		778.00	4.50	-2.85E-01		1.29E+00
+	RU-103	497.08	89.00	-6.93E-03	5.70E-02	5.70E-02
+	RU-106	621.84	9.80	1.61E-01	6.05E-01	6.05E-01
+	AG-108M	433.93	89.90	3.13E-02	5.88E-02	5.88E-02
		614.37	90.40	-1.02E-03		6.34E-02
		722.95	90.50	0.00E+00		6.09E-02
+	CD-109	88.03	3.72	1.22E-01	8.01E-01	8.01E-01
+	AG-110M	657.75	93.14	9.30E-03	7.17E-02	7.17E-02
		677.61	10.53	1.03E-01		6.00E-01
		706.67	16.46	-6.71E-02		3.90E-01
		763.93	21.98	-1.44E-02		2.74E-01
		884.67	71.63	-1.87E-02		7.48E-02
		1384.27	23.94	-1.96E-01		1.67E-01
+	CD-113M	263.70	0.02	-4.52E+01	1.75E+02	1.75E+02
+	SN-113	255.12	1.93	-4.68E-01	7.95E-02	2.05E+00
		391.69	64.90	1.73E-02		7.95E-02
+	TE123M	159.00	84.10	-1.04E-02	4.02E-02	4.02E-02
+	SB-124	602.71	97.87	-1.14E-02	6.38E-02	6.38E-02
		645.85	7.26	1.06E-02		7.90E-01
		722.78	11.10	-7.21E-02		4.60E-01
		1691.02	49.00	-2.20E-02		1.22E-01
+	I-125	35.49	6.49	-7.73E-02	2.86E-01	2.86E-01
+	SB-125	176.33	6.89	1.16E-01	1.73E-01	5.08E-01
		427.89	29.33	5.96E-03		1.73E-01
		463.38	10.35	-5.82E-02		4.99E-01
		600.56	17.80	-6.37E-02		3.29E-01
		635.90	11.32	3.22E-01		6.23E-01
+	SB-126	414.70	83.30	-1.05E-02	5.50E-02	5.50E-02
		666.33	99.60	-2.25E-02		5.80E-02
		695.00	99.60	9.46E-03		6.82E-02
		720.50	53.80	-2.18E-02		9.88E-02
+	SN-126	87.57	37.00	1.22E-02	8.03E-02	8.03E-02
+	SB-127	473.00	25.00	5.79E-02	1.58E-01	2.27E-01
		685.20	35.70	-1.01E-02		1.58E-01
		783.80	14.70	8.11E-02		4.39E-01
+	I-129	29.78	57.00	-1.15E-02	3.44E-02	3.44E-02
		33.60	13.20	1.40E-02		1.42E-01
		39.58	7.52	-1.08E-01		2.60E-01
+	I-131	284.30	6.05	5.09E-01	5.83E-02	7.42E-01
		364.48	81.20	8.14E-03		5.83E-02
		636.97	7.26	2.51E-01		9.30E-01
		722.89	1.80	-4.47E-01		2.85E+00
+	TE-132	49.72	13.10	3.29E-02	4.44E-02	1.65E-01
		228.16	88.00	-1.12E-02		4.44E-02
+	BA-133	81.00	33.00	-5.50E-02	7.88E-02	7.88E-02
		302.84	17.80	1.81E-02		2.47E-01

Analysis Report for 1510086-02

BLANK

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	BA-133	356.01	60.00	-1.55E-02	7.88E-02	8.37E-02
+	I-133	529.87	86.30	-1.27E-03	7.10E-02	7.10E-02
+	XE-133	81.00	38.00	-4.82E-02	6.90E-02	6.90E-02
+	CS-134	563.23	8.38	8.50E-02	6.53E-02	6.83E-01
		569.32	15.43	-5.27E-02		3.68E-01
		604.70	97.60	2.88E-03		6.53E-02
		795.84	85.40	-8.37E-04		7.09E-02
		801.93	8.73	-3.71E-02		7.47E-01
+	CS-135	268.24	16.00	1.88E-02	2.62E-01	2.62E-01
+	I-135	1131.51	22.50	-4.25E-02	3.12E-01	3.37E-01
		1260.41	28.60	-7.62E-02		3.12E-01
		1678.03	9.54	-3.74E-01		5.90E-01
+	CS-136	153.22	7.46	1.24E-01	5.55E-02	4.65E-01
		163.89	4.61	4.39E-02		7.61E-01
		176.55	13.56	5.91E-02		2.59E-01
		273.65	12.66	1.21E-01		3.39E-01
		340.57	48.50	2.04E-02		9.66E-02
		818.50	99.70	-2.00E-02		5.55E-02
		1048.07	79.60	-1.76E-02		9.96E-02
		1235.34	19.70	-8.31E-03		3.96E-01
+	CS-137	661.65	85.12	7.22E-03	7.89E-02	7.89E-02
+	LA-138	788.74	34.00	-1.53E-02	1.35E-01	1.70E-01
		1435.80	66.00	3.33E-02		1.35E-01
+	CE-139	165.85	80.35	1.07E-02	4.50E-02	4.50E-02
+	BA-140	162.64	6.70	3.15E-02	2.32E-01	5.18E-01
		304.84	4.50	-4.07E-01		9.49E-01
		423.70	3.20	6.58E-01		1.68E+00
		437.55	2.00	-6.77E-02		2.53E+00
		537.32	25.00	4.05E-03		2.32E-01
+	LA-140	328.77	20.50	1.33E-02	7.76E-02	2.09E-01
		487.03	45.50	-7.26E-02		9.82E-02
		815.85	23.50	1.00E-01		2.65E-01
		1596.49	95.49	1.61E-02		7.76E-02
+	CE-141	145.44	48.40	-2.14E-02	6.43E-02	6.43E-02
+	CE-143	57.36	11.80	-9.98E-03	1.03E-01	1.90E-01
		293.26	42.00	-2.76E-02		1.03E-01
		664.55	5.20	1.81E-01		1.23E+00
+	CE-144	133.54	10.80	-1.14E-01	2.58E-01	2.58E-01
+	PM-144	476.78	42.00	4.14E-02	4.96E-02	1.36E-01
		618.01	98.60	-2.80E-02		4.96E-02
		696.49	99.49	2.27E-02		7.10E-02
+	PM-145	36.85	21.70	-2.45E-02	4.67E-02	8.71E-02
		37.36	39.70	-2.43E-02		4.67E-02
		42.30	15.10	5.98E-02		1.38E-01
		72.40	2.31	1.43E-01		1.15E+00
+	PM-146	453.90	39.94	-8.33E-03	1.16E-01	1.16E-01
		735.90	14.01	5.67E-02		4.00E-01
		747.13	13.10	1.25E-01		4.64E-01
+	ND-147	91.11	28.90	9.18E-02	1.10E-01	1.10E-01

Analysis Report for 1510086-02

BLANK

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	ND-147	531.02	13.10	-3.82E-02	1.10E-01	4.38E-01
+	PM-149	285.90	3.10	7.96E-01	1.48E+00	1.48E+00
+	EU-152	121.78	20.50	2.93E-03	1.37E-01	1.37E-01
		244.69	5.40	3.07E-01		8.02E-01
		344.27	19.13	-1.03E-01		2.27E-01
		778.89	9.20	-1.37E-01		6.21E-01
		964.01	10.40	4.84E-01		7.94E-01
		1085.78	7.22	9.02E-02		9.54E-01
		1112.02	9.60	4.62E-02		6.94E-01
		1407.95	14.94	-3.38E-02		4.43E-01
+	GD-153	97.43	31.30	-8.65E-02	9.11E-02	9.11E-02
		103.18	22.20	1.85E-02		1.28E-01
+	EU-154	123.07	40.50	-3.00E-03	6.65E-02	6.65E-02
		723.30	19.70	0.00E+00		2.80E-01
		873.19	11.50	3.00E-01		7.20E-01
		996.32	10.30	4.32E-03		7.31E-01
		1004.76	17.90	1.90E-01		4.80E-01
		1274.45	35.50	-4.97E-02		2.25E-01
+	EU-155	86.50	30.90	-5.95E-02	8.76E-02	8.76E-02
		105.30	20.70	-5.52E-02		1.33E-01
+	EU-156	811.77	10.40	1.64E-01	6.16E-01	6.16E-01
		1153.47	7.20	4.71E-01		1.16E+00
		1230.71	8.90	2.75E-01		9.97E-01
+	HO-166M	184.41	72.60	-8.30E-03	5.37E-02	5.37E-02
		280.45	29.60	1.03E-02		1.44E-01
		410.94	11.10	1.21E-01		4.21E-01
		711.69	54.10	-3.04E-02		1.07E-01
+	TM-171	66.72	0.14	1.22E+01	2.03E+01	2.03E+01
+	HF-172	81.75	4.52	-1.66E-01	2.36E-01	5.86E-01
		125.81	11.30	-8.15E-03		2.36E-01
+	LU-172	181.53	20.60	-6.40E-03	1.12E-01	1.81E-01
		810.06	16.63	1.03E-01		3.99E-01
		912.12	15.25	-7.08E-02		3.85E-01
		1093.66	62.50	2.73E-02		1.12E-01
+	LU-173	100.72	5.24	7.26E-02	2.02E-01	5.38E-01
		272.11	21.20	2.41E-02		2.02E-01
+	HF-175	343.40	84.00	-3.16E-02	5.04E-02	5.04E-02
+	LU-176	88.34	13.30	1.81E-01	4.74E-02	2.38E-01
		201.83	86.00	9.45E-03		4.88E-02
		306.78	94.00	4.18E-03		4.74E-02
+	TA-182	67.75	41.20	2.09E-02	6.83E-02	6.83E-02
		1121.30	34.90	5.13E-02		2.23E-01
		1189.05	16.23	2.91E-02		4.37E-01
		1221.41	26.98	-1.44E-01		2.16E-01
		1231.02	11.44	2.13E-01		7.74E-01
+	IR-192	308.46	29.68	5.67E-03	1.10E-01	1.51E-01
		468.07	48.10	-2.23E-02		1.10E-01
+	HG-203	279.19	77.30	-7.61E-03	5.29E-02	5.29E-02
+	BI-207	569.67	97.72	-8.33E-03	5.81E-02	5.81E-02

Analysis Report for 1510086-02

BLANK

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	BI-207	1063.62	74.90	1.71E-02	5.81E-02	9.47E-02
+	TL-208	583.14	30.22	-4.19E-02	1.84E-01	1.84E-01
		860.37	4.48	2.51E-01		1.70E+00
		2614.66	35.85	-1.66E-02		2.68E-01
+	BI-210M	262.00	45.00	-1.10E-02	8.98E-02	8.98E-02
		300.00	23.00	-4.67E-02		1.86E-01
+	PB-210	46.50	4.25	8.85E-02	5.00E-01	5.00E-01
+	PB-211	404.84	2.90	-2.53E-01	1.54E+00	1.54E+00
		831.96	2.90	4.09E-01		2.54E+00
+	BI-212	727.17	11.80	8.54E-02	4.53E-01	4.53E-01
		1620.62	2.75	-2.26E-01		2.10E+00
+	PB-212	238.63	44.60	-3.50E-02	8.84E-02	8.84E-02
		300.09	3.41	-3.15E-01		1.26E+00
+	BI-214	609.31	46.30	8.41E-02	1.46E-01	1.46E-01
		1120.29	15.10	1.38E-01		5.37E-01
		1764.49	15.80	-5.17E-02		4.55E-01
		2204.22	4.98	-4.78E-01		1.17E+00
+	PB-214	295.21	19.19	5.53E-02	1.40E-01	2.33E-01
		351.92	37.19	7.63E-02		1.40E-01
+	RN-219	401.80	6.50	-9.56E-02	6.80E-01	6.80E-01
+	RA-223	323.87	3.88	-3.46E-02	1.25E+00	1.25E+00
+	RA-224	240.98	3.95	-1.35E-01	1.03E+00	1.03E+00
+	RA-225	40.00	31.00	-2.64E-02	6.34E-02	6.34E-02
+	RA-226	186.21	* 3.28	1.31E+00	1.38E+00	1.38E+00
+	TH-227	50.10	8.40	5.06E-02	2.55E-01	2.55E-01
		236.00	11.50	8.27E-02		3.57E-01
		256.20	6.30	1.14E-01		6.34E-01
+	AC-228	338.32	11.40	6.10E-02	2.40E-01	4.07E-01
		911.07	27.70	3.65E-02		2.40E-01
		969.11	16.60	-7.04E-02		4.42E-01
+	TH-230	48.44	16.90	4.69E-03	1.24E-01	1.24E-01
		62.85	4.60	7.46E-01		6.10E-01
		67.67	0.37	2.33E+00		7.60E+00
+	PA-231	283.67	1.60	4.30E-02	1.91E+00	2.64E+00
		302.67	2.30	1.40E-01		1.91E+00
+	TH-231	25.64	14.70	3.77E-02	1.49E-01	1.49E-01
		84.21	6.40	3.13E-01		4.33E-01
+	PA-233	311.98	38.60	0.00E+00	1.17E-01	1.17E-01
+	PA-234	131.20	20.40	-2.46E-02	1.36E-01	1.36E-01
		733.99	8.80	-7.98E-02		6.12E-01
		946.00	12.00	6.90E-02		6.94E-01
+	PA-234M	1001.03	0.92	-3.20E-01	9.05E+00	9.05E+00
+	TH-234	63.29	3.80	8.83E-01	7.43E-01	7.43E-01
+	U-235	143.76	10.50	-8.26E-02	2.90E-01	2.90E-01
		163.35	4.70	4.28E-02		7.42E-01
		205.31	4.70	5.35E-01		8.63E-01
+	NP-237	86.50	12.60	-1.46E-01	2.15E-01	2.15E-01

Analysis Report for 1510086-02

BLANK

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	NP-239	106.10	22.70	-5.16E-02	1.25E-01	1.25E-01
		228.18	10.70	-4.32E-02		3.70E-01
		277.60	14.10	-1.16E-01		2.94E-01
+	AM-241	59.54	35.90	-2.78E-03	6.77E-02	6.77E-02
+	AM-243	74.67	* 66.00	3.09E-02	3.94E-02	3.94E-02
+	CM-243	209.75	3.29	-4.17E-01	2.91E-01	1.18E+00
		228.14	10.60	-9.16E-02		3.63E-01
		277.60	14.00	-1.14E-01		2.91E-01

- + = Nuclide identified during the nuclide identification
- * = Energy line found in the spectrum
- > = MDA value not calculated
- @ = Half-life too short to be able to perform the decay correction
- ? = CAUTION: MDA value is inconsistent with Currie MDA at 95% confidence level

NUCLIDE MDA REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

	Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
	BE-7	477.59	10.42	5.35E-01	5.35E-01	1.35E-01	2.42E-01
	NA-22	1274.54	99.94	8.00E-02	8.00E-02	-1.76E-02	3.32E-02
	NA-24	1368.53	99.99	9.21E-02	2.71E-02	3.24E-02	3.82E-02
		2754.09	99.86	2.71E-02		0.00E+00	0.00E+00
	AL-26	1808.65	99.76	7.36E-02	7.36E-02	-4.56E-03	2.75E-02
	K-40	1460.81	10.67	6.41E-01	6.41E-01	-5.78E-02	2.48E-01
	AR-41	1293.64	99.16	1.62E-01	1.62E-01	2.91E-02	6.77E-02
	TI-44	67.88	94.40	2.98E-02	2.75E-02	9.13E-03	1.43E-02
		78.34	96.00	2.75E-02		-1.02E-02	1.31E-02
	SC-46	889.25	99.98	5.98E-02	5.98E-02	3.76E-03	2.50E-02
		1120.51	99.99	8.11E-02		2.09E-02	3.45E-02
	V-48	983.52	99.98	7.46E-02	6.39E-02	3.57E-02	3.19E-02
		1312.10	97.50	6.39E-02		-2.66E-02	2.48E-02
+	CR-51	320.08	* 9.83	5.69E-01	5.69E-01	4.09E-01	2.66E-01
	MN-54	834.83	99.97	8.10E-02	8.10E-02	5.50E-02	3.60E-02

Analysis Report for 1510086-02

BLANK

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
CO-56	846.75	99.96	5.14E-02	5.14E-02	3.42E-03	2.11E-02
	1037.75	14.03	5.17E-01		-1.94E-01	2.18E-01
	1238.25	67.00	1.16E-01		1.47E-02	4.82E-02
	1771.40	15.51	4.65E-01		-7.21E-02	1.74E-01
	2598.48	16.90	5.68E-01		-1.17E-01	2.12E-01
CO-57	122.06	85.51	3.29E-02	3.29E-02	7.03E-04	1.55E-02
	136.48	10.60	2.87E-01		9.84E-02	1.35E-01
CO-58	810.76	99.40	6.64E-02	6.64E-02	1.71E-02	2.87E-02
FE-59	1099.22	56.50	9.35E-02	9.35E-02	-2.72E-02	3.62E-02
	1291.56	43.20	1.97E-01		-3.06E-03	8.24E-02
CO-60	1173.22	100.00	8.46E-02	7.40E-02	2.93E-02	3.60E-02
	1332.49	100.00	7.40E-02		5.24E-03	2.99E-02
ZN-65	1115.52	50.75	1.46E-01	1.46E-01	1.27E-02	6.12E-02
GA-67	93.31	35.70	9.11E-02	9.11E-02	6.31E-02	4.36E-02
	208.95	2.24	1.77E+00		-2.98E-01	8.29E-01
	300.22	16.00	2.74E-01		-2.67E-02	1.27E-01
SE-75	121.11	16.70	1.67E-01	5.08E-02	3.58E-03	7.86E-02
	136.00	59.20	5.08E-02		1.04E-02	2.39E-02
	264.65	59.80	6.76E-02		-1.76E-02	3.13E-02
	279.53	25.20	1.62E-01		-2.33E-02	7.50E-02
	400.65	11.40	4.00E-01		8.24E-02	1.80E-01
RB-82	776.52	13.00	4.72E-01	4.72E-01	-5.46E-02	2.03E-01
RB-83	520.41	46.00	1.24E-01	1.24E-01	-8.47E-03	5.57E-02
	529.64	30.30	1.91E-01		-3.42E-03	8.60E-02
	552.65	16.40	3.36E-01		4.01E-02	1.50E-01
KR-85	513.99	0.43	2.08E+01	2.08E+01	-8.03E-02	9.77E+00
SR-85	513.99	99.27	9.12E-02	9.12E-02	-3.51E-04	4.28E-02
Y-88	898.02	93.40	7.55E-02	7.55E-02	-2.26E-02	3.25E-02
	1836.01	99.38	9.80E-02		2.70E-02	3.96E-02
NB-93M	16.57	9.43	2.06E-01	2.06E-01	2.00E-01	9.84E-02
NB-94	702.63	100.00	8.14E-02	7.69E-02	2.05E-02	3.69E-02
	871.10	100.00	7.69E-02		3.86E-03	3.37E-02
NB-95	765.79	99.81	6.25E-02	6.25E-02	-7.77E-03	2.71E-02
NB-95M	235.69	25.00	1.66E-01	1.66E-01	3.85E-02	7.77E-02
ZR-95	724.18	43.70	1.17E-01	1.04E-01	-2.42E-02	4.94E-02
	756.72	55.30	1.04E-01		-2.46E-03	4.47E-02
MO-99	181.06	6.20	5.80E-01	4.32E-01	-1.42E-01	2.72E-01
	739.58	12.80	4.32E-01		5.41E-02	1.84E-01
	778.00	4.50	1.29E+00		-2.85E-01	5.49E-01
RU-103	497.08	89.00	5.70E-02	5.70E-02	-6.93E-03	2.54E-02
RU-106	621.84	9.80	6.05E-01	6.05E-01	1.61E-01	2.68E-01
AG-108M	433.93	89.90	5.88E-02	5.88E-02	3.13E-02	2.67E-02
	614.37	90.40	6.34E-02		-1.02E-03	2.80E-02
	722.95	90.50	6.09E-02		0.00E+00	2.61E-02
CD-109	88.03	3.72	8.01E-01	8.01E-01	1.22E-01	3.83E-01
AG-110M	657.75	93.14	7.17E-02	7.17E-02	9.30E-03	3.20E-02
	677.61	10.53	6.00E-01		1.03E-01	2.65E-01
	706.67	16.46	3.90E-01		-6.71E-02	1.72E-01
	763.93	21.98	2.74E-01		-1.44E-02	1.18E-01
	884.67	71.63	7.48E-02		-1.87E-02	3.07E-02
CD-113M	1384.27	23.94	1.67E-01		-1.96E-01	5.27E-02
SN-113	263.70	0.02	1.75E+02	1.75E+02	-4.52E+01	8.11E+01
	255.12	1.93	2.05E+00	7.95E-02	-4.68E-01	9.47E-01

Analysis Report for 1510086-02

BLANK

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
SN-113	391.69	64.90	7.95E-02	7.95E-02	1.73E-02	3.64E-02
TE123M	159.00	84.10	4.02E-02	4.02E-02	-1.04E-02	1.89E-02
SB-124	602.71	97.87	6.38E-02	6.38E-02	-1.14E-02	2.85E-02
	645.85	7.26	7.90E-01		1.06E-02	3.46E-01
	722.78	11.10	4.60E-01		-7.21E-02	1.94E-01
	1691.02	49.00	1.22E-01		-2.20E-02	4.33E-02
I-125	35.49	6.49	2.86E-01	2.86E-01	-7.73E-02	1.36E-01
SB-125	176.33	6.89	5.08E-01	1.73E-01	1.16E-01	2.39E-01
	427.89	29.33	1.73E-01		5.96E-03	7.84E-02
	463.38	10.35	4.99E-01		-5.82E-02	2.25E-01
	600.56	17.80	3.29E-01		-6.37E-02	1.46E-01
	635.90	11.32	6.23E-01		3.22E-01	2.81E-01
SB-126	414.70	83.30	5.50E-02	5.50E-02	-1.05E-02	2.47E-02
	666.33	99.60	5.80E-02		-2.25E-02	2.53E-02
	695.00	99.60	6.82E-02		9.46E-03	3.03E-02
	720.50	53.80	9.88E-02		-2.18E-02	4.20E-02
SN-126	87.57	37.00	8.03E-02	8.03E-02	1.22E-02	3.84E-02
SB-127	473.00	25.00	2.27E-01	1.58E-01	5.79E-02	1.03E-01
	685.20	35.70	1.58E-01		-1.01E-02	6.86E-02
	783.80	14.70	4.39E-01		8.11E-02	1.90E-01
I-129	29.78	57.00	3.44E-02	3.44E-02	-1.15E-02	1.64E-02
	33.60	13.20	1.42E-01		1.40E-02	6.77E-02
	39.58	7.52	2.60E-01		-1.08E-01	1.24E-01
I-131	284.30	6.05	7.42E-01	5.83E-02	5.09E-01	3.44E-01
	364.48	81.20	5.83E-02		8.14E-03	2.66E-02
	636.97	7.26	9.30E-01		2.51E-01	4.16E-01
	722.89	1.80	2.85E+00		-4.47E-01	1.20E+00
TE-132	49.72	13.10	1.65E-01	4.44E-02	3.29E-02	7.87E-02
	228.16	88.00	4.44E-02		-1.12E-02	2.07E-02
BA-133	81.00	33.00	7.88E-02	7.88E-02	-5.50E-02	3.75E-02
	302.84	17.80	2.47E-01		1.81E-02	1.14E-01
	356.01	60.00	8.37E-02		-1.55E-02	3.85E-02
I-133	529.87	86.30	7.10E-02	7.10E-02	-1.27E-03	3.19E-02
XE-133	81.00	38.00	6.90E-02	6.90E-02	-4.82E-02	3.28E-02
CS-134	563.23	8.38	6.83E-01	6.53E-02	8.50E-02	3.05E-01
	569.32	15.43	3.68E-01		-5.27E-02	1.64E-01
	604.70	97.60	6.53E-02		2.88E-03	2.93E-02
	795.84	85.40	7.09E-02		-8.37E-04	3.04E-02
	801.93	8.73	7.47E-01		-3.71E-02	3.23E-01
CS-135	268.24	16.00	2.62E-01	2.62E-01	1.88E-02	1.22E-01
I-135	1131.51	22.50	3.37E-01	3.12E-01	-4.25E-02	1.36E-01
	1260.41	28.60	3.12E-01		-7.62E-02	1.28E-01
	1678.03	9.54	5.90E-01		-3.74E-01	1.86E-01
CS-136	153.22	7.46	4.65E-01	5.55E-02	1.24E-01	2.19E-01
	163.89	4.61	7.61E-01		4.39E-02	3.58E-01
	176.55	13.56	2.59E-01		5.91E-02	1.22E-01
	273.65	12.66	3.39E-01		1.21E-01	1.57E-01
	340.57	48.50	9.66E-02		2.04E-02	4.44E-02
	818.50	99.70	5.55E-02		-2.00E-02	2.32E-02
	1048.07	79.60	9.96E-02		-1.76E-02	4.27E-02
	1235.34	19.70	3.96E-01		-8.31E-03	1.64E-01
CS-137	661.65	85.12	7.89E-02	7.89E-02	7.22E-03	3.52E-02
LA-138	788.74	34.00	1.70E-01	1.35E-01	-1.53E-02	7.24E-02

Analysis Report for 1510086-02

BLANK

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
LA-138	1435.80	66.00	1.35E-01	1.35E-01	3.33E-02	5.59E-02
CE-139	165.85	80.35	4.50E-02	4.50E-02	1.07E-02	2.13E-02
BA-140	162.64	6.70	5.18E-01	2.32E-01	3.15E-02	2.44E-01
	304.84	4.50	9.49E-01		-4.07E-01	4.36E-01
	423.70	3.20	1.68E+00		6.58E-01	7.69E-01
	437.55	2.00	2.53E+00		-6.77E-02	1.14E+00
	537.32	25.00	2.32E-01		4.05E-03	1.04E-01
LA-140	328.77	20.50	2.09E-01	7.76E-02	1.33E-02	9.55E-02
	487.03	45.50	9.82E-02		-7.26E-02	4.32E-02
	815.85	23.50	2.65E-01		1.00E-01	1.13E-01
	1596.49	95.49	7.76E-02		1.61E-02	3.01E-02
CE-141	145.44	48.40	6.43E-02	6.43E-02	-2.14E-02	3.02E-02
CE-143	57.36	11.80	1.90E-01	1.03E-01	-9.98E-03	9.05E-02
	293.26	42.00	1.03E-01		-2.76E-02	4.76E-02
	664.55	5.20	1.23E+00		1.81E-01	5.44E-01
CE-144	133.54	10.80	2.58E-01	2.58E-01	-1.14E-01	1.21E-01
PM-144	476.78	42.00	1.36E-01	4.96E-02	4.14E-02	6.18E-02
	618.01	98.60	4.96E-02		-2.80E-02	2.13E-02
	696.49	99.49	7.10E-02		2.27E-02	3.16E-02
PM-145	36.85	21.70	8.71E-02	4.67E-02	-2.45E-02	4.14E-02
	37.36	39.70	4.67E-02		-2.43E-02	2.22E-02
	42.30	15.10	1.38E-01		5.98E-02	6.60E-02
	72.40	2.31	1.15E+00		1.43E-01	5.47E-01
PM-146	453.90	39.94	1.16E-01	1.16E-01	-8.33E-03	5.17E-02
	735.90	14.01	4.00E-01		5.67E-02	1.71E-01
	747.13	13.10	4.64E-01		1.25E-01	2.01E-01
ND-147	91.11	28.90	1.10E-01	1.10E-01	9.18E-02	5.25E-02
	531.02	13.10	4.38E-01		-3.82E-02	1.96E-01
PM-149	285.90	3.10	1.48E+00	1.48E+00	7.96E-01	6.86E-01
EU-152	121.78	20.50	1.37E-01	1.37E-01	2.93E-03	6.46E-02
	244.69	5.40	8.02E-01		3.07E-01	3.75E-01
	344.27	19.13	2.27E-01		-1.03E-01	1.04E-01
	778.89	9.20	6.21E-01		-1.37E-01	2.64E-01
	964.01	10.40	7.94E-01		4.84E-01	3.47E-01
	1085.78	7.22	9.54E-01		9.02E-02	3.96E-01
	1112.02	9.60	6.94E-01		4.62E-02	2.85E-01
	1407.95	14.94	4.43E-01		-3.38E-02	1.72E-01
GD-153	97.43	31.30	9.11E-02	9.11E-02	-8.65E-02	4.33E-02
	103.18	22.20	1.28E-01		1.85E-02	6.07E-02
EU-154	123.07	40.50	6.65E-02	6.65E-02	-3.00E-03	3.12E-02
	723.30	19.70	2.80E-01		0.00E+00	1.20E-01
	873.19	11.50	7.20E-01		3.00E-01	3.19E-01
	996.32	10.30	7.31E-01		4.32E-03	3.13E-01
	1004.76	17.90	4.80E-01		1.90E-01	2.10E-01
	1274.45	35.50	2.25E-01		-4.97E-02	9.34E-02
EU-155	86.50	30.90	8.76E-02	8.76E-02	-5.95E-02	4.17E-02
	105.30	20.70	1.33E-01		-5.52E-02	6.30E-02
EU-156	811.77	10.40	6.16E-01	6.16E-01	1.64E-01	2.65E-01
	1153.47	7.20	1.16E+00		4.71E-01	4.94E-01
	1230.71	8.90	9.97E-01		2.75E-01	4.24E-01
HO-166M	184.41	72.60	5.37E-02	5.37E-02	-8.30E-03	2.53E-02
	280.45	29.60	1.44E-01		1.03E-02	6.66E-02
	410.94	11.10	4.21E-01		1.21E-01	1.90E-01

: 00358

Analysis Report for 1510086-02

BLANK

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
HO-166M	711.69	54.10	1.07E-01	5.37E-02	-3.04E-02	4.64E-02
TM-171	66.72	0.14	2.03E+01	2.03E+01	1.22E+01	9.72E+00
HF-172	81.75	4.52	5.86E-01	2.36E-01	-1.66E-01	2.79E-01
	125.81	11.30	2.36E-01		-8.15E-03	1.11E-01
LU-172	181.53	20.60	1.81E-01	1.12E-01	-6.40E-03	8.53E-02
	810.06	16.63	3.99E-01		1.03E-01	1.73E-01
	912.12	15.25	3.85E-01		-7.08E-02	1.60E-01
	1093.66	62.50	1.12E-01		2.73E-02	4.63E-02
LU-173	100.72	5.24	5.38E-01	2.02E-01	7.26E-02	2.55E-01
	272.11	21.20	2.02E-01		2.41E-02	9.39E-02
HF-175	343.40	84.00	5.04E-02	5.04E-02	-3.16E-02	2.29E-02
LU-176	88.34	13.30	2.38E-01	4.74E-02	1.81E-01	1.14E-01
	201.83	86.00	4.88E-02		9.45E-03	2.30E-02
	306.78	94.00	4.74E-02		4.18E-03	2.19E-02
TA-182	67.75	41.20	6.83E-02	6.83E-02	2.09E-02	3.28E-02
	1121.30	34.90	2.23E-01		5.13E-02	9.43E-02
	1189.05	16.23	4.37E-01		2.91E-02	1.79E-01
	1221.41	26.98	2.16E-01		-1.44E-01	8.36E-02
	1231.02	11.44	7.74E-01		2.13E-01	3.29E-01
IR-192	308.46	29.68	1.51E-01	1.10E-01	5.67E-03	6.97E-02
	468.07	48.10	1.10E-01		-2.23E-02	4.97E-02
HG-203	279.19	77.30	5.29E-02	5.29E-02	-7.61E-03	2.44E-02
BI-207	569.67	97.72	5.81E-02	5.81E-02	-8.33E-03	2.58E-02
	1063.62	74.90	9.47E-02		1.71E-02	3.97E-02
TL-208	583.14	30.22	1.84E-01	1.84E-01	-4.19E-02	8.15E-02
	860.37	4.48	1.70E+00		2.51E-01	7.43E-01
	2614.66	35.85	2.68E-01		-1.66E-02	1.00E-01
BI-210M	262.00	45.00	8.98E-02	8.98E-02	-1.10E-02	4.16E-02
	300.00	23.00	1.86E-01		-4.67E-02	8.57E-02
PB-210	46.50	4.25	5.00E-01	5.00E-01	8.85E-02	2.39E-01
PB-211	404.84	2.90	1.54E+00	1.54E+00	-2.53E-01	6.91E-01
	831.96	2.90	2.54E+00		4.09E-01	1.11E+00
BI-212	727.17	11.80	4.53E-01	4.53E-01	8.54E-02	1.93E-01
	1620.62	2.75	2.10E+00		-2.26E-01	7.45E-01
PB-212	238.63	44.60	8.84E-02	8.84E-02	-3.50E-02	4.11E-02
	300.09	3.41	1.26E+00		-3.15E-01	5.78E-01
BI-214	609.31	46.30	1.46E-01	1.46E-01	8.41E-02	6.57E-02
	1120.29	15.10	5.37E-01		1.38E-01	2.28E-01
	1764.49	15.80	4.55E-01		-5.17E-02	1.70E-01
	2204.22	4.98	1.17E+00		-4.78E-01	3.71E-01
PB-214	295.21	19.19	2.33E-01	1.40E-01	5.53E-02	1.08E-01
	351.92	37.19	1.40E-01		7.63E-02	6.48E-02
RN-219	401.80	6.50	6.80E-01	6.80E-01	-9.56E-02	3.06E-01
RA-223	323.87	3.88	1.25E+00	1.25E+00	-3.46E-02	5.80E-01
RA-224	240.98	3.95	1.03E+00	1.03E+00	-1.35E-01	4.80E-01
RA-225	40.00	31.00	6.34E-02	6.34E-02	-2.64E-02	3.02E-02
+ RA-226	186.21	* 3.28	1.38E+00	1.38E+00	1.31E+00	6.57E-01
TH-227	50.10	8.40	2.55E-01	2.55E-01	5.06E-02	1.21E-01
	236.00	11.50	3.57E-01		8.27E-02	1.67E-01
	256.20	6.30	6.34E-01		1.14E-01	2.94E-01
AC-228	338.32	11.40	4.07E-01	2.40E-01	6.10E-02	1.87E-01
	911.07	27.70	2.40E-01		3.65E-02	1.02E-01
	969.11	16.60	4.42E-01		-7.04E-02	1.89E-01

Analysis Report for 1510086-02

BLANK

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
TH-230	48.44	16.90	1.24E-01	1.24E-01	4.69E-03	5.91E-02
	62.85	4.60	6.10E-01		7.46E-01	2.93E-01
	67.67	0.37	7.60E+00		2.33E+00	3.64E+00
PA-231	283.67	1.60	2.64E+00	1.91E+00	4.30E-02	1.22E+00
	302.67	2.30	1.91E+00		1.40E-01	8.83E-01
TH-231	25.64	14.70	1.49E-01	1.49E-01	3.77E-02	7.13E-02
	84.21	6.40	4.33E-01		3.13E-01	2.06E-01
PA-233	311.98	38.60	1.17E-01	1.17E-01	0.00E+00	5.42E-02
PA-234	131.20	20.40	1.36E-01	1.36E-01	-2.46E-02	6.37E-02
	733.99	8.80	6.12E-01		-7.98E-02	2.61E-01
	946.00	12.00	6.94E-01		6.90E-02	3.04E-01
PA-234M	1001.03	0.92	9.05E+00	9.05E+00	-3.20E-01	3.94E+00
TH-234	63.29	3.80	7.43E-01	7.43E-01	8.83E-01	3.57E-01
U-235	143.76	10.50	2.90E-01	2.90E-01	-8.26E-02	1.36E-01
	163.35	4.70	7.42E-01		4.28E-02	3.49E-01
	205.31	4.70	8.63E-01		5.35E-01	4.06E-01
NP-237	86.50	12.60	2.15E-01	2.15E-01	-1.46E-01	1.02E-01
NP-239	106.10	22.70	1.25E-01	1.25E-01	-5.16E-02	5.90E-02
	228.18	10.70	3.70E-01		-4.32E-02	1.72E-01
	277.60	14.10	2.94E-01		-1.16E-01	1.36E-01
AM-241	59.54	35.90	6.77E-02	6.77E-02	-2.78E-03	3.23E-02
+ AM-243	74.67	* 66.00	3.94E-02	3.94E-02	3.09E-02	1.88E-02
CM-243	209.75	3.29	1.18E+00	2.91E-01	-4.17E-01	5.50E-01
	228.14	10.60	3.63E-01		-9.16E-02	1.69E-01
	277.60	14.00	2.91E-01		-1.14E-01	1.34E-01

+ = Nuclide identified during the nuclide identification

* = Energy line found in the spectrum

> = MDA value not calculated

@ = Half-life too short to be able to perform the decay correction

No Action Level results available for reporting purposes.

DATA REVIEW COMMENTS REPORT

Creation Date

Comment

User

Analysis Report for 1510086-02
BLANK

No Data Review Comments Entered.

369: 4 9 1 6 8 4 5 3

Sample Title: BLANK

Channel	1	2	3	4	5	6	7	8
377:	3	8	5	3	4	2	2	2
385:	5	1	6	2	5	6	7	5
393:	4	3	2	4	6	3	2	4
401:	2	3	3	2	2	2	3	6
409:	4	3	3	2	2	4	3	3
417:	1	6	2	5	2	7	6	6
425:	5	2	2	1	4	2	4	3
433:	4	4	5	3	5	3	1	3
441:	2	2	4	5	5	0	3	4
449:	3	4	3	4	3	1	0	3
457:	2	3	2	4	5	5	3	2
465:	2	2	3	4	5	3	4	4
473:	2	5	3	2	2	3	4	8
481:	2	1	1	3	1	1	4	4
489:	0	3	2	2	5	2	0	4
497:	1	0	5	5	1	5	2	3
505:	3	1	1	5	10	17	20	16
513:	4	3	0	3	3	1	3	6
521:	0	2	6	3	4	3	5	2
529:	5	2	1	1	4	3	2	3
537:	2	3	3	3	3	3	6	3
545:	2	1	0	0	1	3	3	3
553:	3	6	0	3	1	4	5	1
561:	1	2	1	0	5	6	2	0
569:	0	1	4	2	2	2	2	3
577:	0	7	3	1	0	5	1	1
585:	3	4	2	2	3	2	1	2
593:	2	1	5	4	0	1	3	4
601:	2	3	2	2	4	3	2	3
609:	5	4	2	3	2	0	0	2
617:	4	2	1	0	3	1	1	4
625:	4	3	1	3	1	0	5	4
633:	2	3	2	6	3	3	0	2
641:	2	1	3	2	1	3	2	2
649:	1	1	2	3	1	4	3	4
657:	3	2	2	2	2	3	2	2
665:	5	0	2	1	1	0	3	4
673:	2	1	3	1	1	3	3	1
681:	4	1	2	0	1	1	3	2
689:	0	1	2	1	0	2	1	4
697:	2	4	5	4	5	1	2	4
705:	0	6	2	1	2	0	1	3
713:	5	0	0	2	1	1	3	1
721:	1	1	0	1	0	2	3	1
729:	1	2	1	0	1	1	1	4
737:	0	1	3	0	1	1	0	3
745:	1	1	1	0	0	4	4	1
753:	1	2	2	3	0	1	2	0
761:	1	1	1	1	2	2	4	1
769:	1	4	2	2	1	1	0	0
777:	2	3	2	2	1	0	2	0
785:	3	2	2	0	1	1	1	1
793:	1	1	3	1	1	1	2	3

801: 1 2 3 1 0 1 4 1

Sample Title: BLANK

Channel	1	2	3	1	0	1	4	1
809:	0	0	2	2	1	3	0	0
817:	2	1	1	0	1	1	1	2
825:	2	2	0	0	1	3	3	0
833:	4	2	2	2	2	3	0	2
841:	0	0	1	2	1	0	1	0
849:	0	2	5	1	2	1	1	1
857:	1	1	6	3	1	3	1	0
865:	0	1	4	0	3	3	1	2
873:	1	0	3	5	2	1	0	1
881:	1	1	1	0	1	0	1	1
889:	3	1	0	0	2	1	1	6
897:	3	0	1	0	0	1	1	2
905:	1	1	4	0	2	1	0	0
913:	1	0	3	1	0	1	0	0
921:	1	0	0	1	0	0	0	0
929:	1	0	0	0	2	1	1	0
937:	0	2	2	4	2	0	3	2
945:	1	2	1	4	4	0	2	0
953:	0	1	1	1	0	0	1	1
961:	3	3	2	0	1	2	2	2
969:	0	0	1	3	1	1	3	1
977:	0	0	1	3	1	2	0	1
985:	1	1	2	0	1	0	1	0
993:	1	3	0	1	3	1	1	2
1001:	4	1	1	1	1	5	1	0
1009:	0	1	0	1	1	0	0	1
1017:	0	1	1	1	1	1	0	1
1025:	0	1	0	0	1	2	2	2
1033:	2	0	0	1	2	0	1	3
1041:	1	3	0	2	1	1	0	4
1049:	0	0	3	1	2	2	2	2
1057:	0	0	2	0	1	1	1	2
1065:	1	0	1	1	0	1	1	1
1073:	3	1	0	0	0	1	0	1
1081:	0	1	2	0	0	3	0	0
1089:	0	2	1	0	2	1	0	0
1097:	2	0	0	0	1	0	1	0
1105:	1	1	0	0	0	0	2	1
1113:	1	1	1	1	0	1	1	1
1121:	3	0	1	3	0	1	0	0
1129:	0	1	1	0	1	2	1	0
1137:	0	0	1	2	1	2	2	1
1145:	0	0	0	2	0	0	1	1
1153:	3	0	1	3	2	0	0	0
1161:	1	1	0	2	2	1	0	0
1169:	1	1	3	1	0	2	1	0
1177:	2	1	0	1	2	1	1	0
1185:	0	1	1	2	1	1	0	1
1193:	0	1	1	0	1	0	1	0
1201:	0	1	0	0	0	0	0	3
1209:	0	1	0	1	1	1	1	2
1217:	0	0	1	1	0	0	1	0
1225:	1	1	1	2	2	0	0	1

1233: 1 3 1 1 0 1 0 0

Sample Title: BLANK

Channel	1	2	3	4	5	6	7	8	9
1241:	2	0	1	0	1	0	1	1	
1249:	2	1	1	0	1	2	0	1	
1257:	1	1	0	1	1	0	0	2	
1265:	1	2	1	0	1	1	0	2	
1273:	1	1	1	2	0	0	1	4	
1281:	0	0	0	1	0	3	0	0	
1289:	2	2	1	0	1	0	3	1	
1297:	0	1	1	0	1	1	3	0	
1305:	1	0	0	1	0	2	0	0	
1313:	0	0	0	1	2	1	1	0	
1321:	1	1	0	1	1	1	1	2	
1329:	2	0	0	0	0	0	0	2	
1337:	1	0	0	0	2	0	0	1	
1345:	1	0	0	0	1	0	2	1	
1353:	0	0	1	0	0	0	0	1	
1361:	2	0	0	1	0	1	2	2	
1369:	1	0	0	1	0	0	0	0	
1377:	2	1	2	0	0	0	0	0	
1385:	1	0	0	0	0	1	0	0	
1393:	1	0	2	1	1	0	1	1	
1401:	1	0	0	0	1	1	0	1	
1409:	0	1	0	0	1	1	0	2	
1417:	0	0	0	0	2	1	0	0	
1425:	0	4	1	0	0	2	0	2	
1433:	2	0	0	1	0	1	2	0	
1441:	0	0	1	0	0	1	1	0	
1449:	0	0	1	0	2	0	0	2	
1457:	0	0	0	0	1	0	1	1	
1465:	1	0	1	0	0	0	0	0	
1473:	0	0	0	0	0	2	1	0	
1481:	0	2	0	1	2	0	0	1	
1489:	0	1	0	0	0	0	0	1	
1497:	0	1	0	3	1	1	1	0	
1505:	0	1	0	0	1	1	0	0	
1513:	1	0	1	1	0	0	1	0	
1521:	0	0	0	0	0	0	0	0	
1529:	0	0	0	0	1	1	0	2	
1537:	0	0	0	2	0	0	0	0	
1545:	0	0	0	0	0	1	0	0	
1553:	0	1	0	0	1	0	0	0	
1561:	1	0	0	1	0	2	0	1	
1569:	0	0	0	0	1	1	1	0	
1577:	0	1	1	1	3	0	0	0	
1585:	1	0	0	0	0	1	0	0	
1593:	1	0	0	0	1	0	0	2	
1601:	0	0	0	0	0	2	1	0	
1609:	1	1	0	1	0	0	0	1	
1617:	0	0	0	0	0	1	1	0	
1625:	0	0	1	0	0	0	1	1	
1633:	0	0	1	0	1	0	0	1	
1641:	0	1	0	0	0	0	0	0	
1649:	0	2	1	1	0	0	0	2	
1657:	1	0	0	2	0	1	1	0	

1665: 1 0 0 0 0 0 0 1 0

Sample Title: BLANK

Channel	1	2	3	4	5	6	7	8	9
1673:	0	0	1	0	0	0	0	0	0
1681:	0	0	2	0	0	0	0	0	1
1689:	0	0	0	0	1	0	0	0	1
1697:	1	0	1	0	0	0	0	0	1
1705:	0	0	0	0	0	0	0	0	0
1713:	1	1	0	0	1	1	0	0	0
1721:	2	0	0	4	0	0	0	0	0
1729:	0	0	1	0	0	0	0	0	1
1737:	2	1	0	0	3	1	0	0	0
1745:	0	0	0	0	0	0	0	0	1
1753:	1	0	1	0	0	1	1	0	0
1761:	1	0	0	0	0	0	0	0	0
1769:	2	0	0	0	0	0	1	0	0
1777:	0	1	1	0	0	0	0	0	0
1785:	0	0	0	0	0	1	1	1	1
1793:	0	0	0	0	0	0	1	1	0
1801:	1	0	0	0	0	1	1	0	0
1809:	0	0	0	0	0	1	1	0	0
1817:	0	0	0	1	0	0	0	0	0
1825:	2	0	1	0	0	0	0	0	0
1833:	1	2	1	0	0	1	0	1	1
1841:	0	0	0	1	0	1	1	0	0
1849:	1	2	0	0	1	0	1	0	0
1857:	0	0	1	0	1	0	0	0	0
1865:	0	0	1	0	0	2	0	0	0
1873:	0	0	0	0	0	0	0	0	1
1881:	0	1	0	0	0	0	0	0	0
1889:	1	0	0	0	0	0	2	1	1
1897:	0	0	0	0	1	0	0	0	0
1905:	0	0	1	1	1	0	0	0	0
1913:	2	1	0	0	0	0	1	0	0
1921:	0	0	1	0	0	0	0	0	0
1929:	1	1	1	0	1	1	0	1	1
1937:	0	0	0	0	0	0	1	0	0
1945:	0	0	0	1	0	0	0	1	1
1953:	0	3	0	0	0	0	1	0	0
1961:	0	1	1	0	0	0	0	0	0
1969:	1	0	0	2	0	1	1	0	0
1977:	0	0	0	0	0	1	1	0	0
1985:	0	1	0	0	0	0	1	0	0
1993:	1	1	0	0	0	0	0	0	0
2001:	1	0	1	0	0	1	0	0	0
2009:	1	0	0	0	1	1	0	0	0
2017:	0	0	0	0	0	0	0	0	1
2025:	0	1	0	0	0	0	0	0	1
2033:	0	0	0	0	1	0	0	0	1
2041:	1	0	0	0	0	0	0	0	0
2049:	0	0	0	0	0	1	0	0	0
2057:	0	0	0	0	0	0	1	0	0
2065:	0	0	1	0	0	1	0	1	1
2073:	0	0	1	1	0	1	0	1	1
2081:	0	0	0	0	0	1	1	1	1
2089:	0	0	0	0	0	0	0	4	4

2097: 0 0 1 0 0 0 0 0 0

Sample Title: BLANK

Channel	1	2	3	4	5	6	7	8
2105:	0	0	0	0	0	0	0	0
2113:	0	0	0	0	0	0	0	1
2121:	0	0	0	1	0	0	0	0
2129:	1	1	0	1	0	1	0	1
2137:	1	1	0	0	0	0	0	0
2145:	0	0	0	0	1	0	1	0
2153:	0	0	0	0	1	0	1	0
2161:	0	0	1	0	0	0	0	0
2169:	0	0	0	0	0	1	0	0
2177:	0	0	0	0	0	1	0	0
2185:	0	0	0	0	0	0	0	0
2193:	0	0	0	0	1	2	0	0
2201:	0	0	0	1	0	0	0	0
2209:	0	0	0	0	0	0	0	0
2217:	0	0	0	1	0	0	1	1
2225:	2	1	0	0	0	0	0	0
2233:	0	0	0	0	1	0	0	0
2241:	0	0	0	0	0	0	0	1
2249:	0	1	1	1	0	0	0	0
2257:	0	0	1	1	1	0	0	0
2265:	0	0	0	0	0	0	0	0
2273:	1	0	1	0	0	0	1	1
2281:	0	2	0	0	0	0	0	1
2289:	1	1	0	0	0	0	0	1
2297:	0	0	0	0	0	1	1	0
2305:	0	0	1	0	0	0	1	0
2313:	0	0	1	0	0	0	1	0
2321:	0	0	0	0	0	0	0	1
2329:	0	1	0	0	0	0	0	0
2337:	1	0	0	1	0	0	0	0
2345:	1	0	1	0	2	0	0	0
2353:	0	0	0	0	0	0	0	0
2361:	0	0	0	0	0	0	0	0
2369:	0	0	0	1	0	0	0	0
2377:	0	2	1	0	0	0	0	1
2385:	1	0	0	0	0	0	0	0
2393:	1	0	0	0	0	1	0	1
2401:	0	0	0	0	0	0	0	0
2409:	1	0	0	0	0	0	0	1
2417:	0	0	0	0	0	1	1	0
2425:	0	0	0	0	1	0	0	1
2433:	0	0	0	0	0	0	0	1
2441:	0	0	0	0	1	0	0	0
2449:	0	0	0	0	0	0	0	1
2457:	1	0	1	0	0	0	0	0
2465:	0	1	0	0	0	0	0	0
2473:	0	0	0	0	0	0	0	0
2481:	0	0	1	0	0	1	0	1
2489:	0	0	0	0	0	0	0	0
2497:	0	0	0	0	0	0	1	0
2505:	0	0	0	0	0	0	1	0
2513:	0	0	0	1	0	0	0	0
2521:	0	0	0	0	1	0	0	2

2529: 0 0 1 0 0 0 0 0 1

Sample Title: BLANK

Channel	1	2	3	4	5	6	7	8
2537:	0	0	1	0	1	0	0	0
2545:	0	0	0	0	0	0	0	0
2553:	0	0	0	0	0	1	1	0
2561:	0	0	0	0	0	0	1	1
2569:	0	1	0	0	0	0	0	0
2577:	0	1	0	0	0	0	0	0
2585:	0	0	0	0	0	0	0	0
2593:	1	0	0	0	1	0	0	0
2601:	0	2	0	0	1	0	1	0
2609:	0	0	0	0	0	1	1	1
2617:	0	0	0	0	0	1	0	0
2625:	0	0	0	0	0	0	0	1
2633:	0	1	1	0	0	0	0	0
2641:	0	0	1	0	0	1	0	0
2649:	0	0	0	0	0	0	0	0
2657:	0	0	0	0	0	0	0	0
2665:	1	0	0	0	0	0	0	0
2673:	0	0	0	0	0	0	0	2
2681:	0	0	0	0	0	1	0	0
2689:	0	0	0	0	0	1	0	0
2697:	0	0	1	0	0	0	0	0
2705:	0	0	1	0	1	0	0	0
2713:	0	1	0	0	0	0	0	0
2721:	0	0	0	0	0	0	0	0
2729:	0	0	0	1	0	0	1	0
2737:	0	0	1	0	1	0	0	0
2745:	0	1	0	0	1	0	0	0
2753:	0	0	0	0	0	0	0	0
2761:	0	0	0	0	0	0	0	0
2769:	1	0	0	0	0	0	0	0
2777:	0	1	0	0	0	0	0	0
2785:	0	1	0	0	0	0	1	0
2793:	0	0	0	0	0	0	0	0
2801:	0	0	0	0	0	0	0	0
2809:	0	0	0	0	0	0	0	2
2817:	1	0	1	0	0	0	0	0
2825:	0	0	0	0	0	0	0	0
2833:	0	0	0	0	0	0	0	0
2841:	0	0	2	1	0	0	1	0
2849:	0	0	0	0	0	0	0	0
2857:	1	0	1	0	0	0	0	0
2865:	0	0	0	0	0	0	1	0
2873:	0	0	0	0	0	0	1	0
2881:	0	0	0	0	0	0	0	0
2889:	0	0	0	0	0	0	0	0
2897:	0	0	0	0	0	0	0	1
2905:	0	0	0	0	0	0	0	0
2913:	0	0	0	0	0	0	0	0
2921:	0	0	0	0	0	0	0	0
2929:	0	0	0	0	2	0	0	0
2937:	0	0	0	0	1	1	0	0
2945:	0	0	0	0	0	0	0	0
2953:	0	0	0	1	0	0	0	0

2961: 0 0 2 0 0 0 0 0

Sample Title: BLANK

Channel	1	2	3	4	5	6	7	8
2969:	1	0	0	0	0	0	0	1
2977:	0	0	0	0	0	1	0	0
2985:	0	0	0	0	0	0	0	0
2993:	0	2	0	0	0	1	0	0
3001:	0	0	0	0	0	0	0	0
3009:	0	0	0	0	0	0	0	0
3017:	0	0	0	0	0	0	0	0
3025:	0	0	0	0	0	0	0	1
3033:	0	0	0	0	0	0	0	0
3041:	0	0	1	0	0	0	0	0
3049:	0	0	2	1	0	0	0	0
3057:	0	0	0	0	0	0	0	0
3065:	0	0	0	0	0	0	0	0
3073:	1	0	0	0	0	0	0	0
3081:	0	0	1	0	0	0	0	0
3089:	0	1	0	0	0	0	0	1
3097:	0	0	0	1	0	0	0	0
3105:	0	0	0	0	0	1	0	0
3113:	0	1	0	0	0	0	0	0
3121:	0	0	1	0	1	0	0	0
3129:	0	0	0	1	0	0	1	0
3137:	0	1	1	1	0	0	0	0
3145:	0	0	1	0	0	0	0	0
3153:	0	0	0	0	1	0	0	1
3161:	0	0	0	0	0	0	0	0
3169:	0	0	1	0	0	0	0	0
3177:	0	0	0	0	0	0	0	0
3185:	0	1	0	0	1	0	0	0
3193:	0	1	0	0	0	0	0	0
3201:	0	1	0	0	0	0	0	0
3209:	0	0	0	0	0	0	0	0
3217:	0	0	0	0	0	1	0	0
3225:	0	0	0	0	0	0	1	0
3233:	0	0	0	0	0	0	0	0
3241:	0	0	0	0	0	0	1	0
3249:	0	0	0	0	0	0	0	0
3257:	0	1	0	0	1	0	0	0
3265:	0	0	0	0	1	0	0	0
3273:	0	0	0	0	0	0	0	0
3281:	0	0	0	0	0	0	0	0
3289:	0	2	0	0	0	0	0	0
3297:	0	1	0	0	0	2	0	0
3305:	0	0	0	0	0	0	0	0
3313:	1	1	0	0	0	0	0	0
3321:	1	1	0	0	0	0	0	0
3329:	0	0	0	0	0	0	1	1
3337:	0	0	0	0	0	0	0	0
3345:	0	0	1	0	0	0	0	0
3353:	0	0	0	1	0	0	0	0
3361:	1	1	0	0	0	0	0	1
3369:	0	0	0	0	0	0	0	0
3377:	0	0	0	0	0	0	0	0
3385:	0	0	0	0	0	0	0	0

3393: 0 1 0 0 0 1 0 1

Sample Title: BLANK

Channel	1	2	3	4	5	6	7	8
3401:	0	1	0	0	0	0	0	0
3409:	1	0	0	0	0	0	0	0
3417:	0	2	1	0	0	0	0	0
3425:	0	0	0	0	0	0	0	0
3433:	0	0	0	0	0	0	0	0
3441:	0	0	0	0	0	0	1	0
3449:	1	0	0	0	1	1	0	0
3457:	0	0	0	0	0	0	1	0
3465:	0	1	0	1	0	0	0	0
3473:	0	0	0	0	0	0	1	0
3481:	0	0	0	0	0	0	0	0
3489:	0	0	0	0	0	0	0	0
3497:	1	0	1	0	0	0	0	0
3505:	1	0	1	0	0	0	0	0
3513:	0	0	0	1	0	0	0	0
3521:	0	0	0	0	0	0	0	0
3529:	1	0	0	0	0	0	0	1
3537:	0	0	0	0	0	0	0	0
3545:	0	0	1	0	0	0	0	0
3553:	0	0	0	0	0	0	0	0
3561:	0	0	0	0	0	0	0	1
3569:	0	0	0	0	0	0	0	0
3577:	0	0	0	0	0	1	0	0
3585:	0	0	0	0	0	0	0	0
3593:	1	0	0	0	0	1	0	0
3601:	0	0	0	0	0	1	0	1
3609:	2	0	0	1	1	0	1	0
3617:	0	0	0	0	0	1	0	0
3625:	0	0	0	2	0	0	0	0
3633:	0	0	0	0	0	0	1	0
3641:	1	0	0	0	0	0	0	1
3649:	1	1	0	0	0	0	0	0
3657:	0	0	0	0	0	0	0	0
3665:	0	0	0	0	0	0	0	0
3673:	0	0	0	0	0	0	0	0
3681:	0	0	0	0	0	0	0	0
3689:	0	0	0	0	0	0	1	0
3697:	0	0	0	0	0	0	0	0
3705:	0	0	0	0	1	0	0	0
3713:	0	1	0	0	0	0	0	0
3721:	0	0	0	0	0	0	0	0
3729:	1	0	0	0	0	0	0	1
3737:	0	0	0	0	0	0	0	0
3745:	0	0	0	0	0	1	0	0
3753:	0	1	0	0	0	0	0	0
3761:	0	1	0	0	0	1	0	0
3769:	0	0	0	0	0	0	0	0
3777:	0	0	0	0	0	0	1	0
3785:	0	0	0	0	0	0	1	0
3793:	0	0	0	0	0	0	0	0
3801:	0	0	0	0	0	2	1	0
3809:	1	0	0	1	0	0	0	0
3817:	0	0	0	0	0	0	0	0

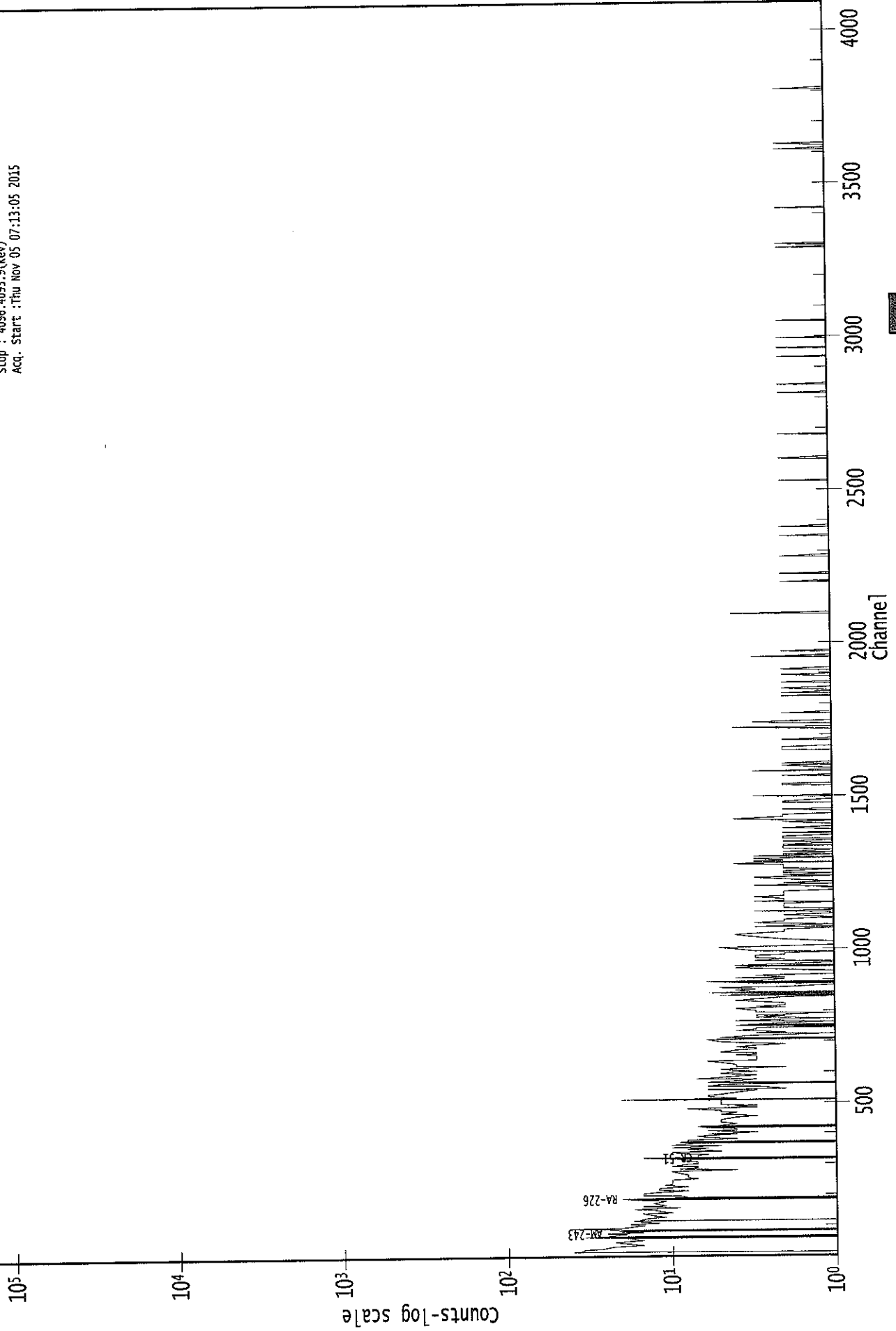
3825: 0 0 0 0 0 1 0 0

Sample Title: BLANK

Channel	1	2	3	4	5	6	7	8
3833:	1	0	0	0	0	0	0	1
3841:	0	0	0	0	0	0	0	0
3849:	0	0	0	1	0	0	0	0
3857:	0	0	0	1	1	0	0	0
3865:	0	0	0	1	0	0	0	0
3873:	0	0	0	0	0	0	0	1
3881:	0	0	1	0	0	0	0	0
3889:	1	0	0	0	0	0	0	0
3897:	0	0	0	0	0	0	1	0
3905:	0	0	0	0	0	0	0	0
3913:	0	0	0	0	0	0	0	0
3921:	0	0	0	0	0	0	0	0
3929:	1	1	0	0	0	0	0	0
3937:	0	0	0	0	0	0	0	0
3945:	0	0	0	0	0	0	0	0
3953:	0	0	0	0	0	0	0	0
3961:	0	0	0	0	0	0	0	0
3969:	0	0	0	0	0	0	0	0
3977:	0	0	0	0	0	0	0	0
3985:	0	0	0	0	0	0	0	0
3993:	0	0	0	0	0	0	0	0
4001:	0	0	0	0	0	0	0	0
4009:	0	0	0	0	0	1	0	0
4017:	0	0	0	1	0	0	0	1
4025:	0	0	0	0	0	0	0	0
4033:	0	0	1	0	0	0	1	0
4041:	0	0	0	0	0	0	0	0
4049:	0	0	0	0	0	0	0	0
4057:	1	0	0	0	0	0	1	0
4065:	0	0	0	0	0	0	0	0
4073:	0	0	0	0	0	0	0	0
4081:	0	0	0	0	0	0	0	0
4089:	0	0	0	0	0	0	0	0

0000029173.CNF

Live Time : 3600.000 sec
Real Time : 3644.830 sec
Start : 1: 1.8(keV)
Stop : 4096-4093.9(keV)
Acq. Start : Thu Nov 05 07:13:05 2015



: 00372

Analysis Report for 1510086-03
CP4105S01-02

1114

GAMMA SPECTRUM ANALYSIS

Sample Identification : 1510086-03
Sample Description : CP4105S01-02
Sample Type : SOIL

Sample Size : 6.128E+02 grams
Facility : Countroom

Sample Taken On : 10/6/2015 7:53:13AM
Acquisition Started : 11/6/2015 10:21:27AM

Procedure : GAS-1402 pCi
Operator : Administrator
Detector Name : GE3
Geometry : GAS-1402
Live Time : 3600.0 seconds
Real Time : 3616.3 seconds

Dead Time : 0.45 %

Peak Locate Threshold : 2.50
Peak Locate Range (in channels) : 1 - 4096
Peak Area Range (in channels) : 9 - 4096
Identification Energy Tolerance : 1.000 keV

Energy Calibration Used Done On : 10/25/2014
Efficiency Calibration Used Done On : 10/25/2014
Efficiency Calibration Description :

Sample Number : 29254

PEAK-TO-TOTAL CALIBRATION REPORT

Peak-to-Total Efficiency Calibration Equation

AG
11/9/15

Analysis Report for 1510086-03
CP4105S01-02

PEAK LOCATE REPORT

Peak Locate Performed on : 11/6/2015 11:21:46AM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096
Peak Search Sensitivity : 2.50

Peak No.	Energy (keV)	Centroid Channel	Centroid Uncertainty	Peak Significance
1	46.29	46.52	0.0000	0.00
2	76.23	76.44	0.0000	0.00
3	88.05	88.25	0.0000	0.00
4	93.38	93.59	0.0000	0.00
5	129.51	129.69	0.0000	0.00
6	185.98	186.14	0.0000	0.00
7	209.46	209.60	0.0000	0.00
8	238.80	238.93	0.0000	0.00
9	241.84	241.96	0.0000	0.00
10	270.73	270.84	0.0000	0.00
11	276.73	276.84	0.0000	0.00
12	295.41	295.51	0.0000	0.00
13	300.26	300.35	0.0000	0.00
14	339.11	339.18	0.0000	0.00
15	352.03	352.10	0.0000	0.00
16	462.93	462.94	0.0000	0.00
17	510.61	510.60	0.0000	0.00
18	583.39	583.35	0.0000	0.00
19	590.93	590.89	0.0000	0.00
20	609.43	609.37	0.0000	0.00
21	702.29	702.19	0.0000	0.00
22	727.31	727.19	0.0000	0.00
23	754.45	754.32	0.0000	0.00
24	770.04	769.91	0.0000	0.00
25	860.71	860.53	0.0000	0.00
26	911.60	911.40	0.0000	0.00
27	968.74	968.52	0.0000	0.00
28	1046.24	1045.98	0.0000	0.00
29	1120.34	1120.06	0.0000	0.00
30	1136.97	1136.68	0.0000	0.00
31	1239.21	1238.87	0.0000	0.00
32	1377.63	1377.24	0.0000	0.00
33	1385.15	1384.76	0.0000	0.00
34	1460.95	1460.53	0.0000	0.00
35	1523.70	1523.26	0.0000	0.00
36	1588.06	1587.59	0.0000	0.00
37	1592.73	1592.26	0.0000	0.00
38	1621.22	1620.74	0.0000	0.00
39	1719.89	1719.38	0.0000	0.00
40	1729.88	1729.36	0.0000	0.00
41	1764.48	1763.95	0.0000	0.00
42	1824.83	1824.28	0.0000	0.00

Analysis Report for 1510086-03
CP4105S01-02

Peak No.	Energy (keV)	Centroid Channel	Centroid Uncertainty	Peak Significance
43	1920.24	1919.66	0.0000	0.00
44	2037.72	2037.10	0.0000	0.00
45	2100.75	2100.11	0.0000	0.00
46	2167.75	2167.09	0.0000	0.00
47	2190.67	2190.00	0.0000	0.00
48	2195.75	2195.09	0.0000	0.00
49	2204.38	2203.71	0.0000	0.00
50	2365.40	2364.68	0.0000	0.00
51	2427.36	2426.63	0.0000	0.00
52	2447.45	2446.71	0.0000	0.00
53	2615.10	2614.32	0.0000	0.00
54	2907.24	2906.40	0.0000	0.00

? = Adjacent peak noted

Errors quoted at 2.000sigma

Analysis Report for 1510086-03
CP4105S01-02

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 11/6/2015 11:21:46AM

Peak Analysis From Channel : 1
Peak Analysis To Channel : 4096

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	FWHM (keV)
1	46.29	42 -	49	46.52	1.48E+02	99.22	1.55E+03	1.46
2	76.23	71 -	82	76.44	1.34E+03	178.37	3.28E+03	3.73
3	88.05	86 -	91	88.25	1.51E+02	95.01	1.68E+03	1.60
4	93.38	91 -	97	93.59	2.41E+02	100.65	1.58E+03	1.67
5	129.51	126 -	132	129.69	9.89E+01	77.31	1.01E+03	2.84
6	185.98	182 -	189	186.14	2.14E+02	79.30	9.00E+02	2.18
7	209.46	205 -	214	209.60	1.17E+02	83.49	9.26E+02	1.94
M 8	238.80	235 -	246	238.93	8.29E+02	76.48	4.70E+02	1.84
m 9	241.84	235 -	246	241.96	2.53E+02	79.08	4.92E+02	2.26
10	270.73	268 -	273	270.84	5.85E+01	47.68	4.03E+02	1.82
11	276.73	274 -	280	276.84	4.80E+01	50.22	4.24E+02	2.01
M 12	295.41	293 -	303	295.51	3.18E+02	51.19	3.10E+02	1.73
m 13	300.26	293 -	303	300.35	3.58E+01	45.93	4.29E+02	2.53
14	339.11	335 -	344	339.18	1.44E+02	62.45	4.62E+02	1.85
15	352.03	347 -	356	352.10	4.23E+02	68.33	4.25E+02	1.78
16	462.93	458 -	467	462.94	7.15E+01	45.42	2.51E+02	2.14
17	510.61	505 -	518	510.60	1.46E+02	62.23	3.71E+02	2.87
M 18	583.39	578 -	594	583.35	2.53E+02	39.77	1.11E+02	2.05
m 19	590.93	578 -	594	590.89	2.41E+01	29.62	1.44E+02	2.41
20	609.43	605 -	614	609.37	3.58E+02	55.49	2.37E+02	2.08
21	702.29	698 -	708	702.19	3.45E+01	43.25	2.31E+02	6.34
22	727.31	724 -	730	727.19	4.75E+01	28.07	1.09E+02	2.06
23	754.45	749 -	758	754.32	3.13E+01	31.58	1.23E+02	4.11
24	770.04	765 -	776	769.91	5.12E+01	36.66	1.38E+02	7.49
25	860.71	857 -	864	860.53	4.07E+01	23.75	6.46E+01	1.81
26	911.60	906 -	915	911.40	1.32E+02	36.54	1.16E+02	2.32
27	968.74	963 -	973	968.52	7.42E+01	41.24	1.88E+02	1.43
28	1046.24	1043 -	1048	1045.98	2.01E+01	16.28	3.39E+01	2.09
29	1120.34	1112 -	1125	1120.06	4.74E+01	49.48	2.47E+02	2.42
30	1136.97	1131 -	1142	1136.68	2.88E+01	31.30	1.08E+02	2.04
31	1239.21	1234 -	1244	1238.87	4.00E+01	35.99	1.44E+02	3.94
M 32	1377.63	1374 -	1387	1377.24	1.91E+01	13.19	1.54E+01	2.62
m 33	1385.15	1374 -	1387	1384.76	1.02E+01	10.68	2.24E+01	2.62
34	1460.95	1454 -	1466	1460.53	5.46E+02	51.24	5.19E+01	2.34
35	1523.70	1518 -	1528	1523.26	1.18E+01	14.46	2.04E+01	2.99
M 36	1588.06	1584 -	1595	1587.59	2.31E+01	10.79	7.00E+00	3.52
m 37	1592.73	1584 -	1595	1592.26	2.01E+01	13.11	8.00E+00	2.73
38	1621.22	1617 -	1624	1620.74	1.30E+01	8.72	4.07E+00	1.85
39	1719.89	1715 -	1722	1719.38	8.00E+00	5.66	0.00E+00	1.33
40	1729.88	1726 -	1734	1729.36	9.00E+00	11.17	1.40E+01	1.96

Analysis Report for 1510086-03

CP4105S01-02

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	FWHM (keV)
41	1764.48	1759 -	1767	1763.95	6.15E+01	17.45	9.00E+00	3.64
42	1824.83	1821 -	1826	1824.28	7.44E+00	6.71	3.11E+00	1.82
43	1920.24	1917 -	1922	1919.66	6.75E+00	6.40	2.50E+00	2.68
44	2037.72	2033 -	2040	2037.10	6.13E+00	6.93	3.75E+00	2.49
45	2100.75	2097 -	2102	2100.11	4.58E+00	5.74	2.83E+00	1.84
46	2167.75	2162 -	2171	2167.09	1.36E+01	9.43	4.88E+00	3.78
47	2190.67	2186 -	2192	2190.00	9.00E+00	6.00	0.00E+00	1.92
48	2195.75	2193 -	2198	2195.09	8.10E+00	7.00	3.80E+00	1.90
49	2204.38	2199 -	2207	2203.71	1.05E+01	10.02	9.00E+00	5.02
50	2365.40	2360 -	2367	2364.68	8.82E+00	7.75	4.36E+00	1.39
51	2427.36	2424 -	2429	2426.63	8.00E+00	5.66	0.00E+00	3.48
52	2447.45	2443 -	2450	2446.71	1.40E+01	7.48	0.00E+00	5.70
53	2615.10	2609 -	2621	2614.32	7.42E+01	18.82	7.53E+00	2.93
54	2907.24	2902 -	2908	2906.40	5.00E+00	4.47	0.00E+00	1.24

M = First peak in a multiplet region

m = Other peak in a multiplet region

F = Fitted singlet

Errors quoted at 2.000sigma

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 11/6/2015 11:21:46AM

Peak Analysis From Channel : 1

Peak Analysis To Channel : 4096

Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level	
1	46.29	42 -	49	1.48E+02	99.22	1.55E+03	7.91E+01	
2	76.23	71 -	82	1.34E+03	178.37	3.28E+03	1.34E+02	
3	88.05	86 -	91	1.51E+02	95.01	1.68E+03	7.54E+01	
4	93.38	91 -	97	2.41E+02	100.65	1.58E+03	7.87E+01	
5	129.51	126 -	132	9.89E+01	77.31	1.01E+03	6.14E+01	
6	185.98	182 -	189	2.14E+02	79.30	9.00E+02	6.06E+01	
7	209.46	205 -	214	1.17E+02	83.49	9.26E+02	6.63E+01	
M	8	238.80	235 -	246	8.29E+02	76.48	4.70E+02	3.56E+01
m	9	241.84	235 -	246	2.53E+02	79.08	4.92E+02	3.65E+01
	10	270.73	268 -	273	5.85E+01	47.68	4.03E+02	3.71E+01
	11	276.73	274 -	280	4.80E+01	50.22	4.24E+02	3.97E+01
M	12	295.41	293 -	303	3.18E+02	51.19	3.10E+02	2.90E+01
m	13	300.26	293 -	303	3.58E+01	45.93	4.29E+02	3.41E+01
	14	339.11	335 -	344	1.44E+02	62.45	4.62E+02	4.74E+01

: 00377

Analysis Report for 1510086-03

CP4105S01-02

	Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
	15	352.03	347 -	356	4.23E+02	68.33	4.25E+02	4.48E+01
	16	462.93	458 -	467	7.15E+01	45.42	2.51E+02	3.47E+01
	17	510.61	505 -	518	1.46E+02	62.23	3.71E+02	4.71E+01
M	18	583.39	578 -	594	2.53E+02	39.77	1.11E+02	1.73E+01
m	19	590.93	578 -	594	2.41E+01	29.62	1.44E+02	1.97E+01
	20	609.43	605 -	614	3.58E+02	55.49	2.37E+02	3.34E+01
	21	702.29	698 -	708	3.45E+01	43.25	2.31E+02	3.42E+01
	22	727.31	724 -	730	4.75E+01	28.07	1.09E+02	2.01E+01
	23	754.45	749 -	758	3.13E+01	31.58	1.23E+02	2.43E+01
	24	770.04	765 -	776	5.12E+01	36.66	1.38E+02	2.77E+01
	25	860.71	857 -	864	4.07E+01	23.75	6.46E+01	1.65E+01
	26	911.60	906 -	915	1.32E+02	36.54	1.16E+02	2.33E+01
	27	968.74	963 -	973	7.42E+01	41.24	1.88E+02	1.48E+01
	28	1046.24	1043 -	1048	2.01E+01	16.28	3.39E+01	1.12E+01
	29	1120.34	1112 -	1125	4.74E+01	49.48	2.47E+02	3.91E+01
	30	1136.97	1131 -	1142	2.88E+01	31.30	1.08E+02	2.42E+01
	31	1239.21	1234 -	1244	4.00E+01	35.99	1.44E+02	2.77E+01
M	32	1377.63	1374 -	1387	1.91E+01	13.19	1.54E+01	6.46E+00
m	33	1385.15	1374 -	1387	1.02E+01	10.68	2.24E+01	7.79E+00
	34	1460.95	1454 -	1466	5.46E+02	51.24	5.19E+01	1.73E+01
	35	1523.70	1518 -	1528	1.18E+01	14.46	2.04E+01	1.05E+01
M	36	1588.06	1584 -	1595	2.31E+01	10.79	7.00E+00	4.35E+00
m	37	1592.73	1584 -	1595	2.01E+01	13.11	8.00E+00	4.65E+00
	38	1621.22	1617 -	1624	1.30E+01	8.72	4.07E+00	4.04E+00
	39	1719.89	1715 -	1722	8.00E+00	5.66	0.00E+00	0.00E+00
	40	1729.88	1726 -	1734	9.00E+00	11.17	1.40E+01	7.74E+00
	41	1764.48	1759 -	1767	6.15E+01	17.45	9.00E+00	6.29E+00
	42	1824.83	1821 -	1826	7.44E+00	6.71	3.11E+00	3.21E+00
	43	1920.24	1917 -	1922	6.75E+00	6.40	2.50E+00	3.08E+00
	44	2037.72	2033 -	2040	6.13E+00	6.93	3.75E+00	3.98E+00
	45	2100.75	2097 -	2102	4.58E+00	5.74	2.83E+00	3.15E+00
	46	2167.75	2162 -	2171	1.36E+01	9.43	4.88E+00	4.85E+00
	47	2190.67	2186 -	2192	9.00E+00	6.00	0.00E+00	0.00E+00
	48	2195.75	2193 -	2198	8.10E+00	7.00	3.80E+00	3.35E+00
	49	2204.38	2199 -	2207	1.05E+01	10.02	9.00E+00	6.29E+00
	50	2365.40	2360 -	2367	8.82E+00	7.75	4.36E+00	4.09E+00
	51	2427.36	2424 -	2429	8.00E+00	5.66	0.00E+00	0.00E+00
	52	2447.45	2443 -	2450	1.40E+01	7.48	0.00E+00	0.00E+00
	53	2615.10	2609 -	2621	7.42E+01	18.82	7.53E+00	6.22E+00
	54	2907.24	2902 -	2908	5.00E+00	4.47	0.00E+00	0.00E+00

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

Analysis Report for 1510086-03
CP4105S01-02

PEAK WITH NID REPORT

Peak Analysis Performed on : 11/6/2015 11:21:46AM

Peak Analysis From Channel : 1
Peak Analysis To Channel : 4096

Tentative NID Library : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB
Peak Match Tolerance : 1.000 keV

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
1	46.29	42 -	49	46.52	1.48E+02	99.22	1.55E+03	PB-210
2	76.23	71 -	82	76.44	1.34E+03	178.37	3.28E+03	.....
3	88.05	86 -	91	88.25	1.51E+02	95.01	1.68E+03	CD-109 LU-176 SN-126
4	93.38	91 -	97	93.59	2.41E+02	100.65	1.58E+03	GA-67
5	129.51	126 -	132	129.69	9.89E+01	77.31	1.01E+03	.....
6	185.98	182 -	189	186.14	2.14E+02	79.30	9.00E+02	RA-226
7	209.46	205 -	214	209.60	1.17E+02	83.49	9.26E+02	CM-243 GA-67
M	8	235 -	246	238.93	8.29E+02	76.48	4.70E+02	PB-212
m	9	235 -	246	241.96	2.53E+02	79.08	4.92E+02	RA-224
	10	268 -	273	270.84	5.85E+01	47.68	4.03E+02	.....
	11	274 -	280	276.84	4.80E+01	50.22	4.24E+02	CM-243 NP-239
M	12	293 -	303	295.51	3.18E+02	51.19	3.10E+02	PB-214
m	13	293 -	303	300.35	3.58E+01	45.93	4.29E+02	GA-67 PB-212 BI-210M
	14	335 -	344	339.18	1.44E+02	62.45	4.62E+02	AC-228
	15	347 -	356	352.10	4.23E+02	68.33	4.25E+02	PB-214
	16	458 -	467	462.94	7.15E+01	45.42	2.51E+02	SB-125
	17	505 -	518	510.60	1.46E+02	62.23	3.71E+02	.....
M	18	578 -	594	583.35	2.53E+02	39.77	1.11E+02	TL-208
m	19	578 -	594	590.89	2.41E+01	29.62	1.44E+02	.....
	20	605 -	614	609.37	3.58E+02	55.49	2.37E+02	BI-214
	21	698 -	708	702.19	3.45E+01	43.25	2.31E+02	NB-94
	22	724 -	730	727.19	4.75E+01	28.07	1.09E+02	BI-212
	23	749 -	758	754.32	3.13E+01	31.58	1.23E+02	.....
	24	765 -	776	769.91	5.12E+01	36.66	1.38E+02	.....
	25	857 -	864	860.53	4.07E+01	23.75	6.46E+01	TL-208
	26	906 -	915	911.40	1.32E+02	36.54	1.16E+02	LU-172 AC-228
	27	963 -	973	968.52	7.42E+01	41.24	1.88E+02	AC-228
	28	1043 -	1048	1045.98	2.01E+01	16.28	3.39E+01	.....
	29	1112 -	1125	1120.06	4.74E+01	49.48	2.47E+02	BI-214 SC-46 TA-182
	30	1131 -	1142	1136.68	2.88E+01	31.30	1.08E+02	.....
	31	1234 -	1244	1238.87	4.00E+01	35.99	1.44E+02	CO-56
M	32	1374 -	1387	1377.24	1.91E+01	13.19	1.54E+01	.....

Analysis Report for 1510086-03
CP4105S01-02

	Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
m	33	1385.15	1374 -	1387	1384.76	1.02E+01	10.68	2.24E+01	AG-110M
	34	1460.95	1454 -	1466	1460.53	5.46E+02	51.24	5.19E+01	K-40
	35	1523.70	1518 -	1528	1523.26	1.18E+01	14.46	2.04E+01	.....
M	36	1588.06	1584 -	1595	1587.59	2.31E+01	10.79	7.00E+00	.....
m	37	1592.73	1584 -	1595	1592.26	2.01E+01	13.11	8.00E+00	.....
	38	1621.22	1617 -	1624	1620.74	1.30E+01	8.72	4.07E+00	BI-212
	39	1719.89	1715 -	1722	1719.38	8.00E+00	5.66	0.00E+00	.....
	40	1729.88	1726 -	1734	1729.36	9.00E+00	11.17	1.40E+01	.....
	41	1764.48	1759 -	1767	1763.95	6.15E+01	17.45	9.00E+00	BI-214
	42	1824.83	1821 -	1826	1824.28	7.44E+00	6.71	3.11E+00	.....
	43	1920.24	1917 -	1922	1919.66	6.75E+00	6.40	2.50E+00	.....
	44	2037.72	2033 -	2040	2037.10	6.13E+00	6.93	3.75E+00	.....
	45	2100.75	2097 -	2102	2100.11	4.58E+00	5.74	2.83E+00	.....
	46	2167.75	2162 -	2171	2167.09	1.36E+01	9.43	4.88E+00	.....
	47	2190.67	2186 -	2192	2190.00	9.00E+00	6.00	0.00E+00	.....
	48	2195.75	2193 -	2198	2195.09	8.10E+00	7.00	3.80E+00	.....
	49	2204.38	2199 -	2207	2203.71	1.05E+01	10.02	9.00E+00	BI-214
	50	2365.40	2360 -	2367	2364.68	8.82E+00	7.75	4.36E+00	.....
	51	2427.36	2424 -	2429	2426.63	8.00E+00	5.66	0.00E+00	.....
	52	2447.45	2443 -	2450	2446.71	1.40E+01	7.48	0.00E+00	.....
	53	2615.10	2609 -	2621	2614.32	7.42E+01	18.82	7.53E+00	TL-208
	54	2907.24	2902 -	2908	2906.40	5.00E+00	4.47	0.00E+00	.....

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

PEAK EFFICIENCY REPORT

Peak Analysis Performed on : 11/6/2015 11:21:46AM

	Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
	1	46.29	1.48E+02	99.22	1.49E-02	1.58E-03
	2	76.23	1.34E+03	178.37	2.38E-02	2.13E-03
	3	88.05	1.51E+02	95.01	2.44E-02	2.52E-03
	4	93.38	2.41E+02	100.65	2.44E-02	2.40E-03
	5	129.51	9.89E+01	77.31	2.25E-02	1.69E-03
	6	185.98	2.14E+02	79.30	1.83E-02	1.42E-03
	7	209.46	1.17E+02	83.49	1.68E-02	1.31E-03
M	8	238.80	8.29E+02	76.48	1.52E-02	1.18E-03

Analysis Report for 1510086-03
CP4105S01-02

	Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
m	9	241.84	2.53E+02	79.08	1.51E-02	1.17E-03
	10	270.73	5.85E+01	47.68	1.38E-02	1.04E-03
	11	276.73	4.80E+01	50.22	1.35E-02	1.01E-03
M	12	295.41	3.18E+02	51.19	1.28E-02	9.74E-04
m	13	300.26	3.58E+01	45.93	1.26E-02	9.67E-04
	14	339.11	1.44E+02	62.45	1.14E-02	9.12E-04
	15	352.03	4.23E+02	68.33	1.11E-02	8.93E-04
	16	462.93	7.15E+01	45.42	8.73E-03	7.66E-04
	17	510.61	1.46E+02	62.23	8.02E-03	7.19E-04
M	18	583.39	2.53E+02	39.77	7.14E-03	6.46E-04
m	19	590.93	2.41E+01	29.62	7.06E-03	6.38E-04
	20	609.43	3.58E+02	55.49	6.87E-03	6.20E-04
	21	702.29	3.45E+01	43.25	6.07E-03	5.35E-04
	22	727.31	4.75E+01	28.07	5.89E-03	5.14E-04
	23	754.45	3.13E+01	31.58	5.71E-03	4.92E-04
	24	770.04	5.12E+01	36.66	5.61E-03	4.79E-04
	25	860.71	4.07E+01	23.75	5.09E-03	4.05E-04
	26	911.60	1.32E+02	36.54	4.85E-03	3.72E-04
	27	968.74	7.42E+01	41.24	4.61E-03	3.61E-04
	28	1046.24	2.01E+01	16.28	4.32E-03	3.47E-04
	29	1120.34	4.74E+01	49.48	4.08E-03	3.33E-04
	30	1136.97	2.88E+01	31.30	4.03E-03	3.30E-04
	31	1239.21	4.00E+01	35.99	3.75E-03	3.09E-04
M	32	1377.63	1.91E+01	13.19	3.45E-03	2.82E-04
m	33	1385.15	1.02E+01	10.68	3.43E-03	2.81E-04
	34	1460.95	5.46E+02	51.24	3.29E-03	2.69E-04
	35	1523.70	1.18E+01	14.46	3.19E-03	2.60E-04
M	36	1588.06	2.31E+01	10.79	3.09E-03	2.50E-04
m	37	1592.73	2.01E+01	13.11	3.08E-03	2.50E-04
	38	1621.22	1.30E+01	8.72	3.04E-03	2.45E-04
	39	1719.89	8.00E+00	5.66	2.91E-03	2.31E-04
	40	1729.88	9.00E+00	11.17	2.90E-03	2.29E-04
	41	1764.48	6.15E+01	17.45	2.86E-03	2.24E-04
	42	1824.83	7.44E+00	6.71	2.79E-03	2.15E-04
	43	1920.24	6.75E+00	6.40	2.69E-03	2.13E-04
	44	2037.72	6.13E+00	6.93	2.59E-03	2.13E-04
	45	2100.75	4.58E+00	5.74	2.54E-03	2.13E-04
	46	2167.75	1.36E+01	9.43	2.49E-03	2.13E-04
	47	2190.67	9.00E+00	6.00	2.47E-03	2.13E-04
	48	2195.75	8.10E+00	7.00	2.47E-03	2.13E-04
	49	2204.38	1.05E+01	10.02	2.46E-03	2.13E-04
	50	2365.40	8.82E+00	7.75	2.36E-03	2.13E-04
	51	2427.36	8.00E+00	5.66	2.33E-03	2.13E-04
	52	2447.45	1.40E+01	7.48	2.32E-03	2.13E-04
	53	2615.10	7.42E+01	18.82	2.24E-03	2.13E-04
	54	2907.24	5.00E+00	4.47	2.13E-03	2.13E-04

Analysis Report for 1510086-03

CP4105S01-02

M = First peak in a multiplet region
 m = Other peak in a multiplet region
 F = Fitted singlet
 Errors quoted at 2.000 sigma

BACKGROUND SUBTRACT REPORT

Peak Analysis Performed on : 11/6/2015 11:21:46AM

Env. Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000028943.CNF

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.	
1	46.29	1.48E+02	99.22	5.28E+01	1.09E+01	9.49E+01	9.98E+01	
2	76.23	1.34E+03	178.37			1.34E+03	1.78E+02	
3	88.05	1.51E+02	95.01	1.52E+01	5.37E+00	1.35E+02	9.52E+01	
4	93.38	2.41E+02	100.65	9.04E+01	2.62E+01	1.51E+02	1.04E+02	
5	129.51	9.89E+01	77.31			9.89E+01	7.73E+01	
6	185.98	2.14E+02	79.30	3.93E+01	6.56E+00	1.75E+02	7.96E+01	
7	209.46	1.17E+02	83.49			1.17E+02	8.35E+01	
M	8	238.80	8.29E+02	76.48	1.34E+01	2.14E+00	8.15E+02	7.65E+01
m	9	241.84	2.53E+02	79.08	2.69E+00	1.46E+00	2.51E+02	7.91E+01
	10	270.73	5.85E+01	47.68			5.85E+01	4.77E+01
	11	276.73	4.80E+01	50.22			4.80E+01	5.02E+01
M	12	295.41	3.18E+02	51.19			3.18E+02	5.12E+01
m	13	300.26	3.58E+01	45.93			3.58E+01	4.59E+01
	14	339.11	1.44E+02	62.45			1.44E+02	6.24E+01
	15	352.03	4.23E+02	68.33	3.99E+00	4.73E+00	4.19E+02	6.85E+01
	16	462.93	7.15E+01	45.42			7.15E+01	4.54E+01
	17	510.61	1.46E+02	62.23	5.78E+01	4.60E+00	8.78E+01	6.24E+01
M	18	583.39	2.53E+02	39.77	5.96E+00	3.46E+00	2.47E+02	3.99E+01
m	19	590.93	2.41E+01	29.62			2.41E+01	2.96E+01
	20	609.43	3.58E+02	55.49	6.71E+00	3.44E+00	3.51E+02	5.56E+01
	21	702.29	3.45E+01	43.25			3.45E+01	4.32E+01
	22	727.31	4.75E+01	28.07			4.75E+01	2.81E+01
	23	754.45	3.13E+01	31.58			3.13E+01	3.16E+01
	24	770.04	5.12E+01	36.66			5.12E+01	3.67E+01
	25	860.71	4.07E+01	23.75			4.07E+01	2.37E+01
	26	911.60	1.32E+02	36.54	2.32E+00	2.73E+00	1.30E+02	3.66E+01
	27	968.74	7.42E+01	41.24			7.42E+01	4.12E+01
	28	1046.24	2.01E+01	16.28			2.01E+01	1.63E+01
	29	1120.34	4.74E+01	49.48	2.00E+00	2.20E+00	4.54E+01	4.95E+01
	30	1136.97	2.88E+01	31.30			2.88E+01	3.13E+01
	31	1239.21	4.00E+01	35.99			4.00E+01	3.60E+01
M	32	1377.63	1.91E+01	13.19			1.91E+01	1.32E+01
m	33	1385.15	1.02E+01	10.68			1.02E+01	1.07E+01
	34	1460.95	5.46E+02	51.24	2.36E+00	1.83E+00	5.44E+02	5.13E+01
	35	1523.70	1.18E+01	14.46			1.18E+01	1.45E+01

: 00382

Analysis Report for 1510086-03

CP4105S01-02

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
M	36	1588.06	2.31E+01	10.79			2.31E+01	1.08E+01
m	37	1592.73	2.01E+01	13.11			2.01E+01	1.31E+01
	38	1621.22	1.30E+01	8.72			1.30E+01	8.72E+00
	39	1719.89	8.00E+00	5.66			8.00E+00	5.66E+00
	40	1729.88	9.00E+00	11.17			9.00E+00	1.12E+01
	41	1764.48	6.15E+01	17.45	1.45E+00	1.16E+00	6.00E+01	1.75E+01
	42	1824.83	7.44E+00	6.71			7.44E+00	6.71E+00
	43	1920.24	6.75E+00	6.40			6.75E+00	6.40E+00
	44	2037.72	6.13E+00	6.93			6.13E+00	6.93E+00
	45	2100.75	4.58E+00	5.74			4.58E+00	5.74E+00
	46	2167.75	1.36E+01	9.43			1.36E+01	9.43E+00
	47	2190.67	9.00E+00	6.00			9.00E+00	6.00E+00
	48	2195.75	8.10E+00	7.00			8.10E+00	7.00E+00
	49	2204.38	1.05E+01	10.02			1.05E+01	1.00E+01
	50	2365.40	8.82E+00	7.75			8.82E+00	7.75E+00
	51	2427.36	8.00E+00	5.66			8.00E+00	5.66E+00
	52	2447.45	1.40E+01	7.48			1.40E+01	7.48E+00
	53	2615.10	7.42E+01	18.82			7.42E+01	1.88E+01
	54	2907.24	5.00E+00	4.47			5.00E+00	4.47E+00

M = First peak in a multiplet region

m = Other peak in a multiplet region

F = Fitted singlet

Errors quoted at 2.000sigma

AREA CORRECTION REPORT REFERENCE PEAK / BKG. SUBTRACT

Peak Analysis Performed on : 11/6/2015 11:21:46AM

Ref. Peak Energy : 0.00 Reference Date :
 Peak Ratio : 0.00 Uncertainty : 0.00
 Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000028943.CNF

Corrected Area is: Original * Peak Ratio - Background

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
	1	46.29	1.48E+02	99.22	5.28E+01	1.09E+01	9.49E+01	9.98E+01
	2	76.23	1.34E+03	178.37			1.34E+03	1.78E+02
	3	88.05	1.51E+02	95.01	1.52E+01	5.37E+00	1.35E+02	9.52E+01
	4	93.38	2.41E+02	100.65	9.04E+01	2.62E+01	1.51E+02	1.04E+02
	5	129.51	9.89E+01	77.31			9.89E+01	7.73E+01
	6	185.98	2.14E+02	79.30	3.93E+01	6.56E+00	1.75E+02	7.96E+01
	7	209.46	1.17E+02	83.49			1.17E+02	8.35E+01
M	8	238.80	8.29E+02	76.48	1.34E+01	2.14E+00	8.15E+02	7.65E+01
m	9	241.84	2.53E+02	79.08	2.69E+00	1.46E+00	2.51E+02	7.91E+01

: 00383

Analysis Report for 1510086-03

CP4105S01-02

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
	10	270.73	5.85E+01	47.68			5.85E+01	4.77E+01
	11	276.73	4.80E+01	50.22			4.80E+01	5.02E+01
M	12	295.41	3.18E+02	51.19			3.18E+02	5.12E+01
m	13	300.26	3.58E+01	45.93			3.58E+01	4.59E+01
	14	339.11	1.44E+02	62.45			1.44E+02	6.24E+01
	15	352.03	4.23E+02	68.33	3.99E+00	4.73E+00	4.19E+02	6.85E+01
	16	462.93	7.15E+01	45.42			7.15E+01	4.54E+01
	17	510.61	1.46E+02	62.23	5.78E+01	4.60E+00	8.78E+01	6.24E+01
M	18	583.39	2.53E+02	39.77	5.96E+00	3.46E+00	2.47E+02	3.99E+01
m	19	590.93	2.41E+01	29.62			2.41E+01	2.96E+01
	20	609.43	3.58E+02	55.49	6.71E+00	3.44E+00	3.51E+02	5.56E+01
	21	702.29	3.45E+01	43.25			3.45E+01	4.32E+01
	22	727.31	4.75E+01	28.07			4.75E+01	2.81E+01
	23	754.45	3.13E+01	31.58			3.13E+01	3.16E+01
	24	770.04	5.12E+01	36.66			5.12E+01	3.67E+01
	25	860.71	4.07E+01	23.75			4.07E+01	2.37E+01
	26	911.60	1.32E+02	36.54	2.32E+00	2.73E+00	1.30E+02	3.66E+01
	27	968.74	7.42E+01	41.24			7.42E+01	4.12E+01
	28	1046.24	2.01E+01	16.28			2.01E+01	1.63E+01
	29	1120.34	4.74E+01	49.48	2.00E+00	2.20E+00	4.54E+01	4.95E+01
	30	1136.97	2.88E+01	31.30			2.88E+01	3.13E+01
	31	1239.21	4.00E+01	35.99			4.00E+01	3.60E+01
M	32	1377.63	1.91E+01	13.19			1.91E+01	1.32E+01
m	33	1385.15	1.02E+01	10.68			1.02E+01	1.07E+01
	34	1460.95	5.46E+02	51.24	2.36E+00	1.83E+00	5.44E+02	5.13E+01
	35	1523.70	1.18E+01	14.46			1.18E+01	1.45E+01
M	36	1588.06	2.31E+01	10.79			2.31E+01	1.08E+01
m	37	1592.73	2.01E+01	13.11			2.01E+01	1.31E+01
	38	1621.22	1.30E+01	8.72			1.30E+01	8.72E+00
	39	1719.89	8.00E+00	5.66			8.00E+00	5.66E+00
	40	1729.88	9.00E+00	11.17			9.00E+00	1.12E+01
	41	1764.48	6.15E+01	17.45	1.45E+00	1.16E+00	6.00E+01	1.75E+01
	42	1824.83	7.44E+00	6.71			7.44E+00	6.71E+00
	43	1920.24	6.75E+00	6.40			6.75E+00	6.40E+00
	44	2037.72	6.13E+00	6.93			6.13E+00	6.93E+00
	45	2100.75	4.58E+00	5.74			4.58E+00	5.74E+00
	46	2167.75	1.36E+01	9.43			1.36E+01	9.43E+00
	47	2190.67	9.00E+00	6.00			9.00E+00	6.00E+00
	48	2195.75	8.10E+00	7.00			8.10E+00	7.00E+00
	49	2204.38	1.05E+01	10.02			1.05E+01	1.00E+01
	50	2365.40	8.82E+00	7.75			8.82E+00	7.75E+00
	51	2427.36	8.00E+00	5.66			8.00E+00	5.66E+00
	52	2447.45	1.40E+01	7.48			1.40E+01	7.48E+00
	53	2615.10	7.42E+01	18.82			7.42E+01	1.88E+01
	54	2907.24	5.00E+00	4.47			5.00E+00	4.47E+00

M = First peak in a multiplet region

m = Other peak in a multiplet region

F = Fitted singlet

Errors quoted at 2.000sigma

Analysis Report for 1510086-03
CP4105S01-02

NUCLIDE IDENTIFICATION REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

IDENTIFIED NUCLIDES

Nuclide Name	Id Confidence	Energy (keV)	Yield(%)	Activity (pCi/grams)	Activity Uncertainty
K-40	0.997	1460.81 *	10.67	1.90E+01	2.40E+00
GA-67	0.633	93.31 *	35.70	1.58E+02	6.74E+02
		208.95 *	2.24	2.85E+03	1.17E+04
		300.22 *	16.00	1.62E+02	7.12E+02
		88.03 *	3.72	1.91E+00	1.36E+00
CD-109	1.000	88.03 *	37.00	1.84E-01	1.30E-01
SN-126	0.964	87.57 *	30.22	1.40E+00	2.60E-01
TL-208	0.979	583.14 *	4.48	2.19E+00	1.29E+00
		860.37 *	35.85	1.13E+00	3.07E-01
		2614.66 *	4.25	1.84E+00	1.95E+00
PB-210	0.993	46.50 *	11.80	8.38E-01	5.00E-01
BI-212	0.987	727.17 *	2.75	1.90E+00	1.29E+00
		1620.62 *	44.60	1.47E+00	1.79E-01
PB-212	0.996	238.63 *	3.41	1.02E+00	1.31E+00
		300.09 *	46.30	1.35E+00	2.46E-01
BI-214	0.998	609.31 *	15.10	9.03E-01	9.88E-01
		1120.29 *	15.80	1.63E+00	4.91E-01
		1764.49 *	4.98	1.05E+00	1.01E+00
		2204.22 *	19.19	1.59E+00	2.82E-01
PB-214	0.997	295.21 *	37.19	1.25E+00	2.28E-01
		351.92 *	3.95	5.16E+00	1.68E+00
RA-224	0.889	240.98 *	3.28	3.57E+00	6.73E+00
RA-226	0.991	186.21 *	11.40	1.36E+00	5.98E-01
		338.32 *	27.70	1.18E+00	3.46E-01
AC-228	0.952	911.07 *	16.60	1.19E+00	6.67E-01
		969.11 *	3.29	2.60E+00	1.87E+00
		209.75 *	10.60		
CM-243	0.310	228.14 *	14.00	3.11E-01	3.27E-01
		277.60 *			

* = Energy line found in the spectrum.

- = Manually added nuclide.

? = Manually edited nuclide.

Energy Tolerance : 1.000 keV

Nuclide confidence index threshold = 0.30

Errors quoted at 2.000sigma

Analysis Report for 1510086-03
CP4105S01-02

UNIDENTIFIED PEAKS

Peak Locate Performed on : 11/6/2015 11:21:46AM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
2	76.23	3.70923E-01	6.68		
5	129.51	2.74633E-02	39.10		
10	270.73	1.62468E-02	40.76		
16	462.93	1.98484E-02	31.78	Sum	
17	510.61	2.43755E-02	35.55	Sum	
m 19	590.93	6.68618E-03	61.53	Sum	
21	702.29	9.58333E-03	62.68	Sum	
23	754.45	8.70370E-03	50.39		
24	770.04	1.42292E-02	35.78	Sum	
28	1046.24	5.57057E-03	40.59	Sum	
30	1136.97	7.99531E-03	54.38	Sum	
31	1239.21	1.11235E-02	44.93		
M 32	1377.63	5.31122E-03	34.49		
m 33	1385.15	2.82240E-03	52.54	Tol.	AG-110M
35	1523.70	3.28283E-03	61.16		
M 36	1588.06	6.40963E-03	23.39	Sum	
m 37	1592.73	5.56967E-03	32.70	D-Esc	
39	1719.89	2.22222E-03	35.36		
40	1729.88	2.50000E-03	62.05	Sum	
42	1824.83	2.06790E-03	45.06		
43	1920.24	1.87500E-03	47.43		
44	2037.72	1.70139E-03	56.56		
45	2100.75	1.27315E-03	62.67		
46	2167.75	3.76736E-03	34.78		
47	2190.67	2.50000E-03	33.33		
48	2195.75	2.25000E-03	43.21		
50	2365.40	2.44950E-03	43.92		
51	2427.36	2.22222E-03	35.36		
52	2447.45	3.88889E-03	26.73		
54	2907.24	1.38889E-03	44.72		

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

Analysis Report for 1510086-03
CP4105S01-02

NUCLIDE IDENTIFICATION REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

IDENTIFIED NUCLIDES

Nuclide Name	Id Confidence	Energy (keV)		Yield(%)	Activity (pCi/grams)	Activity Uncertainty
K-40	0.99	1460.81 *		10.67	1.90E+01	2.40E+00
GA-67	0.63	93.31 *		35.70	1.58E+02	6.74E+02
		208.95 *		2.24	2.85E+03	1.17E+04
		300.22 *		16.00	1.62E+02	7.12E+02
		88.03 *		3.72	1.91E+00	1.36E+00
CD-109	1.00	88.03 *		37.00	1.84E-01	1.30E-01
SN-126	0.96	87.57 *		30.22	1.40E+00	2.60E-01
TL-208	0.97	583.14 *		4.48	2.19E+00	1.29E+00
		860.37 *		35.85	1.13E+00	3.07E-01
		2614.66 *		4.25	1.84E+00	1.95E+00
PB-210	0.99	46.50 *		11.80	8.38E-01	5.00E-01
BI-212	0.98	727.17 *		2.75	1.90E+00	1.29E+00
		1620.62 *		44.60	1.47E+00	1.79E-01
PB-212	0.99	238.63 *		3.41	1.02E+00	1.31E+00
		300.09 *		46.30	1.35E+00	2.46E-01
BI-214	0.99	609.31 *		15.10	9.03E-01	9.88E-01
		1120.29 *		15.80	1.63E+00	4.91E-01
		1764.49 *		4.98	1.05E+00	1.01E+00
		2204.22 *		19.19	1.59E+00	2.82E-01
PB-214	0.99	295.21 *		37.19	1.25E+00	2.28E-01
		351.92 *		3.95	5.16E+00	1.68E+00
RA-224	0.88	240.98 *		3.28	3.57E+00	6.73E+00
RA-226	0.99	186.21 *		11.40	1.36E+00	5.98E-01
AC-228	0.95	338.32 *		27.70	1.18E+00	3.46E-01
		911.07 *		16.60	1.19E+00	6.67E-01
		969.11 *		3.29	2.60E+00	1.87E+00
CM-243	0.31	209.75 *		10.60		
		228.14 *		14.00	3.11E-01	3.27E-01
		277.60 *				

* = Energy line found in the spectrum.

- = Manually added nuclide.

? = Manually edited nuclide.

@ = Energy line not used for Weighted Mean Activity

Energy Tolerance : 1.000 keV

Nuclide confidence index threshold = 0.30

Errors quoted at 2.000sigma

Analysis Report for 1510086-03
CP4105S01-02

INTERFERENCE CORRECTED REPORT

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40	0.997	1.90E+01	2.40E+00	
GA-67	0.633	1.14E+02	4.71E+02	
? CD-109	1.000	1.91E+00	1.36E+00	
? SN-126	0.964	1.84E-01	1.30E-01	
TL-208	0.979	1.31E+00	1.96E-01	
PB-210	0.993	1.84E+00	1.95E+00	
BI-212	0.987	9.77E-01	4.66E-01	
PB-212	0.996	1.45E+00	1.78E-01	
BI-214	0.998	1.37E+00	2.10E-01	
PB-214	0.997	1.38E+00	1.77E-01	
RA-224	0.889	5.16E+00	1.68E+00	
RA-226	0.991	3.57E+00	6.73E+00	
AC-228	0.952	1.22E+00	2.73E-01	
CM-243	0.310	3.76E-01	3.22E-01	

- ? = nuclide is part of an undetermined solution
X = nuclide rejected by the interference analysis
@ = nuclide contains energy lines not used in Weighted Mean Activity

Errors quoted at 2.000sigma

Analysis Report for 1510086-03
CP4105S01-02

UNIDENTIFIED PEAKS

Peak Locate Performed on : 11/6/2015 11:21:46AM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
2	76.23	3.70923E-01	6.68		
5	129.51	2.74633E-02	39.10		
10	270.73	1.62468E-02	40.76		
16	462.93	1.98484E-02	31.78	Sum	
17	510.61	2.43755E-02	35.55	Sum	
m 19	590.93	6.68618E-03	61.53	Sum	
21	702.29	9.58333E-03	62.68	Sum	
23	754.45	8.70370E-03	50.39		
24	770.04	1.42292E-02	35.78	Sum	
28	1046.24	5.57057E-03	40.59	Sum	
30	1136.97	7.99531E-03	54.38	Sum	
31	1239.21	1.11235E-02	44.93		
M 32	1377.63	5.31122E-03	34.49		
m 33	1385.15	2.82240E-03	52.54	Tol.	AG-110M
35	1523.70	3.28283E-03	61.16		
M 36	1588.06	6.40963E-03	23.39	Sum	
m 37	1592.73	5.56967E-03	32.70	D-Esc	
39	1719.89	2.22222E-03	35.36		
40	1729.88	2.50000E-03	62.05	Sum	
42	1824.83	2.06790E-03	45.06		
43	1920.24	1.87500E-03	47.43		
44	2037.72	1.70139E-03	56.56		
45	2100.75	1.27315E-03	62.67		
46	2167.75	3.76736E-03	34.78		
47	2190.67	2.50000E-03	33.33		
48	2195.75	2.25000E-03	43.21		
50	2365.40	2.44950E-03	43.92		
51	2427.36	2.22222E-03	35.36		
52	2447.45	3.88889E-03	26.73		
54	2907.24	1.38889E-03	44.72		

Analysis Report for 1510086-03
CP4105S01-02

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

NUCLIDE MDA REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

	<i>Nuclide Name</i>	<i>Energy (keV)</i>	<i>Yield(%)</i>	<i>Activity (pCi/grams)</i>	<i>Nuclide MDA (pCi/grams)</i>	<i>Line MDA (pCi/grams)</i>
+	BE-7	477.59	10.42	-1.41E-01	1.09E+00	1.09E+00
+	NA-22	1274.54	99.94	4.68E-03	1.26E-01	1.26E-01
+	NA-24	1368.53	99.99	5.82E+13	5.10E+13	1.03E+14
		2754.09	99.86	-5.50E+12		5.10E+13
+	AL-26	1808.65	99.76	-2.48E-02	5.73E-02	5.73E-02
+	K-40	1460.81	* 10.67	1.90E+01	1.32E+00	1.32E+00
+	@ AR-41	1293.64	99.16	1.00E+26	1.00E+26	1.00E+26
+	TI-44	67.88	94.40	9.88E-03	7.57E-02	7.57E-02
		78.34	96.00	2.75E-01		9.48E-02
+	SC-46	889.25	99.98	1.73E-02	1.26E-01	1.26E-01
		1120.51	99.99	2.95E-01		2.07E-01
+	V-48	983.52	99.98	-3.22E-01	3.27E-01	3.27E-01
		1312.10	97.50	-1.89E-01		4.04E-01
+	CR-51	320.08	9.83	-5.45E-01	1.43E+00	1.43E+00
+	MN-54	834.83	99.97	1.08E-02	1.04E-01	1.04E-01
+	CO-56	846.75	99.96	1.29E-02	1.20E-01	1.20E-01
		1037.75	14.03	-2.94E-01		7.99E-01
		1238.25	67.00	2.48E-01		3.00E-01
		1771.40	15.51	-1.05E+00		5.47E-01
		2598.48	16.90	-7.07E-03		5.10E-01
+	CO-57	122.06	85.51	1.54E-02	6.41E-02	6.41E-02
		136.48	10.60	-3.90E-02		5.46E-01
+	CO-58	810.76	99.40	-4.66E-02	1.11E-01	1.11E-01
+	FE-59	1099.22	56.50	1.62E-01	2.97E-01	2.97E-01
		1291.56	43.20	-7.15E-02		4.02E-01
+	CO-60	1173.22	100.00	-6.31E-03	9.87E-02	1.07E-01
		1332.49	100.00	-3.03E-03		9.87E-02
+	ZN-65	1115.52	50.75	-3.68E-01	2.63E-01	2.63E-01
+	GA-67	93.31	* 35.70	1.58E+02	1.77E+02	1.77E+02
		208.95	* 2.24	2.85E+03		3.29E+03
		300.22	* 16.00	1.62E+02		5.27E+02
+	SE-75	121.11	16.70	-3.98E-02	1.06E-01	3.59E-01

Analysis Report for 1510086-03
CP4105S01-02

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)	
	SE-75	136.00	59.20	-1.37E-02	1.06E-01	1.06E-01
		264.65	59.80	4.55E-02		1.38E-01
		279.53	25.20	-3.61E-03		3.27E-01
		400.65	11.40	-2.27E-01		7.76E-01
+	RB-82	776.52	13.00	1.29E-01	1.45E+00	1.45E+00
+	RB-83	520.41	46.00	1.58E-02	2.12E-01	2.12E-01
		529.64	30.30	1.44E-01		3.47E-01
		552.65	16.40	2.48E-02		6.10E-01
+	KR-85	513.99	0.43	1.41E+01	2.34E+01	2.34E+01
+	SR-85	513.99	99.27	8.54E-02	1.42E-01	1.42E-01
+	Y-88	898.02	93.40	1.47E-02	9.85E-02	1.31E-01
		1836.01	99.38	-1.48E-03		9.85E-02
+	NB-93M	16.57	9.43	4.01E+01	8.21E+01	8.21E+01
+	NB-94	702.63	100.00	4.02E-02	8.41E-02	1.00E-01
		871.10	100.00	6.46E-03		8.41E-02
+	NB-95	765.79	99.81	1.34E-02	1.77E-01	1.77E-01
+	NB-95M	235.69	25.00	2.07E+01	1.85E+02	1.85E+02
+	ZR-95	724.18	43.70	3.73E-02	2.24E-01	3.13E-01
		756.72	55.30	3.23E-02		2.24E-01
+	MO-99	181.06	6.20	-6.13E+02	1.82E+03	2.28E+03
		739.58	12.80	-3.55E+02		1.82E+03
		778.00	4.50	1.15E+03		4.64E+03
+	RU-103	497.08	89.00	6.65E-02	1.53E-01	1.53E-01
+	RU-106	621.84	9.80	-3.69E-01	7.78E-01	7.78E-01
+	AG-108M	433.93	89.90	-2.71E-02	7.37E-02	7.37E-02
		614.37	90.40	3.10E-02		1.06E-01
		722.95	90.50	2.06E-02		9.46E-02
+	CD-109	88.03	* 3.72	1.91E+00	2.18E+00	2.18E+00
+	AG-110M	657.75	93.14	-4.07E-02	9.23E-02	9.23E-02
		677.61	10.53	3.89E-01		9.54E-01
		706.67	16.46	9.94E-02		6.02E-01
		763.93	21.98	0.00E+00		4.01E-01
		884.67	71.63	-7.53E-02		1.33E-01
		1384.27	23.94	-1.75E-01		3.99E-01
+	CD-113M	263.70	0.02	1.54E+02	3.02E+02	3.02E+02
+	SN-113	255.12	1.93	2.57E+00	1.32E-01	4.22E+00
		391.69	64.90	-9.95E-02		1.32E-01
+	TE123M	159.00	84.10	-1.67E-03	7.56E-02	7.56E-02
+	SB-124	602.71	97.87	4.11E-02	1.26E-01	1.26E-01
		645.85	7.26	3.60E-01		1.54E+00
		722.78	11.10	2.40E-01		1.10E+00
		1691.02	49.00	-8.09E-03		2.44E-01
+	I-125	35.49	6.49	1.11E+00	3.32E+00	3.32E+00
+	SB-125	176.33	6.89	2.54E-01	2.39E-01	8.32E-01
		427.89	29.33	-4.52E-03		2.39E-01
		463.38	10.35	8.27E-01		8.40E-01
		600.56	17.80	1.68E-01		4.88E-01
		635.90	11.32	2.62E-01		7.66E-01

Analysis Report for 1510086-03
CP4105S01-02

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	SB-126	414.70	83.30	-3.34E-01	4.75E-01	4.75E-01
		666.33	99.60	2.67E-02		4.89E-01
		695.00	99.60	-2.10E-01		4.95E-01
		720.50	53.80	2.94E-01		8.72E-01
+	SN-126	87.57	* 37.00	1.84E-01	2.10E-01	2.10E-01
+	SB-127	473.00	25.00	-4.09E+01	5.77E+01	7.71E+01
		685.20	35.70	-5.78E+01		5.77E+01
		783.80	14.70	3.33E+01		1.88E+02
+	I-129	29.78	57.00	-3.52E-02	4.57E-01	4.57E-01
		33.60	13.20	-4.94E-01		1.32E+00
		39.58	7.52	-5.45E-01		1.50E+00
+	I-131	284.30	6.05	2.79E+00	1.28E+00	1.63E+01
		364.48	81.20	-5.64E-02		1.28E+00
		636.97	7.26	6.64E+00		1.67E+01
		722.89	1.80	1.51E+01		6.96E+01
+	TE-132	49.72	13.10	-1.54E+02	5.61E+01	4.64E+02
		228.16	88.00	-2.65E+01		5.61E+01
+	BA-133	81.00	33.00	-1.18E+00	1.51E-01	1.91E-01
		302.84	17.80	-7.24E-03		4.25E-01
		356.01	60.00	-1.89E-02		1.51E-01
+	I-133	529.87	86.30	2.54E+09	6.14E+09	6.14E+09
+	XE-133	81.00	38.00	-6.25E+01	1.01E+01	1.01E+01
+	CS-134	563.23	8.38	-3.41E-01	1.01E-01	9.82E-01
		569.32	15.43	-4.94E-02		5.20E-01
		604.70	97.60	-2.10E-03		1.01E-01
		795.84	85.40	1.14E-01		1.20E-01
		801.93	8.73	-5.49E-01		1.02E+00
+	CS-135	268.24	16.00	1.84E-02	4.61E-01	4.61E-01
+	@ I-135	1131.51	22.50	1.00E+26	1.00E+26	1.00E+26
	@	1260.41	28.60	1.00E+26		1.00E+26
	@	1678.03	9.54	1.00E+26		1.00E+26
+	CS-136	153.22	7.46	-1.19E+00	4.28E-01	3.57E+00
		163.89	4.61	8.89E-01		5.99E+00
		176.55	13.56	6.51E-01		2.13E+00
		273.65	12.66	1.08E+00		3.06E+00
		340.57	48.50	1.68E+00		9.45E-01
		818.50	99.70	3.50E-03		4.28E-01
		1048.07	79.60	3.33E-02		6.05E-01
		1235.34	19.70	5.59E-02		3.64E+00
+	CS-137	661.65	85.12	5.23E-02	1.05E-01	1.05E-01
+	LA-138	788.74	34.00	-2.17E-01	1.25E-01	2.64E-01
		1435.80	66.00	-5.01E-02		1.25E-01
+	CE-139	165.85	80.35	-1.63E-02	7.62E-02	7.62E-02
+	BA-140	162.64	6.70	-3.83E-01	1.63E+00	4.29E+00
		304.84	4.50	3.86E+00		8.39E+00
		423.70	3.20	-6.07E+00		1.14E+01
		437.55	2.00	-7.52E-01		1.92E+01
		537.32	25.00	4.08E-01		1.63E+00
+	LA-140	328.77	20.50	9.61E-01	5.96E-01	1.99E+00

Analysis Report for 1510086-03
CP4105S01-02

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
LA-140	487.03	45.50	-3.59E-01	5.96E-01	8.81E-01
	815.85	23.50	-5.54E-01		1.86E+00
	1596.49	95.49	8.59E-02		5.96E-01
+ CE-141	145.44	48.40	1.96E-02	2.16E-01	2.16E-01
+ CE-143	57.36	11.80	-1.10E+06	1.55E+06	4.06E+06
	293.26	42.00	-9.80E+04		1.55E+06
	664.55	5.20	7.85E+06		1.13E+07
+ CE-144	133.54	10.80	-3.66E-02	5.20E-01	5.20E-01
+ PM-144	476.78	42.00	1.60E-01	8.91E-02	1.99E-01
	618.01	98.60	2.43E-02		8.91E-02
	696.49	99.49	-5.19E-03		9.69E-02
+ PM-145	36.85	21.70	7.44E-02	3.29E-01	6.27E-01
	37.36	39.70	-2.91E-02		3.29E-01
	42.30	15.10	-9.50E-01		6.63E-01
	72.40	2.31	-6.04E+00		3.65E+00
+ PM-146	453.90	39.94	3.01E-02	1.87E-01	1.87E-01
	735.90	14.01	2.34E-01		6.64E-01
	747.13	13.10	6.15E-02		6.31E-01
+ ND-147	91.11	28.90	-6.96E-01	1.69E+00	1.69E+00
	531.02	13.10	8.83E-01		4.40E+00
+ PM-149	285.90	3.10	1.04E+04	3.73E+04	3.73E+04
+ EU-152	121.78	20.50	5.95E-02	2.48E-01	2.48E-01
	244.69	5.40	5.27E-02		1.50E+00
	344.27	19.13	-4.46E-02		3.64E-01
	778.89	9.20	4.49E-01		9.62E-01
	964.01	10.40	1.17E-01		9.99E-01
	1085.78	7.22	-2.04E-02		1.38E+00
	1112.02	9.60	-2.81E-01		1.16E+00
	1407.95	14.94	2.16E-02		7.44E-01
+ GD-153	97.43	31.30	3.91E-02	1.83E-01	1.83E-01
	103.18	22.20	-1.59E-01		2.45E-01
+ EU-154	123.07	40.50	2.12E-02	1.25E-01	1.25E-01
	723.30	19.70	9.52E-02		4.37E-01
	873.19	11.50	-1.15E-01		7.23E-01
	996.32	10.30	4.45E-02		9.48E-01
	1004.76	17.90	-1.96E-02		5.13E-01
	1274.45	35.50	1.30E-02		3.49E-01
+ EU-155	86.50	30.90	8.90E-02	2.25E-01	2.25E-01
	105.30	20.70	1.17E-01		2.51E-01
+ EU-156	811.77	10.40	-5.16E-01	3.15E+00	3.15E+00
	1153.47	7.20	-2.60E+00		6.00E+00
	1230.71	8.90	-2.11E+00		5.37E+00
+ HO-166M	184.41	72.60	1.85E-01	9.73E-02	9.73E-02
	280.45	29.60	1.76E-02		2.24E-01
	410.94	11.10	1.21E-01		6.93E-01
	711.69	54.10	5.91E-02		1.60E-01
+ TM-171	66.72	0.14	-5.34E+01	5.30E+01	5.30E+01
+ HF-172	81.75	4.52	2.32E-01	4.61E-01	1.44E+00
	125.81	11.30	6.48E-02		4.61E-01

Analysis Report for 1510086-03
CP4105S01-02

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	LU-172	181.53	20.60	-6.20E-01	3.92E+00	6.72E+00
		810.06	16.63	-1.57E+00		1.28E+01
		912.12	15.25	5.49E+01		2.67E+01
		1093.66	62.50	4.11E-02		3.92E+00
+	LU-173	100.72	5.24	6.73E-03	3.60E-01	1.01E+00
		272.11	21.20	-1.51E-01		3.60E-01
+	HF-175	343.40	84.00	-1.37E-02	1.12E-01	1.12E-01
+	LU-176	88.34	13.30	5.73E-01	7.31E-02	5.27E-01
		201.83	86.00	2.10E-02		7.58E-02
		306.78	94.00	-9.87E-03		7.31E-02
+	TA-182	67.75	41.20	2.73E-02	2.09E-01	2.09E-01
		1121.30	34.90	6.45E-01		5.40E-01
		1189.05	16.23	-2.02E-01		7.88E-01
		1221.41	26.98	-4.35E-01		4.74E-01
		1231.02	11.44	-2.02E-01		1.22E+00
+	IR-192	308.46	29.68	-3.86E-02	1.95E-01	3.09E-01
		468.07	48.10	7.10E-02		1.95E-01
+	HG-203	279.19	77.30	9.18E-03	1.47E-01	1.47E-01
+	BI-207	569.67	97.72	2.49E-02	8.37E-02	8.37E-02
		1063.62	74.90	2.79E-02		1.51E-01
+	TL-208	583.14	* 30.22	1.40E+00	2.31E-01	5.27E-01
		860.37	* 4.48	2.19E+00		1.91E+00
		2614.66	* 35.85	1.13E+00		2.31E-01
+	BI-210M	262.00	45.00	-4.16E-02	1.49E-01	1.49E-01
		300.00	23.00	-1.39E+00		3.43E-01
+	PB-210	46.50	* 4.25	1.84E+00	3.18E+00	3.18E+00
+	PB-211	404.84	2.90	-1.23E+00	2.57E+00	2.57E+00
		831.96	2.90	-1.73E+00		3.10E+00
+	BI-212	727.17	* 11.80	8.38E-01	7.56E-01	7.56E-01
		1620.62	* 2.75	1.90E+00		1.58E+00
+	PB-212	238.63	* 44.60	1.47E+00	2.44E-01	2.44E-01
		300.09	* 3.41	1.02E+00		3.31E+00
+	BI-214	609.31	* 46.30	1.35E+00	2.71E-01	2.71E-01
		1120.29	* 15.10	9.03E-01		1.61E+00
		1764.49	* 15.80	1.63E+00		4.35E-01
		2204.22	* 4.98	1.05E+00		1.53E+00
+	PB-214	295.21	* 19.19	1.59E+00	2.77E-01	5.67E-01
		351.92	* 37.19	1.25E+00		2.77E-01
+	RN-219	401.80	6.50	-1.31E-01	1.14E+00	1.14E+00
+	RA-223	323.87	3.88	-1.29E+00	1.71E+00	1.71E+00
+	RA-224	240.98	* 3.95	5.16E+00	2.79E+00	2.79E+00
+	RA-225	40.00	31.00	-5.55E-01	1.52E+00	1.52E+00
+	RA-226	186.21	* 3.28	3.57E+00	2.58E+00	2.58E+00
+	TH-227	50.10	8.40	-3.17E-01	9.55E-01	9.55E-01
		236.00	11.50	1.14E-01		1.02E+00
		256.20	6.30	1.07E-01		1.05E+00
+	AC-228	338.32	* 11.40	1.36E+00	4.55E-01	9.18E-01
		911.07	* 27.70	1.18E+00		4.55E-01

Analysis Report for 1510086-03
CP4105S01-02

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	AC-228	969.11	*	16.60	1.19E+00	4.55E-01	1.03E+00
+	TH-230	48.44		16.90	8.62E-02	5.40E-01	5.40E-01
		62.85		4.60	1.79E+00		1.72E+00
		67.67		0.37	2.52E+00		1.93E+01
+	PA-231	283.67		1.60	7.21E-01	3.27E+00	4.21E+00
		302.67		2.30	-5.57E-02		3.27E+00
+	TH-231	25.64		14.70	-3.25E-01	9.89E-01	3.26E+00
		84.21		6.40	6.53E-02		9.89E-01
+	PA-233	311.98		38.60	8.24E-02	3.99E-01	3.99E-01
+	PA-234	131.20		20.40	1.19E-01	2.70E-01	2.70E-01
		733.99		8.80	7.10E-02		1.01E+00
		946.00		12.00	3.27E-01		7.29E-01
+	PA-234M	1001.03		0.92	3.77E+00	1.06E+01	1.06E+01
+	TH-234	63.29		3.80	1.63E+00	2.06E+00	2.06E+00
+	U-235	143.76		10.50	-1.24E-02	5.19E-01	5.19E-01
		163.35		4.70	1.69E-01		1.14E+00
		205.31		4.70	2.62E-01		1.42E+00
+	NP-237	86.50		12.60	2.16E-01	5.45E-01	5.45E-01
+	NP-239	106.10		22.70	1.43E+03	2.16E+03	2.16E+03
		228.18		10.70	-2.77E+03		5.85E+03
		277.60		14.10	3.75E+03		4.83E+03
+	AM-241	59.54		35.90	-2.07E-01	2.08E-01	2.08E-01
+	AM-243	74.67		66.00	4.40E-01	1.52E-01	1.52E-01
+	CM-243	209.75	*	3.29	2.60E+00	5.33E-01	3.01E+00
		228.14		10.60	-2.94E-01		6.22E-01
		277.60	*	14.00	3.11E-01		5.33E-01

- + = Nuclide identified during the nuclide identification
 * = Energy line found in the spectrum
 > = MDA value not calculated
 @ = Half-life too short to be able to perform the decay correction
 ? = CAUTION: MDA value is inconsistent with Currie MDA at 95% confidence level

NUCLIDE MDA REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

0394A

Analysis Report for 1510086-03
CP4105S01-02

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
BE-7	477.59	10.42	1.09E+00	1.09E+00	-1.41E-01	5.15E-01
NA-22	1274.54	99.94	1.26E-01	1.26E-01	4.68E-03	5.84E-02
NA-24	1368.53	99.99	1.03E+14	5.10E+13	5.82E+13	4.70E+13
	2754.09	99.86	5.10E+13		-5.50E+12	1.81E+13
AL-26	1808.65	99.76	5.73E-02	5.73E-02	-2.48E-02	2.28E-02
+ K-40	1460.81	*	10.67	1.32E+00	1.90E+01	6.12E-01
@ AR-41	1293.64		99.16	1.00E+26	1.00E+26	1.00E+20
TI-44	67.88	94.40	7.57E-02	7.57E-02	9.88E-03	3.71E-02
	78.34	96.00	9.48E-02		2.75E-01	4.67E-02
SC-46	889.25	99.98	1.26E-01	1.26E-01	1.73E-02	5.86E-02
	1120.51	99.99	2.07E-01		2.95E-01	9.83E-02
V-48	983.52	99.98	3.27E-01	3.27E-01	-3.22E-01	1.49E-01
	1312.10	97.50	4.04E-01		-1.89E-01	1.84E-01
CR-51	320.08	9.83	1.43E+00	1.43E+00	-5.45E-01	6.83E-01
MN-54	834.83	99.97	1.04E-01	1.04E-01	1.08E-02	4.85E-02
CO-56	846.75	99.96	1.20E-01	1.20E-01	1.29E-02	5.58E-02
	1037.75	14.03	7.99E-01		-2.94E-01	3.64E-01
	1238.25	67.00	3.00E-01		2.48E-01	1.41E-01
	1771.40	15.51	5.47E-01		-1.05E+00	2.24E-01
	2598.48	16.90	5.10E-01		-7.07E-03	1.97E-01
CO-57	122.06	85.51	6.41E-02	6.41E-02	1.54E-02	3.11E-02
	136.48	10.60	5.46E-01		-3.90E-02	2.65E-01
CO-58	810.76	99.40	1.11E-01	1.11E-01	-4.66E-02	5.13E-02
FE-59	1099.22	56.50	2.97E-01	2.97E-01	1.62E-01	1.37E-01
	1291.56	43.20	4.02E-01		-7.15E-02	1.84E-01
CO-60	1173.22	100.00	1.07E-01	9.87E-02	-6.31E-03	4.93E-02
	1332.49	100.00	9.87E-02		-3.03E-03	4.46E-02
ZN-65	1115.52	50.75	2.63E-01	2.63E-01	-3.68E-01	1.23E-01
+ GA-67	93.31	*	35.70	1.77E+02	1.58E+02	8.72E+01
	208.95	*	2.24	3.29E+03	2.85E+03	1.61E+03
	300.22	*	16.00	5.27E+02	1.62E+02	2.57E+02
SE-75	121.11	16.70	3.59E-01	1.06E-01	-3.98E-02	1.74E-01
	136.00	59.20	1.06E-01		-1.37E-02	5.15E-02
	264.65	59.80	1.38E-01		4.55E-02	6.64E-02
	279.53	25.20	3.27E-01		-3.61E-03	1.58E-01
	400.65	11.40	7.76E-01		-2.27E-01	3.70E-01
RB-82	776.52	13.00	1.45E+00	1.45E+00	1.29E-01	6.73E-01
RB-83	520.41	46.00	2.12E-01	2.12E-01	1.58E-02	9.99E-02
	529.64	30.30	3.47E-01		1.44E-01	1.65E-01
	552.65	16.40	6.10E-01		2.48E-02	2.88E-01
KR-85	513.99	0.43	2.34E+01	2.34E+01	1.41E+01	1.12E+01
SR-85	513.99	99.27	1.42E-01	1.42E-01	8.54E-02	6.82E-02
Y-88	898.02	93.40	1.31E-01	9.85E-02	1.47E-02	6.08E-02
	1836.01	99.38	9.85E-02		-1.48E-03	4.19E-02
NB-93M	16.57	9.43	8.21E+01	8.21E+01	4.01E+01	4.00E+01
NB-94	702.63	100.00	1.00E-01	8.41E-02	4.02E-02	4.74E-02
	871.10	100.00	8.41E-02		6.46E-03	3.88E-02
NB-95	765.79	99.81	1.77E-01	1.77E-01	1.34E-02	8.28E-02
NB-95M	235.69	25.00	1.85E+02	1.85E+02	2.07E+01	9.08E+01
ZR-95	724.18	43.70	3.13E-01	2.24E-01	3.73E-02	1.47E-01
	756.72	55.30	2.24E-01		3.23E-02	1.05E-01

Analysis Report for 1510086-03
CP4105S01-02

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
MO-99	181.06	6.20	2.28E+03	1.82E+03	-6.13E+02	1.10E+03
	739.58	12.80	1.82E+03		-3.55E+02	8.51E+02
	778.00	4.50	4.64E+03		1.15E+03	2.15E+03
RU-103	497.08	89.00	1.53E-01	1.53E-01	6.65E-02	7.27E-02
RU-106	621.84	9.80	7.78E-01	7.78E-01	-3.69E-01	3.63E-01
AG-108M	433.93	89.90	7.37E-02	7.37E-02	-2.71E-02	3.49E-02
	614.37	90.40	1.06E-01		3.10E-02	5.04E-02
	722.95	90.50	9.46E-02		2.06E-02	4.42E-02
+ CD-109	88.03	* 3.72	2.18E+00	2.18E+00	1.91E+00	1.07E+00
AG-110M	657.75	93.14	9.23E-02	9.23E-02	-4.07E-02	4.31E-02
	677.61	10.53	9.54E-01		3.89E-01	4.49E-01
	706.67	16.46	6.02E-01		9.94E-02	2.83E-01
	763.93	21.98	4.01E-01		0.00E+00	1.86E-01
	884.67	71.63	1.33E-01		-7.53E-02	6.16E-02
	1384.27	23.94	3.99E-01		-1.75E-01	1.77E-01
	263.70	0.02	3.02E+02		3.02E+02	1.54E+02	1.46E+02
SN-113	255.12	1.93	4.22E+00	1.32E-01	2.57E+00	2.04E+00
TE123M	391.69	64.90	1.32E-01	7.56E-02	-9.95E-02	6.28E-02
	159.00	84.10	7.56E-02		-1.67E-03	3.66E-02
	602.71	97.87	1.26E-01		4.11E-02	5.95E-02
SB-124	645.85	7.26	1.54E+00	1.26E-01	3.60E-01	7.20E-01
	722.78	11.10	1.10E+00		2.40E-01	5.15E-01
	1691.02	49.00	2.44E-01		-8.09E-03	1.06E-01
	35.49	6.49	3.32E+00		3.32E+00	1.11E+00	1.61E+00
I-125	176.33	6.89	8.32E-01	2.39E-01	2.54E-01	4.03E-01
	427.89	29.33	2.39E-01		-4.52E-03	1.13E-01
	463.38	10.35	8.40E-01		8.27E-01	4.01E-01
	600.56	17.80	4.88E-01		1.68E-01	2.30E-01
	635.90	11.32	7.66E-01		2.62E-01	3.60E-01
	414.70	83.30	4.75E-01		4.75E-01	-3.34E-01	2.26E-01
SB-126	666.33	99.60	4.89E-01	4.75E-01	2.67E-02	2.29E-01
	695.00	99.60	4.95E-01		-2.10E-01	2.32E-01
	720.50	53.80	8.72E-01		2.94E-01	4.07E-01
	87.57	* 37.00	2.10E-01		2.10E-01	1.84E-01	1.03E-01
+ SN-126	473.00	25.00	7.71E+01	5.77E+01	-4.09E+01	3.65E+01
	685.20	35.70	5.77E+01		-5.78E+01	2.68E+01
	783.80	14.70	1.88E+02		3.33E+01	8.84E+01
I-129	29.78	57.00	4.57E-01	4.57E-01	-3.52E-02	2.22E-01
	33.60	13.20	1.32E+00		-4.94E-01	6.43E-01
	39.58	7.52	1.50E+00		-5.45E-01	7.28E-01
I-131	284.30	6.05	1.63E+01	1.28E+00	2.79E+00	7.85E+00
	364.48	81.20	1.28E+00		-5.64E-02	6.11E-01
	636.97	7.26	1.67E+01		6.64E+00	7.87E+00
	722.89	1.80	6.96E+01		1.51E+01	3.25E+01
TE-132	49.72	13.10	4.64E+02	5.61E+01	-1.54E+02	2.27E+02
	228.16	88.00	5.61E+01		-2.65E+01	2.72E+01
BA-133	81.00	33.00	1.91E-01	1.51E-01	-1.18E+00	9.35E-02
	302.84	17.80	4.25E-01		-7.24E-03	2.05E-01
	356.01	60.00	1.51E-01		-1.89E-02	7.30E-02
I-133	529.87	86.30	6.14E+09	6.14E+09	2.54E+09	2.91E+09
XE-133	81.00	38.00	1.01E+01	1.01E+01	-6.25E+01	4.94E+00
CS-134	563.23	8.38	9.82E-01	1.01E-01	-3.41E-01	4.64E-01
	569.32	15.43	5.20E-01		-4.94E-02	2.45E-01

Analysis Report for 1510086-03
CP4105S01-02

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
CS-134	604.70	97.60	1.01E-01	1.01E-01	-2.10E-03	4.80E-02
	795.84	85.40	1.20E-01		1.14E-01	5.64E-02
	801.93	8.73	1.02E+00		-5.49E-01	4.73E-01
CS-135	268.24	16.00	4.61E-01	4.61E-01	1.84E-02	2.23E-01
@ I-135	1131.51	22.50	1.00E+26	1.00E+26	1.00E+26	1.00E+20
@	1260.41	28.60	1.00E+26		1.00E+26	1.00E+20
@	1678.03	9.54	1.00E+26		1.00E+26	1.00E+20
CS-136	153.22	7.46	3.57E+00	4.28E-01	-1.19E+00	1.73E+00
	163.89	4.61	5.99E+00		8.89E-01	2.90E+00
	176.55	13.56	2.13E+00		6.51E-01	1.03E+00
	273.65	12.66	3.06E+00		1.08E+00	1.48E+00
	340.57	48.50	9.45E-01		1.68E+00	4.57E-01
	818.50	99.70	4.28E-01		3.50E-03	1.98E-01
	1048.07	79.60	6.05E-01		3.33E-02	2.77E-01
	1235.34	19.70	3.64E+00		5.59E-02	1.70E+00
CS-137	661.65	85.12	1.05E-01	1.05E-01	5.23E-02	4.92E-02
LA-138	788.74	34.00	2.64E-01	1.25E-01	-2.17E-01	1.23E-01
	1435.80	66.00	1.25E-01		-5.01E-02	5.49E-02
CE-139	165.85	80.35	7.62E-02	7.62E-02	-1.63E-02	3.69E-02
BA-140	162.64	6.70	4.29E+00	1.63E+00	-3.83E-01	2.08E+00
	304.84	4.50	8.39E+00		3.86E+00	4.04E+00
	423.70	3.20	1.14E+01		-6.07E+00	5.43E+00
	437.55	2.00	1.92E+01		-7.52E-01	9.12E+00
	537.32	25.00	1.63E+00		4.08E-01	7.66E-01
LA-140	328.77	20.50	1.99E+00	5.96E-01	9.61E-01	9.57E-01
	487.03	45.50	8.81E-01		-3.59E-01	4.17E-01
	815.85	23.50	1.86E+00		-5.54E-01	8.60E-01
	1596.49	95.49	5.96E-01		8.59E-02	2.67E-01
CE-141	145.44	48.40	2.16E-01	2.16E-01	1.96E-02	1.05E-01
CE-143	57.36	11.80	4.06E+06	1.55E+06	-1.10E+06	1.99E+06
	293.26	42.00	1.55E+06		-9.80E+04	7.54E+05
	664.55	5.20	1.13E+07		7.85E+06	5.32E+06
CE-144	133.54	10.80	5.20E-01	5.20E-01	-3.66E-02	2.52E-01
PM-144	476.78	42.00	1.99E-01	8.91E-02	1.60E-01	9.46E-02
	618.01	98.60	8.91E-02		2.43E-02	4.19E-02
	696.49	99.49	9.69E-02		-5.19E-03	4.56E-02
PM-145	36.85	21.70	6.27E-01	3.29E-01	7.44E-02	3.05E-01
	37.36	39.70	3.29E-01		-2.91E-02	1.60E-01
	42.30	15.10	6.63E-01		-9.50E-01	3.23E-01
	72.40	2.31	3.65E+00		-6.04E+00	1.80E+00
PM-146	453.90	39.94	1.87E-01	1.87E-01	3.01E-02	8.86E-02
	735.90	14.01	6.64E-01		2.34E-01	3.11E-01
	747.13	13.10	6.31E-01		6.15E-02	2.94E-01
ND-147	91.11	28.90	1.69E+00	1.69E+00	-6.96E-01	8.30E-01
	531.02	13.10	4.40E+00		8.83E-01	2.08E+00
PM-149	285.90	3.10	3.73E+04	3.73E+04	1.04E+04	1.80E+04
EU-152	121.78	20.50	2.48E-01	2.48E-01	5.95E-02	1.20E-01
	244.69	5.40	1.50E+00		5.27E-02	7.28E-01
	344.27	19.13	3.64E-01		-4.46E-02	1.74E-01
	778.89	9.20	9.62E-01		4.49E-01	4.48E-01
	964.01	10.40	9.99E-01		1.17E-01	4.65E-01
	1085.78	7.22	1.38E+00		-2.04E-02	6.36E-01
	1112.02	9.60	1.16E+00	-2.81E-01	5.39E-01	

Analysis Report for 1510086-03
CP4105S01-02

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
EU-152	1407.95	14.94	7.44E-01	2.48E-01	2.16E-02	3.39E-01
GD-153	97.43	31.30	1.83E-01	1.83E-01	3.91E-02	8.92E-02
	103.18	22.20	2.45E-01		-1.59E-01	1.19E-01
EU-154	123.07	40.50	1.25E-01	1.25E-01	2.12E-02	6.07E-02
	723.30	19.70	4.37E-01		9.52E-02	2.04E-01
	873.19	11.50	7.23E-01		-1.15E-01	3.33E-01
	996.32	10.30	9.48E-01		4.45E-02	4.38E-01
	1004.76	17.90	5.13E-01		-1.96E-02	2.35E-01
	1274.45	35.50	3.49E-01		1.30E-02	1.62E-01
EU-155	86.50	30.90	2.25E-01	2.25E-01	8.90E-02	1.10E-01
	105.30	20.70	2.51E-01		1.17E-01	1.22E-01
EU-156	811.77	10.40	3.15E+00	3.15E+00	-5.16E-01	1.45E+00
	1153.47	7.20	6.00E+00		-2.60E+00	2.76E+00
	1230.71	8.90	5.37E+00		-2.11E+00	2.48E+00
HO-166M	184.41	72.60	9.73E-02	9.73E-02	1.85E-01	4.74E-02
	280.45	29.60	2.24E-01		1.76E-02	1.08E-01
	410.94	11.10	6.93E-01		1.21E-01	3.31E-01
	711.69	54.10	1.60E-01		5.91E-02	7.50E-02
TM-171	66.72	0.14	5.30E+01	5.30E+01	-5.34E+01	2.59E+01
HF-172	81.75	4.52	1.44E+00	4.61E-01	2.32E-01	7.06E-01
	125.81	11.30	4.61E-01		6.48E-02	2.24E-01
LU-172	181.53	20.60	6.72E+00	3.92E+00	-6.20E-01	3.25E+00
	810.06	16.63	1.28E+01		-1.57E+00	5.93E+00
	912.12	15.25	2.67E+01		5.49E+01	1.28E+01
	1093.66	62.50	3.92E+00		4.11E-02	1.80E+00
LU-173	100.72	5.24	1.01E+00	3.60E-01	6.73E-03	4.91E-01
	272.11	21.20	3.60E-01		-1.51E-01	1.74E-01
HF-175	343.40	84.00	1.12E-01	1.12E-01	-1.37E-02	5.38E-02
LU-176	88.34	13.30	5.27E-01	7.31E-02	5.73E-01	2.58E-01
	201.83	86.00	7.58E-02		2.10E-02	3.68E-02
	306.78	94.00	7.31E-02		-9.87E-03	3.51E-02
TA-182	67.75	41.20	2.09E-01	2.09E-01	2.73E-02	1.03E-01
	1121.30	34.90	5.40E-01		6.45E-01	2.56E-01
	1189.05	16.23	7.88E-01		-2.02E-01	3.62E-01
	1221.41	26.98	4.74E-01		-4.35E-01	2.18E-01
	1231.02	11.44	1.22E+00		-2.02E-01	5.64E-01
IR-192	308.46	29.68	3.09E-01	1.95E-01	-3.86E-02	1.48E-01
	468.07	48.10	1.95E-01		7.10E-02	9.22E-02
HG-203	279.19	77.30	1.47E-01	1.47E-01	9.18E-03	7.09E-02
BI-207	569.67	97.72	8.37E-02	8.37E-02	2.49E-02	3.95E-02
	1063.62	74.90	1.51E-01		2.79E-02	7.05E-02
+ TL-208	583.14	* 30.22	5.27E-01	2.31E-01	1.40E+00	2.56E-01
	860.37	* 4.48	1.91E+00		2.19E+00	8.84E-01
	2614.66	* 35.85	2.31E-01		1.13E+00	9.50E-02
BI-210M	262.00	45.00	1.49E-01	1.49E-01	-4.16E-02	7.20E-02
	300.00	23.00	3.43E-01		-1.39E+00	1.66E-01
+ PB-210	46.50	* 4.25	3.18E+00	3.18E+00	1.84E+00	1.56E+00
PB-211	404.84	2.90	2.57E+00	2.57E+00	-1.23E+00	1.23E+00
	831.96	2.90	3.10E+00		-1.73E+00	1.44E+00
+ BI-212	727.17	* 11.80	7.56E-01	7.56E-01	8.38E-01	3.54E-01
	1620.62	* 2.75	1.58E+00		1.90E+00	5.92E-01
+ PB-212	238.63	* 44.60	2.44E-01	2.44E-01	1.47E+00	1.20E-01
	300.09	* 3.41	3.31E+00		1.02E+00	1.62E+00

Analysis Report for 1510086-03
CP4105S01-02

Nuclide Name	Energy (keV)		Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
+	BI-214	609.31 *	46.30	2.71E-01	2.71E-01	1.35E+00	1.30E-01
		1120.29 *	15.10	1.61E+00		9.03E-01	7.80E-01
		1764.49 *	15.80	4.35E-01		1.63E+00	1.81E-01
		2204.22 *	4.98	1.53E+00		1.05E+00	6.28E-01
+	PB-214	295.21 *	19.19	5.67E-01	2.77E-01	1.59E+00	2.77E-01
		351.92 *	37.19	2.77E-01		1.25E+00	1.35E-01
	RN-219	401.80	6.50	1.14E+00	1.14E+00	-1.31E-01	5.44E-01
	RA-223	323.87	3.88	1.71E+00	1.71E+00	-1.29E+00	8.21E-01
+	RA-224	240.98 *	3.95	2.79E+00	2.79E+00	5.16E+00	1.37E+00
		40.00	31.00	1.52E+00		1.52E+00	-5.55E-01	7.41E-01
+	RA-226	186.21 *	3.28	2.58E+00	2.58E+00	3.57E+00	1.26E+00
		TH-227	50.10	8.40		9.55E-01	9.55E-01	-3.17E-01	4.66E-01
		236.00	11.50	1.02E+00		1.14E-01	5.01E-01
		256.20	6.30	1.05E+00		1.07E-01	5.08E-01
+	AC-228	338.32 *	11.40	9.18E-01	4.55E-01	1.36E+00	4.46E-01
		911.07 *	27.70	4.55E-01		1.18E+00	2.15E-01
		969.11 *	16.60	1.03E+00		1.19E+00	4.94E-01
	TH-230	48.44	16.90	5.40E-01	5.40E-01	8.62E-02	2.64E-01
		62.85	4.60	1.72E+00		1.79E+00	8.42E-01
		67.67	0.37	1.93E+01		2.52E+00	9.46E+00
	PA-231	283.67	1.60	4.21E+00	3.27E+00	7.21E-01	2.03E+00
		302.67	2.30	3.27E+00		-5.57E-02	1.58E+00
	TH-231	25.64	14.70	3.26E+00	9.89E-01	-3.25E-01	1.58E+00
		84.21	6.40	9.89E-01		6.53E-02	4.84E-01
	PA-233	311.98	38.60	3.99E-01	3.99E-01	8.24E-02	1.91E-01
	PA-234	131.20	20.40	2.70E-01	2.70E-01	1.19E-01	1.31E-01
		733.99	8.80	1.01E+00		7.10E-02	4.74E-01
		946.00	12.00	7.29E-01		3.27E-01	3.35E-01
	PA-234M	1001.03	0.92	1.06E+01	1.06E+01	3.77E+00	4.89E+00
	TH-234	63.29	3.80	2.06E+00	2.06E+00	1.63E+00	1.01E+00
	U-235	143.76	10.50	5.19E-01	5.19E-01	-1.24E-02	2.52E-01
		163.35	4.70	1.14E+00		1.69E-01	5.51E-01
		205.31	4.70	1.42E+00		2.62E-01	6.87E-01
	NP-237	86.50	12.60	5.45E-01	5.45E-01	2.16E-01	2.67E-01
	NP-239	106.10	22.70	2.16E+03	2.16E+03	1.43E+03	1.05E+03
		228.18	10.70	5.85E+03		-2.77E+03	2.83E+03
		277.60	14.10	4.83E+03		3.75E+03	2.33E+03
	AM-241	59.54	35.90	2.08E-01	2.08E-01	-2.07E-01	1.02E-01
	AM-243	74.67	66.00	1.52E-01	1.52E-01	4.40E-01	7.51E-02
+	CM-243	209.75 *	3.29	3.01E+00	5.33E-01	2.60E+00	1.47E+00
		228.14	10.60	6.22E-01		-2.94E-01	3.01E-01
		277.60 *	14.00	5.33E-01		3.11E-01	2.57E-01

- + = Nuclide identified during the nuclide identification
- * = Energy line found in the spectrum
- > = MDA value not calculated
- @ = Half-life too short to be able to perform the decay correction

Analysis Report for 1510086-03
CP4105S01-02

No Action Level results available for reporting purposes.

DATA REVIEW COMMENTS REPORT

<i>Creation Date</i>	<i>Comment</i>	<i>User</i>
----------------------	----------------	-------------

No Data Review Comments Entered.

 ***** S P E C T R A L D A T A R E P O R T *****

Sample Title: CP4105S01-02

Elapsed Live time: 3600
 Elapsed Real Time: 3616

Channel	-----	-----	-----	-----	-----	-----	-----	-----
1:	0	0	0	0	0	0	0	0
9:	17	174	181	153	142	98	114	126
17:	101	70	93	86	77	97	93	85
25:	89	86	83	85	84	92	85	91
33:	93	79	97	82	103	91	77	93
41:	87	92	91	107	84	141	197	112
49:	97	109	113	103	132	125	108	106
57:	120	122	132	145	149	143	194	219
65:	147	139	145	183	149	151	152	144
73:	194	236	419	294	544	448	152	146
81:	128	120	130	164	158	126	196	220
89:	129	167	154	124	256	200	104	108
97:	86	83	103	96	89	73	78	90
105:	89	100	89	78	80	72	75	88
113:	92	74	100	90	89	74	79	79
121:	80	68	82	86	71	75	67	84
129:	114	90	95	81	63	71	93	79
137:	71	72	85	84	97	81	78	89
145:	81	66	77	68	73	70	70	59
153:	65	83	53	70	74	59	67	75
161:	58	60	81	66	60	60	67	54
169:	65	58	77	70	56	60	61	63
177:	72	71	57	59	62	62	67	55
185:	92	148	131	58	51	52	61	62
193:	64	47	51	44	52	51	51	61
201:	45	58	55	54	43	54	58	51
209:	78	93	58	51	52	42	47	42
217:	53	52	63	53	46	50	59	41
225:	59	44	41	41	44	44	37	47
233:	53	49	37	49	66	218	493	184
241:	108	148	83	48	31	36	31	43
249:	37	35	28	46	39	29	35	43
257:	42	39	34	31	40	38	40	42
265:	33	36	43	34	33	55	67	41
273:	30	30	33	48	54	36	35	24
281:	37	30	28	35	31	33	33	27
289:	36	27	24	32	24	34	167	175
297:	52	37	36	53	52	26	31	43
305:	25	26	30	36	19	28	29	36
313:	29	26	37	23	21	22	29	22
321:	30	24	20	27	24	18	33	41
329:	33	30	39	29	29	27	32	17
337:	31	77	85	22	34	33	28	16
345:	21	19	21	28	22	29	81	233
353:	137	37	21	27	18	20	20	21
361:	23	14	25	29	31	15	27	22

369: 22 28 23 19 20 22 19 22

Sample Title: CP4105S01-02

Channel	22	28	23	19	20	22	19	22
377:	21	30	17	22	26	17	21	30
385:	18	22	27	24	24	23	26	14
393:	26	14	16	31	24	22	25	28
401:	14	22	21	18	22	21	23	23
409:	22	36	21	21	19	14	17	23
417:	14	16	14	25	18	17	15	19
425:	15	17	12	21	20	17	12	18
433:	14	16	20	9	14	18	15	22
441:	20	24	14	15	11	14	17	13
449:	9	19	17	22	16	16	15	18
457:	15	14	20	19	15	20	36	33
465:	14	18	8	14	20	14	13	11
473:	8	21	20	15	15	24	18	12
481:	10	16	22	12	19	16	19	23
489:	10	7	17	18	13	18	9	15
497:	20	23	12	19	10	13	12	15
505:	6	12	20	23	18	53	60	48
513:	20	17	12	18	9	15	16	14
521:	14	11	19	22	9	24	14	12
529:	26	20	19	8	13	10	11	11
537:	14	17	19	9	11	13	8	10
545:	17	15	8	13	10	15	14	18
553:	13	8	13	12	13	15	14	15
561:	6	19	18	14	13	10	15	19
569:	7	15	18	4	19	7	17	15
577:	6	11	10	17	13	36	127	91
585:	26	15	15	15	12	13	22	13
593:	13	9	12	11	10	13	9	14
601:	20	14	11	15	7	17	15	43
609:	167	155	35	11	13	13	12	18
617:	17	11	7	13	8	6	12	11
625:	6	12	8	9	14	7	13	10
633:	12	13	16	9	13	11	12	8
641:	10	6	10	11	13	11	9	11
649:	5	10	8	10	12	6	11	11
657:	9	9	9	8	12	14	16	11
665:	18	9	10	8	8	12	8	9
673:	7	19	13	13	7	16	13	14
681:	15	9	7	7	8	13	8	7
689:	11	16	12	7	9	11	16	12
697:	9	12	15	11	18	19	18	9
705:	16	11	9	12	9	16	8	8
713:	10	12	10	5	8	7	10	10
721:	14	7	8	7	7	16	32	26
729:	8	6	10	10	8	10	13	8
737:	14	10	15	6	10	13	13	12
745:	9	9	6	11	4	8	6	9
753:	16	13	14	13	7	3	7	11
761:	5	8	5	10	5	6	16	18
769:	18	9	10	11	7	13	5	2
777:	7	10	10	10	11	14	8	13
785:	15	15	10	14	10	4	6	6
793:	12	16	12	11	8	8	13	8

801: 2 9 9 9 8 16 11 9

Sample Title: CP4105S01-02

Channel	1	2	3	4	5	6	7	8
809:	4	5	10	7	9	6	6	6
817:	5	5	12	7	10	10	4	11
825:	9	10	7	16	5	11	8	7
833:	6	9	13	11	12	11	8	10
841:	12	4	8	9	13	7	9	6
849:	8	7	12	6	10	9	8	4
857:	7	9	5	16	20	5	7	4
865:	2	5	6	3	13	7	3	5
873:	6	10	8	6	6	7	7	7
881:	11	6	4	9	6	10	4	12
889:	12	11	6	7	12	5	8	9
897:	10	13	9	4	11	9	8	13
905:	7	6	4	5	3	28	62	52
913:	18	7	5	5	9	4	7	10
921:	5	4	13	9	9	1	5	5
929:	4	5	2	4	10	12	10	3
937:	5	2	5	1	7	3	6	7
945:	6	6	7	6	6	1	6	2
953:	2	9	6	6	6	7	7	4
961:	7	10	6	7	18	8	5	26
969:	60	22	5	7	4	14	9	7
977:	7	10	8	5	5	4	9	4
985:	7	4	12	9	5	7	7	5
993:	9	6	12	4	5	7	7	6
1001:	9	5	6	10	4	8	6	4
1009:	6	5	6	8	5	4	7	7
1017:	6	9	4	4	8	4	2	4
1025:	2	6	5	2	6	5	9	3
1033:	10	6	4	7	4	6	4	2
1041:	8	7	4	7	6	10	9	1
1049:	1	8	7	5	4	4	7	4
1057:	7	6	5	6	9	15	8	7
1065:	11	6	9	10	5	6	6	7
1073:	7	6	7	5	2	14	6	13
1081:	8	5	6	8	4	4	7	5
1089:	11	7	6	5	6	4	3	12
1097:	5	4	11	7	5	4	5	4
1105:	11	6	10	6	5	5	11	13
1113:	10	5	6	9	10	14	19	32
1121:	26	14	3	4	6	6	5	4
1129:	3	4	3	5	7	7	5	6
1137:	13	11	7	7	7	5	6	7
1145:	6	7	9	6	6	4	8	7
1153:	7	6	7	6	12	9	5	9
1161:	12	11	6	6	6	3	6	3
1169:	7	9	5	4	7	5	9	6
1177:	9	7	6	5	10	9	11	6
1185:	4	6	6	8	5	5	5	9
1193:	10	9	10	18	9	10	7	3
1201:	6	9	8	7	5	4	9	9
1209:	7	4	10	10	10	9	11	8
1217:	11	4	6	7	4	7	7	7
1225:	13	9	8	4	6	7	9	5

1233: 11 8 7 11 13 19 17 11

Sample Title: CP4105S01-02

Channel	11	8	7	11	13	19	17	11
1241:	12	5	6	3	6	11	7	2
1249:	12	3	3	4	4	5	2	7
1257:	2	4	5	6	6	4	5	3
1265:	6	5	3	5	9	7	4	8
1273:	5	10	4	6	5	5	5	5
1281:	8	3	4	2	6	1	5	5
1289:	7	2	3	6	3	3	5	8
1297:	4	6	3	4	3	5	2	3
1305:	5	6	9	5	7	4	4	1
1313:	4	2	3	4	3	5	3	1
1321:	2	2	2	5	2	4	4	4
1329:	4	5	1	2	3	5	2	4
1337:	2	4	3	3	4	3	5	6
1345:	2	2	2	2	2	2	2	3
1353:	0	2	6	3	2	2	2	6
1361:	1	5	1	5	2	4	3	2
1369:	6	4	6	2	1	1	3	4
1377:	9	7	6	1	3	1	3	2
1385:	6	2	1	3	1	1	3	4
1393:	2	2	3	0	3	5	2	2
1401:	4	6	6	2	2	4	5	8
1409:	4	5	1	5	2	2	4	4
1417:	2	3	4	1	2	0	1	4
1425:	4	1	2	2	1	5	3	2
1433:	3	1	0	4	2	1	2	3
1441:	3	2	3	2	2	4	1	1
1449:	3	0	1	2	2	1	4	3
1457:	1	9	55	199	208	77	10	1
1465:	2	2	3	1	4	0	1	3
1473:	2	3	0	1	5	0	0	5
1481:	1	2	4	1	3	0	0	1
1489:	1	4	0	2	0	2	3	3
1497:	3	1	1	3	4	2	1	2
1505:	2	1	4	4	6	3	6	2
1513:	4	3	2	1	1	2	2	1
1521:	0	5	3	4	2	1	2	0
1529:	1	1	2	2	0	1	2	2
1537:	0	4	3	2	1	1	2	0
1545:	1	2	1	3	3	2	1	0
1553:	2	1	2	0	2	1	1	2
1561:	3	1	0	0	0	1	5	1
1569:	0	1	1	0	1	2	3	2
1577:	2	2	1	3	3	0	1	0
1585:	0	3	7	8	4	1	4	11
1593:	6	1	0	1	3	2	2	0
1601:	0	2	1	2	3	0	2	1
1609:	2	1	1	2	0	3	1	0
1617:	0	1	1	5	3	2	2	1
1625:	0	3	2	3	2	1	3	1
1633:	4	1	4	2	0	2	0	1
1641:	1	1	1	0	1	2	0	2
1649:	0	1	2	3	2	0	1	1
1657:	4	1	1	1	2	0	1	1

1665: 1 1 1 0 1 1 3 2

Sample Title: CP4105S01-02

Channel	1	2	3	4	5	6	7	8
1673:	2	1	2	0	1	2	0	2
1681:	1	1	0	2	2	2	1	3
1689:	2	1	2	0	0	2	3	2
1697:	0	2	1	1	0	0	3	0
1705:	2	1	2	0	1	0	2	1
1713:	0	0	0	0	1	1	1	4
1721:	1	0	0	2	1	0	2	1
1729:	4	4	1	2	1	1	1	0
1737:	3	1	1	2	0	2	2	0
1745:	2	0	2	1	2	0	0	0
1753:	0	0	0	1	1	1	0	2
1761:	0	7	16	16	17	8	0	1
1769:	0	2	1	0	1	1	1	1
1777:	2	1	0	0	0	1	3	1
1785:	0	0	1	0	3	1	3	1
1793:	0	2	3	1	1	1	1	0
1801:	1	1	1	1	0	1	0	1
1809:	0	1	0	1	1	3	0	0
1817:	1	1	0	0	1	0	0	4
1825:	4	0	0	1	1	0	0	2
1833:	2	1	2	1	2	1	0	1
1841:	1	3	2	2	3	3	3	2
1849:	2	2	0	2	0	2	2	1
1857:	0	0	2	0	2	1	1	0
1865:	0	1	1	1	0	0	0	2
1873:	1	1	4	0	3	1	1	1
1881:	3	0	4	0	2	0	0	1
1889:	0	1	2	2	1	0	2	0
1897:	0	0	1	0	0	2	1	1
1905:	0	0	2	1	1	1	0	1
1913:	1	2	1	0	1	0	3	2
1921:	2	0	0	2	3	1	2	1
1929:	2	2	1	0	0	0	1	1
1937:	2	1	0	0	0	2	0	1
1945:	2	1	1	1	3	2	2	1
1953:	1	1	1	0	0	0	1	1
1961:	0	1	2	3	1	2	1	1
1969:	0	1	3	0	1	0	0	0
1977:	0	0	1	2	1	0	1	3
1985:	0	1	0	1	3	0	0	2
1993:	3	0	4	0	0	1	0	1
2001:	0	1	0	1	1	2	0	2
2009:	1	0	2	1	1	2	3	1
2017:	0	3	0	0	1	1	0	0
2025:	0	1	0	3	0	0	0	0
2033:	0	0	0	2	3	2	1	0
2041:	1	0	1	1	0	0	0	2
2049:	0	1	1	1	1	2	0	0
2057:	0	2	0	1	0	1	2	2
2065:	2	0	1	0	1	0	1	1
2073:	0	0	0	0	1	1	0	2
2081:	1	3	0	2	1	0	1	1
2089:	0	0	0	0	0	0	0	0

2097: 0 0 1 3 2 0 1 1

Sample Title: CP4105S01-02

Channel	1	2	3	4	5	6	7	8	9
2105:	1	2	0	1	0	1	0	1	
2113:	0	2	0	1	1	2	0	2	
2121:	2	0	1	2	0	1	1	0	
2129:	0	0	2	1	0	0	0	0	
2137:	0	2	0	2	1	1	1	2	
2145:	1	1	0	0	0	0	1	1	
2153:	2	1	0	0	0	0	0	2	
2161:	0	1	0	0	2	3	4	3	
2169:	2	1	0	0	0	0	1	1	
2177:	0	1	0	2	0	0	0	1	
2185:	0	0	1	0	1	3	4	0	
2193:	0	3	4	1	2	0	1	0	
2201:	1	4	0	4	1	4	0	1	
2209:	1	0	1	0	1	0	0	1	
2217:	2	0	1	0	0	0	1	1	
2225:	0	0	1	1	1	3	1	1	
2233:	0	0	1	1	1	3	0	0	
2241:	0	1	4	2	3	2	1	1	
2249:	0	0	1	2	1	0	2	1	
2257:	0	2	0	1	2	1	2	1	
2265:	2	0	0	1	3	0	1	0	
2273:	2	1	1	0	1	0	3	1	
2281:	1	1	0	2	0	1	0	2	
2289:	0	0	0	1	2	0	0	0	
2297:	0	0	0	0	1	1	1	2	
2305:	0	2	2	0	0	2	1	2	
2313:	3	2	2	1	2	3	0	1	
2321:	2	4	1	0	1	1	1	0	
2329:	3	0	0	1	2	2	0	2	
2337:	1	0	1	0	0	2	3	1	
2345:	1	0	2	1	1	2	1	0	
2353:	3	1	3	0	0	0	1	0	
2361:	1	1	1	2	2	4	0	0	
2369:	2	1	2	2	0	1	2	2	
2377:	1	2	1	0	2	0	2	1	
2385:	0	1	1	1	0	1	1	1	
2393:	0	2	0	0	1	0	1	0	
2401:	1	2	0	1	1	1	2	0	
2409:	1	2	1	1	0	1	1	0	
2417:	0	1	1	1	3	0	0	0	
2425:	2	1	3	2	0	0	0	0	
2433:	2	2	0	0	1	0	1	0	
2441:	0	0	0	2	2	2	3	2	
2449:	3	0	0	0	0	0	2	0	
2457:	0	1	0	0	0	0	2	0	
2465:	0	0	0	1	0	0	0	0	
2473:	0	0	0	1	0	0	0	0	
2481:	0	1	0	0	0	1	0	1	
2489:	0	0	0	0	1	2	1	0	
2497:	1	0	1	1	1	0	0	0	
2505:	0	1	1	0	1	0	0	1	
2513:	1	0	0	0	0	0	0	0	
2521:	0	0	1	0	0	0	0	1	

2529: 0 0 1 1 0 0 2 0

Sample Title: CP4105S01-02

Channel	1	2	3	4	5	6	7	8
2537:	0	0	1	0	0	2	1	1
2545:	1	0	1	0	0	0	1	0
2553:	0	0	0	0	1	1	0	2
2561:	1	1	0	0	0	0	0	0
2569:	0	0	0	0	0	0	0	0
2577:	1	0	1	0	0	0	1	0
2585:	1	0	0	0	0	0	0	1
2593:	0	0	0	0	1	0	1	1
2601:	0	1	0	2	0	0	0	0
2609:	0	0	1	5	15	24	18	9
2617:	1	2	1	1	1	0	0	1
2625:	0	0	0	1	0	0	1	0
2633:	0	0	0	0	0	0	0	1
2641:	0	0	0	0	0	0	0	0
2649:	0	0	0	0	0	0	0	1
2657:	0	0	1	0	1	0	0	0
2665:	0	0	1	0	0	0	1	1
2673:	0	0	0	1	0	0	0	0
2681:	0	0	0	0	0	0	0	0
2689:	0	1	0	0	0	0	0	1
2697:	0	0	0	0	0	0	0	0
2705:	0	0	0	0	1	1	2	0
2713:	0	0	0	0	0	0	0	0
2721:	0	0	0	0	0	0	0	0
2729:	0	1	0	0	0	1	0	0
2737:	0	0	0	0	0	0	0	0
2745:	0	0	0	1	0	0	1	0
2753:	0	0	1	0	0	0	1	0
2761:	0	0	0	0	0	0	1	0
2769:	0	0	0	0	0	0	0	0
2777:	0	0	0	0	1	0	1	0
2785:	2	0	1	0	0	1	1	0
2793:	0	0	0	0	0	0	0	0
2801:	0	0	0	0	0	0	0	0
2809:	0	0	0	0	0	0	0	0
2817:	0	0	0	0	0	0	0	0
2825:	0	0	1	0	0	1	0	0
2833:	0	0	0	0	0	0	0	0
2841:	0	0	0	0	0	0	0	1
2849:	1	0	0	0	0	0	2	0
2857:	0	0	0	0	0	0	1	0
2865:	0	0	1	0	0	0	1	0
2873:	0	0	0	0	0	0	0	0
2881:	0	0	0	0	0	0	0	0
2889:	0	0	0	0	1	0	0	0
2897:	1	0	0	0	0	0	0	0
2905:	1	1	3	0	0	0	0	0
2913:	0	0	0	0	0	0	0	0
2921:	2	0	0	0	0	1	0	0
2929:	0	0	0	1	0	0	0	0
2937:	0	0	0	0	0	0	0	0
2945:	0	0	0	0	0	2	0	0
2953:	0	1	0	0	1	2	0	0

2961: 0 0 0 0 0 0 0 0 0

Sample Title: CP4105S01-02

Channel	1	2	3	4	5	6	7	8	9
2969:	0	1	0	0	0	0	0	0	0
2977:	0	0	0	0	0	0	0	0	0
2985:	1	0	0	0	0	0	0	0	0
2993:	0	0	0	0	0	0	0	1	0
3001:	0	1	0	1	1	2	0	0	0
3009:	0	1	0	0	0	0	1	0	0
3017:	0	2	0	1	1	0	0	0	0
3025:	1	0	0	0	0	1	1	0	0
3033:	0	0	0	0	0	1	0	0	0
3041:	0	0	0	0	0	0	0	0	0
3049:	0	0	1	0	0	2	0	0	0
3057:	1	0	0	0	0	0	0	0	0
3065:	0	1	0	0	0	0	0	0	0
3073:	1	0	0	0	0	0	1	0	0
3081:	0	0	1	1	0	0	0	0	0
3089:	1	0	0	0	0	0	0	0	0
3097:	0	0	1	0	0	0	0	0	0
3105:	0	0	0	0	0	0	1	0	0
3113:	0	0	0	0	0	0	0	0	0
3121:	0	0	0	0	0	0	0	0	1
3129:	0	1	0	0	0	0	0	0	1
3137:	0	0	0	1	0	0	0	0	1
3145:	0	0	0	1	0	0	0	0	0
3153:	2	0	0	0	0	0	0	0	0
3161:	0	0	0	0	0	0	0	0	0
3169:	1	1	0	1	2	2	0	0	0
3177:	0	0	0	0	1	0	0	0	0
3185:	0	0	0	0	0	0	0	0	0
3193:	0	1	0	0	0	0	1	0	0
3201:	0	0	0	0	0	0	0	0	1
3209:	0	0	0	0	0	1	0	0	1
3217:	0	1	0	0	1	0	0	0	0
3225:	0	0	0	0	0	1	0	0	0
3233:	0	0	0	0	0	0	0	0	0
3241:	0	1	0	0	0	0	0	0	0
3249:	0	0	0	0	0	1	0	0	1
3257:	0	0	1	0	0	0	0	0	0
3265:	0	0	0	1	0	0	0	0	0
3273:	1	0	0	0	0	1	2	0	0
3281:	0	1	0	0	0	0	0	0	1
3289:	0	0	0	0	0	0	0	1	0
3297:	0	0	0	0	0	0	1	0	0
3305:	0	0	0	0	0	0	0	0	0
3313:	0	1	0	0	1	1	0	0	0
3321:	0	0	0	1	0	1	0	0	1
3329:	0	1	1	0	0	0	0	0	0
3337:	0	0	0	1	0	0	0	0	0
3345:	0	0	0	0	0	1	0	0	0
3353:	0	0	0	0	0	1	0	0	0
3361:	0	0	0	0	1	0	1	0	0
3369:	0	0	0	0	0	0	0	1	0
3377:	0	0	0	0	0	0	0	0	0
3385:	0	0	0	0	0	0	0	0	0

3393: 0 0 0 0 0 0 0 0

Sample Title: CP4105S01-02

Channel	1	2	3	4	5	6	7	8	9
3401:	0	0	0	0	0	0	0	0	0
3409:	0	0	0	1	0	0	0	0	0
3417:	1	0	0	0	0	0	0	0	0
3425:	0	0	0	0	0	0	0	0	1
3433:	0	0	2	0	0	0	0	1	1
3441:	0	0	0	0	0	0	0	0	1
3449:	0	1	0	1	0	0	0	0	0
3457:	0	0	1	0	0	0	0	0	0
3465:	0	0	0	0	0	0	0	0	0
3473:	0	1	0	1	0	0	0	0	0
3481:	0	0	0	0	0	0	1	0	0
3489:	0	0	1	0	0	0	1	0	0
3497:	0	0	0	0	0	0	0	0	0
3505:	0	0	0	0	0	0	0	0	0
3513:	0	1	2	0	0	0	0	0	0
3521:	0	0	0	0	0	0	0	0	0
3529:	0	1	0	0	0	0	0	0	0
3537:	0	0	0	0	0	0	0	0	0
3545:	0	1	0	0	0	1	0	0	0
3553:	0	0	0	1	0	0	0	0	0
3561:	0	0	0	0	0	0	0	0	0
3569:	0	0	1	0	0	0	1	0	0
3577:	0	0	0	0	0	1	0	0	0
3585:	0	0	0	0	0	0	0	0	0
3593:	0	0	0	0	0	0	0	0	0
3601:	0	0	0	0	0	0	0	0	0
3609:	0	0	0	0	0	0	0	0	0
3617:	1	0	1	0	0	1	0	0	0
3625:	0	1	0	1	0	0	0	0	0
3633:	0	0	1	0	0	0	0	0	0
3641:	0	0	0	0	0	1	0	0	0
3649:	0	0	0	0	0	0	0	0	0
3657:	0	1	0	0	0	0	0	0	0
3665:	1	0	0	0	0	0	0	1	1
3673:	0	0	0	0	0	0	0	1	1
3681:	0	0	0	0	0	0	0	0	1
3689:	0	1	0	0	0	0	1	0	1
3697:	0	0	0	0	0	0	0	1	0
3705:	0	0	0	0	0	1	0	0	0
3713:	0	1	0	0	0	0	0	0	0
3721:	0	0	0	1	0	0	0	0	0
3729:	0	0	0	0	0	0	0	0	0
3737:	0	0	2	0	0	0	1	0	0
3745:	0	0	0	0	0	0	0	0	0
3753:	0	0	0	0	0	0	0	0	0
3761:	0	0	0	0	0	0	1	0	0
3769:	0	0	0	0	0	0	1	0	0
3777:	0	0	0	0	0	0	0	0	0
3785:	0	0	0	0	0	0	0	0	0
3793:	1	1	0	0	0	0	0	0	1
3801:	0	0	0	0	0	0	0	0	0
3809:	0	0	0	0	0	0	0	0	0
3817:	1	0	0	1	0	0	0	0	0

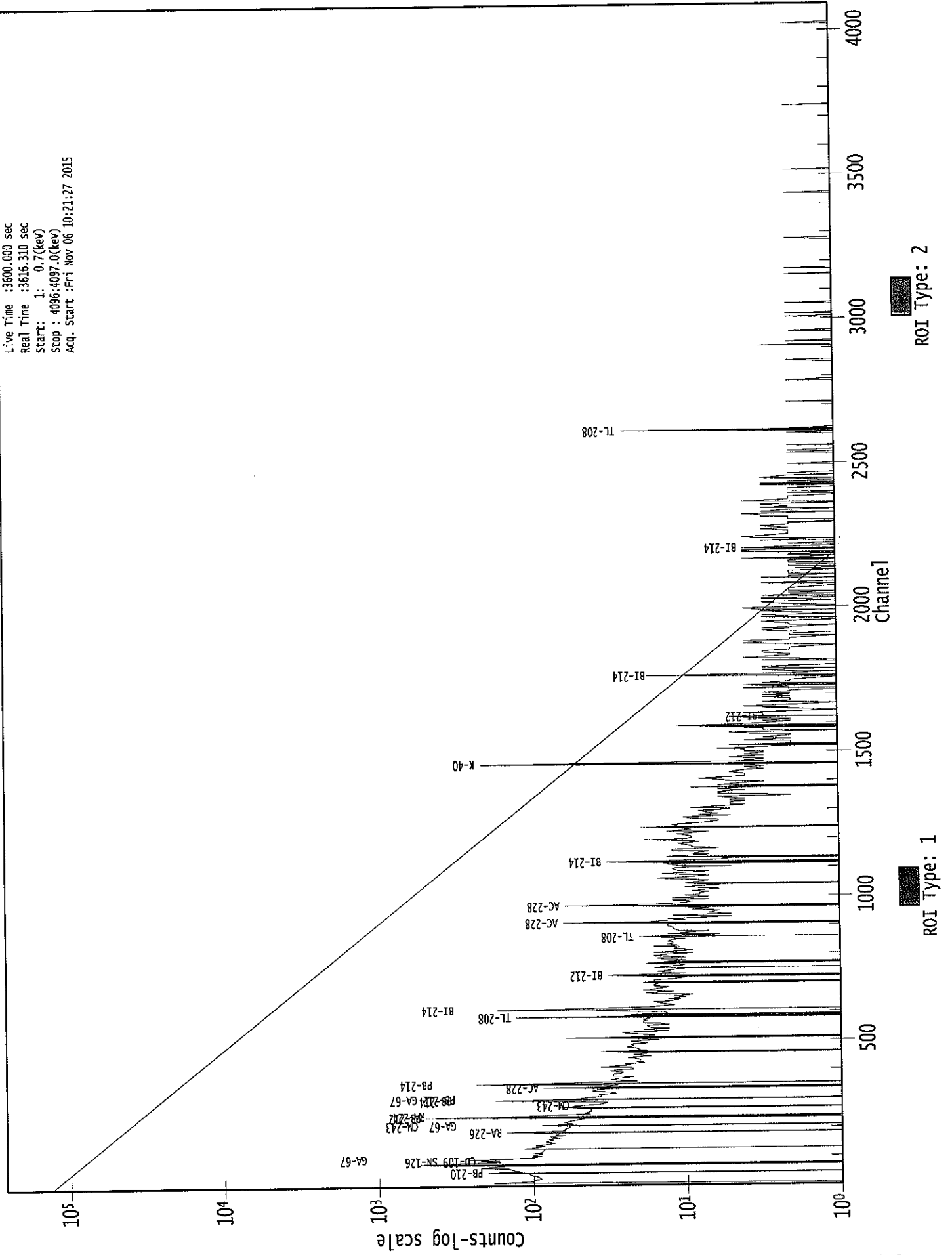
3825: 0 0 0 0 0 0 1 0

Sample Title: CP4105S01-02

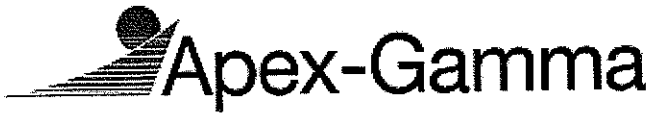
Channel	-----	-----	-----	-----	-----	-----	-----	-----
3833:	0	0	0	1	0	0	0	0
3841:	0	0	0	0	0	0	0	0
3849:	0	0	0	0	0	0	0	0
3857:	0	0	0	0	0	1	0	0
3865:	0	0	0	0	0	0	0	0
3873:	0	0	0	0	0	0	0	0
3881:	0	0	0	0	0	0	0	1
3889:	0	0	0	0	0	0	0	0
3897:	0	1	0	0	0	0	0	0
3905:	0	0	0	1	1	0	0	0
3913:	0	0	1	0	0	0	0	0
3921:	0	0	0	0	0	0	0	0
3929:	0	0	0	0	0	0	0	0
3937:	0	1	0	0	0	1	0	0
3945:	0	0	0	0	0	0	0	0
3953:	0	0	0	0	0	0	0	0
3961:	0	0	0	0	0	1	0	0
3969:	0	0	0	0	0	0	0	0
3977:	0	0	0	0	0	0	0	0
3985:	0	1	0	0	0	0	0	0
3993:	0	1	0	0	0	0	0	0
4001:	0	0	0	0	0	0	0	0
4009:	0	0	0	0	0	0	1	0
4017:	0	0	0	0	0	0	0	2
4025:	0	0	0	1	0	0	0	0
4033:	0	1	0	0	0	0	0	0
4041:	0	0	0	0	0	0	0	0
4049:	0	0	0	0	0	0	0	0
4057:	0	0	0	0	0	0	0	0
4065:	1	0	0	0	1	0	0	0
4073:	0	0	0	0	0	0	0	0
4081:	1	0	0	0	0	1	0	0
4089:	0	0	0	0	0	0	0	0

0000029254.CNF

Live Time : 3600.000 sec
Real Time : 3616.310 sec
Start : 1: 0.7(kev)
Stop : 4096.4097.0(kev)
Acq. Start : Fri Nov 06 10:21:27 2015



VB
initials



Analysis Report for 1510086-04
CP4105S01-02

GAMMA SPECTRUM ANALYSIS

Sample Identification	: 1510086-04
Sample Description	: CP4105S01-02
Sample Type	: SOIL
Sample Size	: 6.128E+02 grams
Facility	: Countroom
Sample Taken On	: 10/6/2015 7:53:41AM
Acquisition Started	: 11/6/2015 11:22:50AM
Procedure	: GAS-1402 pCi
Operator	: Administrator
Detector Name	: GE3
Geometry	: GAS-1402
Live Time	: 3600.0 seconds
Real Time	: 3622.0 seconds
Dead Time	: 0.61 %
Peak Locate Threshold	: 2.50
Peak Locate Range (in channels)	: 1 - 4096
Peak Area Range (in channels)	: 9 - 4096
Identification Energy Tolerance	: 1.000 keV
Energy Calibration Used Done On	: 10/25/2014
Efficiency Calibration Used Done On	: 10/25/2014
Efficiency Calibration Description	:
Sample Number	: 29256

PEAK-TO-TOTAL CALIBRATION REPORT

Peak-to-Total Efficiency Calibration Equation

AG
11/9/15

Analysis Report for 1510086-04
CP4105S01-02

PEAK LOCATE REPORT

Peak Locate Performed on : 11/6/2015 12:23:37PM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096
Peak Search Sensitivity : 2.50

Peak No.	Energy (keV)	Centroid Channel	Centroid Uncertainty	Peak Significance
1	46.33	46.56	0.0000	0.00
2	76.21	76.43	0.0000	0.00
3	84.97	85.18	0.0000	0.00
4	87.98	88.19	0.0000	0.00
5	93.02	93.22	0.0000	0.00
6	129.97	130.15	0.0000	0.00
7	136.85	137.03	0.0000	0.00
8	186.03	186.19	0.0000	0.00
9	200.20	200.34	0.0000	0.00
10	209.09	209.23	0.0000	0.00
11	214.60	214.74	0.0000	0.00
12	222.02	222.16	0.0000	0.00
13	238.80	238.93	0.0000	0.00
14	241.92	242.05	0.0000	0.00
15	270.51	270.62	0.0000	0.00
16	295.32	295.42	0.0000	0.00
17	299.98	300.08	0.0000	0.00
18	339.11	339.19	0.0000	0.00
19	352.08	352.15	0.0000	0.00
20	464.06	464.08	0.0000	0.00
21	478.83	478.84	0.0000	0.00
22	511.29	511.28	0.0000	0.00
23	549.48	549.46	0.0000	0.00
24	583.33	583.28	0.0000	0.00
25	609.60	609.54	0.0000	0.00
26	638.36	638.29	0.0000	0.00
27	727.40	727.28	0.0000	0.00
28	768.52	768.39	0.0000	0.00
29	795.96	795.81	0.0000	0.00
30	821.41	821.25	0.0000	0.00
31	860.93	860.76	0.0000	0.00
32	907.65	907.45	0.0000	0.00
33	911.33	911.13	0.0000	0.00
34	914.22	914.02	0.0000	0.00
35	965.44	965.22	0.0000	0.00
36	969.32	969.10	0.0000	0.00
37	1120.24	1119.95	0.0000	0.00
38	1198.30	1197.98	0.0000	0.00
39	1213.67	1213.34	0.0000	0.00
40	1239.11	1238.78	0.0000	0.00
41	1306.84	1306.48	0.0000	0.00
42	1378.34	1377.95	0.0000	0.00

Analysis Report for 1510086-04
CP4105S01-02

<i>Peak No.</i>	<i>Energy (keV)</i>	<i>Centroid Channel</i>	<i>Centroid Uncertainty</i>	<i>Peak Significance</i>
43	1401.02	1400.62	0.0000	0.00
44	1408.03	1407.62	0.0000	0.00
45	1460.89	1460.47	0.0000	0.00
46	1590.98	1590.51	0.0000	0.00
47	1630.49	1630.01	0.0000	0.00
48	1728.49	1727.97	0.0000	0.00
49	1734.67	1734.15	0.0000	0.00
50	1764.70	1764.17	0.0000	0.00
51	1802.85	1802.31	0.0000	0.00
52	2088.68	2088.04	0.0000	0.00
53	2103.04	2102.40	0.0000	0.00
54	2204.24	2203.57	0.0000	0.00
55	2614.59	2613.81	0.0000	0.00

? = Adjacent peak noted
Errors quoted at 2.000sigma

Analysis Report for 1510086-04
CP4105S01-02

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 11/6/2015 12:23:37PM

Peak Analysis From Channel : 1
Peak Analysis To Channel : 4096

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	FWHM (keV)
1	46.33	44 -	49	46.56	1.50E+02	78.98	1.14E+03	1.32
2	76.21	71 -	82	76.43	1.32E+03	175.25	3.13E+03	3.91
M 3	84.97	82 -	97	85.18	1.63E+02	83.96	1.30E+03	2.70
m 4	87.98	82 -	97	88.19	3.62E+02	108.98	1.64E+03	2.71
m 5	93.02	82 -	97	93.22	3.56E+02	107.00	1.48E+03	2.73
6	129.97	126 -	133	130.15	1.07E+02	82.92	1.06E+03	3.73
7	136.85	134 -	140	137.03	1.03E+02	71.93	8.69E+02	4.47
8	186.03	182 -	189	186.19	1.32E+02	81.44	1.01E+03	1.88
9	200.20	198 -	203	200.34	6.88E+01	57.05	5.94E+02	1.82
10	209.09	206 -	212	209.23	5.72E+01	63.73	6.92E+02	1.68
11	214.60	213 -	217	214.74	3.93E+01	46.77	4.49E+02	2.98
12	222.02	219 -	225	222.16	5.04E+01	60.10	6.15E+02	1.98
M 13	238.80	234 -	246	238.93	7.99E+02	73.28	4.56E+02	1.60
m 14	241.92	234 -	246	242.05	2.24E+02	77.27	5.17E+02	1.97
15	270.51	266 -	274	270.62	9.17E+01	65.19	5.95E+02	2.27
M 16	295.32	292 -	303	295.42	3.38E+02	54.31	2.95E+02	2.17
m 17	299.98	292 -	303	300.08	8.34E+01	45.76	3.31E+02	2.30
18	339.11	335 -	344	339.19	1.78E+02	62.31	4.48E+02	2.02
19	352.08	348 -	355	352.15	4.57E+02	65.57	4.12E+02	1.51
20	464.06	460 -	468	464.08	5.29E+01	43.39	2.48E+02	1.87
21	478.83	477 -	481	478.84	2.11E+01	25.10	1.20E+02	2.60
22	511.29	508 -	517	511.28	2.06E+02	46.05	1.86E+02	2.42
23	549.48	546 -	554	549.46	2.85E+01	36.14	1.81E+02	4.00
24	583.33	578 -	587	583.28	2.34E+02	47.95	1.94E+02	2.05
25	609.60	605 -	614	609.54	3.60E+02	49.49	1.42E+02	2.10
26	638.36	636 -	641	638.29	1.91E+01	24.29	1.04E+02	2.39
27	727.40	721 -	731	727.28	4.42E+01	37.57	1.64E+02	2.66
28	768.52	765 -	771	768.39	3.33E+01	28.44	1.23E+02	1.49
29	795.96	793 -	799	795.81	2.08E+01	24.88	9.05E+01	2.82
30	821.41	818 -	825	821.25	2.14E+01	23.24	7.52E+01	3.64
31	860.93	857 -	863	860.76	4.20E+01	24.53	7.60E+01	2.83
M 32	907.65	906 -	918	907.45	1.39E+01	14.97	4.63E+01	2.62
m 33	911.33	906 -	918	911.13	1.62E+02	30.90	5.76E+01	2.06
m 34	914.22	906 -	918	914.02	1.78E+01	33.65	6.38E+01	2.63
M 35	965.44	962 -	974	965.22	2.63E+01	26.03	7.83E+01	2.42
m 36	969.32	962 -	974	969.10	1.25E+02	31.96	8.06E+01	2.42
37	1120.24	1116 -	1123	1119.95	8.61E+01	26.53	5.98E+01	2.24
38	1198.30	1188 -	1209	1197.98	7.02E+01	46.27	1.44E+02	17.75
39	1213.67	1210 -	1216	1213.34	3.29E+01	18.95	4.02E+01	3.84
40	1239.11	1233 -	1245	1238.78	6.44E+01	37.35	1.25E+02	2.79

Analysis Report for 1510086-04
CP4105S01-02

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	FWHM (keV)
41	1306.84	1302 -	1310	1306.48	2.40E+01	18.17	3.60E+01	3.83
42	1378.34	1373 -	1383	1377.95	3.29E+01	20.39	3.63E+01	2.30
43	1401.02	1398 -	1404	1400.62	1.81E+01	14.48	2.59E+01	2.07
44	1408.03	1404 -	1410	1407.62	1.44E+01	17.53	4.52E+01	2.16
45	1460.89	1454 -	1465	1460.47	5.57E+02	50.16	3.68E+01	2.28
46	1590.98	1586 -	1595	1590.51	4.10E+01	12.81	0.00E+00	5.13
47	1630.49	1626 -	1633	1630.01	8.86E+00	10.20	1.03E+01	3.43
48	1728.49	1723 -	1732	1727.97	1.32E+01	11.05	9.56E+00	1.42
49	1734.67	1732 -	1736	1734.15	5.50E+00	6.67	5.00E+00	2.39
50	1764.70	1759 -	1769	1764.17	6.06E+01	19.15	1.67E+01	2.95
51	1802.85	1798 -	1804	1802.31	6.00E+00	6.65	4.00E+00	1.08
52	2088.68	2083 -	2094	2088.04	1.10E+01	11.83	1.20E+01	1.50
53	2103.04	2099 -	2106	2102.40	1.23E+01	10.95	1.13E+01	2.01
54	2204.24	2200 -	2206	2203.57	1.17E+01	9.19	6.67E+00	1.59
55	2614.59	2608 -	2618	2613.81	7.14E+01	18.06	5.15E+00	3.17

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 11/6/2015 12:23:37PM

Peak Analysis From Channel : 1
Peak Analysis To Channel : 4096

Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
1	46.33	44 -	49	1.50E+02	78.98	1.14E+03	6.17E+01
2	76.21	71 -	82	1.32E+03	175.25	3.13E+03	1.31E+02
M 3	84.97	82 -	97	1.63E+02	83.96	1.30E+03	5.93E+01
m 4	87.98	82 -	97	3.62E+02	108.98	1.64E+03	6.65E+01
m 5	93.02	82 -	97	3.56E+02	107.00	1.48E+03	6.32E+01
6	129.97	126 -	133	1.07E+02	82.92	1.06E+03	6.60E+01
7	136.85	134 -	140	1.03E+02	71.93	8.69E+02	5.67E+01
8	186.03	182 -	189	1.32E+02	81.44	1.01E+03	6.42E+01
9	200.20	198 -	203	6.88E+01	57.05	5.94E+02	4.49E+01
10	209.09	206 -	212	5.72E+01	63.73	6.92E+02	5.09E+01
11	214.60	213 -	217	3.93E+01	46.77	4.49E+02	3.70E+01
12	222.02	219 -	225	5.04E+01	60.10	6.15E+02	4.80E+01
M 13	238.80	234 -	246	7.99E+02	73.28	4.56E+02	3.51E+01

: 00416

Analysis Report for 1510086-04

CP4105S01-02

	Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
m	14	241.92	234 -	246	2.24E+02	77.27	5.17E+02	3.74E+01
	15	270.51	266 -	274	9.17E+01	65.19	5.95E+02	5.12E+01
M	16	295.32	292 -	303	3.38E+02	54.31	2.95E+02	2.82E+01
m	17	299.98	292 -	303	8.34E+01	45.76	3.31E+02	2.99E+01
	18	339.11	335 -	344	1.78E+02	62.31	4.48E+02	4.63E+01
	19	352.08	348 -	355	4.57E+02	65.57	4.12E+02	4.09E+01
	20	464.06	460 -	468	5.29E+01	43.39	2.48E+02	3.36E+01
	21	478.83	477 -	481	2.11E+01	25.10	1.20E+02	1.92E+01
	22	511.29	508 -	517	2.06E+02	46.05	1.86E+02	2.96E+01
	23	549.48	546 -	554	2.85E+01	36.14	1.81E+02	2.84E+01
	24	583.33	578 -	587	2.34E+02	47.95	1.94E+02	3.03E+01
	25	609.60	605 -	614	3.60E+02	49.49	1.42E+02	2.61E+01
	26	638.36	636 -	641	1.91E+01	24.29	1.04E+02	1.86E+01
	27	727.40	721 -	731	4.42E+01	37.57	1.64E+02	2.89E+01
	28	768.52	765 -	771	3.33E+01	28.44	1.23E+02	2.14E+01
	29	795.96	793 -	799	2.08E+01	24.88	9.05E+01	1.90E+01
	30	821.41	818 -	825	2.14E+01	23.24	7.52E+01	1.75E+01
	31	860.93	857 -	863	4.20E+01	24.53	7.60E+01	1.71E+01
M	32	907.65	906 -	918	1.39E+01	14.97	4.63E+01	1.12E+01
m	33	911.33	906 -	918	1.62E+02	30.90	5.76E+01	1.25E+01
m	34	914.22	906 -	918	1.78E+01	33.65	6.38E+01	1.31E+01
M	35	965.44	962 -	974	2.63E+01	26.03	7.83E+01	1.45E+01
m	36	969.32	962 -	974	1.25E+02	31.96	8.06E+01	1.48E+01
	37	1120.24	1116 -	1123	8.61E+01	26.53	5.98E+01	1.56E+01
	38	1198.30	1188 -	1209	7.02E+01	46.27	1.44E+02	3.55E+01
	39	1213.67	1210 -	1216	3.29E+01	18.95	4.02E+01	1.24E+01
	40	1239.11	1233 -	1245	6.44E+01	37.35	1.25E+02	2.77E+01
	41	1306.84	1302 -	1310	2.40E+01	18.17	3.60E+01	1.26E+01
	42	1378.34	1373 -	1383	3.29E+01	20.39	3.63E+01	1.39E+01
	43	1401.02	1398 -	1404	1.81E+01	14.48	2.59E+01	9.64E+00
	44	1408.03	1404 -	1410	1.44E+01	17.53	4.52E+01	1.30E+01
	45	1460.89	1454 -	1465	5.57E+02	50.16	3.68E+01	1.40E+01
	46	1590.98	1586 -	1595	4.10E+01	12.81	0.00E+00	0.00E+00
	47	1630.49	1626 -	1633	8.86E+00	10.20	1.03E+01	6.81E+00
	48	1728.49	1723 -	1732	1.32E+01	11.05	9.56E+00	6.83E+00
	49	1734.67	1732 -	1736	5.50E+00	6.67	5.00E+00	3.90E+00
	50	1764.70	1759 -	1769	6.06E+01	19.15	1.67E+01	9.16E+00
	51	1802.85	1798 -	1804	6.00E+00	6.65	4.00E+00	3.70E+00
	52	2088.68	2083 -	2094	1.10E+01	11.83	1.20E+01	8.05E+00
	53	2103.04	2099 -	2106	1.23E+01	10.95	1.13E+01	6.91E+00
	54	2204.24	2200 -	2206	1.17E+01	9.19	6.67E+00	5.06E+00
	55	2614.59	2608 -	2618	7.14E+01	18.06	5.15E+00	5.23E+00

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.00sigma

Analysis Report for 1510086-04
CP4105S01-02

PEAK WITH NID REPORT

Peak Analysis Performed on : 11/6/2015 12:23:37PM

Peak Analysis From Channel : 1

Peak Analysis To Channel : 4096

Tentative NID Library : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

Peak Match Tolerance : 1.000 keV

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
	1	44 -	49	46.56	1.50E+02	78.98	1.14E+03	PB-210
	2	71 -	82	76.43	1.32E+03	175.25	3.13E+03	.....
M	3	82 -	97	85.18	1.63E+02	83.96	1.30E+03	TH-231
m	4	82 -	97	88.19	3.62E+02	108.98	1.64E+03	CD-109 LU-176 SN-126
	5	82 -	97	93.22	3.56E+02	107.00	1.48E+03	GA-67
m	6	126 -	133	130.15	1.07E+02	82.92	1.06E+03	.....
	7	134 -	140	137.03	1.03E+02	71.93	8.69E+02	CO-57 SE-75
	8	182 -	189	186.19	1.32E+02	81.44	1.01E+03	RA-226
	9	198 -	203	200.34	6.88E+01	57.05	5.94E+02	.....
	10	206 -	212	209.23	5.72E+01	63.73	6.92E+02	GA-67 CM-243
	11	213 -	217	214.74	3.93E+01	46.77	4.49E+02	.....
	12	219 -	225	222.16	5.04E+01	60.10	6.15E+02	.....
M	13	234 -	246	238.93	7.99E+02	73.28	4.56E+02	PB-212
m	14	234 -	246	242.05	2.24E+02	77.27	5.17E+02	RA-224
	15	266 -	274	270.62	9.17E+01	65.19	5.95E+02	.....
M	16	292 -	303	295.42	3.38E+02	54.31	2.95E+02	PB-214
m	17	292 -	303	300.08	8.34E+01	45.76	3.31E+02	BI-210M PB-212 GA-67
	18	335 -	344	339.19	1.78E+02	62.31	4.48E+02	AC-228
	19	348 -	355	352.15	4.57E+02	65.57	4.12E+02	PB-214
	20	460 -	468	464.08	5.29E+01	43.39	2.48E+02	SB-125
	21	477 -	481	478.84	2.11E+01	25.10	1.20E+02	.....
	22	508 -	517	511.28	2.06E+02	46.05	1.86E+02	.....
	23	546 -	554	549.46	2.85E+01	36.14	1.81E+02	.....
	24	578 -	587	583.28	2.34E+02	47.95	1.94E+02	TL-208
	25	605 -	614	609.54	3.60E+02	49.49	1.42E+02	BI-214
	26	636 -	641	638.29	1.91E+01	24.29	1.04E+02	.....
	27	721 -	731	727.28	4.42E+01	37.57	1.64E+02	BI-212
	28	765 -	771	768.39	3.33E+01	28.44	1.23E+02	.....
	29	793 -	799	795.81	2.08E+01	24.88	9.05E+01	CS-134
	30	818 -	825	821.25	2.14E+01	23.24	7.52E+01	.....
	31	857 -	863	860.76	4.20E+01	24.53	7.60E+01	TL-208
M	32	906 -	918	907.45	1.39E+01	14.97	4.63E+01	.....

Analysis Report for 1510086-04
CP4105S01-02

	Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
m	33	911.33	906 -	918	911.13	1.62E+02	30.90	5.76E+01	AC-228 LU-172
m	34	914.22	906 -	918	914.02	1.78E+01	33.65	6.38E+01	.....
M	35	965.44	962 -	974	965.22	2.63E+01	26.03	7.83E+01	.....
m	36	969.32	962 -	974	969.10	1.25E+02	31.96	8.06E+01	AC-228
	37	1120.24	1116 -	1123	1119.95	8.61E+01	26.53	5.98E+01	BI-214 SC-46
	38	1198.30	1188 -	1209	1197.98	7.02E+01	46.27	1.44E+02	.....
	39	1213.67	1210 -	1216	1213.34	3.29E+01	18.95	4.02E+01	.....
	40	1239.11	1233 -	1245	1238.78	6.44E+01	37.35	1.25E+02	CO-56
	41	1306.84	1302 -	1310	1306.48	2.40E+01	18.17	3.60E+01	.....
	42	1378.34	1373 -	1383	1377.95	3.29E+01	20.39	3.63E+01	.....
	43	1401.02	1398 -	1404	1400.62	1.81E+01	14.48	2.59E+01	.....
	44	1408.03	1404 -	1410	1407.62	1.44E+01	17.53	4.52E+01	EU-152
	45	1460.89	1454 -	1465	1460.47	5.57E+02	50.16	3.68E+01	K-40
	46	1590.98	1586 -	1595	1590.51	4.10E+01	12.81	0.00E+00	.....
	47	1630.49	1626 -	1633	1630.01	8.86E+00	10.20	1.03E+01	.....
	48	1728.49	1723 -	1732	1727.97	1.32E+01	11.05	9.56E+00	.....
	49	1734.67	1732 -	1736	1734.15	5.50E+00	6.67	5.00E+00	.....
	50	1764.70	1759 -	1769	1764.17	6.06E+01	19.15	1.67E+01	BI-214
	51	1802.85	1798 -	1804	1802.31	6.00E+00	6.65	4.00E+00	.....
	52	2088.68	2083 -	2094	2088.04	1.10E+01	11.83	1.20E+01	.....
	53	2103.04	2099 -	2106	2102.40	1.23E+01	10.95	1.13E+01	.....
	54	2204.24	2200 -	2206	2203.57	1.17E+01	9.19	6.67E+00	BI-214
	55	2614.59	2608 -	2618	2613.81	7.14E+01	18.06	5.15E+00	TL-208

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

PEAK EFFICIENCY REPORT

Peak Analysis Performed on : 11/6/2015 12:23:37PM

	Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
	1	46.33	1.50E+02	78.98	1.49E-02	1.58E-03
	2	76.21	1.32E+03	175.25	2.38E-02	2.13E-03
M	3	84.97	1.63E+02	83.96	2.43E-02	2.42E-03
m	4	87.98	3.62E+02	108.98	2.44E-02	2.52E-03
m	5	93.02	3.56E+02	107.00	2.44E-02	2.41E-03

Analysis Report for 1510086-04
CP4105S01-02

	Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
	6	129.97	1.07E+02	82.92	2.25E-02	1.69E-03
	7	136.85	1.03E+02	71.93	2.19E-02	1.66E-03
	8	186.03	1.32E+02	81.44	1.83E-02	1.42E-03
	9	200.20	6.88E+01	57.05	1.74E-02	1.36E-03
	10	209.09	5.72E+01	63.73	1.68E-02	1.32E-03
	11	214.60	3.93E+01	46.77	1.65E-02	1.29E-03
	12	222.02	5.04E+01	60.10	1.61E-02	1.26E-03
M	13	238.80	7.99E+02	73.28	1.52E-02	1.18E-03
m	14	241.92	2.24E+02	77.27	1.51E-02	1.17E-03
	15	270.51	9.17E+01	65.19	1.38E-02	1.04E-03
M	16	295.32	3.38E+02	54.31	1.28E-02	9.74E-04
m	17	299.98	8.34E+01	45.76	1.27E-02	9.67E-04
	18	339.11	1.78E+02	62.31	1.14E-02	9.12E-04
	19	352.08	4.57E+02	65.57	1.11E-02	8.93E-04
	20	464.06	5.29E+01	43.39	8.71E-03	7.65E-04
	21	478.83	2.11E+01	25.10	8.48E-03	7.50E-04
	22	511.29	2.06E+02	46.05	8.01E-03	7.18E-04
	23	549.48	2.85E+01	36.14	7.52E-03	6.80E-04
	24	583.33	2.34E+02	47.95	7.14E-03	6.46E-04
	25	609.60	3.60E+02	49.49	6.87E-03	6.20E-04
	26	638.36	1.91E+01	24.29	6.60E-03	5.91E-04
	27	727.40	4.42E+01	37.57	5.89E-03	5.14E-04
	28	768.52	3.33E+01	28.44	5.62E-03	4.80E-04
	29	795.96	2.08E+01	24.88	5.45E-03	4.58E-04
	30	821.41	2.14E+01	23.24	5.30E-03	4.37E-04
	31	860.93	4.20E+01	24.53	5.09E-03	4.05E-04
M	32	907.65	1.39E+01	14.97	4.87E-03	3.73E-04
m	33	911.33	1.62E+02	30.90	4.85E-03	3.72E-04
m	34	914.22	1.78E+01	33.65	4.84E-03	3.72E-04
M	35	965.44	2.63E+01	26.03	4.62E-03	3.62E-04
m	36	969.32	1.25E+02	31.96	4.60E-03	3.61E-04
	37	1120.24	8.61E+01	26.53	4.08E-03	3.33E-04
	38	1198.30	7.02E+01	46.27	3.86E-03	3.18E-04
	39	1213.67	3.29E+01	18.95	3.82E-03	3.15E-04
	40	1239.11	6.44E+01	37.35	3.75E-03	3.09E-04
	41	1306.84	2.40E+01	18.17	3.60E-03	2.94E-04
	42	1378.34	3.29E+01	20.39	3.45E-03	2.82E-04
	43	1401.02	1.81E+01	14.48	3.40E-03	2.78E-04
	44	1408.03	1.44E+01	17.53	3.39E-03	2.77E-04
	45	1460.89	5.57E+02	50.16	3.29E-03	2.69E-04
	46	1590.98	4.10E+01	12.81	3.08E-03	2.50E-04
	47	1630.49	8.86E+00	10.20	3.03E-03	2.44E-04
	48	1728.49	1.32E+01	11.05	2.90E-03	2.29E-04
	49	1734.67	5.50E+00	6.67	2.89E-03	2.28E-04
	50	1764.70	6.06E+01	19.15	2.86E-03	2.24E-04
	51	1802.85	6.00E+00	6.65	2.81E-03	2.18E-04
	52	2088.68	1.10E+01	11.83	2.55E-03	2.13E-04
	53	2103.04	1.23E+01	10.95	2.54E-03	2.13E-04
	54	2204.24	1.17E+01	9.19	2.46E-03	2.13E-04
	55	2614.59	7.14E+01	18.06	2.24E-03	2.13E-04

Analysis Report for 1510086-04
CP4105S01-02

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000 sigma

BACKGROUND SUBTRACT REPORT

Peak Analysis Performed on : 11/6/2015 12:23:37PM

Env. Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000028943.CNF

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
	1	1.50E+02	78.98	5.28E+01	1.09E+01	9.75E+01	7.97E+01
	2	1.32E+03	175.25			1.32E+03	1.75E+02
M	3	1.63E+02	83.96	8.68E+00	4.43E+00	1.54E+02	8.41E+01
m	4	3.62E+02	108.98	1.52E+01	5.37E+00	3.47E+02	1.09E+02
m	5	3.56E+02	107.00	9.04E+01	2.62E+01	2.65E+02	1.10E+02
	6	1.07E+02	82.92			1.07E+02	8.29E+01
	7	1.03E+02	71.93			1.03E+02	7.19E+01
	8	1.32E+02	81.44	3.93E+01	6.56E+00	9.31E+01	8.17E+01
	9	6.88E+01	57.05			6.88E+01	5.71E+01
	10	5.72E+01	63.73			5.72E+01	6.37E+01
	11	3.93E+01	46.77			3.93E+01	4.68E+01
	12	5.04E+01	60.10			5.04E+01	6.01E+01
M	13	7.99E+02	73.28	1.34E+01	2.14E+00	7.85E+02	7.33E+01
m	14	2.24E+02	77.27	2.69E+00	1.46E+00	2.21E+02	7.73E+01
	15	9.17E+01	65.19			9.17E+01	6.52E+01
M	16	3.38E+02	54.31			3.38E+02	5.43E+01
m	17	8.34E+01	45.76			8.34E+01	4.58E+01
	18	1.78E+02	62.31			1.78E+02	6.23E+01
	19	4.57E+02	65.57	3.99E+00	4.73E+00	4.53E+02	6.57E+01
	20	5.29E+01	43.39			5.29E+01	4.34E+01
	21	2.11E+01	25.10			2.11E+01	2.51E+01
	22	2.06E+02	46.05	5.78E+01	4.60E+00	1.48E+02	4.63E+01
	23	2.85E+01	36.14			2.85E+01	3.61E+01
	24	2.34E+02	47.95	5.96E+00	3.46E+00	2.28E+02	4.81E+01
	25	3.60E+02	49.49	6.71E+00	3.44E+00	3.53E+02	4.96E+01
	26	1.91E+01	24.29			1.91E+01	2.43E+01
	27	4.42E+01	37.57			4.42E+01	3.76E+01
	28	3.33E+01	28.44			3.33E+01	2.84E+01
	29	2.08E+01	24.88			2.08E+01	2.49E+01
	30	2.14E+01	23.24			2.14E+01	2.32E+01
	31	4.20E+01	24.53			4.20E+01	2.45E+01
M	32	1.39E+01	14.97			1.39E+01	1.50E+01
m	33	1.62E+02	30.90	2.32E+00	2.73E+00	1.60E+02	3.10E+01
m	34	1.78E+01	33.65			1.78E+01	3.36E+01
M	35	2.63E+01	26.03			2.63E+01	2.60E+01

Analysis Report for 1510086-04

CP4105S01-02

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
m 36	969.32	1.25E+02	31.96			1.25E+02	3.20E+01
37	1120.24	8.61E+01	26.53	2.00E+00	2.20E+00	8.41E+01	2.66E+01
38	1198.30	7.02E+01	46.27			7.02E+01	4.63E+01
39	1213.67	3.29E+01	18.95			3.29E+01	1.89E+01
40	1239.11	6.44E+01	37.35			6.44E+01	3.74E+01
41	1306.84	2.40E+01	18.17			2.40E+01	1.82E+01
42	1378.34	3.29E+01	20.39			3.29E+01	2.04E+01
43	1401.02	1.81E+01	14.48			1.81E+01	1.45E+01
44	1408.03	1.44E+01	17.53			1.44E+01	1.75E+01
45	1460.89	5.57E+02	50.16	2.36E+00	1.83E+00	5.54E+02	5.02E+01
46	1590.98	4.10E+01	12.81			4.10E+01	1.28E+01
47	1630.49	8.86E+00	10.20			8.86E+00	1.02E+01
48	1728.49	1.32E+01	11.05			1.32E+01	1.10E+01
49	1734.67	5.50E+00	6.67			5.50E+00	6.67E+00
50	1764.70	6.06E+01	19.15	1.45E+00	1.16E+00	5.92E+01	1.92E+01
51	1802.85	6.00E+00	6.65			6.00E+00	6.65E+00
52	2088.68	1.10E+01	11.83			1.10E+01	1.18E+01
53	2103.04	1.23E+01	10.95			1.23E+01	1.10E+01
54	2204.24	1.17E+01	9.19			1.17E+01	9.19E+00
55	2614.59	7.14E+01	18.06	2.66E+00	1.22E+00	6.88E+01	1.81E+01

M = First peak in a multiplet region
 m = Other peak in a multiplet region
 F = Fitted singlet
 Errors quoted at 2.000sigma

AREA CORRECTION REPORT REFERENCE PEAK / BKG. SUBTRACT

Peak Analysis Performed on : 11/6/2015 12:23:37PM
 Ref. Peak Energy : 0.00 Reference Date :
 Peak Ratio : 0.00 Uncertainty : 0.00
 Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000028943.CNF

Corrected Area is: Original * Peak Ratio - Background

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
1	46.33	1.50E+02	78.98	5.28E+01	1.09E+01	9.75E+01	7.97E+01
2	76.21	1.32E+03	175.25			1.32E+03	1.75E+02
M 3	84.97	1.63E+02	83.96	8.68E+00	4.43E+00	1.54E+02	8.41E+01
m 4	87.98	3.62E+02	108.98	1.52E+01	5.37E+00	3.47E+02	1.09E+02
m 5	93.02	3.56E+02	107.00	9.04E+01	2.62E+01	2.65E+02	1.10E+02
6	129.97	1.07E+02	82.92			1.07E+02	8.29E+01
7	136.85	1.03E+02	71.93			1.03E+02	7.19E+01
8	186.03	1.32E+02	81.44	3.93E+01	6.56E+00	9.31E+01	8.17E+01

Analysis Report for 1510086-04

CP4105S01-02

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
	9	200.20	6.88E+01	57.05		6.88E+01	5.71E+01
	10	209.09	5.72E+01	63.73		5.72E+01	6.37E+01
	11	214.60	3.93E+01	46.77		3.93E+01	4.68E+01
	12	222.02	5.04E+01	60.10		5.04E+01	6.01E+01
M	13	238.80	7.99E+02	73.28	1.34E+01	2.14E+00	7.85E+02
m	14	241.92	2.24E+02	77.27	2.69E+00	1.46E+00	2.21E+02
	15	270.51	9.17E+01	65.19		9.17E+01	6.52E+01
M	16	295.32	3.38E+02	54.31		3.38E+02	5.43E+01
m	17	299.98	8.34E+01	45.76		8.34E+01	4.58E+01
	18	339.11	1.78E+02	62.31		1.78E+02	6.23E+01
	19	352.08	4.57E+02	65.57	3.99E+00	4.73E+00	4.53E+02
	20	464.06	5.29E+01	43.39		5.29E+01	4.34E+01
	21	478.83	2.11E+01	25.10		2.11E+01	2.51E+01
	22	511.29	2.06E+02	46.05	5.78E+01	4.60E+00	1.48E+02
	23	549.48	2.85E+01	36.14		2.85E+01	3.61E+01
	24	583.33	2.34E+02	47.95	5.96E+00	3.46E+00	2.28E+02
	25	609.60	3.60E+02	49.49	6.71E+00	3.44E+00	3.53E+02
	26	638.36	1.91E+01	24.29		1.91E+01	2.43E+01
	27	727.40	4.42E+01	37.57		4.42E+01	3.76E+01
	28	768.52	3.33E+01	28.44		3.33E+01	2.84E+01
	29	795.96	2.08E+01	24.88		2.08E+01	2.49E+01
	30	821.41	2.14E+01	23.24		2.14E+01	2.32E+01
	31	860.93	4.20E+01	24.53		4.20E+01	2.45E+01
M	32	907.65	1.39E+01	14.97		1.39E+01	1.50E+01
m	33	911.33	1.62E+02	30.90	2.32E+00	2.73E+00	1.60E+02
m	34	914.22	1.78E+01	33.65		1.78E+01	3.36E+01
M	35	965.44	2.63E+01	26.03		2.63E+01	2.60E+01
m	36	969.32	1.25E+02	31.96		1.25E+02	3.20E+01
	37	1120.24	8.61E+01	26.53	2.00E+00	2.20E+00	8.41E+01
	38	1198.30	7.02E+01	46.27		7.02E+01	4.63E+01
	39	1213.67	3.29E+01	18.95		3.29E+01	1.89E+01
	40	1239.11	6.44E+01	37.35		6.44E+01	3.74E+01
	41	1306.84	2.40E+01	18.17		2.40E+01	1.82E+01
	42	1378.34	3.29E+01	20.39		3.29E+01	2.04E+01
	43	1401.02	1.81E+01	14.48		1.81E+01	1.45E+01
	44	1408.03	1.44E+01	17.53		1.44E+01	1.75E+01
	45	1460.89	5.57E+02	50.16	2.36E+00	1.83E+00	5.54E+02
	46	1590.98	4.10E+01	12.81		4.10E+01	1.28E+01
	47	1630.49	8.86E+00	10.20		8.86E+00	1.02E+01
	48	1728.49	1.32E+01	11.05		1.32E+01	1.10E+01
	49	1734.67	5.50E+00	6.67		5.50E+00	6.67E+00
	50	1764.70	6.06E+01	19.15	1.45E+00	1.16E+00	5.92E+01
	51	1802.85	6.00E+00	6.65		6.00E+00	6.65E+00
	52	2088.68	1.10E+01	11.83		1.10E+01	1.18E+01
	53	2103.04	1.23E+01	10.95		1.23E+01	1.10E+01
	54	2204.24	1.17E+01	9.19		1.17E+01	9.19E+00
	55	2614.59	7.14E+01	18.06	2.66E+00	1.22E+00	6.88E+01

M = First peak in a multiplet region

m = Other peak in a multiplet region

F = Fitted singlet

Errors quoted at 2.000sigma

Analysis Report for 1510086-04
CP4105S01-02

NUCLIDE IDENTIFICATION REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

IDENTIFIED NUCLIDES

Nuclide Name	Id Confidence	Energy (keV)		Yield(%)	Activity (pCi/grams)	Activity Uncertainty
K-40	0.999	1460.81	*	10.67	1.93E+01	2.39E+00
GA-67	0.626	93.31	*	35.70	2.81E+02	1.19E+03
		208.95	*	2.24	1.40E+03	5.90E+03
		300.22	*	16.00	3.80E+02	1.62E+03
		88.03	*	3.72	4.90E+00	1.65E+00
CD-109	1.000	88.03	*	3.72	4.90E+00	1.65E+00
SN-126	0.973	87.57	*	37.00	4.70E-01	1.56E-01
TL-208	0.994	583.14	*	30.22	1.30E+00	2.97E-01
		860.37	*	4.48	2.26E+00	1.33E+00
		2614.66	*	35.85	1.05E+00	2.94E-01
		46.50	*	4.25	1.89E+00	1.56E+00
PB-210	0.995	46.50	*	4.25	1.89E+00	1.56E+00
BI-212	0.764	727.17	*	11.80	7.80E-01	6.66E-01
		1620.62		2.75		
PB-212	0.996	238.63	*	44.60	1.42E+00	1.72E-01
		300.09	*	3.41	2.37E+00	1.31E+00
BI-214	0.991	609.31	*	46.30	1.36E+00	2.27E-01
		1120.29	*	15.10	1.67E+00	5.47E-01
		1764.49	*	15.80	1.61E+00	5.36E-01
		2204.22	*	4.98	1.17E+00	9.24E-01
		295.21	*	19.19	1.68E+00	2.99E-01
PB-214	0.997	351.92	*	37.19	1.35E+00	2.24E-01
		240.98	*	3.95	4.55E+00	1.63E+00
RA-224	0.869	240.98	*	3.95	4.55E+00	1.63E+00
RA-226	0.995	186.21	*	3.28	1.90E+00	3.86E+00
AC-228	0.973	338.32	*	11.40	1.67E+00	6.02E-01
		911.07	*	27.70	1.45E+00	3.04E-01
		969.11	*	16.60	2.00E+00	5.36E-01

* = Energy line found in the spectrum.

- = Manually added nuclide.

? = Manually edited nuclide.

Energy Tolerance : 1.000 keV

Nuclide confidence index threshold = 0.30

Errors quoted at 2.000sigma

Analysis Report for 1510086-04
CP4105S01-02

UNIDENTIFIED PEAKS

Peak Locate Performed on : 11/6/2015 12:23:37PM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
M 2	76.21	3.67901E-01	6.62		
3	84.97	4.27368E-02	27.33	Tol.	TH-231
6	129.97	2.96492E-02	38.84		
7	136.85	2.85234E-02	35.02		
9	200.20	1.91200E-02	41.44		
11	214.60	1.09096E-02	59.54		
12	222.02	1.39867E-02	59.68		
15	270.51	2.54720E-02	35.54		
20	464.06	1.46806E-02	41.05	Tol.	SB-125
21	478.83	5.85905E-03	59.51		
22	511.29	4.11275E-02	15.63		
23	549.48	7.91783E-03	63.40		
26	638.36	5.29734E-03	63.68	Sum	
28	768.52	9.24123E-03	42.74	Sum	
29	795.96	5.76810E-03	59.92	Sum	
30	821.41	5.94397E-03	54.30	Sum	
M 32	907.65	3.84930E-03	54.00	Sum	
m 34	914.22	4.95100E-03	94.38	Sum	
M 35	965.44	7.30448E-03	49.50	Sum	
38	1198.30	1.94924E-02	32.97		
39	1213.67	9.14570E-03	28.77	Sum	
40	1239.11	1.78992E-02	28.98	Tol.	CO-56
41	1306.84	6.66667E-03	37.85	Sum	
42	1378.34	9.12582E-03	31.03		
43	1401.02	5.01792E-03	40.09		
44	1408.03	4.00150E-03	60.84	Tol.	EU-152
46	1590.98	1.13889E-02	15.62		
47	1630.49	2.46032E-03	57.57		
48	1728.49	3.67284E-03	41.77		
49	1734.67	1.52778E-03	60.64		
51	1802.85	1.66667E-03	55.43		
52	2088.68	3.05556E-03	53.78	Sum	
53	2103.04	3.42593E-03	44.41	S-Esc	

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.00sigma

Analysis Report for 1510086-04
CP4105S01-02

NUCLIDE IDENTIFICATION REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

IDENTIFIED NUCLIDES

Nuclide Name	Id Confidence	Energy (keV)		Yield(%)	Activity (pCi/grams)	Activity Uncertainty
K-40	0.99	1460.81 *		10.67	1.93E+01	2.39E+00
GA-67	0.62	93.31 *		35.70	2.81E+02	1.19E+03
		208.95 *		2.24	1.40E+03	5.90E+03
		300.22 *		16.00	3.80E+02	1.62E+03
CD-109	1.00	88.03 *		3.72	4.90E+00	1.65E+00
SN-126	0.97	87.57 *		37.00	4.70E-01	1.56E-01
TL-208	0.99	583.14 *		30.22	1.30E+00	2.97E-01
		860.37 *		4.48	2.26E+00	1.33E+00
		2614.66 *		35.85	1.05E+00	2.94E-01
PB-210	0.99	46.50 *		4.25	1.89E+00	1.56E+00
BI-212	0.76	727.17 *		11.80	7.80E-01	6.66E-01
		1620.62		2.75		
PB-212	0.99	238.63 *		44.60	1.42E+00	1.72E-01
		300.09 *		3.41	2.37E+00	1.31E+00
BI-214	0.99	609.31 *		46.30	1.36E+00	2.27E-01
		1120.29 *		15.10	1.67E+00	5.47E-01
		1764.49 *		15.80	1.61E+00	5.36E-01
		2204.22 *		4.98	1.17E+00	9.24E-01
PB-214	0.99	295.21 *		19.19	1.68E+00	2.99E-01
		351.92 *		37.19	1.35E+00	2.24E-01
RA-224	0.86	240.98 *		3.95	4.55E+00	1.63E+00
RA-226	0.99	186.21 *		3.28	1.90E+00	3.86E+00
AC-228	0.97	338.32 *		11.40	1.67E+00	6.02E-01
		911.07 *		27.70	1.45E+00	3.04E-01
		969.11 *		16.60	2.00E+00	5.36E-01

* = Energy line found in the spectrum.

- = Manually added nuclide.

? = Manually edited nuclide.

@ = Energy line not used for Weighted Mean Activity

Energy Tolerance : 1.000 keV

Nuclide confidence index threshold = 0.30

Errors quoted at 2.000sigma

Analysis Report for 1510086-04
CP4105S01-02

INTERFERENCE CORRECTED REPORT

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40	0.999	1.93E+01	2.39E+00	
GA-67	0.626	2.55E+02	1.04E+03	
? CD-109	1.000	4.90E+00	1.65E+00	
? SN-126	0.973	4.70E-01	1.56E-01	
TL-208	0.994	1.20E+00	2.06E-01	
PB-210	0.995	1.89E+00	1.56E+00	
BI-212	0.764	7.80E-01	6.66E-01	
PB-212	0.996	1.41E+00	1.71E-01	
BI-214	0.991	1.42E+00	1.91E-01	
PB-214	0.997	1.47E+00	1.79E-01	
RA-224	0.869	4.55E+00	1.63E+00	
RA-226	0.995	1.90E+00	3.86E+00	
AC-228	0.973	1.60E+00	2.42E-01	

- ? = nuclide is part of an undetermined solution
X = nuclide rejected by the interference analysis
@ = nuclide contains energy lines not used in Weighted Mean Activity

Errors quoted at 2.000sigma

Analysis Report for 1510086-04
CP4105S01-02

UNIDENTIFIED PEAKS

Peak Locate Performed on : 11/6/2015 12:23:37PM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
	2	76.21	3.67901E-01		
M	3	84.97	4.27368E-02	Tol.	TH-231
	6	129.97	2.96492E-02		
	7	136.85	2.85234E-02		
	9	200.20	1.91200E-02		
	11	214.60	1.09096E-02		
	12	222.02	1.39867E-02		
	15	270.51	2.54720E-02		
	20	464.06	1.46806E-02	Tol.	SB-125
	21	478.83	5.85905E-03		
	22	511.29	4.11275E-02		
	23	549.48	7.91783E-03		
	26	638.36	5.29734E-03	Sum	
	28	768.52	9.24123E-03	Sum	
	29	795.96	5.76810E-03	Sum	
	30	821.41	5.94397E-03	Sum	
M	32	907.65	3.84930E-03	Sum	
m	34	914.22	4.95100E-03	Sum	
M	35	965.44	7.30448E-03	Sum	
	38	1198.30	1.94924E-02		
	39	1213.67	9.14570E-03	Sum	
	40	1239.11	1.78992E-02	Tol.	CO-56
	41	1306.84	6.66667E-03	Sum	
	42	1378.34	9.12582E-03		
	43	1401.02	5.01792E-03		
	44	1408.03	4.00150E-03	Tol.	EU-152
	46	1590.98	1.13889E-02		
	47	1630.49	2.46032E-03		
	48	1728.49	3.67284E-03		
	49	1734.67	1.52778E-03		
	51	1802.85	1.66667E-03		
	52	2088.68	3.05556E-03	Sum	
	53	2103.04	3.42593E-03	S-Esc	

Analysis Report for 1510086-04
CP4105S01-02

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

NUCLIDE MDA REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+ BE-7	477.59	10.42	5.18E-03	1.07E+00	1.07E+00
+ NA-22	1274.54	99.94	4.13E-02	1.29E-01	1.29E-01
+ NA-24	1368.53	99.99	2.00E+13	6.20E+13	9.91E+13
	2754.09	99.86	-1.02E+13		6.20E+13
+ AL-26	1808.65	99.76	-7.29E-03	7.29E-02	7.29E-02
+ K-40	1460.81	* 10.67	1.93E+01	1.09E+00	1.09E+00
+ @ AR-41	1293.64	99.16	1.00E+26	1.00E+26	1.00E+26
+ TI-44	67.88	94.40	1.43E-02	7.51E-02	7.51E-02
	78.34	96.00	2.64E-01		9.25E-02
+ SC-46	889.25	99.98	1.44E-02	1.21E-01	1.21E-01
	1120.51	99.99	2.88E-01		2.00E-01
+ V-48	983.52	99.98	-1.03E-01	3.11E-01	3.11E-01
	1312.10	97.50	-6.48E-02		4.10E-01
+ CR-51	320.08	9.83	-3.50E-01	1.46E+00	1.46E+00
+ MN-54	834.83	99.97	-2.23E-02	9.50E-02	9.50E-02
+ CO-56	846.75	99.96	-7.80E-03	1.14E-01	1.14E-01
	1037.75	14.03	1.72E-01		8.97E-01
	1238.25	67.00	2.42E-01		2.99E-01
	1771.40	15.51	9.03E-02		6.86E-01
	2598.48	16.90	8.49E-02		3.94E-01
+ CO-57	122.06	85.51	3.09E-03	6.32E-02	6.32E-02
	136.48	10.60	5.42E-01		5.50E-01
+ CO-58	810.76	99.40	-1.23E-02	1.17E-01	1.17E-01
+ FE-59	1099.22	56.50	-2.85E-02	2.73E-01	2.73E-01
	1291.56	43.20	1.58E-01		4.34E-01
+ CO-60	1173.22	100.00	-3.16E-02	1.00E-01	1.00E-01
	1332.49	100.00	-3.56E-02		1.03E-01
+ ZN-65	1115.52	50.75	2.86E-03	2.27E-01	2.27E-01
+ GA-67	93.31	* 35.70	2.81E+02	3.02E+02	3.02E+02
	208.95	* 2.24	1.40E+03		2.56E+03
	300.22	* 16.00	3.80E+02		4.74E+02
+ SE-75	121.11	16.70	1.99E-01	1.07E-01	3.68E-01

Analysis Report for 1510086-04
CP4105S01-02

<i>Nuclide Name</i>	<i>Energy (keV)</i>	<i>Yield(%)</i>	<i>Activity (pCi/grams)</i>	<i>Nuclide MDA (pCi/grams)</i>	<i>Line MDA (pCi/grams)</i>	
SE-75	136.00	59.20	2.54E-02	1.07E-01	1.07E-01	
	264.65	59.80	2.90E-02		1.34E-01	
	279.53	25.20	1.49E-01		3.28E-01	
	400.65	11.40	4.82E-01		7.96E-01	
+	RB-82	776.52	13.00	2.57E-01	1.54E+00	1.54E+00
+	RB-83	520.41	46.00	-7.93E-02	1.78E-01	1.78E-01
	529.64	30.30	-2.02E-02		2.98E-01	
	552.65	16.40	-3.21E-02		5.91E-01	
+	KR-85	513.99	0.43	3.40E+01	2.49E+01	2.49E+01
+	SR-85	513.99	99.27	2.06E-01	1.51E-01	1.51E-01
+	Y-88	898.02	93.40	-1.16E-02	8.62E-02	1.18E-01
	1836.01	99.38	-1.90E-02		8.62E-02	
+	NB-93M	16.57	9.43	9.00E+00	8.13E+01	8.13E+01
+	NB-94	702.63	100.00	2.16E-02	8.81E-02	9.15E-02
	871.10	100.00	3.99E-02		8.81E-02	
+	NB-95	765.79	99.81	5.22E-03	1.92E-01	1.92E-01
+	NB-95M	235.69	25.00	5.84E+02	1.89E+02	1.89E+02
+	ZR-95	724.18	43.70	-5.12E-02	2.21E-01	2.95E-01
	756.72	55.30	-8.18E-03		2.21E-01	
+	MO-99	181.06	6.20	7.84E+01	1.63E+03	2.28E+03
	739.58	12.80	-9.73E+02		1.63E+03	
	778.00	4.50	-2.75E+03		4.36E+03	
+	RU-103	497.08	89.00	-1.52E-02	1.39E-01	1.39E-01
+	RU-106	621.84	9.80	3.97E-01	9.05E-01	9.05E-01
+	AG-108M	433.93	89.90	5.42E-02	8.67E-02	8.67E-02
	614.37	90.40	6.96E-03		9.41E-02	
	722.95	90.50	-7.99E-02		9.39E-02	
+	CD-109	88.03	* 3.72	4.90E+00	3.99E+00	3.99E+00
+	AG-110M	657.75	93.14	-4.11E-02	9.53E-02	9.53E-02
	677.61	10.53	-2.03E-01		8.09E-01	
	706.67	16.46	1.95E-01		6.52E-01	
	763.93	21.98	5.84E-03		4.17E-01	
	884.67	71.63	6.15E-02		1.37E-01	
	1384.27	23.94	-4.06E-02		4.37E-01	
+	CD-113M	263.70	0.02	-2.85E+01	2.81E+02	2.81E+02
+	SN-113	255.12	1.93	-7.22E-01	1.31E-01	4.00E+00
	391.69	64.90	2.44E-02		1.31E-01	
+	TE123M	159.00	84.10	1.00E-02	7.86E-02	7.86E-02
+	SB-124	602.71	97.87	2.11E-03	1.21E-01	1.21E-01
	645.85	7.26	8.62E-02		1.66E+00	
	722.78	11.10	-9.31E-01		1.10E+00	
	1691.02	49.00	-3.10E-02		2.02E-01	
+	I-125	35.49	6.49	-7.12E-01	3.47E+00	3.47E+00
+	SB-125	176.33	6.89	1.59E-01	2.48E-01	8.19E-01
	427.89	29.33	-3.72E-02		2.48E-01	
	463.38	10.35	6.00E-01		8.27E-01	
	600.56	17.80	1.35E-01		4.88E-01	
	635.90	11.32	8.37E-02		7.74E-01	

Analysis Report for 1510086-04
CP4105S01-02

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	SB-126	414.70	83.30	-1.02E-01	4.87E-01	4.89E-01
		666.33	99.60	1.13E-01		5.15E-01
		695.00	99.60	-2.79E-02		4.87E-01
		720.50	53.80	-3.15E-01		7.87E-01
+	SN-126	87.57	* 37.00	4.70E-01	3.83E-01	3.83E-01
+	SB-127	473.00	25.00	-6.74E+00	6.46E+01	7.55E+01
		685.20	35.70	2.35E+01		6.46E+01
		783.80	14.70	3.71E+01		1.54E+02
+	I-129	29.78	57.00	-1.52E-01	4.52E-01	4.52E-01
		33.60	13.20	-3.76E-03		1.36E+00
		39.58	7.52	5.70E-01		1.56E+00
+	I-131	284.30	6.05	2.30E+00	1.20E+00	1.60E+01
		364.48	81.20	-2.52E-01		1.20E+00
		636.97	7.26	-1.84E+00		1.66E+01
		722.89	1.80	-5.89E+01		6.93E+01
+	TE-132	49.72	13.10	-6.99E+01	5.90E+01	4.72E+02
		228.16	88.00	1.07E+01		5.90E+01
+	BA-133	81.00	33.00	-1.19E+00	1.55E-01	1.82E-01
		302.84	17.80	2.76E-03		4.17E-01
		356.01	60.00	2.24E-02		1.55E-01
+	I-133	529.87	86.30	-3.69E+08	5.45E+09	5.45E+09
+	XE-133	81.00	38.00	-6.30E+01	9.66E+00	9.66E+00
+	CS-134	563.23	8.38	-7.15E-02	9.06E-02	9.92E-01
		569.32	15.43	1.40E-01		5.47E-01
		604.70	97.60	-1.16E-03		9.06E-02
		795.84	85.40	1.70E-02		1.10E-01
		801.93	8.73	3.65E-02		9.50E-01
+	CS-135	268.24	16.00	2.23E-01	4.69E-01	4.69E-01
+	@ I-135	1131.51	22.50	1.00E+26	1.00E+26	1.00E+26
	@	1260.41	28.60	1.00E+26		1.00E+26
	@	1678.03	9.54	1.00E+26		1.00E+26
+	CS-136	153.22	7.46	-9.62E-01	4.25E-01	3.72E+00
		163.89	4.61	1.84E+00		6.11E+00
		176.55	13.56	-3.12E-01		2.07E+00
		273.65	12.66	-6.05E-01		2.91E+00
		340.57	48.50	1.71E+00		9.84E-01
		818.50	99.70	-4.81E-02		4.25E-01
		1048.07	79.60	-9.63E-02		5.65E-01
		1235.34	19.70	-1.31E+00		3.67E+00
+	CS-137	661.65	85.12	-1.02E-02	1.05E-01	1.05E-01
+	LA-138	788.74	34.00	7.00E-02	1.28E-01	2.73E-01
		1435.80	66.00	-6.44E-03		1.28E-01
+	CE-139	165.85	80.35	3.11E-02	7.93E-02	7.93E-02
+	BA-140	162.64	6.70	6.39E-01	1.64E+00	4.35E+00
		304.84	4.50	3.38E+00		8.17E+00
		423.70	3.20	-6.66E-01		1.23E+01
		437.55	2.00	-4.57E+00		1.98E+01
		537.32	25.00	-2.92E-01		1.64E+00
+	LA-140	328.77	20.50	-9.20E-03	5.43E-01	1.94E+00

Analysis Report for 1510086-04
CP4105S01-02

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	LA-140	487.03	45.50	1.75E-01	5.43E-01	9.22E-01
		815.85	23.50	-1.01E-01		1.83E+00
		1596.49	95.49	5.65E-03		5.43E-01
+	CE-141	145.44	48.40	2.95E-02	2.12E-01	2.12E-01
+	CE-143	57.36	11.80	4.50E+05	1.53E+06	4.32E+06
		293.26	42.00	5.37E+04		1.53E+06
		664.55	5.20	7.08E+06		1.21E+07
+	CE-144	133.54	10.80	-2.47E-01	5.11E-01	5.11E-01
+	PM-144	476.78	42.00	-1.74E-02	8.14E-02	1.87E-01
		618.01	98.60	1.69E-02		8.14E-02
		696.49	99.49	3.42E-02		9.42E-02
+	PM-145	36.85	21.70	1.43E-01	3.55E-01	6.65E-01
		37.36	39.70	1.97E-01		3.55E-01
		42.30	15.10	-2.51E-01		6.60E-01
		72.40	2.31	-4.22E+00		3.67E+00
+	PM-146	453.90	39.94	-6.36E-03	1.81E-01	1.81E-01
		735.90	14.01	2.48E-01		6.27E-01
		747.13	13.10	2.08E-01		7.32E-01
+	ND-147	91.11	28.90	-2.28E-01	1.76E+00	1.76E+00
		531.02	13.10	-6.22E-01		3.85E+00
+	PM-149	285.90	3.10	1.90E+03	3.61E+04	3.61E+04
+	EU-152	121.78	20.50	1.19E-02	2.44E-01	2.44E-01
		244.69	5.40	1.48E-01		1.53E+00
		344.27	19.13	-3.16E-02		3.75E-01
		778.89	9.20	-1.02E-01		8.34E-01
		964.01	10.40	-2.55E+00		1.10E+00
		1085.78	7.22	-6.34E-02		1.38E+00
		1112.02	9.60	6.82E-02		1.10E+00
		1407.95	14.94	3.19E-01		8.16E-01
+	GD-153	97.43	31.30	1.08E-02	1.76E-01	1.76E-01
		103.18	22.20	-1.41E-01		2.46E-01
+	EU-154	123.07	40.50	3.39E-02	1.27E-01	1.27E-01
		723.30	19.70	-3.69E-01		4.34E-01
		873.19	11.50	-2.81E-01		7.16E-01
		996.32	10.30	-3.03E-02		8.94E-01
		1004.76	17.90	1.39E-01		5.44E-01
		1274.45	35.50	1.14E-01		3.58E-01
+	EU-155	86.50	30.90	1.11E-01	2.30E-01	2.30E-01
		105.30	20.70	5.23E-02		2.51E-01
+	EU-156	811.77	10.40	1.09E+00	3.42E+00	3.42E+00
		1153.47	7.20	2.65E+00		7.08E+00
		1230.71	8.90	5.62E-01		5.99E+00
+	HO-166M	184.41	72.60	1.38E-01	9.38E-02	9.38E-02
		280.45	29.60	7.88E-02		2.32E-01
		410.94	11.10	5.20E-01		6.72E-01
		711.69	54.10	1.42E-01		1.81E-01
+	TM-171	66.72	0.14	-7.33E+01	5.21E+01	5.21E+01
+	HF-172	81.75	4.52	-4.40E+00	4.47E-01	1.38E+00
		125.81	11.30	-2.74E-03		4.47E-01

Analysis Report for 1510086-04
CP4105S01-02

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)	
+	LU-172	181.53	20.60	1.25E+00	4.14E+00	6.87E+00
		810.06	16.63	-4.58E+00		1.27E+01
		912.12	15.25	6.02E+01		2.88E+01
		1093.66	62.50	3.95E-02		4.14E+00
+	LU-173	100.72	5.24	6.07E-02	3.76E-01	1.00E+00
		272.11	21.20	3.23E-01		3.76E-01
+	HF-175	343.40	84.00	-1.49E-02	1.20E-01	1.20E-01
+	LU-176	88.34	13.30	3.05E-01	7.34E-02	5.52E-01
		201.83	86.00	-1.37E-02		8.04E-02
		306.78	94.00	1.97E-02		7.34E-02
+	TA-182	67.75	41.20	3.97E-02	2.08E-01	2.08E-01
		1121.30	34.90	5.05E-01		5.31E-01
		1189.05	16.23	4.23E-02		7.88E-01
		1221.41	26.98	4.80E-01		5.89E-01
+	IR-192	1231.02	11.44	9.14E-02		1.36E+00
		308.46	29.68	2.21E-02	2.01E-01	3.14E-01
		468.07	48.10	4.81E-02		2.01E-01
+	HG-203	279.19	77.30	4.88E-02	1.41E-01	1.41E-01
+	BI-207	569.67	97.72	-2.88E-02	8.12E-02	8.12E-02
		1063.62	74.90	-6.08E-02		1.16E-01
		583.14	* 30.22	1.30E+00	2.24E-01	3.65E-01
+	TL-208	860.37	* 4.48	2.26E+00		1.98E+00
		2614.66	* 35.85	1.05E+00		2.24E-01
		262.00	45.00	6.04E-03	1.42E-01	1.42E-01
+	BI-210M	300.00	23.00	-1.22E+00		3.25E-01
	PB-210	46.50	* 4.25	1.89E+00	2.51E+00	2.51E+00
+	PB-211	404.84	2.90	-4.29E-01	2.50E+00	2.50E+00
		831.96	2.90	-6.94E-04		3.07E+00
+	BI-212	727.17	* 11.80	7.80E-01	1.07E+00	1.07E+00
		1620.62	2.75	7.32E-02		2.95E+00
+	PB-212	238.63	* 44.60	1.42E+00	2.81E-01	2.81E-01
		300.09	* 3.41	2.37E+00		2.95E+00
+	BI-214	609.31	* 46.30	1.36E+00	2.16E-01	2.16E-01
		1120.29	* 15.10	1.67E+00		6.86E-01
		1764.49	* 15.80	1.61E+00		5.85E-01
		2204.22	* 4.98	1.17E+00		1.28E+00
+	PB-214	295.21	* 19.19	1.68E+00	2.54E-01	5.13E-01
		351.92	* 37.19	1.35E+00		2.54E-01
+	RN-219	401.80	6.50	6.41E-01	1.16E+00	1.16E+00
+	RA-223	323.87	3.88	-1.76E+00	1.73E+00	1.73E+00
+	RA-224	240.98	* 3.95	4.55E+00	3.22E+00	3.22E+00
+	RA-225	40.00	31.00	5.81E-01	1.59E+00	1.59E+00
+	RA-226	186.21	* 3.28	1.90E+00	2.72E+00	2.72E+00
+	TH-227	50.10	8.40	-1.42E-01	9.61E-01	9.61E-01
		236.00	11.50	3.20E+00		1.04E+00
		256.20	6.30	5.52E-01		1.03E+00
+	AC-228	338.32	* 11.40	1.67E+00	4.83E-01	8.98E-01
		911.07	* 27.70	1.45E+00		4.83E-01

Analysis Report for 1510086-04
CP4105S01-02

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	AC-228	969.11	*	16.60	2.00E+00	4.83E-01	9.31E-01
+	TH-230	48.44		16.90	-7.89E-03	5.34E-01	5.34E-01
		62.85		4.60	9.78E-01		1.75E+00
		67.67		0.37	3.66E+00		1.92E+01
+	PA-231	283.67		1.60	5.92E-01	3.21E+00	4.12E+00
		302.67		2.30	2.12E-02		3.21E+00
+	TH-231	25.64		14.70	-1.16E-01	9.56E-01	3.39E+00
		84.21		6.40	-2.11E+00		9.56E-01
+	PA-233	311.98		38.60	-2.80E-03	3.96E-01	3.96E-01
+	PA-234	131.20		20.40	1.90E-01	2.65E-01	2.65E-01
		733.99		8.80	2.81E-01		9.51E-01
		946.00		12.00	1.17E-02		8.55E-01
+	PA-234M	1001.03		0.92	-1.78E+00	1.02E+01	1.02E+01
+	TH-234	63.29		3.80	2.04E+00	2.11E+00	2.11E+00
+	U-235	143.76		10.50	2.94E-01	5.07E-01	5.07E-01
		163.35		4.70	3.49E-01		1.16E+00
		205.31		4.70	-2.53E-01		1.42E+00
+	NP-237	86.50		12.60	2.70E-01	5.58E-01	5.58E-01
+	NP-239	106.10		22.70	-5.99E+00	2.19E+03	2.19E+03
		228.18		10.70	1.11E+03		6.17E+03
		277.60		14.10	1.44E+03		4.74E+03
+	AM-241	59.54		35.90	-2.44E-01	2.15E-01	2.15E-01
+	AM-243	74.67		66.00	3.87E-01	1.50E-01	1.50E-01
+	CM-243	209.75		3.29	2.63E-01	4.97E-01	2.14E+00
		228.14		10.60	1.17E-01		6.48E-01
		277.60		14.00	1.50E-01		4.97E-01

- + = Nuclide identified during the nuclide identification
 * = Energy line found in the spectrum
 > = MDA value not calculated
 @ = Half-life too short to be able to perform the decay correction
 ? = CAUTION: MDA value is inconsistent with Currie MDA at 95% confidence level

NUCLIDE MDA REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

Analysis Report for 1510086-04
CP4105S01-02

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
BE-7	477.59	10.42	1.07E+00	1.07E+00	5.18E-03	5.08E-01
NA-22	1274.54	99.94	1.29E-01	1.29E-01	4.13E-02	6.00E-02
NA-24	1368.53	99.99	9.91E+13	6.20E+13	2.00E+13	4.47E+13
	2754.09	99.86	6.20E+13		-1.02E+13	2.32E+13
AL-26	1808.65	99.76	7.29E-02	7.29E-02	-7.29E-03	3.05E-02
+ K-40	1460.81	* 10.67	1.09E+00	1.09E+00	1.93E+01	4.99E-01
@ AR-41	1293.64	99.16	1.00E+26	1.00E+26	1.00E+26	1.00E+20
TI-44	67.88	94.40	7.51E-02	7.51E-02	1.43E-02	3.68E-02
	78.34	96.00	9.25E-02		2.64E-01	4.55E-02
SC-46	889.25	99.98	1.21E-01	1.21E-01	1.44E-02	5.62E-02
	1120.51	99.99	2.00E-01		2.88E-01	9.49E-02
V-48	983.52	99.98	3.11E-01	3.11E-01	-1.03E-01	1.41E-01
	1312.10	97.50	4.10E-01		-6.48E-02	1.87E-01
CR-51	320.08	9.83	1.46E+00	1.46E+00	-3.50E-01	7.00E-01
MN-54	834.83	99.97	9.50E-02	9.50E-02	-2.23E-02	4.41E-02
CO-56	846.75	99.96	1.14E-01	1.14E-01	-7.80E-03	5.29E-02
	1037.75	14.03	8.97E-01		1.72E-01	4.13E-01
	1238.25	67.00	2.99E-01		2.42E-01	1.41E-01
	1771.40	15.51	6.86E-01		9.03E-02	2.94E-01
	2598.48	16.90	3.94E-01		8.49E-02	1.40E-01
CO-57	122.06	85.51	6.32E-02	6.32E-02	3.09E-03	3.07E-02
	136.48	10.60	5.50E-01		5.42E-01	2.67E-01
CO-58	810.76	99.40	1.17E-01	1.17E-01	-1.23E-02	5.43E-02
FE-59	1099.22	56.50	2.73E-01	2.73E-01	-2.85E-02	1.25E-01
	1291.56	43.20	4.34E-01		1.58E-01	2.00E-01
CO-60	1173.22	100.00	1.00E-01	1.00E-01	-3.16E-02	4.59E-02
	1332.49	100.00	1.03E-01		-3.56E-02	4.68E-02
ZN-65	1115.52	50.75	2.27E-01	2.27E-01	2.86E-03	1.05E-01
+ GA-67	93.31	* 35.70	3.02E+02	3.02E+02	2.81E+02	1.49E+02
	208.95	* 2.24	2.56E+03		1.40E+03	1.25E+03
	300.22	* 16.00	4.74E+02		3.80E+02	2.31E+02
SE-75	121.11	16.70	3.68E-01	1.07E-01	1.99E-01	1.79E-01
	136.00	59.20	1.07E-01		2.54E-02	5.18E-02
	264.65	59.80	1.34E-01		2.90E-02	6.45E-02
	279.53	25.20	3.28E-01		1.49E-01	1.58E-01
	400.65	11.40	7.96E-01		4.82E-01	3.80E-01
RB-82	776.52	13.00	1.54E+00	1.54E+00	2.57E-01	7.17E-01
RB-83	520.41	46.00	1.78E-01	1.78E-01	-7.93E-02	8.33E-02
	529.64	30.30	2.98E-01		-2.02E-02	1.40E-01
	552.65	16.40	5.91E-01		-3.21E-02	2.78E-01
KR-85	513.99	0.43	2.49E+01	2.49E+01	3.40E+01	1.20E+01
SR-85	513.99	99.27	1.51E-01	1.51E-01	2.06E-01	7.27E-02
Y-88	898.02	93.40	1.18E-01	8.62E-02	-1.16E-02	5.43E-02
	1836.01	99.38	8.62E-02		-1.90E-02	3.58E-02
NB-93M	16.57	9.43	8.13E+01	8.13E+01	9.00E+00	3.96E+01
NB-94	702.63	100.00	9.15E-02	8.81E-02	2.16E-02	4.30E-02
	871.10	100.00	8.81E-02		3.99E-02	4.08E-02
NB-95	765.79	99.81	1.92E-01	1.92E-01	5.22E-03	9.05E-02
NB-95M	235.69	25.00	1.89E+02	1.89E+02	5.84E+02	9.28E+01
ZR-95	724.18	43.70	2.95E-01	2.21E-01	-5.12E-02	1.38E-01
	756.72	55.30	2.21E-01		-8.18E-03	1.03E-01

Analysis Report for 1510086-04
CP4105S01-02

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)	
MO-99	181.06	6.20	2.28E+03	1.63E+03	7.84E+01	1.10E+03	
	739.58	12.80	1.63E+03		-9.73E+02	7.58E+02	
	778.00	4.50	4.36E+03		-2.75E+03	2.01E+03	
RU-103	497.08	89.00	1.39E-01	1.39E-01	-1.52E-02	6.55E-02	
RU-106	621.84	9.80	9.05E-01	9.05E-01	3.97E-01	4.26E-01	
AG-108M	433.93	89.90	8.67E-02	8.67E-02	5.42E-02	4.14E-02	
	614.37	90.40	9.41E-02		6.96E-03	4.44E-02	
	722.95	90.50	9.39E-02		-7.99E-02	4.39E-02	
+ CD-109	88.03	*	3.72	3.99E+00	3.99E+00	4.90E+00	
	AG-110M	657.75	93.14	9.53E-02	9.53E-02	-4.11E-02	4.46E-02
		677.61	10.53	8.09E-01		-2.03E-01	3.77E-01
		706.67	16.46	6.52E-01		1.95E-01	3.08E-01
		763.93	21.98	4.17E-01		5.84E-03	1.94E-01
		884.67	71.63	1.37E-01		6.15E-02	6.35E-02
		1384.27	23.94	4.37E-01		-4.06E-02	1.96E-01
		CD-113M	263.70	0.02	2.81E+02	2.81E+02	-2.85E+01	1.35E+02
SN-113	255.12	1.93	4.00E+00	1.31E-01	-7.22E-01	1.93E+00	
	391.69	64.90	1.31E-01		2.44E-02	6.23E-02	
TE123M	159.00	84.10	7.86E-02	7.86E-02	1.00E-02	3.81E-02	
	SB-124	602.71	97.87	1.21E-01	1.21E-01	2.11E-03	5.70E-02
645.85		7.26	1.66E+00		8.62E-02	7.79E-01	
722.78		11.10	1.10E+00		-9.31E-01	5.12E-01	
1691.02		49.00	2.02E-01		-3.10E-02	8.48E-02	
I-125	35.49	6.49	3.47E+00	3.47E+00	-7.12E-01	1.69E+00	
	SB-125	176.33	6.89	8.19E-01	2.48E-01	1.59E-01	3.96E-01
427.89		29.33	2.48E-01		-3.72E-02	1.18E-01	
463.38		10.35	8.27E-01		6.00E-01	3.95E-01	
600.56		17.80	4.88E-01		1.35E-01	2.30E-01	
635.90		11.32	7.74E-01		8.37E-02	3.64E-01	
SB-126		414.70	83.30	4.89E-01	4.87E-01	-1.02E-01	2.33E-01
+ SN-126	666.33	99.60	5.15E-01		1.13E-01	2.43E-01	
	695.00	99.60	4.87E-01		-2.79E-02	2.28E-01	
	720.50	53.80	7.87E-01		-3.15E-01	3.64E-01	
	87.57	*	37.00	3.83E-01	3.83E-01	4.70E-01	1.89E-01
SB-127	473.00	25.00	7.55E+01	6.46E+01	-6.74E+00	3.56E+01	
	685.20	35.70	6.46E+01		2.35E+01	3.03E+01	
I-129	783.80	14.70	1.54E+02		3.71E+01	7.12E+01	
	29.78	57.00	4.52E-01	4.52E-01	-1.52E-01	2.20E-01	
	33.60	13.20	1.36E+00		-3.76E-03	6.63E-01	
I-131	39.58	7.52	1.56E+00		5.70E-01	7.59E-01	
	284.30	6.05	1.60E+01	1.20E+00	2.30E+00	7.71E+00	
	364.48	81.20	1.20E+00		-2.52E-01	5.70E-01	
	636.97	7.26	1.66E+01		-1.84E+00	7.80E+00	
TE-132	722.89	1.80	6.93E+01		-5.89E+01	3.24E+01	
	49.72	13.10	4.72E+02	5.90E+01	-6.99E+01	2.30E+02	
BA-133	228.16	88.00	5.90E+01		1.07E+01	2.86E+01	
	81.00	33.00	1.82E-01	1.55E-01	-1.19E+00	8.88E-02	
	302.84	17.80	4.17E-01		2.76E-03	2.01E-01	
I-133	356.01	60.00	1.55E-01		2.24E-02	7.49E-02	
	529.87	86.30	5.45E+09	5.45E+09	-3.69E+08	2.56E+09	
XE-133	81.00	38.00	9.66E+00	9.66E+00	-6.30E+01	4.72E+00	
CS-134	563.23	8.38	9.92E-01	9.06E-02	-7.15E-02	4.68E-01	
	569.32	15.43	5.47E-01		1.40E-01	2.58E-01	

Analysis Report for 1510086-04
CP4105S01-02

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)		
CS-134	604.70	97.60	9.06E-02	9.06E-02	-1.16E-03	4.28E-02		
	795.84	85.40	1.10E-01		1.70E-02	5.12E-02		
	801.93	8.73	9.50E-01		3.65E-02	4.39E-01		
CS-135	268.24	16.00	4.69E-01	4.69E-01	2.23E-01	2.27E-01		
@ I-135	1131.51	22.50	1.00E+26	1.00E+26	1.00E+26	1.00E+20		
@	1260.41	28.60	1.00E+26		1.00E+26	1.00E+20		
@	1678.03	9.54	1.00E+26		1.00E+26	1.00E+20		
CS-136	153.22	7.46	3.72E+00	4.25E-01	-9.62E-01	1.81E+00		
	163.89	4.61	6.11E+00		1.84E+00	2.96E+00		
	176.55	13.56	2.07E+00		-3.12E-01	9.99E-01		
	273.65	12.66	2.91E+00		-6.05E-01	1.40E+00		
	340.57	48.50	9.84E-01		1.71E+00	4.77E-01		
	818.50	99.70	4.25E-01		-4.81E-02	1.96E-01		
	1048.07	79.60	5.65E-01		-9.63E-02	2.57E-01		
	1235.34	19.70	3.67E+00		-1.31E+00	1.72E+00		
	CS-137	661.65	85.12		1.05E-01	1.05E-01	-1.02E-02	4.92E-02
	LA-138	788.74	34.00		2.73E-01	1.28E-01	7.00E-02	1.28E-01
1435.80		66.00	1.28E-01		-6.44E-03	5.64E-02		
CE-139	165.85	80.35	7.93E-02	7.93E-02	3.11E-02	3.84E-02		
BA-140	162.64	6.70	4.35E+00	1.64E+00	6.39E-01	2.11E+00		
	304.84	4.50	8.17E+00		3.38E+00	3.92E+00		
	423.70	3.20	1.23E+01		-6.66E-01	5.83E+00		
	437.55	2.00	1.98E+01		-4.57E+00	9.41E+00		
	537.32	25.00	1.64E+00		-2.92E-01	7.72E-01		
	LA-140	328.77	20.50		1.94E+00	5.43E-01	-9.20E-03	9.31E-01
CE-141	487.03	45.50	9.22E-01	2.12E-01	1.75E-01	4.37E-01		
	815.85	23.50	1.83E+00		-1.01E-01	8.44E-01		
	1596.49	95.49	5.43E-01		5.65E-03	2.41E-01		
	CE-141	145.44	48.40		2.12E-01	2.95E-02	1.03E-01	
	CE-143	57.36	11.80		4.32E+06	1.53E+06	4.50E+05	2.11E+06
CE-144	293.26	42.00	1.53E+06	5.11E-01	5.37E+04	7.44E+05		
	664.55	5.20	1.21E+07		7.08E+06	5.73E+06		
	133.54	10.80	5.11E-01		-2.47E-01	2.48E-01		
PM-144	476.78	42.00	1.87E-01	8.14E-02	-1.74E-02	8.84E-02		
	618.01	98.60	8.14E-02		1.69E-02	3.81E-02		
PM-145	696.49	99.49	9.42E-02	3.55E-01	3.42E-02	4.42E-02		
	36.85	21.70	6.65E-01		1.43E-01	3.24E-01		
	37.36	39.70	3.55E-01		1.97E-01	1.73E-01		
	42.30	15.10	6.60E-01		-2.51E-01	3.21E-01		
	72.40	2.31	3.67E+00		-4.22E+00	1.80E+00		
PM-146	453.90	39.94	1.81E-01	1.81E-01	-6.36E-03	8.59E-02		
	735.90	14.01	6.27E-01		2.48E-01	2.93E-01		
	747.13	13.10	7.32E-01		2.08E-01	3.44E-01		
ND-147	91.11	28.90	1.76E+00	1.76E+00	-2.28E-01	8.61E-01		
	531.02	13.10	3.85E+00		-6.22E-01	1.81E+00		
PM-149	285.90	3.10	3.61E+04	3.61E+04	1.90E+03	1.73E+04		
EU-152	121.78	20.50	2.44E-01	2.44E-01	1.19E-02	1.19E-01		
	244.69	5.40	1.53E+00		1.48E-01	7.43E-01		
	344.27	19.13	3.75E-01		-3.16E-02	1.80E-01		
	778.89	9.20	8.34E-01		-1.02E-01	3.84E-01		
	964.01	10.40	1.10E+00		-2.55E+00	5.15E-01		
	1085.78	7.22	1.38E+00		-6.34E-02	6.36E-01		
	1112.02	9.60	1.10E+00		6.82E-02	5.09E-01		

Analysis Report for 1510086-04
CP4105S01-02

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
EU-152	1407.95	14.94	8.16E-01	2.44E-01	3.19E-01	3.75E-01
GD-153	97.43	31.30	1.76E-01	1.76E-01	1.08E-02	8.57E-02
	103.18	22.20	2.46E-01		-1.41E-01	1.19E-01
EU-154	123.07	40.50	1.27E-01	1.27E-01	3.39E-02	6.15E-02
	723.30	19.70	4.34E-01		-3.69E-01	2.03E-01
	873.19	11.50	7.16E-01		-2.81E-01	3.29E-01
	996.32	10.30	8.94E-01		-3.03E-02	4.11E-01
	1004.76	17.90	5.44E-01		1.39E-01	2.51E-01
	1274.45	35.50	3.58E-01		1.14E-01	1.66E-01
EU-155	86.50	30.90	2.30E-01	2.30E-01	1.11E-01	1.13E-01
	105.30	20.70	2.51E-01		5.23E-02	1.22E-01
EU-156	811.77	10.40	3.42E+00	3.42E+00	1.09E+00	1.59E+00
	1153.47	7.20	7.08E+00		2.65E+00	3.30E+00
	1230.71	8.90	5.99E+00		5.62E-01	2.79E+00
HO-166M	184.41	72.60	9.38E-02	9.38E-02	1.38E-01	4.57E-02
	280.45	29.60	2.32E-01		7.88E-02	1.12E-01
	410.94	11.10	6.72E-01		5.20E-01	3.20E-01
	711.69	54.10	1.81E-01		1.42E-01	8.56E-02
TM-171	66.72	0.14	5.21E+01	5.21E+01	-7.33E+01	2.55E+01
HF-172	81.75	4.52	1.38E+00	4.47E-01	-4.40E+00	6.74E-01
	125.81	11.30	4.47E-01		-2.74E-03	2.17E-01
LU-172	181.53	20.60	6.87E+00	4.14E+00	1.25E+00	3.33E+00
	810.06	16.63	1.27E+01		-4.58E+00	5.90E+00
	912.12	15.25	2.88E+01		6.02E+01	1.38E+01
	1093.66	62.50	4.14E+00		3.95E-02	1.91E+00
LU-173	100.72	5.24	1.00E+00	3.76E-01	6.07E-02	4.87E-01
	272.11	21.20	3.76E-01		3.23E-01	1.82E-01
HF-175	343.40	84.00	1.20E-01	1.20E-01	-1.49E-02	5.76E-02
LU-176	88.34	13.30	5.52E-01	7.34E-02	3.05E-01	2.71E-01
	201.83	86.00	8.04E-02		-1.37E-02	3.91E-02
	306.78	94.00	7.34E-02		1.97E-02	3.53E-02
TA-182	67.75	41.20	2.08E-01	2.08E-01	3.97E-02	1.02E-01
	1121.30	34.90	5.31E-01		5.05E-01	2.52E-01
	1189.05	16.23	7.88E-01		4.23E-02	3.62E-01
	1221.41	26.98	5.89E-01		4.80E-01	2.75E-01
	1231.02	11.44	1.36E+00		9.14E-02	6.33E-01
IR-192	308.46	29.68	3.14E-01	2.01E-01	2.21E-02	1.51E-01
	468.07	48.10	2.01E-01		4.81E-02	9.53E-02
HG-203	279.19	77.30	1.41E-01	1.41E-01	4.88E-02	6.81E-02
BI-207	569.67	97.72	8.12E-02	8.12E-02	-2.88E-02	3.83E-02
	1063.62	74.90	1.16E-01		-6.08E-02	5.30E-02
+ TL-208	583.14	* 30.22	3.65E-01	2.24E-01	1.30E+00	1.75E-01
	860.37	* 4.48	1.98E+00		2.26E+00	9.20E-01
	2614.66	* 35.85	2.24E-01		1.05E+00	9.11E-02
BI-210M	262.00	45.00	1.42E-01	1.42E-01	6.04E-03	6.85E-02
	300.00	23.00	3.25E-01		-1.22E+00	1.57E-01
+ PB-210	46.50	* 4.25	2.51E+00	2.51E+00	1.89E+00	1.23E+00
PB-211	404.84	2.90	2.50E+00	2.50E+00	-4.29E-01	1.19E+00
	831.96	2.90	3.07E+00		-6.94E-04	1.43E+00
+ BI-212	727.17	* 11.80	1.07E+00	1.07E+00	7.80E-01	5.09E-01
	1620.62	2.75	2.95E+00		7.32E-02	1.28E+00
+ PB-212	238.63	* 44.60	2.81E-01	2.81E-01	1.42E+00	1.38E-01
	300.09	* 3.41	2.95E+00		2.37E+00	1.44E+00

Analysis Report for 1510086-04
CP4105S01-02

Nuclide Name	Energy (keV)		Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
+	BI-214	609.31 *	46.30	2.16E-01	2.16E-01	1.36E+00	1.03E-01
		1120.29 *	15.10	6.86E-01		1.67E+00	3.16E-01
		1764.49 *	15.80	5.85E-01		1.61E+00	2.56E-01
		2204.22 *	4.98	1.28E+00		1.17E+00	5.05E-01
+	PB-214	295.21 *	19.19	5.13E-01	2.54E-01	1.68E+00	2.50E-01
		351.92 *	37.19	2.54E-01		1.35E+00	1.23E-01
	RN-219	401.80	6.50	1.16E+00	1.16E+00	6.41E-01	5.55E-01
	RA-223	323.87	3.88	1.73E+00	1.73E+00	-1.76E+00	8.28E-01
+	RA-224	240.98 *	3.95	3.22E+00	3.22E+00	4.55E+00	1.58E+00
	RA-225	40.00	31.00	1.59E+00	1.59E+00	5.81E-01	7.74E-01
+	RA-226	186.21 *	3.28	2.72E+00	2.72E+00	1.90E+00	1.33E+00
	TH-227	50.10	8.40	9.61E-01	9.61E-01	-1.42E-01	4.69E-01
		236.00	11.50	1.04E+00		3.20E+00	5.08E-01
		256.20	6.30	1.03E+00		5.52E-01	4.98E-01
+	AC-228	338.32 *	11.40	8.98E-01	4.83E-01	1.67E+00	4.36E-01
		911.07 *	27.70	4.83E-01		1.45E+00	2.29E-01
		969.11 *	16.60	9.31E-01		2.00E+00	4.44E-01
	TH-230	48.44	16.90	5.34E-01	5.34E-01	-7.89E-03	2.61E-01
		62.85	4.60	1.75E+00		9.78E-01	8.58E-01
		67.67	0.37	1.92E+01		3.66E+00	9.39E+00
	PA-231	283.67	1.60	4.12E+00	3.21E+00	5.92E-01	1.98E+00
		302.67	2.30	3.21E+00		2.12E-02	1.55E+00
	TH-231	25.64	14.70	3.39E+00	9.56E-01	-1.16E-01	1.65E+00
		84.21	6.40	9.56E-01		-2.11E+00	4.67E-01
	PA-233	311.98	38.60	3.96E-01	3.96E-01	-2.80E-03	1.90E-01
	PA-234	131.20	20.40	2.65E-01	2.65E-01	1.90E-01	1.29E-01
		733.99	8.80	9.51E-01		2.81E-01	4.43E-01
		946.00	12.00	8.55E-01		1.17E-02	3.98E-01
	PA-234M	1001.03	0.92	1.02E+01	1.02E+01	-1.78E+00	4.69E+00
	TH-234	63.29	3.80	2.11E+00	2.11E+00	2.04E+00	1.03E+00
	U-235	143.76	10.50	5.07E-01	5.07E-01	2.94E-01	2.46E-01
		163.35	4.70	1.16E+00		3.49E-01	5.61E-01
		205.31	4.70	1.42E+00		-2.53E-01	6.87E-01
	NP-237	86.50	12.60	5.58E-01	5.58E-01	2.70E-01	2.73E-01
	NP-239	106.10	22.70	2.19E+03	2.19E+03	-5.99E+00	1.06E+03
		228.18	10.70	6.17E+03		1.11E+03	2.99E+03
		277.60	14.10	4.74E+03		1.44E+03	2.29E+03
	AM-241	59.54	35.90	2.15E-01	2.15E-01	-2.44E-01	1.05E-01
	AM-243	74.67	66.00	1.50E-01	1.50E-01	3.87E-01	7.39E-02
	CM-243	209.75	3.29	2.14E+00	4.97E-01	2.63E-01	1.04E+00
		228.14	10.60	6.48E-01		1.17E-01	3.14E-01
		277.60	14.00	4.97E-01		1.50E-01	2.40E-01

- + = Nuclide identified during the nuclide identification
 * = Energy line found in the spectrum
 > = MDA value not calculated
 @ = Half-life too short to be able to perform the decay correction

Analysis Report for 1510086-04
CP4105S01-02

No Action Level results available for reporting purposes.

DATA REVIEW COMMENTS REPORT

Creation Date

Comment

User

No Data Review Comments Entered.

 ***** S P E C T R A L D A T A R E P O R T *****

Sample Title: CP4105S01-02

Elapsed Live time: 3600

Elapsed Real Time: 3622

Channel	-----	-----	-----	-----	-----	-----	-----	-----
1:	0	0	0	0	0	0	0	0
9:	22	170	176	161	142	115	103	115
17:	84	94	99	85	65	76	107	92
25:	99	89	78	108	85	89	71	74
33:	100	94	87	114	111	90	106	99
41:	95	88	73	98	103	118	183	115
49:	101	102	113	111	121	124	107	112
57:	126	132	133	174	153	151	215	226
65:	139	152	147	165	136	156	151	166
73:	166	240	433	281	510	453	135	128
81:	121	106	119	154	141	131	216	238
89:	142	202	153	145	247	184	109	88
97:	82	89	83	97	85	93	74	78
105:	92	118	81	77	85	101	83	103
113:	74	82	79	80	69	67	86	73
121:	89	80	81	61	86	65	77	70
129:	106	97	77	90	57	62	78	87
137:	75	88	78	69	59	83	60	83
145:	77	74	60	70	64	75	62	85
153:	52	92	67	76	86	86	75	56
161:	58	80	58	61	76	64	62	70
169:	68	39	66	70	54	62	72	60
177:	59	63	50	67	66	73	46	64
185:	78	146	124	57	50	66	60	65
193:	57	56	66	69	54	48	77	65
201:	61	62	53	44	53	54	59	48
209:	77	84	42	39	54	54	61	57
217:	38	50	46	51	49	66	62	43
225:	41	41	61	49	53	41	51	49
233:	51	48	54	45	46	208	540	161
241:	103	152	93	34	37	36	47	38
249:	34	42	38	33	41	32	33	43
257:	33	29	40	29	23	37	40	25
265:	40	31	38	40	43	65	56	43
273:	47	26	36	29	35	42	38	37
281:	34	28	31	31	26	34	33	21
289:	26	33	20	18	32	44	153	151
297:	42	31	28	62	46	26	22	27
305:	31	32	37	29	23	30	31	28
313:	35	24	30	23	28	25	23	23
321:	18	31	28	32	24	19	27	54
329:	34	30	23	23	37	26	24	29
337:	30	74	91	41	29	33	30	21
345:	20	24	26	27	23	21	83	312
353:	152	26	19	31	23	21	23	24
361:	18	23	19	22	22	17	20	18

0440A

369: 18 27 31 28 26 20 30 18

Sample Title: CP4105S01-02

Channel	18	27	31	28	26	20	30	18
377:	25	24	19	20	20	20	16	22
385:	29	15	20	22	22	21	26	21
393:	15	18	18	16	18	22	23	14
401:	27	23	19	30	20	15	16	19
409:	26	19	20	22	21	19	13	14
417:	24	18	23	19	14	20	22	19
425:	21	18	16	21	14	12	21	13
433:	22	27	15	23	24	16	19	17
441:	11	15	18	23	21	15	24	9
449:	16	13	21	14	11	21	14	17
457:	14	15	20	17	14	19	39	28
465:	20	13	19	8	13	16	19	12
473:	10	9	13	17	10	24	17	19
481:	11	11	14	12	22	16	19	21
489:	15	11	18	16	14	13	12	10
497:	16	13	16	14	12	15	10	14
505:	16	13	11	7	31	52	82	49
513:	19	19	12	17	11	8	9	11
521:	10	13	6	9	14	9	8	11
529:	5	17	8	14	18	8	17	15
537:	13	9	13	17	13	13	12	16
545:	16	7	15	16	19	15	19	11
553:	9	8	10	15	14	18	14	11
561:	15	13	14	12	16	16	18	8
569:	15	17	14	10	9	13	17	10
577:	15	10	19	19	11	33	108	82
585:	28	15	6	8	12	14	15	8
593:	8	12	13	12	11	10	20	13
601:	16	20	10	7	10	14	10	26
609:	153	153	39	15	5	6	6	15
617:	6	11	7	7	19	14	10	14
625:	16	11	10	11	17	9	11	12
633:	18	8	9	6	13	15	19	10
641:	8	11	16	9	17	12	12	9
649:	7	12	13	6	14	14	7	14
657:	8	9	9	13	14	16	9	13
665:	14	16	18	11	8	11	6	9
673:	10	18	14	13	4	7	11	7
681:	8	5	12	15	9	16	11	6
689:	7	11	10	8	7	15	10	12
697:	13	8	14	8	10	15	8	14
705:	17	12	11	9	17	17	12	12
713:	9	12	16	9	5	3	10	9
721:	9	8	7	7	10	18	21	24
729:	8	9	5	7	10	12	12	10
737:	8	10	7	8	9	7	12	11
745:	8	9	14	13	8	18	9	11
753:	10	10	8	11	11	5	11	10
761:	8	10	9	8	8	7	10	31
769:	20	12	7	12	18	10	7	5
777:	11	9	1	9	5	7	7	6
785:	12	12	6	7	9	9	12	15
793:	6	10	17	13	12	4	4	4

801: 7 9 8 9 9 12 9 7

Sample Title: CP4105S01-02

Channel	1	2	3	4	5	6	7	8
809:	8	7	11	6	6	11	7	7
817:	3	7	6	9	11	9	8	7
825:	2	7	7	8	8	7	9	3
833:	10	7	14	12	6	5	10	11
841:	6	9	8	11	5	6	5	11
849:	7	8	10	5	6	7	6	10
857:	7	8	9	23	15	16	2	4
865:	8	8	4	6	11	12	7	4
873:	3	9	8	1	10	6	2	9
881:	9	8	3	7	8	5	13	5
889:	5	14	8	7	4	11	3	13
897:	8	7	7	8	5	10	6	7
905:	8	4	12	9	12	36	81	50
913:	8	12	5	10	5	1	6	7
921:	10	7	7	8	10	7	6	5
929:	4	11	7	5	11	17	10	6
937:	4	5	8	6	6	5	6	7
945:	5	12	9	12	11	9	15	8
953:	5	5	6	6	3	7	4	11
961:	8	3	7	9	17	14	17	32
969:	59	37	9	9	5	5	7	4
977:	5	5	6	5	2	6	2	5
985:	7	7	6	8	5	11	5	9
993:	6	6	6	6	6	6	8	5
1001:	7	8	5	7	7	10	9	3
1009:	2	9	5	3	7	5	2	2
1017:	5	5	4	9	7	6	8	3
1025:	5	10	11	6	6	4	5	4
1033:	7	4	8	8	5	8	7	6
1041:	3	7	4	4	2	8	4	5
1049:	6	5	6	6	9	13	6	9
1057:	8	6	3	8	4	5	5	5
1065:	2	6	5	13	9	8	8	5
1073:	5	8	7	0	12	4	11	6
1081:	7	9	6	10	4	2	5	7
1089:	11	8	3	6	10	6	7	8
1097:	6	4	6	7	6	3	7	5
1105:	6	8	9	5	8	10	4	9
1113:	8	8	2	6	7	9	18	37
1121:	26	11	2	5	7	12	5	3
1129:	3	2	4	10	7	8	11	3
1137:	6	4	9	8	6	5	6	5
1145:	9	4	9	6	7	7	7	7
1153:	9	9	14	11	9	6	4	10
1161:	4	1	11	5	9	5	8	7
1169:	7	7	7	5	4	3	6	7
1177:	7	7	9	4	4	8	10	7
1185:	6	6	4	1	6	11	9	7
1193:	3	6	4	8	8	8	7	4
1201:	6	4	7	4	11	9	8	7
1209:	4	4	6	10	13	6	12	2
1217:	2	9	13	8	6	10	9	12
1225:	7	7	8	13	4	13	10	5

1233: 10 8 9 10 11 22 16 13

Sample Title: CP4105S01-02

Channel	10	8	9	10	11	22	16	13
1241:	8	5	7	7	1	5	9	9
1249:	4	9	4	4	8	5	4	4
1257:	6	7	3	5	10	5	3	2
1265:	4	9	8	4	3	7	6	7
1273:	9	5	7	9	5	2	6	6
1281:	8	9	4	4	6	2	2	5
1289:	5	9	6	7	2	4	6	5
1297:	2	5	4	5	2	2	5	1
1305:	7	8	2	10	4	3	1	4
1313:	7	1	2	3	2	6	1	2
1321:	4	5	7	2	5	2	7	7
1329:	3	3	3	5	3	0	4	5
1337:	6	4	5	5	2	3	2	1
1345:	5	7	1	3	4	2	3	3
1353:	6	6	4	1	0	4	3	4
1361:	3	3	2	4	4	6	2	3
1369:	2	3	0	4	1	4	4	6
1377:	11	10	2	4	3	5	1	1
1385:	3	6	3	1	4	3	2	4
1393:	3	3	3	3	1	0	4	6
1401:	10	4	4	3	3	6	7	10
1409:	6	2	4	3	3	3	2	4
1417:	2	1	2	1	3	3	3	7
1425:	0	3	2	5	2	2	2	2
1433:	3	0	0	3	2	2	5	2
1441:	3	4	1	1	3	2	3	1
1449:	2	0	3	7	1	3	3	2
1457:	1	11	62	214	207	63	4	4
1465:	1	1	1	2	2	2	2	4
1473:	1	1	4	0	0	1	3	2
1481:	1	2	0	1	3	3	4	4
1489:	2	0	3	3	1	2	3	2
1497:	6	1	0	2	1	4	1	4
1505:	1	2	2	3	3	1	0	1
1513:	1	1	2	3	2	1	1	3
1521:	3	3	0	2	2	2	3	0
1529:	0	2	2	1	1	1	0	3
1537:	3	5	1	1	1	1	2	1
1545:	2	2	1	3	1	1	2	0
1553:	1	1	2	0	0	2	3	2
1561:	1	2	2	0	0	1	2	1
1569:	0	0	2	1	1	2	0	1
1577:	2	1	2	1	1	3	3	2
1585:	0	0	4	6	4	2	8	11
1593:	5	1	0	0	0	2	2	0
1601:	1	1	0	2	3	0	4	2
1609:	0	2	0	1	1	1	2	3
1617:	1	0	4	1	2	2	1	0
1625:	2	1	2	0	4	3	2	2
1633:	0	0	3	1	2	3	2	2
1641:	0	3	0	2	2	0	2	0
1649:	1	0	1	2	3	0	2	1
1657:	1	0	2	1	1	2	0	1

1665: 0 2 3 0 1 3 1 0

Sample Title: CP4105S01-02

Channel	1	2	3	0	1	3	1	0
1673:	1	2	0	1	1	2	2	1
1681:	2	1	1	3	1	3	1	1
1689:	2	1	2	0	1	0	1	1
1697:	0	1	1	0	1	1	3	1
1705:	1	2	0	1	1	1	0	0
1713:	1	1	1	1	1	3	0	1
1721:	0	0	0	1	1	2	1	2
1729:	7	3	1	0	2	3	3	0
1737:	1	1	1	2	2	0	2	1
1745:	1	4	1	0	0	4	1	0
1753:	0	1	1	2	2	0	0	1
1761:	2	2	13	17	21	8	2	2
1769:	1	2	1	0	1	0	3	0
1777:	0	0	0	1	1	0	1	0
1785:	0	1	0	1	0	0	1	0
1793:	0	0	0	0	0	1	0	0
1801:	1	1	5	0	0	1	2	1
1809:	1	2	0	2	0	2	0	0
1817:	0	2	2	0	0	2	1	1
1825:	2	1	2	2	2	1	1	0
1833:	0	0	1	1	1	3	1	0
1841:	0	2	2	1	1	2	4	5
1849:	1	1	0	1	0	0	0	0
1857:	2	3	0	1	1	2	0	0
1865:	0	0	1	3	0	1	1	1
1873:	1	2	1	2	0	1	0	1
1881:	2	1	1	0	0	2	0	1
1889:	2	2	2	0	0	1	3	2
1897:	0	0	1	1	2	0	1	0
1905:	1	1	1	0	1	1	0	0
1913:	0	1	0	0	1	3	0	2
1921:	2	0	1	1	2	0	0	0
1929:	2	2	1	0	3	0	0	1
1937:	1	1	3	0	1	3	1	2
1945:	2	1	1	2	0	0	0	0
1953:	1	2	1	1	0	3	1	2
1961:	0	2	2	1	0	0	0	0
1969:	0	1	1	1	0	0	1	3
1977:	0	2	0	2	2	1	0	1
1985:	2	1	0	0	2	0	1	1
1993:	0	1	0	2	2	0	0	0
2001:	0	2	0	3	2	0	2	0
2009:	1	0	2	0	1	1	2	0
2017:	0	0	0	1	0	2	2	0
2025:	0	1	1	0	1	0	0	0
2033:	1	2	1	0	2	1	1	1
2041:	2	0	1	1	1	1	0	0
2049:	0	1	0	0	0	0	1	1
2057:	0	1	0	1	0	1	1	0
2065:	0	1	0	1	1	1	2	1
2073:	0	2	1	0	0	0	2	2
2081:	1	0	1	1	0	2	5	2
2089:	1	1	1	1	2	0	1	1

2097: 0 2 0 3 1 5 6 2

Sample Title: CP4105S01-02

Channel	1	2	3	4	5	6	7	8
2105:	1	0	1	1	2	1	0	1
2113:	0	3	0	1	2	0	1	1
2121:	1	1	1	1	1	0	0	3
2129:	2	0	0	1	1	2	0	0
2137:	0	1	0	0	0	5	0	0
2145:	1	1	1	0	1	2	0	2
2153:	0	2	2	0	0	1	1	0
2161:	3	0	1	0	1	1	1	1
2169:	0	0	0	1	0	2	0	0
2177:	0	1	0	1	1	0	2	2
2185:	0	0	0	1	0	2	1	1
2193:	0	0	1	0	0	1	0	0
2201:	1	0	4	8	2	0	2	0
2209:	0	0	2	1	0	0	1	1
2217:	2	1	0	0	1	1	1	1
2225:	0	1	0	1	1	0	2	0
2233:	0	1	0	0	0	2	1	1
2241:	1	0	0	1	2	0	1	0
2249:	1	1	0	1	2	1	2	2
2257:	0	3	0	0	0	2	0	1
2265:	2	0	2	0	0	2	0	1
2273:	2	1	0	0	0	2	1	0
2281:	1	0	1	1	1	0	1	2
2289:	0	0	1	0	2	0	0	1
2297:	2	0	1	1	1	0	0	1
2305:	1	1	1	2	2	0	2	0
2313:	0	1	0	0	0	0	2	1
2321:	0	0	0	1	2	0	2	1
2329:	0	1	1	0	3	1	1	1
2337:	0	2	1	1	0	1	1	0
2345:	1	2	3	1	1	1	2	1
2353:	2	1	4	1	5	3	0	2
2361:	0	3	1	1	2	0	0	0
2369:	1	1	1	0	3	1	1	0
2377:	0	2	0	2	3	0	0	1
2385:	1	2	1	0	0	0	2	0
2393:	0	0	0	0	1	1	0	2
2401:	0	0	0	2	0	1	1	0
2409:	0	0	1	0	0	1	0	1
2417:	0	1	0	0	1	0	0	0
2425:	0	1	1	0	0	3	0	1
2433:	0	0	0	0	2	0	1	3
2441:	0	0	2	1	1	1	2	3
2449:	0	0	0	1	0	1	0	0
2457:	0	2	1	1	0	0	1	0
2465:	2	0	1	0	1	1	1	1
2473:	1	1	0	1	0	1	0	0
2481:	1	0	1	0	0	0	0	0
2489:	1	0	0	1	0	0	1	1
2497:	1	1	0	2	1	0	0	0
2505:	0	1	0	0	0	1	0	0
2513:	0	1	0	0	0	1	0	0
2521:	0	0	0	0	0	1	0	0

2529: 0 0 2 0 0 0 1 1

Sample Title: CP4105S01-02

Channel	1	2	3	4	5	6	7	8
2537:	0	0	1	0	1	0	0	0
2545:	0	1	0	0	0	0	0	1
2553:	0	3	0	1	0	0	0	0
2561:	0	1	0	1	0	0	1	0
2569:	0	1	0	0	0	0	0	1
2577:	0	0	0	3	1	0	1	0
2585:	1	0	0	0	0	0	0	0
2593:	0	0	0	0	1	1	0	0
2601:	0	0	0	0	0	1	0	0
2609:	1	0	1	8	19	22	15	7
2617:	1	0	1	1	1	0	0	0
2625:	0	0	0	0	1	0	0	0
2633:	0	0	0	0	0	2	0	0
2641:	0	0	0	1	0	0	0	0
2649:	0	0	0	0	0	1	0	0
2657:	1	0	1	0	0	1	0	0
2665:	0	1	1	0	1	0	0	0
2673:	0	1	1	0	1	1	1	0
2681:	0	0	0	0	0	0	0	2
2689:	0	0	0	0	1	0	0	0
2697:	0	0	1	0	0	0	0	0
2705:	0	0	0	0	1	0	0	0
2713:	0	0	0	0	1	1	0	0
2721:	1	0	1	1	0	0	0	0
2729:	1	1	0	0	1	0	0	0
2737:	0	0	0	0	0	2	0	0
2745:	0	1	0	1	0	1	0	0
2753:	0	0	0	1	1	0	0	1
2761:	0	0	2	0	1	0	0	0
2769:	0	0	0	0	1	2	1	0
2777:	0	0	0	0	0	0	1	1
2785:	0	0	0	0	0	0	0	1
2793:	0	0	0	0	0	0	1	0
2801:	1	0	0	0	0	0	0	0
2809:	0	0	0	0	0	0	0	0
2817:	0	0	0	0	1	1	1	0
2825:	1	0	1	0	0	0	1	0
2833:	0	0	0	0	0	0	0	0
2841:	0	0	0	0	0	0	0	0
2849:	0	0	0	0	0	1	0	0
2857:	0	1	0	0	1	0	0	0
2865:	0	0	1	1	0	0	1	0
2873:	0	0	0	0	0	0	0	1
2881:	0	0	0	0	0	0	1	0
2889:	0	0	0	0	1	0	0	0
2897:	0	0	0	0	0	0	0	0
2905:	0	0	0	0	0	0	0	0
2913:	0	0	0	0	0	0	0	0
2921:	0	1	0	0	0	0	0	0
2929:	0	0	1	0	0	0	0	1
2937:	0	0	0	0	0	0	0	0
2945:	1	0	0	1	0	1	0	0
2953:	0	1	0	0	0	0	0	0

2961: 0 0 0 0 0 0 0 0

Sample Title: CP4105S01-02

Channel	1	2	3	4	5	6	7	8	9
2969:	0	0	0	0	0	0	1	0	
2977:	0	0	0	0	0	0	1	0	
2985:	0	0	2	0	0	0	0	0	
2993:	0	0	0	0	0	0	0	0	
3001:	0	0	0	0	0	0	1	0	
3009:	0	0	0	0	0	0	0	0	
3017:	1	0	0	0	0	0	0	0	
3025:	1	0	0	0	0	0	0	0	
3033:	0	0	0	0	0	0	0	0	
3041:	0	1	1	0	0	1	0	0	
3049:	0	0	0	0	0	0	0	1	
3057:	0	0	1	0	0	0	0	0	
3065:	0	1	0	0	0	0	1	0	
3073:	1	1	0	0	0	0	0	0	
3081:	0	1	0	0	0	0	0	0	
3089:	0	0	0	0	1	0	0	0	
3097:	0	1	0	0	0	0	0	0	
3105:	0	0	0	0	0	1	0	0	
3113:	0	0	0	0	1	1	0	0	
3121:	0	0	0	0	0	0	0	0	
3129:	0	0	0	0	0	0	0	0	
3137:	0	1	1	0	1	0	0	0	
3145:	0	0	0	0	0	0	0	0	
3153:	0	0	0	0	0	0	0	0	
3161:	0	0	0	0	0	0	0	0	
3169:	0	0	0	0	1	1	0	0	
3177:	0	0	0	0	0	0	0	0	
3185:	0	0	0	0	0	0	0	0	
3193:	0	0	0	1	1	0	0	0	
3201:	0	0	0	0	0	0	0	0	
3209:	0	0	0	0	0	0	0	0	
3217:	0	0	0	1	0	0	0	1	
3225:	1	0	0	0	0	0	0	0	
3233:	1	0	1	1	0	0	0	0	
3241:	0	0	0	0	0	0	0	1	
3249:	0	0	0	0	0	0	0	0	
3257:	0	1	0	0	0	0	0	0	
3265:	0	0	1	1	0	0	0	2	
3273:	0	0	0	0	1	0	0	0	
3281:	0	0	0	0	0	0	0	0	
3289:	0	0	0	0	1	0	0	0	
3297:	0	0	0	0	0	0	0	0	
3305:	0	0	1	0	0	0	0	0	
3313:	0	0	0	0	0	0	0	0	
3321:	0	0	0	0	0	0	0	0	
3329:	0	0	0	0	0	0	0	0	
3337:	0	0	0	0	0	0	1	0	
3345:	0	0	0	0	0	0	0	0	
3353:	0	0	0	0	0	0	0	0	
3361:	1	1	1	0	0	1	0	0	
3369:	0	0	0	0	0	0	0	0	
3377:	0	1	0	0	0	0	0	0	
3385:	0	0	0	0	0	0	0	1	

3393: 0 0 0 0 0 0 0 0 0

Sample Title: CP4105S01-02

Channel	1	2	3	4	5	6	7	8	9
3401:	0	0	0	0	0	0	0	0	1
3409:	0	0	0	0	0	0	0	0	0
3417:	0	0	0	0	0	0	2	0	0
3425:	1	0	0	0	0	0	0	0	0
3433:	0	0	0	0	0	0	0	0	0
3441:	0	0	0	0	0	0	0	0	0
3449:	1	0	0	0	0	0	0	1	0
3457:	0	0	0	0	0	0	0	0	0
3465:	2	0	0	0	0	0	0	0	0
3473:	0	0	0	0	0	0	0	0	0
3481:	0	0	0	0	0	0	0	0	1
3489:	0	0	0	1	0	0	0	0	1
3497:	0	0	1	0	0	0	1	0	1
3505:	0	1	0	0	0	0	0	0	0
3513:	0	0	1	0	0	0	0	0	0
3521:	0	0	0	0	0	0	0	0	0
3529:	0	1	0	0	0	0	0	0	0
3537:	0	0	0	0	0	0	0	0	0
3545:	0	0	0	0	0	0	0	0	0
3553:	0	0	0	0	0	0	0	0	0
3561:	0	0	1	0	0	0	0	0	0
3569:	0	0	0	0	0	0	1	0	0
3577:	0	0	0	0	0	0	0	0	0
3585:	0	0	0	0	0	0	0	0	0
3593:	0	0	0	0	0	0	1	0	0
3601:	0	0	0	1	0	0	0	0	0
3609:	0	0	0	0	0	0	0	0	0
3617:	0	0	0	0	0	0	0	0	0
3625:	0	0	0	0	0	0	0	0	0
3633:	0	0	0	0	0	0	0	0	0
3641:	0	0	0	0	0	0	0	0	0
3649:	0	0	0	0	0	1	0	0	0
3657:	0	0	0	0	0	2	0	0	0
3665:	0	0	0	0	0	0	0	0	0
3673:	0	0	0	0	0	0	1	0	0
3681:	0	0	0	0	0	0	0	0	0
3689:	0	0	0	0	0	0	0	0	1
3697:	0	0	1	0	0	0	1	0	1
3705:	0	0	0	0	0	0	0	1	0
3713:	0	0	1	0	0	0	0	0	1
3721:	0	0	0	1	0	0	0	1	0
3729:	0	0	1	0	0	0	0	0	0
3737:	0	0	0	1	0	0	0	0	1
3745:	0	0	0	0	0	0	0	0	0
3753:	0	0	0	0	0	0	0	0	0
3761:	0	0	0	0	0	0	0	0	0
3769:	0	0	1	0	0	0	1	0	0
3777:	0	0	0	0	0	0	1	0	0
3785:	0	1	0	1	0	0	0	0	0
3793:	0	1	0	0	0	0	0	0	0
3801:	0	0	0	1	0	0	0	0	0
3809:	0	0	0	0	0	0	0	0	0
3817:	0	0	0	0	0	0	0	0	0

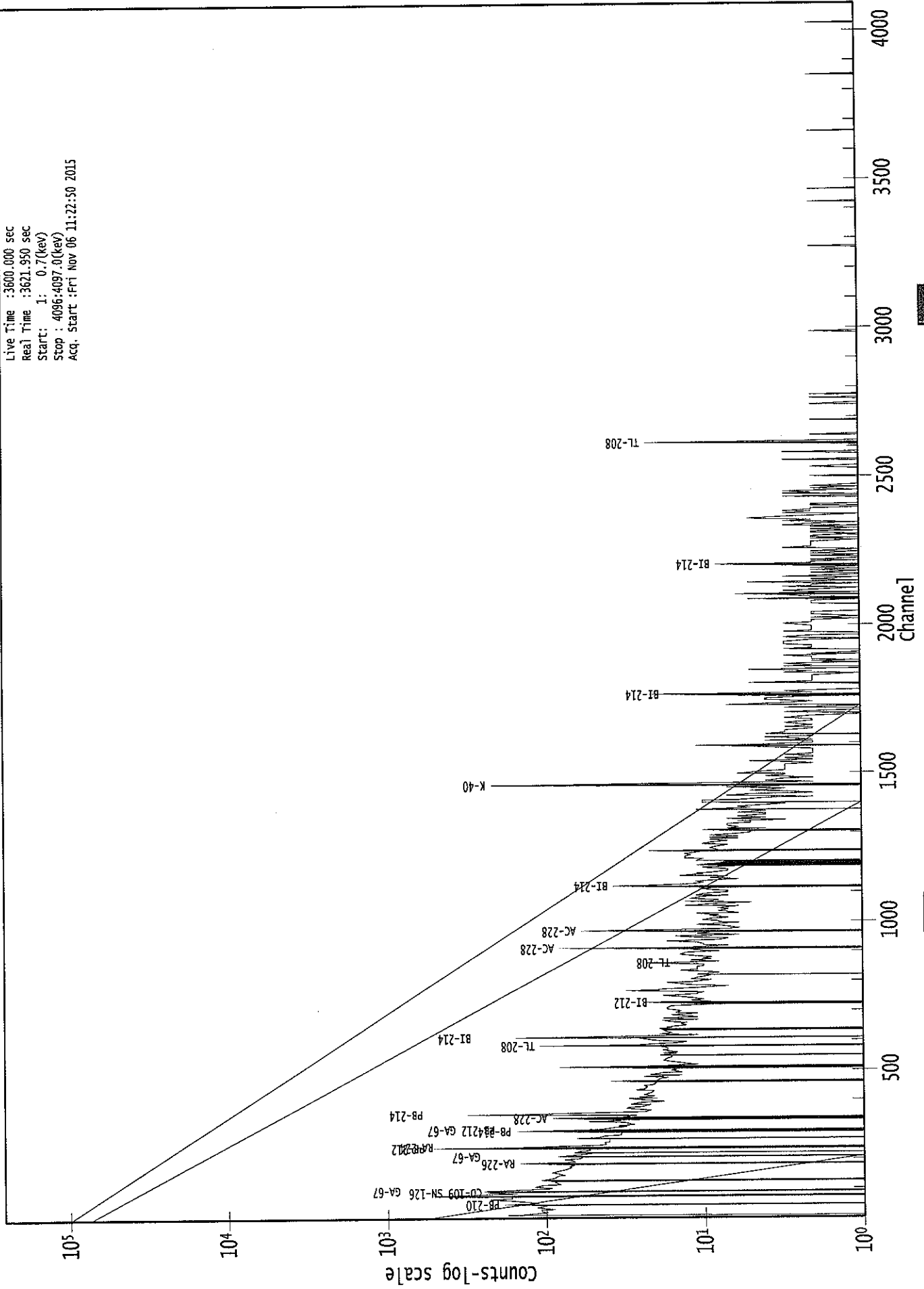
3825: 0 0 0 0 1 0 1 0

Sample Title: CP4105S01-02

Channel	1	2	3	4	5	6	7	8	9
3833:	0	0	0	1	1	0	0	0	0
3841:	0	0	0	0	0	0	0	0	0
3849:	0	2	0	0	1	0	0	0	0
3857:	0	1	0	0	0	0	1	0	0
3865:	0	0	0	0	0	0	0	0	0
3873:	0	0	1	0	0	0	0	0	0
3881:	1	1	0	0	0	0	0	0	0
3889:	0	0	0	0	0	0	0	0	0
3897:	0	1	0	0	0	0	0	0	0
3905:	0	0	0	0	0	0	0	0	0
3913:	0	0	0	0	0	0	0	0	0
3921:	0	0	0	0	0	0	0	0	0
3929:	0	0	0	0	1	0	1	0	0
3937:	0	0	0	0	0	1	0	0	0
3945:	0	0	0	0	1	0	1	0	0
3953:	0	0	0	0	0	0	0	0	0
3961:	0	1	0	0	0	0	0	0	0
3969:	0	0	0	1	0	0	0	0	0
3977:	0	0	0	0	0	0	0	0	0
3985:	0	0	0	0	1	0	0	0	0
3993:	0	0	0	0	0	0	0	0	0
4001:	0	0	0	0	0	0	0	0	1
4009:	0	0	0	0	0	0	0	0	0
4017:	0	0	0	0	0	0	0	0	0
4025:	2	0	0	0	0	0	0	0	0
4033:	0	0	0	0	0	0	0	0	0
4041:	0	0	0	0	0	0	0	0	0
4049:	0	0	0	0	0	0	0	0	0
4057:	0	0	0	0	0	0	0	0	0
4065:	0	0	0	0	0	0	0	0	0
4073:	0	0	0	0	0	0	0	0	0
4081:	0	0	0	0	0	0	0	0	0
4089:	0	0	0	0	0	0	0	0	0

0000029256.CNF

Live Time : 3600.000 sec
Real Time : 3621.950 sec
Start : 1: 0.7 (kev)
Stop : 4096.4097.0 (kev)
Acq. Start : Fri Nov 06 11:22:50 2015



Analysis Report for 1510086-05
CP4105S04-05

C
11/14

GAMMA SPECTRUM ANALYSIS

Sample Identification : 1510086-05
Sample Description : CP4105S04-05
Sample Type : SOIL

Sample Size : 5.236E+02 grams
Facility : Countroom

Sample Taken On : 10/6/2015 7:54:15AM
Acquisition Started : 11/6/2015 10:21:34AM

Procedure : GAS-1402 pCi
Operator : Administrator
Detector Name : GE4
Geometry : GAS-1402
Live Time : 3600.0 seconds
Real Time : 3639.4 seconds

Dead Time : 1.08 %

Peak Locate Threshold : 2.50
Peak Locate Range (in channels) : 1 - 4096
Peak Area Range (in channels) : 15 - 4096
Identification Energy Tolerance : 1.000 keV

Energy Calibration Used Done On : 10/25/2014
Efficiency Calibration Used Done On : 11/8/2014
Efficiency Calibration Description :

Sample Number : 29255

PEAK-TO-TOTAL CALIBRATION REPORT

Peak-to-Total Efficiency Calibration Equation

AG
11/9/15

Analysis Report for 1510086-05
CP4105S04-05

PEAK LOCATE REPORT

Peak Locate Performed on : 11/6/2015 11:22:16AM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096
Peak Search Sensitivity : 2.50

Peak No.	Energy (keV)	Centroid Channel	Centroid Uncertainty	Peak Significance
1	31.25	30.50	0.0000	0.00
2	76.02	75.28	0.0000	0.00
3	93.15	92.43	0.0000	0.00
4	129.51	128.80	0.0000	0.00
5	185.36	184.67	0.0000	0.00
6	239.05	238.39	0.0000	0.00
7	269.35	268.70	0.0000	0.00
8	295.22	294.58	0.0000	0.00
9	351.76	351.15	0.0000	0.00
10	463.38	462.82	0.0000	0.00
11	510.48	509.94	0.0000	0.00
12	583.60	583.09	0.0000	0.00
13	609.54	609.05	0.0000	0.00
14	666.33	665.86	0.0000	0.00
15	794.56	794.16	0.0000	0.00
16	800.65	800.25	0.0000	0.00
17	886.25	885.89	0.0000	0.00
18	910.99	910.65	0.0000	0.00
19	969.49	969.18	0.0000	0.00
20	1052.55	1052.29	0.0000	0.00
21	1204.66	1204.48	0.0000	0.00
22	1265.89	1265.74	0.0000	0.00
23	1276.13	1275.99	0.0000	0.00
24	1377.03	1376.95	0.0000	0.00
25	1460.94	1460.91	0.0000	0.00
26	1594.72	1594.77	0.0000	0.00
27	1625.44	1625.52	0.0000	0.00
28	1727.47	1727.61	0.0000	0.00
29	1764.43	1764.59	0.0000	0.00
30	1790.40	1790.58	0.0000	0.00
31	1870.71	1870.94	0.0000	0.00
32	2105.13	2105.53	0.0000	0.00
33	2193.88	2194.34	0.0000	0.00
34	2203.95	2204.42	0.0000	0.00
35	2312.99	2313.53	0.0000	0.00
36	2614.72	2615.49	0.0000	0.00

? = Adjacent peak noted
Errors quoted at 2.000sigma

Analysis Report for 1510086-05
CP4105S04-05

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 11/6/2015 11:22:16AM

Peak Analysis From Channel : 1
Peak Analysis To Channel : 4096

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	FWHM (keV)
1	31.25	27 -	33	30.50	5.75E+01	66.47	7.53E+02	2.16
2	76.02	69 -	81	75.28	7.39E+02	153.46	2.42E+03	3.98
3	93.15	88 -	96	92.43	2.49E+02	102.05	1.38E+03	2.35
4	129.51	125 -	134	128.80	1.09E+02	85.01	9.70E+02	2.59
5	185.36	179 -	189	184.67	1.69E+02	83.78	8.43E+02	3.29
6	239.05	233 -	245	238.39	5.55E+02	94.12	7.83E+02	2.93
7	269.35	264 -	274	268.70	7.12E+01	59.58	4.38E+02	4.04
8	295.22	290 -	298	294.58	1.36E+02	53.97	3.65E+02	2.44
9	351.76	346 -	354	351.15	2.94E+02	49.10	1.92E+02	2.44
10	463.38	459 -	468	462.82	3.49E+01	36.92	1.74E+02	6.09
11	510.48	504 -	516	509.94	1.04E+02	45.56	1.96E+02	2.89
12	583.60	579 -	588	583.09	1.08E+02	40.27	1.70E+02	2.92
13	609.54	603 -	616	609.05	1.88E+02	48.30	1.77E+02	2.87
14	666.33	657 -	675	665.86	7.21E+01	43.84	1.40E+02	11.01
M 15	794.56	791 -	804	794.16	2.59E+01	17.15	2.63E+01	3.11
m 16	800.65	791 -	804	800.25	2.49E+01	20.25	4.70E+01	3.11
17	886.25	880 -	892	885.89	2.60E+01	27.69	7.80E+01	1.18
18	910.99	906 -	916	910.65	7.34E+01	27.36	6.12E+01	2.51
19	969.49	965 -	972	969.18	3.17E+01	24.41	7.46E+01	4.22
20	1052.55	1048 -	1055	1052.29	1.69E+01	13.71	2.01E+01	4.19
21	1204.66	1201 -	1207	1204.48	2.10E+01	17.75	4.20E+01	2.33
M 22	1265.89	1262 -	1279	1265.74	1.22E+01	14.28	2.14E+01	3.89
m 23	1276.13	1262 -	1279	1275.99	1.21E+01	15.49	3.38E+01	3.89
24	1377.03	1372 -	1383	1376.95	1.65E+01	17.44	2.90E+01	6.58
25	1460.94	1455 -	1466	1460.91	2.59E+02	36.39	3.60E+01	2.41
26	1594.72	1590 -	1599	1594.77	1.22E+01	15.56	2.17E+01	3.33
27	1625.44	1621 -	1628	1625.52	7.18E+00	8.72	7.64E+00	1.09
28	1727.47	1723 -	1732	1727.61	1.40E+01	11.22	1.00E+01	6.27
29	1764.43	1759 -	1768	1764.59	3.20E+01	11.31	0.00E+00	2.31
30	1790.40	1785 -	1796	1790.58	1.20E+01	6.93	0.00E+00	1.77
31	1870.71	1868 -	1873	1870.94	5.50E+00	6.08	3.00E+00	2.37
32	2105.13	2100 -	2110	2105.53	1.84E+01	10.69	5.29E+00	2.27
33	2193.88	2190 -	2197	2194.34	7.22E+00	7.21	3.56E+00	1.97
34	2203.95	2200 -	2207	2204.42	1.20E+01	6.93	0.00E+00	2.74
35	2312.99	2311 -	2317	2313.53	6.83E+00	6.95	4.33E+00	1.88
36	2614.72	2611 -	2620	2615.49	2.47E+01	13.04	1.05E+01	2.71

Analysis Report for 1510086-05
CP4105S04-05

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.00sigma

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 11/6/2015 11:22:16AM

Peak Analysis From Channel : 1
Peak Analysis To Channel : 4096

Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
1	31.25	27 -	33	5.75E+01	66.47	7.53E+02	5.32E+01
2	76.02	69 -	81	7.39E+02	153.46	2.42E+03	1.18E+02
3	93.15	88 -	96	2.49E+02	102.05	1.38E+03	7.98E+01
4	129.51	125 -	134	1.09E+02	85.01	9.70E+02	6.77E+01
5	185.36	179 -	189	1.69E+02	83.78	8.43E+02	6.55E+01
6	239.05	233 -	245	5.55E+02	94.12	7.83E+02	6.70E+01
7	269.35	264 -	274	7.12E+01	59.58	4.38E+02	4.70E+01
8	295.22	290 -	298	1.36E+02	53.97	3.65E+02	4.00E+01
9	351.76	346 -	354	2.94E+02	49.10	1.92E+02	2.89E+01
10	463.38	459 -	468	3.49E+01	36.92	1.74E+02	2.88E+01
11	510.48	504 -	516	1.04E+02	45.56	1.96E+02	3.35E+01
12	583.60	579 -	588	1.08E+02	40.27	1.70E+02	2.84E+01
13	609.54	603 -	616	1.88E+02	48.30	1.77E+02	3.27E+01
14	666.33	657 -	675	7.21E+01	43.84	1.40E+02	3.32E+01
M	794.56	791 -	804	2.59E+01	17.15	2.63E+01	8.43E+00
m	800.65	791 -	804	2.49E+01	20.25	4.70E+01	1.13E+01
17	886.25	880 -	892	2.60E+01	27.69	7.80E+01	2.12E+01
18	910.99	906 -	916	7.34E+01	27.36	6.12E+01	1.75E+01
19	969.49	965 -	972	3.17E+01	24.41	7.46E+01	1.78E+01
20	1052.55	1048 -	1055	1.69E+01	13.71	2.01E+01	9.01E+00
21	1204.66	1201 -	1207	2.10E+01	17.75	4.20E+01	1.25E+01
M	1265.89	1262 -	1279	1.22E+01	14.28	2.14E+01	7.60E+00
m	1276.13	1262 -	1279	1.21E+01	15.49	3.38E+01	9.56E+00
24	1377.03	1372 -	1383	1.65E+01	17.44	2.90E+01	1.27E+01
25	1460.94	1455 -	1466	2.59E+02	36.39	3.60E+01	1.39E+01
26	1594.72	1590 -	1599	1.22E+01	15.56	2.17E+01	1.14E+01
27	1625.44	1621 -	1628	7.18E+00	8.72	7.64E+00	5.65E+00
28	1727.47	1723 -	1732	1.40E+01	11.22	1.00E+01	6.88E+00
29	1764.43	1759 -	1768	3.20E+01	11.31	0.00E+00	0.00E+00
30	1790.40	1785 -	1796	1.20E+01	6.93	0.00E+00	0.00E+00
31	1870.71	1868 -	1873	5.50E+00	6.08	3.00E+00	3.18E+00

Analysis Report for 1510086-05

CP4105S04-05

Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
32	2105.13	2100 -	2110	1.84E+01	10.69	5.29E+00	5.25E+00
33	2193.88	2190 -	2197	7.22E+00	7.21	3.56E+00	3.95E+00
34	2203.95	2200 -	2207	1.20E+01	6.93	0.00E+00	0.00E+00
35	2312.99	2311 -	2317	6.83E+00	6.95	4.33E+00	3.76E+00
36	2614.72	2611 -	2620	2.47E+01	13.04	1.05E+01	6.93E+00

M = First peak in a multiplet region

m = Other peak in a multiplet region

F = Fitted singlet

Errors quoted at 2.000sigma

PEAK WITH NID REPORT

Peak Analysis Performed on : 11/6/2015 11:22:16AM

Peak Analysis From Channel : 1

Peak Analysis To Channel : 4096

Tentative NID Library : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

Peak Match Tolerance : 1.000 keV

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
1	31.25	27 -	33	30.50	5.75E+01	66.47	7.53E+02	.....
2	76.02	69 -	81	75.28	7.39E+02	153.46	2.42E+03	.....
3	93.15	88 -	96	92.43	2.49E+02	102.05	1.38E+03	GA-67
4	129.51	125 -	134	128.80	1.09E+02	85.01	9.70E+02	.....
5	185.36	179 -	189	184.67	1.69E+02	83.78	8.43E+02	RA-226 HO-166M
6	239.05	233 -	245	238.39	5.55E+02	94.12	7.83E+02	PB-212
7	269.35	264 -	274	268.70	7.12E+01	59.58	4.38E+02	.....
8	295.22	290 -	298	294.58	1.36E+02	53.97	3.65E+02	PB-214
9	351.76	346 -	354	351.15	2.94E+02	49.10	1.92E+02	PB-214
10	463.38	459 -	468	462.82	3.49E+01	36.92	1.74E+02	SB-125
11	510.48	504 -	516	509.94	1.04E+02	45.56	1.96E+02	.....
12	583.60	579 -	588	583.09	1.08E+02	40.27	1.70E+02	TL-208
13	609.54	603 -	616	609.05	1.88E+02	48.30	1.77E+02	BI-214
14	666.33	657 -	675	665.86	7.21E+01	43.84	1.40E+02	SB-126
M	794.56	791 -	804	794.16	2.59E+01	17.15	2.63E+01	.....
m	800.65	791 -	804	800.25	2.49E+01	20.25	4.70E+01	.....
17	886.25	880 -	892	885.89	2.60E+01	27.69	7.80E+01	.....
18	910.99	906 -	916	910.65	7.34E+01	27.36	6.12E+01	AC-228
19	969.49	965 -	972	969.18	3.17E+01	24.41	7.46E+01	AC-228
20	1052.55	1048 -	1055	1052.29	1.69E+01	13.71	2.01E+01	.....

: 00455

Analysis Report for 1510086-05

CP4105S04-05

	Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
	21	1204.66	1201 -	1207	1204.48	2.10E+01	17.75	4.20E+01	.....
M	22	1265.89	1262 -	1279	1265.74	1.22E+01	14.28	2.14E+01	.....
m	23	1276.13	1262 -	1279	1275.99	1.21E+01	15.49	3.38E+01	.....
	24	1377.03	1372 -	1383	1376.95	1.65E+01	17.44	2.90E+01	.....
	25	1460.94	1455 -	1466	1460.91	2.59E+02	36.39	3.60E+01	K-40
	26	1594.72	1590 -	1599	1594.77	1.22E+01	15.56	2.17E+01	.....
	27	1625.44	1621 -	1628	1625.52	7.18E+00	8.72	7.64E+00	.....
	28	1727.47	1723 -	1732	1727.61	1.40E+01	11.22	1.00E+01	.....
	29	1764.43	1759 -	1768	1764.59	3.20E+01	11.31	0.00E+00	BI-214
	30	1790.40	1785 -	1796	1790.58	1.20E+01	6.93	0.00E+00	.....
	31	1870.71	1868 -	1873	1870.94	5.50E+00	6.08	3.00E+00	.....
	32	2105.13	2100 -	2110	2105.53	1.84E+01	10.69	5.29E+00	.....
	33	2193.88	2190 -	2197	2194.34	7.22E+00	7.21	3.56E+00	.....
	34	2203.95	2200 -	2207	2204.42	1.20E+01	6.93	0.00E+00	BI-214
	35	2312.99	2311 -	2317	2313.53	6.83E+00	6.95	4.33E+00	.....
	36	2614.72	2611 -	2620	2615.49	2.47E+01	13.04	1.05E+01	TL-208

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

PEAK EFFICIENCY REPORT

Peak Analysis Performed on : 11/6/2015 11:22:16AM

Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
1	31.25	5.75E+01	66.47	2.92E-02	1.78E-03
2	76.02	7.39E+02	153.46	2.13E-02	1.69E-03
3	93.15	2.49E+02	102.05	1.90E-02	1.62E-03
4	129.51	1.09E+02	85.01	1.53E-02	1.47E-03
5	185.36	1.69E+02	83.78	1.17E-02	1.15E-03
6	239.05	5.55E+02	94.12	9.40E-03	9.86E-04
7	269.35	7.12E+01	59.58	8.46E-03	8.92E-04
8	295.22	1.36E+02	53.97	7.78E-03	8.43E-04
9	351.76	2.94E+02	49.10	6.61E-03	7.80E-04
10	463.38	3.49E+01	36.92	5.07E-03	6.31E-04
11	510.48	1.04E+02	45.56	4.61E-03	5.62E-04
12	583.60	1.08E+02	40.27	4.04E-03	4.55E-04
13	609.54	1.88E+02	48.30	3.87E-03	4.17E-04
14	666.33	7.21E+01	43.84	3.55E-03	3.38E-04

: 00456

Analysis Report for 1510086-05
CP4105S04-05

	Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
M	15	794.56	2.59E+01	17.15	2.98E-03	2.66E-04
m	16	800.65	2.49E+01	20.25	2.96E-03	2.62E-04
	17	886.25	2.60E+01	27.69	2.68E-03	2.15E-04
	18	910.99	7.34E+01	27.36	2.61E-03	2.06E-04
	19	969.49	3.17E+01	24.41	2.46E-03	1.99E-04
	20	1052.55	1.69E+01	13.71	2.27E-03	1.88E-04
	21	1204.66	2.10E+01	17.75	2.00E-03	1.81E-04
M	22	1265.89	1.22E+01	14.28	1.91E-03	1.98E-04
m	23	1276.13	1.21E+01	15.49	1.90E-03	2.00E-04
	24	1377.03	1.65E+01	17.44	1.77E-03	2.06E-04
	25	1460.94	2.59E+02	36.39	1.68E-03	1.89E-04
	26	1594.72	1.22E+01	15.56	1.56E-03	1.61E-04
	27	1625.44	7.18E+00	8.72	1.54E-03	1.55E-04
	28	1727.47	1.40E+01	11.22	1.46E-03	1.34E-04
	29	1764.43	3.20E+01	11.31	1.43E-03	1.26E-04
	30	1790.40	1.20E+01	6.93	1.42E-03	1.21E-04
	31	1870.71	5.50E+00	6.08	1.37E-03	1.11E-04
	32	2105.13	1.84E+01	10.69	1.25E-03	1.11E-04
	33	2193.88	7.22E+00	7.21	1.21E-03	1.11E-04
	34	2203.95	1.20E+01	6.93	1.21E-03	1.11E-04
	35	2312.99	6.83E+00	6.95	1.17E-03	1.11E-04
	36	2614.72	2.47E+01	13.04	1.07E-03	1.11E-04

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000 sigma

BACKGROUND SUBTRACT REPORT

Peak Analysis Performed on : 11/6/2015 11:22:16AM

Env. Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000028944.CNF

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
1	31.25	5.75E+01	66.47			5.75E+01	6.65E+01
2	76.02	7.39E+02	153.46			7.39E+02	1.53E+02
3	93.15	2.49E+02	102.05	5.44E+01	8.36E+00	1.94E+02	1.02E+02
4	129.51	1.09E+02	85.01			1.09E+02	8.50E+01
5	185.36	1.69E+02	83.78	1.43E+01	7.33E+00	1.54E+02	8.41E+01
6	239.05	5.55E+02	94.12	1.09E+01	6.39E+00	5.45E+02	9.43E+01
7	269.35	7.12E+01	59.58			7.12E+01	5.96E+01
8	295.22	1.36E+02	53.97			1.36E+02	5.40E+01

: 00457

Analysis Report for 1510086-05

CP4105S04-05

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
9	351.76	2.94E+02	49.10	8.07E+00	5.01E+00	2.86E+02	4.94E+01
10	463.38	3.49E+01	36.92			3.49E+01	3.69E+01
11	510.48	1.04E+02	45.56	4.21E+01	4.92E+00	6.19E+01	4.58E+01
12	583.60	1.08E+02	40.27			1.08E+02	4.03E+01
13	609.54	1.88E+02	48.30	5.16E+00	1.63E+00	1.83E+02	4.83E+01
14	666.33	7.21E+01	43.84			7.21E+01	4.38E+01
M 15	794.56	2.59E+01	17.15			2.59E+01	1.72E+01
m 16	800.65	2.49E+01	20.25			2.49E+01	2.03E+01
17	886.25	2.60E+01	27.69			2.60E+01	2.77E+01
18	910.99	7.34E+01	27.36	1.01E+00	2.85E+00	7.24E+01	2.75E+01
19	969.49	3.17E+01	24.41			3.17E+01	2.44E+01
20	1052.55	1.69E+01	13.71			1.69E+01	1.37E+01
21	1204.66	2.10E+01	17.75			2.10E+01	1.77E+01
M 22	1265.89	1.22E+01	14.28			1.22E+01	1.43E+01
m 23	1276.13	1.21E+01	15.49			1.21E+01	1.55E+01
24	1377.03	1.65E+01	17.44			1.65E+01	1.74E+01
25	1460.94	2.59E+02	36.39			2.59E+02	3.64E+01
26	1594.72	1.22E+01	15.56			1.22E+01	1.56E+01
27	1625.44	7.18E+00	8.72			7.18E+00	8.72E+00
28	1727.47	1.40E+01	11.22			1.40E+01	1.12E+01
29	1764.43	3.20E+01	11.31	1.11E-01	9.77E-01	3.19E+01	1.14E+01
30	1790.40	1.20E+01	6.93			1.20E+01	6.93E+00
31	1870.71	5.50E+00	6.08			5.50E+00	6.08E+00
32	2105.13	1.84E+01	10.69			1.84E+01	1.07E+01
33	2193.88	7.22E+00	7.21			7.22E+00	7.21E+00
34	2203.95	1.20E+01	6.93			1.20E+01	6.93E+00
35	2312.99	6.83E+00	6.95			6.83E+00	6.95E+00
36	2614.72	2.47E+01	13.04	1.20E+00	1.02E+00	2.35E+01	1.31E+01

M = First peak in a multiplet region
 m = Other peak in a multiplet region
 F = Fitted singlet
 Errors quoted at 2.000sigma

AREA CORRECTION REPORT REFERENCE PEAK / BKG. SUBTRACT

Peak Analysis Performed on : 11/6/2015 11:22:16AM
 Ref. Peak Energy : 0.00 Reference Date :
 Peak Ratio : 0.00 Uncertainty : 0.00
 Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000028944.CNF

Corrected Area is: Original * Peak Ratio - Background

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
----------	--------------	---------------	------------------------	--------------------	-----------------	----------------	-------------------

Analysis Report for 1510086-05
 CP4105S04-05

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
1	31.25	5.75E+01	66.47			5.75E+01	6.65E+01
2	76.02	7.39E+02	153.46			7.39E+02	1.53E+02
3	93.15	2.49E+02	102.05	5.44E+01	8.36E+00	1.94E+02	1.02E+02
4	129.51	1.09E+02	85.01			1.09E+02	8.50E+01
5	185.36	1.69E+02	83.78	1.43E+01	7.33E+00	1.54E+02	8.41E+01
6	239.05	5.55E+02	94.12	1.09E+01	6.39E+00	5.45E+02	9.43E+01
7	269.35	7.12E+01	59.58			7.12E+01	5.96E+01
8	295.22	1.36E+02	53.97			1.36E+02	5.40E+01
9	351.76	2.94E+02	49.10	8.07E+00	5.01E+00	2.86E+02	4.94E+01
10	463.38	3.49E+01	36.92			3.49E+01	3.69E+01
11	510.48	1.04E+02	45.56	4.21E+01	4.92E+00	6.19E+01	4.58E+01
12	583.60	1.08E+02	40.27			1.08E+02	4.03E+01
13	609.54	1.88E+02	48.30	5.16E+00	1.63E+00	1.83E+02	4.83E+01
14	666.33	7.21E+01	43.84			7.21E+01	4.38E+01
M	15	794.56	2.59E+01			2.59E+01	1.72E+01
m	16	800.65	2.49E+01			2.49E+01	2.03E+01
	17	886.25	2.60E+01			2.60E+01	2.77E+01
	18	910.99	7.34E+01	1.01E+00	2.85E+00	7.24E+01	2.75E+01
	19	969.49	3.17E+01			3.17E+01	2.44E+01
	20	1052.55	1.69E+01			1.69E+01	1.37E+01
	21	1204.66	2.10E+01			2.10E+01	1.77E+01
M	22	1265.89	1.22E+01			1.22E+01	1.43E+01
m	23	1276.13	1.21E+01			1.21E+01	1.55E+01
	24	1377.03	1.65E+01			1.65E+01	1.74E+01
	25	1460.94	2.59E+02			2.59E+02	3.64E+01
	26	1594.72	1.22E+01			1.22E+01	1.56E+01
	27	1625.44	7.18E+00			7.18E+00	8.72E+00
	28	1727.47	1.40E+01			1.40E+01	1.12E+01
	29	1764.43	3.20E+01	1.11E-01	9.77E-01	3.19E+01	1.14E+01
	30	1790.40	1.20E+01			1.20E+01	6.93E+00
	31	1870.71	5.50E+00			5.50E+00	6.08E+00
	32	2105.13	1.84E+01			1.84E+01	1.07E+01
	33	2193.88	7.22E+00			7.22E+00	7.21E+00
	34	2203.95	1.20E+01			1.20E+01	6.93E+00
	35	2312.99	6.83E+00			6.83E+00	6.95E+00
	36	2614.72	2.47E+01	1.20E+00	1.02E+00	2.35E+01	1.31E+01

M = First peak in a multiplet region
 m = Other peak in a multiplet region
 F = Fitted singlet
 Errors quoted at 2.000sigma

NUCLIDE IDENTIFICATION REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

IDENTIFIED NUCLIDES

Analysis Report for 1510086-05
 CP4105S04-05

Nuclide Name	Id Confidence	Energy (keV)	Yield(%)	Activity (pCi/grams)	Activity Uncertainty
K-40	0.997	1460.81 *	10.67	2.07E+01	3.74E+00
GA-67	0.380	93.31 *	35.70	3.07E+02	1.30E+03
		208.95	2.24		
		300.22	16.00		
TL-208	0.872	583.14 *	30.22	1.27E+00	4.93E-01
		860.37	4.48		
		2614.66 *	35.85	8.78E-01	4.96E-01
PB-212	0.871	238.63 *	44.60	1.86E+00	3.77E-01
		300.09	3.41		
BI-214	0.738	609.31 *	46.30	1.47E+00	4.17E-01
		1120.29	15.10		
		1764.49 *	15.80	2.02E+00	7.40E-01
		2204.22 *	4.98	2.86E+00	1.67E+00
PB-214	0.997	295.21 *	19.19	1.30E+00	5.37E-01
		351.92 *	37.19	1.67E+00	3.49E-01
RA-226	0.889	186.21 *	3.28	5.79E+00	1.11E+01
AC-228	0.518	338.32	11.40		
		911.07 *	27.70	1.43E+00	5.57E-01
		969.11 *	16.60	1.11E+00	8.62E-01

* = Energy line found in the spectrum.
 - = Manually added nuclide.
 ? = Manually edited nuclide.
 Energy Tolerance : 1.000 keV
 Nuclide confidence index threshold = 0.30
 Errors quoted at 2.000sigma

UNIDENTIFIED PEAKS

Peak Locate Performed on : 11/6/2015 11:22:16AM
 Peak Locate From Channel : 1
 Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
1	31.25	1.59773E-02	57.78		
2	76.02	2.05225E-01	10.39		
4	129.51	3.02778E-02	38.99		
7	269.35	1.97658E-02	41.87		
10	463.38	9.69262E-03	52.90	Tol.	SB-125
11	510.48	1.71891E-02	37.03		
14	666.33	2.00342E-02	30.39	Tol.	SB-126

Analysis Report for 1510086-05
CP4105S04-05

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
M	15	794.56	7.18144E-03	33.18	Sum
m	16	800.65	6.90866E-03	40.72	
	17	886.25	7.22222E-03	53.26	
	20	1052.55	4.70679E-03	40.46	
	21	1204.66	5.83333E-03	42.26	
M	22	1265.89	3.37726E-03	58.74	
m	23	1276.13	3.37022E-03	63.84	
	24	1377.03	4.58781E-03	52.78	
	26	1594.72	3.38164E-03	63.89	
	27	1625.44	1.99495E-03	60.69	
	28	1727.47	3.88889E-03	40.09	
	30	1790.40	3.33333E-03	28.87	
	31	1870.71	1.52778E-03	55.30	
	32	2105.13	5.09921E-03	29.11	
	33	2193.88	2.00617E-03	49.92	
	35	2312.99	1.89815E-03	50.83	

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

NUCLIDE IDENTIFICATION REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

IDENTIFIED NUCLIDES

Nuclide Name	Id Confidence	Energy (keV)	Yield(%)	Activity (pCi/grams)	Activity Uncertainty
K-40	0.99	1460.81 *	10.67	2.07E+01	3.74E+00
GA-67	0.38	93.31 *	35.70	3.07E+02	1.30E+03
		208.95	2.24		
		300.22	16.00		
TL-208	0.87	583.14 *	30.22	1.27E+00	4.93E-01
		860.37	4.48		
		2614.66 *	35.85	8.78E-01	4.96E-01
PB-212	0.87	238.63 *	44.60	1.86E+00	3.77E-01
		300.09	3.41		
BI-214	0.73	609.31 *	46.30	1.47E+00	4.17E-01
		1120.29	15.10		
		1764.49 *	15.80	2.02E+00	7.40E-01

: 00461

Analysis Report for 1510086-05
CP4105S04-05

Nuclide Name	Id Confidence	Energy (keV)	Yield(%)	Activity (pCi/grams)	Activity Uncertainty
BI-214	0.73	2204.22 *	4.98	2.86E+00	1.67E+00
PB-214	0.99	295.21 *	19.19	1.30E+00	5.37E-01
		351.92 *	37.19	1.67E+00	3.49E-01
RA-226	0.88	186.21 *	3.28	5.79E+00	1.11E+01
AC-228	0.51	338.32	11.40		
		911.07 *	27.70	1.43E+00	5.57E-01
		969.11 *	16.60	1.11E+00	8.62E-01

* = Energy line found in the spectrum.
- = Manually added nuclide.
? = Manually edited nuclide.
@ = Energy line not used for Weighted Mean Activity
Energy Tolerance : 1.000 keV
Nuclide confidence index threshold = 0.30
Errors quoted at 2.000sigma

INTERFERENCE CORRECTED REPORT

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40	0.997	2.07E+01	3.74E+00	
GA-67	0.380	3.07E+02	1.30E+03	
TL-208	0.872	1.07E+00	3.50E-01	
PB-212	0.871	1.86E+00	3.77E-01	
BI-214	0.738	1.66E+00	3.55E-01	
PB-214	0.997	1.56E+00	2.92E-01	
RA-226	0.889	5.79E+00	1.11E+01	
AC-228	0.518	1.34E+00	4.68E-01	

? = nuclide is part of an undetermined solution
X = nuclide rejected by the interference analysis
@ = nuclide contains energy lines not used in Weighted Mean Activity

Errors quoted at 2.000sigma

Analysis Report for 1510086-05
CP4105S04-05

UNIDENTIFIED PEAKS

Peak Locate Performed on : 11/6/2015 11:22:16AM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
1	31.25	1.59773E-02	57.78		
2	76.02	2.05225E-01	10.39		
4	129.51	3.02778E-02	38.99		
7	269.35	1.97658E-02	41.87		
10	463.38	9.69262E-03	52.90	Tol.	SB-125
11	510.48	1.71891E-02	37.03		
14	666.33	2.00342E-02	30.39	Tol.	SB-126
M	15	794.56	7.18144E-03	Sum	
m	16	800.65	6.90866E-03		
	17	886.25	7.22222E-03		
	20	1052.55	4.70679E-03		
	21	1204.66	5.83333E-03		
M	22	1265.89	3.37726E-03		
m	23	1276.13	3.37022E-03		
	24	1377.03	4.58781E-03		
	26	1594.72	3.38164E-03		
	27	1625.44	1.99495E-03		
	28	1727.47	3.88889E-03		
	30	1790.40	3.33333E-03		
	31	1870.71	1.52778E-03		
	32	2105.13	5.09921E-03		
	33	2193.88	2.00617E-03		
	35	2312.99	1.89815E-03		

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

Analysis Report for 1510086-05
CP4105S04-05

NUCLIDE MDA REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	BE-7	477.59	10.42	-1.24E+00	1.82E+00	1.82E+00
+	NA-22	1274.54	99.94	4.93E-02	2.27E-01	2.27E-01
+	NA-24	1368.53	99.99	-5.79E+13	1.26E+14	1.43E+14
		2754.09	99.86	-2.26E+13		1.26E+14
+	AL-26	1808.65	99.76	6.20E-02	1.78E-01	1.78E-01
+	K-40	1460.81	* 10.67	2.07E+01	2.44E+00	2.44E+00
+	@ AR-41	1293.64	99.16	1.00E+26	1.00E+26	1.00E+26
+	TI-44	67.88	94.40	2.97E-02	9.87E-02	9.87E-02
		78.34	96.00	3.34E-01		1.28E-01
+	SC-46	889.25	99.98	-8.88E-02	2.20E-01	2.20E-01
		1120.51	99.99	2.31E-01		3.58E-01
+	V-48	983.52	99.98	-3.60E-01	6.43E-01	6.43E-01
		1312.10	97.50	1.10E-02		7.96E-01
+	CR-51	320.08	9.83	-5.99E-01	2.76E+00	2.76E+00
+	MN-54	834.83	99.97	-7.37E-02	1.89E-01	1.89E-01
+	CO-56	846.75	99.96	3.88E-04	2.44E-01	2.44E-01
		1037.75	14.03	-1.11E+00		1.62E+00
		1238.25	67.00	1.03E-01		4.98E-01
		1771.40	15.51	-8.22E-01		1.42E+00
		2598.48	16.90	5.18E-01		1.36E+00
+	CO-57	122.06	85.51	-1.38E-02	1.20E-01	1.20E-01
		136.48	10.60	-1.50E-01		1.02E+00
+	CO-58	810.76	99.40	4.87E-02	2.20E-01	2.20E-01
+	FE-59	1099.22	56.50	-1.08E-03	5.70E-01	5.70E-01
		1291.56	43.20	1.51E-01		7.57E-01
+	CO-60	1173.22	100.00	-5.88E-04	1.49E-01	2.27E-01
		1332.49	100.00	-2.25E-02		1.49E-01
+	ZN-65	1115.52	50.75	-3.83E-01	5.01E-01	5.01E-01
+	GA-67	93.31	* 35.70	3.07E+02	2.60E+02	2.60E+02
		208.95	2.24	9.73E+02		4.10E+03
		300.22	16.00	-5.63E+01		6.25E+02
+	SE-75	121.11	16.70	5.77E-02	2.04E-01	6.90E-01
		136.00	59.20	-3.27E-03		2.04E-01
		264.65	59.80	-2.16E-02		2.32E-01
		279.53	25.20	2.01E-01		5.73E-01
		400.65	11.40	5.69E-02		1.37E+00
+	RB-82	776.52	13.00	-1.81E+00	2.99E+00	2.99E+00
+	RB-83	520.41	46.00	9.53E-02	3.94E-01	3.94E-01
		529.64	30.30	-2.66E-02		6.02E-01
		552.65	16.40	-3.72E-02		1.07E+00
+	KR-85	513.99	0.43	3.57E+01	4.38E+01	4.38E+01
+	SR-85	513.99	99.27	2.16E-01	2.66E-01	2.66E-01

Analysis Report for 1510086-05
CP4105S04-05

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	Y-88	898.02	93.40	6.86E-02	1.79E-01	2.38E-01
		1836.01	99.38	1.55E-02		1.79E-01
+	NB-93M	16.57	9.43	9.47E-01	4.76E-01	4.76E-01
+	NB-94	702.63	100.00	1.07E-01	1.76E-01	1.76E-01
		871.10	100.00	3.57E-02		1.82E-01
+	NB-95	765.79	99.81	-1.12E-02	3.41E-01	3.41E-01
+	NB-95M	235.69	25.00	4.07E+00	3.02E+02	3.02E+02
+	ZR-95	724.18	43.70	5.42E-02	4.53E-01	5.93E-01
		756.72	55.30	1.55E-01		4.53E-01
+	MO-99	181.06	6.20	-3.97E+02	3.68E+03	4.92E+03
		739.58	12.80	2.67E+02		3.68E+03
		778.00	4.50	-2.13E+03		9.57E+03
+	RU-103	497.08	89.00	1.08E-01	2.86E-01	2.86E-01
+	RU-106	621.84	9.80	-2.57E-01	1.62E+00	1.62E+00
+	AG-108M	433.93	89.90	-3.89E-02	1.51E-01	1.51E-01
		614.37	90.40	-5.70E-03		2.26E-01
		722.95	90.50	4.00E-02		2.03E-01
+	CD-109	88.03	3.72	4.60E-01	3.03E+00	3.03E+00
+	AG-110M	657.75	93.14	1.18E-03	1.77E-01	1.77E-01
		677.61	10.53	-1.36E-01		1.44E+00
		706.67	16.46	-5.41E-01		1.01E+00
		763.93	21.98	-1.45E-01		9.09E-01
		884.67	71.63	-2.96E-02		2.70E-01
		1384.27	23.94	1.83E-01		7.44E-01
+	CD-113M	263.70	0.02	7.35E+01	5.06E+02	5.06E+02
+	SN-113	255.12	1.93	-3.21E+00	2.47E-01	7.14E+00
		391.69	64.90	4.30E-02		2.47E-01
+	TE123M	159.00	84.10	7.22E-02	1.56E-01	1.56E-01
+	SB-124	602.71	97.87	1.03E-02	2.27E-01	2.27E-01
		645.85	7.26	4.70E-01		2.95E+00
		722.78	11.10	-1.08E+00		2.24E+00
		1691.02	49.00	-1.72E-01		3.97E-01
+	I-125	35.49	6.49	1.14E-01	1.25E+00	1.25E+00
+	SB-125	176.33	6.89	-4.68E-01	4.71E-01	1.63E+00
		427.89	29.33	-6.96E-02		4.71E-01
		463.38	10.35	6.91E-01		1.47E+00
		600.56	17.80	2.59E-01		9.06E-01
		635.90	11.32	7.33E-02		1.33E+00
+	SB-126	414.70	83.30	2.82E-01	9.19E-01	9.64E-01
		666.33	99.60	3.09E-01		1.02E+00
		695.00	99.60	-1.69E-01		9.19E-01
		720.50	53.80	-1.75E+00		1.66E+00
+	SN-126	87.57	37.00	4.40E-02	2.90E-01	2.90E-01
+	SB-127	473.00	25.00	2.22E+01	1.16E+02	1.43E+02
		685.20	35.70	1.03E+00		1.16E+02
		783.80	14.70	1.52E+02		3.37E+02
+	I-129	29.78	57.00	1.39E-03	9.57E-02	9.57E-02
		33.60	13.20	1.54E-03		4.27E-01

Analysis Report for 1510086-05
CP4105S04-05

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	I-129	39.58	7.52	-9.11E-01	9.57E-02	7.61E-01
+	I-131	284.30	6.05	-6.09E+00	2.34E+00	2.81E+01
		364.48	81.20	1.95E-01		2.34E+00
		636.97	7.26	1.88E+00		3.06E+01
		722.89	1.80	-6.82E+01		1.41E+02
+	TE-132	49.72	13.10	1.04E+02	1.03E+02	3.94E+02
		228.16	88.00	3.21E+01		1.03E+02
+	BA-133	81.00	33.00	-9.59E-02	3.22E-01	3.47E-01
		302.84	17.80	-1.75E-01		7.14E-01
		356.01	60.00	-3.12E-01		3.22E-01
+	I-133	529.87	86.30	-4.70E+08	1.06E+10	1.06E+10
+	XE-133	81.00	38.00	-5.07E+00	1.83E+01	1.83E+01
+	CS-134	563.23	8.38	5.46E-01	2.13E-01	1.88E+00
		569.32	15.43	-4.38E-01		9.61E-01
		604.70	97.60	1.61E-02		2.13E-01
		795.84	85.40	-5.90E-03		2.18E-01
		801.93	8.73	2.33E-02		2.09E+00
+	CS-135	268.24	16.00	6.76E-01	7.97E-01	7.97E-01
+	@ I-135	1131.51	22.50	1.00E+26	1.00E+26	1.00E+26
	@	1260.41	28.60	1.00E+26		1.00E+26
	@	1678.03	9.54	1.00E+26		1.00E+26
+	CS-136	153.22	7.46	2.50E+00	7.73E-01	7.54E+00
		163.89	4.61	-5.83E+00		1.15E+01
		176.55	13.56	-1.20E+00		4.19E+00
		273.65	12.66	7.86E-01		5.24E+00
		340.57	48.50	1.22E+00		1.59E+00
		818.50	99.70	-2.92E-03		7.73E-01
		1048.07	79.60	3.16E-01		1.20E+00
		1235.34	19.70	1.47E+00		6.88E+00
+	CS-137	661.65	85.12	9.39E-02	2.06E-01	2.06E-01
+	LA-138	788.74	34.00	-1.77E-02	2.63E-01	4.61E-01
		1435.80	66.00	5.96E-02		2.63E-01
+	CE-139	165.85	80.35	3.43E-02	1.54E-01	1.54E-01
+	BA-140	162.64	6.70	-3.99E+00	3.46E+00	8.32E+00
		304.84	4.50	5.34E+00		1.53E+01
		423.70	3.20	-6.12E+00		2.24E+01
		437.55	2.00	3.91E+00		3.70E+01
		537.32	25.00	1.65E+00		3.46E+00
+	LA-140	328.77	20.50	4.12E-01	1.14E+00	3.53E+00
		487.03	45.50	-5.46E-02		1.64E+00
		815.85	23.50	-6.94E-01		3.43E+00
		1596.49	95.49	-3.47E-02		1.14E+00
+	CE-141	145.44	48.40	1.33E-01	4.32E-01	4.32E-01
+	CE-143	57.36	11.80	-5.22E+06	2.43E+06	4.20E+06
		293.26	42.00	3.71E+06		2.43E+06
		664.55	5.20	3.58E+06		2.16E+07
+	CE-144	133.54	10.80	2.64E-02	1.02E+00	1.02E+00
+	PM-144	476.78	42.00	-1.67E-01	1.66E-01	3.24E-01
		618.01	98.60	-2.85E-02		1.66E-01

Analysis Report for 1510086-05
CP4105S04-05

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	PM-144	696.49	99.49	4.51E-02	1.66E-01	1.80E-01
+	PM-145	36.85	21.70	7.47E-03	1.39E-01	2.58E-01
		37.36	39.70	-7.41E-02		1.39E-01
		42.30	15.10	7.05E-02		4.15E-01
		72.40	2.31	8.46E+00		5.07E+00
+	PM-146	453.90	39.94	1.03E-01	3.69E-01	3.69E-01
		735.90	14.01	-9.26E-01		1.21E+00
		747.13	13.10	-1.36E-01		1.40E+00
+	ND-147	91.11	28.90	4.96E-01	2.81E+00	2.81E+00
		531.02	13.10	-2.44E+00		7.66E+00
+	PM-149	285.90	3.10	-1.67E+03	6.42E+04	6.42E+04
+	EU-152	121.78	20.50	-5.34E-02	4.65E-01	4.65E-01
		244.69	5.40	1.18E-01		2.71E+00
		344.27	19.13	-5.76E-01		6.49E-01
		778.89	9.20	-4.12E-01		1.85E+00
		964.01	10.40	3.39E-03		2.28E+00
		1085.78	7.22	-1.86E+00		2.47E+00
		1112.02	9.60	-4.63E-01		2.21E+00
		1407.95	14.94	5.85E-02		1.04E+00
+	GD-153	97.43	31.30	-6.87E-02	3.28E-01	3.28E-01
		103.18	22.20	-4.90E-02		4.31E-01
+	EU-154	123.07	40.50	-5.19E-02	2.37E-01	2.37E-01
		723.30	19.70	1.85E-01		9.39E-01
		873.19	11.50	-6.38E-03		1.50E+00
		996.32	10.30	4.89E-01		1.88E+00
		1004.76	17.90	3.10E-01		1.07E+00
		1274.45	35.50	1.37E-01		6.29E-01
+	EU-155	86.50	30.90	2.77E-02	3.46E-01	3.46E-01
		105.30	20.70	-7.67E-02		4.28E-01
+	EU-156	811.77	10.40	1.56E+00	6.35E+00	6.35E+00
		1153.47	7.20	3.36E+00		1.22E+01
		1230.71	8.90	3.25E-01		1.19E+01
+	HO-166M	184.41	72.60	2.45E-01	1.83E-01	1.83E-01
		280.45	29.60	6.12E-02		4.07E-01
		410.94	11.10	-4.53E-02		1.25E+00
		711.69	54.10	-9.53E-02		2.81E-01
+	TM-171	66.72	0.14	4.49E+01	6.87E+01	6.87E+01
+	HF-172	81.75	4.52	-5.50E-01	9.38E-01	2.42E+00
		125.81	11.30	7.45E-02		9.38E-01
+	LU-172	181.53	20.60	-1.20E-01	8.12E+00	1.53E+01
		810.06	16.63	5.36E+00		2.42E+01
		912.12	15.25	4.54E+01		4.36E+01
		1093.66	62.50	7.22E-01		8.12E+00
+	LU-173	100.72	5.24	-1.28E+00	6.40E-01	1.69E+00
		272.11	21.20	2.31E-01		6.40E-01
+	HF-175	343.40	84.00	-1.12E-01	2.11E-01	2.11E-01
+	LU-176	88.34	13.30	1.02E-01	1.33E-01	8.26E-01
		201.83	86.00	5.19E-02		1.46E-01
		306.78	94.00	6.84E-04		1.33E-01

Analysis Report for 1510086-05
CP4105S04-05

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	TA-182	67.75	41.20	8.21E-02	2.72E-01	2.72E-01
		1121.30	34.90	5.41E-01		9.58E-01
		1189.05	16.23	9.18E-01		1.91E+00
		1221.41	26.98	1.80E-01		1.12E+00
		1231.02	11.44	7.38E-02		2.69E+00
+	IR-192	308.46	29.68	-5.49E-02	3.85E-01	5.54E-01
		468.07	48.10	3.15E-02		3.85E-01
+	HG-203	279.19	77.30	8.70E-02	2.48E-01	2.48E-01
+	BI-207	569.67	97.72	-6.73E-02	1.48E-01	1.48E-01
		1063.62	74.90	1.32E-01		2.77E-01
+	TL-208	583.14	* 30.22	1.27E+00	6.39E-01	6.97E-01
		860.37	4.48	-1.59E-01		4.39E+00
		2614.66	* 35.85	8.78E-01		6.39E-01
+	BI-210M	262.00	45.00	-1.77E-02	2.49E-01	2.49E-01
		300.00	23.00	-8.93E-03		6.52E-01
+	PB-210	46.50	4.25	1.23E+00	1.58E+00	1.58E+00
+	PB-211	404.84	2.90	-2.53E+00	4.40E+00	4.40E+00
		831.96	2.90	-3.55E+00		5.88E+00
+	BI-212	727.17	11.80	7.34E-01	1.62E+00	1.62E+00
		1620.62	2.75	-7.90E-01		5.64E+00
+	PB-212	238.63	* 44.60	1.86E+00	4.70E-01	4.70E-01
		300.09	3.41	-6.02E-02		4.40E+00
+	BI-214	609.31	* 46.30	1.47E+00	2.94E-01	5.48E-01
		1120.29	15.10	1.18E+00		1.83E+00
		1764.49	* 15.80	2.02E+00		2.94E-01
		2204.22	* 4.98	2.86E+00		6.46E-01
+	PB-214	295.21	* 19.19	1.30E+00	3.61E-01	7.95E-01
		351.92	* 37.19	1.67E+00		3.61E-01
+	RN-219	401.80	6.50	-4.72E-01	1.96E+00	1.96E+00
+	RA-223	323.87	3.88	2.67E-01	3.39E+00	3.39E+00
+	RA-224	240.98	3.95	2.09E+01	5.27E+00	5.27E+00
+	RA-225	40.00	31.00	-9.52E-01	7.95E-01	7.95E-01
+	RA-226	186.21	* 3.28	5.79E+00	5.06E+00	5.06E+00
+	TH-227	50.10	8.40	2.18E-01	8.22E-01	8.22E-01
		236.00	11.50	2.25E-02		1.67E+00
		256.20	6.30	1.02E+00		1.88E+00
+	AC-228	338.32	11.40	1.58E+00	7.59E-01	1.34E+00
		911.07	* 27.70	1.43E+00		7.59E-01
		969.11	* 16.60	1.11E+00		1.35E+00
+	TH-230	48.44	16.90	3.34E-01	4.07E-01	4.07E-01
		62.85	4.60	1.62E+00		1.94E+00
		67.67	0.37	7.56E+00		2.51E+01
+	PA-231	283.67	1.60	-2.34E+00	5.49E+00	7.25E+00
		302.67	2.30	-1.34E+00		5.49E+00
+	TH-231	25.64	14.70	-3.42E-02	3.58E-01	3.58E-01
		84.21	6.40	1.30E-01		1.58E+00
+	PA-233	311.98	38.60	5.48E-03	7.05E-01	7.05E-01
+	PA-234	131.20	20.40	3.65E-01	5.17E-01	5.17E-01

Analysis Report for 1510086-05
CP4105S04-05

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	PA-234	733.99	8.80	-1.94E+00	5.17E-01	1.88E+00
		946.00	12.00	4.98E-01		1.63E+00
+	PA-234M	1001.03	0.92	-1.06E+01	1.90E+01	1.90E+01
+	TH-234	63.29	3.80	2.07E+00	2.37E+00	2.37E+00
+	U-235	143.76	10.50	4.42E-01	1.03E+00	1.03E+00
		163.35	4.70	-1.11E+00		2.19E+00
		205.31	4.70	7.84E-01		2.68E+00
+	NP-237	86.50	12.60	6.71E-02	8.37E-01	8.37E-01
+	NP-239	106.10	22.70	-6.60E+02	3.69E+03	3.69E+03
		228.18	10.70	2.67E+03		1.09E+04
		277.60	14.10	2.60E+03		8.20E+03
+	AM-241	59.54	35.90	7.81E-02	2.32E-01	2.32E-01
+	AM-243	74.67	66.00	7.30E-01	1.90E-01	1.90E-01
+	CM-243	209.75	3.29	1.23E+00	8.70E-01	3.78E+00
		228.14	10.60	3.55E-01		1.14E+00
		277.60	14.00	2.75E-01		8.70E-01

- + = Nuclide identified during the nuclide identification
 * = Energy line found in the spectrum
 > = MDA value not calculated
 @ = Half-life too short to be able to perform the decay correction
 ? = CAUTION: MDA value is inconsistent with Currie MDA at 95% confidence level

NUCLIDE MDA REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

	Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
	BE-7	477.59	10.42	1.82E+00	1.82E+00	-1.24E+00	8.54E-01
	NA-22	1274.54	99.94	2.27E-01	2.27E-01	4.93E-02	1.03E-01
	NA-24	1368.53	99.99	1.43E+14	1.26E+14	-5.79E+13	6.07E+13
		2754.09	99.86	1.26E+14		-2.26E+13	4.46E+13
	AL-26	1808.65	99.76	1.78E-01	1.78E-01	6.20E-02	7.52E-02
+	K-40	1460.81	* 10.67	2.44E+00	2.44E+00	2.07E+01	1.11E+00

: 00469

Analysis Report for 1510086-05

CP4105S04-05

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
@ AR-41	1293.64	99.16	1.00E+26	1.00E+26	1.00E+26	1.00E+20
TI-44	67.88	94.40	9.87E-02	9.87E-02	2.97E-02	4.84E-02
	78.34	96.00	1.28E-01		3.34E-01	6.32E-02
SC-46	889.25	99.98	2.20E-01	2.20E-01	-8.88E-02	1.01E-01
	1120.51	99.99	3.58E-01		2.31E-01	1.67E-01
V-48	983.52	99.98	6.43E-01	6.43E-01	-3.60E-01	2.91E-01
	1312.10	97.50	7.96E-01		1.10E-02	3.56E-01
CR-51	320.08	9.83	2.76E+00	2.76E+00	-5.99E-01	1.32E+00
MN-54	834.83	99.97	1.89E-01	1.89E-01	-7.37E-02	8.71E-02
CO-56	846.75	99.96	2.44E-01	2.44E-01	3.88E-04	1.13E-01
	1037.75	14.03	1.62E+00		-1.11E+00	7.31E-01
	1238.25	67.00	4.98E-01		1.03E-01	2.30E-01
	1771.40	15.51	1.42E+00		-8.22E-01	5.93E-01
	2598.48	16.90	1.36E+00		5.18E-01	5.39E-01
CO-57	122.06	85.51	1.20E-01	1.20E-01	-1.38E-02	5.87E-02
	136.48	10.60	1.02E+00		-1.50E-01	4.98E-01
CO-58	810.76	99.40	2.20E-01	2.20E-01	4.87E-02	1.01E-01
FE-59	1099.22	56.50	5.70E-01	5.70E-01	-1.08E-03	2.59E-01
	1291.56	43.20	7.57E-01		1.51E-01	3.40E-01
CO-60	1173.22	100.00	2.27E-01	1.49E-01	-5.88E-04	1.04E-01
	1332.49	100.00	1.49E-01		-2.25E-02	6.39E-02
ZN-65	1115.52	50.75	5.01E-01	5.01E-01	-3.83E-01	2.31E-01
+ GA-67	93.31	* 35.70	2.60E+02	2.60E+02	3.07E+02	1.28E+02
	208.95	2.24	4.10E+03		9.73E+02	1.99E+03
	300.22	16.00	6.25E+02		-5.63E+01	3.00E+02
SE-75	121.11	16.70	6.90E-01	2.04E-01	5.77E-02	3.36E-01
	136.00	59.20	2.04E-01		-3.27E-03	9.95E-02
	264.65	59.80	2.32E-01		-2.16E-02	1.11E-01
	279.53	25.20	5.73E-01		2.01E-01	2.75E-01
	400.65	11.40	1.37E+00		5.69E-02	6.49E-01
RB-82	776.52	13.00	2.99E+00	2.99E+00	-1.81E+00	1.38E+00
RB-83	520.41	46.00	3.94E-01	3.94E-01	9.53E-02	1.85E-01
	529.64	30.30	6.02E-01		-2.66E-02	2.82E-01
	552.65	16.40	1.07E+00		-3.72E-02	4.97E-01
KR-85	513.99	0.43	4.38E+01	4.38E+01	3.57E+01	2.09E+01
SR-85	513.99	99.27	2.66E-01	2.66E-01	2.16E-01	1.27E-01
Y-88	898.02	93.40	2.38E-01	1.79E-01	6.86E-02	1.10E-01
	1836.01	99.38	1.79E-01		1.55E-02	7.25E-02
NB-93M	16.57	9.43	4.76E-01	4.76E-01	9.47E-01	2.31E-01
NB-94	702.63	100.00	1.76E-01	1.76E-01	1.07E-01	8.23E-02
	871.10	100.00	1.82E-01		3.57E-02	8.38E-02
NB-95	765.79	99.81	3.41E-01	3.41E-01	-1.12E-02	1.59E-01
NB-95M	235.69	25.00	3.02E+02	3.02E+02	4.07E+00	1.48E+02
ZR-95	724.18	43.70	5.93E-01	4.53E-01	5.42E-02	2.78E-01
	756.72	55.30	4.53E-01		1.55E-01	2.11E-01
MO-99	181.06	6.20	4.92E+03	3.68E+03	-3.97E+02	2.39E+03
	739.58	12.80	3.68E+03		2.67E+02	1.72E+03
	778.00	4.50	9.57E+03		-2.13E+03	4.43E+03
RU-103	497.08	89.00	2.86E-01	2.86E-01	1.08E-01	1.35E-01
RU-106	621.84	9.80	1.62E+00	1.62E+00	-2.57E-01	7.54E-01
AG-108M	433.93	89.90	1.51E-01	1.51E-01	-3.89E-02	7.17E-02
	614.37	90.40	2.26E-01		-5.70E-03	1.07E-01
	722.95	90.50	2.03E-01		4.00E-02	9.49E-02

Analysis Report for 1510086-05
CP4105S04-05

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
CD-109	88.03	3.72	3.03E+00	3.03E+00	4.60E-01	1.49E+00
AG-110M	657.75	93.14	1.77E-01	1.77E-01	1.18E-03	8.20E-02
	677.61	10.53	1.44E+00		-1.36E-01	6.64E-01
	706.67	16.46	1.01E+00		-5.41E-01	4.67E-01
	763.93	21.98	9.09E-01		-1.45E-01	4.23E-01
	884.67	71.63	2.70E-01		-2.96E-02	1.24E-01
	1384.27	23.94	7.44E-01		1.83E-01	3.22E-01
CD-113M	263.70	0.02	5.06E+02	5.06E+02	7.35E+01	2.43E+02
SN-113	255.12	1.93	7.14E+00	2.47E-01	-3.21E+00	3.43E+00
	391.69	64.90	2.47E-01		4.30E-02	1.17E-01
TE123M	159.00	84.10	1.56E-01	1.56E-01	7.22E-02	7.57E-02
SB-124	602.71	97.87	2.27E-01	2.27E-01	1.03E-02	1.06E-01
	645.85	7.26	2.95E+00		4.70E-01	1.37E+00
	722.78	11.10	2.24E+00		-1.08E+00	1.04E+00
	1691.02	49.00	3.97E-01		-1.72E-01	1.61E-01
I-125	35.49	6.49	1.25E+00	1.25E+00	1.14E-01	6.11E-01
SB-125	176.33	6.89	1.63E+00	4.71E-01	-4.68E-01	7.94E-01
	427.89	29.33	4.71E-01		-6.96E-02	2.23E-01
	463.38	10.35	1.47E+00		6.91E-01	6.99E-01
	600.56	17.80	9.06E-01		2.59E-01	4.24E-01
	635.90	11.32	1.33E+00		7.33E-02	6.17E-01
SB-126	414.70	83.30	9.64E-01	9.19E-01	2.82E-01	4.58E-01
	666.33	99.60	1.02E+00		3.09E-01	4.81E-01
	695.00	99.60	9.19E-01		-1.69E-01	4.27E-01
	720.50	53.80	1.66E+00		-1.75E+00	7.68E-01
SN-126	87.57	37.00	2.90E-01	2.90E-01	4.40E-02	1.42E-01
SB-127	473.00	25.00	1.43E+02	1.16E+02	2.22E+01	6.71E+01
	685.20	35.70	1.16E+02		1.03E+00	5.35E+01
	783.80	14.70	3.37E+02		1.52E+02	1.56E+02
I-129	29.78	57.00	9.57E-02	9.57E-02	1.39E-03	4.67E-02
	33.60	13.20	4.27E-01		1.54E-03	2.08E-01
	39.58	7.52	7.61E-01		-9.11E-01	3.71E-01
I-131	284.30	6.05	2.81E+01	2.34E+00	-6.09E+00	1.35E+01
	364.48	81.20	2.34E+00		1.95E-01	1.12E+00
	636.97	7.26	3.06E+01		1.88E+00	1.43E+01
	722.89	1.80	1.41E+02		-6.82E+01	6.57E+01
TE-132	49.72	13.10	3.94E+02	1.03E+02	1.04E+02	1.93E+02
	228.16	88.00	1.03E+02		3.21E+01	4.97E+01
BA-133	81.00	33.00	3.47E-01	3.22E-01	-9.59E-02	1.70E-01
	302.84	17.80	7.14E-01		-1.75E-01	3.42E-01
	356.01	60.00	3.22E-01		-3.12E-01	1.56E-01
I-133	529.87	86.30	1.06E+10	1.06E+10	-4.70E+08	4.99E+09
XE-133	81.00	38.00	1.83E+01	1.83E+01	-5.07E+00	9.01E+00
CS-134	563.23	8.38	1.88E+00	2.13E-01	5.46E-01	8.86E-01
	569.32	15.43	9.61E-01		-4.38E-01	4.49E-01
	604.70	97.60	2.13E-01		1.61E-02	1.01E-01
	795.84	85.40	2.18E-01		-5.90E-03	1.01E-01
	801.93	8.73	2.09E+00		2.33E-02	9.68E-01
CS-135	268.24	16.00	7.97E-01	7.97E-01	6.76E-01	3.84E-01
@ I-135	1131.51	22.50	1.00E+26	1.00E+26	1.00E+26	1.00E+20
@	1260.41	28.60	1.00E+26		1.00E+26	1.00E+20
@	1678.03	9.54	1.00E+26		1.00E+26	1.00E+20
CS-136	153.22	7.46	7.54E+00	7.73E-01	2.50E+00	3.67E+00

Analysis Report for 1510086-05

CP4105S04-05

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)		
CS-136	163.89	4.61	1.15E+01	7.73E-01	-5.83E+00	5.59E+00		
	176.55	13.56	4.19E+00		-1.20E+00	2.04E+00		
	273.65	12.66	5.24E+00		7.86E-01	2.53E+00		
	340.57	48.50	1.59E+00		1.22E+00	7.64E-01		
	818.50	99.70	7.73E-01		-2.92E-03	3.52E-01		
	1048.07	79.60	1.20E+00		3.16E-01	5.43E-01		
	1235.34	19.70	6.88E+00		1.47E+00	3.18E+00		
	661.65	85.12	2.06E-01		2.06E-01	9.39E-02	9.64E-02	
LA-138	788.74	34.00	4.61E-01	2.63E-01	-1.77E-02	2.12E-01		
	1435.80	66.00	2.63E-01		5.96E-02	1.14E-01		
CE-139	165.85	80.35	1.54E-01	1.54E-01	3.43E-02	7.49E-02		
BA-140	162.64	6.70	8.32E+00	3.46E+00	-3.99E+00	4.04E+00		
	304.84	4.50	1.53E+01		5.34E+00	7.34E+00		
	423.70	3.20	2.24E+01		-6.12E+00	1.06E+01		
	437.55	2.00	3.70E+01		3.91E+00	1.75E+01		
LA-140	537.32	25.00	3.46E+00	1.14E+00	1.65E+00	1.63E+00		
	328.77	20.50	3.53E+00		4.12E-01	1.69E+00		
	487.03	45.50	1.64E+00		-5.46E-02	7.73E-01		
	815.85	23.50	3.43E+00		-6.94E-01	1.56E+00		
	1596.49	95.49	1.14E+00		-3.47E-02	4.99E-01		
CE-141	145.44	48.40	4.32E-01	4.32E-01	1.33E-01	2.10E-01		
CE-143	57.36	11.80	4.20E+06	2.43E+06	-5.22E+06	2.06E+06		
	293.26	42.00	2.43E+06		3.71E+06	1.18E+06		
	664.55	5.20	2.16E+07		3.58E+06	1.01E+07		
CE-144	133.54	10.80	1.02E+00	1.02E+00	2.64E-02	4.99E-01		
PM-144	476.78	42.00	3.24E-01	1.66E-01	-1.67E-01	1.52E-01		
	618.01	98.60	1.66E-01		-2.85E-02	7.75E-02		
	696.49	99.49	1.80E-01		4.51E-02	8.38E-02		
	36.85	21.70	2.58E-01		1.39E-01	7.47E-03	1.26E-01	
PM-145	37.36	39.70	1.39E-01	1.39E-01	-7.41E-02	6.80E-02		
	42.30	15.10	4.15E-01		7.05E-02	2.03E-01		
	72.40	2.31	5.07E+00		8.46E+00	2.49E+00		
	453.90	39.94	3.69E-01		3.69E-01	1.03E-01	1.75E-01	
PM-146	735.90	14.01	1.21E+00	3.69E-01	-9.26E-01	5.60E-01		
	747.13	13.10	1.40E+00		-1.36E-01	6.55E-01		
	91.11	28.90	2.81E+00		2.81E+00	4.96E-01	1.38E+00	
ND-147	531.02	13.10	7.66E+00	2.81E+00	-2.44E+00	3.59E+00		
	285.90	3.10	6.42E+04		6.42E+04	-1.67E+03	3.08E+04	
EU-152	121.78	20.50	4.65E-01	4.65E-01	-5.34E-02	2.27E-01		
	244.69	5.40	2.71E+00		1.18E-01	1.32E+00		
	344.27	19.13	6.49E-01		-5.76E-01	3.09E-01		
	778.89	9.20	1.85E+00		-4.12E-01	8.55E-01		
	964.01	10.40	2.28E+00		3.39E-03	1.07E+00		
	1085.78	7.22	2.47E+00		-1.86E+00	1.11E+00		
	1112.02	9.60	2.21E+00		-4.63E-01	1.01E+00		
	1407.95	14.94	1.04E+00		5.85E-02	4.46E-01		
	GD-153	97.43	31.30		3.28E-01	3.28E-01	-6.87E-02	1.60E-01
		103.18	22.20		4.31E-01		-4.90E-02	2.10E-01
	EU-154	123.07	40.50		2.37E-01	2.37E-01	-5.19E-02	1.15E-01
		723.30	19.70		9.39E-01		1.85E-01	4.39E-01
873.19		11.50	1.50E+00	-6.38E-03	6.87E-01			
996.32		10.30	1.88E+00	4.89E-01	8.61E-01			
1004.76		17.90	1.07E+00	3.10E-01	4.87E-01			

: 00472

Analysis Report for 1510086-05

CP4105S04-05

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
EU-154	1274.45	35.50	6.29E-01	2.37E-01	1.37E-01	2.86E-01
EU-155	86.50	30.90	3.46E-01	3.46E-01	2.77E-02	1.70E-01
	105.30	20.70	4.28E-01		-7.67E-02	2.09E-01
EU-156	811.77	10.40	6.35E+00	6.35E+00	1.56E+00	2.91E+00
	1153.47	7.20	1.22E+01		3.36E+00	5.59E+00
	1230.71	8.90	1.19E+01		3.25E-01	5.47E+00
HO-166M	184.41	72.60	1.83E-01	1.83E-01	2.45E-01	8.90E-02
	280.45	29.60	4.07E-01		6.12E-02	1.95E-01
	410.94	11.10	1.25E+00		-4.53E-02	5.94E-01
	711.69	54.10	2.81E-01		-9.53E-02	1.30E-01
TM-171	66.72	0.14	6.87E+01	6.87E+01	4.49E+01	3.37E+01
HF-172	81.75	4.52	2.42E+00	9.38E-01	-5.50E-01	1.19E+00
	125.81	11.30	9.38E-01		7.45E-02	4.58E-01
LU-172	181.53	20.60	1.53E+01	8.12E+00	-1.20E-01	7.45E+00
	810.06	16.63	2.42E+01		5.36E+00	1.11E+01
	912.12	15.25	4.36E+01		4.54E+01	2.06E+01
	1093.66	62.50	8.12E+00		7.22E-01	3.70E+00
LU-173	100.72	5.24	1.69E+00	6.40E-01	-1.28E+00	8.21E-01
	272.11	21.20	6.40E-01		2.31E-01	3.09E-01
HF-175	343.40	84.00	2.11E-01	2.11E-01	-1.12E-01	1.01E-01
LU-176	88.34	13.30	8.26E-01	1.33E-01	1.02E-01	4.06E-01
	201.83	86.00	1.46E-01		5.19E-02	7.08E-02
	306.78	94.00	1.33E-01		6.84E-04	6.39E-02
TA-182	67.75	41.20	2.72E-01	2.72E-01	8.21E-02	1.34E-01
	1121.30	34.90	9.58E-01		5.41E-01	4.48E-01
	1189.05	16.23	1.91E+00		9.18E-01	8.82E-01
	1221.41	26.98	1.12E+00		1.80E-01	5.17E-01
	1231.02	11.44	2.69E+00		7.38E-02	1.24E+00
IR-192	308.46	29.68	5.54E-01	3.85E-01	-5.49E-02	2.65E-01
	468.07	48.10	3.85E-01		3.15E-02	1.82E-01
HG-203	279.19	77.30	2.48E-01	2.48E-01	8.70E-02	1.19E-01
BI-207	569.67	97.72	1.48E-01	1.48E-01	-6.73E-02	6.91E-02
	1063.62	74.90	2.77E-01		1.32E-01	1.27E-01
+ TL-208	583.14	* 30.22	6.97E-01	6.39E-01	1.27E+00	3.33E-01
	860.37	4.48	4.39E+00		-1.59E-01	2.04E+00
	2614.66	* 35.85	6.39E-01		8.78E-01	2.69E-01
BI-210M	262.00	45.00	2.49E-01	2.49E-01	-1.77E-02	1.19E-01
	300.00	23.00	6.52E-01		-8.93E-03	3.15E-01
PB-210	46.50	4.25	1.58E+00	1.58E+00	1.23E+00	7.73E-01
PB-211	404.84	2.90	4.40E+00	4.40E+00	-2.53E+00	2.09E+00
	831.96	2.90	5.88E+00		-3.55E+00	2.71E+00
BI-212	727.17	11.80	1.62E+00	1.62E+00	7.34E-01	7.57E-01
	1620.62	2.75	5.64E+00		-7.90E-01	2.36E+00
+ PB-212	238.63	* 44.60	4.70E-01	4.70E-01	1.86E+00	2.31E-01
	300.09	3.41	4.40E+00		-6.02E-02	2.13E+00
+ BI-214	609.31	* 46.30	5.48E-01	2.94E-01	1.47E+00	2.63E-01
	1120.29	15.10	1.83E+00		1.18E+00	8.56E-01
	1764.49	* 15.80	2.94E-01		2.02E+00	6.16E-02
	2204.22	* 4.98	6.46E-01		2.86E+00	0.00E+00
+ PB-214	295.21	* 19.19	7.95E-01	3.61E-01	1.30E+00	3.84E-01
	351.92	* 37.19	3.61E-01		1.67E+00	1.72E-01
RN-219	401.80	6.50	1.96E+00	1.96E+00	-4.72E-01	9.28E-01
RA-223	323.87	3.88	3.39E+00	3.39E+00	2.67E-01	1.63E+00

: 00473

Analysis Report for 1510086-05
CP4105S04-05

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
RA-224	240.98	3.95	5.27E+00	5.27E+00	2.09E+01	2.58E+00
RA-225	40.00	31.00	7.95E-01	7.95E-01	-9.52E-01	3.88E-01
+ RA-226	186.21 *	3.28	5.06E+00	5.06E+00	5.79E+00	2.48E+00
TH-227	50.10	8.40	8.22E-01	8.22E-01	2.18E-01	4.02E-01
	236.00	11.50	1.67E+00		2.25E-02	8.18E-01
	256.20	6.30	1.88E+00		1.02E+00	9.08E-01
+ AC-228	338.32	11.40	1.34E+00	7.59E-01	1.58E+00	6.45E-01
	911.07 *	27.70	7.59E-01		1.43E+00	3.52E-01
	969.11 *	16.60	1.35E+00		1.11E+00	6.26E-01
TH-230	48.44	16.90	4.07E-01	4.07E-01	3.34E-01	1.99E-01
	62.85	4.60	1.94E+00		1.62E+00	9.52E-01
	67.67	0.37	2.51E+01		7.56E+00	1.23E+01
PA-231	283.67	1.60	7.25E+00	5.49E+00	-2.34E+00	3.47E+00
	302.67	2.30	5.49E+00		-1.34E+00	2.63E+00
TH-231	25.64	14.70	3.58E-01	3.58E-01	-3.42E-02	1.75E-01
	84.21	6.40	1.58E+00		1.30E-01	7.76E-01
PA-233	311.98	38.60	7.05E-01	7.05E-01	5.48E-03	3.38E-01
PA-234	131.20	20.40	5.17E-01	5.17E-01	3.65E-01	2.52E-01
	733.99	8.80	1.88E+00		-1.94E+00	8.72E-01
	946.00	12.00	1.63E+00		4.98E-01	7.49E-01
PA-234M	1001.03	0.92	1.90E+01	1.90E+01	-1.06E+01	8.60E+00
TH-234	63.29	3.80	2.37E+00	2.37E+00	2.07E+00	1.16E+00
U-235	143.76	10.50	1.03E+00	1.03E+00	4.42E-01	5.00E-01
	163.35	4.70	2.19E+00		-1.11E+00	1.06E+00
	205.31	4.70	2.68E+00		7.84E-01	1.30E+00
NP-237	86.50	12.60	8.37E-01	8.37E-01	6.71E-02	4.11E-01
NP-239	106.10	22.70	3.69E+03	3.69E+03	-6.60E+02	1.80E+03
	228.18	10.70	1.09E+04		2.67E+03	5.26E+03
	277.60	14.10	8.20E+03		2.60E+03	3.94E+03
AM-241	59.54	35.90	2.32E-01	2.32E-01	7.81E-02	1.14E-01
AM-243	74.67	66.00	1.90E-01	1.90E-01	7.30E-01	9.35E-02
CM-243	209.75	3.29	3.78E+00	8.70E-01	1.23E+00	1.83E+00
	228.14	10.60	1.14E+00		3.55E-01	5.50E-01
	277.60	14.00	8.70E-01		2.75E-01	4.18E-01

- + = Nuclide identified during the nuclide identification
 * = Energy line found in the spectrum
 > = MDA value not calculated
 @ = Half-life too short to be able to perform the decay correction

No Action Level results available for reporting purposes.

Analysis Report for 1510086-05
CP4105S04-05

DATA REVIEW COMMENTS REPORT

Creation Date

Comment

User

No Data Review Comments Entered.

369: 13 22 13 7 13 16 18 15

Sample Title: CP4105S04-05

Channel	1	2	3	4	5	6	7	8
377:	13	11	16	14	13	10	18	9
385:	14	17	11	9	16	24	12	14
393:	11	16	15	15	16	8	14	5
401:	10	15	15	19	9	14	12	11
409:	18	15	21	14	9	13	16	10
417:	17	14	10	10	15	14	12	10
425:	11	13	14	16	11	14	10	14
433:	13	13	13	15	6	19	10	10
441:	10	9	15	8	7	17	8	11
449:	6	13	11	13	10	14	23	14
457:	11	11	7	13	18	18	11	16
465:	8	15	10	6	11	9	11	11
473:	9	10	8	10	6	7	11	7
481:	9	15	12	12	7	17	8	6
489:	6	6	11	12	9	12	13	8
497:	12	11	14	5	13	10	5	9
505:	11	9	11	17	22	34	33	17
513:	10	11	11	7	9	11	7	16
521:	5	9	13	4	7	7	6	7
529:	10	8	10	10	14	5	11	12
537:	13	15	9	11	9	9	4	10
545:	3	10	7	9	9	11	6	7
553:	9	6	3	6	9	8	7	8
561:	8	7	14	15	4	7	12	8
569:	7	8	4	10	10	7	7	10
577:	7	10	7	10	9	44	43	40
585:	15	10	9	6	11	6	7	7
593:	13	6	7	12	11	8	8	9
601:	11	7	4	6	11	9	24	46
609:	66	47	21	10	6	9	12	6
617:	8	6	5	9	8	5	10	5
625:	7	5	8	7	6	4	3	6
633:	10	7	6	7	7	6	6	7
641:	8	5	12	4	4	2	8	8
649:	7	4	4	8	4	9	9	3
657:	6	5	9	6	6	11	12	14
665:	8	5	3	9	12	6	6	9
673:	8	4	3	3	4	6	6	5
681:	6	7	7	4	4	7	5	7
689:	6	10	1	7	2	7	6	8
697:	8	5	14	7	7	6	6	9
705:	9	6	2	4	3	5	7	7
713:	6	6	9	1	9	6	10	6
721:	5	5	6	3	11	11	14	11
729:	10	5	5	7	10	4	7	7
737:	2	8	6	9	13	8	9	7
745:	9	7	11	4	1	10	7	5
753:	7	6	8	4	11	7	3	10
761:	4	7	3	6	7	7	11	8
769:	10	9	6	8	4	6	5	8
777:	6	4	3	6	6	7	10	5
785:	6	10	6	7	2	1	2	3
793:	8	9	11	5	8	6	4	11

801: 13 3 5 2 4 5 4 5

Sample Title: CP4105S04-05

Channel	1	2	3	4	5	6	7	8
809:	5	8	2	6	2	5	4	4
817:	4	3	5	1	3	6	4	4
825:	5	4	8	8	6	4	5	4
833:	6	3	4	5	7	10	8	3
841:	8	8	5	3	7	7	5	6
849:	4	7	10	0	6	9	5	2
857:	10	5	6	9	7	6	6	6
865:	5	7	7	4	5	5	5	9
873:	3	4	5	1	4	5	2	4
881:	5	2	5	13	4	2	5	3
889:	8	5	6	3	3	6	5	4
897:	5	4	5	2	8	5	3	6
905:	2	3	5	5	12	19	27	14
913:	10	4	3	2	4	9	5	2
921:	4	6	3	4	5	3	6	4
929:	4	4	4	8	7	6	8	6
937:	5	3	5	2	2	3	7	6
945:	5	6	6	6	1	6	5	3
953:	6	8	4	4	6	4	8	10
961:	4	3	6	10	5	6	10	13
969:	13	11	10	1	4	3	3	7
977:	4	6	3	5	5	3	0	3
985:	6	2	3	5	3	6	4	8
993:	3	5	3	7	5	2	4	3
1001:	1	4	4	4	5	4	5	8
1009:	2	2	4	6	1	9	4	1
1017:	5	4	6	4	5	4	3	6
1025:	4	4	0	4	2	1	5	10
1033:	4	3	3	5	3	3	4	1
1041:	3	5	5	6	2	9	3	0
1049:	2	5	2	4	8	5	1	1
1057:	5	3	4	1	7	5	2	3
1065:	8	6	5	5	1	2	4	4
1073:	1	5	2	7	3	5	6	9
1081:	5	3	1	2	4	7	4	2
1089:	2	3	5	4	4	7	5	5
1097:	2	2	3	5	7	1	5	5
1105:	4	0	4	2	8	2	5	5
1113:	3	8	2	4	9	4	8	14
1121:	10	13	3	4	4	4	7	5
1129:	1	1	5	1	3	5	3	6
1137:	6	1	3	4	5	5	3	8
1145:	3	3	2	3	3	1	4	6
1153:	5	2	6	6	4	2	6	3
1161:	3	4	2	3	4	3	4	1
1169:	5	4	5	3	1	6	6	6
1177:	4	6	8	4	3	6	1	4
1185:	3	7	6	5	5	6	6	5
1193:	9	3	3	6	8	2	3	3
1201:	3	4	5	10	11	6	5	6
1209:	6	3	4	3	6	6	6	2
1217:	7	9	3	5	7	6	6	7
1225:	2	4	6	2	7	6	3	7

1233: 8 6 3 6 7 9 2 7

Sample Title: CP4105S04-05

Channel	1	2	3	4	5	6	7	8	9
1241:	6	1	2	2	6	3	4	6	
1249:	1	4	2	0	1	5	2	3	
1257:	3	5	2	4	0	2	4	0	
1265:	4	5	6	0	2	1	2	3	
1273:	2	3	6	6	4	6	2	3	
1281:	5	3	5	2	3	3	2	2	
1289:	4	3	3	3	5	2	2	2	
1297:	3	1	4	2	0	3	1	5	
1305:	6	1	3	2	4	4	3	3	
1313:	3	2	1	3	1	2	4	1	
1321:	0	3	0	5	3	0	4	3	
1329:	3	0	2	1	0	0	3	0	
1337:	0	1	3	3	1	2	5	1	
1345:	0	1	0	4	3	1	2	2	
1353:	1	0	2	1	1	4	3	0	
1361:	4	1	2	2	0	1	0	2	
1369:	1	2	2	1	4	1	6	3	
1377:	1	5	5	2	0	1	2	0	
1385:	4	1	3	1	1	1	0	1	
1393:	2	0	1	1	2	1	3	2	
1401:	0	2	1	2	2	1	3	1	
1409:	1	0	0	2	0	1	3	0	
1417:	1	3	1	1	2	2	0	1	
1425:	1	1	4	1	2	0	2	3	
1433:	0	2	2	1	1	3	2	1	
1441:	1	1	1	5	1	1	0	3	
1449:	1	6	0	3	2	3	0	2	
1457:	4	5	25	60	98	53	26	3	
1465:	1	0	3	0	0	2	2	2	
1473:	1	3	0	0	0	0	0	2	
1481:	2	0	1	0	3	0	0	2	
1489:	0	0	2	0	1	1	2	1	
1497:	2	1	1	1	0	3	2	3	
1505:	2	0	0	3	0	4	3	1	
1513:	2	2	2	1	1	5	1	0	
1521:	2	1	0	1	1	1	1	3	
1529:	0	2	2	0	3	0	1	0	
1537:	0	1	0	1	2	2	1	2	
1545:	1	0	1	0	0	0	3	0	
1553:	1	4	1	2	0	0	0	1	
1561:	0	1	1	1	1	2	2	0	
1569:	3	0	0	1	1	1	1	1	
1577:	0	1	1	1	2	0	0	3	
1585:	4	0	3	2	3	3	3	1	
1593:	3	4	4	3	1	1	0	0	
1601:	1	1	1	1	1	1	0	1	
1609:	1	2	2	2	1	0	4	1	
1617:	0	1	1	1	1	2	0	1	
1625:	2	1	4	0	0	0	2	0	
1633:	0	0	1	1	1	1	1	0	
1641:	0	0	1	2	1	0	1	0	
1649:	1	0	0	1	0	1	1	0	
1657:	1	2	0	3	0	1	4	0	

1665: 0 0 1 0 1 1 0 0

Sample Title: CP4105S04-05

Channel	1	2	3	4	5	6	7	8	9
1673:	1	1	2	0	0	1	0	0	0
1681:	1	1	0	0	0	1	3	1	1
1689:	0	0	0	1	0	1	0	1	1
1697:	1	3	0	0	0	0	1	0	0
1705:	0	0	0	0	0	0	1	0	0
1713:	0	2	1	0	0	0	0	3	3
1721:	1	1	0	2	3	2	3	0	0
1729:	4	3	2	0	1	0	1	1	1
1737:	1	0	2	1	1	0	1	0	0
1745:	0	0	0	0	1	3	1	0	0
1753:	1	2	0	1	0	0	0	1	1
1761:	1	1	2	8	11	5	3	0	0
1769:	0	1	1	1	1	0	1	0	0
1777:	1	1	1	1	0	2	0	0	0
1785:	0	1	0	0	3	4	0	1	1
1793:	1	1	1	0	0	1	0	0	0
1801:	0	1	1	0	1	0	1	2	2
1809:	0	1	1	3	0	1	0	0	0
1817:	0	3	1	0	0	1	1	0	0
1825:	2	1	1	0	0	0	1	0	0
1833:	0	1	2	1	0	1	0	0	0
1841:	0	1	0	1	2	0	1	0	0
1849:	1	1	0	0	1	0	0	0	0
1857:	1	0	0	1	2	2	1	0	0
1865:	1	1	0	0	0	2	3	2	2
1873:	0	1	1	1	1	2	1	1	1
1881:	0	0	1	0	0	0	0	3	3
1889:	1	3	3	1	2	2	1	1	1
1897:	1	1	1	0	0	1	1	3	3
1905:	1	0	2	1	1	0	0	1	1
1913:	0	0	1	0	2	0	1	0	0
1921:	0	1	0	0	1	1	0	0	0
1929:	0	0	0	1	1	1	0	0	0
1937:	0	0	2	0	0	0	1	0	0
1945:	0	0	0	0	1	1	2	0	0
1953:	0	3	1	1	1	1	0	0	0
1961:	0	1	0	0	1	0	0	0	0
1969:	0	0	0	1	1	0	2	2	2
1977:	0	0	0	0	1	1	1	1	1
1985:	0	3	0	0	0	0	2	0	0
1993:	2	0	1	1	1	0	1	0	0
2001:	0	2	0	1	0	0	0	1	1
2009:	1	0	1	0	0	0	0	2	2
2017:	1	1	0	1	0	2	1	2	2
2025:	0	0	1	1	0	3	0	1	1
2033:	0	0	0	1	1	0	2	0	0
2041:	0	0	0	1	2	0	2	0	0
2049:	0	1	0	2	0	0	0	0	0
2057:	2	1	1	2	1	1	0	2	2
2065:	0	0	2	0	2	2	0	1	1
2073:	0	0	0	0	2	1	1	0	0
2081:	3	1	1	0	2	0	1	0	0
2089:	1	0	0	1	0	0	1	2	2

0479A

2097: 1 1 1 0 1 1 1 5

Sample Title: CP4105S04-05

Channel	1	2	3	4	5	6	7	8
2105:	5	2	2	2	2	0	0	0
2113:	0	0	0	0	1	0	0	0
2121:	0	0	0	2	0	0	3	0
2129:	0	0	0	1	1	0	0	1
2137:	0	0	0	0	0	0	0	0
2145:	0	1	0	0	1	0	0	1
2153:	1	0	0	0	0	0	0	0
2161:	1	0	0	1	1	0	0	0
2169:	0	1	1	0	0	0	0	2
2177:	0	1	1	1	0	2	1	1
2185:	1	0	0	1	0	0	0	0
2193:	1	4	3	1	0	1	0	0
2201:	1	1	1	3	1	5	0	0
2209:	1	0	0	1	1	0	0	0
2217:	1	2	0	0	1	2	0	1
2225:	1	2	1	1	1	0	0	1
2233:	2	1	0	2	1	0	1	2
2241:	0	1	1	0	0	1	0	1
2249:	2	0	2	0	0	0	0	0
2257:	0	0	0	1	0	2	0	2
2265:	0	0	1	1	0	2	0	0
2273:	1	1	0	0	1	2	0	1
2281:	1	0	0	0	2	1	0	2
2289:	0	0	2	1	2	0	0	0
2297:	0	2	0	0	0	1	1	0
2305:	1	0	1	1	2	0	0	1
2313:	3	4	0	1	0	1	0	3
2321:	0	0	1	0	0	2	2	0
2329:	1	0	0	0	1	1	0	0
2337:	0	2	2	0	0	1	1	0
2345:	1	0	2	0	3	0	2	1
2353:	1	0	1	0	1	3	0	2
2361:	0	2	1	1	0	0	2	2
2369:	0	1	1	1	0	0	2	0
2377:	1	1	1	0	2	1	0	0
2385:	1	2	2	1	1	2	0	0
2393:	0	1	0	0	0	0	0	1
2401:	2	0	1	0	0	1	0	1
2409:	0	1	1	0	0	0	1	0
2417:	0	2	1	0	0	0	0	0
2425:	0	1	2	0	0	0	0	1
2433:	0	0	0	1	1	0	1	0
2441:	1	0	0	0	1	1	0	1
2449:	0	1	0	0	0	1	0	1
2457:	0	1	0	1	1	1	0	0
2465:	1	0	0	2	0	0	0	3
2473:	0	0	1	0	0	0	0	2
2481:	1	0	1	1	0	0	1	0
2489:	2	0	0	0	0	0	1	0
2497:	1	1	0	0	0	1	3	0
2505:	1	0	0	0	1	1	0	0
2513:	1	0	0	1	0	0	0	1
2521:	0	0	0	0	0	0	0	1

2529: 0 0 0 0 0 1 1 0

Sample Title: CP4105S04-05

Channel	1	2	3	4	5	6	7	8	9
2537:	0	1	0	0	1	0	0	0	0
2545:	0	0	1	0	0	0	0	0	0
2553:	0	0	0	0	0	0	0	0	2
2561:	0	0	1	0	0	0	0	0	0
2569:	0	1	0	0	0	0	0	0	0
2577:	0	0	0	1	0	0	0	0	0
2585:	0	0	1	0	0	0	0	0	0
2593:	0	0	1	1	0	1	0	0	0
2601:	0	1	1	0	0	0	0	0	0
2609:	0	0	0	0	0	5	10	0	7
2617:	5	2	1	0	2	0	0	0	0
2625:	0	2	0	0	1	0	0	0	0
2633:	0	0	0	0	0	0	0	0	0
2641:	0	0	0	1	2	0	0	0	0
2649:	1	0	0	0	1	0	0	0	0
2657:	1	1	0	1	0	0	0	0	0
2665:	2	1	0	1	1	0	1	0	0
2673:	0	0	0	0	0	0	0	0	1
2681:	0	1	1	1	1	0	0	0	0
2689:	0	1	0	0	0	0	0	0	0
2697:	1	1	0	0	0	0	0	0	0
2705:	0	0	0	0	0	0	1	0	0
2713:	0	0	0	0	0	1	0	0	0
2721:	0	0	0	0	1	0	0	0	0
2729:	0	0	1	0	0	0	0	1	0
2737:	0	1	0	0	1	0	1	0	0
2745:	0	0	1	0	0	0	0	0	1
2753:	0	0	1	0	0	0	0	0	0
2761:	0	1	0	1	1	0	0	0	0
2769:	0	0	0	0	0	0	0	0	0
2777:	0	0	0	0	0	1	0	0	0
2785:	0	0	1	0	0	0	0	0	0
2793:	0	0	0	1	0	0	0	0	0
2801:	0	0	0	1	1	0	1	0	0
2809:	0	0	0	0	0	0	0	0	0
2817:	0	0	0	0	0	0	0	0	0
2825:	0	0	1	1	0	0	0	0	0
2833:	0	0	0	0	0	0	0	1	0
2841:	0	0	0	0	0	1	0	0	0
2849:	0	0	0	0	0	0	0	0	0
2857:	0	0	1	1	0	0	0	0	0
2865:	0	0	0	0	0	0	0	0	0
2873:	0	1	0	0	0	0	0	0	0
2881:	0	0	0	0	0	1	0	0	1
2889:	0	0	0	0	0	1	0	0	0
2897:	0	0	0	1	0	0	0	0	0
2905:	0	0	0	0	0	0	0	0	0
2913:	0	0	0	0	0	0	0	0	1
2921:	0	0	2	0	0	0	0	0	0
2929:	0	0	0	0	0	0	0	0	0
2937:	0	0	0	0	0	1	0	0	0
2945:	0	0	0	0	0	0	0	0	0
2953:	0	0	0	0	0	2	0	0	0

2961: 0 0 0 0 0 0 0 0 0

Sample Title: CP4105S04-05

Channel	1	2	3	4	5	6	7	8	9
2969:	1	0	0	0	1	0	1	0	
2977:	0	0	0	0	0	0	0	0	0
2985:	0	0	0	1	1	0	0	0	0
2993:	0	0	0	0	0	0	0	0	0
3001:	0	0	0	0	0	0	0	0	0
3009:	0	0	0	0	0	0	0	0	0
3017:	0	0	0	0	0	0	0	0	0
3025:	0	0	0	0	1	1	0	0	0
3033:	0	1	1	0	1	0	0	0	0
3041:	0	0	0	0	1	0	0	0	0
3049:	0	0	1	0	0	0	0	0	0
3057:	0	0	0	0	0	0	0	0	0
3065:	0	0	0	0	1	0	0	0	0
3073:	0	0	0	0	0	1	0	0	0
3081:	0	0	0	0	0	0	1	0	0
3089:	0	0	0	0	0	1	0	0	0
3097:	0	0	0	0	0	0	0	0	0
3105:	1	0	0	1	0	0	0	0	0
3113:	0	0	0	0	0	0	0	0	0
3121:	0	0	0	0	1	0	1	0	0
3129:	0	1	0	1	0	0	0	0	0
3137:	0	0	0	0	0	0	1	0	0
3145:	0	0	0	0	0	0	0	0	0
3153:	0	0	0	0	0	0	0	0	1
3161:	0	1	0	0	0	0	0	0	0
3169:	0	0	0	0	0	0	0	0	0
3177:	0	0	0	0	0	0	0	0	0
3185:	0	0	1	0	0	0	0	0	1
3193:	0	0	0	0	0	0	0	0	0
3201:	1	0	0	0	0	0	0	0	1
3209:	0	1	0	0	0	0	0	0	2
3217:	0	0	0	0	0	0	0	0	0
3225:	0	0	0	0	0	0	0	0	0
3233:	0	0	0	0	0	0	0	0	0
3241:	0	0	0	0	0	0	0	0	0
3249:	0	0	0	0	0	0	1	0	0
3257:	0	0	0	0	3	0	0	0	0
3265:	0	0	0	0	0	0	0	0	0
3273:	0	0	0	0	0	0	3	0	0
3281:	0	0	0	0	0	0	1	0	0
3289:	0	0	0	0	0	0	0	0	0
3297:	0	0	0	0	0	1	0	0	0
3305:	0	0	0	0	0	1	0	0	0
3313:	0	0	1	0	0	0	0	0	0
3321:	0	0	2	0	1	0	0	0	0
3329:	0	0	0	0	0	0	1	0	0
3337:	0	1	1	0	1	0	0	0	0
3345:	0	0	0	0	1	0	0	0	0
3353:	0	1	0	0	0	0	0	0	0
3361:	0	0	0	0	1	0	0	0	0
3369:	0	0	1	0	0	0	0	0	0
3377:	1	0	0	0	0	0	0	0	0
3385:	0	0	0	1	0	0	0	0	0

3393: 1 0 0 1 0 0 1 0

Sample Title: CP4105S04-05

Channel	1	2	3	4	5	6	7	8
3401:	0	0	0	0	0	0	0	1
3409:	0	0	1	0	0	2	0	0
3417:	0	0	0	0	0	0	0	0
3425:	0	0	0	0	0	0	0	0
3433:	0	1	0	0	0	0	0	0
3441:	0	0	0	0	0	0	1	0
3449:	0	0	0	0	0	0	1	0
3457:	0	0	0	0	0	1	0	0
3465:	0	0	0	1	0	0	1	0
3473:	0	0	0	0	0	0	0	0
3481:	0	0	0	0	0	0	0	0
3489:	0	0	0	0	0	0	0	0
3497:	0	0	0	0	0	1	0	0
3505:	0	0	0	1	0	0	0	1
3513:	0	0	0	0	0	0	0	0
3521:	0	0	0	0	0	0	0	0
3529:	0	0	0	0	0	0	0	0
3537:	0	0	0	0	1	0	0	0
3545:	0	0	0	0	0	0	0	0
3553:	0	0	0	0	0	0	0	0
3561:	0	0	0	0	0	0	0	0
3569:	0	0	0	0	1	0	0	0
3577:	0	0	0	0	0	0	0	0
3585:	1	0	0	0	0	0	0	0
3593:	0	1	0	0	0	0	1	0
3601:	0	0	0	0	0	0	2	0
3609:	0	0	0	0	0	0	0	0
3617:	0	0	1	0	0	0	0	0
3625:	1	0	0	0	0	0	1	0
3633:	0	1	0	0	1	0	0	1
3641:	0	1	0	0	0	0	0	0
3649:	0	0	0	0	0	0	0	0
3657:	1	0	0	0	1	0	1	0
3665:	0	0	0	0	0	0	0	0
3673:	0	1	0	0	1	0	0	0
3681:	0	0	0	1	0	0	0	0
3689:	0	1	0	0	0	0	0	0
3697:	0	0	0	0	0	0	1	0
3705:	0	0	0	0	0	0	0	0
3713:	0	0	0	0	0	0	0	0
3721:	0	0	0	0	0	0	0	1
3729:	0	0	0	0	0	0	0	0
3737:	0	1	0	0	0	0	0	0
3745:	0	0	0	0	0	0	1	0
3753:	0	0	0	0	0	0	0	1
3761:	0	0	0	0	0	0	0	1
3769:	0	0	0	0	0	0	0	0
3777:	0	1	0	0	0	0	0	0
3785:	0	0	0	0	0	0	0	0
3793:	0	0	0	0	0	0	0	0
3801:	0	0	0	0	1	0	0	0
3809:	0	0	0	0	0	0	0	0
3817:	0	0	0	1	0	0	0	0

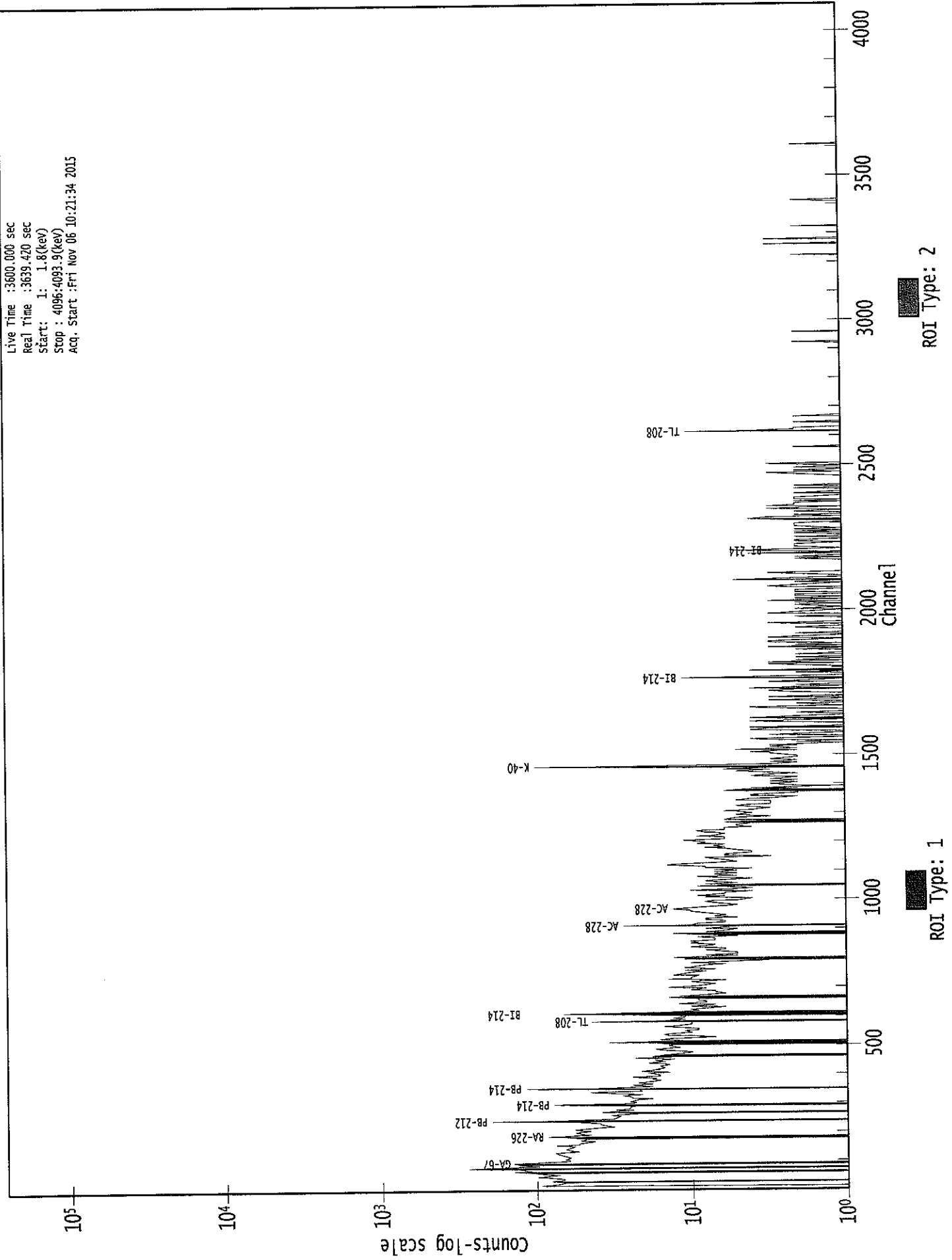
3825: 0 0 0 0 0 0 0 0 1

Sample Title: CP4105S04-05

Channel	1	2	3	4	5	6	7	8	9
3833:	0	0	0	0	0	0	0	0	0
3841:	1	0	0	1	0	0	0	0	0
3849:	0	0	0	0	0	0	0	0	0
3857:	0	0	0	0	0	0	0	0	0
3865:	0	0	0	0	0	0	0	0	0
3873:	0	0	0	0	0	1	0	0	0
3881:	0	0	0	0	0	0	0	0	0
3889:	0	0	0	0	0	0	0	0	0
3897:	0	0	0	0	0	0	0	0	1
3905:	0	0	0	0	0	0	0	0	0
3913:	0	0	0	0	1	0	0	0	0
3921:	0	0	0	0	0	0	0	0	0
3929:	0	0	1	0	0	0	0	0	0
3937:	0	0	0	1	0	0	0	0	0
3945:	0	0	0	0	0	0	0	0	0
3953:	0	0	0	0	0	0	0	0	0
3961:	0	0	0	0	0	0	0	0	0
3969:	0	0	0	0	0	0	1	0	0
3977:	0	0	0	0	0	0	1	0	0
3985:	0	0	0	0	0	0	0	0	0
3993:	0	0	1	0	0	0	0	0	0
4001:	0	0	0	0	0	0	0	0	0
4009:	0	0	0	0	0	0	0	0	0
4017:	0	1	0	0	0	0	0	0	0
4025:	0	0	0	0	0	1	0	0	0
4033:	0	0	0	0	0	0	0	0	0
4041:	0	0	0	0	0	0	0	0	0
4049:	0	0	0	0	0	0	0	0	0
4057:	0	0	0	0	0	0	0	0	0
4065:	0	0	0	0	1	1	1	0	0
4073:	0	1	1	0	1	0	0	0	0
4081:	1	0	0	0	0	0	0	0	0
4089:	0	0	0	0	0	0	1	0	0

0000029255.CNF

Live Time : 3600.000 sec
Real Time : 3639.420 sec
Start : 1: 1.8(keV)
Stop : 4096.4093.9(keV)
Acq. Start : Fri Nov 06 10:21:34 2015



KOB
11/6/15Analysis Report for 1510086-06
CP4105S06-07

GAMMA SPECTRUM ANALYSIS

Sample Identification : 1510086-06
Sample Description : CP4105S06-07
Sample Type : SOIL

Sample Size : 5.790E+02 grams
Facility : Countroom

Sample Taken On : 10/6/2015 7:54:51AM
Acquisition Started : 11/6/2015 11:22:56AM

Procedure : GAS-1402 pCi
Operator : Administrator
Detector Name : GE1
Geometry : GAS-1402
Live Time : 3600.0 seconds
Real Time : 3601.3 seconds

Dead Time : 0.04 %

Peak Locate Threshold : 2.50
Peak Locate Range (in channels) : 1 - 4096
Peak Area Range (in channels) : 19 - 4096
Identification Energy Tolerance : 1.000 keV

Energy Calibration Used Done On : 10/25/2014
Efficiency Calibration Used Done On : 10/25/2014
Efficiency Calibration Description :

Sample Number : 29257

PEAK-TO-TOTAL CALIBRATION REPORT

Peak-to-Total Efficiency Calibration Equation

AG
11/9/15

: 00486

Analysis Report for 1510086-06
CP4105S06-07

PEAK LOCATE REPORT

Peak Locate Performed on : 11/6/2015 12:23:01PM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096
Peak Search Sensitivity : 2.50

Peak No.	Energy (keV)	Centroid Channel	Centroid Uncertainty	Peak Significance
1	40.21	40.56	0.0000	0.00
2	46.58	46.93	0.0000	0.00
3	63.56	63.91	0.0000	0.00
4	76.28	76.62	0.0000	0.00
5	92.50	92.84	0.0000	0.00
6	162.74	163.05	0.0000	0.00
7	185.98	186.28	0.0000	0.00
8	209.82	210.12	0.0000	0.00
9	238.78	239.07	0.0000	0.00
10	241.88	242.17	0.0000	0.00
11	269.90	270.17	0.0000	0.00
12	278.42	278.70	0.0000	0.00
13	295.21	295.48	0.0000	0.00
14	300.04	300.31	0.0000	0.00
15	327.93	328.19	0.0000	0.00
16	338.51	338.77	0.0000	0.00
17	352.05	352.30	0.0000	0.00
18	355.41	355.66	0.0000	0.00
19	409.80	410.03	0.0000	0.00
20	430.86	431.09	0.0000	0.00
21	463.31	463.52	0.0000	0.00
22	510.96	511.16	0.0000	0.00
23	523.74	523.93	0.0000	0.00
24	542.39	542.57	0.0000	0.00
25	583.59	583.76	0.0000	0.00
26	609.57	609.73	0.0000	0.00
27	648.33	648.47	0.0000	0.00
28	727.52	727.64	0.0000	0.00
29	785.41	785.51	0.0000	0.00
30	794.83	794.93	0.0000	0.00
31	861.29	861.36	0.0000	0.00
32	871.53	871.60	0.0000	0.00
33	911.71	911.77	0.0000	0.00
34	969.74	969.77	0.0000	0.00
35	1119.02	1119.00	0.0000	0.00
36	1124.02	1124.00	0.0000	0.00
37	1329.62	1329.52	0.0000	0.00
38	1377.72	1377.60	0.0000	0.00
39	1400.13	1400.01	0.0000	0.00
40	1403.84	1403.72	0.0000	0.00
41	1461.52	1461.37	0.0000	0.00
42	1486.58	1486.43	0.0000	0.00

: 00487

Analysis Report for 1510086-06
CP4105S06-07

Peak No.	Energy (keV)	Centroid Channel	Centroid Uncertainty	Peak Significance
43	1510.20	1510.04	0.0000	0.00
44	1517.40	1517.24	0.0000	0.00
45	1524.81	1524.65	0.0000	0.00
46	1594.02	1593.83	0.0000	0.00
47	1614.47	1614.27	0.0000	0.00
48	1621.32	1621.11	0.0000	0.00
49	1631.13	1630.92	0.0000	0.00
50	1731.54	1731.30	0.0000	0.00
51	1765.33	1765.07	0.0000	0.00
52	1848.24	1847.95	0.0000	0.00
53	1913.31	1913.00	0.0000	0.00
54	2020.28	2019.92	0.0000	0.00
55	2100.63	2100.24	0.0000	0.00
56	2104.63	2104.24	0.0000	0.00
57	2204.42	2204.00	0.0000	0.00
58	2384.88	2384.39	0.0000	0.00
59	2615.45	2614.87	0.0000	0.00

? = Adjacent peak noted
Errors quoted at 2.000sigma

Analysis Report for 1510086-06
 CP4105S06-07

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 11/6/2015 12:23:01PM

Peak Analysis From Channel : 1
 Peak Analysis To Channel : 4096

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	FWHM (keV)	
1	40.21	38 -	43	40.56	6.01E+01	65.79	8.20E+02	1.80	
2	46.58	44 -	50	46.93	1.34E+02	81.53	1.12E+03	1.27	
3	63.56	61 -	66	63.91	2.20E+02	92.82	1.55E+03	1.34	
4	76.28	72 -	83	76.62	1.39E+03	174.73	3.11E+03	3.84	
5	92.50	90 -	97	92.84	3.79E+02	115.91	1.93E+03	1.88	
6	162.74	159 -	167	163.05	8.93E+01	85.81	1.07E+03	1.75	
7	185.98	182 -	190	186.28	2.34E+02	92.18	1.16E+03	1.86	
8	209.82	207 -	213	210.12	1.30E+02	68.19	7.41E+02	1.27	
M	9	238.78	235 -	246	239.07	1.03E+03	78.58	4.42E+02	1.65
m	10	241.88	235 -	246	242.17	3.27E+02	89.22	5.32E+02	2.34
	11	269.90	266 -	274	270.17	8.57E+01	68.65	6.77E+02	2.08
	12	278.42	275 -	282	278.70	6.04E+01	61.55	5.81E+02	1.21
	13	295.21	290 -	298	295.48	3.40E+02	74.43	6.43E+02	1.84
	14	300.04	299 -	304	300.31	4.95E+01	48.19	4.23E+02	2.06
	15	327.93	325 -	332	328.19	8.16E+01	53.67	4.29E+02	3.77
	16	338.51	335 -	343	338.77	2.28E+02	63.77	4.85E+02	1.70
M	17	352.05	347 -	358	352.30	6.48E+02	60.14	2.25E+02	1.59
m	18	355.41	347 -	358	355.66	3.36E+01	48.45	2.39E+02	1.97
	19	409.80	406 -	414	410.03	6.40E+01	47.68	3.10E+02	4.68
	20	430.86	428 -	434	431.09	3.35E+01	36.93	2.23E+02	2.01
	21	463.31	460 -	468	463.52	7.61E+01	45.69	2.74E+02	1.71
	22	510.96	505 -	517	511.16	2.21E+02	61.77	3.47E+02	2.47
	23	523.74	522 -	526	523.93	2.00E+01	23.55	1.06E+02	2.81
	24	542.39	540 -	546	542.57	4.02E+01	29.35	1.24E+02	3.81
	25	583.59	580 -	587	583.76	3.09E+02	49.11	1.97E+02	1.91
	26	609.57	606 -	612	609.73	4.42E+02	52.62	1.81E+02	1.67
	27	648.33	645 -	652	648.47	3.51E+01	28.14	1.10E+02	4.88
	28	727.52	725 -	731	727.64	8.53E+01	31.11	1.17E+02	2.26
	29	785.41	781 -	790	785.51	6.69E+01	33.72	1.22E+02	5.32
	30	794.83	792 -	798	794.93	3.59E+01	24.70	8.61E+01	1.51
	31	861.29	857 -	864	861.36	3.81E+01	28.98	1.12E+02	1.66
	32	871.53	866 -	876	871.60	3.64E+01	33.67	1.31E+02	6.99
	33	911.71	907 -	917	911.77	1.96E+02	46.28	1.79E+02	2.06
	34	969.74	966 -	975	969.77	9.33E+01	46.94	2.27E+02	1.91
M	35	1119.02	1114 -	1128	1119.00	3.22E+01	24.62	6.18E+01	2.06
m	36	1124.02	1114 -	1128	1124.00	2.33E+01	25.26	4.21E+01	2.06
	37	1329.62	1325 -	1332	1329.52	3.28E+01	18.55	3.44E+01	1.99
	38	1377.72	1374 -	1381	1377.60	1.57E+01	20.59	6.05E+01	1.26
M	39	1400.13	1398 -	1415	1400.01	1.30E+01	9.80	1.26E+01	3.18
m	40	1403.84	1398 -	1415	1403.72	1.62E+01	17.26	3.06E+01	2.89

Analysis Report for 1510086-06
CP4105S06-07

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	FWHM (keV)
M	41	1461.52	1456 - 1467	1461.37	8.35E+02	62.10	5.98E+01	2.33
m	42	1486.58	1484 - 1490	1486.43	1.22E+01	11.36	1.56E+01	1.83
m	43	1510.20	1504 - 1530	1510.04	1.40E+01	14.70	1.48E+01	3.24
m	44	1517.40	1504 - 1530	1517.24	6.78E+00	11.31	1.64E+01	2.68
m	45	1524.81	1504 - 1530	1524.65	8.46E+00	12.00	2.07E+01	2.69
	46	1594.02	1592 - 1597	1593.83	1.46E+01	13.93	2.28E+01	1.38
	47	1614.47	1612 - 1617	1614.27	6.54E+00	9.38	1.29E+01	1.02
	48	1621.32	1619 - 1623	1621.11	1.00E+01	9.76	1.19E+01	2.66
	49	1631.13	1627 - 1634	1630.92	1.90E+01	11.14	7.91E+00	2.82
	50	1731.54	1727 - 1737	1731.30	2.47E+01	14.65	1.26E+01	2.93
	51	1765.33	1760 - 1770	1765.07	1.00E+02	21.92	9.87E+00	2.25
	52	1848.24	1844 - 1853	1847.95	1.53E+01	14.28	2.14E+01	2.69
	53	1913.31	1910 - 1916	1913.00	6.50E+00	8.03	7.00E+00	4.28
	54	2020.28	2015 - 2024	2019.92	1.01E+01	10.49	9.73E+00	7.56
M	55	2100.63	2099 - 2110	2100.24	8.69E+00	4.36	2.15E+00	2.66
m	56	2104.63	2099 - 2110	2104.24	1.32E+01	12.00	1.21E+01	2.66
	57	2204.42	2200 - 2207	2204.00	1.51E+01	11.49	1.18E+01	3.00
	58	2384.88	2380 - 2387	2384.39	6.94E+00	7.21	4.11E+00	2.92
	59	2615.45	2611 - 2620	2614.87	1.02E+02	21.10	6.09E+00	3.13

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 11/6/2015 12:23:01PM

Peak Analysis From Channel : 1
Peak Analysis To Channel : 4096

Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level	
1	40.21	38 -	43	6.01E+01	65.79	8.20E+02	5.26E+01	
2	46.58	44 -	50	1.34E+02	81.53	1.12E+03	6.43E+01	
3	63.56	61 -	66	2.20E+02	92.82	1.55E+03	7.23E+01	
4	76.28	72 -	83	1.39E+03	174.73	3.11E+03	1.30E+02	
5	92.50	90 -	97	3.79E+02	115.91	1.93E+03	8.98E+01	
6	162.74	159 -	167	8.93E+01	85.81	1.07E+03	6.88E+01	
7	185.98	182 -	190	2.34E+02	92.18	1.16E+03	7.15E+01	
8	209.82	207 -	213	1.30E+02	68.19	7.41E+02	5.28E+01	
M	9	238.78	235 -	246	1.03E+03	78.58	4.42E+02	3.46E+01

: 00490

Analysis Report for 1510086-06

CP4105S06-07

	Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
m	10	241.88	235 -	246	3.27E+02	89.22	5.32E+02	3.79E+01
	11	269.90	266 -	274	8.57E+01	68.65	6.77E+02	5.43E+01
	12	278.42	275 -	282	6.04E+01	61.55	5.81E+02	4.90E+01
	13	295.21	290 -	298	3.40E+02	74.43	6.43E+02	5.32E+01
	14	300.04	299 -	304	4.95E+01	48.19	4.23E+02	3.79E+01
	15	327.93	325 -	332	8.16E+01	53.67	4.29E+02	4.15E+01
	16	338.51	335 -	343	2.28E+02	63.77	4.85E+02	4.62E+01
M	17	352.05	347 -	358	6.48E+02	60.14	2.25E+02	2.47E+01
m	18	355.41	347 -	358	3.36E+01	48.45	2.39E+02	2.54E+01
	19	409.80	406 -	414	6.40E+01	47.68	3.10E+02	3.69E+01
	20	430.86	428 -	434	3.35E+01	36.93	2.23E+02	2.88E+01
	21	463.31	460 -	468	7.61E+01	45.69	2.74E+02	3.47E+01
	22	510.96	505 -	517	2.21E+02	61.77	3.47E+02	4.45E+01
	23	523.74	522 -	526	2.00E+01	23.55	1.06E+02	1.79E+01
	24	542.39	540 -	546	4.02E+01	29.35	1.24E+02	2.18E+01
	25	583.59	580 -	587	3.09E+02	49.11	1.97E+02	2.82E+01
	26	609.57	606 -	612	4.42E+02	52.62	1.81E+02	2.60E+01
	27	648.33	645 -	652	3.51E+01	28.14	1.10E+02	2.10E+01
	28	727.52	725 -	731	8.53E+01	31.11	1.17E+02	2.06E+01
	29	785.41	781 -	790	6.69E+01	33.72	1.22E+02	2.42E+01
	30	794.83	792 -	798	3.59E+01	24.70	8.61E+01	1.77E+01
	31	861.29	857 -	864	3.81E+01	28.98	1.12E+02	2.16E+01
	32	871.53	866 -	876	3.64E+01	33.67	1.31E+02	2.58E+01
	33	911.71	907 -	917	1.96E+02	46.28	1.79E+02	3.03E+01
	34	969.74	966 -	975	9.33E+01	46.94	2.27E+02	3.52E+01
M	35	1119.02	1114 -	1128	3.22E+01	24.62	6.18E+01	1.29E+01
m	36	1124.02	1114 -	1128	2.33E+01	25.26	4.21E+01	1.07E+01
	37	1329.62	1325 -	1332	3.28E+01	18.55	3.44E+01	1.20E+01
	38	1377.72	1374 -	1381	1.57E+01	20.59	6.05E+01	1.56E+01
M	39	1400.13	1398 -	1415	1.30E+01	9.80	1.26E+01	5.83E+00
m	40	1403.84	1398 -	1415	1.62E+01	17.26	3.06E+01	9.09E+00
	41	1461.52	1456 -	1467	8.35E+02	62.10	5.98E+01	1.87E+01
	42	1486.58	1484 -	1490	1.22E+01	11.36	1.56E+01	7.36E+00
M	43	1510.20	1504 -	1530	1.40E+01	14.70	1.48E+01	6.32E+00
m	44	1517.40	1504 -	1530	6.78E+00	11.31	1.64E+01	6.66E+00
m	45	1524.81	1504 -	1530	8.46E+00	12.00	2.07E+01	7.49E+00
	46	1594.02	1592 -	1597	1.46E+01	13.93	2.28E+01	9.58E+00
	47	1614.47	1612 -	1617	6.54E+00	9.38	1.29E+01	6.46E+00
	48	1621.32	1619 -	1623	1.00E+01	9.76	1.19E+01	6.10E+00
	49	1631.13	1627 -	1634	1.90E+01	11.14	7.91E+00	5.68E+00
	50	1731.54	1727 -	1737	2.47E+01	14.65	1.26E+01	8.85E+00
	51	1765.33	1760 -	1770	1.00E+02	21.92	9.87E+00	7.36E+00
	52	1848.24	1844 -	1853	1.53E+01	14.28	2.14E+01	9.82E+00
	53	1913.31	1910 -	1916	6.50E+00	8.03	7.00E+00	5.10E+00
	54	2020.28	2015 -	2024	1.01E+01	10.49	9.73E+00	6.85E+00
M	55	2100.63	2099 -	2110	8.69E+00	4.36	2.15E+00	2.41E+00
m	56	2104.63	2099 -	2110	1.32E+01	12.00	1.21E+01	5.73E+00
	57	2204.42	2200 -	2207	1.51E+01	11.49	1.18E+01	6.95E+00
	58	2384.88	2380 -	2387	6.94E+00	7.21	4.11E+00	4.05E+00
	59	2615.45	2611 -	2620	1.02E+02	21.10	6.09E+00	5.01E+00

Analysis Report for 1510086-06
CP4105S06-07

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

PEAK WITH NID REPORT

Peak Analysis Performed on : 11/6/2015 12:23:01PM

Peak Analysis From Channel : 1
Peak Analysis To Channel : 4096

Tentative NID Library : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB
Peak Match Tolerance : 1.000 keV

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
1	40.21	38 -	43	40.56	6.01E+01	65.79	8.20E+02	RA-225 I-129
2	46.58	44 -	50	46.93	1.34E+02	81.53	1.12E+03	PB-210
3	63.56	61 -	66	63.91	2.20E+02	92.82	1.55E+03	TH-234 TH-230
4	76.28	72 -	83	76.62	1.39E+03	174.73	3.11E+03	.....
5	92.50	90 -	97	92.84	3.79E+02	115.91	1.93E+03	GA-67
6	162.74	159 -	167	163.05	8.93E+01	85.81	1.07E+03	BA-140 U-235
7	185.98	182 -	190	186.28	2.34E+02	92.18	1.16E+03	RA-226
8	209.82	207 -	213	210.12	1.30E+02	68.19	7.41E+02	CM-243 GA-67
M	9	235 -	246	239.07	1.03E+03	78.58	4.42E+02	PB-212
m	10	235 -	246	242.17	3.27E+02	89.22	5.32E+02	RA-224
	11	266 -	274	270.17	8.57E+01	68.65	6.77E+02	.....
	12	275 -	282	278.70	6.04E+01	61.55	5.81E+02	HG-203 CM-243 NP-239
	13	290 -	298	295.48	3.40E+02	74.43	6.43E+02	PB-214
	14	299 -	304	300.31	4.95E+01	48.19	4.23E+02	BI-210M PB-212 GA-67
	15	325 -	332	328.19	8.16E+01	53.67	4.29E+02	LA-140
	16	335 -	343	338.77	2.28E+02	63.77	4.85E+02	AC-228
M	17	347 -	358	352.30	6.48E+02	60.14	2.25E+02	PB-214
m	18	347 -	358	355.66	3.36E+01	48.45	2.39E+02	BA-133
	19	406 -	414	410.03	6.40E+01	47.68	3.10E+02	.....
	20	428 -	434	431.09	3.35E+01	36.93	2.23E+02	.....
	21	460 -	468	463.52	7.61E+01	45.69	2.74E+02	SB-125
	22	505 -	517	511.16	2.21E+02	61.77	3.47E+02	.....

Analysis Report for 1510086-06

CP4105S06-07

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
23	523.74	522 -	526	523.93	2.00E+01	23.55	1.06E+02	.....
24	542.39	540 -	546	542.57	4.02E+01	29.35	1.24E+02	.....
25	583.59	580 -	587	583.76	3.09E+02	49.11	1.97E+02	TL-208
26	609.57	606 -	612	609.73	4.42E+02	52.62	1.81E+02	BI-214
27	648.33	645 -	652	648.47	3.51E+01	28.14	1.10E+02	.....
28	727.52	725 -	731	727.64	8.53E+01	31.11	1.17E+02	BI-212
29	785.41	781 -	790	785.51	6.69E+01	33.72	1.22E+02	.....
30	794.83	792 -	798	794.93	3.59E+01	24.70	8.61E+01	.....
31	861.29	857 -	864	861.36	3.81E+01	28.98	1.12E+02	TL-208
32	871.53	866 -	876	871.60	3.64E+01	33.67	1.31E+02	NB-94
33	911.71	907 -	917	911.77	1.96E+02	46.28	1.79E+02	LU-172 AC-228
34	969.74	966 -	975	969.77	9.33E+01	46.94	2.27E+02	AC-228
M 35	1119.02	1114 -	1128	1119.00	3.22E+01	24.62	6.18E+01	.....
m 36	1124.02	1114 -	1128	1124.00	2.33E+01	25.26	4.21E+01	.....
37	1329.62	1325 -	1332	1329.52	3.28E+01	18.55	3.44E+01	.....
38	1377.72	1374 -	1381	1377.60	1.57E+01	20.59	6.05E+01	.....
M 39	1400.13	1398 -	1415	1400.01	1.30E+01	9.80	1.26E+01	.....
m 40	1403.84	1398 -	1415	1403.72	1.62E+01	17.26	3.06E+01	.....
41	1461.52	1456 -	1467	1461.37	8.35E+02	62.10	5.98E+01	K-40
42	1486.58	1484 -	1490	1486.43	1.22E+01	11.36	1.56E+01	.....
M 43	1510.20	1504 -	1530	1510.04	1.40E+01	14.70	1.48E+01	.....
m 44	1517.40	1504 -	1530	1517.24	6.78E+00	11.31	1.64E+01	.....
m 45	1524.81	1504 -	1530	1524.65	8.46E+00	12.00	2.07E+01	.....
46	1594.02	1592 -	1597	1593.83	1.46E+01	13.93	2.28E+01	.....
47	1614.47	1612 -	1617	1614.27	6.54E+00	9.38	1.29E+01	.....
48	1621.32	1619 -	1623	1621.11	1.00E+01	9.76	1.19E+01	BI-212
49	1631.13	1627 -	1634	1630.92	1.90E+01	11.14	7.91E+00	.....
50	1731.54	1727 -	1737	1731.30	2.47E+01	14.65	1.26E+01	.....
51	1765.33	1760 -	1770	1765.07	1.00E+02	21.92	9.87E+00	BI-214
52	1848.24	1844 -	1853	1847.95	1.53E+01	14.28	2.14E+01	.....
53	1913.31	1910 -	1916	1913.00	6.50E+00	8.03	7.00E+00	.....
54	2020.28	2015 -	2024	2019.92	1.01E+01	10.49	9.73E+00	.....
M 55	2100.63	2099 -	2110	2100.24	8.69E+00	4.36	2.15E+00	.....
m 56	2104.63	2099 -	2110	2104.24	1.32E+01	12.00	1.21E+01	.....
57	2204.42	2200 -	2207	2204.00	1.51E+01	11.49	1.18E+01	BI-214
58	2384.88	2380 -	2387	2384.39	6.94E+00	7.21	4.11E+00	.....
59	2615.45	2611 -	2620	2614.87	1.02E+02	21.10	6.09E+00	TL-208

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

Analysis Report for 1510086-06
CP4105S06-07

PEAK EFFICIENCY REPORT

Peak Analysis Performed on : 11/6/2015 12:23:01PM

	Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
	1	40.21	6.01E+01	65.79	1.23E-02	1.78E-03
	2	46.58	1.34E+02	81.53	1.68E-02	1.78E-03
	3	63.56	2.20E+02	92.82	2.50E-02	1.92E-03
	4	76.28	1.39E+03	174.73	2.77E-02	2.35E-03
	5	92.50	3.79E+02	115.91	2.86E-02	2.65E-03
	6	162.74	8.93E+01	85.81	2.41E-02	2.17E-03
	7	185.98	2.34E+02	92.18	2.24E-02	2.03E-03
	8	209.82	1.30E+02	68.19	2.08E-02	1.85E-03
M	9	238.78	1.03E+03	78.58	1.92E-02	1.64E-03
m	10	241.88	3.27E+02	89.22	1.91E-02	1.61E-03
	11	269.90	8.57E+01	68.65	1.77E-02	1.41E-03
	12	278.42	6.04E+01	61.55	1.74E-02	1.34E-03
	13	295.21	3.40E+02	74.43	1.67E-02	1.31E-03
	14	300.04	4.95E+01	48.19	1.65E-02	1.30E-03
	15	327.93	8.16E+01	53.67	1.55E-02	1.24E-03
	16	338.51	2.28E+02	63.77	1.52E-02	1.22E-03
M	17	352.05	6.48E+02	60.14	1.48E-02	1.19E-03
m	18	355.41	3.36E+01	48.45	1.47E-02	1.19E-03
	19	409.80	6.40E+01	47.68	1.32E-02	1.10E-03
	20	430.86	3.35E+01	36.93	1.28E-02	1.07E-03
	21	463.31	7.61E+01	45.69	1.21E-02	1.04E-03
	22	510.96	2.21E+02	61.77	1.12E-02	9.90E-04
	23	523.74	2.00E+01	23.55	1.10E-02	9.77E-04
	24	542.39	4.02E+01	29.35	1.07E-02	9.58E-04
	25	583.59	3.09E+02	49.11	1.02E-02	9.15E-04
	26	609.57	4.42E+02	52.62	9.82E-03	8.88E-04
	27	648.33	3.51E+01	28.14	9.36E-03	8.48E-04
	28	727.52	8.53E+01	31.11	8.55E-03	7.75E-04
	29	785.41	6.69E+01	33.72	8.05E-03	7.23E-04
	30	794.83	3.59E+01	24.70	7.97E-03	7.15E-04
	31	861.29	3.81E+01	28.98	7.48E-03	6.55E-04
	32	871.53	3.64E+01	33.67	7.41E-03	6.46E-04
	33	911.71	1.96E+02	46.28	7.14E-03	6.15E-04
	34	969.74	9.33E+01	46.94	6.80E-03	5.85E-04
M	35	1119.02	3.22E+01	24.62	6.07E-03	5.07E-04
m	36	1124.02	2.33E+01	25.26	6.05E-03	5.05E-04
	37	1329.62	3.28E+01	18.55	5.32E-03	4.52E-04
	38	1377.72	1.57E+01	20.59	5.18E-03	4.40E-04
M	39	1400.13	1.30E+01	9.80	5.12E-03	4.34E-04
m	40	1403.84	1.62E+01	17.26	5.11E-03	4.33E-04
	41	1461.52	8.35E+02	62.10	4.97E-03	4.19E-04
	42	1486.58	1.22E+01	11.36	4.91E-03	4.13E-04
	43	1510.20	1.40E+01	14.70	4.86E-03	4.07E-04
M	44	1517.40	6.78E+00	11.31	4.84E-03	4.05E-04
m	45	1524.81	8.46E+00	12.00	4.82E-03	4.03E-04

Analysis Report for 1510086-06
CP4105S06-07

	Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
	46	1594.02	1.46E+01	13.93	4.68E-03	3.86E-04
	47	1614.47	6.54E+00	9.38	4.64E-03	3.81E-04
	48	1621.32	1.00E+01	9.76	4.63E-03	3.79E-04
	49	1631.13	1.90E+01	11.14	4.61E-03	3.77E-04
	50	1731.54	2.47E+01	14.65	4.45E-03	3.52E-04
	51	1765.33	1.00E+02	21.92	4.39E-03	3.43E-04
	52	1848.24	1.53E+01	14.28	4.28E-03	3.26E-04
	53	1913.31	6.50E+00	8.03	4.20E-03	3.26E-04
	54	2020.28	1.01E+01	10.49	4.09E-03	3.26E-04
M	55	2100.63	8.69E+00	4.36	4.02E-03	3.26E-04
m	56	2104.63	1.32E+01	12.00	4.02E-03	3.26E-04
	57	2204.42	1.51E+01	11.49	3.95E-03	3.26E-04
	58	2384.88	6.94E+00	7.21	3.86E-03	3.26E-04
	59	2615.45	1.02E+02	21.10	3.79E-03	3.26E-04

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000 sigma

BACKGROUND SUBTRACT REPORT

Peak Analysis Performed on : 11/6/2015 12:23:01PM

Env. Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000028941.CNF

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
	1	40.21	6.01E+01	65.79			6.01E+01	6.58E+01
	2	46.58	1.34E+02	81.53	4.50E+01	8.46E+00	8.93E+01	8.20E+01
	3	63.56	2.20E+02	92.82	7.80E+01	1.33E+01	1.42E+02	9.38E+01
	4	76.28	1.39E+03	174.73	9.75E+00	8.28E+00	1.38E+03	1.75E+02
	5	92.50	3.79E+02	115.91	1.34E+02	9.83E+00	2.45E+02	1.16E+02
	6	162.74	8.93E+01	85.81	8.29E+00	7.16E+00	8.10E+01	8.61E+01
	7	185.98	2.34E+02	92.18	6.41E+01	7.38E+00	1.70E+02	9.25E+01
	8	209.82	1.30E+02	68.19			1.30E+02	6.82E+01
M	9	238.78	1.03E+03	78.58	2.34E+01	6.34E+00	1.01E+03	7.88E+01
m	10	241.88	3.27E+02	89.22			3.27E+02	8.92E+01
	11	269.90	8.57E+01	68.65			8.57E+01	6.87E+01
	12	278.42	6.04E+01	61.55			6.04E+01	6.15E+01
	13	295.21	3.40E+02	74.43	4.17E+00	5.50E+00	3.36E+02	7.46E+01
	14	300.04	4.95E+01	48.19			4.95E+01	4.82E+01
	15	327.93	8.16E+01	53.67			8.16E+01	5.37E+01
	16	338.51	2.28E+02	63.77	2.22E-01	4.54E+00	2.27E+02	6.39E+01

: 00495

Analysis Report for 1510086-06

CP4105S06-07

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
M	17	352.05	6.48E+02	60.14	8.83E+00	4.91E+00	6.39E+02	6.03E+01
m	18	355.41	3.36E+01	48.45			3.36E+01	4.84E+01
	19	409.80	6.40E+01	47.68			6.40E+01	4.77E+01
	20	430.86	3.35E+01	36.93			3.35E+01	3.69E+01
	21	463.31	7.61E+01	45.69			7.61E+01	4.57E+01
	22	510.96	2.21E+02	61.77	8.12E+01	5.49E+00	1.39E+02	6.20E+01
	23	523.74	2.00E+01	23.55			2.00E+01	2.35E+01
	24	542.39	4.02E+01	29.35			4.02E+01	2.93E+01
	25	583.59	3.09E+02	49.11	6.34E+00	3.74E+00	3.02E+02	4.93E+01
	26	609.57	4.42E+02	52.62	5.20E+00	3.69E+00	4.37E+02	5.28E+01
	27	648.33	3.51E+01	28.14			3.51E+01	2.81E+01
	28	727.52	8.53E+01	31.11			8.53E+01	3.11E+01
	29	785.41	6.69E+01	33.72			6.69E+01	3.37E+01
	30	794.83	3.59E+01	24.70			3.59E+01	2.47E+01
	31	861.29	3.81E+01	28.98			3.81E+01	2.90E+01
	32	871.53	3.64E+01	33.67			3.64E+01	3.37E+01
	33	911.71	1.96E+02	46.28	3.28E+00	2.53E+00	1.93E+02	4.64E+01
	34	969.74	9.33E+01	46.94			9.33E+01	4.69E+01
M	35	1119.02	3.22E+01	24.62			3.22E+01	2.46E+01
m	36	1124.02	2.33E+01	25.26			2.33E+01	2.53E+01
	37	1329.62	3.28E+01	18.55			3.28E+01	1.85E+01
	38	1377.72	1.57E+01	20.59			1.57E+01	2.06E+01
M	39	1400.13	1.30E+01	9.80			1.30E+01	9.80E+00
m	40	1403.84	1.62E+01	17.26			1.62E+01	1.73E+01
	41	1461.52	8.35E+02	62.10	6.46E+00	2.33E+00	8.29E+02	6.21E+01
	42	1486.58	1.22E+01	11.36			1.22E+01	1.14E+01
M	43	1510.20	1.40E+01	14.70			1.40E+01	1.47E+01
m	44	1517.40	6.78E+00	11.31			6.78E+00	1.13E+01
m	45	1524.81	8.46E+00	12.00			8.46E+00	1.20E+01
	46	1594.02	1.46E+01	13.93			1.46E+01	1.39E+01
	47	1614.47	6.54E+00	9.38			6.54E+00	9.38E+00
	48	1621.32	1.00E+01	9.76			1.00E+01	9.76E+00
	49	1631.13	1.90E+01	11.14			1.90E+01	1.11E+01
	50	1731.54	2.47E+01	14.65			2.47E+01	1.47E+01
	51	1765.33	1.00E+02	21.92			1.00E+02	2.19E+01
	52	1848.24	1.53E+01	14.28			1.53E+01	1.43E+01
	53	1913.31	6.50E+00	8.03			6.50E+00	8.03E+00
	54	2020.28	1.01E+01	10.49			1.01E+01	1.05E+01
M	55	2100.63	8.69E+00	4.36			8.69E+00	4.36E+00
m	56	2104.63	1.32E+01	12.00			1.32E+01	1.20E+01
	57	2204.42	1.51E+01	11.49			1.51E+01	1.15E+01
	58	2384.88	6.94E+00	7.21			6.94E+00	7.21E+00
	59	2615.45	1.02E+02	21.10	3.47E+00	1.48E+00	9.85E+01	2.11E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

Analysis Report for 1510086-06
CP4105S06-07

AREA CORRECTION REPORT REFERENCE PEAK / BKG. SUBTRACT

Peak Analysis Performed on : 11/6/2015 12:23:01PM

Ref. Peak Energy : 0.00 Reference Date :
Peak Ratio : 0.00 Uncertainty : 0.00
Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000028941.CNF

Corrected Area is: Original * Peak Ratio - Background

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.	
1	40.21	6.01E+01	65.79			6.01E+01	6.58E+01	
2	46.58	1.34E+02	81.53	4.50E+01	8.46E+00	8.93E+01	8.20E+01	
3	63.56	2.20E+02	92.82	7.80E+01	1.33E+01	1.42E+02	9.38E+01	
4	76.28	1.39E+03	174.73	9.75E+00	8.28E+00	1.38E+03	1.75E+02	
5	92.50	3.79E+02	115.91	1.34E+02	9.83E+00	2.45E+02	1.16E+02	
6	162.74	8.93E+01	85.81	8.29E+00	7.16E+00	8.10E+01	8.61E+01	
7	185.98	2.34E+02	92.18	6.41E+01	7.38E+00	1.70E+02	9.25E+01	
8	209.82	1.30E+02	68.19			1.30E+02	6.82E+01	
M	9	238.78	1.03E+03	78.58	2.34E+01	6.34E+00	1.01E+03	7.88E+01
m	10	241.88	3.27E+02	89.22			3.27E+02	8.92E+01
11	269.90	8.57E+01	68.65			8.57E+01	6.87E+01	
12	278.42	6.04E+01	61.55			6.04E+01	6.15E+01	
13	295.21	3.40E+02	74.43	4.17E+00	5.50E+00	3.36E+02	7.46E+01	
14	300.04	4.95E+01	48.19			4.95E+01	4.82E+01	
15	327.93	8.16E+01	53.67			8.16E+01	5.37E+01	
16	338.51	2.28E+02	63.77	2.22E-01	4.54E+00	2.27E+02	6.39E+01	
M	17	352.05	6.48E+02	60.14	8.83E+00	4.91E+00	6.39E+02	6.03E+01
m	18	355.41	3.36E+01	48.45			3.36E+01	4.84E+01
19	409.80	6.40E+01	47.68			6.40E+01	4.77E+01	
20	430.86	3.35E+01	36.93			3.35E+01	3.69E+01	
21	463.31	7.61E+01	45.69			7.61E+01	4.57E+01	
22	510.96	2.21E+02	61.77	8.12E+01	5.49E+00	1.39E+02	6.20E+01	
23	523.74	2.00E+01	23.55			2.00E+01	2.35E+01	
24	542.39	4.02E+01	29.35			4.02E+01	2.93E+01	
25	583.59	3.09E+02	49.11	6.34E+00	3.74E+00	3.02E+02	4.93E+01	
26	609.57	4.42E+02	52.62	5.20E+00	3.69E+00	4.37E+02	5.28E+01	
27	648.33	3.51E+01	28.14			3.51E+01	2.81E+01	
28	727.52	8.53E+01	31.11			8.53E+01	3.11E+01	
29	785.41	6.69E+01	33.72			6.69E+01	3.37E+01	
30	794.83	3.59E+01	24.70			3.59E+01	2.47E+01	
31	861.29	3.81E+01	28.98			3.81E+01	2.90E+01	
32	871.53	3.64E+01	33.67			3.64E+01	3.37E+01	
33	911.71	1.96E+02	46.28	3.28E+00	2.53E+00	1.93E+02	4.64E+01	
34	969.74	9.33E+01	46.94			9.33E+01	4.69E+01	
M	35	1119.02	3.22E+01	24.62		3.22E+01	2.46E+01	
m	36	1124.02	2.33E+01	25.26		2.33E+01	2.53E+01	
37	1329.62	3.28E+01	18.55			3.28E+01	1.85E+01	
38	1377.72	1.57E+01	20.59			1.57E+01	2.06E+01	
M	39	1400.13	1.30E+01	9.80		1.30E+01	9.80E+00	
m	40	1403.84	1.62E+01	17.26		1.62E+01	1.73E+01	
41	1461.52	8.35E+02	62.10	6.46E+00	2.33E+00	8.29E+02	6.21E+01	

: 00497

Analysis Report for 1510086-06
CP4105S06-07

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
	42	1486.58	1.22E+01	11.36			1.22E+01	1.14E+01
M	43	1510.20	1.40E+01	14.70			1.40E+01	1.47E+01
m	44	1517.40	6.78E+00	11.31			6.78E+00	1.13E+01
m	45	1524.81	8.46E+00	12.00			8.46E+00	1.20E+01
	46	1594.02	1.46E+01	13.93			1.46E+01	1.39E+01
	47	1614.47	6.54E+00	9.38			6.54E+00	9.38E+00
	48	1621.32	1.00E+01	9.76			1.00E+01	9.76E+00
	49	1631.13	1.90E+01	11.14			1.90E+01	1.11E+01
	50	1731.54	2.47E+01	14.65			2.47E+01	1.47E+01
	51	1765.33	1.00E+02	21.92			1.00E+02	2.19E+01
	52	1848.24	1.53E+01	14.28			1.53E+01	1.43E+01
	53	1913.31	6.50E+00	8.03			6.50E+00	8.03E+00
	54	2020.28	1.01E+01	10.49			1.01E+01	1.05E+01
M	55	2100.63	8.69E+00	4.36			8.69E+00	4.36E+00
m	56	2104.63	1.32E+01	12.00			1.32E+01	1.20E+01
	57	2204.42	1.51E+01	11.49			1.51E+01	1.15E+01
	58	2384.88	6.94E+00	7.21			6.94E+00	7.21E+00
	59	2615.45	1.02E+02	21.10	3.47E+00	1.48E+00	9.85E+01	2.11E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

NUCLIDE IDENTIFICATION REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

IDENTIFIED NUCLIDES

Nuclide Name	Id Confidence	Energy (keV)	Yield(%)	Activity (pCi/grams)	Activity Uncertainty
K-40	0.924	1460.81 *	10.67	2.03E+01	2.32E+00
GA-67	0.588	93.31 *	35.70	2.34E+02	9.93E+02
		208.95 *	2.24	2.72E+03	1.12E+04
		300.22 *	16.00	1.83E+02	7.92E+02
TL-208	0.929	583.14 *	30.22	1.28E+00	2.38E-01
		860.37 *	4.48	1.48E+00	1.13E+00
		2614.66 *	35.85	9.39E-01	2.17E-01
PB-210	0.999	46.50 *	4.25	1.62E+00	1.50E+00
BI-212	0.970	727.17 *	11.80	1.10E+00	4.12E-01
		1620.62 *	2.75	1.02E+00	9.97E-01
PB-212	0.996	238.63 *	44.60	1.53E+00	1.77E-01
		300.09 *	3.41	1.14E+00	1.11E+00
BI-214	0.708	609.31 *	46.30	1.25E+00	1.88E-01

: 00498

Analysis Report for 1510086-06
CP4105S06-07

Nuclide Name	Id Confidence	Energy (keV)	Yield(%)	Activity (pCi/grams)	Activity Uncertainty
BI-214	0.708	1120.29	15.10		
		1764.49 *	15.80	1.87E+00	4.35E-01
		2204.22 *	4.98	9.97E-01	7.62E-01
PB-214	0.998	295.21 *	19.19	1.36E+00	3.20E-01
		351.92 *	37.19	1.51E+00	1.88E-01
		240.98 *	3.95	5.64E+00	1.61E+00
RA-224	0.879	40.00 *	31.00	8.83E-01	9.75E-01
RA-225	0.971	186.21 *	3.28	3.00E+00	5.74E+00
RA-226	0.991	338.32 *	11.40	1.70E+00	4.98E-01
AC-228	0.948	911.07 *	27.70	1.26E+00	3.23E-01
		969.11 *	16.60	1.07E+00	5.47E-01
		63.29 *	3.80	1.94E+00	1.29E+00
TH-234	0.988	209.75 *	3.29	2.47E+00	1.31E+00
CM-243	0.321	228.14	10.60		
		277.60 *	14.00	3.23E-01	3.30E-01

* = Energy line found in the spectrum.
 - = Manually added nuclide.
 ? = Manually edited nuclide.
 Energy Tolerance : 1.000 keV
 Nuclide confidence index threshold = 0.30
 Errors quoted at 2.000sigma

UNIDENTIFIED PEAKS

Peak Locate Performed on : 11/6/2015 12:23:01PM
 Peak Locate From Channel : 1
 Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
4	76.28	3.82721E-01	6.35		
6	162.74	2.25114E-02	53.13	Tol.	BA-140 U-235
11	269.90	2.38014E-02	40.06		
15	327.93	2.26764E-02	32.87		
m 18	355.41	9.32391E-03	72.16		
19	409.80	1.77651E-02	37.28		
20	430.86	9.29406E-03	55.19	Sum	
21	463.31	2.11352E-02	30.02		
22	510.96	3.87408E-02	22.23		
23	523.74	5.54414E-03	58.99	Sum	
24	542.39	1.11574E-02	36.53	Sum	
27	648.33	9.74537E-03	40.11		
29	785.41	1.85851E-02	25.20		

Analysis Report for 1510086-06
CP4105S06-07

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
	30	794.83	9.98594E-03	34.35	Sum
	32	871.53	1.01089E-02	46.27	
M	35	1119.02	8.94086E-03	38.24	
m	36	1124.02	6.45942E-03	54.31	
	37	1329.62	9.11389E-03	28.26	
	38	1377.72	4.36896E-03	65.46	
M	39	1400.13	3.60460E-03	37.75	
m	40	1403.84	4.51277E-03	53.11	
	42	1486.58	3.38889E-03	46.55	
M	43	1510.20	3.88748E-03	52.51	
m	44	1517.40	1.88470E-03	83.37	
m	45	1524.81	2.35046E-03	70.91	Sum
	46	1594.02	4.04915E-03	47.78	D-Esc
	47	1614.47	1.81624E-03	71.74	
	49	1631.13	5.28985E-03	29.24	
	50	1731.54	6.86380E-03	29.65	
	52	1848.24	4.25214E-03	46.65	
	53	1913.31	1.80556E-03	61.78	
	54	2020.28	2.81481E-03	51.75	
M	55	2100.63	2.41382E-03	25.08	
m	56	2104.63	3.65688E-03	45.58	S-Esc
	58	2384.88	1.92901E-03	51.92	

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

NUCLIDE IDENTIFICATION REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

IDENTIFIED NUCLIDES

Nuclide Name	Id Confidence	Energy (keV)	Yield(%)	Activity (pCi/grams)	Activity Uncertainty
K-40	0.92	1460.81 *	10.67	2.03E+01	2.32E+00
GA-67	0.58	93.31 *	35.70	2.34E+02	9.93E+02
		208.95 *	2.24	2.72E+03	1.12E+04
		300.22 *	16.00	1.83E+02	7.92E+02
TL-208	0.92	583.14 *	30.22	1.28E+00	2.38E-01
		860.37 *	4.48	1.48E+00	1.13E+00

: 00500

Analysis Report for 1510086-06
CP4105S06-07

Nuclide Name	Id Confidence	Energy (keV)		Yield(%)	Activity (pCi/grams)	Activity Uncertainty
TL-208	0.92	2614.66	*	35.85	9.39E-01	2.17E-01
PB-210	0.99	46.50	*	4.25	1.62E+00	1.50E+00
BI-212	0.97	727.17	*	11.80	1.10E+00	4.12E-01
		1620.62	*	2.75	1.02E+00	9.97E-01
PB-212	0.99	238.63	*	44.60	1.53E+00	1.77E-01
		300.09	*	3.41	1.14E+00	1.11E+00
BI-214	0.70	609.31	*	46.30	1.25E+00	1.88E-01
		1120.29		15.10		
		1764.49	*	15.80	1.87E+00	4.35E-01
		2204.22	*	4.98	9.97E-01	7.62E-01
PB-214	0.99	295.21	*	19.19	1.36E+00	3.20E-01
		351.92	*	37.19	1.51E+00	1.88E-01
RA-224	0.87	240.98	*	3.95	5.64E+00	1.61E+00
RA-225	0.97	40.00	*	31.00	8.83E-01	9.75E-01
RA-226	0.99	186.21	*	3.28	3.00E+00	5.74E+00
AC-228	0.94	338.32	*	11.40	1.70E+00	4.98E-01
		911.07	*	27.70	1.26E+00	3.23E-01
		969.11	*	16.60	1.07E+00	5.47E-01
TH-234	0.98	63.29	*	3.80	1.94E+00	1.29E+00
CM-243	0.32	209.75	*	3.29	2.47E+00	1.31E+00
		228.14		10.60		
		277.60	*	14.00	3.23E-01	3.30E-01

* = Energy line found in the spectrum.

- = Manually added nuclide.

? = Manually edited nuclide.

@ = Energy line not used for Weighted Mean Activity

Energy Tolerance : 1.000 keV

Nuclide confidence index threshold = 0.30

Errors quoted at 2.000sigma

INTERFERENCE CORRECTED REPORT

	Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
	K-40	0.924	2.03E+01	2.32E+00	
	GA-67	0.588	1.60E+02	6.56E+02	
X	HG-203	0.908			
	TL-208	0.929	1.10E+00	1.59E-01	
	PB-210	0.999	1.62E+00	1.50E+00	

Analysis Report for 1510086-06
CP4105S06-07

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
BI-212	0.970	1.08E+00	3.81E-01	
PB-212	0.996	1.50E+00	1.75E-01	
BI-214	0.708	1.33E+00	1.68E-01	
PB-214	0.998	1.47E+00	1.62E-01	
RA-224	0.879	5.64E+00	1.61E+00	
RA-225	0.971	8.83E-01	9.75E-01	
RA-226	0.991	3.00E+00	5.74E+00	
AC-228	0.948	1.33E+00	2.43E-01	
TH-234	0.988	1.94E+00	1.29E+00	
CM-243	0.321	4.42E-01	3.20E-01	

- ? = nuclide is part of an undetermined solution
X = nuclide rejected by the interference analysis
@ = nuclide contains energy lines not used in Weighted Mean Activity

Errors quoted at 2.000sigma

Analysis Report for 1510086-06
CP4105S06-07

UNIDENTIFIED PEAKS

Peak Locate Performed on : 11/6/2015 12:23:01PM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
4	76.28	3.82721E-01	6.35		
6	162.74	2.25114E-02	53.13	Tol.	BA-140 U-235
11	269.90	2.38014E-02	40.06		
15	327.93	2.26764E-02	32.87		
m 18	355.41	9.32391E-03	72.16		
19	409.80	1.77651E-02	37.28		
20	430.86	9.29406E-03	55.19	Sum	
21	463.31	2.11352E-02	30.02		
22	510.96	3.87408E-02	22.23		
23	523.74	5.54414E-03	58.99	Sum	
24	542.39	1.11574E-02	36.53	Sum	
27	648.33	9.74537E-03	40.11		
29	785.41	1.85851E-02	25.20		
30	794.83	9.98594E-03	34.35	Sum	
32	871.53	1.01089E-02	46.27		
M 35	1119.02	8.94086E-03	38.24		
m 36	1124.02	6.45942E-03	54.31		
37	1329.62	9.11389E-03	28.26		
38	1377.72	4.36896E-03	65.46		
M 39	1400.13	3.60460E-03	37.75		
m 40	1403.84	4.51277E-03	53.11		
42	1486.58	3.38889E-03	46.55		
M 43	1510.20	3.88748E-03	52.51		
m 44	1517.40	1.88470E-03	83.37		
m 45	1524.81	2.35046E-03	70.91	Sum	
46	1594.02	4.04915E-03	47.78	D-Esc	
47	1614.47	1.81624E-03	71.74		
49	1631.13	5.28985E-03	29.24		
50	1731.54	6.86380E-03	29.65		
52	1848.24	4.25214E-03	46.65		
53	1913.31	1.80556E-03	61.78		
54	2020.28	2.81481E-03	51.75		
M 55	2100.63	2.41382E-03	25.08		
m 56	2104.63	3.65688E-03	45.58	S-Esc	

Analysis Report for 1510086-06
CP4105S06-07

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
58	2384.88	1.92901E-03	51.92		

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

NUCLIDE MDA REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	BE-7	477.59	10.42	4.87E-01	8.69E-01	8.69E-01
+	NA-22	1274.54	99.94	1.24E-02	8.52E-02	8.52E-02
+	NA-24	1368.53	99.99	1.11E+13	3.78E+13	6.74E+13
		2754.09	99.86	1.05E+13		3.78E+13
+	AL-26	1808.65	99.76	-1.37E-02	4.50E-02	4.50E-02
+	K-40	1460.81	* 10.67	2.03E+01	1.01E+00	1.01E+00
+	@ AR-41	1293.64	99.16	1.00E+26	1.00E+26	1.00E+26
+	TI-44	67.88	94.40	2.76E-02	6.63E-02	6.63E-02
		78.34	96.00	3.05E-01		8.77E-02
+	SC-46	889.25	99.98	-3.49E-02	8.04E-02	8.04E-02
		1120.51	99.99	1.91E-01		1.61E-01
+	V-48	983.52	99.98	3.89E-02	2.70E-01	2.70E-01
		1312.10	97.50	-8.80E-02		3.21E-01
+	CR-51	320.08	9.83	-1.64E-01	1.04E+00	1.04E+00
+	MN-54	834.83	99.97	-2.49E-02	7.60E-02	7.60E-02
+	CO-56	846.75	99.96	4.97E-02	9.56E-02	9.56E-02
		1037.75	14.03	-1.77E-01		5.99E-01
		1238.25	67.00	9.90E-02		2.17E-01
		1771.40	15.51	5.02E-02		3.98E-01
		2598.48	16.90	-1.18E-02		2.86E-01
+	CO-57	122.06	85.51	2.57E-02	5.82E-02	5.82E-02
		136.48	10.60	3.24E-01		4.82E-01
+	CO-58	810.76	99.40	3.19E-03	8.60E-02	8.60E-02
+	FE-59	1099.22	56.50	-3.76E-02	2.13E-01	2.13E-01
		1291.56	43.20	2.78E-02		2.88E-01
+	CO-60	1173.22	100.00	-2.24E-03	7.75E-02	7.83E-02
		1332.49	100.00	-2.02E-02		7.75E-02
+	ZN-65	1115.52	50.75	-4.36E-01	1.82E-01	1.82E-01

Analysis Report for 1510086-06
CP4105S06-07

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	GA-67	93.31	*	35.70	2.34E+02	1.79E+02	1.79E+02
		208.95	*	2.24	2.72E+03		2.27E+03
		300.22	*	16.00	1.83E+02		2.90E+02
+	SE-75	121.11		16.70	-1.18E-01	9.08E-02	3.26E-01
		136.00		59.20	-3.83E-02		9.41E-02
		264.65		59.80	-3.93E-03		9.08E-02
		279.53		25.20	1.54E-01		2.57E-01
		400.65		11.40	4.34E-03		5.12E-01
+	RB-82	776.52		13.00	-1.25E-01	1.25E+00	1.25E+00
+	RB-83	520.41		46.00	-2.71E-02	1.58E-01	1.58E-01
		529.64		30.30	-7.16E-02		2.40E-01
		552.65		16.40	-5.13E-02		4.42E-01
+	KR-85	513.99		0.43	3.69E+01	2.10E+01	2.10E+01
+	SR-85	513.99		99.27	2.24E-01	1.27E-01	1.27E-01
+	Y-88	898.02		93.40	-1.57E-02	7.24E-02	9.18E-02
		1836.01		99.38	2.35E-02		7.24E-02
+	NB-93M	16.57		9.43	-5.10E+00	6.93E+01	6.93E+01
+	NB-94	702.63		100.00	-1.42E-03	6.46E-02	6.46E-02
		871.10		100.00	2.50E-02		7.33E-02
+	NB-95	765.79		99.81	1.46E-01	1.56E-01	1.56E-01
+	NB-95M	235.69		25.00	-1.01E+03	9.82E+01	9.82E+01
+	ZR-95	724.18		43.70	3.69E-02	1.66E-01	2.42E-01
		756.72		55.30	4.13E-02		1.66E-01
+	MO-99	181.06		6.20	1.61E+01	1.39E+03	2.05E+03
		739.58		12.80	4.60E+02		1.39E+03
		778.00		4.50	-1.54E+03		3.68E+03
+	RU-103	497.08		89.00	-8.57E-03	1.10E-01	1.10E-01
+	RU-106	621.84		9.80	-4.22E-01	6.16E-01	6.16E-01
+	AG-108M	433.93		89.90	-7.93E-03	6.63E-02	6.63E-02
		614.37		90.40	-4.71E-02		7.50E-02
		722.95		90.50	1.97E-02		7.08E-02
+	CD-109	88.03		3.72	-5.28E-01	1.77E+00	1.77E+00
+	AG-110M	657.75		93.14	1.24E-02	7.48E-02	7.48E-02
		677.61		10.53	1.04E-01		6.69E-01
		706.67		16.46	1.32E-01		4.52E-01
		763.93		21.98	-2.88E-01		3.62E-01
		884.67		71.63	-1.95E-02		9.78E-02
		1384.27		23.94	-1.04E-01		2.75E-01
+	CD-113M	263.70		0.02	3.39E+01	2.03E+02	2.03E+02
+	SN-113	255.12		1.93	-1.18E+00	1.05E-01	2.92E+00
		391.69		64.90	4.24E-02		1.05E-01
+	TE123M	159.00		84.10	1.18E-02	6.83E-02	6.83E-02
+	SB-124	602.71		97.87	-7.66E-03	9.24E-02	9.24E-02
		645.85		7.26	3.04E-02		1.13E+00
		722.78		11.10	2.29E-01		8.26E-01
		1691.02		49.00	7.98E-02		1.64E-01
+	I-125	35.49		6.49	-4.01E-01	2.91E+00	2.91E+00
+	SB-125	176.33		6.89	4.34E-01	2.04E-01	7.44E-01

Analysis Report for 1510086-06
CP4105S06-07

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)		
SB-125	427.89	29.33	1.75E-02	2.04E-01	2.04E-01		
	463.38	10.35	8.63E-01		7.04E-01		
	600.56	17.80	1.38E-01		3.72E-01		
	635.90	11.32	-4.88E-02		5.42E-01		
+ SB-126	414.70	83.30	-1.31E-01	3.58E-01	3.84E-01		
	666.33	99.60	2.33E-01		3.97E-01		
	695.00	99.60	-3.82E-02		3.58E-01		
	720.50	53.80	1.87E-01		7.03E-01		
+ SN-126	87.57	37.00	-5.07E-02	1.70E-01	1.70E-01		
+ SB-127	473.00	25.00	9.34E-01	4.55E+01	6.29E+01		
	685.20	35.70	-1.92E+01		4.55E+01		
	783.80	14.70	9.33E+01		1.49E+02		
+ I-129	29.78	57.00	-1.64E-01	4.50E-01	4.50E-01		
	33.60	13.20	1.85E-01		1.23E+00		
	39.58	7.52	5.95E-01		1.39E+00		
+ I-131	284.30	6.05	-2.11E+00	8.60E-01	1.14E+01		
	364.48	81.20	1.93E-01		8.60E-01		
	636.97	7.26	3.51E+00		1.27E+01		
	722.89	1.80	1.45E+01		5.22E+01		
+ TE-132	49.72	13.10	-9.34E+01	4.31E+01	4.07E+02		
	228.16	88.00	-1.68E+01		4.31E+01		
+ BA-133	81.00	33.00	-1.18E+00	8.63E-02	1.72E-01		
	302.84	17.80	1.06E-01		3.03E-01		
	356.01	60.00	-6.71E-01		8.63E-02		
+ I-133	529.87	86.30	-1.31E+09	4.39E+09	4.39E+09		
+ XE-133	81.00	38.00	-6.30E+01	9.13E+00	9.13E+00		
+ CS-134	563.23	8.38	5.61E-02	7.03E-02	7.47E-01		
	569.32	15.43	1.16E-02		4.21E-01		
	604.70	97.60	1.56E-03		7.03E-02		
	795.84	85.40	5.76E-02		8.90E-02		
	801.93	8.73	4.83E-01		8.25E-01		
+ CS-135	268.24	16.00	3.77E-01	3.60E-01	3.60E-01		
+ @ I-135	1131.51	22.50	1.00E+26	1.00E+26	1.00E+26		
	@ 1260.41	28.60	1.00E+26		1.00E+26		
	@ 1678.03	9.54	1.00E+26		1.00E+26		
+ CS-136	153.22	7.46	-1.01E+00	3.47E-01	3.40E+00		
	163.89	4.61	3.30E+00		5.53E+00		
	176.55	13.56	1.12E+00		1.91E+00		
	273.65	12.66	-2.71E+00		2.13E+00		
	340.57	48.50	1.21E+00		7.47E-01		
	818.50	99.70	1.26E-03		3.47E-01		
	1048.07	79.60	9.44E-02		4.73E-01		
	1235.34	19.70	-1.13E+00		2.77E+00		
	+ CS-137	661.65	85.12		-2.83E-02	7.68E-02	7.68E-02
	+ LA-138	788.74	34.00		-2.39E-02	9.58E-02	2.06E-01
1435.80		66.00	1.32E-02	9.58E-02			
+ CE-139	165.85	80.35	5.99E-03	6.93E-02	6.93E-02		
+ BA-140	162.64	6.70	4.30E-01	1.28E+00	3.98E+00		
	304.84	4.50	-1.68E+00		5.81E+00		

Analysis Report for 1510086-06
CP4105S06-07

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	BA-140	423.70	3.20	-1.27E+00	1.28E+00	9.33E+00
		437.55	2.00	7.57E+00		1.71E+01
		537.32	25.00	9.27E-03		1.28E+00
+	LA-140	328.77	20.50	1.15E+00	4.01E-01	1.53E+00
		487.03	45.50	2.19E-01		6.91E-01
		815.85	23.50	2.57E-02		1.53E+00
		1596.49	95.49	0.00E+00		4.01E-01
+	CE-141	145.44	48.40	1.39E-01	2.06E-01	2.06E-01
+	CE-143	57.36	11.80	-1.31E+06	1.32E+06	3.68E+06
		293.26	42.00	3.82E+06		1.32E+06
		664.55	5.20	1.69E+06		8.81E+06
+	CE-144	133.54	10.80	-1.77E-01	4.60E-01	4.60E-01
+	PM-144	476.78	42.00	-2.63E-02	6.83E-02	1.49E-01
		618.01	98.60	1.06E-02		6.83E-02
		696.49	99.49	8.93E-03		6.93E-02
+	PM-145	36.85	21.70	-6.15E-03	3.01E-01	5.49E-01
		37.36	39.70	1.27E-02		3.01E-01
		42.30	15.10	-7.24E-01		5.79E-01
		72.40	2.31	-1.13E+00		3.22E+00
+	PM-146	453.90	39.94	3.24E-02	1.47E-01	1.47E-01
		735.90	14.01	-7.64E-02		4.75E-01
		747.13	13.10	-1.24E-01		5.10E-01
+	ND-147	91.11	28.90	-3.19E+00	1.62E+00	1.62E+00
		531.02	13.10	4.66E-02		3.13E+00
+	PM-149	285.90	3.10	-9.55E+02	2.68E+04	2.68E+04
+	EU-152	121.78	20.50	9.94E-02	2.25E-01	2.25E-01
		244.69	5.40	-5.15E-01		1.04E+00
		344.27	19.13	-9.31E-03		2.47E-01
		778.89	9.20	4.57E-02		7.03E-01
		964.01	10.40	1.89E-01		8.67E-01
		1085.78	7.22	3.94E-01		1.02E+00
		1112.02	9.60	-3.16E-02		8.34E-01
		1407.95	14.94	6.17E-02		4.59E-01
+	GD-153	97.43	31.30	3.72E-02	1.69E-01	1.69E-01
		103.18	22.20	7.35E-02		2.30E-01
+	EU-154	123.07	40.50	2.44E-02	1.13E-01	1.13E-01
		723.30	19.70	9.09E-02		3.27E-01
		873.19	11.50	1.06E-01		6.22E-01
		996.32	10.30	-2.76E-02		7.20E-01
		1004.76	17.90	-9.76E-03		4.00E-01
		1274.45	35.50	3.42E-02		2.36E-01
+	EU-155	86.50	30.90	6.47E-02	2.08E-01	2.08E-01
		105.30	20.70	-6.58E-03		2.30E-01
+	EU-156	811.77	10.40	1.55E+00	2.63E+00	2.63E+00
		1153.47	7.20	-4.16E+00		4.14E+00
		1230.71	8.90	2.33E+00		4.60E+00
+	HO-166M	184.41	72.60	2.28E-01	9.12E-02	9.12E-02
		280.45	29.60	-2.62E-02		1.68E-01
		410.94	11.10	6.25E-01		5.86E-01

Analysis Report for 1510086-06
CP4105S06-07

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
HO-166M	711.69	54.10	8.65E-03	9.12E-02	1.23E-01
+ TM-171	66.72	0.14	1.68E+01	4.73E+01	4.73E+01
+ HF-172	81.75	4.52	-2.65E+00	4.28E-01	1.26E+00
	125.81	11.30	-4.91E-01		4.28E-01
+ LU-172	181.53	20.60	3.40E-01	3.16E+00	6.08E+00
	810.06	16.63	-2.63E-01		9.44E+00
	912.12	15.25	5.19E+01		2.26E+01
	1093.66	62.50	1.07E+00		3.16E+00
+ LU-173	100.72	5.24	-1.32E-01	2.88E-01	9.23E-01
	272.11	21.20	1.91E-01		2.88E-01
+ HF-175	343.40	84.00	-2.87E-03	7.68E-02	7.68E-02
+ LU-176	88.34	13.30	3.05E-01	5.18E-02	4.88E-01
	201.83	86.00	-3.68E-02		5.89E-02
	306.78	94.00	5.78E-03		5.18E-02
+ TA-182	67.75	41.20	7.64E-02	1.84E-01	1.84E-01
	1121.30	34.90	7.64E-01		4.46E-01
	1189.05	16.23	-3.42E-01		6.40E-01
	1221.41	26.98	9.66E-02		4.08E-01
	1231.02	11.44	5.28E-01		1.04E+00
+ IR-192	308.46	29.68	-1.98E-02	1.62E-01	2.14E-01
	468.07	48.10	-5.59E-03		1.62E-01
+ HG-203	279.19	* 77.30	9.27E-02	1.55E-01	1.55E-01
+ BI-207	569.67	97.72	1.97E-02	6.53E-02	6.53E-02
	1063.62	74.90	6.61E-03		1.01E-01
+ TL-208	583.14	* 30.22	1.28E+00	1.40E-01	2.54E-01
	860.37	* 4.48	1.48E+00		1.77E+00
	2614.66	* 35.85	9.39E-01		1.40E-01
+ BI-210M	262.00	45.00	4.15E-03	1.06E-01	1.06E-01
	300.00	23.00	-5.58E-01		2.46E-01
+ PB-210	46.50	* 4.25	1.62E+00	2.43E+00	2.43E+00
+ PB-211	404.84	2.90	3.15E-01	1.61E+00	1.61E+00
	831.96	2.90	-5.38E-01		2.29E+00
+ BI-212	727.17	* 11.80	1.10E+00	5.64E-01	5.64E-01
	1620.62	* 2.75	1.02E+00		1.52E+00
+ PB-212	238.63	* 44.60	1.53E+00	2.16E-01	2.16E-01
	300.09	* 3.41	1.14E+00		1.81E+00
+ BI-214	609.31	* 46.30	1.25E+00	1.58E-01	1.58E-01
	1120.29	15.10	9.78E-01		8.26E-01
	1764.49	* 15.80	1.87E+00		3.26E-01
	2204.22	* 4.98	9.97E-01		1.10E+00
+ PB-214	295.21	* 19.19	1.36E+00	2.45E-01	4.44E-01
	351.92	* 37.19	1.51E+00		2.45E-01
+ RN-219	401.80	6.50	1.29E-01	7.45E-01	7.45E-01
+ RA-223	323.87	3.88	2.14E-01	1.34E+00	1.34E+00
+ RA-224	240.98	* 3.95	5.64E+00	2.47E+00	2.47E+00
+ RA-225	40.00	* 31.00	8.83E-01	1.58E+00	1.58E+00
+ RA-226	186.21	* 3.28	3.00E+00	2.62E+00	2.62E+00
+ TH-227	50.10	8.40	-1.90E-01	5.38E-01	8.29E-01

Analysis Report for 1510086-06
CP4105S06-07

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	TH-227	236.00		11.50	-5.51E+00	5.38E-01	5.38E-01
		256.20		6.30	-3.37E-01		7.32E-01
+	AC-228	338.32	*	11.40	1.70E+00	4.18E-01	7.15E-01
		911.07	*	27.70	1.26E+00		4.18E-01
		969.11	*	16.60	1.07E+00		8.39E-01
+	TH-230	48.44		16.90	2.09E-01	4.71E-01	4.71E-01
		62.85		4.60	2.65E+00		1.59E+00
		67.67		0.37	7.05E+00		1.69E+01
+	PA-231	283.67		1.60	-3.70E-01	2.33E+00	2.96E+00
		302.67		2.30	8.12E-01		2.33E+00
+	TH-231	25.64		14.70	6.14E-01	9.25E-01	3.75E+00
		84.21		6.40	-1.04E+00		9.25E-01
+	PA-233	311.98		38.60	-2.61E-02	2.73E-01	2.73E-01
+	PA-234	131.20		20.40	-1.51E-01	2.34E-01	2.34E-01
		733.99		8.80	2.47E-01		7.64E-01
		946.00		12.00	-1.48E-02		5.89E-01
+	PA-234M	1001.03		0.92	3.00E+00	8.30E+00	8.30E+00
+	TH-234	63.29	*	3.80	1.94E+00	2.07E+00	2.07E+00
+	U-235	143.76		10.50	-5.86E-02	4.79E-01	4.79E-01
		163.35		4.70	6.25E-01		1.05E+00
		205.31		4.70	3.76E-01		1.11E+00
+	NP-237	86.50		12.60	1.57E-01	5.04E-01	5.04E-01
+	NP-239	106.10		22.70	-5.72E+01	2.00E+03	2.00E+03
		228.18		10.70	-1.75E+03		4.51E+03
		277.60		14.10	1.17E+03		3.70E+03
+	AM-241	59.54		35.90	-2.32E-02	1.82E-01	1.82E-01
+	AM-243	74.67		66.00	-1.57E-01	1.34E-01	1.34E-01
+	CM-243	209.75	*	3.29	2.47E+00	4.73E-01	2.05E+00
		228.14		10.60	-1.84E-01		4.73E-01
		277.60	*	14.00	3.23E-01		5.38E-01

- + = Nuclide identified during the nuclide identification
 * = Energy line found in the spectrum
 > = MDA value not calculated
 @ = Half-life too short to be able to perform the decay correction
 ? = CAUTION: MDA value is inconsistent with Currie MDA at 95% confidence level

Analysis Report for 1510086-06
CP4105S06-07

NUCLIDE MDA REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
BE-7	477.59	10.42	8.69E-01	8.69E-01	4.87E-01	4.13E-01
NA-22	1274.54	99.94	8.52E-02	8.52E-02	1.24E-02	3.93E-02
NA-24	1368.53	99.99	6.74E+13	3.78E+13	1.11E+13	3.03E+13
	2754.09	99.86	3.78E+13		1.05E+13	1.42E+13
AL-26	1808.65	99.76	4.50E-02	4.50E-02	-1.37E-02	1.85E-02
+ K-40	1460.81	* 10.67	1.01E+00	1.01E+00	2.03E+01	4.70E-01
@ AR-41	1293.64	99.16	1.00E+26	1.00E+26	1.00E+26	1.00E+20
TI-44	67.88	94.40	6.63E-02	6.63E-02	2.76E-02	3.25E-02
	78.34	96.00	8.77E-02		3.05E-01	4.32E-02
SC-46	889.25	99.98	8.04E-02	8.04E-02	-3.49E-02	3.71E-02
	1120.51	99.99	1.61E-01		1.91E-01	7.70E-02
V-48	983.52	99.98	2.70E-01	2.70E-01	3.89E-02	1.25E-01
	1312.10	97.50	3.21E-01		-8.80E-02	1.48E-01
CR-51	320.08	9.83	1.04E+00	1.04E+00	-1.64E-01	4.96E-01
MN-54	834.83	99.97	7.60E-02	7.60E-02	-2.49E-02	3.55E-02
CO-56	846.75	99.96	9.56E-02	9.56E-02	4.97E-02	4.47E-02
	1037.75	14.03	5.99E-01		-1.77E-01	2.74E-01
	1238.25	67.00	2.17E-01		9.90E-02	1.02E-01
	1771.40	15.51	3.98E-01		5.02E-02	1.65E-01
	2598.48	16.90	2.86E-01		-1.18E-02	1.07E-01
CO-57	122.06	85.51	5.82E-02	5.82E-02	2.57E-02	2.83E-02
	136.48	10.60	4.82E-01		3.24E-01	2.34E-01
CO-58	810.76	99.40	8.60E-02	8.60E-02	3.19E-03	4.00E-02
FE-59	1099.22	56.50	2.13E-01	2.13E-01	-3.76E-02	9.85E-02
	1291.56	43.20	2.88E-01		2.78E-02	1.32E-01
CO-60	1173.22	100.00	7.83E-02	7.75E-02	-2.24E-03	3.61E-02
	1332.49	100.00	7.75E-02		-2.02E-02	3.54E-02
ZN-65	1115.52	50.75	1.82E-01	1.82E-01	-4.36E-01	8.47E-02
+ GA-67	93.31	* 35.70	1.79E+02	1.79E+02	2.34E+02	8.83E+01
	208.95	* 2.24	2.27E+03		2.72E+03	1.11E+03
	300.22	* 16.00	2.90E+02		1.83E+02	1.40E+02
SE-75	121.11	16.70	3.26E-01	9.08E-02	-1.18E-01	1.58E-01
	136.00	59.20	9.41E-02		-3.83E-02	4.57E-02
	264.65	59.80	9.08E-02		-3.93E-03	4.35E-02
	279.53	25.20	2.57E-01		1.54E-01	1.24E-01
	400.65	11.40	5.12E-01		4.34E-03	2.42E-01
RB-82	776.52	13.00	1.25E+00	1.25E+00	-1.25E-01	5.88E-01
RB-83	520.41	46.00	1.58E-01	1.58E-01	-2.71E-02	7.44E-02
	529.64	30.30	2.40E-01		-7.16E-02	1.13E-01
	552.65	16.40	4.42E-01		-5.13E-02	2.08E-01
KR-85	513.99	0.43	2.10E+01	2.10E+01	3.69E+01	1.01E+01
SR-85	513.99	99.27	1.27E-01	1.27E-01	2.24E-01	6.14E-02
Y-88	898.02	93.40	9.18E-02	7.24E-02	-1.57E-02	4.27E-02
	1836.01	99.38	7.24E-02		2.35E-02	3.12E-02
NB-93M	16.57	9.43	6.93E+01	6.93E+01	-5.10E+00	3.24E+01

Analysis Report for 1510086-06

CP4105S06-07

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
NB-94	702.63	100.00	6.46E-02	6.46E-02	-1.42E-03	3.03E-02
	871.10	100.00	7.33E-02		2.50E-02	3.43E-02
NB-95	765.79	99.81	1.56E-01	1.56E-01	1.46E-01	7.40E-02
NB-95M	235.69	25.00	9.82E+01	9.82E+01	-1.01E+03	4.77E+01
ZR-95	724.18	43.70	2.42E-01	1.66E-01	3.69E-02	1.14E-01
	756.72	55.30	1.66E-01		4.13E-02	7.77E-02
MO-99	181.06	6.20	2.05E+03	1.39E+03	1.61E+01	9.94E+02
	739.58	12.80	1.39E+03		4.60E+02	6.54E+02
	778.00	4.50	3.68E+03		-1.54E+03	1.71E+03
RU-103	497.08	89.00	1.10E-01	1.10E-01	-8.57E-03	5.19E-02
RU-106	621.84	9.80	6.16E-01	6.16E-01	-4.22E-01	2.88E-01
AG-108M	433.93	89.90	6.63E-02	6.63E-02	-7.93E-03	3.16E-02
	614.37	90.40	7.50E-02		-4.71E-02	3.55E-02
	722.95	90.50	7.08E-02		1.97E-02	3.31E-02
CD-109	88.03	3.72	1.77E+00	1.77E+00	-5.28E-01	8.69E-01
AG-110M	657.75	93.14	7.48E-02	7.48E-02	1.24E-02	3.52E-02
	677.61	10.53	6.69E-01		1.04E-01	3.15E-01
	706.67	16.46	4.52E-01		1.32E-01	2.13E-01
	763.93	21.98	3.62E-01		-2.88E-01	1.71E-01
	884.67	71.63	9.78E-02		-1.95E-02	4.52E-02
	1384.27	23.94	2.75E-01		-1.04E-01	1.22E-01
CD-113M	263.70	0.02	2.03E+02	2.03E+02	3.39E+01	9.73E+01
SN-113	255.12	1.93	2.92E+00	1.05E-01	-1.18E+00	1.40E+00
	391.69	64.90	1.05E-01		4.24E-02	4.99E-02
TE123M	159.00	84.10	6.83E-02	6.83E-02	1.18E-02	3.31E-02
SB-124	602.71	97.87	9.24E-02	9.24E-02	-7.66E-03	4.36E-02
	645.85	7.26	1.13E+00		3.04E-02	5.26E-01
	722.78	11.10	8.26E-01		2.29E-01	3.87E-01
	1691.02	49.00	1.64E-01		7.98E-02	7.05E-02
	35.49	6.49	2.91E+00	2.91E+00	-4.01E-01	1.41E+00
	176.33	6.89	7.44E-01	2.04E-01	4.34E-01	3.61E-01
SB-125	427.89	29.33	2.04E-01		1.75E-02	9.73E-02
	463.38	10.35	7.04E-01		8.63E-01	3.37E-01
	600.56	17.80	3.72E-01		1.38E-01	1.76E-01
	635.90	11.32	5.42E-01		-4.88E-02	2.55E-01
	414.70	83.30	3.84E-01	3.58E-01	-1.31E-01	1.83E-01
	666.33	99.60	3.97E-01		2.33E-01	1.88E-01
SB-126	695.00	99.60	3.58E-01		-3.82E-02	1.68E-01
	720.50	53.80	7.03E-01		1.87E-01	3.30E-01
	87.57	37.00	1.70E-01	1.70E-01	-5.07E-02	8.35E-02
SN-126	473.00	25.00	6.29E+01	4.55E+01	9.34E-01	2.98E+01
	685.20	35.70	4.55E+01		-1.92E+01	2.12E+01
	783.80	14.70	1.49E+02		9.33E+01	7.06E+01
I-129	29.78	57.00	4.50E-01	4.50E-01	-1.64E-01	2.18E-01
	33.60	13.20	1.23E+00		1.85E-01	5.98E-01
	39.58	7.52	1.39E+00		5.95E-01	6.77E-01
I-131	284.30	6.05	1.14E+01	8.60E-01	-2.11E+00	5.46E+00
	364.48	81.20	8.60E-01		1.93E-01	4.08E-01
	636.97	7.26	1.27E+01		3.51E+00	5.99E+00
	722.89	1.80	5.22E+01		1.45E+01	2.45E+01
TE-132	49.72	13.10	4.07E+02	4.31E+01	-9.34E+01	1.98E+02
	228.16	88.00	4.31E+01		-1.68E+01	2.08E+01
BA-133	81.00	33.00	1.72E-01	8.63E-02	-1.18E+00	8.39E-02

Analysis Report for 1510086-06

CP4105S06-07

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
BA-133	302.84	17.80	3.03E-01	8.63E-02	1.06E-01	1.45E-01
	356.01	60.00	8.63E-02		-6.71E-01	4.11E-02
I-133	529.87	86.30	4.39E+09	4.39E+09	-1.31E+09	2.07E+09
XE-133	81.00	38.00	9.13E+00	9.13E+00	-6.30E+01	4.46E+00
CS-134	563.23	8.38	7.47E-01	7.03E-02	5.61E-02	3.53E-01
	569.32	15.43	4.21E-01		1.16E-02	1.99E-01
	604.70	97.60	7.03E-02		1.56E-03	3.33E-02
	795.84	85.40	8.90E-02		5.76E-02	4.18E-02
	801.93	8.73	8.25E-01		4.83E-01	3.86E-01
	268.24	16.00	3.60E-01		3.60E-01	3.77E-01	1.74E-01
@ I-135	1131.51	22.50	1.00E+26	1.00E+26	1.00E+26	1.00E+20
	1260.41	28.60	1.00E+26		1.00E+26	1.00E+20
	1678.03	9.54	1.00E+26		1.00E+26	1.00E+20
CS-136	153.22	7.46	3.40E+00	3.47E-01	-1.01E+00	1.65E+00
	163.89	4.61	5.53E+00		3.30E+00	2.68E+00
	176.55	13.56	1.91E+00		1.12E+00	9.27E-01
	273.65	12.66	2.13E+00		-2.71E+00	1.02E+00
	340.57	48.50	7.47E-01		1.21E+00	3.61E-01
	818.50	99.70	3.47E-01		1.26E-03	1.62E-01
	1048.07	79.60	4.73E-01		9.44E-02	2.19E-01
	1235.34	19.70	2.77E+00		-1.13E+00	1.30E+00
CS-137	661.65	85.12	7.68E-02	7.68E-02	-2.83E-02	3.61E-02
LA-138	788.74	34.00	2.06E-01	9.58E-02	-2.39E-02	9.64E-02
	1435.80	66.00	9.58E-02		1.32E-02	4.26E-02
CE-139	165.85	80.35	6.93E-02	6.93E-02	5.99E-03	3.36E-02
BA-140	162.64	6.70	3.98E+00	1.28E+00	4.30E-01	1.93E+00
	304.84	4.50	5.81E+00		-1.68E+00	2.78E+00
	423.70	3.20	9.33E+00		-1.27E+00	4.43E+00
	437.55	2.00	1.71E+01		7.57E+00	8.19E+00
	537.32	25.00	1.28E+00		9.27E-03	6.04E-01
LA-140	328.77	20.50	1.53E+00	4.01E-01	1.15E+00	7.35E-01
	487.03	45.50	6.91E-01		2.19E-01	3.27E-01
	815.85	23.50	1.53E+00		2.57E-02	7.12E-01
	1596.49	95.49	4.01E-01		0.00E+00	1.79E-01
CE-141	145.44	48.40	2.06E-01	2.06E-01	1.39E-01	1.00E-01
CE-143	57.36	11.80	3.68E+06	1.32E+06	-1.31E+06	1.80E+06
	293.26	42.00	1.32E+06		3.82E+06	6.41E+05
	664.55	5.20	8.81E+06		1.69E+06	4.16E+06
CE-144	133.54	10.80	4.60E-01	4.60E-01	-1.77E-01	2.23E-01
PM-144	476.78	42.00	1.49E-01	6.83E-02	-2.63E-02	7.05E-02
	618.01	98.60	6.83E-02		1.06E-02	3.22E-02
	696.49	99.49	6.93E-02		8.93E-03	3.25E-02
PM-145	36.85	21.70	5.49E-01	3.01E-01	-6.15E-03	2.66E-01
	37.36	39.70	3.01E-01		1.27E-02	1.46E-01
	42.30	15.10	5.79E-01		-7.24E-01	2.81E-01
	72.40	2.31	3.22E+00		-1.13E+00	1.58E+00
PM-146	453.90	39.94	1.47E-01	1.47E-01	3.24E-02	7.00E-02
	735.90	14.01	4.75E-01		-7.64E-02	2.22E-01
	747.13	13.10	5.10E-01		-1.24E-01	2.39E-01
ND-147	91.11	28.90	1.62E+00	1.62E+00	-3.19E+00	7.95E-01
	531.02	13.10	3.13E+00		4.66E-02	1.48E+00
PM-149	285.90	3.10	2.68E+04	2.68E+04	-9.55E+02	1.28E+04
EU-152	121.78	20.50	2.25E-01	2.25E-01	9.94E-02	1.09E-01

: 00512

Analysis Report for 1510086-06
CP4105S06-07

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
EU-152	244.69	5.40	1.04E+00	2.25E-01	-5.15E-01	5.03E-01
	344.27	19.13	2.47E-01		-9.31E-03	1.18E-01
	778.89	9.20	7.03E-01		4.57E-02	3.28E-01
	964.01	10.40	8.67E-01		1.89E-01	4.09E-01
	1085.78	7.22	1.02E+00		3.94E-01	4.72E-01
	1112.02	9.60	8.34E-01		-3.16E-02	3.87E-01
	1407.95	14.94	4.59E-01		6.17E-02	2.06E-01
GD-153	97.43	31.30	1.69E-01	1.69E-01	3.72E-02	8.22E-02
	103.18	22.20	2.30E-01		7.35E-02	1.12E-01
EU-154	123.07	40.50	1.13E-01	1.13E-01	2.44E-02	5.48E-02
	723.30	19.70	3.27E-01		9.09E-02	1.53E-01
	873.19	11.50	6.22E-01		1.06E-01	2.90E-01
	996.32	10.30	7.20E-01		-2.76E-02	3.34E-01
	1004.76	17.90	4.00E-01		-9.76E-03	1.85E-01
EU-155	1274.45	35.50	2.36E-01		3.42E-02	1.09E-01
	86.50	30.90	2.08E-01	2.08E-01	6.47E-02	1.02E-01
EU-156	105.30	20.70	2.30E-01		-6.58E-03	1.12E-01
	811.77	10.40	2.63E+00	2.63E+00	1.55E+00	1.23E+00
	1153.47	7.20	4.14E+00		-4.16E+00	1.90E+00
HO-166M	1230.71	8.90	4.60E+00		2.33E+00	2.16E+00
	184.41	72.60	9.12E-02	9.12E-02	2.28E-01	4.46E-02
	280.45	29.60	1.68E-01		-2.62E-02	8.04E-02
	410.94	11.10	5.86E-01		6.25E-01	2.81E-01
TM-171	711.69	54.10	1.23E-01		8.65E-03	5.77E-02
	66.72	0.14	4.73E+01	4.73E+01	1.68E+01	2.32E+01
HF-172	81.75	4.52	1.26E+00	4.28E-01	-2.65E+00	6.18E-01
	125.81	11.30	4.28E-01		-4.91E-01	2.08E-01
LU-172	181.53	20.60	6.08E+00	3.16E+00	3.40E-01	2.94E+00
	810.06	16.63	9.44E+00		-2.63E-01	4.38E+00
	912.12	15.25	2.26E+01		5.19E+01	1.09E+01
	1093.66	62.50	3.16E+00		1.07E+00	1.47E+00
LU-173	100.72	5.24	9.23E-01	2.88E-01	-1.32E-01	4.49E-01
	272.11	21.20	2.88E-01		1.91E-01	1.39E-01
HF-175	343.40	84.00	7.68E-02	7.68E-02	-2.87E-03	3.65E-02
LU-176	88.34	13.30	4.88E-01	5.18E-02	3.05E-01	2.40E-01
	201.83	86.00	5.89E-02		-3.68E-02	2.85E-02
	306.78	94.00	5.18E-02		5.78E-03	2.47E-02
TA-182	67.75	41.20	1.84E-01	1.84E-01	7.64E-02	8.98E-02
	1121.30	34.90	4.46E-01		7.64E-01	2.13E-01
	1189.05	16.23	6.40E-01		-3.42E-01	2.98E-01
	1221.41	26.98	4.08E-01		9.66E-02	1.90E-01
	1231.02	11.44	1.04E+00		5.28E-01	4.89E-01
	308.46	29.68	2.14E-01	1.62E-01	-1.98E-02	1.02E-01
IR-192	468.07	48.10	1.62E-01		-5.59E-03	7.69E-02
	279.19	* 77.30	1.55E-01	1.55E-01	9.27E-02	7.52E-02
BI-207	569.67	97.72	6.53E-02	6.53E-02	1.97E-02	3.09E-02
	1063.62	74.90	1.01E-01		6.61E-03	4.69E-02
+ TL-208	583.14	* 30.22	2.54E-01	1.40E-01	1.28E+00	1.21E-01
	860.37	* 4.48	1.77E+00		1.48E+00	8.35E-01
	2614.66	* 35.85	1.40E-01		9.39E-01	5.72E-02
BI-210M	262.00	45.00	1.06E-01	1.06E-01	4.15E-03	5.11E-02
	300.00	23.00	2.46E-01		-5.58E-01	1.18E-01
+ PB-210	46.50	* 4.25	2.43E+00	2.43E+00	1.62E+00	1.19E+00

Analysis Report for 1510086-06
CP4105S06-07

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
PB-211	404.84	2.90	1.61E+00	1.61E+00	3.15E-01	7.59E-01
	831.96	2.90	2.29E+00		-5.38E-01	1.07E+00
+ BI-212	727.17 *	11.80	5.64E-01	5.64E-01	1.10E+00	2.65E-01
	1620.62 *	2.75	1.52E+00		1.02E+00	6.22E-01
+ PB-212	238.63 *	44.60	2.16E-01	2.16E-01	1.53E+00	1.06E-01
	300.09 *	3.41	1.81E+00		1.14E+00	8.73E-01
+ BI-214	609.31 *	46.30	1.58E-01	1.58E-01	1.25E+00	7.54E-02
	1120.29	15.10	8.26E-01		9.78E-01	3.94E-01
	1764.49 *	15.80	3.26E-01		1.87E+00	1.38E-01
	2204.22 *	4.98	1.10E+00		9.97E-01	4.59E-01
+ PB-214	295.21 *	19.19	4.44E-01	2.45E-01	1.36E+00	2.17E-01
	351.92 *	37.19	2.45E-01		1.51E+00	1.20E-01
RN-219	401.80	6.50	7.45E-01	7.45E-01	1.29E-01	3.52E-01
RA-223	323.87	3.88	1.34E+00	1.34E+00	2.14E-01	6.40E-01
+ RA-224	240.98 *	3.95	2.47E+00	2.47E+00	5.64E+00	1.21E+00
+ RA-225	40.00 *	31.00	1.58E+00	1.58E+00	8.83E-01	7.72E-01
+ RA-226	186.21 *	3.28	2.62E+00	2.62E+00	3.00E+00	1.29E+00
TH-227	50.10	8.40	8.29E-01	5.38E-01	-1.90E-01	4.03E-01
	236.00	11.50	5.38E-01		-5.51E+00	2.61E-01
	256.20	6.30	7.32E-01		-3.37E-01	3.51E-01
+ AC-228	338.32 *	11.40	7.15E-01	4.18E-01	1.70E+00	3.47E-01
	911.07 *	27.70	4.18E-01		1.26E+00	2.00E-01
	969.11 *	16.60	8.39E-01		1.07E+00	4.04E-01
TH-230	48.44	16.90	4.71E-01	4.71E-01	2.09E-01	2.30E-01
	62.85	4.60	1.59E+00		2.65E+00	7.79E-01
	67.67	0.37	1.69E+01		7.05E+00	8.29E+00
PA-231	283.67	1.60	2.96E+00	2.33E+00	-3.70E-01	1.42E+00
	302.67	2.30	2.33E+00		8.12E-01	1.12E+00
TH-231	25.64	14.70	3.75E+00	9.25E-01	6.14E-01	1.82E+00
	84.21	6.40	9.25E-01		-1.04E+00	4.53E-01
PA-233	311.98	38.60	2.73E-01	2.73E-01	-2.61E-02	1.30E-01
PA-234	131.20	20.40	2.34E-01	2.34E-01	-1.51E-01	1.14E-01
	733.99	8.80	7.64E-01		2.47E-01	3.59E-01
	946.00	12.00	5.89E-01		-1.48E-02	2.74E-01
PA-234M	1001.03	0.92	8.30E+00	8.30E+00	3.00E+00	3.86E+00
+ TH-234	63.29 *	3.80	2.07E+00	2.07E+00	1.94E+00	1.02E+00
U-235	143.76	10.50	4.79E-01	4.79E-01	-5.86E-02	2.33E-01
	163.35	4.70	1.05E+00		6.25E-01	5.09E-01
	205.31	4.70	1.11E+00		3.76E-01	5.38E-01
NP-237	86.50	12.60	5.04E-01	5.04E-01	1.57E-01	2.47E-01
NP-239	106.10	22.70	2.00E+03	2.00E+03	-5.72E+01	9.73E+02
	228.18	10.70	4.51E+03		-1.75E+03	2.17E+03
	277.60	14.10	3.70E+03		1.17E+03	1.78E+03
AM-241	59.54	35.90	1.82E-01	1.82E-01	-2.32E-02	8.90E-02
AM-243	74.67	66.00	1.34E-01	1.34E-01	-1.57E-01	6.61E-02
+ CM-243	209.75 *	3.29	2.05E+00	4.73E-01	2.47E+00	1.00E+00
	228.14	10.60	4.73E-01		-1.84E-01	2.28E-01
	277.60 *	14.00	5.38E-01		3.23E-01	2.62E-01

Analysis Report for 1510086-06
CP4105S06-07

- + = Nuclide identified during the nuclide identification
 - * = Energy line found in the spectrum
 - > = MDA value not calculated
 - @ = Half-life too short to be able to perform the decay correction
-

No Action Level results available for reporting purposes.

DATA REVIEW COMMENTS REPORT

Creation Date

Comment

User

No Data Review Comments Entered.

 ***** S P E C T R A L D A T A R E P O R T *****

Sample Title: CP4105S06-07

Elapsed Live time: 3600

Elapsed Real Time: 3601

Channel	-----	-----	-----	-----	-----	-----	-----	-----
1:	0	0	0	0	0	0	0	0
9:	0	0	0	0	0	0	0	0
17:	0	0	67	70	96	67	86	73
25:	83	68	77	68	61	61	72	79
33:	73	66	63	71	65	67	73	96
41:	85	74	75	65	77	100	178	101
49:	84	89	87	97	109	102	112	101
57:	114	111	123	128	132	131	171	274
65:	159	126	130	161	152	136	135	132
73:	163	189	448	323	452	577	167	135
81:	136	115	107	147	186	115	187	250
89:	124	175	171	164	292	235	112	107
97:	87	118	88	95	95	82	92	77
105:	94	111	77	101	93	81	96	85
113:	75	94	93	67	72	80	83	79
121:	81	91	65	91	66	72	85	100
129:	134	108	80	68	96	65	74	79
137:	86	80	76	67	79	81	74	98
145:	95	82	95	71	75	82	82	75
153:	70	86	75	79	83	64	62	75
161:	69	66	79	90	60	68	57	57
169:	57	59	54	65	67	60	79	64
177:	68	70	65	58	74	63	66	69
185:	88	197	162	55	60	53	69	59
193:	71	66	72	63	60	51	64	67
201:	52	60	62	60	75	66	55	58
209:	83	136	56	60	53	42	44	40
217:	59	41	62	65	64	43	57	59
225:	58	53	47	42	51	58	55	54
233:	63	56	48	61	53	154	678	273
241:	114	174	125	52	41	28	42	31
249:	43	51	45	24	50	33	41	25
257:	38	44	51	41	35	46	44	24
265:	34	29	36	39	48	69	78	43
273:	43	39	47	41	40	64	43	38
281:	42	36	27	40	24	39	33	30
289:	34	36	42	30	32	41	181	222
297:	48	29	44	56	58	34	35	34
305:	35	29	23	37	33	26	28	24
313:	35	32	28	25	30	28	19	32
321:	18	40	34	27	21	44	21	58
329:	57	41	27	27	31	25	30	31
337:	26	94	156	60	25	25	23	30
345:	19	29	23	33	27	31	74	378
353:	240	39	27	37	24	15	24	28
361:	25	19	23	20	21	31	21	21

369: 19 26 23 20 20 24 28 25

Sample Title: CP4105S06-07

Channel	28	30	19	21	28	23	26	22
377:	28	30	19	21	28	23	26	22
385:	27	26	24	29	23	32	29	30
393:	27	30	21	27	21	23	20	21
401:	21	22	22	18	23	12	20	30
409:	30	35	24	28	22	18	16	18
417:	18	15	21	24	20	17	19	15
425:	16	20	19	14	19	29	24	20
433:	22	17	14	25	21	22	26	24
441:	28	21	16	23	25	14	13	12
449:	17	21	19	16	19	23	12	22
457:	16	10	19	12	23	17	52	38
465:	19	22	17	13	17	14	19	23
473:	14	14	17	15	18	17	15	24
481:	21	16	11	17	12	17	16	21
489:	14	16	11	17	13	12	17	12
497:	14	14	13	21	17	14	17	10
505:	12	12	21	18	27	41	82	65
513:	40	28	19	13	16	15	10	16
521:	10	10	20	15	19	9	13	12
529:	16	15	15	14	9	15	18	13
537:	16	12	11	11	19	19	20	17
545:	9	7	8	12	12	11	17	16
553:	10	9	13	11	19	9	16	14
561:	9	14	20	18	7	17	12	17
569:	16	10	20	13	19	14	14	9
577:	14	17	11	12	11	22	113	168
585:	54	17	10	16	13	13	12	10
593:	12	14	18	11	14	15	14	15
601:	11	14	15	18	10	13	16	21
609:	144	262	65	12	17	19	20	16
617:	17	7	12	11	10	8	10	10
625:	12	13	20	8	16	13	7	10
633:	6	15	14	7	12	18	7	14
641:	15	10	14	3	5	10	10	13
649:	14	17	12	9	10	7	15	10
657:	10	12	11	16	11	13	13	10
665:	14	23	13	12	14	10	7	14
673:	14	6	11	9	17	8	16	14
681:	8	12	11	10	8	8	9	10
689:	12	14	12	9	4	13	10	10
697:	13	15	12	7	15	12	9	9
705:	15	11	12	7	16	17	13	8
713:	11	8	8	16	8	12	10	13
721:	14	11	13	6	5	11	43	41
729:	24	10	10	11	13	12	9	11
737:	13	8	9	14	11	16	12	6
745:	13	12	10	12	11	10	16	5
753:	10	11	7	16	7	10	10	10
761:	7	12	14	15	18	6	16	19
769:	30	8	12	13	25	17	10	10
777:	9	11	10	11	4	10	19	14
785:	15	21	20	12	8	5	5	5
793:	13	8	24	15	10	4	10	7

801: 12 14 9 14 8 7 7 4

Sample Title: CP4105S06-07

Channel	1	2	3	4	5	6	7	8
809:	13	6	5	12	10	8	10	8
817:	4	9	15	8	11	10	8	11
825:	7	10	7	7	3	10	12	9
833:	7	11	10	14	12	8	14	12
841:	12	9	5	11	12	5	9	12
849:	11	13	8	7	7	9	13	10
857:	11	3	6	12	31	18	11	2
865:	6	7	5	8	16	13	7	10
873:	6	11	15	4	7	5	11	12
881:	15	8	5	5	9	5	11	9
889:	3	5	6	9	11	10	7	10
897:	8	9	8	8	11	9	9	11
905:	9	9	9	12	5	17	78	97
913:	33	6	9	10	10	5	7	4
921:	8	8	10	8	5	10	6	11
929:	12	9	8	9	6	17	12	9
937:	4	12	10	11	6	10	12	4
945:	9	4	9	7	12	6	11	3
953:	13	5	11	8	4	5	3	10
961:	7	6	10	12	27	17	13	21
969:	62	50	13	6	10	10	5	6
977:	7	6	8	6	11	10	6	6
985:	7	7	5	4	9	8	6	7
993:	9	13	7	5	10	7	6	8
1001:	11	10	10	9	7	5	7	4
1009:	6	7	13	9	7	6	10	11
1017:	10	4	4	12	5	1	10	8
1025:	7	6	7	5	3	8	6	6
1033:	6	6	7	6	5	6	6	5
1041:	4	8	7	5	7	3	5	9
1049:	11	9	7	6	7	12	6	6
1057:	6	6	6	3	11	7	4	10
1065:	6	4	12	11	8	4	8	9
1073:	4	5	4	8	4	4	8	5
1081:	5	7	9	6	12	6	6	4
1089:	6	1	8	10	9	7	7	9
1097:	6	8	8	5	4	9	9	8
1105:	7	8	7	8	6	10	8	5
1113:	10	2	15	8	4	4	20	26
1121:	49	29	11	14	5	11	4	3
1129:	3	3	4	3	7	10	7	12
1137:	10	11	6	10	7	6	7	10
1145:	6	11	7	9	13	8	5	3
1153:	6	6	5	9	10	11	8	10
1161:	7	2	12	10	8	5	7	13
1169:	1	6	7	6	6	9	6	8
1177:	8	6	9	3	5	14	4	12
1185:	7	11	10	9	7	8	8	6
1193:	15	10	5	12	6	6	3	8
1201:	11	5	9	7	9	6	10	12
1209:	8	13	4	13	3	8	13	7
1217:	8	6	11	15	8	8	9	7
1225:	5	11	9	9	7	16	5	10

1233: 16 12 3 8 17 20 29 9

Sample Title: CP4105S06-07

Channel	16	12	3	8	17	20	29	9
1241:	8	4	10	4	6	7	8	10
1249:	7	4	12	7	9	9	7	0
1257:	9	7	7	7	3	6	6	5
1265:	5	6	3	6	7	5	4	6
1273:	9	9	6	7	8	8	5	5
1281:	11	8	6	4	5	5	8	8
1289:	6	5	6	5	6	4	3	6
1297:	8	3	5	2	4	3	2	5
1305:	5	5	9	3	10	8	6	6
1313:	2	7	5	11	6	5	6	6
1321:	0	4	4	7	2	5	8	6
1329:	5	12	12	0	0	6	3	4
1337:	7	2	5	6	4	3	2	4
1345:	4	4	6	3	3	4	4	5
1353:	2	3	4	3	7	6	6	4
1361:	3	2	4	1	2	5	6	4
1369:	2	5	2	3	4	1	5	5
1377:	4	15	8	4	4	6	1	4
1385:	3	2	1	4	5	4	6	4
1393:	1	2	4	4	2	1	6	4
1401:	6	3	9	2	4	2	3	6
1409:	3	5	4	1	2	2	0	4
1417:	6	4	4	6	3	3	3	1
1425:	1	1	4	2	3	3	2	4
1433:	6	4	3	3	2	2	2	3
1441:	2	2	2	2	2	1	3	2
1449:	5	5	1	4	4	3	7	3
1457:	3	4	18	136	329	292	62	9
1465:	7	1	1	0	0	1	2	5
1473:	1	1	0	2	2	1	1	1
1481:	0	6	0	0	2	7	5	1
1489:	3	2	2	4	1	2	2	6
1497:	2	3	2	1	2	2	0	1
1505:	2	1	1	4	3	7	3	2
1513:	4	2	1	1	4	1	2	1
1521:	4	2	2	1	5	1	3	2
1529:	5	0	3	3	1	1	3	3
1537:	4	3	1	3	3	4	4	3
1545:	3	1	1	2	2	1	2	2
1553:	4	1	6	3	4	1	2	3
1561:	3	1	3	2	0	2	0	1
1569:	1	3	1	2	2	1	0	2
1577:	1	1	2	1	2	1	2	2
1585:	3	1	4	7	9	4	4	4
1593:	10	5	3	2	2	0	2	0
1601:	0	1	2	0	1	1	1	3
1609:	2	1	0	1	1	6	1	3
1617:	1	2	1	5	4	6	0	2
1625:	4	0	0	0	1	6	8	7
1633:	1	0	2	1	2	1	1	2
1641:	0	2	1	2	3	2	1	1
1649:	1	1	0	2	0	0	0	2
1657:	2	0	3	2	2	2	3	2

1665: 2 2 2 1 3 4 0 0

Sample Title: CP4105S06-07

Channel	1	2	3	4	5	6	7	8	9
1673:	1	0	1	2	2	0	2	1	4
1681:	0	2	0	0	0	1	0	1	0
1689:	0	3	1	0	4	1	1	0	0
1697:	3	0	3	0	2	4	0	0	1
1705:	2	0	0	1	2	1	0	3	0
1713:	1	2	0	1	0	2	3	0	0
1721:	1	0	3	1	0	3	0	2	1
1729:	4	10	6	6	1	1	2	0	0
1737:	0	0	1	0	0	0	3	0	0
1745:	0	1	0	1	1	0	3	1	1
1753:	2	3	1	1	1	2	1	1	1
1761:	2	1	9	20	39	24	6	1	1
1769:	2	0	0	2	1	2	0	0	1
1777:	2	1	3	1	0	2	1	0	2
1785:	0	1	2	0	2	1	1	2	2
1793:	2	0	1	1	1	1	0	1	1
1801:	0	3	2	0	1	2	1	0	0
1809:	0	2	0	2	2	0	0	0	0
1817:	0	0	1	1	1	2	2	0	0
1825:	0	1	0	3	1	1	2	1	1
1833:	3	2	2	2	1	1	4	6	6
1841:	2	0	0	1	0	3	1	1	1
1849:	7	2	1	2	0	3	3	2	2
1857:	2	1	2	1	2	1	3	1	1
1865:	2	1	1	0	0	1	1	1	1
1873:	1	1	0	1	2	1	2	1	0
1881:	1	0	1	2	1	0	1	2	2
1889:	1	1	0	0	1	3	1	2	1
1897:	1	2	2	3	0	1	2	0	0
1905:	0	0	1	2	0	1	1	2	2
1913:	3	2	2	0	1	0	2	1	1
1921:	0	1	2	0	1	0	2	2	2
1929:	1	1	0	0	3	1	2	1	1
1937:	2	2	4	2	1	2	1	1	1
1945:	0	0	0	2	3	0	1	1	1
1953:	2	1	3	1	3	0	0	1	1
1961:	2	1	1	2	0	2	0	0	0
1969:	0	2	0	0	0	0	0	3	0
1977:	0	2	2	0	1	0	2	0	0
1985:	1	1	1	2	2	0	2	0	0
1993:	2	2	2	2	2	2	1	1	1
2001:	1	2	1	0	0	1	2	0	3
2009:	0	1	0	3	0	0	3	0	0
2017:	1	1	0	1	2	4	1	1	1
2025:	2	0	4	1	2	2	0	2	2
2033:	2	1	1	0	3	0	0	1	1
2041:	1	2	1	0	2	1	1	2	2
2049:	1	2	0	0	1	1	1	2	2
2057:	1	0	1	3	2	0	0	0	0
2065:	1	3	1	0	1	1	1	0	0
2073:	1	1	4	0	1	2	1	2	2
2081:	0	2	0	0	1	0	1	1	1
2089:	0	0	1	0	0	1	1	1	1

2097: 2 1 0 4 1 4 2 6

Sample Title: CP4105S06-07

Channel	1	2	3	4	5	6	7	8
2105:	3	2	2	1	2	0	2	0
2113:	1	1	0	1	1	2	3	2
2121:	3	1	4	0	1	2	1	2
2129:	0	0	1	0	1	1	3	0
2137:	2	2	3	2	3	1	0	1
2145:	1	2	0	3	3	2	1	1
2153:	2	2	0	1	1	0	2	2
2161:	2	2	2	1	1	1	0	0
2169:	1	2	2	1	1	1	3	2
2177:	1	2	0	1	0	1	1	0
2185:	1	0	0	1	0	3	0	1
2193:	0	2	3	2	4	1	0	2
2201:	0	1	5	5	6	2	0	1
2209:	4	1	1	2	0	1	1	1
2217:	1	0	0	3	0	1	0	3
2225:	3	1	0	0	2	1	0	0
2233:	3	2	0	2	1	2	0	1
2241:	1	2	1	1	0	1	5	1
2249:	0	4	0	0	1	3	1	2
2257:	3	0	2	1	1	3	1	1
2265:	0	0	1	2	1	2	4	3
2273:	1	2	1	2	1	1	0	2
2281:	2	0	0	1	3	2	0	3
2289:	2	1	1	0	1	1	5	3
2297:	1	2	0	1	0	1	2	0
2305:	1	3	0	2	1	1	1	1
2313:	1	1	2	0	1	1	1	3
2321:	0	0	2	1	0	0	1	1
2329:	2	0	2	1	2	2	0	3
2337:	1	0	1	1	4	1	1	0
2345:	1	2	1	0	0	2	1	1
2353:	0	1	1	1	2	1	0	3
2361:	3	4	2	3	2	4	4	2
2369:	2	0	1	1	1	2	2	1
2377:	1	1	0	1	0	0	1	3
2385:	2	2	0	0	1	0	2	1
2393:	1	0	1	2	2	0	3	0
2401:	1	0	1	1	0	0	1	0
2409:	0	1	2	1	0	4	1	0
2417:	0	1	0	0	1	0	1	0
2425:	2	0	2	1	1	1	4	0
2433:	1	0	1	0	0	0	0	0
2441:	1	1	1	1	0	0	1	1
2449:	1	0	1	2	2	0	0	1
2457:	1	0	1	1	0	0	1	0
2465:	0	0	0	2	0	0	2	0
2473:	0	0	0	0	0	1	0	0
2481:	0	0	1	0	0	2	0	0
2489:	0	0	0	2	2	0	1	1
2497:	1	1	0	0	0	1	2	0
2505:	0	2	1	0	1	0	1	0
2513:	0	0	0	1	0	0	0	0
2521:	1	0	1	0	1	2	1	1

2529: 0 1 0 0 0 0 0 0 0

Sample Title: CP4105S06-07

Channel	1	2	3	4	5	6	7	8	9
2537:	0	1	0	0	1	0	0	1	
2545:	1	1	0	0	0	0	0	0	
2553:	0	1	0	0	1	0	1	0	
2561:	0	1	0	0	1	0	0	1	
2569:	2	0	2	0	0	0	1	2	
2577:	0	1	0	1	1	0	0	0	
2585:	1	0	2	1	0	0	1	1	
2593:	0	0	2	1	0	0	0	0	
2601:	0	0	1	0	0	1	0	2	
2609:	2	0	0	3	11	30	28	23	
2617:	5	1	4	0	1	0	1	0	
2625:	0	0	0	0	0	0	0	0	
2633:	1	0	1	1	1	1	1	1	
2641:	1	0	0	0	0	0	1	0	
2649:	0	0	1	0	0	0	0	0	
2657:	0	0	0	0	0	0	0	0	
2665:	1	0	0	0	0	0	0	0	
2673:	0	0	0	0	1	0	1	0	
2681:	0	0	0	0	0	1	0	0	
2689:	0	0	0	0	0	1	0	0	
2697:	0	1	1	2	1	0	0	0	
2705:	0	0	0	0	0	2	1	0	
2713:	0	0	0	1	0	0	0	0	
2721:	0	0	0	0	0	0	0	0	
2729:	0	0	1	0	0	0	1	0	
2737:	0	1	1	0	0	0	0	1	
2745:	0	0	0	0	0	1	0	0	
2753:	0	0	1	0	0	0	1	0	
2761:	0	0	1	0	0	0	1	0	
2769:	1	0	0	1	0	0	1	0	
2777:	0	0	0	0	0	0	0	1	
2785:	0	1	1	0	0	0	1	0	
2793:	0	0	0	1	1	0	0	0	
2801:	0	0	0	0	0	0	0	1	
2809:	1	0	1	0	0	0	0	1	
2817:	0	0	0	0	1	0	0	1	
2825:	0	0	0	0	1	1	0	0	
2833:	0	1	0	0	0	0	0	1	
2841:	0	0	2	0	0	1	0	1	
2849:	0	1	0	0	1	0	0	0	
2857:	0	1	0	0	0	0	0	1	
2865:	0	0	0	0	0	2	1	0	
2873:	0	0	0	0	0	1	0	0	
2881:	1	0	1	0	0	0	0	0	
2889:	0	0	0	0	1	0	1	0	
2897:	0	0	0	0	0	0	0	0	
2905:	1	0	0	0	1	0	0	1	
2913:	0	1	0	0	0	1	0	0	
2921:	0	1	0	0	0	0	0	0	
2929:	0	0	0	0	1	2	0	1	
2937:	0	0	0	0	0	0	0	0	
2945:	0	0	0	0	0	0	0	0	
2953:	0	1	0	0	0	1	0	1	

2961: 0 1 0 0 0 0 0 0

Sample Title: CP4105S06-07

Channel	1	2	3	4	5	6	7	8
2969:	0	1	1	0	0	0	0	0
2977:	1	0	0	1	0	0	0	0
2985:	1	0	0	0	0	0	0	0
2993:	0	0	0	0	1	0	0	0
3001:	0	0	1	0	1	0	0	0
3009:	1	0	1	1	0	0	0	0
3017:	0	0	0	1	0	0	0	0
3025:	0	0	0	0	0	1	1	0
3033:	0	0	0	0	0	0	0	0
3041:	0	0	0	0	0	0	0	2
3049:	0	0	0	0	0	1	0	2
3057:	0	0	0	1	0	1	0	0
3065:	1	1	1	0	0	0	0	0
3073:	0	0	1	0	0	1	1	0
3081:	0	0	0	0	0	0	0	0
3089:	0	0	1	0	1	0	1	0
3097:	0	0	0	0	1	0	0	1
3105:	0	0	0	0	0	0	0	0
3113:	0	0	1	0	0	0	1	0
3121:	0	0	0	1	0	0	0	1
3129:	0	0	0	0	0	1	0	0
3137:	0	1	0	0	0	0	0	1
3145:	1	0	0	0	0	0	0	0
3153:	0	0	0	0	0	0	0	0
3161:	0	0	0	0	1	0	1	0
3169:	0	0	0	0	0	0	0	0
3177:	0	0	0	0	0	0	0	0
3185:	0	0	1	0	0	0	1	0
3193:	0	0	1	0	0	0	2	0
3201:	0	0	0	0	0	0	0	0
3209:	0	0	0	0	0	0	0	0
3217:	0	0	0	1	0	0	0	0
3225:	0	0	0	0	0	0	1	0
3233:	1	0	0	1	0	0	0	0
3241:	1	0	0	0	0	0	0	0
3249:	0	0	0	0	0	0	0	1
3257:	0	0	1	0	0	0	2	0
3265:	0	0	0	0	0	1	0	1
3273:	0	0	0	0	0	0	0	0
3281:	0	0	0	0	0	0	0	0
3289:	0	0	0	0	0	1	0	0
3297:	0	0	0	0	0	0	0	0
3305:	0	1	1	0	0	0	0	0
3313:	0	0	0	0	0	0	0	0
3321:	0	0	0	0	0	0	0	0
3329:	0	0	1	0	0	0	0	0
3337:	0	0	0	1	0	0	0	0
3345:	0	0	0	0	0	0	0	0
3353:	0	0	1	0	0	0	0	0
3361:	0	0	1	0	0	0	0	0
3369:	0	1	0	0	0	0	0	0
3377:	0	0	0	0	0	0	0	0
3385:	0	0	1	0	0	0	0	0

3393: 0 0 0 1 0 0 0 0

Sample Title: CP4105S06-07

Channel	1	2	3	4	5	6	7	8	9
3401:	1	1	0	0	1	0	0	0	0
3409:	0	0	0	1	0	0	0	0	0
3417:	0	0	0	0	0	0	1	0	0
3425:	0	0	1	0	0	0	1	1	1
3433:	0	0	0	0	0	1	0	0	0
3441:	0	0	0	0	0	0	0	0	0
3449:	0	0	0	1	0	0	0	0	0
3457:	0	0	0	0	0	0	0	0	0
3465:	1	0	0	1	0	0	1	0	0
3473:	0	0	0	0	0	0	0	0	1
3481:	0	1	0	0	0	0	0	0	0
3489:	1	0	0	0	0	1	0	0	0
3497:	0	0	0	0	1	0	0	0	0
3505:	0	1	0	0	0	0	1	1	1
3513:	0	0	0	0	1	0	0	0	0
3521:	0	0	0	1	0	0	0	0	0
3529:	0	0	0	0	0	0	0	0	0
3537:	0	0	1	0	0	0	0	0	0
3545:	0	0	2	0	0	0	1	0	0
3553:	1	0	0	0	1	0	0	1	1
3561:	0	0	0	0	0	0	0	0	0
3569:	0	0	0	0	0	0	0	0	0
3577:	0	0	0	0	0	0	0	0	0
3585:	1	0	0	0	0	0	0	0	0
3593:	0	0	0	0	0	0	0	0	0
3601:	0	0	0	0	0	0	0	0	0
3609:	0	0	0	0	0	0	1	0	0
3617:	0	0	0	0	0	0	0	1	1
3625:	1	0	0	0	0	0	0	0	0
3633:	0	0	0	1	1	0	0	0	0
3641:	1	0	0	0	0	0	0	0	0
3649:	0	0	0	0	0	0	0	0	0
3657:	0	0	0	1	1	0	0	0	0
3665:	0	0	0	0	0	0	1	0	0
3673:	1	0	1	0	0	0	0	0	0
3681:	0	0	0	0	0	0	1	0	0
3689:	1	0	0	0	0	0	0	0	0
3697:	2	1	0	0	0	0	0	0	0
3705:	0	0	0	1	0	1	1	0	0
3713:	0	0	0	0	1	1	0	0	0
3721:	1	1	0	0	0	0	0	0	0
3729:	1	0	0	0	0	1	1	0	0
3737:	0	1	0	0	0	0	0	0	0
3745:	0	0	0	0	1	0	1	0	0
3753:	0	0	1	0	1	0	0	0	0
3761:	0	0	1	0	1	0	0	0	0
3769:	0	0	0	0	0	0	0	0	0
3777:	1	1	0	0	0	0	0	1	1
3785:	0	0	0	0	0	0	0	0	0
3793:	0	1	1	0	0	1	0	0	0
3801:	0	1	0	0	0	0	0	1	1
3809:	0	1	0	1	0	0	0	0	0
3817:	0	0	0	0	0	0	0	0	0

3825: 0 0 0 1 0 0 0 0

Sample Title: CP4105S06-07

Channel	1	2	3	4	5	6	7	8
3833:	0	0	0	1	0	0	0	0
3841:	0	1	0	0	0	0	0	0
3849:	0	0	1	0	0	0	0	0
3857:	0	0	0	0	0	0	0	0
3865:	0	0	0	0	0	0	1	0
3873:	0	0	0	0	0	0	0	0
3881:	0	0	0	0	0	0	0	0
3889:	0	0	0	0	0	0	0	0
3897:	0	0	0	0	0	0	0	0
3905:	0	0	0	1	1	0	0	1
3913:	0	1	0	0	0	0	0	0
3921:	0	0	0	0	0	0	0	0
3929:	0	0	0	0	0	0	0	0
3937:	0	0	0	0	0	0	0	0
3945:	0	0	1	0	0	2	0	0
3953:	0	0	0	0	0	0	0	0
3961:	1	0	0	0	0	0	1	0
3969:	1	0	0	0	0	0	1	0
3977:	0	0	0	0	0	0	0	0
3985:	0	0	0	0	1	1	0	0
3993:	0	1	0	0	1	0	0	0
4001:	0	0	1	0	0	1	0	1
4009:	1	0	2	0	1	0	0	0
4017:	0	0	1	0	0	1	1	0
4025:	0	0	0	0	0	1	0	1
4033:	1	0	0	0	0	0	0	0
4041:	1	0	0	1	0	0	1	0
4049:	0	0	0	0	0	0	0	0
4057:	0	0	0	0	1	0	0	0
4065:	0	0	0	0	0	0	0	0
4073:	0	0	0	0	0	0	0	0
4081:	0	0	0	0	0	0	0	0
4089:	0	0	1	0	0	0	0	1

RB
11/16/15Analysis Report for 1510086-07
CP4105S08-09

GAMMA SPECTRUM ANALYSIS

Sample Identification : 1510086-07
Sample Description : CP4105S08-09
Sample Type : SOIL

Sample Size : 5.741E+02 grams
Facility : Countroom

Sample Taken On : 10/6/2015 7:55:17AM
Acquisition Started : 11/6/2015 11:23:04AM

Procedure : GAS-1402 pCi
Operator : Administrator
Detector Name : GE2
Geometry : GAS-1402
Live Time : 3600.0 seconds
Real Time : 3601.3 seconds

Dead Time : 0.04 %

Peak Locate Threshold : 2.50
Peak Locate Range (in channels) : 1 - 4096
Peak Area Range (in channels) : 5 - 4096
Identification Energy Tolerance : 1.000 keV

Energy Calibration Used Done On : 11/2/2014
Efficiency Calibration Used Done On : 10/25/2014
Efficiency Calibration Description :

Sample Number : 29258

PEAK-TO-TOTAL CALIBRATION REPORT

Peak-to-Total Efficiency Calibration Equation

AG
11/9/15

Analysis Report for 1510086-07
CP4105S08-09

PEAK LOCATE REPORT

Peak Locate Performed on : 11/6/2015 12:23:20PM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096
Peak Search Sensitivity : 2.50

Peak No.	Energy (keV)	Centroid Channel	Centroid Uncertainty	Peak Significance
1	53.36	53.46	0.0000	0.00
2	63.33	63.42	0.0000	0.00
3	76.16	76.25	0.0000	0.00
4	87.44	87.52	0.0000	0.00
5	93.27	93.35	0.0000	0.00
6	114.97	115.04	0.0000	0.00
7	144.91	144.96	0.0000	0.00
8	186.03	186.05	0.0000	0.00
9	209.69	209.71	0.0000	0.00
10	239.21	239.21	0.0000	0.00
11	270.30	270.28	0.0000	0.00
12	295.18	295.15	0.0000	0.00
13	300.26	300.22	0.0000	0.00
14	327.84	327.79	0.0000	0.00
15	338.42	338.36	0.0000	0.00
16	352.02	351.96	0.0000	0.00
17	463.34	463.22	0.0000	0.00
18	510.69	510.54	0.0000	0.00
19	583.21	583.03	0.0000	0.00
20	609.38	609.18	0.0000	0.00
21	718.77	718.53	0.0000	0.00
22	727.20	726.95	0.0000	0.00
23	740.02	739.77	0.0000	0.00
24	770.03	769.77	0.0000	0.00
25	785.54	785.27	0.0000	0.00
26	812.01	811.72	0.0000	0.00
27	836.67	836.37	0.0000	0.00
28	843.39	843.09	0.0000	0.00
29	861.58	861.27	0.0000	0.00
30	876.58	876.27	0.0000	0.00
31	911.53	911.21	0.0000	0.00
32	933.93	933.60	0.0000	0.00
33	969.24	968.90	0.0000	0.00
34	1024.50	1024.13	0.0000	0.00
35	1120.56	1120.15	0.0000	0.00
36	1155.48	1155.06	0.0000	0.00
37	1258.90	1258.45	0.0000	0.00
38	1331.95	1331.47	0.0000	0.00
39	1379.29	1378.79	0.0000	0.00
40	1408.89	1408.38	0.0000	0.00
41	1460.93	1460.40	0.0000	0.00
42	1498.53	1498.00	0.0000	0.00

Analysis Report for 1510086-07
CP4105S08-09

Peak No.	Energy (keV)	Centroid Channel	Centroid Uncertainty	Peak Significance
43	1508.83	1508.29	0.0000	0.00
44	1558.76	1558.21	0.0000	0.00
45	1572.87	1572.31	0.0000	0.00
46	1579.36	1578.80	0.0000	0.00
47	1584.32	1583.76	0.0000	0.00
48	1625.28	1624.71	0.0000	0.00
49	1639.39	1638.81	0.0000	0.00
50	1704.89	1704.30	0.0000	0.00
51	1729.55	1728.96	0.0000	0.00
52	1764.63	1764.02	0.0000	0.00
53	1819.86	1819.24	0.0000	0.00
54	1849.07	1848.45	0.0000	0.00
55	1875.46	1874.83	0.0000	0.00
56	1881.63	1881.00	0.0000	0.00
57	1908.92	1908.28	0.0000	0.00
58	1998.78	1998.13	0.0000	0.00
59	2009.00	2008.34	0.0000	0.00
60	2103.56	2102.88	0.0000	0.00
61	2117.68	2117.01	0.0000	0.00
62	2151.47	2150.78	0.0000	0.00
63	2203.73	2203.04	0.0000	0.00
64	2614.26	2613.52	0.0000	0.00
65	3492.13	3491.40	0.0000	0.00

? = Adjacent peak noted
Errors quoted at 2.000sigma

Analysis Report for 1510086-07

CP4105S08-09

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 11/6/2015 12:23:20PM

Peak Analysis From Channel : 1
 Peak Analysis To Channel : 4096

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	FWHM (keV)	
1	53.36	51 -	56	53.46	7.98E+01	80.26	1.20E+03	1.54	
2	63.33	60 -	67	63.42	1.42E+02	109.23	1.90E+03	2.24	
3	76.16	72 -	83	76.25	1.10E+03	172.07	3.15E+03	3.52	
4	87.44	86 -	89	87.52	9.39E+01	69.69	1.13E+03	1.56	
5	93.27	91 -	96	93.35	1.67E+02	88.50	1.37E+03	1.23	
6	114.97	111 -	119	115.04	1.10E+02	91.85	1.22E+03	2.30	
7	144.91	141 -	148	144.96	8.39E+01	82.80	1.08E+03	3.47	
8	186.03	183 -	189	186.05	2.05E+02	72.00	7.97E+02	1.35	
9	209.69	206 -	213	209.71	1.09E+02	73.73	8.27E+02	1.88	
10	239.21	237 -	243	239.21	1.00E+03	88.39	7.08E+02	1.59	
11	270.30	267 -	274	270.28	5.73E+01	59.97	5.55E+02	1.67	
M	12	295.18	291 -	304	295.15	3.70E+02	52.27	2.83E+02	1.55
m	13	300.26	291 -	304	300.22	7.46E+01	39.40	2.90E+02	1.82
14	327.84	325 -	330	327.79	6.35E+01	41.29	2.89E+02	1.59	
15	338.42	334 -	342	338.36	1.81E+02	63.41	5.04E+02	1.58	
16	352.02	348 -	356	351.96	6.12E+02	76.00	5.11E+02	1.45	
17	463.34	459 -	467	463.22	5.40E+01	46.66	3.02E+02	1.44	
18	510.69	506 -	516	510.54	2.12E+02	56.98	3.23E+02	2.12	
19	583.21	579 -	586	583.03	2.79E+02	49.60	2.23E+02	1.38	
20	609.38	605 -	613	609.18	4.05E+02	57.11	2.53E+02	1.78	
21	718.77	714 -	722	718.53	2.80E+01	31.87	1.38E+02	1.97	
22	727.20	723 -	730	726.95	5.58E+01	30.33	1.16E+02	1.76	
23	740.02	731 -	748	739.77	5.38E+01	55.54	2.60E+02	15.49	
24	770.03	765 -	774	769.77	5.30E+01	41.22	2.06E+02	1.80	
25	785.54	783 -	788	785.27	2.19E+01	25.34	1.06E+02	2.52	
26	812.01	809 -	816	811.72	2.49E+01	26.83	1.02E+02	1.91	
M	27	836.67	833 -	848	836.37	2.92E+01	26.61	8.83E+01	2.52
m	28	843.39	833 -	848	843.09	1.78E+01	25.30	7.87E+01	2.53
29	861.58	857 -	866	861.27	5.23E+01	31.67	1.09E+02	2.21	
30	876.58	874 -	879	876.27	1.79E+01	17.78	5.02E+01	3.35	
31	911.53	907 -	916	911.21	1.97E+02	40.80	1.27E+02	2.05	
32	933.93	930 -	936	933.60	3.76E+01	23.09	6.87E+01	2.05	
33	969.24	965 -	971	968.90	8.02E+01	35.95	1.74E+02	1.36	
34	1024.50	1020 -	1029	1024.13	2.80E+01	23.07	6.00E+01	7.40	
35	1120.56	1116 -	1124	1120.15	9.39E+01	32.77	1.06E+02	1.94	
36	1155.48	1152 -	1157	1155.06	1.85E+01	22.38	8.30E+01	1.14	
37	1258.90	1251 -	1266	1258.45	3.28E+01	39.55	1.40E+02	13.41	
38	1331.95	1326 -	1335	1331.47	2.77E+01	17.83	2.87E+01	2.06	
39	1379.29	1372 -	1387	1378.79	3.03E+01	26.15	5.75E+01	8.86	
40	1408.89	1405 -	1412	1408.38	1.28E+01	15.49	3.05E+01	2.13	

: 00530

Analysis Report for 1510086-07

CP4105S08-09

	Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	FWHM (keV)
	41	1460.93	1455 - 1466		1460.40	7.56E+02	58.34	4.55E+01	2.39
	42	1498.53	1493 - 1503		1498.00	2.12E+01	14.24	1.36E+01	8.64
	43	1508.83	1504 - 1514		1508.29	2.08E+01	18.26	3.44E+01	2.84
	44	1558.76	1552 - 1564		1558.21	1.72E+01	15.32	1.97E+01	7.65
M	45	1572.87	1569 - 1594		1572.31	9.68E+00	9.80	1.20E+01	3.48
m	46	1579.36	1569 - 1594		1578.80	1.25E+01	14.83	2.00E+01	3.49
m	47	1584.32	1569 - 1594		1583.76	1.00E+01	14.00	1.60E+01	2.62
	48	1625.28	1619 - 1632		1624.71	2.50E+01	17.06	2.19E+01	8.93
	49	1639.39	1634 - 1643		1638.81	1.30E+01	13.56	1.60E+01	3.01
	50	1704.89	1699 - 1709		1704.30	1.11E+01	12.91	1.58E+01	8.34
	51	1729.55	1724 - 1732		1728.96	1.42E+01	16.18	3.16E+01	1.55
	52	1764.63	1758 - 1769		1764.02	8.13E+01	21.63	1.74E+01	2.73
	53	1819.86	1815 - 1823		1819.24	9.00E+00	8.02	4.00E+00	2.77
	54	1849.07	1844 - 1854		1848.45	2.18E+01	11.41	6.36E+00	5.76
	55	1875.46	1872 - 1878		1874.83	8.50E+00	8.51	7.00E+00	3.17
	56	1881.63	1878 - 1884		1881.00	7.50E+00	8.28	7.00E+00	3.13
	57	1908.92	1905 - 1910		1908.28	7.44E+00	6.71	3.11E+00	1.08
	58	1998.78	1995 - 2001		1998.13	5.14E+00	6.34	3.71E+00	2.97
	59	2009.00	2005 - 2013		2008.34	7.75E+00	10.81	1.25E+01	3.60
	60	2103.56	2097 - 2109		2102.88	2.75E+01	12.89	6.90E+00	5.18
	61	2117.68	2111 - 2120		2117.01	1.67E+01	11.75	1.05E+01	3.38
	62	2151.47	2147 - 2154		2150.78	8.20E+00	7.48	3.60E+00	1.74
	63	2203.73	2198 - 2208		2203.04	2.70E+01	16.52	2.20E+01	2.00
	64	2614.26	2609 - 2618		2613.52	1.17E+02	21.63	0.00E+00	2.69
	65	3492.13	3486 - 3493		3491.40	5.00E+00	4.47	0.00E+00	1.24

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 11/6/2015 12:23:20PM

Peak Analysis From Channel : 1
Peak Analysis To Channel : 4096

Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
1	53.36	51 -	56	7.98E+01	80.26	1.20E+03	6.43E+01
2	63.33	60 -	67	1.42E+02	109.23	1.90E+03	8.76E+01
3	76.16	72 -	83	1.10E+03	172.07	3.15E+03	1.30E+02

: 00531

Analysis Report for 1510086-07

CP4105S08-09

Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level	
4	87.44	86 -	89	9.39E+01	69.69	1.13E+03	5.50E+01	
5	93.27	91 -	96	1.67E+02	88.50	1.37E+03	6.96E+01	
6	114.97	111 -	119	1.10E+02	91.85	1.22E+03	7.35E+01	
7	144.91	141 -	148	8.39E+01	82.80	1.08E+03	6.64E+01	
8	186.03	183 -	189	2.05E+02	72.00	7.97E+02	5.43E+01	
9	209.69	206 -	213	1.09E+02	73.73	8.27E+02	5.81E+01	
10	239.21	237 -	243	1.00E+03	88.39	7.08E+02	5.07E+01	
11	270.30	267 -	274	5.73E+01	59.97	5.55E+02	4.77E+01	
M	12	295.18	291 -	304	3.70E+02	52.27	2.83E+02	2.77E+01
m	13	300.26	291 -	304	7.46E+01	39.40	2.90E+02	2.80E+01
14	327.84	325 -	330	6.35E+01	41.29	2.89E+02	3.13E+01	
15	338.42	334 -	342	1.81E+02	63.41	5.04E+02	4.72E+01	
16	352.02	348 -	356	6.12E+02	76.00	5.11E+02	4.74E+01	
17	463.34	459 -	467	5.40E+01	46.66	3.02E+02	3.64E+01	
18	510.69	506 -	516	2.12E+02	56.98	3.23E+02	4.03E+01	
19	583.21	579 -	586	2.79E+02	49.60	2.23E+02	3.01E+01	
20	609.38	605 -	613	4.05E+02	57.11	2.53E+02	3.33E+01	
21	718.77	714 -	722	2.80E+01	31.87	1.38E+02	2.47E+01	
22	727.20	723 -	730	5.58E+01	30.33	1.16E+02	2.17E+01	
23	740.02	731 -	748	5.38E+01	55.54	2.60E+02	4.40E+01	
24	770.03	765 -	774	5.30E+01	41.22	2.06E+02	3.17E+01	
25	785.54	783 -	788	2.19E+01	25.34	1.06E+02	1.94E+01	
26	812.01	809 -	816	2.49E+01	26.83	1.02E+02	2.05E+01	
M	27	836.67	833 -	848	2.92E+01	26.61	8.83E+01	1.54E+01
m	28	843.39	833 -	848	1.78E+01	25.30	7.87E+01	1.46E+01
29	861.58	857 -	866	5.23E+01	31.67	1.09E+02	2.32E+01	
30	876.58	874 -	879	1.79E+01	17.78	5.02E+01	1.29E+01	
31	911.53	907 -	916	1.97E+02	40.80	1.27E+02	2.44E+01	
32	933.93	930 -	936	3.76E+01	23.09	6.87E+01	1.61E+01	
33	969.24	965 -	971	8.02E+01	35.95	1.74E+02	2.56E+01	
34	1024.50	1020 -	1029	2.80E+01	23.07	6.00E+01	1.68E+01	
35	1120.56	1116 -	1124	9.39E+01	32.77	1.06E+02	2.17E+01	
36	1155.48	1152 -	1157	1.85E+01	22.38	8.30E+01	1.70E+01	
37	1258.90	1251 -	1266	3.28E+01	39.55	1.40E+02	3.11E+01	
38	1331.95	1326 -	1335	2.77E+01	17.83	2.87E+01	1.18E+01	
39	1379.29	1372 -	1387	3.03E+01	26.15	5.75E+01	1.95E+01	
40	1408.89	1405 -	1412	1.28E+01	15.49	3.05E+01	1.13E+01	
41	1460.93	1455 -	1466	7.56E+02	58.34	4.55E+01	1.60E+01	
42	1498.53	1493 -	1503	2.12E+01	14.24	1.36E+01	8.93E+00	
43	1508.83	1504 -	1514	2.08E+01	18.26	3.44E+01	1.30E+01	
44	1558.76	1552 -	1564	1.72E+01	15.32	1.97E+01	1.06E+01	
M	45	1572.87	1569 -	1594	9.68E+00	9.80	1.20E+01	5.70E+00
m	46	1579.36	1569 -	1594	1.25E+01	14.83	2.00E+01	7.35E+00
m	47	1584.32	1569 -	1594	1.00E+01	14.00	1.60E+01	6.58E+00
48	1625.28	1619 -	1632	2.50E+01	17.06	2.19E+01	1.14E+01	
49	1639.39	1634 -	1643	1.30E+01	13.56	1.60E+01	9.44E+00	
50	1704.89	1699 -	1709	1.11E+01	12.91	1.58E+01	9.10E+00	
51	1729.55	1724 -	1732	1.42E+01	16.18	3.16E+01	1.18E+01	
52	1764.63	1758 -	1769	8.13E+01	21.63	1.74E+01	9.82E+00	
53	1819.86	1815 -	1823	9.00E+00	8.02	4.00E+00	4.37E+00	
54	1849.07	1844 -	1854	2.18E+01	11.41	6.36E+00	5.39E+00	

Analysis Report for 1510086-07

CP4105S08-09

Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
55	1875.46	1872 -	1878	8.50E+00	8.51	7.00E+00	5.10E+00
56	1881.63	1878 -	1884	7.50E+00	8.28	7.00E+00	5.10E+00
57	1908.92	1905 -	1910	7.44E+00	6.71	3.11E+00	3.21E+00
58	1998.78	1995 -	2001	5.14E+00	6.34	3.71E+00	3.65E+00
59	2009.00	2005 -	2013	7.75E+00	10.81	1.25E+01	7.61E+00
60	2103.56	2097 -	2109	2.75E+01	12.89	6.90E+00	6.15E+00
61	2117.68	2111 -	2120	1.67E+01	11.75	1.05E+01	6.93E+00
62	2151.47	2147 -	2154	8.20E+00	7.48	3.60E+00	3.96E+00
63	2203.73	2198 -	2208	2.70E+01	16.52	2.20E+01	1.06E+01
64	2614.26	2609 -	2618	1.17E+02	21.63	0.00E+00	0.00E+00
65	3492.13	3486 -	3493	5.00E+00	4.47	0.00E+00	0.00E+00

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

PEAK WITH NID REPORT

Peak Analysis Performed on : 11/6/2015 12:23:20PM

Peak Analysis From Channel : 1

Peak Analysis To Channel : 4096

Tentative NID Library : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

Peak Match Tolerance : 1.000 keV

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
1	53.36	51 -	56	53.46	7.98E+01	80.26	1.20E+03	.....
2	63.33	60 -	67	63.42	1.42E+02	109.23	1.90E+03	TH-234 TH-230
3	76.16	72 -	83	76.25	1.10E+03	172.07	3.15E+03	.....
4	87.44	86 -	89	87.52	9.39E+01	69.69	1.13E+03	SN-126 CD-109 LU-176 NP-237 EU-155
5	93.27	91 -	96	93.35	1.67E+02	88.50	1.37E+03	GA-67
6	114.97	111 -	119	115.04	1.10E+02	91.85	1.22E+03	.....
7	144.91	141 -	148	144.96	8.39E+01	82.80	1.08E+03	CE-141
8	186.03	183 -	189	186.05	2.05E+02	72.00	7.97E+02	RA-226
9	209.69	206 -	213	209.71	1.09E+02	73.73	8.27E+02	CM-243 GA-67

: 00533

Analysis Report for 1510086-07

CP4105S08-09

	Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
	10	239.21	237 -	243	239.21	1.00E+03	88.39	7.08E+02	PB-212
	11	270.30	267 -	274	270.28	5.73E+01	59.97	5.55E+02	.....
M	12	295.18	291 -	304	295.15	3.70E+02	52.27	2.83E+02	PB-214
m	13	300.26	291 -	304	300.22	7.46E+01	39.40	2.90E+02	GA-67 PB-212 BI-210M
	14	327.84	325 -	330	327.79	6.35E+01	41.29	2.89E+02	LA-140
	15	338.42	334 -	342	338.36	1.81E+02	63.41	5.04E+02	AC-228
	16	352.02	348 -	356	351.96	6.12E+02	76.00	5.11E+02	PB-214
	17	463.34	459 -	467	463.22	5.40E+01	46.66	3.02E+02	SB-125
	18	510.69	506 -	516	510.54	2.12E+02	56.98	3.23E+02	.....
	19	583.21	579 -	586	583.03	2.79E+02	49.60	2.23E+02	TL-208
	20	609.38	605 -	613	609.18	4.05E+02	57.11	2.53E+02	BI-214
	21	718.77	714 -	722	718.53	2.80E+01	31.87	1.38E+02	.....
	22	727.20	723 -	730	726.95	5.58E+01	30.33	1.16E+02	BI-212
	23	740.02	731 -	748	739.77	5.38E+01	55.54	2.60E+02	MO-99
	24	770.03	765 -	774	769.77	5.30E+01	41.22	2.06E+02	.....
	25	785.54	783 -	788	785.27	2.19E+01	25.34	1.06E+02	.....
	26	812.01	809 -	816	811.72	2.49E+01	26.83	1.02E+02	EU-156
M	27	836.67	833 -	848	836.37	2.92E+01	26.61	8.83E+01	.....
m	28	843.39	833 -	848	843.09	1.78E+01	25.30	7.87E+01	.....
	29	861.58	857 -	866	861.27	5.23E+01	31.67	1.09E+02	.....
	30	876.58	874 -	879	876.27	1.79E+01	17.78	5.02E+01	.....
	31	911.53	907 -	916	911.21	1.97E+02	40.80	1.27E+02	AC-228 LU-172
	32	933.93	930 -	936	933.60	3.76E+01	23.09	6.87E+01	.....
	33	969.24	965 -	971	968.90	8.02E+01	35.95	1.74E+02	AC-228
	34	1024.50	1020 -	1029	1024.13	2.80E+01	23.07	6.00E+01	.....
	35	1120.56	1116 -	1124	1120.15	9.39E+01	32.77	1.06E+02	SC-46 BI-214 TA-182
	36	1155.48	1152 -	1157	1155.06	1.85E+01	22.38	8.30E+01	.....
	37	1258.90	1251 -	1266	1258.45	3.28E+01	39.55	1.40E+02	.....
	38	1331.95	1326 -	1335	1331.47	2.77E+01	17.83	2.87E+01	CO-60
	39	1379.29	1372 -	1387	1378.79	3.03E+01	26.15	5.75E+01	.....
	40	1408.89	1405 -	1412	1408.38	1.28E+01	15.49	3.05E+01	EU-152
	41	1460.93	1455 -	1466	1460.40	7.56E+02	58.34	4.55E+01	K-40
	42	1498.53	1493 -	1503	1498.00	2.12E+01	14.24	1.36E+01	.....
	43	1508.83	1504 -	1514	1508.29	2.08E+01	18.26	3.44E+01	.....
	44	1558.76	1552 -	1564	1558.21	1.72E+01	15.32	1.97E+01	.....
M	45	1572.87	1569 -	1594	1572.31	9.68E+00	9.80	1.20E+01	.....
m	46	1579.36	1569 -	1594	1578.80	1.25E+01	14.83	2.00E+01	.....
m	47	1584.32	1569 -	1594	1583.76	1.00E+01	14.00	1.60E+01	.....
	48	1625.28	1619 -	1632	1624.71	2.50E+01	17.06	2.19E+01	.....
	49	1639.39	1634 -	1643	1638.81	1.30E+01	13.56	1.60E+01	.....
	50	1704.89	1699 -	1709	1704.30	1.11E+01	12.91	1.58E+01	.....
	51	1729.55	1724 -	1732	1728.96	1.42E+01	16.18	3.16E+01	.....
	52	1764.63	1758 -	1769	1764.02	8.13E+01	21.63	1.74E+01	BI-214
	53	1819.86	1815 -	1823	1819.24	9.00E+00	8.02	4.00E+00	.....
	54	1849.07	1844 -	1854	1848.45	2.18E+01	11.41	6.36E+00	.....
	55	1875.46	1872 -	1878	1874.83	8.50E+00	8.51	7.00E+00	.....
	56	1881.63	1878 -	1884	1881.00	7.50E+00	8.28	7.00E+00	.....
	57	1908.92	1905 -	1910	1908.28	7.44E+00	6.71	3.11E+00	.....
	58	1998.78	1995 -	2001	1998.13	5.14E+00	6.34	3.71E+00	.....

: 00534

Analysis Report for 1510086-07

CP4105S08-09

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
59	2009.00	2005 -	2013	2008.34	7.75E+00	10.81	1.25E+01	.....
60	2103.56	2097 -	2109	2102.88	2.75E+01	12.89	6.90E+00	.....
61	2117.68	2111 -	2120	2117.01	1.67E+01	11.75	1.05E+01	.....
62	2151.47	2147 -	2154	2150.78	8.20E+00	7.48	3.60E+00	.....
63	2203.73	2198 -	2208	2203.04	2.70E+01	16.52	2.20E+01	BI-214
64	2614.26	2609 -	2618	2613.52	1.17E+02	21.63	0.00E+00	TL-208
65	3492.13	3486 -	3493	3491.40	5.00E+00	4.47	0.00E+00	.....

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

PEAK EFFICIENCY REPORT

Peak Analysis Performed on : 11/6/2015 12:23:20PM

Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
1	53.36	7.98E+01	80.26	1.84E-02	1.68E-03
2	63.33	1.42E+02	109.23	2.38E-02	2.06E-03
3	76.16	1.10E+03	172.07	2.74E-02	3.33E-03
4	87.44	9.39E+01	69.69	2.84E-02	4.45E-03
5	93.27	1.67E+02	88.50	2.85E-02	4.27E-03
6	114.97	1.10E+02	91.85	2.73E-02	3.30E-03
7	144.91	8.39E+01	82.80	2.45E-02	2.30E-03
8	186.03	2.05E+02	72.00	2.11E-02	1.65E-03
9	209.69	1.09E+02	73.73	1.95E-02	1.63E-03
10	239.21	1.00E+03	88.39	1.78E-02	1.60E-03
11	270.30	5.73E+01	59.97	1.64E-02	1.57E-03
12	295.18	3.70E+02	52.27	1.55E-02	1.48E-03
13	300.26	7.46E+01	39.40	1.53E-02	1.46E-03
14	327.84	6.35E+01	41.29	1.44E-02	1.32E-03
15	338.42	1.81E+02	63.41	1.41E-02	1.27E-03
16	352.02	6.12E+02	76.00	1.37E-02	1.21E-03
17	463.34	5.40E+01	46.66	1.13E-02	9.47E-04
18	510.69	2.12E+02	56.98	1.06E-02	8.99E-04
19	583.21	2.79E+02	49.60	9.58E-03	8.25E-04
20	609.38	4.05E+02	57.11	9.27E-03	7.98E-04
21	718.77	2.80E+01	31.87	8.16E-03	7.08E-04
22	727.20	5.58E+01	30.33	8.09E-03	7.03E-04
23	740.02	5.38E+01	55.54	7.98E-03	6.95E-04

M
m

: 00535

Analysis Report for 1510086-07
CP4105S08-09

	Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
	24	770.03	5.30E+01	41.22	7.73E-03	6.76E-04
	25	785.54	2.19E+01	25.34	7.61E-03	6.66E-04
	26	812.01	2.49E+01	26.83	7.41E-03	6.49E-04
M	27	836.67	2.92E+01	26.61	7.23E-03	6.33E-04
m	28	843.39	1.78E+01	25.30	7.18E-03	6.28E-04
	29	861.58	5.23E+01	31.67	7.06E-03	6.17E-04
	30	876.58	1.79E+01	17.78	6.96E-03	6.07E-04
	31	911.53	1.97E+02	40.80	6.74E-03	5.86E-04
	32	933.93	3.76E+01	23.09	6.61E-03	5.75E-04
	33	969.24	8.02E+01	35.95	6.41E-03	5.57E-04
	34	1024.50	2.80E+01	23.07	6.13E-03	5.29E-04
	35	1120.56	9.39E+01	32.77	5.70E-03	4.80E-04
	36	1155.48	1.85E+01	22.38	5.56E-03	4.62E-04
	37	1258.90	3.28E+01	39.55	5.20E-03	4.92E-04
	38	1331.95	2.77E+01	17.83	4.99E-03	5.26E-04
	39	1379.29	3.03E+01	26.15	4.86E-03	5.07E-04
	40	1408.89	1.28E+01	15.49	4.79E-03	4.95E-04
	41	1460.93	7.56E+02	58.34	4.67E-03	4.73E-04
	42	1498.53	2.12E+01	14.24	4.59E-03	4.58E-04
	43	1508.83	2.08E+01	18.26	4.57E-03	4.53E-04
	44	1558.76	1.72E+01	15.32	4.48E-03	4.33E-04
M	45	1572.87	9.68E+00	9.80	4.46E-03	4.27E-04
m	46	1579.36	1.25E+01	14.83	4.44E-03	4.24E-04
m	47	1584.32	1.00E+01	14.00	4.44E-03	4.22E-04
	48	1625.28	2.50E+01	17.06	4.37E-03	4.05E-04
	49	1639.39	1.30E+01	13.56	4.35E-03	3.99E-04
	50	1704.89	1.11E+01	12.91	4.26E-03	3.72E-04
	51	1729.55	1.42E+01	16.18	4.23E-03	3.62E-04
	52	1764.63	8.13E+01	21.63	4.19E-03	3.47E-04
	53	1819.86	9.00E+00	8.02	4.13E-03	3.25E-04
	54	1849.07	2.18E+01	11.41	4.10E-03	3.18E-04
	55	1875.46	8.50E+00	8.51	4.08E-03	3.18E-04
	56	1881.63	7.50E+00	8.28	4.07E-03	3.18E-04
	57	1908.92	7.44E+00	6.71	4.05E-03	3.18E-04
	58	1998.78	5.14E+00	6.34	3.99E-03	3.18E-04
	59	2009.00	7.75E+00	10.81	3.99E-03	3.18E-04
	60	2103.56	2.75E+01	12.89	3.95E-03	3.18E-04
	61	2117.68	1.67E+01	11.75	3.95E-03	3.18E-04
	62	2151.47	8.20E+00	7.48	3.94E-03	3.18E-04
	63	2203.73	2.70E+01	16.52	3.93E-03	3.18E-04
	64	2614.26	1.17E+02	21.63	4.05E-03	3.18E-04
	65	3492.13	5.00E+00	4.47	5.45E-03	3.18E-04

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000 sigma

Analysis Report for 1510086-07

CP4105S08-09

BACKGROUND SUBTRACT REPORT

Peak Analysis Performed on : 11/6/2015 12:23:20PM

Env. Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000028942.CNF

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.	
1	53.36	7.98E+01	80.26			7.98E+01	8.03E+01	
2	63.33	1.42E+02	109.23	4.34E+01	1.15E+01	9.82E+01	1.10E+02	
3	76.16	1.10E+03	172.07			1.10E+03	1.72E+02	
4	87.44	9.39E+01	69.69	1.46E+00	7.88E+00	9.24E+01	7.01E+01	
5	93.27	1.67E+02	88.50	5.70E+01	9.03E+00	1.10E+02	8.90E+01	
6	114.97	1.10E+02	91.85			1.10E+02	9.19E+01	
7	144.91	8.39E+01	82.80	8.10E+00	1.90E+01	7.58E+01	8.50E+01	
8	186.03	2.05E+02	72.00	4.72E+01	7.97E+00	1.58E+02	7.24E+01	
9	209.69	1.09E+02	73.73			1.09E+02	7.37E+01	
10	239.21	1.00E+03	88.39	2.36E+01	1.35E+01	9.78E+02	8.94E+01	
11	270.30	5.73E+01	59.97			5.73E+01	6.00E+01	
M	12	295.18	3.70E+02	52.27	8.57E+00	6.10E+00	3.61E+02	5.26E+01
m	13	300.26	7.46E+01	39.40			7.46E+01	3.94E+01
	14	327.84	6.35E+01	41.29	0.00E+00	0.00E+00	6.35E+01	4.13E+01
	15	338.42	1.81E+02	63.41			1.81E+02	6.34E+01
	16	352.02	6.12E+02	76.00	1.40E+01	5.55E+00	5.98E+02	7.62E+01
	17	463.34	5.40E+01	46.66			5.40E+01	4.67E+01
	18	510.69	2.12E+02	56.98	8.41E+01	5.50E+00	1.27E+02	5.72E+01
	19	583.21	2.79E+02	49.60	7.32E+00	4.08E+00	2.72E+02	4.98E+01
	20	609.38	4.05E+02	57.11	1.30E+01	3.89E+00	3.92E+02	5.72E+01
	21	718.77	2.80E+01	31.87			2.80E+01	3.19E+01
	22	727.20	5.58E+01	30.33			5.58E+01	3.03E+01
	23	740.02	5.38E+01	55.54			5.38E+01	5.55E+01
	24	770.03	5.30E+01	41.22			5.30E+01	4.12E+01
	25	785.54	2.19E+01	25.34			2.19E+01	2.53E+01
	26	812.01	2.49E+01	26.83			2.49E+01	2.68E+01
M	27	836.67	2.92E+01	26.61			2.92E+01	2.66E+01
m	28	843.39	1.78E+01	25.30			1.78E+01	2.53E+01
	29	861.58	5.23E+01	31.67			5.23E+01	3.17E+01
	30	876.58	1.79E+01	17.78			1.79E+01	1.78E+01
	31	911.53	1.97E+02	40.80	5.60E+00	3.32E+00	1.91E+02	4.09E+01
	32	933.93	3.76E+01	23.09			3.76E+01	2.31E+01
	33	969.24	8.02E+01	35.95			8.02E+01	3.60E+01
	34	1024.50	2.80E+01	23.07			2.80E+01	2.31E+01
	35	1120.56	9.39E+01	32.77	3.93E+00	2.96E+00	8.99E+01	3.29E+01
	36	1155.48	1.85E+01	22.38			1.85E+01	2.24E+01
	37	1258.90	3.28E+01	39.55			3.28E+01	3.95E+01
	38	1331.95	2.77E+01	17.83	4.94E+00	2.44E+00	2.27E+01	1.80E+01
	39	1379.29	3.03E+01	26.15			3.03E+01	2.62E+01
	40	1408.89	1.28E+01	15.49			1.28E+01	1.55E+01
	41	1460.93	7.56E+02	58.34	1.12E+01	2.55E+00	7.45E+02	5.84E+01
	42	1498.53	2.12E+01	14.24			2.12E+01	1.42E+01
	43	1508.83	2.08E+01	18.26			2.08E+01	1.83E+01
	44	1558.76	1.72E+01	15.32			1.72E+01	1.53E+01

: 00537

Analysis Report for 1510086-07
CP4105S08-09

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
M 45	1572.87	9.68E+00	9.80			9.68E+00	9.80E+00
m 46	1579.36	1.25E+01	14.83			1.25E+01	1.48E+01
m 47	1584.32	1.00E+01	14.00			1.00E+01	1.40E+01
48	1625.28	2.50E+01	17.06			2.50E+01	1.71E+01
49	1639.39	1.30E+01	13.56			1.30E+01	1.36E+01
50	1704.89	1.11E+01	12.91			1.11E+01	1.29E+01
51	1729.55	1.42E+01	16.18			1.42E+01	1.62E+01
52	1764.63	8.13E+01	21.63	4.23E+00	2.21E+00	7.71E+01	2.17E+01
53	1819.86	9.00E+00	8.02			9.00E+00	8.02E+00
54	1849.07	2.18E+01	11.41			2.18E+01	1.14E+01
55	1875.46	8.50E+00	8.51			8.50E+00	8.51E+00
56	1881.63	7.50E+00	8.28			7.50E+00	8.28E+00
57	1908.92	7.44E+00	6.71			7.44E+00	6.71E+00
58	1998.78	5.14E+00	6.34			5.14E+00	6.34E+00
59	2009.00	7.75E+00	10.81			7.75E+00	1.08E+01
60	2103.56	2.75E+01	12.89			2.75E+01	1.29E+01
61	2117.68	1.67E+01	11.75			1.67E+01	1.17E+01
62	2151.47	8.20E+00	7.48			8.20E+00	7.48E+00
63	2203.73	2.70E+01	16.52	5.94E-01	1.16E+00	2.64E+01	1.66E+01
64	2614.26	1.17E+02	21.63	7.38E+00	1.57E+00	1.10E+02	2.17E+01
65	3492.13	5.00E+00	4.47			5.00E+00	4.47E+00

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

AREA CORRECTION REPORT REFERENCE PEAK / BKG. SUBTRACT

Peak Analysis Performed on : 11/6/2015 12:23:20PM
Ref. Peak Energy : 0.00 Reference Date :
Peak Ratio : 0.00 Uncertainty : 0.00
Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000028942.CNF

Corrected Area is: Original * Peak Ratio - Background

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
1	53.36	7.98E+01	80.26			7.98E+01	8.03E+01
2	63.33	1.42E+02	109.23	4.34E+01	1.15E+01	9.82E+01	1.10E+02
3	76.16	1.10E+03	172.07			1.10E+03	1.72E+02
4	87.44	9.39E+01	69.69	1.46E+00	7.88E+00	9.24E+01	7.01E+01
5	93.27	1.67E+02	88.50	5.70E+01	9.03E+00	1.10E+02	8.90E+01
6	114.97	1.10E+02	91.85			1.10E+02	9.19E+01
7	144.91	8.39E+01	82.80	8.10E+00	1.90E+01	7.58E+01	8.50E+01

Analysis Report for 1510086-07

CP4105S08-09

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.	
	8	186.03	2.05E+02	72.00	4.72E+01	7.97E+00	1.58E+02	7.24E+01
	9	209.69	1.09E+02	73.73			1.09E+02	7.37E+01
	10	239.21	1.00E+03	88.39	2.36E+01	1.35E+01	9.78E+02	8.94E+01
	11	270.30	5.73E+01	59.97			5.73E+01	6.00E+01
M	12	295.18	3.70E+02	52.27	8.57E+00	6.10E+00	3.61E+02	5.26E+01
m	13	300.26	7.46E+01	39.40			7.46E+01	3.94E+01
	14	327.84	6.35E+01	41.29	0.00E+00	0.00E+00	6.35E+01	4.13E+01
	15	338.42	1.81E+02	63.41			1.81E+02	6.34E+01
	16	352.02	6.12E+02	76.00	1.40E+01	5.55E+00	5.98E+02	7.62E+01
	17	463.34	5.40E+01	46.66			5.40E+01	4.67E+01
	18	510.69	2.12E+02	56.98	8.41E+01	5.50E+00	1.27E+02	5.72E+01
	19	583.21	2.79E+02	49.60	7.32E+00	4.08E+00	2.72E+02	4.98E+01
	20	609.38	4.05E+02	57.11	1.30E+01	3.89E+00	3.92E+02	5.72E+01
	21	718.77	2.80E+01	31.87			2.80E+01	3.19E+01
	22	727.20	5.58E+01	30.33			5.58E+01	3.03E+01
	23	740.02	5.38E+01	55.54			5.38E+01	5.55E+01
	24	770.03	5.30E+01	41.22			5.30E+01	4.12E+01
	25	785.54	2.19E+01	25.34			2.19E+01	2.53E+01
	26	812.01	2.49E+01	26.83			2.49E+01	2.68E+01
M	27	836.67	2.92E+01	26.61			2.92E+01	2.66E+01
m	28	843.39	1.78E+01	25.30			1.78E+01	2.53E+01
	29	861.58	5.23E+01	31.67			5.23E+01	3.17E+01
	30	876.58	1.79E+01	17.78			1.79E+01	1.78E+01
	31	911.53	1.97E+02	40.80	5.60E+00	3.32E+00	1.91E+02	4.09E+01
	32	933.93	3.76E+01	23.09			3.76E+01	2.31E+01
	33	969.24	8.02E+01	35.95			8.02E+01	3.60E+01
	34	1024.50	2.80E+01	23.07			2.80E+01	2.31E+01
	35	1120.56	9.39E+01	32.77	3.93E+00	2.96E+00	8.99E+01	3.29E+01
	36	1155.48	1.85E+01	22.38			1.85E+01	2.24E+01
	37	1258.90	3.28E+01	39.55			3.28E+01	3.95E+01
	38	1331.95	2.77E+01	17.83	4.94E+00	2.44E+00	2.27E+01	1.80E+01
	39	1379.29	3.03E+01	26.15			3.03E+01	2.62E+01
	40	1408.89	1.28E+01	15.49			1.28E+01	1.55E+01
	41	1460.93	7.56E+02	58.34	1.12E+01	2.55E+00	7.45E+02	5.84E+01
	42	1498.53	2.12E+01	14.24			2.12E+01	1.42E+01
	43	1508.83	2.08E+01	18.26			2.08E+01	1.83E+01
	44	1558.76	1.72E+01	15.32			1.72E+01	1.53E+01
M	45	1572.87	9.68E+00	9.80			9.68E+00	9.80E+00
m	46	1579.36	1.25E+01	14.83			1.25E+01	1.48E+01
m	47	1584.32	1.00E+01	14.00			1.00E+01	1.40E+01
	48	1625.28	2.50E+01	17.06			2.50E+01	1.71E+01
	49	1639.39	1.30E+01	13.56			1.30E+01	1.36E+01
	50	1704.89	1.11E+01	12.91			1.11E+01	1.29E+01
	51	1729.55	1.42E+01	16.18			1.42E+01	1.62E+01
	52	1764.63	8.13E+01	21.63	4.23E+00	2.21E+00	7.71E+01	2.17E+01
	53	1819.86	9.00E+00	8.02			9.00E+00	8.02E+00
	54	1849.07	2.18E+01	11.41			2.18E+01	1.14E+01
	55	1875.46	8.50E+00	8.51			8.50E+00	8.51E+00
	56	1881.63	7.50E+00	8.28			7.50E+00	8.28E+00
	57	1908.92	7.44E+00	6.71			7.44E+00	6.71E+00
	58	1998.78	5.14E+00	6.34			5.14E+00	6.34E+00
	59	2009.00	7.75E+00	10.81			7.75E+00	1.08E+01
	60	2103.56	2.75E+01	12.89			2.75E+01	1.29E+01
	61	2117.68	1.67E+01	11.75			1.67E+01	1.17E+01

Analysis Report for 1510086-07

CP4105S08-09

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
62	2151.47	8.20E+00	7.48			8.20E+00	7.48E+00
63	2203.73	2.70E+01	16.52	5.94E-01	1.16E+00	2.64E+01	1.66E+01
64	2614.26	1.17E+02	21.63	7.38E+00	1.57E+00	1.10E+02	2.17E+01
65	3492.13	5.00E+00	4.47			5.00E+00	4.47E+00

M = First peak in a multiplet region

m = Other peak in a multiplet region

F = Fitted singlet

Errors quoted at 2.000sigma

NUCLIDE IDENTIFICATION REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

IDENTIFIED NUCLIDES

Nuclide Name	Id Confidence	Energy (keV)	Yield(%)	Activity (pCi/grams)	Activity Uncertainty
K-40	0.998	1460.81 *	10.67	1.95E+01	2.53E+00
GA-67	0.631	93.31 *	35.70	1.06E+02	4.57E+02
		208.95 *	2.24	2.47E+03	1.02E+04
		300.22 *	16.00	3.00E+02	1.28E+03
CD-109	0.945	88.03 *	3.72	1.20E+00	9.31E-01
SN-126	0.997	87.57 *	37.00	1.15E-01	8.91E-02
CE-141	0.952	145.44 *	48.40	1.62E-01	1.86E-01
TL-208	0.880	583.14 *	30.22	1.23E+00	2.48E-01
		860.37	4.48		
		2614.66 *	35.85	9.87E-01	2.10E-01
BI-212	0.766	727.17 *	11.80	7.65E-01	4.21E-01
		1620.62	2.75		
PB-212	0.951	238.63 *	44.60	1.61E+00	2.06E-01
		300.09 *	3.41	1.87E+00	1.00E+00
BI-214	0.995	609.31 *	46.30	1.20E+00	2.03E-01
		1120.29 *	15.10	1.37E+00	5.13E-01
		1764.49 *	15.80	1.52E+00	4.48E-01
		2204.22 *	4.98	1.76E+00	1.12E+00
PB-214	0.999	295.21 *	19.19	1.59E+00	2.77E-01
		351.92 *	37.19	1.53E+00	2.37E-01
RA-226	0.995	186.21 *	3.28	2.99E+00	5.65E+00
AC-228	0.982	338.32 *	11.40	1.48E+00	5.33E-01
		911.07 *	27.70	1.34E+00	3.09E-01
		969.11 *	16.60	9.85E-01	4.50E-01
TH-234	1.000	63.29 *	3.80	1.42E+00	1.60E+00
NP-237	0.869	86.50 *	12.60	3.38E-01	2.62E-01

: 00540

Analysis Report for 1510086-07
CP4105S08-09

* = Energy line found in the spectrum.
- = Manually added nuclide.
? = Manually edited nuclide.
Energy Tolerance : 1.000 keV
Nuclide confidence index threshold = 0.30
Errors quoted at 2.000sigma

UNIDENTIFIED PEAKS

Peak Locate Performed on : 11/6/2015 12:23:20PM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
1	53.36	2.21592E-02	50.31		
3	76.16	3.05946E-01	7.81		
6	114.97	3.04501E-02	41.89		
11	270.30	1.59134E-02	52.34		
14	327.84	1.76449E-02	32.50	Tol.	LA-140
17	463.34	1.50061E-02	43.18		
18	510.69	3.53957E-02	22.46	Sum	
21	718.77	7.76919E-03	56.98		
23	740.02	1.49419E-02	51.63	Tol.	MO-99
24	770.03	1.47222E-02	38.89	Sum	
25	785.54	6.07407E-03	57.94		
26	812.01	6.91155E-03	53.92	Tol.	EU-156
M m 27	836.67	8.10601E-03	45.59		
28	843.39	4.94717E-03	71.02		
29	861.58	1.45223E-02	30.29		
30	876.58	4.96770E-03	49.70		
32	933.93	1.04552E-02	30.67		
34	1024.50	7.77778E-03	41.19		
36	1155.48	5.13426E-03	60.55	Sum	
37	1258.90	9.10734E-03	60.31		
38	1331.95	6.31251E-03	39.60		
39	1379.29	8.40631E-03	43.21		
40	1408.89	3.54167E-03	60.75	Tol.	EU-152
42	1498.53	5.88790E-03	33.59		
43	1508.83	5.77485E-03	43.92		
44	1558.76	4.76852E-03	44.63		
M m 45	1572.87	2.68871E-03	50.61		
46	1579.36	3.47176E-03	59.34	Sum	
47	1584.32	2.77897E-03	69.97		
48	1625.28	6.95602E-03	34.06		
49	1639.39	3.61111E-03	52.17	Sum	
50	1704.89	3.07749E-03	58.28		
51	1729.55	3.93981E-03	57.03	Sum	
53	1819.86	2.50000E-03	44.53		

Analysis Report for 1510086-07
CP4105S08-09

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
54	1849.07	6.06111E-03	26.15		
55	1875.46	2.36111E-03	50.09		
56	1881.63	2.08333E-03	55.18	Sum	
57	1908.92	2.06790E-03	45.06	Sum	
58	1998.78	1.42857E-03	61.68		
59	2009.00	2.15278E-03	69.71		
60	2103.56	7.65233E-03	23.40	S-Esc	
61	2117.68	4.64646E-03	35.11		
62	2151.47	2.27778E-03	45.63		
65	3492.13	1.38889E-03	44.72		

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.00sigma

NUCLIDE IDENTIFICATION REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

IDENTIFIED NUCLIDES

Nuclide Name	Id Confidence	Energy (keV)	Yield(%)	Activity (pCi/grams)	Activity Uncertainty
K-40	0.99	1460.81 *	10.67	1.95E+01	2.53E+00
GA-67	0.63	93.31 *	35.70	1.06E+02	4.57E+02
		208.95 *	2.24	2.47E+03	1.02E+04
		300.22 *	16.00	3.00E+02	1.28E+03
CD-109	0.94	88.03 *	3.72	1.20E+00	9.31E-01
SN-126	0.99	87.57 *	37.00	1.15E-01	8.91E-02
CE-141	0.95	145.44 *	48.40	1.62E-01	1.86E-01
TL-208	0.88	583.14 *	30.22	1.23E+00	2.48E-01
		860.37 *	4.48		
		2614.66 *	35.85	9.87E-01	2.10E-01
BI-212	0.76	727.17 *	11.80	7.65E-01	4.21E-01
		1620.62 *	2.75		
PB-212	0.95	238.63 *	44.60	1.61E+00	2.06E-01
		300.09 *	3.41	1.87E+00	1.00E+00
BI-214	0.99	609.31 *	46.30	1.20E+00	2.03E-01
		1120.29 *	15.10	1.37E+00	5.13E-01
		1764.49 *	15.80	1.52E+00	4.48E-01
		2204.22 *	4.98	1.76E+00	1.12E+00

: 00542

Analysis Report for 1510086-07
CP4105S08-09

Nuclide Name	Id Confidence	Energy (keV)	Yield(%)	Activity (pCi/grams)	Activity Uncertainty
PB-214	0.99	295.21 *	19.19	1.59E+00	2.77E-01
		351.92 *	37.19	1.53E+00	2.37E-01
RA-226	0.99	186.21 *	3.28	2.99E+00	5.65E+00
AC-228	0.98	338.32 *	11.40	1.48E+00	5.33E-01
		911.07 *	27.70	1.34E+00	3.09E-01
		969.11 *	16.60	9.85E-01	4.50E-01
TH-234	1.00	63.29 *	3.80	1.42E+00	1.60E+00
NP-237	0.86	86.50 *	12.60	3.38E-01	2.62E-01

* = Energy line found in the spectrum.

- = Manually added nuclide.

? = Manually edited nuclide.

@ = Energy line not used for Weighted Mean Activity

Energy Tolerance : 1.000 keV

Nuclide confidence index threshold = 0.30

Errors quoted at 2.000sigma

INTERFERENCE CORRECTED REPORT

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40	0.998	1.95E+01	2.53E+00	
GA-67	0.631	9.73E+01	4.02E+02	
? CD-109	0.945	1.20E+00	9.31E-01	
? SN-126	0.997	1.15E-01	8.91E-02	
CE-141	0.952	1.62E-01	1.86E-01	
TL-208	0.880	1.09E+00	1.60E-01	
BI-212	0.766	7.65E-01	4.21E-01	
PB-212	0.951	1.59E+00	2.02E-01	
BI-214	0.995	1.28E+00	1.72E-01	
PB-214	0.999	1.56E+00	1.80E-01	
RA-226	0.995	2.99E+00	5.65E+00	
AC-228	0.982	1.27E+00	2.30E-01	
TH-234	1.000	1.42E+00	1.60E+00	
? NP-237	0.869	3.38E-01	2.62E-01	

Analysis Report for 1510086-07

CP4105S08-09

- ? = nuclide is part of an undetermined solution
- X = nuclide rejected by the interference analysis
- @ = nuclide contains energy lines not used in Weighted Mean Activity

Errors quoted at 2.000sigma

Analysis Report for 1510086-07
CP4105S08-09

UNIDENTIFIED PEAKS

Peak Locate Performed on : 11/6/2015 12:23:20PM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
1	53.36	2.21592E-02	50.31		
3	76.16	3.05946E-01	7.81		
6	114.97	3.04501E-02	41.89		
11	270.30	1.59134E-02	52.34		
14	327.84	1.76449E-02	32.50	Tol.	LA-140
17	463.34	1.50061E-02	43.18		
18	510.69	3.53957E-02	22.46	Sum	
21	718.77	7.76919E-03	56.98		
23	740.02	1.49419E-02	51.63	Tol.	MO-99
24	770.03	1.47222E-02	38.89	Sum	
25	785.54	6.07407E-03	57.94		
26	812.01	6.91155E-03	53.92	Tol.	EU-156
M m 27	836.67	8.10601E-03	45.59		
28	843.39	4.94717E-03	71.02		
29	861.58	1.45223E-02	30.29		
30	876.58	4.96770E-03	49.70		
32	933.93	1.04552E-02	30.67		
34	1024.50	7.77778E-03	41.19		
36	1155.48	5.13426E-03	60.55	Sum	
37	1258.90	9.10734E-03	60.31		
38	1331.95	6.31251E-03	39.60		
39	1379.29	8.40631E-03	43.21		
40	1408.89	3.54167E-03	60.75	Tol.	EU-152
42	1498.53	5.88790E-03	33.59		
43	1508.83	5.77485E-03	43.92		
44	1558.76	4.76852E-03	44.63		
M m m 45	1572.87	2.68871E-03	50.61		
46	1579.36	3.47176E-03	59.34	Sum	
47	1584.32	2.77897E-03	69.97		
48	1625.28	6.95602E-03	34.06		
49	1639.39	3.61111E-03	52.17	Sum	
50	1704.89	3.07749E-03	58.28		
51	1729.55	3.93981E-03	57.03	Sum	
53	1819.86	2.50000E-03	44.53		
54	1849.07	6.06111E-03	26.15		

Analysis Report for 1510086-07
CP4105S08-09

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
55	1875.46	2.36111E-03	50.09		
56	1881.63	2.08333E-03	55.18	Sum	
57	1908.92	2.06790E-03	45.06	Sum	
58	1998.78	1.42857E-03	61.68		
59	2009.00	2.15278E-03	69.71		
60	2103.56	7.65233E-03	23.40	S-Esc	
61	2117.68	4.64646E-03	35.11		
62	2151.47	2.27778E-03	45.63		
65	3492.13	1.38889E-03	44.72		

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

NUCLIDE MDA REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	BE-7	477.59	10.42	-1.81E-01	7.25E-01	7.25E-01
+	NA-22	1274.54	99.94	-9.09E-03	7.85E-02	7.85E-02
+	NA-24	1368.53	99.99	1.96E+12	2.37E+13	5.51E+13
		2754.09	99.86	3.22E+12		2.37E+13
+	AL-26	1808.65	99.76	2.21E-02	5.74E-02	5.74E-02
+	K-40	1460.81	* 10.67	1.95E+01	9.66E-01	9.66E-01
+	@ AR-41	1293.64	99.16	1.00E+26	1.00E+26	1.00E+26
+	TI-44	67.88	94.40	9.72E-03	5.02E-02	5.02E-02
		78.34	96.00	3.12E-01		7.54E-02
+	SC-46	889.25	99.98	-3.34E-02	9.23E-02	9.23E-02
		1120.51	99.99	2.75E-01		1.68E-01
+	V-48	983.52	99.98	-3.21E-02	2.59E-01	2.59E-01
		1312.10	97.50	1.25E-01		3.23E-01
+	CR-51	320.08	9.83	0.00E+00	1.10E+00	1.10E+00
+	MN-54	834.83	99.97	-7.70E-03	8.48E-02	8.48E-02
+	CO-56	846.75	99.96	1.49E-02	9.39E-02	9.39E-02
		1037.75	14.03	2.27E-01		7.06E-01
		1238.25	67.00	2.43E-01		2.25E-01
		1771.40	15.51	7.97E-03		4.21E-01

Analysis Report for 1510086-07
CP4105S08-09

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	CO-56	2598.48	16.90	1.26E-02	9.39E-02	3.03E-01
+	CO-57	122.06	85.51	1.54E-02	5.63E-02	5.63E-02
		136.48	10.60	1.29E-02		4.94E-01
+	CO-58	810.76	99.40	-6.77E-03	1.01E-01	1.01E-01
+	FE-59	1099.22	56.50	3.20E-02	2.29E-01	2.29E-01
		1291.56	43.20	1.92E-02		2.98E-01
+	CO-60	1173.22	100.00	5.97E-02	7.59E-02	1.02E-01
		1332.49	100.00	2.42E-02		7.59E-02
+	ZN-65	1115.52	50.75	6.37E-02	1.78E-01	1.78E-01
+	GA-67	93.31	* 35.70	1.06E+02	1.40E+02	1.40E+02
		208.95	* 2.24	2.47E+03		2.68E+03
		300.22	* 16.00	3.00E+02		5.31E+02
+	SE-75	121.11	16.70	-8.30E-02	9.93E-02	3.08E-01
		136.00	59.20	3.53E-02		9.96E-02
		264.65	59.80	5.67E-03		9.93E-02
		279.53	25.20	8.32E-02		2.55E-01
		400.65	11.40	9.57E-02		5.78E-01
+	RB-82	776.52	13.00	-7.00E-01	1.17E+00	1.17E+00
+	RB-83	520.41	46.00	-7.08E-02	1.33E-01	1.33E-01
		529.64	30.30	-2.42E-02		2.27E-01
		552.65	16.40	-1.16E-01		3.72E-01
+	KR-85	513.99	0.43	-1.54E+01	1.51E+01	1.51E+01
+	SR-85	513.99	99.27	-9.37E-02	9.16E-02	9.16E-02
+	Y-88	898.02	93.40	-1.32E-02	7.88E-02	9.35E-02
		1836.01	99.38	5.22E-03		7.88E-02
+	NB-93M	16.57	9.43	-3.31E+03	5.49E+03	5.49E+03
+	NB-94	702.63	100.00	-2.54E-03	6.21E-02	7.14E-02
		871.10	100.00	1.19E-02		6.21E-02
+	NB-95	765.79	99.81	2.25E-02	1.70E-01	1.70E-01
+	NB-95M	235.69	25.00	1.54E+01	1.23E+02	1.23E+02
+	ZR-95	724.18	43.70	-1.25E-01	1.95E-01	2.42E-01
		756.72	55.30	1.23E-01		1.95E-01
+	MO-99	181.06	6.20	3.04E+02	1.34E+03	2.03E+03
		739.58	12.80	-3.95E+02		1.34E+03
		778.00	4.50	-1.33E+03		3.92E+03
+	RU-103	497.08	89.00	1.73E-02	1.04E-01	1.04E-01
+	RU-106	621.84	9.80	1.24E-01	7.18E-01	7.18E-01
+	AG-108M	433.93	89.90	1.39E-02	5.68E-02	5.68E-02
		614.37	90.40	-6.53E-03		7.62E-02
		722.95	90.50	-1.76E-01		7.36E-02
+	CD-109	88.03	* 3.72	1.20E+00	1.47E+00	1.47E+00
+	AG-110M	657.75	93.14	-2.69E-03	7.57E-02	7.57E-02
		677.61	10.53	-1.69E-01		6.98E-01
		706.67	16.46	1.83E-01		4.75E-01
		763.93	21.98	-2.01E-02		3.70E-01
		884.67	71.63	2.44E-02		1.12E-01
		1384.27	23.94	-4.14E-02		3.13E-01
+	CD-113M	263.70	0.02	6.10E+01	2.20E+02	2.20E+02

Analysis Report for 1510086-07
CP4105S08-09

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	SN-113	255.12	1.93	8.92E-01	9.21E-02	3.29E+00
		391.69	64.90	-6.20E-02		9.21E-02
+	TE123M	159.00	84.10	4.14E-02	7.14E-02	7.14E-02
+	SB-124	602.71	97.87	-2.67E-02	9.64E-02	9.64E-02
		645.85	7.26	-3.68E-01		1.27E+00
		722.78	11.10	-2.05E+00		8.58E-01
		1691.02	49.00	-3.40E-02		1.56E-01
+	I-125	35.49	6.49	-3.06E-01	5.47E+00	5.47E+00
+	SB-125	176.33	6.89	4.43E-01	1.80E-01	7.79E-01
		427.89	29.33	1.51E-02		1.80E-01
		463.38	10.35	6.24E-01		6.54E-01
		600.56	17.80	4.14E-02		3.94E-01
		635.90	11.32	-1.31E-01		5.83E-01
+	SB-126	414.70	83.30	8.66E-02	3.65E-01	3.65E-01
		666.33	99.60	1.97E-01		3.93E-01
		695.00	99.60	1.11E-01		4.36E-01
		720.50	53.80	2.93E-01		7.46E-01
+	SN-126	87.57	* 37.00	1.15E-01	1.41E-01	1.41E-01
+	SB-127	473.00	25.00	1.33E+00	5.02E+01	5.40E+01
		685.20	35.70	-1.02E+01		5.02E+01
		783.80	14.70	1.34E+01		1.56E+02
+	I-129	29.78	57.00	-7.34E-01	1.12E+00	1.12E+00
		33.60	13.20	-1.74E+00		2.40E+00
		39.58	7.52	1.28E-01		2.16E+00
+	I-131	284.30	6.05	1.98E+00	9.88E-01	1.21E+01
		364.48	81.20	-7.33E-02		9.88E-01
		636.97	7.26	-5.94E+00		1.31E+01
		722.89	1.80	-1.30E+02		5.43E+01
+	TE-132	49.72	13.10	-1.06E+01	4.63E+01	4.37E+02
		228.16	88.00	-2.05E+01		4.63E+01
+	BA-133	81.00	33.00	5.80E-03	9.61E-02	1.26E-01
		302.84	17.80	-1.61E-01		3.13E-01
		356.01	60.00	-1.19E-03		9.61E-02
+	I-133	529.87	86.30	1.11E+09	4.29E+09	4.29E+09
+	XE-133	81.00	38.00	3.08E-01	6.68E+00	6.68E+00
+	CS-134	563.23	8.38	3.07E-01	8.66E-02	7.07E-01
		569.32	15.43	8.94E-02		3.96E-01
		604.70	97.60	-1.04E-02		8.66E-02
		795.84	85.40	6.24E-02		9.91E-02
		801.93	8.73	-8.64E-01		7.20E-01
+	CS-135	268.24	16.00	3.65E-02	3.65E-01	3.65E-01
+	@ I-135	1131.51	22.50	1.00E+26	1.00E+26	1.00E+26
	@	1260.41	28.60	1.00E+26		1.00E+26
	@	1678.03	9.54	1.00E+26		1.00E+26
+	CS-136	153.22	7.46	2.70E-01	3.31E-01	3.38E+00
		163.89	4.61	2.11E+00		5.43E+00
		176.55	13.56	-1.93E-01		1.93E+00
		273.65	12.66	-4.03E-01		2.05E+00
		340.57	48.50	-6.12E-01		6.75E-01

Analysis Report for 1510086-07
CP4105S08-09

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	CS-136	818.50	99.70	4.32E-02	3.31E-01	3.31E-01
		1048.07	79.60	8.76E-02		4.97E-01
		1235.34	19.70	6.49E-01		2.76E+00
+	CS-137	661.65	85.12	-4.53E-02	7.41E-02	7.41E-02
+	LA-138	788.74	34.00	1.16E-02	8.93E-02	2.20E-01
		1435.80	66.00	2.15E-02		8.93E-02
+	CE-139	165.85	80.35	3.61E-02	7.14E-02	7.14E-02
+	BA-140	162.64	6.70	1.04E+00	1.22E+00	3.92E+00
		304.84	4.50	2.83E+00		6.11E+00
		423.70	3.20	-1.16E+00		8.98E+00
		437.55	2.00	1.90E+00		1.40E+01
		537.32	25.00	6.55E-01		1.22E+00
+	LA-140	328.77	20.50	7.31E-01	3.38E-01	1.55E+00
		487.03	45.50	2.76E-02		6.16E-01
		815.85	23.50	-1.34E-01		1.48E+00
		1596.49	95.49	8.39E-02		3.38E-01
+	CE-141	145.44	* 48.40	1.62E-01	2.99E-01	2.99E-01
+	CE-143	57.36	11.80	-1.15E+05	1.29E+06	2.85E+06
		293.26	42.00	1.19E+06		1.29E+06
		664.55	5.20	4.26E+06		8.70E+06
+	CE-144	133.54	10.80	1.07E-01	4.90E-01	4.90E-01
+	PM-144	476.78	42.00	-3.17E-02	7.15E-02	1.27E-01
		618.01	98.60	-3.67E-03		7.15E-02
		696.49	99.49	4.63E-02		8.21E-02
+	PM-145	36.85	21.70	2.14E-01	5.10E-01	9.93E-01
		37.36	39.70	1.10E-01		5.10E-01
		42.30	15.10	-7.70E-02		8.51E-01
		72.40	2.31	-1.60E+00		2.08E+00
+	PM-146	453.90	39.94	6.16E-03	1.30E-01	1.30E-01
		735.90	14.01	1.19E-01		5.03E-01
		747.13	13.10	4.78E-02		5.45E-01
+	ND-147	91.11	28.90	-1.77E+00	1.53E+00	1.53E+00
		531.02	13.10	1.16E+00		3.03E+00
+	PM-149	285.90	3.10	1.73E+04	2.91E+04	2.91E+04
+	EU-152	121.78	20.50	5.96E-02	2.17E-01	2.17E-01
		244.69	5.40	-5.48E-01		9.77E-01
		344.27	19.13	-3.76E-02		2.65E-01
		778.89	9.20	5.17E-02		8.02E-01
		964.01	10.40	-3.43E-03		8.59E-01
		1085.78	7.22	-8.43E-02		1.13E+00
		1112.02	9.60	2.73E-01		8.33E-01
		1407.95	14.94	4.02E-02		4.85E-01
+	GD-153	97.43	31.30	1.93E-01	1.64E-01	1.64E-01
		103.18	22.20	-2.64E-01		2.12E-01
+	EU-154	123.07	40.50	-2.62E-02	1.11E-01	1.11E-01
		723.30	19.70	-8.15E-01		3.40E-01
		873.19	11.50	1.64E-02		5.78E-01
		996.32	10.30	-4.14E-01		7.12E-01
		1004.76	17.90	-1.03E-01		4.13E-01

Analysis Report for 1510086-07
CP4105S08-09

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	EU-154	1274.45	35.50	-2.52E-02	1.11E-01	2.17E-01
+	EU-155	86.50	30.90	-1.58E-01	2.03E-01	2.03E-01
		105.30	20.70	5.19E-03		2.21E-01
+	EU-156	811.77	10.40	-1.23E-01	2.87E+00	2.87E+00
		1153.47	7.20	-2.30E-01		5.66E+00
		1230.71	8.90	1.38E+00		4.32E+00
+	HO-166M	184.41	72.60	4.44E-02	8.57E-02	8.57E-02
		280.45	29.60	5.93E-02		1.82E-01
		410.94	11.10	6.89E-02		4.88E-01
		711.69	54.10	4.89E-02		1.28E-01
+	TM-171	66.72	0.14	-1.26E+01	3.51E+01	3.51E+01
+	HF-172	81.75	4.52	-1.13E+00	4.33E-01	9.25E-01
		125.81	11.30	-8.34E-02		4.33E-01
+	LU-172	181.53	20.60	1.34E+00	3.19E+00	6.00E+00
		810.06	16.63	-7.49E-01		1.12E+01
		912.12	15.25	6.01E+01		2.38E+01
		1093.66	62.50	6.27E-01		3.19E+00
+	LU-173	100.72	5.24	2.61E-01	2.82E-01	8.89E-01
		272.11	21.20	5.15E-02		2.82E-01
+	HF-175	343.40	84.00	3.00E-03	8.34E-02	8.34E-02
+	LU-176	88.34	13.30	6.84E-01	5.31E-02	4.80E-01
		201.83	86.00	2.84E-03		6.28E-02
		306.78	94.00	1.92E-02		5.31E-02
+	TA-182	67.75	41.20	2.69E-02	1.39E-01	1.39E-01
		1121.30	34.90	7.90E-01		4.55E-01
		1189.05	16.23	1.73E-01		6.98E-01
		1221.41	26.98	3.77E-02		3.69E-01
		1231.02	11.44	-5.01E-04		9.45E-01
+	IR-192	308.46	29.68	-2.08E-01	1.41E-01	2.17E-01
		468.07	48.10	7.55E-04		1.41E-01
+	HG-203	279.19	77.30	6.82E-02	1.14E-01	1.14E-01
+	BI-207	569.67	97.72	1.37E-02	6.09E-02	6.09E-02
		1063.62	74.90	1.72E-02		1.17E-01
+	TL-208	583.14	* 30.22	1.23E+00	1.08E-01	2.89E-01
		860.37	4.48	1.37E+00		1.90E+00
		2614.66	* 35.85	9.87E-01		1.08E-01
+	BI-210M	262.00	45.00	-6.96E-02	1.06E-01	1.06E-01
		300.00	23.00	2.89E-01		2.65E-01
+	PB-210	46.50	4.25	3.55E+00	2.56E+00	2.56E+00
+	PB-211	404.84	2.90	1.08E+00	1.99E+00	1.99E+00
		831.96	2.90	4.76E-01		2.62E+00
+	BI-212	727.17	* 11.80	7.65E-01	6.32E-01	6.32E-01
		1620.62	2.75	0.00E+00		2.55E+00
+	PB-212	238.63	* 44.60	1.61E+00	1.77E-01	1.77E-01
		300.09	* 3.41	1.87E+00		3.31E+00
+	BI-214	609.31	* 46.30	1.20E+00	2.15E-01	2.15E-01
		1120.29	* 15.10	1.37E+00		7.13E-01
		1764.49	* 15.80	1.52E+00		4.71E-01

Analysis Report for 1510086-07
CP4105S08-09

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	BI-214	2204.22	*	4.98	1.76E+00	2.15E-01	1.61E+00
+	PB-214	295.21	*	19.19	1.59E+00	2.53E-01	5.84E-01
		351.92	*	37.19	1.53E+00		2.53E-01
+	RN-219	401.80		6.50	2.27E-01	8.52E-01	8.52E-01
+	RA-223	323.87		3.88	2.23E-03	1.28E+00	1.28E+00
+	RA-224	240.98		3.95	9.59E+00	2.78E+00	2.78E+00
+	RA-225	40.00		31.00	1.28E-01	2.16E+00	2.16E+00
+	RA-226	186.21	*	3.28	2.99E+00	2.16E+00	2.16E+00
+	TH-227	50.10		8.40	-2.15E-02	6.74E-01	8.84E-01
		236.00		11.50	8.43E-02		6.74E-01
		256.20		6.30	-4.30E-01		8.21E-01
+	AC-228	338.32	*	11.40	1.48E+00	3.67E-01	7.91E-01
		911.07	*	27.70	1.34E+00		3.67E-01
		969.11	*	16.60	9.85E-01		6.63E-01
+	TH-230	48.44		16.90	-4.37E-01	4.93E-01	4.93E-01
		62.85		4.60	8.17E-01		1.26E+00
		67.67		0.37	2.48E+00		1.28E+01
+	PA-231	283.67		1.60	5.09E-01	2.41E+00	3.12E+00
		302.67		2.30	-1.24E+00		2.41E+00
+	TH-231	25.64		14.70	1.85E+00	6.96E-01	1.45E+01
		84.21		6.40	5.87E-01		6.96E-01
+	PA-233	311.98		38.60	6.58E-02	2.95E-01	2.95E-01
+	PA-234	131.20		20.40	2.80E-02	2.45E-01	2.45E-01
		733.99		8.80	2.68E-01		7.86E-01
		946.00		12.00	7.83E-02		5.93E-01
+	PA-234M	1001.03		0.92	-1.95E+00	8.03E+00	8.03E+00
+	TH-234	63.29	*	3.80	1.42E+00	2.61E+00	2.61E+00
+	U-235	143.76		10.50	6.14E-02	4.89E-01	4.89E-01
		163.35		4.70	2.74E-01		1.03E+00
		205.31		4.70	-5.50E-02		1.14E+00
+	NP-237	86.50	*	12.60	3.38E-01	4.15E-01	4.15E-01
+	NP-239	106.10		22.70	1.33E+02	1.93E+03	1.93E+03
		228.18		10.70	-2.14E+03		4.85E+03
		277.60		14.10	-3.88E+02		3.68E+03
+	AM-241	59.54		35.90	-1.50E-02	1.50E-01	1.50E-01
+	AM-243	74.67		66.00	-2.56E-01	1.03E-01	1.03E-01
+	CM-243	209.75		3.29	2.17E+00	3.86E-01	1.86E+00
		228.14		10.60	-2.25E-01		5.09E-01
		277.60		14.00	-4.06E-02		3.86E-01

- + = Nuclide identified during the nuclide identification
 * = Energy line found in the spectrum
 > = MDA value not calculated
 @ = Half-life too short to be able to perform the decay correction
 ? = CAUTION: MDA value is inconsistent with Currie MDA at 95% confidence level

0550A

Analysis Report for 1510086-07
CP4105S08-09

NUCLIDE MDA REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
BE-7	477.59	10.42	7.25E-01	7.25E-01	-1.81E-01	3.39E-01
NA-22	1274.54	99.94	7.85E-02	7.85E-02	-9.09E-03	3.57E-02
NA-24	1368.53	99.99	5.51E+13	2.37E+13	1.96E+12	2.38E+13
	2754.09	99.86	2.37E+13		3.22E+12	7.50E+12
AL-26	1808.65	99.76	5.74E-02	5.74E-02	2.21E-02	2.44E-02
+ K-40	1460.81	*	9.66E-01	9.66E-01	1.95E+01	4.48E-01
@ AR-41	1293.64	99.16	1.00E+26	1.00E+26	1.00E+26	1.00E+20
TI-44	67.88	94.40	5.02E-02	5.02E-02	9.72E-03	2.44E-02
	78.34	96.00	7.54E-02		3.12E-01	3.70E-02
SC-46	889.25	99.98	9.23E-02	9.23E-02	-3.34E-02	4.28E-02
	1120.51	99.99	1.68E-01		2.75E-01	7.99E-02
V-48	983.52	99.98	2.59E-01	2.59E-01	-3.21E-02	1.19E-01
	1312.10	97.50	3.23E-01		1.25E-01	1.47E-01
CR-51	320.08	9.83	1.10E+00	1.10E+00	0.00E+00	5.26E-01
MN-54	834.83	99.97	8.48E-02	8.48E-02	-7.70E-03	3.98E-02
CO-56	846.75	99.96	9.39E-02	9.39E-02	1.49E-02	4.37E-02
	1037.75	14.03	7.06E-01		2.27E-01	3.26E-01
	1238.25	67.00	2.25E-01		2.43E-01	1.06E-01
	1771.40	15.51	4.21E-01		7.97E-03	1.75E-01
	2598.48	16.90	3.03E-01		1.26E-02	1.17E-01
CO-57	122.06	85.51	5.63E-02	5.63E-02	1.54E-02	2.73E-02
	136.48	10.60	4.94E-01		1.29E-02	2.40E-01
CO-58	810.76	99.40	1.01E-01	1.01E-01	-6.77E-03	4.72E-02
FE-59	1099.22	56.50	2.29E-01	2.29E-01	3.20E-02	1.06E-01
	1291.56	43.20	2.98E-01		1.92E-02	1.36E-01
CO-60	1173.22	100.00	1.02E-01	7.59E-02	5.97E-02	4.78E-02
	1332.49	100.00	7.59E-02		2.42E-02	3.43E-02
ZN-65	1115.52	50.75	1.78E-01	1.78E-01	6.37E-02	8.25E-02
+ GA-67	93.31	*	35.70	1.40E+02	1.06E+02	6.89E+01
	208.95	*	2.24	2.68E+03	2.47E+03	1.31E+03
	300.22	*	16.00	5.31E+02	3.00E+02	2.60E+02
SE-75	121.11	16.70	3.08E-01	9.93E-02	-8.30E-02	1.49E-01
	136.00	59.20	9.96E-02		3.53E-02	4.84E-02
	264.65	59.80	9.93E-02		5.67E-03	4.75E-02
	279.53	25.20	2.55E-01		8.32E-02	1.22E-01
	400.65	11.40	5.78E-01		9.57E-02	2.74E-01
RB-82	776.52	13.00	1.17E+00	1.17E+00	-7.00E-01	5.45E-01

Analysis Report for 1510086-07

CP4105S08-09

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)	
RB-83	520.41	46.00	1.33E-01	1.33E-01	-7.08E-02	6.16E-02	
	529.64	30.30	2.27E-01		-2.42E-02	1.06E-01	
	552.65	16.40	3.72E-01		-1.16E-01	1.72E-01	
KR-85	513.99	0.43	1.51E+01	1.51E+01	-1.54E+01	7.16E+00	
SR-85	513.99	99.27	9.16E-02	9.16E-02	-9.37E-02	4.34E-02	
Y-88	898.02	93.40	9.35E-02	7.88E-02	-1.32E-02	4.33E-02	
	1836.01	99.38	7.88E-02		5.22E-03	3.41E-02	
NB-93M	16.57	9.43	5.49E+03	5.49E+03	-3.31E+03	2.67E+03	
NB-94	702.63	100.00	7.14E-02	6.21E-02	-2.54E-03	3.36E-02	
	871.10	100.00	6.21E-02		1.19E-02	2.85E-02	
NB-95	765.79	99.81	1.70E-01	1.70E-01	2.25E-02	8.06E-02	
NB-95M	235.69	25.00	1.23E+02	1.23E+02	1.54E+01	5.99E+01	
ZR-95	724.18	43.70	2.42E-01	1.95E-01	-1.25E-01	1.14E-01	
MO-99	756.72	55.30	1.95E-01		1.23E-01	9.18E-02	
	181.06	6.20	2.03E+03	1.34E+03	3.04E+02	9.80E+02	
	739.58	12.80	1.34E+03		-3.95E+02	6.27E+02	
	778.00	4.50	3.92E+03		-1.33E+03	1.83E+03	
RU-103	497.08	89.00	1.04E-01	1.04E-01	1.73E-02	4.88E-02	
RU-106	621.84	9.80	7.18E-01	7.18E-01	1.24E-01	3.38E-01	
AG-108M	433.93	89.90	5.68E-02	5.68E-02	1.39E-02	2.68E-02	
	614.37	90.40	7.62E-02		-6.53E-03	3.60E-02	
	722.95	90.50	7.36E-02		-1.76E-01	3.44E-02	
+ CD-109	88.03	* 3.72	1.47E+00	1.47E+00	1.20E+00	7.19E-01	
AG-110M	657.75	93.14	7.57E-02	7.57E-02	-2.69E-03	3.55E-02	
	677.61	10.53	6.98E-01		-1.69E-01	3.28E-01	
	706.67	16.46	4.75E-01		1.83E-01	2.23E-01	
	763.93	21.98	3.70E-01		-2.01E-02	1.74E-01	
	884.67	71.63	1.12E-01		2.44E-02	5.19E-02	
	1384.27	23.94	3.13E-01		-4.14E-02	1.40E-01	
	CD-113M	263.70	0.02	2.20E+02	2.20E+02	6.10E+01	1.05E+02
	SN-113	255.12	1.93	3.29E+00	9.21E-02	8.92E-01	1.58E+00
	391.69	64.90	9.21E-02		-6.20E-02	4.35E-02	
TE123M	159.00	84.10	7.14E-02	7.14E-02	4.14E-02	3.46E-02	
SB-124	602.71	97.87	9.64E-02	9.64E-02	-2.67E-02	4.54E-02	
	645.85	7.26	1.27E+00		-3.68E-01	5.94E-01	
	722.78	11.10	8.58E-01		-2.05E+00	4.01E-01	
	1691.02	49.00	1.56E-01		-3.40E-02	6.57E-02	
I-125	35.49	6.49	5.47E+00	5.47E+00	-3.06E-01	2.66E+00	
SB-125	176.33	6.89	7.79E-01	1.80E-01	4.43E-01	3.77E-01	
	427.89	29.33	1.80E-01		1.51E-02	8.48E-02	
	463.38	10.35	6.54E-01		6.24E-01	3.11E-01	
	600.56	17.80	3.94E-01		4.14E-02	1.86E-01	
	635.90	11.32	5.83E-01		-1.31E-01	2.74E-01	
SB-126	414.70	83.30	3.65E-01	3.65E-01	8.66E-02	1.73E-01	
	666.33	99.60	3.93E-01		1.97E-01	1.85E-01	
	695.00	99.60	4.36E-01		1.11E-01	2.06E-01	
	720.50	53.80	7.46E-01		2.93E-01	3.50E-01	
+ SN-126	87.57	* 37.00	1.41E-01	1.41E-01	1.15E-01	6.90E-02	
SB-127	473.00	25.00	5.40E+01	5.02E+01	1.33E+00	2.53E+01	
	685.20	35.70	5.02E+01		-1.02E+01	2.35E+01	
	783.80	14.70	1.56E+02		1.34E+01	7.35E+01	
I-129	29.78	57.00	1.12E+00	1.12E+00	-7.34E-01	5.42E-01	
	33.60	13.20	2.40E+00		-1.74E+00	1.16E+00	

Analysis Report for 1510086-07

CP4105S08-09

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
I-129	39.58	7.52	2.16E+00	1.12E+00	1.28E-01	1.05E+00
I-131	284.30	6.05	1.21E+01	9.88E-01	1.98E+00	5.79E+00
	364.48	81.20	9.88E-01		-7.33E-02	4.70E-01
	636.97	7.26	1.31E+01		-5.94E+00	6.14E+00
	722.89	1.80	5.43E+01		-1.30E+02	2.54E+01
TE-132	49.72	13.10	4.37E+02	4.63E+01	-1.06E+01	2.12E+02
	228.16	88.00	4.63E+01		-2.05E+01	2.23E+01
BA-133	81.00	33.00	1.26E-01	9.61E-02	5.80E-03	6.09E-02
	302.84	17.80	3.13E-01		-1.61E-01	1.50E-01
	356.01	60.00	9.61E-02		-1.19E-03	4.59E-02
I-133	529.87	86.30	4.29E+09	4.29E+09	1.11E+09	2.01E+09
XE-133	81.00	38.00	6.68E+00	6.68E+00	3.08E-01	3.24E+00
CS-134	563.23	8.38	7.07E-01	8.66E-02	3.07E-01	3.31E-01
	569.32	15.43	3.96E-01		8.94E-02	1.86E-01
	604.70	97.60	8.66E-02		-1.04E-02	4.13E-02
	795.84	85.40	9.91E-02		6.24E-02	4.67E-02
	801.93	8.73	7.20E-01		-8.64E-01	3.32E-01
CS-135	268.24	16.00	3.65E-01	3.65E-01	3.65E-02	1.76E-01
@ I-135	1131.51	22.50	1.00E+26	1.00E+26	1.00E+26	1.00E+20
@	1260.41	28.60	1.00E+26		1.00E+26	1.00E+20
@	1678.03	9.54	1.00E+26		1.00E+26	1.00E+20
CS-136	153.22	7.46	3.38E+00	3.31E-01	2.70E-01	1.64E+00
	163.89	4.61	5.43E+00		2.11E+00	2.63E+00
	176.55	13.56	1.93E+00		-1.93E-01	9.34E-01
	273.65	12.66	2.05E+00		-4.03E-01	9.78E-01
	340.57	48.50	6.75E-01		-6.12E-01	3.24E-01
	818.50	99.70	3.31E-01		4.32E-02	1.53E-01
	1048.07	79.60	4.97E-01		8.76E-02	2.29E-01
	1235.34	19.70	2.76E+00		6.49E-01	1.29E+00
CS-137	661.65	85.12	7.41E-02	7.41E-02	-4.53E-02	3.47E-02
LA-138	788.74	34.00	2.20E-01	8.93E-02	1.16E-02	1.03E-01
	1435.80	66.00	8.93E-02		2.15E-02	3.90E-02
CE-139	165.85	80.35	7.14E-02	7.14E-02	3.61E-02	3.46E-02
BA-140	162.64	6.70	3.92E+00	1.22E+00	1.04E+00	1.90E+00
	304.84	4.50	6.11E+00		2.83E+00	2.91E+00
	423.70	3.20	8.98E+00		-1.16E+00	4.24E+00
	437.55	2.00	1.40E+01		1.90E+00	6.59E+00
	537.32	25.00	1.22E+00		6.55E-01	5.72E-01
LA-140	328.77	20.50	1.55E+00	3.38E-01	7.31E-01	7.43E-01
	487.03	45.50	6.16E-01		2.76E-02	2.89E-01
	815.85	23.50	1.48E+00		-1.34E-01	6.85E-01
	1596.49	95.49	3.38E-01		8.39E-02	1.46E-01
+ CE-141	145.44	*	2.99E-01	2.99E-01	1.62E-01	1.46E-01
CE-143	57.36	11.80	2.85E+06	1.29E+06	-1.15E+05	1.38E+06
	293.26	42.00	1.29E+06		1.19E+06	6.29E+05
	664.55	5.20	8.70E+06		4.26E+06	4.09E+06
CE-144	133.54	10.80	4.90E-01	4.90E-01	1.07E-01	2.38E-01
PM-144	476.78	42.00	1.27E-01	7.15E-02	-3.17E-02	5.96E-02
	618.01	98.60	7.15E-02		-3.67E-03	3.37E-02
	696.49	99.49	8.21E-02		4.63E-02	3.88E-02
PM-145	36.85	21.70	9.93E-01	5.10E-01	2.14E-01	4.82E-01
	37.36	39.70	5.10E-01		1.10E-01	2.48E-01
	42.30	15.10	8.51E-01		-7.70E-02	4.14E-01

Analysis Report for 1510086-07
CP4105S08-09

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
PM-145	72.40	2.31	2.08E+00	5.10E-01	-1.60E+00	1.01E+00
PM-146	453.90	39.94	1.30E-01	1.30E-01	6.16E-03	6.10E-02
	735.90	14.01	5.03E-01		1.19E-01	2.36E-01
	747.13	13.10	5.45E-01		4.78E-02	2.55E-01
ND-147	91.11	28.90	1.53E+00	1.53E+00	-1.77E+00	7.52E-01
	531.02	13.10	3.03E+00		1.16E+00	1.42E+00
PM-149	285.90	3.10	2.91E+04	2.91E+04	1.73E+04	1.39E+04
EU-152	121.78	20.50	2.17E-01	2.17E-01	5.96E-02	1.05E-01
	244.69	5.40	9.77E-01		-5.48E-01	4.70E-01
	344.27	19.13	2.65E-01		-3.76E-02	1.26E-01
	778.89	9.20	8.02E-01		5.17E-02	3.76E-01
	964.01	10.40	8.59E-01		-3.43E-03	4.03E-01
	1085.78	7.22	1.13E+00		-8.43E-02	5.22E-01
	1112.02	9.60	8.33E-01		2.73E-01	3.84E-01
	1407.95	14.94	4.85E-01		4.02E-02	2.18E-01
GD-153	97.43	31.30	1.64E-01	1.64E-01	1.93E-01	7.99E-02
	103.18	22.20	2.12E-01		-2.64E-01	1.03E-01
EU-154	123.07	40.50	1.11E-01	1.11E-01	-2.62E-02	5.38E-02
	723.30	19.70	3.40E-01		-8.15E-01	1.59E-01
	873.19	11.50	5.78E-01		1.64E-02	2.67E-01
	996.32	10.30	7.12E-01		-4.14E-01	3.28E-01
	1004.76	17.90	4.13E-01		-1.03E-01	1.90E-01
	1274.45	35.50	2.17E-01		-2.52E-02	9.90E-02
EU-155	86.50	30.90	2.03E-01	2.03E-01	-1.58E-01	9.94E-02
	105.30	20.70	2.21E-01		5.19E-03	1.08E-01
EU-156	811.77	10.40	2.87E+00	2.87E+00	-1.23E-01	1.34E+00
	1153.47	7.20	5.66E+00		-2.30E-01	2.65E+00
	1230.71	8.90	4.32E+00		1.38E+00	2.00E+00
HO-166M	184.41	72.60	8.57E-02	8.57E-02	4.44E-02	4.17E-02
	280.45	29.60	1.82E-01		5.93E-02	8.70E-02
	410.94	11.10	4.88E-01		6.89E-02	2.31E-01
	711.69	54.10	1.28E-01		4.89E-02	6.00E-02
TM-171	66.72	0.14	3.51E+01	3.51E+01	-1.26E+01	1.70E+01
HF-172	81.75	4.52	9.25E-01	4.33E-01	-1.13E+00	4.48E-01
	125.81	11.30	4.33E-01		-8.34E-02	2.10E-01
LU-172	181.53	20.60	6.00E+00	3.19E+00	1.34E+00	2.90E+00
	810.06	16.63	1.12E+01		-7.49E-01	5.22E+00
	912.12	15.25	2.38E+01		6.01E+01	1.15E+01
	1093.66	62.50	3.19E+00		6.27E-01	1.47E+00
LU-173	100.72	5.24	8.89E-01	2.82E-01	2.61E-01	4.32E-01
	272.11	21.20	2.82E-01		5.15E-02	1.36E-01
HF-175	343.40	84.00	8.34E-02	8.34E-02	3.00E-03	3.97E-02
LU-176	88.34	13.30	4.80E-01	5.31E-02	6.84E-01	2.35E-01
	201.83	86.00	6.28E-02		2.84E-03	3.04E-02
	306.78	94.00	5.31E-02		1.92E-02	2.53E-02
TA-182	67.75	41.20	1.39E-01	1.39E-01	2.69E-02	6.75E-02
	1121.30	34.90	4.55E-01		7.90E-01	2.17E-01
	1189.05	16.23	6.98E-01		1.73E-01	3.25E-01
	1221.41	26.98	3.69E-01		3.77E-02	1.70E-01
	1231.02	11.44	9.45E-01		-5.01E-04	4.37E-01
IR-192	308.46	29.68	2.17E-01	1.41E-01	-2.08E-01	1.03E-01
	468.07	48.10	1.41E-01		7.55E-04	6.61E-02
HG-203	279.19	77.30	1.14E-01	1.14E-01	6.82E-02	5.46E-02

Analysis Report for 1510086-07

CP4105S08-09

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
BI-207	569.67	97.72	6.09E-02	6.09E-02	1.37E-02	2.86E-02
	1063.62	74.90	1.17E-01		1.72E-02	5.43E-02
+ TL-208	583.14 *	30.22	2.89E-01	1.08E-01	1.23E+00	1.38E-01
	860.37	4.48	1.90E+00		1.37E+00	8.96E-01
	2614.66 *	35.85	1.08E-01		9.87E-01	4.19E-02
BI-210M	262.00	45.00	1.06E-01	1.06E-01	-6.96E-02	5.06E-02
	300.00	23.00	2.65E-01		2.89E-01	1.27E-01
PB-210	46.50	4.25	2.56E+00	2.56E+00	3.55E+00	1.25E+00
PB-211	404.84	2.90	1.99E+00	1.99E+00	1.08E+00	9.45E-01
	831.96	2.90	2.62E+00		4.76E-01	1.23E+00
+ BI-212	727.17 *	11.80	6.32E-01	6.32E-01	7.65E-01	2.97E-01
	1620.62	2.75	2.55E+00		0.00E+00	1.13E+00
+ PB-212	238.63 *	44.60	1.77E-01	1.77E-01	1.61E+00	8.63E-02
	300.09 *	3.41	3.31E+00		1.87E+00	1.62E+00
+ BI-214	609.31 *	46.30	2.15E-01	2.15E-01	1.20E+00	1.04E-01
	1120.29 *	15.10	7.13E-01		1.37E+00	3.36E-01
	1764.49 *	15.80	4.71E-01		1.52E+00	2.09E-01
	2204.22 *	4.98	1.61E+00		1.76E+00	7.14E-01
+ PB-214	295.21 *	19.19	5.84E-01	2.53E-01	1.59E+00	2.86E-01
	351.92 *	37.19	2.53E-01		1.53E+00	1.23E-01
RN-219	401.80	6.50	8.52E-01	8.52E-01	2.27E-01	4.04E-01
RA-223	323.87	3.88	1.28E+00	1.28E+00	2.23E-03	6.08E-01
RA-224	240.98	3.95	2.78E+00	2.78E+00	9.59E+00	1.37E+00
RA-225	40.00	31.00	2.16E+00	2.16E+00	1.28E-01	1.05E+00
+ RA-226	186.21 *	3.28	2.16E+00	2.16E+00	2.99E+00	1.06E+00
TH-227	50.10	8.40	8.84E-01	6.74E-01	-2.15E-02	4.29E-01
	236.00	11.50	6.74E-01		8.43E-02	3.29E-01
	256.20	6.30	8.21E-01		-4.30E-01	3.94E-01
+ AC-228	338.32 *	11.40	7.91E-01	3.67E-01	1.48E+00	3.84E-01
	911.07 *	27.70	3.67E-01		1.34E+00	1.74E-01
	969.11 *	16.60	6.63E-01		9.85E-01	3.15E-01
TH-230	48.44	16.90	4.93E-01	4.93E-01	-4.37E-01	2.40E-01
	62.85	4.60	1.26E+00		8.17E-01	6.13E-01
	67.67	0.37	1.28E+01		2.48E+00	6.23E+00
PA-231	283.67	1.60	3.12E+00	2.41E+00	5.09E-01	1.49E+00
	302.67	2.30	2.41E+00		-1.24E+00	1.15E+00
TH-231	25.64	14.70	1.45E+01	6.96E-01	1.85E+00	7.03E+00
	84.21	6.40	6.96E-01		5.87E-01	3.38E-01
PA-233	311.98	38.60	2.95E-01	2.95E-01	6.58E-02	1.41E-01
PA-234	131.20	20.40	2.45E-01	2.45E-01	2.80E-02	1.19E-01
	733.99	8.80	7.86E-01		2.68E-01	3.68E-01
	946.00	12.00	5.93E-01		7.83E-02	2.74E-01
PA-234M	1001.03	0.92	8.03E+00	8.03E+00	-1.95E+00	3.71E+00
+ TH-234	63.29 *	3.80	2.61E+00	2.61E+00	1.42E+00	1.29E+00
U-235	143.76	10.50	4.89E-01	4.89E-01	6.14E-02	2.38E-01
	163.35	4.70	1.03E+00		2.74E-01	5.01E-01
	205.31	4.70	1.14E+00		-5.50E-02	5.53E-01
+ NP-237	86.50 *	12.60	4.15E-01	4.15E-01	3.38E-01	2.03E-01
NP-239	106.10	22.70	1.93E+03	1.93E+03	1.33E+02	9.37E+02
	228.18	10.70	4.85E+03		-2.14E+03	2.34E+03
	277.60	14.10	3.68E+03		-3.88E+02	1.77E+03
AM-241	59.54	35.90	1.50E-01	1.50E-01	-1.50E-02	7.27E-02
AM-243	74.67	66.00	1.03E-01	1.03E-01	-2.56E-01	5.07E-02

Analysis Report for 1510086-07
CP4105S08-09

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
CM-243	209.75	3.29	1.86E+00	3.86E-01	2.17E+00	9.05E-01
	228.14	10.60	5.09E-01		-2.25E-01	2.45E-01
	277.60	14.00	3.86E-01		-4.06E-02	1.85E-01

- + = Nuclide identified during the nuclide identification
 * = Energy line found in the spectrum
 > = MDA value not calculated
 @ = Half-life too short to be able to perform the decay correction

No Action Level results available for reporting purposes.

DATA REVIEW COMMENTS REPORT

Creation Date	Comment	User
----------------------	----------------	-------------

No Data Review Comments Entered.

 ***** S P E C T R A L D A T A R E P O R T *****

Sample Title: CP4105S08-09

Elapsed Live time: 3600

Elapsed Real Time: 3601

Channel	0	1	6	11	20	39	215	
1:	0	0	1	6	11	20	39	215
9:	646	1277	1039	450	765	1607	263	174
17:	131	144	128	140	122	135	113	135
25:	132	113	105	103	107	100	108	134
33:	119	117	102	134	131	128	135	151
41:	126	139	154	138	134	147	248	145
49:	126	121	118	113	145	118	107	78
57:	97	106	112	118	126	130	166	180
65:	142	119	110	133	126	124	113	149
73:	153	186	471	233	554	362	128	113
81:	113	112	103	160	141	112	214	229
89:	105	196	125	114	269	162	101	80
97:	91	94	86	105	54	77	84	64
105:	94	92	77	85	79	71	73	79
113:	86	80	95	98	74	77	60	70
121:	69	65	70	83	71	80	78	85
129:	92	104	64	84	83	82	75	78
137:	84	79	66	72	78	72	74	104
145:	68	90	80	56	67	70	60	60
153:	62	80	81	65	84	70	71	61
161:	59	55	62	73	64	56	53	67
169:	49	67	52	83	67	74	57	67
177:	82	53	50	57	64	53	53	53
185:	90	196	96	53	63	57	55	71
193:	49	56	54	55	66	67	63	55
201:	59	62	59	60	55	58	53	50
209:	104	94	59	55	50	46	49	46
217:	58	58	54	51	61	66	54	42
225:	61	45	53	55	60	34	53	48
233:	52	52	36	49	36	327	574	100
241:	99	145	75	35	35	39	29	27
249:	42	30	43	31	48	33	38	43
257:	39	40	44	34	32	37	28	27
265:	37	46	31	37	47	72	52	37
273:	34	25	39	30	45	47	32	34
281:	39	32	25	29	39	30	22	45
289:	26	26	29	32	34	67	249	130
297:	25	25	39	66	55	32	30	23
305:	36	29	27	21	26	24	36	23
313:	30	30	26	35	26	25	32	27
321:	28	18	26	29	22	32	37	58
329:	36	23	23	28	32	30	32	28
337:	36	138	86	30	30	23	28	19
345:	26	24	28	31	28	27	172	401
353:	112	32	31	33	22	32	25	20
361:	34	34	28	19	26	24	23	18

369: 20 28 17 25 21 19 17 30

Sample Title: CP4105S08-09

Channel	1	2	3	4	5	6	7	8
377:	22	16	23	19	26	29	23	18
385:	25	12	25	26	24	15	15	27
393:	17	22	27	23	24	22	20	18
401:	25	18	35	21	21	23	26	20
409:	25	32	13	11	27	16	21	20
417:	19	22	22	14	30	20	28	12
425:	22	17	19	22	17	17	17	19
433:	14	11	17	27	10	18	17	21
441:	17	19	22	16	24	14	18	22
449:	13	20	17	18	28	10	17	10
457:	16	14	19	16	17	22	47	29
465:	23	14	18	16	20	9	14	15
473:	18	13	12	10	18	24	10	20
481:	16	13	14	15	13	20	19	11
489:	13	13	17	10	18	13	11	17
497:	20	16	15	11	16	11	20	7
505:	16	10	19	20	38	71	101	42
513:	27	15	14	16	16	9	10	12
521:	13	13	14	16	12	18	13	13
529:	19	13	14	18	13	10	13	20
537:	17	14	14	13	8	14	14	17
545:	17	12	15	12	8	12	6	13
553:	10	11	16	13	10	10	12	8
561:	12	19	11	16	18	10	15	17
569:	14	18	16	18	10	12	14	11
577:	13	14	17	10	21	53	191	71
585:	16	12	13	12	9	12	13	10
593:	9	13	13	16	19	17	17	12
601:	16	10	9	16	10	18	13	68
609:	234	140	21	11	17	13	15	6
617:	14	15	10	16	13	11	12	7
625:	19	9	9	9	13	8	7	10
633:	13	10	13	10	12	11	11	13
641:	19	14	7	11	15	12	13	10
649:	9	11	9	7	17	11	11	9
657:	17	10	7	12	10	5	13	14
665:	17	12	12	9	7	8	11	12
673:	12	13	10	8	9	9	14	16
681:	16	11	10	11	9	12	12	8
689:	8	9	11	13	11	18	11	13
697:	21	11	15	13	5	14	13	14
705:	10	9	10	15	13	10	9	13
713:	8	9	7	11	13	10	18	17
721:	6	6	8	10	7	15	38	25
729:	4	7	8	12	12	14	8	5
737:	14	12	9	8	9	10	9	14
745:	9	14	13	4	10	10	9	7
753:	10	10	21	10	13	12	11	9
761:	8	6	14	16	12	14	10	28
769:	29	10	15	17	10	11	4	12
777:	4	9	9	12	15	14	10	16
785:	16	19	8	6	8	7	12	11
793:	7	13	24	17	6	16	9	9

801: 5 3 11 9 2 15 13 3

Sample Title: CP4105S08-09

Channel	1	2	3	4	5	6	7	8
809:	11	8	11	15	10	9	7	5
817:	7	9	5	8	10	7	8	7
825:	8	10	5	10	7	17	10	5
833:	7	9	17	16	17	7	7	13
841:	10	5	14	12	9	6	11	2
849:	7	8	8	11	5	8	11	7
857:	8	3	9	25	23	12	7	7
865:	6	7	1	9	4	11	7	6
873:	3	3	10	9	10	8	3	7
881:	8	14	6	5	12	7	8	8
889:	10	10	6	7	8	14	10	7
897:	8	7	8	11	4	6	8	6
905:	9	6	5	9	8	44	94	58
913:	14	9	10	9	5	7	4	4
921:	11	8	6	4	3	7	7	7
929:	5	7	7	7	15	21	11	4
937:	4	8	6	6	9	5	7	4
945:	8	6	8	7	10	4	8	5
953:	8	1	5	5	11	8	7	6
961:	6	8	7	19	17	10	11	34
969:	70	19	6	9	6	10	8	9
977:	10	7	7	2	6	8	7	10
985:	7	1	10	2	5	9	8	11
993:	3	5	7	7	14	5	7	8
1001:	12	4	5	8	6	7	6	7
1009:	10	6	4	6	5	5	10	8
1017:	10	6	5	1	9	10	6	4
1025:	5	3	10	7	3	3	11	5
1033:	6	4	8	3	6	7	9	11
1041:	5	5	4	10	8	7	9	6
1049:	4	9	6	3	8	10	4	4
1057:	8	7	7	7	10	9	12	12
1065:	6	7	12	6	6	4	9	11
1073:	3	3	5	8	11	9	5	7
1081:	7	6	8	7	5	9	9	8
1089:	8	9	11	1	6	3	9	10
1097:	4	5	11	8	5	6	3	10
1105:	5	1	6	6	3	7	5	7
1113:	14	5	7	7	2	10	26	51
1121:	29	12	4	6	4	8	4	4
1129:	8	7	9	11	7	8	11	5
1137:	4	8	2	10	6	9	5	5
1145:	4	5	9	8	8	6	9	9
1153:	8	8	22	9	4	7	10	9
1161:	12	3	7	9	4	10	4	13
1169:	12	12	11	15	13	7	6	9
1177:	5	2	6	8	6	11	8	11
1185:	9	14	12	12	5	6	5	7
1193:	2	10	10	6	10	8	7	6
1201:	5	9	9	5	10	9	6	13
1209:	5	11	5	7	8	10	6	5
1217:	6	8	5	4	9	7	8	3
1225:	6	6	7	6	12	5	13	6

1233: 7 3 10 6 20 21 14 4

Sample Title: CP4105S08-09

Channel	1	2	3	4	5	6	7	8	9
1241:	12	4	7	9	12	8	3	11	
1249:	3	9	2	9	7	11	8	10	
1257:	4	7	5	6	3	5	7	9	
1265:	9	1	6	3	3	5	6	2	
1273:	7	7	8	1	4	6	7	3	
1281:	5	9	4	5	4	5	5	1	
1289:	9	5	7	2	9	4	6	4	
1297:	3	4	5	4	5	4	7	8	
1305:	7	4	4	4	7	8	5	6	
1313:	1	5	6	5	2	5	2	2	
1321:	3	1	6	3	2	3	3	5	
1329:	5	4	3	4	7	8	0	1	
1337:	4	5	1	7	3	2	5	5	
1345:	5	5	2	0	2	1	6	5	
1353:	5	1	3	2	3	2	2	6	
1361:	3	0	5	1	1	2	3	2	
1369:	2	2	2	0	2	4	3	8	
1377:	6	6	4	2	4	3	2	6	
1385:	4	5	0	5	4	3	2	3	
1393:	4	5	5	5	2	2	2	1	
1401:	6	7	2	3	2	4	4	6	
1409:	6	1	3	2	1	2	1	3	
1417:	0	2	1	4	2	2	2	0	
1425:	1	2	1	2	1	1	1	3	
1433:	1	2	2	3	3	2	3	1	
1441:	1	2	1	2	1	4	1	2	
1449:	5	2	6	1	6	3	3	2	
1457:	5	18	116	281	264	70	14	1	
1465:	3	2	0	4	3	3	1	0	
1473:	1	5	1	1	4	3	0	2	
1481:	3	0	2	2	0	2	2	2	
1489:	1	5	2	2	1	6	2	5	
1497:	1	1	1	4	4	3	0	0	
1505:	3	1	6	7	6	2	3	5	
1513:	4	1	5	2	1	4	2	3	
1521:	2	0	1	4	1	3	2	1	
1529:	2	1	3	2	1	3	3	3	
1537:	2	0	3	1	1	0	5	2	
1545:	2	2	1	0	3	0	1	0	
1553:	2	1	1	5	5	1	2	2	
1561:	1	3	4	0	2	3	2	0	
1569:	2	0	3	5	2	3	1	1	
1577:	2	5	3	6	3	4	2	5	
1585:	2	5	6	7	5	5	4	1	
1593:	2	0	2	2	0	3	0	4	
1601:	0	2	1	1	2	1	2	2	
1609:	2	0	1	0	3	0	0	1	
1617:	1	1	0	3	4	3	1	6	
1625:	5	3	1	1	4	3	2	0	
1633:	2	2	1	1	6	2	4	2	
1641:	1	2	0	0	3	1	0	1	
1649:	1	3	0	2	1	1	2	2	
1657:	1	1	2	3	3	1	2	1	

1665: 3 3 2 0 1 2 1 3

Sample Title: CP4105S08-09

Channel	1	2	3	4	5	6	7	8
1673:	2	0	1	1	1	0	0	1
1681:	1	2	1	0	2	1	1	2
1689:	0	0	2	2	1	1	2	2
1697:	2	1	1	4	1	2	0	2
1705:	1	2	4	2	0	1	0	2
1713:	1	3	1	1	3	3	2	1
1721:	1	3	2	2	0	1	0	8
1729:	13	2	4	0	3	1	3	1
1737:	1	1	0	2	2	0	0	2
1745:	0	1	2	0	1	0	0	2
1753:	0	1	1	2	2	1	1	2
1761:	0	11	20	28	15	9	2	1
1769:	0	0	2	0	2	0	1	1
1777:	1	2	2	1	3	1	1	3
1785:	1	0	0	1	0	2	1	1
1793:	1	0	1	3	4	2	1	1
1801:	2	0	0	3	2	1	0	1
1809:	1	1	1	1	0	1	0	1
1817:	1	2	3	2	1	1	0	0
1825:	0	2	1	2	1	0	2	2
1833:	2	1	1	3	1	1	1	1
1841:	2	2	0	0	2	2	7	4
1849:	2	1	1	4	2	0	1	0
1857:	1	1	3	2	0	0	2	1
1865:	1	1	1	0	0	3	0	1
1873:	1	4	1	4	1	0	1	3
1881:	3	3	1	0	1	1	1	1
1889:	0	0	0	1	3	1	1	1
1897:	0	1	1	1	1	5	0	1
1905:	0	1	2	1	5	0	0	0
1913:	1	1	1	0	2	2	1	2
1921:	1	0	0	1	0	1	1	0
1929:	0	0	1	1	0	1	1	1
1937:	4	2	1	1	2	1	2	2
1945:	1	1	1	0	0	1	0	0
1953:	2	1	2	5	0	2	1	2
1961:	1	1	2	1	1	1	2	0
1969:	0	0	0	1	1	0	0	0
1977:	0	0	0	1	2	0	0	0
1985:	2	2	0	1	0	1	0	0
1993:	2	0	0	0	2	2	2	1
2001:	0	1	2	2	0	3	0	4
2009:	4	1	1	1	0	1	0	0
2017:	3	2	0	0	2	2	1	1
2025:	2	1	0	0	1	0	0	0
2033:	0	0	0	0	2	0	2	2
2041:	1	1	1	0	0	1	0	2
2049:	1	1	2	0	1	1	0	0
2057:	0	0	1	0	1	0	1	0
2065:	1	2	2	0	0	0	1	1
2073:	2	2	1	0	2	1	1	0
2081:	0	2	0	2	0	2	1	3
2089:	0	0	2	0	1	2	1	0

2097: 0 1 0 2 6 4 4 4

Sample Title: CP4105S08-09

Channel	1	2	3	4	5	6	7	8
2105:	7	1	1	1	0	1	1	2
2113:	1	1	0	4	5	5	3	0
2121:	0	1	3	2	3	5	1	4
2129:	3	1	1	0	0	1	0	1
2137:	0	2	1	1	0	0	1	0
2145:	0	1	0	1	2	0	4	3
2153:	0	0	0	0	0	1	0	1
2161:	0	0	4	0	1	0	2	1
2169:	0	3	1	3	1	1	3	2
2177:	1	0	1	1	1	2	4	1
2185:	2	0	2	0	3	2	1	0
2193:	1	0	1	1	2	0	3	1
2201:	5	2	10	10	2	2	2	1
2209:	1	2	2	2	0	2	1	1
2217:	2	0	0	2	1	2	0	0
2225:	0	0	0	1	2	1	0	2
2233:	1	2	1	0	1	0	0	1
2241:	3	1	0	1	1	0	2	2
2249:	1	1	1	0	2	1	0	0
2257:	2	0	3	1	1	1	1	0
2265:	1	1	1	2	1	0	1	1
2273:	1	1	0	0	2	0	1	1
2281:	1	0	1	2	0	1	3	2
2289:	0	1	3	2	3	2	2	3
2297:	1	1	1	2	1	0	0	3
2305:	3	3	1	2	2	1	1	1
2313:	1	1	0	0	1	2	1	0
2321:	3	0	1	0	1	0	3	1
2329:	2	0	2	0	2	0	0	3
2337:	2	0	1	0	0	3	2	1
2345:	1	1	2	0	1	2	0	3
2353:	1	0	1	0	1	1	1	1
2361:	1	1	0	2	3	1	0	2
2369:	0	2	1	0	2	2	0	2
2377:	1	1	2	1	1	2	1	0
2385:	2	2	2	0	2	1	1	2
2393:	1	2	1	1	0	1	1	0
2401:	1	1	2	1	0	1	1	1
2409:	1	0	0	0	0	1	0	0
2417:	0	3	1	1	1	1	1	2
2425:	0	0	0	1	0	0	1	1
2433:	1	1	1	0	1	0	1	1
2441:	1	0	1	2	3	1	3	2
2449:	2	1	0	0	1	2	1	0
2457:	1	1	1	3	1	0	0	0
2465:	0	0	0	0	0	1	0	0
2473:	0	1	2	1	0	0	0	3
2481:	0	0	0	0	0	0	0	2
2489:	1	0	3	1	0	0	0	0
2497:	1	1	0	1	0	0	1	0
2505:	0	0	0	0	0	0	2	0
2513:	0	0	0	1	0	1	1	0
2521:	0	1	0	0	0	1	1	1

2529: 1 0 0 0 2 2 0 0

Sample Title: CP4105S08-09

Channel	1	2	3	4	5	6	7	8
2537:	1	0	0	2	0	0	0	0
2545:	1	2	0	1	0	0	0	1
2553:	1	0	0	0	0	1	0	0
2561:	0	0	0	0	0	0	1	0
2569:	1	0	0	0	1	2	0	0
2577:	1	2	0	0	0	1	0	1
2585:	0	1	0	0	0	1	0	0
2593:	0	0	0	1	1	1	0	1
2601:	0	0	1	0	1	2	0	0
2609:	0	2	7	10	41	30	22	3
2617:	2	0	0	2	0	1	1	0
2625:	0	0	0	0	0	0	0	1
2633:	1	0	0	0	0	0	0	0
2641:	0	1	0	0	0	0	0	0
2649:	0	0	1	0	0	0	0	0
2657:	1	0	0	0	0	0	0	0
2665:	0	1	1	1	0	0	0	0
2673:	1	0	1	0	0	0	0	0
2681:	0	1	0	1	0	0	0	0
2689:	0	1	1	0	2	0	1	1
2697:	0	0	0	0	0	0	1	1
2705:	0	1	0	2	1	0	3	0
2713:	0	0	0	0	0	0	0	1
2721:	1	0	0	0	0	0	0	1
2729:	0	1	0	0	0	0	0	0
2737:	0	0	0	0	1	0	0	0
2745:	0	1	0	0	1	0	0	0
2753:	0	0	0	0	0	0	0	0
2761:	0	0	0	0	0	0	0	1
2769:	0	1	1	0	0	0	0	1
2777:	0	0	2	0	0	0	0	0
2785:	0	0	0	0	0	0	0	2
2793:	0	0	0	0	0	0	0	2
2801:	0	1	0	0	0	0	0	1
2809:	1	1	0	0	0	0	0	0
2817:	0	1	1	1	1	0	0	0
2825:	1	0	0	0	0	0	0	0
2833:	0	0	0	0	0	0	0	0
2841:	0	0	1	0	0	0	1	0
2849:	0	0	0	0	0	1	0	0
2857:	0	0	1	0	0	0	0	1
2865:	0	2	1	0	0	0	0	0
2873:	0	0	0	0	0	2	0	2
2881:	0	0	0	0	1	0	0	0
2889:	0	0	1	1	0	0	0	0
2897:	0	0	1	0	0	1	0	0
2905:	0	0	0	0	0	0	0	1
2913:	0	0	0	1	0	0	0	0
2921:	0	0	0	0	0	0	0	0
2929:	0	0	0	1	2	0	0	0
2937:	0	0	0	1	0	0	1	0
2945:	0	1	0	0	0	0	1	0
2953:	0	0	1	0	1	0	0	0

2961: 0 0 0 0 0 0 0 0

Sample Title: CP4105S08-09

Channel	1	2	3	4	5	6	7	8	9
2969:	0	0	1	1	1	1	0	1	
2977:	1	0	0	0	0	0	0	0	
2985:	2	0	0	1	0	0	1	0	
2993:	0	0	0	0	0	1	0	0	
3001:	1	1	1	0	0	0	0	0	
3009:	0	0	0	0	0	0	0	0	
3017:	0	0	0	0	1	0	0	0	
3025:	1	0	0	1	0	1	0	0	
3033:	0	0	0	1	0	0	2	1	
3041:	0	1	0	0	1	0	0	0	
3049:	0	1	0	0	0	1	1	0	
3057:	0	0	0	0	0	0	0	0	
3065:	0	0	0	0	0	0	0	0	
3073:	0	1	0	0	0	0	0	0	
3081:	0	0	0	1	0	0	0	0	
3089:	0	0	0	0	1	0	0	0	
3097:	0	0	0	1	0	0	1	0	
3105:	0	0	0	0	1	1	0	1	
3113:	0	0	0	0	0	0	0	0	
3121:	0	0	0	0	0	0	0	1	
3129:	1	0	0	0	2	0	0	0	
3137:	0	0	0	1	0	0	0	0	
3145:	0	1	0	0	0	0	0	0	
3153:	0	0	0	0	1	0	1	0	
3161:	0	0	0	0	0	0	0	0	
3169:	0	0	1	0	1	0	0	1	
3177:	0	0	1	0	0	0	0	0	
3185:	0	0	0	0	0	0	0	0	
3193:	0	0	2	1	0	0	0	2	
3201:	0	0	0	0	0	0	1	0	
3209:	0	0	0	0	0	0	0	0	
3217:	0	0	0	0	0	0	0	0	
3225:	0	0	0	0	0	1	0	0	
3233:	0	0	0	0	0	0	0	0	
3241:	0	0	2	0	0	0	0	1	
3249:	0	0	0	0	0	1	0	0	
3257:	0	0	0	0	0	0	0	1	
3265:	0	0	0	0	0	0	0	0	
3273:	0	0	0	0	0	0	2	0	
3281:	0	0	0	1	0	0	1	0	
3289:	0	0	0	0	0	0	0	1	
3297:	0	0	0	0	1	0	0	0	
3305:	0	0	0	0	1	0	0	0	
3313:	0	0	0	0	0	0	0	0	
3321:	0	0	0	0	0	0	0	0	
3329:	1	1	1	0	0	0	0	0	
3337:	0	0	1	0	0	0	0	1	
3345:	0	0	0	0	0	0	0	0	
3353:	0	0	0	0	0	0	0	0	
3361:	0	0	0	0	0	0	0	0	
3369:	0	0	0	1	0	0	1	0	
3377:	1	1	0	0	2	0	0	0	
3385:	0	0	0	1	0	0	0	0	

3393: 0 1 0 0 0 0 0 0 0

Sample Title: CP4105S08-09

Channel	1	2	3	4	5	6	7	8	9
3401:	0	0	0	0	0	0	0	0	0
3409:	0	0	0	0	0	0	0	0	0
3417:	0	0	0	0	0	0	0	0	0
3425:	0	0	0	0	0	0	0	1	0
3433:	0	0	0	0	0	0	0	0	0
3441:	0	0	0	0	0	0	0	0	0
3449:	0	0	0	0	0	0	1	0	0
3457:	1	0	0	0	0	0	0	0	0
3465:	1	0	0	0	0	0	0	0	0
3473:	0	0	0	0	0	0	0	1	0
3481:	0	1	0	0	0	0	0	0	0
3489:	0	1	1	3	0	0	0	0	1
3497:	0	1	0	0	0	0	0	0	0
3505:	0	0	0	1	0	0	0	0	0
3513:	0	0	0	0	0	0	1	0	0
3521:	0	0	0	0	0	0	1	0	0
3529:	0	0	1	0	1	0	0	0	0
3537:	0	0	0	1	0	0	0	0	0
3545:	0	0	0	0	0	0	0	1	0
3553:	0	0	0	0	0	0	0	1	1
3561:	0	0	0	1	0	0	0	0	0
3569:	0	0	1	0	0	0	0	0	0
3577:	0	0	0	1	0	0	0	0	0
3585:	0	0	1	0	1	0	0	0	0
3593:	0	0	0	0	0	0	0	0	0
3601:	0	0	1	0	1	1	1	1	0
3609:	0	0	0	1	0	0	0	0	0
3617:	0	1	0	0	0	0	0	1	0
3625:	0	0	0	0	0	0	0	0	0
3633:	0	0	0	0	0	0	0	0	1
3641:	0	0	0	2	0	0	0	1	1
3649:	0	1	1	1	0	0	0	0	0
3657:	0	0	0	0	0	0	0	1	1
3665:	0	0	0	0	0	0	1	1	0
3673:	0	0	0	0	0	0	0	0	0
3681:	1	0	0	0	0	0	0	1	2
3689:	0	0	0	0	0	1	0	0	0
3697:	0	0	0	0	0	1	0	0	0
3705:	0	0	0	0	0	0	1	0	1
3713:	1	1	0	0	0	0	0	0	0
3721:	0	0	0	0	0	0	0	0	0
3729:	1	0	0	0	0	0	0	0	0
3737:	1	0	1	0	0	0	0	0	0
3745:	0	0	0	0	0	0	0	1	0
3753:	0	0	1	0	0	0	0	0	0
3761:	0	1	0	0	0	1	0	0	0
3769:	0	0	1	0	0	0	0	0	0
3777:	1	0	1	0	0	0	0	0	0
3785:	0	0	0	0	0	0	0	1	0
3793:	0	1	0	0	0	1	0	0	1
3801:	0	0	1	0	0	0	1	1	0
3809:	0	0	0	0	0	0	0	0	1
3817:	0	0	0	0	0	0	0	0	0

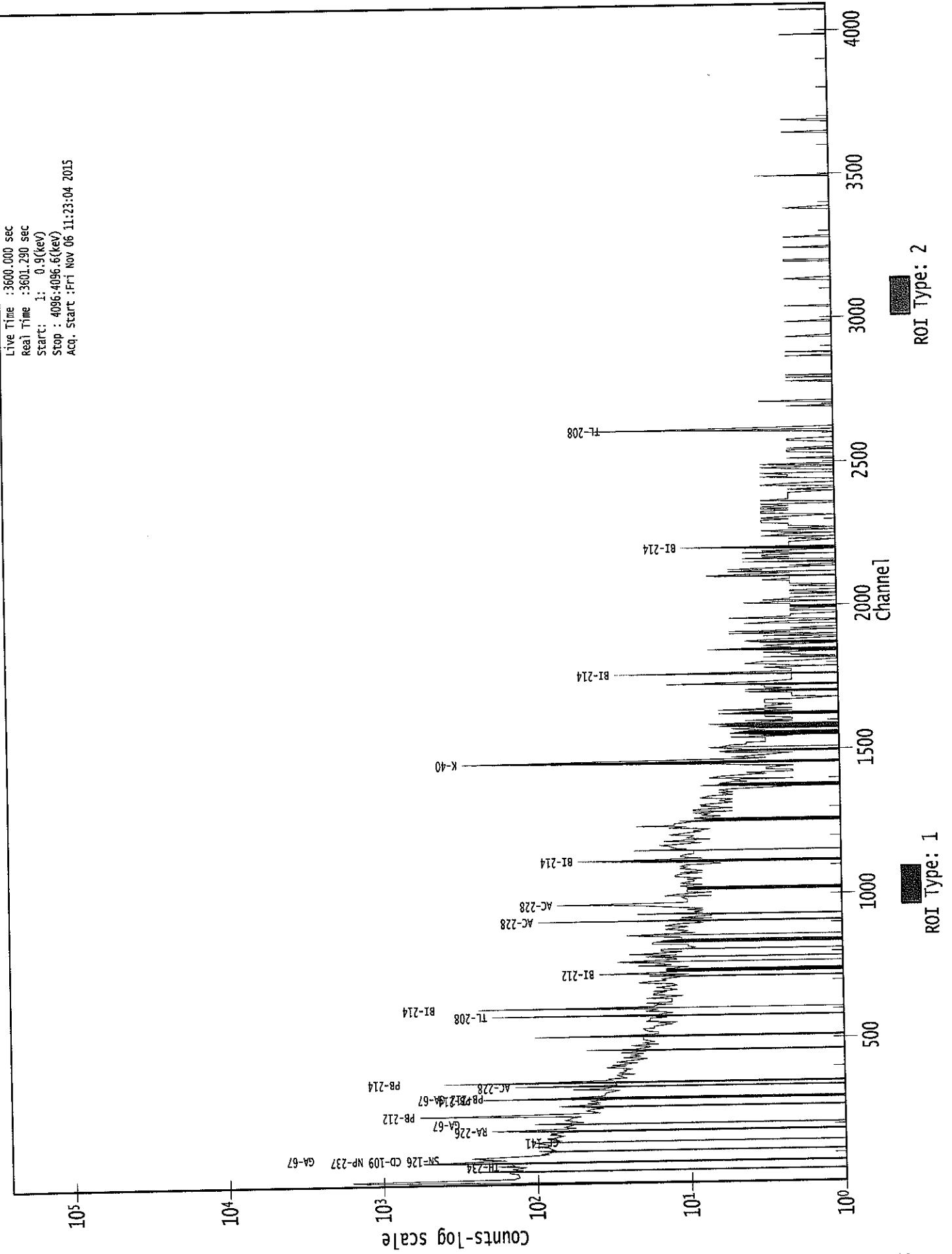
3825: 1 0 0 0 0 0 0 0 0

Sample Title: CP4105S08-09

Channel	1	2	3	4	5	6	7	8	9
3833:	1	0	0	0	0	0	0	0	0
3841:	0	0	1	1	0	0	0	0	0
3849:	1	0	0	0	1	0	0	0	0
3857:	0	0	1	0	0	1	0	0	1
3865:	0	0	0	0	0	0	0	0	0
3873:	0	0	0	0	0	0	0	0	1
3881:	0	0	0	0	0	0	0	0	0
3889:	1	0	0	0	0	0	0	0	0
3897:	0	1	0	0	0	0	0	0	0
3905:	0	0	0	0	0	1	0	0	0
3913:	0	0	0	0	0	0	0	0	0
3921:	0	0	1	0	1	0	0	0	0
3929:	0	0	0	0	0	0	0	0	1
3937:	0	0	0	0	0	0	0	0	0
3945:	0	0	0	0	1	0	0	0	1
3953:	1	1	0	0	0	0	1	0	0
3961:	0	0	0	0	0	0	0	0	0
3969:	1	0	0	1	0	0	0	0	0
3977:	0	0	0	0	0	0	0	0	0
3985:	2	0	0	0	0	0	0	0	0
3993:	0	0	0	0	0	0	0	0	0
4001:	0	0	0	0	0	0	0	0	0
4009:	0	0	0	0	0	0	1	0	1
4017:	0	0	0	0	0	0	0	0	0
4025:	1	0	1	1	0	0	0	0	0
4033:	0	1	1	0	0	1	0	0	0
4041:	0	0	0	0	0	0	0	0	0
4049:	0	1	0	0	0	0	0	0	0
4057:	0	0	0	0	0	0	1	0	0
4065:	0	0	0	0	0	0	0	0	2
4073:	0	0	0	0	0	0	0	0	1
4081:	0	0	0	0	1	0	0	0	1
4089:	0	0	0	0	0	0	0	0	0

0000029258.CNF

Live Time :3600.000 sec
Real Time :3601.290 sec
Start: 1: 0.9(keV)
Stop : 4096:4096.6(keV)
Acq. Start :Fri Nov 06 11:23:04 2015



KCB
11/6/15Analysis Report for 1510086-08
CP4105S10-11

GAMMA SPECTRUM ANALYSIS

Sample Identification : 1510086-08
Sample Description : CP4105S10-11
Sample Type : SOIL

Sample Size : 6.089E+02 grams
Facility : Countroom

Sample Taken On : 10/6/2015 7:55:43AM
Acquisition Started : 11/6/2015 11:23:12AM

Procedure : GAS-1402 pCi
Operator : Administrator
Detector Name : GE4
Geometry : GAS-1402
Live Time : 3600.0 seconds
Real Time : 3692.0 seconds

Dead Time : 2.49 %

Peak Locate Threshold : 2.50
Peak Locate Range (in channels) : 1 - 4096
Peak Area Range (in channels) : 15 - 4096
Identification Energy Tolerance : 1.000 keV

Energy Calibration Used Done On : 10/25/2014
Efficiency Calibration Used Done On : 11/8/2014
Efficiency Calibration Description :

Sample Number : 29259

PEAK-TO-TOTAL CALIBRATION REPORT

Peak-to-Total Efficiency Calibration Equation

AG
11/9/15

Analysis Report for 1510086-08
CP4105S10-11

PEAK LOCATE REPORT

Peak Locate Performed on : 11/6/2015 12:24:46PM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096
Peak Search Sensitivity : 2.50

Peak No.	Energy (keV)	Centroid Channel	Centroid Uncertainty	Peak Significance
1	39.14	38.39	0.0000	0.00
2	46.60	45.86	0.0000	0.00
3	52.65	51.91	0.0000	0.00
4	76.29	75.56	0.0000	0.00
5	87.56	86.83	0.0000	0.00
6	239.17	238.50	0.0000	0.00
7	295.19	294.55	0.0000	0.00
8	338.35	337.73	0.0000	0.00
9	352.19	351.57	0.0000	0.00
10	407.87	407.29	0.0000	0.00
11	510.99	510.45	0.0000	0.00
12	547.32	546.80	0.0000	0.00
13	583.87	583.36	0.0000	0.00
14	609.35	608.85	0.0000	0.00
15	677.85	677.39	0.0000	0.00
16	727.88	727.44	0.0000	0.00
17	742.17	741.74	0.0000	0.00
18	911.11	910.77	0.0000	0.00
19	957.48	957.16	0.0000	0.00
20	968.83	968.52	0.0000	0.00
21	1021.02	1020.74	0.0000	0.00
22	1085.29	1085.05	0.0000	0.00
23	1092.37	1092.12	0.0000	0.00
24	1121.25	1121.03	0.0000	0.00
25	1413.98	1413.93	0.0000	0.00
26	1460.77	1460.74	0.0000	0.00
27	1545.43	1545.46	0.0000	0.00
28	1567.08	1567.12	0.0000	0.00
29	1587.47	1587.52	0.0000	0.00
30	1593.61	1593.67	0.0000	0.00
31	1754.22	1754.38	0.0000	0.00
32	1764.50	1764.67	0.0000	0.00
33	1952.14	1952.43	0.0000	0.00
34	2205.08	2205.55	0.0000	0.00
35	2229.45	2229.93	0.0000	0.00
36	2613.99	2614.76	0.0000	0.00

? = Adjacent peak noted
Errors quoted at 2.000sigma

Analysis Report for 1510086-08
CP4105S10-11

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 11/6/2015 12:24:46PM

Peak Analysis From Channel : 1
Peak Analysis To Channel : 4096

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	FWHM (keV)
1	39.14	36 -	40	38.39	5.09E+01	50.32	5.08E+02	1.26
2	46.60	42 -	49	45.86	1.08E+02	80.17	1.01E+03	2.21
3	52.65	50 -	54	51.91	5.62E+01	57.20	6.74E+02	1.90
4	76.29	70 -	80	75.56	7.41E+02	141.61	2.27E+03	4.00
M 5	87.56	82 -	111	86.83	1.99E+02	109.17	1.73E+03	3.45
6	239.17	233 -	245	238.50	6.04E+02	90.90	6.84E+02	2.85
7	295.19	291 -	298	294.55	8.83E+01	50.95	3.77E+02	2.53
8	338.35	333 -	343	337.73	8.82E+01	58.76	4.16E+02	1.82
9	352.19	347 -	357	351.57	2.20E+02	60.29	3.64E+02	2.77
10	407.87	394 -	421	407.29	1.25E+02	100.64	6.00E+02	22.54
11	510.99	505 -	515	510.45	1.01E+02	42.03	1.82E+02	2.91
12	547.32	537 -	555	546.80	6.73E+01	49.53	1.89E+02	14.05
13	583.87	579 -	590	583.36	1.69E+02	41.09	1.27E+02	2.88
14	609.35	604 -	614	608.85	1.42E+02	43.06	1.74E+02	1.86
15	677.85	672 -	685	677.39	3.76E+01	35.92	1.29E+02	8.64
16	727.88	724 -	731	727.44	3.28E+01	26.08	9.04E+01	2.78
17	742.17	739 -	745	741.74	2.34E+01	17.51	3.92E+01	2.02
18	911.11	905 -	916	910.77	9.19E+01	31.50	7.82E+01	2.09
19	957.48	953 -	961	957.16	1.98E+01	21.34	5.65E+01	1.63
20	968.83	962 -	976	968.52	7.67E+01	30.76	6.65E+01	5.19
21	1021.02	1018 -	1023	1020.74	1.26E+01	13.45	2.48E+01	3.04
22	1085.29	1082 -	1087	1085.05	1.33E+01	13.45	2.34E+01	1.04
23	1092.37	1089 -	1096	1092.12	2.55E+01	14.83	1.90E+01	4.93
24	1121.25	1114 -	1127	1121.03	5.04E+01	29.92	7.72E+01	3.45
25	1413.98	1409 -	1418	1413.93	1.20E+01	13.71	2.00E+01	5.41
26	1460.77	1454 -	1466	1460.74	2.96E+02	36.01	1.33E+01	3.32
27	1545.43	1540 -	1549	1545.46	1.06E+01	10.49	8.80E+00	7.41
28	1567.08	1563 -	1572	1567.12	7.00E+00	9.90	1.00E+01	1.31
29	1587.47	1583 -	1590	1587.52	8.08E+00	8.94	7.83E+00	1.86
30	1593.61	1591 -	1596	1593.67	9.00E+00	6.00	0.00E+00	2.94
31	1754.22	1750 -	1757	1754.38	8.00E+00	5.66	0.00E+00	1.66
32	1764.50	1759 -	1768	1764.67	2.40E+01	9.80	0.00E+00	2.28
33	1952.14	1949 -	1955	1952.43	7.00E+00	5.29	0.00E+00	1.98
34	2205.08	2202 -	2209	2205.55	9.39E+00	10.20	9.21E+00	3.18
35	2229.45	2225 -	2232	2229.93	5.69E+00	6.93	4.63E+00	1.11
36	2613.99	2609 -	2618	2614.76	4.90E+01	14.00	0.00E+00	3.91

Analysis Report for 1510086-08
CP4105S10-11

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.00sigma

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 11/6/2015 12:24:46PM

Peak Analysis From Channel : 1
Peak Analysis To Channel : 4096

Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
1	39.14	36 -	40	5.09E+01	50.32	5.08E+02	3.97E+01
2	46.60	42 -	49	1.08E+02	80.17	1.01E+03	6.36E+01
3	52.65	50 -	54	5.62E+01	57.20	6.74E+02	4.54E+01
4	76.29	70 -	80	7.41E+02	141.61	2.27E+03	1.07E+02
M 5	87.56	82 -	111	1.99E+02	109.17	1.73E+03	6.83E+01
6	239.17	233 -	245	6.04E+02	90.90	6.84E+02	6.28E+01
7	295.19	291 -	298	8.83E+01	50.95	3.77E+02	3.89E+01
8	338.35	333 -	343	8.82E+01	58.76	4.16E+02	4.58E+01
9	352.19	347 -	357	2.20E+02	60.29	3.64E+02	4.31E+01
10	407.87	394 -	421	1.25E+02	100.64	6.00E+02	8.07E+01
11	510.99	505 -	515	1.01E+02	42.03	1.82E+02	3.03E+01
12	547.32	537 -	555	6.73E+01	49.53	1.89E+02	3.84E+01
13	583.87	579 -	590	1.69E+02	41.09	1.27E+02	2.61E+01
14	609.35	604 -	614	1.42E+02	43.06	1.74E+02	2.95E+01
15	677.85	672 -	685	3.76E+01	35.92	1.29E+02	2.78E+01
16	727.88	724 -	731	3.28E+01	26.08	9.04E+01	1.93E+01
17	742.17	739 -	745	2.34E+01	17.51	3.92E+01	1.20E+01
18	911.11	905 -	916	9.19E+01	31.50	7.82E+01	2.05E+01
19	957.48	953 -	961	1.98E+01	21.34	5.65E+01	1.59E+01
20	968.83	962 -	976	7.67E+01	30.76	6.65E+01	2.08E+01
21	1021.02	1018 -	1023	1.26E+01	13.45	2.48E+01	9.40E+00
22	1085.29	1082 -	1087	1.33E+01	13.45	2.34E+01	9.29E+00
23	1092.37	1089 -	1096	2.55E+01	14.83	1.90E+01	8.93E+00
24	1121.25	1114 -	1127	5.04E+01	29.92	7.72E+01	2.16E+01
25	1413.98	1409 -	1418	1.20E+01	13.71	2.00E+01	9.73E+00
26	1460.77	1454 -	1466	2.96E+02	36.01	1.33E+01	8.67E+00
27	1545.43	1540 -	1549	1.06E+01	10.49	8.80E+00	6.76E+00
28	1567.08	1563 -	1572	7.00E+00	9.90	1.00E+01	6.88E+00
29	1587.47	1583 -	1590	8.08E+00	8.94	7.83E+00	5.68E+00
30	1593.61	1591 -	1596	9.00E+00	6.00	0.00E+00	0.00E+00
31	1754.22	1750 -	1757	8.00E+00	5.66	0.00E+00	0.00E+00

Analysis Report for 1510086-08
CP4105S10-11

Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
32	1764.50	1759 -	1768	2.40E+01	9.80	0.00E+00	0.00E+00
33	1952.14	1949 -	1955	7.00E+00	5.29	0.00E+00	0.00E+00
34	2205.08	2202 -	2209	9.39E+00	10.20	9.21E+00	6.70E+00
35	2229.45	2225 -	2232	5.69E+00	6.93	4.63E+00	4.13E+00
36	2613.99	2609 -	2618	4.90E+01	14.00	0.00E+00	0.00E+00

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

PEAK WITH NID REPORT

Peak Analysis Performed on : 11/6/2015 12:24:46PM

Peak Analysis From Channel : 1
Peak Analysis To Channel : 4096

Tentative NID Library : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB
Peak Match Tolerance : 1.000 keV

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
1	39.14	36 -	40	38.39	5.09E+01	50.32	5.08E+02	I-129 RA-225
2	46.60	42 -	49	45.86	1.08E+02	80.17	1.01E+03	PB-210
3	52.65	50 -	54	51.91	5.62E+01	57.20	6.74E+02	.....
4	76.29	70 -	80	75.56	7.41E+02	141.61	2.27E+03	.....
M 5	87.56	82 -	111	86.83	1.99E+02	109.17	1.73E+03	SN-126 CD-109 LU-176
6	239.17	233 -	245	238.50	6.04E+02	90.90	6.84E+02	PB-212
7	295.19	291 -	298	294.55	8.83E+01	50.95	3.77E+02	PB-214
8	338.35	333 -	343	337.73	8.82E+01	58.76	4.16E+02	AC-228
9	352.19	347 -	357	351.57	2.20E+02	60.29	3.64E+02	PB-214
10	407.87	394 -	421	407.29	1.25E+02	100.64	6.00E+02	.....
11	510.99	505 -	515	510.45	1.01E+02	42.03	1.82E+02	.....
12	547.32	537 -	555	546.80	6.73E+01	49.53	1.89E+02	.....
13	583.87	579 -	590	583.36	1.69E+02	41.09	1.27E+02	TL-208
14	609.35	604 -	614	608.85	1.42E+02	43.06	1.74E+02	BI-214
15	677.85	672 -	685	677.39	3.76E+01	35.92	1.29E+02	AG-110M
16	727.88	724 -	731	727.44	3.28E+01	26.08	9.04E+01	BI-212
17	742.17	739 -	745	741.74	2.34E+01	17.51	3.92E+01	.....
18	911.11	905 -	916	910.77	9.19E+01	31.50	7.82E+01	AC-228

: 00572

Analysis Report for 1510086-08

CP4105S10-11

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
19	957.48	953 -	961	957.16	1.98E+01	21.34	5.65E+01	.....
20	968.83	962 -	976	968.52	7.67E+01	30.76	6.65E+01	AC-228
21	1021.02	1018 -	1023	1020.74	1.26E+01	13.45	2.48E+01	.....
22	1085.29	1082 -	1087	1085.05	1.33E+01	13.45	2.34E+01	EU-152
23	1092.37	1089 -	1096	1092.12	2.55E+01	14.83	1.90E+01	.....
24	1121.25	1114 -	1127	1121.03	5.04E+01	29.92	7.72E+01	TA-182 SC-46 BI-214
25	1413.98	1409 -	1418	1413.93	1.20E+01	13.71	2.00E+01	.....
26	1460.77	1454 -	1466	1460.74	2.96E+02	36.01	1.33E+01	K-40
27	1545.43	1540 -	1549	1545.46	1.06E+01	10.49	8.80E+00	.....
28	1567.08	1563 -	1572	1567.12	7.00E+00	9.90	1.00E+01	.....
29	1587.47	1583 -	1590	1587.52	8.08E+00	8.94	7.83E+00	.....
30	1593.61	1591 -	1596	1593.67	9.00E+00	6.00	0.00E+00	.....
31	1754.22	1750 -	1757	1754.38	8.00E+00	5.66	0.00E+00	.....
32	1764.50	1759 -	1768	1764.67	2.40E+01	9.80	0.00E+00	BI-214
33	1952.14	1949 -	1955	1952.43	7.00E+00	5.29	0.00E+00	.....
34	2205.08	2202 -	2209	2205.55	9.39E+00	10.20	9.21E+00	BI-214
35	2229.45	2225 -	2232	2229.93	5.69E+00	6.93	4.63E+00	.....
36	2613.99	2609 -	2618	2614.76	4.90E+01	14.00	0.00E+00	TL-208

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

PEAK EFFICIENCY REPORT

Peak Analysis Performed on : 11/6/2015 12:24:46PM

Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
1	39.14	5.09E+01	50.32	2.77E-02	1.78E-03
2	46.60	1.08E+02	80.17	2.63E-02	1.78E-03
3	52.65	5.62E+01	57.20	2.51E-02	1.78E-03
4	76.29	7.41E+02	141.61	2.12E-02	1.69E-03
M 5	87.56	1.99E+02	109.17	1.97E-02	1.63E-03
6	239.17	6.04E+02	90.90	9.40E-03	9.85E-04
7	295.19	8.83E+01	50.95	7.78E-03	8.43E-04
8	338.35	8.82E+01	58.76	6.86E-03	7.95E-04
9	352.19	2.20E+02	60.29	6.60E-03	7.80E-04
10	407.87	1.25E+02	100.64	5.74E-03	7.12E-04

: 00573

Analysis Report for 1510086-08
CP4105S10-11

Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
11	510.99	1.01E+02	42.03	4.61E-03	5.61E-04
12	547.32	6.73E+01	49.53	4.31E-03	5.08E-04
13	583.87	1.69E+02	41.09	4.04E-03	4.54E-04
14	609.35	1.42E+02	43.06	3.88E-03	4.17E-04
15	677.85	3.76E+01	35.92	3.49E-03	3.31E-04
16	727.88	3.28E+01	26.08	3.25E-03	3.03E-04
17	742.17	2.34E+01	17.51	3.19E-03	2.95E-04
18	911.11	9.19E+01	31.50	2.61E-03	2.06E-04
19	957.48	1.98E+01	21.34	2.49E-03	2.00E-04
20	968.83	7.67E+01	30.76	2.46E-03	1.99E-04
21	1021.02	1.26E+01	13.45	2.34E-03	1.92E-04
22	1085.29	1.33E+01	13.45	2.21E-03	1.84E-04
23	1092.37	2.55E+01	14.83	2.20E-03	1.83E-04
24	1121.25	5.04E+01	29.92	2.14E-03	1.79E-04
25	1413.98	1.20E+01	13.71	1.73E-03	1.99E-04
26	1460.77	2.96E+02	36.01	1.68E-03	1.89E-04
27	1545.43	1.06E+01	10.49	1.60E-03	1.71E-04
28	1567.08	7.00E+00	9.90	1.58E-03	1.67E-04
29	1587.47	8.08E+00	8.94	1.57E-03	1.63E-04
30	1593.61	9.00E+00	6.00	1.56E-03	1.61E-04
31	1754.22	8.00E+00	5.66	1.44E-03	1.28E-04
32	1764.50	2.40E+01	9.80	1.43E-03	1.26E-04
33	1952.14	7.00E+00	5.29	1.32E-03	1.11E-04
34	2205.08	9.39E+00	10.20	1.21E-03	1.11E-04
35	2229.45	5.69E+00	6.93	1.20E-03	1.11E-04
36	2613.99	4.90E+01	14.00	1.07E-03	1.11E-04

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000 sigma

BACKGROUND SUBTRACT REPORT

Peak Analysis Performed on : 11/6/2015 12:24:46PM

Env. Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000028944.CNF

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
1	39.14	5.09E+01	50.32			5.09E+01	5.03E+01
2	46.60	1.08E+02	80.17	2.00E+01	7.38E+00	8.81E+01	8.05E+01
3	52.65	5.62E+01	57.20			5.62E+01	5.72E+01
4	76.29	7.41E+02	141.61			7.41E+02	1.42E+02

: 00574

Analysis Report for 1510086-08

CP4105S10-11

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
M 5	87.56	1.99E+02	109.17			1.99E+02	1.09E+02
6	239.17	6.04E+02	90.90	1.09E+01	6.39E+00	5.93E+02	9.11E+01
7	295.19	8.83E+01	50.95			8.83E+01	5.10E+01
8	338.35	8.82E+01	58.76			8.82E+01	5.88E+01
9	352.19	2.20E+02	60.29	8.07E+00	5.01E+00	2.12E+02	6.05E+01
10	407.87	1.25E+02	100.64			1.25E+02	1.01E+02
11	510.99	1.01E+02	42.03	4.21E+01	4.92E+00	5.90E+01	4.23E+01
12	547.32	6.73E+01	49.53			6.73E+01	4.95E+01
13	583.87	1.69E+02	41.09			1.69E+02	4.11E+01
14	609.35	1.42E+02	43.06	5.16E+00	1.63E+00	1.37E+02	4.31E+01
15	677.85	3.76E+01	35.92			3.76E+01	3.59E+01
16	727.88	3.28E+01	26.08			3.28E+01	2.61E+01
17	742.17	2.34E+01	17.51			2.34E+01	1.75E+01
18	911.11	9.19E+01	31.50	1.01E+00	2.85E+00	9.09E+01	3.16E+01
19	957.48	1.98E+01	21.34			1.98E+01	2.13E+01
20	968.83	7.67E+01	30.76			7.67E+01	3.08E+01
21	1021.02	1.26E+01	13.45			1.26E+01	1.35E+01
22	1085.29	1.33E+01	13.45			1.33E+01	1.35E+01
23	1092.37	2.55E+01	14.83			2.55E+01	1.48E+01
24	1121.25	5.04E+01	29.92			5.04E+01	2.99E+01
25	1413.98	1.20E+01	13.71			1.20E+01	1.37E+01
26	1460.77	2.96E+02	36.01			2.96E+02	3.60E+01
27	1545.43	1.06E+01	10.49			1.06E+01	1.05E+01
28	1567.08	7.00E+00	9.90			7.00E+00	9.90E+00
29	1587.47	8.08E+00	8.94			8.08E+00	8.94E+00
30	1593.61	9.00E+00	6.00			9.00E+00	6.00E+00
31	1754.22	8.00E+00	5.66			8.00E+00	5.66E+00
32	1764.50	2.40E+01	9.80	1.11E-01	9.77E-01	2.39E+01	9.85E+00
33	1952.14	7.00E+00	5.29			7.00E+00	5.29E+00
34	2205.08	9.39E+00	10.20			9.39E+00	1.02E+01
35	2229.45	5.69E+00	6.93			5.69E+00	6.93E+00
36	2613.99	4.90E+01	14.00	1.20E+00	1.02E+00	4.78E+01	1.40E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

AREA CORRECTION REPORT REFERENCE PEAK / BKG. SUBTRACT

Peak Analysis Performed on : 11/6/2015 12:24:46PM
Ref. Peak Energy : 0.00 Reference Date :
Peak Ratio : 0.00 Uncertainty : 0.00
Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000028944.CNF

Corrected Area is: Original * Peak Ratio - Background

: 00575

Analysis Report for 1510086-08

CP4105S10-11

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
	1	39.14	5.09E+01	50.32		5.09E+01	5.03E+01
	2	46.60	1.08E+02	80.17	2.00E+01	7.38E+00	8.81E+01
	3	52.65	5.62E+01	57.20		5.62E+01	5.72E+01
	4	76.29	7.41E+02	141.61		7.41E+02	1.42E+02
M	5	87.56	1.99E+02	109.17		1.99E+02	1.09E+02
	6	239.17	6.04E+02	90.90	1.09E+01	6.39E+00	5.93E+02
	7	295.19	8.83E+01	50.95		8.83E+01	5.10E+01
	8	338.35	8.82E+01	58.76		8.82E+01	5.88E+01
	9	352.19	2.20E+02	60.29	8.07E+00	5.01E+00	2.12E+02
	10	407.87	1.25E+02	100.64		1.25E+02	1.01E+02
	11	510.99	1.01E+02	42.03	4.21E+01	4.92E+00	5.90E+01
	12	547.32	6.73E+01	49.53		6.73E+01	4.95E+01
	13	583.87	1.69E+02	41.09		1.69E+02	4.11E+01
	14	609.35	1.42E+02	43.06	5.16E+00	1.63E+00	1.37E+02
	15	677.85	3.76E+01	35.92		3.76E+01	3.59E+01
	16	727.88	3.28E+01	26.08		3.28E+01	2.61E+01
	17	742.17	2.34E+01	17.51		2.34E+01	1.75E+01
	18	911.11	9.19E+01	31.50	1.01E+00	2.85E+00	9.09E+01
	19	957.48	1.98E+01	21.34		1.98E+01	2.13E+01
	20	968.83	7.67E+01	30.76		7.67E+01	3.08E+01
	21	1021.02	1.26E+01	13.45		1.26E+01	1.35E+01
	22	1085.29	1.33E+01	13.45		1.33E+01	1.35E+01
	23	1092.37	2.55E+01	14.83		2.55E+01	1.48E+01
	24	1121.25	5.04E+01	29.92		5.04E+01	2.99E+01
	25	1413.98	1.20E+01	13.71		1.20E+01	1.37E+01
	26	1460.77	2.96E+02	36.01		2.96E+02	3.60E+01
	27	1545.43	1.06E+01	10.49		1.06E+01	1.05E+01
	28	1567.08	7.00E+00	9.90		7.00E+00	9.90E+00
	29	1587.47	8.08E+00	8.94		8.08E+00	8.94E+00
	30	1593.61	9.00E+00	6.00		9.00E+00	6.00E+00
	31	1754.22	8.00E+00	5.66		8.00E+00	5.66E+00
	32	1764.50	2.40E+01	9.80	1.11E-01	9.77E-01	2.39E+01
	33	1952.14	7.00E+00	5.29		7.00E+00	5.29E+00
	34	2205.08	9.39E+00	10.20		9.39E+00	1.02E+01
	35	2229.45	5.69E+00	6.93		5.69E+00	6.93E+00
	36	2613.99	4.90E+01	14.00	1.20E+00	1.02E+00	4.78E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

NUCLIDE IDENTIFICATION REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

IDENTIFIED NUCLIDES

: 00576

Analysis Report for 1510086-08
CP4105S10-11

Nuclide Name	Id Confidence	Energy (keV)	Yield(%)	Activity (pCi/grams)	Activity Uncertainty
K-40	1.000	1460.81 *	10.67	2.03E+01	3.39E+00
CD-109	0.965	88.03 *	3.72	3.51E+00	1.96E+00
SN-126	1.000	87.57 *	37.00	3.37E-01	1.87E-01
TL-208	0.816	583.14 *	30.22	1.71E+00	4.57E-01
		860.37	4.48		
		2614.66 *	35.85	1.53E+00	4.78E-01
PB-210	0.998	46.50 *	4.25	9.75E-01	8.94E-01
BI-212	0.716	727.17 *	11.80	1.05E+00	8.44E-01
		1620.62	2.75		
PB-212	0.855	238.63 *	44.60	1.74E+00	3.24E-01
		300.09	3.41		
BI-214	0.966	609.31 *	46.30	9.41E-01	3.13E-01
		1120.29 *	15.10	1.92E+00	1.15E+00
		1764.49 *	15.80	1.30E+00	5.48E-01
		2204.22 *	4.98	1.93E+00	2.10E+00
PB-214	0.993	295.21 *	19.19	7.29E-01	4.28E-01
		351.92 *	37.19	1.06E+00	3.29E-01
RA-225	0.868	40.00 *	31.00	3.14E-01	3.11E-01
AC-228	0.996	338.32 *	11.40	1.39E+00	9.40E-01
		911.07 *	27.70	1.55E+00	5.53E-01
		969.11 *	16.60	2.32E+00	9.47E-01

* = Energy line found in the spectrum.

- = Manually added nuclide.

? = Manually edited nuclide.

Energy Tolerance : 1.000 keV

Nuclide confidence index threshold = 0.30

Errors quoted at 2.000sigma

UNIDENTIFIED PEAKS

Peak Locate Performed on : 11/6/2015 12:24:46PM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
3	52.65	1.55980E-02	50.93		
4	76.29	2.05875E-01	9.55		
10	407.87	3.47768E-02	40.19		
11	510.99	1.63900E-02	35.86		
12	547.32	1.86968E-02	36.79		

: 00577

Analysis Report for 1510086-08
CP4105S10-11

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
15	677.85	1.04330E-02	47.81	Tol.	AG-110M
17	742.17	6.50517E-03	37.39	D-Esc	
19	957.48	5.48611E-03	54.02	Sum	
21	1021.02	3.49444E-03	53.47		
22	1085.29	3.70000E-03	50.50	Tol.	EU-152
23	1092.37	7.07937E-03	29.10		
25	1413.98	3.33333E-03	57.13		
27	1545.43	2.94444E-03	49.47		
28	1567.08	1.94444E-03	70.71		
29	1587.47	2.24537E-03	55.33		
30	1593.61	2.50000E-03	33.33		
31	1754.22	2.22222E-03	35.36		
33	1952.14	1.94444E-03	37.80		
35	2229.45	1.57986E-03	60.91		

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

NUCLIDE IDENTIFICATION REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

IDENTIFIED NUCLIDES

Nuclide Name	Id Confidence	Energy (keV)	Yield(%)	Activity (pCi/grams)	Activity Uncertainty
K-40	1.00	1460.81 *	10.67	2.03E+01	3.39E+00
CD-109	0.96	88.03 *	3.72	3.51E+00	1.96E+00
SN-126	1.00	87.57 *	37.00	3.37E-01	1.87E-01
TL-208	0.81	583.14 *	30.22	1.71E+00	4.57E-01
		860.37	4.48		
		2614.66 *	35.85	1.53E+00	4.78E-01
PB-210	0.99	46.50 *	4.25	9.75E-01	8.94E-01
BI-212	0.71	727.17 *	11.80	1.05E+00	8.44E-01
		1620.62	2.75		
PB-212	0.85	238.63 *	44.60	1.74E+00	3.24E-01
		300.09	3.41		
BI-214	0.96	609.31 *	46.30	9.41E-01	3.13E-01
		1120.29 *	15.10	1.92E+00	1.15E+00
		1764.49 *	15.80	1.30E+00	5.48E-01

: 00578

Analysis Report for 1510086-08
CP4105S10-11

Nuclide Name	Id Confidence	Energy (keV)	Yield(%)	Activity (pCi/grams)	Activity Uncertainty
BI-214	0.96	2204.22 *	4.98	1.93E+00	2.10E+00
PB-214	0.99	295.21 *	19.19	7.29E-01	4.28E-01
		351.92 *	37.19	1.06E+00	3.29E-01
RA-225	0.86	40.00 *	31.00	3.14E-01	3.11E-01
AC-228	0.99	338.32 *	11.40	1.39E+00	9.40E-01
		911.07 *	27.70	1.55E+00	5.53E-01
		969.11 *	16.60	2.32E+00	9.47E-01

* = Energy line found in the spectrum.
- = Manually added nuclide.
? = Manually edited nuclide.
@ = Energy line not used for Weighted Mean Activity
Energy Tolerance : 1.000 keV
Nuclide confidence index threshold = 0.30
Errors quoted at 2.000sigma

INTERFERENCE CORRECTED REPORT

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
	K-40	1.000	2.03E+01	3.39E+00
?	CD-109	0.965	3.51E+00	1.96E+00
?	SN-126	1.000	3.37E-01	1.87E-01
	TL-208	0.816	1.63E+00	3.30E-01
	PB-210	0.998	9.75E-01	8.94E-01
	BI-212	0.716	1.05E+00	8.44E-01
	PB-212	0.855	1.74E+00	3.24E-01
	BI-214	0.966	1.09E+00	2.62E-01
	PB-214	0.993	9.39E-01	2.61E-01
	RA-225	0.868	3.14E-01	3.11E-01
	AC-228	0.996	1.67E+00	4.26E-01

? = nuclide is part of an undetermined solution
X = nuclide rejected by the interference analysis
@ = nuclide contains energy lines not used in Weighted Mean Activity

Errors quoted at 2.000sigma

Analysis Report for 1510086-08
CP4105S10-11

UNIDENTIFIED PEAKS

Peak Locate Performed on : 11/6/2015 12:24:46PM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
3	52.65	1.55980E-02	50.93		
4	76.29	2.05875E-01	9.55		
10	407.87	3.47768E-02	40.19		
11	510.99	1.63900E-02	35.86		
12	547.32	1.86968E-02	36.79		
15	677.85	1.04330E-02	47.81	Tol.	AG-110M
17	742.17	6.50517E-03	37.39	D-Esc	
19	957.48	5.48611E-03	54.02	Sum	
21	1021.02	3.49444E-03	53.47		
22	1085.29	3.70000E-03	50.50	Tol.	EU-152
23	1092.37	7.07937E-03	29.10		
25	1413.98	3.33333E-03	57.13		
27	1545.43	2.94444E-03	49.47		
28	1567.08	1.94444E-03	70.71		
29	1587.47	2.24537E-03	55.33		
30	1593.61	2.50000E-03	33.33		
31	1754.22	2.22222E-03	35.36		
33	1952.14	1.94444E-03	37.80		
35	2229.45	1.57986E-03	60.91		

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

NUCLIDE MDA REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

: 00580

Analysis Report for 1510086-08
CP4105S10-11

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	BE-7	477.59	10.42	-1.07E-01	1.73E+00	1.73E+00
+	NA-22	1274.54	99.94	-5.15E-02	1.84E-01	1.84E-01
+	NA-24	1368.53	99.99	-6.18E+12	1.31E+14	1.38E+14
		2754.09	99.86	1.76E+13		1.31E+14
+	AL-26	1808.65	99.76	6.84E-03	9.46E-02	9.46E-02
+	K-40	1460.81	* 10.67	2.03E+01	1.38E+00	1.38E+00
+	@ AR-41	1293.64	99.16	1.00E+26	1.00E+26	1.00E+26
+	TI-44	67.88	94.40	3.80E-03	8.57E-02	8.57E-02
		78.34	96.00	3.31E-01		1.15E-01
+	SC-46	889.25	99.98	3.81E-02	2.02E-01	2.02E-01
		1120.51	99.99	2.87E-01		3.10E-01
+	V-48	983.52	99.98	4.33E-01	6.21E-01	6.94E-01
		1312.10	97.50	-5.72E-02		6.21E-01
+	CR-51	320.08	9.83	1.77E-01	2.43E+00	2.43E+00
+	MN-54	834.83	99.97	1.83E-02	1.74E-01	1.74E-01
+	CO-56	846.75	99.96	-1.83E-02	2.19E-01	2.19E-01
		1037.75	14.03	-5.45E-01		1.44E+00
		1238.25	67.00	1.09E-01		4.41E-01
		1771.40	15.51	-6.83E-01		1.22E+00
		2598.48	16.90	-2.38E-01		6.56E-01
+	CO-57	122.06	85.51	-2.84E-02	1.07E-01	1.07E-01
		136.48	10.60	-2.81E-02		9.42E-01
+	CO-58	810.76	99.40	-4.49E-03	1.99E-01	1.99E-01
+	FE-59	1099.22	56.50	2.30E-02	4.36E-01	4.36E-01
		1291.56	43.20	1.70E-01		7.64E-01
+	CO-60	1173.22	100.00	6.23E-02	1.64E-01	1.95E-01
		1332.49	100.00	4.06E-02		1.64E-01
+	ZN-65	1115.52	50.75	-2.83E-02	3.68E-01	3.68E-01
+	GA-67	93.31	35.70	1.14E+02	1.95E+02	1.95E+02
		208.95	2.24	-4.86E+02		3.67E+03
		300.22	16.00	7.93E+01		5.69E+02
+	SE-75	121.11	16.70	-7.28E-02	1.87E-01	6.07E-01
		136.00	59.20	-3.71E-02		1.87E-01
		264.65	59.80	-1.07E-01		2.12E-01
		279.53	25.20	-1.88E-01		5.05E-01
		400.65	11.40	1.74E-01		1.28E+00
+	RB-82	776.52	13.00	-2.66E-01	2.60E+00	2.60E+00
+	RB-83	520.41	46.00	4.99E-02	3.66E-01	3.66E-01
		529.64	30.30	1.49E-01		5.42E-01
		552.65	16.40	-1.99E-01		9.67E-01
+	KR-85	513.99	0.43	-4.47E+00	3.88E+01	3.88E+01
+	SR-85	513.99	99.27	-2.71E-02	2.36E-01	2.36E-01
+	Y-88	898.02	93.40	3.50E-02	1.43E-01	1.98E-01
		1836.01	99.38	-2.19E-02		1.43E-01
+	NB-93M	16.57	9.43	8.83E-01	4.26E-01	4.26E-01
+	NB-94	702.63	100.00	7.02E-02	1.38E-01	1.61E-01
		871.10	100.00	3.47E-02		1.38E-01

Analysis Report for 1510086-08
CP4105S10-11

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	NB-95	765.79	99.81	3.39E-02	2.93E-01	2.93E-01
+	NB-95M	235.69	25.00	-9.06E+00	2.63E+02	2.63E+02
+	ZR-95	724.18	43.70	-2.82E-02	3.78E-01	5.64E-01
		756.72	55.30	-6.42E-02		3.78E-01
+	MO-99	181.06	6.20	-5.29E+03	2.91E+03	4.15E+03
		739.58	12.80	-4.13E+02		2.91E+03
		778.00	4.50	-4.63E+03		8.09E+03
+	RU-103	497.08	89.00	3.25E-02	2.52E-01	2.52E-01
+	RU-106	621.84	9.80	-7.89E-01	1.41E+00	1.41E+00
+	AG-108M	433.93	89.90	-7.90E-02	1.31E-01	1.31E-01
		614.37	90.40	-8.45E-04		1.78E-01
		722.95	90.50	-1.41E-02		1.82E-01
+	CD-109	88.03	* 3.72	3.51E+00	7.72E+00	7.72E+00
+	AG-110M	657.75	93.14	-9.39E-02	1.51E-01	1.51E-01
		677.61	10.53	3.30E-01		1.51E+00
		706.67	16.46	1.67E-01		1.02E+00
		763.93	21.98	-2.61E-01		7.40E-01
		884.67	71.63	1.17E-01		2.39E-01
		1384.27	23.94	-2.00E-01		6.40E-01
+	CD-113M	263.70	0.02	-1.17E+02	4.61E+02	4.61E+02
+	SN-113	255.12	1.93	2.58E+00	2.20E-01	6.48E+00
		391.69	64.90	5.79E-02		2.20E-01
+	TE123M	159.00	84.10	-1.57E-02	1.33E-01	1.33E-01
+	SB-124	602.71	97.87	1.27E-02	1.89E-01	1.89E-01
		645.85	7.26	7.59E-02		2.82E+00
		722.78	11.10	-2.87E-01		2.02E+00
		1691.02	49.00	8.08E-03		3.42E-01
+	I-125	35.49	6.49	3.91E-03	1.08E+00	1.08E+00
+	SB-125	176.33	6.89	2.97E-03	4.24E-01	1.43E+00
		427.89	29.33	1.44E-01		4.24E-01
		463.38	10.35	2.72E-01		1.28E+00
		600.56	17.80	-1.58E-01		7.19E-01
		635.90	11.32	-3.43E-01		1.17E+00
+	SB-126	414.70	83.30	2.92E-01	8.01E-01	8.70E-01
		666.33	99.60	4.58E-01		8.01E-01
		695.00	99.60	-9.56E-03		8.23E-01
		720.50	53.80	-6.64E-02		1.64E+00
+	SN-126	87.57	* 37.00	3.37E-01	7.41E-01	7.41E-01
+	SB-127	473.00	25.00	-3.33E+01	1.08E+02	1.34E+02
		685.20	35.70	1.12E+01		1.08E+02
		783.80	14.70	1.18E+02		2.98E+02
+	I-129	29.78	57.00	-8.12E-02	7.76E-02	7.76E-02
		33.60	13.20	-4.56E-02		3.52E-01
		39.58	7.52	7.84E-04		6.56E-01
+	I-131	284.30	6.05	2.75E+00	1.99E+00	2.54E+01
		364.48	81.20	-7.44E-01		1.99E+00
		636.97	7.26	-5.30E+00		2.61E+01
		722.89	1.80	-1.82E+01		1.28E+02

Analysis Report for 1510086-08
CP4105S10-11

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	TE-132	49.72	13.10	4.24E+02	8.88E+01	3.62E+02
		228.16	88.00	-1.26E+01		8.88E+01
+	BA-133	81.00	33.00	-2.68E-01	2.77E-01	3.09E-01
		302.84	17.80	1.95E-01		6.51E-01
		356.01	60.00	2.96E-02		2.77E-01
+	I-133	529.87	86.30	2.72E+09	9.90E+09	9.90E+09
+	XE-133	81.00	38.00	-1.42E+01	1.64E+01	1.64E+01
+	CS-134	563.23	8.38	1.44E+00	1.74E-01	1.75E+00
		569.32	15.43	-2.90E-01		8.42E-01
		604.70	97.60	8.13E-03		1.74E-01
		795.84	85.40	7.66E-02		2.05E-01
		801.93	8.73	-1.17E+00		1.72E+00
+	CS-135	268.24	16.00	2.10E-01	7.08E-01	7.08E-01
+	@ I-135	1131.51	22.50	1.00E+26	1.00E+26	1.00E+26
	@	1260.41	28.60	1.00E+26		1.00E+26
	@	1678.03	9.54	1.00E+26		1.00E+26
+	CS-136	153.22	7.46	2.29E+00	7.40E-01	6.62E+00
		163.89	4.61	-1.32E+00		1.02E+01
		176.55	13.56	7.63E-03		3.67E+00
		273.65	12.66	4.05E+00		4.79E+00
		340.57	48.50	1.95E+00		1.50E+00
		818.50	99.70	-1.54E-01		7.40E-01
		1048.07	79.60	6.06E-02		1.09E+00
		1235.34	19.70	-3.58E-01		5.71E+00
+	CS-137	661.65	85.12	2.18E-02	1.66E-01	1.66E-01
+	LA-138	788.74	34.00	1.98E-01	2.13E-01	4.99E-01
		1435.80	66.00	-2.19E-02		2.13E-01
+	CE-139	165.85	80.35	-1.28E-02	1.35E-01	1.35E-01
+	BA-140	162.64	6.70	-1.21E+00	2.65E+00	7.35E+00
		304.84	4.50	3.90E+00		1.33E+01
		423.70	3.20	3.97E-01		1.93E+01
		437.55	2.00	4.56E+00		3.20E+01
		537.32	25.00	4.71E-01		2.65E+00
+	LA-140	328.77	20.50	4.16E-01	9.02E-01	3.04E+00
		487.03	45.50	-4.08E-01		1.44E+00
		815.85	23.50	-1.59E+00		3.07E+00
		1596.49	95.49	-2.99E-02		9.02E-01
+	CE-141	145.44	48.40	3.66E-02	3.80E-01	3.80E-01
+	CE-143	57.36	11.80	-2.92E+06	2.04E+06	3.72E+06
		293.26	42.00	-2.82E+05		2.04E+06
		664.55	5.20	1.26E+07		1.85E+07
+	CE-144	133.54	10.80	-3.10E-01	9.11E-01	9.11E-01
+	PM-144	476.78	42.00	2.54E-02	1.41E-01	3.08E-01
		618.01	98.60	-2.72E-02		1.41E-01
		696.49	99.49	3.90E-02		1.59E-01
+	PM-145	36.85	21.70	-1.55E-02	1.22E-01	2.23E-01
		37.36	39.70	9.68E-03		1.22E-01
		42.30	15.10	-7.59E-02		3.55E-01
		72.40	2.31	2.68E-01		4.50E+00

Analysis Report for 1510086-08
CP4105S10-11

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	PM-146	453.90	39.94	1.02E-01	3.31E-01	3.31E-01
		735.90	14.01	-8.15E-02		9.38E-01
		747.13	13.10	1.67E-01		1.14E+00
+	ND-147	91.11	28.90	5.69E+00	2.48E+00	2.48E+00
		531.02	13.10	2.49E+00		6.95E+00
+	PM-149	285.90	3.10	1.76E+04	5.90E+04	5.90E+04
+	EU-152	121.78	20.50	-1.10E-01	4.13E-01	4.13E-01
		244.69	5.40	-2.49E-02		2.26E+00
		344.27	19.13	-9.76E-03		6.13E-01
		778.89	9.20	-8.86E-01		1.55E+00
		964.01	10.40	-6.62E-01		1.91E+00
		1085.78	7.22	-1.09E+00		2.32E+00
		1112.02	9.60	-2.01E-01		1.66E+00
		1407.95	14.94	-8.34E-02		9.58E-01
+	GD-153	97.43	31.30	-2.88E-01	2.88E-01	2.88E-01
		103.18	22.20	6.02E-02		3.95E-01
+	EU-154	123.07	40.50	-1.01E-01	2.09E-01	2.09E-01
		723.30	19.70	-6.52E-02		8.43E-01
		873.19	11.50	-4.23E-01		1.08E+00
		996.32	10.30	-2.01E-01		1.60E+00
		1004.76	17.90	8.34E-02		1.03E+00
		1274.45	35.50	-1.43E-01		5.10E-01
+	EU-155	86.50	30.90	-1.35E-01	3.06E-01	3.06E-01
		105.30	20.70	2.00E-01		3.95E-01
+	EU-156	811.77	10.40	-1.55E+00	5.59E+00	5.59E+00
		1153.47	7.20	2.44E+00		1.18E+01
		1230.71	8.90	6.29E-01		1.00E+01
+	HO-166M	184.41	72.60	1.21E-01	1.53E-01	1.53E-01
		280.45	29.60	-6.47E-02		3.60E-01
		410.94	11.10	3.53E-01		1.17E+00
		711.69	54.10	-1.72E-01		2.66E-01
+	TM-171	66.72	0.14	2.48E+01	5.96E+01	5.96E+01
+	HF-172	81.75	4.52	-6.65E+00	7.96E-01	2.17E+00
		125.81	11.30	-1.66E-01		7.96E-01
+	LU-172	181.53	20.60	-3.50E+00	7.01E+00	1.27E+01
		810.06	16.63	-4.97E-01		2.20E+01
		912.12	15.25	5.99E+01		4.13E+01
		1093.66	62.50	9.04E-01		7.01E+00
+	LU-173	100.72	5.24	-1.77E+00	5.65E-01	1.57E+00
		272.11	21.20	7.68E-02		5.65E-01
+	HF-175	343.40	84.00	-3.01E-03	1.95E-01	1.95E-01
+	LU-176	88.34	13.30	1.02E+00	1.08E-01	7.38E-01
		201.83	86.00	1.44E-02		1.27E-01
		306.78	94.00	-1.18E-01		1.08E-01
+	TA-182	67.75	41.20	1.05E-02	2.37E-01	2.37E-01
		1121.30	34.90	8.76E-01		8.51E-01
		1189.05	16.23	-6.57E-01		1.49E+00
		1221.41	26.98	-3.96E-02		9.27E-01
		1231.02	11.44	1.43E-01		2.27E+00

Analysis Report for 1510086-08
CP4105S10-11

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	IR-192	308.46	29.68	-1.69E-02	3.58E-01	4.66E-01
		468.07	48.10	1.06E-01		3.58E-01
+	HG-203	279.19	77.30	-8.15E-02	2.18E-01	2.18E-01
+	BI-207	569.67	97.72	-4.46E-02	1.30E-01	1.30E-01
		1063.62	74.90	6.25E-02		2.43E-01
+	TL-208	583.14	* 30.22	1.71E+00	2.15E-01	5.55E-01
		860.37	4.48	1.80E+00		3.74E+00
		2614.66	* 35.85	1.53E+00		2.15E-01
+	BI-210M	262.00	45.00	1.37E-02	2.35E-01	2.35E-01
		300.00	23.00	8.04E-02		5.67E-01
+	PB-210	46.50	* 4.25	9.75E-01	1.46E+00	1.46E+00
+	PB-211	404.84	2.90	-6.28E-01	4.22E+00	4.22E+00
		831.96	2.90	7.63E-01		5.73E+00
+	BI-212	727.17	* 11.80	1.05E+00	1.33E+00	1.33E+00
		1620.62	2.75	1.28E+00		5.67E+00
+	PB-212	238.63	* 44.60	1.74E+00	3.81E-01	3.81E-01
		300.09	3.41	5.43E-01		3.82E+00
+	BI-214	609.31	* 46.30	9.41E-01	2.53E-01	4.27E-01
		1120.29	* 15.10	1.92E+00		1.75E+00
		1764.49	* 15.80	1.30E+00		2.53E-01
		2204.22	* 4.98	1.93E+00		3.31E+00
+	PB-214	295.21	* 19.19	7.29E-01	4.51E-01	6.65E-01
		351.92	* 37.19	1.06E+00		4.51E-01
+	RN-219	401.80	6.50	3.35E-01	1.90E+00	1.90E+00
+	RA-223	323.87	3.88	-1.31E+00	2.87E+00	2.87E+00
+	RA-224	240.98	3.95	2.04E+01	4.59E+00	4.59E+00
+	RA-225	40.00	* 31.00	3.14E-01	5.07E-01	5.07E-01
+	RA-226	186.21	3.28	3.65E+00	3.44E+00	3.44E+00
+	TH-227	50.10	8.40	8.75E-01	7.47E-01	7.47E-01
		236.00	11.50	-4.96E-02		1.44E+00
		256.20	6.30	2.41E-01		1.62E+00
+	AC-228	338.32	* 11.40	1.39E+00	7.54E-01	1.49E+00
		911.07	* 27.70	1.55E+00		7.54E-01
		969.11	* 16.60	2.32E+00		1.34E+00
+	TH-230	48.44	16.90	4.71E-01	3.64E-01	3.64E-01
		62.85	4.60	5.18E-01		1.65E+00
		67.67	0.37	9.68E-01		2.18E+01
+	PA-231	283.67	1.60	-1.36E+00	5.01E+00	6.49E+00
		302.67	2.30	1.50E+00		5.01E+00
+	TH-231	25.64	14.70	-3.27E-03	3.17E-01	3.17E-01
		84.21	6.40	-4.76E+00		1.42E+00
+	PA-233	311.98	38.60	-3.08E-01	5.81E-01	5.81E-01
+	PA-234	131.20	20.40	2.80E-01	4.54E-01	4.54E-01
		733.99	8.80	-1.28E-01		1.55E+00
		946.00	12.00	1.88E-01		1.36E+00
+	PA-234M	1001.03	0.92	5.28E+00	1.94E+01	1.94E+01
+	TH-234	63.29	3.80	1.82E-02	2.01E+00	2.01E+00

Analysis Report for 1510086-08
CP4105S10-11

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	U-235	143.76	10.50	4.20E-01	9.09E-01	9.09E-01
		163.35	4.70	-2.49E-01		1.94E+00
		205.31	4.70	2.64E-01		2.34E+00
+	NP-237	86.50	12.60	-3.28E-01	7.42E-01	7.42E-01
+	NP-239	106.10	22.70	1.75E+03	3.45E+03	3.45E+03
		228.18	10.70	-4.27E+02		9.18E+03
		277.60	14.10	3.06E+01		7.56E+03
+	AM-241	59.54	35.90	6.69E-02	1.99E-01	1.99E-01
+	AM-243	74.67	66.00	6.28E-01	1.68E-01	1.68E-01
+	CM-243	209.75	3.29	6.12E-01	7.92E-01	3.35E+00
		228.14	10.60	-1.38E-01		9.75E-01
		277.60	14.00	3.21E-03		7.92E-01

- + = Nuclide identified during the nuclide identification
 * = Energy line found in the spectrum
 > = MDA value not calculated
 @ = Half-life too short to be able to perform the decay correction
 ? = CAUTION: MDA value is inconsistent with Currie MDA at 95% confidence level

NUCLIDE MDA REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

	Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
	BE-7	477.59	10.42	1.73E+00	1.73E+00	-1.07E-01	8.16E-01
	NA-22	1274.54	99.94	1.84E-01	1.84E-01	-5.15E-02	8.31E-02
	NA-24	1368.53	99.99	1.38E+14	1.31E+14	-6.18E+12	5.94E+13
		2754.09	99.86	1.31E+14		1.76E+13	4.92E+13
	AL-26	1808.65	99.76	9.46E-02	9.46E-02	6.84E-03	3.54E-02
+	K-40	1460.81	* 10.67	1.38E+00	1.38E+00	2.03E+01	5.95E-01
@	AR-41	1293.64	99.16	1.00E+26	1.00E+26	1.00E+26	1.00E+20
	TI-44	67.88	94.40	8.57E-02	8.57E-02	3.80E-03	4.21E-02
		78.34	96.00	1.15E-01		3.31E-01	5.65E-02
	SC-46	889.25	99.98	2.02E-01	2.02E-01	3.81E-02	9.32E-02

Analysis Report for 1510086-08

CP4105S10-11

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
SC-46	1120.51	99.99	3.10E-01	2.02E-01	2.87E-01	1.45E-01
V-48	983.52	99.98	6.94E-01	6.21E-01	4.33E-01	3.20E-01
	1312.10	97.50	6.21E-01		-5.72E-02	2.75E-01
CR-51	320.08	9.83	2.43E+00	2.43E+00	1.77E-01	1.17E+00
MN-54	834.83	99.97	1.74E-01	1.74E-01	1.83E-02	8.09E-02
CO-56	846.75	99.96	2.19E-01	2.19E-01	-1.83E-02	1.02E-01
	1037.75	14.03	1.44E+00		-5.45E-01	6.50E-01
	1238.25	67.00	4.41E-01		1.09E-01	2.04E-01
	1771.40	15.51	1.22E+00		-6.83E-01	5.10E-01
	2598.48	16.90	6.56E-01		-2.38E-01	2.07E-01
CO-57	122.06	85.51	1.07E-01	1.07E-01	-2.84E-02	5.22E-02
	136.48	10.60	9.42E-01		-2.81E-02	4.59E-01
CO-58	810.76	99.40	1.99E-01	1.99E-01	-4.49E-03	9.18E-02
FE-59	1099.22	56.50	4.36E-01	4.36E-01	2.30E-02	1.96E-01
	1291.56	43.20	7.64E-01		1.70E-01	3.49E-01
CO-60	1173.22	100.00	1.95E-01	1.64E-01	6.23E-02	8.93E-02
	1332.49	100.00	1.64E-01		4.06E-02	7.27E-02
ZN-65	1115.52	50.75	3.68E-01	3.68E-01	-2.83E-02	1.67E-01
GA-67	93.31	35.70	1.95E+02	1.95E+02	1.14E+02	9.56E+01
	208.95	2.24	3.67E+03		-4.86E+02	1.78E+03
	300.22	16.00	5.69E+02		7.93E+01	2.74E+02
SE-75	121.11	16.70	6.07E-01	1.87E-01	-7.28E-02	2.96E-01
	136.00	59.20	1.87E-01		-3.71E-02	9.11E-02
	264.65	59.80	2.12E-01		-1.07E-01	1.02E-01
	279.53	25.20	5.05E-01		-1.88E-01	2.43E-01
	400.65	11.40	1.28E+00		1.74E-01	6.10E-01
RB-82	776.52	13.00	2.60E+00	2.60E+00	-2.66E-01	1.20E+00
RB-83	520.41	46.00	3.66E-01	3.66E-01	4.99E-02	1.72E-01
	529.64	30.30	5.42E-01		1.49E-01	2.55E-01
	552.65	16.40	9.67E-01		-1.99E-01	4.53E-01
KR-85	513.99	0.43	3.88E+01	3.88E+01	-4.47E+00	1.86E+01
SR-85	513.99	99.27	2.36E-01	2.36E-01	-2.71E-02	1.13E-01
Y-88	898.02	93.40	1.98E-01	1.43E-01	3.50E-02	9.09E-02
	1836.01	99.38	1.43E-01		-2.19E-02	5.69E-02
NB-93M	16.57	9.43	4.26E-01	4.26E-01	8.83E-01	2.07E-01
NB-94	702.63	100.00	1.61E-01	1.38E-01	7.02E-02	7.57E-02
	871.10	100.00	1.38E-01		3.47E-02	6.31E-02
NB-95	765.79	99.81	2.93E-01	2.93E-01	3.39E-02	1.37E-01
NB-95M	235.69	25.00	2.63E+02	2.63E+02	-9.06E+00	1.29E+02
ZR-95	724.18	43.70	5.64E-01	3.78E-01	-2.82E-02	2.66E-01
	756.72	55.30	3.78E-01		-6.42E-02	1.75E-01
MO-99	181.06	6.20	4.15E+03	2.91E+03	-5.29E+03	2.02E+03
	739.58	12.80	2.91E+03		-4.13E+02	1.35E+03
	778.00	4.50	8.09E+03		-4.63E+03	3.73E+03
RU-103	497.08	89.00	2.52E-01	2.52E-01	3.25E-02	1.19E-01
RU-106	621.84	9.80	1.41E+00	1.41E+00	-7.89E-01	6.59E-01
AG-108M	433.93	89.90	1.31E-01	1.31E-01	-7.90E-02	6.19E-02
	614.37	90.40	1.78E-01		-8.45E-04	8.42E-02
	722.95	90.50	1.82E-01		-1.41E-02	8.55E-02
+ CD-109	88.03	*	7.72E+00	7.72E+00	3.51E+00	3.84E+00
AG-110M	657.75	93.14	1.51E-01	1.51E-01	-9.39E-02	6.99E-02
	677.61	10.53	1.51E+00		3.30E-01	7.07E-01
	706.67	16.46	1.02E+00		1.67E-01	4.78E-01

Analysis Report for 1510086-08
CP4105S10-11

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
AG-110M	763.93	21.98	7.40E-01	1.51E-01	-2.61E-01	3.43E-01
	884.67	71.63	2.39E-01		1.17E-01	1.10E-01
	1384.27	23.94	6.40E-01		-2.00E-01	2.77E-01
CD-113M	263.70	0.02	4.61E+02	4.61E+02	-1.17E+02	2.22E+02
	SN-113	255.12	1.93	6.48E+00	2.20E-01	2.58E+00	3.12E+00
TE123M	391.69	64.90	2.20E-01	1.33E-01	5.79E-02	1.05E-01
	159.00	84.10	1.33E-01		-1.57E-02	6.45E-02
	602.71	97.87	1.89E-01		1.89E-01	1.27E-02	8.83E-02
SB-124	645.85	7.26	2.82E+00	1.89E-01	7.59E-02	1.32E+00
	722.78	11.10	2.02E+00		-2.87E-01	9.45E-01
	1691.02	49.00	3.42E-01		8.08E-03	1.38E-01
I-125	35.49	6.49	1.08E+00	1.08E+00	3.91E-03	5.26E-01
SB-125	176.33	6.89	1.43E+00	4.24E-01	2.97E-03	6.93E-01
	427.89	29.33	4.24E-01	1.44E-01	2.01E-01	
	463.38	10.35	1.28E+00	2.72E-01	6.06E-01	
	600.56	17.80	7.19E-01	-1.58E-01	3.35E-01	
	635.90	11.32	1.17E+00	-3.43E-01	5.44E-01	
SB-126	414.70	83.30	8.70E-01	8.01E-01	2.92E-01	4.15E-01
	666.33	99.60	8.01E-01	4.58E-01	3.74E-01	
	695.00	99.60	8.23E-01	-9.56E-03	3.83E-01	
	720.50	53.80	1.64E+00	-6.64E-02	7.64E-01	
+ SN-126	87.57	* 37.00	7.41E-01	7.41E-01	3.37E-01	3.68E-01
SB-127	473.00	25.00	1.34E+02	1.08E+02	-3.33E+01	6.31E+01
	685.20	35.70	1.08E+02	1.12E+01	5.01E+01	
	783.80	14.70	2.98E+02	1.18E+02	1.39E+02	
I-129	29.78	57.00	7.76E-02	7.76E-02	-8.12E-02	3.78E-02
	33.60	13.20	3.52E-01	-4.56E-02	1.72E-01	
	39.58	7.52	6.56E-01	7.84E-04	3.20E-01	
I-131	284.30	6.05	2.54E+01	1.99E+00	2.75E+00	1.22E+01
	364.48	81.20	1.99E+00	-7.44E-01	9.50E-01	
	636.97	7.26	2.61E+01	-5.30E+00	1.21E+01	
	722.89	1.80	1.28E+02	-1.82E+01	5.98E+01	
TE-132	49.72	13.10	3.62E+02	8.88E+01	4.24E+02	1.77E+02
	228.16	88.00	8.88E+01	-1.26E+01	4.29E+01	
BA-133	81.00	33.00	3.09E-01	2.77E-01	-2.68E-01	1.52E-01
	302.84	17.80	6.51E-01	1.95E-01	3.13E-01	
	356.01	60.00	2.77E-01	2.96E-02	1.34E-01	
I-133	529.87	86.30	9.90E+09	9.90E+09	2.72E+09	4.66E+09
XE-133	81.00	38.00	1.64E+01	1.64E+01	-1.42E+01	8.09E+00
CS-134	563.23	8.38	1.75E+00	1.74E-01	1.44E+00	8.24E-01
	569.32	15.43	8.42E-01	-2.90E-01	3.94E-01	
	604.70	97.60	1.74E-01	8.13E-03	8.23E-02	
	795.84	85.40	2.05E-01	7.66E-02	9.57E-02	
	801.93	8.73	1.72E+00	-1.17E+00	7.92E-01	
	268.24	16.00	7.08E-01	7.08E-01	2.10E-01	3.42E-01
@ I-135	1131.51	22.50	1.00E+26	1.00E+26	1.00E+26	1.00E+20
@	1260.41	28.60	1.00E+26	1.00E+26	1.00E+26	1.00E+20
@	1678.03	9.54	1.00E+26	1.00E+26	1.00E+26	1.00E+20
CS-136	153.22	7.46	6.62E+00	7.40E-01	2.29E+00	3.22E+00
	163.89	4.61	1.02E+01	-1.32E+00	4.97E+00	
	176.55	13.56	3.67E+00	7.63E-03	1.78E+00	
	273.65	12.66	4.79E+00	4.05E+00	2.31E+00	
	340.57	48.50	1.50E+00	1.95E+00	7.26E-01	

Analysis Report for 1510086-08

CP4105S10-11

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
CS-136	818.50	99.70	7.40E-01	7.40E-01	-1.54E-01	3.40E-01
	1048.07	79.60	1.09E+00		6.06E-02	4.96E-01
	1235.34	19.70	5.71E+00		-3.58E-01	2.63E+00
CS-137	661.65	85.12	1.66E-01	1.66E-01	2.18E-02	7.74E-02
	1435.80	66.00	2.13E-01	2.13E-01	1.98E-01	2.33E-01
LA-138	788.74	34.00	4.99E-01		-2.19E-02	9.16E-02
CE-139	165.85	80.35	1.35E-01	1.35E-01	-1.28E-02	6.55E-02
BA-140	162.64	6.70	7.35E+00	2.65E+00	-1.21E+00	3.57E+00
	304.84	4.50	1.33E+01		3.90E+00	6.39E+00
	423.70	3.20	1.93E+01		3.97E-01	9.16E+00
	437.55	2.00	3.20E+01		4.56E+00	1.52E+01
	537.32	25.00	2.65E+00		4.71E-01	1.24E+00
LA-140	328.77	20.50	3.04E+00	9.02E-01	4.16E-01	1.46E+00
	487.03	45.50	1.44E+00		-4.08E-01	6.81E-01
	815.85	23.50	3.07E+00		-1.59E+00	1.40E+00
CE-141	1596.49	95.49	9.02E-01		-2.99E-02	3.90E-01
	145.44	48.40	3.80E-01	3.80E-01	3.66E-02	1.85E-01
CE-143	57.36	11.80	3.72E+06	2.04E+06	-2.92E+06	1.82E+06
	293.26	42.00	2.04E+06		-2.82E+05	9.86E+05
	664.55	5.20	1.85E+07		1.26E+07	8.63E+06
CE-144	133.54	10.80	9.11E-01	9.11E-01	-3.10E-01	4.44E-01
PM-144	476.78	42.00	3.08E-01	1.41E-01	2.54E-02	1.45E-01
	618.01	98.60	1.41E-01		-2.72E-02	6.56E-02
	696.49	99.49	1.59E-01		3.90E-02	7.43E-02
PM-145	36.85	21.70	2.23E-01	1.22E-01	-1.55E-02	1.09E-01
	37.36	39.70	1.22E-01		9.68E-03	5.95E-02
	42.30	15.10	3.55E-01		-7.59E-02	1.73E-01
	72.40	2.31	4.50E+00		2.68E-01	2.21E+00
PM-146	453.90	39.94	3.31E-01	3.31E-01	1.02E-01	1.57E-01
	735.90	14.01	9.38E-01		-8.15E-02	4.32E-01
	747.13	13.10	1.14E+00		1.67E-01	5.27E-01
ND-147	91.11	28.90	2.48E+00	2.48E+00	5.69E+00	1.22E+00
	531.02	13.10	6.95E+00		2.49E+00	3.27E+00
PM-149	285.90	3.10	5.90E+04	5.90E+04	1.76E+04	2.84E+04
EU-152	121.78	20.50	4.13E-01	4.13E-01	-1.10E-01	2.02E-01
	244.69	5.40	2.26E+00		-2.49E-02	1.10E+00
	344.27	19.13	6.13E-01		-9.76E-03	2.94E-01
	778.89	9.20	1.55E+00		-8.86E-01	7.13E-01
	964.01	10.40	1.91E+00		-6.62E-01	8.89E-01
	1085.78	7.22	2.32E+00		-1.09E+00	1.05E+00
	1112.02	9.60	1.66E+00		-2.01E-01	7.49E-01
	1407.95	14.94	9.58E-01		-8.34E-02	4.15E-01
GD-153	97.43	31.30	2.88E-01	2.88E-01	-2.88E-01	1.41E-01
	103.18	22.20	3.95E-01		6.02E-02	1.93E-01
EU-154	123.07	40.50	2.09E-01	2.09E-01	-1.01E-01	1.02E-01
	723.30	19.70	8.43E-01		-6.52E-02	3.96E-01
	873.19	11.50	1.08E+00		-4.23E-01	4.88E-01
	996.32	10.30	1.60E+00		-2.01E-01	7.31E-01
	1004.76	17.90	1.03E+00		8.34E-02	4.75E-01
EU-155	1274.45	35.50	5.10E-01		-1.43E-01	2.30E-01
	86.50	30.90	3.06E-01	3.06E-01	-1.35E-01	1.50E-01
	105.30	20.70	3.95E-01		2.00E-01	1.93E-01
EU-156	811.77	10.40	5.59E+00	5.59E+00	-1.55E+00	2.57E+00

Analysis Report for 1510086-08

CP4105S10-11

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
EU-156	1153.47	7.20	1.18E+01	5.59E+00	2.44E+00	5.43E+00
	1230.71	8.90	1.00E+01		6.29E-01	4.61E+00
HO-166M	184.41	72.60	1.53E-01	1.53E-01	1.21E-01	7.47E-02
	280.45	29.60	3.60E-01		-6.47E-02	1.73E-01
	410.94	11.10	1.17E+00		3.53E-01	5.57E-01
	711.69	54.10	2.66E-01		-1.72E-01	1.24E-01
TM-171	66.72	0.14	5.96E+01	5.96E+01	2.48E+01	2.92E+01
HF-172	81.75	4.52	2.17E+00	7.96E-01	-6.65E+00	1.07E+00
	125.81	11.30	7.96E-01		-1.66E-01	3.88E-01
LU-172	181.53	20.60	1.27E+01	7.01E+00	-3.50E+00	6.19E+00
	810.06	16.63	2.20E+01		-4.97E-01	1.02E+01
	912.12	15.25	4.13E+01		5.99E+01	1.96E+01
LU-173	1093.66	62.50	7.01E+00	5.65E-01	9.04E-01	3.20E+00
	100.72	5.24	1.57E+00		-1.77E+00	7.65E-01
	272.11	21.20	5.65E-01		7.68E-02	2.73E-01
HF-175	343.40	84.00	1.95E-01	1.95E-01	-3.01E-03	9.37E-02
LU-176	88.34	13.30	7.38E-01	1.08E-01	1.02E+00	3.63E-01
	201.83	86.00	1.27E-01		1.44E-02	6.16E-02
	306.78	94.00	1.08E-01		-1.18E-01	5.17E-02
TA-182	67.75	41.20	2.37E-01	2.37E-01	1.05E-02	1.16E-01
	1121.30	34.90	8.51E-01		8.76E-01	3.99E-01
	1189.05	16.23	1.49E+00		-6.57E-01	6.82E-01
	1221.41	26.98	9.27E-01		-3.96E-02	4.26E-01
	1231.02	11.44	2.27E+00		1.43E-01	1.05E+00
IR-192	308.46	29.68	4.66E-01	3.58E-01	-1.69E-02	2.23E-01
	468.07	48.10	3.58E-01		1.06E-01	1.70E-01
HG-203	279.19	77.30	2.18E-01	2.18E-01	-8.15E-02	1.05E-01
BI-207	569.67	97.72	1.30E-01	1.30E-01	-4.46E-02	6.07E-02
	1063.62	74.90	2.43E-01		6.25E-02	1.12E-01
+ TL-208	583.14	* 30.22	5.55E-01	2.15E-01	1.71E+00	2.64E-01
	860.37	4.48	3.74E+00		1.80E+00	1.74E+00
	2614.66	* 35.85	2.15E-01		1.53E+00	6.39E-02
BI-210M	262.00	45.00	2.35E-01	2.35E-01	1.37E-02	1.13E-01
	300.00	23.00	5.67E-01		8.04E-02	2.74E-01
+ PB-210	46.50	* 4.25	1.46E+00	1.46E+00	9.75E-01	7.13E-01
	PB-211	404.84	2.90		4.22E+00	-6.28E-01	2.01E+00
+ BI-212	831.96	2.90	5.73E+00	1.33E+00	7.63E-01	2.66E+00
	727.17	* 11.80	1.33E+00		1.05E+00	6.19E-01
+ PB-212	1620.62	2.75	5.67E+00	3.81E-01	1.28E+00	2.44E+00
	238.63	* 44.60	3.81E-01		1.74E+00	1.86E-01
+ BI-214	300.09	3.41	3.82E+00	2.53E-01	5.43E-01	1.85E+00
	609.31	* 46.30	4.27E-01		9.41E-01	2.04E-01
	1120.29	* 15.10	1.75E+00		1.92E+00	8.26E-01
+ PB-214	1764.49	* 15.80	2.53E-01	4.51E-01	1.30E+00	5.29E-02
	2204.22	* 4.98	3.31E+00		1.93E+00	1.38E+00
	295.21	* 19.19	6.65E-01		7.29E-01	3.21E-01
RN-219	351.92	* 37.19	4.51E-01	1.90E+00	1.06E+00	2.19E-01
	401.80	6.50	1.90E+00		3.35E-01	9.06E-01
RA-223	323.87	3.88	2.87E+00	2.87E+00	-1.31E+00	1.37E+00
RA-224	240.98	3.95	4.59E+00	4.59E+00	2.04E+01	2.25E+00
+ RA-225	40.00	* 31.00	5.07E-01	5.07E-01	3.14E-01	2.45E-01
RA-226	186.21	3.28	3.44E+00	3.44E+00	3.65E+00	1.68E+00
TH-227	50.10	8.40	7.47E-01	7.47E-01	8.75E-01	3.66E-01

Analysis Report for 1510086-08
CP4105S10-11

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
TH-227	236.00	11.50	1.44E+00	7.47E-01	-4.96E-02	7.05E-01
	256.20	6.30	1.62E+00		2.41E-01	7.82E-01
+ AC-228	338.32 *	11.40	1.49E+00	7.54E-01	1.39E+00	7.22E-01
	911.07 *	27.70	7.54E-01		1.55E+00	3.54E-01
	969.11 *	16.60	1.34E+00		2.32E+00	6.28E-01
TH-230	48.44	16.90	3.64E-01	3.64E-01	4.71E-01	1.78E-01
	62.85	4.60	1.65E+00		5.18E-01	8.07E-01
	67.67	0.37	2.18E+01		9.68E-01	1.07E+01
PA-231	283.67	1.60	6.49E+00	5.01E+00	-1.36E+00	3.12E+00
	302.67	2.30	5.01E+00		1.50E+00	2.41E+00
TH-231	25.64	14.70	3.17E-01	3.17E-01	-3.27E-03	1.55E-01
	84.21	6.40	1.42E+00		-4.76E+00	6.99E-01
PA-233	311.98	38.60	5.81E-01	5.81E-01	-3.08E-01	2.77E-01
PA-234	131.20	20.40	4.54E-01	4.54E-01	2.80E-01	2.21E-01
	733.99	8.80	1.55E+00		-1.28E-01	7.15E-01
	946.00	12.00	1.36E+00		1.88E-01	6.23E-01
PA-234M	1001.03	0.92	1.94E+01	1.94E+01	5.28E+00	8.96E+00
TH-234	63.29	3.80	2.01E+00	2.01E+00	1.82E-02	9.84E-01
U-235	143.76	10.50	9.09E-01	9.09E-01	4.20E-01	4.43E-01
	163.35	4.70	1.94E+00		-2.49E-01	9.42E-01
	205.31	4.70	2.34E+00		2.64E-01	1.14E+00
NP-237	86.50	12.60	7.42E-01	7.42E-01	-3.28E-01	3.64E-01
NP-239	106.10	22.70	3.45E+03	3.45E+03	1.75E+03	1.68E+03
	228.18	10.70	9.18E+03		-4.27E+02	4.44E+03
	277.60	14.10	7.56E+03		3.06E+01	3.64E+03
AM-241	59.54	35.90	1.99E-01	1.99E-01	6.69E-02	9.76E-02
AM-243	74.67	66.00	1.68E-01	1.68E-01	6.28E-01	8.28E-02
CM-243	209.75	3.29	3.35E+00	7.92E-01	6.12E-01	1.63E+00
	228.14	10.60	9.75E-01		-1.38E-01	4.72E-01
	277.60	14.00	7.92E-01		3.21E-03	3.81E-01

- + = Nuclide identified during the nuclide identification
 * = Energy line found in the spectrum
 > = MDA value not calculated
 @ = Half-life too short to be able to perform the decay correction

No Action Level results available for reporting purposes.

DATA REVIEW COMMENTS REPORT

Creation Date Comment User

: 00591

Analysis Report for 1510086-08
CP4105S10-11

No Data Review Comments Entered.

 ***** S P E C T R A L D A T A R E P O R T *****

Sample Title: CP4105S10-11

Elapsed Live time: 3600
Elapsed Real Time: 3692

Channel	-----	-----	-----	-----	-----	-----	-----	-----
1:	0	0	0	0	0	0	0	0
9:	0	0	0	0	0	0	17	92
17:	83	76	80	79	69	68	72	82
25:	55	48	53	62	61	40	65	53
33:	52	62	62	58	63	64	79	41
41:	49	58	63	65	89	99	79	82
49:	76	66	86	98	78	65	65	81
57:	90	100	81	83	105	119	129	107
65:	88	101	107	109	118	109	102	123
73:	173	218	266	285	260	138	112	89
81:	99	96	93	109	111	134	141	113
89:	105	103	131	137	137	91	63	68
97:	61	65	64	68	59	66	67	69
105:	65	69	63	76	52	59	48	52
113:	78	60	46	61	71	49	67	62
121:	50	60	52	60	54	61	65	72
129:	61	74	58	61	55	63	63	58
137:	46	69	65	54	55	61	52	60
145:	56	70	57	51	50	48	48	55
153:	64	70	46	49	53	44	36	45
161:	36	52	37	53	44	49	43	33
169:	52	42	54	49	36	48	35	50
177:	42	38	50	43	37	40	39	65
185:	86	73	64	42	45	42	53	36
193:	37	41	44	44	47	49	40	44
201:	52	42	50	32	47	41	38	53
209:	43	46	48	32	36	41	43	37
217:	30	44	37	40	33	39	33	28
225:	31	35	26	38	27	41	31	26
233:	30	35	23	59	153	209	156	75
241:	78	41	32	34	21	29	20	29
249:	18	24	33	20	22	30	29	28
257:	25	28	22	27	23	30	19	27
265:	37	22	27	21	30	36	36	26
273:	31	29	26	33	25	24	24	19
281:	23	18	20	26	22	27	18	26
289:	18	17	21	15	33	55	62	43
297:	25	23	32	35	26	20	18	20
305:	24	18	17	18	13	14	18	24
313:	23	14	13	20	17	25	19	15
321:	23	18	25	15	17	21	23	29
329:	21	24	16	18	16	18	18	28
337:	43	61	27	24	19	20	22	19
345:	19	20	16	14	28	53	82	93
353:	51	20	19	19	7	24	19	15
361:	22	15	13	11	8	19	12	22

369: 17 17 21 17 19 7 18 9

Sample Title: CP4105S10-11

Channel	1	2	3	4	5	6	7	8	9
377:	20	13	13	18	12	15	16	10	
385:	14	19	16	23	16	14	16	16	
393:	13	10	14	18	20	20	11	13	
401:	18	13	9	18	21	14	14	18	
409:	20	11	16	20	18	20	14	13	
417:	14	16	12	12	8	12	8	9	
425:	9	16	23	14	13	17	13	15	
433:	11	11	10	7	13	15	13	15	
441:	15	5	10	9	10	15	11	12	
449:	9	14	11	20	14	26	9	13	
457:	10	12	12	11	12	20	11	14	
465:	18	9	11	14	9	13	11	15	
473:	8	11	6	13	12	9	16	8	
481:	12	7	11	9	12	12	6	12	
489:	9	15	9	16	10	13	10	5	
497:	19	11	10	11	13	8	8	9	
505:	7	10	8	21	18	36	33	25	
513:	13	13	8	9	9	14	10	15	
521:	9	10	12	7	10	7	9	6	
529:	14	10	10	7	14	9	7	5	
537:	6	6	6	17	7	9	3	8	
545:	10	11	9	8	10	11	7	8	
553:	12	9	5	4	10	9	7	10	
561:	11	16	9	10	12	8	13	2	
569:	7	6	6	10	9	7	10	8	
577:	12	7	3	5	23	47	57	36	
585:	16	12	6	12	11	5	6	5	
593:	5	15	9	7	5	9	6	11	
601:	10	4	6	6	4	12	20	40	
609:	71	32	21	5	7	11	8	6	
617:	4	10	8	6	6	7	4	6	
625:	14	15	10	8	4	6	7	9	
633:	4	4	11	7	5	8	6	6	
641:	8	15	4	6	6	6	11	11	
649:	6	8	9	10	3	9	9	5	
657:	5	6	4	6	9	11	9	6	
665:	11	7	5	6	3	7	3	3	
673:	5	10	8	11	7	13	4	5	
681:	6	10	8	7	5	7	4	7	
689:	8	3	4	7	7	8	6	9	
697:	6	9	7	9	6	9	8	9	
705:	13	9	5	8	6	4	8	4	
713:	9	10	6	9	11	6	8	7	
721:	5	9	10	3	8	14	14	19	
729:	8	8	4	6	6	8	3	5	
737:	8	2	3	6	7	13	9	3	
745:	2	4	10	9	7	8	5	3	
753:	13	6	5	4	6	10	6	4	
761:	7	8	7	3	6	7	8	6	
769:	11	8	5	6	5	10	4	7	
777:	4	3	5	7	3	5	6	11	
785:	10	8	7	3	7	7	8	8	
793:	5	6	9	8	11	7	6	4	

801: 7 7 3 2 4 8 8 9

Sample Title: CP4105S10-11

Channel	1	2	3	4	5	6	7	8	9
809:	4	8	5	1	3	1	4	8	
817:	7	4	5	7	3	5	9	4	
825:	11	7	9	5	7	8	6	6	
833:	10	8	4	5	4	5	2	7	
841:	6	5	7	8	4	5	10	11	
849:	2	5	6	10	8	4	3	8	
857:	4	4	10	10	9	2	5	4	
865:	4	5	2	10	2	6	1	6	
873:	2	2	5	2	2	3	1	6	
881:	4	4	7	3	3	7	5	7	
889:	2	7	4	8	2	5	4	3	
897:	4	8	4	5	6	2	4	3	
905:	3	1	10	8	13	11	34	29	
913:	8	6	5	3	4	3	6	4	
921:	5	5	6	4	5	2	3	2	
929:	3	3	3	3	6	9	6	10	
937:	4	8	5	5	5	4	5	5	
945:	3	7	7	3	3	6	3	3	
953:	5	6	1	6	12	7	3	7	
961:	1	4	5	5	12	8	7	14	
969:	16	8	6	8	7	5	4	1	
977:	3	5	3	6	6	4	7	5	
985:	8	6	4	6	1	2	3	4	
993:	6	4	3	5	4	4	3	6	
1001:	10	6	5	4	5	5	7	1	
1009:	6	5	7	3	2	4	3	6	
1017:	3	3	4	7	5	6	0	3	
1025:	1	2	1	5	4	7	7	5	
1033:	6	0	6	4	6	3	3	2	
1041:	1	1	5	5	3	7	4	3	
1049:	5	5	1	4	8	2	5	4	
1057:	2	5	5	3	2	4	4	8	
1065:	3	7	7	4	3	5	2	4	
1073:	5	4	5	4	7	7	5	4	
1081:	3	5	1	6	3	10	0	1	
1089:	2	6	7	5	7	5	3	0	
1097:	2	2	6	3	6	3	2	1	
1105:	4	6	3	1	6	4	3	3	
1113:	2	3	4	3	4	3	9	16	
1121:	10	11	8	6	7	4	1	5	
1129:	2	6	7	5	4	1	8	3	
1137:	5	6	6	1	4	5	4	7	
1145:	7	6	2	0	7	3	5	9	
1153:	3	7	6	4	3	7	2	8	
1161:	4	3	4	3	2	2	1	3	
1169:	3	4	1	3	8	4	7	5	
1177:	5	5	6	3	4	4	7	5	
1185:	0	4	6	4	3	6	8	7	
1193:	4	4	8	10	3	6	8	4	
1201:	5	5	6	4	6	2	4	10	
1209:	3	6	3	6	6	4	7	7	
1217:	4	5	3	3	7	5	6	8	
1225:	2	3	3	6	5	7	6	2	

1233: 4 8 5 6 6 4 6 5

Sample Title: CP4105S10-11

Channel	1	2	3	4	5	6	7	8
1241:	3	7	7	3	5	3	8	2
1249:	4	8	1	2	0	1	3	7
1257:	5	2	6	3	4	3	5	3
1265:	4	5	6	3	5	1	3	1
1273:	3	3	5	2	4	7	2	3
1281:	5	5	1	5	4	6	7	5
1289:	2	2	5	1	2	7	6	2
1297:	3	1	2	3	5	5	2	5
1305:	3	5	2	2	0	4	0	4
1313:	3	3	3	1	0	3	2	4
1321:	3	4	1	4	3	0	3	0
1329:	4	1	3	2	2	3	3	3
1337:	1	1	2	2	4	2	2	2
1345:	1	2	3	0	2	0	3	3
1353:	3	1	0	3	2	5	0	2
1361:	3	1	0	2	2	3	1	0
1369:	0	3	1	1	1	3	1	1
1377:	5	2	1	1	0	1	2	1
1385:	2	1	2	4	2	1	2	2
1393:	2	1	5	5	2	2	2	2
1401:	2	6	1	1	2	0	3	2
1409:	0	1	2	3	4	4	4	1
1417:	3	0	2	4	1	2	1	1
1425:	2	0	5	0	3	1	1	3
1433:	0	1	1	1	1	2	2	2
1441:	2	0	3	5	3	2	1	1
1449:	1	3	3	5	1	1	6	2
1457:	1	12	34	69	84	68	22	2
1465:	2	0	0	0	1	1	2	1
1473:	1	1	0	0	2	1	2	1
1481:	2	3	2	2	1	0	2	0
1489:	2	1	2	1	1	1	2	3
1497:	2	2	0	1	1	4	0	4
1505:	0	3	2	0	3	3	2	1
1513:	0	3	2	2	1	2	2	0
1521:	0	1	0	0	2	1	2	1
1529:	0	1	3	0	2	1	1	0
1537:	0	2	0	0	2	1	0	2
1545:	0	2	4	4	0	2	0	1
1553:	1	1	1	0	2	1	2	2
1561:	1	0	1	1	0	1	5	2
1569:	0	1	1	0	1	0	0	1
1577:	1	0	1	2	0	1	1	0
1585:	2	1	2	4	2	0	0	1
1593:	3	3	2	0	0	1	2	2
1601:	1	2	0	1	0	0	0	1
1609:	1	0	1	1	1	2	1	2
1617:	2	2	3	2	1	2	1	0
1625:	0	1	1	0	1	2	2	0
1633:	1	0	2	1	1	0	2	0
1641:	1	1	1	0	3	1	1	2
1649:	0	0	0	0	1	0	0	0
1657:	1	1	1	0	2	0	1	1

1665: 0 2 0 0 0 0 1 0

Sample Title: CP4105S10-11

Channel	1	2	3	4	5	6	7	8
1673:	2	1	1	1	1	1	1	2
1681:	0	1	0	0	2	1	1	0
1689:	0	2	0	1	1	1	0	0
1697:	1	0	0	3	0	0	2	1
1705:	1	2	0	1	1	0	0	0
1713:	1	0	0	1	0	1	1	2
1721:	3	1	0	2	2	1	0	3
1729:	0	2	3	0	2	0	1	0
1737:	0	1	1	2	0	0	1	0
1745:	3	0	0	1	0	0	1	0
1753:	0	2	4	1	0	0	0	1
1761:	1	1	2	3	8	5	3	0
1769:	0	0	0	3	0	1	0	2
1777:	0	1	1	0	1	0	0	1
1785:	2	0	0	0	1	1	2	1
1793:	0	0	0	0	1	1	0	1
1801:	0	0	0	0	0	1	0	0
1809:	1	1	0	0	0	0	0	0
1817:	1	0	0	0	0	0	1	1
1825:	1	0	2	2	0	1	1	0
1833:	0	0	1	0	1	1	1	0
1841:	0	0	1	0	1	0	1	2
1849:	0	1	2	1	0	0	1	0
1857:	0	1	0	1	0	0	0	1
1865:	1	1	1	1	0	0	2	0
1873:	0	2	0	0	0	1	1	0
1881:	0	0	1	1	0	0	0	1
1889:	0	1	1	0	1	1	1	1
1897:	1	0	1	0	0	1	1	0
1905:	0	1	1	1	1	2	1	1
1913:	3	1	0	0	1	2	0	4
1921:	2	0	1	0	0	0	0	1
1929:	3	0	0	1	1	1	1	0
1937:	0	3	0	1	0	2	0	3
1945:	1	1	1	0	0	1	0	2
1953:	3	1	0	0	0	1	0	2
1961:	1	1	0	0	0	1	2	0
1969:	0	0	0	0	2	2	0	0
1977:	0	0	0	1	1	0	0	0
1985:	0	0	1	2	0	2	1	1
1993:	0	0	1	2	0	0	0	1
2001:	1	2	0	0	0	0	0	0
2009:	1	0	0	0	0	0	0	0
2017:	0	0	0	2	1	1	1	0
2025:	0	0	0	2	0	2	0	0
2033:	1	1	0	0	1	0	1	0
2041:	0	0	0	0	2	1	0	2
2049:	0	0	0	1	1	0	1	0
2057:	2	0	0	1	2	0	3	1
2065:	0	0	0	1	1	1	0	2
2073:	0	2	2	0	0	0	1	1
2081:	1	2	0	3	1	0	0	1
2089:	0	0	0	0	1	1	0	2

2097: 1 0 0 1 0 1 1 3

Sample Title: CP4105S10-11

Channel	1	2	3	4	5	6	7	8
2105:	0	2	0	0	3	0	0	1
2113:	0	2	1	2	0	2	1	0
2121:	1	0	1	1	1	0	0	2
2129:	0	0	0	0	0	1	2	1
2137:	2	3	2	0	0	1	0	0
2145:	0	1	1	1	0	2	2	1
2153:	0	0	0	0	1	0	2	0
2161:	1	0	1	0	1	0	1	1
2169:	0	1	1	0	0	0	2	1
2177:	0	1	1	1	2	0	0	1
2185:	2	0	2	0	0	0	0	1
2193:	2	1	0	1	1	0	2	3
2201:	0	3	1	0	3	4	1	2
2209:	0	0	0	1	1	0	0	0
2217:	0	0	1	0	1	0	1	0
2225:	1	0	0	0	2	1	4	0
2233:	0	1	0	0	0	2	0	1
2241:	0	0	1	3	1	1	1	0
2249:	0	2	1	0	3	3	0	0
2257:	1	1	0	0	0	0	0	2
2265:	2	0	1	1	0	0	0	0
2273:	1	0	1	1	0	0	1	0
2281:	1	0	2	2	0	1	0	0
2289:	1	0	1	0	1	2	0	2
2297:	1	1	0	0	2	0	0	0
2305:	0	1	0	1	0	0	1	2
2313:	0	1	1	1	0	1	2	1
2321:	0	2	0	0	0	1	0	0
2329:	0	1	2	0	0	1	0	0
2337:	2	0	0	0	0	1	1	0
2345:	0	1	1	1	1	1	0	0
2353:	0	0	1	0	0	2	1	3
2361:	5	0	1	0	2	2	1	1
2369:	2	1	1	0	1	2	2	3
2377:	0	2	2	1	0	0	0	2
2385:	0	1	0	0	1	1	2	2
2393:	1	0	0	2	0	0	0	1
2401:	3	0	2	0	0	1	2	0
2409:	0	2	0	0	2	1	0	1
2417:	0	1	1	1	0	1	0	0
2425:	1	0	0	0	2	1	0	0
2433:	2	1	0	1	0	0	0	0
2441:	0	0	0	0	0	1	0	1
2449:	1	1	0	1	0	0	0	0
2457:	0	1	0	1	1	0	0	2
2465:	0	0	1	1	0	1	0	0
2473:	0	0	0	0	0	0	0	1
2481:	0	1	0	1	0	0	0	0
2489:	0	0	2	1	0	0	0	2
2497:	0	0	0	0	0	1	0	0
2505:	2	0	0	0	0	1	0	1
2513:	0	0	0	0	0	0	0	0
2521:	0	1	0	0	0	1	0	0

2529: 0 1 2 0 0 0 1 1

Sample Title: CP4105S10-11

Channel	1	2	3	4	5	6	7	8
2537:	0	0	0	0	0	0	0	1
2545:	0	1	0	0	0	0	0	0
2553:	0	0	0	0	0	0	1	0
2561:	0	0	0	2	0	0	0	0
2569:	0	0	0	0	0	0	0	0
2577:	0	0	0	0	0	0	1	0
2585:	0	0	0	0	1	0	0	1
2593:	1	1	0	0	0	0	0	0
2601:	0	0	0	0	0	1	0	0
2609:	0	1	1	2	5	11	13	8
2617:	8	0	0	0	0	0	1	0
2625:	0	0	1	1	0	0	0	0
2633:	1	0	0	0	0	0	1	0
2641:	0	0	0	0	0	0	0	1
2649:	0	0	1	0	0	1	0	0
2657:	0	0	0	1	0	0	0	0
2665:	0	0	0	0	0	1	1	2
2673:	0	2	0	0	0	0	0	1
2681:	0	0	0	0	0	0	0	0
2689:	0	0	2	0	0	1	0	0
2697:	0	0	0	0	0	0	1	0
2705:	1	0	0	0	0	0	0	0
2713:	0	0	0	0	0	0	0	0
2721:	0	0	0	0	0	0	0	0
2729:	0	0	0	0	0	0	0	0
2737:	0	0	0	0	0	0	0	0
2745:	0	0	1	0	0	0	0	0
2753:	1	0	1	1	0	0	0	0
2761:	0	0	0	2	1	0	0	1
2769:	0	0	0	0	0	0	1	0
2777:	0	0	0	0	0	0	0	0
2785:	0	0	0	0	0	0	0	0
2793:	0	0	1	1	1	0	0	0
2801:	0	1	1	0	0	0	0	0
2809:	0	0	0	0	0	1	1	0
2817:	0	0	0	0	0	0	0	0
2825:	1	0	0	0	0	0	0	0
2833:	0	0	1	0	0	0	1	0
2841:	0	0	0	0	0	0	0	0
2849:	0	0	0	0	0	0	1	0
2857:	0	0	1	0	0	0	0	0
2865:	0	0	0	0	0	0	0	0
2873:	0	0	0	0	1	0	0	0
2881:	1	0	0	0	1	0	0	0
2889:	0	1	0	0	0	0	0	0
2897:	1	0	0	0	0	0	0	0
2905:	2	0	0	0	0	0	0	0
2913:	0	0	0	0	0	0	0	0
2921:	0	0	0	0	0	0	0	0
2929:	0	0	0	0	0	0	0	0
2937:	0	1	0	1	0	0	0	0
2945:	1	0	0	0	1	0	0	1
2953:	0	0	0	0	0	0	0	0

2961: 0 0 0 0 0 0 0 1 1

Sample Title: CP4105S10-11

Channel	1	2	3	4	5	6	7	8	9
2969:	0	0	0	0	0	0	0	0	0
2977:	1	0	1	0	0	0	0	0	0
2985:	0	0	1	0	0	0	0	0	0
2993:	0	0	0	0	0	0	0	0	0
3001:	0	1	0	0	1	0	0	0	1
3009:	0	0	0	0	0	0	0	0	0
3017:	0	0	1	0	0	0	0	0	0
3025:	0	0	1	0	0	0	0	0	0
3033:	0	0	1	0	0	0	0	0	0
3041:	0	0	0	0	0	0	0	0	0
3049:	0	0	0	0	0	0	1	0	0
3057:	0	0	0	1	0	0	0	0	1
3065:	1	0	0	0	0	0	0	0	0
3073:	0	0	0	0	0	0	0	0	0
3081:	0	1	0	0	1	0	0	0	0
3089:	0	0	0	0	0	0	0	0	0
3097:	0	0	0	0	0	0	0	0	0
3105:	0	0	0	0	0	0	0	0	1
3113:	0	0	0	0	1	0	0	0	1
3121:	0	0	0	0	0	0	0	0	0
3129:	0	0	0	0	0	0	0	0	0
3137:	0	0	0	0	0	0	0	0	1
3145:	0	0	0	0	0	0	1	0	0
3153:	0	0	0	0	0	0	0	0	1
3161:	0	0	0	0	0	0	0	0	0
3169:	0	0	0	0	0	0	0	0	0
3177:	0	0	0	0	0	0	0	0	0
3185:	0	0	0	0	0	0	0	0	0
3193:	0	0	1	0	0	0	0	0	0
3201:	1	0	0	0	0	0	0	0	0
3209:	0	0	0	0	0	0	0	0	0
3217:	0	0	0	0	0	0	0	0	0
3225:	0	0	0	0	0	0	1	0	0
3233:	0	0	0	0	0	0	2	0	0
3241:	0	0	0	0	0	0	0	0	1
3249:	0	0	0	0	0	0	0	0	0
3257:	1	0	0	1	0	1	0	0	0
3265:	0	0	0	0	0	0	0	0	0
3273:	0	0	0	0	0	0	0	0	0
3281:	0	0	0	0	0	0	1	0	0
3289:	0	0	0	0	0	0	0	0	0
3297:	0	0	0	0	0	0	0	0	0
3305:	0	0	0	0	0	0	0	0	0
3313:	1	0	0	0	0	0	0	0	0
3321:	0	0	0	0	0	0	0	0	0
3329:	0	0	1	2	0	0	0	0	0
3337:	0	1	0	0	0	0	0	0	0
3345:	0	0	0	0	0	0	0	0	0
3353:	2	0	0	0	0	0	0	0	0
3361:	0	0	0	0	0	0	0	0	0
3369:	0	0	0	0	0	0	1	0	0
3377:	0	1	1	0	0	0	0	0	0
3385:	2	0	1	0	0	0	0	0	0

3393: 0 0 0 1 0 0 0 0

Sample Title: CP4105S10-11

Channel	1	2	3	4	5	6	7	8
3401:	0	0	0	0	0	0	0	0
3409:	0	0	0	0	0	0	0	0
3417:	0	0	0	0	0	0	0	0
3425:	0	0	0	0	0	0	0	0
3433:	0	0	1	0	0	0	0	0
3441:	0	1	0	0	0	0	0	0
3449:	0	0	0	0	0	0	0	0
3457:	0	0	0	0	0	0	0	0
3465:	0	0	0	0	0	0	0	0
3473:	0	0	0	0	0	0	0	0
3481:	0	0	0	0	0	0	0	0
3489:	0	0	0	0	0	0	0	0
3497:	0	0	0	0	0	0	0	0
3505:	0	0	0	0	0	1	0	0
3513:	0	0	0	0	0	0	0	0
3521:	0	0	0	1	0	0	0	0
3529:	0	0	0	0	0	0	0	0
3537:	0	0	0	0	0	0	0	0
3545:	0	0	0	0	0	0	1	0
3553:	0	0	0	0	0	0	0	0
3561:	0	0	0	0	0	0	0	0
3569:	1	0	0	0	0	0	0	0
3577:	0	0	1	1	0	0	0	0
3585:	0	0	0	0	0	0	1	0
3593:	0	0	0	0	0	0	0	0
3601:	0	0	0	0	0	0	0	0
3609:	0	0	0	0	0	0	0	0
3617:	0	0	0	0	0	0	0	0
3625:	0	0	0	0	0	1	0	0
3633:	0	0	0	0	0	0	0	0
3641:	0	0	0	0	0	0	0	0
3649:	1	0	0	0	0	0	0	0
3657:	0	1	0	0	0	0	2	0
3665:	0	0	0	0	0	0	0	0
3673:	0	0	0	0	0	0	0	0
3681:	0	0	0	0	0	0	0	0
3689:	0	0	0	0	1	0	0	1
3697:	0	0	0	0	0	0	0	0
3705:	0	0	0	1	1	0	0	0
3713:	0	0	0	0	0	0	0	0
3721:	1	0	0	0	0	0	0	1
3729:	0	0	0	0	0	0	0	0
3737:	0	0	0	0	0	0	0	0
3745:	1	0	0	0	0	1	0	0
3753:	0	1	0	0	0	0	0	0
3761:	0	0	0	0	0	0	0	0
3769:	0	0	0	0	0	0	1	0
3777:	0	1	1	0	0	0	0	0
3785:	1	1	0	0	0	1	0	0
3793:	0	0	0	1	0	1	0	0
3801:	0	0	0	0	0	0	0	0
3809:	0	0	0	1	1	1	0	1
3817:	0	0	0	0	1	0	0	0

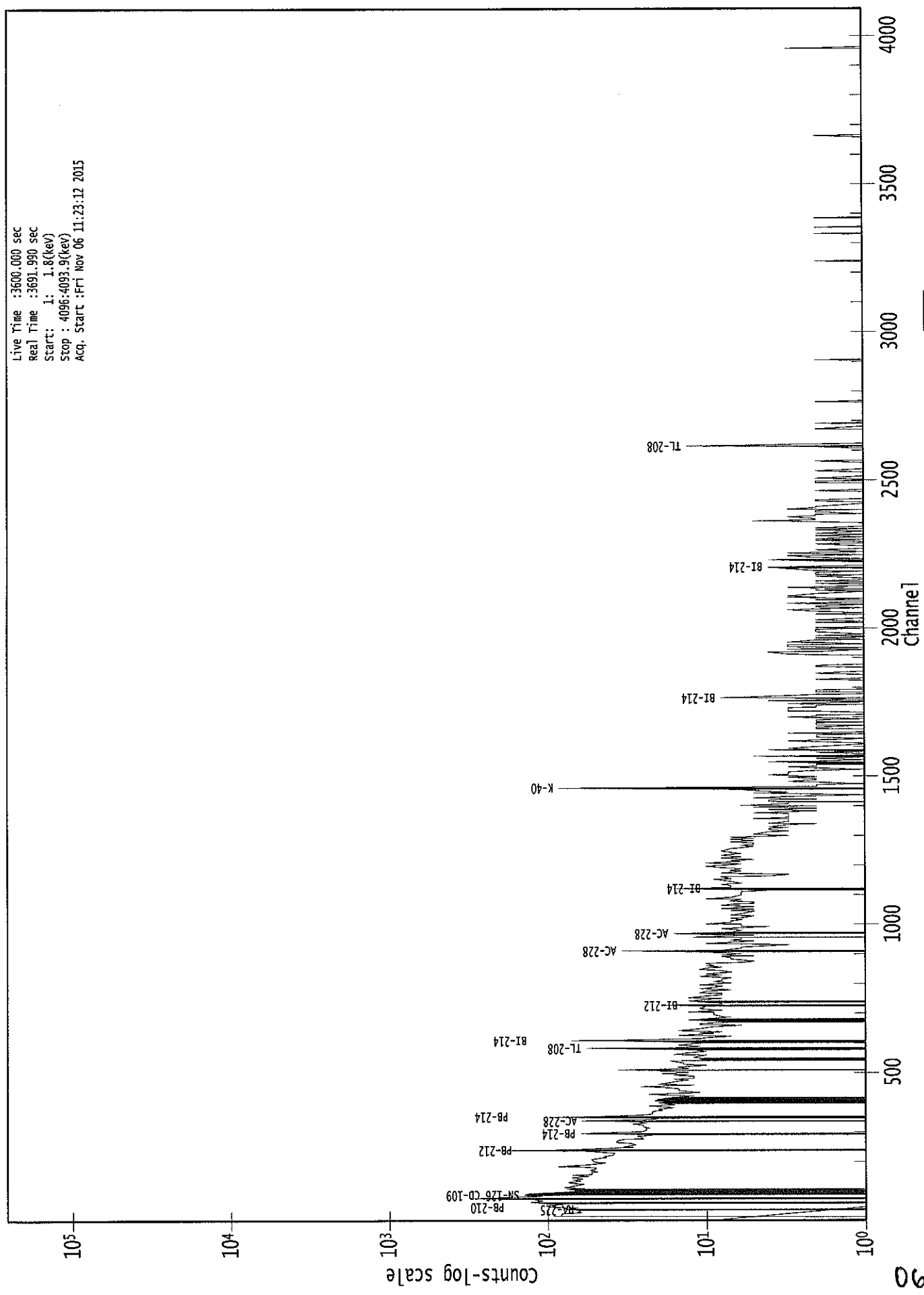
3825: 0 0 0 0 0 0 0 0 0

Sample Title: CP4105S10-11

Channel	-----	-----	-----	-----	-----	-----	-----	-----
3833:	0	0	0	0	0	0	1	0
3841:	1	0	1	0	0	0	0	0
3849:	0	0	1	0	0	0	0	0
3857:	0	0	0	1	0	0	0	0
3865:	0	0	0	0	0	0	0	0
3873:	0	0	0	0	1	0	0	0
3881:	1	0	0	0	0	0	0	1
3889:	0	0	0	0	0	0	0	0
3897:	0	1	0	0	0	0	0	0
3905:	0	0	0	0	0	0	0	1
3913:	0	0	0	1	0	0	0	0
3921:	0	0	0	0	1	0	0	0
3929:	0	0	0	0	0	0	0	0
3937:	1	0	0	0	0	0	0	0
3945:	0	0	0	1	0	0	0	0
3953:	0	0	0	1	3	0	0	0
3961:	0	1	0	0	1	0	0	0
3969:	0	0	0	0	0	0	0	0
3977:	0	0	0	0	1	0	0	0
3985:	0	0	0	0	0	1	0	0
3993:	0	1	0	0	1	0	0	1
4001:	0	0	0	0	0	0	1	0
4009:	0	1	0	0	0	0	1	0
4017:	0	0	0	0	0	0	0	0
4025:	0	0	0	1	0	0	0	0
4033:	0	1	0	0	0	1	0	0
4041:	0	0	0	0	0	0	0	1
4049:	0	0	0	0	0	0	0	0
4057:	0	0	1	0	0	0	0	0
4065:	0	0	0	0	0	0	0	0
4073:	0	0	0	0	0	0	0	0
4081:	0	0	0	0	1	0	0	0
4089:	0	0	1	0	0	0	0	0

0000029259.CNF

Live Time : 3600.000 sec
Real Time : 3691.990 sec
Start : 1: 1.8(kev)
Stop : 4096.4093.9(kev)
Acq. Start : Fri Nov 06 11:23:12 2015



0602A

KB
11/6/15Analysis Report for 1510086-09
CP4105S12-13

GAMMA SPECTRUM ANALYSIS

Sample Identification : 1510086-09
Sample Description : CP4105S12-13
Sample Type : SOIL

Sample Size : 5.846E+02 grams
Facility : Countroom

Sample Taken On : 10/6/2015 7:56:10AM
Acquisition Started : 11/6/2015 12:24:31PM

Procedure : GAS-1402 pCi
Operator : Administrator
Detector Name : GE1
Geometry : GAS-1402
Live Time : 3600.0 seconds
Real Time : 3601.3 seconds

Dead Time : 0.04 %

Peak Locate Threshold : 2.50
Peak Locate Range (in channels) : 1 - 4096
Peak Area Range (in channels) : 19 - 4096
Identification Energy Tolerance : 1.000 keV

Energy Calibration Used Done On : 10/25/2014
Efficiency Calibration Used Done On : 10/25/2014
Efficiency Calibration Description :

Sample Number : 29261

PEAK-TO-TOTAL CALIBRATION REPORT

Peak-to-Total Efficiency Calibration Equation

AG
11/9/15

Analysis Report for 1510086-09
CP4105S12-13

PEAK LOCATE REPORT

Peak Locate Performed on : 11/6/2015 1:24:34PM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096
Peak Search Sensitivity : 2.50

Peak No.	Energy (keV)	Centroid Channel	Centroid Uncertainty	Peak Significance
1	43.77	44.13	0.0000	0.00
2	46.78	47.13	0.0000	0.00
3	76.39	76.73	0.0000	0.00
4	89.53	89.86	0.0000	0.00
5	92.66	93.00	0.0000	0.00
6	106.56	106.89	0.0000	0.00
7	186.20	186.51	0.0000	0.00
8	209.34	209.64	0.0000	0.00
9	238.83	239.11	0.0000	0.00
10	241.77	242.06	0.0000	0.00
11	270.30	270.58	0.0000	0.00
12	277.12	277.40	0.0000	0.00
13	295.36	295.63	0.0000	0.00
14	338.97	339.23	0.0000	0.00
15	352.06	352.31	0.0000	0.00
16	440.64	440.86	0.0000	0.00
17	463.46	463.67	0.0000	0.00
18	511.62	511.82	0.0000	0.00
19	583.30	583.47	0.0000	0.00
20	610.37	610.53	0.0000	0.00
21	693.92	694.05	0.0000	0.00
22	727.61	727.73	0.0000	0.00
23	770.41	770.51	0.0000	0.00
24	785.92	786.02	0.0000	0.00
25	795.30	795.40	0.0000	0.00
26	800.31	800.40	0.0000	0.00
27	860.78	860.86	0.0000	0.00
28	911.61	911.66	0.0000	0.00
29	964.77	964.81	0.0000	0.00
30	969.46	969.50	0.0000	0.00
31	1120.62	1120.60	0.0000	0.00
32	1237.84	1237.78	0.0000	0.00
33	1281.94	1281.87	0.0000	0.00
34	1378.47	1378.35	0.0000	0.00
35	1439.12	1438.99	0.0000	0.00
36	1461.49	1461.35	0.0000	0.00
37	1510.12	1509.96	0.0000	0.00
38	1535.09	1534.92	0.0000	0.00
39	1589.41	1589.22	0.0000	0.00
40	1599.97	1599.78	0.0000	0.00
41	1678.60	1678.38	0.0000	0.00
42	1686.63	1686.40	0.0000	0.00

Analysis Report for 1510086-09
CP4105S12-13

<i>Peak No.</i>	<i>Energy (keV)</i>	<i>Centroid Channel</i>	<i>Centroid Uncertainty</i>	<i>Peak Significance</i>
43	1693.81	1693.58	0.0000	0.00
44	1729.49	1729.24	0.0000	0.00
45	1737.34	1737.09	0.0000	0.00
46	1746.61	1746.37	0.0000	0.00
47	1765.76	1765.50	0.0000	0.00
48	1847.21	1846.92	0.0000	0.00
49	1901.16	1900.86	0.0000	0.00
50	1972.82	1972.48	0.0000	0.00
51	2064.15	2063.79	0.0000	0.00
52	2094.47	2094.09	0.0000	0.00
53	2104.25	2103.86	0.0000	0.00
54	2224.13	2223.70	0.0000	0.00
55	2294.46	2294.00	0.0000	0.00
56	2311.78	2311.32	0.0000	0.00
57	2324.56	2324.09	0.0000	0.00
58	2339.53	2339.05	0.0000	0.00
59	2352.03	2351.55	0.0000	0.00
60	2615.57	2614.98	0.0000	0.00

? = Adjacent peak noted
Errors quoted at 2.000sigma

Analysis Report for 1510086-09
CP4105S12-13

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 11/6/2015 1:24:34PM

Peak Analysis From Channel : 1
Peak Analysis To Channel : 4096

	Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	FWHM (keV)
M	1	43.77	43 -	50	44.13	2.76E+01	30.64	2.76E+02	1.39
m	2	46.78	43 -	50	47.13	1.17E+02	53.89	6.21E+02	1.40
	3	76.39	72 -	81	76.73	1.31E+03	153.36	2.60E+03	3.67
m	4	89.53	83 -	97	89.86	1.70E+02	67.68	7.90E+02	1.49
m	5	92.66	83 -	97	93.00	3.27E+02	70.23	7.39E+02	1.49
	6	106.56	104 -	111	106.89	1.28E+02	90.02	1.27E+03	4.48
	7	186.20	183 -	189	186.51	1.73E+02	76.52	9.34E+02	1.89
	8	209.34	204 -	215	209.64	1.47E+02	100.32	1.17E+03	2.04
M	9	238.83	235 -	244	239.11	9.79E+02	78.88	4.48E+02	1.68
m	10	241.77	235 -	244	242.06	2.08E+02	62.63	4.18E+02	1.68
	11	270.30	267 -	273	270.58	9.63E+01	56.68	5.13E+02	2.39
	12	277.12	275 -	280	277.40	4.55E+01	49.22	4.41E+02	1.38
	13	295.36	292 -	299	295.63	3.45E+02	70.14	5.95E+02	1.86
	14	338.97	333 -	347	339.23	2.18E+02	93.55	8.18E+02	1.46
	15	352.06	348 -	357	352.31	5.72E+02	74.66	4.69E+02	1.89
	16	440.64	438 -	443	440.86	3.62E+01	29.77	1.46E+02	2.40
	17	463.46	460 -	467	463.67	6.18E+01	43.03	2.66E+02	1.29
	18	511.62	507 -	517	511.82	2.05E+02	55.80	3.00E+02	1.94
	19	583.30	577 -	586	583.47	3.34E+02	53.94	2.24E+02	1.87
	20	610.37	605 -	625	610.53	5.29E+02	91.10	4.47E+02	1.73
	21	693.92	691 -	697	694.05	2.68E+01	26.60	1.10E+02	2.76
	22	727.61	723 -	731	727.73	8.48E+01	39.83	1.88E+02	1.79
	23	770.41	765 -	777	770.51	6.83E+01	46.89	2.23E+02	2.84
	24	785.92	781 -	791	786.02	3.03E+01	36.24	1.57E+02	2.15
M	25	795.30	792 -	807	795.40	3.41E+01	25.98	9.47E+01	2.30
m	26	800.31	792 -	807	800.40	1.75E+01	24.88	9.97E+01	2.30
	27	860.78	858 -	864	860.86	3.55E+01	26.44	1.01E+02	2.85
	28	911.61	906 -	916	911.66	2.24E+02	44.82	1.47E+02	1.89
M	29	964.77	960 -	976	964.81	3.07E+01	26.52	1.28E+02	2.45
m	30	969.46	960 -	976	969.50	1.30E+02	32.86	9.85E+01	2.29
	31	1120.62	1116 -	1125	1120.60	8.35E+01	41.27	1.97E+02	1.57
	32	1237.84	1234 -	1242	1237.78	2.87E+01	36.31	1.87E+02	2.25
	33	1281.94	1279 -	1286	1281.87	2.03E+01	25.14	9.14E+01	3.72
	34	1378.47	1374 -	1382	1378.35	2.39E+01	19.66	4.42E+01	2.48
	35	1439.12	1436 -	1442	1438.99	1.21E+01	13.48	2.38E+01	1.40
	36	1461.49	1455 -	1466	1461.35	8.67E+02	63.21	6.63E+01	2.19
	37	1510.12	1504 -	1515	1509.96	3.05E+01	17.66	2.31E+01	1.89
	38	1535.09	1532 -	1537	1534.92	9.59E+00	7.28	2.82E+00	3.03
M	39	1589.41	1586 -	1605	1589.22	2.89E+01	13.30	9.63E+00	2.47
m	40	1599.97	1586 -	1605	1599.78	1.34E+01	12.21	1.76E+01	2.47

Analysis Report for 1510086-09
CP4105S12-13

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	FWHM (keV)
41	1678.60	1675 - 1681		1678.38	8.00E+00	5.66	0.00E+00	2.98
42	1686.63	1683 - 1689		1686.40	1.00E+01	6.32	0.00E+00	2.06
43	1693.81	1690 - 1698		1693.58	1.20E+01	6.93	0.00E+00	3.48
44	1729.49	1725 - 1732		1729.24	1.10E+01	12.81	2.00E+01	1.76
45	1737.34	1733 - 1742		1737.09	1.07E+01	11.79	1.07E+01	9.44
46	1746.61	1744 - 1748		1746.37	8.90E+00	6.80	2.20E+00	1.07
47	1765.76	1761 - 1772		1765.50	8.48E+01	21.91	1.65E+01	2.64
48	1847.21	1842 - 1850		1846.92	2.10E+01	10.59	4.04E+00	4.72
49	1901.16	1897 - 1903		1900.86	7.00E+00	5.29	0.00E+00	2.83
50	1972.82	1969 - 1975		1972.48	6.00E+00	7.78	6.00E+00	1.55
51	2064.15	2061 - 2066		2063.79	6.00E+00	7.35	6.00E+00	1.75
M	52	2094.47	2089 - 2108	2094.09	1.33E+01	9.00	8.61E+00	4.71
m	53	2104.25	2089 - 2108	2103.86	2.35E+01	12.37	3.20E+00	4.72
54	2224.13	2219 - 2227		2223.70	1.00E+01	6.32	0.00E+00	3.22
55	2294.46	2291 - 2296		2294.00	8.00E+00	5.66	0.00E+00	1.16
56	2311.78	2307 - 2315		2311.32	1.07E+01	8.50	4.54E+00	1.20
57	2324.56	2321 - 2327		2324.09	6.56E+00	6.65	2.88E+00	1.26
58	2339.53	2336 - 2342		2339.05	5.33E+00	7.78	7.33E+00	1.62
59	2352.03	2348 - 2354		2351.55	1.23E+01	8.26	3.43E+00	2.70
60	2615.57	2611 - 2619		2614.98	1.31E+02	22.89	0.00E+00	2.37

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 11/6/2015 1:24:34PM

Peak Analysis From Channel : 1
Peak Analysis To Channel : 4096

Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
M	1	43.77	43 - 50	2.76E+01	30.64	2.76E+02	2.73E+01
m	2	46.78	43 - 50	1.17E+02	53.89	6.21E+02	4.10E+01
	3	76.39	72 - 81	1.31E+03	153.36	2.60E+03	1.11E+02
m	4	89.53	83 - 97	1.70E+02	67.68	7.90E+02	4.62E+01
m	5	92.66	83 - 97	3.27E+02	70.23	7.39E+02	4.47E+01
	6	106.56	104 - 111	1.28E+02	90.02	1.27E+03	7.16E+01
	7	186.20	183 - 189	1.73E+02	76.52	9.34E+02	5.91E+01
	8	209.34	204 - 215	1.47E+02	100.32	1.17E+03	8.00E+01

Analysis Report for 1510086-09

CP4105S12-13

	Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
M	9	238.83	235 -	244	9.79E+02	78.88	4.48E+02	3.48E+01
m	10	241.77	235 -	244	2.08E+02	62.63	4.18E+02	3.36E+01
	11	270.30	267 -	273	9.63E+01	56.68	5.13E+02	4.37E+01
	12	277.12	275 -	280	4.55E+01	49.22	4.41E+02	3.89E+01
	13	295.36	292 -	299	3.45E+02	70.14	5.95E+02	4.89E+01
	14	338.97	333 -	347	2.18E+02	93.55	8.18E+02	2.23E+01
	15	352.06	348 -	357	5.72E+02	74.66	4.69E+02	4.71E+01
	16	440.64	438 -	443	3.62E+01	29.77	1.46E+02	2.24E+01
	17	463.46	460 -	467	6.18E+01	43.03	2.66E+02	3.29E+01
	18	511.62	507 -	517	2.05E+02	55.80	3.00E+02	3.94E+01
	19	583.30	577 -	586	3.34E+02	53.94	2.24E+02	3.26E+01
	20	610.37	605 -	625	5.29E+02	91.10	4.47E+02	1.86E+01
	21	693.92	691 -	697	2.68E+01	26.60	1.10E+02	2.01E+01
	22	727.61	723 -	731	8.48E+01	39.83	1.88E+02	2.90E+01
	23	770.41	765 -	777	6.83E+01	46.89	2.23E+02	3.61E+01
	24	785.92	781 -	791	3.03E+01	36.24	1.57E+02	2.84E+01
M	25	795.30	792 -	807	3.41E+01	25.98	9.47E+01	1.60E+01
m	26	800.31	792 -	807	1.75E+01	24.88	9.97E+01	1.64E+01
	27	860.78	858 -	864	3.55E+01	26.44	1.01E+02	1.94E+01
	28	911.61	906 -	916	2.24E+02	44.82	1.47E+02	2.74E+01
M	29	964.77	960 -	976	3.07E+01	26.52	1.28E+02	1.86E+01
m	30	969.46	960 -	976	1.30E+02	32.86	9.85E+01	1.63E+01
	31	1120.62	1116 -	1125	8.35E+01	41.27	1.97E+02	3.04E+01
	32	1237.84	1234 -	1242	2.87E+01	36.31	1.87E+02	2.85E+01
	33	1281.94	1279 -	1286	2.03E+01	25.14	9.14E+01	1.93E+01
	34	1378.47	1374 -	1382	2.39E+01	19.66	4.42E+01	1.40E+01
	35	1439.12	1436 -	1442	1.21E+01	13.48	2.38E+01	9.49E+00
	36	1461.49	1455 -	1466	8.67E+02	63.21	6.63E+01	1.89E+01
	37	1510.12	1504 -	1515	3.05E+01	17.66	2.31E+01	1.13E+01
	38	1535.09	1532 -	1537	9.59E+00	7.28	2.82E+00	3.14E+00
M	39	1589.41	1586 -	1605	2.89E+01	13.30	9.63E+00	5.10E+00
m	40	1599.97	1586 -	1605	1.34E+01	12.21	1.76E+01	6.91E+00
	41	1678.60	1675 -	1681	8.00E+00	5.66	0.00E+00	0.00E+00
	42	1686.63	1683 -	1689	1.00E+01	6.32	0.00E+00	0.00E+00
	43	1693.81	1690 -	1698	1.20E+01	6.93	0.00E+00	0.00E+00
	44	1729.49	1725 -	1732	1.10E+01	12.81	2.00E+01	9.00E+00
	45	1737.34	1733 -	1742	1.07E+01	11.79	1.07E+01	8.07E+00
	46	1746.61	1744 -	1748	8.90E+00	6.80	2.20E+00	2.68E+00
	47	1765.76	1761 -	1772	8.48E+01	21.91	1.65E+01	9.76E+00
	48	1847.21	1842 -	1850	2.10E+01	10.59	4.04E+00	4.38E+00
	49	1901.16	1897 -	1903	7.00E+00	5.29	0.00E+00	0.00E+00
	50	1972.82	1969 -	1975	6.00E+00	7.78	6.00E+00	4.97E+00
	51	2064.15	2061 -	2066	6.00E+00	7.35	6.00E+00	4.50E+00
M	52	2094.47	2089 -	2108	1.33E+01	9.00	8.61E+00	4.82E+00
m	53	2104.25	2089 -	2108	2.35E+01	12.37	3.20E+00	2.94E+00
	54	2224.13	2219 -	2227	1.00E+01	6.32	0.00E+00	0.00E+00
	55	2294.46	2291 -	2296	8.00E+00	5.66	0.00E+00	0.00E+00
	56	2311.78	2307 -	2315	1.07E+01	8.50	4.54E+00	4.45E+00
	57	2324.56	2321 -	2327	6.56E+00	6.65	2.88E+00	3.49E+00
	58	2339.53	2336 -	2342	5.33E+00	7.78	7.33E+00	5.14E+00
	59	2352.03	2348 -	2354	1.23E+01	8.26	3.43E+00	3.59E+00

Analysis Report for 1510086-09

CP4105S12-13

Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
60	2615.57	2611 -	2619	1.31E+02	22.89	0.00E+00	0.00E+00

M = First peak in a multiplet region
 m = Other peak in a multiplet region
 F = Fitted singlet
 Errors quoted at 2.000sigma

PEAK WITH NID REPORT

Peak Analysis Performed on : 11/6/2015 1:24:34PM

Peak Analysis From Channel : 1
 Peak Analysis To Channel : 4096

Tentative NID Library : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB
 Peak Match Tolerance : 1.000 keV

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
M	1	43 -	50	44.13	2.76E+01	30.64	2.76E+02	.....
m	2	43 -	50	47.13	1.17E+02	53.89	6.21E+02	PB-210
	3	72 -	81	76.73	1.31E+03	153.36	2.60E+03	.....
m	4	83 -	97	89.86	1.70E+02	67.68	7.90E+02	.....
m	5	83 -	97	93.00	3.27E+02	70.23	7.39E+02	GA-67
	6	104 -	111	106.89	1.28E+02	90.02	1.27E+03	NP-239
	7	183 -	189	186.51	1.73E+02	76.52	9.34E+02	RA-226
	8	204 -	215	209.64	1.47E+02	100.32	1.17E+03	GA-67 CM-243
M	9	235 -	244	239.11	9.79E+02	78.88	4.48E+02	PB-212
m	10	235 -	244	242.06	2.08E+02	62.63	4.18E+02	RA-224
	11	267 -	273	270.58	9.63E+01	56.68	5.13E+02	.....
	12	275 -	280	277.40	4.55E+01	49.22	4.41E+02	CM-243 NP-239
	13	292 -	299	295.63	3.45E+02	70.14	5.95E+02	PB-214
	14	333 -	347	339.23	2.18E+02	93.55	8.18E+02	AC-228
	15	348 -	357	352.31	5.72E+02	74.66	4.69E+02	PB-214
	16	440 -	443	440.86	3.62E+01	29.77	1.46E+02	.....
	17	460 -	467	463.67	6.18E+01	43.03	2.66E+02	SB-125
	18	507 -	517	511.82	2.05E+02	55.80	3.00E+02	.....
	19	577 -	586	583.47	3.34E+02	53.94	2.24E+02	TL-208
	20	605 -	625	610.53	5.29E+02	91.10	4.47E+02	.....
	21	691 -	697	694.05	2.68E+01	26.60	1.10E+02	.....
	22	723 -	731	727.73	8.48E+01	39.83	1.88E+02	BI-212
	23	765 -	777	770.51	6.83E+01	46.89	2.23E+02	.....

Analysis Report for 1510086-09

CP4105S12-13

	Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
	24	785.92	781 -	791	786.02	3.03E+01	36.24	1.57E+02	.....
M	25	795.30	792 -	807	795.40	3.41E+01	25.98	9.47E+01	CS-134
m	26	800.31	792 -	807	800.40	1.75E+01	24.88	9.97E+01	.....
	27	860.78	858 -	864	860.86	3.55E+01	26.44	1.01E+02	TL-208
	28	911.61	906 -	916	911.66	2.24E+02	44.82	1.47E+02	LU-172 AC-228
M	29	964.77	960 -	976	964.81	3.07E+01	26.52	1.28E+02	EU-152
m	30	969.46	960 -	976	969.50	1.30E+02	32.86	9.85E+01	AC-228
	31	1120.62	1116 -	1125	1120.60	8.35E+01	41.27	1.97E+02	SC-46 BI-214 TA-182
	32	1237.84	1234 -	1242	1237.78	2.87E+01	36.31	1.87E+02	CO-56
	33	1281.94	1279 -	1286	1281.87	2.03E+01	25.14	9.14E+01	.....
	34	1378.47	1374 -	1382	1378.35	2.39E+01	19.66	4.42E+01	.....
	35	1439.12	1436 -	1442	1438.99	1.21E+01	13.48	2.38E+01	.....
	36	1461.49	1455 -	1466	1461.35	8.67E+02	63.21	6.63E+01	K-40
	37	1510.12	1504 -	1515	1509.96	3.05E+01	17.66	2.31E+01	.....
	38	1535.09	1532 -	1537	1534.92	9.59E+00	7.28	2.82E+00	.....
M	39	1589.41	1586 -	1605	1589.22	2.89E+01	13.30	9.63E+00	.....
m	40	1599.97	1586 -	1605	1599.78	1.34E+01	12.21	1.76E+01	.....
	41	1678.60	1675 -	1681	1678.38	8.00E+00	5.66	0.00E+00	I-135
	42	1686.63	1683 -	1689	1686.40	1.00E+01	6.32	0.00E+00	.....
	43	1693.81	1690 -	1698	1693.58	1.20E+01	6.93	0.00E+00	.....
	44	1729.49	1725 -	1732	1729.24	1.10E+01	12.81	2.00E+01	.....
	45	1737.34	1733 -	1742	1737.09	1.07E+01	11.79	1.07E+01	.....
	46	1746.61	1744 -	1748	1746.37	8.90E+00	6.80	2.20E+00	.....
	47	1765.76	1761 -	1772	1765.50	8.48E+01	21.91	1.65E+01	.....
	48	1847.21	1842 -	1850	1846.92	2.10E+01	10.59	4.04E+00	.....
	49	1901.16	1897 -	1903	1900.86	7.00E+00	5.29	0.00E+00	.....
	50	1972.82	1969 -	1975	1972.48	6.00E+00	7.78	6.00E+00	.....
	51	2064.15	2061 -	2066	2063.79	6.00E+00	7.35	6.00E+00	.....
M	52	2094.47	2089 -	2108	2094.09	1.33E+01	9.00	8.61E+00	.....
m	53	2104.25	2089 -	2108	2103.86	2.35E+01	12.37	3.20E+00	.....
	54	2224.13	2219 -	2227	2223.70	1.00E+01	6.32	0.00E+00	.....
	55	2294.46	2291 -	2296	2294.00	8.00E+00	5.66	0.00E+00	.....
	56	2311.78	2307 -	2315	2311.32	1.07E+01	8.50	4.54E+00	.....
	57	2324.56	2321 -	2327	2324.09	6.56E+00	6.65	2.88E+00	.....
	58	2339.53	2336 -	2342	2339.05	5.33E+00	7.78	7.33E+00	.....
	59	2352.03	2348 -	2354	2351.55	1.23E+01	8.26	3.43E+00	.....
	60	2615.57	2611 -	2619	2614.98	1.31E+02	22.89	0.00E+00	TL-208

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

Analysis Report for 1510086-09
CP4105S12-13

PEAK EFFICIENCY REPORT

Peak Analysis Performed on : 11/6/2015 1:24:34PM

	Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
M	1	43.77	2.76E+01	30.64	1.49E-02	1.78E-03
m	2	46.78	1.17E+02	53.89	1.70E-02	1.78E-03
	3	76.39	1.31E+03	153.36	2.77E-02	2.35E-03
m	4	89.53	1.70E+02	67.68	2.85E-02	2.71E-03
m	5	92.66	3.27E+02	70.23	2.86E-02	2.65E-03
	6	106.56	1.28E+02	90.02	2.82E-02	2.37E-03
	7	186.20	1.73E+02	76.52	2.24E-02	2.03E-03
	8	209.34	1.47E+02	100.32	2.09E-02	1.85E-03
M	9	238.83	9.79E+02	78.88	1.92E-02	1.64E-03
m	10	241.77	2.08E+02	62.63	1.91E-02	1.62E-03
	11	270.30	9.63E+01	56.68	1.77E-02	1.40E-03
	12	277.12	4.55E+01	49.22	1.74E-02	1.35E-03
	13	295.36	3.45E+02	70.14	1.67E-02	1.31E-03
	14	338.97	2.18E+02	93.55	1.52E-02	1.22E-03
	15	352.06	5.72E+02	74.66	1.48E-02	1.19E-03
	16	440.64	3.62E+01	29.77	1.26E-02	1.06E-03
	17	463.46	6.18E+01	43.03	1.21E-02	1.04E-03
	18	511.62	2.05E+02	55.80	1.12E-02	9.90E-04
	19	583.30	3.34E+02	53.94	1.02E-02	9.15E-04
	20	610.37	5.29E+02	91.10	9.81E-03	8.87E-04
	21	693.92	2.68E+01	26.60	8.88E-03	8.05E-04
	22	727.61	8.48E+01	39.83	8.55E-03	7.75E-04
	23	770.41	6.83E+01	46.89	8.17E-03	7.37E-04
	24	785.92	3.03E+01	36.24	8.04E-03	7.23E-04
M	25	795.30	3.41E+01	25.98	7.97E-03	7.14E-04
m	26	800.31	1.75E+01	24.88	7.93E-03	7.10E-04
	27	860.78	3.55E+01	26.44	7.48E-03	6.56E-04
	28	911.61	2.24E+02	44.82	7.15E-03	6.15E-04
M	29	964.77	3.07E+01	26.52	6.83E-03	5.88E-04
m	30	969.46	1.30E+02	32.86	6.80E-03	5.85E-04
	31	1120.62	8.35E+01	41.27	6.07E-03	5.07E-04
	32	1237.84	2.87E+01	36.31	5.62E-03	4.68E-04
	33	1281.94	2.03E+01	25.14	5.47E-03	4.60E-04
	34	1378.47	2.39E+01	19.66	5.18E-03	4.40E-04
	35	1439.12	1.21E+01	13.48	5.02E-03	4.25E-04
	36	1461.49	8.67E+02	63.21	4.97E-03	4.19E-04
	37	1510.12	3.05E+01	17.66	4.86E-03	4.07E-04
	38	1535.09	9.59E+00	7.28	4.80E-03	4.01E-04
M	39	1589.41	2.89E+01	13.30	4.69E-03	3.87E-04
m	40	1599.97	1.34E+01	12.21	4.67E-03	3.85E-04
	41	1678.60	8.00E+00	5.66	4.53E-03	3.65E-04
	42	1686.63	1.00E+01	6.32	4.52E-03	3.63E-04
	43	1693.81	1.20E+01	6.93	4.51E-03	3.61E-04
	44	1729.49	1.10E+01	12.81	4.45E-03	3.52E-04
	45	1737.34	1.07E+01	11.79	4.44E-03	3.50E-04

Analysis Report for 1510086-09
CP4105S12-13

Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty	
	46	1746.61	8.90E+00	6.80	4.42E-03	3.48E-04
	47	1765.76	8.48E+01	21.91	4.39E-03	3.43E-04
	48	1847.21	2.10E+01	10.59	4.28E-03	3.26E-04
	49	1901.16	7.00E+00	5.29	4.22E-03	3.26E-04
	50	1972.82	6.00E+00	7.78	4.14E-03	3.26E-04
	51	2064.15	6.00E+00	7.35	4.05E-03	3.26E-04
M	52	2094.47	1.33E+01	9.00	4.03E-03	3.26E-04
m	53	2104.25	2.35E+01	12.37	4.02E-03	3.26E-04
	54	2224.13	1.00E+01	6.32	3.94E-03	3.26E-04
	55	2294.46	8.00E+00	5.66	3.90E-03	3.26E-04
	56	2311.78	1.07E+01	8.50	3.89E-03	3.26E-04
	57	2324.56	6.56E+00	6.65	3.88E-03	3.26E-04
	58	2339.53	5.33E+00	7.78	3.87E-03	3.26E-04
	59	2352.03	1.23E+01	8.26	3.87E-03	3.26E-04
	60	2615.57	1.31E+02	22.89	3.79E-03	3.26E-04

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000 sigma

BACKGROUND SUBTRACT REPORT

Peak Analysis Performed on : 11/6/2015 1:24:34PM
Env. Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000028941.CNF

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
M	1	43.77	2.76E+01	30.64		2.76E+01	3.06E+01
m	2	46.78	1.17E+02	53.89	4.50E+01	7.19E+01	5.45E+01
	3	76.39	1.31E+03	153.36	9.75E+00	1.30E+03	1.54E+02
m	4	89.53	1.70E+02	67.68		1.70E+02	6.77E+01
m	5	92.66	3.27E+02	70.23	1.34E+02	1.93E+02	7.09E+01
	6	106.56	1.28E+02	90.02		1.28E+02	9.00E+01
	7	186.20	1.73E+02	76.52	6.41E+01	1.09E+02	7.69E+01
	8	209.34	1.47E+02	100.32		1.47E+02	1.00E+02
M	9	238.83	9.79E+02	78.88	2.34E+01	9.56E+02	7.91E+01
m	10	241.77	2.08E+02	62.63		2.08E+02	6.26E+01
	11	270.30	9.63E+01	56.68		9.63E+01	5.67E+01
	12	277.12	4.55E+01	49.22		4.55E+01	4.92E+01
	13	295.36	3.45E+02	70.14	4.17E+00	3.40E+02	7.04E+01
	14	338.97	2.18E+02	93.55	2.22E-01	2.18E+02	9.37E+01
	15	352.06	5.72E+02	74.66	8.83E+00	5.63E+02	7.48E+01

Analysis Report for 1510086-09

CP4105S12-13

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
16	440.64	3.62E+01	29.77			3.62E+01	2.98E+01
17	463.46	6.18E+01	43.03			6.18E+01	4.30E+01
18	511.62	2.05E+02	55.80	8.12E+01	5.49E+00	1.24E+02	5.61E+01
19	583.30	3.34E+02	53.94	6.34E+00	3.74E+00	3.28E+02	5.41E+01
20	610.37	5.29E+02	91.10	5.20E+00	3.69E+00	5.23E+02	9.12E+01
21	693.92	2.68E+01	26.60			2.68E+01	2.66E+01
22	727.61	8.48E+01	39.83			8.48E+01	3.98E+01
23	770.41	6.83E+01	46.89			6.83E+01	4.69E+01
24	785.92	3.03E+01	36.24			3.03E+01	3.62E+01
M	25	795.30	3.41E+01			3.41E+01	2.60E+01
m	26	800.31	1.75E+01			1.75E+01	2.49E+01
	27	860.78	3.55E+01			3.55E+01	2.64E+01
	28	911.61	2.24E+02	3.28E+00	2.53E+00	2.21E+02	4.49E+01
M	29	964.77	3.07E+01			3.07E+01	2.65E+01
m	30	969.46	1.30E+02			1.30E+02	3.29E+01
	31	1120.62	8.35E+01	2.28E+00	2.55E+00	8.12E+01	4.13E+01
	32	1237.84	2.87E+01			2.87E+01	3.63E+01
	33	1281.94	2.03E+01			2.03E+01	2.51E+01
	34	1378.47	2.39E+01			2.39E+01	1.97E+01
	35	1439.12	1.21E+01			1.21E+01	1.35E+01
	36	1461.49	8.67E+02	6.46E+00	2.33E+00	8.60E+02	6.33E+01
	37	1510.12	3.05E+01			3.05E+01	1.77E+01
	38	1535.09	9.59E+00			9.59E+00	7.28E+00
M	39	1589.41	2.89E+01			2.89E+01	1.33E+01
m	40	1599.97	1.34E+01			1.34E+01	1.22E+01
	41	1678.60	8.00E+00			8.00E+00	5.66E+00
	42	1686.63	1.00E+01			1.00E+01	6.32E+00
	43	1693.81	1.20E+01			1.20E+01	6.93E+00
	44	1729.49	1.10E+01			1.10E+01	1.28E+01
	45	1737.34	1.07E+01			1.07E+01	1.18E+01
	46	1746.61	8.90E+00			8.90E+00	6.80E+00
	47	1765.76	8.48E+01			8.48E+01	2.19E+01
	48	1847.21	2.10E+01			2.10E+01	1.06E+01
	49	1901.16	7.00E+00			7.00E+00	5.29E+00
	50	1972.82	6.00E+00			6.00E+00	7.78E+00
	51	2064.15	6.00E+00			6.00E+00	7.35E+00
M	52	2094.47	1.33E+01			1.33E+01	9.00E+00
m	53	2104.25	2.35E+01			2.35E+01	1.24E+01
	54	2224.13	1.00E+01	2.83E+00	1.71E+00	7.17E+00	6.55E+00
	55	2294.46	8.00E+00			8.00E+00	5.66E+00
	56	2311.78	1.07E+01			1.07E+01	8.50E+00
	57	2324.56	6.56E+00			6.56E+00	6.65E+00
	58	2339.53	5.33E+00			5.33E+00	7.78E+00
	59	2352.03	1.23E+01			1.23E+01	8.26E+00
	60	2615.57	1.31E+02	3.47E+00	1.48E+00	1.28E+02	2.29E+01

M = First peak in a multiplet region

m = Other peak in a multiplet region

F = Fitted singlet

Errors quoted at 2.000sigma

Analysis Report for 1510086-09
CP4105S12-13

AREA CORRECTION REPORT REFERENCE PEAK / BKG. SUBTRACT

Peak Analysis Performed on : 11/6/2015 1:24:34PM
 Ref. Peak Energy : 0.00 Reference Date :
 Peak Ratio : 0.00 Uncertainty : 0.00
 Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000028941.CNF

Corrected Area is: Original * Peak Ratio - Background

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
M	1	43.77	2.76E+01	30.64		2.76E+01	3.06E+01
m	2	46.78	1.17E+02	53.89	4.50E+01	8.46E+00	7.19E+01
	3	76.39	1.31E+03	153.36	9.75E+00	8.28E+00	1.30E+03
m	4	89.53	1.70E+02	67.68		1.70E+02	6.77E+01
m	5	92.66	3.27E+02	70.23	1.34E+02	9.83E+00	1.93E+02
	6	106.56	1.28E+02	90.02		1.28E+02	9.00E+01
	7	186.20	1.73E+02	76.52	6.41E+01	7.38E+00	1.09E+02
	8	209.34	1.47E+02	100.32		1.47E+02	1.00E+02
M	9	238.83	9.79E+02	78.88	2.34E+01	6.34E+00	9.56E+02
m	10	241.77	2.08E+02	62.63		2.08E+02	6.26E+01
	11	270.30	9.63E+01	56.68		9.63E+01	5.67E+01
	12	277.12	4.55E+01	49.22		4.55E+01	4.92E+01
	13	295.36	3.45E+02	70.14	4.17E+00	5.50E+00	3.40E+02
	14	338.97	2.18E+02	93.55	2.22E-01	4.54E+00	2.18E+02
	15	352.06	5.72E+02	74.66	8.83E+00	4.91E+00	5.63E+02
	16	440.64	3.62E+01	29.77		3.62E+01	2.98E+01
	17	463.46	6.18E+01	43.03		6.18E+01	4.30E+01
	18	511.62	2.05E+02	55.80	8.12E+01	5.49E+00	1.24E+02
	19	583.30	3.34E+02	53.94	6.34E+00	3.74E+00	3.28E+02
	20	610.37	5.29E+02	91.10	5.20E+00	3.69E+00	5.23E+02
	21	693.92	2.68E+01	26.60		2.68E+01	2.66E+01
	22	727.61	8.48E+01	39.83		8.48E+01	3.98E+01
	23	770.41	6.83E+01	46.89		6.83E+01	4.69E+01
	24	785.92	3.03E+01	36.24		3.03E+01	3.62E+01
M	25	795.30	3.41E+01	25.98		3.41E+01	2.60E+01
m	26	800.31	1.75E+01	24.88		1.75E+01	2.49E+01
	27	860.78	3.55E+01	26.44		3.55E+01	2.64E+01
	28	911.61	2.24E+02	44.82	3.28E+00	2.53E+00	2.21E+02
M	29	964.77	3.07E+01	26.52		3.07E+01	2.65E+01
m	30	969.46	1.30E+02	32.86		1.30E+02	3.29E+01
	31	1120.62	8.35E+01	41.27	2.28E+00	2.55E+00	8.12E+01
	32	1237.84	2.87E+01	36.31		2.87E+01	3.63E+01
	33	1281.94	2.03E+01	25.14		2.03E+01	2.51E+01
	34	1378.47	2.39E+01	19.66		2.39E+01	1.97E+01
	35	1439.12	1.21E+01	13.48		1.21E+01	1.35E+01
	36	1461.49	8.67E+02	63.21	6.46E+00	2.33E+00	8.60E+02
	37	1510.12	3.05E+01	17.66		3.05E+01	1.77E+01
	38	1535.09	9.59E+00	7.28		9.59E+00	7.28E+00
M	39	1589.41	2.89E+01	13.30		2.89E+01	1.33E+01

Analysis Report for 1510086-09
CP4105S12-13

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
m 40	1599.97	1.34E+01	12.21			1.34E+01	1.22E+01
41	1678.60	8.00E+00	5.66			8.00E+00	5.66E+00
42	1686.63	1.00E+01	6.32			1.00E+01	6.32E+00
43	1693.81	1.20E+01	6.93			1.20E+01	6.93E+00
44	1729.49	1.10E+01	12.81			1.10E+01	1.28E+01
45	1737.34	1.07E+01	11.79			1.07E+01	1.18E+01
46	1746.61	8.90E+00	6.80			8.90E+00	6.80E+00
47	1765.76	8.48E+01	21.91			8.48E+01	2.19E+01
48	1847.21	2.10E+01	10.59			2.10E+01	1.06E+01
49	1901.16	7.00E+00	5.29			7.00E+00	5.29E+00
50	1972.82	6.00E+00	7.78			6.00E+00	7.78E+00
51	2064.15	6.00E+00	7.35			6.00E+00	7.35E+00
M 52	2094.47	1.33E+01	9.00			1.33E+01	9.00E+00
m 53	2104.25	2.35E+01	12.37			2.35E+01	1.24E+01
54	2224.13	1.00E+01	6.32	2.83E+00	1.71E+00	7.17E+00	6.55E+00
55	2294.46	8.00E+00	5.66			8.00E+00	5.66E+00
56	2311.78	1.07E+01	8.50			1.07E+01	8.50E+00
57	2324.56	6.56E+00	6.65			6.56E+00	6.65E+00
58	2339.53	5.33E+00	7.78			5.33E+00	7.78E+00
59	2352.03	1.23E+01	8.26			1.23E+01	8.26E+00
60	2615.57	1.31E+02	22.89	3.47E+00	1.48E+00	1.28E+02	2.29E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

NUCLIDE IDENTIFICATION REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

IDENTIFIED NUCLIDES

Nuclide Name	Id Confidence	Energy (keV)	Yield(%)	Activity (pCi/grams)	Activity Uncertainty
K-40	0.928	1460.81	* 10.67	2.08E+01	2.37E+00
GA-67	0.358	93.31	* 35.70	1.85E+02	7.83E+02
		208.95	* 2.24	3.06E+03	1.26E+04
		300.22	16.00		
TL-208	0.932	583.14	* 30.22	1.37E+00	2.58E-01
		860.37	* 4.48	1.36E+00	1.02E+00
		2614.66	* 35.85	1.20E+00	2.40E-01
PB-210	0.988	46.50	* 4.25	1.28E+00	9.83E-01
BI-212	0.741	727.17	* 11.80	1.08E+00	5.16E-01
		1620.62	2.75		

Analysis Report for 1510086-09
CP4105S12-13

Nuclide Name	Id Confidence	Energy (keV)	Yield(%)	Activity (pCi/grams)	Activity Uncertainty
PB-212	0.888	238.63 *	44.60	1.43E+00	1.70E-01
		300.09	3.41		
PB-214	0.997	295.21 *	19.19	1.37E+00	3.02E-01
		351.92 *	37.19	1.32E+00	2.05E-01
RA-224	0.904	240.98 *	3.95	3.56E+00	1.11E+00
RA-226	1.000	186.21 *	3.28	1.91E+00	3.74E+00
AC-228	0.958	338.32 *	11.40	1.62E+00	7.08E-01
		911.07 *	27.70	1.43E+00	3.16E-01
		969.11 *	16.60	1.47E+00	3.95E-01
CM-243	0.353	209.75 *	3.29	2.75E+00	1.90E+00
		228.14	10.60		
		277.60 *	14.00	2.40E-01	2.60E-01

* = Energy line found in the spectrum.
 - = Manually added nuclide.
 ? = Manually edited nuclide.
 Energy Tolerance : 1.000 keV
 Nuclide confidence index threshold = 0.30
 Errors quoted at 2.000sigma

UNIDENTIFIED PEAKS

Peak Locate Performed on : 11/6/2015 1:24:34PM
 Peak Locate From Channel : 1
 Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
M 1	43.77	7.65414E-03	55.60		
3	76.39	3.60388E-01	5.92		
m 4	89.53	4.72301E-02	19.90		
6	106.56	3.55001E-02	35.22	Tol.	NP-239
11	270.30	2.67489E-02	29.43		
16	440.64	1.00561E-02	41.11		
17	463.46	1.71581E-02	34.84	Sum	
18	511.62	3.43437E-02	22.68		
20	610.37	1.45363E-01	8.71		
21	693.92	7.44580E-03	49.62		
23	770.41	1.89622E-02	34.35	Sum	
24	785.92	8.40979E-03	59.85		
M 25	795.30	9.47117E-03	38.10	Tol.	CS-134
m 26	800.31	4.86778E-03	70.99		
M 29	964.77	8.52938E-03	43.19	Tol.	EU-152
31	1120.62	2.25497E-02	25.47	Sum	

Analysis Report for 1510086-09
CP4105S12-13

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
32	1237.84	7.96334E-03	63.32		
33	1281.94	5.64394E-03	61.86		
34	1378.47	6.63647E-03	41.14		
35	1439.12	3.35648E-03	55.79		
37	1510.12	8.45900E-03	29.00		
38	1535.09	2.66414E-03	37.95		
M	39	1589.41	8.01977E-03	23.04	
m	40	1599.97	3.71819E-03	45.60	
	41	1678.60	2.22222E-03	35.36	Tol. I-135
	42	1686.63	2.77778E-03	31.62	
	43	1693.81	3.33333E-03	28.87	
	44	1729.49	3.05556E-03	58.21	
	45	1737.34	2.96007E-03	55.32	
	46	1746.61	2.47222E-03	38.21	
	47	1765.76	2.35454E-02	12.92	
	48	1847.21	5.82729E-03	25.25	
	49	1901.16	1.94444E-03	37.80	
	50	1972.82	1.66667E-03	64.82	
	51	2064.15	1.66667E-03	61.24	
M	52	2094.47	3.70599E-03	33.73	
m	53	2104.25	6.51643E-03	26.36	S-Esc
	54	2224.13	1.99153E-03	45.69	
	55	2294.46	2.22222E-03	35.36	
	56	2311.78	2.98077E-03	39.61	
	57	2324.56	1.82292E-03	50.68	
	58	2339.53	1.48148E-03	72.92	
	59	2352.03	3.41270E-03	33.62	

M = First peak in a multiplet region
 m = Other peak in a multiplet region
 F = Fitted singlet
 Errors quoted at 2.000sigma

NUCLIDE IDENTIFICATION REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

IDENTIFIED NUCLIDES

Nuclide Name	Id Confidence	Energy (keV)	Yield(%)	Activity (pCi/grams)	Activity Uncertainty
--------------	---------------	--------------	----------	----------------------	----------------------

Analysis Report for 1510086-09
CP4105S12-13

Nuclide Name	Id Confidence	Energy (keV)		Yield(%)	Activity (pCi/grams)	Activity Uncertainty
K-40	0.92	1460.81 *		10.67	2.08E+01	2.37E+00
GA-67	0.35	93.31 *		35.70	1.85E+02	7.83E+02
		208.95 *		2.24	3.06E+03	1.26E+04
		300.22		16.00		
TL-208	0.93	583.14 *		30.22	1.37E+00	2.58E-01
		860.37 *		4.48	1.36E+00	1.02E+00
		2614.66 *		35.85	1.20E+00	2.40E-01
				4.25	1.28E+00	9.83E-01
PB-210	0.98	46.50 *		11.80	1.08E+00	5.16E-01
BI-212	0.74	727.17 *		2.75		
		1620.62		44.60	1.43E+00	1.70E-01
PB-212	0.88	238.63 *		3.41		
		300.09		19.19	1.37E+00	3.02E-01
PB-214	0.99	295.21 *		37.19	1.32E+00	2.05E-01
		351.92 *		3.95	3.56E+00	1.11E+00
RA-224	0.90	240.98 *		3.28	1.91E+00	3.74E+00
RA-226	1.00	186.21 *		11.40	1.62E+00	7.08E-01
AC-228	0.95	338.32 *		27.70	1.43E+00	3.16E-01
		911.07 *		16.60	1.47E+00	3.95E-01
		969.11 *		3.29	2.75E+00	1.90E+00
CM-243	0.35	209.75 *		10.60		
		228.14		14.00	2.40E-01	2.60E-01
		277.60 *				

* = Energy line found in the spectrum.
 - = Manually added nuclide.
 ? = Manually edited nuclide.
 @ = Energy line not used for Weighted Mean Activity
 Energy Tolerance : 1.000 keV
 Nuclide confidence index threshold = 0.30
 Errors quoted at 2.000sigma

INTERFERENCE CORRECTED REPORT

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40	0.928	2.08E+01	2.37E+00	
GA-67	0.358	1.88E+02	7.66E+02	
TL-208	0.932	1.28E+00	1.73E-01	
PB-210	0.988	1.28E+00	9.83E-01	
BI-212	0.741	1.08E+00	5.16E-01	

Analysis Report for 1510086-09
CP4105S12-13

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
PB-212	0.888	1.43E+00	1.70E-01	
PB-214	0.997	1.33E+00	1.70E-01	
RA-224	0.904	3.56E+00	1.11E+00	
RA-226	1.000	1.91E+00	3.74E+00	
AC-228	0.958	1.47E+00	2.33E-01	
CM-243	0.353	2.83E-01	2.58E-01	

- ? = nuclide is part of an undetermined solution
X = nuclide rejected by the interference analysis
@ = nuclide contains energy lines not used in Weighted Mean Activity

Errors quoted at 2.000sigma

Analysis Report for 1510086-09
CP4105S12-13

UNIDENTIFIED PEAKS

Peak Locate Performed on : 11/6/2015 1:24:34PM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
M	1	43.77	7.65414E-03	55.60	
	3	76.39	3.60388E-01	5.92	
m	4	89.53	4.72301E-02	19.90	
	6	106.56	3.55001E-02	35.22	Tol. NP-239
	11	270.30	2.67489E-02	29.43	
	16	440.64	1.00561E-02	41.11	
	17	463.46	1.71581E-02	34.84	Sum
	18	511.62	3.43437E-02	22.68	
	20	610.37	1.45363E-01	8.71	
	21	693.92	7.44580E-03	49.62	
	23	770.41	1.89622E-02	34.35	Sum
	24	785.92	8.40979E-03	59.85	
M	25	795.30	9.47117E-03	38.10	Tol. CS-134
m	26	800.31	4.86778E-03	70.99	
M	29	964.77	8.52938E-03	43.19	Tol. EU-152
	31	1120.62	2.25497E-02	25.47	Sum
	32	1237.84	7.96334E-03	63.32	
	33	1281.94	5.64394E-03	61.86	
	34	1378.47	6.63647E-03	41.14	
	35	1439.12	3.35648E-03	55.79	
	37	1510.12	8.45900E-03	29.00	
	38	1535.09	2.66414E-03	37.95	
M	39	1589.41	8.01977E-03	23.04	
m	40	1599.97	3.71819E-03	45.60	
	41	1678.60	2.22222E-03	35.36	Tol. I-135
	42	1686.63	2.77778E-03	31.62	
	43	1693.81	3.33333E-03	28.87	
	44	1729.49	3.05556E-03	58.21	
	45	1737.34	2.96007E-03	55.32	
	46	1746.61	2.47222E-03	38.21	
	47	1765.76	2.35454E-02	12.92	
	48	1847.21	5.82729E-03	25.25	
	49	1901.16	1.94444E-03	37.80	

Analysis Report for 1510086-09
CP4105S12-13

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
	50	1972.82	1.66667E-03	64.82	
	51	2064.15	1.66667E-03	61.24	
M	52	2094.47	3.70599E-03	33.73	
m	53	2104.25	6.51643E-03	26.36	S-Esc
	54	2224.13	1.99153E-03	45.69	
	55	2294.46	2.22222E-03	35.36	
	56	2311.78	2.98077E-03	39.61	
	57	2324.56	1.82292E-03	50.68	
	58	2339.53	1.48148E-03	72.92	
	59	2352.03	3.41270E-03	33.62	

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

NUCLIDE MDA REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	BE-7	477.59	10.42	-1.20E-01	8.48E-01	8.48E-01
+	NA-22	1274.54	99.94	-1.51E-02	7.14E-02	7.14E-02
+	NA-24	1368.53	99.99	-6.78E+12	3.93E+13	6.75E+13
		2754.09	99.86	1.22E+12		3.93E+13
+	AL-26	1808.65	99.76	5.94E-03	4.19E-02	4.19E-02
+	K-40	1460.81	* 10.67	2.08E+01	1.01E+00	1.01E+00
+	@ AR-41	1293.64	99.16	1.00E+26	1.00E+26	1.00E+26
+	TI-44	67.88	94.40	-3.64E-02	6.64E-02	6.64E-02
		78.34	96.00	2.80E-01		8.55E-02
+	SC-46	889.25	99.98	4.94E-03	8.84E-02	8.84E-02
		1120.51	99.99	2.49E-01		1.66E-01
+	V-48	983.52	99.98	5.16E-02	2.80E-01	2.80E-01
		1312.10	97.50	-6.19E-02		2.80E-01
+	CR-51	320.08	9.83	-3.32E-01	1.07E+00	1.07E+00
+	MN-54	834.83	99.97	-9.90E-03	7.27E-02	7.27E-02
+	CO-56	846.75	99.96	8.35E-03	8.78E-02	8.78E-02
		1037.75	14.03	-1.59E-02		6.72E-01
		1238.25	67.00	1.50E-01		2.28E-01

Analysis Report for 1510086-09
CP4105S12-13

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)	
	CO-56	1771.40	15.51	3.31E-02	8.78E-02	4.51E-01
		2598.48	16.90	-9.66E-02		2.45E-01
+	CO-57	122.06	85.51	1.31E-02	5.67E-02	5.67E-02
		136.48	10.60	3.23E-01		4.84E-01
+	CO-58	810.76	99.40	-3.06E-02	8.46E-02	8.46E-02
+	FE-59	1099.22	56.50	-3.00E-02	2.03E-01	2.03E-01
		1291.56	43.20	1.06E-01		2.92E-01
+	CO-60	1173.22	100.00	-1.07E-02	7.49E-02	8.67E-02
		1332.49	100.00	1.12E-02		7.49E-02
+	ZN-65	1115.52	50.75	-4.90E-03	1.72E-01	1.72E-01
+	GA-67	93.31	* 35.70	1.85E+02	2.48E+02	2.48E+02
		208.95	* 2.24	3.06E+03		3.40E+03
		300.22	16.00	1.76E+02		2.69E+02
+	SE-75	121.11	16.70	-8.87E-02	9.69E-02	3.18E-01
		136.00	59.20	2.46E-02		9.71E-02
		264.65	59.80	1.31E-02		9.69E-02
		279.53	25.20	3.09E-02		2.43E-01
		400.65	11.40	3.14E-02		5.23E-01
+	RB-82	776.52	13.00	-1.01E-03	1.21E+00	1.21E+00
+	RB-83	520.41	46.00	1.38E-02	1.62E-01	1.62E-01
		529.64	30.30	7.92E-02		2.44E-01
		552.65	16.40	-2.97E-04		4.59E-01
+	KR-85	513.99	0.43	4.19E+01	2.11E+01	2.11E+01
+	SR-85	513.99	99.27	2.54E-01	1.28E-01	1.28E-01
+	Y-88	898.02	93.40	6.87E-02	6.14E-02	1.03E-01
		1836.01	99.38	2.48E-02		6.14E-02
+	NB-93M	16.57	9.43	-4.38E+01	6.62E+01	6.62E+01
+	NB-94	702.63	100.00	3.45E-02	6.92E-02	7.26E-02
		871.10	100.00	4.97E-03		6.92E-02
+	NB-95	765.79	99.81	6.55E-02	1.54E-01	1.54E-01
+	NB-95M	235.69	25.00	-8.68E+02	9.96E+01	9.96E+01
+	ZR-95	724.18	43.70	1.45E-02	1.79E-01	2.54E-01
		756.72	55.30	1.07E-01		1.79E-01
+	MO-99	181.06	6.20	5.06E+02	1.42E+03	2.08E+03
		739.58	12.80	7.98E+02		1.42E+03
		778.00	4.50	-3.27E+00		3.71E+03
+	RU-103	497.08	89.00	7.34E-02	1.16E-01	1.16E-01
+	RU-106	621.84	9.80	-1.89E-01	6.41E-01	6.41E-01
+	AG-108M	433.93	89.90	2.10E-02	6.35E-02	6.35E-02
		614.37	90.40	-6.18E-01		7.00E-02
		722.95	90.50	-9.08E-03		7.53E-02
+	CD-109	88.03	3.72	2.10E-01	1.81E+00	1.81E+00
+	AG-110M	657.75	93.14	1.84E-02	7.61E-02	7.61E-02
		677.61	10.53	-1.49E-01		6.44E-01
		706.67	16.46	-3.20E-01		4.33E-01
		763.93	21.98	1.35E-01		3.45E-01
		884.67	71.63	-1.03E-02		9.94E-02
		1384.27	23.94	1.31E-01		3.04E-01

Analysis Report for 1510086-09
CP4105S12-13

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	CD-113M	263.70	0.02	-9.47E+00	2.11E+02	2.11E+02
+	SN-113	255.12	1.93	7.88E-01	8.95E-02	3.02E+00
		391.69	64.90	-2.98E-02		8.95E-02
+	TE123M	159.00	84.10	-4.54E-02	6.65E-02	6.65E-02
+	SB-124	602.71	97.87	-4.17E-04	9.68E-02	9.68E-02
		645.85	7.26	-4.28E-01		1.12E+00
		722.78	11.10	-1.06E-01		8.79E-01
		1691.02	49.00	-8.24E-02		1.45E-01
+	I-125	35.49	6.49	-4.90E-01	3.02E+00	3.02E+00
+	SB-125	176.33	6.89	9.51E-02	1.99E-01	6.96E-01
		427.89	29.33	-2.87E-02		1.99E-01
		463.38	10.35	4.84E-01		6.77E-01
		600.56	17.80	-9.58E-02		3.67E-01
		635.90	11.32	3.91E-02		5.50E-01
+	SB-126	414.70	83.30	-2.01E-01	3.78E-01	3.78E-01
		666.33	99.60	1.34E-01		3.85E-01
		695.00	99.60	1.68E-02		3.80E-01
		720.50	53.80	7.81E-02		7.66E-01
+	SN-126	87.57	37.00	2.02E-02	1.74E-01	1.74E-01
+	SB-127	473.00	25.00	-1.85E+01	4.78E+01	6.50E+01
		685.20	35.70	1.20E+01		4.78E+01
		783.80	14.70	8.23E+01		1.32E+02
+	I-129	29.78	57.00	-4.01E-01	4.34E-01	4.34E-01
		33.60	13.20	-2.84E-02		1.23E+00
		39.58	7.52	2.49E-01		1.34E+00
+	I-131	284.30	6.05	-3.12E+00	7.74E-01	1.16E+01
		364.48	81.20	-3.44E-01		7.74E-01
		636.97	7.26	-2.75E+00		1.22E+01
		722.89	1.80	-6.73E+00		5.58E+01
+	TE-132	49.72	13.10	-1.17E+02	4.25E+01	3.96E+02
		228.16	88.00	-1.61E+01		4.25E+01
+	BA-133	81.00	33.00	-1.19E+00	8.07E-02	1.67E-01
		302.84	17.80	1.53E-01		2.97E-01
		356.01	60.00	-6.93E-01		8.07E-02
+	I-133	529.87	86.30	1.50E+09	4.61E+09	4.61E+09
+	XE-133	81.00	38.00	-6.35E+01	8.92E+00	8.92E+00
+	CS-134	563.23	8.38	-3.82E-01	7.21E-02	7.51E-01
		569.32	15.43	1.24E-01		4.17E-01
		604.70	97.60	-5.92E-03		7.21E-02
		795.84	85.40	2.57E-02		8.76E-02
		801.93	8.73	-3.54E-02		7.75E-01
+	CS-135	268.24	16.00	2.14E-01	3.52E-01	3.52E-01
+	@ I-135	1131.51	22.50	1.00E+26	1.00E+26	1.00E+26
	@	1260.41	28.60	1.00E+26		1.00E+26
	@	1678.03	9.54	1.00E+26		1.00E+26
+	CS-136	153.22	7.46	3.02E+00	3.37E-01	3.48E+00
		163.89	4.61	1.08E+00		5.46E+00
		176.55	13.56	2.45E-01		1.79E+00
		273.65	12.66	-2.98E+00		2.13E+00

Analysis Report for 1510086-09
CP4105S12-13

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	CS-136	340.57	48.50	9.91E-01	3.37E-01	7.33E-01
		818.50	99.70	-7.95E-02		3.37E-01
		1048.07	79.60	-2.39E-01		4.43E-01
		1235.34	19.70	2.84E-02		2.72E+00
+	CS-137	661.65	85.12	-5.44E-02	7.40E-02	7.40E-02
+	LA-138	788.74	34.00	3.25E-02	9.86E-02	1.93E-01
		1435.80	66.00	-4.14E-03		9.86E-02
+	CE-139	165.85	80.35	5.07E-02	7.13E-02	7.13E-02
+	BA-140	162.64	6.70	-5.19E-01	1.27E+00	3.91E+00
		304.84	4.50	-3.56E+00		5.57E+00
		423.70	3.20	2.61E+00		9.84E+00
		437.55	2.00	3.79E+00		1.59E+01
		537.32	25.00	-7.64E-02		1.27E+00
+	LA-140	328.77	20.50	4.28E-01	4.19E-01	1.41E+00
		487.03	45.50	7.89E-02		6.97E-01
		815.85	23.50	-2.65E-02		1.48E+00
		1596.49	95.49	-1.43E-01		4.19E-01
+	CE-141	145.44	48.40	2.17E-01	1.96E-01	1.96E-01
+	CE-143	57.36	11.80	3.86E+05	1.32E+06	3.79E+06
		293.26	42.00	3.84E+06		1.32E+06
		664.55	5.20	2.87E+06		8.82E+06
+	CE-144	133.54	10.80	-1.29E-01	4.73E-01	4.73E-01
+	PM-144	476.78	42.00	3.39E-03	6.70E-02	1.50E-01
		618.01	98.60	8.97E-03		6.70E-02
		696.49	99.49	8.17E-03		7.36E-02
+	PM-145	36.85	21.70	-4.18E-01	3.05E-01	5.63E-01
		37.36	39.70	9.44E-02		3.05E-01
		42.30	15.10	-5.93E-02		5.58E-01
		72.40	2.31	-3.72E+00		3.13E+00
+	PM-146	453.90	39.94	-5.41E-02	1.38E-01	1.38E-01
		735.90	14.01	3.79E-01		5.09E-01
		747.13	13.10	-1.70E-01		4.55E-01
+	ND-147	91.11	28.90	-3.45E+00	1.60E+00	1.60E+00
		531.02	13.10	6.52E-01		3.18E+00
+	PM-149	285.90	3.10	1.69E+03	2.75E+04	2.75E+04
+	EU-152	121.78	20.50	5.08E-02	2.19E-01	2.19E-01
		244.69	5.40	-3.32E-01		1.01E+00
		344.27	19.13	-1.62E-03		2.60E-01
		778.89	9.20	-6.18E-04		6.96E-01
		964.01	10.40	-1.43E+00		8.23E-01
		1085.78	7.22	1.29E-01		1.02E+00
		1112.02	9.60	-2.07E-01		7.54E-01
		1407.95	14.94	2.51E-01		5.56E-01
+	GD-153	97.43	31.30	1.01E-01	1.65E-01	1.65E-01
		103.18	22.20	5.10E-02		2.30E-01
+	EU-154	123.07	40.50	-7.40E-02	1.10E-01	1.10E-01
		723.30	19.70	-4.20E-02		3.48E-01
		873.19	11.50	3.35E-01		6.20E-01
		996.32	10.30	-1.32E-01		6.13E-01

Analysis Report for 1510086-09
CP4105S12-13

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)	
	EU-154	1004.76	17.90	-8.19E-02	1.10E-01	3.71E-01
		1274.45	35.50	-4.17E-02		1.98E-01
+	EU-155	86.50	30.90	-2.27E-02	2.08E-01	2.08E-01
		105.30	20.70	2.91E-02		2.35E-01
+	EU-156	811.77	10.40	-3.83E-01	2.52E+00	2.52E+00
		1153.47	7.20	-2.36E-01		4.61E+00
		1230.71	8.90	1.14E+00		4.51E+00
+	HO-166M	184.41	72.60	1.01E-01	8.48E-02	8.48E-02
		280.45	29.60	2.39E-02		1.56E-01
		410.94	11.10	4.45E-01		5.63E-01
		711.69	54.10	7.52E-02		1.32E-01
+	TM-171	66.72	0.14	-1.29E+02	4.63E+01	4.63E+01
+	HF-172	81.75	4.52	-1.83E+00	4.24E-01	1.25E+00
		125.81	11.30	-3.03E-01		4.24E-01
+	LU-172	181.53	20.60	-1.39E-01	2.90E+00	5.90E+00
		810.06	16.63	-1.52E+00		9.32E+00
		912.12	15.25	6.54E+01		2.34E+01
		1093.66	62.50	-1.68E-01		2.90E+00
+	LU-173	100.72	5.24	6.66E-01	2.82E-01	9.39E-01
		272.11	21.20	1.59E-01		2.82E-01
+	HF-175	343.40	84.00	-5.99E-04	8.22E-02	8.22E-02
+	LU-176	88.34	13.30	1.06E+00	4.87E-02	4.95E-01
		201.83	86.00	1.75E-02		5.72E-02
		306.78	94.00	-1.14E-02		4.87E-02
+	TA-182	67.75	41.20	-1.01E-01	1.84E-01	1.84E-01
		1121.30	34.90	6.36E-01		4.46E-01
		1189.05	16.23	-7.61E-02		6.09E-01
		1221.41	26.98	-1.90E-01		3.74E-01
		1231.02	11.44	2.58E-01		1.02E+00
+	IR-192	308.46	29.68	-5.15E-02	1.70E-01	2.10E-01
		468.07	48.10	1.02E-02		1.70E-01
+	HG-203	279.19	77.30	5.92E-02	1.09E-01	1.09E-01
+	BI-207	569.67	97.72	1.40E-02	6.52E-02	6.52E-02
		1063.62	74.90	-3.71E-03		1.01E-01
+	TL-208	583.14	* 30.22	1.37E+00	8.78E-02	2.88E-01
		860.37	* 4.48	1.36E+00		1.59E+00
		2614.66	* 35.85	1.20E+00		8.78E-02
+	BI-210M	262.00	45.00	3.82E-03	1.07E-01	1.07E-01
		300.00	23.00	1.61E-01		2.46E-01
+	PB-210	46.50	* 4.25	1.28E+00	2.40E+00	2.40E+00
+	PB-211	404.84	2.90	-6.02E-01	1.69E+00	1.69E+00
		831.96	2.90	-8.93E-02		2.21E+00
+	BI-212	727.17	* 11.80	1.08E+00	7.74E-01	7.74E-01
		1620.62	2.75	-1.31E-01		2.37E+00
+	PB-212	238.63	* 44.60	1.43E+00	1.87E-01	1.87E-01
		300.09	3.41	1.09E+00		1.66E+00
+	BI-214	609.31	46.30	1.36E+00	3.25E-01	3.25E-01
		1120.29	15.10	1.27E+00		8.47E-01

Analysis Report for 1510086-09
CP4105S12-13

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)	
	BI-214	1764.49	15.80	1.30E+00	3.25E-01	8.43E-01
		2204.22	4.98	1.27E+00		1.67E+00
+	PB-214	295.21	* 19.19	1.37E+00	2.29E-01	4.06E-01
		351.92	* 37.19	1.32E+00		2.29E-01
+	RN-219	401.80	6.50	1.86E-03	7.61E-01	7.61E-01
+	RA-223	323.87	3.88	-2.22E-01	1.27E+00	1.27E+00
+	RA-224	240.98	* 3.95	3.56E+00	2.09E+00	2.09E+00
+	RA-225	40.00	31.00	2.54E-01	1.37E+00	1.37E+00
+	RA-226	186.21	* 3.28	1.91E+00	2.18E+00	2.18E+00
+	TH-227	50.10	8.40	-2.37E-01	5.42E-01	7.99E-01
		236.00	11.50	-4.72E+00		5.42E-01
		256.20	6.30	-2.22E-01		7.46E-01
+	AC-228	338.32	* 11.40	1.62E+00	3.77E-01	1.11E+00
		911.07	* 27.70	1.43E+00		3.77E-01
		969.11	* 16.60	1.47E+00		9.41E-01
+	TH-230	48.44	16.90	2.10E-01	4.55E-01	4.55E-01
		62.85	4.60	1.80E+00		1.58E+00
		67.67	0.37	-9.30E+00		1.70E+01
+	PA-231	283.67	1.60	-2.26E-02	2.29E+00	2.97E+00
		302.67	2.30	1.18E+00		2.29E+00
+	TH-231	25.64	14.70	6.85E-01	9.30E-01	3.72E+00
		84.21	6.40	-1.43E+00		9.30E-01
+	PA-233	311.98	38.60	5.74E-02	2.87E-01	2.87E-01
+	PA-234	131.20	20.40	6.04E-02	2.41E-01	2.41E-01
		733.99	8.80	-2.15E-01		7.20E-01
		946.00	12.00	1.98E-01		5.93E-01
+	PA-234M	1001.03	0.92	4.21E+00	7.70E+00	7.70E+00
+	TH-234	63.29	3.80	3.71E+00	1.90E+00	1.90E+00
+	U-235	143.76	10.50	2.49E-01	4.65E-01	4.65E-01
		163.35	4.70	2.04E-01		1.03E+00
		205.31	4.70	-1.14E+00		1.06E+00
+	NP-237	86.50	12.60	-5.50E-02	5.03E-01	5.03E-01
+	NP-239	106.10	22.70	2.56E+02	2.07E+03	2.07E+03
		228.18	10.70	-1.69E+03		4.46E+03
		277.60	14.10	1.28E+03		3.68E+03
+	AM-241	59.54	35.90	-8.65E-02	1.82E-01	1.82E-01
+	AM-243	74.67	66.00	-1.49E-01	1.30E-01	1.30E-01
+	CM-243	209.75	* 3.29	2.75E+00	4.25E-01	3.05E+00
		228.14	10.60	-1.75E-01		4.63E-01
		277.60	* 14.00	2.40E-01		4.25E-01

- + = Nuclide identified during the nuclide identification
 * = Energy line found in the spectrum
 > = MDA value not calculated
 @ = Half-life too short to be able to perform the decay correction
 ? = CAUTION: MDA value is inconsistent with Currie MDA at 95% confidence level

Analysis Report for 1510086-09
CP4105S12-13

NUCLIDE MDA REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
BE-7	477.59	10.42	8.48E-01	8.48E-01	-1.20E-01	4.03E-01
NA-22	1274.54	99.94	7.14E-02	7.14E-02	-1.51E-02	3.25E-02
NA-24	1368.53	99.99	6.75E+13	3.93E+13	-6.78E+12	3.02E+13
	2754.09	99.86	3.93E+13		1.22E+12	1.47E+13
AL-26	1808.65	99.76	4.19E-02	4.19E-02	5.94E-03	1.69E-02
+ K-40	1460.81	* 10.67	1.01E+00	1.01E+00	2.08E+01	4.71E-01
@ AR-41	1293.64	99.16	1.00E+26	1.00E+26	1.00E+26	1.00E+20
TI-44	67.88	94.40	6.64E-02	6.64E-02	-3.64E-02	3.25E-02
	78.34	96.00	8.55E-02		2.80E-01	4.21E-02
SC-46	889.25	99.98	8.84E-02	8.84E-02	4.94E-03	4.11E-02
	1120.51	99.99	1.66E-01		2.49E-01	7.91E-02
V-48	983.52	99.98	2.80E-01	2.80E-01	5.16E-02	1.30E-01
	1312.10	97.50	2.80E-01		-6.19E-02	1.27E-01
CR-51	320.08	9.83	1.07E+00	1.07E+00	-3.32E-01	5.08E-01
MN-54	834.83	99.97	7.27E-02	7.27E-02	-9.90E-03	3.39E-02
CO-56	846.75	99.96	8.78E-02	8.78E-02	8.35E-03	4.09E-02
	1037.75	14.03	6.72E-01		-1.59E-02	3.11E-01
	1238.25	67.00	2.28E-01		1.50E-01	1.08E-01
	1771.40	15.51	4.51E-01		3.31E-02	1.92E-01
	2598.48	16.90	2.45E-01		-9.66E-02	8.67E-02
CO-57	122.06	85.51	5.67E-02	5.67E-02	1.31E-02	2.75E-02
	136.48	10.60	4.84E-01		3.23E-01	2.35E-01
CO-58	810.76	99.40	8.46E-02	8.46E-02	-3.06E-02	3.93E-02
FE-59	1099.22	56.50	2.03E-01	2.03E-01	-3.00E-02	9.35E-02
	1291.56	43.20	2.92E-01		1.06E-01	1.34E-01
CO-60	1173.22	100.00	8.67E-02	7.49E-02	-1.07E-02	4.03E-02
	1332.49	100.00	7.49E-02		1.12E-02	3.41E-02
ZN-65	1115.52	50.75	1.72E-01	1.72E-01	-4.90E-03	7.98E-02
+ GA-67	93.31	* 35.70	2.48E+02	2.48E+02	1.85E+02	1.23E+02
	208.95	* 2.24	3.40E+03		3.06E+03	1.67E+03
	300.22	16.00	2.69E+02		1.76E+02	1.30E+02
SE-75	121.11	16.70	3.18E-01	9.69E-02	-8.87E-02	1.54E-01
	136.00	59.20	9.71E-02		2.46E-02	4.72E-02
	264.65	59.80	9.69E-02		1.31E-02	4.65E-02
	279.53	25.20	2.43E-01		3.09E-02	1.17E-01
	400.65	11.40	5.23E-01		3.14E-02	2.48E-01
RB-82	776.52	13.00	1.21E+00	1.21E+00	-1.01E-03	5.68E-01

Analysis Report for 1510086-09
CP4105S12-13

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
RB-83	520.41	46.00	1.62E-01	1.62E-01	1.38E-02	7.68E-02
	529.64	30.30	2.44E-01		7.92E-02	1.15E-01
	552.65	16.40	4.59E-01		-2.97E-04	2.17E-01
KR-85	513.99	0.43	2.11E+01	2.11E+01	4.19E+01	1.02E+01
SR-85	513.99	99.27	1.28E-01	1.28E-01	2.54E-01	6.18E-02
Y-88	898.02	93.40	1.03E-01	6.14E-02	6.87E-02	4.85E-02
	1836.01	99.38	6.14E-02		2.48E-02	2.57E-02
NB-93M	16.57	9.43	6.62E+01	6.62E+01	-4.38E+01	3.08E+01
NB-94	702.63	100.00	7.26E-02	6.92E-02	3.45E-02	3.43E-02
	871.10	100.00	6.92E-02		4.97E-03	3.23E-02
NB-95	765.79	99.81	1.54E-01	1.54E-01	6.55E-02	7.31E-02
NB-95M	235.69	25.00	9.96E+01	9.96E+01	-8.68E+02	4.84E+01
ZR-95	724.18	43.70	2.54E-01	1.79E-01	1.45E-02	1.20E-01
	756.72	55.30	1.79E-01		1.07E-01	8.42E-02
MO-99	181.06	6.20	2.08E+03	1.42E+03	5.06E+02	1.01E+03
	739.58	12.80	1.42E+03		7.98E+02	6.67E+02
	778.00	4.50	3.71E+03		-3.27E+00	1.73E+03
RU-103	497.08	89.00	1.16E-01	1.16E-01	7.34E-02	5.48E-02
RU-106	621.84	9.80	6.41E-01	6.41E-01	-1.89E-01	3.01E-01
AG-108M	433.93	89.90	6.35E-02	6.35E-02	2.10E-02	3.02E-02
	614.37	90.40	7.00E-02		-6.18E-01	3.30E-02
	722.95	90.50	7.53E-02		-9.08E-03	3.54E-02
CD-109	88.03	3.72	1.81E+00	1.81E+00	2.10E-01	8.87E-01
AG-110M	657.75	93.14	7.61E-02	7.61E-02	1.84E-02	3.58E-02
	677.61	10.53	6.44E-01		-1.49E-01	3.02E-01
	706.67	16.46	4.33E-01		-3.20E-01	2.04E-01
	763.93	21.98	3.45E-01		1.35E-01	1.62E-01
	884.67	71.63	9.94E-02		-1.03E-02	4.61E-02
	1384.27	23.94	3.04E-01		1.31E-01	1.37E-01
CD-113M	263.70	0.02	2.11E+02	2.11E+02	-9.47E+00	1.01E+02
SN-113	255.12	1.93	3.02E+00	8.95E-02	7.88E-01	1.45E+00
	391.69	64.90	8.95E-02		-2.98E-02	4.24E-02
TE123M	159.00	84.10	6.65E-02	6.65E-02	-4.54E-02	3.23E-02
SB-124	602.71	97.87	9.68E-02	9.68E-02	-4.17E-04	4.59E-02
	645.85	7.26	1.12E+00		-4.28E-01	5.21E-01
	722.78	11.10	8.79E-01		-1.06E-01	4.13E-01
	1691.02	49.00	1.45E-01		-8.24E-02	6.12E-02
I-125	35.49	6.49	3.02E+00	3.02E+00	-4.90E-01	1.46E+00
SB-125	176.33	6.89	6.96E-01	1.99E-01	9.51E-02	3.37E-01
	427.89	29.33	1.99E-01		-2.87E-02	9.50E-02
	463.38	10.35	6.77E-01		4.84E-01	3.24E-01
	600.56	17.80	3.67E-01		-9.58E-02	1.73E-01
	635.90	11.32	5.50E-01		3.91E-02	2.58E-01
	414.70	83.30	3.78E-01	3.78E-01	-2.01E-01	1.80E-01
SB-126	666.33	99.60	3.85E-01		1.34E-01	1.82E-01
	695.00	99.60	3.80E-01		1.68E-02	1.78E-01
	720.50	53.80	7.66E-01		7.81E-02	3.61E-01
SN-126	87.57	37.00	1.74E-01	1.74E-01	2.02E-02	8.52E-02
SB-127	473.00	25.00	6.50E+01	4.78E+01	-1.85E+01	3.09E+01
	685.20	35.70	4.78E+01		1.20E+01	2.24E+01
	783.80	14.70	1.32E+02		8.23E+01	6.21E+01
I-129	29.78	57.00	4.34E-01	4.34E-01	-4.01E-01	2.10E-01
	33.60	13.20	1.23E+00		-2.84E-02	5.97E-01

Analysis Report for 1510086-09
CP4105S12-13

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
I-129	39.58	7.52	1.34E+00	4.34E-01	2.49E-01	6.51E-01
I-131	284.30	6.05	1.16E+01	7.74E-01	-3.12E+00	5.54E+00
	364.48	81.20	7.74E-01		-3.44E-01	3.65E-01
	636.97	7.26	1.22E+01		-2.75E+00	5.75E+00
	722.89	1.80	5.58E+01		-6.73E+00	2.62E+01
TE-132	49.72	13.10	3.96E+02	4.25E+01	-1.17E+02	1.93E+02
	228.16	88.00	4.25E+01		-1.61E+01	2.05E+01
BA-133	81.00	33.00	1.67E-01	8.07E-02	-1.19E+00	8.15E-02
	302.84	17.80	2.97E-01		1.53E-01	1.43E-01
	356.01	60.00	8.07E-02		-6.93E-01	3.84E-02
I-133	529.87	86.30	4.61E+09	4.61E+09	1.50E+09	2.18E+09
XE-133	81.00	38.00	8.92E+00	8.92E+00	-6.35E+01	4.36E+00
CS-134	563.23	8.38	7.51E-01	7.21E-02	-3.82E-01	3.55E-01
	569.32	15.43	4.17E-01		1.24E-01	1.97E-01
	604.70	97.60	7.21E-02		-5.92E-03	3.42E-02
	795.84	85.40	8.76E-02		2.57E-02	4.12E-02
	801.93	8.73	7.75E-01		-3.54E-02	3.61E-01
CS-135	268.24	16.00	3.52E-01	3.52E-01	2.14E-01	1.70E-01
@ I-135	1131.51	22.50	1.00E+26	1.00E+26	1.00E+26	1.00E+20
@	1260.41	28.60	1.00E+26		1.00E+26	1.00E+20
@	1678.03	9.54	1.00E+26		1.00E+26	1.00E+20
CS-136	153.22	7.46	3.48E+00	3.37E-01	3.02E+00	1.69E+00
	163.89	4.61	5.46E+00		1.08E+00	2.65E+00
	176.55	13.56	1.79E+00		2.45E-01	8.68E-01
	273.65	12.66	2.13E+00		-2.98E+00	1.02E+00
	340.57	48.50	7.33E-01		9.91E-01	3.54E-01
	818.50	99.70	3.37E-01		-7.95E-02	1.57E-01
	1048.07	79.60	4.43E-01		-2.39E-01	2.04E-01
	1235.34	19.70	2.72E+00		2.84E-02	1.28E+00
CS-137	661.65	85.12	7.40E-02	7.40E-02	-5.44E-02	3.48E-02
LA-138	788.74	34.00	1.93E-01	9.86E-02	3.25E-02	9.03E-02
	1435.80	66.00	9.86E-02		-4.14E-03	4.41E-02
CE-139	165.85	80.35	7.13E-02	7.13E-02	5.07E-02	3.46E-02
BA-140	162.64	6.70	3.91E+00	1.27E+00	-5.19E-01	1.90E+00
	304.84	4.50	5.57E+00		-3.56E+00	2.66E+00
	423.70	3.20	9.84E+00		2.61E+00	4.69E+00
	437.55	2.00	1.59E+01		3.79E+00	7.57E+00
	537.32	25.00	1.27E+00		-7.64E-02	5.99E-01
LA-140	328.77	20.50	1.41E+00	4.19E-01	4.28E-01	6.73E-01
	487.03	45.50	6.97E-01		7.89E-02	3.31E-01
	815.85	23.50	1.48E+00		-2.65E-02	6.90E-01
	1596.49	95.49	4.19E-01		-1.43E-01	1.89E-01
CE-141	145.44	48.40	1.96E-01	1.96E-01	2.17E-01	9.55E-02
CE-143	57.36	11.80	3.79E+06	1.32E+06	3.86E+05	1.85E+06
	293.26	42.00	1.32E+06		3.84E+06	6.46E+05
	664.55	5.20	8.82E+06		2.87E+06	4.17E+06
CE-144	133.54	10.80	4.73E-01	4.73E-01	-1.29E-01	2.30E-01
PM-144	476.78	42.00	1.50E-01	6.70E-02	3.39E-03	7.13E-02
	618.01	98.60	6.70E-02		8.97E-03	3.16E-02
	696.49	99.49	7.36E-02		8.17E-03	3.47E-02
PM-145	36.85	21.70	5.63E-01	3.05E-01	-4.18E-01	2.73E-01
	37.36	39.70	3.05E-01		9.44E-02	1.48E-01
	42.30	15.10	5.58E-01		-5.93E-02	2.71E-01

Analysis Report for 1510086-09
CP4105S12-13

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
PM-145	72.40	2.31	3.13E+00	3.05E-01	-3.72E+00	1.54E+00
PM-146	453.90	39.94	1.38E-01	1.38E-01	-5.41E-02	6.54E-02
	735.90	14.01	5.09E-01		3.79E-01	2.40E-01
	747.13	13.10	4.55E-01		-1.70E-01	2.11E-01
ND-147	91.11	28.90	1.60E+00	1.60E+00	-3.45E+00	7.84E-01
	531.02	13.10	3.18E+00		6.52E-01	1.51E+00
PM-149	285.90	3.10	2.75E+04	2.75E+04	1.69E+03	1.32E+04
EU-152	121.78	20.50	2.19E-01	2.19E-01	5.08E-02	1.06E-01
	244.69	5.40	1.01E+00		-3.32E-01	4.90E-01
	344.27	19.13	2.60E-01		-1.62E-03	1.24E-01
	778.89	9.20	6.96E-01		-6.18E-04	3.25E-01
	964.01	10.40	8.23E-01		-1.43E+00	3.87E-01
	1085.78	7.22	1.02E+00		1.29E-01	4.73E-01
	1112.02	9.60	7.54E-01		-2.07E-01	3.47E-01
	1407.95	14.94	5.56E-01		2.51E-01	2.55E-01
GD-153	97.43	31.30	1.65E-01	1.65E-01	1.01E-01	8.05E-02
	103.18	22.20	2.30E-01		5.10E-02	1.12E-01
EU-154	123.07	40.50	1.10E-01	1.10E-01	-7.40E-02	5.33E-02
	723.30	19.70	3.48E-01		-4.20E-02	1.64E-01
	873.19	11.50	6.20E-01		3.35E-01	2.89E-01
	996.32	10.30	6.13E-01		-1.32E-01	2.81E-01
	1004.76	17.90	3.71E-01		-8.19E-02	1.71E-01
	1274.45	35.50	1.98E-01		-4.17E-02	8.99E-02
EU-155	86.50	30.90	2.08E-01	2.08E-01	-2.27E-02	1.02E-01
	105.30	20.70	2.35E-01		2.91E-02	1.15E-01
EU-156	811.77	10.40	2.52E+00	2.52E+00	-3.83E-01	1.17E+00
	1153.47	7.20	4.61E+00		-2.36E-01	2.14E+00
	1230.71	8.90	4.51E+00		1.14E+00	2.11E+00
HO-166M	184.41	72.60	8.48E-02	8.48E-02	1.01E-01	4.14E-02
	280.45	29.60	1.56E-01		2.39E-02	7.48E-02
	410.94	11.10	5.63E-01		4.45E-01	2.70E-01
	711.69	54.10	1.32E-01		7.52E-02	6.25E-02
TM-171	66.72	0.14	4.63E+01	4.63E+01	-1.29E+02	2.27E+01
HF-172	81.75	4.52	1.25E+00	4.24E-01	-1.83E+00	6.10E-01
	125.81	11.30	4.24E-01		-3.03E-01	2.06E-01
LU-172	181.53	20.60	5.90E+00	2.90E+00	-1.39E-01	2.86E+00
	810.06	16.63	9.32E+00		-1.52E+00	4.32E+00
	912.12	15.25	2.34E+01		6.54E+01	1.13E+01
	1093.66	62.50	2.90E+00		-1.68E-01	1.34E+00
LU-173	100.72	5.24	9.39E-01	2.82E-01	6.66E-01	4.57E-01
	272.11	21.20	2.82E-01		1.59E-01	1.36E-01
HF-175	343.40	84.00	8.22E-02	8.22E-02	-5.99E-04	3.92E-02
LU-176	88.34	13.30	4.95E-01	4.87E-02	1.06E+00	2.43E-01
	201.83	86.00	5.72E-02		1.75E-02	2.76E-02
	306.78	94.00	4.87E-02		-1.14E-02	2.32E-02
TA-182	67.75	41.20	1.84E-01	1.84E-01	-1.01E-01	8.99E-02
	1121.30	34.90	4.46E-01		6.36E-01	2.13E-01
	1189.05	16.23	6.09E-01		-7.61E-02	2.82E-01
	1221.41	26.98	3.74E-01		-1.90E-01	1.73E-01
	1231.02	11.44	1.02E+00		2.58E-01	4.78E-01
IR-192	308.46	29.68	2.10E-01	1.70E-01	-5.15E-02	1.00E-01
	468.07	48.10	1.70E-01		1.02E-02	8.11E-02
HG-203	279.19	77.30	1.09E-01	1.09E-01	5.92E-02	5.26E-02

Analysis Report for 1510086-09
CP4105S12-13

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
BI-207	569.67	97.72	6.52E-02	6.52E-02	1.40E-02	3.09E-02
	1063.62	74.90	1.01E-01		-3.71E-03	4.69E-02
+ TL-208	583.14 *	30.22	2.88E-01	8.78E-02	1.37E+00	1.38E-01
	860.37 *	4.48	1.59E+00		1.36E+00	7.44E-01
	2614.66 *	35.85	8.78E-02		1.20E+00	3.11E-02
BI-210M	262.00	45.00	1.07E-01	1.07E-01	3.82E-03	5.14E-02
	300.00	23.00	2.46E-01		1.61E-01	1.19E-01
+ PB-210	46.50 *	4.25	2.40E+00	2.40E+00	1.28E+00	1.18E+00
PB-211	404.84	2.90	1.69E+00	1.69E+00	-6.02E-01	8.02E-01
	831.96	2.90	2.21E+00		-8.93E-02	1.03E+00
+ BI-212	727.17 *	11.80	7.74E-01	7.74E-01	1.08E+00	3.70E-01
	1620.62	2.75	2.37E+00		-1.31E-01	1.05E+00
+ PB-212	238.63 *	44.60	1.87E-01	1.87E-01	1.43E+00	9.15E-02
	300.09	3.41	1.66E+00		1.09E+00	8.00E-01
BI-214	609.31	46.30	3.25E-01	3.25E-01	1.36E+00	1.59E-01
	1120.29	15.10	8.47E-01		1.27E+00	4.05E-01
	1764.49	15.80	8.43E-01		1.30E+00	3.97E-01
	2204.22	4.98	1.67E+00		1.27E+00	7.44E-01
+ PB-214	295.21 *	19.19	4.06E-01	2.29E-01	1.37E+00	1.98E-01
	351.92 *	37.19	2.29E-01		1.32E+00	1.11E-01
RN-219	401.80	6.50	7.61E-01	7.61E-01	1.86E-03	3.61E-01
RA-223	323.87	3.88	1.27E+00	1.27E+00	-2.22E-01	6.09E-01
+ RA-224	240.98 *	3.95	2.09E+00	2.09E+00	3.56E+00	1.02E+00
RA-225	40.00	31.00	1.37E+00	1.37E+00	2.54E-01	6.63E-01
+ RA-226	186.21 *	3.28	2.18E+00	2.18E+00	1.91E+00	1.06E+00
TH-227	50.10	8.40	7.99E-01	5.42E-01	-2.37E-01	3.89E-01
	236.00	11.50	5.42E-01		-4.72E+00	2.63E-01
	256.20	6.30	7.46E-01		-2.22E-01	3.58E-01
+ AC-228	338.32 *	11.40	1.11E+00	3.77E-01	1.62E+00	5.43E-01
	911.07 *	27.70	3.77E-01		1.43E+00	1.80E-01
	969.11 *	16.60	9.41E-01		1.47E+00	4.55E-01
TH-230	48.44	16.90	4.55E-01	4.55E-01	2.10E-01	2.22E-01
	62.85	4.60	1.58E+00		1.80E+00	7.73E-01
	67.67	0.37	1.70E+01		-9.30E+00	8.30E+00
PA-231	283.67	1.60	2.97E+00	2.29E+00	-2.26E-02	1.42E+00
	302.67	2.30	2.29E+00		1.18E+00	1.10E+00
TH-231	25.64	14.70	3.72E+00	9.30E-01	6.85E-01	1.81E+00
	84.21	6.40	9.30E-01		-1.43E+00	4.55E-01
PA-233	311.98	38.60	2.87E-01	2.87E-01	5.74E-02	1.37E-01
PA-234	131.20	20.40	2.41E-01	2.41E-01	6.04E-02	1.17E-01
	733.99	8.80	7.20E-01		-2.15E-01	3.37E-01
	946.00	12.00	5.93E-01		1.98E-01	2.76E-01
PA-234M	1001.03	0.92	7.70E+00	7.70E+00	4.21E+00	3.57E+00
TH-234	63.29	3.80	1.90E+00	1.90E+00	3.71E+00	9.33E-01
U-235	143.76	10.50	4.65E-01	4.65E-01	2.49E-01	2.26E-01
	163.35	4.70	1.03E+00		2.04E-01	5.01E-01
	205.31	4.70	1.06E+00		-1.14E+00	5.11E-01
NP-237	86.50	12.60	5.03E-01	5.03E-01	-5.50E-02	2.47E-01
NP-239	106.10	22.70	2.07E+03	2.07E+03	2.56E+02	1.01E+03
	228.18	10.70	4.46E+03		-1.69E+03	2.15E+03
	277.60	14.10	3.68E+03		1.28E+03	1.77E+03
AM-241	59.54	35.90	1.82E-01	1.82E-01	-8.65E-02	8.90E-02
AM-243	74.67	66.00	1.30E-01	1.30E-01	-1.49E-01	6.41E-02

Analysis Report for 1510086-09
CP4105S12-13

Nuclide Name	Energy (keV)		Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
+ CM-243	209.75	*	3.29	3.05E+00	4.25E-01	2.75E+00	1.50E+00
	228.14		10.60	4.63E-01		-1.75E-01	2.23E-01
	277.60	*	14.00	4.25E-01		2.40E-01	2.06E-01

- + = Nuclide identified during the nuclide identification
- * = Energy line found in the spectrum
- > = MDA value not calculated
- @ = Half-life too short to be able to perform the decay correction

No Action Level results available for reporting purposes.

DATA REVIEW COMMENTS REPORT

Creation Date	Comment	User
----------------------	----------------	-------------

No Data Review Comments Entered.

369: 17 26 26 20 28 18 25 26

Sample Title: CP4105S12-13

Channel	-----	-----	-----	-----	-----	-----	-----	-----
377:	24	20	21	19	24	22	18	21
385:	15	21	23	25	26	18	22	21
393:	26	22	31	19	32	20	22	18
401:	22	26	25	20	18	28	17	20
409:	32	40	19	17	23	24	16	13
417:	17	22	23	14	17	27	17	21
425:	21	21	19	20	16	22	18	26
433:	18	13	27	16	15	14	15	24
441:	28	20	8	13	20	19	18	15
449:	25	16	11	19	20	14	21	17
457:	11	19	17	18	15	19	55	30
465:	19	26	13	19	20	15	25	18
473:	19	13	16	19	21	20	16	20
481:	11	23	18	20	20	17	14	22
489:	16	8	12	14	15	21	19	13
497:	9	20	16	19	8	12	14	16
505:	14	19	14	20	20	30	98	74
513:	24	21	18	26	10	13	14	11
521:	16	14	18	18	11	11	12	19
529:	18	9	12	13	16	14	11	17
537:	19	9	15	23	6	16	13	22
545:	17	19	14	16	15	13	15	18
553:	16	8	14	12	16	9	25	12
561:	20	13	21	8	16	12	14	24
569:	14	12	11	18	16	11	17	11
577:	11	15	18	12	18	29	110	172
585:	51	10	13	10	16	13	12	11
593:	17	15	15	17	15	13	13	15
601:	16	12	12	20	11	22	15	23
609:	158	275	72	19	12	16	12	14
617:	12	10	11	13	19	6	15	12
625:	5	12	18	16	12	12	11	13
633:	13	15	10	17	5	12	11	11
641:	11	15	7	15	11	8	8	13
649:	7	5	18	13	7	11	4	20
657:	10	19	13	16	8	13	13	10
665:	10	11	25	14	11	11	12	16
673:	12	12	10	15	8	14	13	12
681:	6	14	12	14	9	9	10	8
689:	13	6	7	7	16	18	15	11
697:	8	10	13	18	7	20	23	13
705:	14	7	12	10	16	9	12	13
713:	12	18	17	6	12	19	10	8
721:	19	11	17	12	10	8	39	56
729:	20	12	5	10	11	13	9	10
737:	13	15	18	7	9	13	11	12
745:	4	12	8	10	8	5	10	9
753:	11	9	14	17	11	14	12	8
761:	6	8	20	15	5	7	20	23
769:	27	15	11	15	11	15	13	14
777:	4	11	8	9	7	12	8	10
785:	12	14	17	6	7	11	5	8
793:	3	12	23	17	12	8	8	16

801: 9 11 5 11 6 12 7 8

Sample Title: CP4105S12-13

Channel	1	2	3	4	5	6	7	8
809:	13	7	8	5	8	8	10	11
817:	10	5	9	11	10	6	10	12
825:	7	12	7	6	8	8	7	6
833:	12	5	13	9	12	9	11	14
841:	13	8	13	16	6	9	7	8
849:	9	7	8	6	7	9	10	8
857:	11	4	12	18	22	17	9	4
865:	10	7	11	9	5	8	11	12
873:	7	12	8	9	6	6	8	8
881:	10	8	9	12	4	7	6	9
889:	9	7	11	11	10	7	16	14
897:	12	14	6	11	7	7	6	13
905:	9	8	8	11	7	17	87	116
913:	22	12	6	4	6	10	8	6
921:	5	5	11	6	8	9	7	8
929:	5	6	12	4	7	11	13	9
937:	3	12	6	4	5	7	12	9
945:	7	9	3	8	11	9	5	14
953:	12	10	10	6	7	4	12	8
961:	4	8	8	14	25	17	8	15
969:	59	50	19	10	10	9	8	4
977:	6	5	5	6	9	7	9	5
985:	7	8	12	8	9	6	7	5
993:	4	9	5	5	5	9	4	4
1001:	11	13	9	3	6	3	6	5
1009:	8	7	10	7	7	11	8	8
1017:	7	8	6	5	10	9	12	5
1025:	6	9	5	6	5	8	11	11
1033:	9	8	7	6	8	8	5	6
1041:	11	7	6	9	8	6	6	10
1049:	6	6	3	8	12	9	4	9
1057:	10	10	7	6	12	8	7	9
1065:	5	7	7	10	8	10	8	9
1073:	5	4	10	8	1	5	4	7
1081:	7	6	5	7	11	3	7	8
1089:	9	5	8	6	6	10	6	8
1097:	3	4	10	10	6	4	8	5
1105:	7	4	8	9	10	6	4	7
1113:	4	7	8	8	7	11	12	36
1121:	62	16	10	9	11	12	7	14
1129:	5	3	3	10	7	7	12	7
1137:	6	6	12	8	9	5	7	5
1145:	12	4	5	6	7	3	7	5
1153:	15	4	7	13	12	7	10	7
1161:	3	7	4	9	6	6	7	14
1169:	9	9	6	7	7	8	14	10
1177:	8	7	10	11	6	7	12	10
1185:	8	11	8	9	9	6	2	9
1193:	8	8	4	15	13	7	8	9
1201:	11	7	7	6	11	8	15	8
1209:	11	7	9	13	9	8	9	7
1217:	11	7	7	7	8	8	11	6
1225:	11	12	9	16	13	11	9	9

1233: 10 5 13 6 16 25 22 13

Sample Title: CP4105S12-13

Channel	1	2	3	4	5	6	7	8
1241:	12	10	16	8	10	2	7	8
1249:	6	6	6	14	7	9	6	7
1257:	4	11	8	13	7	8	5	4
1265:	8	5	6	5	3	8	3	3
1273:	6	5	4	8	5	9	3	10
1281:	12	11	12	7	5	6	5	9
1289:	5	6	6	5	4	7	3	4
1297:	8	6	6	5	4	8	10	7
1305:	8	7	5	3	9	5	5	4
1313:	2	4	4	5	8	6	3	7
1321:	0	8	6	1	5	4	8	5
1329:	4	4	8	6	5	5	4	4
1337:	2	5	3	1	3	3	5	3
1345:	8	4	2	3	4	6	4	1
1353:	4	1	2	5	4	4	1	5
1361:	6	4	3	6	0	5	0	5
1369:	5	5	4	1	5	1	3	6
1377:	5	11	10	6	3	1	3	5
1385:	3	8	4	2	3	2	4	4
1393:	3	1	3	3	2	2	3	3
1401:	4	7	4	2	4	5	4	16
1409:	7	3	3	5	4	5	2	6
1417:	2	3	2	2	6	5	5	1
1425:	1	0	7	2	0	6	1	5
1433:	1	4	2	2	3	4	8	3
1441:	3	1	2	0	3	4	2	3
1449:	3	2	1	3	2	3	3	3
1457:	2	5	17	129	366	284	71	13
1465:	6	1	4	5	2	1	0	2
1473:	0	2	1	1	5	0	2	0
1481:	3	0	2	1	5	5	2	0
1489:	2	6	2	2	2	2	3	6
1497:	4	2	2	4	3	1	2	1
1505:	3	2	2	3	7	12	5	2
1513:	1	3	1	0	1	3	1	3
1521:	3	1	0	0	1	2	0	1
1529:	1	3	1	0	1	4	2	4
1537:	0	0	0	2	2	2	5	3
1545:	2	2	4	1	1	2	1	2
1553:	2	3	0	2	2	3	5	0
1561:	1	3	3	1	1	1	0	4
1569:	2	3	1	1	2	0	3	1
1577:	0	1	0	3	4	2	3	4
1585:	1	0	0	6	13	4	2	7
1593:	8	5	2	1	5	5	1	7
1601:	4	2	2	5	1	2	2	2
1609:	3	3	3	0	1	1	2	3
1617:	2	5	2	0	2	7	2	3
1625:	4	2	3	2	1	6	2	3
1633:	0	1	2	1	1	1	1	1
1641:	0	1	3	3	2	1	0	1
1649:	4	0	1	1	2	0	2	0
1657:	4	2	2	0	3	4	0	1

1665: 3 4 0 2 3 2 1 0

Sample Title: CP4105S12-13

Channel	1	2	3	4	5	6	7	8
1673:	0	0	0	0	2	2	3	1
1681:	0	0	0	1	0	4	4	1
1689:	0	0	1	3	2	3	1	1
1697:	1	0	0	1	0	0	0	2
1705:	1	1	2	3	1	2	1	1
1713:	2	2	2	3	1	1	1	0
1721:	5	1	1	0	2	1	0	0
1729:	8	9	1	0	3	2	4	1
1737:	0	0	1	2	3	0	0	1
1745:	2	1	6	0	0	1	1	2
1753:	1	1	1	2	3	3	2	1
1761:	1	2	1	18	26	31	6	4
1769:	2	1	1	0	1	2	1	1
1777:	1	3	0	0	1	0	2	2
1785:	2	2	0	2	1	0	1	1
1793:	3	1	1	0	1	2	3	0
1801:	2	0	0	0	1	2	0	0
1809:	1	0	2	1	1	1	2	1
1817:	3	0	1	0	1	0	1	0
1825:	1	2	2	0	0	1	0	0
1833:	3	0	2	1	1	1	1	5
1841:	0	0	1	1	4	3	3	0
1849:	6	0	1	1	0	3	2	0
1857:	2	0	2	1	1	2	2	1
1865:	0	2	0	1	0	0	1	2
1873:	0	8	0	4	4	0	1	1
1881:	1	3	0	1	0	1	3	2
1889:	0	1	1	2	2	0	2	0
1897:	0	0	0	4	0	3	0	0
1905:	0	3	0	0	0	1	1	2
1913:	1	1	0	0	2	1	1	3
1921:	0	0	2	0	0	2	1	0
1929:	1	0	1	0	1	2	0	0
1937:	1	1	2	5	0	1	3	2
1945:	0	2	1	1	1	3	2	0
1953:	2	1	2	2	2	0	1	0
1961:	0	1	0	3	1	0	1	1
1969:	1	0	1	4	2	1	0	0
1977:	1	0	2	0	1	1	2	2
1985:	1	2	2	0	0	0	2	2
1993:	0	2	1	2	2	0	0	1
2001:	1	0	1	2	2	1	1	1
2009:	2	2	0	0	1	2	1	1
2017:	1	1	1	2	0	0	0	0
2025:	0	2	4	1	1	0	2	1
2033:	2	2	0	0	2	0	0	1
2041:	0	0	0	0	0	0	0	1
2049:	1	2	0	2	1	1	0	1
2057:	2	1	2	0	1	0	2	4
2065:	2	0	1	1	2	0	0	0
2073:	0	2	1	1	0	2	1	0
2081:	0	2	1	1	1	1	1	0
2089:	1	1	0	0	0	6	1	2

2097: 2 1 1 2 3 3 7 6

Sample Title: CP4105S12-13

Channel	1	2	3	4	5	6	7	8
2105:	2	4	4	0	0	0	1	0
2113:	1	1	2	0	3	2	2	2
2121:	1	0	1	0	0	2	2	1
2129:	2	0	0	1	1	0	0	3
2137:	2	0	0	1	0	1	0	1
2145:	3	2	1	0	1	0	1	2
2153:	0	3	0	3	2	0	0	1
2161:	0	1	1	1	0	0	1	1
2169:	2	0	1	1	0	2	1	1
2177:	3	0	3	2	0	1	0	3
2185:	0	0	1	1	1	3	1	1
2193:	1	0	1	2	1	1	1	1
2201:	0	1	6	5	5	0	4	2
2209:	0	0	2	1	3	1	0	2
2217:	1	0	0	1	0	1	2	2
2225:	3	1	0	0	2	0	1	0
2233:	1	2	1	0	0	2	1	2
2241:	1	1	3	0	1	1	1	0
2249:	0	2	1	1	0	2	1	2
2257:	1	0	1	2	1	1	2	0
2265:	1	1	1	1	0	1	0	0
2273:	1	1	1	0	0	1	2	1
2281:	0	1	4	0	0	1	1	2
2289:	1	0	0	1	2	1	4	0
2297:	0	0	2	0	1	0	1	2
2305:	0	0	0	0	2	1	5	1
2313:	2	2	0	1	1	1	1	0
2321:	1	0	1	4	1	1	0	0
2329:	0	2	2	0	1	4	0	0
2337:	1	0	4	3	1	0	2	1
2345:	3	0	1	0	2	2	3	2
2353:	5	0	0	2	0	1	1	0
2361:	0	1	0	2	0	1	1	3
2369:	0	2	2	2	2	1	2	0
2377:	1	2	1	3	3	2	2	1
2385:	0	0	0	0	0	0	1	1
2393:	1	0	0	1	0	1	1	0
2401:	1	0	1	0	1	1	0	0
2409:	0	0	0	2	0	0	0	0
2417:	1	0	2	0	0	1	1	0
2425:	3	2	1	3	0	0	3	0
2433:	0	1	2	0	0	0	1	0
2441:	2	2	0	3	2	0	0	1
2449:	3	1	0	2	3	0	1	1
2457:	0	1	1	0	1	2	1	2
2465:	0	0	2	1	1	2	1	0
2473:	0	0	0	1	1	0	2	2
2481:	0	0	0	0	1	1	0	1
2489:	1	1	0	0	0	1	0	1
2497:	1	0	1	1	1	1	0	0
2505:	2	1	2	2	0	0	0	1
2513:	0	1	0	0	0	1	0	1
2521:	2	1	0	0	0	0	0	0

2529: 1 0 0 0 0 0 0 0 0

Sample Title: CP4105S12-13

Channel	1	2	3	4	5	6	7	8	9
2537:	0	0	0	0	0	0	0	0	0
2545:	0	0	0	0	0	2	0	0	1
2553:	2	0	0	1	0	0	1	1	1
2561:	0	0	0	0	3	0	0	0	0
2569:	0	1	0	0	1	0	1	0	0
2577:	0	0	0	0	0	0	2	0	0
2585:	1	0	0	0	1	1	0	0	0
2593:	0	1	1	0	0	0	0	0	0
2601:	0	0	1	0	1	1	1	0	0
2609:	0	0	0	1	9	30	52	30	0
2617:	8	1	0	0	1	0	0	0	0
2625:	1	0	1	0	0	1	1	1	1
2633:	0	0	1	0	0	1	0	0	0
2641:	1	1	0	0	0	0	0	0	0
2649:	0	0	1	0	0	3	0	0	0
2657:	0	1	0	0	0	1	0	0	1
2665:	0	0	1	0	1	1	0	0	1
2673:	1	1	0	0	0	2	0	0	0
2681:	1	0	0	1	0	0	1	1	1
2689:	1	0	0	1	0	0	0	0	0
2697:	1	0	0	0	0	0	1	0	0
2705:	0	0	1	0	1	0	0	0	1
2713:	1	0	1	2	1	0	0	0	0
2721:	1	0	0	1	0	0	0	0	0
2729:	0	0	0	0	0	1	0	0	1
2737:	0	2	1	1	0	1	0	0	0
2745:	0	0	0	0	0	1	0	0	0
2753:	0	0	1	0	1	2	0	0	1
2761:	0	0	0	0	0	1	0	0	0
2769:	0	0	0	0	0	0	0	0	0
2777:	0	0	0	0	0	0	0	0	0
2785:	0	0	0	0	0	0	1	1	0
2793:	0	0	0	1	0	0	1	1	1
2801:	1	0	0	0	0	0	1	1	2
2809:	0	0	0	0	0	0	1	1	0
2817:	0	0	0	0	0	0	2	0	0
2825:	0	1	0	0	0	0	0	0	0
2833:	0	0	1	0	1	0	0	0	1
2841:	1	0	1	1	1	0	0	0	0
2849:	0	0	0	0	0	0	0	0	0
2857:	0	0	0	0	1	0	0	0	0
2865:	0	0	1	0	0	0	0	1	2
2873:	0	0	0	0	1	0	1	0	0
2881:	0	0	0	0	0	0	0	0	0
2889:	0	0	0	0	0	0	0	0	0
2897:	1	0	1	0	0	0	0	0	0
2905:	1	0	0	1	0	0	0	0	0
2913:	0	1	0	1	1	0	0	0	0
2921:	0	1	2	0	0	0	0	0	0
2929:	0	0	0	0	1	0	0	0	0
2937:	1	0	0	0	0	2	2	0	0
2945:	1	0	0	0	0	1	0	0	0
2953:	0	2	0	1	0	0	0	1	0

2961: 0 0 1 0 0 0 0 0 0

Sample Title: CP4105S12-13

Channel	1	2	3	4	5	6	7	8	9
2969:	1	0	1	0	0	0	0	0	0
2977:	0	0	0	0	0	0	0	0	1
2985:	1	0	0	0	0	0	0	0	0
2993:	0	0	0	0	1	1	0	0	0
3001:	0	0	1	0	0	0	0	0	0
3009:	0	0	0	0	0	0	0	0	0
3017:	1	0	0	0	0	0	0	0	0
3025:	0	1	1	1	0	0	0	0	0
3033:	0	0	0	0	0	0	1	0	0
3041:	0	0	1	1	1	0	1	0	0
3049:	0	0	0	0	1	0	2	0	0
3057:	0	0	0	0	0	0	1	0	0
3065:	1	0	0	0	1	0	0	0	0
3073:	0	0	0	0	0	1	0	0	1
3081:	0	0	0	0	0	0	0	0	0
3089:	0	0	0	0	0	1	0	0	0
3097:	0	0	1	0	0	0	0	0	1
3105:	0	0	0	0	0	0	0	0	0
3113:	0	0	0	0	0	0	0	0	0
3121:	0	0	0	0	0	0	1	0	0
3129:	0	0	0	0	0	0	0	0	0
3137:	0	0	0	0	0	0	0	0	0
3145:	0	0	0	1	0	0	0	0	0
3153:	2	0	0	0	0	0	0	0	1
3161:	1	0	0	1	0	0	0	0	1
3169:	0	0	0	0	1	0	0	0	1
3177:	0	0	0	0	0	0	0	0	0
3185:	0	0	1	0	0	0	1	0	0
3193:	0	0	0	1	1	1	1	0	0
3201:	0	0	0	0	0	0	0	0	0
3209:	0	2	0	0	0	0	0	0	1
3217:	0	0	0	0	2	0	0	0	0
3225:	0	0	0	0	0	0	1	0	0
3233:	0	0	1	0	0	0	0	0	0
3241:	0	0	0	0	0	0	0	0	0
3249:	0	0	0	1	0	0	0	0	0
3257:	0	0	0	1	0	0	0	0	0
3265:	0	0	0	0	0	0	0	0	2
3273:	0	0	0	0	1	0	0	0	0
3281:	0	0	0	0	0	0	1	0	0
3289:	0	0	0	0	0	0	0	0	0
3297:	0	0	0	1	0	0	0	0	0
3305:	0	0	0	0	0	0	0	0	0
3313:	2	0	0	0	0	0	0	0	0
3321:	0	0	0	0	0	0	0	0	0
3329:	0	0	0	0	0	0	0	0	1
3337:	0	1	0	0	1	0	0	0	0
3345:	0	1	0	0	0	0	0	0	0
3353:	0	0	1	1	0	1	0	0	0
3361:	0	0	0	0	0	1	0	0	0
3369:	0	0	0	0	0	1	2	0	0
3377:	0	0	0	1	0	1	0	0	0
3385:	0	0	0	1	1	0	0	0	0

3393: 0 0 0 0 0 0 2 0

Sample Title: CP4105S12-13

Channel	1	2	3	4	5	6	7	8
3401:	0	0	0	0	0	0	0	2
3409:	0	0	1	0	0	0	0	1
3417:	0	0	0	0	0	0	0	0
3425:	0	0	0	0	0	0	0	0
3433:	0	0	1	0	0	1	0	0
3441:	0	0	1	0	0	0	0	0
3449:	0	0	0	0	0	0	0	0
3457:	0	0	1	0	0	0	1	0
3465:	0	0	1	0	0	0	0	0
3473:	1	0	1	0	0	0	1	0
3481:	0	0	0	0	0	0	0	0
3489:	0	0	0	2	0	0	1	0
3497:	0	0	0	0	0	0	0	0
3505:	0	0	0	0	0	1	0	0
3513:	0	0	0	0	0	0	1	0
3521:	0	0	0	0	0	0	0	0
3529:	0	0	0	0	0	0	0	0
3537:	0	1	0	0	0	0	0	0
3545:	0	0	0	0	0	0	0	1
3553:	0	0	0	0	0	0	1	0
3561:	0	0	1	0	0	0	1	0
3569:	0	0	0	1	0	0	0	0
3577:	0	1	0	0	0	0	0	0
3585:	0	0	0	0	0	0	0	0
3593:	0	0	0	0	0	0	1	0
3601:	0	0	0	0	0	0	0	0
3609:	0	0	0	1	0	0	1	1
3617:	0	0	0	1	1	0	1	1
3625:	0	0	0	1	1	0	0	0
3633:	0	1	0	0	0	0	0	0
3641:	0	1	1	0	0	0	2	0
3649:	0	0	0	0	1	0	1	0
3657:	0	0	0	0	1	0	0	0
3665:	0	0	0	0	1	0	0	0
3673:	0	0	0	0	0	1	0	0
3681:	0	0	0	0	0	0	1	0
3689:	0	0	0	0	0	1	0	0
3697:	0	1	0	0	0	0	0	0
3705:	0	0	0	0	0	0	0	0
3713:	0	0	0	0	0	1	0	0
3721:	0	0	0	0	0	0	0	0
3729:	0	0	0	0	0	0	1	0
3737:	0	0	0	1	0	0	0	0
3745:	0	0	0	0	0	0	0	0
3753:	0	0	0	0	0	0	0	0
3761:	0	0	1	0	0	0	0	0
3769:	0	0	0	0	0	0	0	0
3777:	0	0	0	1	0	0	0	0
3785:	0	0	0	0	0	0	0	0
3793:	0	0	0	0	0	0	0	0
3801:	0	1	0	0	0	0	0	0
3809:	0	0	0	0	0	0	0	0
3817:	0	0	0	0	0	0	0	0

3825: 0 0 0 0 0 0 0 0

Sample Title: CP4105S12-13

Channel	1	2	3	4	5	6	7	8	9
3833:	0	2	0	0	0	0	0	0	0
3841:	1	0	0	0	0	0	0	0	0
3849:	0	0	0	0	0	0	0	0	0
3857:	0	1	0	0	0	0	0	0	0
3865:	0	0	0	0	0	0	0	0	0
3873:	0	0	0	0	0	0	1	0	0
3881:	0	0	0	0	0	0	0	0	0
3889:	1	0	0	0	0	0	0	0	0
3897:	0	0	0	0	0	0	0	0	0
3905:	0	0	0	0	0	0	0	0	0
3913:	0	0	0	0	0	1	0	0	0
3921:	1	0	1	1	0	0	0	0	0
3929:	0	0	0	0	0	0	0	0	0
3937:	1	0	0	0	0	0	0	0	2
3945:	0	1	0	1	0	0	0	0	0
3953:	1	0	0	0	0	0	0	1	0
3961:	0	0	0	0	0	0	0	0	0
3969:	0	0	0	0	0	0	0	0	0
3977:	0	0	0	0	0	0	0	0	0
3985:	0	0	0	0	0	0	0	0	0
3993:	0	0	0	0	0	0	0	1	2
4001:	0	0	0	0	0	0	0	0	0
4009:	0	0	0	0	0	0	0	0	0
4017:	0	0	0	0	0	0	0	0	0
4025:	0	0	0	0	0	0	0	0	0
4033:	0	0	0	0	0	0	0	0	0
4041:	0	0	0	0	0	0	0	0	0
4049:	1	0	0	0	0	0	0	0	0
4057:	0	0	0	0	0	0	0	0	0
4065:	0	0	0	0	0	1	0	0	0
4073:	0	0	0	0	0	0	0	0	0
4081:	0	0	0	0	0	0	0	1	0
4089:	0	0	0	0	0	0	0	0	0

*108
11/10/15*Analysis Report for 1510086-10
CP4105S14-15

GAMMA SPECTRUM ANALYSIS

Sample Identification : 1510086-10
Sample Description : CP4105S14-15
Sample Type : SOIL

Sample Size : 5.474E+02 grams
Facility : Countroom

Sample Taken On : 10/6/2015 12:26:02PM
Acquisition Started : 11/6/2015 12:26:26PM

Procedure : GAS-1402 pCi
Operator : Administrator
Detector Name : GE2
Geometry : GAS-1402
Live Time : 3600.0 seconds
Real Time : 3601.3 seconds

Dead Time : 0.04 %

Peak Locate Threshold : 2.50
Peak Locate Range (in channels) : 1 - 4096
Peak Area Range (in channels) : 5 - 4096
Identification Energy Tolerance : 1.000 keV

Energy Calibration Used Done On : 11/2/2014
Efficiency Calibration Used Done On : 10/25/2014
Efficiency Calibration Description :

Sample Number : 29264

PEAK-TO-TOTAL CALIBRATION REPORT

Peak-to-Total Efficiency Calibration Equation

*Ag
11/9/15*

Analysis Report for 1510086-10
CP4105S14-15

PEAK LOCATE REPORT

Peak Locate Performed on : 11/6/2015 1:26:31PM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096
Peak Search Sensitivity : 2.50

Peak No.	Energy (keV)	Centroid Channel	Centroid Uncertainty	Peak Significance
1	63.13	63.23	0.0000	0.00
2	76.40	76.49	0.0000	0.00
3	87.30	87.38	0.0000	0.00
4	93.43	93.51	0.0000	0.00
5	186.02	186.04	0.0000	0.00
6	209.46	209.47	0.0000	0.00
7	236.43	236.42	0.0000	0.00
8	241.58	241.57	0.0000	0.00
9	270.23	270.21	0.0000	0.00
10	295.28	295.24	0.0000	0.00
11	338.36	338.30	0.0000	0.00
12	351.92	351.86	0.0000	0.00
13	463.70	463.58	0.0000	0.00
14	510.83	510.69	0.0000	0.00
15	583.17	582.99	0.0000	0.00
16	609.40	609.21	0.0000	0.00
17	727.88	727.64	0.0000	0.00
18	767.56	767.29	0.0000	0.00
19	784.21	783.94	0.0000	0.00
20	860.08	859.77	0.0000	0.00
21	911.33	911.01	0.0000	0.00
22	933.50	933.17	0.0000	0.00
23	969.27	968.92	0.0000	0.00
24	1003.70	1003.34	0.0000	0.00
25	1068.53	1068.14	0.0000	0.00
26	1120.60	1120.19	0.0000	0.00
27	1227.14	1226.70	0.0000	0.00
28	1238.66	1238.21	0.0000	0.00
29	1256.05	1255.60	0.0000	0.00
30	1377.18	1376.68	0.0000	0.00
31	1401.56	1401.05	0.0000	0.00
32	1408.01	1407.50	0.0000	0.00
33	1460.94	1460.42	0.0000	0.00
34	1539.37	1538.82	0.0000	0.00
35	1574.35	1573.79	0.0000	0.00
36	1583.30	1582.74	0.0000	0.00
37	1588.00	1587.44	0.0000	0.00
38	1591.43	1590.87	0.0000	0.00
39	1630.90	1630.33	0.0000	0.00
40	1694.03	1693.44	0.0000	0.00
41	1730.27	1729.67	0.0000	0.00
42	1764.42	1763.82	0.0000	0.00

Analysis Report for 1510086-10
CP4105S14-15

Peak No.	Energy (keV)	Centroid Channel	Centroid Uncertainty	Peak Significance
43	1768.65	1768.05	0.0000	0.00
44	1829.26	1828.63	0.0000	0.00
45	1953.15	1952.50	0.0000	0.00
46	1972.65	1972.00	0.0000	0.00
47	1992.52	1991.87	0.0000	0.00
48	2104.06	2103.38	0.0000	0.00
49	2117.43	2116.75	0.0000	0.00
50	2157.92	2157.24	0.0000	0.00
51	2613.99	2613.25	0.0000	0.00

? = Adjacent peak noted
Errors quoted at 2.000sigma

Analysis Report for 1510086-10
CP4105S14-15

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 11/6/2015 1:26:31PM

Peak Analysis From Channel : 1
Peak Analysis To Channel : 4096

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	FWHM (keV)
1	63.13	60 -	67	63.23	1.57E+02	106.68	1.80E+03	2.14
2	76.40	72 -	81	76.49	1.26E+03	143.59	2.21E+03	3.77
3	87.30	86 -	89	87.38	9.73E+01	68.44	1.09E+03	1.49
4	93.43	91 -	97	93.51	1.59E+02	97.13	1.51E+03	1.60
5	186.02	182 -	190	186.04	2.31E+02	85.88	9.88E+02	1.61
6	209.46	208 -	212	209.47	7.66E+01	49.67	4.87E+02	1.56
M 7	236.43	235 -	246	236.42	5.68E+01	31.00	2.79E+02	1.70
m 8	241.58	235 -	246	241.57	2.08E+02	71.84	3.42E+02	1.71
9	270.23	267 -	274	270.21	1.04E+02	57.10	4.79E+02	1.65
10	295.28	292 -	299	295.24	2.51E+02	67.38	6.00E+02	1.51
11	338.36	335 -	342	338.30	1.67E+02	56.96	4.33E+02	1.61
12	351.92	347 -	356	351.86	6.20E+02	75.77	4.67E+02	1.42
13	463.70	459 -	467	463.58	6.65E+01	43.43	2.43E+02	1.64
14	510.83	505 -	515	510.69	1.60E+02	53.57	2.97E+02	2.18
15	583.17	578 -	586	582.99	2.57E+02	49.64	2.21E+02	1.50
16	609.40	605 -	613	609.21	4.00E+02	55.61	2.29E+02	1.49
17	727.88	723 -	733	727.64	7.40E+01	40.20	1.76E+02	1.82
18	767.56	760 -	772	767.29	6.20E+01	44.90	2.08E+02	2.43
19	784.21	780 -	787	783.94	3.79E+01	29.05	1.14E+02	4.44
20	860.08	855 -	865	859.77	4.75E+01	34.99	1.39E+02	2.03
21	911.33	906 -	916	911.01	1.66E+02	45.90	1.93E+02	1.86
22	933.50	928 -	938	933.17	4.54E+01	31.76	1.11E+02	4.87
23	969.27	965 -	973	968.92	9.82E+01	46.73	2.58E+02	2.06
24	1003.70	997 -	1010	1003.34	3.68E+01	39.94	1.60E+02	8.78
25	1068.53	1063 -	1074	1068.14	3.85E+01	28.77	8.50E+01	9.19
26	1120.60	1115 -	1125	1120.19	7.23E+01	39.62	1.71E+02	1.79
27	1227.14	1223 -	1231	1226.70	2.87E+01	27.60	1.01E+02	5.13
28	1238.66	1235 -	1242	1238.21	2.48E+01	27.35	1.08E+02	1.53
29	1256.05	1253 -	1258	1255.60	1.65E+01	16.67	4.31E+01	3.15
30	1377.18	1373 -	1380	1376.68	2.30E+01	19.49	4.80E+01	1.67
31	1401.56	1397 -	1404	1401.05	1.95E+01	15.49	2.50E+01	3.16
32	1408.01	1405 -	1412	1407.50	1.66E+01	16.97	3.87E+01	1.73
33	1460.94	1456 -	1464	1460.42	7.31E+02	55.94	3.14E+01	2.44
34	1539.37	1535 -	1544	1538.82	1.52E+01	14.00	1.77E+01	7.07
M 35	1574.35	1570 -	1600	1573.79	1.06E+01	9.80	8.00E+00	4.64
m 36	1583.30	1570 -	1600	1582.74	2.02E+01	11.14	8.00E+00	2.75
m 37	1588.00	1570 -	1600	1587.44	2.38E+01	14.07	1.00E+01	3.18
m 38	1591.43	1570 -	1600	1590.87	1.22E+01	12.49	8.00E+00	2.64
39	1630.90	1627 -	1634	1630.33	1.74E+01	9.59	3.26E+00	4.86
40	1694.03	1688 -	1697	1693.44	1.20E+01	10.86	1.00E+01	1.76

Analysis Report for 1510086-10
CP4105S14-15

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	FWHM (keV)
M 41	1730.27	1723 -	1733	1729.67	1.76E+01	15.39	2.29E+01	3.37
m 42	1764.42	1758 -	1770	1763.82	7.96E+01	19.08	8.00E+00	2.61
m 43	1768.65	1758 -	1770	1768.05	6.38E+00	7.52	5.00E+00	3.01
m 44	1829.26	1824 -	1831	1828.63	7.80E+00	7.48	4.40E+00	2.00
m 45	1953.15	1950 -	1955	1952.50	7.00E+00	7.62	6.00E+00	3.19
m 46	1972.65	1969 -	1974	1972.00	7.00E+00	7.62	6.00E+00	1.73
m 47	1992.52	1988 -	1995	1991.87	6.00E+00	8.49	8.00E+00	3.44
m 48	2104.06	2096 -	2110	2103.38	2.04E+01	12.34	7.21E+00	1.45
m 49	2117.43	2113 -	2120	2116.75	6.40E+00	8.49	7.20E+00	2.78
m 50	2157.92	2154 -	2160	2157.24	7.17E+00	6.95	3.67E+00	4.41
m 51	2613.99	2606 -	2618	2613.25	1.19E+02	21.82	0.00E+00	2.68

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 11/6/2015 1:26:31PM

Peak Analysis From Channel : 1
Peak Analysis To Channel : 4096

Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
1	63.13	60 -	67	1.57E+02	106.68	1.80E+03	8.52E+01
2	76.40	72 -	81	1.26E+03	143.59	2.21E+03	1.03E+02
3	87.30	86 -	89	9.73E+01	68.44	1.09E+03	5.39E+01
4	93.43	91 -	97	1.59E+02	97.13	1.51E+03	7.71E+01
5	186.02	182 -	190	2.31E+02	85.88	9.88E+02	6.60E+01
6	209.46	208 -	212	7.66E+01	49.67	4.87E+02	3.82E+01
M 7	236.43	235 -	246	5.68E+01	31.00	2.79E+02	2.74E+01
m 8	241.58	235 -	246	2.08E+02	71.84	3.42E+02	3.04E+01
m 9	270.23	267 -	274	1.04E+02	57.10	4.79E+02	4.39E+01
10	295.28	292 -	299	2.51E+02	67.38	6.00E+02	4.89E+01
11	338.36	335 -	342	1.67E+02	56.96	4.33E+02	4.17E+01
12	351.92	347 -	356	6.20E+02	75.77	4.67E+02	4.69E+01
13	463.70	459 -	467	6.65E+01	43.43	2.43E+02	3.31E+01
14	510.83	505 -	515	1.60E+02	53.57	2.97E+02	3.88E+01
15	583.17	578 -	586	2.57E+02	49.64	2.21E+02	3.11E+01
16	609.40	605 -	613	4.00E+02	55.61	2.29E+02	3.17E+01
17	727.88	723 -	733	7.40E+01	40.20	1.76E+02	2.99E+01

Analysis Report for 1510086-10

CP4105S14-15

Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
18	767.56	760 -	772	6.20E+01	44.90	2.08E+02	3.46E+01
19	784.21	780 -	787	3.79E+01	29.05	1.14E+02	2.16E+01
20	860.08	855 -	865	4.75E+01	34.99	1.39E+02	2.64E+01
21	911.33	906 -	916	1.66E+02	45.90	1.93E+02	3.12E+01
22	933.50	928 -	938	4.54E+01	31.76	1.11E+02	2.36E+01
23	969.27	965 -	973	9.82E+01	46.73	2.58E+02	3.48E+01
24	1003.70	997 -	1010	3.68E+01	39.94	1.60E+02	3.13E+01
25	1068.53	1063 -	1074	3.85E+01	28.77	8.50E+01	2.13E+01
26	1120.60	1115 -	1125	7.23E+01	39.62	1.71E+02	2.94E+01
27	1227.14	1223 -	1231	2.87E+01	27.60	1.01E+02	2.09E+01
28	1238.66	1235 -	1242	2.48E+01	27.35	1.08E+02	2.09E+01
29	1256.05	1253 -	1258	1.65E+01	16.67	4.31E+01	1.20E+01
30	1377.18	1373 -	1380	2.30E+01	19.49	4.80E+01	1.39E+01
31	1401.56	1397 -	1404	1.95E+01	15.49	2.50E+01	1.05E+01
32	1408.01	1405 -	1412	1.66E+01	16.97	3.87E+01	1.22E+01
33	1460.94	1456 -	1464	7.31E+02	55.94	3.14E+01	1.18E+01
34	1539.37	1535 -	1544	1.52E+01	14.00	1.77E+01	9.56E+00
M 35	1574.35	1570 -	1600	1.06E+01	9.80	8.00E+00	4.65E+00
m 36	1583.30	1570 -	1600	2.02E+01	11.14	8.00E+00	4.65E+00
m 37	1588.00	1570 -	1600	2.38E+01	14.07	1.00E+01	5.20E+00
m 38	1591.43	1570 -	1600	1.22E+01	12.49	8.00E+00	4.65E+00
39	1630.90	1627 -	1634	1.74E+01	9.59	3.26E+00	3.90E+00
40	1694.03	1688 -	1697	1.20E+01	10.86	1.00E+01	6.88E+00
41	1730.27	1723 -	1733	1.76E+01	15.39	2.29E+01	1.06E+01
M 42	1764.42	1758 -	1770	7.96E+01	19.08	8.00E+00	4.65E+00
m 43	1768.65	1758 -	1770	6.38E+00	7.52	5.00E+00	3.68E+00
44	1829.26	1824 -	1831	7.80E+00	7.48	4.40E+00	4.09E+00
45	1953.15	1950 -	1955	7.00E+00	7.62	6.00E+00	4.50E+00
46	1972.65	1969 -	1974	7.00E+00	7.62	6.00E+00	4.50E+00
47	1992.52	1988 -	1995	6.00E+00	8.49	8.00E+00	5.70E+00
48	2104.06	2096 -	2110	2.04E+01	12.34	7.21E+00	6.91E+00
49	2117.43	2113 -	2120	6.40E+00	8.49	7.20E+00	5.60E+00
50	2157.92	2154 -	2160	7.17E+00	6.95	3.67E+00	3.64E+00
51	2613.99	2606 -	2618	1.19E+02	21.82	0.00E+00	0.00E+00

M = First peak in a multiplet region

m = Other peak in a multiplet region

F = Fitted singlet

Errors quoted at 2.000sigma

Analysis Report for 1510086-10
CP4105S14-15

PEAK WITH NID REPORT

Peak Analysis Performed on : 11/6/2015 1:26:31PM

Peak Analysis From Channel : 1
Peak Analysis To Channel : 4096

Tentative NID Library : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB
Peak Match Tolerance : 1.000 keV

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
1	63.13	60 -	67	63.23	1.57E+02	106.68	1.80E+03	TH-234 TH-230
2	76.40	72 -	81	76.49	1.26E+03	143.59	2.21E+03	.....
3	87.30	86 -	89	87.38	9.73E+01	68.44	1.09E+03	SN-126 CD-109 NP-237 EU-155
4	93.43	91 -	97	93.51	1.59E+02	97.13	1.51E+03	GA-67
5	186.02	182 -	190	186.04	2.31E+02	85.88	9.88E+02	RA-226
6	209.46	208 -	212	209.47	7.66E+01	49.67	4.87E+02	CM-243 GA-67
M 7	236.43	235 -	246	236.42	5.68E+01	31.00	2.79E+02	TH-227 NB-95M
m 8	241.58	235 -	246	241.57	2.08E+02	71.84	3.42E+02	RA-224
9	270.23	267 -	274	270.21	1.04E+02	57.10	4.79E+02	.....
10	295.28	292 -	299	295.24	2.51E+02	67.38	6.00E+02	PB-214
11	338.36	335 -	342	338.30	1.67E+02	56.96	4.33E+02	AC-228
12	351.92	347 -	356	351.86	6.20E+02	75.77	4.67E+02	PB-214
13	463.70	459 -	467	463.58	6.65E+01	43.43	2.43E+02	SB-125
14	510.83	505 -	515	510.69	1.60E+02	53.57	2.97E+02	.....
15	583.17	578 -	586	582.99	2.57E+02	49.64	2.21E+02	TL-208
16	609.40	605 -	613	609.21	4.00E+02	55.61	2.29E+02	BI-214
17	727.88	723 -	733	727.64	7.40E+01	40.20	1.76E+02	BI-212
18	767.56	760 -	772	767.29	6.20E+01	44.90	2.08E+02	.....
19	784.21	780 -	787	783.94	3.79E+01	29.05	1.14E+02	SB-127
20	860.08	855 -	865	859.77	4.75E+01	34.99	1.39E+02	TL-208
21	911.33	906 -	916	911.01	1.66E+02	45.90	1.93E+02	AC-228 LU-172
22	933.50	928 -	938	933.17	4.54E+01	31.76	1.11E+02	.....
23	969.27	965 -	973	968.92	9.82E+01	46.73	2.58E+02	AC-228
24	1003.70	997 -	1010	1003.34	3.68E+01	39.94	1.60E+02	.....
25	1068.53	1063 -	1074	1068.14	3.85E+01	28.77	8.50E+01	.....
26	1120.60	1115 -	1125	1120.19	7.23E+01	39.62	1.71E+02	SC-46 BI-214 TA-182
27	1227.14	1223 -	1231	1226.70	2.87E+01	27.60	1.01E+02	.....
28	1238.66	1235 -	1242	1238.21	2.48E+01	27.35	1.08E+02	CO-56
29	1256.05	1253 -	1258	1255.60	1.65E+01	16.67	4.31E+01	.....
30	1377.18	1373 -	1380	1376.68	2.30E+01	19.49	4.80E+01	.....
31	1401.56	1397 -	1404	1401.05	1.95E+01	15.49	2.50E+01	.....
32	1408.01	1405 -	1412	1407.50	1.66E+01	16.97	3.87E+01	EU-152

Analysis Report for 1510086-10

CP4105S14-15

	Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
	33	1460.94	1456 -	1464	1460.42	7.31E+02	55.94	3.14E+01	K-40
	34	1539.37	1535 -	1544	1538.82	1.52E+01	14.00	1.77E+01	.....
M	35	1574.35	1570 -	1600	1573.79	1.06E+01	9.80	8.00E+00	.....
m	36	1583.30	1570 -	1600	1582.74	2.02E+01	11.14	8.00E+00	.....
m	37	1588.00	1570 -	1600	1587.44	2.38E+01	14.07	1.00E+01	.....
m	38	1591.43	1570 -	1600	1590.87	1.22E+01	12.49	8.00E+00	.....
	39	1630.90	1627 -	1634	1630.33	1.74E+01	9.59	3.26E+00	.....
	40	1694.03	1688 -	1697	1693.44	1.20E+01	10.86	1.00E+01	.....
	41	1730.27	1723 -	1733	1729.67	1.76E+01	15.39	2.29E+01	.....
M	42	1764.42	1758 -	1770	1763.82	7.96E+01	19.08	8.00E+00	BI-214
m	43	1768.65	1758 -	1770	1768.05	6.38E+00	7.52	5.00E+00	.....
	44	1829.26	1824 -	1831	1828.63	7.80E+00	7.48	4.40E+00	.....
	45	1953.15	1950 -	1955	1952.50	7.00E+00	7.62	6.00E+00	.....
	46	1972.65	1969 -	1974	1972.00	7.00E+00	7.62	6.00E+00	.....
	47	1992.52	1988 -	1995	1991.87	6.00E+00	8.49	8.00E+00	.....
	48	2104.06	2096 -	2110	2103.38	2.04E+01	12.34	7.21E+00	.....
	49	2117.43	2113 -	2120	2116.75	6.40E+00	8.49	7.20E+00	.....
	50	2157.92	2154 -	2160	2157.24	7.17E+00	6.95	3.67E+00	.....
	51	2613.99	2606 -	2618	2613.25	1.19E+02	21.82	0.00E+00	TL-208

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

PEAK EFFICIENCY REPORT

Peak Analysis Performed on : 11/6/2015 1:26:31PM

	Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
	1	63.13	1.57E+02	106.68	2.37E-02	2.04E-03
	2	76.40	1.26E+03	143.59	2.74E-02	3.35E-03
	3	87.30	9.73E+01	68.44	2.84E-02	4.43E-03
	4	93.43	1.59E+02	97.13	2.85E-02	4.26E-03
	5	186.02	2.31E+02	85.88	2.11E-02	1.65E-03
	6	209.46	7.66E+01	49.67	1.95E-02	1.63E-03
M	7	236.43	5.68E+01	31.00	1.80E-02	1.60E-03
m	8	241.58	2.08E+02	71.84	1.77E-02	1.60E-03
	9	270.23	1.04E+02	57.10	1.64E-02	1.57E-03
	10	295.28	2.51E+02	67.38	1.55E-02	1.48E-03
	11	338.36	1.67E+02	56.96	1.41E-02	1.27E-03

: 00651

Analysis Report for 1510086-10
CP4105S14-15

Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty	
12	351.92	6.20E+02	75.77	1.37E-02	1.21E-03	
13	463.70	6.65E+01	43.43	1.13E-02	9.46E-04	
14	510.83	1.60E+02	53.57	1.06E-02	8.98E-04	
15	583.17	2.57E+02	49.64	9.58E-03	8.25E-04	
16	609.40	4.00E+02	55.61	9.27E-03	7.98E-04	
17	727.88	7.40E+01	40.20	8.08E-03	7.03E-04	
18	767.56	6.20E+01	44.90	7.75E-03	6.77E-04	
19	784.21	3.79E+01	29.05	7.62E-03	6.66E-04	
20	860.08	4.75E+01	34.99	7.07E-03	6.18E-04	
21	911.33	1.66E+02	45.90	6.74E-03	5.87E-04	
22	933.50	4.54E+01	31.76	6.61E-03	5.75E-04	
23	969.27	9.82E+01	46.73	6.41E-03	5.57E-04	
24	1003.70	3.68E+01	39.94	6.23E-03	5.39E-04	
25	1068.53	3.85E+01	28.77	5.92E-03	5.06E-04	
26	1120.60	7.23E+01	39.62	5.70E-03	4.80E-04	
27	1227.14	2.87E+01	27.60	5.31E-03	4.78E-04	
28	1238.66	2.48E+01	27.35	5.27E-03	4.83E-04	
29	1256.05	1.65E+01	16.67	5.21E-03	4.91E-04	
30	1377.18	2.30E+01	19.49	4.87E-03	5.08E-04	
31	1401.56	1.95E+01	15.49	4.81E-03	4.98E-04	
32	1408.01	1.66E+01	16.97	4.79E-03	4.95E-04	
33	1460.94	7.31E+02	55.94	4.67E-03	4.73E-04	
34	1539.37	1.52E+01	14.00	4.52E-03	4.41E-04	
M	35	1574.35	1.06E+01	9.80	4.45E-03	4.26E-04
m	36	1583.30	2.02E+01	11.14	4.44E-03	4.23E-04
m	37	1588.00	2.38E+01	14.07	4.43E-03	4.21E-04
m	38	1591.43	1.22E+01	12.49	4.42E-03	4.19E-04
	39	1630.90	1.74E+01	9.59	4.36E-03	4.03E-04
	40	1694.03	1.20E+01	10.86	4.27E-03	3.77E-04
	41	1730.27	1.76E+01	15.39	4.23E-03	3.62E-04
M	42	1764.42	7.96E+01	19.08	4.19E-03	3.48E-04
m	43	1768.65	6.38E+00	7.52	4.18E-03	3.46E-04
	44	1829.26	7.80E+00	7.48	4.12E-03	3.21E-04
	45	1953.15	7.00E+00	7.62	4.02E-03	3.18E-04
	46	1972.65	7.00E+00	7.62	4.01E-03	3.18E-04
	47	1992.52	6.00E+00	8.49	4.00E-03	3.18E-04
	48	2104.06	2.04E+01	12.34	3.95E-03	3.18E-04
	49	2117.43	6.40E+00	8.49	3.95E-03	3.18E-04
	50	2157.92	7.17E+00	6.95	3.94E-03	3.18E-04
	51	2613.99	1.19E+02	21.82	4.05E-03	3.18E-04

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000 sigma

Analysis Report for 1510086-10

CP4105S14-15

BACKGROUND SUBTRACT REPORT

Peak Analysis Performed on : 11/6/2015 1:26:31PM

Env. Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000028942.CNF

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
1	63.13	1.57E+02	106.68	4.34E+01	1.15E+01	1.13E+02	1.07E+02
2	76.40	1.26E+03	143.59			1.26E+03	1.44E+02
3	87.30	9.73E+01	68.44	1.46E+00	7.88E+00	9.59E+01	6.89E+01
4	93.43	1.59E+02	97.13	5.70E+01	9.03E+00	1.02E+02	9.75E+01
5	186.02	2.31E+02	85.88	4.72E+01	7.97E+00	1.84E+02	8.62E+01
6	209.46	7.66E+01	49.67			7.66E+01	4.97E+01
M	7	236.43	5.68E+01			5.68E+01	3.10E+01
m	8	241.58	2.08E+02	6.38E+00	3.91E+00	2.01E+02	7.19E+01
	9	270.23	1.04E+02			1.04E+02	5.71E+01
	10	295.28	2.51E+02	8.57E+00	6.10E+00	2.43E+02	6.77E+01
	11	338.36	1.67E+02			1.67E+02	5.70E+01
	12	351.92	6.20E+02	1.40E+01	5.55E+00	6.07E+02	7.60E+01
	13	463.70	6.65E+01			6.65E+01	4.34E+01
	14	510.83	1.60E+02	8.41E+01	5.50E+00	7.62E+01	5.38E+01
	15	583.17	2.57E+02	7.32E+00	4.08E+00	2.50E+02	4.98E+01
	16	609.40	4.00E+02	1.30E+01	3.89E+00	3.87E+02	5.57E+01
	17	727.88	7.40E+01			7.40E+01	4.02E+01
	18	767.56	6.20E+01			6.20E+01	4.49E+01
	19	784.21	3.79E+01			3.79E+01	2.91E+01
	20	860.08	4.75E+01			4.75E+01	3.50E+01
	21	911.33	1.66E+02	5.60E+00	3.32E+00	1.60E+02	4.60E+01
	22	933.50	4.54E+01			4.54E+01	3.18E+01
	23	969.27	9.82E+01			9.82E+01	4.67E+01
	24	1003.70	3.68E+01			3.68E+01	3.99E+01
	25	1068.53	3.85E+01			3.85E+01	2.88E+01
	26	1120.60	7.23E+01	3.93E+00	2.96E+00	6.84E+01	3.97E+01
	27	1227.14	2.87E+01			2.87E+01	2.76E+01
	28	1238.66	2.48E+01			2.48E+01	2.73E+01
	29	1256.05	1.65E+01			1.65E+01	1.67E+01
	30	1377.18	2.30E+01			2.30E+01	1.95E+01
	31	1401.56	1.95E+01			1.95E+01	1.55E+01
	32	1408.01	1.66E+01			1.66E+01	1.70E+01
	33	1460.94	7.31E+02	1.12E+01	2.55E+00	7.20E+02	5.60E+01
	34	1539.37	1.52E+01			1.52E+01	1.40E+01
M	35	1574.35	1.06E+01			1.06E+01	9.80E+00
m	36	1583.30	2.02E+01			2.02E+01	1.11E+01
m	37	1588.00	2.38E+01			2.38E+01	1.41E+01
m	38	1591.43	1.22E+01			1.22E+01	1.25E+01
	39	1630.90	1.74E+01			1.74E+01	9.59E+00
	40	1694.03	1.20E+01			1.20E+01	1.09E+01
	41	1730.27	1.76E+01			1.76E+01	1.54E+01
M	42	1764.42	7.96E+01	4.23E+00	2.21E+00	7.54E+01	1.92E+01
m	43	1768.65	6.38E+00			6.38E+00	7.52E+00
	44	1829.26	7.80E+00			7.80E+00	7.48E+00

Analysis Report for 1510086-10

CP4105S14-15

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
45	1953.15	7.00E+00	7.62			7.00E+00	7.62E+00
46	1972.65	7.00E+00	7.62			7.00E+00	7.62E+00
47	1992.52	6.00E+00	8.49			6.00E+00	8.49E+00
48	2104.06	2.04E+01	12.34			2.04E+01	1.23E+01
49	2117.43	6.40E+00	8.49			6.40E+00	8.49E+00
50	2157.92	7.17E+00	6.95			7.17E+00	6.95E+00
51	2613.99	1.19E+02	21.82	7.38E+00	1.57E+00	1.12E+02	2.19E+01

M = First peak in a multiplet region
 m = Other peak in a multiplet region
 F = Fitted singlet
 Errors quoted at 2.000sigma

AREA CORRECTION REPORT REFERENCE PEAK / BKG. SUBTRACT

Peak Analysis Performed on : 11/6/2015 1:26:31PM
 Ref. Peak Energy : 0.00 Reference Date :
 Peak Ratio : 0.00 Uncertainty : 0.00
 Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000028942.CNF

Corrected Area is: Original * Peak Ratio - Background

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
1	63.13	1.57E+02	106.68	4.34E+01	1.15E+01	1.13E+02	1.07E+02
2	76.40	1.26E+03	143.59			1.26E+03	1.44E+02
3	87.30	9.73E+01	68.44	1.46E+00	7.88E+00	9.59E+01	6.89E+01
4	93.43	1.59E+02	97.13	5.70E+01	9.03E+00	1.02E+02	9.75E+01
5	186.02	2.31E+02	85.88	4.72E+01	7.97E+00	1.84E+02	8.62E+01
6	209.46	7.66E+01	49.67			7.66E+01	4.97E+01
M	7	236.43	5.68E+01			5.68E+01	3.10E+01
m	8	241.58	2.08E+02	6.38E+00	3.91E+00	2.01E+02	7.19E+01
	9	270.23	1.04E+02			1.04E+02	5.71E+01
	10	295.28	2.51E+02	8.57E+00	6.10E+00	2.43E+02	6.77E+01
	11	338.36	1.67E+02			1.67E+02	5.70E+01
	12	351.92	6.20E+02	1.40E+01	5.55E+00	6.07E+02	7.60E+01
	13	463.70	6.65E+01			6.65E+01	4.34E+01
	14	510.83	1.60E+02	8.41E+01	5.50E+00	7.62E+01	5.38E+01
	15	583.17	2.57E+02	7.32E+00	4.08E+00	2.50E+02	4.98E+01
	16	609.40	4.00E+02	1.30E+01	3.89E+00	3.87E+02	5.57E+01
	17	727.88	7.40E+01			7.40E+01	4.02E+01
	18	767.56	6.20E+01			6.20E+01	4.49E+01
	19	784.21	3.79E+01			3.79E+01	2.91E+01
	20	860.08	4.75E+01			4.75E+01	3.50E+01
	21	911.33	1.66E+02	5.60E+00	3.32E+00	1.60E+02	4.60E+01

Analysis Report for 1510086-10

CP4105S14-15

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
22	933.50	4.54E+01	31.76			4.54E+01	3.18E+01
23	969.27	9.82E+01	46.73			9.82E+01	4.67E+01
24	1003.70	3.68E+01	39.94			3.68E+01	3.99E+01
25	1068.53	3.85E+01	28.77			3.85E+01	2.88E+01
26	1120.60	7.23E+01	39.62	3.93E+00	2.96E+00	6.84E+01	3.97E+01
27	1227.14	2.87E+01	27.60			2.87E+01	2.76E+01
28	1238.66	2.48E+01	27.35			2.48E+01	2.73E+01
29	1256.05	1.65E+01	16.67			1.65E+01	1.67E+01
30	1377.18	2.30E+01	19.49			2.30E+01	1.95E+01
31	1401.56	1.95E+01	15.49			1.95E+01	1.55E+01
32	1408.01	1.66E+01	16.97			1.66E+01	1.70E+01
33	1460.94	7.31E+02	55.94	1.12E+01	2.55E+00	7.20E+02	5.60E+01
34	1539.37	1.52E+01	14.00			1.52E+01	1.40E+01
M	35	1574.35	1.06E+01	9.80		1.06E+01	9.80E+00
m	36	1583.30	2.02E+01	11.14		2.02E+01	1.11E+01
m	37	1588.00	2.38E+01	14.07		2.38E+01	1.41E+01
m	38	1591.43	1.22E+01	12.49		1.22E+01	1.25E+01
	39	1630.90	1.74E+01	9.59		1.74E+01	9.59E+00
	40	1694.03	1.20E+01	10.86		1.20E+01	1.09E+01
	41	1730.27	1.76E+01	15.39		1.76E+01	1.54E+01
M	42	1764.42	7.96E+01	19.08	4.23E+00	2.21E+00	7.54E+01
m	43	1768.65	6.38E+00	7.52		6.38E+00	7.52E+00
	44	1829.26	7.80E+00	7.48		7.80E+00	7.48E+00
	45	1953.15	7.00E+00	7.62		7.00E+00	7.62E+00
	46	1972.65	7.00E+00	7.62		7.00E+00	7.62E+00
	47	1992.52	6.00E+00	8.49		6.00E+00	8.49E+00
	48	2104.06	2.04E+01	12.34		2.04E+01	1.23E+01
	49	2117.43	6.40E+00	8.49		6.40E+00	8.49E+00
	50	2157.92	7.17E+00	6.95		7.17E+00	6.95E+00
	51	2613.99	1.19E+02	21.82	7.38E+00	1.57E+00	1.12E+02

M = First peak in a multiplet region
 m = Other peak in a multiplet region
 F = Fitted singlet
 Errors quoted at 2.000sigma

NUCLIDE IDENTIFICATION REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

IDENTIFIED NUCLIDES

Nuclide Name	Id Confidence	Energy (keV)	Yield(%)	Activity (pCi/grams)	Activity Uncertainty
K-40	0.997	1460.81	* 10.67	1.98E+01	2.56E+00

Analysis Report for 1510086-10
CP4105S14-15

Nuclide Name	Id Confidence	Energy (keV)	Yield(%)	Activity (pCi/grams)	Activity Uncertainty
GA-67	0.392	93.31 *	35.70	1.00E+02	4.31E+02
		208.95 *	2.24	1.76E+03	7.19E+03
		300.22	16.00		
NB-95M	0.634	235.69 *	25.00	6.69E+01	3.70E+01
CD-109	0.918	88.03 *	3.72	1.30E+00	9.61E-01
SN-126	0.989	87.57 *	37.00	1.25E-01	9.20E-02
EU-155	0.301	86.50 *	30.90	1.52E-01	1.11E-01
		105.30	20.70		
TL-208	0.964	583.14 *	30.22	1.18E+00	2.57E-01
		860.37 *	4.48	2.06E+00	1.53E+00
		2614.66 *	35.85	1.05E+00	2.23E-01
BI-212	0.702	727.17 *	11.80	1.06E+00	5.86E-01
		1620.62	2.75		
BI-214	0.924	609.31 *	46.30	1.24E+00	2.08E-01
		1120.29 *	15.10	1.09E+00	6.39E-01
		1764.49 *	15.80	1.56E+00	4.19E-01
PB-214	1.000	2204.22	4.98		
		295.21 *	19.19	1.12E+00	3.30E-01
RA-224	0.944	351.92 *	37.19	1.63E+00	2.50E-01
		240.98 *	3.95	3.94E+00	1.45E+00
RA-226	0.994	186.21 *	3.28	3.64E+00	6.88E+00
AC-228	0.993	338.32 *	11.40	1.42E+00	5.03E-01
		911.07 *	27.70	1.17E+00	3.53E-01
		969.11 *	16.60	1.27E+00	6.12E-01
TH-234	0.996	63.29 *	3.80	1.73E+00	1.64E+00
NP-237	0.903	86.50 *	12.60	3.67E-01	2.70E-01

* = Energy line found in the spectrum.

- = Manually added nuclide.

? = Manually edited nuclide.

Energy Tolerance : 1.000 keV

Nuclide confidence index threshold = 0.30

Errors quoted at 2.000sigma

UNIDENTIFIED PEAKS

Peak Locate Performed on : 11/6/2015 1:26:31PM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
2	76.40	3.49042E-01	5.71		
9	270.23	2.87528E-02	27.58		
13	463.70	1.84752E-02	32.65	Tol.	SB-125

Analysis Report for 1510086-10
CP4105S14-15

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
14	510.83	2.11640E-02	35.34		
18	767.56	1.72222E-02	36.21		
19	784.21	1.05409E-02	38.28	Tol.	SB-127
22	933.50	1.26155E-02	34.97		
24	1003.70	1.02315E-02	54.21		
25	1068.53	1.06893E-02	37.39		
27	1227.14	7.97468E-03	48.06		
28	1238.66	6.87588E-03	55.24		
29	1256.05	4.57602E-03	50.61		
30	1377.18	6.38889E-03	42.38		
31	1401.56	5.41233E-03	39.75		
32	1408.01	4.62191E-03	51.00	Tol.	EU-152
34	1539.37	4.21296E-03	46.15		
M	35	1574.35	2.93566E-03	46.36	
m	36	1583.30	5.60799E-03	27.58	
m	37	1588.00	6.61401E-03	29.55	Sum
m	38	1591.43	3.40090E-03	51.01	D-Esc
	39	1630.90	4.82456E-03	27.61	
	40	1694.03	3.33333E-03	45.26	
	41	1730.27	4.87548E-03	43.86	Sum
m	43	1768.65	1.77349E-03	58.87	
	44	1829.26	2.16667E-03	47.97	Sum
	45	1953.15	1.94444E-03	54.40	
	46	1972.65	1.94444E-03	54.40	
	47	1992.52	1.66667E-03	70.71	
	48	2104.06	5.66551E-03	30.25	
	49	2117.43	1.77778E-03	66.29	
	50	2157.92	1.99074E-03	48.46	

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

NUCLIDE IDENTIFICATION REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

IDENTIFIED NUCLIDES

Nuclide Name	Id Confidence	Energy (keV)	Yield(%)	Activity (pCi/grams)	Activity Uncertainty
--------------	---------------	--------------	----------	----------------------	----------------------

Analysis Report for 1510086-10
CP4105S14-15

Nuclide Name	Id Confidence	Energy (keV)	Yield(%)	Activity (pCi/grams)	Activity Uncertainty
K-40	0.99	1460.81 *	10.67	1.98E+01	2.56E+00
GA-67	0.39	93.31 *	35.70	1.00E+02	4.31E+02
		208.95 *	2.24	1.76E+03	7.19E+03
		300.22	16.00		
NB-95M	0.63	235.69 *	25.00	6.69E+01	3.70E+01
CD-109	0.91	88.03 *	3.72	1.30E+00	9.61E-01
SN-126	0.98	87.57 *	37.00	1.25E-01	9.20E-02
EU-155	0.30	86.50 *	30.90	1.52E-01	1.11E-01
		105.30	20.70		
TL-208	0.96	583.14 *	30.22	1.18E+00	2.57E-01
		860.37 *	4.48	2.06E+00	1.53E+00
		2614.66 *	35.85	1.05E+00	2.23E-01
BI-212	0.70	727.17 *	11.80	1.06E+00	5.86E-01
		1620.62	2.75		
BI-214	0.92	609.31 *	46.30	1.24E+00	2.08E-01
		1120.29 *	15.10	1.09E+00	6.39E-01
		1764.49 *	15.80	1.56E+00	4.19E-01
		2204.22	4.98		
PB-214	1.00	295.21 *	19.19	1.12E+00	3.30E-01
		351.92 *	37.19	1.63E+00	2.50E-01
RA-224	0.94	240.98 *	3.95	3.94E+00	1.45E+00
RA-226	0.99	186.21 *	3.28	3.64E+00	6.88E+00
AC-228	0.99	338.32 *	11.40	1.42E+00	5.03E-01
		911.07 *	27.70	1.17E+00	3.53E-01
		969.11 *	16.60	1.27E+00	6.12E-01
TH-234	0.99	63.29 *	3.80	1.73E+00	1.64E+00
NP-237	0.90	86.50 *	12.60	3.67E-01	2.70E-01

* = Energy line found in the spectrum.

- = Manually added nuclide.

? = Manually edited nuclide.

@ = Energy line not used for Weighted Mean Activity

Energy Tolerance : 1.000 keV

Nuclide confidence index threshold = 0.30

Errors quoted at 2.000sigma

INTERFERENCE CORRECTED REPORT

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
---------------------	------------------------------	-------------------------------------	-------------------------------------	-----------------

Analysis Report for 1510086-10
CP4105S14-15

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40	0.997	1.98E+01	2.56E+00	
GA-67	0.392	1.27E+02	5.35E+02	
NB-95M	0.634	6.69E+01	3.70E+01	
? CD-109	0.918	1.30E+00	9.61E-01	
? SN-126	0.989	1.25E-01	9.20E-02	
? EU-155	0.301	1.52E-01	1.11E-01	
TL-208	0.964	1.12E+00	1.67E-01	
BI-212	0.702	1.06E+00	5.86E-01	
BI-214	0.924	1.29E+00	1.79E-01	
PB-214	1.000	1.44E+00	1.99E-01	
RA-224	0.944	3.94E+00	1.45E+00	
RA-226	0.994	3.64E+00	6.88E+00	
AC-228	0.993	1.26E+00	2.61E-01	
TH-234	0.996	1.73E+00	1.64E+00	
? NP-237	0.903	3.67E-01	2.70E-01	

- ? = nuclide is part of an undetermined solution
X = nuclide rejected by the interference analysis
@ = nuclide contains energy lines not used in Weighted Mean Activity

Errors quoted at 2.000sigma

Analysis Report for 1510086-10
CP4105S14-15

UNIDENTIFIED PEAKS

Peak Locate Performed on : 11/6/2015 1:26:31PM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
2	76.40	3.49042E-01	5.71		
9	270.23	2.87528E-02	27.58		
13	463.70	1.84752E-02	32.65	Tol.	SB-125
14	510.83	2.11640E-02	35.34		
18	767.56	1.72222E-02	36.21		
19	784.21	1.05409E-02	38.28	Tol.	SB-127
22	933.50	1.26155E-02	34.97		
24	1003.70	1.02315E-02	54.21		
25	1068.53	1.06893E-02	37.39		
27	1227.14	7.97468E-03	48.06		
28	1238.66	6.87588E-03	55.24		
29	1256.05	4.57602E-03	50.61		
30	1377.18	6.38889E-03	42.38		
31	1401.56	5.41233E-03	39.75		
32	1408.01	4.62191E-03	51.00	Tol.	EU-152
34	1539.37	4.21296E-03	46.15		
M	35	1574.35	2.93566E-03	46.36	
m	36	1583.30	5.60799E-03	27.58	
m	37	1588.00	6.61401E-03	29.55	Sum
m	38	1591.43	3.40090E-03	51.01	D-Esc
	39	1630.90	4.82456E-03	27.61	
	40	1694.03	3.33333E-03	45.26	
	41	1730.27	4.87548E-03	43.86	Sum
m	43	1768.65	1.77349E-03	58.87	
	44	1829.26	2.16667E-03	47.97	Sum
	45	1953.15	1.94444E-03	54.40	
	46	1972.65	1.94444E-03	54.40	
	47	1992.52	1.66667E-03	70.71	
	48	2104.06	5.66551E-03	30.25	
	49	2117.43	1.77778E-03	66.29	
	50	2157.92	1.99074E-03	48.46	

Analysis Report for 1510086-10
CP4105S14-15

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

NUCLIDE MDA REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	BE-7	477.59	10.42	-4.79E-01	7.34E-01	7.34E-01
+	NA-22	1274.54	99.94	5.56E-02	9.42E-02	9.42E-02
+	NA-24	1368.53	99.99	-1.43E+13	7.80E+12	6.01E+13
		2754.09	99.86	0.00E+00		7.80E+12
+	AL-26	1808.65	99.76	1.63E-02	5.27E-02	5.27E-02
+	K-40	1460.81	* 10.67	1.98E+01	7.98E-01	7.98E-01
+	@ AR-41	1293.64	99.16	1.00E+26	1.00E+26	1.00E+26
+	TI-44	67.88	94.40	8.73E-04	5.21E-02	5.21E-02
		78.34	96.00	3.09E-01		7.88E-02
+	SC-46	889.25	99.98	-2.21E-02	8.92E-02	8.92E-02
		1120.51	99.99	1.81E-01		1.68E-01
+	V-48	983.52	99.98	1.06E-01	2.61E-01	2.61E-01
		1312.10	97.50	-5.36E-02		2.68E-01
+	CR-51	320.08	9.83	6.21E-01	1.22E+00	1.22E+00
+	MN-54	834.83	99.97	-3.50E-02	8.56E-02	8.56E-02
+	CO-56	846.75	99.96	-1.41E-02	9.29E-02	9.29E-02
		1037.75	14.03	-2.05E-01		6.56E-01
		1238.25	67.00	1.25E-01		2.15E-01
		1771.40	15.51	-9.39E-02		4.63E-01
		2598.48	16.90	1.06E-01		3.17E-01
+	CO-57	122.06	85.51	-5.19E-03	6.14E-02	6.14E-02
		136.48	10.60	-1.61E-01		4.84E-01
+	CO-58	810.76	99.40	2.77E-02	9.77E-02	9.77E-02
+	FE-59	1099.22	56.50	-2.63E-03	2.39E-01	2.39E-01
		1291.56	43.20	4.97E-02		3.38E-01
+	CO-60	1173.22	100.00	4.19E-02	7.48E-02	1.01E-01
		1332.49	100.00	1.22E-02		7.48E-02
+	ZN-65	1115.52	50.75	2.46E-02	1.89E-01	1.89E-01
+	GA-67	93.31	* 35.70	1.00E+02	1.57E+02	1.57E+02
		208.95	* 2.24	1.76E+03		1.82E+03
		300.22	16.00	1.34E+02		2.71E+02
+	SE-75	121.11	16.70	1.62E-01	9.60E-02	3.52E-01

00660A

Analysis Report for 1510086-10
CP4105S14-15

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
SE-75	136.00	59.20	2.69E-02	9.60E-02	9.60E-02
	264.65	59.80	4.07E-02		1.00E-01
	279.53	25.20	-5.89E-02		2.67E-01
	400.65	11.40	-3.44E-02		5.70E-01
+ RB-82	776.52	13.00	-2.35E-02	1.24E+00	1.24E+00
+ RB-83	520.41	46.00	-5.58E-02	1.44E-01	1.44E-01
	529.64	30.30	5.44E-03		2.30E-01
	552.65	16.40	-1.56E-01		4.10E-01
+ KR-85	513.99	0.43	-1.13E+01	1.52E+01	1.52E+01
+ SR-85	513.99	99.27	-6.87E-02	9.18E-02	9.18E-02
+ Y-88	898.02	93.40	3.72E-02	5.38E-02	1.06E-01
	1836.01	99.38	-2.87E-02		5.38E-02
+ NB-93M	16.57	9.43	-7.23E+03	5.69E+03	5.69E+03
+ NB-94	702.63	100.00	1.58E-02	6.91E-02	8.17E-02
	871.10	100.00	9.98E-03		6.91E-02
+ NB-95	765.79	99.81	1.50E-01	1.71E-01	1.71E-01
+ NB-95M	235.69	* 25.00	6.69E+01	1.56E+02	1.56E+02
+ ZR-95	724.18	43.70	2.75E-02	1.92E-01	2.70E-01
	756.72	55.30	8.53E-02		1.92E-01
+ MO-99	181.06	6.20	-5.73E+01	1.38E+03	2.06E+03
	739.58	12.80	2.47E+02		1.38E+03
	778.00	4.50	-2.96E+02		3.73E+03
+ RU-103	497.08	89.00	7.06E-03	1.04E-01	1.04E-01
+ RU-106	621.84	9.80	1.87E-01	7.20E-01	7.20E-01
+ AG-108M	433.93	89.90	1.46E-02	6.18E-02	6.18E-02
	614.37	90.40	-6.83E-03		7.80E-02
	722.95	90.50	1.27E-02		7.87E-02
+ CD-109	88.03	* 3.72	1.30E+00	1.51E+00	1.51E+00
+ AG-110M	657.75	93.14	-8.53E-04	7.69E-02	7.69E-02
	677.61	10.53	2.91E-01		6.92E-01
	706.67	16.46	-3.94E-02		5.03E-01
	763.93	21.98	-2.42E-01		3.97E-01
	884.67	71.63	-1.77E-03		1.03E-01
	1384.27	23.94	3.46E-02		3.28E-01
	263.70	0.02	7.79E+00		2.17E+02	2.17E+02
+ SN-113	255.12	1.93	2.63E-01	9.75E-02	3.24E+00
	391.69	64.90	2.06E-02		9.75E-02
+ TE123M	159.00	84.10	2.90E-02	7.25E-02	7.25E-02
+ SB-124	602.71	97.87	-9.54E-03	1.03E-01	1.03E-01
	645.85	7.26	-3.65E-01		1.24E+00
	722.78	11.10	1.48E-01		9.17E-01
	1691.02	49.00	-9.36E-03		1.82E-01
+ I-125	35.49	6.49	3.71E-01	5.58E+00	5.58E+00
+ SB-125	176.33	6.89	-8.26E-02	1.90E-01	7.42E-01
	427.89	29.33	-2.39E-02		1.90E-01
	463.38	10.35	5.36E-01		6.51E-01
	600.56	17.80	1.68E-02		3.99E-01
	635.90	11.32	6.62E-03		5.97E-01

Analysis Report for 1510086-10
CP4105S14-15

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	SB-126	414.70	83.30	1.35E-01	3.97E-01	3.97E-01
		666.33	99.60	7.75E-02		3.99E-01
		695.00	99.60	-2.70E-01		4.17E-01
		720.50	53.80	2.27E-01		7.57E-01
+	SN-126	87.57	* 37.00	1.25E-01	1.45E-01	1.45E-01
+	SB-127	473.00	25.00	1.45E+01	5.29E+01	5.70E+01
		685.20	35.70	2.43E+01		5.29E+01
		783.80	14.70	1.13E+02		1.53E+02
+	I-129	29.78	57.00	2.75E-01	1.23E+00	1.23E+00
		33.60	13.20	-4.56E-01		2.54E+00
		39.58	7.52	7.64E-01		2.21E+00
+	I-131	284.30	6.05	1.48E+00	9.13E-01	1.29E+01
		364.48	81.20	-4.94E-01		9.13E-01
		636.97	7.26	5.95E-01		1.33E+01
		722.89	1.80	9.27E+00		5.74E+01
+	TE-132	49.72	13.10	2.91E+01	4.35E+01	4.37E+02
		228.16	88.00	4.66E+00		4.35E+01
+	BA-133	81.00	33.00	-2.67E-02	9.17E-02	1.29E-01
		302.84	17.80	-2.28E-01		3.04E-01
		356.01	60.00	-5.03E-03		9.17E-02
+	I-133	529.87	86.30	4.14E+08	3.86E+09	3.86E+09
+	XE-133	81.00	38.00	-1.39E+00	6.73E+00	6.73E+00
+	CS-134	563.23	8.38	5.56E-01	8.90E-02	7.63E-01
		569.32	15.43	1.47E-01		3.80E-01
		604.70	97.60	-3.16E-03		8.90E-02
		795.84	85.40	2.69E-02		1.03E-01
		801.93	8.73	3.53E-02		8.31E-01
+	CS-135	268.24	16.00	-1.43E-01	3.62E-01	3.62E-01
+	@ I-135	1131.51	22.50	1.00E+26	1.00E+26	1.00E+26
	@	1260.41	28.60	1.00E+26		1.00E+26
	@	1678.03	9.54	1.00E+26		1.00E+26
+	CS-136	153.22	7.46	1.59E+00	3.59E-01	3.63E+00
		163.89	4.61	-1.07E+00		5.43E+00
		176.55	13.56	7.55E-01		1.92E+00
		273.65	12.66	-6.13E-01		2.18E+00
		340.57	48.50	-8.29E-01		7.07E-01
		818.50	99.70	1.01E-01		3.59E-01
		1048.07	79.60	3.01E-01		5.64E-01
		1235.34	19.70	1.78E-01		2.76E+00
+	CS-137	661.65	85.12	-1.46E-02	7.92E-02	7.92E-02
+	LA-138	788.74	34.00	8.14E-03	1.08E-01	2.20E-01
		1435.80	66.00	-3.40E-03		1.08E-01
+	CE-139	165.85	80.35	4.52E-03	7.27E-02	7.27E-02
+	BA-140	162.64	6.70	1.36E-01	1.28E+00	3.91E+00
		304.84	4.50	6.65E-02		6.25E+00
		423.70	3.20	-2.81E+00		8.89E+00
		437.55	2.00	7.04E+00		1.50E+01
		537.32	25.00	3.07E-01		1.28E+00
+	LA-140	328.77	20.50	2.02E-01	3.72E-01	1.58E+00

Analysis Report for 1510086-10
CP4105S14-15

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
LA-140	487.03	45.50	-3.05E-01	3.72E-01	6.21E-01
	815.85	23.50	-2.78E-01		1.51E+00
	1596.49	95.49	-2.23E-01		3.72E-01
+ CE-141	145.44	48.40	-5.75E-02	2.07E-01	2.07E-01
+ CE-143	57.36	11.80	-3.22E+04	1.16E+06	2.87E+06
	293.26	42.00	-8.83E+04		1.16E+06
	664.55	5.20	1.22E+05		8.19E+06
+ CE-144	133.54	10.80	1.99E-01	4.84E-01	4.84E-01
+ PM-144	476.78	42.00	-8.41E-02	6.96E-02	1.29E-01
	618.01	98.60	-4.18E-02		6.96E-02
	696.49	99.49	-6.70E-02		7.70E-02
+ PM-145	36.85	21.70	-1.68E-01	5.05E-01	9.84E-01
	37.36	39.70	-8.63E-02		5.05E-01
	42.30	15.10	-2.86E-01		8.61E-01
	72.40	2.31	-1.23E+00		2.15E+00
+ PM-146	453.90	39.94	6.66E-03	1.38E-01	1.38E-01
	735.90	14.01	8.30E-02		5.11E-01
	747.13	13.10	1.16E-01		5.64E-01
+ ND-147	91.11	28.90	-1.69E+00	1.57E+00	1.57E+00
	531.02	13.10	-1.05E+00		3.03E+00
+ PM-149	285.90	3.10	5.06E+03	3.02E+04	3.02E+04
+ EU-152	121.78	20.50	-2.01E-02	2.37E-01	2.37E-01
	244.69	5.40	-2.08E+00		1.01E+00
	344.27	19.13	8.85E-02		2.89E-01
	778.89	9.20	-1.41E-01		7.64E-01
	964.01	10.40	6.70E-02		1.03E+00
	1085.78	7.22	2.45E-01		1.14E+00
	1112.02	9.60	-7.50E-02		9.15E-01
	1407.95	14.94	-3.64E-02		5.26E-01
+ GD-153	97.43	31.30	-2.02E-02	1.65E-01	1.65E-01
	103.18	22.20	-2.87E-03		2.48E-01
+ EU-154	123.07	40.50	-5.37E-03	1.21E-01	1.21E-01
	723.30	19.70	5.88E-02		3.64E-01
	873.19	11.50	1.10E-01		6.23E-01
	996.32	10.30	0.00E+00		7.02E-01
	1004.76	17.90	-1.02E-01		4.84E-01
	1274.45	35.50	1.54E-01		2.61E-01
+ EU-155	86.50	* 30.90	1.52E-01	1.76E-01	1.76E-01
	105.30	20.70	1.89E-01		2.43E-01
+ EU-156	811.77	10.40	5.50E-01	2.77E+00	2.77E+00
	1153.47	7.20	8.37E-02		5.15E+00
	1230.71	8.90	3.42E-02		4.79E+00
+ HO-166M	184.41	72.60	3.12E-02	9.12E-02	9.12E-02
	280.45	29.60	-4.20E-02		1.90E-01
	410.94	11.10	1.64E-01		5.34E-01
	711.69	54.10	1.85E-02		1.34E-01
+ TM-171	66.72	0.14	-6.05E+00	3.65E+01	3.65E+01
+ HF-172	81.75	4.52	-7.45E-01	4.48E-01	9.51E-01
	125.81	11.30	-4.50E-01		4.48E-01

Analysis Report for 1510086-10
CP4105S14-15

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	LU-172	181.53	20.60	6.24E-01	3.20E+00	6.31E+00
		810.06	16.63	3.03E+00		1.07E+01
		912.12	15.25	5.84E+01		2.44E+01
		1093.66	62.50	-1.23E-01		3.20E+00
+	LU-173	100.72	5.24	4.95E-01	3.12E-01	9.94E-01
		272.11	21.20	2.50E-01		3.12E-01
+	HF-175	343.40	84.00	1.48E-02	9.06E-02	9.06E-02
+	LU-176	88.34	13.30	8.99E-01	5.48E-02	5.00E-01
		201.83	86.00	-2.67E-02		6.38E-02
		306.78	94.00	-8.54E-03		5.48E-02
+	TA-182	67.75	41.20	2.41E-03	1.44E-01	1.44E-01
		1121.30	34.90	5.86E-01		4.57E-01
		1189.05	16.23	-2.57E-01		6.61E-01
		1221.41	26.98	-3.67E-02		4.14E-01
		1231.02	11.44	7.20E-02		1.07E+00
+	IR-192	308.46	29.68	-1.66E-02	1.40E-01	2.32E-01
		468.07	48.10	-2.69E-02		1.40E-01
+	HG-203	279.19	77.30	6.87E-02	1.21E-01	1.21E-01
+	BI-207	569.67	97.72	2.26E-02	5.84E-02	5.84E-02
		1063.62	74.90	-4.63E-03		1.07E-01
+	TL-208	583.14	* 30.22	1.18E+00	1.13E-01	3.13E-01
		860.37	* 4.48	2.06E+00		2.41E+00
		2614.66	* 35.85	1.05E+00		1.13E-01
+	BI-210M	262.00	45.00	-6.10E-02	1.15E-01	1.15E-01
		300.00	23.00	1.28E-01		2.58E-01
+	PB-210	46.50	4.25	3.88E+00	2.60E+00	2.60E+00
+	PB-211	404.84	2.90	2.69E-01	1.91E+00	1.91E+00
		831.96	2.90	9.25E-01		2.80E+00
+	BI-212	727.17	* 11.80	1.06E+00	8.99E-01	8.99E-01
		1620.62	2.75	1.29E+00		2.74E+00
+	PB-212	238.63	44.60	1.08E+00	2.82E-01	2.82E-01
		300.09	3.41	8.60E-01		1.74E+00
+	BI-214	609.31	* 46.30	1.24E+00	2.16E-01	2.16E-01
		1120.29	* 15.10	1.09E+00		9.90E-01
		1764.49	* 15.80	1.56E+00		4.33E-01
		2204.22	4.98	1.05E+00		1.91E+00
+	PB-214	295.21	* 19.19	1.12E+00	2.63E-01	4.69E-01
		351.92	* 37.19	1.63E+00		2.63E-01
+	RN-219	401.80	6.50	-4.23E-01	8.37E-01	8.37E-01
+	RA-223	323.87	3.88	-3.34E-01	1.30E+00	1.30E+00
+	RA-224	240.98	* 3.95	3.94E+00	2.63E+00	2.63E+00
+	RA-225	40.00	31.00	7.61E-01	2.20E+00	2.20E+00
+	RA-226	186.21	* 3.28	3.64E+00	2.73E+00	2.73E+00
+	TH-227	50.10	8.40	6.06E-02	7.30E-01	9.13E-01
		236.00	11.50	-5.51E+00		7.30E-01
		256.20	6.30	-8.15E-01		8.03E-01
+	AC-228	338.32	* 11.40	1.42E+00	4.84E-01	7.36E-01
		911.07	* 27.70	1.17E+00		4.84E-01

Analysis Report for 1510086-10
CP4105S14-15

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	AC-228	969.11	*	16.60	1.27E+00	4.84E-01	9.32E-01
+	TH-230	48.44		16.90	-4.95E-01	4.94E-01	4.94E-01
		62.85		4.60	1.27E+00		1.31E+00
		67.67		0.37	2.23E-01		1.33E+01
+	PA-231	283.67		1.60	3.85E-01	2.34E+00	3.36E+00
		302.67		2.30	-1.75E+00		2.34E+00
+	TH-231	25.64		14.70	1.11E+01	7.26E-01	1.55E+01
		84.21		6.40	7.11E-01		7.26E-01
+	PA-233	311.98		38.60	1.94E-02	3.09E-01	3.09E-01
+	PA-234	131.20		20.40	1.66E-01	2.52E-01	2.52E-01
		733.99		8.80	-2.18E-01		7.81E-01
		946.00		12.00	8.54E-02		6.39E-01
+	PA-234M	1001.03		0.92	5.03E+00	9.60E+00	9.60E+00
+	TH-234	63.29	*	3.80	1.73E+00	2.68E+00	2.68E+00
+	U-235	143.76		10.50	-4.46E-01	4.81E-01	4.81E-01
		163.35		4.70	3.61E-02		1.04E+00
		205.31		4.70	1.26E+00		1.22E+00
+	NP-237	86.50	*	12.60	3.67E-01	4.27E-01	4.27E-01
+	NP-239	106.10		22.70	-8.55E+02	1.95E+03	1.95E+03
		228.18		10.70	4.82E+02		4.50E+03
		277.60		14.10	2.85E+03		3.90E+03
+	AM-241	59.54		35.90	-5.03E-02	1.51E-01	1.51E-01
+	AM-243	74.67		66.00	-2.35E-01	1.05E-01	1.05E-01
+	CM-243	209.75		3.29	1.07E+00	4.27E-01	1.84E+00
		228.14		10.60	5.28E-02		4.92E-01
		277.60		14.00	3.11E-01		4.27E-01

- + = Nuclide identified during the nuclide identification
 * = Energy line found in the spectrum
 > = MDA value not calculated
 @ = Half-life too short to be able to perform the decay correction
 ? = CAUTION: MDA value is inconsistent with Currie MDA at 95% confidence level

NUCLIDE MDA REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

: 00665

Analysis Report for 1510086-10
CP4105S14-15

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
BE-7	477.59	10.42	7.34E-01	7.34E-01	-4.79E-01	3.43E-01
NA-22	1274.54	99.94	9.42E-02	9.42E-02	5.56E-02	4.34E-02
NA-24	1368.53	99.99	6.01E+13	7.80E+12	-1.43E+13	2.67E+13
	2754.09	99.86	7.80E+12		0.00E+00	0.00E+00
AL-26	1808.65	99.76	5.27E-02	5.27E-02	1.63E-02	2.19E-02
+ K-40	1460.81	*	10.67	7.98E-01	1.98E+01	3.62E-01
@ AR-41	1293.64	99.16	1.00E+26	1.00E+26	1.00E+26	1.00E+20
TI-44	67.88	94.40	5.21E-02	5.21E-02	8.73E-04	2.53E-02
	78.34	96.00	7.88E-02		3.09E-01	3.87E-02
SC-46	889.25	99.98	8.92E-02	8.92E-02	-2.21E-02	4.11E-02
	1120.51	99.99	1.68E-01		1.81E-01	7.99E-02
V-48	983.52	99.98	2.61E-01	2.61E-01	1.06E-01	1.19E-01
	1312.10	97.50	2.68E-01		-5.36E-02	1.20E-01
CR-51	320.08	9.83	1.22E+00	1.22E+00	6.21E-01	5.80E-01
MN-54	834.83	99.97	8.56E-02	8.56E-02	-3.50E-02	4.01E-02
CO-56	846.75	99.96	9.29E-02	9.29E-02	-1.41E-02	4.30E-02
	1037.75	14.03	6.56E-01		-2.05E-01	3.00E-01
	1238.25	67.00	2.15E-01		1.25E-01	1.01E-01
	1771.40	15.51	4.63E-01		-9.39E-02	1.94E-01
	2598.48	16.90	3.17E-01		1.06E-01	1.23E-01
CO-57	122.06	85.51	6.14E-02	6.14E-02	-5.19E-03	2.98E-02
	136.48	10.60	4.84E-01		-1.61E-01	2.35E-01
CO-58	810.76	99.40	9.77E-02	9.77E-02	2.77E-02	4.54E-02
FE-59	1099.22	56.50	2.39E-01	2.39E-01	-2.63E-03	1.11E-01
	1291.56	43.20	3.38E-01		4.97E-02	1.55E-01
CO-60	1173.22	100.00	1.01E-01	7.48E-02	4.19E-02	4.73E-02
	1332.49	100.00	7.48E-02		1.22E-02	3.36E-02
ZN-65	1115.52	50.75	1.89E-01	1.89E-01	2.46E-02	8.73E-02
+ GA-67	93.31	*	35.70	1.57E+02	1.00E+02	7.74E+01
	208.95	*	2.24	1.82E+03	1.76E+03	8.77E+02
	300.22	16.00	2.71E+02		1.34E+02	1.30E+02
SE-75	121.11	16.70	3.52E-01	9.60E-02	1.62E-01	1.71E-01
	136.00	59.20	9.60E-02		2.69E-02	4.65E-02
	264.65	59.80	1.00E-01		4.07E-02	4.80E-02
	279.53	25.20	2.67E-01		-5.89E-02	1.28E-01
	400.65	11.40	5.70E-01		-3.44E-02	2.70E-01
RB-82	776.52	13.00	1.24E+00	1.24E+00	-2.35E-02	5.79E-01
RB-83	520.41	46.00	1.44E-01	1.44E-01	-5.58E-02	6.73E-02
	529.64	30.30	2.30E-01		5.44E-03	1.08E-01
	552.65	16.40	4.10E-01		-1.56E-01	1.91E-01
KR-85	513.99	0.43	1.52E+01	1.52E+01	-1.13E+01	7.17E+00
SR-85	513.99	99.27	9.18E-02	9.18E-02	-6.87E-02	4.34E-02
Y-88	898.02	93.40	1.06E-01	5.38E-02	3.72E-02	4.94E-02
	1836.01	99.38	5.38E-02		-2.87E-02	2.14E-02
NB-93M	16.57	9.43	5.69E+03	5.69E+03	-7.23E+03	2.77E+03
NB-94	702.63	100.00	8.17E-02	6.91E-02	1.58E-02	3.86E-02
	871.10	100.00	6.91E-02		9.98E-03	3.19E-02
NB-95	765.79	99.81	1.71E-01	1.71E-01	1.50E-01	8.12E-02
+ NB-95M	235.69	*	25.00	1.56E+02	6.69E+01	7.64E+01
ZR-95	724.18	43.70	2.70E-01	1.92E-01	2.75E-02	1.28E-01
	756.72	55.30	1.92E-01		8.53E-02	8.98E-02

Analysis Report for 1510086-10
CP4105S14-15

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)		
MO-99	181.06	6.20	2.06E+03	1.38E+03	-5.73E+01	9.94E+02		
	739.58	12.80	1.38E+03		2.47E+02	6.44E+02		
	778.00	4.50	3.73E+03		-2.96E+02	1.73E+03		
RU-103	497.08	89.00	1.04E-01	1.04E-01	7.06E-03	4.84E-02		
RU-106	621.84	9.80	7.20E-01	7.20E-01	1.87E-01	3.38E-01		
AG-108M	433.93	89.90	6.18E-02	6.18E-02	1.46E-02	2.92E-02		
	614.37	90.40	7.80E-02		-6.83E-03	3.68E-02		
	722.95	90.50	7.87E-02		1.27E-02	3.68E-02		
+ CD-109	88.03	*	1.51E+00	1.51E+00	1.30E+00	7.38E-01		
	AG-110M	657.75	93.14		7.69E-02	7.69E-02	-8.53E-04	3.60E-02
		677.61	10.53		6.92E-01	2.91E-01	3.23E-01	
		706.67	16.46		5.03E-01	-3.94E-02	2.37E-01	
		763.93	21.98		3.97E-01	-2.42E-01	1.86E-01	
		884.67	71.63		1.03E-01	-1.77E-03	4.77E-02	
		1384.27	23.94		3.28E-01	3.46E-02	1.47E-01	
		CD-113M	263.70		0.02	2.17E+02	2.17E+02	7.79E+00	1.04E+02
SN-113	255.12	1.93	3.24E+00	9.75E-02	2.63E-01	1.55E+00		
	391.69	64.90	9.75E-02		2.06E-02	4.60E-02		
TE123M	159.00	84.10	7.25E-02	7.25E-02	2.90E-02	3.51E-02		
SB-124	602.71	97.87	1.03E-01	1.03E-01	-9.54E-03	4.86E-02		
	645.85	7.26	1.24E+00		-3.65E-01	5.80E-01		
	722.78	11.10	9.17E-01		1.48E-01	4.29E-01		
	1691.02	49.00	1.82E-01		-9.36E-03	7.85E-02		
	I-125	35.49	6.49		5.58E+00	5.58E+00	3.71E-01	2.71E+00
SB-125	176.33	6.89	7.42E-01	1.90E-01	-8.26E-02	3.58E-01		
	427.89	29.33	1.90E-01		-2.39E-02	8.94E-02		
	463.38	10.35	6.51E-01		5.36E-01	3.10E-01		
	600.56	17.80	3.99E-01		1.68E-02	1.88E-01		
	635.90	11.32	5.97E-01		6.62E-03	2.80E-01		
SB-126	414.70	83.30	3.97E-01	3.97E-01	1.35E-01	1.88E-01		
	666.33	99.60	3.99E-01		7.75E-02	1.87E-01		
	695.00	99.60	4.17E-01		-2.70E-01	1.96E-01		
	720.50	53.80	7.57E-01		2.27E-01	3.55E-01		
+ SN-126	87.57	*	1.45E-01	1.45E-01	1.25E-01	7.09E-02		
	SB-127	473.00	25.00		5.70E+01	5.29E+01	1.45E+01	2.67E+01
		685.20	35.70		5.29E+01	2.43E+01	2.48E+01	
I-129	783.80	14.70	1.53E+02	1.23E+00	1.13E+02	7.20E+01		
	29.78	57.00	1.23E+00		2.75E-01	5.98E-01		
	33.60	13.20	2.54E+00		-4.56E-01	1.23E+00		
I-131	39.58	7.52	2.21E+00	9.13E-01	7.64E-01	1.07E+00		
	284.30	6.05	1.29E+01		1.48E+00	6.17E+00		
	364.48	81.20	9.13E-01		-4.94E-01	4.32E-01		
TE-132	636.97	7.26	1.33E+01	4.35E+01	5.95E-01	6.24E+00		
	722.89	1.80	5.74E+01		9.27E+00	2.68E+01		
	49.72	13.10	4.37E+02		2.91E+01	2.12E+02		
BA-133	228.16	88.00	4.35E+01	9.17E-02	4.66E+00	2.09E+01		
	81.00	33.00	1.29E-01		-2.67E-02	6.25E-02		
	302.84	17.80	3.04E-01		-2.28E-01	1.45E-01		
I-133	356.01	60.00	9.17E-02	3.86E+09	-5.03E-03	4.36E-02		
	529.87	86.30	3.86E+09		4.14E+08	1.80E+09		
	XE-133	81.00	38.00		6.73E+00	-1.39E+00	3.26E+00	
CS-134	563.23	8.38	7.63E-01	8.90E-02	5.56E-01	3.59E-01		
	569.32	15.43	3.80E-01		1.47E-01	1.77E-01		

Analysis Report for 1510086-10

CP4105S14-15

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
CS-134	604.70	97.60	8.90E-02	8.90E-02	-3.16E-03	4.24E-02
	795.84	85.40	1.03E-01		2.69E-02	4.87E-02
	801.93	8.73	8.31E-01		3.53E-02	3.86E-01
CS-135	268.24	16.00	3.62E-01	3.62E-01	-1.43E-01	1.74E-01
@ I-135	1131.51	22.50	1.00E+26	1.00E+26	1.00E+26	1.00E+20
@	1260.41	28.60	1.00E+26		1.00E+26	1.00E+20
@	1678.03	9.54	1.00E+26		1.00E+26	1.00E+20
CS-136	153.22	7.46	3.63E+00	3.59E-01	1.59E+00	1.76E+00
	163.89	4.61	5.43E+00		-1.07E+00	2.62E+00
	176.55	13.56	1.92E+00		7.55E-01	9.29E-01
	273.65	12.66	2.18E+00		-6.13E-01	1.05E+00
	340.57	48.50	7.07E-01		-8.29E-01	3.40E-01
	818.50	99.70	3.59E-01		1.01E-01	1.67E-01
	1048.07	79.60	5.64E-01		3.01E-01	2.62E-01
	1235.34	19.70	2.76E+00		1.78E-01	1.29E+00
CS-137	661.65	85.12	7.92E-02	7.92E-02	-1.46E-02	3.71E-02
LA-138	788.74	34.00	2.20E-01	1.08E-01	8.14E-03	1.03E-01
	1435.80	66.00	1.08E-01		-3.40E-03	4.80E-02
CE-139	165.85	80.35	7.27E-02	7.27E-02	4.52E-03	3.52E-02
BA-140	162.64	6.70	3.91E+00	1.28E+00	1.36E-01	1.89E+00
	304.84	4.50	6.25E+00		6.65E-02	2.98E+00
	423.70	3.20	8.89E+00		-2.81E+00	4.19E+00
	437.55	2.00	1.50E+01		7.04E+00	7.08E+00
	537.32	25.00	1.28E+00		3.07E-01	6.02E-01
	537.32	25.00	1.28E+00		3.07E-01	6.02E-01
LA-140	328.77	20.50	1.58E+00	3.72E-01	2.02E-01	7.56E-01
	487.03	45.50	6.21E-01		-3.05E-01	2.90E-01
	815.85	23.50	1.51E+00		-2.78E-01	6.99E-01
	1596.49	95.49	3.72E-01		-2.23E-01	1.63E-01
CE-141	145.44	48.40	2.07E-01	2.07E-01	-5.75E-02	1.01E-01
CE-143	57.36	11.80	2.87E+06	1.16E+06	-3.22E+04	1.39E+06
	293.26	42.00	1.16E+06		-8.83E+04	5.63E+05
	664.55	5.20	8.19E+06		1.22E+05	3.84E+06
CE-144	133.54	10.80	4.84E-01	4.84E-01	1.99E-01	2.35E-01
PM-144	476.78	42.00	1.29E-01	6.96E-02	-8.41E-02	6.03E-02
	618.01	98.60	6.96E-02		-4.18E-02	3.26E-02
	696.49	99.49	7.70E-02		-6.70E-02	3.62E-02
PM-145	36.85	21.70	9.84E-01	5.05E-01	-1.68E-01	4.77E-01
	37.36	39.70	5.05E-01		-8.63E-02	2.45E-01
	42.30	15.10	8.61E-01		-2.86E-01	4.18E-01
	72.40	2.31	2.15E+00		-1.23E+00	1.04E+00
PM-146	453.90	39.94	1.38E-01	1.38E-01	6.66E-03	6.47E-02
	735.90	14.01	5.11E-01		8.30E-02	2.39E-01
	747.13	13.10	5.64E-01		1.16E-01	2.64E-01
ND-147	91.11	28.90	1.57E+00	1.57E+00	-1.69E+00	7.68E-01
	531.02	13.10	3.03E+00		-1.05E+00	1.42E+00
PM-149	285.90	3.10	3.02E+04	3.02E+04	5.06E+03	1.45E+04
EU-152	121.78	20.50	2.37E-01	2.37E-01	-2.01E-02	1.15E-01
	244.69	5.40	1.01E+00		-2.08E+00	4.84E-01
	344.27	19.13	2.89E-01		8.85E-02	1.38E-01
	778.89	9.20	7.64E-01		-1.41E-01	3.55E-01
	964.01	10.40	1.03E+00		6.70E-02	4.85E-01
	1085.78	7.22	1.14E+00		2.45E-01	5.26E-01
	1112.02	9.60	9.15E-01		-7.50E-02	4.24E-01

Analysis Report for 1510086-10
CP4105S14-15

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
EU-152	1407.95	14.94	5.26E-01	2.37E-01	-3.64E-02	2.37E-01
GD-153	97.43	31.30	1.65E-01	1.65E-01	-2.02E-02	8.01E-02
	103.18	22.20	2.48E-01		-2.87E-03	1.21E-01
EU-154	123.07	40.50	1.21E-01	1.21E-01	-5.37E-03	5.89E-02
	723.30	19.70	3.64E-01		5.88E-02	1.70E-01
	873.19	11.50	6.23E-01		1.10E-01	2.88E-01
	996.32	10.30	7.02E-01		0.00E+00	3.22E-01
	1004.76	17.90	4.84E-01		-1.02E-01	2.25E-01
	1274.45	35.50	2.61E-01		1.54E-01	1.20E-01
+ EU-155	86.50 *	30.90	1.76E-01	1.76E-01	1.52E-01	8.59E-02
	105.30	20.70	2.43E-01		1.89E-01	1.18E-01
EU-156	811.77	10.40	2.77E+00	2.77E+00	5.50E-01	1.29E+00
	1153.47	7.20	5.15E+00		8.37E-02	2.38E+00
	1230.71	8.90	4.79E+00		3.42E-02	2.23E+00
HO-166M	184.41	72.60	9.12E-02	9.12E-02	3.12E-02	4.44E-02
	280.45	29.60	1.90E-01		-4.20E-02	9.13E-02
	410.94	11.10	5.34E-01		1.64E-01	2.53E-01
	711.69	54.10	1.34E-01		1.85E-02	6.29E-02
TM-171	66.72	0.14	3.65E+01	3.65E+01	-6.05E+00	1.77E+01
HF-172	81.75	4.52	9.51E-01	4.48E-01	-7.45E-01	4.61E-01
	125.81	11.30	4.48E-01		-4.50E-01	2.18E-01
LU-172	181.53	20.60	6.31E+00	3.20E+00	6.24E-01	3.05E+00
	810.06	16.63	1.07E+01		3.03E+00	4.96E+00
	912.12	15.25	2.44E+01		5.84E+01	1.17E+01
	1093.66	62.50	3.20E+00		-1.23E-01	1.47E+00
LU-173	100.72	5.24	9.94E-01	3.12E-01	4.95E-01	4.84E-01
	272.11	21.20	3.12E-01		2.50E-01	1.50E-01
HF-175	343.40	84.00	9.06E-02	9.06E-02	1.48E-02	4.32E-02
LU-176	88.34	13.30	5.00E-01	5.48E-02	8.99E-01	2.45E-01
	201.83	86.00	6.38E-02		-2.67E-02	3.08E-02
	306.78	94.00	5.48E-02		-8.54E-03	2.61E-02
TA-182	67.75	41.20	1.44E-01	1.44E-01	2.41E-03	6.99E-02
	1121.30	34.90	4.57E-01		5.86E-01	2.17E-01
	1189.05	16.23	6.61E-01		-2.57E-01	3.05E-01
	1221.41	26.98	4.14E-01		-3.67E-02	1.91E-01
	1231.02	11.44	1.07E+00		7.20E-02	5.00E-01
IR-192	308.46	29.68	2.32E-01	1.40E-01	-1.66E-02	1.10E-01
	468.07	48.10	1.40E-01		-2.69E-02	6.55E-02
HG-203	279.19	77.30	1.21E-01	1.21E-01	6.87E-02	5.81E-02
BI-207	569.67	97.72	5.84E-02	5.84E-02	2.26E-02	2.73E-02
	1063.62	74.90	1.07E-01		-4.63E-03	4.92E-02
+ TL-208	583.14 *	30.22	3.13E-01	1.13E-01	1.18E+00	1.50E-01
	860.37 *	4.48	2.41E+00		2.06E+00	1.15E+00
	2614.66 *	35.85	1.13E-01		1.05E+00	4.39E-02
BI-210M	262.00	45.00	1.15E-01	1.15E-01	-6.10E-02	5.53E-02
	300.00	23.00	2.58E-01		1.28E-01	1.24E-01
PB-210	46.50	4.25	2.60E+00	2.60E+00	3.88E+00	1.27E+00
PB-211	404.84	2.90	1.91E+00	1.91E+00	2.69E-01	9.05E-01
	831.96	2.90	2.80E+00		9.25E-01	1.31E+00
+ BI-212	727.17 *	11.80	8.99E-01	8.99E-01	1.06E+00	4.30E-01
	1620.62	2.75	2.74E+00		1.29E+00	1.21E+00
PB-212	238.63	44.60	2.82E-01	2.82E-01	1.08E+00	1.39E-01
	300.09	3.41	1.74E+00		8.60E-01	8.34E-01

Analysis Report for 1510086-10
CP4105S14-15

Nuclide Name	Energy (keV)		Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
+	BI-214	609.31 *	46.30	2.16E-01	2.16E-01	1.24E+00	1.04E-01
		1120.29 *	15.10	9.90E-01		1.09E+00	4.73E-01
		1764.49 *	15.80	4.33E-01		1.56E+00	1.89E-01
		2204.22 *	4.98	1.91E+00		1.05E+00	8.62E-01
+	PB-214	295.21 *	19.19	4.69E-01	2.63E-01	1.12E+00	2.28E-01
		351.92 *	37.19	2.63E-01		1.63E+00	1.28E-01
	RN-219	401.80	6.50	8.37E-01	8.37E-01	-4.23E-01	3.96E-01
	RA-223	323.87	3.88	1.30E+00	1.30E+00	-3.34E-01	6.18E-01
+	RA-224	240.98 *	3.95	2.63E+00	2.63E+00	3.94E+00	1.29E+00
	RA-225	40.00	31.00	2.20E+00	2.20E+00	7.61E-01	1.07E+00
+	RA-226	186.21 *	3.28	2.73E+00	2.73E+00	3.64E+00	1.34E+00
	TH-227	50.10	8.40	9.13E-01	7.30E-01	6.06E-02	4.43E-01
		236.00	11.50	7.30E-01		-5.51E+00	3.56E-01
		256.20	6.30	8.03E-01		-8.15E-01	3.84E-01
+	AC-228	338.32 *	11.40	7.36E-01	4.84E-01	1.42E+00	3.56E-01
		911.07 *	27.70	4.84E-01		1.17E+00	2.32E-01
		969.11 *	16.60	9.32E-01		1.27E+00	4.48E-01
	TH-230	48.44	16.90	4.94E-01	4.94E-01	-4.95E-01	2.39E-01
		62.85	4.60	1.31E+00		1.27E+00	6.37E-01
		67.67	0.37	1.33E+01		2.23E-01	6.46E+00
	PA-231	283.67	1.60	3.36E+00	2.34E+00	3.85E-01	1.61E+00
		302.67	2.30	2.34E+00		-1.75E+00	1.12E+00
	TH-231	25.64	14.70	1.55E+01	7.26E-01	1.11E+01	7.50E+00
		84.21	6.40	7.26E-01		7.11E-01	3.53E-01
	PA-233	311.98	38.60	3.09E-01	3.09E-01	1.94E-02	1.47E-01
	PA-234	131.20	20.40	2.52E-01	2.52E-01	1.66E-01	1.23E-01
		733.99	8.80	7.81E-01		-2.18E-01	3.64E-01
		946.00	12.00	6.39E-01		8.54E-02	2.96E-01
	PA-234M	1001.03	0.92	9.60E+00	9.60E+00	5.03E+00	4.48E+00
+	TH-234	63.29 *	3.80	2.68E+00	2.68E+00	1.73E+00	1.32E+00
	U-235	143.76	10.50	4.81E-01	4.81E-01	-4.46E-01	2.33E-01
		163.35	4.70	1.04E+00		3.61E-02	5.03E-01
		205.31	4.70	1.22E+00		1.26E+00	5.90E-01
+	NP-237	86.50 *	12.60	4.27E-01	4.27E-01	3.67E-01	2.08E-01
	NP-239	106.10	22.70	1.95E+03	1.95E+03	-8.55E+02	9.47E+02
		228.18	10.70	4.50E+03		4.82E+02	2.16E+03
		277.60	14.10	3.90E+03		2.85E+03	1.88E+03
	AM-241	59.54	35.90	1.51E-01	1.51E-01	-5.03E-02	7.31E-02
	AM-243	74.67	66.00	1.05E-01	1.05E-01	-2.35E-01	5.14E-02
	CM-243	209.75	3.29	1.84E+00	4.27E-01	1.07E+00	8.92E-01
		228.14	10.60	4.92E-01		5.28E-02	2.37E-01
		277.60	14.00	4.27E-01		3.11E-01	2.05E-01

- + = Nuclide identified during the nuclide identification
 * = Energy line found in the spectrum
 > = MDA value not calculated
 @ = Half-life too short to be able to perform the decay correction

Analysis Report for 1510086-10
CP4105S14-15

No Action Level results available for reporting purposes.

DATA REVIEW COMMENTS REPORT

<i>Creation Date</i>	<i>Comment</i>	<i>User</i>
----------------------	----------------	-------------

No Data Review Comments Entered.

 ***** S P E C T R A L D A T A R E P O R T *****

Sample Title: CP4105S14-15

Elapsed Live time: 3600

Elapsed Real Time: 3601

Channel	0	0	0	1	6	8	11	220
1:	0	0	0	1	6	8	11	220
9:	610	1254	1049	428	735	1673	250	166
17:	154	117	162	123	131	120	111	118
25:	117	122	123	89	121	107	121	120
33:	117	116	111	120	117	113	127	144
41:	121	123	145	138	119	176	214	119
49:	115	122	116	114	121	94	99	96
57:	98	106	101	109	118	126	173	169
65:	125	119	118	119	123	121	124	121
73:	157	170	421	239	504	417	116	122
81:	94	108	113	161	126	99	234	208
89:	103	199	114	135	230	166	110	83
97:	78	80	96	80	95	92	100	84
105:	97	103	68	64	87	94	70	66
113:	74	91	68	97	82	72	84	75
121:	73	89	80	71	76	81	67	92
129:	108	81	65	81	75	56	74	70
137:	63	72	53	82	86	77	67	77
145:	70	67	90	81	66	66	85	74
153:	62	81	62	64	82	56	65	71
161:	49	54	68	66	50	47	67	65
169:	51	60	65	62	64	42	70	48
177:	54	59	51	55	61	55	57	62
185:	97	188	112	55	47	52	53	50
193:	43	45	61	48	51	62	59	54
201:	49	47	65	61	64	59	46	39
209:	99	79	57	46	59	39	50	52
217:	55	48	45	41	46	46	66	37
225:	36	48	33	50	42	36	43	50
233:	56	50	45	70	37	332	610	93
241:	127	143	72	37	34	31	31	36
249:	24	39	44	38	42	29	37	32
257:	37	32	49	41	36	25	39	30
265:	36	25	27	32	39	84	59	39
273:	33	30	36	36	50	51	29	44
281:	29	31	34	29	38	32	33	46
289:	33	35	26	34	33	41	213	129
297:	34	39	28	58	35	26	29	35
305:	25	27	24	29	29	24	29	25
313:	29	36	27	34	23	32	29	27
321:	29	28	23	19	27	22	25	55
329:	39	26	24	38	22	25	24	22
337:	33	134	88	27	27	28	30	25
345:	26	22	18	29	25	37	147	397
353:	121	20	33	27	26	17	22	20
361:	26	22	10	26	25	20	26	19

369: 30 18 15 29 26 20 17 20

Sample Title: CP4105S14-15

Channel	-----	-----	-----	-----	-----	-----	-----	-----
377:	22	23	16	20	29	17	31	23
385:	18	24	25	16	21	18	19	19
393:	18	24	15	14	28	21	21	28
401:	18	19	16	21	28	18	22	20
409:	31	31	19	18	19	18	22	26
417:	28	18	21	25	19	19	23	16
425:	14	17	18	22	20	16	20	26
433:	16	18	17	18	16	16	28	10
441:	15	16	17	16	18	23	16	15
449:	22	14	15	12	16	24	21	12
457:	17	19	17	17	10	26	47	27
465:	14	22	8	12	13	14	15	17
473:	18	16	11	9	17	15	17	24
481:	18	19	14	17	17	16	11	13
489:	14	21	19	14	10	16	14	20
497:	12	12	13	15	13	13	9	13
505:	12	12	11	21	29	58	81	40
513:	13	22	10	19	13	6	16	14
521:	12	14	17	13	9	10	13	14
529:	17	12	11	17	14	15	24	12
537:	12	12	20	16	11	13	17	16
545:	14	11	12	12	17	16	11	8
553:	14	9	13	16	13	16	6	14
561:	13	15	21	17	15	7	12	21
569:	8	14	11	5	14	10	11	15
577:	15	12	17	15	15	53	167	72
585:	10	7	15	13	8	11	9	14
593:	12	8	12	14	13	11	16	10
601:	16	14	13	13	13	16	10	59
609:	252	115	25	9	16	9	13	13
617:	7	12	10	11	10	13	19	6
625:	11	11	9	5	11	17	11	10
633:	12	11	13	7	11	9	13	13
641:	9	12	8	6	9	8	14	12
649:	10	6	18	9	12	9	10	11
657:	9	9	14	12	6	9	11	13
665:	15	11	12	8	10	11	13	8
673:	7	11	13	7	9	6	14	10
681:	6	9	14	8	11	8	14	14
689:	11	6	12	21	11	8	8	13
697:	13	8	18	22	12	13	18	11
705:	7	13	16	11	10	10	16	12
713:	8	10	9	5	13	9	7	10
721:	19	4	12	6	8	13	41	29
729:	12	12	9	13	7	9	8	8
737:	11	10	16	9	8	7	10	8
745:	15	6	9	11	9	14	8	11
753:	6	11	11	16	16	6	10	6
761:	8	9	14	9	14	14	16	24
769:	23	9	13	7	9	11	11	7
777:	6	5	12	5	11	15	11	18
785:	17	13	5	7	8	9	10	8
793:	7	20	27	14	9	8	6	13

801: 12 9 6 5 8 6 10 8

Sample Title: CP4105S14-15

Channel	1	2	3	4	5	6	7	8
809:	11	12	7	6	6	7	7	6
817:	4	9	11	6	13	4	9	8
825:	5	12	11	8	9	5	17	13
833:	6	12	13	11	5	12	17	11
841:	9	11	11	7	6	9	6	7
849:	8	10	5	7	10	5	6	11
857:	9	5	10	25	20	11	8	6
865:	6	8	4	4	6	12	6	6
873:	6	9	7	6	8	7	8	3
881:	4	9	5	7	11	8	2	6
889:	9	5	8	9	11	3	10	9
897:	4	9	9	10	14	7	8	13
905:	9	8	7	5	13	44	97	54
913:	9	8	8	9	9	10	10	5
921:	5	8	7	5	8	8	3	5
929:	7	6	8	14	13	16	7	12
937:	9	4	8	6	8	8	10	4
945:	6	5	14	9	5	5	7	9
953:	5	7	6	9	8	9	3	5
961:	5	7	12	24	21	18	16	51
969:	62	30	9	12	8	10	11	5
977:	8	3	1	4	5	5	6	5
985:	7	6	6	4	14	6	6	6
993:	4	6	9	5	7	5	6	15
1001:	9	15	7	8	6	7	9	11
1009:	8	4	7	6	9	3	3	5
1017:	6	6	10	7	7	5	6	7
1025:	7	6	9	7	7	6	10	10
1033:	5	4	4	10	3	4	6	6
1041:	4	8	9	2	11	4	8	6
1049:	10	8	12	7	4	5	3	9
1057:	5	8	7	4	9	4	2	9
1065:	6	13	8	2	7	7	7	8
1073:	9	3	5	7	5	6	10	11
1081:	5	7	5	7	6	9	7	7
1089:	5	3	4	8	6	9	11	5
1097:	11	4	11	6	7	5	4	6
1105:	4	4	3	13	9	6	4	8
1113:	12	6	8	8	6	5	20	48
1121:	30	6	7	10	10	7	6	6
1129:	5	10	7	14	10	9	8	8
1137:	5	11	2	5	6	12	8	10
1145:	6	5	9	9	8	8	5	6
1153:	4	8	10	12	3	10	6	5
1161:	9	9	11	4	6	7	14	3
1169:	4	5	11	8	15	10	12	4
1177:	10	9	6	11	6	15	7	8
1185:	7	7	8	5	6	13	5	5
1193:	13	7	6	3	4	14	8	8
1201:	10	13	12	7	6	7	9	6
1209:	9	11	7	8	8	9	10	9
1217:	11	11	5	7	11	3	3	11
1225:	3	12	10	14	9	10	7	9

1233: 5 8 5 6 12 22 12 6

Sample Title: CP4105S14-15

Channel	-----	-----	-----	-----	-----	-----	-----	-----
1241:	9	7	7	9	9	6	8	8
1249:	7	4	3	3	2	6	8	10
1257:	8	4	5	7	6	6	7	6
1265:	8	5	6	8	3	4	6	8
1273:	8	9	3	9	4	6	2	15
1281:	11	5	5	4	3	5	5	4
1289:	6	6	12	7	7	2	5	7
1297:	8	3	6	8	2	5	2	5
1305:	8	3	6	2	7	3	2	3
1313:	2	1	5	4	4	3	3	4
1321:	8	7	3	3	0	7	3	4
1329:	2	3	6	3	5	4	4	4
1337:	2	1	4	3	4	5	2	1
1345:	4	4	10	2	2	3	6	0
1353:	4	2	3	2	0	5	2	4
1361:	4	4	7	4	4	5	3	1
1369:	3	2	4	4	2	3	7	13
1377:	7	7	6	2	4	4	3	6
1385:	4	1	2	0	5	1	5	2
1393:	5	2	4	2	4	3	1	6
1401:	9	4	5	0	1	3	9	6
1409:	6	3	4	4	4	2	4	0
1417:	3	4	1	2	2	3	2	4
1425:	2	2	1	4	3	3	4	3
1433:	1	1	3	7	4	3	2	4
1441:	3	3	1	3	0	3	4	3
1449:	4	1	6	1	3	6	3	1
1457:	3	22	106	263	257	81	14	0
1465:	3	2	2	4	2	2	2	0
1473:	3	3	1	5	3	1	3	1
1481:	3	2	2	0	2	2	1	0
1489:	1	2	1	2	3	3	2	6
1497:	0	4	1	6	1	2	2	0
1505:	3	0	4	3	4	1	4	2
1513:	4	6	0	4	2	1	1	3
1521:	2	0	3	2	2	1	3	2
1529:	0	4	2	2	5	3	0	4
1537:	6	4	2	1	1	3	3	0
1545:	1	0	1	2	1	0	2	1
1553:	2	1	0	3	1	0	1	2
1561:	4	2	2	3	0	2	2	2
1569:	0	1	0	3	5	1	1	3
1577:	2	1	2	1	1	10	5	2
1585:	1	1	7	4	4	5	6	2
1593:	1	2	2	3	2	1	2	1
1601:	0	3	1	2	4	3	1	1
1609:	0	3	2	1	1	1	0	1
1617:	3	2	3	2	6	2	1	1
1625:	2	1	0	2	5	5	3	1
1633:	3	0	0	2	5	1	0	3
1641:	2	1	0	4	0	2	0	2
1649:	3	3	1	1	2	2	1	0
1657:	2	2	0	4	4	1	0	1

1665: 2 2 1 1 2 1 2 2

Sample Title: CP4105S14-15

Channel	1	2	3	4	5	6	7	8
1673:	0	1	1	2	2	2	3	1
1681:	0	5	1	1	1	1	0	1
1689:	1	1	0	1	5	3	2	2
1697:	1	0	2	0	0	3	0	0
1705:	1	1	3	1	1	0	2	2
1713:	1	1	2	0	3	3	3	3
1721:	0	1	3	1	1	0	1	3
1729:	6	8	2	4	0	0	1	0
1737:	1	1	0	1	1	0	2	1
1745:	1	0	0	1	0	1	0	2
1753:	0	1	0	2	1	0	2	2
1761:	2	6	17	36	13	6	1	3
1769:	1	0	1	0	2	1	0	4
1777:	0	0	4	1	0	2	3	1
1785:	1	2	3	0	2	1	4	0
1793:	0	1	3	3	0	1	0	1
1801:	0	0	2	1	1	1	0	0
1809:	2	0	0	3	0	0	0	1
1817:	0	0	1	2	1	1	1	0
1825:	1	0	2	1	3	3	0	0
1833:	0	1	0	3	0	1	0	1
1841:	0	2	1	0	1	1	5	2
1849:	3	0	1	1	1	1	0	0
1857:	0	1	1	1	1	1	0	3
1865:	2	1	2	1	1	0	2	0
1873:	1	0	1	1	2	2	2	2
1881:	2	0	1	1	2	0	1	4
1889:	1	2	2	2	0	2	0	3
1897:	3	2	0	4	0	1	2	1
1905:	1	0	2	3	0	1	0	2
1913:	0	1	3	0	1	0	2	0
1921:	0	1	1	1	1	0	0	1
1929:	1	1	0	3	2	2	1	0
1937:	2	1	1	1	1	2	1	0
1945:	1	2	1	1	1	0	2	3
1953:	3	2	0	1	0	0	1	2
1961:	0	2	3	2	1	1	0	1
1969:	0	2	1	3	4	0	1	1
1977:	0	1	0	1	1	0	2	1
1985:	0	1	0	1	0	0	3	3
1993:	1	2	0	1	4	2	0	2
2001:	0	0	0	0	1	0	1	0
2009:	0	1	0	0	0	0	0	2
2017:	2	1	0	0	2	4	0	1
2025:	1	1	1	0	1	1	2	0
2033:	1	1	0	1	1	1	2	2
2041:	1	3	2	2	1	1	0	1
2049:	3	0	0	1	0	1	3	1
2057:	2	0	1	1	0	2	1	0
2065:	0	0	1	1	2	0	2	1
2073:	2	1	1	1	1	1	0	0
2081:	2	1	0	0	3	0	1	0
2089:	1	1	0	0	1	0	0	0

2097: 1 1 1 1 1 2 6 2

Sample Title: CP4105S14-15

Channel	1	2	3	4	5	6	7	8
2105:	1	2	2	2	1	1	0	2
2113:	0	0	3	1	4	1	1	0
2121:	0	1	1	1	0	1	0	2
2129:	0	5	0	0	0	0	1	0
2137:	4	1	0	1	1	0	1	3
2145:	0	1	1	2	0	0	0	1
2153:	0	0	2	0	2	3	2	0
2161:	1	0	1	1	0	0	1	2
2169:	1	0	0	1	1	0	1	2
2177:	3	1	2	0	0	2	1	0
2185:	1	4	1	1	1	0	0	2
2193:	0	1	1	0	2	0	0	3
2201:	3	4	1	7	3	2	3	2
2209:	4	2	0	0	2	2	0	1
2217:	1	1	1	1	0	2	0	0
2225:	0	1	0	0	0	1	1	1
2233:	4	2	0	0	3	0	2	1
2241:	1	1	1	1	1	0	2	0
2249:	1	2	1	1	1	0	1	0
2257:	1	1	0	0	0	0	0	2
2265:	1	1	1	1	1	0	2	1
2273:	1	3	0	1	0	2	2	0
2281:	0	1	1	1	1	2	2	2
2289:	1	0	2	4	3	1	1	2
2297:	1	1	1	1	2	1	2	0
2305:	0	1	1	1	0	2	0	1
2313:	0	2	0	0	0	2	0	1
2321:	0	0	1	0	0	1	0	0
2329:	1	1	2	1	0	2	2	2
2337:	3	0	2	1	0	1	1	2
2345:	1	0	1	2	1	1	0	2
2353:	3	1	1	1	0	1	1	1
2361:	0	4	0	0	2	0	0	2
2369:	0	0	2	3	0	1	0	1
2377:	0	2	2	0	0	0	0	0
2385:	1	1	0	1	2	0	3	1
2393:	0	0	1	3	1	0	1	1
2401:	1	2	0	1	1	0	2	0
2409:	1	1	1	0	0	1	0	0
2417:	0	1	2	0	0	2	0	0
2425:	1	0	1	0	2	1	0	1
2433:	1	4	0	1	0	0	1	0
2441:	1	2	0	1	1	1	3	2
2449:	2	2	0	0	2	1	0	0
2457:	1	0	1	0	2	0	1	1
2465:	1	1	1	1	1	1	0	1
2473:	1	1	1	0	0	2	0	3
2481:	2	0	1	2	0	1	3	2
2489:	0	1	0	0	1	1	0	0
2497:	2	1	1	1	0	0	0	0
2505:	0	0	0	1	1	0	2	0
2513:	0	0	0	1	1	1	0	0
2521:	1	0	0	0	1	0	0	0

2529: 1 0 0 0 0 0 0 0 2

Sample Title: CP4105S14-15

Channel	1	2	3	4	5	6	7	8	9
2537:	0	2	0	0	0	1	0	0	
2545:	1	1	1	0	0	0	1	0	
2553:	0	0	0	0	0	0	1	2	
2561:	1	0	0	0	0	0	0	0	
2569:	1	2	0	2	0	3	0	0	
2577:	0	1	0	1	0	0	1	1	
2585:	0	0	0	1	0	3	0	0	
2593:	0	0	0	0	2	0	1	1	
2601:	0	0	0	0	0	0	1	1	
2609:	1	1	11	16	33	34	14	4	
2617:	3	0	0	0	0	0	0	0	
2625:	0	0	0	1	0	2	0	1	
2633:	0	1	0	0	0	0	1	0	
2641:	0	0	0	0	0	0	0	0	
2649:	0	0	1	1	0	1	0	0	
2657:	0	0	0	0	0	0	0	0	
2665:	0	1	0	0	0	0	0	1	
2673:	0	0	0	1	1	0	0	0	
2681:	0	0	1	0	1	0	0	2	
2689:	1	1	1	1	0	1	0	1	
2697:	0	0	0	0	0	0	0	0	
2705:	0	0	0	0	0	0	0	1	
2713:	0	0	1	0	0	0	0	0	
2721:	0	0	0	0	0	0	0	0	
2729:	0	0	0	0	1	1	0	0	
2737:	0	0	0	0	0	1	0	0	
2745:	1	0	0	0	0	0	0	0	
2753:	0	0	0	0	0	0	1	0	
2761:	0	0	0	0	0	0	0	2	
2769:	0	0	0	0	0	1	0	0	
2777:	0	1	0	1	0	1	0	0	
2785:	0	1	0	0	1	0	1	0	
2793:	0	0	0	0	0	0	0	0	
2801:	0	0	1	0	0	0	1	1	
2809:	0	0	1	0	0	2	1	1	
2817:	1	1	1	1	0	0	0	0	
2825:	0	0	1	0	0	1	1	0	
2833:	0	0	0	0	0	1	0	1	
2841:	0	0	0	1	1	0	0	0	
2849:	0	0	0	0	0	0	0	0	
2857:	0	2	0	0	0	0	0	1	
2865:	0	0	0	0	0	0	0	0	
2873:	1	0	0	0	0	1	0	0	
2881:	0	0	0	0	0	0	0	0	
2889:	0	0	0	1	0	0	1	0	
2897:	0	0	1	0	1	0	0	0	
2905:	0	0	0	1	0	0	0	1	
2913:	1	0	0	0	0	0	0	1	
2921:	1	0	1	0	0	2	0	0	
2929:	1	0	0	0	1	1	1	0	
2937:	0	1	0	0	0	0	0	0	
2945:	0	0	0	0	0	1	0	0	
2953:	0	0	0	0	0	0	0	1	

2961: 0 1 0 1 1 0 0 0

Sample Title: CP4105S14-15

Channel	1	2	3	4	5	6	7	8	9
2969:	1	1	0	0	0	0	0	1	1
2977:	0	0	0	0	1	1	0	0	0
2985:	1	0	0	0	1	0	0	0	1
2993:	0	0	1	0	0	0	0	0	0
3001:	0	0	0	0	0	0	0	0	0
3009:	1	0	1	1	0	0	1	1	1
3017:	0	0	0	0	0	0	0	0	0
3025:	0	0	0	0	0	0	0	0	0
3033:	3	1	0	1	1	0	1	0	0
3041:	0	0	0	0	0	1	0	0	0
3049:	0	0	0	0	1	0	0	0	0
3057:	0	0	0	0	0	0	0	0	0
3065:	1	0	0	0	1	0	0	0	0
3073:	0	2	0	0	0	0	0	0	0
3081:	0	0	0	0	1	0	0	0	0
3089:	0	0	0	0	0	0	0	0	0
3097:	0	0	0	0	0	1	0	0	0
3105:	0	1	0	0	0	0	0	0	0
3113:	0	0	0	0	0	0	1	0	0
3121:	0	0	0	1	0	0	1	0	0
3129:	1	0	0	0	0	0	0	0	0
3137:	0	0	1	0	0	0	0	0	0
3145:	2	0	0	0	0	0	0	0	0
3153:	1	0	0	0	0	0	0	0	0
3161:	0	0	0	0	0	0	0	0	0
3169:	1	0	0	0	1	0	0	0	0
3177:	0	0	0	0	0	0	0	0	0
3185:	0	0	0	0	0	1	0	1	0
3193:	0	0	0	0	0	0	0	0	0
3201:	0	0	0	0	0	0	0	0	0
3209:	0	0	0	0	1	1	0	0	0
3217:	0	0	0	0	0	1	0	0	0
3225:	1	0	0	0	0	0	0	0	0
3233:	0	0	0	0	0	0	0	0	0
3241:	0	0	0	0	1	0	0	0	0
3249:	0	0	0	1	0	0	0	0	0
3257:	0	0	1	0	0	0	0	0	0
3265:	1	0	0	0	0	0	0	0	0
3273:	0	0	1	0	0	2	0	0	0
3281:	0	0	0	1	1	0	0	0	1
3289:	1	0	0	0	0	0	0	0	1
3297:	0	0	0	0	0	0	0	0	1
3305:	0	0	0	0	0	0	0	0	0
3313:	0	0	0	0	0	0	1	0	0
3321:	0	0	0	0	0	1	0	0	1
3329:	1	0	1	0	0	0	0	1	1
3337:	0	0	0	0	1	0	1	0	0
3345:	0	0	0	1	0	1	0	0	0
3353:	0	0	1	1	0	1	0	0	0
3361:	0	0	0	0	0	0	0	1	2
3369:	0	0	0	0	0	0	0	1	0
3377:	0	0	0	0	0	0	0	0	0
3385:	1	0	1	0	0	0	0	0	0

3393: 0 0 0 1 1 0 0 0

Sample Title: CP4105S14-15

Channel	1	2	3	4	5	6	7	8	9
3401:	0	0	0	0	0	1	0	0	0
3409:	1	0	1	0	0	0	0	0	0
3417:	0	0	0	0	0	1	0	0	0
3425:	0	0	0	0	0	0	1	0	0
3433:	0	0	0	0	0	0	0	0	1
3441:	0	0	0	0	0	0	0	0	1
3449:	0	0	1	0	0	0	1	0	0
3457:	0	0	1	1	0	0	0	0	1
3465:	0	0	0	0	0	1	0	0	0
3473:	0	1	0	0	1	0	1	0	0
3481:	0	0	0	0	1	0	0	0	1
3489:	0	0	0	0	2	0	0	0	0
3497:	0	2	0	1	0	0	0	0	1
3505:	0	0	0	0	0	0	0	0	0
3513:	0	1	0	0	0	0	0	0	0
3521:	1	0	0	0	0	0	0	0	0
3529:	0	0	0	0	0	0	0	0	0
3537:	0	0	0	0	0	0	1	0	0
3545:	0	0	0	1	0	0	0	0	1
3553:	0	2	0	1	0	0	0	0	0
3561:	0	0	0	1	1	0	0	0	1
3569:	0	0	0	0	0	0	0	0	0
3577:	0	1	0	0	0	0	0	0	0
3585:	0	0	0	0	0	0	0	0	0
3593:	0	0	0	0	0	0	0	0	1
3601:	0	0	0	0	0	1	0	0	0
3609:	0	0	1	0	0	0	0	0	0
3617:	0	0	0	0	0	0	0	0	0
3625:	0	0	0	1	0	0	0	0	0
3633:	0	0	0	0	0	1	0	0	0
3641:	0	0	0	0	0	0	0	0	0
3649:	0	0	0	0	0	1	0	0	0
3657:	0	0	0	0	0	0	0	0	0
3665:	1	0	0	0	0	0	0	0	0
3673:	0	0	0	0	0	0	0	0	0
3681:	2	1	0	0	0	0	0	0	0
3689:	0	0	0	0	1	0	0	0	0
3697:	0	0	0	0	0	0	0	0	0
3705:	0	0	0	0	0	0	0	0	0
3713:	0	0	0	1	0	0	0	0	0
3721:	0	0	0	0	0	0	0	0	1
3729:	0	0	0	0	0	0	0	0	0
3737:	0	0	1	0	0	0	0	0	0
3745:	0	1	0	0	0	0	0	0	0
3753:	0	0	0	0	0	0	1	0	0
3761:	0	1	0	0	0	0	0	0	0
3769:	0	0	0	0	0	0	0	0	0
3777:	0	0	0	0	0	1	0	0	0
3785:	0	0	0	0	0	0	0	0	0
3793:	0	0	1	0	0	0	0	0	0
3801:	0	0	0	1	1	0	0	0	0
3809:	0	0	0	0	0	0	1	0	0
3817:	0	1	0	0	0	0	0	0	0

3825: 0 0 0 0 0 0 0 0 0

Sample Title: CP4105S14-15

Channel	1	2	3	4	5	6	7	8	9
3833:	1	0	0	0	0	0	0	0	0
3841:	0	0	0	1	0	0	1	0	0
3849:	0	0	0	0	0	1	0	2	0
3857:	1	0	0	0	0	0	0	0	0
3865:	0	0	1	0	0	0	0	0	0
3873:	0	0	0	0	0	0	0	0	0
3881:	0	0	0	0	0	0	0	0	0
3889:	0	0	0	0	0	0	0	0	0
3897:	1	0	1	0	0	0	0	0	0
3905:	0	0	0	0	0	0	1	0	0
3913:	0	0	0	1	0	0	0	0	0
3921:	0	0	0	0	1	0	0	0	0
3929:	0	0	0	0	0	0	0	0	0
3937:	0	0	2	0	0	0	0	0	0
3945:	0	0	0	0	0	0	0	0	0
3953:	0	0	0	1	1	0	0	0	0
3961:	0	0	0	0	0	0	0	0	0
3969:	0	3	0	0	0	0	1	0	0
3977:	0	0	0	0	0	0	0	0	1
3985:	0	0	1	0	0	0	0	1	1
3993:	0	0	0	0	0	0	1	1	0
4001:	0	0	0	0	0	0	0	0	0
4009:	0	0	0	0	0	0	0	0	0
4017:	0	0	0	1	0	0	0	0	0
4025:	0	0	0	0	0	1	0	0	0
4033:	0	0	1	0	0	1	0	0	0
4041:	0	0	0	0	0	0	0	0	0
4049:	0	0	0	0	0	0	0	0	0
4057:	0	0	0	1	0	0	0	0	0
4065:	0	0	0	0	0	0	0	0	0
4073:	0	0	1	0	0	0	0	0	0
4081:	0	0	0	0	1	1	0	0	0
4089:	0	0	0	0	0	0	0	0	0

Analysis Report for 1510086-11
CP4105S14-15

GAMMA SPECTRUM ANALYSIS

Sample Identification : 1510086-11
Sample Description : CP4105S14-15
Sample Type : SOIL

Sample Size : 5.273E+02 grams
Facility : Countroom

Sample Taken On : 10/6/2015 7:56:42AM
Acquisition Started : 11/6/2015 12:25:19PM

Procedure : GAS-1402 pCi
Operator : Administrator
Detector Name : GE3
Geometry : GAS-1402
Live Time : 3600.0 seconds
Real Time : 3619.6 seconds

Dead Time : 0.54 %

Peak Locate Threshold : 2.50
Peak Locate Range (in channels) : 1 - 4096
Peak Area Range (in channels) : 9 - 4096
Identification Energy Tolerance : 1.000 keV

Energy Calibration Used Done On : 10/25/2014
Efficiency Calibration Used Done On : 10/25/2014
Efficiency Calibration Description :

Sample Number : 29312

PEAK-TO-TOTAL CALIBRATION REPORT

Peak-to-Total Efficiency Calibration Equation

AG
11/9/15

Analysis Report for 1510086-11
CP4105S14-15

PEAK LOCATE REPORT

Peak Locate Performed on : 11/9/2015 7:20:11AM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096
Peak Search Sensitivity : 2.50

Peak No.	Energy (keV)	Centroid Channel	Centroid Uncertainty	Peak Significance
1	62.53	62.75	0.0000	0.00
2	76.23	76.45	0.0000	0.00
3	92.79	92.99	0.0000	0.00
4	130.31	130.50	0.0000	0.00
5	138.92	139.10	0.0000	0.00
6	186.04	186.20	0.0000	0.00
7	209.27	209.41	0.0000	0.00
8	238.80	238.93	0.0000	0.00
9	242.05	242.17	0.0000	0.00
10	273.54	273.65	0.0000	0.00
11	295.22	295.32	0.0000	0.00
12	300.19	300.29	0.0000	0.00
13	327.68	327.77	0.0000	0.00
14	338.55	338.63	0.0000	0.00
15	352.02	352.09	0.0000	0.00
16	378.05	378.10	0.0000	0.00
17	510.90	510.89	0.0000	0.00
18	583.26	583.21	0.0000	0.00
19	609.37	609.32	0.0000	0.00
20	705.21	705.11	0.0000	0.00
21	727.51	727.40	0.0000	0.00
22	748.81	748.69	0.0000	0.00
23	755.13	755.00	0.0000	0.00
24	767.39	767.26	0.0000	0.00
25	860.43	860.25	0.0000	0.00
26	911.38	911.19	0.0000	0.00
27	964.77	964.55	0.0000	0.00
28	969.24	969.02	0.0000	0.00
29	1120.61	1120.33	0.0000	0.00
30	1208.65	1208.33	0.0000	0.00
31	1253.55	1253.21	0.0000	0.00
32	1368.45	1368.06	0.0000	0.00
33	1385.69	1385.30	0.0000	0.00
34	1460.80	1460.37	0.0000	0.00
35	1502.72	1502.28	0.0000	0.00
36	1618.54	1618.06	0.0000	0.00
37	1702.23	1701.72	0.0000	0.00
38	1729.38	1728.86	0.0000	0.00
39	1746.65	1746.13	0.0000	0.00
40	1764.46	1763.93	0.0000	0.00
41	1859.86	1859.30	0.0000	0.00
42	1963.60	1963.00	0.0000	0.00

Analysis Report for 1510086-11
CP4105S14-15

Peak No.	Energy (keV)	Centroid Channel	Centroid Uncertainty	Peak Significance
43	2103.56	2102.92	0.0000	0.00
44	2203.24	2202.57	0.0000	0.00
45	2448.23	2447.49	0.0000	0.00
46	2614.39	2613.61	0.0000	0.00

? = Adjacent peak noted
Errors quoted at 2.000sigma

Analysis Report for 1510086-11
CP4105S14-15

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 11/9/2015 7:20:11AM

Peak Analysis From Channel : 1
Peak Analysis To Channel : 4096

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	FWHM (keV)
1	62.53	59 -	66	62.75	1.61E+02	112.20	2.00E+03	1.32
2	76.23	71 -	81	76.45	1.19E+03	155.50	2.58E+03	3.78
3	92.79	90 -	97	92.99	3.29E+02	103.05	1.45E+03	2.19
4	130.31	126 -	135	130.50	1.72E+02	95.78	1.18E+03	3.75
5	138.92	136 -	143	139.10	8.66E+01	74.86	8.85E+02	4.53
6	186.04	183 -	188	186.20	1.50E+02	59.72	5.92E+02	1.78
7	209.27	207 -	213	209.41	6.57E+01	59.32	5.81E+02	2.07
M 8	238.80	233 -	248	238.93	7.99E+02	68.52	3.52E+02	1.80
m 9	242.05	233 -	248	242.17	1.93E+02	72.35	3.97E+02	1.89
10	273.54	267 -	280	273.65	1.88E+02	77.98	5.82E+02	8.58
11	295.22	292 -	298	295.32	2.29E+02	51.64	3.17E+02	1.93
12	300.19	299 -	303	300.29	3.95E+01	36.55	2.67E+02	1.78
13	327.68	324 -	330	327.77	3.84E+01	44.86	3.35E+02	1.23
14	338.55	335 -	342	338.63	1.35E+02	52.80	3.71E+02	1.96
15	352.02	347 -	355	352.09	4.30E+02	61.66	3.21E+02	1.73
16	378.05	375 -	381	378.10	3.75E+01	37.90	2.33E+02	1.06
17	510.90	505 -	517	510.89	1.42E+02	54.30	2.82E+02	2.56
18	583.26	580 -	586	583.21	2.04E+02	38.90	1.28E+02	2.09
19	609.37	603 -	614	609.32	2.88E+02	54.55	2.28E+02	2.07
20	705.21	701 -	708	705.11	2.51E+01	25.85	9.17E+01	1.74
21	727.51	724 -	731	727.40	4.98E+01	29.05	1.06E+02	1.96
M 22	748.81	747 -	761	748.69	2.29E+01	17.20	6.00E+01	2.77
m 23	755.13	747 -	761	755.00	2.22E+01	21.77	7.33E+01	2.09
24	767.39	763 -	770	767.26	5.01E+01	27.42	9.18E+01	4.45
25	860.43	857 -	864	860.25	2.14E+01	25.85	9.92E+01	1.59
26	911.38	906 -	915	911.19	1.48E+02	38.28	1.25E+02	1.79
M 27	964.77	958 -	977	964.55	3.12E+01	22.64	7.26E+01	2.26
m 28	969.24	958 -	977	969.02	8.22E+01	27.36	5.86E+01	2.48
29	1120.61	1117 -	1124	1120.33	5.57E+01	27.35	8.67E+01	1.48
30	1208.65	1204 -	1212	1208.33	2.48E+01	25.47	8.23E+01	4.01
31	1253.55	1251 -	1256	1253.21	1.40E+01	15.36	3.60E+01	3.00
32	1368.45	1365 -	1370	1368.06	9.40E+00	9.80	1.12E+01	2.52
33	1385.69	1382 -	1388	1385.30	1.20E+01	12.71	1.99E+01	3.15
34	1460.80	1453 -	1466	1460.37	5.21E+02	48.33	2.72E+01	2.33
35	1502.72	1500 -	1505	1502.28	6.86E+00	8.43	8.27E+00	1.80
36	1618.54	1614 -	1621	1618.06	9.20E+00	10.39	1.16E+01	2.20
37	1702.23	1696 -	1707	1701.72	1.40E+01	10.20	6.06E+00	8.29
38	1729.38	1724 -	1733	1728.86	2.20E+01	9.38	0.00E+00	2.12
39	1746.65	1743 -	1749	1746.13	5.14E+00	6.34	3.71E+00	2.97
40	1764.46	1760 -	1769	1763.93	4.62E+01	15.81	7.52E+00	1.98

Analysis Report for 1510086-11

CP4105S14-15

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	FWHM (keV)
41	1859.86	1856 -	1862	1859.30	5.21E+00	6.34	3.57E+00	1.85
42	1963.60	1959 -	1965	1963.00	7.00E+00	5.29	0.00E+00	1.88
43	2103.56	2099 -	2107	2102.92	2.40E+01	9.80	0.00E+00	2.35
44	2203.24	2196 -	2207	2202.57	1.28E+01	16.97	2.83E+01	3.25
45	2448.23	2443 -	2450	2447.49	7.28E+00	7.21	3.44E+00	1.50
46	2614.39	2609 -	2618	2613.61	8.40E+01	18.33	0.00E+00	2.97

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 11/9/2015 7:20:11AM

Peak Analysis From Channel : 1
Peak Analysis To Channel : 4096

Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
1	62.53	59 -	66	1.61E+02	112.20	2.00E+03	8.98E+01
2	76.23	71 -	81	1.19E+03	155.50	2.58E+03	1.15E+02
3	92.79	90 -	97	3.29E+02	103.05	1.45E+03	7.93E+01
4	130.31	126 -	135	1.72E+02	95.78	1.18E+03	7.57E+01
5	138.92	136 -	143	8.66E+01	74.86	8.85E+02	5.96E+01
6	186.04	183 -	188	1.50E+02	59.72	5.92E+02	4.48E+01
7	209.27	207 -	213	6.57E+01	59.32	5.81E+02	4.69E+01
M	238.80	233 -	248	7.99E+02	68.52	3.52E+02	3.09E+01
m	242.05	233 -	248	1.93E+02	72.35	3.97E+02	3.28E+01
10	273.54	267 -	280	1.88E+02	77.98	5.82E+02	6.00E+01
11	295.22	292 -	298	2.29E+02	51.64	3.17E+02	3.44E+01
12	300.19	299 -	303	3.95E+01	36.55	2.67E+02	2.82E+01
13	327.68	324 -	330	3.84E+01	44.86	3.35E+02	3.54E+01
14	338.55	335 -	342	1.35E+02	52.80	3.71E+02	3.90E+01
15	352.02	347 -	355	4.30E+02	61.66	3.21E+02	3.75E+01
16	378.05	375 -	381	3.75E+01	37.90	2.33E+02	2.95E+01
17	510.90	505 -	517	1.42E+02	54.30	2.82E+02	4.01E+01
18	583.26	580 -	586	2.04E+02	38.90	1.28E+02	2.17E+01
19	609.37	603 -	614	2.88E+02	54.55	2.28E+02	3.51E+01
20	705.21	701 -	708	2.51E+01	25.85	9.17E+01	1.96E+01
21	727.51	724 -	731	4.98E+01	29.05	1.06E+02	2.09E+01

: 00687

Analysis Report for 1510086-11

CP4105S14-15

	Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
M	22	748.81	747 -	761	2.29E+01	17.20	6.00E+01	1.27E+01
m	23	755.13	747 -	761	2.22E+01	21.77	7.33E+01	1.41E+01
	24	767.39	763 -	770	5.01E+01	27.42	9.18E+01	1.93E+01
	25	860.43	857 -	864	2.14E+01	25.85	9.92E+01	1.98E+01
	26	911.38	906 -	915	1.48E+02	38.28	1.25E+02	2.43E+01
M	27	964.77	958 -	977	3.12E+01	22.64	7.26E+01	1.40E+01
m	28	969.24	958 -	977	8.22E+01	27.36	5.86E+01	1.26E+01
	29	1120.61	1117 -	1124	5.57E+01	27.35	8.67E+01	1.88E+01
	30	1208.65	1204 -	1212	2.48E+01	25.47	8.23E+01	1.93E+01
	31	1253.55	1251 -	1256	1.40E+01	15.36	3.60E+01	1.10E+01
	32	1368.45	1365 -	1370	9.40E+00	9.80	1.12E+01	6.28E+00
	33	1385.69	1382 -	1388	1.20E+01	12.71	1.99E+01	8.75E+00
	34	1460.80	1453 -	1466	5.21E+02	48.33	2.72E+01	1.30E+01
	35	1502.72	1500 -	1505	6.86E+00	8.43	8.27E+00	5.42E+00
	36	1618.54	1614 -	1621	9.20E+00	10.39	1.16E+01	6.94E+00
	37	1702.23	1696 -	1707	1.40E+01	10.20	6.06E+00	5.70E+00
	38	1729.38	1724 -	1733	2.20E+01	9.38	0.00E+00	0.00E+00
	39	1746.65	1743 -	1749	5.14E+00	6.34	3.71E+00	3.65E+00
	40	1764.46	1760 -	1769	4.62E+01	15.81	7.52E+00	6.63E+00
	41	1859.86	1856 -	1862	5.21E+00	6.34	3.57E+00	3.62E+00
	42	1963.60	1959 -	1965	7.00E+00	5.29	0.00E+00	0.00E+00
	43	2103.56	2099 -	2107	2.40E+01	9.80	0.00E+00	0.00E+00
	44	2203.24	2196 -	2207	1.28E+01	16.97	2.83E+01	1.26E+01
	45	2448.23	2443 -	2450	7.28E+00	7.21	3.44E+00	3.93E+00
	46	2614.39	2609 -	2618	8.40E+01	18.33	0.00E+00	0.00E+00

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

PEAK WITH NID REPORT

Peak Analysis Performed on : 11/9/2015 7:20:11AM

Peak Analysis From Channel : 1

Peak Analysis To Channel : 4096

Tentative NID Library : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

Peak Match Tolerance : 1.000 keV

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
----------	--------------	-----------	---------	---------------	---------------	----------------------	------------------	-------------------

: 00688

Analysis Report for 1510086-11

CP4105S14-15

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
1	62.53	59 -	66	62.75	1.61E+02	112.20	2.00E+03	TH-230 TH-234
2	76.23	71 -	81	76.45	1.19E+03	155.50	2.58E+03	.....
3	92.79	90 -	97	92.99	3.29E+02	103.05	1.45E+03	GA-67
4	130.31	126 -	135	130.50	1.72E+02	95.78	1.18E+03	PA-234
5	138.92	136 -	143	139.10	8.66E+01	74.86	8.85E+02	.....
6	186.04	183 -	188	186.20	1.50E+02	59.72	5.92E+02	RA-226
7	209.27	207 -	213	209.41	6.57E+01	59.32	5.81E+02	GA-67 CM-243
M m 8	238.80	233 -	248	238.93	7.99E+02	68.52	3.52E+02	PB-212
9	242.05	233 -	248	242.17	1.93E+02	72.35	3.97E+02	.....
10	273.54	267 -	280	273.65	1.88E+02	77.98	5.82E+02	CS-136
11	295.22	292 -	298	295.32	2.29E+02	51.64	3.17E+02	PB-214
12	300.19	299 -	303	300.29	3.95E+01	36.55	2.67E+02	GA-67 PB-212 BI-210M
13	327.68	324 -	330	327.77	3.84E+01	44.86	3.35E+02	.....
14	338.55	335 -	342	338.63	1.35E+02	52.80	3.71E+02	AC-228
15	352.02	347 -	355	352.09	4.30E+02	61.66	3.21E+02	PB-214
16	378.05	375 -	381	378.10	3.75E+01	37.90	2.33E+02	.....
17	510.90	505 -	517	510.89	1.42E+02	54.30	2.82E+02	.....
18	583.26	580 -	586	583.21	2.04E+02	38.90	1.28E+02	TL-208
19	609.37	603 -	614	609.32	2.88E+02	54.55	2.28E+02	BI-214
20	705.21	701 -	708	705.11	2.51E+01	25.85	9.17E+01	.....
21	727.51	724 -	731	727.40	4.98E+01	29.05	1.06E+02	BI-212
M m 22	748.81	747 -	761	748.69	2.29E+01	17.20	6.00E+01	.....
23	755.13	747 -	761	755.00	2.22E+01	21.77	7.33E+01	.....
24	767.39	763 -	770	767.26	5.01E+01	27.42	9.18E+01	.....
25	860.43	857 -	864	860.25	2.14E+01	25.85	9.92E+01	TL-208
26	911.38	906 -	915	911.19	1.48E+02	38.28	1.25E+02	AC-228 LU-172
M m 27	964.77	958 -	977	964.55	3.12E+01	22.64	7.26E+01	EU-152
28	969.24	958 -	977	969.02	8.22E+01	27.36	5.86E+01	AC-228
29	1120.61	1117 -	1124	1120.33	5.57E+01	27.35	8.67E+01	SC-46 BI-214 TA-182
30	1208.65	1204 -	1212	1208.33	2.48E+01	25.47	8.23E+01	.....
31	1253.55	1251 -	1256	1253.21	1.40E+01	15.36	3.60E+01	.....
32	1368.45	1365 -	1370	1368.06	9.40E+00	9.80	1.12E+01	NA-24
33	1385.69	1382 -	1388	1385.30	1.20E+01	12.71	1.99E+01	.....
34	1460.80	1453 -	1466	1460.37	5.21E+02	48.33	2.72E+01	K-40
35	1502.72	1500 -	1505	1502.28	6.86E+00	8.43	8.27E+00	.....
36	1618.54	1614 -	1621	1618.06	9.20E+00	10.39	1.16E+01	.....
37	1702.23	1696 -	1707	1701.72	1.40E+01	10.20	6.06E+00	.....
38	1729.38	1724 -	1733	1728.86	2.20E+01	9.38	0.00E+00	.....
39	1746.65	1743 -	1749	1746.13	5.14E+00	6.34	3.71E+00	.....
40	1764.46	1760 -	1769	1763.93	4.62E+01	15.81	7.52E+00	BI-214
41	1859.86	1856 -	1862	1859.30	5.21E+00	6.34	3.57E+00	.....
42	1963.60	1959 -	1965	1963.00	7.00E+00	5.29	0.00E+00	.....
43	2103.56	2099 -	2107	2102.92	2.40E+01	9.80	0.00E+00	.....
44	2203.24	2196 -	2207	2202.57	1.28E+01	16.97	2.83E+01	BI-214
45	2448.23	2443 -	2450	2447.49	7.28E+00	7.21	3.44E+00	.....
46	2614.39	2609 -	2618	2613.61	8.40E+01	18.33	0.00E+00	TL-208

Analysis Report for 1510086-11
CP4105S14-15

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.00sigma

PEAK EFFICIENCY REPORT

Peak Analysis Performed on : 11/9/2015 7:20:11AM

	Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
	1	62.53	1.61E+02	112.20	2.14E-02	1.68E-03
	2	76.23	1.19E+03	155.50	2.38E-02	2.14E-03
	3	92.79	3.29E+02	103.05	2.44E-02	2.41E-03
	4	130.31	1.72E+02	95.78	2.24E-02	1.69E-03
	5	138.92	8.66E+01	74.86	2.18E-02	1.65E-03
	6	186.04	1.50E+02	59.72	1.83E-02	1.42E-03
	7	209.27	6.57E+01	59.32	1.68E-02	1.31E-03
M	8	238.80	7.99E+02	68.52	1.52E-02	1.18E-03
m	9	242.05	1.93E+02	72.35	1.51E-02	1.17E-03
	10	273.54	1.88E+02	77.98	1.37E-02	1.02E-03
	11	295.22	2.29E+02	51.64	1.28E-02	9.74E-04
	12	300.19	3.95E+01	36.55	1.26E-02	9.67E-04
	13	327.68	3.84E+01	44.86	1.18E-02	9.28E-04
	14	338.55	1.35E+02	52.80	1.14E-02	9.13E-04
	15	352.02	4.30E+02	61.66	1.11E-02	8.94E-04
	16	378.05	3.75E+01	37.90	1.04E-02	8.57E-04
	17	510.90	1.42E+02	54.30	8.01E-03	7.18E-04
	18	583.26	2.04E+02	38.90	7.14E-03	6.46E-04
	19	609.37	2.88E+02	54.55	6.87E-03	6.20E-04
	20	705.21	2.51E+01	25.85	6.05E-03	5.32E-04
	21	727.51	4.98E+01	29.05	5.89E-03	5.14E-04
M	22	748.81	2.29E+01	17.20	5.74E-03	4.97E-04
m	23	755.13	2.22E+01	21.77	5.70E-03	4.91E-04
	24	767.39	5.01E+01	27.42	5.62E-03	4.81E-04
	25	860.43	2.14E+01	25.85	5.10E-03	4.05E-04
	26	911.38	1.48E+02	38.28	4.85E-03	3.72E-04
M	27	964.77	3.12E+01	22.64	4.62E-03	3.62E-04
m	28	969.24	8.22E+01	27.36	4.60E-03	3.61E-04
	29	1120.61	5.57E+01	27.35	4.08E-03	3.33E-04
	30	1208.65	2.48E+01	25.47	3.83E-03	3.16E-04
	31	1253.55	1.40E+01	15.36	3.72E-03	3.06E-04
	32	1368.45	9.40E+00	9.80	3.47E-03	2.83E-04
	33	1385.69	1.20E+01	12.71	3.43E-03	2.81E-04
	34	1460.80	5.21E+02	48.33	3.29E-03	2.69E-04

Analysis Report for 1510086-11
CP4105S14-15

Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
35	1502.72	6.86E+00	8.43	3.22E-03	2.63E-04
36	1618.54	9.20E+00	10.39	3.04E-03	2.46E-04
37	1702.23	1.40E+01	10.20	2.93E-03	2.33E-04
38	1729.38	2.20E+01	9.38	2.90E-03	2.29E-04
39	1746.65	5.14E+00	6.34	2.88E-03	2.27E-04
40	1764.46	4.62E+01	15.81	2.86E-03	2.24E-04
41	1859.86	5.21E+00	6.34	2.75E-03	2.13E-04
42	1963.60	7.00E+00	5.29	2.65E-03	2.13E-04
43	2103.56	2.40E+01	9.80	2.54E-03	2.13E-04
44	2203.24	1.28E+01	16.97	2.46E-03	2.13E-04
45	2448.23	7.28E+00	7.21	2.32E-03	2.13E-04
46	2614.39	8.40E+01	18.33	2.24E-03	2.13E-04

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000 sigma

BACKGROUND SUBTRACT REPORT

Peak Analysis Performed on : 11/9/2015 7:20:11AM

Env. Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000028943.CNF

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.	
1	62.53	1.61E+02	112.20			1.61E+02	1.12E+02	
2	76.23	1.19E+03	155.50			1.19E+03	1.55E+02	
3	92.79	3.29E+02	103.05	9.04E+01	2.62E+01	2.39E+02	1.06E+02	
4	130.31	1.72E+02	95.78			1.72E+02	9.58E+01	
5	138.92	8.66E+01	74.86	4.51E+00	4.44E+00	8.21E+01	7.50E+01	
6	186.04	1.50E+02	59.72	3.93E+01	6.56E+00	1.10E+02	6.01E+01	
7	209.27	6.57E+01	59.32			6.57E+01	5.93E+01	
M	8	238.80	7.99E+02	68.52	1.34E+01	2.14E+00	7.86E+02	6.85E+01
m	9	242.05	1.93E+02	72.35	2.69E+00	1.46E+00	1.91E+02	7.24E+01
10	273.54	1.88E+02	77.98			1.88E+02	7.80E+01	
11	295.22	2.29E+02	51.64			2.29E+02	5.16E+01	
12	300.19	3.95E+01	36.55			3.95E+01	3.65E+01	
13	327.68	3.84E+01	44.86			3.84E+01	4.49E+01	
14	338.55	1.35E+02	52.80			1.35E+02	5.28E+01	
15	352.02	4.30E+02	61.66	3.99E+00	4.73E+00	4.26E+02	6.18E+01	
16	378.05	3.75E+01	37.90			3.75E+01	3.79E+01	
17	510.90	1.42E+02	54.30	5.78E+01	4.60E+00	8.43E+01	5.45E+01	
18	583.26	2.04E+02	38.90	5.96E+00	3.46E+00	1.98E+02	3.91E+01	

0690A

Analysis Report for 1510086-11

CP4105S14-15

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.	
	19	609.37	2.88E+02	54.55	6.71E+00	3.44E+00	2.81E+02	5.47E+01
	20	705.21	2.51E+01	25.85			2.51E+01	2.58E+01
	21	727.51	4.98E+01	29.05			4.98E+01	2.91E+01
M	22	748.81	2.29E+01	17.20			2.29E+01	1.72E+01
m	23	755.13	2.22E+01	21.77			2.22E+01	2.18E+01
	24	767.39	5.01E+01	27.42			5.01E+01	2.74E+01
	25	860.43	2.14E+01	25.85			2.14E+01	2.58E+01
	26	911.38	1.48E+02	38.28	2.32E+00	2.73E+00	1.45E+02	3.84E+01
M	27	964.77	3.12E+01	22.64			3.12E+01	2.26E+01
m	28	969.24	8.22E+01	27.36			8.22E+01	2.74E+01
	29	1120.61	5.57E+01	27.35	2.00E+00	2.20E+00	5.37E+01	2.74E+01
	30	1208.65	2.48E+01	25.47			2.48E+01	2.55E+01
	31	1253.55	1.40E+01	15.36			1.40E+01	1.54E+01
	32	1368.45	9.40E+00	9.80			9.40E+00	9.80E+00
	33	1385.69	1.20E+01	12.71			1.20E+01	1.27E+01
	34	1460.80	5.21E+02	48.33	2.36E+00	1.83E+00	5.19E+02	4.84E+01
	35	1502.72	6.86E+00	8.43			6.86E+00	8.43E+00
	36	1618.54	9.20E+00	10.39			9.20E+00	1.04E+01
	37	1702.23	1.40E+01	10.20			1.40E+01	1.02E+01
	38	1729.38	2.20E+01	9.38			2.20E+01	9.38E+00
	39	1746.65	5.14E+00	6.34			5.14E+00	6.34E+00
	40	1764.46	4.62E+01	15.81	1.45E+00	1.16E+00	4.48E+01	1.59E+01
	41	1859.86	5.21E+00	6.34			5.21E+00	6.34E+00
	42	1963.60	7.00E+00	5.29			7.00E+00	5.29E+00
	43	2103.56	2.40E+01	9.80			2.40E+01	9.80E+00
	44	2203.24	1.28E+01	16.97			1.28E+01	1.70E+01
	45	2448.23	7.28E+00	7.21			7.28E+00	7.21E+00
	46	2614.39	8.40E+01	18.33	2.66E+00	1.22E+00	8.13E+01	1.84E+01

M = First peak in a multiplet region
 m = Other peak in a multiplet region
 F = Fitted singlet
 Errors quoted at 2.000sigma

AREA CORRECTION REPORT REFERENCE PEAK / BKG. SUBTRACT

Peak Analysis Performed on : 11/9/2015 7:20:11AM
 Ref. Peak Energy : 0.00 Reference Date :
 Peak Ratio : 0.00 Uncertainty : 0.00
 Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000028943.CNF

Corrected Area is: Original * Peak Ratio - Background

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
----------	--------------	---------------	------------------------	--------------------	-----------------	----------------	-------------------

Analysis Report for 1510086-11

CP4105S14-15

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
1	62.53	1.61E+02	112.20			1.61E+02	1.12E+02
2	76.23	1.19E+03	155.50			1.19E+03	1.55E+02
3	92.79	3.29E+02	103.05	9.04E+01	2.62E+01	2.39E+02	1.06E+02
4	130.31	1.72E+02	95.78			1.72E+02	9.58E+01
5	138.92	8.66E+01	74.86	4.51E+00	4.44E+00	8.21E+01	7.50E+01
6	186.04	1.50E+02	59.72	3.93E+01	6.56E+00	1.10E+02	6.01E+01
7	209.27	6.57E+01	59.32			6.57E+01	5.93E+01
M	8	238.80	7.99E+02	1.34E+01	2.14E+00	7.86E+02	6.85E+01
m	9	242.05	1.93E+02	2.69E+00	1.46E+00	1.91E+02	7.24E+01
	10	273.54	1.88E+02			1.88E+02	7.80E+01
	11	295.22	2.29E+02			2.29E+02	5.16E+01
	12	300.19	3.95E+01			3.95E+01	3.65E+01
	13	327.68	3.84E+01			3.84E+01	4.49E+01
	14	338.55	1.35E+02			1.35E+02	5.28E+01
	15	352.02	4.30E+02	3.99E+00	4.73E+00	4.26E+02	6.18E+01
	16	378.05	3.75E+01			3.75E+01	3.79E+01
	17	510.90	1.42E+02	5.78E+01	4.60E+00	8.43E+01	5.45E+01
	18	583.26	2.04E+02	5.96E+00	3.46E+00	1.98E+02	3.91E+01
	19	609.37	2.88E+02	6.71E+00	3.44E+00	2.81E+02	5.47E+01
	20	705.21	2.51E+01			2.51E+01	2.58E+01
	21	727.51	4.98E+01			4.98E+01	2.91E+01
M	22	748.81	2.29E+01			2.29E+01	1.72E+01
m	23	755.13	2.22E+01			2.22E+01	2.18E+01
	24	767.39	5.01E+01			5.01E+01	2.74E+01
	25	860.43	2.14E+01			2.14E+01	2.58E+01
	26	911.38	1.48E+02	2.32E+00	2.73E+00	1.45E+02	3.84E+01
M	27	964.77	3.12E+01			3.12E+01	2.26E+01
m	28	969.24	8.22E+01			8.22E+01	2.74E+01
	29	1120.61	5.57E+01	2.00E+00	2.20E+00	5.37E+01	2.74E+01
	30	1208.65	2.48E+01			2.48E+01	2.55E+01
	31	1253.55	1.40E+01			1.40E+01	1.54E+01
	32	1368.45	9.40E+00			9.40E+00	9.80E+00
	33	1385.69	1.20E+01			1.20E+01	1.27E+01
	34	1460.80	5.21E+02	2.36E+00	1.83E+00	5.19E+02	4.84E+01
	35	1502.72	6.86E+00			6.86E+00	8.43E+00
	36	1618.54	9.20E+00			9.20E+00	1.04E+01
	37	1702.23	1.40E+01			1.40E+01	1.02E+01
	38	1729.38	2.20E+01			2.20E+01	9.38E+00
	39	1746.65	5.14E+00			5.14E+00	6.34E+00
	40	1764.46	4.62E+01	1.45E+00	1.16E+00	4.48E+01	1.59E+01
	41	1859.86	5.21E+00			5.21E+00	6.34E+00
	42	1963.60	7.00E+00			7.00E+00	5.29E+00
	43	2103.56	2.40E+01			2.40E+01	9.80E+00
	44	2203.24	1.28E+01			1.28E+01	1.70E+01
	45	2448.23	7.28E+00			7.28E+00	7.21E+00
	46	2614.39	8.40E+01	2.66E+00	1.22E+00	8.13E+01	1.84E+01

M = First peak in a multiplet region

m = Other peak in a multiplet region

F = Fitted singlet

Errors quoted at 2.00sigma

Analysis Report for 1510086-11
CP4105S14-15

NUCLIDE IDENTIFICATION REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

IDENTIFIED NUCLIDES

Nuclide Name	Id Confidence	Energy (keV)	Yield(%)	Activity (pCi/grams)	Activity Uncertainty
K-40	1.000	1460.81 *	10.67	2.10E+01	2.64E+00
GA-67	0.614	93.31 *	35.70	2.96E+02	1.26E+03
		208.95 *	2.24	1.89E+03	7.87E+03
		300.22 *	16.00	2.11E+02	9.13E+02
TL-208	0.993	583.14 *	30.22	1.31E+00	2.84E-01
		860.37 *	4.48	1.34E+00	1.62E+00
		2614.66 *	35.85	1.44E+00	3.53E-01
BI-212	0.756	727.17 *	11.80	1.02E+00	6.02E-01
		1620.62	2.75		
PB-212	0.995	238.63 *	44.60	1.65E+00	1.92E-01
		300.09 *	3.41	1.31E+00	1.21E+00
BI-214	0.987	609.31 *	46.30	1.26E+00	2.70E-01
		1120.29 *	15.10	1.24E+00	6.43E-01
		1764.49 *	15.80	1.41E+00	5.12E-01
		2204.22 *	4.98	1.49E+00	1.97E+00
PB-214	0.999	295.21 *	19.19	1.33E+00	3.15E-01
		351.92 *	37.19	1.48E+00	2.45E-01
RA-226	0.995	186.21 *	3.28	2.62E+00	5.01E+00
AC-228	0.990	338.32 *	11.40	1.48E+00	5.89E-01
		911.07 *	27.70	1.54E+00	4.23E-01
		969.11 *	16.60	1.53E+00	5.24E-01
PA-234	0.413	131.20 *	20.40	5.36E-01	3.01E-01
		733.99	8.80		
		946.00	12.00		
TH-234	0.911	63.29 *	3.80	2.82E+00	1.98E+00

* = Energy line found in the spectrum.

- = Manually added nuclide.

? = Manually edited nuclide.

Energy Tolerance : 1.000 keV

Nuclide confidence index threshold = 0.30

Errors quoted at 2.000sigma

Analysis Report for 1510086-11
CP4105S14-15

UNIDENTIFIED PEAKS

Peak Locate Performed on : 11/9/2015 7:20:11AM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
	2	76.23	3.31292E-01		
	5	138.92	2.27932E-02		
m	9	242.05	5.29341E-02		
	10	273.54	5.21912E-02	Tol.	CS-136
	13	327.68	1.06580E-02		
	16	378.05	1.04113E-02		
	17	510.90	2.34263E-02		
	20	705.21	6.98357E-03		
M	22	748.81	6.37100E-03		
m	23	755.13	6.16395E-03		
	24	767.39	1.39135E-02		
M	27	964.77	8.66478E-03	Tol.	EU-152
	30	1208.65	6.90025E-03	Sum	
	31	1253.55	3.88889E-03	S-Esc	
	32	1368.45	2.61111E-03		
	33	1385.69	3.34596E-03		
	35	1502.72	1.90657E-03		
	36	1618.54	2.55556E-03		
	37	1702.23	3.88072E-03		
	38	1729.38	6.11111E-03	Sum	
	39	1746.65	1.42857E-03		
	41	1859.86	1.44841E-03		
	42	1963.60	1.94444E-03		
	43	2103.56	6.66667E-03	S-Esc	
	45	2448.23	2.02160E-03		

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

NUCLIDE IDENTIFICATION REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

IDENTIFIED NUCLIDES

Analysis Report for 1510086-11
CP4105S14-15

Nuclide Name	Id Confidence	Energy (keV)		Yield(%)	Activity (pCi/grams)	Activity Uncertainty
K-40	1.00	1460.81 *		10.67	2.10E+01	2.64E+00
GA-67	0.61	93.31 *		35.70	2.96E+02	1.26E+03
		208.95 *		2.24	1.89E+03	7.87E+03
		300.22 *		16.00	2.11E+02	9.13E+02
TL-208	0.99	583.14 *		30.22	1.31E+00	2.84E-01
		860.37 *		4.48	1.34E+00	1.62E+00
		2614.66 *		35.85	1.44E+00	3.53E-01
BI-212	0.75	727.17 *		11.80	1.02E+00	6.02E-01
		1620.62		2.75		
PB-212	0.99	238.63 *		44.60	1.65E+00	1.92E-01
		300.09 *		3.41	1.31E+00	1.21E+00
BI-214	0.98	609.31 *		46.30	1.26E+00	2.70E-01
		1120.29 *		15.10	1.24E+00	6.43E-01
		1764.49 *		15.80	1.41E+00	5.12E-01
		2204.22 *		4.98	1.49E+00	1.97E+00
PB-214	0.99	295.21 *		19.19	1.33E+00	3.15E-01
		351.92 *		37.19	1.48E+00	2.45E-01
RA-226	0.99	186.21 *		3.28	2.62E+00	5.01E+00
AC-228	0.99	338.32 *		11.40	1.48E+00	5.89E-01
		911.07 *		27.70	1.54E+00	4.23E-01
		969.11 *		16.60	1.53E+00	5.24E-01
PA-234	0.41	131.20 *		20.40	5.36E-01	3.01E-01
		733.99		8.80		
		946.00		12.00		
TH-234	0.91	63.29 *		3.80	2.82E+00	1.98E+00

* = Energy line found in the spectrum.
 - = Manually added nuclide.
 ? = Manually edited nuclide.
 @ = Energy line not used for Weighted Mean Activity
 Energy Tolerance : 1.000 keV
 Nuclide confidence index threshold = 0.30
 Errors quoted at 2.000sigma

INTERFERENCE CORRECTED REPORT

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
--------------	-----------------------	------------------------------	------------------------------	----------

Analysis Report for 1510086-11
CP4105S14-15

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40	1.000	2.10E+01	2.64E+00	
GA-67	0.614	1.92E+02	7.89E+02	
TL-208	0.993	1.36E+00	2.19E-01	
BI-212	0.756	1.02E+00	6.02E-01	
PB-212	0.995	1.61E+00	1.91E-01	
BI-214	0.987	1.29E+00	2.22E-01	
PB-214	0.999	1.42E+00	1.94E-01	
RA-226	0.995	2.62E+00	5.01E+00	
AC-228	0.990	1.52E+00	2.87E-01	
PA-234	0.413	5.36E-01	3.01E-01	
TH-234	0.911	2.82E+00	1.98E+00	

- ? = nuclide is part of an undetermined solution
 X = nuclide rejected by the interference analysis
 @ = nuclide contains energy lines not used in Weighted Mean Activity

Errors quoted at 2.000sigma

Analysis Report for 1510086-11
CP4105S14-15

UNIDENTIFIED PEAKS

Peak Locate Performed on : 11/9/2015 7:20:11AM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
2	76.23	3.31292E-01	6.52		
5	138.92	2.27932E-02	45.70		
m 9	242.05	5.29341E-02	18.99		
10	273.54	5.21912E-02	20.75	Tol.	CS-136
13	327.68	1.06580E-02	58.46		
16	378.05	1.04113E-02	50.57		
17	510.90	2.34263E-02	32.31		
20	705.21	6.98357E-03	51.40		
M 22	748.81	6.37100E-03	37.51		
m 23	755.13	6.16395E-03	49.06		
24	767.39	1.39135E-02	27.37		
M 27	964.77	8.66478E-03	36.29	Tol.	EU-152
30	1208.65	6.90025E-03	51.27	Sum	
31	1253.55	3.88889E-03	54.87	S-Esc	
32	1368.45	2.61111E-03	52.12		
33	1385.69	3.34596E-03	52.75		
35	1502.72	1.90657E-03	61.38		
36	1618.54	2.55556E-03	56.48		
37	1702.23	3.88072E-03	36.50		
38	1729.38	6.11111E-03	21.32	Sum	
39	1746.65	1.42857E-03	61.68		
41	1859.86	1.44841E-03	60.84		
42	1963.60	1.94444E-03	37.80		
43	2103.56	6.66667E-03	20.41	S-Esc	
45	2448.23	2.02160E-03	49.54		

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

Analysis Report for 1510086-11
CP4105S14-15

NUCLIDE MDA REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	BE-7	477.59	10.42	-5.66E-01	1.10E+00	1.10E+00
+	NA-22	1274.54	99.94	1.04E-02	1.15E-01	1.15E-01
+	NA-24	1368.53	99.99	9.93E+12	5.16E+13	1.04E+14
		2754.09	99.86	-3.04E+13		5.16E+13
+	AL-26	1808.65	99.76	0.00E+00	7.63E-02	7.63E-02
+	K-40	1460.81	* 10.67	2.10E+01	1.19E+00	1.19E+00
+	@ AR-41	1293.64	99.16	1.00E+26	1.00E+26	1.00E+26
+	TI-44	67.88	94.40	5.22E-02	8.31E-02	8.31E-02
		78.34	96.00	2.69E-01		1.03E-01
+	SC-46	889.25	99.98	2.87E-02	1.21E-01	1.21E-01
		1120.51	99.99	1.85E-01		2.17E-01
+	V-48	983.52	99.98	-7.87E-02	3.42E-01	3.42E-01
		1312.10	97.50	-4.27E-02		4.24E-01
+	CR-51	320.08	9.83	-2.79E-02	1.63E+00	1.63E+00
+	MN-54	834.83	99.97	1.37E-02	1.15E-01	1.15E-01
+	CO-56	846.75	99.96	-8.09E-03	1.32E-01	1.32E-01
		1037.75	14.03	-2.72E-01		9.17E-01
		1238.25	67.00	1.07E-01		3.00E-01
		1771.40	15.51	-9.89E-02		5.56E-01
		2598.48	16.90	-1.32E-01		3.63E-01
+	CO-57	122.06	85.51	-1.96E-02	6.76E-02	6.76E-02
		136.48	10.60	-2.01E-01		5.60E-01
+	CO-58	810.76	99.40	2.27E-03	1.16E-01	1.16E-01
+	FE-59	1099.22	56.50	-2.21E-01	3.06E-01	3.06E-01
		1291.56	43.20	2.55E-02		4.84E-01
+	CO-60	1173.22	100.00	5.88E-02	1.15E-01	1.34E-01
		1332.49	100.00	2.32E-02		1.15E-01
+	ZN-65	1115.52	50.75	8.16E-02	2.62E-01	2.62E-01
+	GA-67	93.31	* 35.70	2.96E+02	2.11E+02	2.11E+02
		208.95	* 2.24	1.89E+03		2.77E+03
		300.22	* 16.00	2.11E+02		3.16E+02
+	SE-75	121.11	16.70	-1.99E-01	1.08E-01	3.80E-01
		136.00	59.20	-9.51E-02		1.08E-01
		264.65	59.80	-6.97E-02		1.40E-01
		279.53	25.20	5.80E-02		3.63E-01
		400.65	11.40	3.21E-01		8.85E-01
+	RB-82	776.52	13.00	-9.20E-01	1.62E+00	1.62E+00
+	RB-83	520.41	46.00	9.61E-02	2.31E-01	2.31E-01
		529.64	30.30	2.04E-02		3.53E-01
		552.65	16.40	3.83E-02		6.12E-01
+	KR-85	513.99	0.43	2.62E+01	2.66E+01	2.66E+01
+	SR-85	513.99	99.27	1.59E-01	1.61E-01	1.61E-01

Analysis Report for 1510086-11
CP4105S14-15

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	Y-88	898.02	93.40	-1.58E-01	8.91E-02	1.06E-01
		1836.01	99.38	1.02E-02		8.91E-02
+	NB-93M	16.57	9.43	4.75E+01	9.21E+01	9.21E+01
+	NB-94	702.63	100.00	9.03E-03	9.28E-02	9.50E-02
		871.10	100.00	-4.94E-02		9.28E-02
+	NB-95	765.79	99.81	2.60E-01	2.22E-01	2.22E-01
+	NB-95M	235.69	25.00	6.18E+02	2.11E+02	2.11E+02
+	ZR-95	724.18	43.70	1.32E-02	2.59E-01	3.46E-01
		756.72	55.30	6.51E-02		2.59E-01
+	MO-99	181.06	6.20	1.11E+03	1.90E+03	2.44E+03
		739.58	12.80	8.33E+01		1.90E+03
		778.00	4.50	-1.52E+03		5.12E+03
+	RU-103	497.08	89.00	3.81E-02	1.66E-01	1.66E-01
+	RU-106	621.84	9.80	7.35E-02	9.24E-01	9.24E-01
+	AG-108M	433.93	89.90	-3.91E-03	8.53E-02	8.53E-02
		614.37	90.40	1.12E-02		1.06E-01
		722.95	90.50	1.72E-03		1.03E-01
+	CD-109	88.03	3.72	8.13E-01	2.17E+00	2.17E+00
+	AG-110M	657.75	93.14	-4.72E-02	1.04E-01	1.04E-01
		677.61	10.53	-1.87E-02		8.98E-01
		706.67	16.46	-8.33E-02		5.71E-01
		763.93	21.98	-3.69E-01		5.03E-01
		884.67	71.63	-5.49E-02		1.33E-01
		1384.27	23.94	-8.50E-02		4.90E-01
+	CD-113M	263.70	0.02	-1.80E+02	3.01E+02	3.01E+02
+	SN-113	255.12	1.93	-1.95E+00	1.44E-01	4.38E+00
		391.69	64.90	3.85E-02		1.44E-01
+	TE123M	159.00	84.10	2.72E-02	8.58E-02	8.58E-02
+	SB-124	602.71	97.87	-2.75E-03	1.34E-01	1.34E-01
		645.85	7.26	9.37E-01		1.80E+00
		722.78	11.10	2.01E-02		1.20E+00
		1691.02	49.00	-4.24E-02		1.99E-01
+	I-125	35.49	6.49	1.50E+00	3.67E+00	3.67E+00
+	SB-125	176.33	6.89	-2.28E-02	2.73E-01	8.25E-01
		427.89	29.33	2.97E-02		2.73E-01
		463.38	10.35	3.88E-01		9.01E-01
		600.56	17.80	-1.52E-01		5.30E-01
		635.90	11.32	-1.94E-02		7.22E-01
+	SB-126	414.70	83.30	-1.42E-01	5.09E-01	5.40E-01
		666.33	99.60	2.02E-02		5.53E-01
		695.00	99.60	-1.63E-01		5.09E-01
		720.50	53.80	2.81E-01		1.00E+00
+	SN-126	87.57	37.00	7.80E-02	2.08E-01	2.08E-01
+	SB-127	473.00	25.00	2.90E+01	6.42E+01	9.06E+01
		685.20	35.70	1.91E+01		6.42E+01
		783.80	14.70	1.00E+02		1.90E+02
+	I-129	29.78	57.00	-2.07E-01	5.16E-01	5.16E-01
		33.60	13.20	7.08E-01		1.52E+00

Analysis Report for 1510086-11
CP4105S14-15

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	I-129	39.58	7.52	-3.96E-01	5.16E-01	1.67E+00
+	I-131	284.30	6.05	-4.98E-01	1.41E+00	1.80E+01
		364.48	81.20	8.89E-01		1.41E+00
		636.97	7.26	-1.14E+00		1.61E+01
		722.89	1.80	1.27E+00		7.63E+01
+	TE-132	49.72	13.10	-5.94E+02	6.68E+01	5.32E+02
		228.16	88.00	2.59E+01		6.68E+01
+	BA-133	81.00	33.00	-8.74E-02	1.68E-01	2.07E-01
		302.84	17.80	-9.25E-03		4.66E-01
		356.01	60.00	3.34E-02		1.68E-01
+	I-133	529.87	86.30	3.86E+08	6.66E+09	6.66E+09
+	XE-133	81.00	38.00	-4.67E+00	1.10E+01	1.10E+01
+	CS-134	563.23	8.38	-2.27E-01	1.08E-01	1.05E+00
		569.32	15.43	3.12E-01		6.13E-01
		604.70	97.60	-7.67E-01		1.08E-01
		795.84	85.40	9.90E-02		1.44E-01
		801.93	8.73	-4.30E-01		1.21E+00
+	CS-135	268.24	16.00	-8.41E-04	5.00E-01	5.00E-01
+	@ I-135	1131.51	22.50	1.00E+26	1.00E+26	1.00E+26
	@	1260.41	28.60	1.00E+26		1.00E+26
	@	1678.03	9.54	1.00E+26		1.00E+26
+	CS-136	153.22	7.46	8.09E-01	5.04E-01	4.19E+00
		163.89	4.61	8.83E-01		6.74E+00
		176.55	13.56	2.10E-01		2.15E+00
		273.65	12.66	-3.13E-01		3.26E+00
		340.57	48.50	-1.57E-02		1.09E+00
		818.50	99.70	1.42E-01		5.04E-01
		1048.07	79.60	-1.80E-01		7.06E-01
		1235.34	19.70	2.98E-01		3.82E+00
+	CS-137	661.65	85.12	-1.06E-01	1.04E-01	1.04E-01
+	LA-138	788.74	34.00	-2.93E-01	1.22E-01	2.59E-01
		1435.80	66.00	-8.51E-02		1.22E-01
+	CE-139	165.85	80.35	2.11E-02	8.83E-02	8.83E-02
+	BA-140	162.64	6.70	1.67E+00	1.97E+00	4.95E+00
		304.84	4.50	3.60E-01		9.17E+00
		423.70	3.20	5.75E+00		1.37E+01
		437.55	2.00	9.33E+00		2.23E+01
		537.32	25.00	3.79E-01		1.97E+00
+	LA-140	328.77	20.50	-2.30E-01	6.58E-01	2.22E+00
		487.03	45.50	2.43E-01		9.62E-01
		815.85	23.50	-5.64E-01		2.00E+00
		1596.49	95.49	4.69E-02		6.58E-01
+	CE-141	145.44	48.40	4.70E-03	2.37E-01	2.37E-01
+	CE-143	57.36	11.80	-1.94E+06	1.70E+06	4.68E+06
		293.26	42.00	-1.52E+05		1.70E+06
		664.55	5.20	7.20E+06		1.26E+07
+	CE-144	133.54	10.80	-5.50E-01	5.32E-01	5.32E-01
+	PM-144	476.78	42.00	-2.05E-02	9.53E-02	1.97E-01
		618.01	98.60	2.97E-02		9.53E-02

Analysis Report for 1510086-11
CP4105S14-15

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	PM-144	696.49	99.49	1.37E-02	9.53E-02	9.84E-02
+	PM-145	36.85	21.70	-4.39E-01	3.60E-01	6.79E-01
		37.36	39.70	-2.76E-01		3.60E-01
		42.30	15.10	-1.02E+00		7.41E-01
		72.40	2.31	-7.59E+00		3.92E+00
+	PM-146	453.90	39.94	4.82E-02	2.17E-01	2.17E-01
		735.90	14.01	9.35E-02		6.66E-01
		747.13	13.10	-1.78E-01		7.89E-01
+	ND-147	91.11	28.90	-5.65E-01	1.89E+00	1.89E+00
		531.02	13.10	-1.97E-01		4.69E+00
+	PM-149	285.90	3.10	2.06E+04	4.38E+04	4.38E+04
+	EU-152	121.78	20.50	-7.58E-02	2.61E-01	2.61E-01
		244.69	5.40	-7.45E-01		1.69E+00
		344.27	19.13	-2.87E-03		3.87E-01
		778.89	9.20	5.25E-03		9.78E-01
		964.01	10.40	-2.44E+00		1.26E+00
		1085.78	7.22	9.27E-02		1.47E+00
		1112.02	9.60	-2.32E-01		1.21E+00
		1407.95	14.94	1.44E-01		7.07E-01
+	GD-153	97.43	31.30	7.15E-02	1.91E-01	1.91E-01
		103.18	22.20	-1.16E-01		2.72E-01
+	EU-154	123.07	40.50	-1.44E-02	1.37E-01	1.37E-01
		723.30	19.70	7.95E-03		4.76E-01
		873.19	11.50	4.79E-02		8.40E-01
		996.32	10.30	2.99E-01		1.10E+00
		1004.76	17.90	8.94E-02		5.83E-01
		1274.45	35.50	2.89E-02		3.19E-01
+	EU-155	86.50	30.90	9.92E-02	2.49E-01	2.49E-01
		105.30	20.70	1.43E-01		2.80E-01
+	EU-156	811.77	10.40	-1.46E+00	3.12E+00	3.12E+00
		1153.47	7.20	4.12E+00		8.24E+00
		1230.71	8.90	-1.34E+00		6.03E+00
+	HO-166M	184.41	72.60	1.54E-01	1.02E-01	1.02E-01
		280.45	29.60	4.02E-03		2.46E-01
		410.94	11.10	1.49E-01		7.60E-01
		711.69	54.10	-4.38E-03		1.63E-01
+	TM-171	66.72	0.14	1.59E+01	5.84E+01	5.84E+01
+	HF-172	81.75	4.52	2.52E-02	5.30E-01	1.59E+00
		125.81	11.30	-1.52E-02		5.30E-01
+	LU-172	181.53	20.60	1.84E+00	4.69E+00	6.95E+00
		810.06	16.63	4.81E+00		1.37E+01
		912.12	15.25	7.08E+01		3.25E+01
		1093.66	62.50	1.51E+00		4.69E+00
+	LU-173	100.72	5.24	4.28E-01	3.83E-01	1.12E+00
		272.11	21.20	-1.52E-01		3.83E-01
+	HF-175	343.40	84.00	-8.83E-04	1.24E-01	1.24E-01
+	LU-176	88.34	13.30	3.54E-01	8.05E-02	5.82E-01
		201.83	86.00	-2.09E-02		8.50E-02
		306.78	94.00	1.56E-02		8.05E-02

Analysis Report for 1510086-11
CP4105S14-15

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	TA-182	67.75	41.20	1.45E-01	2.30E-01	2.30E-01
		1121.30	34.90	5.48E-01		5.78E-01
		1189.05	16.23	-4.10E-02		7.70E-01
		1221.41	26.98	-2.10E-01		5.81E-01
		1231.02	11.44	5.66E-01		1.44E+00
+	IR-192	308.46	29.68	3.37E-02	2.30E-01	3.33E-01
		468.07	48.10	-2.18E-01		2.30E-01
+	HG-203	279.19	77.30	-2.96E-03	1.59E-01	1.59E-01
+	BI-207	569.67	97.72	3.00E-02	9.33E-02	9.33E-02
		1063.62	74.90	-6.80E-02		1.22E-01
+	TL-208	583.14	* 30.22	1.31E+00	1.50E-01	3.12E-01
		860.37	* 4.48	1.34E+00		2.64E+00
		2614.66	* 35.85	1.44E+00		1.50E-01
+	BI-210M	262.00	45.00	5.50E-02	1.63E-01	1.63E-01
		300.00	23.00	-1.46E+00		3.47E-01
+	PB-210	46.50	4.25	1.59E+00	2.50E+00	2.50E+00
+	PB-211	404.84	2.90	-1.41E+00	2.82E+00	2.82E+00
		831.96	2.90	1.56E+00		3.79E+00
+	BI-212	727.17	* 11.80	1.02E+00	9.11E-01	9.11E-01
		1620.62	2.75	-1.42E-01		3.53E+00
+	PB-212	238.63	* 44.60	1.65E+00	3.44E-01	3.44E-01
		300.09	* 3.41	1.31E+00		1.95E+00
+	BI-214	609.31	* 46.30	1.26E+00	3.30E-01	3.30E-01
		1120.29	* 15.10	1.24E+00		9.45E-01
		1764.49	* 15.80	1.41E+00		5.26E-01
		2204.22	* 4.98	1.49E+00		3.25E+00
+	PB-214	295.21	* 19.19	1.33E+00	2.72E-01	4.14E-01
		351.92	* 37.19	1.48E+00		2.72E-01
+	RN-219	401.80	6.50	4.44E-01	1.30E+00	1.30E+00
+	RA-223	323.87	3.88	-2.59E-01	1.97E+00	1.97E+00
+	RA-224	240.98	3.95	2.16E+01	3.92E+00	3.92E+00
+	RA-225	40.00	31.00	-4.05E-01	1.71E+00	1.71E+00
+	RA-226	186.21	* 3.28	2.62E+00	2.26E+00	2.26E+00
+	TH-227	50.10	8.40	-1.20E+00	1.07E+00	1.07E+00
		236.00	11.50	3.36E+00		1.15E+00
		256.20	6.30	-2.56E-01		1.13E+00
+	AC-228	338.32	* 11.40	1.48E+00	5.49E-01	8.81E-01
		911.07	* 27.70	1.54E+00		5.49E-01
		969.11	* 16.60	1.53E+00		1.39E+00
+	TH-230	48.44	16.90	1.78E-01	5.91E-01	5.91E-01
		62.85	4.60	2.01E+00		1.92E+00
		67.67	0.37	1.33E+01		2.12E+01
+	PA-231	283.67	1.60	-1.28E-01	3.58E+00	4.62E+00
		302.67	2.30	-7.12E-02		3.58E+00
+	TH-231	25.64	14.70	-6.56E-01	1.09E+00	3.68E+00
		84.21	6.40	-1.58E+00		1.09E+00
+	PA-233	311.98	38.60	1.45E-02	4.11E-01	4.11E-01
+	PA-234	131.20	* 20.40	5.36E-01	4.80E-01	4.80E-01

Analysis Report for 1510086-11
CP4105S14-15

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
PA-234	733.99	8.80	-7.38E-02	4.80E-01	9.95E-01
	946.00	12.00	2.34E-01		8.11E-01
+ PA-234M	1001.03	0.92	2.39E+00	1.24E+01	1.24E+01
+ TH-234	63.29 *	3.80	2.82E+00	3.20E+00	3.20E+00
+ U-235	143.76	10.50	1.40E-01	5.57E-01	5.57E-01
	163.35	4.70	1.67E-01		1.27E+00
	205.31	4.70	4.79E-01		1.59E+00
+ NP-237	86.50	12.60	2.40E-01	6.03E-01	6.03E-01
+ NP-239	106.10	22.70	-1.33E+02	2.40E+03	2.40E+03
	228.18	10.70	2.72E+03		7.01E+03
	277.60	14.10	2.96E+02		5.16E+03
+ AM-241	59.54	35.90	-1.32E-01	2.31E-01	2.31E-01
+ AM-243	74.67	66.00	4.58E-01	1.65E-01	1.65E-01
+ CM-243	209.75	3.29	1.27E+00	5.33E-01	2.34E+00
	228.14	10.60	2.82E-01		7.27E-01
	277.60	14.00	3.06E-02		5.33E-01

+ = Nuclide identified during the nuclide identification

* = Energy line found in the spectrum

> = MDA value not calculated

@ = Half-life too short to be able to perform the decay correction

? = CAUTION: MDA value is inconsistent with Currie MDA at 95% confidence level

NUCLIDE MDA REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
BE-7	477.59	10.42	1.10E+00	1.10E+00	-5.66E-01	5.17E-01
NA-22	1274.54	99.94	1.15E-01	1.15E-01	1.04E-02	5.23E-02
NA-24	1368.53	99.99	1.04E+14	5.16E+13	9.93E+12	4.59E+13
	2754.09	99.86	5.16E+13		-3.04E+13	1.63E+13
AL-26	1808.65	99.76	7.63E-02	7.63E-02	0.00E+00	3.13E-02
+ K-40	1460.81 *	10.67	1.19E+00	1.19E+00	2.10E+01	5.41E-01

: 00703

Analysis Report for 1510086-11

CP4105S14-15

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
@ AR-41	1293.64	99.16	1.00E+26	1.00E+26	1.00E+26	1.00E+20
TI-44	67.88	94.40	8.31E-02	8.31E-02	5.22E-02	4.06E-02
	78.34	96.00	1.03E-01		2.69E-01	5.08E-02
SC-46	889.25	99.98	1.21E-01	1.21E-01	2.87E-02	5.54E-02
	1120.51	99.99	2.17E-01		1.85E-01	1.03E-01
V-48	983.52	99.98	3.42E-01	3.42E-01	-7.87E-02	1.55E-01
	1312.10	97.50	4.24E-01		-4.27E-02	1.91E-01
CR-51	320.08	9.83	1.63E+00	1.63E+00	-2.79E-02	7.79E-01
MN-54	834.83	99.97	1.15E-01	1.15E-01	1.37E-02	5.35E-02
CO-56	846.75	99.96	1.32E-01	1.32E-01	-8.09E-03	6.09E-02
	1037.75	14.03	9.17E-01		-2.72E-01	4.17E-01
	1238.25	67.00	3.00E-01		1.07E-01	1.40E-01
	1771.40	15.51	5.56E-01		-9.89E-02	2.21E-01
	2598.48	16.90	3.63E-01		-1.32E-01	1.15E-01
CO-57	122.06	85.51	6.76E-02	6.76E-02	-1.96E-02	3.27E-02
	136.48	10.60	5.60E-01		-2.01E-01	2.71E-01
CO-58	810.76	99.40	1.16E-01	1.16E-01	2.27E-03	5.33E-02
FE-59	1099.22	56.50	3.06E-01	3.06E-01	-2.21E-01	1.40E-01
	1291.56	43.20	4.84E-01		2.55E-02	2.22E-01
CO-60	1173.22	100.00	1.34E-01	1.15E-01	5.88E-02	6.21E-02
	1332.49	100.00	1.15E-01		2.32E-02	5.18E-02
ZN-65	1115.52	50.75	2.62E-01	2.62E-01	8.16E-02	1.21E-01
+ GA-67	93.31	* 35.70	2.11E+02	2.11E+02	2.96E+02	1.04E+02
	208.95	* 2.24	2.77E+03		1.89E+03	1.35E+03
	300.22	* 16.00	3.16E+02		2.11E+02	1.51E+02
SE-75	121.11	16.70	3.80E-01	1.08E-01	-1.99E-01	1.84E-01
	136.00	59.20	1.08E-01		-9.51E-02	5.21E-02
	264.65	59.80	1.40E-01		-6.97E-02	6.73E-02
	279.53	25.20	3.63E-01		5.80E-02	1.75E-01
	400.65	11.40	8.85E-01		3.21E-01	4.22E-01
RB-82	776.52	13.00	1.62E+00	1.62E+00	-9.20E-01	7.47E-01
RB-83	520.41	46.00	2.31E-01	2.31E-01	9.61E-02	1.09E-01
	529.64	30.30	3.53E-01		2.04E-02	1.66E-01
	552.65	16.40	6.12E-01		3.83E-02	2.86E-01
KR-85	513.99	0.43	2.66E+01	2.66E+01	2.62E+01	1.27E+01
SR-85	513.99	99.27	1.61E-01	1.61E-01	1.59E-01	7.73E-02
Y-88	898.02	93.40	1.06E-01	8.91E-02	-1.58E-01	4.76E-02
	1836.01	99.38	8.91E-02		1.02E-02	3.60E-02
NB-93M	16.57	9.43	9.21E+01	9.21E+01	4.75E+01	4.48E+01
NB-94	702.63	100.00	9.50E-02	9.28E-02	9.03E-03	4.43E-02
	871.10	100.00	9.28E-02		-4.94E-02	4.26E-02
NB-95	765.79	99.81	2.22E-01	2.22E-01	2.60E-01	1.05E-01
NB-95M	235.69	25.00	2.11E+02	2.11E+02	6.18E+02	1.03E+02
ZR-95	724.18	43.70	3.46E-01	2.59E-01	1.32E-02	1.63E-01
	756.72	55.30	2.59E-01		6.51E-02	1.21E-01
MO-99	181.06	6.20	2.44E+03	1.90E+03	1.11E+03	1.18E+03
	739.58	12.80	1.90E+03		8.33E+01	8.83E+02
	778.00	4.50	5.12E+03		-1.52E+03	2.36E+03
RU-103	497.08	89.00	1.66E-01	1.66E-01	3.81E-02	7.82E-02
RU-106	621.84	9.80	9.24E-01	9.24E-01	7.35E-02	4.31E-01
AG-108M	433.93	89.90	8.53E-02	8.53E-02	-3.91E-03	4.03E-02
	614.37	90.40	1.06E-01		1.12E-02	5.01E-02
	722.95	90.50	1.03E-01		1.72E-03	4.79E-02

Analysis Report for 1510086-11
CP4105S14-15

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
CD-109	88.03	3.72	2.17E+00	2.17E+00	8.13E-01	1.06E+00
AG-110M	657.75	93.14	1.04E-01	1.04E-01	-4.72E-02	4.86E-02
	677.61	10.53	8.98E-01		-1.87E-02	4.17E-01
	706.67	16.46	5.71E-01		-8.33E-02	2.64E-01
	763.93	21.98	5.03E-01		-3.69E-01	2.35E-01
	884.67	71.63	1.33E-01		-5.49E-02	6.08E-02
	1384.27	23.94	4.90E-01		-8.50E-02	2.20E-01
CD-113M	263.70	0.02	3.01E+02	3.01E+02	-1.80E+02	1.45E+02
SN-113	255.12	1.93	4.38E+00	1.44E-01	-1.95E+00	2.11E+00
	391.69	64.90	1.44E-01		3.85E-02	6.85E-02
TE123M	159.00	84.10	8.58E-02	8.58E-02	2.72E-02	4.15E-02
SB-124	602.71	97.87	1.34E-01	1.34E-01	-2.75E-03	6.29E-02
	645.85	7.26	1.80E+00		9.37E-01	8.43E-01
	722.78	11.10	1.20E+00		2.01E-02	5.59E-01
	1691.02	49.00	1.99E-01		-4.24E-02	8.05E-02
I-125	35.49	6.49	3.67E+00	3.67E+00	1.50E+00	1.78E+00
SB-125	176.33	6.89	8.25E-01	2.73E-01	-2.28E-02	3.97E-01
	427.89	29.33	2.73E-01		2.97E-02	1.29E-01
	463.38	10.35	9.01E-01		3.88E-01	4.29E-01
	600.56	17.80	5.30E-01		-1.52E-01	2.49E-01
	635.90	11.32	7.22E-01		-1.94E-02	3.35E-01
SB-126	414.70	83.30	5.40E-01	5.09E-01	-1.42E-01	2.56E-01
	666.33	99.60	5.53E-01		2.02E-02	2.59E-01
	695.00	99.60	5.09E-01		-1.63E-01	2.37E-01
	720.50	53.80	1.00E+00		2.81E-01	4.67E-01
SN-126	87.57	37.00	2.08E-01	2.08E-01	7.80E-02	1.02E-01
SB-127	473.00	25.00	9.06E+01	6.42E+01	2.90E+01	4.28E+01
	685.20	35.70	6.42E+01		1.91E+01	2.97E+01
	783.80	14.70	1.90E+02		1.00E+02	8.85E+01
I-129	29.78	57.00	5.16E-01	5.16E-01	-2.07E-01	2.51E-01
	33.60	13.20	1.52E+00		7.08E-01	7.38E-01
	39.58	7.52	1.67E+00		-3.96E-01	8.13E-01
I-131	284.30	6.05	1.80E+01	1.41E+00	-4.98E-01	8.67E+00
	364.48	81.20	1.41E+00		8.89E-01	6.72E-01
	636.97	7.26	1.61E+01		-1.14E+00	7.47E+00
	722.89	1.80	7.63E+01		1.27E+00	3.55E+01
TE-132	49.72	13.10	5.32E+02	6.68E+01	-5.94E+02	2.59E+02
	228.16	88.00	6.68E+01		2.59E+01	3.23E+01
BA-133	81.00	33.00	2.07E-01	1.68E-01	-8.74E-02	1.01E-01
	302.84	17.80	4.66E-01		-9.25E-03	2.24E-01
	356.01	60.00	1.68E-01		3.34E-02	8.13E-02
I-133	529.87	86.30	6.66E+09	6.66E+09	3.86E+08	3.13E+09
XE-133	81.00	38.00	1.10E+01	1.10E+01	-4.67E+00	5.39E+00
CS-134	563.23	8.38	1.05E+00	1.08E-01	-2.27E-01	4.94E-01
	569.32	15.43	6.13E-01		3.12E-01	2.89E-01
	604.70	97.60	1.08E-01		-7.67E-01	5.12E-02
	795.84	85.40	1.44E-01		9.90E-02	6.75E-02
	801.93	8.73	1.21E+00		-4.30E-01	5.63E-01
CS-135	268.24	16.00	5.00E-01	5.00E-01	-8.41E-04	2.41E-01
@ I-135	1131.51	22.50	1.00E+26	1.00E+26	1.00E+26	1.00E+20
@	1260.41	28.60	1.00E+26		1.00E+26	1.00E+20
@	1678.03	9.54	1.00E+26		1.00E+26	1.00E+20
CS-136	153.22	7.46	4.19E+00	5.04E-01	8.09E-01	2.03E+00

Analysis Report for 1510086-11
CP4105S14-15

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)	
CS-136	163.89	4.61	6.74E+00	5.04E-01	8.83E-01	3.26E+00	
	176.55	13.56	2.15E+00		2.10E-01	1.04E+00	
	273.65	12.66	3.26E+00		-3.13E-01	1.57E+00	
	340.57	48.50	1.09E+00		-1.57E-02	5.25E-01	
	818.50	99.70	5.04E-01		1.42E-01	2.33E-01	
	1048.07	79.60	7.06E-01		-1.80E-01	3.24E-01	
	1235.34	19.70	3.82E+00		2.98E-01	1.78E+00	
CS-137	661.65	85.12	1.04E-01	1.04E-01	-1.06E-01	4.84E-02	
LA-138	788.74	34.00	2.59E-01	1.22E-01	-2.93E-01	1.19E-01	
	1435.80	66.00	1.22E-01		-8.51E-02	5.21E-02	
CE-139	165.85	80.35	8.83E-02	8.83E-02	2.11E-02	4.27E-02	
BA-140	162.64	6.70	4.95E+00	1.97E+00	1.67E+00	2.39E+00	
	304.84	4.50	9.17E+00		3.60E-01	4.40E+00	
	423.70	3.20	1.37E+01		5.75E+00	6.53E+00	
	437.55	2.00	2.23E+01		9.33E+00	1.06E+01	
	537.32	25.00	1.97E+00		3.79E-01	9.33E-01	
LA-140	328.77	20.50	2.22E+00	6.58E-01	-2.30E-01	1.07E+00	
	487.03	45.50	9.62E-01		2.43E-01	4.54E-01	
	815.85	23.50	2.00E+00		-5.64E-01	9.18E-01	
	1596.49	95.49	6.58E-01		4.69E-02	2.93E-01	
CE-141	145.44	48.40	2.37E-01	2.37E-01	4.70E-03	1.15E-01	
CE-143	57.36	11.80	4.68E+06	1.70E+06	-1.94E+06	2.28E+06	
	293.26	42.00	1.70E+06		-1.52E+05	8.28E+05	
	664.55	5.20	1.26E+07		7.20E+06	5.92E+06	
CE-144	133.54	10.80	5.32E-01	5.32E-01	-5.50E-01	2.57E-01	
PM-144	476.78	42.00	1.97E-01	9.53E-02	-2.05E-02	9.28E-02	
	618.01	98.60	9.53E-02		2.97E-02	4.46E-02	
	696.49	99.49	9.84E-02		1.37E-02	4.59E-02	
PM-145	36.85	21.70	6.79E-01	3.60E-01	-4.39E-01	3.30E-01	
	37.36	39.70	3.60E-01		-2.76E-01	1.75E-01	
	42.30	15.10	7.41E-01		-1.02E+00	3.60E-01	
	72.40	2.31	3.92E+00		-7.59E+00	1.92E+00	
PM-146	453.90	39.94	2.17E-01	2.17E-01	4.82E-02	1.03E-01	
	735.90	14.01	6.66E-01		9.35E-02	3.09E-01	
	747.13	13.10	7.89E-01		-1.78E-01	3.69E-01	
ND-147	91.11	28.90	1.89E+00	1.89E+00	-5.65E-01	9.28E-01	
	531.02	13.10	4.69E+00		-1.97E-01	2.21E+00	
PM-149	285.90	3.10	4.38E+04	4.38E+04	2.06E+04	2.10E+04	
EU-152	121.78	20.50	2.61E-01	2.61E-01	-7.58E-02	1.26E-01	
	244.69	5.40	1.69E+00		-7.45E-01	8.19E-01	
	344.27	19.13	3.87E-01		-2.87E-03	1.85E-01	
	778.89	9.20	9.78E-01		5.25E-03	4.51E-01	
	964.01	10.40	1.26E+00		-2.44E+00	5.91E-01	
	1085.78	7.22	1.47E+00		9.27E-02	6.70E-01	
	1112.02	9.60	1.21E+00		-2.32E-01	5.54E-01	
	1407.95	14.94	7.07E-01		1.44E-01	3.15E-01	
	GD-153	97.43	31.30	1.91E-01	1.91E-01	7.15E-02	9.26E-02
		103.18	22.20	2.72E-01		-1.16E-01	1.32E-01
EU-154	123.07	40.50	1.37E-01	1.37E-01	-1.44E-02	6.64E-02	
	723.30	19.70	4.76E-01		7.95E-03	2.21E-01	
	873.19	11.50	8.40E-01		4.79E-02	3.87E-01	
	996.32	10.30	1.10E+00		2.99E-01	5.09E-01	
	1004.76	17.90	5.83E-01		8.94E-02	2.67E-01	

Analysis Report for 1510086-11
CP4105S14-15

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
EU-154	1274.45	35.50	3.19E-01	1.37E-01	2.89E-02	1.45E-01
EU-155	86.50	30.90	2.49E-01	2.49E-01	9.92E-02	1.22E-01
	105.30	20.70	2.80E-01		1.43E-01	1.36E-01
EU-156	811.77	10.40	3.12E+00	3.12E+00	-1.46E+00	1.42E+00
	1153.47	7.20	8.24E+00		4.12E+00	3.84E+00
	1230.71	8.90	6.03E+00		-1.34E+00	2.78E+00
HO-166M	184.41	72.60	1.02E-01	1.02E-01	1.54E-01	4.97E-02
	280.45	29.60	2.46E-01		4.02E-03	1.18E-01
	410.94	11.10	7.60E-01		1.49E-01	3.62E-01
	711.69	54.10	1.63E-01		-4.38E-03	7.56E-02
TM-171	66.72	0.14	5.84E+01	5.84E+01	1.59E+01	2.86E+01
HF-172	81.75	4.52	1.59E+00	5.30E-01	2.52E-02	7.75E-01
	125.81	11.30	5.30E-01		-1.52E-02	2.57E-01
LU-172	181.53	20.60	6.95E+00	4.69E+00	1.84E+00	3.35E+00
	810.06	16.63	1.37E+01		4.81E+00	6.28E+00
	912.12	15.25	3.25E+01		7.08E+01	1.56E+01
	1093.66	62.50	4.69E+00		1.51E+00	2.16E+00
LU-173	100.72	5.24	1.12E+00	3.83E-01	4.28E-01	5.46E-01
	272.11	21.20	3.83E-01		-1.52E-01	1.85E-01
HF-175	343.40	84.00	1.24E-01	1.24E-01	-8.83E-04	5.92E-02
LU-176	88.34	13.30	5.82E-01	8.05E-02	3.54E-01	2.85E-01
	201.83	86.00	8.50E-02		-2.09E-02	4.12E-02
	306.78	94.00	8.05E-02		1.56E-02	3.86E-02
TA-182	67.75	41.20	2.30E-01	2.30E-01	1.45E-01	1.12E-01
	1121.30	34.90	5.78E-01		5.48E-01	2.73E-01
	1189.05	16.23	7.70E-01		-4.10E-02	3.48E-01
	1221.41	26.98	5.81E-01		-2.10E-01	2.68E-01
	1231.02	11.44	1.44E+00		5.66E-01	6.68E-01
IR-192	308.46	29.68	3.33E-01	2.30E-01	3.37E-02	1.59E-01
	468.07	48.10	2.30E-01		-2.18E-01	1.09E-01
HG-203	279.19	77.30	1.59E-01	1.59E-01	-2.96E-03	7.65E-02
BI-207	569.67	97.72	9.33E-02	9.33E-02	3.00E-02	4.40E-02
	1063.62	74.90	1.22E-01		-6.80E-02	5.51E-02
+ TL-208	583.14	*	30.22	1.50E-01	1.31E+00	1.47E-01
	860.37	*	4.48		1.34E+00	1.24E+00
	2614.66	*	35.85		1.44E+00	5.08E-02
BI-210M	262.00	45.00	1.63E-01	1.63E-01	5.50E-02	7.86E-02
	300.00	23.00	3.47E-01		-1.46E+00	1.67E-01
PB-210	46.50	4.25	2.50E+00	2.50E+00	1.59E+00	1.22E+00
PB-211	404.84	2.90	2.82E+00	2.82E+00	-1.41E+00	1.34E+00
	831.96	2.90	3.79E+00		1.56E+00	1.77E+00
+ BI-212	727.17	*	11.80	9.11E-01	1.02E+00	4.28E-01
	1620.62	2.75	3.53E+00		-1.42E-01	1.53E+00
+ PB-212	238.63	*	44.60	3.44E-01	1.65E+00	1.69E-01
	300.09	*	3.41		1.31E+00	9.32E-01
+ BI-214	609.31	*	46.30	3.30E-01	1.26E+00	1.59E-01
	1120.29	*	15.10		1.24E+00	4.41E-01
	1764.49	*	15.80		1.41E+00	2.20E-01
	2204.22	*	4.98		1.49E+00	1.47E+00
+ PB-214	295.21	*	19.19	2.72E-01	1.33E+00	1.99E-01
	351.92	*	37.19		1.48E+00	1.31E-01
RN-219	401.80	6.50	1.30E+00	1.30E+00	4.44E-01	6.19E-01
RA-223	323.87	3.88	1.97E+00	1.97E+00	-2.59E-01	9.43E-01

Analysis Report for 1510086-11
CP4105S14-15

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
RA-224	240.98	3.95	3.92E+00	3.92E+00	2.16E+01	1.93E+00
RA-225	40.00	31.00	1.71E+00	1.71E+00	-4.05E-01	8.30E-01
+ RA-226	186.21 *	3.28	2.26E+00	2.26E+00	2.62E+00	1.10E+00
TH-227	50.10	8.40	1.07E+00	1.07E+00	-1.20E+00	5.23E-01
	236.00	11.50	1.15E+00		3.36E+00	5.62E-01
	256.20	6.30	1.13E+00		-2.56E-01	5.42E-01
+ AC-228	338.32 *	11.40	8.81E-01	5.49E-01	1.48E+00	4.26E-01
	911.07 *	27.70	5.49E-01		1.54E+00	2.60E-01
	969.11 *	16.60	1.39E+00		1.53E+00	6.71E-01
TH-230	48.44	16.90	5.91E-01	5.91E-01	1.78E-01	2.89E-01
	62.85	4.60	1.92E+00		2.01E+00	9.38E-01
	67.67	0.37	2.12E+01		1.33E+01	1.04E+01
PA-231	283.67	1.60	4.62E+00	3.58E+00	-1.28E-01	2.22E+00
	302.67	2.30	3.58E+00		-7.12E-02	1.72E+00
TH-231	25.64	14.70	3.68E+00	1.09E+00	-6.56E-01	1.79E+00
	84.21	6.40	1.09E+00		-1.58E+00	5.34E-01
PA-233	311.98	38.60	4.11E-01	4.11E-01	1.45E-02	1.96E-01
+ PA-234	131.20 *	20.40	4.80E-01	4.80E-01	5.36E-01	2.36E-01
	733.99	8.80	9.95E-01		-7.38E-02	4.60E-01
	946.00	12.00	8.11E-01		2.34E-01	3.71E-01
PA-234M	1001.03	0.92	1.24E+01	1.24E+01	2.39E+00	5.74E+00
+ TH-234	63.29 *	3.80	3.20E+00	3.20E+00	2.82E+00	1.57E+00
U-235	143.76	10.50	5.57E-01	5.57E-01	1.40E-01	2.70E-01
	163.35	4.70	1.27E+00		1.67E-01	6.17E-01
	205.31	4.70	1.59E+00		4.79E-01	7.73E-01
NP-237	86.50	12.60	6.03E-01	6.03E-01	2.40E-01	2.95E-01
NP-239	106.10	22.70	2.40E+03	2.40E+03	-1.33E+02	1.17E+03
	228.18	10.70	7.01E+03		2.72E+03	3.39E+03
	277.60	14.10	5.16E+03		2.96E+02	2.48E+03
AM-241	59.54	35.90	2.31E-01	2.31E-01	-1.32E-01	1.13E-01
AM-243	74.67	66.00	1.65E-01	1.65E-01	4.58E-01	8.15E-02
CM-243	209.75	3.29	2.34E+00	5.33E-01	1.27E+00	1.13E+00
	228.14	10.60	7.27E-01		2.82E-01	3.52E-01
	277.60	14.00	5.33E-01		3.06E-02	2.57E-01

- + = Nuclide identified during the nuclide identification
 * = Energy line found in the spectrum
 > = MDA value not calculated
 @ = Half-life too short to be able to perform the decay correction

No Action Level results available for reporting purposes.

Analysis Report for 1510086-11
CP4105S14-15

DATA REVIEW COMMENTS REPORT

Creation Date

Comment

User

No Data Review Comments Entered.

369: 14 13 22 23 21 19 16 17

Sample Title: CP4105S14-15

Channel	14	13	22	23	21	19	16	17
377:	39	19	22	22	19	13	29	22
385:	21	19	19	14	22	13	20	24
393:	17	16	14	16	15	21	23	19
401:	23	20	17	21	21	17	18	19
409:	20	29	20	18	18	14	17	20
417:	12	18	16	13	21	12	12	22
425:	18	19	16	14	13	14	16	12
433:	15	11	14	20	14	14	18	17
441:	20	14	14	7	12	12	9	15
449:	12	13	15	11	21	20	25	9
457:	18	15	20	14	9	15	44	22
465:	14	13	16	11	18	17	15	12
473:	13	18	11	15	11	10	12	12
481:	14	14	17	16	15	18	10	13
489:	12	8	9	9	14	11	13	12
497:	9	18	17	19	12	15	11	10
505:	9	14	11	19	19	36	57	46
513:	19	15	17	10	11	13	11	15
521:	11	13	12	10	7	11	11	16
529:	13	12	7	11	14	16	11	18
537:	19	12	10	13	10	16	8	16
545:	15	9	16	7	10	9	12	8
553:	9	11	6	13	6	14	11	18
561:	8	13	8	9	9	15	12	14
569:	13	10	15	12	13	7	12	6
577:	12	19	8	7	14	36	101	87
585:	14	9	12	11	9	14	8	12
593:	14	12	8	14	17	10	11	15
601:	12	9	11	15	8	11	9	40
609:	138	117	27	14	8	4	14	7
617:	13	8	15	6	9	11	9	10
625:	6	8	8	15	11	9	9	7
633:	8	5	9	12	7	10	4	7
641:	9	8	13	7	12	11	10	7
649:	11	6	6	7	10	15	10	5
657:	9	25	5	7	4	14	9	14
665:	10	16	9	8	9	16	7	9
673:	12	8	13	9	8	9	6	8
681:	5	10	5	12	8	5	5	7
689:	7	4	8	9	9	11	10	8
697:	5	6	14	11	5	11	11	8
705:	9	11	14	2	6	3	9	5
713:	13	12	7	7	9	9	10	8
721:	5	11	10	5	10	11	30	22
729:	12	7	6	6	9	9	6	6
737:	9	5	13	7	10	8	11	6
745:	5	10	6	15	7	20	13	13
753:	11	5	16	8	7	12	7	12
761:	4	6	6	8	14	7	20	20
769:	17	4	7	19	12	6	6	7
777:	8	3	7	7	9	7	8	7
785:	13	10	8	4	6	9	4	4
793:	13	13	15	12	12	14	6	10

801: 10 8 12 11 4 10 8 11

Sample Title: CP4105S14-15

Channel	1	2	3	4	5	6	7	8
809:	6	5	8	2	5	3	4	4
817:	6	12	7	9	10	10	6	3
825:	4	7	3	10	8	5	12	11
833:	9	13	8	8	7	6	10	6
841:	6	8	10	7	13	7	10	3
849:	5	7	8	6	8	3	14	1
857:	7	6	5	12	19	9	8	5
865:	11	8	9	8	6	7	7	7
873:	6	1	8	9	3	8	5	12
881:	7	7	4	5	4	5	4	5
889:	7	4	6	10	6	4	2	6
897:	5	3	9	3	1	14	13	6
905:	6	8	5	7	11	27	82	48
913:	11	3	8	3	10	5	3	6
921:	5	2	2	8	6	9	5	10
929:	3	10	10	6	2	13	9	7
937:	4	4	5	6	4	3	5	10
945:	4	3	8	5	5	2	8	5
953:	2	5	5	5	7	5	10	3
961:	7	6	8	18	21	8	5	32
969:	38	21	7	9	4	4	3	4
977:	2	4	7	6	3	6	1	4
985:	5	5	2	8	5	5	5	2
993:	8	9	4	6	6	9	8	6
1001:	9	5	5	9	7	6	4	5
1009:	3	4	4	6	5	6	4	3
1017:	5	0	5	8	8	6	7	5
1025:	8	5	6	6	3	6	4	9
1033:	6	9	7	2	3	4	9	3
1041:	6	7	3	9	7	6	10	4
1049:	4	2	9	12	4	3	6	5
1057:	1	11	4	3	9	6	0	7
1065:	1	2	5	6	10	6	5	4
1073:	6	6	7	8	3	6	9	5
1081:	5	4	4	3	5	6	5	7
1089:	7	5	6	4	6	11	7	6
1097:	2	4	6	7	4	8	5	11
1105:	3	6	8	8	6	4	4	3
1113:	7	4	15	7	5	7	14	35
1121:	16	10	8	4	6	9	9	8
1129:	4	6	5	6	3	9	5	6
1137:	6	6	6	5	6	9	3	9
1145:	4	3	9	2	7	16	6	7
1153:	7	9	10	9	8	7	2	3
1161:	6	6	10	10	7	6	6	5
1169:	4	5	9	6	8	4	9	12
1177:	8	4	5	5	10	11	4	4
1185:	5	6	7	2	4	3	4	4
1193:	6	3	10	11	6	8	6	10
1201:	8	5	7	5	5	7	12	10
1209:	11	10	3	3	4	8	7	11
1217:	6	6	11	7	5	4	7	7
1225:	10	7	2	9	9	6	10	3

1233: 7 8 6 6 8 21 9 7

Sample Title: CP4105S14-15

Channel	1	2	3	4	5	6	7	8
1241:	8	12	2	8	9	9	9	6
1249:	3	3	3	8	5	9	4	3
1257:	3	6	7	8	4	5	7	4
1265:	6	7	4	6	5	5	3	4
1273:	5	7	3	1	3	1	4	0
1281:	9	7	2	4	2	4	4	6
1289:	7	3	7	3	4	5	3	6
1297:	5	1	3	4	4	12	4	5
1305:	4	2	2	6	4	1	4	2
1313:	5	2	2	1	3	5	2	3
1321:	1	5	1	4	4	0	2	3
1329:	3	4	5	1	6	2	3	3
1337:	2	6	5	2	1	1	3	0
1345:	0	3	8	5	4	5	3	4
1353:	4	5	2	3	4	3	3	5
1361:	4	2	3	1	2	1	4	2
1369:	6	0	1	3	1	2	5	4
1377:	3	6	6	0	3	1	2	5
1385:	6	5	3	0	2	3	3	3
1393:	1	1	3	2	5	2	5	3
1401:	5	3	0	0	1	3	4	4
1409:	2	5	1	3	2	3	1	0
1417:	1	3	4	2	1	2	3	1
1425:	6	2	2	2	3	5	1	2
1433:	1	2	1	2	2	1	0	2
1441:	2	3	7	2	2	3	3	6
1449:	1	3	0	0	1	1	3	5
1457:	6	12	58	192	182	64	7	1
1465:	3	0	3	1	1	6	2	1
1473:	2	1	2	0	5	1	0	0
1481:	0	2	5	3	1	2	2	2
1489:	3	2	0	1	4	2	1	3
1497:	6	3	2	0	2	5	3	1
1505:	0	1	3	1	4	1	1	1
1513:	1	2	2	1	1	1	3	3
1521:	1	0	2	2	3	0	2	5
1529:	2	2	1	1	3	0	3	1
1537:	1	1	2	1	7	4	0	5
1545:	0	2	0	1	2	4	1	0
1553:	1	1	1	1	1	2	1	0
1561:	0	1	1	0	0	1	2	1
1569:	2	1	0	1	2	2	0	0
1577:	1	1	1	2	3	4	2	2
1585:	0	0	4	5	3	0	4	7
1593:	3	5	0	4	0	1	0	3
1601:	4	1	1	2	2	3	0	0
1609:	1	1	1	2	1	1	2	2
1617:	0	4	4	2	0	1	0	2
1625:	1	2	1	0	0	2	1	2
1633:	2	0	4	0	2	2	3	1
1641:	2	1	1	0	2	0	2	2
1649:	0	2	2	0	0	0	0	4
1657:	1	2	1	2	2	3	2	2

1665: 3 0 0 2 2 1 1 1

Sample Title: CP4105S14-15

Channel	-----	-----	-----	-----	-----	-----	-----	-----
1673:	1	3	2	2	1	0	1	0
1681:	0	0	1	0	1	1	0	0
1689:	2	0	1	1	0	2	0	0
1697:	1	3	1	1	0	2	2	3
1705:	3	1	0	1	0	3	0	4
1713:	2	1	1	0	2	0	2	1
1721:	2	4	0	0	2	0	2	4
1729:	7	3	2	2	0	0	0	1
1737:	0	0	2	1	0	0	0	0
1745:	2	2	2	1	0	1	1	1
1753:	1	0	1	2	3	1	1	1
1761:	2	2	14	21	7	1	1	1
1769:	0	0	0	1	0	0	2	2
1777:	0	2	0	4	0	1	1	2
1785:	3	1	0	1	1	0	1	0
1793:	1	2	1	3	0	1	1	0
1801:	2	0	2	0	1	1	2	0
1809:	1	1	0	1	0	1	0	2
1817:	1	2	1	1	0	1	0	1
1825:	0	2	0	0	1	0	1	0
1833:	0	1	0	1	0	3	0	0
1841:	1	1	1	0	0	2	1	2
1849:	2	1	2	2	1	0	0	0
1857:	1	0	2	3	1	0	1	0
1865:	1	1	2	1	2	3	1	0
1873:	1	3	0	0	1	1	0	0
1881:	2	1	0	1	0	0	0	0
1889:	2	4	0	2	1	1	2	0
1897:	0	2	2	1	1	3	0	0
1905:	1	1	0	1	0	0	1	0
1913:	1	1	0	0	1	0	0	0
1921:	0	0	0	1	2	0	0	1
1929:	0	1	1	0	0	2	1	1
1937:	0	0	2	0	0	0	2	2
1945:	0	1	2	1	1	0	0	1
1953:	0	1	2	0	1	0	0	1
1961:	0	0	3	3	0	0	0	1
1969:	1	1	2	2	2	1	0	0
1977:	1	2	0	0	0	1	0	0
1985:	3	0	0	0	0	1	1	0
1993:	0	0	0	0	1	0	3	1
2001:	0	0	0	0	1	0	0	3
2009:	1	1	2	1	1	0	2	0
2017:	3	1	0	1	0	0	0	0
2025:	1	0	2	1	1	0	1	2
2033:	3	0	1	0	0	1	1	2
2041:	3	0	1	1	0	0	1	0
2049:	1	0	0	0	0	0	0	1
2057:	1	1	1	1	0	0	0	0
2065:	2	0	0	0	1	0	1	0
2073:	2	0	0	1	0	0	1	2
2081:	1	1	2	1	2	2	1	3
2089:	0	0	1	1	0	2	0	1

2097: 2 0 0 0 2 8 8 3

Sample Title: CP4105S14-15

Channel	1	2	3	4	5	6	7	8
2105:	2	1	0	0	0	1	1	0
2113:	1	0	1	0	0	2	0	2
2121:	1	3	1	2	3	1	0	1
2129:	1	0	0	1	0	0	0	1
2137:	0	0	1	0	4	0	1	0
2145:	4	1	1	0	1	0	0	2
2153:	0	1	1	1	1	3	0	0
2161:	0	2	1	0	0	0	1	1
2169:	2	0	1	1	0	2	0	2
2177:	0	1	2	0	1	1	0	0
2185:	1	1	2	1	2	0	0	0
2193:	2	0	2	2	2	0	3	2
2201:	2	5	4	4	2	1	0	1
2209:	1	0	0	0	2	0	0	2
2217:	2	0	4	2	0	0	0	2
2225:	1	0	0	1	0	0	1	0
2233:	0	2	1	0	0	0	0	0
2241:	1	3	0	0	1	0	0	1
2249:	3	0	2	1	0	3	3	2
2257:	0	1	0	0	1	4	0	1
2265:	2	1	1	2	1	3	0	0
2273:	0	0	2	1	1	1	0	0
2281:	1	0	0	0	0	0	1	1
2289:	1	0	1	1	2	1	0	1
2297:	0	2	0	1	1	2	0	1
2305:	0	1	0	1	0	1	1	2
2313:	1	1	0	1	0	1	0	1
2321:	0	0	1	0	1	0	1	0
2329:	0	2	1	2	0	2	3	1
2337:	0	0	1	1	0	1	1	3
2345:	2	0	0	1	0	0	0	1
2353:	2	1	0	0	0	1	1	1
2361:	1	1	0	0	0	0	0	2
2369:	0	0	0	0	1	1	1	0
2377:	0	1	2	0	2	0	0	0
2385:	1	1	0	1	0	0	0	0
2393:	0	0	0	0	2	0	1	1
2401:	0	1	1	1	0	1	1	1
2409:	1	2	0	1	1	0	0	0
2417:	0	2	0	0	0	1	1	0
2425:	2	0	0	1	0	0	0	0
2433:	0	1	0	4	0	0	2	0
2441:	0	0	0	0	1	1	1	4
2449:	2	0	1	1	1	1	0	0
2457:	1	1	1	0	0	1	1	1
2465:	0	0	0	0	0	1	0	3
2473:	1	0	1	0	0	0	1	0
2481:	1	2	0	1	0	1	0	1
2489:	0	0	0	0	0	2	0	0
2497:	0	0	0	0	0	0	0	0
2505:	0	1	1	1	0	1	1	0
2513:	1	0	1	0	0	1	0	2
2521:	0	1	1	1	0	0	0	0

2529: 1 0 1 1 2 0 0 0

Sample Title: CP4105S14-15

Channel	1	2	3	4	5	6	7	8
2537:	0	0	1	0	0	0	0	0
2545:	0	0	0	0	0	0	1	0
2553:	0	0	0	0	0	2	0	0
2561:	0	1	1	0	2	1	1	0
2569:	0	0	1	0	0	0	0	2
2577:	1	1	0	0	0	0	0	2
2585:	0	0	0	0	0	0	1	0
2593:	0	0	0	0	0	0	0	0
2601:	0	1	1	1	1	2	0	0
2609:	0	2	0	13	27	22	14	4
2617:	2	0	0	1	0	0	1	0
2625:	0	0	1	2	0	0	1	0
2633:	0	2	0	0	0	1	1	0
2641:	0	0	0	0	0	0	1	0
2649:	0	1	1	1	0	0	0	0
2657:	2	0	0	1	0	0	0	0
2665:	0	1	0	1	0	0	1	0
2673:	0	0	1	0	0	1	1	0
2681:	0	0	1	1	0	0	0	0
2689:	0	0	0	1	0	0	1	0
2697:	1	0	0	0	0	1	0	1
2705:	0	0	0	0	0	0	0	0
2713:	0	0	0	2	0	1	2	0
2721:	0	0	0	0	0	0	0	0
2729:	0	0	0	1	1	0	2	0
2737:	0	0	0	1	0	0	0	0
2745:	0	0	0	1	0	0	1	0
2753:	0	0	0	0	0	0	1	1
2761:	0	1	0	0	1	0	0	0
2769:	1	1	0	0	0	0	0	0
2777:	0	0	0	0	0	0	0	1
2785:	0	0	0	0	0	0	1	0
2793:	1	2	0	0	0	0	2	1
2801:	0	1	0	0	1	0	1	0
2809:	0	0	0	1	0	0	0	1
2817:	0	0	0	1	0	0	0	0
2825:	0	0	0	0	0	0	0	0
2833:	0	0	0	0	0	0	0	0
2841:	0	0	1	0	0	0	0	0
2849:	0	0	0	0	1	0	0	0
2857:	1	0	1	2	0	0	0	0
2865:	0	1	0	0	0	0	0	0
2873:	0	0	1	0	0	0	0	0
2881:	0	0	0	0	0	1	0	0
2889:	0	0	0	0	0	0	1	2
2897:	1	0	0	0	0	0	0	1
2905:	0	0	0	0	0	0	0	0
2913:	0	1	0	0	0	0	0	0
2921:	0	0	1	1	1	0	0	0
2929:	0	0	0	0	1	1	0	2
2937:	0	0	0	0	0	0	0	0
2945:	0	0	0	0	0	0	0	0
2953:	0	1	0	0	0	0	0	0

2961: 0 0 0 0 0 0 0 1 0

Sample Title: CP4105S14-15

Channel	1	2	3	4	5	6	7	8	9
2969:	0	0	0	0	0	0	0	0	0
2977:	1	1	0	0	0	0	0	0	1
2985:	0	0	0	0	0	0	0	0	0
2993:	1	1	0	0	0	0	0	0	1
3001:	0	0	1	0	0	0	0	0	1
3009:	0	0	0	0	0	0	0	0	0
3017:	0	0	1	0	0	0	0	1	0
3025:	0	0	0	0	0	0	0	0	0
3033:	0	0	0	0	0	0	1	0	0
3041:	0	0	0	0	0	0	0	0	0
3049:	0	0	0	0	0	0	0	0	0
3057:	0	2	0	1	0	0	0	0	0
3065:	1	1	0	0	0	0	0	0	0
3073:	0	1	0	0	0	0	0	0	1
3081:	0	0	0	1	1	0	0	0	1
3089:	0	1	1	0	0	0	0	0	0
3097:	0	0	0	0	0	0	1	0	0
3105:	0	0	0	0	0	0	0	0	0
3113:	0	0	0	0	0	0	0	0	0
3121:	1	0	0	0	0	0	0	0	0
3129:	0	0	0	0	0	0	0	0	0
3137:	0	0	0	0	0	0	1	0	0
3145:	0	0	0	0	0	0	0	0	0
3153:	0	0	0	0	0	0	0	0	0
3161:	0	0	1	0	0	0	1	0	0
3169:	0	0	0	0	0	2	0	0	0
3177:	0	0	0	0	0	0	0	1	0
3185:	1	0	0	0	0	0	0	1	2
3193:	0	0	1	0	0	1	0	0	0
3201:	0	0	0	0	0	0	0	0	1
3209:	0	0	0	0	0	1	0	0	0
3217:	1	0	0	0	0	0	0	0	0
3225:	0	1	0	0	0	0	0	0	0
3233:	0	0	0	0	0	0	0	0	1
3241:	0	0	0	0	0	0	0	0	0
3249:	0	0	0	0	0	0	1	0	0
3257:	0	0	0	0	0	0	1	0	1
3265:	0	0	0	0	0	0	0	1	0
3273:	0	0	0	0	0	0	0	0	0
3281:	0	0	0	1	1	1	1	0	0
3289:	0	0	0	0	0	0	0	0	0
3297:	0	0	0	0	0	0	1	0	0
3305:	0	0	1	0	0	0	0	0	0
3313:	1	0	0	0	0	1	0	0	0
3321:	0	0	0	0	0	0	0	0	0
3329:	1	0	0	0	0	0	0	0	0
3337:	0	0	0	0	0	0	0	0	0
3345:	0	0	1	0	0	0	0	0	0
3353:	1	0	1	0	0	0	0	0	0
3361:	0	0	0	0	0	0	0	0	0
3369:	1	0	0	0	0	0	0	1	1
3377:	0	0	0	0	0	0	0	0	0
3385:	0	0	0	0	0	0	0	0	0

3393: 0 0 0 0 0 0 1 0

Sample Title: CP4105S14-15

Channel	1	2	3	4	5	6	7	8
3401:	0	0	0	0	0	0	1	1
3409:	0	0	0	0	0	0	0	0
3417:	0	0	0	0	0	0	0	0
3425:	0	1	0	0	0	0	0	0
3433:	0	0	0	0	0	0	0	0
3441:	0	0	1	0	0	0	0	0
3449:	0	0	0	0	0	1	0	0
3457:	0	0	0	0	0	0	0	1
3465:	0	0	0	0	0	0	1	1
3473:	0	0	1	0	0	1	0	0
3481:	0	0	1	0	0	0	0	0
3489:	0	0	0	0	0	0	0	0
3497:	0	0	0	0	0	0	0	0
3505:	1	2	0	0	0	0	0	0
3513:	0	0	0	0	0	0	1	0
3521:	0	0	0	0	0	1	0	0
3529:	0	0	0	0	0	0	0	0
3537:	0	0	0	0	0	0	0	0
3545:	1	0	0	0	0	0	0	0
3553:	0	0	0	0	1	1	0	1
3561:	0	0	0	1	0	0	0	0
3569:	1	0	0	0	0	0	0	0
3577:	1	0	0	0	0	0	0	0
3585:	0	0	0	1	0	0	0	0
3593:	0	0	0	0	0	1	0	0
3601:	0	0	0	1	1	0	0	0
3609:	0	0	0	0	0	0	2	0
3617:	0	0	0	0	0	0	0	0
3625:	0	0	1	0	0	0	0	0
3633:	0	0	0	1	0	0	0	0
3641:	0	1	0	0	0	0	0	0
3649:	0	0	0	0	0	0	0	0
3657:	0	0	0	0	1	0	0	2
3665:	0	0	0	0	0	1	0	0
3673:	1	1	0	0	0	0	0	0
3681:	0	1	0	0	0	1	0	1
3689:	0	0	0	0	0	0	0	0
3697:	0	0	0	1	1	0	0	1
3705:	0	0	0	0	0	0	0	0
3713:	0	0	0	0	0	1	0	0
3721:	0	0	0	0	0	0	0	0
3729:	0	0	0	0	0	0	1	0
3737:	0	0	0	0	0	0	1	0
3745:	2	0	0	0	0	0	0	1
3753:	0	0	0	0	0	0	0	0
3761:	0	0	0	1	0	0	0	0
3769:	0	0	0	0	0	0	0	0
3777:	0	0	0	0	0	1	0	0
3785:	0	1	0	0	0	0	0	0
3793:	0	0	0	0	0	0	0	0
3801:	0	0	0	0	0	1	0	1
3809:	0	0	0	0	0	0	0	1
3817:	0	0	0	0	1	0	0	0

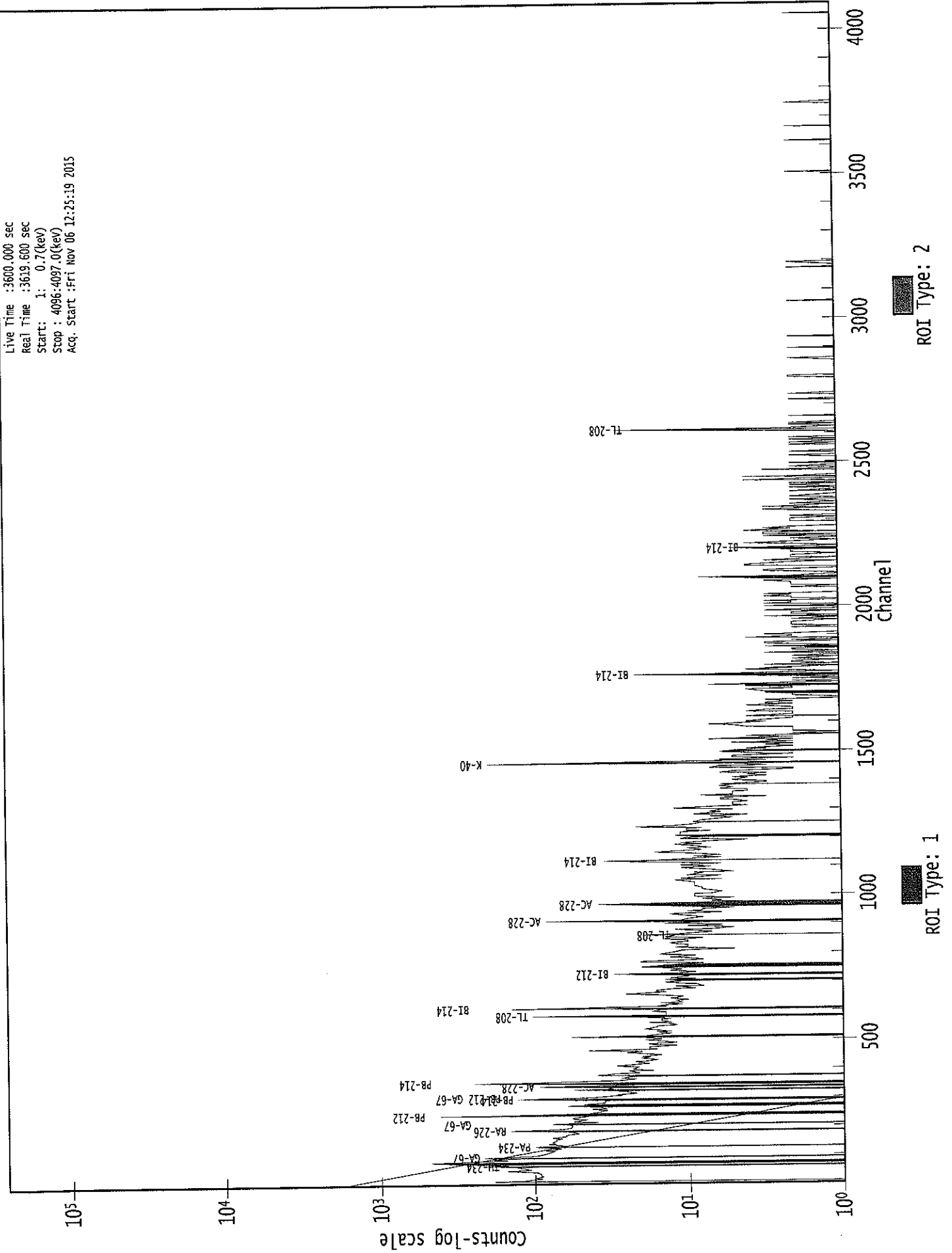
3825: 0 0 0 0 1 0 0 0

Sample Title: CP4105S14-15

Channel								
3833:	0	0	0	0	0	0	0	0
3841:	0	0	0	0	0	0	0	0
3849:	0	0	0	0	0	0	0	0
3857:	0	1	0	0	0	0	0	0
3865:	0	0	1	0	1	0	0	0
3873:	0	0	0	0	0	0	0	0
3881:	1	0	0	0	0	0	0	0
3889:	0	0	0	0	0	0	0	0
3897:	0	0	1	1	0	0	0	0
3905:	0	0	0	1	0	0	0	0
3913:	0	0	0	0	0	0	0	0
3921:	0	1	0	0	0	0	0	0
3929:	1	0	0	0	0	0	0	0
3937:	0	0	0	0	0	0	0	0
3945:	0	0	0	0	0	0	0	0
3953:	0	0	0	0	0	0	0	0
3961:	0	0	0	0	0	0	0	1
3969:	0	0	1	0	0	0	0	0
3977:	0	0	0	0	0	0	1	0
3985:	0	0	0	0	0	0	0	0
3993:	0	0	0	1	1	0	0	0
4001:	0	0	0	0	0	0	0	0
4009:	0	0	0	0	0	0	0	0
4017:	0	0	0	0	0	1	1	0
4025:	0	0	0	0	0	0	0	0
4033:	0	1	0	1	0	1	0	0
4041:	0	0	0	0	1	0	0	0
4049:	0	0	0	0	0	0	2	0
4057:	0	0	0	0	0	1	0	0
4065:	0	0	0	0	0	0	0	0
4073:	0	0	1	0	0	1	0	0
4081:	0	0	0	0	0	0	0	0
4089:	0	0	0	0	0	0	0	0

0000029312.CNF

Live Time : 3600.000 sec
Real Time : 3619.600 sec
Start: 1: 0.7(kev)
Stop : 4096.4097.0(kev)
Acq. Start : Fri Nov 06 12:25:19 2015



*W.S. Walker*Analysis Report for 1510086-12
CP040S03-04

GAMMA SPECTRUM ANALYSIS

Sample Identification : 1510086-12
Sample Description : CP040S03-04
Sample Type : SOIL

Sample Size : 6.162E+02 grams
Facility : Countroom

Sample Taken On : 10/8/2015 7:57:21AM
Acquisition Started : 11/6/2015 12:25:30PM

Procedure : GAS-1402 pCi
Operator : Administrator
Detector Name : GE4
Geometry : GAS-1402
Live Time : 3600.0 seconds
Real Time : 3677.5 seconds

Dead Time : 2.11 %

Peak Locate Threshold : 2.50
Peak Locate Range (in channels) : 1 - 4096
Peak Area Range (in channels) : 15 - 4096
Identification Energy Tolerance : 1.000 keV

Energy Calibration Used Done On : 10/25/2014
Efficiency Calibration Used Done On : 11/8/2014
Efficiency Calibration Description :

Sample Number : 29263

PEAK-TO-TOTAL CALIBRATION REPORT

Peak-to-Total Efficiency Calibration Equation

Ag
11/9/15

Analysis Report for 1510086-12
CP040S03-04

PEAK LOCATE REPORT

Peak Locate Performed on : 11/6/2015 1:26:49PM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096
Peak Search Sensitivity : 2.50

Peak No.	Energy (keV)	Centroid Channel	Centroid Uncertainty	Peak Significance
1	75.84	75.11	0.0000	0.00
2	87.76	87.04	0.0000	0.00
3	92.72	91.99	0.0000	0.00
4	105.16	104.44	0.0000	0.00
5	185.38	184.69	0.0000	0.00
6	239.35	238.69	0.0000	0.00
7	295.18	294.54	0.0000	0.00
8	328.36	327.74	0.0000	0.00
9	338.92	338.30	0.0000	0.00
10	352.13	351.52	0.0000	0.00
11	511.39	510.85	0.0000	0.00
12	583.45	582.94	0.0000	0.00
13	609.49	609.00	0.0000	0.00
14	633.89	633.40	0.0000	0.00
15	646.35	645.87	0.0000	0.00
16	839.03	838.65	0.0000	0.00
17	860.90	860.53	0.0000	0.00
18	911.38	911.04	0.0000	0.00
19	969.83	969.52	0.0000	0.00
20	1011.32	1011.04	0.0000	0.00
21	1121.73	1121.50	0.0000	0.00
22	1239.51	1239.35	0.0000	0.00
23	1399.39	1399.33	0.0000	0.00
24	1408.64	1408.58	0.0000	0.00
25	1461.02	1460.99	0.0000	0.00
26	1593.76	1593.81	0.0000	0.00
27	1621.68	1621.75	0.0000	0.00
28	1740.35	1740.50	0.0000	0.00
29	1764.11	1764.27	0.0000	0.00
30	1903.49	1903.75	0.0000	0.00
31	1967.15	1967.45	0.0000	0.00
32	2614.38	2615.15	0.0000	0.00

? = Adjacent peak noted
Errors quoted at 2.000sigma

Analysis Report for 1510086-12
CP040S03-04

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 11/6/2015 1:26:49PM

Peak Analysis From Channel : 1
Peak Analysis To Channel : 4096

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	FWHM (keV)
M	1	75.84	68 - 81	75.11	1.02E+03	169.62	2.74E+03	4.18
m	2	87.76	82 - 97	87.04	2.49E+02	117.45	1.83E+03	4.16
	3	92.72	82 - 97	91.99	1.88E+02	97.59	1.35E+03	2.78
	4	105.16	100 - 107	104.44	6.46E+01	79.12	9.77E+02	1.24
	5	185.38	178 - 189	184.69	2.11E+02	95.12	1.02E+03	2.83
	6	239.35	234 - 245	238.69	6.04E+02	93.23	7.81E+02	2.66
	7	295.18	289 - 297	294.54	1.41E+02	58.71	5.21E+02	2.46
	8	328.36	323 - 331	327.74	5.83E+01	48.31	3.21E+02	2.14
	9	338.92	333 - 343	338.30	1.01E+02	57.62	3.85E+02	1.82
	10	352.13	347 - 357	351.52	3.44E+02	65.19	3.78E+02	2.43
	11	511.39	505 - 515	510.85	8.07E+01	43.95	2.15E+02	2.68
	12	583.45	577 - 588	582.94	1.19E+02	50.36	2.57E+02	2.37
	13	609.49	604 - 614	609.00	2.23E+02	49.15	2.03E+02	2.35
M	14	633.89	629 - 651	633.40	3.07E+01	24.00	7.20E+01	4.08
m	15	646.35	629 - 651	645.87	4.87E+01	34.23	1.08E+02	4.08
	16	839.03	832 - 844	838.65	3.17E+01	30.75	9.26E+01	8.89
	17	860.90	856 - 865	860.53	2.17E+01	26.72	8.86E+01	2.41
	18	911.38	905 - 916	911.04	1.10E+02	30.33	5.96E+01	1.89
	19	969.83	967 - 975	969.52	4.35E+01	26.40	6.90E+01	2.89
	20	1011.32	1008 - 1015	1011.04	1.96E+01	15.75	2.88E+01	2.75
	21	1121.73	1117 - 1127	1121.50	3.97E+01	30.07	1.01E+02	1.83
	22	1239.51	1232 - 1246	1239.35	5.03E+01	32.36	8.55E+01	8.35
	23	1399.39	1393 - 1404	1399.33	1.54E+01	12.49	1.12E+01	1.24
	24	1408.64	1405 - 1414	1408.58	1.73E+01	11.92	1.15E+01	2.18
	25	1461.02	1456 - 1468	1460.99	2.64E+02	35.74	2.60E+01	2.92
	26	1593.76	1590 - 1597	1593.81	1.63E+01	14.28	2.15E+01	1.49
	27	1621.68	1617 - 1626	1621.75	1.50E+01	11.40	1.00E+01	5.36
	28	1740.35	1735 - 1745	1740.50	1.03E+01	9.07	5.31E+00	7.55
	29	1764.11	1760 - 1768	1764.27	1.97E+01	10.40	4.64E+00	3.07
	30	1903.49	1901 - 1907	1903.75	8.00E+00	5.66	0.00E+00	1.47
	31	1967.15	1963 - 1971	1967.45	5.88E+00	7.23	4.25E+00	1.27
	32	2614.38	2610 - 2619	2615.15	3.76E+01	13.60	4.80E+00	4.16

Analysis Report for 1510086-12
CP040S03-04

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 11/6/2015 1:26:49PM

Peak Analysis From Channel : 1
Peak Analysis To Channel : 4096

	Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
	1	75.84	68 -	81	1.02E+03	169.62	2.74E+03	1.29E+02
M	2	87.76	82 -	97	2.49E+02	117.45	1.83E+03	7.02E+01
m	3	92.72	82 -	97	1.88E+02	97.59	1.35E+03	6.05E+01
	4	105.16	100 -	107	6.46E+01	79.12	9.77E+02	6.37E+01
	5	185.38	178 -	189	2.11E+02	95.12	1.02E+03	7.45E+01
	6	239.35	234 -	245	6.04E+02	93.23	7.81E+02	6.51E+01
	7	295.18	289 -	297	1.41E+02	58.71	5.21E+02	5.43E+01
	8	328.36	323 -	331	5.83E+01	48.31	3.21E+02	3.77E+01
	9	338.92	333 -	343	1.01E+02	57.62	3.85E+02	4.44E+01
	10	352.13	347 -	357	3.44E+02	65.19	3.78E+02	4.41E+01
	11	511.39	505 -	515	8.07E+01	43.95	2.15E+02	3.30E+01
	12	583.45	577 -	588	1.19E+02	50.36	2.57E+02	3.73E+01
	13	609.49	604 -	614	2.23E+02	49.15	2.03E+02	3.21E+01
M	14	633.89	629 -	651	3.07E+01	24.00	7.20E+01	1.39E+01
m	15	646.35	629 -	651	4.87E+01	34.23	1.08E+02	1.71E+01
	16	839.03	832 -	844	3.17E+01	30.75	9.26E+01	2.35E+01
	17	860.90	856 -	865	2.17E+01	26.72	8.86E+01	2.06E+01
	18	911.38	905 -	916	1.10E+02	30.33	5.96E+01	1.80E+01
	19	969.83	967 -	975	4.35E+01	26.40	6.90E+01	1.88E+01
	20	1011.32	1008 -	1015	1.96E+01	15.75	2.88E+01	1.07E+01
	21	1121.73	1117 -	1127	3.97E+01	30.07	1.01E+02	2.24E+01
	22	1239.51	1232 -	1246	5.03E+01	32.36	8.55E+01	2.39E+01
	23	1399.39	1393 -	1404	1.54E+01	12.49	1.12E+01	7.99E+00
	24	1408.64	1405 -	1414	1.73E+01	11.92	1.15E+01	7.02E+00
	25	1461.02	1456 -	1468	2.64E+02	35.74	2.60E+01	1.22E+01
	26	1593.76	1590 -	1597	1.63E+01	14.28	2.15E+01	9.69E+00
	27	1621.68	1617 -	1626	1.50E+01	11.40	1.00E+01	6.88E+00
	28	1740.35	1735 -	1745	1.03E+01	9.07	5.31E+00	5.25E+00
	29	1764.11	1760 -	1768	1.97E+01	10.40	4.64E+00	4.47E+00
	30	1903.49	1901 -	1907	8.00E+00	5.66	0.00E+00	0.00E+00
	31	1967.15	1963 -	1971	5.88E+00	7.23	4.25E+00	4.41E+00

Analysis Report for 1510086-12
CP040S03-04

Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
32	2614.38	2610 -	2619	3.76E+01	13.60	4.80E+00	4.84E+00

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

PEAK WITH NID REPORT

Peak Analysis Performed on : 11/6/2015 1:26:49PM

Peak Analysis From Channel : 1
Peak Analysis To Channel : 4096

Tentative NID Library : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB
Peak Match Tolerance : 1.000 keV

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
M 1	75.84	68 -	81	75.11	1.02E+03	169.62	2.74E+03	.....
M 2	87.76	82 -	97	87.04	2.49E+02	117.45	1.83E+03	SN-126 CD-109 LU-176
m 3	92.72	82 -	97	91.99	1.88E+02	97.59	1.35E+03	GA-67
m 4	105.16	100 -	107	104.44	6.46E+01	79.12	9.77E+02	EU-155 NP-239
5	185.38	178 -	189	184.69	2.11E+02	95.12	1.02E+03	RA-226 HO-166M
6	239.35	234 -	245	238.69	6.04E+02	93.23	7.81E+02	PB-212
7	295.18	289 -	297	294.54	1.41E+02	58.71	5.21E+02	PB-214
8	328.36	323 -	331	327.74	5.83E+01	48.31	3.21E+02	LA-140
9	338.92	333 -	343	338.30	1.01E+02	57.62	3.85E+02	AC-228
10	352.13	347 -	357	351.52	3.44E+02	65.19	3.78E+02	PB-214
11	511.39	505 -	515	510.85	8.07E+01	43.95	2.15E+02	.....
12	583.45	577 -	588	582.94	1.19E+02	50.36	2.57E+02	TL-208
13	609.49	604 -	614	609.00	2.23E+02	49.15	2.03E+02	BI-214
M 14	633.89	629 -	651	633.40	3.07E+01	24.00	7.20E+01	.....
m 15	646.35	629 -	651	645.87	4.87E+01	34.23	1.08E+02	SB-124
16	839.03	832 -	844	838.65	3.17E+01	30.75	9.26E+01	.....
17	860.90	856 -	865	860.53	2.17E+01	26.72	8.86E+01	TL-208
18	911.38	905 -	916	911.04	1.10E+02	30.33	5.96E+01	AC-228 LU-172
19	969.83	967 -	975	969.52	4.35E+01	26.40	6.90E+01	AC-228
20	1011.32	1008 -	1015	1011.04	1.96E+01	15.75	2.88E+01	.....

Analysis Report for 1510086-12

CP040S03-04

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
21	1121.73	1117 -	1127	1121.50	3.97E+01	30.07	1.01E+02	TA-182
22	1239.51	1232 -	1246	1239.35	5.03E+01	32.36	8.55E+01	.....
23	1399.39	1393 -	1404	1399.33	1.54E+01	12.49	1.12E+01	.....
24	1408.64	1405 -	1414	1408.58	1.73E+01	11.92	1.15E+01	EU-152
25	1461.02	1456 -	1468	1460.99	2.64E+02	35.74	2.60E+01	K-40
26	1593.76	1590 -	1597	1593.81	1.63E+01	14.28	2.15E+01	.....
27	1621.68	1617 -	1626	1621.75	1.50E+01	11.40	1.00E+01	.....
28	1740.35	1735 -	1745	1740.50	1.03E+01	9.07	5.31E+00	.....
29	1764.11	1760 -	1768	1764.27	1.97E+01	10.40	4.64E+00	BI-214
30	1903.49	1901 -	1907	1903.75	8.00E+00	5.66	0.00E+00	.....
31	1967.15	1963 -	1971	1967.45	5.88E+00	7.23	4.25E+00	.....
32	2614.38	2610 -	2619	2615.15	3.76E+01	13.60	4.80E+00	TL-208

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

PEAK EFFICIENCY REPORT

Peak Analysis Performed on : 11/6/2015 1:26:49PM

	Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
	1	75.84	1.02E+03	169.62	2.13E-02	1.70E-03
M	2	87.76	2.49E+02	117.45	1.96E-02	1.63E-03
m	3	92.72	1.88E+02	97.59	1.90E-02	1.62E-03
	4	105.16	6.46E+01	79.12	1.76E-02	1.58E-03
	5	185.38	2.11E+02	95.12	1.17E-02	1.15E-03
	6	239.35	6.04E+02	93.23	9.39E-03	9.85E-04
	7	295.18	1.41E+02	58.71	7.78E-03	8.43E-04
	8	328.36	5.83E+01	48.31	7.05E-03	8.06E-04
	9	338.92	1.01E+02	57.62	6.85E-03	7.95E-04
	10	352.13	3.44E+02	65.19	6.61E-03	7.80E-04
	11	511.39	8.07E+01	43.95	4.61E-03	5.61E-04
	12	583.45	1.19E+02	50.36	4.04E-03	4.55E-04
	13	609.49	2.23E+02	49.15	3.87E-03	4.17E-04
M	14	633.89	3.07E+01	24.00	3.73E-03	3.81E-04
m	15	646.35	4.87E+01	34.23	3.66E-03	3.63E-04
	16	839.03	3.17E+01	30.75	2.83E-03	2.41E-04
	17	860.90	2.17E+01	26.72	2.76E-03	2.29E-04
	18	911.38	1.10E+02	30.33	2.61E-03	2.06E-04

: 00726

Analysis Report for 1510086-12
CP040S03-04

Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
19	969.83	4.35E+01	26.40	2.46E-03	1.99E-04
20	1011.32	1.96E+01	15.75	2.36E-03	1.93E-04
21	1121.73	3.97E+01	30.07	2.14E-03	1.79E-04
22	1239.51	5.03E+01	32.36	1.95E-03	1.91E-04
23	1399.39	1.54E+01	12.49	1.75E-03	2.02E-04
24	1408.64	1.73E+01	11.92	1.74E-03	2.00E-04
25	1461.02	2.64E+02	35.74	1.68E-03	1.89E-04
26	1593.76	1.63E+01	14.28	1.56E-03	1.61E-04
27	1621.68	1.50E+01	11.40	1.54E-03	1.56E-04
28	1740.35	1.03E+01	9.07	1.45E-03	1.31E-04
29	1764.11	1.97E+01	10.40	1.43E-03	1.26E-04
30	1903.49	8.00E+00	5.66	1.35E-03	1.11E-04
31	1967.15	5.88E+00	7.23	1.32E-03	1.11E-04
32	2614.38	3.76E+01	13.60	1.07E-03	1.11E-04

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000 sigma

BACKGROUND SUBTRACT REPORT

Peak Analysis Performed on : 11/6/2015 1:26:49PM

Env. Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000028944.CNF

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
	1	75.84	1.02E+03			1.02E+03	1.70E+02
M	2	87.76	2.49E+02			2.49E+02	1.17E+02
m	3	92.72	1.88E+02	5.44E+01	8.36E+00	1.33E+02	9.79E+01
	4	105.16	6.46E+01			6.46E+01	7.91E+01
	5	185.38	2.11E+02	1.43E+01	7.33E+00	1.97E+02	9.54E+01
	6	239.35	6.04E+02	1.09E+01	6.39E+00	5.93E+02	9.34E+01
	7	295.18	1.41E+02			1.41E+02	5.87E+01
	8	328.36	5.83E+01			5.83E+01	4.83E+01
	9	338.92	1.01E+02			1.01E+02	5.76E+01
	10	352.13	3.44E+02	8.07E+00	5.01E+00	3.36E+02	6.54E+01
	11	511.39	8.07E+01	4.21E+01	4.92E+00	3.86E+01	4.42E+01
	12	583.45	1.19E+02			1.19E+02	5.04E+01
	13	609.49	2.23E+02	5.16E+00	1.63E+00	2.17E+02	4.92E+01
M	14	633.89	3.07E+01			3.07E+01	2.40E+01
m	15	646.35	4.87E+01			4.87E+01	3.42E+01
	16	839.03	3.17E+01			3.17E+01	3.08E+01

: 00727

Analysis Report for 1510086-12

CP040S03-04

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
17	860.90	2.17E+01	26.72			2.17E+01	2.67E+01
18	911.38	1.10E+02	30.33	1.01E+00	2.85E+00	1.09E+02	3.05E+01
19	969.83	4.35E+01	26.40			4.35E+01	2.64E+01
20	1011.32	1.96E+01	15.75			1.96E+01	1.57E+01
21	1121.73	3.97E+01	30.07			3.97E+01	3.01E+01
22	1239.51	5.03E+01	32.36			5.03E+01	3.24E+01
23	1399.39	1.54E+01	12.49			1.54E+01	1.25E+01
24	1408.64	1.73E+01	11.92			1.73E+01	1.19E+01
25	1461.02	2.64E+02	35.74			2.64E+02	3.57E+01
26	1593.76	1.63E+01	14.28			1.63E+01	1.43E+01
27	1621.68	1.50E+01	11.40			1.50E+01	1.14E+01
28	1740.35	1.03E+01	9.07			1.03E+01	9.07E+00
29	1764.11	1.97E+01	10.40	1.11E-01	9.77E-01	1.96E+01	1.05E+01
30	1903.49	8.00E+00	5.66			8.00E+00	5.66E+00
31	1967.15	5.88E+00	7.23			5.88E+00	7.23E+00
32	2614.38	3.76E+01	13.60	1.20E+00	1.02E+00	3.64E+01	1.36E+01

M = First peak in a multiplet region

m = Other peak in a multiplet region

F = Fitted singlet

Errors quoted at 2.000sigma

AREA CORRECTION REPORT REFERENCE PEAK / BKG. SUBTRACT

Peak Analysis Performed on : 11/6/2015 1:26:49PM

Ref. Peak Energy : 0.00

Reference Date :

Peak Ratio : 0.00

Uncertainty : 0.00

Background File

: \\OR-GAMMA1\ApexRoot\Countroom\Data\0000028944.CNF

Corrected Area is: Original * Peak Ratio - Background

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
	1	75.84	1.02E+03			1.02E+03	1.70E+02
M	2	87.76	2.49E+02			2.49E+02	1.17E+02
m	3	92.72	1.88E+02	5.44E+01	8.36E+00	1.33E+02	9.79E+01
	4	105.16	6.46E+01			6.46E+01	7.91E+01
	5	185.38	2.11E+02	1.43E+01	7.33E+00	1.97E+02	9.54E+01
	6	239.35	6.04E+02	1.09E+01	6.39E+00	5.93E+02	9.34E+01
	7	295.18	1.41E+02			1.41E+02	5.87E+01
	8	328.36	5.83E+01			5.83E+01	4.83E+01
	9	338.92	1.01E+02			1.01E+02	5.76E+01
	10	352.13	3.44E+02	8.07E+00	5.01E+00	3.36E+02	6.54E+01
	11	511.39	8.07E+01	4.21E+01	4.92E+00	3.86E+01	4.42E+01
	12	583.45	1.19E+02			1.19E+02	5.04E+01

: 00728

Analysis Report for 1510086-12

CP040S03-04

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
M	13 609.49	2.23E+02	49.15	5.16E+00	1.63E+00	2.17E+02	4.92E+01
m	14 633.89	3.07E+01	24.00			3.07E+01	2.40E+01
	15 646.35	4.87E+01	34.23			4.87E+01	3.42E+01
	16 839.03	3.17E+01	30.75			3.17E+01	3.08E+01
	17 860.90	2.17E+01	26.72			2.17E+01	2.67E+01
	18 911.38	1.10E+02	30.33	1.01E+00	2.85E+00	1.09E+02	3.05E+01
	19 969.83	4.35E+01	26.40			4.35E+01	2.64E+01
	20 1011.32	1.96E+01	15.75			1.96E+01	1.57E+01
	21 1121.73	3.97E+01	30.07			3.97E+01	3.01E+01
	22 1239.51	5.03E+01	32.36			5.03E+01	3.24E+01
	23 1399.39	1.54E+01	12.49			1.54E+01	1.25E+01
	24 1408.64	1.73E+01	11.92			1.73E+01	1.19E+01
	25 1461.02	2.64E+02	35.74			2.64E+02	3.57E+01
	26 1593.76	1.63E+01	14.28			1.63E+01	1.43E+01
	27 1621.68	1.50E+01	11.40			1.50E+01	1.14E+01
	28 1740.35	1.03E+01	9.07			1.03E+01	9.07E+00
	29 1764.11	1.97E+01	10.40	1.11E-01	9.77E-01	1.96E+01	1.05E+01
	30 1903.49	8.00E+00	5.66			8.00E+00	5.66E+00
	31 1967.15	5.88E+00	7.23			5.88E+00	7.23E+00
	32 2614.38	3.76E+01	13.60	1.20E+00	1.02E+00	3.64E+01	1.36E+01

M = First peak in a multiplet region

m = Other peak in a multiplet region

F = Fitted singlet

Errors quoted at 2.000sigma

NUCLIDE IDENTIFICATION REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

IDENTIFIED NUCLIDES

Nuclide Name	Id Confidence	Energy (keV)	Yield(%)	Activity (pCi/grams)	Activity Uncertainty
K-40	0.993	1460.81 *	10.67	1.79E+01	3.17E+00
GA-67	0.378	93.31 *	35.70	1.19E+02	4.79E+02
		208.95	2.24		
		300.22	16.00		
CD-109	0.989	88.03 *	3.72	4.34E+00	2.09E+00
SN-126	0.994	87.57 *	37.00	4.18E-01	2.00E-01
TL-208	0.984	583.14 *	30.22	1.18E+00	5.19E-01
		860.37 *	4.48	2.14E+00	2.64E+00
		2614.66 *	35.85	1.15E+00	4.49E-01
PB-212	0.823	238.63 *	44.60	1.72E+00	3.26E-01
		300.09	3.41		

: 00729

Analysis Report for 1510086-12
CP040S03-04

Nuclide Name	Id Confidence	Energy (keV)	Yield(%)	Activity (pCi/grams)	Activity Uncertainty
BI-214	0.672	609.31 *	46.30	1.48E+00	3.70E-01
		1120.29	15.10		
		1764.49 *	15.80	1.05E+00	5.69E-01
		2204.22	4.98		
PB-214	0.995	295.21 *	19.19	1.15E+00	4.95E-01
		351.92 *	37.19	1.67E+00	3.79E-01
RA-226	0.896	186.21 *	3.28	6.27E+00	1.19E+01
AC-228	0.957	338.32 *	11.40	1.57E+00	9.17E-01
		911.07 *	27.70	1.84E+00	5.34E-01
		969.11 *	16.60	1.30E+00	7.95E-01

* = Energy line found in the spectrum.
 - = Manually added nuclide.
 ? = Manually edited nuclide.
 Energy Tolerance : 1.000 keV
 Nuclide confidence index threshold = 0.30
 Errors quoted at 2.000sigma

UNIDENTIFIED PEAKS

Peak Locate Performed on : 11/6/2015 1:26:49PM
 Peak Locate From Channel : 1
 Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide	
1	75.84	2.83056E-01	8.32			
4	105.16	1.79408E-02	61.25	Tol.	EU-155 NP-239	
8	328.36	1.62081E-02	41.40	Tol.	LA-140	
11	511.39	1.07252E-02	57.27			
M	14	633.89	8.53753E-03	39.04	Sum	
m	15	646.35	1.35158E-02	35.18	Sum	
16	839.03	8.81054E-03	48.48			
20	1011.32	5.44526E-03	40.17			
21	1121.73	1.10216E-02	37.90	Tol.	TA-182	
22	1239.51	1.39651E-02	32.18			
23	1399.39	4.27249E-03	40.60			
24	1408.64	4.79469E-03	34.52	Tol.	EU-152	
26	1593.76	4.51646E-03	43.92			
27	1621.68	4.16667E-03	38.01			
28	1740.35	2.87393E-03	43.83			
30	1903.49	2.22222E-03	35.36			
31	1967.15	1.63194E-03	61.52			

Analysis Report for 1510086-12
CP040S03-04

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

NUCLIDE IDENTIFICATION REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

IDENTIFIED NUCLIDES

Nuclide Name	Id Confidence	Energy (keV)		Yield(%)	Activity (pCi/grams)	Activity Uncertainty
K-40	0.99	1460.81	*	10.67	1.79E+01	3.17E+00
GA-67	0.37	93.31	*	35.70	1.19E+02	4.79E+02
		208.95		2.24		
		300.22		16.00		
CD-109	0.98	88.03	*	3.72	4.34E+00	2.09E+00
SN-126	0.99	87.57	*	37.00	4.18E-01	2.00E-01
TL-208	0.98	583.14	*	30.22	1.18E+00	5.19E-01
		860.37	*	4.48	2.14E+00	2.64E+00
		2614.66	*	35.85	1.15E+00	4.49E-01
PB-212	0.82	238.63	*	44.60	1.72E+00	3.26E-01
		300.09		3.41		
BI-214	0.67	609.31	*	46.30	1.48E+00	3.70E-01
		1120.29		15.10		
		1764.49	*	15.80	1.05E+00	5.69E-01
		2204.22		4.98		
PB-214	0.99	295.21	*	19.19	1.15E+00	4.95E-01
		351.92	*	37.19	1.67E+00	3.79E-01
RA-226	0.89	186.21	*	3.28	6.27E+00	1.19E+01
AC-228	0.95	338.32	*	11.40	1.57E+00	9.17E-01
		911.07	*	27.70	1.84E+00	5.34E-01
		969.11	*	16.60	1.30E+00	7.95E-01

* = Energy line found in the spectrum.

- = Manually added nuclide.

? = Manually edited nuclide.

@ = Energy line not used for Weighted Mean Activity

Energy Tolerance : 1.000 keV

Nuclide confidence index threshold = 0.30

Errors quoted at 2.000sigma

Analysis Report for 1510086-12
CP040S03-04

INTERFERENCE CORRECTED REPORT

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40	0.993	1.79E+01	3.17E+00	
GA-67	0.378	1.19E+02	4.79E+02	
? CD-109	0.989	4.34E+00	2.09E+00	
? SN-126	0.994	4.18E-01	2.00E-01	
TL-208	0.984	1.18E+00	3.37E-01	
PB-212	0.823	1.72E+00	3.26E-01	
BI-214	0.672	1.35E+00	3.10E-01	
PB-214	0.995	1.47E+00	3.01E-01	
RA-226	0.896	6.27E+00	1.19E+01	
AC-228	0.957	1.65E+00	3.99E-01	

- ? = nuclide is part of an undetermined solution
X = nuclide rejected by the interference analysis
@ = nuclide contains energy lines not used in Weighted Mean Activity

Errors quoted at 2.000sigma

Analysis Report for 1510086-12
CP040S03-04

UNIDENTIFIED PEAKS

Peak Locate Performed on : 11/6/2015 1:26:49PM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
1	75.84	2.83056E-01	8.32		
4	105.16	1.79408E-02	61.25	Tol.	EU-155 NP-239
8	328.36	1.62081E-02	41.40	Tol.	LA-140
11	511.39	1.07252E-02	57.27		
M 14	633.89	8.53753E-03	39.04	Sum	
m 15	646.35	1.35158E-02	35.18	Sum	
16	839.03	8.81054E-03	48.48		
20	1011.32	5.44526E-03	40.17		
21	1121.73	1.10216E-02	37.90	Tol.	TA-182
22	1239.51	1.39651E-02	32.18		
23	1399.39	4.27249E-03	40.60		
24	1408.64	4.79469E-03	34.52	Tol.	EU-152
26	1593.76	4.51646E-03	43.92		
27	1621.68	4.16667E-03	38.01		
28	1740.35	2.87393E-03	43.83		
30	1903.49	2.22222E-03	35.36		
31	1967.15	1.63194E-03	61.52		

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

NUCLIDE MDA REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
-----------------	-----------------	----------	-------------------------	----------------------------	-------------------------

Analysis Report for 1510086-12
CP040S03-04

+	BE-7	477.59	10.42	-2.62E-01	1.75E+00	1.75E+00
+	NA-22	1274.54	99.94	-4.36E-04	1.85E-01	1.85E-01
+	NA-24	1368.53	99.99	-2.39E+12	3.72E+12	1.79E+13
		2754.09	99.86	0.00E+00		3.72E+12
+	AL-26	1808.65	99.76	-2.46E-02	1.38E-01	1.38E-01
+	K-40	1460.81	*	10.67	1.79E+01	1.84E+00
+	@ AR-41	1293.64	99.16	1.00E+26	1.00E+26	1.00E+26
+	TI-44	67.88	94.40	1.13E-02	8.79E-02	8.79E-02
		78.34	96.00	3.67E-01		1.19E-01
+	SC-46	889.25	99.98	-7.44E-02	1.99E-01	1.99E-01
		1120.51	99.99	1.39E-01		3.07E-01
+	V-48	983.52	99.98	6.11E-02	5.99E-01	5.99E-01
		1312.10	97.50	5.18E-01		7.43E-01
+	CR-51	320.08	9.83	-4.88E-01	2.36E+00	2.36E+00
+	MN-54	834.83	99.97	3.40E-03	1.80E-01	1.80E-01
+	CO-56	846.75	99.96	-3.90E-02	1.95E-01	1.95E-01
		1037.75	14.03	-2.90E-01		1.45E+00
		1238.25	67.00	2.71E-01		4.98E-01
		1771.40	15.51	-3.55E-02		1.24E+00
		2598.48	16.90	4.33E-01		1.14E+00
+	CO-57	122.06	85.51	-2.28E-02	1.12E-01	1.12E-01
		136.48	10.60	-3.26E-01		9.35E-01
+	CO-58	810.76	99.40	-3.74E-02	1.85E-01	1.85E-01
+	FE-59	1099.22	56.50	-1.44E-03	4.76E-01	4.76E-01
		1291.56	43.20	-1.06E-02		5.91E-01
+	CO-60	1173.22	100.00	-1.30E-02	1.72E-01	1.90E-01
		1332.49	100.00	6.14E-02		1.72E-01
+	ZN-65	1115.52	50.75	-3.11E-03	3.94E-01	3.94E-01
+	GA-67	93.31	*	35.70	1.19E+02	2.37E+02
		208.95	2.24	4.16E+02		2.51E+03
		300.22	16.00	-3.97E+02		3.91E+02
+	SE-75	121.11	16.70	-3.48E-02	1.86E-01	6.27E-01
		136.00	59.20	-4.47E-02		1.86E-01
		264.65	59.80	-1.60E-01		2.15E-01
		279.53	25.20	1.43E-01		5.25E-01
		400.65	11.40	-2.90E-01		1.22E+00
+	RB-82	776.52	13.00	-1.34E+00	2.52E+00	2.52E+00
+	RB-83	520.41	46.00	1.97E-02	3.45E-01	3.45E-01
		529.64	30.30	9.43E-02		5.24E-01
		552.65	16.40	-2.86E-01		9.76E-01
+	KR-85	513.99	0.43	3.18E+00	3.98E+01	3.98E+01
+	SR-85	513.99	99.27	1.89E-02	2.36E-01	2.36E-01
+	Y-88	898.02	93.40	8.84E-02	2.02E-01	2.02E-01
		1836.01	99.38	4.52E-02		2.08E-01
+	NB-93M	16.57	9.43	1.02E+00	4.36E-01	4.36E-01
+	NB-94	702.63	100.00	-3.57E-02	1.36E-01	1.36E-01
		871.10	100.00	5.05E-02		1.61E-01
+	NB-95	765.79	99.81	-5.02E-03	2.93E-01	2.93E-01
+	NB-95M	235.69	25.00	-1.05E+00	1.85E+02	1.85E+02
+	ZR-95	724.18	43.70	1.83E-01	3.68E-01	5.54E-01
		756.72	55.30	6.83E-03		3.68E-01

Analysis Report for 1510086-12
CP040S03-04

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	MO-99	181.06	6.20	2.13E+02	1.82E+03	2.72E+03
		739.58	12.80	1.02E+02		1.82E+03
		778.00	4.50	-3.11E+03		5.11E+03
+	RU-103	497.08	89.00	4.11E-02	2.55E-01	2.55E-01
+	RU-106	621.84	9.80	-8.63E-02	1.40E+00	1.40E+00
+	AG-108M	433.93	89.90	7.47E-02	1.41E-01	1.41E-01
		614.37	90.40	2.09E-02		2.09E-01
		722.95	90.50	6.72E-02		1.96E-01
+	CD-109	88.03	* 3.72	4.34E+00	4.69E+00	4.69E+00
+	AG-110M	657.75	93.14	-4.56E-02	1.71E-01	1.71E-01
		677.61	10.53	-2.47E-02		1.43E+00
		706.67	16.46	4.83E-01		1.02E+00
		763.93	21.98	-3.45E-01		7.74E-01
		884.67	71.63	5.82E-02		2.44E-01
		1384.27	23.94	-5.63E-02		7.66E-01
+	CD-113M	263.70	0.02	-3.79E+02	4.66E+02	4.66E+02
+	SN-113	255.12	1.93	3.61E+00	2.22E-01	6.99E+00
		391.69	64.90	6.76E-04		2.22E-01
+	TE123M	159.00	84.10	-5.35E-02	1.38E-01	1.38E-01
+	SB-124	602.71	97.87	-5.22E-02	1.95E-01	1.95E-01
		645.85	7.26	2.70E+00		3.28E+00
		722.78	11.10	-4.78E-01		2.12E+00
		1691.02	49.00	4.69E-02		3.72E-01
+	I-125	35.49	6.49	-8.85E-01	9.71E-01	9.71E-01
+	SB-125	176.33	6.89	4.91E-01	4.12E-01	1.53E+00
		427.89	29.33	2.16E-02		4.12E-01
		463.38	10.35	6.76E-01		1.32E+00
		600.56	17.80	-1.32E-01		7.78E-01
		635.90	11.32	7.01E-01		1.33E+00
+	SB-126	414.70	83.30	1.67E-01	7.34E-01	7.93E-01
		666.33	99.60	1.54E-01		7.96E-01
		695.00	99.60	1.42E-01		7.34E-01
+	SN-126	720.50	53.80	-2.40E-01	4.52E-01	1.57E+00
		87.57	* 37.00	4.18E-01		4.52E-01
+	SB-127	473.00	25.00	-4.13E+01	7.91E+01	9.53E+01
		685.20	35.70	-2.44E+00		7.91E+01
		783.80	14.70	-3.27E+00		2.01E+02
+	I-129	29.78	57.00	3.55E-02	7.95E-02	7.95E-02
		33.60	13.20	-2.90E-01		3.37E-01
		39.58	7.52	-2.06E-01		6.63E-01
+	I-131	284.30	6.05	-4.54E+00	1.70E+00	2.24E+01
		364.48	81.20	1.80E-01		1.70E+00
		636.97	7.26	3.96E+00		2.46E+01
		722.89	1.80	-2.62E+01		1.16E+02
+	TE-132	49.72	13.10	1.29E+02	6.09E+01	2.37E+02
		228.16	88.00	3.02E+00		6.09E+01
+	BA-133	81.00	33.00	-1.78E-01	3.11E-01	3.21E-01
		302.84	17.80	-7.83E-01		6.89E-01
		356.01	60.00	2.60E-02		3.11E-01

Analysis Report for 1510086-12
CP040S03-04

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	I-133	529.87	86.30	3.66E+08	2.03E+09	2.03E+09
+	XE-133	81.00	38.00	-7.32E+00	1.32E+01	1.32E+01
+	CS-134	563.23	8.38	-1.02E-01	1.94E-01	1.67E+00
		569.32	15.43	-5.80E-02		9.02E-01
		604.70	97.60	-6.47E-03		1.94E-01
		795.84	85.40	8.98E-02		1.98E-01
		801.93	8.73	-4.24E-01		1.63E+00
+	CS-135	268.24	16.00	6.87E-01	7.31E-01	7.31E-01
+	@ I-135	1131.51	22.50	1.00E+26	1.00E+26	1.00E+26
	@	1260.41	28.60	1.00E+26		1.00E+26
	@	1678.03	9.54	1.00E+26		1.00E+26
+	CS-136	153.22	7.46	1.24E+00	6.66E-01	6.21E+00
		163.89	4.61	7.72E+00		1.04E+01
		176.55	13.56	1.14E+00		3.55E+00
		273.65	12.66	-1.55E+00		4.19E+00
		340.57	48.50	1.31E+00		1.32E+00
		818.50	99.70	-1.73E-01		6.66E-01
		1048.07	79.60	-2.67E-01		9.68E-01
		1235.34	19.70	1.06E+00		5.74E+00
+	CS-137	661.65	85.12	1.61E-02	1.80E-01	1.80E-01
+	LA-138	788.74	34.00	9.88E-02	2.36E-01	4.97E-01
		1435.80	66.00	3.92E-02		2.36E-01
+	CE-139	165.85	80.35	1.11E-02	1.47E-01	1.47E-01
+	BA-140	162.64	6.70	3.01E-01	2.43E+00	7.27E+00
		304.84	4.50	6.62E+00		1.31E+01
		423.70	3.20	-1.36E+01		1.75E+01
		437.55	2.00	1.52E+01		3.11E+01
		537.32	25.00	7.53E-01		2.43E+00
+	LA-140	328.77	20.50	1.68E+00	1.02E+00	2.95E+00
		487.03	45.50	-1.81E-01		1.35E+00
		815.85	23.50	1.04E+00		3.03E+00
		1596.49	95.49	-9.29E-02		1.02E+00
+	CE-141	145.44	48.40	-1.51E-01	3.67E-01	3.67E-01
+	CE-143	57.36	11.80	-1.64E+06	8.81E+05	1.45E+06
		293.26	42.00	1.41E+06		8.81E+05
		664.55	5.20	5.96E+06		7.69E+06
+	CE-144	133.54	10.80	-2.33E-01	9.21E-01	9.21E-01
+	PM-144	476.78	42.00	-4.81E-02	1.42E-01	3.16E-01
		618.01	98.60	1.14E-02		1.42E-01
		696.49	99.49	-1.24E-02		1.50E-01
+	PM-145	36.85	21.70	-1.20E-01	1.20E-01	2.14E-01
		37.36	39.70	-3.38E-02		1.20E-01
		42.30	15.10	5.64E-02		3.61E-01
		72.40	2.31	8.71E+00		4.63E+00
+	PM-146	453.90	39.94	1.25E-01	2.99E-01	2.99E-01
		735.90	14.01	-3.17E-01		1.01E+00
		747.13	13.10	2.75E-01		1.27E+00
+	ND-147	91.11	28.90	4.60E+00	2.25E+00	2.25E+00
		531.02	13.10	1.46E+00		6.07E+00

Analysis Report for 1510086-12
CP040S03-04

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	PM-149	285.90	3.10	-1.09E+04	3.26E+04	3.26E+04
+	EU-152	121.78	20.50	-8.85E-02	4.35E-01	4.35E-01
		244.69	5.40	5.78E-03		2.42E+00
		344.27	19.13	4.44E-03		6.07E-01
		778.89	9.20	-9.73E-01		1.60E+00
		964.01	10.40	-7.76E-02		2.12E+00
		1085.78	7.22	4.82E-01		2.49E+00
		1112.02	9.60	-2.09E-01		1.83E+00
		1407.95	14.94	3.14E-02		1.13E+00
+	GD-153	97.43	31.30	8.36E-03	3.01E-01	3.01E-01
		103.18	22.20	1.22E-02		4.10E-01
+	EU-154	123.07	40.50	-1.01E-01	2.22E-01	2.22E-01
		723.30	19.70	3.11E-01		9.05E-01
		873.19	11.50	5.88E-01		1.41E+00
		996.32	10.30	-7.48E-01		1.50E+00
		1004.76	17.90	-4.13E-02		8.83E-01
		1274.45	35.50	-1.21E-03		5.12E-01
+	EU-155	86.50	30.90	-4.10E-03	3.16E-01	3.16E-01
		105.30	20.70	-1.06E-01		3.88E-01
+	EU-156	811.77	10.40	1.47E+00	5.26E+00	5.26E+00
		1153.47	7.20	-9.70E-01		1.05E+01
		1230.71	8.90	2.34E+00		9.58E+00
+	HO-166M	184.41	72.60	2.58E-01	1.66E-01	1.66E-01
		280.45	29.60	2.61E-01		3.86E-01
		410.94	11.10	6.73E-03		1.14E+00
		711.69	54.10	-6.04E-02		2.78E-01
+	TM-171	66.72	0.14	3.42E+01	6.13E+01	6.13E+01
+	HF-172	81.75	4.52	-7.64E+00	8.41E-01	2.22E+00
		125.81	11.30	1.52E-01		8.41E-01
+	LU-172	181.53	20.60	-8.67E-01	5.73E+00	1.13E+01
		810.06	16.63	-3.45E+00		1.71E+01
		912.12	15.25	5.99E+01		3.45E+01
		1093.66	62.50	6.82E-01		5.73E+00
+	LU-173	100.72	5.24	4.88E-02	5.61E-01	1.63E+00
		272.11	21.20	-6.81E-03		5.61E-01
+	HF-175	343.40	84.00	1.34E-03	1.91E-01	1.91E-01
+	LU-176	88.34	13.30	1.20E+00	1.21E-01	7.61E-01
		201.83	86.00	-3.13E-02		1.21E-01
		306.78	94.00	-4.78E-02		1.25E-01
+	TA-182	67.75	41.20	3.09E-02	2.40E-01	2.40E-01
		1121.30	34.90	5.11E-01		8.42E-01
		1189.05	16.23	-3.28E-01		1.25E+00
		1221.41	26.98	-9.30E-02		9.24E-01
		1231.02	11.44	5.74E-01		2.35E+00
+	IR-192	308.46	29.68	-4.40E-02	3.61E-01	5.17E-01
		468.07	48.10	3.17E-02		3.61E-01
+	HG-203	279.19	77.30	6.07E-02	2.23E-01	2.23E-01
+	BI-207	569.67	97.72	-8.94E-03	1.39E-01	1.39E-01
		1063.62	74.90	9.14E-02		2.58E-01

Analysis Report for 1510086-12
CP040S03-04

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	TL-208	583.14	*	30.22	1.18E+00	4.18E-01	7.71E-01
		860.37	*	4.48	2.14E+00		4.33E+00
		2614.66	*	35.85	1.15E+00		4.18E-01
+	BI-210M	262.00		45.00	-6.40E-02	2.42E-01	2.42E-01
		300.00		23.00	-4.16E-01		6.10E-01
+	PB-210	46.50		4.25	3.12E-01	1.38E+00	1.38E+00
+	PB-211	404.84		2.90	-2.04E+00	4.10E+00	4.10E+00
		831.96		2.90	1.64E-02		5.53E+00
+	BI-212	727.17		11.80	6.94E-01	1.46E+00	1.46E+00
		1620.62		2.75	3.16E+00		6.77E+00
+	PB-212	238.63	*	44.60	1.72E+00	3.89E-01	3.89E-01
		300.09		3.41	-2.80E+00		4.12E+00
+	BI-214	609.31	*	46.30	1.48E+00	4.58E-01	4.58E-01
		1120.29		15.10	7.25E-01		1.60E+00
		1764.49	*	15.80	1.05E+00		6.37E-01
		2204.22		4.98	1.31E+00		3.82E+00
+	PB-214	295.21	*	19.19	1.15E+00	4.55E-01	9.09E-01
		351.92	*	37.19	1.67E+00		4.55E-01
+	RN-219	401.80		6.50	8.54E-02	1.84E+00	1.84E+00
+	RA-223	323.87		3.88	-7.11E-01	2.92E+00	2.92E+00
+	RA-224	240.98		3.95	2.04E+01	4.71E+00	4.71E+00
+	RA-225	40.00		31.00	-1.97E-01	6.33E-01	6.33E-01
+	RA-226	186.21	*	3.28	6.27E+00	4.87E+00	4.87E+00
+	TH-227	50.10		8.40	4.03E-01	7.43E-01	7.43E-01
		236.00		11.50	-8.36E-03		1.48E+00
		256.20		6.30	5.59E-01		1.76E+00
+	AC-228	338.32	*	11.40	1.57E+00	6.60E-01	1.43E+00
		911.07	*	27.70	1.84E+00		6.60E-01
		969.11	*	16.60	1.30E+00		1.20E+00
+	TH-230	48.44		16.90	1.93E-01	3.61E-01	3.61E-01
		62.85		4.60	1.87E+00		1.74E+00
		67.67		0.37	2.88E+00		2.24E+01
+	PA-231	283.67		1.60	-1.04E+00	5.30E+00	6.90E+00
		302.67		2.30	-6.03E+00		5.30E+00
+	TH-231	25.64		14.70	-1.70E-01	3.12E-01	3.12E-01
		84.21		6.40	-6.57E+00		1.44E+00
+	PA-233	311.98		38.60	-1.04E-01	6.36E-01	6.36E-01
+	PA-234	131.20		20.40	1.61E-01	4.63E-01	4.63E-01
		733.99		8.80	-1.35E+00		1.58E+00
		946.00		12.00	-6.18E-01		1.30E+00
+	PA-234M	1001.03		0.92	8.88E+00	1.80E+01	1.80E+01
+	TH-234	63.29		3.80	7.57E-01	2.09E+00	2.09E+00
+	U-235	143.76		10.50	1.78E-01	9.18E-01	9.18E-01
		163.35		4.70	1.62E+00		2.18E+00
		205.31		4.70	9.37E-02		2.33E+00
+	NP-237	86.50		12.60	-9.95E-03	7.66E-01	7.66E-01
+	NP-239	106.10		22.70	-5.21E+02	1.90E+03	1.90E+03

Analysis Report for 1510086-12
CP040S03-04

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
NP-239	228.18	10.70	1.65E+03	1.90E+03	5.48E+03
	277.60	14.10	-1.35E+03		4.27E+03
+ AM-241	59.54	35.90	6.00E-02	2.09E-01	2.09E-01
+ AM-243	74.67	66.00	7.81E-01	1.75E-01	1.75E-01
+ CM-243	209.75	3.29	2.21E-01	7.95E-01	3.44E+00
	228.14	10.60	5.03E-02		1.01E+00
	277.60	14.00	-2.52E-01		7.95E-01

- + = Nuclide identified during the nuclide identification
 * = Energy line found in the spectrum
 > = MDA value not calculated
 @ = Half-life too short to be able to perform the decay correction
 ? = CAUTION: MDA value is inconsistent with Currie MDA at 95% confidence level

NUCLIDE MDA REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
BE-7	477.59	10.42	1.75E+00	1.75E+00	-2.62E-01	8.30E-01
NA-22	1274.54	99.94	1.85E-01	1.85E-01	-4.36E-04	8.34E-02
NA-24	1368.53	99.99	1.79E+13	3.72E+12	-2.39E+12	7.88E+12
	2754.09	99.86	3.72E+12		0.00E+00	0.00E+00
AL-26	1808.65	99.76	1.38E-01	1.38E-01	-2.46E-02	5.72E-02
+ K-40	1460.81	* 10.67	1.84E+00	1.84E+00	1.79E+01	8.29E-01
@ AR-41	1293.64	99.16	1.00E+26	1.00E+26	1.00E+26	1.00E+20
TI-44	67.88	94.40	8.79E-02	8.79E-02	1.13E-02	4.32E-02
	78.34	96.00	1.19E-01		3.67E-01	5.85E-02
SC-46	889.25	99.98	1.99E-01	1.99E-01	-7.44E-02	9.16E-02
	1120.51	99.99	3.07E-01		1.39E-01	1.44E-01
V-48	983.52	99.98	5.99E-01	5.99E-01	6.11E-02	2.75E-01
	1312.10	97.50	7.43E-01		5.18E-01	3.39E-01
CR-51	320.08	9.83	2.36E+00	2.36E+00	-4.88E-01	1.13E+00
MN-54	834.83	99.97	1.80E-01	1.80E-01	3.40E-03	8.38E-02
CO-56	846.75	99.96	1.95E-01	1.95E-01	-3.90E-02	8.97E-02

Analysis Report for 1510086-12
CP040S03-04

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)	
CO-56	1037.75	14.03	1.45E+00	1.95E-01	-2.90E-01	6.61E-01	
	1238.25	67.00	4.98E-01		2.71E-01	2.33E-01	
	1771.40	15.51	1.24E+00		-3.55E-02	5.23E-01	
	2598.48	16.90	1.14E+00		4.33E-01	4.51E-01	
CO-57	122.06	85.51	1.12E-01	1.12E-01	-2.28E-02	5.48E-02	
	136.48	10.60	9.35E-01		-3.26E-01	4.56E-01	
CO-58	810.76	99.40	1.85E-01	1.85E-01	-3.74E-02	8.51E-02	
FE-59	1099.22	56.50	4.76E-01	4.76E-01	-1.44E-03	2.17E-01	
	1291.56	43.20	5.91E-01		-1.06E-02	2.63E-01	
CO-60	1173.22	100.00	1.90E-01	1.72E-01	-1.30E-02	8.71E-02	
	1332.49	100.00	1.72E-01		6.14E-02	7.68E-02	
ZN-65	1115.52	50.75	3.94E-01	3.94E-01	-3.11E-03	1.80E-01	
+ GA-67	93.31	*	2.37E+02	2.37E+02	1.19E+02	1.17E+02	
	208.95	2.24	2.51E+03		4.16E+02	1.22E+03	
	300.22	16.00	3.91E+02		-3.97E+02	1.89E+02	
	SE-75	121.11	16.70	6.27E-01	1.86E-01	-3.48E-02	3.06E-01
136.00		59.20	1.86E-01		-4.47E-02	9.08E-02	
264.65		59.80	2.15E-01		-1.60E-01	1.04E-01	
279.53		25.20	5.25E-01		1.43E-01	2.53E-01	
400.65		11.40	1.22E+00		-2.90E-01	5.79E-01	
RB-82	776.52	13.00	2.52E+00	2.52E+00	-1.34E+00	1.17E+00	
RB-83	520.41	46.00	3.45E-01	3.45E-01	1.97E-02	1.62E-01	
	529.64	30.30	5.24E-01		9.43E-02	2.47E-01	
	552.65	16.40	9.76E-01		-2.86E-01	4.58E-01	
KR-85	513.99	0.43	3.98E+01	3.98E+01	3.18E+00	1.91E+01	
SR-85	513.99	99.27	2.36E-01	2.36E-01	1.89E-02	1.13E-01	
Y-88	898.02	93.40	2.02E-01	2.02E-01	8.84E-02	9.30E-02	
	1836.01	99.38	2.08E-01		4.52E-02	8.95E-02	
NB-93M	16.57	9.43	4.36E-01	4.36E-01	1.02E+00	2.12E-01	
NB-94	702.63	100.00	1.36E-01	1.36E-01	-3.57E-02	6.30E-02	
	871.10	100.00	1.61E-01		5.05E-02	7.42E-02	
NB-95	765.79	99.81	2.93E-01	2.93E-01	-5.02E-03	1.37E-01	
NB-95M	235.69	25.00	1.85E+02	1.85E+02	-1.05E+00	9.06E+01	
ZR-95	724.18	43.70	5.54E-01	3.68E-01	1.83E-01	2.61E-01	
	756.72	55.30	3.68E-01		6.83E-03	1.71E-01	
MO-99	181.06	6.20	2.72E+03	1.82E+03	2.13E+02	1.33E+03	
	739.58	12.80	1.82E+03		1.02E+02	8.49E+02	
	778.00	4.50	5.11E+03		-3.11E+03	2.37E+03	
RU-103	497.08	89.00	2.55E-01	2.55E-01	4.11E-02	1.21E-01	
RU-106	621.84	9.80	1.40E+00	1.40E+00	-8.63E-02	6.54E-01	
AG-108M	433.93	89.90	1.41E-01	1.41E-01	7.47E-02	6.73E-02	
	614.37	90.40	2.09E-01		2.09E-02	9.99E-02	
	722.95	90.50	1.96E-01		6.72E-02	9.23E-02	
+ CD-109	88.03	*	4.69E+00	4.69E+00	4.34E+00	2.32E+00	
	AG-110M	657.75	93.14	1.71E-01	1.71E-01	-4.56E-02	8.01E-02
		677.61	10.53	1.43E+00		-2.47E-02	6.64E-01
		706.67	16.46	1.02E+00		4.83E-01	4.80E-01
		763.93	21.98	7.74E-01		-3.45E-01	3.61E-01
		884.67	71.63	2.44E-01		5.82E-02	1.13E-01
1384.27	23.94	7.66E-01		-5.63E-02	3.41E-01		
CD-113M	263.70	0.02	4.66E+02	4.66E+02	-3.79E+02	2.25E+02	
SN-113	255.12	1.93	6.99E+00	2.22E-01	3.61E+00	3.38E+00	
	391.69	64.90	2.22E-01		6.76E-04	1.06E-01	

Analysis Report for 1510086-12
CP040S03-04

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
TE123M	159.00	84.10	1.38E-01	1.38E-01	-5.35E-02	6.72E-02
SB-124	602.71	97.87	1.95E-01	1.95E-01	-5.22E-02	9.14E-02
	645.85	7.26	3.28E+00		2.70E+00	1.55E+00
	722.78	11.10	2.12E+00		-4.78E-01	9.95E-01
	1691.02	49.00	3.72E-01		4.69E-02	1.54E-01
I-125	35.49	6.49	9.71E-01	9.71E-01	-8.85E-01	4.73E-01
SB-125	176.33	6.89	1.53E+00	4.12E-01	4.91E-01	7.45E-01
	427.89	29.33	4.12E-01		2.16E-02	1.95E-01
	463.38	10.35	1.32E+00		6.76E-01	6.26E-01
	600.56	17.80	7.78E-01		-1.32E-01	3.65E-01
	635.90	11.32	1.33E+00		7.01E-01	6.23E-01
SB-126	414.70	83.30	7.93E-01	7.34E-01	1.67E-01	3.79E-01
	666.33	99.60	7.96E-01		1.54E-01	3.74E-01
	695.00	99.60	7.34E-01		1.42E-01	3.42E-01
	720.50	53.80	1.57E+00		-2.40E-01	7.39E-01
+ SN-126	87.57	* 37.00	4.52E-01	4.52E-01	4.18E-01	2.24E-01
SB-127	473.00	25.00	9.53E+01	7.91E+01	-4.13E+01	4.51E+01
	685.20	35.70	7.91E+01		-2.44E+00	3.70E+01
	783.80	14.70	2.01E+02		-3.27E+00	9.33E+01
I-129	29.78	57.00	7.95E-02	7.95E-02	3.55E-02	3.88E-02
	33.60	13.20	3.37E-01		-2.90E-01	1.64E-01
	39.58	7.52	6.63E-01		-2.06E-01	3.24E-01
I-131	284.30	6.05	2.24E+01	1.70E+00	-4.54E+00	1.08E+01
	364.48	81.20	1.70E+00		1.80E-01	8.13E-01
	636.97	7.26	2.46E+01		3.96E+00	1.15E+01
	722.89	1.80	1.16E+02		-2.62E+01	5.44E+01
TE-132	49.72	13.10	2.37E+02	6.09E+01	1.29E+02	1.16E+02
	228.16	88.00	6.09E+01		3.02E+00	2.95E+01
BA-133	81.00	33.00	3.21E-01	3.11E-01	-1.78E-01	1.58E-01
	302.84	17.80	6.89E-01		-7.83E-01	3.32E-01
	356.01	60.00	3.11E-01		2.60E-02	1.52E-01
I-133	529.87	86.30	2.03E+09	2.03E+09	3.66E+08	9.56E+08
XE-133	81.00	38.00	1.32E+01	1.32E+01	-7.32E+00	6.49E+00
CS-134	563.23	8.38	1.67E+00	1.94E-01	-1.02E-01	7.87E-01
	569.32	15.43	9.02E-01		-5.80E-02	4.25E-01
	604.70	97.60	1.94E-01		-6.47E-03	9.23E-02
	795.84	85.40	1.98E-01		8.98E-02	9.23E-02
	801.93	8.73	1.63E+00		-4.24E-01	7.48E-01
CS-135	268.24	16.00	7.31E-01	7.31E-01	6.87E-01	3.53E-01
@ I-135	1131.51	22.50	1.00E+26	1.00E+26	1.00E+26	1.00E+20
@	1260.41	28.60	1.00E+26		1.00E+26	1.00E+20
@	1678.03	9.54	1.00E+26		1.00E+26	1.00E+20
CS-136	153.22	7.46	6.21E+00	6.66E-01	1.24E+00	3.03E+00
	163.89	4.61	1.04E+01		7.72E+00	5.05E+00
	176.55	13.56	3.55E+00		1.14E+00	1.73E+00
	273.65	12.66	4.19E+00		-1.55E+00	2.02E+00
	340.57	48.50	1.32E+00		1.31E+00	6.36E-01
	818.50	99.70	6.66E-01		-1.73E-01	3.06E-01
	1048.07	79.60	9.68E-01		-2.67E-01	4.42E-01
	1235.34	19.70	5.74E+00		1.06E+00	2.67E+00
CS-137	661.65	85.12	1.80E-01	1.80E-01	1.61E-02	8.46E-02
LA-138	788.74	34.00	4.97E-01	2.36E-01	9.88E-02	2.32E-01
	1435.80	66.00	2.36E-01		3.92E-02	1.04E-01

Analysis Report for 1510086-12
CP040S03-04

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
CE-139	165.85	80.35	1.47E-01	1.47E-01	1.11E-02	7.14E-02
BA-140	162.64	6.70	7.27E+00	2.43E+00	3.01E-01	3.54E+00
	304.84	4.50	1.31E+01		6.62E+00	6.33E+00
	423.70	3.20	1.75E+01		-1.36E+01	8.29E+00
	437.55	2.00	3.11E+01		1.52E+01	1.48E+01
	537.32	25.00	2.43E+00		7.53E-01	1.14E+00
LA-140	328.77	20.50	2.95E+00	1.02E+00	1.68E+00	1.42E+00
	487.03	45.50	1.35E+00		-1.81E-01	6.37E-01
	815.85	23.50	3.03E+00		1.04E+00	1.40E+00
	1596.49	95.49	1.02E+00		-9.29E-02	4.54E-01
CE-141	145.44	48.40	3.67E-01	3.67E-01	-1.51E-01	1.79E-01
CE-143	57.36	11.80	1.45E+06	8.81E+05	-1.64E+06	7.12E+05
	293.26	42.00	8.81E+05		1.41E+06	4.28E+05
	664.55	5.20	7.69E+06		5.96E+06	3.63E+06
CE-144	133.54	10.80	9.21E-01	9.21E-01	-2.33E-01	4.49E-01
PM-144	476.78	42.00	3.16E-01	1.42E-01	-4.81E-02	1.50E-01
	618.01	98.60	1.42E-01		1.14E-02	6.65E-02
	696.49	99.49	1.50E-01		-1.24E-02	6.98E-02
PM-145	36.85	21.70	2.14E-01	1.20E-01	-1.20E-01	1.04E-01
	37.36	39.70	1.20E-01		-3.38E-02	5.84E-02
	42.30	15.10	3.61E-01		5.64E-02	1.77E-01
	72.40	2.31	4.63E+00		8.71E+00	2.28E+00
PM-146	453.90	39.94	2.99E-01	2.99E-01	1.25E-01	1.41E-01
	735.90	14.01	1.01E+00		-3.17E-01	4.67E-01
	747.13	13.10	1.27E+00		2.75E-01	5.93E-01
ND-147	91.11	28.90	2.25E+00	2.25E+00	4.60E+00	1.10E+00
	531.02	13.10	6.07E+00		1.46E+00	2.86E+00
PM-149	285.90	3.10	3.26E+04	3.26E+04	-1.09E+04	1.57E+04
EU-152	121.78	20.50	4.35E-01	4.35E-01	-8.85E-02	2.12E-01
	244.69	5.40	2.42E+00		5.78E-03	1.18E+00
	344.27	19.13	6.07E-01		4.44E-03	2.91E-01
	778.89	9.20	1.60E+00		-9.73E-01	7.40E-01
	964.01	10.40	2.12E+00		-7.76E-02	9.96E-01
	1085.78	7.22	2.49E+00		4.82E-01	1.14E+00
	1112.02	9.60	1.83E+00		-2.09E-01	8.35E-01
	1407.95	14.94	1.13E+00		3.14E-02	5.02E-01
GD-153	97.43	31.30	3.01E-01	3.01E-01	8.36E-03	1.47E-01
	103.18	22.20	4.10E-01		1.22E-02	2.00E-01
EU-154	123.07	40.50	2.22E-01	2.22E-01	-1.01E-01	1.08E-01
	723.30	19.70	9.05E-01		3.11E-01	4.27E-01
	873.19	11.50	1.41E+00		5.88E-01	6.51E-01
	996.32	10.30	1.50E+00		-7.48E-01	6.84E-01
	1004.76	17.90	8.83E-01		-4.13E-02	4.02E-01
	1274.45	35.50	5.12E-01		-1.21E-03	2.31E-01
EU-155	86.50	30.90	3.16E-01	3.16E-01	-4.10E-03	1.55E-01
	105.30	20.70	3.88E-01		-1.06E-01	1.89E-01
EU-156	811.77	10.40	5.26E+00	5.26E+00	1.47E+00	2.43E+00
	1153.47	7.20	1.05E+01		-9.70E-01	4.85E+00
	1230.71	8.90	9.58E+00		2.34E+00	4.43E+00
HO-166M	184.41	72.60	1.66E-01	1.66E-01	2.58E-01	8.11E-02
	280.45	29.60	3.86E-01		2.61E-01	1.86E-01
	410.94	11.10	1.14E+00		6.73E-03	5.43E-01
	711.69	54.10	2.78E-01		-6.04E-02	1.30E-01

Analysis Report for 1510086-12
CP040S03-04

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
TM-171	66.72	0.14	6.13E+01	6.13E+01	3.42E+01	3.01E+01
HF-172	81.75	4.52	2.22E+00	8.41E-01	-7.64E+00	1.09E+00
	125.81	11.30	8.41E-01		1.52E-01	4.11E-01
LU-172	181.53	20.60	1.13E+01	5.73E+00	-8.67E-01	5.49E+00
	810.06	16.63	1.71E+01		-3.45E+00	7.84E+00
	912.12	15.25	3.45E+01		5.99E+01	1.64E+01
	1093.66	62.50	5.73E+00		6.82E-01	2.62E+00
LU-173	100.72	5.24	1.63E+00	5.61E-01	4.88E-02	7.95E-01
	272.11	21.20	5.61E-01		-6.81E-03	2.71E-01
HF-175	343.40	84.00	1.91E-01	1.91E-01	1.34E-03	9.18E-02
LU-176	88.34	13.30	7.61E-01	1.21E-01	1.20E+00	3.74E-01
	201.83	86.00	1.21E-01		-3.13E-02	5.88E-02
	306.78	94.00	1.25E-01		-4.78E-02	5.99E-02
TA-182	67.75	41.20	2.40E-01	2.40E-01	3.09E-02	1.18E-01
	1121.30	34.90	8.42E-01		5.11E-01	3.95E-01
	1189.05	16.23	1.25E+00		-3.28E-01	5.63E-01
	1221.41	26.98	9.24E-01		-9.30E-02	4.25E-01
	1231.02	11.44	2.35E+00		5.74E-01	1.09E+00
IR-192	308.46	29.68	5.17E-01	3.61E-01	-4.40E-02	2.49E-01
	468.07	48.10	3.61E-01		3.17E-02	1.72E-01
HG-203	279.19	77.30	2.23E-01	2.23E-01	6.07E-02	1.08E-01
BI-207	569.67	97.72	1.39E-01	1.39E-01	-8.94E-03	6.54E-02
	1063.62	74.90	2.58E-01		9.14E-02	1.19E-01
+ TL-208	583.14	* 30.22	7.71E-01	4.18E-01	1.18E+00	3.72E-01
	860.37	* 4.48	4.33E+00		2.14E+00	2.03E+00
	2614.66	* 35.85	4.18E-01		1.15E+00	1.66E-01
BI-210M	262.00	45.00	2.42E-01	2.42E-01	-6.40E-02	1.17E-01
	300.00	23.00	6.10E-01		-4.16E-01	2.96E-01
PB-210	46.50	4.25	1.38E+00	1.38E+00	3.12E-01	6.76E-01
PB-211	404.84	2.90	4.10E+00	4.10E+00	-2.04E+00	1.95E+00
	831.96	2.90	5.53E+00		1.64E-02	2.56E+00
BI-212	727.17	11.80	1.46E+00	1.46E+00	6.94E-01	6.88E-01
	1620.62	2.75	6.77E+00		3.16E+00	2.99E+00
+ PB-212	238.63	* 44.60	3.89E-01	3.89E-01	1.72E+00	1.91E-01
	300.09	3.41	4.12E+00		-2.80E+00	2.00E+00
+ BI-214	609.31	* 46.30	4.58E-01	4.58E-01	1.48E+00	2.20E-01
	1120.29	15.10	1.60E+00		7.25E-01	7.48E-01
	1764.49	* 15.80	6.37E-01		1.05E+00	2.46E-01
	2204.22	4.98	3.82E+00		1.31E+00	1.63E+00
+ PB-214	295.21	* 19.19	9.09E-01	4.55E-01	1.15E+00	4.43E-01
	351.92	* 37.19	4.55E-01		1.67E+00	2.21E-01
RN-219	401.80	6.50	1.84E+00	1.84E+00	8.54E-02	8.76E-01
RA-223	323.87	3.88	2.92E+00	2.92E+00	-7.11E-01	1.40E+00
RA-224	240.98	3.95	4.71E+00	4.71E+00	2.04E+01	2.31E+00
RA-225	40.00	31.00	6.33E-01	6.33E-01	-1.97E-01	3.09E-01
+ RA-226	186.21	* 3.28	4.87E+00	4.87E+00	6.27E+00	2.39E+00
TH-227	50.10	8.40	7.43E-01	7.43E-01	4.03E-01	3.64E-01
	236.00	11.50	1.48E+00		-8.36E-03	7.23E-01
	256.20	6.30	1.76E+00		5.59E-01	8.53E-01
+ AC-228	338.32	* 11.40	1.43E+00	6.60E-01	1.57E+00	6.93E-01
	911.07	* 27.70	6.60E-01		1.84E+00	3.07E-01
	969.11	* 16.60	1.20E+00		1.30E+00	5.61E-01
TH-230	48.44	16.90	3.61E-01	3.61E-01	1.93E-01	1.77E-01

Analysis Report for 1510086-12
CP040S03-04

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
TH-230	62.85	4.60	1.74E+00	3.61E-01	1.87E+00	8.55E-01
	67.67	0.37	2.24E+01		2.88E+00	1.10E+01
PA-231	283.67	1.60	6.90E+00	5.30E+00	-1.04E+00	3.32E+00
	302.67	2.30	5.30E+00		-6.03E+00	2.56E+00
TH-231	25.64	14.70	3.12E-01	3.12E-01	-1.70E-01	1.52E-01
	84.21	6.40	1.44E+00		-6.57E+00	7.08E-01
PA-233	311.98	38.60	6.36E-01	6.36E-01	-1.04E-01	3.06E-01
PA-234	131.20	20.40	4.63E-01	4.63E-01	1.61E-01	2.26E-01
	733.99	8.80	1.58E+00		-1.35E+00	7.34E-01
	946.00	12.00	1.30E+00		-6.18E-01	5.93E-01
PA-234M	1001.03	0.92	1.80E+01	1.80E+01	8.88E+00	8.27E+00
TH-234	63.29	3.80	2.09E+00	2.09E+00	7.57E-01	1.03E+00
U-235	143.76	10.50	9.18E-01	9.18E-01	1.78E-01	4.48E-01
	163.35	4.70	2.18E+00		1.62E+00	1.06E+00
	205.31	4.70	2.33E+00		9.37E-02	1.13E+00
NP-237	86.50	12.60	7.66E-01	7.66E-01	-9.95E-03	3.77E-01
NP-239	106.10	22.70	1.90E+03	1.90E+03	-5.21E+02	9.28E+02
	228.18	10.70	5.48E+03		1.65E+03	2.65E+03
	277.60	14.10	4.27E+03		-1.35E+03	2.06E+03
AM-241	59.54	35.90	2.09E-01	2.09E-01	6.00E-02	1.02E-01
AM-243	74.67	66.00	1.75E-01	1.75E-01	7.81E-01	8.61E-02
CM-243	209.75	3.29	3.44E+00	7.95E-01	2.21E-01	1.67E+00
	228.14	10.60	1.01E+00		5.03E-02	4.91E-01
	277.60	14.00	7.95E-01		-2.52E-01	3.83E-01

- + = Nuclide identified during the nuclide identification
 * = Energy line found in the spectrum
 > = MDA value not calculated
 @ = Half-life too short to be able to perform the decay correction

No Action Level results available for reporting purposes.

DATA REVIEW COMMENTS REPORT

Creation Date

Comment

User

: 00744

Analysis Report for 1510086-12
CP040S03-04

No Data Review Comments Entered.

 ***** S P E C T R A L D A T A R E P O R T *****

Sample Title: CP040S03-04

Elapsed Live time: 3600
Elapsed Real Time: 3677

Channel	-----	-----	-----	-----	-----	-----	-----	-----
1:	0	0	0	0	0	0	0	0
9:	0	0	0	0	0	0	34	93
17:	80	94	80	79	78	65	58	55
25:	66	62	69	56	54	68	55	52
33:	45	39	47	60	64	67	54	74
41:	73	59	65	70	89	95	82	93
49:	69	86	76	87	86	88	75	96
57:	92	113	71	101	120	135	157	114
65:	128	109	90	106	126	110	107	131
73:	183	282	249	338	300	152	97	103
81:	107	89	114	117	116	136	154	131
89:	127	116	136	148	136	89	82	75
97:	74	84	69	84	72	66	62	66
105:	71	88	44	56	53	82	71	60
113:	67	64	74	62	73	68	61	69
121:	56	61	71	76	63	69	66	78
129:	77	60	78	61	72	48	55	71
137:	48	49	78	63	55	63	60	59
145:	56	66	55	61	58	66	66	63
153:	64	59	63	46	52	51	49	64
161:	51	56	57	59	49	58	70	46
169:	49	45	61	55	60	54	50	53
177:	52	39	52	48	56	52	53	75
185:	103	94	66	43	42	38	51	47
193:	58	47	37	45	38	38	35	54
201:	35	48	40	42	46	45	51	41
209:	56	53	44	42	37	50	57	34
217:	51	39	37	33	42	32	31	42
225:	39	33	26	34	37	39	41	37
233:	34	34	29	51	152	228	173	79
241:	92	66	37	24	29	34	31	30
249:	30	39	28	34	28	31	40	18
257:	41	35	27	27	24	31	21	29
265:	24	33	29	34	34	41	28	35
273:	23	21	21	30	28	33	33	31
281:	22	23	21	31	21	18	29	28
289:	19	25	24	24	47	93	92	61
297:	16	28	30	33	29	24	26	23
305:	22	34	26	26	16	26	22	24
313:	31	18	23	20	26	25	16	14
321:	23	20	19	20	25	24	27	38
329:	28	25	13	20	20	19	19	23
337:	38	63	38	21	19	21	12	19
345:	21	24	15	22	33	66	140	127
353:	56	20	19	26	9	22	16	15
361:	9	18	16	21	16	15	10	24

369: 13 16 16 17 13 23 17 20

Sample Title: CP040S03-04

Channel	1	2	3	4	5	6	7	8
377:	15	20	20	16	15	18	12	14
385:	22	18	20	20	18	18	12	15
393:	18	12	15	15	13	18	20	10
401:	18	12	15	11	20	19	12	16
409:	23	18	15	20	12	12	21	16
417:	14	23	11	19	12	14	17	13
425:	13	7	7	12	24	14	11	7
433:	14	12	22	11	18	19	9	13
441:	14	12	10	15	16	15	9	12
449:	14	7	15	14	9	8	11	14
457:	12	5	11	5	9	18	22	16
465:	15	14	19	9	11	16	9	15
473:	4	15	14	13	12	12	14	8
481:	14	11	15	10	9	14	10	13
489:	10	11	10	12	15	10	16	15
497:	11	12	12	11	14	9	11	18
505:	4	7	7	16	11	43	43	31
513:	8	13	5	12	11	6	11	10
521:	7	11	9	12	8	9	14	10
529:	10	6	8	7	14	8	5	8
537:	9	12	5	15	6	9	5	10
545:	11	10	14	7	11	11	11	9
553:	6	9	6	10	14	8	6	8
561:	10	9	13	13	13	6	12	8
569:	7	15	6	6	14	7	6	13
577:	10	12	5	12	18	44	65	41
585:	17	6	8	9	11	4	10	7
593:	11	9	10	15	7	9	7	5
601:	7	9	12	7	10	12	33	51
609:	94	68	24	12	7	6	12	7
617:	6	8	6	6	6	13	5	13
625:	3	10	7	4	5	3	12	10
633:	9	14	16	3	3	6	9	8
641:	7	9	10	15	15	13	14	15
649:	10	12	3	6	11	9	6	11
657:	4	6	7	7	15	11	11	14
665:	7	10	6	10	7	7	5	7
673:	10	5	7	5	8	8	5	5
681:	10	7	9	7	9	8	5	5
689:	10	7	8	13	7	12	5	6
697:	5	4	4	6	3	8	9	5
705:	14	3	7	11	10	7	9	8
713:	5	5	6	9	9	10	8	10
721:	6	13	3	13	10	10	20	7
729:	10	6	8	6	5	5	7	6
737:	3	8	6	5	11	5	10	9
745:	7	7	9	9	9	6	8	6
753:	4	12	5	6	6	6	6	7
761:	4	6	6	7	5	7	10	12
769:	13	9	15	5	8	7	7	3
777:	10	5	5	5	7	4	5	9
785:	9	8	6	10	7	4	8	9
793:	7	12	5	5	7	9	3	5

801: 1 6 7 4 5 4 7 3

Sample Title: CP040S03-04

Channel	1	2	3	4	5	6	7	8
809:	8	1	8	4	3	5	8	3
817:	6	3	8	4	5	3	6	5
825:	9	8	9	8	6	7	6	5
833:	3	9	4	8	10	10	4	4
841:	4	9	5	3	1	2	8	8
849:	5	6	6	10	4	4	6	4
857:	5	8	5	14	10	9	4	2
865:	5	3	1	8	8	6	7	5
873:	3	5	8	1	8	7	1	4
881:	6	5	6	5	5	8	8	3
889:	4	6	2	6	4	10	8	4
897:	1	8	5	1	4	4	3	3
905:	3	6	5	7	11	15	43	25
913:	12	4	6	3	1	3	4	3
921:	3	10	6	2	1	3	3	5
929:	9	5	4	2	8	6	7	3
937:	8	6	4	8	7	7	4	5
945:	3	1	5	4	6	5	4	10
953:	4	6	5	2	1	7	4	5
961:	4	6	10	9	15	8	6	18
969:	15	20	6	6	4	2	1	4
977:	3	6	4	5	5	3	5	6
985:	3	8	5	1	3	10	2	3
993:	6	3	5	2	4	5	3	4
1001:	6	8	4	3	4	4	1	2
1009:	3	9	6	6	3	4	1	3
1017:	4	4	5	5	7	4	2	6
1025:	10	2	2	4	5	6	4	6
1033:	9	5	3	5	2	1	4	2
1041:	3	5	5	2	6	4	1	6
1049:	6	7	2	3	9	2	6	4
1057:	6	3	8	4	4	4	5	6
1065:	5	11	3	3	6	3	4	3
1073:	6	2	6	2	5	7	1	7
1081:	3	4	4	9	3	4	5	3
1089:	4	5	6	4	2	7	2	4
1097:	4	3	4	4	3	4	8	3
1105:	5	3	4	2	4	5	3	4
1113:	4	3	8	4	3	3	9	11
1121:	19	11	7	6	7	7	7	4
1129:	2	9	8	2	7	5	0	6
1137:	4	4	3	3	1	4	2	3
1145:	7	3	8	7	7	3	4	6
1153:	3	5	8	3	7	4	4	7
1161:	3	4	4	3	1	5	5	6
1169:	7	3	5	3	4	2	6	5
1177:	4	3	3	6	2	3	5	2
1185:	4	6	3	3	3	3	4	1
1193:	3	5	3	6	5	6	3	4
1201:	6	3	5	2	6	5	6	8
1209:	5	2	2	5	2	4	5	1
1217:	6	6	4	5	4	4	5	4
1225:	7	6	10	5	5	6	7	2

1233: 3 8 6 9 7 12 7 12

Sample Title: CP040S03-04

Channel	1	2	3	4	5	6	7	8	9
1241:	5	3	7	7	4	1	2	3	
1249:	2	3	5	9	6	5	6	6	
1257:	5	5	7	6	6	3	4	4	
1265:	5	1	3	3	3	1	4	2	
1273:	3	2	7	6	4	1	4	4	
1281:	3	6	4	3	3	4	2	4	
1289:	2	2	4	1	1	3	4	4	
1297:	1	1	4	1	3	1	3	6	
1305:	1	3	3	6	6	4	3	4	
1313:	5	5	1	3	1	1	2	4	
1321:	3	1	3	4	1	1	1	2	
1329:	3	1	2	3	3	3	2	5	
1337:	2	2	3	5	1	4	1	3	
1345:	6	4	4	2	4	2	2	1	
1353:	2	3	3	0	4	4	4	0	
1361:	2	5	0	3	2	2	2	3	
1369:	3	2	1	0	5	1	1	5	
1377:	0	7	5	2	2	5	2	2	
1385:	3	2	2	2	0	2	3	1	
1393:	1	4	1	1	0	0	3	1	
1401:	7	2	1	0	0	1	2	6	
1409:	7	2	1	2	1	1	1	2	
1417:	1	1	1	2	1	1	0	1	
1425:	3	0	6	1	2	1	2	3	
1433:	0	2	3	2	1	1	2	3	
1441:	3	1	0	2	2	1	1	1	
1449:	0	0	1	1	3	2	1	1	
1457:	2	4	29	63	87	58	19	6	
1465:	2	2	3	1	1	4	2	2	
1473:	1	1	1	0	5	1	2	2	
1481:	0	2	0	2	2	2	3	3	
1489:	0	5	1	2	1	1	7	0	
1497:	3	3	2	1	3	3	4	5	
1505:	1	0	1	1	4	5	3	1	
1513:	2	1	2	1	3	0	0	0	
1521:	1	2	1	1	1	0	0	0	
1529:	0	1	3	1	1	1	0	2	
1537:	2	0	0	0	1	1	1	3	
1545:	2	0	1	3	0	4	0	1	
1553:	5	1	1	1	4	1	2	3	
1561:	1	2	0	2	2	0	1	1	
1569:	1	0	2	1	2	1	0	0	
1577:	1	1	0	0	0	1	0	1	
1585:	2	2	3	1	4	1	2	4	
1593:	9	4	4	3	0	1	0	2	
1601:	1	1	2	0	0	0	0	3	
1609:	0	0	2	1	2	2	1	0	
1617:	1	1	0	4	5	2	2	2	
1625:	3	0	1	2	0	1	0	1	
1633:	2	2	0	0	0	1	2	0	
1641:	2	3	0	1	0	1	1	1	
1649:	0	0	1	0	0	0	1	1	
1657:	1	1	0	0	0	1	1	1	

1665: 0 2 0 0 2 1 0 1

Sample Title: CP040S03-04

Channel	1	2	3	4	5	6	7	8
1673:	2	0	1	0	1	0	0	0
1681:	2	0	1	1	0	1	1	1
1689:	3	0	2	0	0	1	0	1
1697:	1	0	1	1	1	0	1	0
1705:	2	0	1	0	2	0	2	0
1713:	0	1	0	3	1	1	0	2
1721:	0	0	1	2	1	1	0	2
1729:	2	1	3	0	1	0	0	1
1737:	2	1	0	0	3	2	2	2
1745:	0	1	0	2	3	0	2	2
1753:	1	0	0	0	1	0	0	0
1761:	1	0	7	2	8	2	2	0
1769:	1	0	1	3	1	0	0	1
1777:	1	0	2	0	1	0	0	0
1785:	0	1	1	2	0	0	2	2
1793:	1	2	0	0	1	0	0	0
1801:	0	1	0	0	1	1	0	0
1809:	0	2	2	2	0	0	1	4
1817:	0	2	0	1	2	1	0	0
1825:	1	1	1	1	1	0	0	0
1833:	0	1	2	0	0	7	1	1
1841:	1	1	1	1	2	0	7	0
1849:	3	2	0	2	0	1	0	0
1857:	3	0	1	0	1	2	0	0
1865:	0	0	1	2	2	0	0	0
1873:	2	1	0	1	2	0	1	1
1881:	1	0	1	1	0	1	0	2
1889:	0	1	0	0	1	1	1	4
1897:	0	1	1	0	0	1	2	1
1905:	0	1	0	0	1	0	1	1
1913:	1	0	2	2	0	0	0	1
1921:	0	2	1	0	1	2	1	2
1929:	0	1	0	2	1	0	0	0
1937:	0	0	1	0	2	1	0	0
1945:	1	0	0	2	0	2	0	0
1953:	0	2	0	3	1	2	0	1
1961:	2	0	0	0	0	1	4	1
1969:	1	0	1	0	0	1	2	0
1977:	1	2	1	2	0	0	1	0
1985:	0	2	0	0	1	3	1	2
1993:	1	0	1	1	2	2	0	0
2001:	1	0	0	2	1	1	1	2
2009:	0	1	0	1	0	1	0	1
2017:	0	0	0	0	0	1	0	0
2025:	0	0	1	1	0	0	1	0
2033:	0	0	0	1	0	0	0	0
2041:	1	0	0	0	1	0	1	3
2049:	0	0	0	1	1	0	1	0
2057:	1	0	1	1	0	2	0	0
2065:	0	0	0	2	0	0	0	0
2073:	0	1	0	0	2	0	0	2
2081:	1	0	0	1	0	1	0	0
2089:	1	0	0	0	1	0	0	1

2097: 0 0 0 1 3 0 2 2

Sample Title: CP040S03-04

Channel	1	2	3	4	5	6	7	8
2105:	1	3	2	2	0	2	0	1
2113:	0	1	0	0	1	0	2	1
2121:	1	0	1	1	0	0	0	0
2129:	1	1	1	1	0	1	0	0
2137:	2	3	0	0	0	0	0	2
2145:	1	1	2	0	0	0	0	0
2153:	0	2	0	0	0	2	1	0
2161:	0	1	0	2	0	1	1	1
2169:	1	1	1	1	2	0	1	1
2177:	0	0	2	1	0	1	2	0
2185:	0	0	0	0	0	0	0	0
2193:	1	1	0	0	0	1	0	1
2201:	0	2	0	0	4	1	1	1
2209:	1	1	1	1	0	2	0	3
2217:	1	0	0	1	0	0	0	0
2225:	0	0	0	0	1	1	1	1
2233:	1	0	0	0	0	2	1	0
2241:	1	0	1	1	3	0	0	1
2249:	1	1	3	0	3	1	1	0
2257:	0	0	0	1	1	0	2	1
2265:	1	0	0	0	0	1	1	2
2273:	1	1	0	1	2	3	1	0
2281:	1	0	2	1	1	0	0	1
2289:	2	0	1	0	0	0	2	0
2297:	1	0	2	0	1	1	0	0
2305:	1	1	2	2	1	0	0	0
2313:	0	1	2	1	1	3	0	0
2321:	2	2	1	1	0	0	0	0
2329:	0	1	1	0	2	1	2	1
2337:	0	2	1	0	1	0	2	1
2345:	1	0	1	0	1	1	0	1
2353:	1	0	2	1	3	1	1	0
2361:	1	0	2	1	2	1	1	0
2369:	0	0	0	2	0	1	0	0
2377:	0	0	0	0	2	0	0	0
2385:	0	0	0	1	1	1	1	1
2393:	0	0	0	0	0	1	1	2
2401:	0	0	0	1	0	1	2	1
2409:	0	0	0	0	1	1	1	0
2417:	0	1	0	1	1	0	1	2
2425:	1	0	0	2	1	0	1	1
2433:	0	0	0	0	0	1	2	1
2441:	0	0	0	0	0	1	1	1
2449:	1	0	0	0	0	0	0	0
2457:	1	0	0	1	0	2	0	1
2465:	1	0	0	0	0	0	1	1
2473:	0	0	0	1	0	1	1	0
2481:	0	1	1	0	0	1	0	0
2489:	0	0	0	0	1	0	0	0
2497:	0	0	1	0	1	1	0	0
2505:	0	0	1	0	1	0	0	0
2513:	0	1	0	0	1	1	0	0
2521:	0	1	0	3	0	0	1	1

2529: 0 0 0 0 1 1 2 0

Sample Title: CP040S03-04

Channel	1	2	3	4	5	6	7	8
2537:	0	0	1	0	1	1	1	0
2545:	1	0	0	0	0	0	0	0
2553:	1	1	0	0	1	0	0	1
2561:	0	0	2	0	1	1	0	0
2569:	3	0	0	1	1	0	0	0
2577:	0	0	1	0	1	0	0	0
2585:	0	0	0	0	0	1	0	0
2593:	0	2	2	0	0	0	0	0
2601:	1	0	0	0	0	0	0	0
2609:	0	0	2	0	6	4	7	12
2617:	7	2	0	1	0	0	0	0
2625:	0	0	0	0	1	0	1	0
2633:	0	0	0	0	0	0	0	0
2641:	0	0	0	0	0	0	1	2
2649:	0	1	0	0	0	0	0	0
2657:	0	0	0	0	0	0	0	0
2665:	0	0	0	0	0	1	1	1
2673:	1	0	0	1	0	0	0	1
2681:	0	0	0	0	0	0	0	0
2689:	0	1	0	0	0	0	0	0
2697:	1	1	0	0	1	0	0	0
2705:	0	0	0	0	0	0	0	0
2713:	0	0	1	0	0	0	1	0
2721:	1	0	0	0	0	1	0	0
2729:	0	0	0	0	0	0	0	1
2737:	0	0	0	0	0	1	0	0
2745:	1	0	0	0	0	0	0	0
2753:	0	0	0	0	0	0	0	0
2761:	0	2	0	0	0	0	0	0
2769:	0	0	0	0	0	0	0	0
2777:	0	0	0	0	0	0	1	0
2785:	0	0	0	0	0	0	1	1
2793:	1	0	0	0	0	0	0	1
2801:	0	1	0	0	0	0	0	0
2809:	0	0	0	0	0	0	0	0
2817:	0	0	0	0	1	0	2	1
2825:	0	0	0	0	0	1	0	0
2833:	0	0	0	1	0	0	0	0
2841:	0	0	0	0	0	0	0	0
2849:	0	0	0	1	0	0	0	0
2857:	0	0	0	0	0	0	0	0
2865:	0	0	0	0	0	0	1	0
2873:	0	0	0	0	1	0	0	0
2881:	0	1	0	1	0	0	0	0
2889:	1	0	0	0	0	0	0	0
2897:	0	0	0	0	0	1	0	0
2905:	0	0	0	0	0	0	1	0
2913:	0	0	0	0	1	0	0	0
2921:	0	0	0	0	1	0	0	1
2929:	0	0	0	0	0	0	1	0
2937:	1	0	0	1	0	0	0	0
2945:	0	0	0	0	0	1	0	0
2953:	1	0	0	0	0	0	1	1

2961: 0 0 0 0 1 1 0 0

Sample Title: CP040S03-04

Channel	1	2	3	4	5	6	7	8	9
2969:	0	0	0	0	0	0	0	0	0
2977:	1	0	0	0	0	0	0	0	0
2985:	0	0	0	0	0	0	0	0	0
2993:	0	1	0	0	0	0	0	0	0
3001:	0	0	0	0	0	0	0	1	0
3009:	0	0	0	0	0	1	0	0	0
3017:	0	0	0	0	0	1	0	0	1
3025:	0	0	0	0	0	0	0	0	0
3033:	0	0	1	0	0	0	1	0	0
3041:	0	0	0	0	0	0	1	0	0
3049:	0	0	0	0	0	0	0	0	0
3057:	1	0	0	0	0	0	0	0	0
3065:	0	0	0	0	0	0	0	0	0
3073:	0	0	0	0	0	1	0	0	0
3081:	0	0	0	0	0	0	0	1	0
3089:	1	0	0	0	0	0	0	0	0
3097:	0	0	0	0	0	0	0	0	0
3105:	0	0	0	0	0	0	0	0	0
3113:	0	0	0	0	0	0	0	0	0
3121:	0	0	0	0	0	1	0	0	0
3129:	0	0	0	0	0	0	0	0	0
3137:	0	0	0	0	0	0	1	0	0
3145:	0	0	1	0	0	0	0	0	0
3153:	0	0	0	0	0	0	0	0	0
3161:	0	0	0	0	0	2	0	0	0
3169:	0	1	0	0	0	0	0	1	0
3177:	0	0	1	0	0	0	0	0	0
3185:	0	0	0	0	0	0	0	1	0
3193:	1	0	0	0	0	0	0	1	0
3201:	1	0	0	1	0	0	0	0	0
3209:	0	0	1	0	0	0	0	0	0
3217:	1	0	0	1	0	1	0	0	0
3225:	0	0	0	0	1	1	0	0	0
3233:	1	0	0	0	0	0	0	0	0
3241:	0	0	0	0	0	0	0	0	1
3249:	0	0	0	0	1	0	0	0	0
3257:	1	0	0	0	0	0	0	0	0
3265:	0	1	0	0	0	0	0	0	0
3273:	1	1	0	0	0	0	0	0	0
3281:	0	2	0	0	0	0	0	0	0
3289:	2	0	1	0	1	0	0	0	1
3297:	1	0	0	0	0	0	0	0	1
3305:	0	1	0	0	0	0	0	0	0
3313:	0	0	0	0	0	0	0	0	0
3321:	0	0	0	1	0	0	0	0	0
3329:	0	0	0	0	0	0	0	0	0
3337:	0	0	0	0	0	0	0	0	0
3345:	0	0	0	0	1	0	0	0	0
3353:	0	0	0	0	0	0	0	0	0
3361:	0	0	0	1	0	0	0	0	0
3369:	0	0	0	0	0	0	0	0	0
3377:	0	0	0	1	0	0	0	0	0
3385:	0	0	0	0	0	0	0	0	0

3393: 0 0 0 1 0 0 0 0

Sample Title: CP040S03-04

Channel	1	2	3	4	5	6	7	8
3401:	0	0	0	0	1	0	0	0
3409:	0	0	0	0	0	0	0	0
3417:	0	0	0	0	0	0	0	0
3425:	0	0	0	0	0	0	0	0
3433:	0	0	0	0	0	0	0	0
3441:	0	0	0	0	0	0	0	0
3449:	0	0	0	1	0	0	1	0
3457:	0	1	1	3	0	0	0	0
3465:	0	0	0	0	1	0	1	1
3473:	0	1	0	0	0	0	0	0
3481:	0	0	0	0	0	0	0	0
3489:	0	0	0	1	0	0	1	0
3497:	0	0	0	0	1	0	0	0
3505:	0	0	0	0	0	0	0	0
3513:	0	0	0	0	0	0	1	0
3521:	1	0	0	0	0	1	0	0
3529:	0	0	2	0	1	0	0	1
3537:	0	0	0	0	0	0	0	0
3545:	0	1	0	0	0	0	0	0
3553:	0	0	0	0	0	0	0	0
3561:	0	0	1	0	0	0	0	0
3569:	0	0	0	0	0	0	0	0
3577:	0	1	0	0	0	0	0	0
3585:	0	0	0	0	0	0	0	0
3593:	1	0	0	1	0	0	0	0
3601:	0	0	0	0	0	0	0	0
3609:	0	0	0	0	0	0	0	1
3617:	0	0	0	0	0	0	0	0
3625:	0	0	1	0	0	0	0	0
3633:	0	0	0	0	0	0	0	0
3641:	0	0	0	0	0	0	1	0
3649:	1	1	1	0	0	0	2	0
3657:	0	0	0	0	0	0	0	0
3665:	1	0	0	0	0	0	0	1
3673:	1	0	0	0	0	0	0	1
3681:	0	0	0	0	0	0	0	1
3689:	0	0	0	0	0	0	0	0
3697:	0	0	0	0	0	0	0	0
3705:	0	0	0	0	1	0	0	0
3713:	0	0	1	0	0	0	0	0
3721:	0	1	0	0	0	0	1	0
3729:	0	0	0	0	0	0	1	1
3737:	0	1	0	0	0	0	0	0
3745:	0	0	0	0	0	0	0	1
3753:	0	0	0	0	0	0	0	0
3761:	0	0	0	0	0	0	0	0
3769:	0	0	0	0	0	0	0	0
3777:	0	1	0	0	0	0	0	0
3785:	0	0	0	0	0	0	0	0
3793:	0	0	0	0	0	0	0	1
3801:	2	0	0	0	0	0	0	0
3809:	0	0	0	0	0	1	0	0
3817:	0	0	0	0	0	0	0	0

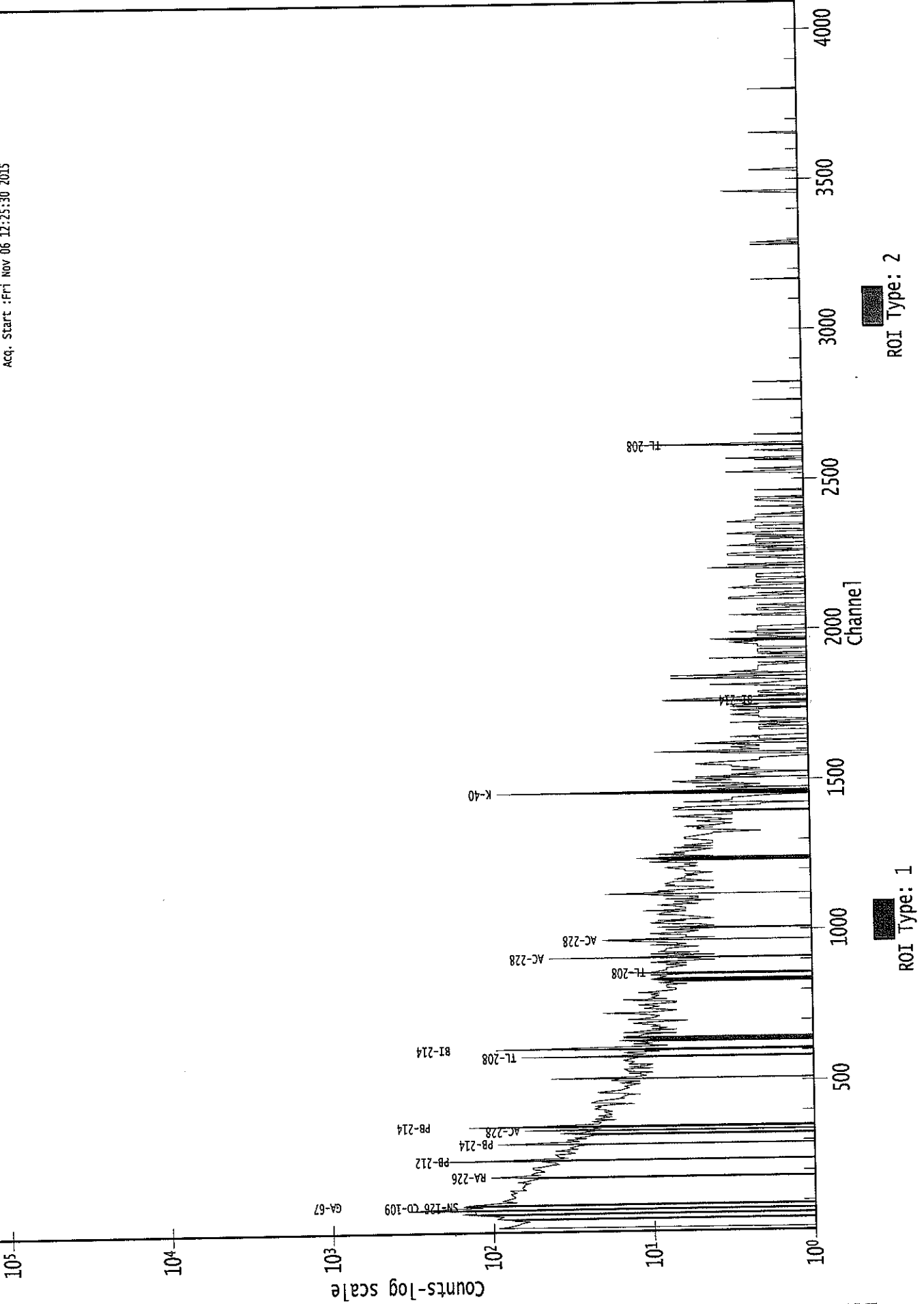
3825: 0 0 0 0 0 0 0 0

Sample Title: CP040S03-04

Channel	1	2	3	4	5	6	7	8	9
3833:	0	0	0	0	0	0	0	1	0
3841:	0	0	0	0	0	0	0	0	0
3849:	0	0	0	0	0	0	0	0	0
3857:	0	0	0	0	0	0	0	0	0
3865:	0	0	0	0	0	0	0	0	0
3873:	0	0	0	0	0	0	0	0	0
3881:	0	0	0	0	0	0	0	0	1
3889:	0	0	0	0	0	0	0	0	0
3897:	0	0	0	0	0	0	0	0	0
3905:	0	0	0	0	0	1	0	0	0
3913:	0	0	0	0	0	0	0	0	0
3921:	0	0	0	0	0	0	0	1	0
3929:	0	1	0	0	0	0	0	0	0
3937:	0	0	0	0	0	0	1	0	0
3945:	0	0	0	0	0	0	0	1	0
3953:	1	0	0	0	0	0	0	0	0
3961:	0	0	0	0	0	0	0	0	0
3969:	0	0	0	0	0	0	0	0	0
3977:	0	1	0	0	0	0	0	0	0
3985:	0	0	0	0	0	0	0	0	0
3993:	0	0	0	1	0	0	0	0	0
4001:	0	0	0	1	0	0	0	0	1
4009:	0	0	0	0	0	0	0	0	1
4017:	0	0	0	0	0	0	0	0	0
4025:	1	0	0	0	0	0	0	0	1
4033:	1	0	0	0	0	0	0	0	1
4041:	0	0	0	0	0	1	0	0	0
4049:	0	0	0	0	0	0	0	0	0
4057:	1	0	0	0	0	1	0	0	0
4065:	0	0	1	0	0	0	0	0	0
4073:	0	0	0	0	0	0	0	1	0
4081:	0	1	0	0	0	0	0	0	0
4089:	0	0	0	0	0	0	0	0	0

0000029263.CNF

Live Time :3600.000 sec
Real Time :3677.450 sec
Start: 1: 1.8(kev)
Stop : 4096:4093.9(kev)
Acq. Start :Fri Nov 06 12:25:30 2015



95700 :

KPB
11/6/15Analysis Report for 1510086-13
CP0404S05-06

GAMMA SPECTRUM ANALYSIS

Sample Identification : 1510086-13
Sample Description : CP0404S05-06
Sample Type : SOIL

Sample Size : 5.461E+02 grams
Facility : Countroom

Sample Taken On : 10/8/2015 7:57:48AM
Acquisition Started : 11/6/2015 1:37:28PM

Procedure : GAS-1402 pCi
Operator : Administrator
Detector Name : GE1
Geometry : GAS-1402
Live Time : 3600.0 seconds
Real Time : 3601.3 seconds

Dead Time : 0.04 %

Peak Locate Threshold : 2.50
Peak Locate Range (in channels) : 1 - 4096
Peak Area Range (in channels) : 19 - 4096
Identification Energy Tolerance : 1.000 keV

Energy Calibration Used Done On : 10/25/2014
Efficiency Calibration Used Done On : 10/25/2014
Efficiency Calibration Description :

Sample Number : 29265

PEAK-TO-TOTAL CALIBRATION REPORT

Peak-to-Total Efficiency Calibration Equation

AG
11/9/15

: 00757

Analysis Report for 1510086-13
CP0404S05-06

PEAK LOCATE REPORT

Peak Locate Performed on : 11/6/2015 2:37:33PM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096
Peak Search Sensitivity : 2.50

Peak No.	Energy (keV)	Centroid Channel	Centroid Uncertainty	Peak Significance
1	32.52	32.88	0.0000	0.00
2	63.19	63.54	0.0000	0.00
3	73.68	74.02	0.0000	0.00
4	77.06	77.40	0.0000	0.00
5	87.80	88.13	0.0000	0.00
6	92.53	92.86	0.0000	0.00
7	129.71	130.03	0.0000	0.00
8	186.35	186.66	0.0000	0.00
9	209.85	210.14	0.0000	0.00
10	238.70	238.99	0.0000	0.00
11	241.87	242.15	0.0000	0.00
12	270.06	270.34	0.0000	0.00
13	277.39	277.66	0.0000	0.00
14	295.52	295.79	0.0000	0.00
15	300.41	300.68	0.0000	0.00
16	328.20	328.45	0.0000	0.00
17	338.91	339.16	0.0000	0.00
18	352.07	352.32	0.0000	0.00
19	452.39	452.60	0.0000	0.00
20	478.96	479.17	0.0000	0.00
21	511.09	511.28	0.0000	0.00
22	583.46	583.63	0.0000	0.00
23	588.80	588.96	0.0000	0.00
24	609.66	609.82	0.0000	0.00
25	727.65	727.77	0.0000	0.00
26	768.35	768.45	0.0000	0.00
27	795.27	795.37	0.0000	0.00
28	807.91	808.00	0.0000	0.00
29	836.30	836.38	0.0000	0.00
30	840.11	840.19	0.0000	0.00
31	861.20	861.27	0.0000	0.00
32	911.51	911.56	0.0000	0.00
33	937.31	937.35	0.0000	0.00
34	965.38	965.42	0.0000	0.00
35	969.21	969.25	0.0000	0.00
36	1029.03	1029.05	0.0000	0.00
37	1086.26	1086.26	0.0000	0.00
38	1120.81	1120.79	0.0000	0.00
39	1125.02	1125.00	0.0000	0.00
40	1135.58	1135.55	0.0000	0.00
41	1176.53	1176.49	0.0000	0.00
42	1189.45	1189.40	0.0000	0.00

Analysis Report for 1510086-13
CP0404S05-06

<i>Peak No.</i>	<i>Energy (keV)</i>	<i>Centroid Channel</i>	<i>Centroid Uncertainty</i>	<i>Peak Significance</i>
43	1238.79	1238.73	0.0000	0.00
44	1387.12	1387.00	0.0000	0.00
45	1401.42	1401.30	0.0000	0.00
46	1408.18	1408.06	0.0000	0.00
47	1461.48	1461.34	0.0000	0.00
48	1563.40	1563.22	0.0000	0.00
49	1589.56	1589.37	0.0000	0.00
50	1596.45	1596.26	0.0000	0.00
51	1632.57	1632.37	0.0000	0.00
52	1730.82	1730.58	0.0000	0.00
53	1765.43	1765.18	0.0000	0.00
54	1848.09	1847.81	0.0000	0.00
55	1970.40	1970.07	0.0000	0.00
56	2094.60	2094.22	0.0000	0.00
57	2105.88	2105.49	0.0000	0.00
58	2204.57	2204.15	0.0000	0.00
59	2399.45	2398.95	0.0000	0.00
60	2428.88	2428.37	0.0000	0.00
61	2449.30	2448.78	0.0000	0.00
62	2615.54	2614.95	0.0000	0.00

? = Adjacent peak noted
Errors quoted at 2.000sigma

Analysis Report for 1510086-13
CP0404S05-06

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 11/6/2015 2:37:33PM

Peak Analysis From Channel : 1
Peak Analysis To Channel : 4096

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	FWHM (keV)
	1	31 -	36	32.88	4.94E+01	61.07	7.13E+02	1.01
	2	60 -	67	63.54	2.21E+02	111.59	1.94E+03	1.32
M	3	71 -	81	74.02	1.86E+02	112.70	1.67E+03	2.34
m	4	71 -	81	77.40	9.94E+02	119.05	1.61E+03	2.36
m	5	82 -	97	88.13	2.39E+02	64.40	7.92E+02	1.48
m	6	82 -	97	92.86	2.99E+02	68.91	7.05E+02	1.49
	7	127 -	133	130.03	7.69E+01	78.92	1.08E+03	1.46
	8	182 -	191	186.66	3.02E+02	96.20	1.15E+03	1.86
	9	207 -	213	210.14	1.03E+02	64.94	6.89E+02	1.84
M	10	233 -	246	238.99	9.02E+02	72.92	3.89E+02	1.68
m	11	233 -	246	242.15	2.27E+02	58.97	3.40E+02	1.68
	12	267 -	274	270.34	8.34E+01	61.32	5.69E+02	2.99
	13	275 -	281	277.66	4.10E+01	51.34	4.46E+02	1.15
M	14	292 -	304	295.79	4.32E+02	55.30	3.37E+02	1.60
m	15	292 -	304	300.68	1.01E+02	57.65	4.21E+02	2.55
	16	326 -	332	328.45	4.85E+01	47.87	3.81E+02	1.86
	17	335 -	343	339.16	2.07E+02	62.73	4.70E+02	1.47
	18	349 -	357	352.32	6.31E+02	72.55	4.27E+02	1.88
	19	449 -	456	452.60	3.37E+01	39.95	2.43E+02	2.36
	20	475 -	484	479.17	3.84E+01	42.85	2.41E+02	2.19
	21	506 -	516	511.28	1.60E+02	53.92	3.02E+02	2.10
M	22	578 -	591	583.63	3.13E+02	43.06	1.26E+02	2.03
m	23	578 -	591	588.96	2.32E+01	26.80	1.26E+02	2.16
	24	605 -	614	609.82	4.73E+02	60.04	2.43E+02	1.46
	25	724 -	732	727.77	5.55E+01	36.90	1.75E+02	1.53
	26	765 -	771	768.45	3.71E+01	32.18	1.62E+02	1.26
M	27	781 -	812	795.37	3.72E+01	28.98	1.17E+02	2.53
m	28	781 -	812	808.00	2.34E+01	23.52	6.71E+01	1.91
M	29	833 -	845	836.38	2.39E+01	24.30	9.40E+01	2.19
m	30	833 -	845	840.19	1.67E+01	21.84	7.04E+01	2.12
	31	857 -	866	861.27	5.12E+01	30.68	1.06E+02	1.94
	32	907 -	915	911.56	1.88E+02	38.87	1.17E+02	1.86
	33	932 -	944	937.35	5.35E+01	34.76	1.17E+02	5.29
M	34	962 -	979	965.42	4.53E+01	26.25	7.98E+01	2.40
m	35	962 -	979	969.25	9.21E+01	29.62	7.20E+01	2.22
	36	1026 -	1032	1029.05	1.74E+01	17.87	4.51E+01	2.95
	37	1083 -	1090	1086.26	2.44E+01	23.07	7.32E+01	4.58
M	38	1115 -	1130	1120.79	8.80E+01	29.30	8.84E+01	2.26
m	39	1115 -	1130	1125.00	1.95E+01	22.83	7.32E+01	2.06
	40	1132 -	1139	1135.55	2.32E+01	24.82	8.57E+01	2.70

Analysis Report for 1510086-13
CP0404S05-06

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	FWHM (keV)	
41	1176.53	1173 -	1180	1176.49	3.20E+01	21.54	5.60E+01	4.75	
42	1189.45	1187 -	1193	1189.40	1.93E+01	23.54	8.54E+01	2.77	
43	1238.79	1232 -	1245	1238.73	8.87E+01	40.95	1.47E+02	2.26	
44	1387.12	1384 -	1390	1387.00	1.21E+01	13.48	2.38E+01	2.23	
45	1401.42	1398 -	1404	1401.30	1.79E+01	15.56	3.03E+01	1.39	
46	1408.18	1405 -	1411	1408.06	1.81E+01	16.32	3.58E+01	1.52	
47	1461.48	1456 -	1467	1461.34	6.51E+02	55.14	5.59E+01	2.29	
48	1563.40	1560 -	1566	1563.22	8.64E+00	9.63	1.07E+01	1.54	
M	49	1589.56	1585 -	1599	1589.37	1.91E+01	15.78	1.97E+01	3.61
m	50	1596.45	1585 -	1599	1596.26	8.04E+00	10.63	8.21E+00	2.99
51	1632.57	1628 -	1636	1632.37	1.25E+01	12.85	1.70E+01	1.89	
52	1730.82	1725 -	1735	1730.58	2.37E+01	13.29	1.06E+01	2.67	
53	1765.43	1760 -	1769	1765.18	8.00E+01	19.75	1.01E+01	2.28	
54	1848.09	1843 -	1851	1847.81	1.54E+01	12.20	1.33E+01	1.23	
55	1970.40	1966 -	1973	1970.07	6.00E+00	8.49	8.00E+00	2.38	
56	2094.60	2090 -	2097	2094.22	9.00E+00	6.00	0.00E+00	1.12	
57	2105.88	2100 -	2114	2105.49	2.94E+01	13.87	9.12E+00	4.08	
58	2204.57	2199 -	2207	2204.15	3.10E+01	15.52	1.80E+01	3.33	
59	2399.45	2395 -	2402	2398.95	5.07E+00	6.63	3.86E+00	1.89	
60	2428.88	2426 -	2430	2428.37	5.93E+00	5.85	2.14E+00	1.11	
61	2449.30	2445 -	2453	2448.78	1.22E+01	8.73	3.64E+00	1.57	
62	2615.54	2609 -	2619	2614.95	1.11E+02	21.07	0.00E+00	3.37	

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 11/6/2015 2:37:33PM

Peak Analysis From Channel : 1
Peak Analysis To Channel : 4096

Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
1	32.52	31 -	36	4.94E+01	61.07	7.13E+02	4.89E+01
2	63.19	60 -	67	2.21E+02	111.59	1.94E+03	8.84E+01
M	3	71 -	81	1.86E+02	112.70	1.67E+03	6.71E+01
m	4	71 -	81	9.94E+02	119.05	1.61E+03	6.59E+01
m	5	82 -	97	2.39E+02	64.40	7.92E+02	4.63E+01
m	6	82 -	97	2.99E+02	68.91	7.05E+02	4.37E+01

: 00761

Analysis Report for 1510086-13

CP0404S05-06

	Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
	7	129.71	127 -	133	7.69E+01	78.92	1.08E+03	6.33E+01
	8	186.35	182 -	191	3.02E+02	96.20	1.15E+03	7.37E+01
	9	209.85	207 -	213	1.03E+02	64.94	6.89E+02	5.07E+01
M	10	238.70	233 -	246	9.02E+02	72.92	3.89E+02	3.24E+01
m	11	241.87	233 -	246	2.27E+02	58.97	3.40E+02	3.03E+01
	12	270.06	267 -	274	8.34E+01	61.32	5.69E+02	4.81E+01
	13	277.39	275 -	281	4.10E+01	51.34	4.46E+02	4.09E+01
M	14	295.52	292 -	304	4.32E+02	55.30	3.37E+02	3.02E+01
m	15	300.41	292 -	304	1.01E+02	57.65	4.21E+02	3.37E+01
	16	328.20	326 -	332	4.85E+01	47.87	3.81E+02	3.76E+01
	17	338.91	335 -	343	2.07E+02	62.73	4.70E+02	4.58E+01
	18	352.07	349 -	357	6.31E+02	72.55	4.27E+02	4.30E+01
	19	452.39	449 -	456	3.37E+01	39.95	2.43E+02	3.14E+01
	20	478.96	475 -	484	3.84E+01	42.85	2.41E+02	3.37E+01
	21	511.09	506 -	516	1.60E+02	53.92	3.02E+02	3.91E+01
M	22	583.46	578 -	591	3.13E+02	43.06	1.26E+02	1.85E+01
m	23	588.80	578 -	591	2.32E+01	26.80	1.26E+02	1.85E+01
	24	609.66	605 -	614	4.73E+02	60.04	2.43E+02	3.40E+01
	25	727.65	724 -	732	5.55E+01	36.90	1.75E+02	2.77E+01
	26	768.35	765 -	771	3.71E+01	32.18	1.62E+02	2.45E+01
M	27	795.27	781 -	812	3.72E+01	28.98	1.17E+02	1.78E+01
m	28	807.91	781 -	812	2.34E+01	23.52	6.71E+01	1.35E+01
M	29	836.30	833 -	845	2.39E+01	24.30	9.40E+01	1.59E+01
m	30	840.11	833 -	845	1.67E+01	21.84	7.04E+01	1.38E+01
	31	861.20	857 -	866	5.12E+01	30.68	1.06E+02	2.23E+01
	32	911.51	907 -	915	1.88E+02	38.87	1.17E+02	2.27E+01
	33	937.31	932 -	944	5.35E+01	34.76	1.17E+02	2.59E+01
M	34	965.38	962 -	979	4.53E+01	26.25	7.98E+01	1.47E+01
m	35	969.21	962 -	979	9.21E+01	29.62	7.20E+01	1.40E+01
	36	1029.03	1026 -	1032	1.74E+01	17.87	4.51E+01	1.30E+01
	37	1086.26	1083 -	1090	2.44E+01	23.07	7.32E+01	1.71E+01
M	38	1120.81	1115 -	1130	8.80E+01	29.30	8.84E+01	1.55E+01
m	39	1125.02	1115 -	1130	1.95E+01	22.83	7.32E+01	1.41E+01
	40	1135.58	1132 -	1139	2.32E+01	24.82	8.57E+01	1.88E+01
	41	1176.53	1173 -	1180	3.20E+01	21.54	5.60E+01	1.51E+01
	42	1189.45	1187 -	1193	1.93E+01	23.54	8.54E+01	1.80E+01
	43	1238.79	1232 -	1245	8.87E+01	40.95	1.47E+02	2.99E+01
	44	1387.12	1384 -	1390	1.21E+01	13.48	2.38E+01	9.49E+00
	45	1401.42	1398 -	1404	1.79E+01	15.56	3.03E+01	1.07E+01
	46	1408.18	1405 -	1411	1.81E+01	16.32	3.58E+01	1.15E+01
	47	1461.48	1456 -	1467	6.51E+02	55.14	5.59E+01	1.72E+01
	48	1563.40	1560 -	1566	8.64E+00	9.63	1.07E+01	6.27E+00
M	49	1589.56	1585 -	1599	1.91E+01	15.78	1.97E+01	7.30E+00
m	50	1596.45	1585 -	1599	8.04E+00	10.63	8.21E+00	4.71E+00
	51	1632.57	1628 -	1636	1.25E+01	12.85	1.70E+01	8.82E+00
	52	1730.82	1725 -	1735	2.37E+01	13.29	1.06E+01	7.43E+00
	53	1765.43	1760 -	1769	8.00E+01	19.75	1.01E+01	6.89E+00
	54	1848.09	1843 -	1851	1.54E+01	12.20	1.33E+01	7.68E+00
	55	1970.40	1966 -	1973	6.00E+00	8.49	8.00E+00	5.70E+00
	56	2094.60	2090 -	2097	9.00E+00	6.00	0.00E+00	0.00E+00
	57	2105.88	2100 -	2114	2.94E+01	13.87	9.12E+00	7.09E+00

Analysis Report for 1510086-13

CP0404S05-06

Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
58	2204.57	2199 -	2207	3.10E+01	15.52	1.80E+01	8.89E+00
59	2399.45	2395 -	2402	5.07E+00	6.63	3.86E+00	4.00E+00
60	2428.88	2426 -	2430	5.93E+00	5.85	2.14E+00	2.67E+00
61	2449.30	2445 -	2453	1.22E+01	8.73	3.64E+00	4.31E+00
62	2615.54	2609 -	2619	1.11E+02	21.07	0.00E+00	0.00E+00

M = First peak in a multiplet region

m = Other peak in a multiplet region

F = Fitted singlet

Errors quoted at 2.000sigma

PEAK WITH NID REPORT

Peak Analysis Performed on : 11/6/2015 2:37:33PM

Peak Analysis From Channel : 1

Peak Analysis To Channel : 4096

Tentative NID Library : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

Peak Match Tolerance : 1.000 keV

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
1	32.52	31 -	36	32.88	4.94E+01	61.07	7.13E+02	.....
2	63.19	60 -	67	63.54	2.21E+02	111.59	1.94E+03	TH-234 TH-230
M 3	73.68	71 -	81	74.02	1.86E+02	112.70	1.67E+03	AM-243
m 4	77.06	71 -	81	77.40	9.94E+02	119.05	1.61E+03	.....
m 5	87.80	82 -	97	88.13	2.39E+02	64.40	7.92E+02	SN-126 CD-109 LU-176
m 6	92.53	82 -	97	92.86	2.99E+02	68.91	7.05E+02	GA-67
7	129.71	127 -	133	130.03	7.69E+01	78.92	1.08E+03	.....
8	186.35	182 -	191	186.66	3.02E+02	96.20	1.15E+03	RA-226
9	209.85	207 -	213	210.14	1.03E+02	64.94	6.89E+02	CM-243 GA-67
M 10	238.70	233 -	246	238.99	9.02E+02	72.92	3.89E+02	PB-212
m 11	241.87	233 -	246	242.15	2.27E+02	58.97	3.40E+02	RA-224
12	270.06	267 -	274	270.34	8.34E+01	61.32	5.69E+02	.....
13	277.39	275 -	281	277.66	4.10E+01	51.34	4.46E+02	CM-243 NP-239
M 14	295.52	292 -	304	295.79	4.32E+02	55.30	3.37E+02	PB-214
m 15	300.41	292 -	304	300.68	1.01E+02	57.65	4.21E+02	GA-67 PB-212

: 00763

Analysis Report for 1510086-13

CP0404S05-06

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
								BI-210M
16	328.20	326 -	332	328.45	4.85E+01	47.87	3.81E+02	LA-140
17	338.91	335 -	343	339.16	2.07E+02	62.73	4.70E+02	AC-228
18	352.07	349 -	357	352.32	6.31E+02	72.55	4.27E+02	PB-214
19	452.39	449 -	456	452.60	3.37E+01	39.95	2.43E+02	.....
20	478.96	475 -	484	479.17	3.84E+01	42.85	2.41E+02	.....
21	511.09	506 -	516	511.28	1.60E+02	53.92	3.02E+02	.....
M 22	583.46	578 -	591	583.63	3.13E+02	43.06	1.26E+02	TL-208
m 23	588.80	578 -	591	588.96	2.32E+01	26.80	1.26E+02	.....
24	609.66	605 -	614	609.82	4.73E+02	60.04	2.43E+02	BI-214
25	727.65	724 -	732	727.77	5.55E+01	36.90	1.75E+02	BI-212
26	768.35	765 -	771	768.45	3.71E+01	32.18	1.62E+02	.....
M 27	795.27	781 -	812	795.37	3.72E+01	28.98	1.17E+02	CS-134
m 28	807.91	781 -	812	808.00	2.34E+01	23.52	6.71E+01	.....
M 29	836.30	833 -	845	836.38	2.39E+01	24.30	9.40E+01	.....
m 30	840.11	833 -	845	840.19	1.67E+01	21.84	7.04E+01	.....
31	861.20	857 -	866	861.27	5.12E+01	30.68	1.06E+02	TL-208
32	911.51	907 -	915	911.56	1.88E+02	38.87	1.17E+02	AC-228 LU-172
33	937.31	932 -	944	937.35	5.35E+01	34.76	1.17E+02	.....
M 34	965.38	962 -	979	965.42	4.53E+01	26.25	7.98E+01	.....
m 35	969.21	962 -	979	969.25	9.21E+01	29.62	7.20E+01	AC-228
36	1029.03	1026 -	1032	1029.05	1.74E+01	17.87	4.51E+01	.....
37	1086.26	1083 -	1090	1086.26	2.44E+01	23.07	7.32E+01	EU-152
M 38	1120.81	1115 -	1130	1120.79	8.80E+01	29.30	8.84E+01	SC-46 TA-182 BI-214
m 39	1125.02	1115 -	1130	1125.00	1.95E+01	22.83	7.32E+01	.....
40	1135.58	1132 -	1139	1135.55	2.32E+01	24.82	8.57E+01	.....
41	1176.53	1173 -	1180	1176.49	3.20E+01	21.54	5.60E+01	.....
42	1189.45	1187 -	1193	1189.40	1.93E+01	23.54	8.54E+01	TA-182
43	1238.79	1232 -	1245	1238.73	8.87E+01	40.95	1.47E+02	CO-56
44	1387.12	1384 -	1390	1387.00	1.21E+01	13.48	2.38E+01	.....
45	1401.42	1398 -	1404	1401.30	1.79E+01	15.56	3.03E+01	.....
46	1408.18	1405 -	1411	1408.06	1.81E+01	16.32	3.58E+01	EU-152
47	1461.48	1456 -	1467	1461.34	6.51E+02	55.14	5.59E+01	K-40
48	1563.40	1560 -	1566	1563.22	8.64E+00	9.63	1.07E+01	.....
M 49	1589.56	1585 -	1599	1589.37	1.91E+01	15.78	1.97E+01	.....
m 50	1596.45	1585 -	1599	1596.26	8.04E+00	10.63	8.21E+00	LA-140
51	1632.57	1628 -	1636	1632.37	1.25E+01	12.85	1.70E+01	.....
52	1730.82	1725 -	1735	1730.58	2.37E+01	13.29	1.06E+01	.....
53	1765.43	1760 -	1769	1765.18	8.00E+01	19.75	1.01E+01	BI-214
54	1848.09	1843 -	1851	1847.81	1.54E+01	12.20	1.33E+01	.....
55	1970.40	1966 -	1973	1970.07	6.00E+00	8.49	8.00E+00	.....
56	2094.60	2090 -	2097	2094.22	9.00E+00	6.00	0.00E+00	.....
57	2105.88	2100 -	2114	2105.49	2.94E+01	13.87	9.12E+00	.....
58	2204.57	2199 -	2207	2204.15	3.10E+01	15.52	1.80E+01	BI-214
59	2399.45	2395 -	2402	2398.95	5.07E+00	6.63	3.86E+00	.....
60	2428.88	2426 -	2430	2428.37	5.93E+00	5.85	2.14E+00	.....
61	2449.30	2445 -	2453	2448.78	1.22E+01	8.73	3.64E+00	.....
62	2615.54	2609 -	2619	2614.95	1.11E+02	21.07	0.00E+00	TL-208

Analysis Report for 1510086-13
CP0404S05-06

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

PEAK EFFICIENCY REPORT

Peak Analysis Performed on : 11/6/2015 2:37:33PM

	Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
	1	32.52	4.94E+01	61.07	6.38E-03	1.78E-03
	2	63.19	2.21E+02	111.59	2.49E-02	1.91E-03
M	3	73.68	1.86E+02	112.70	2.73E-02	2.26E-03
m	4	77.06	9.94E+02	119.05	2.78E-02	2.37E-03
m	5	87.80	2.39E+02	64.40	2.85E-02	2.73E-03
m	6	92.53	2.99E+02	68.91	2.86E-02	2.65E-03
	7	129.71	7.69E+01	78.92	2.67E-02	2.09E-03
	8	186.35	3.02E+02	96.20	2.24E-02	2.02E-03
	9	209.85	1.03E+02	64.94	2.08E-02	1.85E-03
M	10	238.70	9.02E+02	72.92	1.92E-02	1.64E-03
m	11	241.87	2.27E+02	58.97	1.91E-02	1.61E-03
	12	270.06	8.34E+01	61.32	1.77E-02	1.41E-03
	13	277.39	4.10E+01	51.34	1.74E-02	1.35E-03
M	14	295.52	4.32E+02	55.30	1.67E-02	1.31E-03
m	15	300.41	1.01E+02	57.65	1.65E-02	1.30E-03
	16	328.20	4.85E+01	47.87	1.55E-02	1.24E-03
	17	338.91	2.07E+02	62.73	1.52E-02	1.22E-03
	18	352.07	6.31E+02	72.55	1.48E-02	1.19E-03
	19	452.39	3.37E+01	39.95	1.23E-02	1.05E-03
	20	478.96	3.84E+01	42.85	1.18E-02	1.02E-03
	21	511.09	1.60E+02	53.92	1.12E-02	9.90E-04
M	22	583.46	3.13E+02	43.06	1.02E-02	9.15E-04
m	23	588.80	2.32E+01	26.80	1.01E-02	9.10E-04
	24	609.66	4.73E+02	60.04	9.82E-03	8.88E-04
	25	727.65	5.55E+01	36.90	8.55E-03	7.75E-04
	26	768.35	3.71E+01	32.18	8.19E-03	7.39E-04
M	27	795.27	3.72E+01	28.98	7.97E-03	7.14E-04
m	28	807.91	2.34E+01	23.52	7.87E-03	7.03E-04
M	29	836.30	2.39E+01	24.30	7.66E-03	6.78E-04
m	30	840.11	1.67E+01	21.84	7.63E-03	6.74E-04
	31	861.20	5.12E+01	30.68	7.48E-03	6.55E-04
	32	911.51	1.88E+02	38.87	7.15E-03	6.15E-04
	33	937.31	5.35E+01	34.76	6.99E-03	6.02E-04
M	34	965.38	4.53E+01	26.25	6.83E-03	5.87E-04

Analysis Report for 1510086-13
CP0404S05-06

	Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
m	35	969.21	9.21E+01	29.62	6.80E-03	5.85E-04
	36	1029.03	1.74E+01	17.87	6.49E-03	5.54E-04
	37	1086.26	2.44E+01	23.07	6.22E-03	5.24E-04
M	38	1120.81	8.80E+01	29.30	6.06E-03	5.06E-04
m	39	1125.02	1.95E+01	22.83	6.05E-03	5.04E-04
	40	1135.58	2.32E+01	24.82	6.00E-03	4.99E-04
	41	1176.53	3.20E+01	21.54	5.84E-03	4.79E-04
	42	1189.45	1.93E+01	23.54	5.79E-03	4.76E-04
	43	1238.79	8.87E+01	40.95	5.61E-03	4.68E-04
	44	1387.12	1.21E+01	13.48	5.16E-03	4.38E-04
	45	1401.42	1.79E+01	15.56	5.12E-03	4.34E-04
	46	1408.18	1.81E+01	16.32	5.10E-03	4.32E-04
	47	1461.48	6.51E+02	55.14	4.97E-03	4.19E-04
	48	1563.40	8.64E+00	9.63	4.74E-03	3.94E-04
M	49	1589.56	1.91E+01	15.78	4.69E-03	3.87E-04
m	50	1596.45	8.04E+00	10.63	4.68E-03	3.85E-04
	51	1632.57	1.25E+01	12.85	4.61E-03	3.76E-04
	52	1730.82	2.37E+01	13.29	4.45E-03	3.52E-04
	53	1765.43	8.00E+01	19.75	4.39E-03	3.43E-04
	54	1848.09	1.54E+01	12.20	4.28E-03	3.26E-04
	55	1970.40	6.00E+00	8.49	4.14E-03	3.26E-04
	56	2094.60	9.00E+00	6.00	4.03E-03	3.26E-04
	57	2105.88	2.94E+01	13.87	4.02E-03	3.26E-04
	58	2204.57	3.10E+01	15.52	3.95E-03	3.26E-04
	59	2399.45	5.07E+00	6.63	3.85E-03	3.26E-04
	60	2428.88	5.93E+00	5.85	3.84E-03	3.26E-04
	61	2449.30	1.22E+01	8.73	3.83E-03	3.26E-04
	62	2615.54	1.11E+02	21.07	3.79E-03	3.26E-04

M = First peak in a multiplet region
 m = Other peak in a multiplet region
 F = Fitted singlet
 Errors quoted at 2.000 sigma

BACKGROUND SUBTRACT REPORT

Peak Analysis Performed on : 11/6/2015 2:37:33PM

Env. Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000028941.CNF

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
1	32.52	4.94E+01	61.07			4.94E+01	6.11E+01
2	63.19	2.21E+02	111.59	7.80E+01	1.33E+01	1.43E+02	1.12E+02

Analysis Report for 1510086-13

CP0404S05-06

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
M	3	73.68	1.86E+02	112.70			1.86E+02	1.13E+02
m	4	77.06	9.94E+02	119.05	9.75E+00	8.28E+00	9.84E+02	1.19E+02
m	5	87.80	2.39E+02	64.40			2.39E+02	6.44E+01
m	6	92.53	2.99E+02	68.91	1.34E+02	9.83E+00	1.65E+02	6.96E+01
	7	129.71	7.69E+01	78.92			7.69E+01	7.89E+01
	8	186.35	3.02E+02	96.20	6.41E+01	7.38E+00	2.38E+02	9.65E+01
	9	209.85	1.03E+02	64.94			1.03E+02	6.49E+01
M	10	238.70	9.02E+02	72.92	2.34E+01	6.34E+00	8.79E+02	7.32E+01
m	11	241.87	2.27E+02	58.97			2.27E+02	5.90E+01
	12	270.06	8.34E+01	61.32			8.34E+01	6.13E+01
	13	277.39	4.10E+01	51.34			4.10E+01	5.13E+01
M	14	295.52	4.32E+02	55.30	4.17E+00	5.50E+00	4.28E+02	5.56E+01
m	15	300.41	1.01E+02	57.65			1.01E+02	5.77E+01
	16	328.20	4.85E+01	47.87			4.85E+01	4.79E+01
	17	338.91	2.07E+02	62.73	2.22E-01	4.54E+00	2.07E+02	6.29E+01
	18	352.07	6.31E+02	72.55	8.83E+00	4.91E+00	6.23E+02	7.27E+01
	19	452.39	3.37E+01	39.95			3.37E+01	3.99E+01
	20	478.96	3.84E+01	42.85			3.84E+01	4.28E+01
	21	511.09	1.60E+02	53.92	8.12E+01	5.49E+00	7.87E+01	5.42E+01
M	22	583.46	3.13E+02	43.06	6.34E+00	3.74E+00	3.07E+02	4.32E+01
m	23	588.80	2.32E+01	26.80			2.32E+01	2.68E+01
	24	609.66	4.73E+02	60.04	5.20E+00	3.69E+00	4.68E+02	6.02E+01
	25	727.65	5.55E+01	36.90			5.55E+01	3.69E+01
	26	768.35	3.71E+01	32.18			3.71E+01	3.22E+01
M	27	795.27	3.72E+01	28.98			3.72E+01	2.90E+01
m	28	807.91	2.34E+01	23.52			2.34E+01	2.35E+01
M	29	836.30	2.39E+01	24.30			2.39E+01	2.43E+01
m	30	840.11	1.67E+01	21.84			1.67E+01	2.18E+01
	31	861.20	5.12E+01	30.68			5.12E+01	3.07E+01
	32	911.51	1.88E+02	38.87	3.28E+00	2.53E+00	1.84E+02	3.89E+01
	33	937.31	5.35E+01	34.76			5.35E+01	3.48E+01
M	34	965.38	4.53E+01	26.25			4.53E+01	2.63E+01
m	35	969.21	9.21E+01	29.62			9.21E+01	2.96E+01
	36	1029.03	1.74E+01	17.87			1.74E+01	1.79E+01
	37	1086.26	2.44E+01	23.07			2.44E+01	2.31E+01
M	38	1120.81	8.80E+01	29.30	2.28E+00	2.55E+00	8.57E+01	2.94E+01
m	39	1125.02	1.95E+01	22.83			1.95E+01	2.28E+01
	40	1135.58	2.32E+01	24.82			2.32E+01	2.48E+01
	41	1176.53	3.20E+01	21.54			3.20E+01	2.15E+01
	42	1189.45	1.93E+01	23.54			1.93E+01	2.35E+01
	43	1238.79	8.87E+01	40.95			8.87E+01	4.10E+01
	44	1387.12	1.21E+01	13.48			1.21E+01	1.35E+01
	45	1401.42	1.79E+01	15.56			1.79E+01	1.56E+01
	46	1408.18	1.81E+01	16.32			1.81E+01	1.63E+01
	47	1461.48	6.51E+02	55.14	6.46E+00	2.33E+00	6.45E+02	5.52E+01
	48	1563.40	8.64E+00	9.63			8.64E+00	9.63E+00
M	49	1589.56	1.91E+01	15.78			1.91E+01	1.58E+01
m	50	1596.45	8.04E+00	10.63			8.04E+00	1.06E+01
	51	1632.57	1.25E+01	12.85			1.25E+01	1.28E+01
	52	1730.82	2.37E+01	13.29			2.37E+01	1.33E+01
	53	1765.43	8.00E+01	19.75			8.00E+01	1.97E+01
	54	1848.09	1.54E+01	12.20			1.54E+01	1.22E+01
	55	1970.40	6.00E+00	8.49			6.00E+00	8.49E+00
	56	2094.60	9.00E+00	6.00			9.00E+00	6.00E+00

Analysis Report for 1510086-13

CP0404S05-06

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
57	2105.88	2.94E+01	13.87			2.94E+01	1.39E+01
58	2204.57	3.10E+01	15.52			3.10E+01	1.55E+01
59	2399.45	5.07E+00	6.63			5.07E+00	6.63E+00
60	2428.88	5.93E+00	5.85			5.93E+00	5.85E+00
61	2449.30	1.22E+01	8.73			1.22E+01	8.73E+00
62	2615.54	1.11E+02	21.07	3.47E+00	1.48E+00	1.08E+02	2.11E+01

M = First peak in a multiplet region

m = Other peak in a multiplet region

F = Fitted singlet

Errors quoted at 2.000sigma

AREA CORRECTION REPORT REFERENCE PEAK / BKG. SUBTRACT

Peak Analysis Performed on : 11/6/2015 2:37:33PM

Ref. Peak Energy : 0.00

Reference Date :

Peak Ratio : 0.00

Uncertainty : 0.00

Background File

: \\OR-GAMMA1\ApexRoot\Countroom\Data\0000028941.CNF

Corrected Area is: Original * Peak Ratio - Background

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
	1	32.52	4.94E+01	61.07		4.94E+01	6.11E+01
	2	63.19	2.21E+02	111.59	7.80E+01	1.43E+02	1.12E+02
M	3	73.68	1.86E+02	112.70		1.86E+02	1.13E+02
m	4	77.06	9.94E+02	119.05	9.75E+00	9.84E+02	1.19E+02
m	5	87.80	2.39E+02	64.40		2.39E+02	6.44E+01
m	6	92.53	2.99E+02	68.91	1.34E+02	1.65E+02	6.96E+01
	7	129.71	7.69E+01	78.92		7.69E+01	7.89E+01
	8	186.35	3.02E+02	96.20	6.41E+01	2.38E+02	9.65E+01
	9	209.85	1.03E+02	64.94		1.03E+02	6.49E+01
M	10	238.70	9.02E+02	72.92	2.34E+01	8.79E+02	7.32E+01
m	11	241.87	2.27E+02	58.97		2.27E+02	5.90E+01
	12	270.06	8.34E+01	61.32		8.34E+01	6.13E+01
	13	277.39	4.10E+01	51.34		4.10E+01	5.13E+01
M	14	295.52	4.32E+02	55.30	4.17E+00	4.28E+02	5.56E+01
m	15	300.41	1.01E+02	57.65		1.01E+02	5.77E+01
	16	328.20	4.85E+01	47.87		4.85E+01	4.79E+01
	17	338.91	2.07E+02	62.73	2.22E-01	2.07E+02	6.29E+01
	18	352.07	6.31E+02	72.55	8.83E+00	6.23E+02	7.27E+01
	19	452.39	3.37E+01	39.95		3.37E+01	3.99E+01
	20	478.96	3.84E+01	42.85		3.84E+01	4.28E+01
	21	511.09	1.60E+02	53.92	8.12E+01	7.87E+01	5.42E+01
M	22	583.46	3.13E+02	43.06	6.34E+00	3.07E+02	4.32E+01

: 00768

Analysis Report for 1510086-13

CP0404S05-06

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
m	23	588.80	2.32E+01	26.80			2.32E+01	2.68E+01
	24	609.66	4.73E+02	60.04	5.20E+00	3.69E+00	4.68E+02	6.02E+01
	25	727.65	5.55E+01	36.90			5.55E+01	3.69E+01
	26	768.35	3.71E+01	32.18			3.71E+01	3.22E+01
M	27	795.27	3.72E+01	28.98			3.72E+01	2.90E+01
m	28	807.91	2.34E+01	23.52			2.34E+01	2.35E+01
M	29	836.30	2.39E+01	24.30			2.39E+01	2.43E+01
m	30	840.11	1.67E+01	21.84			1.67E+01	2.18E+01
	31	861.20	5.12E+01	30.68			5.12E+01	3.07E+01
	32	911.51	1.88E+02	38.87	3.28E+00	2.53E+00	1.84E+02	3.89E+01
	33	937.31	5.35E+01	34.76			5.35E+01	3.48E+01
M	34	965.38	4.53E+01	26.25			4.53E+01	2.63E+01
m	35	969.21	9.21E+01	29.62			9.21E+01	2.96E+01
	36	1029.03	1.74E+01	17.87			1.74E+01	1.79E+01
	37	1086.26	2.44E+01	23.07			2.44E+01	2.31E+01
M	38	1120.81	8.80E+01	29.30	2.28E+00	2.55E+00	8.57E+01	2.94E+01
m	39	1125.02	1.95E+01	22.83			1.95E+01	2.28E+01
	40	1135.58	2.32E+01	24.82			2.32E+01	2.48E+01
	41	1176.53	3.20E+01	21.54			3.20E+01	2.15E+01
	42	1189.45	1.93E+01	23.54			1.93E+01	2.35E+01
	43	1238.79	8.87E+01	40.95			8.87E+01	4.10E+01
	44	1387.12	1.21E+01	13.48			1.21E+01	1.35E+01
	45	1401.42	1.79E+01	15.56			1.79E+01	1.56E+01
	46	1408.18	1.81E+01	16.32			1.81E+01	1.63E+01
	47	1461.48	6.51E+02	55.14	6.46E+00	2.33E+00	6.45E+02	5.52E+01
	48	1563.40	8.64E+00	9.63			8.64E+00	9.63E+00
M	49	1589.56	1.91E+01	15.78			1.91E+01	1.58E+01
m	50	1596.45	8.04E+00	10.63			8.04E+00	1.06E+01
	51	1632.57	1.25E+01	12.85			1.25E+01	1.28E+01
	52	1730.82	2.37E+01	13.29			2.37E+01	1.33E+01
	53	1765.43	8.00E+01	19.75			8.00E+01	1.97E+01
	54	1848.09	1.54E+01	12.20			1.54E+01	1.22E+01
	55	1970.40	6.00E+00	8.49			6.00E+00	8.49E+00
	56	2094.60	9.00E+00	6.00			9.00E+00	6.00E+00
	57	2105.88	2.94E+01	13.87			2.94E+01	1.39E+01
	58	2204.57	3.10E+01	15.52			3.10E+01	1.55E+01
	59	2399.45	5.07E+00	6.63			5.07E+00	6.63E+00
	60	2428.88	5.93E+00	5.85			5.93E+00	5.85E+00
	61	2449.30	1.22E+01	8.73			1.22E+01	8.73E+00
	62	2615.54	1.11E+02	21.07	3.47E+00	1.48E+00	1.08E+02	2.11E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

Analysis Report for 1510086-13
CP0404S05-06

NUCLIDE IDENTIFICATION REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

IDENTIFIED NUCLIDES

Nuclide Name	Id Confidence	Energy (keV)	Yield(%)	Activity (pCi/grams)	Activity Uncertainty
K-40	0.931	1460.81 *	10.67	1.67E+01	2.04E+00
GA-67	0.623	93.31 *	35.70	1.12E+02	4.46E+02
		208.95 *	2.24	1.53E+03	5.91E+03
		300.22 *	16.00	2.63E+02	1.06E+03
		88.03 *	3.72	3.24E+00	9.46E-01
CD-109	0.991	87.57 *	37.00	3.12E-01	8.92E-02
SN-126	0.992	583.14 *	30.22	1.37E+00	2.30E-01
TL-208	0.926	860.37 *	4.48	2.10E+00	1.27E+00
		2614.66 *	35.85	1.09E+00	2.33E-01
		727.17 *	11.80	7.57E-01	5.07E-01
BI-212	0.737	1620.62	2.75		
		238.63 *	44.60	1.41E+00	1.68E-01
PB-212	0.998	300.09 *	3.41	2.46E+00	1.42E+00
		609.31 *	46.30	1.42E+00	2.22E-01
BI-214	0.954	1120.29 *	15.10	1.29E+00	4.54E-01
		1764.49 *	15.80	1.58E+00	4.10E-01
		2204.22 *	4.98	2.17E+00	1.10E+00
		295.21 *	19.19	1.84E+00	2.79E-01
		351.92 *	37.19	1.56E+00	2.21E-01
RA-224	0.882	240.98 *	3.95	4.14E+00	1.13E+00
		186.21 *	3.28	4.47E+00	8.38E+00
RA-226	0.997	338.32 *	11.40	1.65E+00	5.17E-01
		911.07 *	27.70	1.28E+00	2.92E-01
AC-228	0.973	969.11 *	16.60	1.12E+00	3.73E-01
		63.29 *	3.80	2.08E+00	1.64E+00
		74.67 *	66.00	1.42E-01	8.68E-02
TH-234	0.998	209.75 *	3.29	2.08E+00	1.32E+00
AM-243	0.854	228.14	10.60		
CM-243	0.370	277.60 *	14.00	2.32E-01	2.91E-01

* = Energy line found in the spectrum.

- = Manually added nuclide.

? = Manually edited nuclide.

Energy Tolerance : 1.000 keV

Nuclide confidence index threshold = 0.30

Errors quoted at 2.000sigma

Analysis Report for 1510086-13
CP0404S05-06

UNIDENTIFIED PEAKS

Peak Locate Performed on : 11/6/2015 2:37:33PM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
	1	32.52	1.37178E-02		
m	4	77.06	2.73296E-01		
	7	129.71	2.13553E-02		
	12	270.06	2.31609E-02		
	16	328.20	1.34844E-02	Tol.	LA-140
	19	452.39	9.36559E-03	Sum	
	20	478.96	1.06778E-02		
	21	511.09	2.18720E-02	Sum	
m	23	588.80	6.43932E-03		
	26	768.35	1.02990E-02		
M	27	795.27	1.03255E-02	Sum	
m	28	807.91	6.50143E-03		
M	29	836.30	6.64799E-03		
m	30	840.11	4.64770E-03		
	33	937.31	1.48611E-02	Sum	
M	34	965.38	1.25736E-02	Sum	
	36	1029.03	4.84028E-03	Sum	
	37	1086.26	6.77596E-03	Tol.	EU-152
m	39	1125.02	5.40397E-03		
	40	1135.58	6.43098E-03		
	41	1176.53	8.88889E-03		
	42	1189.45	5.36514E-03	Sum	
	43	1238.79	2.46416E-02	Tol.	CO-56
	44	1387.12	3.35648E-03		
	45	1401.42	4.96212E-03		
	46	1408.18	5.03086E-03	Tol.	EU-152
	48	1563.40	2.40079E-03		
M	49	1589.56	5.30511E-03	Sum	
m	50	1596.45	2.23431E-03	Tol.	LA-140
	51	1632.57	3.47222E-03		
	52	1730.82	6.59004E-03	Sum	
	54	1848.09	4.26768E-03	Sum	
	55	1970.40	1.66667E-03		
	56	2094.60	2.50000E-03		
	57	2105.88	8.17810E-03		
	59	2399.45	1.40873E-03		
	60	2428.88	1.64683E-03		
	61	2449.30	3.38294E-03		

Analysis Report for 1510086-13
CP0404S05-06

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

NUCLIDE IDENTIFICATION REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

IDENTIFIED NUCLIDES

Nuclide Name	Id Confidence	Energy (keV)	Yield(%)	Activity (pCi/grams)	Activity Uncertainty
K-40	0.93	1460.81 *	10.67	1.67E+01	2.04E+00
GA-67	0.62	93.31 *	35.70	1.12E+02	4.46E+02
		208.95 *	2.24	1.53E+03	5.91E+03
		300.22 *	16.00	2.63E+02	1.06E+03
		88.03 *	3.72	3.24E+00	9.46E-01
CD-109	0.99	87.57 *	37.00	3.12E-01	8.92E-02
SN-126	0.99	583.14 *	30.22	1.37E+00	2.30E-01
		860.37 *	4.48	2.10E+00	1.27E+00
TL-208	0.92	2614.66 *	35.85	1.09E+00	2.33E-01
		727.17 *	11.80	7.57E-01	5.07E-01
BI-212	0.73	1620.62	2.75		
		238.63 *	44.60	1.41E+00	1.68E-01
PB-212	0.99	300.09 *	3.41	2.46E+00	1.42E+00
		609.31 *	46.30	1.42E+00	2.22E-01
BI-214	0.95	1120.29 *	15.10	1.29E+00	4.54E-01
		1764.49 *	15.80	1.58E+00	4.10E-01
		2204.22 *	4.98	2.17E+00	1.10E+00
		295.21 *	19.19	1.84E+00	2.79E-01
PB-214	0.99	351.92 *	37.19	1.56E+00	2.21E-01
		240.98 *	3.95	4.14E+00	1.13E+00
RA-224	0.88	186.21 *	3.28	4.47E+00	8.38E+00
RA-226	0.99	338.32 *	11.40	1.65E+00	5.17E-01
		911.07 *	27.70	1.28E+00	2.92E-01
AC-228	0.97	969.11 *	16.60	1.12E+00	3.73E-01
		63.29 *	3.80	2.08E+00	1.64E+00
TH-234	0.99	74.67 *	66.00	1.42E-01	8.68E-02
AM-243	0.85	209.75 *	3.29	2.08E+00	1.32E+00
		228.14	10.60		
CM-243	0.37	277.60 *	14.00	2.32E-01	2.91E-01

Analysis Report for 1510086-13
CP0404S05-06

* = Energy line found in the spectrum.
- = Manually added nuclide.
? = Manually edited nuclide.
@ = Energy line not used for Weighted Mean Activity
Energy Tolerance : 1.000 keV
Nuclide confidence index threshold = 0.30
Errors quoted at 2.000sigma

INTERFERENCE CORRECTED REPORT

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40	0.931	1.67E+01	2.04E+00	
GA-67	0.623	1.14E+02	4.39E+02	
? CD-109	0.991	3.24E+00	9.46E-01	
? SN-126	0.992	3.12E-01	8.92E-02	
TL-208	0.926	1.25E+00	1.62E-01	
BI-212	0.737	7.57E-01	5.07E-01	
PB-212	0.998	1.41E+00	1.67E-01	
BI-214	0.954	1.45E+00	1.77E-01	
PB-214	0.992	1.67E+00	1.73E-01	
RA-224	0.882	4.14E+00	1.13E+00	
RA-226	0.997	4.47E+00	8.38E+00	
AC-228	0.973	1.29E+00	2.10E-01	
TH-234	0.998	2.08E+00	1.64E+00	
AM-243	0.854	1.42E-01	8.68E-02	
CM-243	0.370	3.10E-01	2.84E-01	

? = nuclide is part of an undetermined solution
X = nuclide rejected by the interference analysis
@ = nuclide contains energy lines not used in Weighted Mean Activity

Errors quoted at 2.000sigma

Analysis Report for 1510086-13
CP0404S05-06

UNIDENTIFIED PEAKS

Peak Locate Performed on : 11/6/2015 2:37:33PM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
	1	32.52	1.37178E-02	61.84	
m	4	77.06	2.73296E-01	6.06	
	7	129.71	2.13553E-02	51.33	
	12	270.06	2.31609E-02	36.77	
	16	328.20	1.34844E-02	49.30	Tol. LA-140
	19	452.39	9.36559E-03	59.24	Sum
	20	478.96	1.06778E-02	55.73	
	21	511.09	2.18720E-02	34.42	Sum
m	23	588.80	6.43932E-03	57.79	
	26	768.35	1.02990E-02	43.40	
M	27	795.27	1.03255E-02	38.99	Sum
m	28	807.91	6.50143E-03	50.24	
M	29	836.30	6.64799E-03	50.76	
m	30	840.11	4.64770E-03	65.27	
	33	937.31	1.48611E-02	32.49	Sum
M	34	965.38	1.25736E-02	29.00	Sum
	36	1029.03	4.84028E-03	51.27	Sum
	37	1086.26	6.77596E-03	47.28	Tol. EU-152
m	39	1125.02	5.40397E-03	58.66	
	40	1135.58	6.43098E-03	53.60	
	41	1176.53	8.88889E-03	33.66	
	42	1189.45	5.36514E-03	60.95	Sum
	43	1238.79	2.46416E-02	23.08	Tol. CO-56
	44	1387.12	3.35648E-03	55.79	
	45	1401.42	4.96212E-03	43.56	
	46	1408.18	5.03086E-03	45.07	Tol. EU-152
	48	1563.40	2.40079E-03	55.71	
M	49	1589.56	5.30511E-03	41.31	Sum
m	50	1596.45	2.23431E-03	66.08	Tol. LA-140
	51	1632.57	3.47222E-03	51.38	
	52	1730.82	6.59004E-03	28.00	Sum
	54	1848.09	4.26768E-03	39.69	Sum
	55	1970.40	1.66667E-03	70.71	
	56	2094.60	2.50000E-03	33.33	
	57	2105.88	8.17810E-03	23.55	

Analysis Report for 1510086-13
CP0404S05-06

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
59	2399.45	1.40873E-03	65.40		
60	2428.88	1.64683E-03	49.36		
61	2449.30	3.38294E-03	35.85		

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

NUCLIDE MDA REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	BE-7	477.59	10.42	5.95E-01	8.82E-01	8.82E-01
+	NA-22	1274.54	99.94	-4.72E-02	8.31E-02	8.31E-02
+	NA-24	1368.53	99.99	1.19E+12	3.30E+12	7.83E+12
		2754.09	99.86	-1.95E+12		3.30E+12
+	AL-26	1808.65	99.76	1.02E-02	5.30E-02	5.30E-02
+	K-40	1460.81	* 10.67	1.67E+01	9.92E-01	9.92E-01
+	@ AR-41	1293.64	99.16	1.00E+26	1.00E+26	1.00E+26
+	TI-44	67.88	94.40	1.03E-02	6.77E-02	6.77E-02
		78.34	96.00	2.40E-01		8.76E-02
+	SC-46	889.25	99.98	3.36E-02	9.02E-02	9.02E-02
		1120.51	99.99	2.19E-01		1.66E-01
+	V-48	983.52	99.98	-1.05E-02	2.51E-01	2.52E-01
		1312.10	97.50	7.47E-02		2.51E-01
+	CR-51	320.08	9.83	-1.01E+00	9.77E-01	9.77E-01
+	MN-54	834.83	99.97	-8.24E-04	8.07E-02	8.07E-02
+	CO-56	846.75	99.96	1.61E-03	7.63E-02	7.63E-02
		1037.75	14.03	-3.15E-01		6.02E-01
		1238.25	67.00	2.78E-01		2.47E-01
		1771.40	15.51	-9.15E-02		3.43E-01
		2598.48	16.90	9.50E-02		4.16E-01
+	CO-57	122.06	85.51	2.03E-02	5.94E-02	5.94E-02
		136.48	10.60	-1.60E-01		5.03E-01
+	CO-58	810.76	99.40	-9.17E-03	8.95E-02	8.95E-02
+	FE-59	1099.22	56.50	-4.29E-03	2.11E-01	2.11E-01
		1291.56	43.20	1.29E-01		3.09E-01
+	CO-60	1173.22	100.00	-1.38E-02	6.79E-02	7.89E-02

Analysis Report for 1510086-13
CP0404S05-06

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	CO-60	1332.49		100.00	2.14E-02	6.79E-02	6.79E-02
+	ZN-65	1115.52		50.75	1.21E-02	1.67E-01	1.67E-01
+	GA-67	93.31	*	35.70	1.12E+02	1.83E+02	1.83E+02
		208.95	*	2.24	1.53E+03		1.54E+03
		300.22	*	16.00	2.63E+02		3.46E+02
+	SE-75	121.11		16.70	6.07E-02	9.96E-02	3.29E-01
		136.00		59.20	1.06E-02		9.96E-02
		264.65		59.80	1.99E-02		1.00E-01
		279.53		25.20	-1.89E-02		2.44E-01
		400.65		11.40	1.27E-01		5.65E-01
+	RB-82	776.52		13.00	-5.80E-01	1.17E+00	1.17E+00
+	RB-83	520.41		46.00	-3.20E-02	1.64E-01	1.64E-01
		529.64		30.30	-1.76E-01		2.46E-01
		552.65		16.40	-1.25E-02		4.69E-01
+	KR-85	513.99		0.43	3.13E+01	2.08E+01	2.08E+01
+	SR-85	513.99		99.27	1.86E-01	1.23E-01	1.23E-01
+	Y-88	898.02		93.40	2.95E-02	6.18E-02	9.08E-02
		1836.01		99.38	-4.38E-03		6.18E-02
+	NB-93M	16.57		9.43	-3.24E+01	6.87E+01	6.87E+01
+	NB-94	702.63		100.00	-1.53E-02	6.79E-02	6.85E-02
		871.10		100.00	1.21E-02		6.79E-02
+	NB-95	765.79		99.81	3.87E-03	1.56E-01	1.56E-01
+	NB-95M	235.69		25.00	-5.78E+02	7.09E+01	7.09E+01
+	ZR-95	724.18		43.70	-1.49E-02	1.61E-01	2.32E-01
		756.72		55.30	-6.85E-03		1.61E-01
+	MO-99	181.06		6.20	-1.51E+02	9.38E+02	1.28E+03
		739.58		12.80	1.47E+02		9.38E+02
		778.00		4.50	-1.12E+03		2.38E+03
+	RU-103	497.08		89.00	-1.13E-02	1.11E-01	1.11E-01
+	RU-106	621.84		9.80	3.35E-01	7.40E-01	7.40E-01
+	AG-108M	433.93		89.90	1.08E-02	6.31E-02	6.31E-02
		614.37		90.40	-1.11E-02		7.34E-02
		722.95		90.50	-3.79E-03		7.51E-02
+	CD-109	88.03	*	3.72	3.24E+00	3.63E+00	3.63E+00
+	AG-110M	657.75		93.14	1.90E-02	8.39E-02	8.39E-02
		677.61		10.53	7.83E-03		6.52E-01
		706.67		16.46	-2.17E-01		4.53E-01
		763.93		21.98	1.97E-02		3.65E-01
		884.67		71.63	-8.76E-02		9.24E-02
		1384.27		23.94	-2.77E-02		3.19E-01
+	CD-113M	263.70		0.02	-1.87E+00	2.19E+02	2.19E+02
+	SN-113	255.12		1.93	1.38E+00	9.43E-02	3.25E+00
		391.69		64.90	1.11E-02		9.43E-02
+	TE123M	159.00		84.10	7.23E-03	6.68E-02	6.68E-02
+	SB-124	602.71		97.87	-1.33E-02	9.25E-02	9.25E-02
		645.85		7.26	-1.13E-01		1.20E+00
		722.78		11.10	-4.32E-02		8.57E-01
		1691.02		49.00	-1.79E-02		1.52E-01

0775A

Analysis Report for 1510086-13
CP0404S05-06

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	I-125	35.49	6.49	-1.92E-01	3.02E+00	3.02E+00
+	SB-125	176.33	6.89	-9.60E-02	1.95E-01	7.45E-01
		427.89	29.33	-7.62E-02		1.95E-01
		463.38	10.35	2.40E-01		6.86E-01
		600.56	17.80	-7.68E-02		3.56E-01
		635.90	11.32	2.11E-01		5.98E-01
+	SB-126	414.70	83.30	-2.91E-01	3.28E-01	3.70E-01
		666.33	99.60	-1.06E-02		3.56E-01
		695.00	99.60	-3.24E-02		3.28E-01
		720.50	53.80	-3.14E-02		6.46E-01
+	SN-126	87.57	* 37.00	3.12E-01	3.50E-01	3.50E-01
+	SB-127	473.00	25.00	-1.26E+00	3.37E+01	4.63E+01
		685.20	35.70	-4.99E+00		3.37E+01
		783.80	14.70	5.92E+01		9.97E+01
+	I-129	29.78	57.00	1.99E-01	4.68E-01	4.68E-01
		33.60	13.20	9.29E-01		1.32E+00
		39.58	7.52	-1.57E-01		1.44E+00
+	I-131	284.30	6.05	9.81E-01	7.38E-01	1.06E+01
		364.48	81.20	-2.06E-01		7.38E-01
		636.97	7.26	4.05E+00		1.16E+01
		722.89	1.80	-2.37E+00		4.70E+01
+	TE-132	49.72	13.10	-5.81E+02	3.07E+01	2.75E+02
		228.16	88.00	9.42E+00		3.07E+01
+	BA-133	81.00	33.00	-1.26E+00	9.39E-02	1.72E-01
		302.84	17.80	1.11E-01		3.08E-01
		356.01	60.00	-7.09E-01		9.39E-02
+	I-133	529.87	86.30	-7.11E+08	9.91E+08	9.91E+08
+	XE-133	81.00	38.00	-5.19E+01	7.09E+00	7.09E+00
+	CS-134	563.23	8.38	-2.78E-01	7.34E-02	6.98E-01
		569.32	15.43	1.90E-01		4.41E-01
		604.70	97.60	-2.73E-02		7.34E-02
		795.84	85.40	8.90E-02		9.47E-02
		801.93	8.73	-3.23E-01		7.54E-01
+	CS-135	268.24	16.00	2.97E-01	3.71E-01	3.71E-01
+	@ I-135	1131.51	22.50	1.00E+26	1.00E+26	1.00E+26
	@	1260.41	28.60	1.00E+26		1.00E+26
	@	1678.03	9.54	1.00E+26		1.00E+26
+	CS-136	153.22	7.46	2.14E+00	3.00E-01	3.21E+00
		163.89	4.61	1.12E+00		5.04E+00
		176.55	13.56	-2.23E-01		1.73E+00
		273.65	12.66	-2.31E+00		1.92E+00
		340.57	48.50	1.44E+00		7.18E-01
		818.50	99.70	5.37E-02		3.00E-01
		1048.07	79.60	-5.12E-02		4.61E-01
		1235.34	19.70	-2.95E-01		2.57E+00
+	CS-137	661.65	85.12	2.00E-02	8.52E-02	8.52E-02
+	LA-138	788.74	34.00	-6.05E-02	9.95E-02	1.92E-01
		1435.80	66.00	-7.10E-03		9.95E-02
+	CE-139	165.85	80.35	1.17E-02	7.53E-02	7.53E-02

Analysis Report for 1510086-13
CP0404S05-06

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	BA-140	162.64	6.70	-1.23E+00	1.33E+00	3.54E+00
		304.84	4.50	-1.54E-01		5.13E+00
		423.70	3.20	1.73E+00		9.34E+00
		437.55	2.00	2.67E+00		1.44E+01
		537.32	25.00	8.68E-02		1.33E+00
+	LA-140	328.77	20.50	1.10E+00	3.20E-01	1.41E+00
		487.03	45.50	-1.74E-02		6.46E-01
		815.85	23.50	-2.71E-01		1.28E+00
		1596.49	95.49	4.51E-02		3.20E-01
+	CE-141	145.44	48.40	6.77E-02	1.98E-01	1.98E-01
+	CE-143	57.36	11.80	-1.17E+05	5.58E+05	1.40E+06
		293.26	42.00	1.74E+06		5.58E+05
		664.55	5.20	1.14E+06		3.53E+06
+	CE-144	133.54	10.80	-1.65E-02	5.05E-01	5.05E-01
+	PM-144	476.78	42.00	-3.12E-02	6.92E-02	1.51E-01
		618.01	98.60	1.57E-03		7.18E-02
		696.49	99.49	-2.90E-02		6.92E-02
+	PM-145	36.85	21.70	-2.66E-01	3.13E-01	5.82E-01
		37.36	39.70	4.44E-02		3.13E-01
		42.30	15.10	-7.60E-01		6.14E-01
		72.40	2.31	-3.34E+00		3.27E+00
+	PM-146	453.90	39.94	6.75E-02	1.62E-01	1.62E-01
		735.90	14.01	-8.40E-03		4.90E-01
		747.13	13.10	-1.51E-01		5.23E-01
+	ND-147	91.11	28.90	-3.20E+00	1.48E+00	1.48E+00
		531.02	13.10	-6.01E-01		2.91E+00
+	PM-149	285.90	3.10	-2.95E+03	1.58E+04	1.58E+04
+	EU-152	121.78	20.50	7.88E-02	2.31E-01	2.31E-01
		244.69	5.40	-8.98E-01		1.04E+00
		344.27	19.13	-1.61E-02		2.56E-01
		778.89	9.20	-4.48E-02		7.66E-01
		964.01	10.40	-8.06E-01		9.38E-01
		1085.78	7.22	7.07E-01		1.17E+00
		1112.02	9.60	2.17E-01		8.39E-01
		1407.95	14.94	2.35E-01		5.54E-01
+	GD-153	97.43	31.30	8.65E-02	1.69E-01	1.69E-01
		103.18	22.20	1.94E-01		2.36E-01
+	EU-154	123.07	40.50	-3.12E-02	1.17E-01	1.17E-01
		723.30	19.70	-1.75E-02		3.47E-01
		873.19	11.50	1.15E-01		6.00E-01
		996.32	10.30	-1.85E-01		6.77E-01
		1004.76	17.90	1.28E-02		4.35E-01
		1274.45	35.50	-1.31E-01		2.31E-01
+	EU-155	86.50	30.90	-2.78E-02	2.17E-01	2.17E-01
		105.30	20.70	5.95E-02		2.31E-01
+	EU-156	811.77	10.40	-3.03E-01	2.24E+00	2.24E+00
		1153.47	7.20	-7.65E-01		4.51E+00
		1230.71	8.90	3.27E-01		3.57E+00
+	HO-166M	184.41	72.60	1.71E-01	9.40E-02	9.40E-02

Analysis Report for 1510086-13
CP0404S05-06

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	HO-166M	280.45	29.60	1.54E-02	9.40E-02	1.68E-01
		410.94	11.10	3.30E-02		5.77E-01
		711.69	54.10	6.37E-02		1.35E-01
+	TM-171	66.72	0.14	1.66E+00	4.81E+01	4.81E+01
+	HF-172	81.75	4.52	-1.95E+00	4.30E-01	1.31E+00
		125.81	11.30	3.05E-02		4.30E-01
+	LU-172	181.53	20.60	-2.45E-01	2.49E+00	4.99E+00
		810.06	16.63	1.79E+00		8.80E+00
		912.12	15.25	4.59E+01		1.91E+01
		1093.66	62.50	3.86E-01		2.49E+00
+	LU-173	100.72	5.24	-3.34E-02	2.86E-01	9.51E-01
		272.11	21.20	1.41E-01		2.86E-01
+	HF-175	343.40	84.00	-3.47E-02	7.75E-02	7.75E-02
+	LU-176	88.34	13.30	7.64E-01	4.89E-02	5.04E-01
		201.83	86.00	-1.04E-02		6.21E-02
		306.78	94.00	-1.34E-02		4.89E-02
+	TA-182	67.75	41.20	2.82E-02	1.85E-01	1.85E-01
		1121.30	34.90	6.35E-01		4.51E-01
		1189.05	16.23	3.67E-01		7.12E-01
		1221.41	26.98	1.29E-01		3.96E-01
		1231.02	11.44	7.98E-02		8.72E-01
+	IR-192	308.46	29.68	-3.40E-02	1.69E-01	2.09E-01
		468.07	48.10	-2.32E-01		1.69E-01
+	HG-203	279.19	77.30	1.81E-02	1.06E-01	1.06E-01
+	BI-207	569.67	97.72	9.08E-03	6.73E-02	6.73E-02
		1063.62	74.90	-2.98E-02		1.01E-01
+	TL-208	583.14	* 30.22	1.37E+00	9.40E-02	3.69E-01
		860.37	* 4.48	2.10E+00		1.94E+00
		2614.66	* 35.85	1.09E+00		9.40E-02
+	BI-210M	262.00	45.00	-2.11E-02	1.10E-01	1.10E-01
		300.00	23.00	-6.75E-01		2.62E-01
+	PB-210	46.50	4.25	1.46E+00	2.05E+00	2.05E+00
+	PB-211	404.84	2.90	2.33E-01	1.84E+00	1.84E+00
		831.96	2.90	4.72E-01		2.31E+00
+	BI-212	727.17	* 11.80	7.57E-01	7.93E-01	7.93E-01
		1620.62	2.75	1.28E+00		2.75E+00
+	PB-212	238.63	* 44.60	1.41E+00	2.44E-01	2.44E-01
		300.09	* 3.41	2.46E+00		3.24E+00
+	BI-214	609.31	* 46.30	1.42E+00	2.16E-01	2.16E-01
		1120.29	* 15.10	1.29E+00		1.09E+00
		1764.49	* 15.80	1.58E+00		3.26E-01
		2204.22	* 4.98	2.17E+00		1.43E+00
+	PB-214	295.21	* 19.19	1.84E+00	2.25E-01	5.63E-01
		351.92	* 37.19	1.56E+00		2.25E-01
+	RN-219	401.80	6.50	-2.81E-01	8.18E-01	8.18E-01
+	RA-223	323.87	3.88	4.76E-01	1.33E+00	1.33E+00
+	RA-224	240.98	* 3.95	4.14E+00	2.74E+00	2.74E+00
+	RA-225	40.00	31.00	-1.46E-01	1.34E+00	1.34E+00

Analysis Report for 1510086-13
CP0404S05-06

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	RA-226	186.21	*	3.28	4.47E+00	2.87E+00	2.87E+00
+	TH-227	50.10		8.40	-1.77E+00	5.60E-01	8.39E-01
		236.00		11.50	-4.57E+00		5.60E-01
		256.20		6.30	6.57E-02		8.24E-01
+	AC-228	338.32	*	11.40	1.65E+00	3.38E-01	7.53E-01
		911.07	*	27.70	1.28E+00		3.38E-01
		969.11	*	16.60	1.12E+00		8.93E-01
+	TH-230	48.44		16.90	3.74E-01	4.83E-01	4.83E-01
		62.85		4.60	2.72E+00		1.64E+00
		67.67		0.37	2.64E+00		1.73E+01
+	PA-231	283.67		1.60	-5.58E-01	2.37E+00	3.13E+00
		302.67		2.30	8.52E-01		2.37E+00
+	TH-231	25.64		14.70	1.64E+00	9.73E-01	3.94E+00
		84.21		6.40	-1.50E+00		9.73E-01
+	PA-233	311.98		38.60	3.97E-02	2.74E-01	2.74E-01
+	PA-234	131.20		20.40	4.71E-02	2.58E-01	2.58E-01
		733.99		8.80	-3.33E-01		7.45E-01
		946.00		12.00	1.34E-01		5.77E-01
+	PA-234M	1001.03		0.92	1.31E+00	8.17E+00	8.17E+00
+	TH-234	63.29	*	3.80	2.08E+00	2.66E+00	2.66E+00
+	U-235	143.76		10.50	-1.65E-01	4.92E-01	4.92E-01
		163.35		4.70	2.35E-01		1.06E+00
		205.31		4.70	4.59E-01		1.12E+00
+	NP-237	86.50		12.60	-6.75E-02	5.25E-01	5.25E-01
+	NP-239	106.10		22.70	2.95E+02	1.15E+03	1.15E+03
		228.18		10.70	8.43E+02		2.75E+03
		277.60		14.10	1.34E+03		2.12E+03
+	AM-241	59.54		35.90	-1.05E-02	1.83E-01	1.83E-01
+	AM-243	74.67	*	66.00	1.42E-01	1.68E-01	1.68E-01
+	CM-243	209.75	*	3.29	2.08E+00	4.78E-01	2.09E+00
		228.14		10.60	1.55E-01		5.07E-01
		277.60	*	14.00	2.32E-01		4.78E-01

- + = Nuclide identified during the nuclide identification
 * = Energy line found in the spectrum
 > = MDA value not calculated
 @ = Half-life too short to be able to perform the decay correction
 ? = CAUTION: MDA value is inconsistent with Currie MDA at 95% confidence level

0778A

Analysis Report for 1510086-13
CP0404S05-06

NUCLIDE MDA REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
BE-7	477.59	10.42	8.82E-01	8.82E-01	5.95E-01	4.19E-01
NA-22	1274.54	99.94	8.31E-02	8.31E-02	-4.72E-02	3.81E-02
NA-24	1368.53	99.99	7.83E+12	3.30E+12	1.19E+12	3.47E+12
	2754.09	99.86	3.30E+12		-1.95E+12	1.04E+12
AL-26	1808.65	99.76	5.30E-02	5.30E-02	1.02E-02	2.22E-02
+ K-40	1460.81	* 10.67	9.92E-01	9.92E-01	1.67E+01	4.61E-01
@ AR-41	1293.64	99.16	1.00E+26	1.00E+26	1.00E+26	1.00E+20
TI-44	67.88	94.40	6.77E-02	6.77E-02	1.03E-02	3.31E-02
	78.34	96.00	8.76E-02		2.40E-01	4.31E-02
SC-46	889.25	99.98	9.02E-02	9.02E-02	3.36E-02	4.18E-02
	1120.51	99.99	1.66E-01		2.19E-01	7.89E-02
V-48	983.52	99.98	2.52E-01	2.51E-01	-1.05E-02	1.16E-01
	1312.10	97.50	2.51E-01		7.47E-02	1.13E-01
CR-51	320.08	9.83	9.77E-01	9.77E-01	-1.01E+00	4.64E-01
MN-54	834.83	99.97	8.07E-02	8.07E-02	-8.24E-04	3.78E-02
CO-56	846.75	99.96	7.63E-02	7.63E-02	1.61E-03	3.50E-02
	1037.75	14.03	6.02E-01		-3.15E-01	2.75E-01
	1238.25	67.00	2.47E-01		2.78E-01	1.17E-01
	1771.40	15.51	3.43E-01		-9.15E-02	1.36E-01
	2598.48	16.90	4.16E-01		9.50E-02	1.71E-01
CO-57	122.06	85.51	5.94E-02	5.94E-02	2.03E-02	2.88E-02
	136.48	10.60	5.03E-01		-1.60E-01	2.44E-01
CO-58	810.76	99.40	8.95E-02	8.95E-02	-9.17E-03	4.16E-02
FE-59	1099.22	56.50	2.11E-01	2.11E-01	-4.29E-03	9.71E-02
	1291.56	43.20	3.09E-01		1.29E-01	1.42E-01
CO-60	1173.22	100.00	7.89E-02	6.79E-02	-1.38E-02	3.62E-02
	1332.49	100.00	6.79E-02		2.14E-02	3.04E-02
ZN-65	1115.52	50.75	1.67E-01	1.67E-01	1.21E-02	7.71E-02
+ GA-67	93.31	* 35.70	1.83E+02	1.83E+02	1.12E+02	9.06E+01
	208.95	* 2.24	1.54E+03		1.53E+03	7.50E+02
	300.22	* 16.00	3.46E+02		2.63E+02	1.70E+02
SE-75	121.11	16.70	3.29E-01	9.96E-02	6.07E-02	1.60E-01
	136.00	59.20	9.96E-02		1.06E-02	4.84E-02
	264.65	59.80	1.00E-01		1.99E-02	4.80E-02
	279.53	25.20	2.44E-01		-1.89E-02	1.17E-01
	400.65	11.40	5.65E-01		1.27E-01	2.68E-01
RB-82	776.52	13.00	1.17E+00	1.17E+00	-5.80E-01	5.48E-01
RB-83	520.41	46.00	1.64E-01	1.64E-01	-3.20E-02	7.73E-02
	529.64	30.30	2.46E-01		-1.76E-01	1.16E-01
	552.65	16.40	4.69E-01		-1.25E-02	2.21E-01
KR-85	513.99	0.43	2.08E+01	2.08E+01	3.13E+01	9.99E+00
SR-85	513.99	99.27	1.23E-01	1.23E-01	1.86E-01	5.94E-02
Y-88	898.02	93.40	9.08E-02	6.18E-02	2.95E-02	4.21E-02
	1836.01	99.38	6.18E-02		-4.38E-03	2.56E-02
NB-93M	16.57	9.43	6.87E+01	6.87E+01	-3.24E+01	3.19E+01

Analysis Report for 1510086-13
CP0404S05-06

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)	
NB-94	702.63	100.00	6.85E-02	6.79E-02	-1.53E-02	3.21E-02	
	871.10	100.00	6.79E-02		1.21E-02	3.14E-02	
NB-95	765.79	99.81	1.56E-01	1.56E-01	3.87E-03	7.40E-02	
NB-95M	235.69	25.00	7.09E+01	7.09E+01	-5.78E+02	3.44E+01	
ZR-95	724.18	43.70	2.32E-01	1.61E-01	-1.49E-02	1.09E-01	
	756.72	55.30	1.61E-01		-6.85E-03	7.48E-02	
MO-99	181.06	6.20	1.28E+03	9.38E+02	-1.51E+02	6.21E+02	
	739.58	12.80	9.38E+02		1.47E+02	4.42E+02	
	778.00	4.50	2.38E+03		-1.12E+03	1.11E+03	
RU-103	497.08	89.00	1.11E-01	1.11E-01	-1.13E-02	5.24E-02	
RU-106	621.84	9.80	7.40E-01	7.40E-01	3.35E-01	3.49E-01	
AG-108M	433.93	89.90	6.31E-02	6.31E-02	1.08E-02	2.99E-02	
	614.37	90.40	7.34E-02		-1.11E-02	3.46E-02	
	722.95	90.50	7.51E-02		-3.79E-03	3.51E-02	
+ CD-109	88.03	*	3.63E+00	3.63E+00	3.24E+00	1.80E+00	
	AG-110M	657.75	93.14	8.39E-02	8.39E-02	1.90E-02	3.96E-02
		677.61	10.53	6.52E-01		7.83E-03	3.05E-01
	706.67	16.46	4.53E-01		-2.17E-01	2.13E-01	
	763.93	21.98	3.65E-01		1.97E-02	1.72E-01	
	884.67	71.63	9.24E-02		-8.76E-02	4.24E-02	
	1384.27	23.94	3.19E-01		-2.77E-02	1.43E-01	
	CD-113M	263.70	0.02	2.19E+02	2.19E+02	-1.87E+00	1.05E+02
SN-113	255.12	1.93	3.25E+00	9.43E-02	1.38E+00	1.56E+00	
	391.69	64.90	9.43E-02		1.11E-02	4.46E-02	
TE123M	159.00	84.10	6.68E-02	6.68E-02	7.23E-03	3.23E-02	
SB-124	602.71	97.87	9.25E-02	9.25E-02	-1.33E-02	4.36E-02	
	645.85	7.26	1.20E+00		-1.13E-01	5.61E-01	
	722.78	11.10	8.57E-01		-4.32E-02	4.01E-01	
	1691.02	49.00	1.52E-01		-1.79E-02	6.41E-02	
	I-125	35.49	6.49	3.02E+00	3.02E+00	-1.92E-01	1.47E+00
SB-125	176.33	6.89	7.45E-01	1.95E-01	-9.60E-02	3.61E-01	
	427.89	29.33	1.95E-01		-7.62E-02	9.26E-02	
	463.38	10.35	6.86E-01		2.40E-01	3.28E-01	
	600.56	17.80	3.56E-01		-7.68E-02	1.67E-01	
	635.90	11.32	5.98E-01		2.11E-01	2.81E-01	
	SB-126	414.70	83.30	3.70E-01	3.28E-01	-2.91E-01	1.76E-01
666.33		99.60	3.56E-01		-1.06E-02	1.68E-01	
695.00		99.60	3.28E-01		-3.24E-02	1.53E-01	
720.50		53.80	6.46E-01		-3.14E-02	3.02E-01	
+ SN-126	87.57	*	3.50E-01	3.50E-01	3.12E-01	1.73E-01	
	SB-127	473.00	25.00	4.63E+01	3.37E+01	-1.26E+00	2.19E+01
		685.20	35.70	3.37E+01		-4.99E+00	1.57E+01
I-129	783.80	14.70	9.97E+01		5.92E+01	4.68E+01	
	29.78	57.00	4.68E-01	4.68E-01	1.99E-01	2.27E-01	
	33.60	13.20	1.32E+00		9.29E-01	6.41E-01	
I-131	39.58	7.52	1.44E+00		-1.57E-01	6.99E-01	
	284.30	6.05	1.06E+01	7.38E-01	9.81E-01	5.07E+00	
	364.48	81.20	7.38E-01		-2.06E-01	3.49E-01	
	636.97	7.26	1.16E+01		4.05E+00	5.48E+00	
TE-132	722.89	1.80	4.70E+01		-2.37E+00	2.20E+01	
	49.72	13.10	2.75E+02	3.07E+01	-5.81E+02	1.33E+02	
	228.16	88.00	3.07E+01		9.42E+00	1.48E+01	
BA-133	81.00	33.00	1.72E-01	9.39E-02	-1.26E+00	8.37E-02	

Analysis Report for 1510086-13
CP0404S05-06

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
BA-133	302.84	17.80	3.08E-01	9.39E-02	1.11E-01	1.47E-01
	356.01	60.00	9.39E-02		-7.09E-01	4.48E-02
I-133	529.87	86.30	9.91E+08	9.91E+08	-7.11E+08	4.67E+08
XE-133	81.00	38.00	7.09E+00	7.09E+00	-5.19E+01	3.46E+00
CS-134	563.23	8.38	6.98E-01	7.34E-02	-2.78E-01	3.27E-01
	569.32	15.43	4.41E-01		1.90E-01	2.09E-01
	604.70	97.60	7.34E-02		-2.73E-02	3.47E-02
	795.84	85.40	9.47E-02		8.90E-02	4.45E-02
	801.93	8.73	7.54E-01		-3.23E-01	3.49E-01
CS-135	268.24	16.00	3.71E-01	3.71E-01	2.97E-01	1.79E-01
@ I-135	1131.51	22.50	1.00E+26	1.00E+26	1.00E+26	1.00E+20
@	1260.41	28.60	1.00E+26		1.00E+26	1.00E+20
@	1678.03	9.54	1.00E+26		1.00E+26	1.00E+20
CS-136	153.22	7.46	3.21E+00	3.00E-01	2.14E+00	1.56E+00
	163.89	4.61	5.04E+00		1.12E+00	2.44E+00
	176.55	13.56	1.73E+00		-2.23E-01	8.40E-01
	273.65	12.66	1.92E+00		-2.31E+00	9.21E-01
	340.57	48.50	7.18E-01		1.44E+00	3.47E-01
	818.50	99.70	3.00E-01		5.37E-02	1.39E-01
	1048.07	79.60	4.61E-01		-5.12E-02	2.14E-01
	1235.34	19.70	2.57E+00		-2.95E-01	1.21E+00
CS-137	661.65	85.12	8.52E-02	8.52E-02	2.00E-02	4.02E-02
LA-138	788.74	34.00	1.92E-01	9.95E-02	-6.05E-02	8.93E-02
	1435.80	66.00	9.95E-02		-7.10E-03	4.41E-02
CE-139	165.85	80.35	7.53E-02	7.53E-02	1.17E-02	3.65E-02
BA-140	162.64	6.70	3.54E+00	1.33E+00	-1.23E+00	1.71E+00
	304.84	4.50	5.13E+00		-1.54E-01	2.44E+00
	423.70	3.20	9.34E+00		1.73E+00	4.45E+00
	437.55	2.00	1.44E+01		2.67E+00	6.86E+00
	537.32	25.00	1.33E+00		8.68E-02	6.30E-01
LA-140	328.77	20.50	1.41E+00	3.20E-01	1.10E+00	6.74E-01
	487.03	45.50	6.46E-01		-1.74E-02	3.06E-01
	815.85	23.50	1.28E+00		-2.71E-01	5.90E-01
	1596.49	95.49	3.20E-01		4.51E-02	1.40E-01
CE-141	145.44	48.40	1.98E-01	1.98E-01	6.77E-02	9.61E-02
CE-143	57.36	11.80	1.40E+06	5.58E+05	-1.17E+05	6.80E+05
	293.26	42.00	5.58E+05		1.74E+06	2.72E+05
	664.55	5.20	3.53E+06		1.14E+06	1.67E+06
CE-144	133.54	10.80	5.05E-01	5.05E-01	-1.65E-02	2.45E-01
PM-144	476.78	42.00	1.51E-01	6.92E-02	-3.12E-02	7.13E-02
	618.01	98.60	7.18E-02		1.57E-03	3.38E-02
	696.49	99.49	6.92E-02		-2.90E-02	3.24E-02
PM-145	36.85	21.70	5.82E-01	3.13E-01	-2.66E-01	2.82E-01
	37.36	39.70	3.13E-01		4.44E-02	1.52E-01
	42.30	15.10	6.14E-01		-7.60E-01	2.98E-01
	72.40	2.31	3.27E+00		-3.34E+00	1.60E+00
PM-146	453.90	39.94	1.62E-01	1.62E-01	6.75E-02	7.74E-02
	735.90	14.01	4.90E-01		-8.40E-03	2.29E-01
	747.13	13.10	5.23E-01		-1.51E-01	2.45E-01
ND-147	91.11	28.90	1.48E+00	1.48E+00	-3.20E+00	7.27E-01
	531.02	13.10	2.91E+00		-6.01E-01	1.37E+00
PM-149	285.90	3.10	1.58E+04	1.58E+04	-2.95E+03	7.55E+03
EU-152	121.78	20.50	2.31E-01	2.31E-01	7.88E-02	1.12E-01

Analysis Report for 1510086-13
CP0404S05-06

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
EU-152	244.69	5.40	1.04E+00	2.31E-01	-8.98E-01	5.02E-01
	344.27	19.13	2.56E-01		-1.61E-02	1.22E-01
	778.89	9.20	7.66E-01		-4.48E-02	3.58E-01
	964.01	10.40	9.38E-01		-8.06E-01	4.43E-01
	1085.78	7.22	1.17E+00		7.07E-01	5.45E-01
	1112.02	9.60	8.39E-01		2.17E-01	3.88E-01
	1407.95	14.94	5.54E-01		2.35E-01	2.53E-01
GD-153	97.43	31.30	1.69E-01	1.69E-01	8.65E-02	8.20E-02
	103.18	22.20	2.36E-01		1.94E-01	1.15E-01
EU-154	123.07	40.50	1.17E-01	1.17E-01	-3.12E-02	5.66E-02
	723.30	19.70	3.47E-01		-1.75E-02	1.62E-01
	873.19	11.50	6.00E-01		1.15E-01	2.78E-01
	996.32	10.30	6.77E-01		-1.85E-01	3.11E-01
	1004.76	17.90	4.35E-01		1.28E-02	2.02E-01
EU-155	1274.45	35.50	2.31E-01	2.17E-01	-1.31E-01	1.06E-01
	86.50	30.90	2.17E-01		-2.78E-02	1.06E-01
	105.30	20.70	2.31E-01		5.95E-02	1.12E-01
EU-156	811.77	10.40	2.24E+00	2.24E+00	-3.03E-01	1.03E+00
	1153.47	7.20	4.51E+00		-7.65E-01	2.09E+00
	1230.71	8.90	3.57E+00		3.27E-01	1.64E+00
HO-166M	184.41	72.60	9.40E-02	9.40E-02	1.71E-01	4.59E-02
	280.45	29.60	1.68E-01		1.54E-02	8.03E-02
	410.94	11.10	5.77E-01		3.30E-02	2.76E-01
	711.69	54.10	1.35E-01		6.37E-02	6.37E-02
TM-171	66.72	0.14	4.81E+01	4.81E+01	1.66E+00	2.35E+01
HF-172	81.75	4.52	1.31E+00	4.30E-01	-1.95E+00	6.41E-01
	125.81	11.30	4.30E-01		3.05E-02	2.09E-01
LU-172	181.53	20.60	4.99E+00	2.49E+00	-2.45E-01	2.41E+00
	810.06	16.63	8.80E+00		1.79E+00	4.10E+00
	912.12	15.25	1.91E+01		4.59E+01	9.19E+00
	1093.66	62.50	2.49E+00		3.86E-01	1.15E+00
LU-173	100.72	5.24	9.51E-01	2.86E-01	-3.34E-02	4.62E-01
	272.11	21.20	2.86E-01		1.41E-01	1.38E-01
HF-175	343.40	84.00	7.75E-02	7.75E-02	-3.47E-02	3.68E-02
LU-176	88.34	13.30	5.04E-01	4.89E-02	7.64E-01	2.47E-01
	201.83	86.00	6.21E-02		-1.04E-02	3.00E-02
	306.78	94.00	4.89E-02		-1.34E-02	2.32E-02
TA-182	67.75	41.20	1.85E-01	1.85E-01	2.82E-02	9.06E-02
	1121.30	34.90	4.51E-01		6.35E-01	2.15E-01
	1189.05	16.23	7.12E-01		3.67E-01	3.32E-01
	1221.41	26.98	3.96E-01		1.29E-01	1.83E-01
	1231.02	11.44	8.72E-01		7.98E-02	4.01E-01
IR-192	308.46	29.68	2.09E-01	1.69E-01	-3.40E-02	9.94E-02
	468.07	48.10	1.69E-01		-2.32E-01	8.01E-02
HG-203	279.19	77.30	1.06E-01	1.06E-01	1.81E-02	5.08E-02
BI-207	569.67	97.72	6.73E-02	6.73E-02	9.08E-03	3.18E-02
	1063.62	74.90	1.01E-01		-2.98E-02	4.64E-02
+ TL-208	583.14	* 30.22	3.69E-01	9.40E-02	1.37E+00	1.78E-01
	860.37	* 4.48	1.94E+00		2.10E+00	9.16E-01
	2614.66	* 35.85	9.40E-02		1.09E+00	3.33E-02
BI-210M	262.00	45.00	1.10E-01	1.10E-01	-2.11E-02	5.27E-02
	300.00	23.00	2.62E-01		-6.75E-01	1.26E-01
PB-210	46.50	4.25	2.05E+00	2.05E+00	1.46E+00	1.00E+00

Analysis Report for 1510086-13
CP0404S05-06

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
PB-211	404.84	2.90	1.84E+00	1.84E+00	2.33E-01	8.74E-01
	831.96	2.90	2.31E+00		4.72E-01	1.07E+00
+ BI-212	727.17 *	11.80	7.93E-01	7.93E-01	7.57E-01	3.78E-01
	1620.62	2.75	2.75E+00		1.28E+00	1.23E+00
+ PB-212	238.63 *	44.60	2.44E-01	2.44E-01	1.41E+00	1.20E-01
	300.09 *	3.41	3.24E+00		2.46E+00	1.58E+00
+ BI-214	609.31 *	46.30	2.16E-01	2.16E-01	1.42E+00	1.04E-01
	1120.29 *	15.10	1.09E+00		1.29E+00	5.23E-01
	1764.49 *	15.80	3.26E-01		1.58E+00	1.36E-01
	2204.22 *	4.98	1.43E+00		2.17E+00	6.22E-01
+ PB-214	295.21 *	19.19	5.63E-01	2.25E-01	1.84E+00	2.76E-01
	351.92 *	37.19	2.25E-01		1.56E+00	1.09E-01
RN-219	401.80	6.50	8.18E-01	8.18E-01	-2.81E-01	3.88E-01
RA-223	323.87	3.88	1.33E+00	1.33E+00	4.76E-01	6.36E-01
+ RA-224	240.98 *	3.95	2.74E+00	2.74E+00	4.14E+00	1.35E+00
RA-225	40.00	31.00	1.34E+00	1.34E+00	-1.46E-01	6.50E-01
+ RA-226	186.21 *	3.28	2.87E+00	2.87E+00	4.47E+00	1.41E+00
TH-227	50.10	8.40	8.39E-01	5.60E-01	-1.77E+00	4.08E-01
	236.00	11.50	5.60E-01		-4.57E+00	2.72E-01
	256.20	6.30	8.24E-01		6.57E-02	3.96E-01
+ AC-228	338.32 *	11.40	7.53E-01	3.38E-01	1.65E+00	3.66E-01
	911.07 *	27.70	3.38E-01		1.28E+00	1.59E-01
	969.11 *	16.60	8.93E-01		1.12E+00	4.30E-01
TH-230	48.44	16.90	4.83E-01	4.83E-01	3.74E-01	2.36E-01
	62.85	4.60	1.64E+00		2.72E+00	8.04E-01
	67.67	0.37	1.73E+01		2.64E+00	8.46E+00
PA-231	283.67	1.60	3.13E+00	2.37E+00	-5.58E-01	1.50E+00
	302.67	2.30	2.37E+00		8.52E-01	1.13E+00
TH-231	25.64	14.70	3.94E+00	9.73E-01	1.64E+00	1.91E+00
	84.21	6.40	9.73E-01		-1.50E+00	4.76E-01
PA-233	311.98	38.60	2.74E-01	2.74E-01	3.97E-02	1.31E-01
PA-234	131.20	20.40	2.58E-01	2.58E-01	4.71E-02	1.26E-01
	733.99	8.80	7.45E-01		-3.33E-01	3.48E-01
	946.00	12.00	5.77E-01		1.34E-01	2.66E-01
PA-234M	1001.03	0.92	8.17E+00	8.17E+00	1.31E+00	3.78E+00
+ TH-234	63.29 *	3.80	2.66E+00	2.66E+00	2.08E+00	1.31E+00
U-235	143.76	10.50	4.92E-01	4.92E-01	-1.65E-01	2.39E-01
	163.35	4.70	1.06E+00		2.35E-01	5.12E-01
	205.31	4.70	1.12E+00		4.59E-01	5.40E-01
NP-237	86.50	12.60	5.25E-01	5.25E-01	-6.75E-02	2.57E-01
NP-239	106.10	22.70	1.15E+03	1.15E+03	2.95E+02	5.57E+02
	228.18	10.70	2.75E+03		8.43E+02	1.33E+03
	277.60	14.10	2.12E+03		1.34E+03	1.02E+03
AM-241	59.54	35.90	1.83E-01	1.83E-01	-1.05E-02	8.93E-02
+ AM-243	74.67 *	66.00	1.68E-01	1.68E-01	1.42E-01	8.29E-02
+ CM-243	209.75 *	3.29	2.09E+00	4.78E-01	2.08E+00	1.02E+00
	228.14	10.60	5.07E-01		1.55E-01	2.44E-01
	277.60 *	14.00	4.78E-01		2.32E-01	2.31E-01

Analysis Report for 1510086-13
CP0404S05-06

-
- + = Nuclide identified during the nuclide identification
 - * = Energy line found in the spectrum
 - > = MDA value not calculated
 - @ = Half-life too short to be able to perform the decay correction
-

No Action Level results available for reporting purposes.

DATA REVIEW COMMENTS REPORT

<i>Creation Date</i>	<i>Comment</i>	<i>User</i>
----------------------	----------------	-------------

No Data Review Comments Entered.

 ***** S P E C T R A L D A T A R E P O R T *****

Sample Title: CP0404S05-06

Elapsed Live time: 3600
 Elapsed Real Time: 3601

Channel	1	9	17	25	33	41	49	57	65	73	81	89	97	105	113	121	129	137	145	153	161	169	177	185	193	201	209	217	225	233	241	249	257	265	273	281	289	297	305	313	321	329	337	345	353	361																																																																																																																																																																																																																																																																																																																																																												
1:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																																																																																																																																																																																																																																																																																																																																																									
9:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																																																																																																																																																																																																																																																																																																																																																								
17:	0	0	58	76	63	77	75	80	88	63	61	71	59	59	46	93	33:	65	65	75	62	67	65	71	91	41:	76	72	84	65	79	103	162	80	49:	72	96	94	74	99	88	92	111	57:	88	99	99	107	115	140	164	259	65:	144	129	135	139	123	127	118	110	73:	163	170	418	340	429	497	130	132	81:	111	110	102	160	178	113	177	242	89:	123	177	139	139	297	230	109	100	97:	65	96	75	107	81	87	78	80	105:	87	99	62	84	77	91	77	71	113:	78	88	77	83	78	77	56	83	121:	79	75	77	66	78	78	69	81	129:	97	119	77	97	77	83	81	76	137:	83	69	76	83	93	78	74	88	145:	88	75	83	59	71	67	64	70	153:	62	85	82	74	61	71	49	71	161:	54	50	68	75	67	67	67	81	169:	69	59	67	77	62	74	61	59	177:	55	71	63	57	59	59	58	59	185:	77	202	153	80	64	70	54	58	193:	66	54	63	62	45	70	64	66	201:	50	66	54	61	61	57	46	56	209:	84	93	48	64	57	38	51	58	217:	46	49	50	49	53	60	53	48	225:	52	69	47	54	40	46	44	45	233:	40	45	48	58	53	154	600	230	241:	92	175	101	37	52	31	34	36	249:	36	37	31	36	42	34	41	53	257:	42	35	42	39	35	30	37	39	265:	35	42	32	41	55	62	64	45	273:	32	37	32	42	39	56	30	35	281:	30	30	40	31	33	31	39	35	289:	37	37	47	32	47	35	171	271	297:	42	37	34	55	67	31	33	24	305:	24	24	27	29	19	26	28	25	313:	35	29	27	31	42	26	27	19	321:	20	25	31	35	32	23	36	53	329:	42	25	32	28	26	34	31	17	337:	27	77	152	55	27	31	25	17	345:	19	26	31	27	15	34	73	346	353:	255	44	30	25	23	28	23	25	361:	28	24	23	21	21	26	14	17

369: 28 27 16 16 18 21 16 19

Sample Title: CP0404S05-06

Channel	14	29	27	16	16	19	20	19
377:	14	29	27	16	16	19	20	19
385:	18	26	24	27	21	27	25	25
393:	13	18	18	19	21	22	20	18
401:	27	30	23	14	28	30	17	19
409:	13	42	25	18	24	19	22	21
417:	17	17	18	24	23	21	19	23
425:	16	18	19	19	14	16	12	18
433:	18	18	16	19	13	9	21	23
441:	22	16	13	20	19	17	21	19
449:	13	19	21	21	26	26	15	14
457:	15	12	21	15	18	16	41	39
465:	12	16	16	21	20	16	20	20
473:	15	11	12	17	17	15	17	21
481:	23	11	12	14	11	10	16	20
489:	20	17	19	18	12	20	10	7
497:	14	14	20	15	15	15	15	12
505:	13	15	11	17	19	34	82	60
513:	31	16	12	14	13	19	9	13
521:	11	10	17	16	18	14	13	13
529:	14	6	14	14	16	17	21	11
537:	20	20	14	14	19	11	22	9
545:	12	13	20	14	15	10	16	17
553:	12	12	11	12	11	13	12	10
561:	10	6	17	11	8	14	10	18
569:	12	12	17	20	12	15	16	18
577:	11	10	16	16	13	26	128	144
585:	39	19	7	14	23	13	9	12
593:	15	9	11	17	5	11	11	17
601:	16	8	9	10	17	12	18	30
609:	124	286	66	20	17	5	17	12
617:	8	12	14	17	12	11	18	12
625:	12	15	7	15	7	15	12	11
633:	9	7	12	16	10	16	16	13
641:	4	18	10	13	7	10	6	12
649:	15	10	12	6	11	8	18	14
657:	8	13	9	14	21	17	12	12
665:	12	16	11	16	8	6	10	11
673:	19	5	14	7	13	8	8	9
681:	11	7	10	15	8	5	11	10
689:	16	5	9	13	9	12	9	5
697:	9	11	17	8	13	15	11	12
705:	11	8	13	10	13	11	12	18
713:	12	13	9	10	6	7	11	10
721:	17	8	7	13	11	7	24	41
729:	16	9	12	10	9	5	9	12
737:	9	10	17	7	12	14	19	13
745:	12	8	13	7	6	10	10	7
753:	8	9	9	10	8	7	10	8
761:	10	10	9	13	8	13	17	18
769:	35	15	12	13	17	12	7	10
777:	8	9	10	11	8	13	8	7
785:	13	16	15	5	5	3	5	9
793:	10	10	25	26	6	4	4	6

801: 5 8 13 10 8 16 14 17

Sample Title: CP0404S05-06

Channel	1	2	3	4	5	6	7	8
809:	7	11	7	5	5	6	7	9
817:	8	5	8	9	10	3	8	5
825:	6	8	8	8	6	8	9	11
833:	4	7	11	15	17	7	10	14
841:	6	9	9	5	4	6	7	5
849:	7	7	8	7	10	7	8	3
857:	7	8	6	11	25	17	10	5
865:	8	7	4	5	9	7	10	9
873:	8	5	8	7	8	5	2	8
881:	12	5	2	7	5	7	10	5
889:	11	10	7	6	4	8	6	12
897:	7	11	7	5	6	6	6	7
905:	13	7	7	9	12	14	69	99
913:	23	7	6	6	9	12	6	6
921:	4	5	4	5	8	7	8	8
929:	6	7	8	1	5	12	18	13
937:	4	12	12	8	7	9	7	4
945:	5	8	7	9	8	6	6	7
953:	8	5	6	11	11	5	11	8
961:	7	5	7	13	27	19	18	19
969:	45	39	11	4	7	8	11	8
977:	9	4	2	7	5	10	9	7
985:	5	5	6	6	11	5	9	5
993:	8	7	4	6	6	11	2	4
1001:	12	16	6	1	7	7	10	8
1009:	6	9	4	5	9	6	7	13
1017:	10	8	10	3	5	6	4	2
1025:	6	1	6	7	11	5	7	3
1033:	3	7	5	4	3	6	6	8
1041:	4	8	11	9	5	10	9	3
1049:	5	8	13	7	6	3	4	9
1057:	6	0	6	8	11	5	3	7
1065:	10	3	8	8	10	10	9	6
1073:	8	8	7	9	8	6	6	9
1081:	5	5	3	9	9	9	12	12
1089:	4	3	7	10	7	4	8	3
1097:	6	7	7	10	4	8	6	8
1105:	6	6	4	10	9	5	11	5
1113:	7	7	6	4	7	5	11	34
1121:	47	21	13	11	15	7	7	7
1129:	7	5	7	6	3	9	19	9
1137:	12	4	4	5	6	7	7	5
1145:	5	8	7	6	7	6	2	6
1153:	6	11	13	10	12	10	10	5
1161:	4	7	7	7	9	8	8	5
1169:	6	6	5	2	5	8	5	12
1177:	12	10	7	1	6	9	11	9
1185:	7	10	4	13	11	15	7	7
1193:	5	6	9	5	4	7	9	4
1201:	7	10	10	8	11	6	6	9
1209:	9	7	10	4	6	4	6	4
1217:	7	5	7	4	12	5	7	14
1225:	6	7	8	9	9	6	5	6

1233: 6 5 12 10 11 30 30 13

Sample Title: CP0404S05-06

Channel	7	8	11	8	5	5	11	5
1241:	7	8	11	8	5	5	11	5
1249:	8	5	6	9	5	4	6	1
1257:	5	2	5	9	6	2	5	1
1265:	7	4	6	4	6	6	7	3
1273:	5	8	5	7	6	8	13	7
1281:	8	4	3	4	4	3	2	9
1289:	6	4	6	7	8	4	6	5
1297:	10	8	4	3	1	5	8	1
1305:	7	8	1	1	3	2	7	6
1313:	2	3	4	4	4	5	2	3
1321:	1	4	5	1	5	4	3	3
1329:	6	1	1	8	3	5	1	2
1337:	2	4	2	4	2	3	7	5
1345:	5	7	3	4	1	2	2	3
1353:	2	3	5	1	4	6	4	6
1361:	3	4	2	4	4	1	1	4
1369:	3	5	3	2	2	4	4	4
1377:	2	14	12	5	5	2	3	1
1385:	4	4	7	5	3	0	3	1
1393:	2	4	2	4	5	1	5	6
1401:	5	11	4	1	2	1	6	13
1409:	6	5	3	4	4	1	1	3
1417:	2	4	3	3	2	4	1	3
1425:	4	5	2	3	2	2	6	4
1433:	0	4	7	4	2	1	3	3
1441:	1	3	3	2	3	1	3	1
1449:	6	3	6	3	2	2	2	1
1457:	2	2	19	99	261	219	58	11
1465:	2	1	4	2	1	0	3	3
1473:	4	3	0	1	1	0	1	5
1481:	1	3	3	4	2	2	2	3
1489:	2	3	2	2	4	2	4	5
1497:	3	3	2	1	2	4	4	3
1505:	3	0	5	2	7	8	4	2
1513:	2	2	2	1	1	4	4	2
1521:	2	2	1	2	2	2	3	1
1529:	1	2	4	2	1	3	1	4
1537:	6	2	2	4	0	2	4	0
1545:	1	0	2	3	1	3	2	2
1553:	2	2	2	0	2	1	0	0
1561:	1	2	3	6	2	0	3	2
1569:	0	0	4	5	3	2	0	3
1577:	1	1	1	0	1	1	3	2
1585:	1	4	3	8	7	6	3	5
1593:	5	2	3	1	4	1	0	1
1601:	1	0	1	1	1	4	4	0
1609:	3	0	0	1	1	0	5	1
1617:	3	3	1	2	7	4	4	1
1625:	0	2	2	1	1	2	6	4
1633:	2	1	3	1	0	3	2	2
1641:	0	1	1	0	4	3	0	2
1649:	1	2	2	0	1	0	1	1
1657:	2	2	0	3	1	2	2	2

1665: 2 1 1 3 2 0 2 0

Sample Title: CP0404S05-06

Channel	1	2	3	4	5	6	7	8
1673:	0	2	1	0	0	2	3	0
1681:	0	0	2	1	3	2	1	1
1689:	1	1	1	0	3	3	2	2
1697:	1	1	0	0	2	2	0	0
1705:	1	1	3	0	1	0	3	1
1713:	1	1	1	0	1	1	0	3
1721:	2	0	0	1	1	0	0	1
1729:	6	9	8	1	1	2	0	0
1737:	1	1	1	0	0	1	0	1
1745:	3	1	0	2	1	0	1	1
1753:	1	1	0	1	0	1	1	1
1761:	0	1	6	16	32	21	5	3
1769:	0	0	0	1	0	1	1	0
1777:	1	1	1	3	2	0	1	1
1785:	2	0	3	3	2	1	2	1
1793:	0	0	2	3	1	2	2	1
1801:	1	0	0	1	2	2	0	2
1809:	1	2	0	2	0	1	1	0
1817:	1	1	1	0	1	1	1	3
1825:	3	0	4	1	2	2	1	0
1833:	1	0	2	0	1	2	2	0
1841:	1	1	0	2	1	1	1	11
1849:	4	2	0	2	0	1	1	0
1857:	1	0	2	2	0	0	0	2
1865:	0	2	0	0	1	3	2	1
1873:	2	1	1	3	1	0	2	2
1881:	0	0	2	1	0	6	1	1
1889:	0	4	1	0	2	1	1	1
1897:	4	2	0	0	0	2	1	1
1905:	0	2	2	1	0	2	0	2
1913:	2	1	0	2	0	3	1	2
1921:	2	1	1	0	0	0	4	1
1929:	3	1	3	1	0	1	0	1
1937:	0	0	2	0	0	1	0	0
1945:	1	0	0	1	0	1	1	1
1953:	1	0	0	1	0	1	0	0
1961:	2	2	1	0	0	1	0	0
1969:	2	3	2	1	1	0	3	1
1977:	1	1	1	0	1	0	1	2
1985:	1	0	1	0	0	0	0	1
1993:	1	0	1	2	2	2	0	1
2001:	0	0	1	1	3	0	0	0
2009:	2	1	0	4	1	0	0	3
2017:	0	0	0	1	1	0	1	1
2025:	1	0	1	1	3	1	0	0
2033:	0	3	0	1	1	0	2	0
2041:	1	1	0	0	1	2	0	0
2049:	0	1	0	0	2	3	1	1
2057:	2	2	0	1	1	1	1	0
2065:	1	0	1	1	3	1	1	1
2073:	1	1	1	1	0	0	1	4
2081:	0	0	0	1	0	2	0	1
2089:	0	0	1	0	0	5	1	2

2097: 0 0 0 0 2 2 5 6

Sample Title: CP0404S05-06

Channel	1	2	3	4	5	6	7	8
2105:	3	5	1	3	1	1	2	1
2113:	2	0	1	1	0	2	3	2
2121:	1	0	1	2	1	0	0	3
2129:	3	1	0	2	1	1	1	0
2137:	4	0	3	2	0	1	1	1
2145:	1	1	0	3	0	3	1	0
2153:	0	2	0	0	0	2	1	0
2161:	0	3	0	0	0	2	1	1
2169:	1	0	1	1	2	2	0	1
2177:	1	0	1	1	0	0	2	0
2185:	1	0	0	1	1	0	2	2
2193:	0	1	0	2	0	1	1	3
2201:	0	3	6	11	7	9	0	2
2209:	0	0	1	1	2	1	2	1
2217:	3	1	2	1	1	4	1	1
2225:	2	1	0	0	0	1	1	1
2233:	2	0	0	1	1	2	0	0
2241:	1	1	1	0	0	2	0	0
2249:	3	0	0	0	1	1	2	2
2257:	2	0	0	1	0	1	2	1
2265:	2	1	0	1	0	1	1	3
2273:	1	0	0	0	1	2	1	0
2281:	1	1	0	0	1	2	0	3
2289:	3	0	0	0	1	0	1	0
2297:	0	0	1	0	1	1	1	0
2305:	1	0	1	0	1	1	3	2
2313:	1	0	0	1	1	3	1	1
2321:	1	1	0	1	2	2	0	0
2329:	2	1	1	1	1	2	0	1
2337:	0	3	0	4	1	2	2	2
2345:	3	0	1	4	2	2	0	0
2353:	0	1	1	0	2	1	0	0
2361:	2	1	2	0	2	2	0	0
2369:	1	0	2	1	2	0	0	0
2377:	2	0	1	2	4	0	1	2
2385:	3	1	3	1	0	1	1	1
2393:	1	0	0	0	0	2	3	1
2401:	1	0	1	3	0	1	0	0
2409:	2	0	2	1	1	1	0	0
2417:	1	2	1	4	0	0	2	1
2425:	0	1	1	1	4	0	0	0
2433:	0	1	1	0	2	1	3	2
2441:	2	0	1	1	0	1	2	5
2449:	2	2	1	1	0	0	1	1
2457:	0	0	0	2	1	1	1	1
2465:	1	1	1	1	1	0	0	0
2473:	1	0	0	0	0	0	0	0
2481:	0	1	1	0	0	0	0	0
2489:	0	2	0	2	1	2	1	0
2497:	1	0	0	0	0	0	0	0
2505:	0	1	0	0	0	1	0	1
2513:	0	0	0	0	0	0	0	1
2521:	0	1	0	0	0	2	1	0

2529: 0 0 0 2 2 0 0 0

Sample Title: CP0404S05-06

Channel	-----	-----	-----	-----	-----	-----	-----	-----
2537:	0	1	0	0	0	2	0	2
2545:	0	1	0	0	0	0	0	0
2553:	1	1	1	0	0	2	1	0
2561:	2	1	0	1	1	0	0	1
2569:	0	2	0	1	0	0	0	1
2577:	0	2	0	0	0	0	0	1
2585:	1	1	0	0	1	0	1	2
2593:	0	0	0	3	1	1	1	0
2601:	1	0	0	0	0	0	1	0
2609:	0	1	1	2	8	29	28	30
2617:	11	1	0	0	1	0	0	0
2625:	2	0	0	0	1	1	1	0
2633:	1	1	0	0	0	0	0	0
2641:	1	0	0	0	0	0	0	0
2649:	0	1	0	0	0	0	1	1
2657:	1	1	1	1	0	1	0	1
2665:	0	0	1	1	0	0	0	0
2673:	0	1	0	0	1	1	0	1
2681:	0	1	0	0	1	0	0	1
2689:	1	0	0	1	0	0	1	1
2697:	0	1	0	0	0	0	2	0
2705:	1	1	0	1	2	0	0	0
2713:	1	0	0	0	1	0	0	0
2721:	0	1	0	0	1	0	1	2
2729:	0	1	0	0	3	0	1	1
2737:	0	0	0	0	2	0	0	0
2745:	0	0	0	0	0	1	0	0
2753:	0	0	0	0	0	1	1	0
2761:	0	0	0	1	0	0	0	0
2769:	0	0	0	0	0	1	1	1
2777:	0	1	0	0	0	0	1	0
2785:	1	0	0	0	2	1	0	0
2793:	0	0	1	0	0	0	0	0
2801:	0	0	0	0	0	0	0	1
2809:	0	0	1	0	0	1	0	0
2817:	0	0	0	0	0	1	0	0
2825:	0	0	0	2	0	0	0	0
2833:	1	0	1	0	1	1	0	0
2841:	0	0	0	0	0	1	0	2
2849:	0	1	0	1	0	1	0	0
2857:	0	0	0	0	0	1	0	1
2865:	0	1	0	0	0	0	0	1
2873:	0	0	0	0	0	1	1	1
2881:	1	0	0	0	1	0	0	2
2889:	1	0	0	0	0	0	0	0
2897:	0	0	0	0	0	1	0	0
2905:	0	0	0	0	1	0	0	0
2913:	0	0	0	0	0	1	0	0
2921:	0	1	0	1	1	1	1	0
2929:	0	0	2	1	0	0	0	0
2937:	1	0	1	0	0	0	0	0
2945:	0	0	0	1	0	0	0	0
2953:	0	0	0	0	0	0	0	1

2961: 0 0 0 0 0 0 0 0 0

Sample Title: CP0404S05-06

Channel	1	2	3	4	5	6	7	8	9
2969:	0	0	0	2	0	0	0	0	0
2977:	1	0	0	0	0	0	0	1	0
2985:	0	0	1	0	0	0	1	0	0
2993:	0	0	0	1	0	0	2	0	0
3001:	1	1	1	1	0	0	1	0	0
3009:	0	0	0	0	0	0	0	1	1
3017:	0	0	1	0	0	0	0	0	1
3025:	0	0	0	0	0	0	0	1	1
3033:	0	0	0	1	0	0	1	0	0
3041:	0	0	0	0	0	1	1	1	1
3049:	0	0	0	0	0	0	0	0	1
3057:	0	0	0	0	0	0	0	0	0
3065:	0	0	0	0	0	0	0	1	0
3073:	1	0	0	0	0	0	0	1	0
3081:	0	0	0	0	0	0	0	1	0
3089:	0	0	1	0	0	0	0	0	0
3097:	0	0	0	0	0	1	0	0	0
3105:	1	0	0	0	0	0	0	0	1
3113:	1	0	0	0	0	0	0	0	0
3121:	0	0	0	1	0	0	1	0	0
3129:	0	0	0	0	0	0	1	0	0
3137:	0	0	0	0	0	0	0	0	1
3145:	0	0	0	0	0	0	0	0	0
3153:	0	0	0	0	0	0	0	0	1
3161:	0	0	0	0	0	0	2	0	1
3169:	0	0	1	0	0	0	0	0	0
3177:	0	0	0	0	0	0	1	0	0
3185:	1	0	0	0	0	0	0	1	0
3193:	0	0	0	0	0	0	1	1	0
3201:	0	0	0	0	0	0	0	0	0
3209:	0	1	0	0	0	0	0	1	0
3217:	0	1	0	0	0	0	0	0	1
3225:	0	0	0	0	0	0	0	0	0
3233:	0	0	1	0	0	1	0	1	0
3241:	1	0	0	0	0	0	2	0	0
3249:	0	0	0	0	0	0	0	0	0
3257:	0	0	0	0	0	0	0	0	0
3265:	0	0	0	0	0	0	1	0	0
3273:	0	0	0	0	0	0	0	0	0
3281:	0	0	1	0	0	1	0	0	0
3289:	0	0	0	0	0	1	0	1	0
3297:	0	0	0	0	0	0	0	0	0
3305:	0	0	0	0	0	0	0	0	0
3313:	0	0	0	0	0	2	0	0	1
3321:	0	0	0	0	0	0	0	1	0
3329:	1	0	0	0	0	0	0	0	0
3337:	0	0	0	0	0	0	0	1	0
3345:	1	0	0	0	0	0	0	0	0
3353:	0	0	0	0	0	1	0	0	0
3361:	0	0	0	0	0	0	0	0	0
3369:	0	1	0	1	0	0	0	0	0
3377:	0	0	0	0	0	1	0	0	0
3385:	0	0	0	0	0	0	1	0	0

3393: 0 1 1 0 0 2 0 0

Sample Title: CP0404S05-06

Channel	1	2	3	4	5	6	7	8	9
3401:	0	1	0	0	0	1	0	1	
3409:	0	0	0	0	0	0	0	0	0
3417:	0	0	0	0	0	0	1	0	0
3425:	0	0	0	0	0	0	0	0	0
3433:	0	0	0	1	0	1	0	0	0
3441:	0	0	0	0	0	0	0	0	0
3449:	0	0	0	0	0	0	0	0	0
3457:	1	0	0	0	0	0	0	0	0
3465:	0	0	0	0	1	0	0	0	0
3473:	0	0	0	0	0	0	0	0	1
3481:	0	0	0	0	0	0	0	0	1
3489:	0	1	0	0	1	0	0	0	0
3497:	0	0	0	0	0	1	0	0	1
3505:	0	0	0	0	0	0	0	0	0
3513:	0	0	0	0	0	0	0	0	1
3521:	0	3	0	0	0	1	0	0	0
3529:	0	0	0	0	0	0	1	0	0
3537:	1	0	1	0	0	0	0	0	0
3545:	0	0	0	0	1	0	0	0	0
3553:	0	0	1	0	0	0	1	0	0
3561:	0	0	0	0	0	0	0	0	1
3569:	0	0	0	0	0	0	0	0	0
3577:	0	0	0	0	0	0	0	0	0
3585:	1	0	0	0	0	0	0	0	0
3593:	0	0	0	0	0	0	0	0	0
3601:	0	0	0	0	0	0	0	0	1
3609:	0	0	0	1	1	0	0	0	0
3617:	0	0	0	1	0	0	0	0	0
3625:	0	0	0	1	0	0	0	0	0
3633:	0	0	0	0	0	2	0	0	0
3641:	0	1	0	0	1	0	0	0	0
3649:	0	0	0	0	1	0	0	0	0
3657:	0	0	0	0	0	1	0	0	0
3665:	0	0	0	0	0	0	0	0	0
3673:	0	0	1	1	0	0	0	0	0
3681:	0	1	0	0	1	0	0	0	0
3689:	0	0	0	0	0	0	0	0	0
3697:	0	0	0	1	0	0	0	0	0
3705:	0	0	1	0	0	0	0	0	0
3713:	0	0	0	0	0	0	0	0	0
3721:	0	0	0	0	0	0	0	0	1
3729:	0	0	1	0	0	1	1	1	1
3737:	0	0	0	1	0	0	0	0	1
3745:	0	0	0	0	0	0	0	0	0
3753:	0	0	0	0	0	0	0	0	0
3761:	0	0	0	0	0	0	1	0	0
3769:	1	0	0	0	0	0	0	0	0
3777:	0	0	0	0	0	1	0	0	0
3785:	0	0	1	0	0	1	0	0	0
3793:	0	0	0	0	0	1	0	0	0
3801:	1	0	0	0	0	0	0	0	0
3809:	0	0	0	0	0	0	0	0	0
3817:	0	0	0	0	0	0	0	0	0

3825: 0 0 1 0 0 0 0 0

Sample Title: CP0404S05-06

Channel	-----	-----	-----	-----	-----	-----	-----	-----
3833:	0	0	0	0	0	0	0	0
3841:	0	0	0	1	0	0	0	0
3849:	0	0	0	0	0	0	0	0
3857:	0	0	0	0	0	1	0	0
3865:	0	0	0	0	0	0	0	0
3873:	0	0	0	1	0	0	0	0
3881:	1	0	0	1	0	0	0	0
3889:	0	0	0	0	0	0	0	0
3897:	0	1	0	0	0	0	0	0
3905:	0	1	1	0	1	0	0	0
3913:	0	0	0	0	0	0	0	0
3921:	0	0	0	0	0	0	0	0
3929:	0	0	1	0	0	0	0	1
3937:	0	0	0	0	0	0	0	1
3945:	0	0	1	0	0	0	0	1
3953:	1	2	0	0	0	0	0	0
3961:	0	0	0	0	0	0	0	0
3969:	2	0	0	0	0	0	0	0
3977:	0	0	0	1	0	1	0	0
3985:	0	0	0	1	0	0	0	0
3993:	0	0	0	0	0	0	0	0
4001:	0	0	0	0	0	0	0	0
4009:	2	0	0	0	0	0	0	0
4017:	0	0	0	0	0	0	0	0
4025:	0	0	0	0	0	0	0	0
4033:	0	1	0	0	0	0	0	1
4041:	0	0	0	0	1	0	2	0
4049:	0	0	0	0	0	0	0	0
4057:	0	0	0	0	0	0	0	0
4065:	0	0	0	0	0	0	0	0
4073:	0	0	0	0	0	0	0	0
4081:	0	0	0	0	0	0	0	0
4089:	0	0	1	0	0	0	0	0

YLS
11/6/15Analysis Report for 1510086-14
CP0404S07-08

GAMMA SPECTRUM ANALYSIS

Sample Identification : 1510086-14
Sample Description : CP0404S07-08
Sample Type : SOIL

Sample Size : 4.933E+02 grams
Facility : Countroom

Sample Taken On : 10/8/2015 7:58:15AM
Acquisition Started : 11/6/2015 1:37:37PM

Procedure : GAS-1402 pCi
Operator : Administrator
Detector Name : GE2
Geometry : GAS-1402
Live Time : 3600.0 seconds
Real Time : 3601.2 seconds

Dead Time : 0.03 %

Peak Locate Threshold : 2.50
Peak Locate Range (in channels) : 1 - 4096
Peak Area Range (in channels) : 7 - 4096
Identification Energy Tolerance : 1.000 keV

Energy Calibration Used Done On : 11/2/2014
Efficiency Calibration Used Done On : 10/25/2014
Efficiency Calibration Description :

Sample Number : 29266

PEAK-TO-TOTAL CALIBRATION REPORT

Peak-to-Total Efficiency Calibration Equation

AG
11/9/15

: 00796

Analysis Report for 1510086-14
CP0404S07-08

PEAK LOCATE REPORT

Peak Locate Performed on : 11/6/2015 2:37:52PM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096
Peak Search Sensitivity : 2.50

Peak No.	Energy (keV)	Centroid Channel	Centroid Uncertainty	Peak Significance
1	76.46	76.54	0.0000	0.00
2	87.42	87.50	0.0000	0.00
3	99.15	99.22	0.0000	0.00
4	104.84	104.91	0.0000	0.00
5	129.34	129.40	0.0000	0.00
6	162.99	163.03	0.0000	0.00
7	185.73	185.76	0.0000	0.00
8	208.75	208.77	0.0000	0.00
9	238.79	238.78	0.0000	0.00
10	241.85	241.84	0.0000	0.00
11	269.62	269.60	0.0000	0.00
12	278.23	278.20	0.0000	0.00
13	295.22	295.19	0.0000	0.00
14	300.11	300.07	0.0000	0.00
15	338.73	338.67	0.0000	0.00
16	352.04	351.98	0.0000	0.00
17	410.06	409.96	0.0000	0.00
18	463.42	463.30	0.0000	0.00
19	511.14	510.99	0.0000	0.00
20	583.28	583.10	0.0000	0.00
21	609.38	609.19	0.0000	0.00
22	727.31	727.07	0.0000	0.00
23	747.51	747.25	0.0000	0.00
24	777.88	777.61	0.0000	0.00
25	787.27	787.00	0.0000	0.00
26	795.64	795.36	0.0000	0.00
27	860.34	860.03	0.0000	0.00
28	911.37	911.04	0.0000	0.00
29	933.52	933.19	0.0000	0.00
30	964.75	964.40	0.0000	0.00
31	969.22	968.87	0.0000	0.00
32	988.23	987.87	0.0000	0.00
33	1120.79	1120.38	0.0000	0.00
34	1164.87	1164.45	0.0000	0.00
35	1237.76	1237.31	0.0000	0.00
36	1317.66	1317.18	0.0000	0.00
37	1401.73	1401.22	0.0000	0.00
38	1408.84	1408.34	0.0000	0.00
39	1430.59	1430.08	0.0000	0.00
40	1460.96	1460.43	0.0000	0.00
41	1507.41	1506.88	0.0000	0.00
42	1529.31	1528.77	0.0000	0.00

Analysis Report for 1510086-14
CP0404S07-08

<i>Peak No.</i>	<i>Energy (keV)</i>	<i>Centroid Channel</i>	<i>Centroid Uncertainty</i>	<i>Peak Significance</i>
43	1542.55	1542.00	0.0000	0.00
44	1729.06	1728.46	0.0000	0.00
45	1765.25	1764.64	0.0000	0.00
46	1940.54	1939.90	0.0000	0.00
47	1953.98	1953.33	0.0000	0.00
48	1959.65	1959.00	0.0000	0.00
49	2104.86	2104.18	0.0000	0.00
50	2118.57	2117.89	0.0000	0.00
51	2175.82	2175.13	0.0000	0.00
52	2185.80	2185.11	0.0000	0.00
53	2203.96	2203.27	0.0000	0.00
54	2245.24	2244.54	0.0000	0.00
55	2423.32	2422.59	0.0000	0.00
56	2614.14	2613.40	0.0000	0.00

? = Adjacent peak noted
Errors quoted at 2.000sigma

Analysis Report for 1510086-14
CP0404S07-08

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 11/6/2015 2:37:52PM

Peak Analysis From Channel : 1
Peak Analysis To Channel : 4096

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	FWHM (keV)
1	76.46	72 -	82	76.54	1.21E+03	149.25	2.27E+03	3.62
2	87.42	86 -	89	87.50	8.04E+01	66.90	1.05E+03	1.58
3	99.15	97 -	101	99.22	8.94E+01	58.73	6.77E+02	2.71
4	104.84	103 -	107	104.91	5.96E+01	55.20	6.23E+02	2.60
5	129.34	127 -	131	129.40	4.70E+01	56.78	6.74E+02	1.78
6	162.99	161 -	165	163.03	5.34E+01	49.14	4.91E+02	1.43
7	185.73	182 -	190	185.76	2.33E+02	83.88	9.45E+02	1.41
8	208.75	205 -	212	208.77	1.13E+02	70.91	7.59E+02	1.87
M	9	234 -	244	238.78	7.69E+02	71.97	4.11E+02	1.55
m	10	234 -	244	241.84	2.09E+02	52.45	3.22E+02	1.56
	11	265 -	272	269.60	7.22E+01	56.00	4.72E+02	1.48
	12	276 -	281	278.20	3.51E+01	43.28	3.40E+02	2.21
M	13	290 -	303	295.19	2.99E+02	48.54	2.63E+02	1.53
m	14	290 -	303	300.07	4.84E+01	36.50	2.53E+02	1.66
	15	334 -	343	338.67	2.01E+02	65.32	4.95E+02	1.82
	16	348 -	356	351.98	4.85E+02	69.63	4.52E+02	1.42
	17	407 -	412	409.96	3.03E+01	34.22	2.05E+02	1.94
	18	459 -	466	463.30	4.29E+01	43.31	2.84E+02	1.13
	19	505 -	516	510.99	2.29E+02	58.21	3.00E+02	2.07
	20	579 -	587	583.10	2.22E+02	48.38	2.19E+02	1.43
	21	605 -	612	609.19	3.61E+02	49.52	1.68E+02	1.77
	22	724 -	730	727.07	6.70E+01	30.67	1.22E+02	1.35
	23	745 -	751	747.25	2.07E+01	23.88	9.06E+01	1.73
M	24	776 -	799	777.61	1.98E+01	11.95	2.72E+01	2.46
m	25	776 -	799	787.00	2.21E+01	21.33	5.68E+01	1.85
m	26	776 -	799	795.36	4.03E+01	23.85	6.88E+01	2.48
	27	856 -	862	860.03	3.72E+01	24.70	8.35E+01	1.81
	28	906 -	914	911.04	1.80E+02	38.50	1.18E+02	1.51
	29	928 -	938	933.19	4.85E+01	27.78	7.70E+01	2.94
M	30	961 -	975	964.40	4.73E+01	22.98	4.18E+01	2.36
m	31	961 -	975	968.87	1.35E+02	30.53	5.80E+01	2.37
	32	985 -	991	987.87	1.99E+01	20.51	6.01E+01	1.76
	33	1116 -	1124	1120.38	6.07E+01	31.15	1.11E+02	1.55
	34	1162 -	1168	1164.45	2.03E+01	17.05	3.75E+01	3.09
	35	1234 -	1241	1237.31	4.04E+01	26.83	9.51E+01	2.47
	36	1314 -	1320	1317.18	1.45E+01	14.49	2.71E+01	2.76
	37	1399 -	1403	1401.22	1.00E+01	10.27	1.40E+01	2.48
	38	1405 -	1411	1408.34	1.30E+01	13.63	2.39E+01	3.84
	39	1421 -	1439	1430.08	3.75E+01	19.20	1.90E+01	11.72
	40	1453 -	1464	1460.43	7.43E+02	57.13	3.87E+01	2.45

Analysis Report for 1510086-14
CP0404S07-08

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	FWHM (keV)
41	1507.41	1501 -	1512	1506.88	1.86E+01	18.97	3.48E+01	2.09
42	1529.31	1526 -	1532	1528.77	6.00E+00	8.03	8.00E+00	1.13
43	1542.55	1540 -	1544	1542.00	6.50E+00	6.96	5.00E+00	2.71
44	1729.06	1724 -	1732	1728.46	1.19E+01	8.73	4.29E+00	1.24
45	1765.25	1760 -	1772	1764.64	6.98E+01	22.20	2.23E+01	2.68
46	1940.54	1936 -	1942	1939.90	6.70E+00	8.03	6.60E+00	0.95
47	1953.98	1950 -	1955	1953.33	6.00E+00	4.90	0.00E+00	1.47
48	1959.65	1956 -	1961	1959.00	8.00E+00	5.66	0.00E+00	2.96
49	2104.86	2102 -	2107	2104.18	1.00E+01	12.53	1.80E+01	2.76
50	2118.57	2115 -	2120	2117.89	9.00E+00	6.00	0.00E+00	1.77
51	2175.82	2171 -	2178	2175.13	8.10E+00	7.48	3.80E+00	1.50
52	2185.80	2182 -	2188	2185.11	9.50E+00	7.50	3.00E+00	1.57
53	2203.96	2198 -	2207	2203.27	1.54E+01	9.85	5.11E+00	2.93
54	2245.24	2240 -	2249	2244.54	1.44E+01	9.64	5.29E+00	1.55
55	2423.32	2419 -	2425	2422.59	6.25E+00	6.65	3.50E+00	1.28
56	2614.14	2609 -	2618	2613.40	1.19E+02	21.82	0.00E+00	2.98

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 11/6/2015 2:37:52PM

Peak Analysis From Channel : 1
Peak Analysis To Channel : 4096

Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level	
1	76.46	72 -	82	1.21E+03	149.25	2.27E+03	1.09E+02	
2	87.42	86 -	89	8.04E+01	66.90	1.05E+03	5.30E+01	
3	99.15	97 -	101	8.94E+01	58.73	6.77E+02	4.57E+01	
4	104.84	103 -	107	5.96E+01	55.20	6.23E+02	4.36E+01	
5	129.34	127 -	131	4.70E+01	56.78	6.74E+02	4.53E+01	
6	162.99	161 -	165	5.34E+01	49.14	4.91E+02	3.86E+01	
7	185.73	182 -	190	2.33E+02	83.88	9.45E+02	6.42E+01	
8	208.75	205 -	212	1.13E+02	70.91	7.59E+02	5.56E+01	
M	9	238.79	234 -	244	7.69E+02	71.97	4.11E+02	3.33E+01
m	10	241.85	234 -	244	2.09E+02	52.45	3.22E+02	2.95E+01
	11	269.62	265 -	272	7.22E+01	56.00	4.72E+02	4.39E+01
	12	278.23	276 -	281	3.51E+01	43.28	3.40E+02	3.42E+01

0799A

Analysis Report for 1510086-14

CP0404S07-08

	Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
M	13	295.22	290 -	303	2.99E+02	48.54	2.63E+02	2.67E+01
m	14	300.11	290 -	303	4.84E+01	36.50	2.53E+02	2.62E+01
	15	338.73	334 -	343	2.01E+02	65.32	4.95E+02	4.84E+01
	16	352.04	348 -	356	4.85E+02	69.63	4.52E+02	4.43E+01
	17	410.06	407 -	412	3.03E+01	34.22	2.05E+02	2.66E+01
	18	463.42	459 -	466	4.29E+01	43.31	2.84E+02	3.39E+01
	19	511.14	505 -	516	2.29E+02	58.21	3.00E+02	4.09E+01
	20	583.28	579 -	587	2.22E+02	48.38	2.19E+02	3.13E+01
	21	609.38	605 -	612	3.61E+02	49.52	1.68E+02	2.61E+01
	22	727.31	724 -	730	6.70E+01	30.67	1.22E+02	2.13E+01
	23	747.51	745 -	751	2.07E+01	23.88	9.06E+01	1.81E+01
M	24	777.88	776 -	799	1.98E+01	11.95	2.72E+01	8.57E+00
m	25	787.27	776 -	799	2.21E+01	21.33	5.68E+01	1.24E+01
m	26	795.64	776 -	799	4.03E+01	23.85	6.88E+01	1.36E+01
	27	860.34	856 -	862	3.72E+01	24.70	8.35E+01	1.77E+01
	28	911.37	906 -	914	1.80E+02	38.50	1.18E+02	2.27E+01
	29	933.52	928 -	938	4.85E+01	27.78	7.70E+01	1.98E+01
M	30	964.75	961 -	975	4.73E+01	22.98	4.18E+01	1.06E+01
m	31	969.22	961 -	975	1.35E+02	30.53	5.80E+01	1.25E+01
	32	988.23	985 -	991	1.99E+01	20.51	6.01E+01	1.52E+01
	33	1120.79	1116 -	1124	6.07E+01	31.15	1.11E+02	2.22E+01
	34	1164.87	1162 -	1168	2.03E+01	17.05	3.75E+01	1.19E+01
	35	1237.76	1234 -	1241	4.04E+01	26.83	9.51E+01	1.94E+01
	36	1317.66	1314 -	1320	1.45E+01	14.49	2.71E+01	1.01E+01
	37	1401.73	1399 -	1403	1.00E+01	10.27	1.40E+01	6.65E+00
	38	1408.84	1405 -	1411	1.30E+01	13.63	2.39E+01	9.50E+00
	39	1430.59	1421 -	1439	3.75E+01	19.20	1.90E+01	1.22E+01
	40	1460.96	1453 -	1464	7.43E+02	57.13	3.87E+01	1.41E+01
	41	1507.41	1501 -	1512	1.86E+01	18.97	3.48E+01	1.39E+01
	42	1529.31	1526 -	1532	6.00E+00	8.03	8.00E+00	5.23E+00
	43	1542.55	1540 -	1544	6.50E+00	6.96	5.00E+00	3.90E+00
	44	1729.06	1724 -	1732	1.19E+01	8.73	4.29E+00	4.41E+00
	45	1765.25	1760 -	1772	6.98E+01	22.20	2.23E+01	1.20E+01
	46	1940.54	1936 -	1942	6.70E+00	8.03	6.60E+00	5.05E+00
	47	1953.98	1950 -	1955	6.00E+00	4.90	0.00E+00	0.00E+00
	48	1959.65	1956 -	1961	8.00E+00	5.66	0.00E+00	0.00E+00
	49	2104.86	2102 -	2107	1.00E+01	12.53	1.80E+01	8.89E+00
	50	2118.57	2115 -	2120	9.00E+00	6.00	0.00E+00	0.00E+00
	51	2175.82	2171 -	2178	8.10E+00	7.48	3.80E+00	3.99E+00
	52	2185.80	2182 -	2188	9.50E+00	7.50	3.00E+00	3.51E+00
	53	2203.96	2198 -	2207	1.54E+01	9.85	5.11E+00	4.88E+00
	54	2245.24	2240 -	2249	1.44E+01	9.64	5.29E+00	4.90E+00
	55	2423.32	2419 -	2425	6.25E+00	6.65	3.50E+00	3.61E+00
	56	2614.14	2609 -	2618	1.19E+02	21.82	0.00E+00	0.00E+00

Analysis Report for 1510086-14
 CP0404S07-08

M = First peak in a multiplet region
 m = Other peak in a multiplet region
 F = Fitted singlet
 Errors quoted at 2.000sigma

PEAK WITH NID REPORT

Peak Analysis Performed on : 11/6/2015 2:37:52PM

Peak Analysis From Channel : 1
 Peak Analysis To Channel : 4096

Tentative NID Library : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB
 Peak Match Tolerance : 1.000 keV

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
1	76.46	72 -	82	76.54	1.21E+03	149.25	2.27E+03	.....
2	87.42	86 -	89	87.50	8.04E+01	66.90	1.05E+03	SN-126 CD-109 NP-237 EU-155 LU-176
3	99.15	97 -	101	99.22	8.94E+01	58.73	6.77E+02	.....
4	104.84	103 -	107	104.91	5.96E+01	55.20	6.23E+02	EU-155
5	129.34	127 -	131	129.40	4.70E+01	56.78	6.74E+02	.....
6	162.99	161 -	165	163.03	5.34E+01	49.14	4.91E+02	BA-140 U-235 CS-136
7	185.73	182 -	190	185.76	2.33E+02	83.88	9.45E+02	RA-226
8	208.75	205 -	212	208.77	1.13E+02	70.91	7.59E+02	GA-67 CM-243
M 9	238.79	234 -	244	238.78	7.69E+02	71.97	4.11E+02	PB-212
m 10	241.85	234 -	244	241.84	2.09E+02	52.45	3.22E+02	RA-224
11	269.62	265 -	272	269.60	7.22E+01	56.00	4.72E+02	.....
12	278.23	276 -	281	278.20	3.51E+01	43.28	3.40E+02	CM-243 NP-239 HG-203
M 13	295.22	290 -	303	295.19	2.99E+02	48.54	2.63E+02	PB-214
m 14	300.11	290 -	303	300.07	4.84E+01	36.50	2.53E+02	PB-212 GA-67 BI-210M
15	338.73	334 -	343	338.67	2.01E+02	65.32	4.95E+02	AC-228
16	352.04	348 -	356	351.98	4.85E+02	69.63	4.52E+02	PB-214
17	410.06	407 -	412	409.96	3.03E+01	34.22	2.05E+02	HO-166M
18	463.42	459 -	466	463.30	4.29E+01	43.31	2.84E+02	SB-125
19	511.14	505 -	516	510.99	2.29E+02	58.21	3.00E+02	.....

Analysis Report for 1510086-14

CP0404S07-08

	Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
	20	583.28	579 -	587	583.10	2.22E+02	48.38	2.19E+02	TL-208
	21	609.38	605 -	612	609.19	3.61E+02	49.52	1.68E+02	BI-214
	22	727.31	724 -	730	727.07	6.70E+01	30.67	1.22E+02	BI-212
	23	747.51	745 -	751	747.25	2.07E+01	23.88	9.06E+01	PM-146
M	24	777.88	776 -	799	777.61	1.98E+01	11.95	2.72E+01	MO-99
m	25	787.27	776 -	799	787.00	2.21E+01	21.33	5.68E+01	.....
m	26	795.64	776 -	799	795.36	4.03E+01	23.85	6.88E+01	CS-134
	27	860.34	856 -	862	860.03	3.72E+01	24.70	8.35E+01	TL-208
	28	911.37	906 -	914	911.04	1.80E+02	38.50	1.18E+02	AC-228 LU-172
	29	933.52	928 -	938	933.19	4.85E+01	27.78	7.70E+01	.....
M	30	964.75	961 -	975	964.40	4.73E+01	22.98	4.18E+01	EU-152
m	31	969.22	961 -	975	968.87	1.35E+02	30.53	5.80E+01	AC-228
	32	988.23	985 -	991	987.87	1.99E+01	20.51	6.01E+01	.....
	33	1120.79	1116 -	1124	1120.38	6.07E+01	31.15	1.11E+02	SC-46 BI-214 TA-182
	34	1164.87	1162 -	1168	1164.45	2.03E+01	17.05	3.75E+01	.....
	35	1237.76	1234 -	1241	1237.31	4.04E+01	26.83	9.51E+01	CO-56
	36	1317.66	1314 -	1320	1317.18	1.45E+01	14.49	2.71E+01	.....
	37	1401.73	1399 -	1403	1401.22	1.00E+01	10.27	1.40E+01	.....
	38	1408.84	1405 -	1411	1408.34	1.30E+01	13.63	2.39E+01	EU-152
	39	1430.59	1421 -	1439	1430.08	3.75E+01	19.20	1.90E+01	.....
	40	1460.96	1453 -	1464	1460.43	7.43E+02	57.13	3.87E+01	K-40
	41	1507.41	1501 -	1512	1506.88	1.86E+01	18.97	3.48E+01	.....
	42	1529.31	1526 -	1532	1528.77	6.00E+00	8.03	8.00E+00	.....
	43	1542.55	1540 -	1544	1542.00	6.50E+00	6.96	5.00E+00	.....
	44	1729.06	1724 -	1732	1728.46	1.19E+01	8.73	4.29E+00	.....
	45	1765.25	1760 -	1772	1764.64	6.98E+01	22.20	2.23E+01	BI-214
	46	1940.54	1936 -	1942	1939.90	6.70E+00	8.03	6.60E+00	.....
	47	1953.98	1950 -	1955	1953.33	6.00E+00	4.90	0.00E+00	.....
	48	1959.65	1956 -	1961	1959.00	8.00E+00	5.66	0.00E+00	.....
	49	2104.86	2102 -	2107	2104.18	1.00E+01	12.53	1.80E+01	.....
	50	2118.57	2115 -	2120	2117.89	9.00E+00	6.00	0.00E+00	.....
	51	2175.82	2171 -	2178	2175.13	8.10E+00	7.48	3.80E+00	.....
	52	2185.80	2182 -	2188	2185.11	9.50E+00	7.50	3.00E+00	.....
	53	2203.96	2198 -	2207	2203.27	1.54E+01	9.85	5.11E+00	BI-214
	54	2245.24	2240 -	2249	2244.54	1.44E+01	9.64	5.29E+00	.....
	55	2423.32	2419 -	2425	2422.59	6.25E+00	6.65	3.50E+00	.....
	56	2614.14	2609 -	2618	2613.40	1.19E+02	21.82	0.00E+00	TL-208

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

Analysis Report for 1510086-14
CP0404S07-08

PEAK EFFICIENCY REPORT

Peak Analysis Performed on : 11/6/2015 2:37:52PM

	Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
	1	76.46	1.21E+03	149.25	2.74E-02	3.36E-03
	2	87.42	8.04E+01	66.90	2.84E-02	4.44E-03
	3	99.15	8.94E+01	58.73	2.83E-02	4.01E-03
	4	104.84	5.96E+01	55.20	2.80E-02	3.76E-03
	5	129.34	4.70E+01	56.78	2.60E-02	2.77E-03
	6	162.99	5.34E+01	49.14	2.29E-02	1.76E-03
	7	185.73	2.33E+02	83.88	2.11E-02	1.65E-03
	8	208.75	1.13E+02	70.91	1.95E-02	1.63E-03
M	9	238.79	7.69E+02	71.97	1.79E-02	1.60E-03
m	10	241.85	2.09E+02	52.45	1.77E-02	1.60E-03
	11	269.62	7.22E+01	56.00	1.65E-02	1.57E-03
	12	278.23	3.51E+01	43.28	1.61E-02	1.56E-03
M	13	295.22	2.99E+02	48.54	1.55E-02	1.48E-03
m	14	300.11	4.84E+01	36.50	1.53E-02	1.46E-03
	15	338.73	2.01E+02	65.32	1.41E-02	1.27E-03
	16	352.04	4.85E+02	69.63	1.37E-02	1.21E-03
	17	410.06	3.03E+01	34.22	1.23E-02	1.00E-03
	18	463.42	4.29E+01	43.31	1.13E-02	9.47E-04
	19	511.14	2.29E+02	58.21	1.06E-02	8.98E-04
	20	583.28	2.22E+02	48.38	9.58E-03	8.25E-04
	21	609.38	3.61E+02	49.52	9.27E-03	7.98E-04
	22	727.31	6.70E+01	30.67	8.09E-03	7.03E-04
	23	747.51	2.07E+01	23.88	7.91E-03	6.90E-04
M	24	777.88	1.98E+01	11.95	7.67E-03	6.71E-04
m	25	787.27	2.21E+01	21.33	7.59E-03	6.64E-04
m	26	795.64	4.03E+01	23.85	7.53E-03	6.59E-04
	27	860.34	3.72E+01	24.70	7.07E-03	6.18E-04
	28	911.37	1.80E+02	38.50	6.74E-03	5.87E-04
	29	933.52	4.85E+01	27.78	6.61E-03	5.75E-04
M	30	964.75	4.73E+01	22.98	6.44E-03	5.59E-04
m	31	969.22	1.35E+02	30.53	6.41E-03	5.57E-04
	32	988.23	1.99E+01	20.51	6.31E-03	5.47E-04
	33	1120.79	6.07E+01	31.15	5.70E-03	4.80E-04
	34	1164.87	2.03E+01	17.05	5.53E-03	4.57E-04
	35	1237.76	4.04E+01	26.83	5.27E-03	4.83E-04
	36	1317.66	1.45E+01	14.49	5.03E-03	5.20E-04
	37	1401.73	1.00E+01	10.27	4.81E-03	4.98E-04
	38	1408.84	1.30E+01	13.63	4.79E-03	4.95E-04
	39	1430.59	3.75E+01	19.20	4.74E-03	4.86E-04
	40	1460.96	7.43E+02	57.13	4.67E-03	4.73E-04
	41	1507.41	1.86E+01	18.97	4.58E-03	4.54E-04
	42	1529.31	6.00E+00	8.03	4.53E-03	4.45E-04
	43	1542.55	6.50E+00	6.96	4.51E-03	4.39E-04
	44	1729.06	1.19E+01	8.73	4.23E-03	3.62E-04
	45	1765.25	6.98E+01	22.20	4.18E-03	3.47E-04

Analysis Report for 1510086-14
CP0404S07-08

Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
46	1940.54	6.70E+00	8.03	4.03E-03	3.18E-04
47	1953.98	6.00E+00	4.90	4.02E-03	3.18E-04
48	1959.65	8.00E+00	5.66	4.02E-03	3.18E-04
49	2104.86	1.00E+01	12.53	3.95E-03	3.18E-04
50	2118.57	9.00E+00	6.00	3.95E-03	3.18E-04
51	2175.82	8.10E+00	7.48	3.93E-03	3.18E-04
52	2185.80	9.50E+00	7.50	3.93E-03	3.18E-04
53	2203.96	1.54E+01	9.85	3.93E-03	3.18E-04
54	2245.24	1.44E+01	9.64	3.93E-03	3.18E-04
55	2423.32	6.25E+00	6.65	3.96E-03	3.18E-04
56	2614.14	1.19E+02	21.82	4.05E-03	3.18E-04

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000 sigma

BACKGROUND SUBTRACT REPORT

Peak Analysis Performed on : 11/6/2015 2:37:52PM

Env. Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000028942.CNF

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
1	76.46	1.21E+03	149.25			1.21E+03	1.49E+02
2	87.42	8.04E+01	66.90	1.46E+00	7.88E+00	7.89E+01	6.74E+01
3	99.15	8.94E+01	58.73			8.94E+01	5.87E+01
4	104.84	5.96E+01	55.20			5.96E+01	5.52E+01
5	129.34	4.70E+01	56.78			4.70E+01	5.68E+01
6	162.99	5.34E+01	49.14			5.34E+01	4.91E+01
7	185.73	2.33E+02	83.88	4.72E+01	7.97E+00	1.86E+02	8.43E+01
8	208.75	1.13E+02	70.91			1.13E+02	7.09E+01
M	238.79	7.69E+02	71.97	2.36E+01	1.35E+01	7.45E+02	7.32E+01
m	241.85	2.09E+02	52.45	6.38E+00	3.91E+00	2.02E+02	5.26E+01
11	269.62	7.22E+01	56.00			7.22E+01	5.60E+01
12	278.23	3.51E+01	43.28			3.51E+01	4.33E+01
M	295.22	2.99E+02	48.54	8.57E+00	6.10E+00	2.90E+02	4.89E+01
m	300.11	4.84E+01	36.50			4.84E+01	3.65E+01
15	338.73	2.01E+02	65.32			2.01E+02	6.53E+01
16	352.04	4.85E+02	69.63	1.40E+01	5.55E+00	4.71E+02	6.99E+01
17	410.06	3.03E+01	34.22			3.03E+01	3.42E+01
18	463.42	4.29E+01	43.31			4.29E+01	4.33E+01
19	511.14	2.29E+02	58.21	8.41E+01	5.50E+00	1.45E+02	5.85E+01

: 00804

Analysis Report for 1510086-14

CP0404S07-08

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
	20	583.28	2.22E+02	48.38	7.32E+00	4.08E+00	2.15E+02	4.86E+01
	21	609.38	3.61E+02	49.52	1.30E+01	3.89E+00	3.48E+02	4.97E+01
	22	727.31	6.70E+01	30.67			6.70E+01	3.07E+01
	23	747.51	2.07E+01	23.88			2.07E+01	2.39E+01
M	24	777.88	1.98E+01	11.95			1.98E+01	1.19E+01
m	25	787.27	2.21E+01	21.33			2.21E+01	2.13E+01
m	26	795.64	4.03E+01	23.85			4.03E+01	2.38E+01
	27	860.34	3.72E+01	24.70			3.72E+01	2.47E+01
	28	911.37	1.80E+02	38.50	5.60E+00	3.32E+00	1.74E+02	3.86E+01
	29	933.52	4.85E+01	27.78			4.85E+01	2.78E+01
M	30	964.75	4.73E+01	22.98			4.73E+01	2.30E+01
m	31	969.22	1.35E+02	30.53			1.35E+02	3.05E+01
	32	988.23	1.99E+01	20.51			1.99E+01	2.05E+01
	33	1120.79	6.07E+01	31.15	3.93E+00	2.96E+00	5.67E+01	3.13E+01
	34	1164.87	2.03E+01	17.05			2.03E+01	1.71E+01
	35	1237.76	4.04E+01	26.83			4.04E+01	2.68E+01
	36	1317.66	1.45E+01	14.49			1.45E+01	1.45E+01
	37	1401.73	1.00E+01	10.27			1.00E+01	1.03E+01
	38	1408.84	1.30E+01	13.63			1.30E+01	1.36E+01
	39	1430.59	3.75E+01	19.20			3.75E+01	1.92E+01
	40	1460.96	7.43E+02	57.13	1.12E+01	2.55E+00	7.31E+02	5.72E+01
	41	1507.41	1.86E+01	18.97			1.86E+01	1.90E+01
	42	1529.31	6.00E+00	8.03			6.00E+00	8.03E+00
	43	1542.55	6.50E+00	6.96			6.50E+00	6.96E+00
	44	1729.06	1.19E+01	8.73			1.19E+01	8.73E+00
	45	1765.25	6.98E+01	22.20	4.23E+00	2.21E+00	6.56E+01	2.23E+01
	46	1940.54	6.70E+00	8.03			6.70E+00	8.03E+00
	47	1953.98	6.00E+00	4.90			6.00E+00	4.90E+00
	48	1959.65	8.00E+00	5.66			8.00E+00	5.66E+00
	49	2104.86	1.00E+01	12.53			1.00E+01	1.25E+01
	50	2118.57	9.00E+00	6.00			9.00E+00	6.00E+00
	51	2175.82	8.10E+00	7.48			8.10E+00	7.48E+00
	52	2185.80	9.50E+00	7.50			9.50E+00	7.50E+00
	53	2203.96	1.54E+01	9.85	5.94E-01	1.16E+00	1.49E+01	9.92E+00
	54	2245.24	1.44E+01	9.64			1.44E+01	9.64E+00
	55	2423.32	6.25E+00	6.65			6.25E+00	6.65E+00
	56	2614.14	1.19E+02	21.82	7.38E+00	1.57E+00	1.12E+02	2.19E+01

M = First peak in a multiplet region

m = Other peak in a multiplet region

F = Fitted singlet

Errors quoted at 2.000sigma

Analysis Report for 1510086-14
CP0404S07-08

AREA CORRECTION REPORT REFERENCE PEAK / BKG. SUBTRACT

Peak Analysis Performed on : 11/6/2015 2:37:52PM
 Ref. Peak Energy : 0.00 Reference Date :
 Peak Ratio : 0.00 Uncertainty : 0.00
 Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000028942.CNF

Corrected Area is: Original * Peak Ratio - Background

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
1	76.46	1.21E+03	149.25			1.21E+03	1.49E+02
2	87.42	8.04E+01	66.90	1.46E+00	7.88E+00	7.89E+01	6.74E+01
3	99.15	8.94E+01	58.73			8.94E+01	5.87E+01
4	104.84	5.96E+01	55.20			5.96E+01	5.52E+01
5	129.34	4.70E+01	56.78			4.70E+01	5.68E+01
6	162.99	5.34E+01	49.14			5.34E+01	4.91E+01
7	185.73	2.33E+02	83.88	4.72E+01	7.97E+00	1.86E+02	8.43E+01
8	208.75	1.13E+02	70.91			1.13E+02	7.09E+01
M	9	238.79	7.69E+02	2.36E+01	1.35E+01	7.45E+02	7.32E+01
m	10	241.85	2.09E+02	6.38E+00	3.91E+00	2.02E+02	5.26E+01
	11	269.62	7.22E+01			7.22E+01	5.60E+01
	12	278.23	3.51E+01			3.51E+01	4.33E+01
M	13	295.22	2.99E+02	8.57E+00	6.10E+00	2.90E+02	4.89E+01
m	14	300.11	4.84E+01			4.84E+01	3.65E+01
	15	338.73	2.01E+02			2.01E+02	6.53E+01
	16	352.04	4.85E+02	1.40E+01	5.55E+00	4.71E+02	6.99E+01
	17	410.06	3.03E+01			3.03E+01	3.42E+01
	18	463.42	4.29E+01			4.29E+01	4.33E+01
	19	511.14	2.29E+02	8.41E+01	5.50E+00	1.45E+02	5.85E+01
	20	583.28	2.22E+02	7.32E+00	4.08E+00	2.15E+02	4.86E+01
	21	609.38	3.61E+02	1.30E+01	3.89E+00	3.48E+02	4.97E+01
	22	727.31	6.70E+01			6.70E+01	3.07E+01
	23	747.51	2.07E+01			2.07E+01	2.39E+01
M	24	777.88	1.98E+01			1.98E+01	1.19E+01
m	25	787.27	2.21E+01			2.21E+01	2.13E+01
m	26	795.64	4.03E+01			4.03E+01	2.38E+01
	27	860.34	3.72E+01			3.72E+01	2.47E+01
	28	911.37	1.80E+02	5.60E+00	3.32E+00	1.74E+02	3.86E+01
	29	933.52	4.85E+01			4.85E+01	2.78E+01
M	30	964.75	4.73E+01			4.73E+01	2.30E+01
m	31	969.22	1.35E+02			1.35E+02	3.05E+01
	32	988.23	1.99E+01			1.99E+01	2.05E+01
	33	1120.79	6.07E+01	3.93E+00	2.96E+00	5.67E+01	3.13E+01
	34	1164.87	2.03E+01			2.03E+01	1.71E+01
	35	1237.76	4.04E+01			4.04E+01	2.68E+01
	36	1317.66	1.45E+01			1.45E+01	1.45E+01
	37	1401.73	1.00E+01			1.00E+01	1.03E+01
	38	1408.84	1.30E+01			1.30E+01	1.36E+01
	39	1430.59	3.75E+01			3.75E+01	1.92E+01
	40	1460.96	7.43E+02	1.12E+01	2.55E+00	7.31E+02	5.72E+01
	41	1507.41	1.86E+01			1.86E+01	1.90E+01

Analysis Report for 1510086-14

CP0404S07-08

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
42	1529.31	6.00E+00	8.03			6.00E+00	8.03E+00
43	1542.55	6.50E+00	6.96			6.50E+00	6.96E+00
44	1729.06	1.19E+01	8.73			1.19E+01	8.73E+00
45	1765.25	6.98E+01	22.20	4.23E+00	2.21E+00	6.56E+01	2.23E+01
46	1940.54	6.70E+00	8.03			6.70E+00	8.03E+00
47	1953.98	6.00E+00	4.90			6.00E+00	4.90E+00
48	1959.65	8.00E+00	5.66			8.00E+00	5.66E+00
49	2104.86	1.00E+01	12.53			1.00E+01	1.25E+01
50	2118.57	9.00E+00	6.00			9.00E+00	6.00E+00
51	2175.82	8.10E+00	7.48			8.10E+00	7.48E+00
52	2185.80	9.50E+00	7.50			9.50E+00	7.50E+00
53	2203.96	1.54E+01	9.85	5.94E-01	1.16E+00	1.49E+01	9.92E+00
54	2245.24	1.44E+01	9.64			1.44E+01	9.64E+00
55	2423.32	6.25E+00	6.65			6.25E+00	6.65E+00
56	2614.14	1.19E+02	21.82	7.38E+00	1.57E+00	1.12E+02	2.19E+01

M = First peak in a multiplet region

m = Other peak in a multiplet region

F = Fitted singlet

Errors quoted at 2.000sigma

NUCLIDE IDENTIFICATION REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

IDENTIFIED NUCLIDES

Nuclide Name	Id Confidence	Energy (keV)	Yield(%)	Activity (pCi/grams)	Activity Uncertainty
K-40	0.997	1460.81 *	10.67	2.23E+01	2.89E+00
EU-155	0.910	86.50 *	30.90	1.38E-01	1.20E-01
		105.30 *	20.70	1.58E-01	1.48E-01
TL-208	0.977	583.14 *	30.22	1.13E+00	2.73E-01
		860.37 *	4.48	1.79E+00	1.20E+00
		2614.66 *	35.85	1.17E+00	2.47E-01
BI-212	0.763	727.17 *	11.80	1.07E+00	4.98E-01
		1620.62	2.75		
PB-212	0.996	238.63 *	44.60	1.42E+00	1.89E-01
		300.09 *	3.41	1.41E+00	1.07E+00
BI-214	0.974	609.31 *	46.30	1.23E+00	2.06E-01
		1120.29 *	15.10	1.00E+00	5.59E-01
		1764.49 *	15.80	1.51E+00	5.29E-01
PB-214	0.998	2204.22 *	4.98	1.15E+00	7.77E-01
		295.21 *	19.19	1.49E+00	2.88E-01
		351.92 *	37.19	1.40E+00	2.42E-01

: 00807

Analysis Report for 1510086-14
CP0404S07-08

Nuclide Name	Id Confidence	Energy (keV)	Yield(%)	Activity (pCi/grams)	Activity Uncertainty
RA-224	0.886	240.98 *	3.95	4.40E+00	1.21E+00
RA-226	0.964	186.21 *	3.28	4.09E+00	7.71E+00
AC-228	0.987	338.32 *	11.40	1.90E+00	6.42E-01
		911.07 *	27.70	1.42E+00	3.38E-01
		969.11 *	16.60	1.92E+00	4.67E-01
CM-243	0.325	209.75 *	3.29	2.69E+00	1.70E+00
		228.14	10.60		
		277.60 *	14.00	2.38E-01	2.94E-01

* = Energy line found in the spectrum.
 - = Manually added nuclide.
 ? = Manually edited nuclide.
 Energy Tolerance : 1.000 keV
 Nuclide confidence index threshold = 0.30
 Errors quoted at 2.000sigma

UNIDENTIFIED PEAKS

Peak Locate Performed on : 11/6/2015 2:37:52PM
 Peak Locate From Channel : 1
 Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
1	76.46	3.36865E-01	6.15		
3	99.15	2.48215E-02	32.86	D-Esc	
5	129.34	1.30527E-02	60.41		
6	162.99	1.48351E-02	46.01	Tol.	CS-136 BA-140 U-235
11	269.62	2.00424E-02	38.81		
17	410.06	8.41061E-03	56.51	Tol.	HO-166M
18	463.42	1.19129E-02	50.50	Sum	
19	511.14	4.01961E-02	20.20		
23	747.51	5.74916E-03	57.69	Tol.	PM-146
M	24	777.88	5.51388E-03	Tol.	MO-99
m	25	787.27	6.13303E-03		
m	26	795.64	1.11939E-02	Sum	
	29	933.52	1.34722E-02		
M	30	964.75	1.31316E-02	Sum	
	32	988.23	5.53889E-03		
	34	1164.87	5.62678E-03		
	35	1237.76	1.12358E-02		
	36	1317.66	4.01786E-03		
	37	1401.73	2.77778E-03		

Analysis Report for 1510086-14
CP0404S07-08

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
38	1408.84	3.62222E-03	52.26	Tol.	EU-152
39	1430.59	1.04167E-02	25.60		
41	1507.41	5.16204E-03	51.05		
42	1529.31	1.66667E-03	66.93		
43	1542.55	1.80556E-03	53.57		
44	1729.06	3.29365E-03	36.82		
46	1940.54	1.86111E-03	59.93		
47	1953.98	1.66667E-03	40.82		
48	1959.65	2.22222E-03	35.36		
49	2104.86	2.77778E-03	62.65	Sum	
50	2118.57	2.50000E-03	33.33		
51	2175.82	2.25000E-03	46.19		
52	2185.80	2.63889E-03	39.47		
54	2245.24	3.98693E-03	33.59		
55	2423.32	1.73611E-03	53.22		

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

NUCLIDE IDENTIFICATION REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

IDENTIFIED NUCLIDES

Nuclide Name	Id Confidence	Energy (keV)	Yield(%)	Activity (pCi/grams)	Activity Uncertainty
K-40	0.99	1460.81 *	10.67	2.23E+01	2.89E+00
EU-155	0.91	86.50 *	30.90	1.38E-01	1.20E-01
		105.30 *	20.70	1.58E-01	1.48E-01
TL-208	0.97	583.14 *	30.22	1.13E+00	2.73E-01
		860.37 *	4.48	1.79E+00	1.20E+00
		2614.66 *	35.85	1.17E+00	2.47E-01
BI-212	0.76	727.17 *	11.80	1.07E+00	4.98E-01
		1620.62	2.75		
PB-212	0.99	238.63 *	44.60	1.42E+00	1.89E-01
		300.09 *	3.41	1.41E+00	1.07E+00
BI-214	0.97	609.31 *	46.30	1.23E+00	2.06E-01
		1120.29 *	15.10	1.00E+00	5.59E-01
		1764.49 *	15.80	1.51E+00	5.29E-01

Analysis Report for 1510086-14
CP0404S07-08

Nuclide Name	Id Confidence	Energy (keV)	Yield(%)	Activity (pCi/grams)	Activity Uncertainty
BI-214	0.97	2204.22 *	4.98	1.15E+00	7.77E-01
PB-214	0.99	295.21 *	19.19	1.49E+00	2.88E-01
		351.92 *	37.19	1.40E+00	2.42E-01
RA-224	0.88	240.98 *	3.95	4.40E+00	1.21E+00
RA-226	0.96	186.21 *	3.28	4.09E+00	7.71E+00
AC-228	0.98	338.32 *	11.40	1.90E+00	6.42E-01
		911.07 *	27.70	1.42E+00	3.38E-01
		969.11 *	16.60	1.92E+00	4.67E-01
CM-243	0.32	209.75 *	3.29	2.69E+00	1.70E+00
		228.14	10.60		
		277.60 *	14.00	2.38E-01	2.94E-01

* = Energy line found in the spectrum.
- = Manually added nuclide.
? = Manually edited nuclide.
@ = Energy line not used for Weighted Mean Activity
Energy Tolerance : 1.000 keV
Nuclide confidence index threshold = 0.30
Errors quoted at 2.000sigma

INTERFERENCE CORRECTED REPORT

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
	K-40	0.997	2.23E+01	2.89E+00
X	CD-109	0.942		
X	SN-126	0.996		
	EU-155	0.910	1.46E-01	9.32E-02
X	HG-203	0.860		
	TL-208	0.977	1.17E+00	1.81E-01
	BI-212	0.763	1.07E+00	4.98E-01
	PB-212	0.996	1.42E+00	1.86E-01
	BI-214	0.974	1.24E+00	1.77E-01
	PB-214	0.998	1.44E+00	1.86E-01
	RA-224	0.886	4.40E+00	1.21E+00
	RA-226	0.964	4.09E+00	7.71E+00
	AC-228	0.987	1.64E+00	2.52E-01
X	NP-237	0.874		
	CM-243	0.325	3.09E-01	2.89E-01

Analysis Report for 1510086-14
CP0404S07-08

- ? = nuclide is part of an undetermined solution
- X = nuclide rejected by the interference analysis
- @ = nuclide contains energy lines not used in Weighted Mean Activity

Errors quoted at 2.000sigma

Analysis Report for 1510086-14
CP0404S07-08

UNIDENTIFIED PEAKS

Peak Locate Performed on : 11/6/2015 2:37:52PM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
1	76.46	3.36865E-01	6.15		
3	99.15	2.48215E-02	32.86	D-Esc	
5	129.34	1.30527E-02	60.41		
6	162.99	1.48351E-02	46.01	Tol.	CS-136 BA-140 U-235
11	269.62	2.00424E-02	38.81		
17	410.06	8.41061E-03	56.51	Tol.	HO-166M
18	463.42	1.19129E-02	50.50	Sum	
19	511.14	4.01961E-02	20.20		
23	747.51	5.74916E-03	57.69	Tol.	PM-146
M	24	777.88	5.51388E-03	Tol.	MO-99
m	25	787.27	6.13303E-03		
m	26	795.64	1.11939E-02	Sum	
	29	933.52	1.34722E-02		
M	30	964.75	1.31316E-02	Sum	
	32	988.23	5.53889E-03		
	34	1164.87	5.62678E-03		
	35	1237.76	1.12358E-02		
	36	1317.66	4.01786E-03		
	37	1401.73	2.77778E-03		
	38	1408.84	3.62222E-03	Tol.	EU-152
	39	1430.59	1.04167E-02		
	41	1507.41	5.16204E-03		
	42	1529.31	1.66667E-03		
	43	1542.55	1.80556E-03		
	44	1729.06	3.29365E-03		
	46	1940.54	1.86111E-03		
	47	1953.98	1.66667E-03		
	48	1959.65	2.22222E-03		
	49	2104.86	2.77778E-03	Sum	
	50	2118.57	2.50000E-03		
	51	2175.82	2.25000E-03		
	52	2185.80	2.63889E-03		
	54	2245.24	3.98693E-03		

Analysis Report for 1510086-14
CP0404S07-08

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
55	2423.32	1.73611E-03	53.22		

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

NUCLIDE MDA REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+ BE-7	477.59	10.42	4.93E-01	8.63E-01	8.63E-01
+ NA-22	1274.54	99.94	-6.72E-02	7.83E-02	7.83E-02
+ NA-24	1368.53	99.99	-5.76E+11	4.86E+12	8.18E+12
	2754.09	99.86	1.35E+12		4.86E+12
+ AL-26	1808.65	99.76	-1.52E-02	5.20E-02	5.20E-02
+ K-40	1460.81	* 10.67	2.23E+01	1.02E+00	1.02E+00
+ @ AR-41	1293.64	99.16	1.00E+26	1.00E+26	1.00E+26
+ TI-44	67.88	94.40	-7.92E-03	5.58E-02	5.58E-02
	78.34	96.00	3.77E-01		8.55E-02
+ SC-46	889.25	99.98	5.18E-02	1.06E-01	1.06E-01
	1120.51	99.99	2.03E-01		1.70E-01
+ V-48	983.52	99.98	-6.27E-02	2.70E-01	2.90E-01
	1312.10	97.50	5.78E-02		2.70E-01
+ CR-51	320.08	9.83	-1.92E-02	1.21E+00	1.21E+00
+ MN-54	834.83	99.97	3.36E-02	9.58E-02	9.58E-02
+ CO-56	846.75	99.96	2.55E-02	9.88E-02	9.88E-02
	1037.75	14.03	3.58E-01		7.60E-01
	1238.25	67.00	9.44E-02		2.51E-01
	1771.40	15.51	4.56E-02		5.72E-01
	2598.48	16.90	-6.73E-02		2.68E-01
+ CO-57	122.06	85.51	-6.81E-03	6.41E-02	6.41E-02
	136.48	10.60	-3.66E-02		5.29E-01
+ CO-58	810.76	99.40	1.91E-03	1.08E-01	1.08E-01
+ FE-59	1099.22	56.50	3.66E-02	2.54E-01	2.54E-01
	1291.56	43.20	8.03E-02		3.45E-01
+ CO-60	1173.22	100.00	5.71E-02	8.43E-02	1.05E-01
	1332.49	100.00	6.39E-03		8.43E-02
+ ZN-65	1115.52	50.75	-2.23E-02	1.87E-01	1.87E-01

Analysis Report for 1510086-14
CP0404S07-08

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	GA-67	93.31	35.70	9.49E+01	9.54E+01	9.54E+01
		208.95	2.24	1.51E+03		1.54E+03
		300.22	16.00	1.43E+02		1.97E+02
+	SE-75	121.11	16.70	-9.04E-02	1.03E-01	3.55E-01
		136.00	59.20	-5.67E-02		1.03E-01
		264.65	59.80	-4.87E-03		1.17E-01
		279.53	25.20	-1.05E-02		2.75E-01
		400.65	11.40	-8.56E-02		6.15E-01
+	RB-82	776.52	13.00	-2.51E-01	1.30E+00	1.30E+00
+	RB-83	520.41	46.00	1.87E-02	1.71E-01	1.71E-01
		529.64	30.30	6.30E-02		2.55E-01
		552.65	16.40	-7.23E-02		4.73E-01
+	KR-85	513.99	0.43	-1.42E+01	1.71E+01	1.71E+01
+	SR-85	513.99	99.27	-8.45E-02	1.02E-01	1.02E-01
+	Y-88	898.02	93.40	2.67E-02	8.17E-02	1.09E-01
		1836.01	99.38	-3.14E-03		8.17E-02
+	NB-93M	16.57	9.43	-6.32E+03	5.91E+03	5.91E+03
+	NB-94	702.63	100.00	2.42E-02	7.89E-02	8.76E-02
		871.10	100.00	-4.58E-03		7.89E-02
+	NB-95	765.79	99.81	1.14E-01	1.68E-01	1.68E-01
+	NB-95M	235.69	25.00	-6.66E+02	1.00E+02	1.00E+02
+	ZR-95	724.18	43.70	6.97E-02	1.82E-01	3.20E-01
		756.72	55.30	-4.96E-02		1.82E-01
+	MO-99	181.06	6.20	-3.43E+02	9.32E+02	1.41E+03
		739.58	12.80	4.37E+02		9.32E+02
		778.00	4.50	-5.16E+02		2.63E+03
+	RU-103	497.08	89.00	3.70E-02	1.12E-01	1.12E-01
+	RU-106	621.84	9.80	-2.30E-01	8.15E-01	8.15E-01
+	AG-108M	433.93	89.90	1.94E-02	6.93E-02	6.93E-02
		614.37	90.40	-2.47E-02		8.47E-02
		722.95	90.50	1.21E-02		8.96E-02
+	CD-109	88.03	* 3.72	1.19E+00	1.65E+00	1.65E+00
+	AG-110M	657.75	93.14	1.87E-02	9.34E-02	9.34E-02
		677.61	10.53	1.90E-01		7.98E-01
		706.67	16.46	2.64E-03		5.53E-01
		763.93	21.98	-2.40E-01		4.23E-01
		884.67	71.63	-5.47E-02		1.18E-01
		1384.27	23.94	1.42E-01		3.49E-01
+	CD-113M	263.70	0.02	1.19E+01	2.64E+02	2.64E+02
+	SN-113	255.12	1.93	7.42E-01	1.14E-01	3.53E+00
		391.69	64.90	-2.82E-03		1.14E-01
+	TE123M	159.00	84.10	-1.87E-02	7.30E-02	7.30E-02
+	SB-124	602.71	97.87	-2.50E-02	9.76E-02	9.76E-02
		645.85	7.26	3.55E-01		1.48E+00
		722.78	11.10	1.38E-01		1.02E+00
		1691.02	49.00	4.82E-02		2.23E-01
+	I-125	35.49	6.49	3.12E+00	6.00E+00	6.00E+00
+	SB-125	176.33	6.89	2.89E-01	2.20E-01	8.32E-01

Analysis Report for 1510086-14
CP0404S07-08

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	SB-125	427.89	29.33	3.09E-02	2.20E-01	2.20E-01
		463.38	10.35	3.95E-01		7.16E-01
		600.56	17.80	1.74E-01		4.38E-01
		635.90	11.32	6.65E-02		6.85E-01
+	SB-126	414.70	83.30	8.41E-02	3.64E-01	3.64E-01
		666.33	99.60	1.57E-01		4.31E-01
		695.00	99.60	2.19E-01		4.34E-01
		720.50	53.80	2.49E-01		7.42E-01
+	SN-126	87.57	* 37.00	1.14E-01	1.59E-01	1.59E-01
+	SB-127	473.00	25.00	-9.85E+00	3.89E+01	4.40E+01
		685.20	35.70	9.24E+00		3.89E+01
		783.80	14.70	8.27E+01		1.19E+02
+	I-129	29.78	57.00	2.17E-01	1.32E+00	1.32E+00
		33.60	13.20	9.57E-01		2.83E+00
		39.58	7.52	8.60E-01		2.37E+00
+	I-131	284.30	6.05	-2.66E+00	8.82E-01	1.12E+01
		364.48	81.20	4.74E-01		8.82E-01
		636.97	7.26	6.83E+00		1.35E+01
		722.89	1.80	7.56E+00		5.61E+01
+	TE-132	49.72	13.10	-5.90E+01	3.31E+01	3.23E+02
		228.16	88.00	7.96E+00		3.31E+01
+	BA-133	81.00	33.00	-1.80E-02	1.01E-01	1.33E-01
		302.84	17.80	1.31E-02		3.22E-01
		356.01	60.00	-1.10E-02		1.01E-01
+	I-133	529.87	86.30	-5.23E+08	9.79E+08	9.79E+08
+	XE-133	81.00	38.00	-7.44E-01	5.51E+00	5.51E+00
+	CS-134	563.23	8.38	-4.42E-02	9.11E-02	7.57E-01
		569.32	15.43	7.14E-02		4.12E-01
		604.70	97.60	-1.37E-02		9.11E-02
		795.84	85.40	5.17E-02		1.07E-01
		801.93	8.73	-3.29E-01		9.13E-01
+	CS-135	268.24	16.00	-1.03E-01	3.96E-01	3.96E-01
+	@ I-135	1131.51	22.50	1.00E+26	1.00E+26	1.00E+26
	@	1260.41	28.60	1.00E+26		1.00E+26
	@	1678.03	9.54	1.00E+26		1.00E+26
+	CS-136	153.22	7.46	3.35E-01	3.75E-01	3.47E+00
		163.89	4.61	1.68E+00		5.65E+00
		176.55	13.56	-1.23E+00		1.88E+00
		273.65	12.66	1.04E+00		2.14E+00
		340.57	48.50	-5.11E-01		7.44E-01
		818.50	99.70	2.29E-01		3.75E-01
		1048.07	79.60	-1.65E-01		4.31E-01
		1235.34	19.70	-4.00E-01		2.88E+00
+	CS-137	661.65	85.12	-9.32E-03	9.84E-02	9.84E-02
+	LA-138	788.74	34.00	1.28E-01	1.17E-01	2.55E-01
		1435.80	66.00	5.22E-02		1.17E-01
+	CE-139	165.85	80.35	2.62E-02	8.14E-02	8.14E-02
+	BA-140	162.64	6.70	2.10E+00	1.21E+00	4.02E+00
		304.84	4.50	-2.06E-01		6.15E+00

Analysis Report for 1510086-14
CP0404S07-08

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)	
BA-140	423.70	3.20	-3.74E+00	1.21E+00	8.92E+00	
	437.55	2.00	-1.43E+00		1.40E+01	
	537.32	25.00	-7.30E-02		1.21E+00	
+ LA-140	328.77	20.50	1.85E+00	4.14E-01	1.64E+00	
	487.03	45.50	-1.05E-01		6.62E-01	
	815.85	23.50	-9.13E-01		1.55E+00	
	1596.49	95.49	3.52E-02		4.14E-01	
+ CE-141	145.44	48.40	1.47E-01	2.23E-01	2.23E-01	
	+ CE-143	57.36	11.80	-2.66E+05	5.32E+05	1.24E+06
293.26		42.00	2.88E+05		5.32E+05	
664.55		5.20	4.93E+05		4.12E+06	
+ CE-144	133.54	10.80	1.37E-01	5.28E-01	5.28E-01	
	+ PM-144	476.78	42.00	8.85E-02	8.16E-02	1.55E-01
618.01		98.60	8.92E-03		8.16E-02	
696.49		99.49	2.41E-02		8.96E-02	
+ PM-145	36.85	21.70	-5.02E-01	5.39E-01	1.05E+00	
	37.36	39.70	-2.58E-01		5.39E-01	
	42.30	15.10	3.31E-01		9.64E-01	
	72.40	2.31	-5.40E-01		2.39E+00	
+ PM-146	453.90	39.94	9.89E-02	1.60E-01	1.60E-01	
	735.90	14.01	2.76E-02		5.10E-01	
	747.13	13.10	1.28E-01		6.00E-01	
+ ND-147	91.11	28.90	8.88E-01	1.53E+00	1.53E+00	
	531.02	13.10	-1.61E+00		2.84E+00	
+ PM-149	285.90	3.10	-1.04E+02	1.71E+04	1.71E+04	
+ EU-152	121.78	20.50	-2.64E-02	2.49E-01	2.49E-01	
	244.69	5.40	2.58E-01		1.09E+00	
	344.27	19.13	5.13E-02		3.24E-01	
	778.89	9.20	-1.28E-01		8.14E-01	
	964.01	10.40	-2.20E+00		1.03E+00	
	1085.78	7.22	2.54E-01		1.24E+00	
	1112.02	9.60	5.90E-04		9.60E-01	
	1407.95	14.94	1.97E-01		5.74E-01	
	+ GD-153	97.43	31.30	1.73E-01	1.88E-01	1.88E-01
		103.18	22.20	-2.74E-01		2.38E-01
+ EU-154	123.07	40.50	6.57E-02	1.30E-01	1.30E-01	
	723.30	19.70	5.58E-02		4.14E-01	
	873.19	11.50	-2.05E-02		6.91E-01	
	996.32	10.30	-2.08E-04		8.97E-01	
	1004.76	17.90	-1.13E-01		5.11E-01	
+ EU-155	1274.45	35.50	-1.86E-01		2.17E-01	
	86.50	* 30.90	1.38E-01	1.92E-01	1.92E-01	
	105.30	* 20.70	1.58E-01		2.38E-01	
+ EU-156	811.77	10.40	-1.68E+00	2.75E+00	2.75E+00	
	1153.47	7.20	-6.78E-02		5.18E+00	
	1230.71	8.90	-7.63E-01		4.20E+00	
+ HO-166M	184.41	72.60	1.37E-01	9.96E-02	9.96E-02	
	280.45	29.60	-7.59E-03		1.98E-01	
	410.94	11.10	3.38E-01		5.92E-01	

Analysis Report for 1510086-14
CP0404S07-08

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	HO-166M	711.69	54.10	4.63E-02	9.96E-02	1.44E-01
+	TM-171	66.72	0.14	1.36E+01	3.97E+01	3.97E+01
+	HF-172	81.75	4.52	-8.77E-01	4.78E-01	1.01E+00
		125.81	11.30	6.37E-02		4.78E-01
+	LU-172	181.53	20.60	5.76E-02	3.02E+00	5.70E+00
		810.06	16.63	1.76E-01		1.00E+01
		912.12	15.25	5.29E+01		2.22E+01
		1093.66	62.50	3.24E-01		3.02E+00
+	LU-173	100.72	5.24	-2.76E-01	3.32E-01	1.01E+00
		272.11	21.20	5.97E-02		3.32E-01
+	HF-175	343.40	84.00	1.47E-02	1.02E-01	1.02E-01
+	LU-176	88.34	13.30	4.99E-01	6.12E-02	5.32E-01
		201.83	86.00	-1.13E-02		7.01E-02
		306.78	94.00	-3.11E-03		6.12E-02
+	TA-182	67.75	41.20	-2.17E-02	1.53E-01	1.53E-01
		1121.30	34.90	5.65E-01		4.56E-01
		1189.05	16.23	-2.47E-01		6.91E-01
		1221.41	26.98	-5.08E-02		4.66E-01
		1231.02	11.44	-1.18E-01		1.02E+00
+	IR-192	308.46	29.68	1.01E-01	1.75E-01	2.57E-01
		468.07	48.10	1.61E-02		1.75E-01
+	HG-203	279.19	* 77.30	6.64E-02	1.34E-01	1.34E-01
+	BI-207	569.67	97.72	1.10E-02	6.34E-02	6.34E-02
		1063.62	74.90	3.64E-03		9.93E-02
+	TL-208	583.14	* 30.22	1.13E+00	1.26E-01	3.49E-01
		860.37	* 4.48	1.79E+00		1.83E+00
		2614.66	* 35.85	1.17E+00		1.26E-01
+	BI-210M	262.00	45.00	-2.86E-02	1.30E-01	1.30E-01
		300.00	23.00	1.98E-01		2.73E-01
+	PB-210	46.50	4.25	2.77E+00	2.72E+00	2.72E+00
+	PB-211	404.84	2.90	2.74E-01	2.09E+00	2.09E+00
		831.96	2.90	6.42E-01		2.99E+00
+	BI-212	727.17	* 11.80	1.07E+00	7.24E-01	7.24E-01
		1620.62	2.75	8.85E-01		2.69E+00
+	PB-212	238.63	* 44.60	1.42E+00	2.46E-01	2.46E-01
		300.09	* 3.41	1.41E+00		3.69E+00
+	BI-214	609.31	* 46.30	1.23E+00	2.01E-01	2.01E-01
		1120.29	* 15.10	1.00E+00		8.45E-01
		1764.49	* 15.80	1.51E+00		6.43E-01
		2204.22	* 4.98	1.15E+00		1.01E+00
+	PB-214	295.21	* 19.19	1.49E+00	2.77E-01	6.53E-01
		351.92	* 37.19	1.40E+00		2.77E-01
+	RN-219	401.80	6.50	-4.48E-01	8.94E-01	8.94E-01
+	RA-223	323.87	3.88	-1.14E+00	1.43E+00	1.43E+00
+	RA-224	240.98	* 3.95	4.40E+00	2.70E+00	2.70E+00
+	RA-225	40.00	31.00	7.88E-01	2.17E+00	2.17E+00
+	RA-226	186.21	* 3.28	4.09E+00	2.94E+00	2.94E+00
+	TH-227	50.10	8.40	-1.79E-01	7.91E-01	9.80E-01

Analysis Report for 1510086-14
CP0404S07-08

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	TH-227	236.00		11.50	-5.27E+00	7.91E-01	7.91E-01
		256.20		6.30	-2.18E-01		9.14E-01
+	AC-228	338.32	*	11.40	1.90E+00	4.00E-01	9.43E-01
		911.07	*	27.70	1.42E+00		4.00E-01
		969.11	*	16.60	1.92E+00		7.88E-01
+	TH-230	48.44		16.90	-4.60E-01	5.36E-01	5.36E-01
		62.85		4.60	1.21E+00		1.34E+00
		67.67		0.37	-2.02E+00		1.43E+01
+	PA-231	283.67		1.60	-8.06E-01	2.48E+00	3.40E+00
		302.67		2.30	1.00E-01		2.48E+00
+	TH-231	25.64		14.70	8.40E+00	7.73E-01	1.67E+01
		84.21		6.40	8.06E-01		7.73E-01
+	PA-233	311.98		38.60	1.12E-01	3.05E-01	3.05E-01
+	PA-234	131.20		20.40	4.45E-02	2.74E-01	2.74E-01
		733.99		8.80	8.54E-02		8.08E-01
		946.00		12.00	1.30E-01		6.51E-01
+	PA-234M	1001.03		0.92	6.49E-01	1.03E+01	1.03E+01
+	TH-234	63.29		3.80	1.46E+00	1.62E+00	1.62E+00
+	U-235	143.76		10.50	-3.48E-01	5.27E-01	5.27E-01
		163.35		4.70	6.15E-01		1.18E+00
		205.31		4.70	1.09E-02		1.30E+00
+	NP-237	86.50	*	12.60	3.36E-01	4.66E-01	4.66E-01
+	NP-239	106.10		22.70	1.45E+02	1.21E+03	1.21E+03
		228.18		10.70	7.12E+02		2.96E+03
		277.60		14.10	1.23E+03		2.39E+03
+	AM-241	59.54		35.90	-1.55E-02	1.60E-01	1.60E-01
+	AM-243	74.67		66.00	-3.01E-01	1.14E-01	1.14E-01
+	CM-243	209.75	*	3.29	2.69E+00	4.81E-01	2.70E+00
		228.14		10.60	1.31E-01		5.45E-01
		277.60	*	14.00	2.38E-01		4.81E-01

- + = Nuclide identified during the nuclide identification
 * = Energy line found in the spectrum
 > = MDA value not calculated
 @ = Half-life too short to be able to perform the decay correction
 ? = CAUTION: MDA value is inconsistent with Currie MDA at 95% confidence level

Analysis Report for 1510086-14
CP0404S07-08

NUCLIDE MDA REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
BE-7	477.59	10.42	8.63E-01	8.63E-01	4.93E-01	4.06E-01
NA-22	1274.54	99.94	7.83E-02	7.83E-02	-6.72E-02	3.51E-02
NA-24	1368.53	99.99	8.18E+12	4.86E+12	-5.76E+11	3.57E+12
	2754.09	99.86	4.86E+12		1.35E+12	1.82E+12
AL-26	1808.65	99.76	5.20E-02	5.20E-02	-1.52E-02	2.10E-02
+ K-40	1460.81	* 10.67	1.02E+00	1.02E+00	2.23E+01	4.66E-01
@ AR-41	1293.64	99.16	1.00E+26	1.00E+26	1.00E+26	1.00E+20
TI-44	67.88	94.40	5.58E-02	5.58E-02	-7.92E-03	2.70E-02
	78.34	96.00	8.55E-02		3.77E-01	4.20E-02
SC-46	889.25	99.98	1.06E-01	1.06E-01	5.18E-02	4.90E-02
	1120.51	99.99	1.70E-01		2.03E-01	8.03E-02
V-48	983.52	99.98	2.90E-01	2.70E-01	-6.27E-02	1.33E-01
	1312.10	97.50	2.70E-01		5.78E-02	1.20E-01
CR-51	320.08	9.83	1.21E+00	1.21E+00	-1.92E-02	5.76E-01
MN-54	834.83	99.97	9.58E-02	9.58E-02	3.36E-02	4.49E-02
CO-56	846.75	99.96	9.88E-02	9.88E-02	2.55E-02	4.57E-02
	1037.75	14.03	7.60E-01		3.58E-01	3.49E-01
	1238.25	67.00	2.51E-01		9.44E-02	1.18E-01
	1771.40	15.51	5.72E-01		4.56E-02	2.45E-01
	2598.48	16.90	2.68E-01		-6.73E-02	9.48E-02
CO-57	122.06	85.51	6.41E-02	6.41E-02	-6.81E-03	3.11E-02
	136.48	10.60	5.29E-01		-3.66E-02	2.56E-01
CO-58	810.76	99.40	1.08E-01	1.08E-01	1.91E-03	5.04E-02
FE-59	1099.22	56.50	2.54E-01	2.54E-01	3.66E-02	1.17E-01
	1291.56	43.20	3.45E-01		8.03E-02	1.58E-01
CO-60	1173.22	100.00	1.05E-01	8.43E-02	5.71E-02	4.87E-02
	1332.49	100.00	8.43E-02		6.39E-03	3.80E-02
ZN-65	1115.52	50.75	1.87E-01	1.87E-01	-2.23E-02	8.58E-02
GA-67	93.31	35.70	9.54E+01	9.54E+01	9.49E+01	4.67E+01
	208.95	2.24	1.54E+03		1.51E+03	7.47E+02
	300.22	16.00	1.97E+02		1.43E+02	9.44E+01
SE-75	121.11	16.70	3.55E-01	1.03E-01	-9.04E-02	1.72E-01
	136.00	59.20	1.03E-01		-5.67E-02	4.99E-02
	264.65	59.80	1.17E-01		-4.87E-03	5.60E-02
	279.53	25.20	2.75E-01		-1.05E-02	1.32E-01
	400.65	11.40	6.15E-01		-8.56E-02	2.90E-01
RB-82	776.52	13.00	1.30E+00	1.30E+00	-2.51E-01	6.03E-01
RB-83	520.41	46.00	1.71E-01	1.71E-01	1.87E-02	7.98E-02
	529.64	30.30	2.55E-01		6.30E-02	1.19E-01
	552.65	16.40	4.73E-01		-7.23E-02	2.21E-01
KR-85	513.99	0.43	1.71E+01	1.71E+01	-1.42E+01	8.10E+00
SR-85	513.99	99.27	1.02E-01	1.02E-01	-8.45E-02	4.82E-02
Y-88	898.02	93.40	1.09E-01	8.17E-02	2.67E-02	5.07E-02
	1836.01	99.38	8.17E-02		-3.14E-03	3.48E-02
NB-93M	16.57	9.43	5.91E+03	5.91E+03	-6.32E+03	2.87E+03

Analysis Report for 1510086-14

CP0404S07-08

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
NB-94	702.63	100.00	8.76E-02	7.89E-02	2.42E-02	4.13E-02
	871.10	100.00	7.89E-02		-4.58E-03	3.65E-02
NB-95	765.79	99.81	1.68E-01	1.68E-01	1.14E-01	7.94E-02
NB-95M	235.69	25.00	1.00E+02	1.00E+02	-6.66E+02	4.87E+01
ZR-95	724.18	43.70	3.20E-01	1.82E-01	6.97E-02	1.52E-01
	756.72	55.30	1.82E-01		-4.96E-02	8.47E-02
MO-99	181.06	6.20	1.41E+03	9.32E+02	-3.43E+02	6.79E+02
	739.58	12.80	9.32E+02		4.37E+02	4.34E+02
	778.00	4.50	2.63E+03		-5.16E+02	1.22E+03
RU-103	497.08	89.00	1.12E-01	1.12E-01	3.70E-02	5.25E-02
RU-106	621.84	9.80	8.15E-01	8.15E-01	-2.30E-01	3.83E-01
AG-108M	433.93	89.90	6.93E-02	6.93E-02	1.94E-02	3.27E-02
	614.37	90.40	8.47E-02		-2.47E-02	3.99E-02
	722.95	90.50	8.96E-02		1.21E-02	4.20E-02
CD-109	88.03	*	3.72	1.65E+00	1.19E+00	8.04E-01
AG-110M	657.75	93.14	9.34E-02	9.34E-02	1.87E-02	4.40E-02
	677.61	10.53	7.98E-01		1.90E-01	3.74E-01
	706.67	16.46	5.53E-01		2.64E-03	2.60E-01
	763.93	21.98	4.23E-01		-2.40E-01	1.98E-01
	884.67	71.63	1.18E-01		-5.47E-02	5.43E-02
	1384.27	23.94	3.49E-01		1.42E-01	1.55E-01
CD-113M	263.70	0.02	2.64E+02	2.64E+02	1.19E+01	1.27E+02
SN-113	255.12	1.93	3.53E+00	1.14E-01	7.42E-01	1.69E+00
	391.69	64.90	1.14E-01		-2.82E-03	5.43E-02
TE123M	159.00	84.10	7.30E-02	7.30E-02	-1.87E-02	3.52E-02
SB-124	602.71	97.87	9.76E-02	9.76E-02	-2.50E-02	4.57E-02
	645.85	7.26	1.48E+00		3.55E-01	6.93E-01
	722.78	11.10	1.02E+00		1.38E-01	4.79E-01
	1691.02	49.00	2.23E-01		4.82E-02	9.76E-02
	35.49	6.49	6.00E+00	6.00E+00	3.12E+00	2.91E+00
SB-125	176.33	6.89	8.32E-01	2.20E-01	2.89E-01	4.02E-01
	427.89	29.33	2.20E-01		3.09E-02	1.04E-01
	463.38	10.35	7.16E-01		3.95E-01	3.40E-01
	600.56	17.80	4.38E-01		1.74E-01	2.07E-01
	635.90	11.32	6.85E-01		6.65E-02	3.22E-01
SB-126	414.70	83.30	3.64E-01	3.64E-01	8.41E-02	1.72E-01
	666.33	99.60	4.31E-01		1.57E-01	2.03E-01
	695.00	99.60	4.34E-01		2.19E-01	2.04E-01
SN-126	720.50	53.80	7.42E-01		2.49E-01	3.47E-01
	87.57	*	37.00	1.59E-01	1.14E-01	7.74E-02
SB-127	473.00	25.00	4.40E+01	3.89E+01	-9.85E+00	2.06E+01
	685.20	35.70	3.89E+01		9.24E+00	1.82E+01
	783.80	14.70	1.19E+02		8.27E+01	5.62E+01
I-129	29.78	57.00	1.32E+00	1.32E+00	2.17E-01	6.37E-01
	33.60	13.20	2.83E+00		9.57E-01	1.37E+00
	39.58	7.52	2.37E+00		8.60E-01	1.15E+00
I-131	284.30	6.05	1.12E+01	8.82E-01	-2.66E+00	5.34E+00
	364.48	81.20	8.82E-01		4.74E-01	4.17E-01
	636.97	7.26	1.35E+01		6.83E+00	6.36E+00
	722.89	1.80	5.61E+01		7.56E+00	2.63E+01
TE-132	49.72	13.10	3.23E+02	3.31E+01	-5.90E+01	1.56E+02
	228.16	88.00	3.31E+01		7.96E+00	1.59E+01
BA-133	81.00	33.00	1.33E-01	1.01E-01	-1.80E-02	6.45E-02

Analysis Report for 1510086-14

CP0404S07-08

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
BA-133	302.84	17.80	3.22E-01	1.01E-01	1.31E-02	1.53E-01
	356.01	60.00	1.01E-01		-1.10E-02	4.81E-02
I-133	529.87	86.30	9.79E+08	9.79E+08	-5.23E+08	4.56E+08
XE-133	81.00	38.00	5.51E+00	5.51E+00	-7.44E-01	2.66E+00
CS-134	563.23	8.38	7.57E-01	9.11E-02	-4.42E-02	3.53E-01
	569.32	15.43	4.12E-01		7.14E-02	1.92E-01
	604.70	97.60	9.11E-02		-1.37E-02	4.32E-02
	795.84	85.40	1.07E-01		5.17E-02	5.00E-02
	801.93	8.73	9.13E-01		-3.29E-01	4.24E-01
CS-135	268.24	16.00	3.96E-01	3.96E-01	-1.03E-01	1.90E-01
@ I-135	1131.51	22.50	1.00E+26	1.00E+26	1.00E+26	1.00E+20
@	1260.41	28.60	1.00E+26		1.00E+26	1.00E+20
@	1678.03	9.54	1.00E+26		1.00E+26	1.00E+20
CS-136	153.22	7.46	3.47E+00	3.75E-01	3.35E-01	1.68E+00
	163.89	4.61	5.65E+00		1.68E+00	2.73E+00
	176.55	13.56	1.88E+00		-1.23E+00	9.09E-01
	273.65	12.66	2.14E+00		1.04E+00	1.02E+00
	340.57	48.50	7.44E-01		-5.11E-01	3.58E-01
	818.50	99.70	3.75E-01		2.29E-01	1.75E-01
	1048.07	79.60	4.31E-01		-1.65E-01	1.95E-01
	1235.34	19.70	2.88E+00		-4.00E-01	1.35E+00
CS-137	661.65	85.12	9.84E-02	9.84E-02	-9.32E-03	4.64E-02
LA-138	788.74	34.00	2.55E-01	1.17E-01	1.28E-01	1.20E-01
	1435.80	66.00	1.17E-01		5.22E-02	5.20E-02
CE-139	165.85	80.35	8.14E-02	8.14E-02	2.62E-02	3.94E-02
BA-140	162.64	6.70	4.02E+00	1.21E+00	2.10E+00	1.94E+00
	304.84	4.50	6.15E+00		-2.06E-01	2.93E+00
	423.70	3.20	8.92E+00		-3.74E+00	4.20E+00
	437.55	2.00	1.40E+01		-1.43E+00	6.59E+00
	537.32	25.00	1.21E+00		-7.30E-02	5.64E-01
LA-140	328.77	20.50	1.64E+00	4.14E-01	1.85E+00	7.87E-01
	487.03	45.50	6.62E-01		-1.05E-01	3.11E-01
	815.85	23.50	1.55E+00		-9.13E-01	7.19E-01
	1596.49	95.49	4.14E-01		3.52E-02	1.83E-01
CE-141	145.44	48.40	2.23E-01	2.23E-01	1.47E-01	1.08E-01
CE-143	57.36	11.80	1.24E+06	5.32E+05	-2.66E+05	6.00E+05
	293.26	42.00	5.32E+05		2.88E+05	2.58E+05
	664.55	5.20	4.12E+06		4.93E+05	1.94E+06
CE-144	133.54	10.80	5.28E-01	5.28E-01	1.37E-01	2.56E-01
PM-144	476.78	42.00	1.55E-01	8.16E-02	8.85E-02	7.27E-02
	618.01	98.60	8.16E-02		8.92E-03	3.84E-02
	696.49	99.49	8.96E-02		2.41E-02	4.22E-02
PM-145	36.85	21.70	1.05E+00	5.39E-01	-5.02E-01	5.09E-01
	37.36	39.70	5.39E-01		-2.58E-01	2.61E-01
	42.30	15.10	9.64E-01		3.31E-01	4.68E-01
	72.40	2.31	2.39E+00		-5.40E-01	1.16E+00
PM-146	453.90	39.94	1.60E-01	1.60E-01	9.89E-02	7.55E-02
	735.90	14.01	5.10E-01		2.76E-02	2.36E-01
	747.13	13.10	6.00E-01		1.28E-01	2.80E-01
ND-147	91.11	28.90	1.53E+00	1.53E+00	8.88E-01	7.48E-01
	531.02	13.10	2.84E+00		-1.61E+00	1.32E+00
PM-149	285.90	3.10	1.71E+04	1.71E+04	-1.04E+02	8.14E+03
EU-152	121.78	20.50	2.49E-01	2.49E-01	-2.64E-02	1.21E-01

Analysis Report for 1510086-14
CP0404S07-08

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
EU-152	244.69	5.40	1.09E+00	2.49E-01	2.58E-01	5.23E-01
	344.27	19.13	3.24E-01		5.13E-02	1.54E-01
	778.89	9.20	8.14E-01		-1.28E-01	3.78E-01
	964.01	10.40	1.03E+00		-2.20E+00	4.83E-01
	1085.78	7.22	1.24E+00		2.54E-01	5.71E-01
	1112.02	9.60	9.60E-01		5.90E-04	4.42E-01
	1407.95	14.94	5.74E-01		1.97E-01	2.58E-01
	GD-153	97.43	31.30		1.88E-01	1.88E-01
103.18		22.20	2.38E-01	-2.74E-01	1.15E-01	
EU-154	123.07	40.50	1.30E-01	1.30E-01	6.57E-02	6.30E-02
	723.30	19.70	4.14E-01		5.58E-02	1.94E-01
	873.19	11.50	6.91E-01		-2.05E-02	3.20E-01
	996.32	10.30	8.97E-01		-2.08E-04	4.16E-01
	1004.76	17.90	5.11E-01		-1.13E-01	2.37E-01
+ EU-155	1274.45	35.50	2.17E-01	1.92E-01	-1.86E-01	9.73E-02
	86.50	* 30.90	1.92E-01		1.38E-01	9.37E-02
EU-156	105.30	* 20.70	2.38E-01	2.75E+00	1.58E-01	1.16E-01
	811.77	10.40	2.75E+00		-1.68E+00	1.27E+00
HO-166M	1153.47	7.20	5.18E+00	9.96E-02	-6.78E-02	2.39E+00
	1230.71	8.90	4.20E+00		-7.63E-01	1.94E+00
	184.41	72.60	9.96E-02		1.37E-01	4.85E-02
	280.45	29.60	1.98E-01		-7.59E-03	9.47E-02
	410.94	11.10	5.92E-01		3.38E-01	2.81E-01
TM-171	711.69	54.10	1.44E-01	3.97E+01	4.63E-02	6.75E-02
	66.72	0.14	3.97E+01		1.36E+01	1.92E+01
HF-172	81.75	4.52	1.01E+00	4.78E-01	-8.77E-01	4.89E-01
	125.81	11.30	4.78E-01		6.37E-02	2.32E-01
LU-172	181.53	20.60	5.70E+00	3.02E+00	5.76E-02	2.76E+00
	810.06	16.63	1.00E+01		1.76E-01	4.66E+00
	912.12	15.25	2.22E+01		5.29E+01	1.07E+01
	1093.66	62.50	3.02E+00		3.24E-01	1.39E+00
LU-173	100.72	5.24	1.01E+00	3.32E-01	-2.76E-01	4.91E-01
	272.11	21.20	3.32E-01		5.97E-02	1.60E-01
HF-175	343.40	84.00	1.02E-01	1.02E-01	1.47E-02	4.88E-02
LU-176	88.34	13.30	5.32E-01	6.12E-02	4.99E-01	2.61E-01
	201.83	86.00	7.01E-02		-1.13E-02	3.38E-02
	306.78	94.00	6.12E-02		-3.11E-03	2.91E-02
TA-182	67.75	41.20	1.53E-01	1.53E-01	-2.17E-02	7.40E-02
	1121.30	34.90	4.56E-01		5.65E-01	2.16E-01
	1189.05	16.23	6.91E-01		-2.47E-01	3.18E-01
	1221.41	26.98	4.66E-01		-5.08E-02	2.16E-01
	1231.02	11.44	1.02E+00		-1.18E-01	4.68E-01
IR-192	308.46	29.68	2.57E-01	1.75E-01	1.01E-01	1.22E-01
	468.07	48.10	1.75E-01		1.61E-02	8.25E-02
HG-203	279.19	* 77.30	1.34E-01	1.34E-01	6.64E-02	6.47E-02
BI-207	569.67	97.72	6.34E-02	6.34E-02	1.10E-02	2.95E-02
	1063.62	74.90	9.93E-02		3.64E-03	4.50E-02
+ TL-208	583.14	* 30.22	3.49E-01	1.26E-01	1.13E+00	1.67E-01
	860.37	* 4.48	1.83E+00		1.79E+00	8.49E-01
	2614.66	* 35.85	1.26E-01		1.17E+00	4.88E-02
BI-210M	262.00	45.00	1.30E-01	1.30E-01	-2.86E-02	6.22E-02
	300.00	23.00	2.73E-01		1.98E-01	1.31E-01
PB-210	46.50	4.25	2.72E+00	2.72E+00	2.77E+00	1.33E+00

Analysis Report for 1510086-14

CP0404S07-08

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
PB-211	404.84	2.90	2.09E+00	2.09E+00	2.74E-01	9.90E-01
	831.96	2.90	2.99E+00		6.42E-01	1.40E+00
+ BI-212	727.17 *	11.80	7.24E-01	7.24E-01	1.07E+00	3.40E-01
	1620.62	2.75	2.69E+00		8.85E-01	1.18E+00
+ PB-212	238.63 *	44.60	2.46E-01	2.46E-01	1.42E+00	1.20E-01
	300.09 *	3.41	3.69E+00		1.41E+00	1.80E+00
+ BI-214	609.31 *	46.30	2.01E-01	2.01E-01	1.23E+00	9.56E-02
	1120.29 *	15.10	8.45E-01		1.00E+00	3.99E-01
	1764.49 *	15.80	6.43E-01		1.51E+00	2.90E-01
	2204.22 *	4.98	1.01E+00		1.15E+00	3.99E-01
+ PB-214	295.21 *	19.19	6.53E-01	2.77E-01	1.49E+00	3.20E-01
	351.92 *	37.19	2.77E-01		1.40E+00	1.34E-01
RN-219	401.80	6.50	8.94E-01	8.94E-01	-4.48E-01	4.22E-01
RA-223	323.87	3.88	1.43E+00	1.43E+00	-1.14E+00	6.79E-01
+ RA-224	240.98 *	3.95	2.70E+00	2.70E+00	4.40E+00	1.32E+00
RA-225	40.00	31.00	2.17E+00	2.17E+00	7.88E-01	1.05E+00
+ RA-226	186.21 *	3.28	2.94E+00	2.94E+00	4.09E+00	1.44E+00
TH-227	50.10	8.40	9.80E-01	7.91E-01	-1.79E-01	4.75E-01
	236.00	11.50	7.91E-01		-5.27E+00	3.85E-01
	256.20	6.30	9.14E-01		-2.18E-01	4.38E-01
+ AC-228	338.32 *	11.40	9.43E-01	4.00E-01	1.90E+00	4.59E-01
	911.07 *	27.70	4.00E-01		1.42E+00	1.89E-01
	969.11 *	16.60	7.88E-01		1.92E+00	3.75E-01
TH-230	48.44	16.90	5.36E-01	5.36E-01	-4.60E-01	2.60E-01
	62.85	4.60	1.34E+00		1.21E+00	6.53E-01
	67.67	0.37	1.43E+01		-2.02E+00	6.91E+00
PA-231	283.67	1.60	3.40E+00	2.48E+00	-8.06E-01	1.62E+00
	302.67	2.30	2.48E+00		1.00E-01	1.18E+00
TH-231	25.64	14.70	1.67E+01	7.73E-01	8.40E+00	8.09E+00
	84.21	6.40	7.73E-01		8.06E-01	3.75E-01
PA-233	311.98	38.60	3.05E-01	3.05E-01	1.12E-01	1.45E-01
PA-234	131.20	20.40	2.74E-01	2.74E-01	4.45E-02	1.33E-01
	733.99	8.80	8.08E-01		8.54E-02	3.75E-01
	946.00	12.00	6.51E-01		1.30E-01	2.99E-01
PA-234M	1001.03	0.92	1.03E+01	1.03E+01	6.49E-01	4.77E+00
TH-234	63.29	3.80	1.62E+00	1.62E+00	1.46E+00	7.85E-01
U-235	143.76	10.50	5.27E-01	5.27E-01	-3.48E-01	2.55E-01
	163.35	4.70	1.18E+00		6.15E-01	5.69E-01
	205.31	4.70	1.30E+00		1.09E-02	6.27E-01
NP-237	86.50 *	12.60	4.66E-01	4.66E-01	3.36E-01	2.27E-01
NP-239	106.10	22.70	1.21E+03	1.21E+03	1.45E+02	5.86E+02
	228.18	10.70	2.96E+03		7.12E+02	1.42E+03
	277.60	14.10	2.39E+03		1.23E+03	1.15E+03
AM-241	59.54	35.90	1.60E-01	1.60E-01	-1.55E-02	7.72E-02
AM-243	74.67	66.00	1.14E-01	1.14E-01	-3.01E-01	5.59E-02
+ CM-243	209.75 *	3.29	2.70E+00	4.81E-01	2.69E+00	1.32E+00
	228.14	10.60	5.45E-01		1.31E-01	2.62E-01
	277.60 *	14.00	4.81E-01		2.38E-01	2.31E-01

Analysis Report for 1510086-14
CP0404S07-08

- + = Nuclide identified during the nuclide identification
 - * = Energy line found in the spectrum
 - > = MDA value not calculated
 - @ = Half-life too short to be able to perform the decay correction
-

No Action Level results available for reporting purposes.

DATA REVIEW COMMENTS REPORT

<i>Creation Date</i>	<i>Comment</i>	<i>User</i>
----------------------	----------------	-------------

No Data Review Comments Entered.

 ***** S P E C T R A L D A T A R E P O R T *****

Sample Title: CP0404S07-08

Elapsed Live time: 3600
Elapsed Real Time: 3601

Channel	0	0	0	0	0	0	2	204
1:	0	0	0	0	0	0	2	204
9:	585	1184	1051	414	629	1693	251	131
17:	134	117	118	107	134	111	114	119
25:	127	108	107	90	95	111	115	109
33:	133	100	114	104	122	97	125	111
41:	130	118	149	127	124	128	205	118
49:	112	111	107	114	114	102	94	89
57:	83	97	96	107	94	104	136	160
65:	111	107	112	123	100	120	128	124
73:	154	155	421	222	514	372	105	84
81:	115	81	93	136	138	96	196	204
89:	109	171	125	128	219	164	77	84
97:	72	94	99	97	66	56	71	77
105:	80	86	57	66	71	67	87	66
113:	70	66	71	63	59	64	68	56
121:	75	67	70	77	73	68	68	72
129:	91	94	59	75	72	68	70	61
137:	68	52	74	65	67	61	73	89
145:	58	67	91	65	76	59	63	65
153:	59	66	71	66	55	60	61	39
161:	55	60	64	78	42	59	56	71
169:	59	65	48	54	60	60	51	57
177:	52	60	44	65	40	54	54	64
185:	93	179	85	60	56	61	53	56
193:	50	58	45	54	48	42	65	49
201:	60	56	56	49	51	61	54	60
209:	97	78	49	43	48	46	56	54
217:	52	40	57	48	30	49	55	42
225:	32	46	45	41	40	36	42	46
233:	54	43	49	61	57	298	536	96
241:	102	149	65	29	32	41	28	28
249:	31	36	33	26	34	35	39	38
257:	28	36	41	29	36	40	41	30
265:	36	41	29	18	34	79	51	20
273:	33	43	36	31	38	45	38	28
281:	25	25	30	25	21	34	33	25
289:	26	29	37	27	24	57	205	109
297:	30	25	28	56	36	24	21	29
305:	26	28	29	33	20	27	21	27
313:	27	21	21	25	25	23	24	26
321:	22	32	26	21	18	20	37	51
329:	38	35	19	22	28	22	24	26
337:	33	126	101	24	35	35	22	27
345:	27	23	23	19	21	24	128	335
353:	104	18	28	34	23	19	21	26
361:	14	20	23	15	26	22	17	19

369: 19 20 33 11 23 22 28 9

Sample Title: CP0404S07-08

Channel	19	20	33	11	23	22	28	9
377:	31	23	14	25	31	20	28	17
385:	25	24	29	24	24	15	24	26
393:	26	22	22	23	21	24	23	15
401:	19	25	16	19	24	27	16	17
409:	29	37	24	10	18	23	13	18
417:	21	13	19	21	19	19	12	23
425:	15	19	23	22	19	19	15	23
433:	24	20	13	17	16	17	18	14
441:	13	15	19	17	17	16	14	19
449:	11	12	12	16	26	13	18	21
457:	13	14	21	17	12	15	53	27
465:	15	25	11	18	19	19	7	18
473:	11	9	25	15	11	12	19	14
481:	10	18	19	17	14	12	25	15
489:	14	17	17	18	13	12	16	12
497:	14	13	17	10	12	16	15	17
505:	19	17	16	26	24	69	100	46
513:	25	16	12	9	7	19	16	9
521:	15	14	17	17	5	12	20	13
529:	10	17	9	13	14	20	15	12
537:	12	18	12	15	10	13	14	17
545:	18	9	14	15	18	13	21	12
553:	7	12	15	11	16	20	19	14
561:	14	18	12	9	11	9	14	11
569:	15	11	12	8	16	11	8	16
577:	13	16	14	11	17	44	155	64
585:	6	12	9	11	7	9	12	10
593:	13	17	13	7	14	19	18	17
601:	10	9	4	12	9	10	16	57
609:	204	120	19	10	11	16	12	9
617:	11	13	16	14	11	11	9	14
625:	9	16	14	13	10	9	9	12
633:	11	15	15	8	11	11	11	17
641:	6	9	7	7	12	17	12	7
649:	19	12	13	10	7	13	12	11
657:	11	11	16	14	12	12	12	17
665:	15	18	9	8	14	12	8	11
673:	11	13	14	6	12	11	12	9
681:	9	8	9	17	8	8	6	8
689:	8	6	5	14	6	14	12	12
697:	10	20	14	11	13	18	14	12
705:	12	7	11	16	13	10	9	9
713:	8	7	10	6	9	15	5	7
721:	11	15	8	10	6	19	54	22
729:	7	10	7	7	8	9	4	9
737:	12	4	9	4	12	12	6	6
745:	4	11	17	10	11	7	6	9
753:	9	9	10	8	8	5	8	11
761:	11	9	15	10	12	12	9	18
769:	19	8	8	24	12	5	7	2
777:	15	8	10	4	10	7	12	10
785:	16	13	16	4	12	9	6	9
793:	3	11	26	16	10	9	3	7

801: 10 1 20 7 10 16 16 2

Sample Title: CP0404S07-08

Channel	1	2	3	4	5	6	7	8
809:	8	9	14	8	5	7	5	8
817:	9	13	5	9	11	4	5	6
825:	7	10	4	8	11	5	9	7
833:	9	15	13	14	8	8	11	8
841:	9	4	7	3	10	8	6	8
849:	9	8	3	8	2	6	7	7
857:	8	5	12	26	17	4	6	4
865:	8	8	10	7	6	4	7	6
873:	12	10	6	7	10	7	14	9
881:	8	2	12	2	7	10	8	7
889:	8	8	4	11	8	4	3	11
897:	9	9	9	8	8	4	11	13
905:	12	3	7	7	10	41	112	43
913:	10	6	5	10	6	8	5	3
921:	10	7	4	4	9	8	3	4
929:	7	5	7	10	11	17	11	7
937:	4	4	3	6	3	5	7	8
945:	2	5	5	5	12	7	6	10
953:	6	4	6	4	7	8	4	0
961:	5	4	8	20	23	9	14	37
969:	65	26	10	6	9	8	4	7
977:	8	10	7	2	6	10	9	4
985:	7	7	7	12	8	4	5	2
993:	7	9	4	13	7	5	12	8
1001:	16	7	5	7	7	7	6	5
1009:	12	5	5	6	7	8	4	4
1017:	2	8	9	6	5	2	6	6
1025:	6	6	13	2	8	11	8	4
1033:	3	8	4	7	5	4	8	6
1041:	5	3	4	6	4	5	7	3
1049:	3	6	4	9	5	3	7	5
1057:	4	6	5	0	5	9	5	4
1065:	5	4	5	2	11	7	6	7
1073:	5	7	6	5	6	12	4	8
1081:	5	10	6	5	7	9	5	4
1089:	5	5	10	7	9	9	3	5
1097:	9	6	5	5	10	7	5	7
1105:	6	10	8	6	8	9	6	3
1113:	3	11	7	8	5	5	15	39
1121:	20	10	9	5	5	6	8	5
1129:	4	4	5	6	7	8	10	6
1137:	6	4	5	4	8	10	3	7
1145:	6	1	10	7	6	7	6	9
1153:	6	7	12	4	7	9	6	4
1161:	4	2	8	10	10	6	3	0
1169:	5	9	7	10	3	12	7	8
1177:	8	6	5	3	4	6	9	8
1185:	8	8	9	7	9	5	3	3
1193:	8	8	8	9	5	6	8	6
1201:	6	7	3	9	9	16	5	4
1209:	3	12	3	8	11	5	7	13
1217:	9	8	8	8	1	12	4	13
1225:	7	5	6	6	7	8	8	8

1233: 3 5 12 5 18 21 15 6

Sample Title: CP0404S07-08

Channel	6	9	17	4	5	6	7	7
1241:	6	9	17	4	5	6	7	7
1249:	5	7	4	8	6	7	11	1
1257:	5	4	2	3	7	4	5	5
1265:	5	3	4	4	9	5	2	3
1273:	4	1	5	6	4	5	8	10
1281:	6	6	7	10	5	6	4	4
1289:	8	1	2	7	5	12	3	5
1297:	4	3	8	1	8	5	5	3
1305:	8	3	3	4	2	6	5	3
1313:	2	3	1	7	6	6	2	3
1321:	0	4	7	4	2	7	5	3
1329:	3	5	6	4	3	3	4	3
1337:	4	1	1	3	4	1	4	5
1345:	3	2	2	4	5	2	5	3
1353:	3	2	2	4	3	5	3	1
1361:	2	2	3	2	1	3	1	1
1369:	5	1	4	4	1	5	3	6
1377:	6	6	2	3	3	0	5	3
1385:	5	2	4	0	2	0	1	0
1393:	4	0	3	5	2	3	1	5
1401:	4	7	0	2	2	3	5	5
1409:	5	5	0	3	3	4	2	3
1417:	3	1	2	1	0	1	4	4
1425:	5	1	2	2	1	2	4	2
1433:	5	6	1	1	3	3	0	1
1441:	2	0	1	3	1	3	4	3
1449:	3	3	0	2	2	2	3	3
1457:	2	17	107	268	257	87	14	0
1465:	2	0	1	1	1	3	2	3
1473:	6	4	2	4	1	2	3	0
1481:	1	3	1	2	3	1	3	0
1489:	0	4	4	1	1	5	7	3
1497:	5	2	1	3	1	4	1	4
1505:	4	1	4	7	8	1	1	0
1513:	2	3	2	2	1	1	1	2
1521:	3	0	0	2	0	0	0	2
1529:	7	0	1	0	2	0	0	0
1537:	2	2	1	0	3	3	3	0
1545:	1	1	3	2	0	1	1	5
1553:	0	0	2	2	0	2	3	1
1561:	0	0	1	2	3	1	2	1
1569:	0	3	3	1	2	2	1	3
1577:	0	3	2	2	1	6	4	2
1585:	2	4	5	3	6	2	2	3
1593:	3	3	0	1	1	1	7	1
1601:	3	1	1	1	1	1	6	0
1609:	1	1	1	1	1	2	0	2
1617:	1	2	1	2	3	2	1	2
1625:	0	2	2	1	4	4	4	2
1633:	3	3	2	2	4	1	4	2
1641:	0	2	1	0	3	1	3	2
1649:	2	1	4	2	0	1	1	3
1657:	1	3	2	3	2	2	2	1

1665: 0 1 2 2 1 1 0 0

Sample Title: CP0404S07-08

Channel	1	2	3	4	5	6	7	8
1673:	0	1	0	4	2	1	2	2
1681:	2	1	1	5	0	2	3	2
1689:	2	0	2	1	3	2	1	0
1697:	0	1	2	1	2	0	2	1
1705:	2	0	1	1	0	3	2	0
1713:	1	0	0	0	0	0	1	1
1721:	1	2	0	0	2	0	0	2
1729:	7	1	1	1	0	2	0	1
1737:	1	1	1	0	1	0	2	0
1745:	1	0	0	1	0	0	1	1
1753:	1	1	1	2	0	1	3	0
1761:	3	2	15	24	23	4	2	2
1769:	2	2	2	0	1	1	0	0
1777:	0	2	2	0	2	2	0	0
1785:	2	4	0	1	3	1	1	0
1793:	0	0	1	1	1	2	2	3
1801:	2	1	2	2	2	0	1	0
1809:	1	0	0	0	1	1	1	0
1817:	0	2	0	0	1	1	2	1
1825:	1	0	2	2	0	4	0	1
1833:	2	1	2	1	2	2	0	0
1841:	1	1	1	0	1	2	6	3
1849:	1	0	3	2	1	0	0	1
1857:	0	1	1	0	1	0	1	2
1865:	0	1	0	0	1	1	0	1
1873:	1	5	0	2	2	1	2	0
1881:	1	1	2	2	0	1	0	0
1889:	0	1	1	3	2	0	2	1
1897:	3	0	0	1	1	1	2	2
1905:	1	1	2	2	1	1	2	0
1913:	0	1	0	2	0	1	1	1
1921:	1	1	1	3	1	1	0	1
1929:	0	1	0	1	1	2	1	1
1937:	2	0	2	0	5	0	0	1
1945:	1	3	0	1	0	0	0	0
1953:	4	2	0	0	0	3	2	3
1961:	0	0	0	0	1	1	0	1
1969:	0	0	0	1	1	3	1	1
1977:	2	2	1	0	3	0	0	1
1985:	0	0	0	0	1	1	1	3
1993:	1	1	2	4	0	1	0	2
2001:	0	1	0	1	2	1	0	2
2009:	2	2	1	0	2	0	0	3
2017:	0	1	1	3	0	2	0	1
2025:	1	1	1	2	1	2	0	0
2033:	0	2	1	0	0	0	1	3
2041:	0	2	0	1	1	3	2	0
2049:	3	1	1	0	2	1	2	2
2057:	1	0	2	1	1	3	2	1
2065:	1	2	1	1	1	2	0	0
2073:	1	1	0	1	1	0	1	2
2081:	1	1	2	3	0	2	1	0
2089:	0	0	0	1	1	0	1	1

2097: 0 1 0 4 9 0 7 6

Sample Title: CP0404S07-08

Channel	1	2	3	4	5	6	7	8
2105:	5	1	0	0	2	1	0	3
2113:	0	0	0	2	0	4	3	0
2121:	0	0	1	2	0	0	1	1
2129:	1	0	3	1	0	0	1	1
2137:	2	0	4	0	2	0	0	2
2145:	0	0	4	0	1	2	0	0
2153:	2	1	0	1	3	0	1	0
2161:	0	0	1	1	0	0	0	0
2169:	0	0	0	1	1	1	1	4
2177:	2	0	1	0	1	0	2	2
2185:	2	4	1	0	0	0	0	0
2193:	1	1	1	0	0	1	0	0
2201:	0	5	5	4	1	2	0	0
2209:	1	3	0	0	0	1	0	0
2217:	1	0	1	2	2	1	0	0
2225:	0	1	1	0	0	1	1	1
2233:	2	0	1	0	1	2	0	0
2241:	2	1	2	2	2	5	2	1
2249:	0	1	0	1	5	1	1	0
2257:	3	0	1	1	1	0	2	0
2265:	1	0	0	2	3	1	1	0
2273:	2	0	0	1	2	1	1	1
2281:	1	1	2	2	2	1	2	1
2289:	0	2	1	0	0	2	0	2
2297:	1	0	1	1	3	2	0	0
2305:	2	1	2	2	0	1	1	0
2313:	1	0	0	0	0	0	1	0
2321:	1	1	1	1	0	2	2	1
2329:	0	1	2	0	2	0	1	0
2337:	1	2	0	2	2	0	3	0
2345:	0	2	0	0	2	0	1	4
2353:	0	1	0	1	0	1	1	3
2361:	1	2	2	0	2	2	0	0
2369:	1	0	2	2	3	1	0	3
2377:	1	1	2	1	3	2	0	1
2385:	0	0	0	1	1	0	1	2
2393:	2	0	1	1	0	0	2	2
2401:	0	0	0	0	0	1	1	2
2409:	1	0	2	1	0	0	0	0
2417:	0	1	0	0	2	1	4	1
2425:	0	0	0	1	1	1	1	1
2433:	0	1	0	3	0	0	0	0
2441:	1	0	1	1	2	1	1	3
2449:	2	0	0	0	0	0	2	0
2457:	2	0	0	0	1	1	1	0
2465:	0	1	1	0	1	1	1	0
2473:	2	0	0	0	0	0	0	1
2481:	2	0	1	1	0	1	1	1
2489:	0	1	0	2	2	1	0	0
2497:	0	1	0	1	0	1	1	0
2505:	2	0	0	1	1	0	0	0
2513:	0	0	1	0	0	0	0	0
2521:	0	0	0	0	0	1	0	0

2529: 1 1 0 0 0 1 0 0

Sample Title: CP0404S07-08

Channel	1	2	3	4	5	6	7	8
2537:	0	1	0	1	0	0	0	0
2545:	0	0	2	0	0	0	0	0
2553:	0	0	0	0	1	1	1	0
2561:	0	0	0	0	2	0	1	2
2569:	0	1	0	1	0	0	1	1
2577:	0	1	0	0	1	1	0	0
2585:	0	0	1	0	0	0	0	0
2593:	1	0	0	0	1	0	1	0
2601:	0	0	0	1	0	0	1	0
2609:	0	0	8	22	37	29	15	5
2617:	3	0	0	1	1	0	1	0
2625:	0	0	0	0	1	0	0	0
2633:	1	1	0	0	0	0	0	0
2641:	1	0	1	0	0	0	0	0
2649:	2	1	1	1	0	0	1	0
2657:	0	0	0	0	0	0	0	0
2665:	0	0	0	0	0	0	0	0
2673:	0	0	0	0	0	0	0	0
2681:	1	0	0	0	0	2	0	0
2689:	0	0	0	0	0	2	1	0
2697:	0	0	0	0	0	0	0	0
2705:	0	0	0	0	0	0	0	1
2713:	0	0	1	0	0	0	0	0
2721:	1	0	0	1	0	0	0	2
2729:	0	1	1	0	0	0	0	0
2737:	0	0	0	3	0	1	1	0
2745:	0	0	0	0	2	0	0	0
2753:	0	0	0	1	0	0	0	0
2761:	1	1	0	1	0	0	0	2
2769:	0	0	0	0	0	0	1	1
2777:	0	0	0	0	0	1	0	0
2785:	0	0	1	0	1	0	0	1
2793:	0	1	0	0	1	1	0	0
2801:	0	0	0	1	0	0	1	0
2809:	0	0	0	0	0	1	0	0
2817:	0	1	2	0	1	0	0	0
2825:	0	0	0	0	0	0	0	0
2833:	0	1	0	1	0	0	0	0
2841:	0	0	1	0	1	1	0	1
2849:	0	0	0	0	0	1	0	0
2857:	0	0	0	0	0	0	0	0
2865:	1	1	1	0	0	1	0	0
2873:	0	0	0	1	0	0	0	0
2881:	0	0	0	0	1	0	0	0
2889:	0	0	0	0	0	0	0	0
2897:	0	0	1	0	0	1	0	0
2905:	1	0	0	1	0	0	1	0
2913:	0	1	0	0	0	1	0	0
2921:	0	0	1	0	0	0	0	0
2929:	0	0	0	0	0	0	0	0
2937:	0	0	0	0	1	0	0	1
2945:	0	0	1	0	0	0	0	0
2953:	0	0	0	1	0	0	0	0

2961: 0 0 0 0 1 0 1 0

Sample Title: CP0404S07-08

Channel	1	2	3	4	5	6	7	8	9
2969:	1	1	0	0	0	0	0	0	0
2977:	0	0	0	0	0	0	1	0	0
2985:	0	0	0	0	0	0	0	0	1
2993:	0	0	0	0	0	0	0	0	0
3001:	0	0	0	0	0	0	0	1	1
3009:	0	0	0	0	1	0	0	0	0
3017:	0	0	0	0	0	0	0	1	0
3025:	0	0	0	0	0	0	0	0	2
3033:	0	0	0	0	0	0	0	0	0
3041:	0	0	0	0	0	0	0	0	0
3049:	0	0	0	1	0	0	0	0	0
3057:	0	0	0	0	0	0	0	0	0
3065:	0	0	1	1	0	0	0	0	0
3073:	0	0	0	0	0	0	0	0	0
3081:	1	0	0	0	0	0	0	0	0
3089:	1	0	0	0	0	0	0	0	1
3097:	0	0	0	0	0	0	0	1	0
3105:	0	0	0	0	0	0	0	0	0
3113:	0	0	0	0	0	0	1	0	0
3121:	0	0	0	2	0	1	1	0	0
3129:	0	1	0	0	1	0	0	0	0
3137:	0	0	0	0	0	0	0	0	0
3145:	0	0	0	0	0	0	0	0	1
3153:	0	0	2	1	1	1	1	0	1
3161:	0	0	0	0	0	0	0	0	0
3169:	0	0	0	0	0	0	1	1	0
3177:	0	0	0	0	0	0	0	0	0
3185:	1	0	1	0	0	0	0	0	0
3193:	0	0	0	2	0	0	0	2	0
3201:	0	0	0	0	0	0	0	0	1
3209:	1	0	0	1	0	0	0	0	1
3217:	1	0	0	0	1	0	0	0	0
3225:	1	0	0	0	2	1	1	1	0
3233:	0	0	0	0	0	0	0	0	0
3241:	1	0	0	0	0	0	0	0	0
3249:	0	0	0	0	0	0	0	0	1
3257:	0	0	0	0	0	1	0	0	0
3265:	0	0	0	0	0	1	0	0	0
3273:	0	0	0	0	0	0	0	0	0
3281:	0	0	0	0	0	0	0	0	0
3289:	1	0	0	0	0	0	0	0	0
3297:	0	0	1	0	0	0	1	1	0
3305:	0	0	0	0	0	0	0	0	0
3313:	0	1	0	0	0	0	0	0	0
3321:	0	0	0	1	0	0	0	0	0
3329:	0	0	0	0	0	0	0	1	0
3337:	0	0	1	0	0	0	0	0	0
3345:	1	0	0	0	0	0	0	0	0
3353:	0	0	0	0	0	1	0	0	1
3361:	1	1	1	0	0	0	0	0	0
3369:	0	0	0	0	0	0	0	0	0
3377:	0	0	0	0	0	0	0	0	0
3385:	0	0	0	0	0	0	0	0	0

3393: 0 1 0 0 0 0 0 0 0

Sample Title: CP0404S07-08

Channel	1	2	3	4	5	6	7	8
3401:	0	0	0	1	0	0	0	0
3409:	0	0	0	0	0	0	0	0
3417:	0	0	0	0	0	0	0	0
3425:	0	0	0	0	0	0	1	1
3433:	0	1	0	0	0	1	0	0
3441:	0	0	0	0	0	1	0	0
3449:	0	0	0	0	0	0	0	0
3457:	0	1	0	1	0	0	0	0
3465:	0	1	0	0	0	0	0	0
3473:	0	0	0	0	0	1	0	0
3481:	1	0	0	0	0	1	0	0
3489:	0	0	1	0	0	0	0	1
3497:	0	1	1	0	0	0	0	0
3505:	0	1	0	0	0	0	0	0
3513:	0	0	0	0	0	0	0	0
3521:	0	0	0	1	0	0	0	0
3529:	0	0	0	0	0	0	0	0
3537:	0	0	0	0	0	0	0	0
3545:	0	0	1	0	0	0	0	1
3553:	0	0	1	1	0	1	0	1
3561:	0	0	1	1	0	0	0	0
3569:	0	0	0	0	0	0	0	0
3577:	1	0	0	0	0	1	0	0
3585:	0	0	0	1	0	0	1	0
3593:	0	0	0	0	0	0	1	0
3601:	0	0	0	0	0	0	0	1
3609:	0	0	0	0	0	0	1	0
3617:	0	0	0	0	0	0	0	0
3625:	0	0	0	0	0	0	0	0
3633:	0	0	0	0	0	0	0	1
3641:	0	0	0	0	0	1	0	1
3649:	0	0	0	0	0	1	0	1
3657:	0	1	0	0	0	0	0	0
3665:	0	0	0	0	0	0	0	1
3673:	0	0	0	0	0	0	0	0
3681:	0	0	0	0	0	0	0	0
3689:	1	0	0	0	0	0	0	0
3697:	0	0	0	0	0	0	0	0
3705:	0	0	0	3	0	0	0	0
3713:	0	1	0	0	0	0	0	0
3721:	0	0	0	0	0	0	0	0
3729:	0	0	0	0	0	0	0	0
3737:	0	0	0	0	0	0	0	0
3745:	0	0	0	0	0	0	0	0
3753:	0	0	0	0	1	0	1	1
3761:	0	0	0	0	0	1	0	0
3769:	0	0	0	0	0	1	0	0
3777:	0	0	0	0	0	0	0	1
3785:	0	0	1	0	1	0	0	0
3793:	0	0	0	0	0	1	0	0
3801:	0	0	0	0	0	0	1	0
3809:	0	0	0	0	0	0	0	0
3817:	0	0	0	0	0	0	0	0

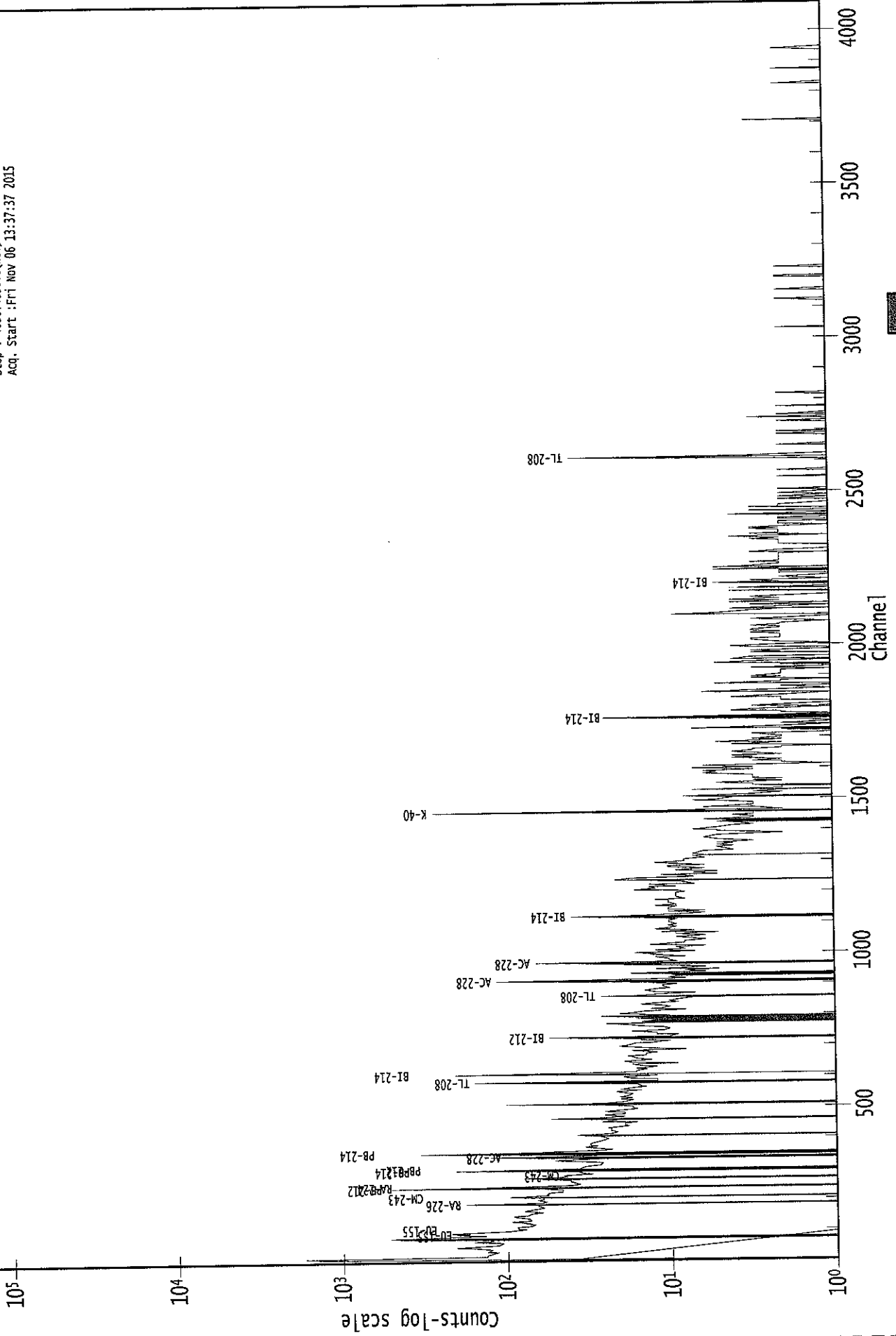
3825: 1 2 0 0 0 0 0 1

Sample Title: CP0404S07-08

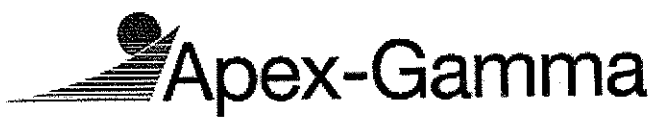
Channel	1	2	3	4	5	6	7	8	9
3833:	0	0	0	0	0	1	0	1	
3841:	1	0	0	0	0	0	1	0	
3849:	1	0	0	0	1	0	0	0	
3857:	0	0	0	0	0	0	0	0	
3865:	0	0	0	0	0	0	0	0	
3873:	2	0	0	0	0	0	0	0	
3881:	0	1	0	0	0	0	0	0	
3889:	0	0	0	0	0	1	0	0	
3897:	0	0	0	0	0	0	0	0	
3905:	0	1	0	0	0	0	0	0	
3913:	0	0	0	0	0	0	0	0	
3921:	0	0	0	0	0	1	0	1	
3929:	0	1	0	0	1	1	0	0	
3937:	0	0	2	0	0	2	1	0	
3945:	0	1	0	0	0	0	0	0	
3953:	0	0	1	0	0	0	0	0	
3961:	0	0	0	0	0	0	0	0	
3969:	0	0	0	0	0	0	1	0	
3977:	0	1	0	0	0	0	0	0	
3985:	0	0	0	0	0	0	0	0	
3993:	0	0	0	0	0	0	0	0	
4001:	0	0	0	0	0	1	0	0	
4009:	0	0	0	0	0	0	0	0	
4017:	0	0	1	0	0	0	0	0	
4025:	0	0	0	0	0	0	0	0	
4033:	0	0	0	0	0	0	0	0	
4041:	1	0	0	0	0	0	0	0	
4049:	0	0	0	0	0	1	0	0	
4057:	0	0	0	0	0	0	0	0	
4065:	0	0	0	0	0	0	0	0	
4073:	0	0	1	0	1	0	0	0	
4081:	0	1	0	0	0	0	0	1	
4089:	1	0	0	0	0	0	0	0	

0000029266.CNF

Live Time : 3600.000 sec
Real Time : 3601.210 sec
Start: 1: 0.9(keV)
Stop : 4096:4096.6(keV)
Acq. Start : Fri Nov 06 13:37:37 2015



MS
11/6/15



Analysis Report for 1510086-15
CP0404S10-11

GAMMA SPECTRUM ANALYSIS

Sample Identification	: 1510086-15
Sample Description	: CP0404S10-11
Sample Type	: SOIL
Sample Size	: 5.425E+02 grams
Facility	: Countroom
Sample Taken On	: 10/8/2015 7:58:45AM
Acquisition Started	: 11/6/2015 1:37:46PM
Procedure	: GAS-1402 pCi
Operator	: Administrator
Detector Name	: GE3
Geometry	: GAS-1402
Live Time	: 3600.0 seconds
Real Time	: 3617.2 seconds
Dead Time	: 0.48 %
Peak Locate Threshold	: 2.50
Peak Locate Range (in channels)	: 1 - 4096
Peak Area Range (in channels)	: 9 - 4096
Identification Energy Tolerance	: 1.000 keV
Energy Calibration Used Done On	: 10/25/2014
Efficiency Calibration Used Done On	: 10/25/2014
Efficiency Calibration Description	:
Sample Number	: 29267

PEAK-TO-TOTAL CALIBRATION REPORT

Peak-to-Total Efficiency Calibration Equation

AG
11/9/15

Analysis Report for 1510086-15
CP0404S10-11

PEAK LOCATE REPORT

Peak Locate Performed on : 11/6/2015 2:38:08PM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096
Peak Search Sensitivity : 2.50

Peak No.	Energy (keV)	Centroid Channel	Centroid Uncertainty	Peak Significance
1	46.49	46.72	0.0000	0.00
2	76.34	76.56	0.0000	0.00
3	87.94	88.15	0.0000	0.00
4	92.64	92.85	0.0000	0.00
5	129.45	129.63	0.0000	0.00
6	186.04	186.20	0.0000	0.00
7	192.37	192.52	0.0000	0.00
8	209.77	209.92	0.0000	0.00
9	238.76	238.88	0.0000	0.00
10	241.87	242.00	0.0000	0.00
11	295.29	295.39	0.0000	0.00
12	327.70	327.78	0.0000	0.00
13	338.39	338.46	0.0000	0.00
14	352.02	352.09	0.0000	0.00
15	462.70	462.71	0.0000	0.00
16	511.03	511.02	0.0000	0.00
17	562.53	562.49	0.0000	0.00
18	583.46	583.42	0.0000	0.00
19	596.85	596.80	0.0000	0.00
20	601.25	601.20	0.0000	0.00
21	609.40	609.34	0.0000	0.00
22	727.16	727.04	0.0000	0.00
23	768.19	768.06	0.0000	0.00
24	786.12	785.98	0.0000	0.00
25	792.38	792.24	0.0000	0.00
26	795.14	795.00	0.0000	0.00
27	906.91	906.72	0.0000	0.00
28	911.43	911.24	0.0000	0.00
29	935.25	935.05	0.0000	0.00
30	968.85	968.63	0.0000	0.00
31	1070.52	1070.25	0.0000	0.00
32	1120.39	1120.10	0.0000	0.00
33	1153.41	1153.11	0.0000	0.00
34	1230.00	1229.67	0.0000	0.00
35	1237.36	1237.02	0.0000	0.00
36	1386.52	1386.13	0.0000	0.00
37	1400.83	1400.43	0.0000	0.00
38	1460.90	1460.48	0.0000	0.00
39	1509.34	1508.90	0.0000	0.00
40	1520.93	1520.48	0.0000	0.00
41	1592.92	1592.45	0.0000	0.00
42	1600.47	1600.00	0.0000	0.00

Analysis Report for 1510086-15
CP0404S10-11

<i>Peak No.</i>	<i>Energy (keV)</i>	<i>Centroid Channel</i>	<i>Centroid Uncertainty</i>	<i>Peak Significance</i>
43	1630.43	1629.94	0.0000	0.00
44	1663.39	1662.89	0.0000	0.00
45	1729.16	1728.64	0.0000	0.00
46	1764.58	1764.05	0.0000	0.00
47	1881.93	1881.36	0.0000	0.00
48	1890.34	1889.77	0.0000	0.00
49	2014.44	2013.82	0.0000	0.00
50	2103.64	2103.00	0.0000	0.00
51	2122.18	2121.53	0.0000	0.00
52	2204.17	2203.50	0.0000	0.00
53	2242.81	2242.13	0.0000	0.00
54	2261.69	2261.00	0.0000	0.00
55	2328.07	2327.37	0.0000	0.00
56	2614.06	2613.28	0.0000	0.00

? = Adjacent peak noted
Errors quoted at 2.000sigma

Analysis Report for 1510086-15
CP0404S10-11

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 11/6/2015 2:38:08PM

Peak Analysis From Channel : 1
Peak Analysis To Channel : 4096

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	FWHM (keV)
1	46.49	44 -	49	46.72	1.53E+02	76.81	1.06E+03	1.56
2	76.34	71 -	82	76.56	1.24E+03	166.32	2.80E+03	3.91
m 3	87.94	83 -	97	88.15	2.55E+02	74.47	8.97E+02	1.68
m 4	92.64	83 -	97	92.85	2.98E+02	76.44	8.07E+02	1.69
5	129.45	126 -	133	129.63	6.73E+01	81.31	1.05E+03	4.50
6	186.04	183 -	189	186.20	1.53E+02	70.11	7.80E+02	1.49
7	192.37	190 -	196	192.52	5.12E+01	63.00	6.76E+02	0.98
8	209.77	206 -	214	209.92	7.71E+01	75.19	8.20E+02	2.45
M 9	238.76	234 -	246	238.88	8.48E+02	69.44	3.43E+02	1.76
m 10	241.87	234 -	246	242.00	1.78E+02	76.35	4.40E+02	2.29
11	295.29	292 -	299	295.39	2.68E+02	62.00	4.66E+02	1.92
12	327.70	323 -	332	327.78	8.22E+01	54.70	3.82E+02	1.79
13	338.39	334 -	342	338.46	1.05E+02	60.59	5.03E+02	1.87
14	352.02	348 -	356	352.09	4.23E+02	61.63	3.25E+02	1.59
15	462.70	459 -	466	462.71	3.37E+01	37.89	2.19E+02	1.19
16	511.03	506 -	514	511.02	1.44E+02	42.83	1.93E+02	1.51
17	562.53	559 -	565	562.49	2.71E+01	25.83	1.02E+02	2.97
18	583.46	578 -	588	583.42	1.96E+02	50.56	2.36E+02	2.14
M 19	596.85	593 -	604	596.80	2.34E+01	26.15	1.11E+02	2.19
m 20	601.25	593 -	604	601.20	2.52E+01	25.45	9.87E+01	2.20
21	609.40	605 -	614	609.34	2.84E+02	48.31	1.75E+02	1.98
22	727.16	724 -	731	727.04	6.43E+01	30.53	1.13E+02	1.80
23	768.19	763 -	772	768.06	4.39E+01	34.00	1.40E+02	2.42
24	786.12	780 -	790	785.98	3.48E+01	30.38	1.04E+02	4.37
M 25	792.38	791 -	801	792.24	1.46E+01	8.89	1.74E+01	2.55
m 26	795.14	791 -	801	795.00	4.32E+01	20.37	4.58E+01	2.11
M 27	906.91	905 -	916	906.72	1.34E+01	11.53	3.00E+01	2.88
M 28	911.43	905 -	916	911.24	1.37E+02	30.55	7.00E+01	2.34
m 29	935.25	930 -	941	935.05	2.70E+01	32.56	1.16E+02	2.22
30	968.85	965 -	973	968.63	4.60E+01	37.67	1.82E+02	1.58
31	1070.52	1064 -	1076	1070.25	3.44E+01	27.29	7.12E+01	3.50
32	1120.39	1115 -	1122	1120.10	3.62E+01	27.78	1.06E+02	1.59
33	1153.41	1149 -	1155	1153.11	2.22E+01	19.90	5.55E+01	1.62
34	1230.00	1225 -	1233	1229.67	3.03E+01	25.39	7.93E+01	1.47
35	1237.36	1234 -	1241	1237.02	3.30E+01	25.38	8.79E+01	2.43
36	1386.52	1383 -	1391	1386.13	1.02E+01	13.76	2.36E+01	1.05
37	1400.83	1397 -	1402	1400.43	8.18E+00	11.05	1.76E+01	1.79
38	1460.90	1454 -	1466	1460.48	5.04E+02	48.43	3.88E+01	2.41
39	1509.34	1505 -	1513	1508.90	2.00E+01	14.04	1.80E+01	2.68
40	1520.93	1518 -	1522	1520.48	6.25E+00	7.66	7.50E+00	1.72

Analysis Report for 1510086-15
CP0404S10-11

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	FWHM (keV)
41	1592.92	1590 -	1595	1592.45	1.16E+01	11.58	1.68E+01	3.22
42	1600.47	1598 -	1602	1600.00	7.00E+00	5.29	0.00E+00	2.50
43	1630.43	1626 -	1634	1629.94	1.06E+01	8.50	4.85E+00	1.44
44	1663.39	1660 -	1667	1662.89	1.22E+01	9.59	5.60E+00	4.43
45	1729.16	1725 -	1731	1728.64	1.40E+01	7.48	0.00E+00	2.53
46	1764.58	1760 -	1769	1764.05	3.20E+01	16.25	1.80E+01	2.31
47	1881.93	1877 -	1885	1881.36	1.10E+01	6.63	0.00E+00	4.70
48	1890.34	1886 -	1894	1889.77	9.50E+00	8.26	5.00E+00	3.31
49	2014.44	2010 -	2017	2013.82	7.25E+00	9.80	9.50E+00	2.99
50	2103.64	2099 -	2106	2103.00	1.51E+01	11.49	1.18E+01	4.05
51	2122.18	2119 -	2124	2121.53	7.60E+00	7.62	4.80E+00	2.85
52	2204.17	2198 -	2207	2203.50	1.70E+01	11.75	1.00E+01	3.50
53	2242.81	2239 -	2245	2242.13	8.00E+00	5.66	0.00E+00	4.49
54	2261.69	2256 -	2264	2261.00	8.00E+00	5.66	0.00E+00	2.88
55	2328.07	2322 -	2332	2327.37	1.90E+01	8.72	0.00E+00	5.85
56	2614.06	2608 -	2617	2613.28	7.23E+01	18.92	9.32E+00	2.18

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 11/6/2015 2:38:08PM

Peak Analysis From Channel : 1
Peak Analysis To Channel : 4096

Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
	1	44 -	49	1.53E+02	76.81	1.06E+03	5.98E+01
	2	71 -	82	1.24E+03	166.32	2.80E+03	1.24E+02
m	3	83 -	97	2.55E+02	74.47	8.97E+02	4.92E+01
m	4	83 -	97	2.98E+02	76.44	8.07E+02	4.67E+01
	5	126 -	133	6.73E+01	81.31	1.05E+03	6.55E+01
	6	183 -	189	1.53E+02	70.11	7.80E+02	5.39E+01
	7	190 -	196	5.12E+01	63.00	6.76E+02	5.04E+01
	8	206 -	214	7.71E+01	75.19	8.20E+02	6.01E+01
M	9	234 -	246	8.48E+02	69.44	3.43E+02	3.05E+01
m	10	234 -	246	1.78E+02	76.35	4.40E+02	3.45E+01
	11	292 -	299	2.68E+02	62.00	4.66E+02	4.33E+01
	12	323 -	332	8.22E+01	54.70	3.82E+02	4.24E+01

: 00840

Analysis Report for 1510086-15

CP0404S10-11

Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level	
13	338.39	334 -	342	1.05E+02	60.59	5.03E+02	4.69E+01	
14	352.02	348 -	356	4.23E+02	61.63	3.25E+02	3.77E+01	
15	462.70	459 -	466	3.37E+01	37.89	2.19E+02	2.97E+01	
16	511.03	506 -	514	1.44E+02	42.83	1.93E+02	2.91E+01	
17	562.53	559 -	565	2.71E+01	25.83	1.02E+02	1.94E+01	
18	583.46	578 -	588	1.96E+02	50.56	2.36E+02	3.46E+01	
M	19	596.85	593 -	604	2.34E+01	26.15	1.11E+02	1.73E+01
m	20	601.25	593 -	604	2.52E+01	25.45	9.87E+01	1.63E+01
	21	609.40	605 -	614	2.84E+02	48.31	1.75E+02	2.85E+01
	22	727.16	724 -	731	6.43E+01	30.53	1.13E+02	2.14E+01
	23	768.19	763 -	772	4.39E+01	34.00	1.40E+02	2.57E+01
	24	786.12	780 -	790	3.48E+01	30.38	1.04E+02	2.30E+01
M	25	792.38	791 -	801	1.46E+01	8.89	1.74E+01	6.85E+00
m	26	795.14	791 -	801	4.32E+01	20.37	4.58E+01	1.11E+01
M	27	906.91	905 -	916	1.34E+01	11.53	3.00E+01	9.00E+00
m	28	911.43	905 -	916	1.37E+02	30.55	7.00E+01	1.38E+01
	29	935.25	930 -	941	2.70E+01	32.56	1.16E+02	2.54E+01
	30	968.85	965 -	973	4.60E+01	37.67	1.82E+02	2.89E+01
	31	1070.52	1064 -	1076	3.44E+01	27.29	7.12E+01	2.03E+01
	32	1120.39	1115 -	1122	3.62E+01	27.78	1.06E+02	2.06E+01
	33	1153.41	1149 -	1155	2.22E+01	19.90	5.55E+01	1.44E+01
	34	1230.00	1225 -	1233	3.03E+01	25.39	7.93E+01	1.88E+01
	35	1237.36	1234 -	1241	3.30E+01	25.38	8.79E+01	1.86E+01
	36	1386.52	1383 -	1391	1.02E+01	13.76	2.36E+01	1.00E+01
	37	1400.83	1397 -	1402	8.18E+00	11.05	1.76E+01	7.77E+00
	38	1460.90	1454 -	1466	5.04E+02	48.43	3.88E+01	1.50E+01
	39	1509.34	1505 -	1513	2.00E+01	14.04	1.80E+01	8.89E+00
	40	1520.93	1518 -	1522	6.25E+00	7.66	7.50E+00	4.78E+00
	41	1592.92	1590 -	1595	1.16E+01	11.58	1.68E+01	7.69E+00
	42	1600.47	1598 -	1602	7.00E+00	5.29	0.00E+00	0.00E+00
	43	1630.43	1626 -	1634	1.06E+01	8.50	4.85E+00	4.50E+00
	44	1663.39	1660 -	1667	1.22E+01	9.59	5.60E+00	5.40E+00
	45	1729.16	1725 -	1731	1.40E+01	7.48	0.00E+00	0.00E+00
	46	1764.58	1760 -	1769	3.20E+01	16.25	1.80E+01	9.58E+00
	47	1881.93	1877 -	1885	1.10E+01	6.63	0.00E+00	0.00E+00
	48	1890.34	1886 -	1894	9.50E+00	8.26	5.00E+00	4.52E+00
	49	2014.44	2010 -	2017	7.25E+00	9.80	9.50E+00	6.73E+00
	50	2103.64	2099 -	2106	1.51E+01	11.49	1.18E+01	6.96E+00
	51	2122.18	2119 -	2124	7.60E+00	7.62	4.80E+00	4.32E+00
	52	2204.17	2198 -	2207	1.70E+01	11.75	1.00E+01	6.88E+00
	53	2242.81	2239 -	2245	8.00E+00	5.66	0.00E+00	0.00E+00
	54	2261.69	2256 -	2264	8.00E+00	5.66	0.00E+00	0.00E+00
	55	2328.07	2322 -	2332	1.90E+01	8.72	0.00E+00	0.00E+00
	56	2614.06	2608 -	2617	7.23E+01	18.92	9.32E+00	6.81E+00

Analysis Report for 1510086-15
CP0404S10-11

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

PEAK WITH NID REPORT

Peak Analysis Performed on : 11/6/2015 2:38:08PM

Peak Analysis From Channel : 1
Peak Analysis To Channel : 4096

Tentative NID Library : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB
Peak Match Tolerance : 1.000 keV

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
	1	44 -	49	46.72	1.53E+02	76.81	1.06E+03	PB-210
	2	71 -	82	76.56	1.24E+03	166.32	2.80E+03	.....
m	3	83 -	97	88.15	2.55E+02	74.47	8.97E+02	CD-109 SN-126 LU-176
	4	83 -	97	92.85	2.98E+02	76.44	8.07E+02	GA-67
m	5	126 -	133	129.63	6.73E+01	81.31	1.05E+03	.....
	6	183 -	189	186.20	1.53E+02	70.11	7.80E+02	RA-226
	7	190 -	196	192.52	5.12E+01	63.00	6.76E+02	.....
	8	206 -	214	209.92	7.71E+01	75.19	8.20E+02	CM-243 GA-67
M	9	234 -	246	238.88	8.48E+02	69.44	3.43E+02	PB-212
m	10	234 -	246	242.00	1.78E+02	76.35	4.40E+02	RA-224
	11	292 -	299	295.39	2.68E+02	62.00	4.66E+02	PB-214
	12	323 -	332	327.78	8.22E+01	54.70	3.82E+02	.....
	13	334 -	342	338.46	1.05E+02	60.59	5.03E+02	AC-228
	14	348 -	356	352.09	4.23E+02	61.63	3.25E+02	PB-214
	15	459 -	466	462.71	3.37E+01	37.89	2.19E+02	SB-125
	16	506 -	514	511.02	1.44E+02	42.83	1.93E+02	.....
	17	559 -	565	562.49	2.71E+01	25.83	1.02E+02	CS-134
	18	578 -	588	583.42	1.96E+02	50.56	2.36E+02	TL-208
M	19	593 -	604	596.80	2.34E+01	26.15	1.11E+02	.....
m	20	593 -	604	601.20	2.52E+01	25.45	9.87E+01	SB-125
	21	605 -	614	609.34	2.84E+02	48.31	1.75E+02	BI-214
	22	724 -	731	727.04	6.43E+01	30.53	1.13E+02	BI-212
	23	763 -	772	768.06	4.39E+01	34.00	1.40E+02	.....
	24	780 -	790	785.98	3.48E+01	30.38	1.04E+02	.....
M	25	791 -	801	792.24	1.46E+01	8.89	1.74E+01	.....
m	26	791 -	801	795.00	4.32E+01	20.37	4.58E+01	CS-134
M	27	905 -	916	906.72	1.34E+01	11.53	3.00E+01	.....

Analysis Report for 1510086-15

CP0404S10-11

	Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
m	28	911.43	905 -	916	911.24	1.37E+02	30.55	7.00E+01	AC-228 LU-172
	29	935.25	930 -	941	935.05	2.70E+01	32.56	1.16E+02	.....
	30	968.85	965 -	973	968.63	4.60E+01	37.67	1.82E+02	AC-228
	31	1070.52	1064 -	1076	1070.25	3.44E+01	27.29	7.12E+01	.....
	32	1120.39	1115 -	1122	1120.10	3.62E+01	27.78	1.06E+02	BI-214 SC-46 TA-182
	33	1153.41	1149 -	1155	1153.11	2.22E+01	19.90	5.55E+01	EU-156
	34	1230.00	1225 -	1233	1229.67	3.03E+01	25.39	7.93E+01	EU-156
	35	1237.36	1234 -	1241	1237.02	3.30E+01	25.38	8.79E+01	CO-56
	36	1386.52	1383 -	1391	1386.13	1.02E+01	13.76	2.36E+01	.....
	37	1400.83	1397 -	1402	1400.43	8.18E+00	11.05	1.76E+01	.....
	38	1460.90	1454 -	1466	1460.48	5.04E+02	48.43	3.88E+01	K-40
	39	1509.34	1505 -	1513	1508.90	2.00E+01	14.04	1.80E+01	.....
	40	1520.93	1518 -	1522	1520.48	6.25E+00	7.66	7.50E+00	.....
	41	1592.92	1590 -	1595	1592.45	1.16E+01	11.58	1.68E+01	.....
	42	1600.47	1598 -	1602	1600.00	7.00E+00	5.29	0.00E+00	.....
	43	1630.43	1626 -	1634	1629.94	1.06E+01	8.50	4.85E+00	.....
	44	1663.39	1660 -	1667	1662.89	1.22E+01	9.59	5.60E+00	.....
	45	1729.16	1725 -	1731	1728.64	1.40E+01	7.48	0.00E+00	.....
	46	1764.58	1760 -	1769	1764.05	3.20E+01	16.25	1.80E+01	BI-214
	47	1881.93	1877 -	1885	1881.36	1.10E+01	6.63	0.00E+00	.....
	48	1890.34	1886 -	1894	1889.77	9.50E+00	8.26	5.00E+00	.....
	49	2014.44	2010 -	2017	2013.82	7.25E+00	9.80	9.50E+00	.....
	50	2103.64	2099 -	2106	2103.00	1.51E+01	11.49	1.18E+01	.....
	51	2122.18	2119 -	2124	2121.53	7.60E+00	7.62	4.80E+00	.....
	52	2204.17	2198 -	2207	2203.50	1.70E+01	11.75	1.00E+01	BI-214
	53	2242.81	2239 -	2245	2242.13	8.00E+00	5.66	0.00E+00	.....
	54	2261.69	2256 -	2264	2261.00	8.00E+00	5.66	0.00E+00	.....
	55	2328.07	2322 -	2332	2327.37	1.90E+01	8.72	0.00E+00	.....
	56	2614.06	2608 -	2617	2613.28	7.23E+01	18.92	9.32E+00	TL-208

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

PEAK EFFICIENCY REPORT

Peak Analysis Performed on : 11/6/2015 2:38:08PM

: 00843

Analysis Report for 1510086-15
CP0404S10-11

	Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
	1	46.49	1.53E+02	76.81	1.50E-02	1.58E-03
	2	76.34	1.24E+03	166.32	2.38E-02	2.14E-03
m	3	87.94	2.55E+02	74.47	2.44E-02	2.52E-03
m	4	92.64	2.98E+02	76.44	2.44E-02	2.42E-03
	5	129.45	6.73E+01	81.31	2.25E-02	1.70E-03
	6	186.04	1.53E+02	70.11	1.83E-02	1.42E-03
	7	192.37	5.12E+01	63.00	1.79E-02	1.39E-03
	8	209.77	7.71E+01	75.19	1.68E-02	1.31E-03
M	9	238.76	8.48E+02	69.44	1.52E-02	1.18E-03
m	10	241.87	1.78E+02	76.35	1.51E-02	1.17E-03
	11	295.29	2.68E+02	62.00	1.28E-02	9.74E-04
	12	327.70	8.22E+01	54.70	1.18E-02	9.28E-04
	13	338.39	1.05E+02	60.59	1.14E-02	9.13E-04
	14	352.02	4.23E+02	61.63	1.11E-02	8.94E-04
	15	462.70	3.37E+01	37.89	8.73E-03	7.66E-04
	16	511.03	1.44E+02	42.83	8.01E-03	7.18E-04
	17	562.53	2.71E+01	25.83	7.37E-03	6.67E-04
	18	583.46	1.96E+02	50.56	7.14E-03	6.46E-04
M	19	596.85	2.34E+01	26.15	7.00E-03	6.33E-04
m	20	601.25	2.52E+01	25.45	6.95E-03	6.28E-04
	21	609.40	2.84E+02	48.31	6.87E-03	6.20E-04
	22	727.16	6.43E+01	30.53	5.89E-03	5.14E-04
	23	768.19	4.39E+01	34.00	5.62E-03	4.81E-04
	24	786.12	3.48E+01	30.38	5.51E-03	4.66E-04
M	25	792.38	1.46E+01	8.89	5.47E-03	4.61E-04
m	26	795.14	4.32E+01	20.37	5.45E-03	4.59E-04
M	27	906.91	1.34E+01	11.53	4.87E-03	3.73E-04
m	28	911.43	1.37E+02	30.55	4.85E-03	3.72E-04
	29	935.25	2.70E+01	32.56	4.75E-03	3.68E-04
	30	968.85	4.60E+01	37.67	4.61E-03	3.61E-04
	31	1070.52	3.44E+01	27.29	4.23E-03	3.43E-04
	32	1120.39	3.62E+01	27.78	4.08E-03	3.33E-04
	33	1153.41	2.22E+01	19.90	3.98E-03	3.27E-04
	34	1230.00	3.03E+01	25.39	3.78E-03	3.11E-04
	35	1237.36	3.30E+01	25.38	3.76E-03	3.09E-04
	36	1386.52	1.02E+01	13.76	3.43E-03	2.80E-04
	37	1400.83	8.18E+00	11.05	3.40E-03	2.78E-04
	38	1460.90	5.04E+02	48.43	3.29E-03	2.69E-04
	39	1509.34	2.00E+01	14.04	3.21E-03	2.62E-04
	40	1520.93	6.25E+00	7.66	3.19E-03	2.60E-04
	41	1592.92	1.16E+01	11.58	3.08E-03	2.50E-04
	42	1600.47	7.00E+00	5.29	3.07E-03	2.48E-04
	43	1630.43	1.06E+01	8.50	3.03E-03	2.44E-04
	44	1663.39	1.22E+01	9.59	2.98E-03	2.39E-04
	45	1729.16	1.40E+01	7.48	2.90E-03	2.29E-04
	46	1764.58	3.20E+01	16.25	2.86E-03	2.24E-04
	47	1881.93	1.10E+01	6.63	2.73E-03	2.13E-04
	48	1890.34	9.50E+00	8.26	2.72E-03	2.13E-04
	49	2014.44	7.25E+00	9.80	2.61E-03	2.13E-04
	50	2103.64	1.51E+01	11.49	2.54E-03	2.13E-04
	51	2122.18	7.60E+00	7.62	2.52E-03	2.13E-04
	52	2204.17	1.70E+01	11.75	2.46E-03	2.13E-04
	53	2242.81	8.00E+00	5.66	2.44E-03	2.13E-04

Analysis Report for 1510086-15
CP0404S10-11

Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
54	2261.69	8.00E+00	5.66	2.42E-03	2.13E-04
55	2328.07	1.90E+01	8.72	2.38E-03	2.13E-04
56	2614.06	7.23E+01	18.92	2.24E-03	2.13E-04

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000 sigma

BACKGROUND SUBTRACT REPORT

Peak Analysis Performed on : 11/6/2015 2:38:08PM

Env. Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000028943.CNF

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.	
	1	46.49	1.53E+02	76.81	5.28E+01	1.09E+01	1.00E+02	7.76E+01
	2	76.34	1.24E+03	166.32			1.24E+03	1.66E+02
m	3	87.94	2.55E+02	74.47	1.52E+01	5.37E+00	2.39E+02	7.47E+01
m	4	92.64	2.98E+02	76.44	9.04E+01	2.62E+01	2.08E+02	8.08E+01
	5	129.45	6.73E+01	81.31			6.73E+01	8.13E+01
	6	186.04	1.53E+02	70.11	3.93E+01	6.56E+00	1.14E+02	7.04E+01
	7	192.37	5.12E+01	63.00			5.12E+01	6.30E+01
	8	209.77	7.71E+01	75.19			7.71E+01	7.52E+01
M	9	238.76	8.48E+02	69.44	1.34E+01	2.14E+00	8.34E+02	6.95E+01
m	10	241.87	1.78E+02	76.35	2.69E+00	1.46E+00	1.75E+02	7.64E+01
	11	295.29	2.68E+02	62.00			2.68E+02	6.20E+01
	12	327.70	8.22E+01	54.70			8.22E+01	5.47E+01
	13	338.39	1.05E+02	60.59			1.05E+02	6.06E+01
	14	352.02	4.23E+02	61.63	3.99E+00	4.73E+00	4.19E+02	6.18E+01
	15	462.70	3.37E+01	37.89			3.37E+01	3.79E+01
	16	511.03	1.44E+02	42.83	5.78E+01	4.60E+00	8.66E+01	4.31E+01
	17	562.53	2.71E+01	25.83			2.71E+01	2.58E+01
	18	583.46	1.96E+02	50.56	5.96E+00	3.46E+00	1.90E+02	5.07E+01
M	19	596.85	2.34E+01	26.15			2.34E+01	2.61E+01
m	20	601.25	2.52E+01	25.45			2.52E+01	2.55E+01
	21	609.40	2.84E+02	48.31	6.71E+00	3.44E+00	2.77E+02	4.84E+01
	22	727.16	6.43E+01	30.53			6.43E+01	3.05E+01
	23	768.19	4.39E+01	34.00			4.39E+01	3.40E+01
	24	786.12	3.48E+01	30.38			3.48E+01	3.04E+01
M	25	792.38	1.46E+01	8.89			1.46E+01	8.89E+00
m	26	795.14	4.32E+01	20.37			4.32E+01	2.04E+01
M	27	906.91	1.34E+01	11.53			1.34E+01	1.15E+01

Analysis Report for 1510086-15

CP0404S10-11

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
m 28	911.43	1.37E+02	30.55	2.32E+00	2.73E+00	1.35E+02	3.07E+01
29	935.25	2.70E+01	32.56			2.70E+01	3.26E+01
30	968.85	4.60E+01	37.67			4.60E+01	3.77E+01
31	1070.52	3.44E+01	27.29			3.44E+01	2.73E+01
32	1120.39	3.62E+01	27.78	2.00E+00	2.20E+00	3.42E+01	2.79E+01
33	1153.41	2.22E+01	19.90			2.22E+01	1.99E+01
34	1230.00	3.03E+01	25.39			3.03E+01	2.54E+01
35	1237.36	3.30E+01	25.38			3.30E+01	2.54E+01
36	1386.52	1.02E+01	13.76			1.02E+01	1.38E+01
37	1400.83	8.18E+00	11.05			8.18E+00	1.10E+01
38	1460.90	5.04E+02	48.43	2.36E+00	1.83E+00	5.01E+02	4.85E+01
39	1509.34	2.00E+01	14.04			2.00E+01	1.40E+01
40	1520.93	6.25E+00	7.66			6.25E+00	7.66E+00
41	1592.92	1.16E+01	11.58			1.16E+01	1.16E+01
42	1600.47	7.00E+00	5.29			7.00E+00	5.29E+00
43	1630.43	1.06E+01	8.50			1.06E+01	8.50E+00
44	1663.39	1.22E+01	9.59			1.22E+01	9.59E+00
45	1729.16	1.40E+01	7.48			1.40E+01	7.48E+00
46	1764.58	3.20E+01	16.25	1.45E+00	1.16E+00	3.06E+01	1.63E+01
47	1881.93	1.10E+01	6.63			1.10E+01	6.63E+00
48	1890.34	9.50E+00	8.26			9.50E+00	8.26E+00
49	2014.44	7.25E+00	9.80			7.25E+00	9.80E+00
50	2103.64	1.51E+01	11.49			1.51E+01	1.15E+01
51	2122.18	7.60E+00	7.62			7.60E+00	7.62E+00
52	2204.17	1.70E+01	11.75			1.70E+01	1.17E+01
53	2242.81	8.00E+00	5.66			8.00E+00	5.66E+00
54	2261.69	8.00E+00	5.66			8.00E+00	5.66E+00
55	2328.07	1.90E+01	8.72			1.90E+01	8.72E+00
56	2614.06	7.23E+01	18.92	2.66E+00	1.22E+00	6.97E+01	1.90E+01

M = First peak in a multiplet region

m = Other peak in a multiplet region

F = Fitted singlet

Errors quoted at 2.00sigma

AREA CORRECTION REPORT REFERENCE PEAK / BKG. SUBTRACT

Peak Analysis Performed on : 11/6/2015 2:38:08PM

Ref. Peak Energy : 0.00

Reference Date :

Peak Ratio : 0.00

Uncertainty : 0.00

Background File :

\\OR-GAMMA1\ApexRoot\Countroom\Data\0000028943.CNF

Corrected Area is: Original * Peak Ratio - Background

: 00846

Analysis Report for 1510086-15
CP0404S10-11

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
	1	46.49	1.53E+02	76.81	5.28E+01	1.09E+01	1.00E+02	7.76E+01
	2	76.34	1.24E+03	166.32			1.24E+03	1.66E+02
m	3	87.94	2.55E+02	74.47	1.52E+01	5.37E+00	2.39E+02	7.47E+01
m	4	92.64	2.98E+02	76.44	9.04E+01	2.62E+01	2.08E+02	8.08E+01
	5	129.45	6.73E+01	81.31			6.73E+01	8.13E+01
	6	186.04	1.53E+02	70.11	3.93E+01	6.56E+00	1.14E+02	7.04E+01
	7	192.37	5.12E+01	63.00			5.12E+01	6.30E+01
	8	209.77	7.71E+01	75.19			7.71E+01	7.52E+01
M	9	238.76	8.48E+02	69.44	1.34E+01	2.14E+00	8.34E+02	6.95E+01
m	10	241.87	1.78E+02	76.35	2.69E+00	1.46E+00	1.75E+02	7.64E+01
	11	295.29	2.68E+02	62.00			2.68E+02	6.20E+01
	12	327.70	8.22E+01	54.70			8.22E+01	5.47E+01
	13	338.39	1.05E+02	60.59			1.05E+02	6.06E+01
	14	352.02	4.23E+02	61.63	3.99E+00	4.73E+00	4.19E+02	6.18E+01
	15	462.70	3.37E+01	37.89			3.37E+01	3.79E+01
	16	511.03	1.44E+02	42.83	5.78E+01	4.60E+00	8.66E+01	4.31E+01
	17	562.53	2.71E+01	25.83			2.71E+01	2.58E+01
	18	583.46	1.96E+02	50.56	5.96E+00	3.46E+00	1.90E+02	5.07E+01
M	19	596.85	2.34E+01	26.15			2.34E+01	2.61E+01
m	20	601.25	2.52E+01	25.45			2.52E+01	2.55E+01
	21	609.40	2.84E+02	48.31	6.71E+00	3.44E+00	2.77E+02	4.84E+01
	22	727.16	6.43E+01	30.53			6.43E+01	3.05E+01
	23	768.19	4.39E+01	34.00			4.39E+01	3.40E+01
	24	786.12	3.48E+01	30.38			3.48E+01	3.04E+01
M	25	792.38	1.46E+01	8.89			1.46E+01	8.89E+00
m	26	795.14	4.32E+01	20.37			4.32E+01	2.04E+01
M	27	906.91	1.34E+01	11.53			1.34E+01	1.15E+01
m	28	911.43	1.37E+02	30.55	2.32E+00	2.73E+00	1.35E+02	3.07E+01
	29	935.25	2.70E+01	32.56			2.70E+01	3.26E+01
	30	968.85	4.60E+01	37.67			4.60E+01	3.77E+01
	31	1070.52	3.44E+01	27.29			3.44E+01	2.73E+01
	32	1120.39	3.62E+01	27.78	2.00E+00	2.20E+00	3.42E+01	2.79E+01
	33	1153.41	2.22E+01	19.90			2.22E+01	1.99E+01
	34	1230.00	3.03E+01	25.39			3.03E+01	2.54E+01
	35	1237.36	3.30E+01	25.38			3.30E+01	2.54E+01
	36	1386.52	1.02E+01	13.76			1.02E+01	1.38E+01
	37	1400.83	8.18E+00	11.05			8.18E+00	1.10E+01
	38	1460.90	5.04E+02	48.43	2.36E+00	1.83E+00	5.01E+02	4.85E+01
	39	1509.34	2.00E+01	14.04			2.00E+01	1.40E+01
	40	1520.93	6.25E+00	7.66			6.25E+00	7.66E+00
	41	1592.92	1.16E+01	11.58			1.16E+01	1.16E+01
	42	1600.47	7.00E+00	5.29			7.00E+00	5.29E+00
	43	1630.43	1.06E+01	8.50			1.06E+01	8.50E+00
	44	1663.39	1.22E+01	9.59			1.22E+01	9.59E+00
	45	1729.16	1.40E+01	7.48			1.40E+01	7.48E+00
	46	1764.58	3.20E+01	16.25	1.45E+00	1.16E+00	3.06E+01	1.63E+01
	47	1881.93	1.10E+01	6.63			1.10E+01	6.63E+00
	48	1890.34	9.50E+00	8.26			9.50E+00	8.26E+00
	49	2014.44	7.25E+00	9.80			7.25E+00	9.80E+00
	50	2103.64	1.51E+01	11.49			1.51E+01	1.15E+01
	51	2122.18	7.60E+00	7.62			7.60E+00	7.62E+00
	52	2204.17	1.70E+01	11.75			1.70E+01	1.17E+01
	53	2242.81	8.00E+00	5.66			8.00E+00	5.66E+00
	54	2261.69	8.00E+00	5.66			8.00E+00	5.66E+00

Analysis Report for 1510086-15

CP0404S10-11

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
55	2328.07	1.90E+01	8.72			1.90E+01	8.72E+00
56	2614.06	7.23E+01	18.92	2.66E+00	1.22E+00	6.97E+01	1.90E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

NUCLIDE IDENTIFICATION REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

IDENTIFIED NUCLIDES

Nuclide Name	Id Confidence	Energy (keV)	Yield(%)	Activity (pCi/grams)	Activity Uncertainty
K-40	0.999	1460.81 *	10.67	1.97E+01	2.53E+00
GA-67	0.384	93.31 *	35.70	1.66E+02	6.62E+02
		208.95 *	2.24	1.43E+03	5.61E+03
		300.22	16.00		
CD-109	0.999	88.03 *	3.72	3.81E+00	1.27E+00
		SN-126	0.978	87.57 *	37.00	3.67E-01	1.21E-01
TL-208	0.852	583.14 *	30.22	1.22E+00	3.43E-01
		860.37	4.48		
		2614.66 *	35.85	1.20E+00	3.46E-01
PB-210	1.000	46.50 *	4.25	2.18E+00	1.70E+00
		BI-212	0.770	727.17 *	11.80	1.28E+00	6.18E-01
PB-212	0.893	1620.62	2.75		
		238.63 *	44.60	1.70E+00	1.94E-01
		300.09	3.41		
BI-214	0.999	609.31 *	46.30	1.20E+00	2.37E-01
		1120.29 *	15.10	7.69E-01	6.30E-01
		1764.49 *	15.80	9.37E-01	5.05E-01
		2204.22 *	4.98	1.92E+00	1.34E+00
PB-214	0.999	295.21 *	19.19	1.51E+00	3.67E-01
		351.92 *	37.19	1.41E+00	2.37E-01
		RA-224	0.882	240.98 *	3.95	4.07E+00	1.80E+00
RA-226	0.995	186.21 *	3.28	2.62E+00	5.07E+00
AC-228	0.986	338.32 *	11.40	1.11E+00	6.49E-01
		911.07 *	27.70	1.39E+00	3.33E-01
		969.11 *	16.60	8.33E-01	6.85E-01

: 00848

Analysis Report for 1510086-15
CP0404S10-11

* = Energy line found in the spectrum.
- = Manually added nuclide.
? = Manually edited nuclide.
Energy Tolerance : 1.000 keV
Nuclide confidence index threshold = 0.30
Errors quoted at 2.000sigma

UNIDENTIFIED PEAKS

Peak Locate Performed on : 11/6/2015 2:38:08PM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide	
2	76.34	3.44534E-01	6.70			
5	129.45	1.87064E-02	60.37			
7	192.37	1.42284E-02	61.50			
12	327.70	2.28297E-02	33.28	Sum		
15	462.70	9.35703E-03	56.25	Tol.	SB-125	
16	511.03	2.40507E-02	24.88			
17	562.53	7.52137E-03	47.70	Sum		
M	19	596.85	6.48644E-03	55.99		
m	20	601.25	6.99065E-03	50.57	Tol.	SB-125
	23	768.19	1.22027E-02	38.70		
	24	786.12	9.67433E-03	43.61		
M	25	792.38	4.05327E-03	30.46	Sum	
m	26	795.14	1.19952E-02	23.59	Sum	
M	27	906.91	3.71266E-03	43.14		
	29	935.25	7.50000E-03	60.29	Sum	
	31	1070.52	9.55754E-03	39.66		
	33	1153.41	6.17778E-03	44.74	Sum	
	34	1230.00	8.42460E-03	41.85	Tol.	EU-156
	35	1237.36	9.17929E-03	38.40	Tol.	CO-56
	36	1386.52	2.83460E-03	67.41		
	37	1400.83	2.27124E-03	67.54		
	39	1509.34	5.55556E-03	35.09		
	40	1520.93	1.73611E-03	61.32	Sum	
	41	1592.92	3.22222E-03	49.90	D-Esc	
	42	1600.47	1.94444E-03	37.80		
	43	1630.43	2.93803E-03	40.18		
	44	1663.39	3.38889E-03	39.31		
	45	1729.16	3.88889E-03	26.73	Sum	
	47	1881.93	3.05556E-03	30.15		
	48	1890.34	2.63889E-03	43.48		
	49	2014.44	2.01389E-03	67.57		
	50	2103.64	4.19312E-03	38.06	S-Esc	
	51	2122.18	2.11111E-03	50.10		
	53	2242.81	2.22222E-03	35.36		

Analysis Report for 1510086-15
CP0404S10-11

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
54	2261.69	2.22222E-03	35.36		
55	2328.07	5.27778E-03	22.94		

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

NUCLIDE IDENTIFICATION REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

IDENTIFIED NUCLIDES

Nuclide Name	Id Confidence	Energy (keV)	Yield(%)	Activity (pCi/grams)	Activity Uncertainty
K-40	0.99	1460.81 *	10.67	1.97E+01	2.53E+00
GA-67	0.38	93.31 *	35.70	1.66E+02	6.62E+02
		208.95 *	2.24	1.43E+03	5.61E+03
		300.22	16.00		
CD-109	0.99	88.03 *	3.72	3.81E+00	1.27E+00
SN-126	0.97	87.57 *	37.00	3.67E-01	1.21E-01
TL-208	0.85	583.14 *	30.22	1.22E+00	3.43E-01
		860.37	4.48		
		2614.66 *	35.85	1.20E+00	3.46E-01
PB-210	1.00	46.50 *	4.25	2.18E+00	1.70E+00
BI-212	0.77	727.17 *	11.80	1.28E+00	6.18E-01
		1620.62	2.75		
PB-212	0.89	238.63 *	44.60	1.70E+00	1.94E-01
		300.09	3.41		
BI-214	0.99	609.31 *	46.30	1.20E+00	2.37E-01
		1120.29 *	15.10	7.69E-01	6.30E-01
		1764.49 *	15.80	9.37E-01	5.05E-01
		2204.22 *	4.98	1.92E+00	1.34E+00
PB-214	0.99	295.21 *	19.19	1.51E+00	3.67E-01
		351.92 *	37.19	1.41E+00	2.37E-01
RA-224	0.88	240.98 *	3.95	4.07E+00	1.80E+00
RA-226	0.99	186.21 *	3.28	2.62E+00	5.07E+00
AC-228	0.98	338.32 *	11.40	1.11E+00	6.49E-01
		911.07 *	27.70	1.39E+00	3.33E-01
		969.11 *	16.60	8.33E-01	6.85E-01

Analysis Report for 1510086-15
CP0404S10-11

* = Energy line found in the spectrum.
- = Manually added nuclide.
? = Manually edited nuclide.
@ = Energy line not used for Weighted Mean Activity
Energy Tolerance : 1.000 keV
Nuclide confidence index threshold = 0.30
Errors quoted at 2.000sigma

INTERFERENCE CORRECTED REPORT

<i>Nuclide Name</i>	<i>Nuclide Id Confidence</i>	<i>Wt mean Activity (pCi/grams)</i>	<i>Wt mean Activity Uncertainty</i>	<i>Comments</i>
K-40	0.999	1.97E+01	2.53E+00	
GA-67	0.384	1.90E+02	7.52E+02	
? CD-109	0.999	3.81E+00	1.27E+00	
? SN-126	0.978	3.67E-01	1.21E-01	
TL-208	0.852	1.21E+00	2.44E-01	
PB-210	1.000	2.18E+00	1.70E+00	
BI-212	0.770	1.28E+00	6.18E-01	
PB-212	0.893	1.70E+00	1.94E-01	
BI-214	0.999	1.13E+00	2.01E-01	
PB-214	0.999	1.44E+00	1.99E-01	
RA-224	0.882	4.07E+00	1.80E+00	
RA-226	0.995	2.62E+00	5.07E+00	
AC-228	0.986	1.25E+00	2.72E-01	

? = nuclide is part of an undetermined solution
X = nuclide rejected by the interference analysis
@ = nuclide contains energy lines not used in Weighted Mean Activity

Errors quoted at 2.000sigma

Analysis Report for 1510086-15
CP0404S10-11

UNIDENTIFIED PEAKS

Peak Locate Performed on : 11/6/2015 2:38:08PM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
2	76.34	3.44534E-01	6.70		
5	129.45	1.87064E-02	60.37		
7	192.37	1.42284E-02	61.50		
12	327.70	2.28297E-02	33.28	Sum	
15	462.70	9.35703E-03	56.25	Tol.	SB-125
16	511.03	2.40507E-02	24.88		
17	562.53	7.52137E-03	47.70	Sum	
M	19	596.85	6.48644E-03	55.99	
m	20	601.25	6.99065E-03	50.57	Tol. SB-125
	23	768.19	1.22027E-02	38.70	
	24	786.12	9.67433E-03	43.61	
M	25	792.38	4.05327E-03	30.46	Sum
m	26	795.14	1.19952E-02	23.59	Sum
M	27	906.91	3.71266E-03	43.14	
	29	935.25	7.50000E-03	60.29	Sum
	31	1070.52	9.55754E-03	39.66	
	33	1153.41	6.17778E-03	44.74	Sum
	34	1230.00	8.42460E-03	41.85	Tol. EU-156
	35	1237.36	9.17929E-03	38.40	Tol. CO-56
	36	1386.52	2.83460E-03	67.41	
	37	1400.83	2.27124E-03	67.54	
	39	1509.34	5.55556E-03	35.09	
	40	1520.93	1.73611E-03	61.32	Sum
	41	1592.92	3.22222E-03	49.90	D-Esc
	42	1600.47	1.94444E-03	37.80	
	43	1630.43	2.93803E-03	40.18	
	44	1663.39	3.38889E-03	39.31	
	45	1729.16	3.88889E-03	26.73	Sum
	47	1881.93	3.05556E-03	30.15	
	48	1890.34	2.63889E-03	43.48	
	49	2014.44	2.01389E-03	67.57	
	50	2103.64	4.19312E-03	38.06	S-Esc
	51	2122.18	2.11111E-03	50.10	
	53	2242.81	2.22222E-03	35.36	
	54	2261.69	2.22222E-03	35.36	

Analysis Report for 1510086-15
CP0404S10-11

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
55	2328.07	5.27778E-03	22.94		

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

NUCLIDE MDA REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	BE-7	477.59	10.42	2.72E-01	1.16E+00	1.16E+00
+	NA-22	1274.54	99.94	4.88E-03	1.41E-01	1.41E-01
+	NA-24	1368.53	99.99	-1.16E+12	1.03E+13	1.16E+13
		2754.09	99.86	2.24E+12		1.03E+13
+	AL-26	1808.65	99.76	-1.65E-03	5.93E-02	5.93E-02
+	K-40	1460.81	* 10.67	1.97E+01	1.31E+00	1.31E+00
+	@ AR-41	1293.64	99.16	1.00E+26	1.00E+26	1.00E+26
+	TI-44	67.88	94.40	-1.62E-02	8.14E-02	8.14E-02
		78.34	96.00	2.61E-01		9.98E-02
+	SC-46	889.25	99.98	-1.94E-03	1.19E-01	1.19E-01
		1120.51	99.99	1.38E-01		1.97E-01
+	V-48	983.52	99.98	6.50E-02	3.68E-01	3.68E-01
		1312.10	97.50	-1.63E-01		4.32E-01
+	CR-51	320.08	9.83	-2.79E-01	1.43E+00	1.43E+00
+	MN-54	834.83	99.97	-8.47E-03	1.14E-01	1.14E-01
+	CO-56	846.75	99.96	-2.95E-02	1.11E-01	1.11E-01
		1037.75	14.03	2.08E-01		9.10E-01
		1238.25	67.00	2.42E-01		3.04E-01
		1771.40	15.51	4.05E-02		7.06E-01
		2598.48	16.90	4.72E-02		3.47E-01
+	CO-57	122.06	85.51	5.38E-03	6.97E-02	6.97E-02
		136.48	10.60	-6.48E-02		5.47E-01
+	CO-58	810.76	99.40	-2.94E-03	1.26E-01	1.26E-01
+	FE-59	1099.22	56.50	-2.05E-01	3.03E-01	3.03E-01
		1291.56	43.20	-7.38E-02		4.57E-01
+	CO-60	1173.22	100.00	1.54E-02	1.29E-01	1.29E-01
		1332.49	100.00	1.43E-02		1.35E-01
+	ZN-65	1115.52	50.75	-4.94E-02	2.13E-01	2.13E-01

Analysis Report for 1510086-15
CP0404S10-11

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	GA-67	93.31	*	35.70	1.66E+02	1.97E+02	1.97E+02
		208.95	*	2.24	1.43E+03		2.27E+03
		300.22		16.00	1.27E+02		2.62E+02
+	SE-75	121.11		16.70	1.37E-01	1.07E-01	3.95E-01
		136.00		59.20	-3.21E-02		1.07E-01
		264.65		59.80	-1.26E-01		1.41E-01
		279.53		25.20	2.15E-01		3.75E-01
		400.65		11.40	-3.12E-01		8.31E-01
+	RB-82	776.52		13.00	-1.34E-01	1.51E+00	1.51E+00
+	RB-83	520.41		46.00	3.09E-03	2.30E-01	2.30E-01
		529.64		30.30	-8.80E-02		3.66E-01
		552.65		16.40	2.91E-01		6.17E-01
+	KR-85	513.99		0.43	-2.99E+00	2.71E+01	2.71E+01
+	SR-85	513.99		99.27	-1.78E-02	1.61E-01	1.61E-01
+	Y-88	898.02		93.40	2.25E-02	8.55E-02	1.35E-01
		1836.01		99.38	-4.78E-02		8.55E-02
+	NB-93M	16.57		9.43	1.09E+01	8.99E+01	8.99E+01
+	NB-94	702.63		100.00	9.63E-04	9.56E-02	9.56E-02
		871.10		100.00	-5.89E-03		9.86E-02
+	NB-95	765.79		99.81	1.19E-01	2.01E-01	2.01E-01
+	NB-95M	235.69		25.00	4.83E+02	1.44E+02	1.44E+02
+	ZR-95	724.18		43.70	2.85E-02	2.48E-01	3.77E-01
		756.72		55.30	1.17E-01		2.48E-01
+	MO-99	181.06		6.20	-7.63E+01	1.09E+03	1.54E+03
		739.58		12.80	-6.14E+02		1.09E+03
		778.00		4.50	-1.09E+03		2.83E+03
+	RU-103	497.08		89.00	-8.33E-03	1.53E-01	1.53E-01
+	RU-106	621.84		9.80	4.42E-01	9.56E-01	9.56E-01
+	AG-108M	433.93		89.90	-2.76E-02	8.59E-02	8.59E-02
		614.37		90.40	-1.09E-02		8.63E-02
		722.95		90.50	2.22E-02		1.20E-01
+	CD-109	88.03	*	3.72	3.81E+00	3.87E+00	3.87E+00
+	AG-110M	657.75		93.14	2.20E-02	1.10E-01	1.10E-01
		677.61		10.53	1.46E-01		9.91E-01
		706.67		16.46	-2.15E-01		6.03E-01
		763.93		21.98	-1.67E-02		4.50E-01
		884.67		71.63	5.71E-02		1.62E-01
		1384.27		23.94	1.05E-01		4.99E-01
+	CD-113M	263.70		0.02	1.06E+02	3.21E+02	3.21E+02
+	SN-113	255.12		1.93	-1.16E+00	1.39E-01	4.24E+00
		391.69		64.90	-5.21E-02		1.39E-01
+	TE123M	159.00		84.10	-1.18E-02	7.93E-02	7.93E-02
+	SB-124	602.71		97.87	-1.21E-01	1.17E-01	1.17E-01
		645.85		7.26	1.94E-01		1.67E+00
		722.78		11.10	2.54E-01		1.37E+00
		1691.02		49.00	-6.98E-02		2.34E-01
+	I-125	35.49		6.49	6.43E-01	3.60E+00	3.60E+00
+	SB-125	176.33		6.89	9.19E-02	2.67E-01	8.65E-01

Analysis Report for 1510086-15
CP0404S10-11

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	SB-125	427.89	29.33	-5.09E-02	2.67E-01	2.67E-01
		463.38	10.35	4.78E-01		8.75E-01
		600.56	17.80	-8.92E-02		4.65E-01
		635.90	11.32	-1.18E-01		7.52E-01
+	SB-126	414.70	83.30	-4.21E-02	4.44E-01	4.82E-01
		666.33	99.60	7.85E-02		5.28E-01
		695.00	99.60	-2.69E-01		4.44E-01
		720.50	53.80	5.82E-01		1.01E+00
+	SN-126	87.57	* 37.00	3.67E-01	3.72E-01	3.72E-01
+	SB-127	473.00	25.00	-9.26E+00	5.53E+01	6.22E+01
		685.20	35.70	2.70E+01		5.53E+01
		783.80	14.70	4.67E+01		1.29E+02
+	I-129	29.78	57.00	2.49E-01	5.16E-01	5.16E-01
		33.60	13.20	-7.73E-01		1.47E+00
		39.58	7.52	-5.45E-01		1.68E+00
+	I-131	284.30	6.05	-5.01E-01	1.12E+00	1.52E+01
		364.48	81.20	-2.72E-01		1.12E+00
		636.97	7.26	4.09E+00		1.49E+01
		722.89	1.80	1.39E+01		7.54E+01
+	TE-132	49.72	13.10	7.04E+01	4.03E+01	3.42E+02
		228.16	88.00	-8.64E+00		4.03E+01
+	BA-133	81.00	33.00	-1.15E+00	1.59E-01	1.97E-01
		302.84	17.80	3.53E-01		4.60E-01
		356.01	60.00	-1.38E-02		1.59E-01
+	I-133	529.87	86.30	-3.55E+08	1.48E+09	1.48E+09
+	XE-133	81.00	38.00	-4.74E+01	8.16E+00	8.16E+00
+	CS-134	563.23	8.38	-9.61E-02	9.39E-02	1.02E+00
		569.32	15.43	1.71E-01		6.04E-01
		604.70	97.60	-8.71E-01		9.39E-02
		795.84	85.40	9.42E-02		1.31E-01
		801.93	8.73	2.64E-02		1.07E+00
+	CS-135	268.24	16.00	8.09E-02	4.89E-01	4.89E-01
+	@ I-135	1131.51	22.50	1.00E+26	1.00E+26	1.00E+26
	@	1260.41	28.60	1.00E+26		1.00E+26
	@	1678.03	9.54	1.00E+26		1.00E+26
+	CS-136	153.22	7.46	2.75E+00	4.05E-01	3.82E+00
		163.89	4.61	1.45E+00		5.93E+00
		176.55	13.56	-6.45E-02		2.02E+00
		273.65	12.66	-1.14E+00		2.94E+00
		340.57	48.50	1.04E-01		1.01E+00
		818.50	99.70	-1.58E-01		4.05E-01
		1048.07	79.60	1.42E-01		6.12E-01
		1235.34	19.70	-1.01E+00		3.48E+00
+	CS-137	661.65	85.12	-2.31E-02	1.19E-01	1.19E-01
+	LA-138	788.74	34.00	-1.71E-02	1.69E-01	2.92E-01
		1435.80	66.00	5.66E-02		1.69E-01
+	CE-139	165.85	80.35	2.01E-02	8.38E-02	8.38E-02
+	BA-140	162.64	6.70	-2.38E-01	1.71E+00	4.21E+00
		304.84	4.50	-2.72E+00		8.16E+00

Analysis Report for 1510086-15
CP0404S10-11

<i>Nuclide Name</i>	<i>Energy (keV)</i>	<i>Yield(%)</i>	<i>Activity (pCi/grams)</i>	<i>Nuclide MDA (pCi/grams)</i>	<i>Line MDA (pCi/grams)</i>	
	BA-140	423.70	3.20	3.47E+00	1.71E+00	1.24E+01
		437.55	2.00	2.78E+00		1.98E+01
		537.32	25.00	7.33E-01		1.71E+00
+	LA-140	328.77	20.50	1.04E+00	5.64E-01	1.95E+00
		487.03	45.50	-8.56E-02		8.37E-01
		815.85	23.50	1.14E-01		1.87E+00
		1596.49	95.49	0.00E+00		5.64E-01
+	CE-141	145.44	48.40	1.86E-02	2.20E-01	2.20E-01
+	CE-143	57.36	11.80	-5.16E+03	6.65E+05	1.70E+06
		293.26	42.00	4.84E+04		6.65E+05
		664.55	5.20	1.27E+06		5.10E+06
+	CE-144	133.54	10.80	-2.20E-01	5.28E-01	5.28E-01
+	PM-144	476.78	42.00	-3.30E-02	8.41E-02	2.03E-01
		618.01	98.60	-2.67E-02		8.41E-02
		696.49	99.49	-3.61E-02		9.46E-02
+	PM-145	36.85	21.70	-2.32E-01	3.73E-01	6.93E-01
		37.36	39.70	2.17E-01		3.73E-01
		42.30	15.10	3.76E-02		7.31E-01
		72.40	2.31	-6.51E+00		3.87E+00
+	PM-146	453.90	39.94	2.76E-02	1.98E-01	1.98E-01
		735.90	14.01	5.53E-02		6.63E-01
		747.13	13.10	-2.88E-02		6.96E-01
+	ND-147	91.11	28.90	3.14E-01	1.73E+00	1.73E+00
		531.02	13.10	-1.01E+00		4.26E+00
+	PM-149	285.90	3.10	-9.09E+03	2.19E+04	2.19E+04
+	EU-152	121.78	20.50	2.09E-02	2.71E-01	2.71E-01
		244.69	5.40	-3.03E-01		1.57E+00
		344.27	19.13	8.61E-02		4.15E-01
		778.89	9.20	-8.93E-02		8.64E-01
		964.01	10.40	-1.95E-01		1.15E+00
		1085.78	7.22	-2.97E-01		1.44E+00
		1112.02	9.60	1.53E-01		1.29E+00
		1407.95	14.94	3.17E-01		7.74E-01
+	GD-153	97.43	31.30	3.51E-02	1.93E-01	1.93E-01
		103.18	22.20	-1.78E-01		2.64E-01
+	EU-154	123.07	40.50	5.22E-02	1.39E-01	1.39E-01
		723.30	19.70	1.03E-01		5.57E-01
		873.19	11.50	-4.75E-01		8.08E-01
		996.32	10.30	-3.76E-01		9.55E-01
		1004.76	17.90	-2.35E-01		5.66E-01
		1274.45	35.50	1.35E-02		3.91E-01
+	EU-155	86.50	30.90	5.38E-02	2.45E-01	2.45E-01
		105.30	20.70	9.75E-02		2.73E-01
+	EU-156	811.77	10.40	-1.37E-01	3.36E+00	3.36E+00
		1153.47	7.20	2.03E+00		6.41E+00
		1230.71	8.90	1.32E+00		5.83E+00
+	HO-166M	184.41	72.60	1.72E-01	1.04E-01	1.04E-01
		280.45	29.60	8.92E-02		2.62E-01
		410.94	11.10	2.20E-01		7.56E-01

Analysis Report for 1510086-15
CP0404S10-11

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	HO-166M	711.69	54.10	2.75E-03	1.04E-01	1.71E-01
+	TM-171	66.72	0.14	-3.24E+01	5.76E+01	5.76E+01
+	HF-172	81.75	4.52	-4.75E+00	5.03E-01	1.47E+00
		125.81	11.30	2.83E-02		5.03E-01
+	LU-172	181.53	20.60	3.68E-02	3.80E+00	6.07E+00
		810.06	16.63	3.57E+00		1.22E+01
		912.12	15.25	4.99E+01		2.45E+01
		1093.66	62.50	1.67E+00		3.80E+00
+	LU-173	100.72	5.24	1.30E-01	4.09E-01	1.08E+00
		272.11	21.20	3.25E-01		4.09E-01
+	HF-175	343.40	84.00	4.21E-02	1.30E-01	1.30E-01
+	LU-176	88.34	13.30	1.01E-01	7.66E-02	5.97E-01
		201.83	86.00	2.17E-02		8.48E-02
		306.78	94.00	-2.47E-02		7.66E-02
+	TA-182	67.75	41.20	-4.44E-02	2.23E-01	2.23E-01
		1121.30	34.90	2.29E-02		5.61E-01
		1189.05	16.23	-2.37E-01		9.34E-01
		1221.41	26.98	-2.99E-02		5.47E-01
		1231.02	11.44	-6.46E-01		1.40E+00
+	IR-192	308.46	29.68	-1.04E-01	2.17E-01	3.13E-01
		468.07	48.10	2.61E-02		2.17E-01
+	HG-203	279.19	77.30	8.94E-02	1.59E-01	1.59E-01
+	BI-207	569.67	97.72	6.12E-02	9.49E-02	9.49E-02
		1063.62	74.90	5.07E-02		1.31E-01
+	TL-208	583.14	* 30.22	1.22E+00	3.01E-01	4.66E-01
		860.37	4.48	6.75E-01		2.54E+00
		2614.66	* 35.85	1.20E+00		3.01E-01
+	BI-210M	262.00	45.00	-2.10E-03	1.61E-01	1.61E-01
		300.00	23.00	1.75E-01		3.63E-01
+	PB-210	46.50	* 4.25	2.18E+00	2.74E+00	2.74E+00
+	PB-211	404.84	2.90	-1.86E+00	2.83E+00	2.83E+00
		831.96	2.90	-5.38E-01		3.53E+00
+	BI-212	727.17	* 11.80	1.28E+00	9.04E-01	9.04E-01
		1620.62	2.75	6.89E-01		3.11E+00
+	PB-212	238.63	* 44.60	1.70E+00	2.74E-01	2.74E-01
		300.09	3.41	1.18E+00		2.45E+00
+	BI-214	609.31	* 46.30	1.20E+00	2.64E-01	2.64E-01
		1120.29	* 15.10	7.69E-01		9.97E-01
		1764.49	* 15.80	9.37E-01		6.86E-01
		2204.22	* 4.98	1.92E+00		1.86E+00
+	PB-214	295.21	* 19.19	1.51E+00	2.66E-01	5.02E-01
		351.92	* 37.19	1.41E+00		2.66E-01
+	RN-219	401.80	6.50	5.74E-01	1.30E+00	1.30E+00
+	RA-223	323.87	3.88	-1.88E-01	1.82E+00	1.82E+00
+	RA-224	240.98	* 3.95	4.07E+00	3.16E+00	3.16E+00
+	RA-225	40.00	31.00	-5.08E-01	1.56E+00	1.56E+00
+	RA-226	186.21	* 3.28	2.62E+00	2.61E+00	2.61E+00
+	TH-227	50.10	8.40	2.15E-01	1.05E+00	1.05E+00

Analysis Report for 1510086-15
CP0404S10-11

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	TH-227	236.00		11.50	3.82E+00	1.05E+00	1.14E+00
		256.20		6.30	-2.12E-02		1.10E+00
+	AC-228	338.32	*	11.40	1.11E+00	5.30E-01	1.02E+00
		911.07	*	27.70	1.39E+00		5.30E-01
		969.11	*	16.60	8.33E-01		1.10E+00
+	TH-230	48.44		16.90	3.64E-03	5.86E-01	5.86E-01
		62.85		4.60	1.47E+00		1.83E+00
		67.67		0.37	-4.15E+00		2.08E+01
+	PA-231	283.67		1.60	-1.52E-01	3.54E+00	4.61E+00
		302.67		2.30	2.72E+00		3.54E+00
+	TH-231	25.64		14.70	-3.57E-01	1.02E+00	3.58E+00
		84.21		6.40	-2.28E+00		1.02E+00
+	PA-233	311.98		38.60	1.09E-01	3.98E-01	3.98E-01
+	PA-234	131.20		20.40	1.64E-01	2.82E-01	2.82E-01
		733.99		8.80	3.64E-01		1.07E+00
		946.00		12.00	3.74E-02		8.24E-01
+	PA-234M	1001.03		0.92	4.03E+00	1.24E+01	1.24E+01
+	TH-234	63.29		3.80	1.70E+00	2.22E+00	2.22E+00
+	U-235	143.76		10.50	2.82E-01	5.54E-01	5.54E-01
		163.35		4.70	3.05E-01		1.24E+00
		205.31		4.70	-1.72E-01		1.49E+00
+	NP-237	86.50		12.60	1.31E-01	5.94E-01	5.94E-01
+	NP-239	106.10		22.70	3.51E+02	1.35E+03	1.35E+03
		228.18		10.70	-7.73E+02		3.61E+03
		277.60		14.10	-7.74E+02		3.01E+03
+	AM-241	59.54		35.90	-1.50E-01	2.21E-01	2.21E-01
+	AM-243	74.67		66.00	3.71E-01	1.61E-01	1.61E-01
+	CM-243	209.75		3.29	1.95E+00	5.54E-01	2.39E+00
		228.14		10.60	-1.42E-01		6.64E-01
		277.60		14.00	-1.42E-01		5.54E-01

- + = Nuclide identified during the nuclide identification
 * = Energy line found in the spectrum
 > = MDA value not calculated
 @ = Half-life too short to be able to perform the decay correction
 ? = CAUTION: MDA value is inconsistent with Currie MDA at 95% confidence level

Analysis Report for 1510086-15
CP0404S10-11

NUCLIDE MDA REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
BE-7	477.59	10.42	1.16E+00	1.16E+00	2.72E-01	5.50E-01
NA-22	1274.54	99.94	1.41E-01	1.41E-01	4.88E-03	6.53E-02
NA-24	1368.53	99.99	1.16E+13	1.03E+13	-1.16E+12	5.13E+12
	2754.09	99.86	1.03E+13		2.24E+12	4.07E+12
AL-26	1808.65	99.76	5.93E-02	5.93E-02	-1.65E-03	2.30E-02
+ K-40	1460.81	* 10.67	1.31E+00	1.31E+00	1.97E+01	6.01E-01
@ AR-41	1293.64	99.16	1.00E+26	1.00E+26	1.00E+26	1.00E+20
TI-44	67.88	94.40	8.14E-02	8.14E-02	-1.62E-02	3.98E-02
	78.34	96.00	9.98E-02		2.61E-01	4.91E-02
SC-46	889.25	99.98	1.19E-01	1.19E-01	-1.94E-03	5.49E-02
	1120.51	99.99	1.97E-01		1.38E-01	9.28E-02
V-48	983.52	99.98	3.68E-01	3.68E-01	6.50E-02	1.69E-01
	1312.10	97.50	4.32E-01		-1.63E-01	1.97E-01
CR-51	320.08	9.83	1.43E+00	1.43E+00	-2.79E-01	6.79E-01
MN-54	834.83	99.97	1.14E-01	1.14E-01	-8.47E-03	5.34E-02
CO-56	846.75	99.96	1.11E-01	1.11E-01	-2.95E-02	5.10E-02
	1037.75	14.03	9.10E-01		2.08E-01	4.15E-01
	1238.25	67.00	3.04E-01		2.42E-01	1.42E-01
	1771.40	15.51	7.06E-01		4.05E-02	2.98E-01
	2598.48	16.90	3.47E-01		4.72E-02	1.10E-01
CO-57	122.06	85.51	6.97E-02	6.97E-02	5.38E-03	3.38E-02
	136.48	10.60	5.47E-01		-6.48E-02	2.65E-01
CO-58	810.76	99.40	1.26E-01	1.26E-01	-2.94E-03	5.86E-02
FE-59	1099.22	56.50	3.03E-01	3.03E-01	-2.05E-01	1.39E-01
	1291.56	43.20	4.57E-01		-7.38E-02	2.10E-01
CO-60	1173.22	100.00	1.29E-01	1.29E-01	1.54E-02	5.98E-02
	1332.49	100.00	1.35E-01		1.43E-02	6.23E-02
ZN-65	1115.52	50.75	2.13E-01	2.13E-01	-4.94E-02	9.68E-02
+ GA-67	93.31	* 35.70	1.97E+02	1.97E+02	1.66E+02	9.75E+01
	208.95	* 2.24	2.27E+03		1.43E+03	1.11E+03
	300.22	16.00	2.62E+02		1.27E+02	1.26E+02
SE-75	121.11	16.70	3.95E-01	1.07E-01	1.37E-01	1.92E-01
	136.00	59.20	1.07E-01		-3.21E-02	5.16E-02
	264.65	59.80	1.41E-01		-1.26E-01	6.81E-02
	279.53	25.20	3.75E-01		2.15E-01	1.81E-01
	400.65	11.40	8.31E-01		-3.12E-01	3.96E-01
RB-82	776.52	13.00	1.51E+00	1.51E+00	-1.34E-01	6.96E-01
RB-83	520.41	46.00	2.30E-01	2.30E-01	3.09E-03	1.08E-01
	529.64	30.30	3.66E-01		-8.80E-02	1.73E-01
	552.65	16.40	6.17E-01		2.91E-01	2.89E-01
KR-85	513.99	0.43	2.71E+01	2.71E+01	-2.99E+00	1.30E+01
SR-85	513.99	99.27	1.61E-01	1.61E-01	-1.78E-02	7.73E-02
Y-88	898.02	93.40	1.35E-01	8.55E-02	2.25E-02	6.24E-02
	1836.01	99.38	8.55E-02		-4.78E-02	3.45E-02
NB-93M	16.57	9.43	8.99E+01	8.99E+01	1.09E+01	4.38E+01

Analysis Report for 1510086-15
CP0404S10-11

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)	
NB-94	702.63	100.00	9.56E-02	9.56E-02	9.63E-04	4.47E-02	
	871.10	100.00	9.86E-02		-5.89E-03	4.56E-02	
NB-95	765.79	99.81	2.01E-01	2.01E-01	1.19E-01	9.47E-02	
NB-95M	235.69	25.00	1.44E+02	1.44E+02	4.83E+02	7.09E+01	
ZR-95	724.18	43.70	3.77E-01	2.48E-01	2.85E-02	1.79E-01	
	756.72	55.30	2.48E-01		1.17E-01	1.16E-01	
MO-99	181.06	6.20	1.54E+03	1.09E+03	-7.63E+01	7.46E+02	
	739.58	12.80	1.09E+03		-6.14E+02	5.06E+02	
	778.00	4.50	2.83E+03		-1.09E+03	1.30E+03	
RU-103	497.08	89.00	1.53E-01	1.53E-01	-8.33E-03	7.23E-02	
RU-106	621.84	9.80	9.56E-01	9.56E-01	4.42E-01	4.48E-01	
AG-108M	433.93	89.90	8.59E-02	8.59E-02	-2.76E-02	4.07E-02	
	614.37	90.40	8.63E-02		-1.09E-02	4.01E-02	
	722.95	90.50	1.20E-01		2.22E-02	5.67E-02	
+ CD-109	88.03	*	3.72	3.87E+00	3.81E+00	1.91E+00	
	AG-110M	657.75	93.14	1.10E-01	1.10E-01	2.20E-02	5.18E-02
		677.61	10.53	9.91E-01		1.46E-01	4.65E-01
		706.67	16.46	6.03E-01		-2.15E-01	2.81E-01
		763.93	21.98	4.50E-01		-1.67E-02	2.09E-01
		884.67	71.63	1.62E-01		5.71E-02	7.53E-02
		1384.27	23.94	4.99E-01		1.05E-01	2.25E-01
CD-113M	263.70	0.02	3.21E+02	3.21E+02	1.06E+02	1.55E+02	
SN-113	255.12	1.93	4.24E+00	1.39E-01	-1.16E+00	2.04E+00	
	391.69	64.90	1.39E-01		-5.21E-02	6.63E-02	
TE123M	159.00	84.10	7.93E-02	7.93E-02	-1.18E-02	3.83E-02	
SB-124	602.71	97.87	1.17E-01	1.17E-01	-1.21E-01	5.48E-02	
	645.85	7.26	1.67E+00		1.94E-01	7.78E-01	
	722.78	11.10	1.37E+00		2.54E-01	6.47E-01	
	1691.02	49.00	2.34E-01		-6.98E-02	9.87E-02	
	I-125	35.49	6.49	3.60E+00	3.60E+00	6.43E-01	1.75E+00
SB-125	176.33	6.89	8.65E-01	2.67E-01	9.19E-02	4.18E-01	
	427.89	29.33	2.67E-01		-5.09E-02	1.27E-01	
	463.38	10.35	8.75E-01		4.78E-01	4.16E-01	
	600.56	17.80	4.65E-01		-8.92E-02	2.17E-01	
	635.90	11.32	7.52E-01		-1.18E-01	3.51E-01	
SB-126	414.70	83.30	4.82E-01	4.44E-01	-4.21E-02	2.29E-01	
	666.33	99.60	5.28E-01		7.85E-02	2.49E-01	
	695.00	99.60	4.44E-01		-2.69E-01	2.06E-01	
	720.50	53.80	1.01E+00		5.82E-01	4.74E-01	
+ SN-126	87.57	*	37.00	3.72E-01	3.67E-01	1.84E-01	
	SB-127	473.00	25.00	6.22E+01	5.53E+01	-9.26E+00	2.94E+01
		685.20	35.70	5.53E+01		2.70E+01	2.60E+01
I-129	783.80	14.70	1.29E+02		4.67E+01	6.01E+01	
	29.78	57.00	5.16E-01	5.16E-01	2.49E-01	2.51E-01	
	33.60	13.20	1.47E+00		-7.73E-01	7.17E-01	
I-131	39.58	7.52	1.68E+00		-5.45E-01	8.16E-01	
	284.30	6.05	1.52E+01	1.12E+00	-5.01E-01	7.31E+00	
	364.48	81.20	1.12E+00		-2.72E-01	5.33E-01	
	636.97	7.26	1.49E+01		4.09E+00	6.94E+00	
TE-132	722.89	1.80	7.54E+01		1.39E+01	3.55E+01	
	49.72	13.10	3.42E+02	4.03E+01	7.04E+01	1.67E+02	
	228.16	88.00	4.03E+01		-8.64E+00	1.95E+01	
BA-133	81.00	33.00	1.97E-01	1.59E-01	-1.15E+00	9.64E-02	

Analysis Report for 1510086-15

CP0404S10-11

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
BA-133	302.84	17.80	4.60E-01	1.59E-01	3.53E-01	2.22E-01
	356.01	60.00	1.59E-01		-1.38E-02	7.65E-02
I-133	529.87	86.30	1.48E+09	1.48E+09	-3.55E+08	6.98E+08
XE-133	81.00	38.00	8.16E+00	8.16E+00	-4.74E+01	3.98E+00
CS-134	563.23	8.38	1.02E+00	9.39E-02	-9.61E-02	4.80E-01
	569.32	15.43	6.04E-01		1.71E-01	2.85E-01
	604.70	97.60	9.39E-02		-8.71E-01	4.41E-02
	795.84	85.40	1.31E-01		9.42E-02	6.11E-02
	801.93	8.73	1.07E+00		2.64E-02	4.95E-01
CS-135	268.24	16.00	4.89E-01	4.89E-01	8.09E-02	2.36E-01
@ I-135	1131.51	22.50	1.00E+26	1.00E+26	1.00E+26	1.00E+20
@	1260.41	28.60	1.00E+26		1.00E+26	1.00E+20
@	1678.03	9.54	1.00E+26		1.00E+26	1.00E+20
CS-136	153.22	7.46	3.82E+00	4.05E-01	2.75E+00	1.85E+00
	163.89	4.61	5.93E+00		1.45E+00	2.87E+00
	176.55	13.56	2.02E+00		-6.45E-02	9.78E-01
	273.65	12.66	2.94E+00		-1.14E+00	1.42E+00
	340.57	48.50	1.01E+00		1.04E-01	4.88E-01
	818.50	99.70	4.05E-01		-1.58E-01	1.86E-01
	1048.07	79.60	6.12E-01		1.42E-01	2.81E-01
	1235.34	19.70	3.48E+00		-1.01E+00	1.62E+00
CS-137	661.65	85.12	1.19E-01	1.19E-01	-2.31E-02	5.59E-02
LA-138	788.74	34.00	2.92E-01	1.69E-01	-1.71E-02	1.36E-01
	1435.80	66.00	1.69E-01		5.66E-02	7.60E-02
CE-139	165.85	80.35	8.38E-02	8.38E-02	2.01E-02	4.05E-02
BA-140	162.64	6.70	4.21E+00	1.71E+00	-2.38E-01	2.04E+00
	304.84	4.50	8.16E+00		-2.72E+00	3.92E+00
	423.70	3.20	1.24E+01		3.47E+00	5.92E+00
	437.55	2.00	1.98E+01		2.78E+00	9.39E+00
	537.32	25.00	1.71E+00		7.33E-01	8.08E-01
LA-140	328.77	20.50	1.95E+00	5.64E-01	1.04E+00	9.37E-01
	487.03	45.50	8.37E-01		-8.56E-02	3.94E-01
	815.85	23.50	1.87E+00		1.14E-01	8.60E-01
	1596.49	95.49	5.64E-01		0.00E+00	2.51E-01
CE-141	145.44	48.40	2.20E-01	2.20E-01	1.86E-02	1.07E-01
CE-143	57.36	11.80	1.70E+06	6.65E+05	-5.16E+03	8.30E+05
	293.26	42.00	6.65E+05		4.84E+04	3.24E+05
	664.55	5.20	5.10E+06		1.27E+06	2.41E+06
CE-144	133.54	10.80	5.28E-01	5.28E-01	-2.20E-01	2.56E-01
PM-144	476.78	42.00	2.03E-01	8.41E-02	-3.30E-02	9.62E-02
	618.01	98.60	8.41E-02		-2.67E-02	3.91E-02
	696.49	99.49	9.46E-02		-3.61E-02	4.41E-02
PM-145	36.85	21.70	6.93E-01	3.73E-01	-2.32E-01	3.37E-01
	37.36	39.70	3.73E-01		2.17E-01	1.81E-01
	42.30	15.10	7.31E-01		3.76E-02	3.56E-01
	72.40	2.31	3.87E+00		-6.51E+00	1.90E+00
PM-146	453.90	39.94	1.98E-01	1.98E-01	2.76E-02	9.35E-02
	735.90	14.01	6.63E-01		5.53E-02	3.08E-01
	747.13	13.10	6.96E-01		-2.88E-02	3.23E-01
ND-147	91.11	28.90	1.73E+00	1.73E+00	3.14E-01	8.48E-01
	531.02	13.10	4.26E+00		-1.01E+00	2.01E+00
PM-149	285.90	3.10	2.19E+04	2.19E+04	-9.09E+03	1.05E+04
EU-152	121.78	20.50	2.71E-01	2.71E-01	2.09E-02	1.31E-01

: 00861

Analysis Report for 1510086-15
CP0404S10-11

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)	
EU-152	244.69	5.40	1.57E+00	2.71E-01	-3.03E-01	7.63E-01	
	344.27	19.13	4.15E-01		8.61E-02	1.99E-01	
	778.89	9.20	8.64E-01		-8.93E-02	3.95E-01	
	964.01	10.40	1.15E+00		-1.95E-01	5.38E-01	
	1085.78	7.22	1.44E+00		-2.97E-01	6.60E-01	
	1112.02	9.60	1.29E+00		1.53E-01	5.98E-01	
	1407.95	14.94	7.74E-01		3.17E-01	3.50E-01	
GD-153	97.43	31.30	1.93E-01	1.93E-01	3.51E-02	9.36E-02	
	103.18	22.20	2.64E-01		-1.78E-01	1.28E-01	
EU-154	123.07	40.50	1.39E-01	1.39E-01	5.22E-02	6.75E-02	
	723.30	19.70	5.57E-01		1.03E-01	2.62E-01	
	873.19	11.50	8.08E-01		-4.75E-01	3.71E-01	
	996.32	10.30	9.55E-01		-3.76E-01	4.37E-01	
	1004.76	17.90	5.66E-01		-2.35E-01	2.60E-01	
	1274.45	35.50	3.91E-01		1.35E-02	1.81E-01	
EU-155	86.50	30.90	2.45E-01	2.45E-01	5.38E-02	1.20E-01	
	105.30	20.70	2.73E-01		9.75E-02	1.33E-01	
EU-156	811.77	10.40	3.36E+00	3.36E+00	-1.37E-01	1.55E+00	
	1153.47	7.20	6.41E+00		2.03E+00	2.96E+00	
	1230.71	8.90	5.83E+00		1.32E+00	2.70E+00	
HO-166M	184.41	72.60	1.04E-01	1.04E-01	1.72E-01	5.06E-02	
	280.45	29.60	2.62E-01		8.92E-02	1.26E-01	
	410.94	11.10	7.56E-01		2.20E-01	3.61E-01	
	711.69	54.10	1.71E-01		2.75E-03	7.99E-02	
TM-171	66.72	0.14	5.76E+01	5.76E+01	-3.24E+01	2.82E+01	
HF-172	81.75	4.52	1.47E+00	5.03E-01	-4.75E+00	7.18E-01	
	125.81	11.30	5.03E-01		2.83E-02	2.44E-01	
LU-172	181.53	20.60	6.07E+00	3.80E+00	3.68E-02	2.93E+00	
	810.06	16.63	1.22E+01		3.57E+00	5.67E+00	
	912.12	15.25	2.45E+01		4.99E+01	1.17E+01	
	1093.66	62.50	3.80E+00		1.67E+00	1.75E+00	
LU-173	100.72	5.24	1.08E+00	4.09E-01	1.30E-01	5.27E-01	
	272.11	21.20	4.09E-01		3.25E-01	1.98E-01	
HF-175	343.40	84.00	1.30E-01	1.30E-01	4.21E-02	6.22E-02	
LU-176	88.34	13.30	5.97E-01	7.66E-02	1.01E-01	2.93E-01	
	201.83	86.00	8.48E-02		2.17E-02	4.11E-02	
	306.78	94.00	7.66E-02		-2.47E-02	3.67E-02	
TA-182	67.75	41.20	2.23E-01	2.23E-01	-4.44E-02	1.09E-01	
	1121.30	34.90	5.61E-01		2.29E-02	2.65E-01	
	1189.05	16.23	9.34E-01		-2.37E-01	4.31E-01	
	1221.41	26.98	5.47E-01		-2.99E-02	2.52E-01	
	1231.02	11.44	1.40E+00		-6.46E-01	6.48E-01	
	308.46	29.68	3.13E-01		2.17E-01	-1.04E-01	1.50E-01
IR-192	468.07	48.10	2.17E-01	2.17E-01	2.61E-02	1.03E-01	
	279.19	77.30	1.59E-01		1.59E-01	8.94E-02	7.69E-02
HG-203	569.67	97.72	9.49E-02	9.49E-02	6.12E-02	4.48E-02	
	1063.62	74.90	1.31E-01		5.07E-02	5.98E-02	
BI-207	583.14	*	30.22	3.01E-01	1.22E+00	2.25E-01	
	860.37		4.48		2.54E+00	6.75E-01	1.19E+00
+ TL-208	2614.66	*	35.85	1.61E-01	1.20E+00	1.27E-01	
	262.00		45.00		1.61E-01	-2.10E-03	7.76E-02
	300.00		23.00		3.63E-01	1.75E-01	1.75E-01
+ PB-210	46.50	*	4.25	2.74E+00	2.18E+00	1.34E+00	

Analysis Report for 1510086-15
CP0404S10-11

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
PB-211	404.84	2.90	2.83E+00	2.83E+00	-1.86E+00	1.35E+00
	831.96	2.90	3.53E+00		-5.38E-01	1.64E+00
+ BI-212	727.17 *	11.80	9.04E-01	9.04E-01	1.28E+00	4.25E-01
	1620.62	2.75	3.11E+00		6.89E-01	1.33E+00
+ PB-212	238.63 *	44.60	2.74E-01	2.74E-01	1.70E+00	1.34E-01
	300.09	3.41	2.45E+00		1.18E+00	1.18E+00
+ BI-214	609.31 *	46.30	2.64E-01	2.64E-01	1.20E+00	1.26E-01
	1120.29 *	15.10	9.97E-01		7.69E-01	4.68E-01
	1764.49 *	15.80	6.86E-01		9.37E-01	3.02E-01
	2204.22 *	4.98	1.86E+00		1.92E+00	7.76E-01
+ PB-214	295.21 *	19.19	5.02E-01	2.66E-01	1.51E+00	2.44E-01
	351.92 *	37.19	2.66E-01		1.41E+00	1.28E-01
RN-219	401.80	6.50	1.30E+00	1.30E+00	5.74E-01	6.23E-01
RA-223	323.87	3.88	1.82E+00	1.82E+00	-1.88E-01	8.71E-01
+ RA-224	240.98 *	3.95	3.16E+00	3.16E+00	4.07E+00	1.55E+00
RA-225	40.00	31.00	1.56E+00	1.56E+00	-5.08E-01	7.61E-01
+ RA-226	186.21 *	3.28	2.61E+00	2.61E+00	2.62E+00	1.27E+00
TH-227	50.10	8.40	1.05E+00	1.05E+00	2.15E-01	5.10E-01
	236.00	11.50	1.14E+00		3.82E+00	5.61E-01
	256.20	6.30	1.10E+00		-2.12E-02	5.30E-01
+ AC-228	338.32 *	11.40	1.02E+00	5.30E-01	1.11E+00	4.98E-01
	911.07 *	27.70	5.30E-01		1.39E+00	2.51E-01
	969.11 *	16.60	1.10E+00		8.33E-01	5.23E-01
TH-230	48.44	16.90	5.86E-01	5.86E-01	3.64E-03	2.86E-01
	62.85	4.60	1.83E+00		1.47E+00	8.97E-01
	67.67	0.37	2.08E+01		-4.15E+00	1.02E+01
PA-231	283.67	1.60	4.61E+00	3.54E+00	-1.52E-01	2.22E+00
	302.67	2.30	3.54E+00		2.72E+00	1.70E+00
TH-231	25.64	14.70	3.58E+00	1.02E+00	-3.57E-01	1.74E+00
	84.21	6.40	1.02E+00		-2.28E+00	4.97E-01
PA-233	311.98	38.60	3.98E-01	3.98E-01	1.09E-01	1.90E-01
PA-234	131.20	20.40	2.82E-01	2.82E-01	1.64E-01	1.37E-01
	733.99	8.80	1.07E+00		3.64E-01	4.97E-01
	946.00	12.00	8.24E-01		3.74E-02	3.79E-01
PA-234M	1001.03	0.92	1.24E+01	1.24E+01	4.03E+00	5.74E+00
TH-234	63.29	3.80	2.22E+00	2.22E+00	1.70E+00	1.09E+00
U-235	143.76	10.50	5.54E-01	5.54E-01	2.82E-01	2.69E-01
	163.35	4.70	1.24E+00		3.05E-01	6.01E-01
	205.31	4.70	1.49E+00		-1.72E-01	7.23E-01
NP-237	86.50	12.60	5.94E-01	5.94E-01	1.31E-01	2.91E-01
NP-239	106.10	22.70	1.35E+03	1.35E+03	3.51E+02	6.55E+02
	228.18	10.70	3.61E+03		-7.73E+02	1.74E+03
	277.60	14.10	3.01E+03		-7.74E+02	1.45E+03
AM-241	59.54	35.90	2.21E-01	2.21E-01	-1.50E-01	1.08E-01
AM-243	74.67	66.00	1.61E-01	1.61E-01	3.71E-01	7.91E-02
CM-243	209.75	3.29	2.39E+00	5.54E-01	1.95E+00	1.16E+00
	228.14	10.60	6.64E-01		-1.42E-01	3.21E-01
	277.60	14.00	5.54E-01		-1.42E-01	2.67E-01

Analysis Report for 1510086-15
CP0404S10-11

- + = Nuclide identified during the nuclide identification
 - * = Energy line found in the spectrum
 - > = MDA value not calculated
 - @ = Half-life too short to be able to perform the decay correction
-

No Action Level results available for reporting purposes.

DATA REVIEW COMMENTS REPORT

Creation Date

Comment

User

No Data Review Comments Entered.

 ***** S P E C T R A L D A T A R E P O R T *****

Sample Title: CP0404S10-11

Elapsed Live time: 3600

Elapsed Real Time: 3617

Channel	1	9	17	25	33	41	49	57	65	73	81	89	97	105	113	121	129	137	145	153	161	169	177	185	193	201	209	217	225	233	241	249	257	265	273	281	289	297	305	313	321	329	337	345	353	361																																																																																																																																																																																																																																																																																								
1:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																																																																																																																																																																																																																																																																																			
9:	18	194	176	149	128	123	99	109	106	77	83	74	87	88	83	97	83	89	89	86	79	93	96	82	80	97	97	110	123	127	122	129	167	195	152	181	386	298	450	417	135	105	122	109	92	132	133	111	190	219	116	210	138	134	263	175	98	94	97	68	77	84	92	84	70	69	75	86	105	76	66	82	80	73	79	90	69	74	67	65	67	83	61	121	77	75	81	75	67	74	57	86	80	86	69	76	65	59	61	60	68	65	65	68	62	45	169	49	58	51	47	60	49	60	49	60	57	59	55	185	71	155	100	57	46	62	61	59	193	52	75	39	41	48	47	65	53	201	52	53	39	51	47	48	49	37	209	73	79	65	47	46	43	45	45	217	40	42	34	49	48	44	42	47	225	47	42	38	29	37	44	39	44	233	36	37	34	47	52	211	528	158	241	88	117	74	38	44	29	32	28	249	38	41	34	35	25	34	31	26	257	35	33	39	24	36	39	37	32	265	28	30	37	21	39	58	52	40	273	35	35	35	31	39	40	37	37	281	25	48	31	23	34	22	30	29	289	24	27	29	23	24	48	170	138	297	43	31	24	39	47	25	41	30	305	29	23	24	24	20	27	17	33	313	27	23	27	24	18	19	23	28	321	19	19	17	25	26	28	21	50	329	38	28	25	15	25	21	22	22	337	27	91	89	30	28	26	39	18	345	23	24	18	17	21	27	75	256	353	129	25	17	18	19	14	19	22	361	19	24	17	24	17	24	15	13

369: 18 25 26 19 17 16 20 21

Sample Title: CP0404S10-11

Channel	18	25	26	19	17	16	20	21
377:	20	13	25	20	10	26	21	21
385:	14	16	27	20	17	16	21	17
393:	25	11	21	19	20	13	25	24
401:	22	17	11	25	30	20	19	20
409:	29	27	18	19	13	19	23	12
417:	17	20	13	17	27	15	15	26
425:	15	15	16	13	21	18	14	16
433:	14	17	18	21	10	16	18	17
441:	20	23	10	17	19	16	13	13
449:	21	13	12	18	11	16	22	14
457:	11	11	12	11	16	19	41	17
465:	13	14	17	16	10	20	12	13
473:	15	11	16	15	17	18	15	10
481:	16	18	10	14	17	13	14	19
489:	6	8	9	18	12	12	18	16
497:	18	11	10	11	11	16	19	15
505:	14	7	8	16	22	29	83	40
513:	22	14	8	11	15	14	8	18
521:	12	7	19	18	14	15	18	16
529:	9	18	13	9	17	18	16	15
537:	10	11	13	14	8	11	14	6
545:	13	12	12	7	10	12	11	9
553:	9	9	13	13	8	7	7	11
561:	9	16	12	17	6	9	16	15
569:	12	9	17	16	13	10	12	14
577:	11	11	8	13	7	36	94	93
585:	15	17	12	8	13	8	10	11
593:	7	11	12	10	19	10	5	9
601:	19	12	6	6	7	9	13	28
609:	136	140	16	7	6	9	12	2
617:	7	9	9	7	13	9	16	13
625:	9	6	10	18	13	6	9	10
633:	7	9	9	8	10	10	11	12
641:	9	7	9	10	15	9	9	3
649:	12	8	11	11	7	8	14	7
657:	12	8	13	15	10	14	10	13
665:	14	23	11	11	9	15	9	11
673:	10	9	10	17	9	9	10	11
681:	11	10	11	16	18	8	12	10
689:	9	6	15	7	8	5	15	4
697:	8	11	11	14	8	10	14	10
705:	7	8	10	9	8	12	13	8
713:	12	6	6	6	12	8	14	13
721:	12	17	8	5	15	19	33	18
729:	14	10	7	8	10	8	11	9
737:	10	5	7	6	11	6	11	12
745:	4	4	9	10	7	10	9	7
753:	8	7	7	15	7	13	7	12
761:	7	6	4	9	7	7	15	23
769:	21	7	15	6	12	10	5	5
777:	6	7	5	5	7	4	6	10
785:	9	12	13	9	8	4	5	11
793:	5	13	23	12	6	8	7	8

801: 2 4 15 5 9 8 12 7

Sample Title: CP0404S10-11

Channel	1	2	3	4	5	6	7	8	9
809:	11	5	7	7	9	7	4	8	
817:	4	9	6	7	5	6	10	10	
825:	8	6	7	8	11	6	9	7	
833:	5	7	15	14	8	10	10	14	
841:	8	4	7	4	4	8	7	9	
849:	5	3	9	7	5	7	11	9	
857:	10	8	8	14	18	7	6	9	
865:	6	15	4	7	13	6	8	8	
873:	5	4	9	4	7	10	11	5	
881:	11	10	6	6	11	10	5	2	
889:	9	8	8	2	6	4	4	8	
897:	9	6	6	14	7	9	8	8	
905:	2	11	9	6	13	24	69	36	
913:	15	9	4	5	5	6	5	4	
921:	4	5	8	5	2	5	6	3	
929:	5	7	3	5	11	15	10	8	
937:	8	7	3	6	2	6	6	7	
945:	8	6	6	5	6	9	6	8	
953:	4	4	7	8	7	9	10	2	
961:	6	8	8	12	15	12	3	31	
969:	47	13	7	5	4	12	4	1	
977:	8	5	3	3	5	8	9	5	
985:	8	7	7	7	8	7	5	4	
993:	10	3	3	5	7	1	10	11	
1001:	8	7	10	7	8	4	4	1	
1009:	7	7	3	7	8	7	4	9	
1017:	4	2	10	5	7	9	7	2	
1025:	7	9	6	7	10	6	8	4	
1033:	4	4	6	5	3	3	6	10	
1041:	4	4	5	4	3	8	8	5	
1049:	6	2	9	5	5	5	3	6	
1057:	6	1	4	8	4	7	4	2	
1065:	4	6	1	7	10	9	8	4	
1073:	6	6	4	3	2	7	2	3	
1081:	6	5	8	4	4	3	7	6	
1089:	6	5	9	5	4	16	6	2	
1097:	5	2	11	8	8	5	7	7	
1105:	4	6	8	9	8	11	10	3	
1113:	6	8	7	5	0	4	15	36	
1121:	19	3	8	11	7	8	9	9	
1129:	4	4	6	8	6	6	9	3	
1137:	3	7	3	4	10	3	10	6	
1145:	1	5	7	4	6	3	7	4	
1153:	12	16	2	4	4	7	3	8	
1161:	5	9	8	11	8	7	9	8	
1169:	4	7	6	7	7	7	10	8	
1177:	8	7	4	9	8	5	8	9	
1185:	5	8	4	9	7	10	6	6	
1193:	9	10	8	12	6	7	8	4	
1201:	7	7	9	8	7	7	10	8	
1209:	6	9	5	5	9	8	6	6	
1217:	5	9	5	7	4	8	8	4	
1225:	7	8	5	7	9	8	15	7	

1233: 4 3 9 15 17 9 9 11

Sample Title: CP0404S10-11

Channel	1	2	3	4	5	6	7	8
1241:	4	10	4	13	8	5	3	6
1249:	4	4	7	14	5	6	5	5
1257:	8	5	5	5	4	4	3	6
1265:	5	2	7	5	3	5	9	4
1273:	8	8	7	1	3	8	9	5
1281:	8	3	5	4	5	6	1	4
1289:	3	7	6	3	7	6	5	4
1297:	6	8	5	5	9	3	6	0
1305:	2	7	5	1	8	3	3	0
1313:	3	4	4	10	3	6	4	7
1321:	3	6	2	5	4	3	7	5
1329:	6	3	8	8	5	2	3	6
1337:	7	2	4	3	6	2	4	4
1345:	3	4	5	5	1	3	2	2
1353:	2	4	3	3	0	3	5	4
1361:	3	2	2	0	2	3	3	2
1369:	3	1	1	5	3	3	2	4
1377:	6	3	4	2	8	1	1	1
1385:	9	2	3	1	2	3	0	3
1393:	6	3	1	3	1	2	2	6
1401:	6	0	2	5	1	2	2	6
1409:	2	5	3	4	2	4	0	1
1417:	2	0	3	0	4	5	4	1
1425:	4	2	3	4	2	2	1	3
1433:	4	2	5	3	3	3	3	3
1441:	1	4	1	0	2	8	4	2
1449:	3	1	3	0	2	2	2	3
1457:	3	13	64	180	181	64	4	2
1465:	4	1	1	1	2	0	1	2
1473:	2	0	1	2	2	2	0	4
1481:	2	3	1	2	2	3	0	1
1489:	1	2	2	5	2	3	2	1
1497:	3	2	0	6	1	2	3	0
1505:	2	1	2	6	8	6	1	1
1513:	2	0	1	3	1	0	0	5
1521:	5	0	2	1	0	0	1	3
1529:	0	1	0	2	3	1	3	1
1537:	1	1	1	1	1	0	2	2
1545:	0	3	1	1	0	1	1	2
1553:	0	0	3	1	2	2	1	3
1561:	0	2	3	4	1	2	1	2
1569:	2	0	3	2	0	1	0	1
1577:	1	1	3	0	2	0	3	1
1585:	2	3	4	7	4	0	5	8
1593:	1	6	0	2	0	0	2	3
1601:	2	0	0	1	1	1	0	0
1609:	1	1	0	2	1	2	2	1
1617:	1	1	2	1	3	2	1	0
1625:	0	0	1	0	2	6	2	1
1633:	1	0	1	1	0	1	0	4
1641:	0	0	2	1	1	1	1	0
1649:	0	2	3	2	1	2	0	1
1657:	2	2	2	0	4	4	2	2

1665: 2 1 0 0 1 0 1 0

Sample Title: CP0404S10-11

Channel	1	2	3	4	5	6	7	8	9
1673:	1	1	1	2	0	1	2	5	0
1681:	1	2	2	0	2	1	3	2	0
1689:	2	2	1	0	1	0	1	0	2
1697:	2	2	2	1	1	1	1	0	2
1705:	0	1	2	0	0	0	0	1	0
1713:	1	0	0	0	2	1	0	0	3
1721:	0	0	0	0	0	2	0	0	1
1729:	5	4	0	0	1	1	0	0	1
1737:	1	1	0	0	0	0	0	1	0
1745:	0	0	1	1	3	2	1	3	0
1753:	1	0	2	1	2	1	3	0	1
1761:	2	5	7	13	10	1	2	0	2
1769:	0	1	1	1	1	1	1	2	0
1777:	0	3	1	0	2	0	1	2	2
1785:	1	0	0	0	2	0	1	1	1
1793:	2	1	1	2	2	0	2	0	0
1801:	2	1	1	0	2	0	0	0	2
1809:	0	0	0	1	0	0	1	1	1
1817:	1	0	1	0	1	2	1	1	1
1825:	1	0	1	3	2	1	0	0	3
1833:	1	0	2	0	1	0	2	1	0
1841:	1	0	0	1	1	0	1	0	1
1849:	2	0	0	0	0	2	1	1	1
1857:	0	2	0	3	2	1	0	0	2
1865:	2	0	1	5	1	2	0	0	3
1873:	2	0	2	0	0	1	0	1	1
1881:	2	2	1	2	0	0	1	1	2
1889:	3	2	3	1	1	0	1	1	2
1897:	0	0	0	0	0	1	0	0	0
1905:	1	2	0	0	1	0	0	0	2
1913:	0	0	0	0	2	1	0	1	2
1921:	0	3	1	2	1	0	0	0	1
1929:	0	2	0	1	1	0	0	0	0
1937:	3	1	0	0	2	0	2	0	0
1945:	0	2	0	0	2	2	0	0	1
1953:	0	0	2	1	0	0	0	0	1
1961:	0	0	1	0	2	0	0	0	3
1969:	2	3	1	0	0	0	1	1	1
1977:	0	3	2	0	1	0	0	0	0
1985:	0	0	2	1	0	0	0	0	1
1993:	1	3	1	2	0	1	2	1	1
2001:	0	0	0	0	1	0	2	1	1
2009:	1	2	1	0	4	1	3	1	1
2017:	0	0	2	1	0	0	2	0	1
2025:	0	1	0	0	0	1	0	0	0
2033:	1	2	0	1	2	1	1	0	3
2041:	0	0	1	1	0	0	0	0	1
2049:	0	1	0	0	0	0	0	0	3
2057:	1	0	0	1	0	0	0	0	0
2065:	0	1	1	1	3	0	0	0	1
2073:	0	1	1	1	0	0	0	0	0
2081:	0	0	1	0	1	0	0	0	0
2089:	2	0	1	0	0	3	1	1	1

2097: 0 2 0 1 3 5 5 4

Sample Title: CP0404S10-11

Channel	1	2	3	4	5	6	7	8
2105:	3	0	1	0	0	0	1	2
2113:	1	2	0	5	3	2	0	2
2121:	4	2	2	0	0	0	0	0
2129:	1	0	1	0	0	4	2	0
2137:	1	0	2	0	0	1	2	0
2145:	0	0	0	1	2	1	1	0
2153:	1	1	0	1	1	1	2	1
2161:	2	1	2	0	0	1	1	0
2169:	2	2	0	2	0	0	1	1
2177:	0	0	1	1	0	2	1	0
2185:	0	0	0	0	0	0	2	1
2193:	2	0	2	3	1	0	1	1
2201:	1	3	6	3	5	2	0	1
2209:	1	1	1	2	0	0	0	1
2217:	1	0	1	1	1	0	2	1
2225:	0	2	0	1	1	1	0	1
2233:	0	1	0	1	0	0	0	2
2241:	0	3	1	2	0	0	0	1
2249:	1	0	1	0	0	1	0	0
2257:	1	0	1	0	2	2	2	0
2265:	0	1	0	0	0	0	0	1
2273:	1	2	1	1	1	1	0	1
2281:	1	2	0	1	0	1	1	0
2289:	1	2	1	1	1	1	1	0
2297:	1	0	2	1	1	0	1	1
2305:	0	0	0	1	0	1	1	0
2313:	0	3	0	1	0	0	1	1
2321:	0	0	2	1	0	2	1	1
2329:	3	5	1	0	3	0	0	0
2337:	0	2	1	2	0	0	0	3
2345:	1	1	1	1	1	0	0	0
2353:	0	1	0	0	0	0	2	1
2361:	2	1	4	2	1	0	2	1
2369:	3	1	1	3	1	1	2	0
2377:	0	2	3	1	2	1	1	0
2385:	1	1	0	1	0	1	1	1
2393:	0	2	1	0	2	0	2	1
2401:	1	1	0	0	0	1	3	1
2409:	0	2	1	2	1	0	0	0
2417:	1	0	0	2	0	1	0	0
2425:	1	0	0	0	2	0	1	0
2433:	0	0	1	0	0	1	0	0
2441:	0	1	0	0	2	0	2	1
2449:	3	1	0	2	1	0	3	1
2457:	1	2	0	0	0	0	0	1
2465:	0	1	0	0	1	2	0	2
2473:	0	0	1	1	0	0	1	0
2481:	1	1	0	0	0	0	3	2
2489:	0	0	1	0	0	0	1	0
2497:	1	1	0	0	0	0	1	1
2505:	0	1	0	0	1	0	0	0
2513:	1	0	1	0	0	0	0	0
2521:	0	0	0	0	0	1	1	1

2529: 1 0 0 0 1 0 2 1

Sample Title: CP0404S10-11

Channel	1	2	3	4	5	6	7	8
2537:	0	0	0	0	1	0	0	1
2545:	1	0	1	0	0	0	1	0
2553:	2	0	0	1	0	0	0	0
2561:	1	1	0	1	0	1	0	1
2569:	0	0	1	0	1	0	0	1
2577:	1	0	0	3	0	0	0	0
2585:	1	0	1	1	0	0	0	0
2593:	0	0	0	0	0	0	1	0
2601:	0	0	0	0	0	0	0	0
2609:	1	0	4	11	23	30	5	3
2617:	0	2	0	1	0	0	0	0
2625:	0	0	0	1	1	0	1	0
2633:	0	0	0	0	0	0	0	0
2641:	0	0	0	0	0	0	2	1
2649:	0	0	0	0	0	1	0	1
2657:	1	0	0	0	1	1	0	1
2665:	0	0	0	0	1	0	0	0
2673:	0	1	0	0	0	0	0	0
2681:	1	0	0	0	0	1	0	0
2689:	0	0	0	0	0	0	0	0
2697:	0	0	0	1	0	1	0	1
2705:	0	0	0	0	0	0	0	0
2713:	0	0	0	1	2	0	0	0
2721:	0	0	0	0	0	0	1	0
2729:	1	0	0	0	1	0	0	0
2737:	0	0	0	0	0	0	0	0
2745:	0	0	2	0	0	1	1	1
2753:	1	0	1	0	0	0	0	0
2761:	0	0	0	0	0	1	0	0
2769:	0	0	0	0	0	0	0	0
2777:	0	0	0	0	0	1	0	0
2785:	1	0	0	0	0	1	1	0
2793:	0	1	0	0	0	0	0	0
2801:	0	0	0	0	0	1	0	0
2809:	0	1	0	0	0	1	0	0
2817:	0	0	2	0	0	0	1	0
2825:	1	0	0	1	0	0	0	0
2833:	0	0	0	0	1	0	0	0
2841:	1	0	0	0	0	0	1	0
2849:	1	1	0	0	0	0	0	0
2857:	1	0	1	0	0	0	0	0
2865:	0	0	0	1	0	0	1	1
2873:	0	0	0	1	0	0	0	0
2881:	0	0	0	0	0	3	0	0
2889:	1	0	0	0	1	1	0	0
2897:	0	0	0	0	0	0	0	1
2905:	2	0	0	0	0	1	0	0
2913:	0	0	0	1	0	0	0	0
2921:	0	0	0	0	0	0	0	0
2929:	0	0	0	0	0	0	0	0
2937:	0	1	0	0	0	1	0	0
2945:	0	0	0	1	0	0	0	1
2953:	0	0	0	0	0	0	0	0

2961: 0 1 1 0 0 0 0 1

Sample Title: CP0404S10-11

Channel	1	2	3	4	5	6	7	8
2969:	0	0	0	0	0	0	0	0
2977:	1	1	0	0	0	0	0	1
2985:	0	0	1	0	1	0	0	0
2993:	0	0	1	0	0	0	0	0
3001:	0	0	0	0	2	0	0	0
3009:	0	0	0	1	0	0	0	0
3017:	0	0	0	0	0	0	1	0
3025:	0	0	0	1	0	1	0	1
3033:	0	0	0	0	1	0	1	0
3041:	0	0	0	0	0	0	0	0
3049:	0	1	1	0	0	0	0	1
3057:	1	0	0	1	0	0	1	0
3065:	0	0	0	0	0	0	0	1
3073:	0	0	0	1	0	0	0	0
3081:	0	0	0	0	0	0	0	0
3089:	1	0	0	0	0	0	0	0
3097:	0	1	0	1	0	0	1	0
3105:	0	1	0	1	0	0	0	0
3113:	0	0	0	0	0	0	1	1
3121:	0	1	0	1	1	0	0	0
3129:	0	0	0	0	0	0	0	0
3137:	0	0	0	0	0	0	0	2
3145:	0	0	0	0	0	1	0	1
3153:	0	0	0	1	0	0	0	0
3161:	0	0	0	0	0	0	0	0
3169:	0	0	0	1	0	0	0	0
3177:	0	0	0	0	0	0	0	1
3185:	0	0	0	1	2	0	0	0
3193:	0	0	0	1	0	0	0	0
3201:	0	0	0	0	0	0	0	0
3209:	0	0	0	0	0	1	0	0
3217:	0	0	1	0	1	1	0	0
3225:	0	0	0	1	0	0	0	0
3233:	0	0	1	0	0	0	0	0
3241:	0	0	0	1	0	0	0	1
3249:	0	0	0	0	1	0	1	0
3257:	0	0	0	0	0	2	0	0
3265:	0	0	0	0	1	0	0	0
3273:	1	0	0	0	0	0	0	0
3281:	0	0	0	1	0	1	0	0
3289:	0	0	0	0	1	0	0	0
3297:	0	0	0	0	0	0	0	0
3305:	0	0	0	2	0	0	0	0
3313:	0	0	0	0	0	0	0	0
3321:	0	0	0	0	0	0	0	0
3329:	0	0	0	0	0	0	0	0
3337:	0	0	1	0	0	0	0	0
3345:	0	0	0	0	0	0	0	0
3353:	0	0	0	0	0	1	0	0
3361:	0	0	0	0	0	0	1	0
3369:	0	0	0	0	0	0	0	0
3377:	0	0	1	0	0	0	0	0
3385:	0	0	0	0	1	0	0	0

3393: 1 0 0 0 0 0 0 0

Sample Title: CP0404S10-11

Channel	1	2	3	4	5	6	7	8	9
3401:	0	1	0	0	0	0	0	0	0
3409:	0	0	0	0	0	0	0	0	0
3417:	0	0	0	0	0	0	0	0	1
3425:	0	1	0	1	1	2	1	1	0
3433:	0	0	0	0	0	1	1	0	0
3441:	0	2	0	0	0	0	0	0	0
3449:	0	0	0	0	0	0	0	0	0
3457:	0	1	0	0	0	0	0	0	0
3465:	1	0	0	0	0	0	0	1	0
3473:	0	0	0	0	0	0	0	1	0
3481:	0	0	0	0	0	0	0	0	0
3489:	0	0	0	0	0	1	0	0	0
3497:	0	0	0	0	0	0	0	1	0
3505:	0	0	0	0	1	0	1	0	0
3513:	0	0	0	0	0	0	0	0	1
3521:	1	0	0	0	0	1	0	0	0
3529:	0	0	0	0	0	0	0	0	0
3537:	0	0	0	0	0	0	0	0	0
3545:	0	2	0	0	0	0	0	0	0
3553:	0	0	0	0	0	1	0	0	0
3561:	0	0	0	0	2	0	0	0	0
3569:	0	0	0	0	0	0	0	0	0
3577:	0	0	0	0	0	0	0	0	1
3585:	0	0	0	0	0	0	0	0	0
3593:	0	1	0	0	0	0	0	0	0
3601:	0	0	1	0	0	0	0	0	0
3609:	0	0	0	0	0	1	0	0	0
3617:	0	0	0	0	0	0	0	1	0
3625:	0	0	0	0	0	0	1	0	0
3633:	0	0	0	0	0	0	1	0	0
3641:	0	0	0	0	0	0	0	0	0
3649:	1	0	0	0	0	0	0	0	0
3657:	1	0	1	0	0	1	0	0	0
3665:	0	0	0	0	0	0	0	0	1
3673:	0	0	1	0	0	0	0	0	0
3681:	0	0	0	0	0	0	0	0	0
3689:	0	0	0	0	0	1	0	0	0
3697:	1	0	0	0	0	2	0	0	0
3705:	1	0	0	0	0	0	0	0	0
3713:	0	0	1	0	0	1	0	0	1
3721:	0	0	0	0	0	0	0	0	0
3729:	0	0	0	0	0	0	0	0	0
3737:	0	0	0	0	1	0	0	0	0
3745:	1	0	0	0	0	0	0	0	0
3753:	0	0	0	0	0	0	0	0	0
3761:	0	0	0	0	0	0	0	0	0
3769:	0	1	0	0	0	0	0	0	0
3777:	0	0	0	0	0	0	0	0	0
3785:	0	0	0	0	0	0	0	0	0
3793:	0	0	0	0	0	0	1	0	0
3801:	0	0	0	0	1	0	0	0	0
3809:	0	0	0	0	0	0	0	0	0
3817:	0	0	0	0	0	0	0	0	0

3825: 0 0 0 0 0 0 0 0 0

Sample Title: CP0404S10-11

Channel								
3833:	0	0	0	0	0	0	0	0
3841:	0	0	0	0	0	0	0	0
3849:	0	0	0	0	0	1	1	0
3857:	0	0	0	0	0	0	0	0
3865:	0	0	0	1	0	0	0	0
3873:	0	0	0	0	0	0	0	0
3881:	0	0	0	0	0	0	0	0
3889:	0	0	0	0	0	0	2	0
3897:	0	0	0	0	0	0	0	0
3905:	0	0	0	0	0	0	1	0
3913:	0	0	0	0	0	0	0	0
3921:	0	0	0	0	0	0	0	0
3929:	0	0	0	1	0	1	0	0
3937:	1	0	0	1	0	0	0	0
3945:	1	0	1	0	0	0	0	0
3953:	1	0	0	0	0	0	0	1
3961:	0	0	0	0	0	0	0	0
3969:	0	0	0	0	0	0	0	0
3977:	1	1	0	0	0	0	0	0
3985:	0	0	0	0	0	0	0	0
3993:	0	1	0	0	0	0	0	1
4001:	0	0	0	0	0	0	0	0
4009:	0	0	1	0	0	0	0	0
4017:	0	0	1	0	0	0	0	1
4025:	0	0	0	0	0	1	0	0
4033:	0	0	0	0	1	0	0	0
4041:	0	1	0	0	0	0	0	0
4049:	0	0	1	0	0	0	0	0
4057:	0	0	0	0	0	0	0	0
4065:	0	1	0	0	0	0	0	0
4073:	0	0	1	0	0	0	0	0
4081:	0	0	0	0	0	0	0	0
4089:	0	0	0	0	0	0	0	0

KB
11/6/15



Analysis Report for 1510086-16
CP0404S12-13

GAMMA SPECTRUM ANALYSIS

Sample Identification : 1510086-16
 Sample Description : CP0404S12-13
 Sample Type : SOIL

 Sample Size : 5.732E+02 grams
 Facility : Countroom

 Sample Taken On : 10/8/2015 7:59:14AM
 Acquisition Started : 11/6/2015 1:37:58PM

 Procedure : GAS-1402 pCi
 Operator : Administrator
 Detector Name : GE4
 Geometry : GAS-1402
 Live Time : 3600.0 seconds
 Real Time : 3639.4 seconds

 Dead Time : 1.08 %

 Peak Locate Threshold : 2.50
 Peak Locate Range (in channels) : 1 - 4096
 Peak Area Range (in channels) : 15 - 4096
 Identification Energy Tolerance : 1.000 keV

 Energy Calibration Used Done On : 10/25/2014
 Efficiency Calibration Used Done On : 11/8/2014
 Efficiency Calibration Description :

 Sample Number : 29268

PEAK-TO-TOTAL CALIBRATION REPORT

Peak-to-Total Efficiency Calibration Equation

AG
11/9/15

Analysis Report for 1510086-16
CP0404S12-13

PEAK LOCATE REPORT

Peak Locate Performed on : 11/6/2015 2:38:38PM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096
Peak Search Sensitivity : 2.50

Peak No.	Energy (keV)	Centroid Channel	Centroid Uncertainty	Peak Significance
1	46.22	45.48	0.0000	0.00
2	76.30	75.57	0.0000	0.00
3	93.13	92.41	0.0000	0.00
4	154.16	153.46	0.0000	0.00
5	185.72	185.04	0.0000	0.00
6	210.34	209.66	0.0000	0.00
7	239.26	238.60	0.0000	0.00
8	295.50	294.86	0.0000	0.00
9	338.55	337.93	0.0000	0.00
10	352.34	351.73	0.0000	0.00
11	380.70	380.10	0.0000	0.00
12	416.21	415.63	0.0000	0.00
13	463.33	462.77	0.0000	0.00
14	510.76	510.22	0.0000	0.00
15	583.01	582.50	0.0000	0.00
16	609.12	608.62	0.0000	0.00
17	645.14	644.66	0.0000	0.00
18	693.73	693.27	0.0000	0.00
19	728.88	728.45	0.0000	0.00
20	840.99	840.61	0.0000	0.00
21	903.55	903.21	0.0000	0.00
22	911.54	911.20	0.0000	0.00
23	968.76	968.45	0.0000	0.00
24	1031.37	1031.10	0.0000	0.00
25	1155.51	1155.31	0.0000	0.00
26	1212.36	1212.18	0.0000	0.00
27	1240.64	1240.48	0.0000	0.00
28	1300.72	1300.60	0.0000	0.00
29	1377.30	1377.23	0.0000	0.00
30	1389.78	1389.71	0.0000	0.00
31	1460.95	1460.93	0.0000	0.00
32	1527.84	1527.86	0.0000	0.00
33	1535.13	1535.15	0.0000	0.00
34	1619.76	1619.83	0.0000	0.00
35	1664.77	1664.87	0.0000	0.00
36	1764.48	1764.64	0.0000	0.00
37	1886.54	1886.79	0.0000	0.00
38	1965.27	1965.57	0.0000	0.00
39	2103.44	2103.83	0.0000	0.00
40	2204.11	2204.57	0.0000	0.00
41	2259.16	2259.67	0.0000	0.00
42	2365.21	2365.79	0.0000	0.00

Analysis Report for 1510086-16
CP0404S12-13

Peak No.	Energy (keV)	Centroid Channel	Centroid Uncertainty	Peak Significance
43	2615.38	2616.15	0.0000	0.00
44	2911.99	2913.00	0.0000	0.00

? = Adjacent peak noted
Errors quoted at 2.000sigma

Analysis Report for 1510086-16
CP0404S12-13

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 11/6/2015 2:38:38PM

Peak Analysis From Channel : 1
Peak Analysis To Channel : 4096

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	FWHM (keV)
1	46.22	42 -	48	45.48	8.06E+01	73.44	9.25E+02	2.46
2	76.30	70 -	81	75.57	7.00E+02	146.86	2.31E+03	3.61
3	93.13	90 -	97	92.41	1.36E+02	91.72	1.25E+03	2.84
4	154.16	150 -	158	153.46	7.15E+01	72.41	7.57E+02	4.28
5	185.72	181 -	187	185.04	1.36E+02	57.76	5.08E+02	2.30
6	210.34	206 -	214	209.66	7.83E+01	64.88	5.91E+02	1.64
7	239.26	232 -	244	238.60	6.74E+02	90.05	6.36E+02	2.91
8	295.50	291 -	298	294.86	9.90E+01	52.84	3.98E+02	2.77
M m 9	338.55	332 -	367	337.93	9.30E+01	42.52	2.52E+02	2.66
10	352.34	332 -	367	351.73	1.85E+02	49.50	2.52E+02	2.97
11	380.70	371 -	390	380.10	7.55E+01	73.10	4.21E+02	17.11
12	416.21	413 -	419	415.63	2.88E+01	29.83	1.42E+02	1.74
13	463.33	457 -	467	462.77	5.03E+01	37.89	1.63E+02	4.73
14	510.76	504 -	515	510.22	1.41E+02	40.25	1.31E+02	3.53
15	583.01	577 -	589	582.50	1.32E+02	44.44	1.74E+02	2.20
16	609.12	603 -	617	608.62	1.43E+02	50.15	2.12E+02	3.35
17	645.14	639 -	648	644.66	2.47E+01	27.62	9.46E+01	4.85
18	693.73	690 -	699	693.27	2.21E+01	26.10	8.38E+01	2.63
19	728.88	725 -	734	728.45	4.20E+01	25.73	7.20E+01	3.90
20	840.99	838 -	844	840.61	1.65E+01	17.64	4.31E+01	1.57
M m 21	903.55	896 -	919	903.21	1.88E+01	19.77	3.79E+01	3.45
22	911.54	896 -	919	911.20	7.80E+01	24.96	3.38E+01	3.45
23	968.76	961 -	977	968.45	9.19E+01	34.27	7.83E+01	6.38
24	1031.37	1026 -	1034	1031.10	1.87E+01	21.99	6.25E+01	2.96
25	1155.51	1153 -	1158	1155.31	1.10E+01	12.81	2.40E+01	3.47
26	1212.36	1205 -	1218	1212.18	2.77E+01	32.48	1.05E+02	8.85
27	1240.64	1236 -	1245	1240.48	3.22E+01	25.04	6.16E+01	6.13
28	1300.72	1296 -	1307	1300.60	1.70E+01	18.87	3.60E+01	0.94
M m 29	1377.30	1373 -	1392	1377.23	1.16E+01	14.14	3.69E+01	3.23
30	1389.78	1373 -	1392	1389.71	2.44E+01	11.05	4.10E+00	3.23
31	1460.95	1454 -	1468	1460.93	2.66E+02	35.79	2.30E+01	2.82
32	1527.84	1525 -	1530	1527.86	7.00E+00	5.29	0.00E+00	1.66
33	1535.13	1532 -	1538	1535.15	9.50E+00	8.75	7.00E+00	2.82
34	1619.76	1615 -	1624	1619.83	8.64E+00	8.31	4.73E+00	6.89
35	1664.77	1658 -	1672	1664.87	1.71E+01	11.84	7.71E+00	3.96
36	1764.48	1761 -	1768	1764.64	2.00E+01	11.31	8.00E+00	2.25
37	1886.54	1879 -	1893	1886.79	1.90E+01	8.72	0.00E+00	7.00
38	1965.27	1962 -	1968	1965.57	7.00E+00	5.29	0.00E+00	2.87
39	2103.44	2099 -	2106	2103.83	6.44E+00	6.93	3.13E+00	2.05
40	2204.11	2199 -	2208	2204.57	1.68E+01	10.05	4.37E+00	3.59

Analysis Report for 1510086-16
CP0404S12-13

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	FWHM (keV)
41	2259.16	2255 - 2263		2259.67	9.00E+00	6.00	0.00E+00	6.75
42	2365.21	2361 - 2368		2365.79	6.45E+00	8.72	9.09E+00	2.13
43	2615.38	2611 - 2621		2616.15	2.95E+01	12.58	5.06E+00	3.14
44	2911.99	2910 - 2915		2913.00	5.00E+00	4.47	0.00E+00	1.50

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 11/6/2015 2:38:38PM

Peak Analysis From Channel : 1
Peak Analysis To Channel : 4096

Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
1	46.22	42 -	48	8.06E+01	73.44	9.25E+02	5.85E+01
2	76.30	70 -	81	7.00E+02	146.86	2.31E+03	1.13E+02
3	93.13	90 -	97	1.36E+02	91.72	1.25E+03	7.29E+01
4	154.16	150 -	158	7.15E+01	72.41	7.57E+02	5.79E+01
5	185.72	181 -	187	1.36E+02	57.76	5.08E+02	4.34E+01
6	210.34	206 -	214	7.83E+01	64.88	5.91E+02	5.13E+01
7	239.26	232 -	244	6.74E+02	90.05	6.36E+02	6.05E+01
8	295.50	291 -	298	9.90E+01	52.84	3.98E+02	4.02E+01
M	9	332 -	367	9.30E+01	42.52	2.52E+02	2.61E+01
m	10	332 -	367	1.85E+02	49.50	2.52E+02	2.61E+01
11	380.70	371 -	390	7.55E+01	73.10	4.21E+02	5.84E+01
12	416.21	413 -	419	2.88E+01	29.83	1.42E+02	2.29E+01
13	463.33	457 -	467	5.03E+01	37.89	1.63E+02	2.89E+01
14	510.76	504 -	515	1.41E+02	40.25	1.31E+02	2.67E+01
15	583.01	577 -	589	1.32E+02	44.44	1.74E+02	3.13E+01
16	609.12	603 -	617	1.43E+02	50.15	2.12E+02	3.62E+01
17	645.14	639 -	648	2.47E+01	27.62	9.46E+01	2.12E+01
18	693.73	690 -	699	2.21E+01	26.10	8.38E+01	2.00E+01
19	728.88	725 -	734	4.20E+01	25.73	7.20E+01	1.83E+01
20	840.99	838 -	844	1.65E+01	17.64	4.31E+01	1.29E+01
M	21	896 -	919	1.88E+01	19.77	3.79E+01	1.01E+01
m	22	896 -	919	7.80E+01	24.96	3.38E+01	9.55E+00
23	968.76	961 -	977	9.19E+01	34.27	7.83E+01	2.33E+01

Analysis Report for 1510086-16
CP0404S12-13

Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
24	1031.37	1026 -	1034	1.87E+01	21.99	6.25E+01	1.66E+01
25	1155.51	1153 -	1158	1.10E+01	12.81	2.40E+01	9.00E+00
26	1212.36	1205 -	1218	2.77E+01	32.48	1.05E+02	2.53E+01
27	1240.64	1236 -	1245	3.22E+01	25.04	6.16E+01	1.83E+01
28	1300.72	1296 -	1307	1.70E+01	18.87	3.60E+01	1.39E+01
M 29	1377.30	1373 -	1392	1.16E+01	14.14	3.69E+01	9.99E+00
m 30	1389.78	1373 -	1392	2.44E+01	11.05	4.10E+00	3.33E+00
31	1460.95	1454 -	1468	2.66E+02	35.79	2.30E+01	1.20E+01
32	1527.84	1525 -	1530	7.00E+00	5.29	0.00E+00	0.00E+00
33	1535.13	1532 -	1538	9.50E+00	8.75	7.00E+00	5.10E+00
34	1619.76	1615 -	1624	8.64E+00	8.31	4.73E+00	4.83E+00
35	1664.77	1658 -	1672	1.71E+01	11.84	7.71E+00	6.96E+00
36	1764.48	1761 -	1768	2.00E+01	11.31	8.00E+00	5.70E+00
37	1886.54	1879 -	1893	1.90E+01	8.72	0.00E+00	0.00E+00
38	1965.27	1962 -	1968	7.00E+00	5.29	0.00E+00	0.00E+00
39	2103.44	2099 -	2106	6.44E+00	6.93	3.13E+00	3.88E+00
40	2204.11	2199 -	2208	1.68E+01	10.05	4.37E+00	4.77E+00
41	2259.16	2255 -	2263	9.00E+00	6.00	0.00E+00	0.00E+00
42	2365.21	2361 -	2368	6.45E+00	8.72	9.09E+00	5.82E+00
43	2615.38	2611 -	2621	2.95E+01	12.58	5.06E+00	5.22E+00
44	2911.99	2910 -	2915	5.00E+00	4.47	0.00E+00	0.00E+00

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

PEAK WITH NID REPORT

Peak Analysis Performed on : 11/6/2015 2:38:38PM

Peak Analysis From Channel : 1
Peak Analysis To Channel : 4096

Tentative NID Library : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB
Peak Match Tolerance : 1.000 keV

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
1	46.22	42 -	48	45.48	8.06E+01	73.44	9.25E+02	PB-210
2	76.30	70 -	81	75.57	7.00E+02	146.86	2.31E+03	.....
3	93.13	90 -	97	92.41	1.36E+02	91.72	1.25E+03	GA-67
4	154.16	150 -	158	153.46	7.15E+01	72.41	7.57E+02	CS-136

Analysis Report for 1510086-16

CP0404S12-13

	Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
	5	185.72	181 -	187	185.04	1.36E+02	57.76	5.08E+02	RA-226
	6	210.34	206 -	214	209.66	7.83E+01	64.88	5.91E+02	CM-243
	7	239.26	232 -	244	238.60	6.74E+02	90.05	6.36E+02	PB-212
	8	295.50	291 -	298	294.86	9.90E+01	52.84	3.98E+02	PB-214
M	9	338.55	332 -	367	337.93	9.30E+01	42.52	2.52E+02	AC-228
m	10	352.34	332 -	367	351.73	1.85E+02	49.50	2.52E+02	PB-214
	11	380.70	371 -	390	380.10	7.55E+01	73.10	4.21E+02	.....
	12	416.21	413 -	419	415.63	2.88E+01	29.83	1.42E+02	.....
	13	463.33	457 -	467	462.77	5.03E+01	37.89	1.63E+02	SB-125
	14	510.76	504 -	515	510.22	1.41E+02	40.25	1.31E+02	.....
	15	583.01	577 -	589	582.50	1.32E+02	44.44	1.74E+02	TL-208
	16	609.12	603 -	617	608.62	1.43E+02	50.15	2.12E+02	BI-214
	17	645.14	639 -	648	644.66	2.47E+01	27.62	9.46E+01	SB-124
	18	693.73	690 -	699	693.27	2.21E+01	26.10	8.38E+01	.....
	19	728.88	725 -	734	728.45	4.20E+01	25.73	7.20E+01	.....
	20	840.99	838 -	844	840.61	1.65E+01	17.64	4.31E+01	.....
M	21	903.55	896 -	919	903.21	1.88E+01	19.77	3.79E+01	.....
m	22	911.54	896 -	919	911.20	7.80E+01	24.96	3.38E+01	AC-228
									LU-172
	23	968.76	961 -	977	968.45	9.19E+01	34.27	7.83E+01	AC-228
	24	1031.37	1026 -	1034	1031.10	1.87E+01	21.99	6.25E+01	.....
	25	1155.51	1153 -	1158	1155.31	1.10E+01	12.81	2.40E+01	.....
	26	1212.36	1205 -	1218	1212.18	2.77E+01	32.48	1.05E+02	.....
	27	1240.64	1236 -	1245	1240.48	3.22E+01	25.04	6.16E+01	.....
	28	1300.72	1296 -	1307	1300.60	1.70E+01	18.87	3.60E+01	.....
M	29	1377.30	1373 -	1392	1377.23	1.16E+01	14.14	3.69E+01	.....
m	30	1389.78	1373 -	1392	1389.71	2.44E+01	11.05	4.10E+00	.....
	31	1460.95	1454 -	1468	1460.93	2.66E+02	35.79	2.30E+01	K-40
	32	1527.84	1525 -	1530	1527.86	7.00E+00	5.29	0.00E+00	.....
	33	1535.13	1532 -	1538	1535.15	9.50E+00	8.75	7.00E+00	.....
	34	1619.76	1615 -	1624	1619.83	8.64E+00	8.31	4.73E+00	BI-212
	35	1664.77	1658 -	1672	1664.87	1.71E+01	11.84	7.71E+00	.....
	36	1764.48	1761 -	1768	1764.64	2.00E+01	11.31	8.00E+00	BI-214
	37	1886.54	1879 -	1893	1886.79	1.90E+01	8.72	0.00E+00	.....
	38	1965.27	1962 -	1968	1965.57	7.00E+00	5.29	0.00E+00	.....
	39	2103.44	2099 -	2106	2103.83	6.44E+00	6.93	3.13E+00	.....
	40	2204.11	2199 -	2208	2204.57	1.68E+01	10.05	4.37E+00	BI-214
	41	2259.16	2255 -	2263	2259.67	9.00E+00	6.00	0.00E+00	.....
	42	2365.21	2361 -	2368	2365.79	6.45E+00	8.72	9.09E+00	.....
	43	2615.38	2611 -	2621	2616.15	2.95E+01	12.58	5.06E+00	TL-208
	44	2911.99	2910 -	2915	2913.00	5.00E+00	4.47	0.00E+00	.....

M = First peak in a multiplet region

m = Other peak in a multiplet region

F = Fitted singlet

Errors quoted at 2.000sigma

Analysis Report for 1510086-16
CP0404S12-13

PEAK EFFICIENCY REPORT

Peak Analysis Performed on : 11/6/2015 2:38:38PM

	Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
	1	46.22	8.06E+01	73.44	2.64E-02	1.78E-03
	2	76.30	7.00E+02	146.86	2.12E-02	1.69E-03
	3	93.13	1.36E+02	91.72	1.90E-02	1.62E-03
	4	154.16	7.15E+01	72.41	1.35E-02	1.30E-03
	5	185.72	1.36E+02	57.76	1.16E-02	1.15E-03
	6	210.34	7.83E+01	64.88	1.05E-02	1.08E-03
	7	239.26	6.74E+02	90.05	9.40E-03	9.85E-04
	8	295.50	9.90E+01	52.84	7.78E-03	8.43E-04
M	9	338.55	9.30E+01	42.52	6.86E-03	7.95E-04
m	10	352.34	1.85E+02	49.50	6.60E-03	7.80E-04
	11	380.70	7.55E+01	73.10	6.13E-03	7.48E-04
	12	416.21	2.88E+01	29.83	5.63E-03	7.00E-04
	13	463.33	5.03E+01	37.89	5.07E-03	6.31E-04
	14	510.76	1.41E+02	40.25	4.61E-03	5.61E-04
	15	583.01	1.32E+02	44.44	4.05E-03	4.56E-04
	16	609.12	1.43E+02	50.15	3.88E-03	4.17E-04
	17	645.14	2.47E+01	27.62	3.66E-03	3.64E-04
	18	693.73	2.21E+01	26.10	3.41E-03	3.22E-04
	19	728.88	4.20E+01	25.73	3.25E-03	3.03E-04
	20	840.99	1.65E+01	17.64	2.82E-03	2.40E-04
M	21	903.55	1.88E+01	19.77	2.63E-03	2.07E-04
m	22	911.54	7.80E+01	24.96	2.61E-03	2.06E-04
	23	968.76	9.19E+01	34.27	2.46E-03	1.99E-04
	24	1031.37	1.87E+01	21.99	2.32E-03	1.91E-04
	25	1155.51	1.10E+01	12.81	2.08E-03	1.75E-04
	26	1212.36	2.77E+01	32.48	1.99E-03	1.83E-04
	27	1240.64	3.22E+01	25.04	1.95E-03	1.91E-04
	28	1300.72	1.70E+01	18.87	1.87E-03	2.07E-04
M	29	1377.30	1.16E+01	14.14	1.77E-03	2.06E-04
m	30	1389.78	2.44E+01	11.05	1.76E-03	2.04E-04
	31	1460.95	2.66E+02	35.79	1.68E-03	1.89E-04
	32	1527.84	7.00E+00	5.29	1.62E-03	1.75E-04
	33	1535.13	9.50E+00	8.75	1.61E-03	1.74E-04
	34	1619.76	8.64E+00	8.31	1.54E-03	1.56E-04
	35	1664.77	1.71E+01	11.84	1.51E-03	1.47E-04
	36	1764.48	2.00E+01	11.31	1.43E-03	1.26E-04
	37	1886.54	1.90E+01	8.72	1.36E-03	1.11E-04
	38	1965.27	7.00E+00	5.29	1.32E-03	1.11E-04
	39	2103.44	6.44E+00	6.93	1.25E-03	1.11E-04
	40	2204.11	1.68E+01	10.05	1.21E-03	1.11E-04
	41	2259.16	9.00E+00	6.00	1.19E-03	1.11E-04
	42	2365.21	6.45E+00	8.72	1.15E-03	1.11E-04
	43	2615.38	2.95E+01	12.58	1.07E-03	1.11E-04
	44	2911.99	5.00E+00	4.47	1.00E-03	1.11E-04

Analysis Report for 1510086-16

CP0404S12-13

M = First peak in a multiplet region
 m = Other peak in a multiplet region
 F = Fitted singlet
 Errors quoted at 2.000 sigma

BACKGROUND SUBTRACT REPORT

Peak Analysis Performed on : 11/6/2015 2:38:38PM

Env. Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000028944.CNF

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
1	46.22	8.06E+01	73.44	2.00E+01	7.38E+00	6.06E+01	7.38E+01
2	76.30	7.00E+02	146.86			7.00E+02	1.47E+02
3	93.13	1.36E+02	91.72	5.44E+01	8.36E+00	8.20E+01	9.21E+01
4	154.16	7.15E+01	72.41			7.15E+01	7.24E+01
5	185.72	1.36E+02	57.76	1.43E+01	7.33E+00	1.22E+02	5.82E+01
6	210.34	7.83E+01	64.88			7.83E+01	6.49E+01
7	239.26	6.74E+02	90.05	1.09E+01	6.39E+00	6.63E+02	9.03E+01
8	295.50	9.90E+01	52.84			9.90E+01	5.28E+01
M	9	338.55	9.30E+01	42.52		9.30E+01	4.25E+01
m	10	352.34	1.85E+02	49.50	8.07E+00	5.01E+00	1.77E+02
	11	380.70	7.55E+01	73.10		7.55E+01	7.31E+01
	12	416.21	2.88E+01	29.83		2.88E+01	2.98E+01
	13	463.33	5.03E+01	37.89		5.03E+01	3.79E+01
	14	510.76	1.41E+02	40.25	4.21E+01	4.92E+00	9.93E+01
	15	583.01	1.32E+02	44.44		1.32E+02	4.44E+01
	16	609.12	1.43E+02	50.15	5.16E+00	1.63E+00	1.38E+02
	17	645.14	2.47E+01	27.62		2.47E+01	2.76E+01
	18	693.73	2.21E+01	26.10		2.21E+01	2.61E+01
	19	728.88	4.20E+01	25.73		4.20E+01	2.57E+01
	20	840.99	1.65E+01	17.64		1.65E+01	1.76E+01
M	21	903.55	1.88E+01	19.77		1.88E+01	1.98E+01
m	22	911.54	7.80E+01	24.96	1.01E+00	2.85E+00	7.70E+01
	23	968.76	9.19E+01	34.27		9.19E+01	3.43E+01
	24	1031.37	1.87E+01	21.99		1.87E+01	2.20E+01
	25	1155.51	1.10E+01	12.81		1.10E+01	1.28E+01
	26	1212.36	2.77E+01	32.48		2.77E+01	3.25E+01
	27	1240.64	3.22E+01	25.04		3.22E+01	2.50E+01
	28	1300.72	1.70E+01	18.87		1.70E+01	1.89E+01
M	29	1377.30	1.16E+01	14.14		1.16E+01	1.41E+01
m	30	1389.78	2.44E+01	11.05		2.44E+01	1.10E+01
	31	1460.95	2.66E+02	35.79		2.66E+02	3.58E+01
	32	1527.84	7.00E+00	5.29		7.00E+00	5.29E+00
	33	1535.13	9.50E+00	8.75		9.50E+00	8.75E+00
	34	1619.76	8.64E+00	8.31		8.64E+00	8.31E+00
	35	1664.77	1.71E+01	11.84		1.71E+01	1.18E+01

: 00884

Analysis Report for 1510086-16

CP0404S12-13

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
36	1764.48	2.00E+01	11.31	1.11E-01	9.77E-01	1.99E+01	1.14E+01
37	1886.54	1.90E+01	8.72			1.90E+01	8.72E+00
38	1965.27	7.00E+00	5.29			7.00E+00	5.29E+00
39	2103.44	6.44E+00	6.93			6.44E+00	6.93E+00
40	2204.11	1.68E+01	10.05			1.68E+01	1.00E+01
41	2259.16	9.00E+00	6.00			9.00E+00	6.00E+00
42	2365.21	6.45E+00	8.72			6.45E+00	8.72E+00
43	2615.38	2.95E+01	12.58			2.95E+01	1.26E+01
44	2911.99	5.00E+00	4.47			5.00E+00	4.47E+00

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

AREA CORRECTION REPORT REFERENCE PEAK / BKG. SUBTRACT

Peak Analysis Performed on : 11/6/2015 2:38:38PM
Ref. Peak Energy : 0.00 Reference Date :
Peak Ratio : 0.00 Uncertainty : 0.00
Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000028944.CNF

Corrected Area is: Original * Peak Ratio - Background

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.	
1	46.22	8.06E+01	73.44	2.00E+01	7.38E+00	6.06E+01	7.38E+01	
2	76.30	7.00E+02	146.86			7.00E+02	1.47E+02	
3	93.13	1.36E+02	91.72	5.44E+01	8.36E+00	8.20E+01	9.21E+01	
4	154.16	7.15E+01	72.41			7.15E+01	7.24E+01	
5	185.72	1.36E+02	57.76	1.43E+01	7.33E+00	1.22E+02	5.82E+01	
6	210.34	7.83E+01	64.88			7.83E+01	6.49E+01	
7	239.26	6.74E+02	90.05	1.09E+01	6.39E+00	6.63E+02	9.03E+01	
8	295.50	9.90E+01	52.84			9.90E+01	5.28E+01	
M	9	338.55	9.30E+01	42.52		9.30E+01	4.25E+01	
m	10	352.34	1.85E+02	49.50	8.07E+00	5.01E+00	1.77E+02	4.98E+01
	11	380.70	7.55E+01	73.10		7.55E+01	7.31E+01	
	12	416.21	2.88E+01	29.83		2.88E+01	2.98E+01	
	13	463.33	5.03E+01	37.89		5.03E+01	3.79E+01	
	14	510.76	1.41E+02	40.25	4.21E+01	4.92E+00	9.93E+01	4.05E+01
	15	583.01	1.32E+02	44.44		1.32E+02	4.44E+01	
	16	609.12	1.43E+02	50.15	5.16E+00	1.63E+00	1.38E+02	5.02E+01
	17	645.14	2.47E+01	27.62		2.47E+01	2.76E+01	
	18	693.73	2.21E+01	26.10		2.21E+01	2.61E+01	
	19	728.88	4.20E+01	25.73		4.20E+01	2.57E+01	

: 00885

Analysis Report for 1510086-16

CP0404S12-13

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
	20	840.99	1.65E+01	17.64		1.65E+01	1.76E+01
M	21	903.55	1.88E+01	19.77		1.88E+01	1.98E+01
m	22	911.54	7.80E+01	24.96	1.01E+00 2.85E+00	7.70E+01	2.51E+01
	23	968.76	9.19E+01	34.27		9.19E+01	3.43E+01
	24	1031.37	1.87E+01	21.99		1.87E+01	2.20E+01
	25	1155.51	1.10E+01	12.81		1.10E+01	1.28E+01
	26	1212.36	2.77E+01	32.48		2.77E+01	3.25E+01
	27	1240.64	3.22E+01	25.04		3.22E+01	2.50E+01
	28	1300.72	1.70E+01	18.87		1.70E+01	1.89E+01
M	29	1377.30	1.16E+01	14.14		1.16E+01	1.41E+01
m	30	1389.78	2.44E+01	11.05		2.44E+01	1.10E+01
	31	1460.95	2.66E+02	35.79		2.66E+02	3.58E+01
	32	1527.84	7.00E+00	5.29		7.00E+00	5.29E+00
	33	1535.13	9.50E+00	8.75		9.50E+00	8.75E+00
	34	1619.76	8.64E+00	8.31		8.64E+00	8.31E+00
	35	1664.77	1.71E+01	11.84		1.71E+01	1.18E+01
	36	1764.48	2.00E+01	11.31	1.11E-01 9.77E-01	1.99E+01	1.14E+01
	37	1886.54	1.90E+01	8.72		1.90E+01	8.72E+00
	38	1965.27	7.00E+00	5.29		7.00E+00	5.29E+00
	39	2103.44	6.44E+00	6.93		6.44E+00	6.93E+00
	40	2204.11	1.68E+01	10.05		1.68E+01	1.00E+01
	41	2259.16	9.00E+00	6.00		9.00E+00	6.00E+00
	42	2365.21	6.45E+00	8.72		6.45E+00	8.72E+00
	43	2615.38	2.95E+01	12.58		2.95E+01	1.26E+01
	44	2911.99	5.00E+00	4.47		5.00E+00	4.47E+00

M = First peak in a multiplet region
 m = Other peak in a multiplet region
 F = Fitted singlet
 Errors quoted at 2.000sigma

NUCLIDE IDENTIFICATION REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

IDENTIFIED NUCLIDES

Nuclide Name	Id Confidence	Energy (keV)	Yield(%)	Activity (pCi/grams)	Activity Uncertainty
K-40	0.997	1460.81	* 10.67	1.94E+01	3.42E+00
GA-67	0.400	93.31	* 35.70	7.96E+01	3.29E+02
		208.95	2.24		
		300.22	16.00		
TL-208	0.845	583.14	* 30.22	1.41E+00	5.02E-01
		860.37	4.48		

Analysis Report for 1510086-16
CP0404S12-13

Nuclide Name	Id Confidence	Energy (keV)	Yield(%)	Activity (pCi/grams)	Activity Uncertainty
TL-208	0.845	2614.66 *	35.85	1.00E+00	4.41E-01
PB-210	0.988	46.50 *	4.25	7.10E-01	8.67E-01
PB-212	0.839	238.63 *	44.60	2.07E+00	3.56E-01
		300.09	3.41		
BI-214	0.739	609.31 *	46.30	1.01E+00	3.82E-01
		1120.29	15.10		
		1764.49 *	15.80	1.15E+00	6.64E-01
		2204.22 *	4.98	3.67E+00	2.22E+00
PB-214	0.977	295.21 *	19.19	8.69E-01	4.73E-01
		351.92 *	37.19	9.44E-01	2.88E-01
RA-226	0.963	186.21 *	3.28	4.18E+00	7.92E+00
AC-228	0.975	338.32 *	11.40	1.56E+00	7.35E-01
		911.07 *	27.70	1.40E+00	4.68E-01
		969.11 *	16.60	2.95E+00	1.12E+00

* = Energy line found in the spectrum.
 - = Manually added nuclide.
 ? = Manually edited nuclide.
 Energy Tolerance : 1.000 keV
 Nuclide confidence index threshold = 0.30
 Errors quoted at 2.000sigma

UNIDENTIFIED PEAKS

Peak Locate Performed on : 11/6/2015 2:38:38PM
 Peak Locate From Channel : 1
 Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
2	76.30	1.94547E-01	10.48		
4	154.16	1.98722E-02	50.60	Tol.	CS-136
6	210.34	2.17372E-02	41.46	Tol.	CM-243
11	380.70	2.09615E-02	48.44		
12	416.21	8.01111E-03	51.72		
13	463.33	1.39857E-02	37.63	Tol.	SB-125
14	510.76	2.75768E-02	20.42		
17	645.14	6.85764E-03	55.94	Tol.	SB-124
18	693.73	6.13932E-03	59.04		
19	728.88	1.16667E-02	30.63		
20	840.99	4.57602E-03	53.55		
M 21	903.55	5.22364E-03	52.58		
24	1031.37	5.20556E-03	58.67		
25	1155.51	3.05556E-03	58.21		
26	1212.36	7.70660E-03	58.54		

Analysis Report for 1510086-16
CP0404S12-13

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
	27	1240.64	8.95062E-03		
	28	1300.72	4.72222E-03		
M	29	1377.30	3.21345E-03		
m	30	1389.78	6.77480E-03		
	32	1527.84	1.94444E-03		
	33	1535.13	2.63889E-03		
	34	1619.76	2.39899E-03	Tol.	BI-212
	35	1664.77	4.76190E-03		
	37	1886.54	5.27778E-03		
	38	1965.27	1.94444E-03		
	39	2103.44	1.78819E-03	S-Esc	
	41	2259.16	2.50000E-03		
	42	2365.21	1.79293E-03		
	44	2911.99	1.38889E-03		

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

NUCLIDE IDENTIFICATION REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

IDENTIFIED NUCLIDES

Nuclide Name	Id Confidence	Energy (keV)	Yield(%)	Activity (pCi/grams)	Activity Uncertainty
K-40	0.99	1460.81 *	10.67	1.94E+01	3.42E+00
GA-67	0.40	93.31 *	35.70	7.96E+01	3.29E+02
		208.95	2.24		
		300.22	16.00		
TL-208	0.84	583.14 *	30.22	1.41E+00	5.02E-01
		860.37	4.48		
		2614.66 *	35.85	1.00E+00	4.41E-01
PB-210	0.98	46.50 *	4.25	7.10E-01	8.67E-01
PB-212	0.83	238.63 *	44.60	2.07E+00	3.56E-01
		300.09	3.41		
BI-214	0.73	609.31 *	46.30	1.01E+00	3.82E-01
		1120.29	15.10		
		1764.49 *	15.80	1.15E+00	6.64E-01
		2204.22 *	4.98	3.67E+00	2.22E+00

: 00000

Analysis Report for 1510086-16
 CP0404S12-13

Nuclide Name	Id Confidence	Energy (keV)	Yield(%)	Activity (pCi/grams)	Activity Uncertainty
PB-214	0.97	295.21 *	19.19	8.69E-01	4.73E-01
		351.92 *	37.19	9.44E-01	2.88E-01
RA-226	0.96	186.21 *	3.28	4.18E+00	7.92E+00
AC-228	0.97	338.32 *	11.40	1.56E+00	7.35E-01
		911.07 *	27.70	1.40E+00	4.68E-01
		969.11 *	16.60	2.95E+00	1.12E+00

* = Energy line found in the spectrum.
 - = Manually added nuclide.
 ? = Manually edited nuclide.
 @ = Energy line not used for Weighted Mean Activity
 Energy Tolerance : 1.000 keV
 Nuclide confidence index threshold = 0.30
 Errors quoted at 2.000sigma

INTERFERENCE CORRECTED REPORT

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40	0.997	1.94E+01	3.42E+00	
GA-67	0.400	7.96E+01	3.29E+02	
TL-208	0.845	1.18E+00	3.31E-01	
PB-210	0.988	7.10E-01	8.67E-01	
PB-212	0.839	2.07E+00	3.56E-01	
BI-214	0.739	1.10E+00	3.27E-01	
PB-214	0.977	9.24E-01	2.46E-01	
RA-226	0.963	4.18E+00	7.92E+00	
AC-228	0.975	1.61E+00	3.73E-01	

? = nuclide is part of an undetermined solution
 X = nuclide rejected by the interference analysis
 @ = nuclide contains energy lines not used in Weighted Mean Activity

Errors quoted at 2.000sigma

Analysis Report for 1510086-16
CP0404S12-13

UNIDENTIFIED PEAKS

Peak Locate Performed on : 11/6/2015 2:38:38PM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
2	76.30	1.94547E-01	10.48		
4	154.16	1.98722E-02	50.60	Tol.	CS-136
6	210.34	2.17372E-02	41.46	Tol.	CM-243
11	380.70	2.09615E-02	48.44		
12	416.21	8.01111E-03	51.72		
13	463.33	1.39857E-02	37.63	Tol.	SB-125
14	510.76	2.75768E-02	20.42		
17	645.14	6.85764E-03	55.94	Tol.	SB-124
18	693.73	6.13932E-03	59.04		
19	728.88	1.16667E-02	30.63		
20	840.99	4.57602E-03	53.55		
M 21	903.55	5.22364E-03	52.58		
24	1031.37	5.20556E-03	58.67		
25	1155.51	3.05556E-03	58.21		
26	1212.36	7.70660E-03	58.54		
27	1240.64	8.95062E-03	38.86		
28	1300.72	4.72222E-03	55.49		
M 29	1377.30	3.21345E-03	61.12		
m 30	1389.78	6.77480E-03	22.64		
32	1527.84	1.94444E-03	37.80		
33	1535.13	2.63889E-03	46.03		
34	1619.76	2.39899E-03	48.09	Tol.	BI-212
35	1664.77	4.76190E-03	34.54		
37	1886.54	5.27778E-03	22.94		
38	1965.27	1.94444E-03	37.80		
39	2103.44	1.78819E-03	53.81	S-Esc	
41	2259.16	2.50000E-03	33.33		
42	2365.21	1.79293E-03	67.53		
44	2911.99	1.38889E-03	44.72		

Analysis Report for 1510086-16
CP0404S12-13

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

NUCLIDE MDA REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

	<i>Nuclide Name</i>	<i>Energy (keV)</i>	<i>Yield(%)</i>	<i>Activity (pCi/grams)</i>	<i>Nuclide MDA (pCi/grams)</i>	<i>Line MDA (pCi/grams)</i>
+	BE-7	477.59	10.42	-7.55E-01	1.82E+00	1.82E+00
+	NA-22	1274.54	99.94	4.93E-02	2.10E-01	2.10E-01
+	NA-24	1368.53	99.99	-3.62E+12	1.15E+13	1.98E+13
		2754.09	99.86	1.56E+12		1.15E+13
+	AL-26	1808.65	99.76	2.70E-02	1.56E-01	1.56E-01
+	K-40	1460.81	* 10.67	1.94E+01	1.95E+00	1.95E+00
+	@ AR-41	1293.64	99.16	1.00E+26	1.00E+26	1.00E+26
+	TI-44	67.88	94.40	7.15E-03	9.12E-02	9.12E-02
		78.34	96.00	3.15E-01		1.17E-01
+	SC-46	889.25	99.98	4.47E-02	2.12E-01	2.12E-01
		1120.51	99.99	1.28E-01		3.02E-01
+	V-48	983.52	99.98	-4.71E-03	5.03E-01	6.78E-01
		1312.10	97.50	7.61E-02		5.03E-01
+	CR-51	320.08	9.83	-3.45E-01	2.50E+00	2.50E+00
+	MN-54	834.83	99.97	2.09E-02	1.96E-01	1.96E-01
+	CO-56	846.75	99.96	-2.93E-02	1.85E-01	1.85E-01
		1037.75	14.03	-1.16E-01		1.87E+00
		1238.25	67.00	8.32E-03		5.13E-01
		1771.40	15.51	-3.42E-01		1.21E+00
		2598.48	16.90	2.79E-01		1.00E+00
+	CO-57	122.06	85.51	-5.23E-02	1.06E-01	1.06E-01
		136.48	10.60	-8.81E-02		9.71E-01
+	CO-58	810.76	99.40	-1.62E-02	2.19E-01	2.19E-01
+	FE-59	1099.22	56.50	-3.63E-01	4.99E-01	4.99E-01
		1291.56	43.20	9.61E-02		7.88E-01
+	CO-60	1173.22	100.00	6.30E-02	1.98E-01	2.12E-01
		1332.49	100.00	1.18E-01		1.98E-01
+	ZN-65	1115.52	50.75	-2.10E-01	4.42E-01	4.42E-01
+	GA-67	93.31	* 35.70	7.96E+01	1.47E+02	1.47E+02
		208.95	2.24	-2.58E+02		2.60E+03
		300.22	16.00	-1.36E+01		4.03E+02
+	SE-75	121.11	16.70	-4.06E-01	1.91E-01	5.94E-01

Analysis Report for 1510086-16
CP0404S12-13

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	SE-75	136.00	59.20	3.89E-02	1.91E-01
		264.65	59.80	-2.52E-01	2.09E-01
		279.53	25.20	9.88E-02	5.51E-01
		400.65	11.40	3.03E-01	1.29E+00
+	RB-82	776.52	13.00	-5.41E-03	2.69E+00
+	RB-83	520.41	46.00	6.12E-02	3.71E-01
		529.64	30.30	-3.86E-01	4.84E-01
		552.65	16.40	-1.67E-01	1.02E+00
+	KR-85	513.99	0.43	-3.57E+00	4.24E+01
+	SR-85	513.99	99.27	-2.13E-02	2.52E-01
+	Y-88	898.02	93.40	-1.19E-02	1.72E-01
		1836.01	99.38	-2.62E-02	1.72E-01
+	NB-93M	16.57	9.43	9.83E-01	4.51E-01
+	NB-94	702.63	100.00	0.00E+00	1.44E-01
		871.10	100.00	1.25E-02	1.61E-01
+	NB-95	765.79	99.81	9.27E-02	3.17E-01
+	NB-95M	235.69	25.00	4.49E+02	1.94E+02
+	ZR-95	724.18	43.70	-1.15E-01	4.06E-01
		756.72	55.30	-5.80E-02	4.06E-01
+	MO-99	181.06	6.20	3.75E+02	2.09E+03
		739.58	12.80	1.32E+03	2.09E+03
		778.00	4.50	-2.49E+03	5.21E+03
+	RU-103	497.08	89.00	1.24E-01	2.41E-01
+	RU-106	621.84	9.80	-6.12E-02	1.52E+00
+	AG-108M	433.93	89.90	-6.57E-02	1.19E-01
		614.37	90.40	-8.18E-02	1.93E-01
		722.95	90.50	-1.46E-02	1.77E-01
+	CD-109	88.03	3.72	1.52E+00	2.83E+00
+	AG-110M	657.75	93.14	7.72E-04	1.72E-01
		677.61	10.53	4.54E-01	1.60E+00
		706.67	16.46	3.59E-02	1.01E+00
		763.93	21.98	2.46E-01	8.74E-01
		884.67	71.63	-1.79E-02	2.45E-01
		1384.27	23.94	-7.16E-01	8.24E-01
+	CD-113M	263.70	0.02	-3.88E+02	4.62E+02
+	SN-113	255.12	1.93	4.54E-01	2.25E-01
		391.69	64.90	-5.14E-03	2.25E-01
+	TE123M	159.00	84.10	-1.54E-02	1.36E-01
+	SB-124	602.71	97.87	1.65E-02	1.94E-01
		645.85	7.26	6.78E-01	2.82E+00
		722.78	11.10	-3.29E-01	1.85E+00
		1691.02	49.00	-1.20E-01	3.03E-01
+	I-125	35.49	6.49	-4.86E-01	1.04E+00
+	SB-125	176.33	6.89	9.93E-01	4.09E-01
		427.89	29.33	1.15E-01	4.09E-01
		463.38	10.35	4.66E-01	1.31E+00
		600.56	17.80	2.10E-01	8.00E-01
		635.90	11.32	1.50E-01	1.22E+00

Analysis Report for 1510086-16
CP0404S12-13

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	SB-126	414.70	83.30	5.44E-03	7.48E-01	8.05E-01
		666.33	99.60	2.38E-02		7.48E-01
		695.00	99.60	9.06E-02		7.56E-01
		720.50	53.80	-9.55E-01		1.40E+00
+	SN-126	87.57	37.00	1.45E-01	2.72E-01	2.72E-01
+	SB-127	473.00	25.00	-2.48E+01	8.69E+01	1.01E+02
		685.20	35.70	1.16E+01		8.69E+01
		783.80	14.70	5.90E+01		2.13E+02
+	I-129	29.78	57.00	-2.70E-02	8.22E-02	8.22E-02
		33.60	13.20	-2.02E-01		3.54E-01
		39.58	7.52	-2.78E-01		6.85E-01
+	I-131	284.30	6.05	-1.55E+01	1.77E+00	2.31E+01
		364.48	81.20	1.29E+00		1.77E+00
		636.97	7.26	2.04E+00		2.25E+01
		722.89	1.80	-1.80E+01		1.01E+02
+	TE-132	49.72	13.10	-8.94E+01	6.11E+01	2.50E+02
		228.16	88.00	-2.75E+01		6.11E+01
+	BA-133	81.00	33.00	-6.13E-02	2.67E-01	3.17E-01
		302.84	17.80	-6.96E-02		6.68E-01
		356.01	60.00	3.91E-01		2.67E-01
+	I-133	529.87	86.30	-1.56E+09	1.95E+09	1.95E+09
+	XE-133	81.00	38.00	-2.53E+00	1.31E+01	1.31E+01
+	CS-134	563.23	8.38	2.63E-02	1.86E-01	1.71E+00
		569.32	15.43	-5.28E-01		8.28E-01
		604.70	97.60	-2.30E-02		1.86E-01
		795.84	85.40	5.94E-02		2.11E-01
		801.93	8.73	-1.36E+00		1.89E+00
+	CS-135	268.24	16.00	3.37E-01	7.32E-01	7.32E-01
+	@ I-135	1131.51	22.50	1.00E+26	1.00E+26	1.00E+26
	@	1260.41	28.60	1.00E+26		1.00E+26
	@	1678.03	9.54	1.00E+26		1.00E+26
+	CS-136	153.22	7.46	3.96E+00	6.80E-01	6.23E+00
		163.89	4.61	4.09E+00		1.00E+01
		176.55	13.56	2.31E+00		3.62E+00
		273.65	12.66	1.97E+00		4.56E+00
		340.57	48.50	9.80E-01		1.36E+00
		818.50	99.70	-2.30E-01		6.80E-01
		1048.07	79.60	-2.14E-02		1.13E+00
		1235.34	19.70	2.87E-01		6.38E+00
+	CS-137	661.65	85.12	8.63E-03	1.74E-01	1.74E-01
+	LA-138	788.74	34.00	-2.63E-01	2.33E-01	4.65E-01
		1435.80	66.00	-1.58E-02		2.33E-01
+	CE-139	165.85	80.35	2.28E-02	1.43E-01	1.43E-01
+	BA-140	162.64	6.70	2.42E+00	2.36E+00	7.12E+00
		304.84	4.50	-3.33E+00		1.23E+01
		423.70	3.20	8.44E+00		1.88E+01
		437.55	2.00	-8.92E+00		2.81E+01
		537.32	25.00	1.73E-01		2.36E+00
+	LA-140	328.77	20.50	1.28E+00	9.40E-01	3.04E+00

Analysis Report for 1510086-16
CP0404S12-13

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
LA-140	487.03	45.50	6.34E-01	9.40E-01	1.47E+00
	815.85	23.50	1.30E-01		3.14E+00
	1596.49	95.49	8.00E-02		9.40E-01
+ CE-141	145.44	48.40	-7.30E-02	3.70E-01	3.70E-01
+ CE-143	57.36	11.80	-3.86E+05	8.88E+05	1.56E+06
	293.26	42.00	1.00E+05		8.88E+05
	664.55	5.20	-4.08E+06		6.75E+06
+ CE-144	133.54	10.80	-2.87E-01	9.30E-01	9.30E-01
+ PM-144	476.78	42.00	-1.11E-02	1.36E-01	3.37E-01
	618.01	98.60	-2.18E-02		1.36E-01
	696.49	99.49	-1.16E-02		1.58E-01
+ PM-145	36.85	21.70	-9.20E-02	1.25E-01	2.26E-01
	37.36	39.70	-5.45E-02		1.25E-01
	42.30	15.10	-3.93E-02		3.82E-01
	72.40	2.31	7.68E-02		4.73E+00
+ PM-146	453.90	39.94	8.33E-02	3.08E-01	3.08E-01
	735.90	14.01	-1.61E-02		1.07E+00
	747.13	13.10	-8.60E-01		1.11E+00
+ ND-147	91.11	28.90	8.55E-01	2.33E+00	2.33E+00
	531.02	13.10	-4.02E+00		5.58E+00
+ PM-149	285.90	3.10	-1.21E+04	3.46E+04	3.46E+04
+ EU-152	121.78	20.50	-2.03E-01	4.12E-01	4.12E-01
	244.69	5.40	-7.82E-01		2.49E+00
	344.27	19.13	-2.44E+00		6.16E-01
	778.89	9.20	-7.69E-01		1.61E+00
	964.01	10.40	-4.21E-01		2.03E+00
	1085.78	7.22	-1.11E-01		2.62E+00
	1112.02	9.60	-9.06E-01		2.11E+00
	1407.95	14.94	-6.75E-01		9.52E-01
+ GD-153	97.43	31.30	7.98E-02	3.00E-01	3.00E-01
	103.18	22.20	-1.44E-02		4.00E-01
+ EU-154	123.07	40.50	1.66E-02	2.14E-01	2.14E-01
	723.30	19.70	-6.76E-02		8.16E-01
	873.19	11.50	1.54E-01		1.41E+00
	996.32	10.30	-1.29E+00		1.64E+00
	1004.76	17.90	2.58E-01		1.05E+00
	1274.45	35.50	1.37E-01		5.82E-01
+ EU-155	86.50	30.90	1.75E-01	3.21E-01	3.21E-01
	105.30	20.70	-1.90E-01		3.97E-01
+ EU-156	811.77	10.40	-3.88E-01	5.89E+00	5.89E+00
	1153.47	7.20	-1.82E+00		9.62E+00
	1230.71	8.90	1.49E+00		1.03E+01
+ HO-166M	184.41	72.60	7.81E-02	1.59E-01	1.59E-01
	280.45	29.60	1.31E-01		3.99E-01
	410.94	11.10	3.18E-01		1.14E+00
	711.69	54.10	1.66E-01		3.07E-01
+ TM-171	66.72	0.14	4.45E+00	6.23E+01	6.23E+01
+ HF-172	81.75	4.52	-8.39E-01	8.16E-01	2.18E+00
	125.81	11.30	2.08E-01		8.16E-01

Analysis Report for 1510086-16
CP0404S12-13

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	LU-172	181.53	20.60	2.41E+00	6.69E+00	1.12E+01
		810.06	16.63	-1.50E+00		2.03E+01
		912.12	15.25	5.38E+01		3.48E+01
		1093.66	62.50	7.37E-01		6.69E+00
+	LU-173	100.72	5.24	2.29E-01	5.92E-01	1.58E+00
		272.11	21.20	1.40E-01		5.92E-01
+	HF-175	343.40	84.00	-2.60E-01	1.99E-01	1.99E-01
+	LU-176	88.34	13.30	2.43E-01	1.19E-01	7.73E-01
		201.83	86.00	-1.54E-03		1.29E-01
		306.78	94.00	-4.97E-02		1.19E-01
+	TA-182	67.75	41.20	1.95E-02	2.49E-01	2.49E-01
		1121.30	34.90	4.28E-01		8.17E-01
		1189.05	16.23	-1.37E+00		1.42E+00
		1221.41	26.98	-2.86E-01		1.02E+00
		1231.02	11.44	3.63E-01		2.52E+00
+	IR-192	308.46	29.68	-9.93E-02	3.58E-01	4.97E-01
		468.07	48.10	5.09E-04		3.58E-01
+	HG-203	279.19	77.30	4.20E-02	2.34E-01	2.34E-01
+	BI-207	569.67	97.72	-8.13E-02	1.28E-01	1.28E-01
		1063.62	74.90	-1.19E-01		2.16E-01
+	TL-208	583.14	* 30.22	1.41E+00	4.49E-01	6.99E-01
		860.37	4.48	9.18E-01		3.97E+00
		2614.66	* 35.85	1.00E+00		4.49E-01
+	BI-210M	262.00	45.00	2.77E-02	2.36E-01	2.36E-01
		300.00	23.00	-8.02E-02		6.00E-01
+	PB-210	46.50	* 4.25	7.10E-01	1.42E+00	1.42E+00
+	PB-211	404.84	2.90	1.44E-01	4.39E+00	4.39E+00
		831.96	2.90	4.59E+00		6.68E+00
+	BI-212	727.17	11.80	-5.03E-02	1.49E+00	1.49E+00
		1620.62	2.75	-7.35E-01		4.91E+00
+	PB-212	238.63	* 44.60	2.07E+00	3.90E-01	3.90E-01
		300.09	3.41	-5.41E-01		4.05E+00
+	BI-214	609.31	* 46.30	1.01E+00	5.52E-01	5.52E-01
		1120.29	15.10	6.65E-01		1.57E+00
		1764.49	* 15.80	1.15E+00		8.25E-01
		2204.22	* 4.98	3.67E+00		2.67E+00
+	PB-214	295.21	* 19.19	8.69E-01	7.30E-01	7.30E-01
		351.92	* 37.19	9.44E-01		1.24E+00
+	RN-219	401.80	6.50	-2.15E-01	1.89E+00	1.89E+00
+	RA-223	323.87	3.88	-2.73E-01	3.19E+00	3.19E+00
+	RA-224	240.98	3.95	2.15E+01	4.96E+00	4.96E+00
+	RA-225	40.00	31.00	-2.66E-01	6.56E-01	6.56E-01
+	RA-226	186.21	* 3.28	4.18E+00	3.14E+00	3.14E+00
+	TH-227	50.10	8.40	-2.77E-01	7.76E-01	7.76E-01
		236.00	11.50	3.55E+00		1.54E+00
		256.20	6.30	-1.95E-01		1.66E+00
+	AC-228	338.32	* 11.40	1.56E+00	1.03E+00	3.88E+00
		911.07	* 27.70	1.40E+00		1.03E+00

Analysis Report for 1510086-16
CP0404S12-13

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	AC-228	969.11	*	16.60	2.95E+00	1.03E+00	1.58E+00
+	TH-230	48.44		16.90	-1.06E-01	3.79E-01	3.79E-01
		62.85		4.60	6.32E-02		1.72E+00
		67.67		0.37	1.82E+00		2.32E+01
+	PA-231	283.67		1.60	-3.19E+00	5.14E+00	7.10E+00
		302.67		2.30	-5.36E-01		5.14E+00
+	TH-231	25.64		14.70	-3.79E-02	3.26E-01	3.26E-01
		84.21		6.40	8.10E-01		1.44E+00
+	PA-233	311.98		38.60	-1.44E-01	6.23E-01	6.23E-01
+	PA-234	131.20		20.40	3.38E-03	4.55E-01	4.55E-01
		733.99		8.80	1.80E-01		1.77E+00
		946.00		12.00	6.41E-02		1.49E+00
+	PA-234M	1001.03		0.92	3.95E+00	2.00E+01	2.00E+01
+	TH-234	63.29		3.80	-4.22E-01	2.10E+00	2.10E+00
+	U-235	143.76		10.50	3.60E-01	9.35E-01	9.35E-01
		163.35		4.70	8.58E-01		2.10E+00
		205.31		4.70	3.62E-01		2.49E+00
+	NP-237	86.50		12.60	4.23E-01	7.79E-01	7.79E-01
+	NP-239	106.10		22.70	-9.44E+02	1.98E+03	1.98E+03
		228.18		10.70	-1.12E+03		5.48E+03
		277.60		14.10	1.35E+03		4.68E+03
+	AM-241	59.54		35.90	3.57E-02	2.11E-01	2.11E-01
+	AM-243	74.67		66.00	7.21E-01	1.76E-01	1.76E-01
+	CM-243	209.75		3.29	1.56E+00	8.60E-01	3.54E+00
		228.14		10.60	-4.54E-01		1.01E+00
		277.60		14.00	2.49E-01		8.60E-01

- + = Nuclide identified during the nuclide identification
 * = Energy line found in the spectrum
 > = MDA value not calculated
 @ = Half-life too short to be able to perform the decay correction
 ? = CAUTION: MDA value is inconsistent with Currie MDA at 95% confidence level

NUCLIDE MDA REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

: 00896

Analysis Report for 1510086-16
CP0404S12-13

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
BE-7	477.59	10.42	1.82E+00	1.82E+00	-7.55E-01	8.59E-01
NA-22	1274.54	99.94	2.10E-01	2.10E-01	4.93E-02	9.54E-02
NA-24	1368.53	99.99	1.98E+13	1.15E+13	-3.62E+12	8.69E+12
	2754.09	99.86	1.15E+13		1.56E+12	3.63E+12
AL-26	1808.65	99.76	1.56E-01	1.56E-01	2.70E-02	6.52E-02
+ K-40	1460.81	* 10.67	1.95E+00	1.95E+00	1.94E+01	8.79E-01
@ AR-41	1293.64	99.16	1.00E+26	1.00E+26	1.00E+26	1.00E+20
TI-44	67.88	94.40	9.12E-02	9.12E-02	7.15E-03	4.47E-02
	78.34	96.00	1.17E-01		3.15E-01	5.77E-02
SC-46	889.25	99.98	2.12E-01	2.12E-01	4.47E-02	9.74E-02
	1120.51	99.99	3.02E-01		1.28E-01	1.40E-01
V-48	983.52	99.98	6.78E-01	5.03E-01	-4.71E-03	3.13E-01
	1312.10	97.50	5.03E-01		7.61E-02	2.16E-01
CR-51	320.08	9.83	2.50E+00	2.50E+00	-3.45E-01	1.20E+00
MN-54	834.83	99.97	1.96E-01	1.96E-01	2.09E-02	9.15E-02
CO-56	846.75	99.96	1.85E-01	1.85E-01	-2.93E-02	8.44E-02
	1037.75	14.03	1.87E+00		-1.16E-01	8.62E-01
	1238.25	67.00	5.13E-01		8.32E-03	2.39E-01
	1771.40	15.51	1.21E+00		-3.42E-01	5.03E-01
	2598.48	16.90	1.00E+00		2.79E-01	3.75E-01
CO-57	122.06	85.51	1.06E-01	1.06E-01	-5.23E-02	5.18E-02
	136.48	10.60	9.71E-01		-8.81E-02	4.73E-01
CO-58	810.76	99.40	2.19E-01	2.19E-01	-1.62E-02	1.02E-01
FE-59	1099.22	56.50	4.99E-01	4.99E-01	-3.63E-01	2.27E-01
	1291.56	43.20	7.88E-01		9.61E-02	3.59E-01
CO-60	1173.22	100.00	2.12E-01	1.98E-01	6.30E-02	9.72E-02
	1332.49	100.00	1.98E-01		1.18E-01	8.92E-02
ZN-65	1115.52	50.75	4.42E-01	4.42E-01	-2.10E-01	2.03E-01
+ GA-67	93.31	* 35.70	1.47E+02	1.47E+02	7.96E+01	7.21E+01
	208.95	2.24	2.60E+03		-2.58E+02	1.26E+03
	300.22	16.00	4.03E+02		-1.36E+01	1.94E+02
SE-75	121.11	16.70	5.94E-01	1.91E-01	-4.06E-01	2.89E-01
	136.00	59.20	1.91E-01		3.89E-02	9.33E-02
	264.65	59.80	2.09E-01		-2.52E-01	1.01E-01
	279.53	25.20	5.51E-01		9.88E-02	2.65E-01
	400.65	11.40	1.29E+00		3.03E-01	6.13E-01
RB-82	776.52	13.00	2.69E+00	2.69E+00	-5.41E-03	1.25E+00
RB-83	520.41	46.00	3.71E-01	3.71E-01	6.12E-02	1.75E-01
	529.64	30.30	4.84E-01		-3.86E-01	2.25E-01
	552.65	16.40	1.02E+00		-1.67E-01	4.80E-01
KR-85	513.99	0.43	4.24E+01	4.24E+01	-3.57E+00	2.03E+01
SR-85	513.99	99.27	2.52E-01	2.52E-01	-2.13E-02	1.21E-01
Y-88	898.02	93.40	2.03E-01	1.72E-01	-1.19E-02	9.31E-02
	1836.01	99.38	1.72E-01		-2.62E-02	7.06E-02
NB-93M	16.57	9.43	4.51E-01	4.51E-01	9.83E-01	2.19E-01
NB-94	702.63	100.00	1.44E-01	1.44E-01	0.00E+00	6.65E-02
	871.10	100.00	1.61E-01		1.25E-02	7.41E-02
NB-95	765.79	99.81	3.17E-01	3.17E-01	9.27E-02	1.48E-01
NB-95M	235.69	25.00	1.94E+02	1.94E+02	4.49E+02	9.51E+01
ZR-95	724.18	43.70	5.17E-01	4.06E-01	-1.15E-01	2.42E-01
	756.72	55.30	4.06E-01		-5.80E-02	1.89E-01

Analysis Report for 1510086-16
CP0404S12-13

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
MO-99	181.06	6.20	2.70E+03	2.09E+03	3.75E+02	1.31E+03
	739.58	12.80	2.09E+03		1.32E+03	9.76E+02
	778.00	4.50	5.21E+03		-2.49E+03	2.40E+03
RU-103	497.08	89.00	2.41E-01	2.41E-01	1.24E-01	1.14E-01
RU-106	621.84	9.80	1.52E+00	1.52E+00	-6.12E-02	7.08E-01
AG-108M	433.93	89.90	1.19E-01	1.19E-01	-6.57E-02	5.57E-02
	614.37	90.40	1.93E-01		-8.18E-02	9.12E-02
	722.95	90.50	1.77E-01		-1.46E-02	8.23E-02
CD-109	88.03	3.72	2.83E+00	2.83E+00	1.52E+00	1.39E+00
AG-110M	657.75	93.14	1.72E-01	1.72E-01	7.72E-04	8.02E-02
	677.61	10.53	1.60E+00		4.54E-01	7.47E-01
	706.67	16.46	1.01E+00		3.59E-02	4.68E-01
	763.93	21.98	8.74E-01		2.46E-01	4.09E-01
	884.67	71.63	2.45E-01		-1.79E-02	1.13E-01
	1384.27	23.94	8.24E-01		-7.16E-01	3.67E-01
CD-113M	263.70	0.02	4.62E+02	4.62E+02	-3.88E+02	2.22E+02
SN-113	255.12	1.93	6.52E+00	2.25E-01	4.54E-01	3.14E+00
	391.69	64.90	2.25E-01		-5.14E-03	1.07E-01
TE123M	159.00	84.10	1.36E-01	1.36E-01	-1.54E-02	6.63E-02
SB-124	602.71	97.87	1.94E-01	1.94E-01	1.65E-02	9.04E-02
	645.85	7.26	2.82E+00		6.78E-01	1.32E+00
	722.78	11.10	1.85E+00		-3.29E-01	8.55E-01
	1691.02	49.00	3.03E-01		-1.20E-01	1.17E-01
	35.49	6.49	1.04E+00		1.04E+00	-4.86E-01	5.06E-01
SB-125	176.33	6.89	1.56E+00	4.09E-01	9.93E-01	7.57E-01
	427.89	29.33	4.09E-01		1.15E-01	1.93E-01
	463.38	10.35	1.31E+00		4.66E-01	6.21E-01
	600.56	17.80	8.00E-01		2.10E-01	3.74E-01
	635.90	11.32	1.22E+00		1.50E-01	5.68E-01
SB-126	414.70	83.30	8.05E-01	7.48E-01	5.44E-03	3.83E-01
	666.33	99.60	7.48E-01		2.38E-02	3.48E-01
	695.00	99.60	7.56E-01		9.06E-02	3.51E-01
	720.50	53.80	1.40E+00		-9.55E-01	6.50E-01
SN-126	87.57	37.00	2.72E-01	2.72E-01	1.45E-01	1.33E-01
SB-127	473.00	25.00	1.01E+02	8.69E+01	-2.48E+01	4.75E+01
	685.20	35.70	8.69E+01		1.16E+01	4.07E+01
	783.80	14.70	2.13E+02		5.90E+01	9.86E+01
I-129	29.78	57.00	8.22E-02	8.22E-02	-2.70E-02	4.00E-02
	33.60	13.20	3.54E-01		-2.02E-01	1.72E-01
	39.58	7.52	6.85E-01		-2.78E-01	3.34E-01
I-131	284.30	6.05	2.31E+01	1.77E+00	-1.55E+01	1.11E+01
	364.48	81.20	1.77E+00		1.29E+00	8.43E-01
	636.97	7.26	2.25E+01		2.04E+00	1.05E+01
	722.89	1.80	1.01E+02		-1.80E+01	4.69E+01
TE-132	49.72	13.10	2.50E+02	6.11E+01	-8.94E+01	1.23E+02
	228.16	88.00	6.11E+01		-2.75E+01	2.95E+01
BA-133	81.00	33.00	3.17E-01	2.67E-01	-6.13E-02	1.56E-01
	302.84	17.80	6.68E-01		-6.96E-02	3.21E-01
	356.01	60.00	2.67E-01		3.91E-01	1.29E-01
I-133	529.87	86.30	1.95E+09	1.95E+09	-1.56E+09	9.07E+08
XE-133	81.00	38.00	1.31E+01	1.31E+01	-2.53E+00	6.44E+00
CS-134	563.23	8.38	1.71E+00	1.86E-01	2.63E-02	8.03E-01
	569.32	15.43	8.28E-01		-5.28E-01	3.85E-01

Analysis Report for 1510086-16
CP0404S12-13

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
CS-134	604.70	97.60	1.86E-01	1.86E-01	-2.30E-02	8.81E-02
	795.84	85.40	2.11E-01		5.94E-02	9.84E-02
	801.93	8.73	1.89E+00		-1.36E+00	8.75E-01
CS-135	268.24	16.00	7.32E-01	7.32E-01	3.37E-01	3.53E-01
@ I-135	1131.51	22.50	1.00E+26	1.00E+26	1.00E+26	1.00E+20
@	1260.41	28.60	1.00E+26		1.00E+26	1.00E+20
@	1678.03	9.54	1.00E+26		1.00E+26	1.00E+20
CS-136	153.22	7.46	6.23E+00	6.80E-01	3.96E+00	3.03E+00
	163.89	4.61	1.00E+01		4.09E+00	4.88E+00
	176.55	13.56	3.62E+00		2.31E+00	1.76E+00
	273.65	12.66	4.56E+00		1.97E+00	2.20E+00
	340.57	48.50	1.36E+00		9.80E-01	6.53E-01
	818.50	99.70	6.80E-01		-2.30E-01	3.11E-01
	1048.07	79.60	1.13E+00		-2.14E-02	5.19E-01
	1235.34	19.70	6.38E+00		2.87E-01	2.97E+00
CS-137	661.65	85.12	1.74E-01	1.74E-01	8.63E-03	8.09E-02
LA-138	788.74	34.00	4.65E-01	2.33E-01	-2.63E-01	2.15E-01
	1435.80	66.00	2.33E-01		-1.58E-02	1.01E-01
CE-139	165.85	80.35	1.43E-01	1.43E-01	2.28E-02	6.94E-02
BA-140	162.64	6.70	7.12E+00	2.36E+00	2.42E+00	3.46E+00
	304.84	4.50	1.23E+01		-3.33E+00	5.92E+00
	423.70	3.20	1.88E+01		8.44E+00	8.89E+00
	437.55	2.00	2.81E+01		-8.92E+00	1.32E+01
	537.32	25.00	2.36E+00		1.73E-01	1.10E+00
LA-140	328.77	20.50	3.04E+00	9.40E-01	1.28E+00	1.46E+00
	487.03	45.50	1.47E+00		6.34E-01	6.97E-01
	815.85	23.50	3.14E+00		1.30E-01	1.44E+00
	1596.49	95.49	9.40E-01		8.00E-02	4.12E-01
CE-141	145.44	48.40	3.70E-01	3.70E-01	-7.30E-02	1.80E-01
CE-143	57.36	11.80	1.56E+06	8.88E+05	-3.86E+05	7.65E+05
	293.26	42.00	8.88E+05		1.00E+05	4.30E+05
	664.55	5.20	6.75E+06		-4.08E+06	3.13E+06
CE-144	133.54	10.80	9.30E-01	9.30E-01	-2.87E-01	4.53E-01
PM-144	476.78	42.00	3.37E-01	1.36E-01	-1.11E-02	1.59E-01
	618.01	98.60	1.36E-01		-2.18E-02	6.28E-02
	696.49	99.49	1.58E-01		-1.16E-02	7.33E-02
PM-145	36.85	21.70	2.26E-01	1.25E-01	-9.20E-02	1.10E-01
	37.36	39.70	1.25E-01		-5.45E-02	6.10E-02
	42.30	15.10	3.82E-01		-3.93E-02	1.87E-01
	72.40	2.31	4.73E+00		7.68E-02	2.33E+00
PM-146	453.90	39.94	3.08E-01	3.08E-01	8.33E-02	1.45E-01
	735.90	14.01	1.07E+00		-1.61E-02	4.97E-01
	747.13	13.10	1.11E+00		-8.60E-01	5.14E-01
ND-147	91.11	28.90	2.33E+00	2.33E+00	8.55E-01	1.15E+00
	531.02	13.10	5.58E+00		-4.02E+00	2.59E+00
PM-149	285.90	3.10	3.46E+04	3.46E+04	-1.21E+04	1.66E+04
EU-152	121.78	20.50	4.12E-01	4.12E-01	-2.03E-01	2.01E-01
	244.69	5.40	2.49E+00		-7.82E-01	1.21E+00
	344.27	19.13	6.16E-01		-2.44E+00	2.94E-01
	778.89	9.20	1.61E+00		-7.69E-01	7.42E-01
	964.01	10.40	2.03E+00		-4.21E-01	9.44E-01
	1085.78	7.22	2.62E+00		-1.11E-01	1.20E+00
	1112.02	9.60	2.11E+00		-9.06E-01	9.68E-01

Analysis Report for 1510086-16
CP0404S12-13

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
EU-152	1407.95	14.94	9.52E-01	4.12E-01	-6.75E-01	4.08E-01
GD-153	97.43	31.30	3.00E-01	3.00E-01	7.98E-02	1.47E-01
	103.18	22.20	4.00E-01		-1.44E-02	1.95E-01
EU-154	123.07	40.50	2.14E-01	2.14E-01	1.66E-02	1.04E-01
	723.30	19.70	8.16E-01		-6.76E-02	3.81E-01
	873.19	11.50	1.41E+00		1.54E-01	6.50E-01
	996.32	10.30	1.64E+00		-1.29E+00	7.46E-01
	1004.76	17.90	1.05E+00		2.58E-01	4.84E-01
	1274.45	35.50	5.82E-01		1.37E-01	2.65E-01
EU-155	86.50	30.90	3.21E-01	3.21E-01	1.75E-01	1.58E-01
	105.30	20.70	3.97E-01		-1.90E-01	1.94E-01
EU-156	811.77	10.40	5.89E+00	5.89E+00	-3.88E-01	2.72E+00
	1153.47	7.20	9.62E+00		-1.82E+00	4.36E+00
	1230.71	8.90	1.03E+01		1.49E+00	4.78E+00
HO-166M	184.41	72.60	1.59E-01	1.59E-01	7.81E-02	7.73E-02
	280.45	29.60	3.99E-01		1.31E-01	1.92E-01
	410.94	11.10	1.14E+00		3.18E-01	5.43E-01
	711.69	54.10	3.07E-01		1.66E-01	1.44E-01
TM-171	66.72	0.14	6.23E+01	6.23E+01	4.45E+00	3.06E+01
HF-172	81.75	4.52	2.18E+00	8.16E-01	-8.39E-01	1.07E+00
	125.81	11.30	8.16E-01		2.08E-01	3.98E-01
LU-172	181.53	20.60	1.12E+01	6.69E+00	2.41E+00	5.43E+00
	810.06	16.63	2.03E+01		-1.50E+00	9.40E+00
	912.12	15.25	3.48E+01		5.38E+01	1.65E+01
	1093.66	62.50	6.69E+00		7.37E-01	3.08E+00
LU-173	100.72	5.24	1.58E+00	5.92E-01	2.29E-01	7.71E-01
	272.11	21.20	5.92E-01		1.40E-01	2.86E-01
HF-175	343.40	84.00	1.99E-01	1.99E-01	-2.60E-01	9.53E-02
LU-176	88.34	13.30	7.73E-01	1.19E-01	2.43E-01	3.80E-01
	201.83	86.00	1.29E-01		-1.54E-03	6.26E-02
	306.78	94.00	1.19E-01		-4.97E-02	5.67E-02
TA-182	67.75	41.20	2.49E-01	2.49E-01	1.95E-02	1.22E-01
	1121.30	34.90	8.17E-01		4.28E-01	3.80E-01
	1189.05	16.23	1.42E+00		-1.37E+00	6.44E-01
	1221.41	26.98	1.02E+00		-2.86E-01	4.72E-01
	1231.02	11.44	2.52E+00		3.63E-01	1.17E+00
IR-192	308.46	29.68	4.97E-01	3.58E-01	-9.93E-02	2.38E-01
	468.07	48.10	3.58E-01		5.09E-04	1.69E-01
HG-203	279.19	77.30	2.34E-01	2.34E-01	4.20E-02	1.13E-01
BI-207	569.67	97.72	1.28E-01	1.28E-01	-8.13E-02	5.94E-02
	1063.62	74.90	2.16E-01		-1.19E-01	9.75E-02
+ TL-208	583.14	* 30.22	6.99E-01	4.49E-01	1.41E+00	3.35E-01
	860.37	4.48	3.97E+00		9.18E-01	1.84E+00
	2614.66	* 35.85	4.49E-01		1.00E+00	1.78E-01
BI-210M	262.00	45.00	2.36E-01	2.36E-01	2.77E-02	1.14E-01
	300.00	23.00	6.00E-01		-8.02E-02	2.90E-01
+ PB-210	46.50	* 4.25	1.42E+00	1.42E+00	7.10E-01	6.96E-01
PB-211	404.84	2.90	4.39E+00	4.39E+00	1.44E-01	2.09E+00
	831.96	2.90	6.68E+00		4.59E+00	3.13E+00
BI-212	727.17	11.80	1.49E+00	1.49E+00	-5.03E-02	7.01E-01
	1620.62	2.75	4.91E+00		-7.35E-01	2.04E+00
+ PB-212	238.63	* 44.60	3.90E-01	3.90E-01	2.07E+00	1.91E-01
	300.09	3.41	4.05E+00		-5.41E-01	1.96E+00

Analysis Report for 1510086-16

CP0404S12-13

	Nuclide Name	Energy (keV)		Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
+	BI-214	609.31	*	46.30	5.52E-01	5.52E-01	1.01E+00	2.66E-01
		1120.29		15.10	1.57E+00		6.65E-01	7.29E-01
		1764.49	*	15.80	8.25E-01		1.15E+00	3.34E-01
		2204.22	*	4.98	2.67E+00		3.67E+00	1.04E+00
+	PB-214	295.21	*	19.19	7.30E-01	7.30E-01	8.69E-01	3.53E-01
		351.92	*	37.19	1.24E+00		9.44E-01	6.10E-01
	RN-219	401.80		6.50	1.89E+00	1.89E+00	-2.15E-01	8.96E-01
	RA-223	323.87		3.88	3.19E+00	3.19E+00	-2.73E-01	1.53E+00
	RA-224	240.98		3.95	4.96E+00	4.96E+00	2.15E+01	2.43E+00
	RA-225	40.00		31.00	6.56E-01	6.56E-01	-2.66E-01	3.20E-01
+	RA-226	186.21	*	3.28	3.14E+00	3.14E+00	4.18E+00	1.52E+00
		TH-227		8.40	7.76E-01	7.76E-01	-2.77E-01	3.80E-01
		236.00		11.50	1.54E+00		3.55E+00	7.52E-01
		256.20		6.30	1.66E+00		-1.95E-01	7.98E-01
+	AC-228	338.32	*	11.40	3.88E+00	1.03E+00	1.56E+00	1.91E+00
		911.07	*	27.70	1.03E+00		1.40E+00	4.92E-01
		969.11	*	16.60	1.58E+00		2.95E+00	7.49E-01
	TH-230	48.44		16.90	3.79E-01	3.79E-01	-1.06E-01	1.85E-01
		62.85		4.60	1.72E+00		6.32E-02	8.45E-01
		67.67		0.37	2.32E+01		1.82E+00	1.14E+01
	PA-231	283.67		1.60	7.10E+00	5.14E+00	-3.19E+00	3.41E+00
		302.67		2.30	5.14E+00		-5.36E-01	2.47E+00
	TH-231	25.64		14.70	3.26E-01	3.26E-01	-3.79E-02	1.59E-01
		84.21		6.40	1.44E+00		8.10E-01	7.04E-01
	PA-233	311.98		38.60	6.23E-01	6.23E-01	-1.44E-01	2.98E-01
	PA-234	131.20		20.40	4.55E-01	4.55E-01	3.38E-03	2.22E-01
		733.99		8.80	1.77E+00		1.80E-01	8.25E-01
		946.00		12.00	1.49E+00		6.41E-02	6.84E-01
	PA-234M	1001.03		0.92	2.00E+01	2.00E+01	3.95E+00	9.21E+00
	TH-234	63.29		3.80	2.10E+00	2.10E+00	-4.22E-01	1.03E+00
	U-235	143.76		10.50	9.35E-01	9.35E-01	3.60E-01	4.55E-01
		163.35		4.70	2.10E+00		8.58E-01	1.02E+00
		205.31		4.70	2.49E+00		3.62E-01	1.21E+00
	NP-237	86.50		12.60	7.79E-01	7.79E-01	4.23E-01	3.82E-01
	NP-239	106.10		22.70	1.98E+03	1.98E+03	-9.44E+02	9.64E+02
		228.18		10.70	5.48E+03		-1.12E+03	2.65E+03
		277.60		14.10	4.68E+03		1.35E+03	2.26E+03
	AM-241	59.54		35.90	2.11E-01	2.11E-01	3.57E-02	1.03E-01
	AM-243	74.67		66.00	1.76E-01	1.76E-01	7.21E-01	8.66E-02
	CM-243	209.75		3.29	3.54E+00	8.60E-01	1.56E+00	1.72E+00
		228.14		10.60	1.01E+00		-4.54E-01	4.87E-01
		277.60		14.00	8.60E-01		2.49E-01	4.15E-01

+ = Nuclide identified during the nuclide identification

* = Energy line found in the spectrum

> = MDA value not calculated

@ = Half-life too short to be able to perform the decay correction

Analysis Report for 1510086-16
CP0404S12-13

No Action Level results available for reporting purposes.

DATA REVIEW COMMENTS REPORT

<i>Creation Date</i>	<i>Comment</i>	<i>User</i>
----------------------	----------------	-------------

No Data Review Comments Entered.

 ***** S P E C T R A L D A T A R E P O R T *****

Sample Title: CP0404S12-13

Elapsed Live time: 3600
 Elapsed Real Time: 3639

Channel	-----	-----	-----	-----	-----	-----	-----	-----
1:	0	0	0	0	0	0	0	0
9:	0	0	0	0	0	0	25	92
17:	87	83	66	72	64	65	61	65
25:	55	63	44	66	48	54	51	47
33:	58	53	46	61	44	54	64	56
41:	59	67	68	69	92	97	83	67
49:	70	77	83	73	78	100	80	82
57:	93	93	95	92	89	98	124	94
65:	92	109	102	113	111	117	110	114
73:	164	211	237	296	233	139	93	71
81:	70	95	103	91	94	127	142	118
89:	118	94	129	140	132	88	74	57
97:	45	79	63	64	54	53	52	63
105:	51	64	62	57	68	59	54	67
113:	66	70	51	45	47	44	49	52
121:	46	59	50	69	46	62	60	53
129:	55	57	64	47	52	56	54	63
137:	54	55	67	59	46	57	66	61
145:	49	42	49	46	50	41	58	49
153:	63	61	53	44	44	37	42	50
161:	34	48	50	47	50	48	44	39
169:	44	41	38	51	48	55	39	39
177:	45	49	51	37	34	32	47	62
185:	88	90	37	37	46	45	40	32
193:	33	45	41	39	33	40	40	40
201:	44	45	52	40	35	40	40	42
209:	61	46	44	34	37	30	29	34
217:	34	31	36	39	36	39	28	32
225:	32	31	30	35	32	31	23	29
233:	34	32	30	56	138	212	174	93
241:	74	64	38	18	28	30	25	18
249:	35	25	27	22	28	18	24	19
257:	32	24	24	22	20	21	22	22
265:	25	23	28	22	42	36	32	18
273:	27	29	22	23	38	25	26	30
281:	25	15	26	24	27	20	16	20
289:	26	30	23	16	35	59	66	50
297:	29	20	27	30	21	16	23	27
305:	16	21	19	10	22	19	20	20
313:	18	25	21	20	23	19	15	24
321:	18	16	24	18	26	19	34	27
329:	24	20	17	16	21	22	16	26
337:	36	50	37	19	14	14	12	22
345:	22	23	14	14	23	33	82	67
353:	44	25	17	9	7	12	10	17
361:	14	16	14	14	9	24	10	15

369: 12 12 8 16 15 18 15 19

Sample Title: CP0404S12-13

Channel	1	2	3	4	5	6	7	8
377:	17	20	10	6	12	19	6	11
385:	18	15	17	19	16	9	13	16
393:	16	10	14	13	15	13	12	14
401:	26	10	14	11	9	15	13	20
409:	13	17	16	9	9	15	16	24
417:	16	11	9	13	13	9	15	19
425:	8	10	16	9	7	9	7	11
433:	4	10	15	11	5	9	16	9
441:	12	11	20	12	11	8	9	8
449:	11	11	11	14	14	8	9	8
457:	9	13	7	12	11	18	14	15
465:	17	12	4	9	7	15	13	12
473:	13	9	12	10	13	10	18	8
481:	5	13	18	8	15	8	12	12
489:	9	11	11	8	7	10	11	16
497:	5	7	6	12	14	5	7	2
505:	8	7	17	14	27	32	38	23
513:	18	14	7	6	9	9	9	9
521:	10	10	12	15	5	7	3	8
529:	14	7	3	5	10	4	12	10
537:	6	4	11	3	6	11	8	6
545:	5	6	13	16	9	7	6	11
553:	6	6	7	8	9	11	10	11
561:	8	12	10	13	10	3	4	5
569:	10	11	7	4	8	12	8	4
577:	4	12	5	8	15	43	59	28
585:	13	6	11	7	8	10	7	9
593:	6	4	8	9	8	14	9	8
601:	5	3	7	8	5	7	26	46
609:	53	47	14	7	8	6	4	5
617:	6	11	6	3	5	8	9	8
625:	11	9	16	6	10	8	7	9
633:	9	7	6	5	5	4	7	3
641:	4	5	13	6	12	8	11	3
649:	5	10	9	4	5	3	7	11
657:	9	8	13	5	5	6	9	6
665:	4	10	4	7	12	4	7	3
673:	8	5	6	10	4	7	8	9
681:	12	8	10	6	11	7	12	3
689:	3	6	5	10	12	10	3	7
697:	5	4	2	6	9	6	9	7
705:	7	4	6	11	10	1	7	9
713:	6	15	7	5	5	5	10	6
721:	4	5	9	5	1	8	16	14
729:	9	11	5	5	7	2	6	8
737:	7	8	5	6	11	8	9	6
745:	3	5	5	4	2	7	7	10
753:	9	6	10	3	8	5	4	6
761:	10	7	9	8	5	9	8	9
769:	6	9	7	7	9	6	4	6
777:	3	3	8	8	4	4	7	7
785:	5	8	4	4	10	3	5	6
793:	3	15	13	13	3	3	3	6

801: 7 5 9 7 5 7 9 6

Sample Title: CP0404S12-13

Channel	1	2	3	4	5	6	7	8
809:	8	5	2	4	8	4	5	6
817:	6	5	4	2	4	4	6	4
825:	9	4	7	7	9	11	11	3
833:	7	6	10	8	3	5	2	12
841:	8	5	4	2	3	5	5	2
849:	5	5	5	5	8	3	7	4
857:	8	5	8	3	10	11	2	5
865:	7	4	3	4	8	4	6	6
873:	4	4	5	2	5	5	4	6
881:	2	8	6	3	7	1	3	7
889:	10	2	4	7	4	5	2	2
897:	6	5	5	3	3	8	8	9
905:	5	6	2	6	10	18	28	21
913:	9	7	5	5	3	4	1	2
921:	4	7	4	4	6	6	4	5
929:	9	2	7	4	1	7	4	2
937:	6	5	9	3	9	8	8	5
945:	3	5	2	5	8	2	3	3
953:	5	4	4	8	2	4	6	2
961:	1	4	7	4	9	10	14	12
969:	16	14	12	4	4	5	6	7
977:	2	4	4	8	5	7	6	3
985:	5	6	5	4	8	7	4	2
993:	5	2	7	4	3	4	4	5
1001:	9	6	6	2	5	6	0	6
1009:	3	2	8	4	4	3	6	5
1017:	1	5	3	5	3	1	4	4
1025:	2	8	1	2	4	5	10	8
1033:	10	2	2	9	4	8	3	6
1041:	6	6	4	5	3	8	3	4
1049:	7	6	5	3	9	3	2	8
1057:	5	9	6	5	4	2	2	3
1065:	3	3	1	5	3	3	3	6
1073:	6	2	1	6	3	6	4	5
1081:	1	1	2	4	6	6	6	6
1089:	4	4	7	6	4	5	2	3
1097:	10	3	4	3	3	5	1	6
1105:	4	11	8	6	4	4	4	6
1113:	6	2	7	4	4	2	10	5
1121:	10	11	6	8	5	5	4	5
1129:	6	5	2	6	3	5	1	4
1137:	3	5	6	3	6	2	4	5
1145:	2	6	5	4	4	3	0	4
1153:	0	7	4	5	5	2	2	4
1161:	6	6	6	6	8	2	1	3
1169:	5	4	5	7	6	5	2	6
1177:	2	4	5	5	4	4	5	7
1185:	3	7	5	4	4	3	2	3
1193:	3	8	9	7	4	6	7	4
1201:	6	8	6	4	4	5	5	7
1209:	9	9	3	7	3	3	5	6
1217:	12	2	5	6	4	7	7	3
1225:	2	5	5	8	4	3	3	4

1233: 11 5 9 4 9 8 12 10

Sample Title: CP0404S12-13

Channel	1	2	3	4	5	6	7	8
1241:	5	1	6	8	0	2	6	3
1249:	3	4	2	6	4	4	7	5
1257:	2	2	3	6	2	4	4	7
1265:	3	5	6	1	2	8	3	5
1273:	3	2	5	0	6	2	3	3
1281:	3	2	2	5	4	5	3	5
1289:	5	5	6	4	1	6	2	1
1297:	4	4	4	4	0	8	2	4
1305:	2	1	1	2	1	1	4	1
1313:	2	2	0	0	2	0	1	2
1321:	2	3	0	2	3	1	3	2
1329:	1	4	2	7	2	4	3	3
1337:	1	0	0	3	5	2	3	3
1345:	1	2	1	2	2	6	3	3
1353:	2	4	2	2	1	3	1	1
1361:	4	0	3	4	2	0	1	1
1369:	1	3	2	3	3	2	2	2
1377:	6	7	2	2	2	3	4	1
1385:	2	5	2	1	4	8	2	0
1393:	0	2	1	3	0	1	2	0
1401:	3	4	5	1	2	1	3	0
1409:	2	1	1	1	2	2	2	2
1417:	1	4	3	3	2	3	1	1
1425:	1	0	1	2	6	1	0	3
1433:	2	2	1	2	0	1	0	3
1441:	1	1	2	1	0	1	1	3
1449:	0	1	1	1	1	0	2	1
1457:	2	9	25	56	88	62	23	3
1465:	2	2	1	2	0	2	1	1
1473:	1	3	0	1	3	0	1	0
1481:	3	0	0	1	1	1	2	2
1489:	1	0	1	1	1	2	0	1
1497:	1	0	2	2	1	0	0	3
1505:	0	1	2	1	0	3	3	2
1513:	0	2	1	0	0	1	1	3
1521:	0	2	0	0	0	0	2	4
1529:	1	0	0	1	2	1	4	2
1537:	3	0	1	0	2	2	2	1
1545:	3	0	0	0	2	2	1	1
1553:	1	1	0	3	1	2	0	1
1561:	0	1	1	0	1	1	0	1
1569:	2	0	2	1	0	0	1	1
1577:	2	2	1	0	3	2	2	2
1585:	3	0	3	3	2	3	1	4
1593:	6	3	1	1	2	1	2	1
1601:	0	0	1	3	0	0	2	0
1609:	2	1	1	2	1	1	0	3
1617:	0	0	0	3	2	2	1	0
1625:	0	1	1	1	1	0	1	0
1633:	4	0	0	1	2	0	1	0
1641:	2	0	2	0	0	2	2	1
1649:	1	0	1	0	1	1	0	0
1657:	0	0	1	0	0	3	3	3

1665: 3 1 1 2 1 1 2 0

Sample Title: CP0404S12-13

Channel	1	2	3	4	5	6	7	8	9
1673:	1	3	1	0	0	1	0	1	
1681:	1	1	1	3	0	1	0	0	
1689:	0	0	1	0	2	1	0	0	
1697:	1	0	1	1	1	0	0	0	
1705:	2	0	3	1	0	1	0	1	
1713:	2	0	0	0	1	0	0	1	
1721:	1	0	0	1	0	1	1	1	
1729:	1	1	4	1	1	0	1	0	
1737:	0	3	0	1	0	0	0	0	
1745:	1	1	2	1	1	0	3	2	
1753:	2	3	1	1	1	1	1	1	
1761:	0	1	3	6	9	4	1	0	
1769:	1	0	1	1	1	1	2	0	
1777:	0	1	1	1	1	3	2	1	
1785:	1	0	0	0	3	1	1	0	
1793:	0	0	1	0	0	0	1	1	
1801:	0	2	1	0	1	0	1	2	
1809:	0	0	1	1	2	1	0	0	
1817:	0	1	1	1	0	2	0	0	
1825:	1	0	1	1	0	2	0	0	
1833:	1	0	1	2	0	1	1	0	
1841:	1	1	1	0	0	1	0	2	
1849:	1	0	1	5	0	1	2	2	
1857:	0	0	1	1	0	2	0	1	
1865:	0	0	0	0	2	0	0	0	
1873:	0	1	0	0	0	0	0	1	
1881:	0	0	3	1	3	1	1	1	
1889:	4	1	2	1	0	0	1	0	
1897:	0	0	0	1	2	1	1	1	
1905:	0	1	1	0	1	0	1	0	
1913:	0	0	2	0	0	1	1	1	
1921:	0	1	2	1	1	0	0	0	
1929:	0	0	0	0	0	0	1	0	
1937:	1	0	0	0	2	1	0	1	
1945:	0	0	0	2	0	0	1	0	
1953:	3	1	0	0	2	1	0	0	
1961:	0	0	1	0	2	2	2	0	
1969:	0	0	1	1	0	1	0	1	
1977:	2	1	0	2	1	0	1	0	
1985:	0	0	0	0	1	1	3	1	
1993:	1	0	0	2	0	0	1	0	
2001:	0	1	0	0	0	0	0	0	
2009:	0	2	1	0	0	1	1	0	
2017:	1	0	1	1	0	1	1	2	
2025:	0	0	0	1	0	0	0	1	
2033:	0	1	0	1	0	0	3	1	
2041:	0	1	1	0	0	0	1	1	
2049:	0	2	0	3	0	0	1	0	
2057:	1	0	1	1	0	0	0	3	
2065:	1	0	1	1	0	0	0	2	
2073:	0	1	0	0	1	1	0	1	
2081:	2	0	0	1	0	0	1	1	
2089:	0	1	2	0	1	0	1	0	

2097: 0 0 0 0 1 0 1 3

Sample Title: CP0404S12-13

Channel	1	2	3	4	5	6	7	8
2105:	3	0	1	1	0	1	0	0
2113:	0	0	0	0	1	1	0	0
2121:	0	0	0	1	0	1	1	2
2129:	0	0	1	1	2	1	0	2
2137:	0	0	1	2	0	0	0	0
2145:	1	1	0	0	0	0	4	0
2153:	1	2	0	0	1	2	2	1
2161:	1	1	0	0	2	1	2	1
2169:	0	0	1	1	0	3	2	0
2177:	0	0	0	0	2	0	1	0
2185:	0	1	0	1	0	1	1	0
2193:	0	0	1	0	0	0	0	1
2201:	1	1	1	4	3	5	3	0
2209:	1	0	1	0	1	1	1	0
2217:	1	0	1	1	1	0	1	0
2225:	1	0	1	1	0	0	0	2
2233:	1	0	1	0	0	0	1	0
2241:	0	0	0	0	0	2	2	1
2249:	0	1	1	1	0	0	0	2
2257:	0	0	1	3	0	3	0	0
2265:	1	1	0	1	1	1	1	1
2273:	1	2	1	0	1	0	1	2
2281:	0	0	1	0	1	0	1	0
2289:	0	1	0	1	1	1	1	1
2297:	1	0	0	1	0	0	0	0
2305:	0	0	0	1	0	2	1	0
2313:	0	1	0	0	3	1	0	0
2321:	1	0	0	2	2	1	1	2
2329:	0	0	3	3	0	0	1	1
2337:	0	0	2	0	1	1	2	0
2345:	0	1	0	2	1	1	1	0
2353:	0	0	1	1	0	1	1	2
2361:	0	0	2	0	2	4	3	0
2369:	0	0	1	0	1	0	0	2
2377:	2	1	1	1	1	1	1	1
2385:	0	1	0	0	0	0	0	1
2393:	0	0	0	0	4	1	0	2
2401:	1	1	0	1	0	1	0	1
2409:	2	1	1	0	0	0	1	0
2417:	0	1	0	0	1	0	1	1
2425:	1	0	0	0	0	0	1	0
2433:	0	0	0	0	1	0	0	1
2441:	0	0	0	0	0	0	1	0
2449:	0	1	1	0	0	0	0	0
2457:	0	0	0	0	0	0	0	0
2465:	1	0	0	0	0	0	0	0
2473:	0	0	1	0	0	0	0	0
2481:	1	0	0	2	1	0	2	0
2489:	0	1	0	0	0	1	1	0
2497:	0	0	0	0	0	0	0	1
2505:	1	0	0	0	3	0	0	0
2513:	1	0	2	1	0	1	0	0
2521:	0	1	0	1	0	0	0	0

2529: 2 0 0 0 0 0 0 0 0

Sample Title: CP0404S12-13

Channel	-----	-----	-----	-----	-----	-----	-----	-----
2537:	0	0	0	0	0	0	0	0
2545:	0	0	1	1	1	0	0	0
2553:	0	0	0	0	0	0	0	0
2561:	0	0	0	0	0	0	0	0
2569:	0	0	0	0	1	1	0	0
2577:	0	0	0	0	1	1	0	0
2585:	1	1	0	1	0	1	0	0
2593:	0	1	0	0	0	0	0	0
2601:	0	1	0	1	0	0	0	0
2609:	0	1	0	0	1	4	6	9
2617:	8	2	1	1	0	0	0	0
2625:	0	0	0	0	0	0	0	0
2633:	0	0	0	0	1	0	0	1
2641:	0	0	0	0	0	0	0	0
2649:	0	0	1	1	1	0	0	0
2657:	0	0	1	0	0	0	0	0
2665:	0	0	0	0	0	0	0	0
2673:	0	0	0	0	0	0	0	0
2681:	0	0	1	0	0	0	0	0
2689:	0	0	0	0	0	0	0	0
2697:	0	0	0	0	0	0	0	1
2705:	0	1	0	1	1	0	0	0
2713:	0	1	0	0	0	0	0	1
2721:	0	2	0	0	0	0	0	0
2729:	1	0	0	0	0	0	0	0
2737:	0	0	0	0	0	0	0	1
2745:	1	1	0	0	0	0	1	0
2753:	0	0	0	0	0	0	0	0
2761:	0	0	0	0	0	0	0	0
2769:	1	0	0	1	0	0	0	0
2777:	1	0	1	1	1	0	0	0
2785:	0	0	0	0	0	0	0	0
2793:	1	1	1	1	0	1	1	0
2801:	1	0	0	0	0	0	0	1
2809:	0	0	0	0	0	0	0	0
2817:	1	0	0	0	0	0	0	0
2825:	0	0	0	0	0	0	0	0
2833:	0	0	0	0	0	0	1	0
2841:	0	0	0	0	0	0	0	0
2849:	0	1	0	0	1	1	0	0
2857:	0	0	0	1	0	0	0	0
2865:	2	0	0	0	0	1	0	0
2873:	0	0	0	0	0	0	0	0
2881:	0	0	0	2	0	0	1	0
2889:	0	1	0	0	0	0	0	0
2897:	0	1	0	1	0	0	0	0
2905:	0	1	0	0	0	0	0	1
2913:	3	1	0	0	0	0	0	0
2921:	0	1	0	1	0	1	0	2
2929:	0	0	0	0	0	0	1	0
2937:	1	0	0	0	0	0	0	0
2945:	0	0	0	0	0	0	0	0
2953:	0	0	0	0	0	0	0	0

2961: 0 0 0 0 1 1 0 0

Sample Title: CP0404S12-13

Channel	1	2	3	4	5	6	7	8
2969:	0	1	0	0	0	0	0	0
2977:	0	0	1	0	0	0	0	1
2985:	0	0	0	0	1	0	0	0
2993:	0	0	0	0	0	0	0	0
3001:	0	0	0	1	0	0	0	0
3009:	0	0	0	0	0	0	0	0
3017:	0	1	0	1	0	0	0	0
3025:	0	0	0	0	0	0	0	0
3033:	0	0	0	0	0	0	0	0
3041:	1	0	0	1	1	0	0	0
3049:	0	0	0	0	0	0	1	0
3057:	0	0	1	0	0	0	0	1
3065:	0	0	0	0	1	0	0	0
3073:	0	0	0	0	0	0	0	0
3081:	0	0	0	1	0	0	0	0
3089:	0	0	0	0	1	1	0	0
3097:	0	0	0	0	0	0	0	0
3105:	0	0	0	0	0	0	0	0
3113:	0	0	0	0	0	0	0	0
3121:	0	0	0	0	0	1	0	0
3129:	0	0	0	0	0	0	0	0
3137:	0	0	1	0	0	0	0	0
3145:	1	1	0	0	0	0	0	1
3153:	0	0	0	0	1	0	0	0
3161:	0	0	0	0	0	0	0	1
3169:	0	0	0	0	0	0	0	0
3177:	0	0	1	0	0	0	0	0
3185:	0	0	0	0	0	0	0	0
3193:	1	0	1	1	0	1	0	0
3201:	0	1	0	0	0	0	0	0
3209:	0	0	0	0	1	0	0	0
3217:	0	0	0	0	0	0	1	0
3225:	0	1	0	0	0	1	0	0
3233:	1	0	0	0	0	0	0	0
3241:	0	0	0	0	0	0	1	0
3249:	0	1	0	0	0	0	0	0
3257:	0	0	0	0	0	0	0	0
3265:	0	0	0	0	0	0	0	1
3273:	0	0	0	0	0	0	0	0
3281:	0	0	0	0	0	2	0	0
3289:	0	0	0	0	0	1	0	0
3297:	0	0	0	0	0	1	0	0
3305:	0	0	1	2	0	0	0	0
3313:	0	0	0	0	0	0	1	0
3321:	0	0	0	0	0	0	0	0
3329:	0	0	0	1	0	1	0	2
3337:	0	0	0	0	0	0	0	0
3345:	0	0	1	0	0	0	0	0
3353:	0	0	0	0	0	0	0	0
3361:	0	0	0	0	0	0	0	0
3369:	0	0	0	1	0	0	0	0
3377:	0	0	0	0	0	0	0	0
3385:	0	1	0	0	2	0	1	0

3393: 1 0 0 1 0 0 1 0

Sample Title: CP0404S12-13

Channel	1	2	3	4	5	6	7	8	9
3401:	0	0	0	0	0	1	0	0	0
3409:	0	0	0	0	1	0	0	1	1
3417:	0	0	0	0	0	0	1	1	1
3425:	0	0	0	0	0	0	0	0	0
3433:	0	0	0	0	0	0	0	0	1
3441:	0	0	0	0	0	0	0	0	0
3449:	1	0	0	0	0	0	0	0	0
3457:	0	0	0	0	0	0	0	0	0
3465:	0	0	0	0	0	0	0	0	0
3473:	0	1	1	0	1	1	0	0	0
3481:	1	0	0	0	0	0	0	0	0
3489:	0	0	1	0	1	0	0	0	0
3497:	0	0	0	0	0	0	0	0	0
3505:	0	0	0	0	0	1	0	0	0
3513:	0	0	0	0	0	0	0	0	0
3521:	0	0	0	0	0	1	0	0	1
3529:	0	0	0	0	0	0	0	0	0
3537:	0	0	0	0	0	0	0	0	0
3545:	0	0	0	0	1	0	0	0	0
3553:	0	0	0	0	0	0	0	0	0
3561:	0	0	1	0	0	0	0	0	0
3569:	0	0	0	0	0	0	0	0	1
3577:	0	0	0	0	0	0	0	0	0
3585:	0	0	0	0	0	0	0	0	0
3593:	0	1	0	0	1	0	0	0	0
3601:	0	0	2	0	0	0	0	0	1
3609:	0	1	0	0	0	0	0	0	0
3617:	0	0	1	0	0	1	0	0	1
3625:	0	0	0	0	1	0	0	0	0
3633:	0	0	0	0	0	2	0	0	1
3641:	0	0	0	0	0	0	0	0	0
3649:	0	1	0	0	1	0	0	0	0
3657:	0	0	0	0	0	0	1	0	0
3665:	0	0	0	0	0	0	0	0	0
3673:	0	0	1	0	0	0	0	0	0
3681:	0	0	0	0	0	0	0	0	0
3689:	1	0	0	0	1	0	0	0	0
3697:	0	0	1	0	0	0	0	0	0
3705:	1	0	0	0	0	1	0	0	0
3713:	2	0	0	0	0	0	0	0	0
3721:	0	0	0	0	0	0	0	0	0
3729:	0	0	0	0	0	0	0	0	0
3737:	0	0	0	0	0	0	0	0	0
3745:	0	1	0	0	0	0	0	0	0
3753:	0	0	0	0	0	0	0	0	0
3761:	0	0	0	0	0	0	0	0	0
3769:	0	0	0	0	0	0	0	0	0
3777:	0	0	0	0	1	0	0	0	0
3785:	1	0	0	0	0	0	0	0	0
3793:	0	0	0	0	0	0	0	0	0
3801:	0	0	0	0	0	0	0	0	0
3809:	0	0	0	0	0	0	0	0	0
3817:	0	0	0	0	0	0	0	0	0

3825: 0 0 0 0 0 0 0 0

Sample Title: CP0404S12-13

Channel	1	2	3	4	5	6	7	8
3833:	0	1	0	1	0	0	0	0
3841:	0	0	0	0	0	0	0	0
3849:	0	0	0	0	0	0	0	1
3857:	1	1	1	0	0	0	0	0
3865:	0	0	0	0	0	0	0	0
3873:	0	0	0	0	0	0	0	0
3881:	0	0	0	0	0	0	0	0
3889:	1	1	0	0	0	0	0	1
3897:	0	0	0	0	0	0	0	0
3905:	1	0	0	0	0	0	1	0
3913:	0	0	0	0	0	0	0	0
3921:	0	0	0	1	0	0	0	0
3929:	0	0	0	0	0	0	0	0
3937:	0	0	0	0	0	0	0	0
3945:	0	0	0	0	0	0	0	0
3953:	0	0	0	0	0	0	0	1
3961:	0	0	0	0	0	0	0	1
3969:	0	0	1	0	0	0	0	0
3977:	0	0	0	0	0	0	1	0
3985:	0	0	0	0	0	0	0	0
3993:	1	0	0	0	0	0	0	0
4001:	1	0	0	0	0	0	0	0
4009:	1	0	0	0	0	1	0	0
4017:	0	0	0	0	0	0	0	0
4025:	0	0	0	0	0	0	0	0
4033:	0	0	0	0	0	0	0	0
4041:	0	0	0	0	0	0	0	1
4049:	0	0	0	0	0	0	0	0
4057:	1	0	0	0	0	0	0	0
4065:	0	0	0	0	0	0	0	0
4073:	0	0	1	0	0	0	0	0
4081:	0	0	0	0	0	0	0	0
4089:	0	0	0	0	0	0	0	0

KB
11/6/15Analysis Report for 1510086-17
CP0404S14-15

GAMMA SPECTRUM ANALYSIS

Sample Identification : 1510086-17
Sample Description : CP0404S14-15
Sample Type : SOIL

Sample Size : 5.258E+02 grams
Facility : Countroom

Sample Taken On : 10/8/2015 7:59:42AM
Acquisition Started : 11/6/2015 2:40:26PM

Procedure : GAS-1402 pCi
Operator : Administrator
Detector Name : GE1
Geometry : GAS-1402
Live Time : 3600.0 seconds
Real Time : 3601.3 seconds

Dead Time : 0.03 %

Peak Locate Threshold : 2.50
Peak Locate Range (in channels) : 1 - 4096
Peak Area Range (in channels) : 19 - 4096
Identification Energy Tolerance : 1.000 keV

Energy Calibration Used Done On : 10/25/2014
Efficiency Calibration Used Done On : 10/25/2014
Efficiency Calibration Description :

Sample Number : 29271

PEAK-TO-TOTAL CALIBRATION REPORT

Peak-to-Total Efficiency Calibration Equation

AG
11/9/15

Analysis Report for 1510086-17
CP0404S14-15

PEAK LOCATE REPORT

Peak Locate Performed on : 11/6/2015 3:40:31PM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096
Peak Search Sensitivity : 2.50

Peak No.	Energy (keV)	Centroid Channel	Centroid Uncertainty	Peak Significance
1	39.60	39.96	0.0000	0.00
2	47.55	47.90	0.0000	0.00
3	63.66	64.01	0.0000	0.00
4	74.94	75.28	0.0000	0.00
5	77.47	77.81	0.0000	0.00
6	88.09	88.43	0.0000	0.00
7	92.67	93.00	0.0000	0.00
8	128.81	129.13	0.0000	0.00
9	186.01	186.32	0.0000	0.00
10	209.12	209.42	0.0000	0.00
11	216.55	216.85	0.0000	0.00
12	238.86	239.14	0.0000	0.00
13	241.83	242.11	0.0000	0.00
14	270.84	271.12	0.0000	0.00
15	295.50	295.77	0.0000	0.00
16	300.19	300.46	0.0000	0.00
17	327.92	328.17	0.0000	0.00
18	338.57	338.82	0.0000	0.00
19	352.16	352.40	0.0000	0.00
20	453.36	453.57	0.0000	0.00
21	463.47	463.68	0.0000	0.00
22	511.11	511.31	0.0000	0.00
23	520.56	520.75	0.0000	0.00
24	583.49	583.66	0.0000	0.00
25	609.81	609.97	0.0000	0.00
26	683.63	683.76	0.0000	0.00
27	727.53	727.65	0.0000	0.00
28	768.59	768.69	0.0000	0.00
29	772.52	772.63	0.0000	0.00
30	785.53	785.63	0.0000	0.00
31	796.03	796.13	0.0000	0.00
32	860.34	860.42	0.0000	0.00
33	911.63	911.68	0.0000	0.00
34	935.30	935.35	0.0000	0.00
35	965.13	965.16	0.0000	0.00
36	969.46	969.49	0.0000	0.00
37	1121.03	1121.01	0.0000	0.00
38	1256.01	1255.94	0.0000	0.00
39	1322.76	1322.67	0.0000	0.00
40	1406.28	1406.16	0.0000	0.00
41	1461.49	1461.35	0.0000	0.00
42	1509.92	1509.76	0.0000	0.00

Analysis Report for 1510086-17
CP0404S14-15

Peak No.	Energy (keV)	Centroid Channel	Centroid Uncertainty	Peak Significance
43	1531.72	1531.55	0.0000	0.00
44	1543.34	1543.16	0.0000	0.00
45	1551.61	1551.43	0.0000	0.00
46	1588.71	1588.52	0.0000	0.00
47	1622.74	1622.54	0.0000	0.00
48	1660.94	1660.73	0.0000	0.00
49	1730.52	1730.28	0.0000	0.00
50	1765.23	1764.97	0.0000	0.00
51	1844.61	1844.32	0.0000	0.00
52	1848.78	1848.49	0.0000	0.00
53	1948.36	1948.03	0.0000	0.00
54	1959.46	1959.13	0.0000	0.00
55	2104.38	2104.00	0.0000	0.00
56	2109.19	2108.80	0.0000	0.00
57	2204.73	2204.30	0.0000	0.00
58	2260.29	2259.85	0.0000	0.00
59	2359.48	2359.00	0.0000	0.00
60	2368.15	2367.67	0.0000	0.00
61	2375.31	2374.82	0.0000	0.00
62	2615.50	2614.92	0.0000	0.00

? = Adjacent peak noted
Errors quoted at 2.000sigma

Analysis Report for 1510086-17
CP0404S14-15

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 11/6/2015 3:40:31PM

Peak Analysis From Channel : 1
Peak Analysis To Channel : 4096

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	FWHM (keV)
	1	39.60	36 - 44	39.96	1.00E+02	84.27	1.03E+03	3.92
	2	47.55	44 - 52	47.90	2.05E+02	94.64	1.26E+03	1.71
	3	63.66	60 - 67	64.01	2.24E+02	114.75	2.05E+03	1.24
M	4	74.94	72 - 81	75.28	4.25E+02	94.39	1.32E+03	1.60
m	5	77.47	72 - 81	77.81	7.27E+02	101.87	1.30E+03	1.61
M	6	88.09	83 - 97	88.43	2.53E+02	86.38	1.21E+03	1.97
m	7	92.67	83 - 97	93.00	3.91E+02	87.98	1.07E+03	1.98
	8	128.81	126 - 133	129.13	7.77E+01	83.81	1.12E+03	1.61
	9	186.01	182 - 190	186.32	2.17E+02	88.66	1.08E+03	1.94
	10	209.12	207 - 212	209.42	8.85E+01	55.52	5.45E+02	2.26
	11	216.55	213 - 221	216.85	1.19E+02	72.89	7.38E+02	6.85
M	12	238.86	235 - 245	239.14	9.71E+02	75.12	3.98E+02	1.68
m	13	241.83	235 - 245	242.11	2.29E+02	80.66	4.39E+02	2.04
	14	270.84	268 - 275	271.12	9.97E+01	59.53	5.25E+02	1.55
M	15	295.50	291 - 303	295.77	2.72E+02	48.53	2.80E+02	1.57
m	16	300.19	291 - 303	300.46	5.26E+01	45.68	3.65E+02	2.02
	17	327.92	326 - 331	328.17	5.60E+01	40.68	2.88E+02	2.19
	18	338.57	335 - 343	338.82	2.21E+02	60.56	4.19E+02	1.74
	19	352.16	349 - 357	352.40	5.37E+02	66.57	3.42E+02	1.96
	20	453.36	449 - 458	453.57	5.63E+01	47.13	2.85E+02	1.62
	21	463.47	460 - 468	463.68	5.50E+01	43.85	2.64E+02	1.87
	22	511.11	505 - 516	511.31	2.14E+02	57.83	3.09E+02	2.54
	23	520.56	518 - 524	520.75	2.49E+01	30.17	1.48E+02	3.22
	24	583.49	580 - 586	583.66	3.22E+02	47.63	1.79E+02	1.90
	25	609.81	605 - 614	609.97	3.79E+02	57.69	2.56E+02	1.65
	26	683.63	681 - 687	683.76	2.27E+01	27.06	1.19E+02	1.03
	27	727.53	724 - 731	727.65	6.80E+01	33.41	1.42E+02	1.96
M	28	768.59	764 - 776	768.69	6.48E+01	29.60	8.98E+01	2.51
m	29	772.52	764 - 776	772.63	2.10E+01	28.07	7.79E+01	2.51
	30	785.53	783 - 788	785.63	1.83E+01	22.47	8.53E+01	1.50
	31	796.03	793 - 800	796.13	2.80E+01	29.66	1.28E+02	1.62
	32	860.34	856 - 866	860.42	4.01E+01	35.79	1.52E+02	2.62
	33	911.63	908 - 915	911.68	2.11E+02	36.44	8.22E+01	2.03
	34	935.30	932 - 938	935.35	3.10E+01	22.11	6.60E+01	1.91
M	35	965.13	960 - 973	965.16	5.35E+01	25.61	8.10E+01	2.10
m	36	969.46	960 - 973	969.49	1.23E+02	29.80	8.68E+01	1.96
	37	1121.03	1116 - 1125	1121.01	1.11E+02	33.27	9.45E+01	2.47
	38	1256.01	1250 - 1264	1255.94	3.93E+01	34.98	1.11E+02	6.92
	39	1322.76	1320 - 1325	1322.67	1.51E+01	15.36	3.38E+01	3.49
	40	1406.28	1398 - 1413	1406.16	5.00E+01	22.80	3.20E+01	2.97

Analysis Report for 1510086-17

CP0404S14-15

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	FWHM (keV)
41	1461.49	1455 - 1467		1461.35	8.58E+02	63.54	7.09E+01	2.25
42	1509.92	1506 - 1512		1509.76	1.52E+01	11.70	1.36E+01	2.20
43	1531.72	1528 - 1537		1531.55	1.24E+01	11.05	1.12E+01	1.18
44	1543.34	1538 - 1548		1543.16	1.62E+01	12.02	9.52E+00	7.77
45	1551.61	1549 - 1553		1551.43	6.44E+00	6.96	5.11E+00	0.99
46	1588.71	1586 - 1590		1588.52	2.00E+01	11.18	1.00E+01	1.85
47	1622.74	1619 - 1627		1622.54	1.89E+01	12.84	1.41E+01	1.97
48	1660.94	1656 - 1665		1660.73	1.44E+01	9.64	5.12E+00	3.58
49	1730.52	1727 - 1733		1730.28	2.01E+01	13.16	1.59E+01	1.22
50	1765.23	1760 - 1770		1764.97	6.67E+01	20.81	2.27E+01	2.14
M	51	1844.61	1843 - 1851	1844.32	5.10E+00	4.36	3.74E+00	2.83
m	52	1848.78	1843 - 1851	1848.49	1.21E+01	9.11	7.74E+00	2.58
	53	1948.36	1945 - 1951	1948.03	5.50E+00	6.34	3.00E+00	1.84
	54	1959.46	1955 - 1963	1959.13	8.46E+00	9.62	9.08E+00	5.65
M	55	2104.38	2098 - 2113	2104.00	1.80E+01	9.17	0.00E+00	2.42
m	56	2109.19	2098 - 2113	2108.80	9.95E+00	10.58	0.00E+00	3.22
	57	2204.73	2199 - 2208	2204.30	2.74E+01	12.04	5.13E+00	1.63
	58	2260.29	2255 - 2263	2259.85	5.69E+00	7.23	4.63E+00	3.01
	59	2359.48	2355 - 2362	2359.00	7.00E+00	5.29	0.00E+00	1.00
	60	2368.15	2363 - 2372	2367.67	1.50E+01	7.75	0.00E+00	7.15
	61	2375.31	2373 - 2377	2374.82	6.44E+00	6.18	3.13E+00	2.71
	62	2615.50	2609 - 2619	2614.92	1.24E+02	22.27	0.00E+00	2.95

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 11/6/2015 3:40:31PM

Peak Analysis From Channel : 1
Peak Analysis To Channel : 4096

Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level	
1	39.60	36 -	44	1.00E+02	84.27	1.03E+03	6.73E+01	
2	47.55	44 -	52	2.05E+02	94.64	1.26E+03	7.42E+01	
3	63.66	60 -	67	2.24E+02	114.75	2.05E+03	9.11E+01	
M	4	74.94	72 -	81	4.25E+02	94.39	1.32E+03	5.98E+01
m	5	77.47	72 -	81	7.27E+02	101.87	1.30E+03	5.94E+01
M	6	88.09	83 -	97	2.53E+02	86.38	1.21E+03	5.72E+01

: 00917

Analysis Report for 1510086-17

CP0404S14-15

	Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
m	7	92.67	83 -	97	3.91E+02	87.98	1.07E+03	5.37E+01
	8	128.81	126 -	133	7.77E+01	83.81	1.12E+03	6.73E+01
	9	186.01	182 -	190	2.17E+02	88.66	1.08E+03	6.87E+01
	10	209.12	207 -	212	8.85E+01	55.52	5.45E+02	4.29E+01
	11	216.55	213 -	221	1.19E+02	72.89	7.38E+02	5.72E+01
M	12	238.86	235 -	245	9.71E+02	75.12	3.98E+02	3.28E+01
m	13	241.83	235 -	245	2.29E+02	80.66	4.39E+02	3.45E+01
	14	270.84	268 -	275	9.97E+01	59.53	5.25E+02	4.61E+01
M	15	295.50	291 -	303	2.72E+02	48.53	2.80E+02	2.75E+01
m	16	300.19	291 -	303	5.26E+01	45.68	3.65E+02	3.14E+01
	17	327.92	326 -	331	5.60E+01	40.68	2.88E+02	3.11E+01
	18	338.57	335 -	343	2.21E+02	60.56	4.19E+02	4.34E+01
	19	352.16	349 -	357	5.37E+02	66.57	3.42E+02	3.93E+01
	20	453.36	449 -	458	5.63E+01	47.13	2.85E+02	3.67E+01
	21	463.47	460 -	468	5.50E+01	43.85	2.64E+02	3.39E+01
	22	511.11	505 -	516	2.14E+02	57.83	3.09E+02	4.10E+01
	23	520.56	518 -	524	2.49E+01	30.17	1.48E+02	2.34E+01
	24	583.49	580 -	586	3.22E+02	47.63	1.79E+02	2.58E+01
	25	609.81	605 -	614	3.79E+02	57.69	2.56E+02	3.50E+01
	26	683.63	681 -	687	2.27E+01	27.06	1.19E+02	2.08E+01
	27	727.53	724 -	731	6.80E+01	33.41	1.42E+02	2.39E+01
M	28	768.59	764 -	776	6.48E+01	29.60	8.98E+01	1.56E+01
m	29	772.52	764 -	776	2.10E+01	28.07	7.79E+01	1.45E+01
	30	785.53	783 -	788	1.83E+01	22.47	8.53E+01	1.71E+01
	31	796.03	793 -	800	2.80E+01	29.66	1.28E+02	2.28E+01
	32	860.34	856 -	866	4.01E+01	35.79	1.52E+02	2.75E+01
	33	911.63	908 -	915	2.11E+02	36.44	8.22E+01	1.81E+01
	34	935.30	932 -	938	3.10E+01	22.11	6.60E+01	1.57E+01
M	35	965.13	960 -	973	5.35E+01	25.61	8.10E+01	1.48E+01
m	36	969.46	960 -	973	1.23E+02	29.80	8.68E+01	1.53E+01
	37	1121.03	1116 -	1125	1.11E+02	33.27	9.45E+01	2.12E+01
	38	1256.01	1250 -	1264	3.93E+01	34.98	1.11E+02	2.68E+01
	39	1322.76	1320 -	1325	1.51E+01	15.36	3.38E+01	1.09E+01
	40	1406.28	1398 -	1413	5.00E+01	22.80	3.20E+01	1.47E+01
	41	1461.49	1455 -	1467	8.58E+02	63.54	7.09E+01	2.02E+01
	42	1509.92	1506 -	1512	1.52E+01	11.70	1.36E+01	7.18E+00
	43	1531.72	1528 -	1537	1.24E+01	11.05	1.12E+01	7.00E+00
	44	1543.34	1538 -	1548	1.62E+01	12.02	9.52E+00	7.33E+00
	45	1551.61	1549 -	1553	6.44E+00	6.96	5.11E+00	3.92E+00
	46	1588.71	1586 -	1590	2.00E+01	11.18	1.00E+01	5.51E+00
	47	1622.74	1619 -	1627	1.89E+01	12.84	1.41E+01	7.75E+00
	48	1660.94	1656 -	1665	1.44E+01	9.64	5.12E+00	4.88E+00
	49	1730.52	1727 -	1733	2.01E+01	13.16	1.59E+01	7.93E+00
	50	1765.23	1760 -	1770	6.67E+01	20.81	2.27E+01	1.06E+01
M	51	1844.61	1843 -	1851	5.10E+00	4.36	3.74E+00	3.18E+00
m	52	1848.78	1843 -	1851	1.21E+01	9.11	7.74E+00	4.57E+00
	53	1948.36	1945 -	1951	5.50E+00	6.34	3.00E+00	3.51E+00
	54	1959.46	1955 -	1963	8.46E+00	9.62	9.08E+00	6.30E+00
M	55	2104.38	2098 -	2113	1.80E+01	9.17	0.00E+00	0.00E+00
m	56	2109.19	2098 -	2113	9.95E+00	10.58	0.00E+00	0.00E+00
	57	2204.73	2199 -	2208	2.74E+01	12.04	5.13E+00	4.88E+00

Analysis Report for 1510086-17

CP0404S14-15

Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
58	2260.29	2255 -	2263	5.69E+00	7.23	4.63E+00	4.46E+00
59	2359.48	2355 -	2362	7.00E+00	5.29	0.00E+00	0.00E+00
60	2368.15	2363 -	2372	1.50E+01	7.75	0.00E+00	0.00E+00
61	2375.31	2373 -	2377	6.44E+00	6.18	3.13E+00	2.91E+00
62	2615.50	2609 -	2619	1.24E+02	22.27	0.00E+00	0.00E+00

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

PEAK WITH NID REPORT

Peak Analysis Performed on : 11/6/2015 3:40:31PM

Peak Analysis From Channel : 1
Peak Analysis To Channel : 4096

Tentative NID Library : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB
Peak Match Tolerance : 1.000 keV

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
1	39.60	36 -	44	39.96	1.00E+02	84.27	1.03E+03	I-129 RA-225
2	47.55	44 -	52	47.90	2.05E+02	94.64	1.26E+03	TH-230
3	63.66	60 -	67	64.01	2.24E+02	114.75	2.05E+03	TH-234 TH-230
M 4	74.94	72 -	81	75.28	4.25E+02	94.39	1.32E+03	AM-243
m 5	77.47	72 -	81	77.81	7.27E+02	101.87	1.30E+03	TI-44
M 6	88.09	83 -	97	88.43	2.53E+02	86.38	1.21E+03	CD-109 LU-176 SN-126
m 7	92.67	83 -	97	93.00	3.91E+02	87.98	1.07E+03	GA-67
8	128.81	126 -	133	129.13	7.77E+01	83.81	1.12E+03	.....
9	186.01	182 -	190	186.32	2.17E+02	88.66	1.08E+03	RA-226
10	209.12	207 -	212	209.42	8.85E+01	55.52	5.45E+02	GA-67 CM-243
11	216.55	213 -	221	216.85	1.19E+02	72.89	7.38E+02	.....
M 12	238.86	235 -	245	239.14	9.71E+02	75.12	3.98E+02	PB-212
m 13	241.83	235 -	245	242.11	2.29E+02	80.66	4.39E+02	RA-224
14	270.84	268 -	275	271.12	9.97E+01	59.53	5.25E+02	.....
M 15	295.50	291 -	303	295.77	2.72E+02	48.53	2.80E+02	PB-214
m 16	300.19	291 -	303	300.46	5.26E+01	45.68	3.65E+02	GA-67

: 00919

Analysis Report for 1510086-17

CP0404S14-15

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
								PB-212
								BI-210M
17	327.92	326 -	331	328.17	5.60E+01	40.68	2.88E+02	LA-140
18	338.57	335 -	343	338.82	2.21E+02	60.56	4.19E+02	AC-228
19	352.16	349 -	357	352.40	5.37E+02	66.57	3.42E+02	PB-214
20	453.36	449 -	458	453.57	5.63E+01	47.13	2.85E+02	PM-146
21	463.47	460 -	468	463.68	5.50E+01	43.85	2.64E+02	SB-125
22	511.11	505 -	516	511.31	2.14E+02	57.83	3.09E+02	.....
23	520.56	518 -	524	520.75	2.49E+01	30.17	1.48E+02	RB-83
24	583.49	580 -	586	583.66	3.22E+02	47.63	1.79E+02	TL-208
25	609.81	605 -	614	609.97	3.79E+02	57.69	2.56E+02	BI-214
26	683.63	681 -	687	683.76	2.27E+01	27.06	1.19E+02	.....
27	727.53	724 -	731	727.65	6.80E+01	33.41	1.42E+02	BI-212
M 28	768.59	764 -	776	768.69	6.48E+01	29.60	8.98E+01	.....
m 29	772.52	764 -	776	772.63	2.10E+01	28.07	7.79E+01	.....
30	785.53	783 -	788	785.63	1.83E+01	22.47	8.53E+01	.....
31	796.03	793 -	800	796.13	2.80E+01	29.66	1.28E+02	CS-134
32	860.34	856 -	866	860.42	4.01E+01	35.79	1.52E+02	TL-208
33	911.63	908 -	915	911.68	2.11E+02	36.44	8.22E+01	LU-172
								AC-228
M 34	935.30	932 -	938	935.35	3.10E+01	22.11	6.60E+01	.....
m 35	965.13	960 -	973	965.16	5.35E+01	25.61	8.10E+01	.....
36	969.46	960 -	973	969.49	1.23E+02	29.80	8.68E+01	AC-228
37	1121.03	1116 -	1125	1121.01	1.11E+02	33.27	9.45E+01	TA-182
								SC-46
								BI-214
38	1256.01	1250 -	1264	1255.94	3.93E+01	34.98	1.11E+02	.....
39	1322.76	1320 -	1325	1322.67	1.51E+01	15.36	3.38E+01	.....
40	1406.28	1398 -	1413	1406.16	5.00E+01	22.80	3.20E+01	.....
41	1461.49	1455 -	1467	1461.35	8.58E+02	63.54	7.09E+01	K-40
42	1509.92	1506 -	1512	1509.76	1.52E+01	11.70	1.36E+01	.....
43	1531.72	1528 -	1537	1531.55	1.24E+01	11.05	1.12E+01	.....
44	1543.34	1538 -	1548	1543.16	1.62E+01	12.02	9.52E+00	.....
45	1551.61	1549 -	1553	1551.43	6.44E+00	6.96	5.11E+00	.....
46	1588.71	1586 -	1590	1588.52	2.00E+01	11.18	1.00E+01	.....
47	1622.74	1619 -	1627	1622.54	1.89E+01	12.84	1.41E+01	.....
48	1660.94	1656 -	1665	1660.73	1.44E+01	9.64	5.12E+00	.....
49	1730.52	1727 -	1733	1730.28	2.01E+01	13.16	1.59E+01	.....
50	1765.23	1760 -	1770	1764.97	6.67E+01	20.81	2.27E+01	BI-214
M 51	1844.61	1843 -	1851	1844.32	5.10E+00	4.36	3.74E+00	.....
m 52	1848.78	1843 -	1851	1848.49	1.21E+01	9.11	7.74E+00	.....
53	1948.36	1945 -	1951	1948.03	5.50E+00	6.34	3.00E+00	.....
54	1959.46	1955 -	1963	1959.13	8.46E+00	9.62	9.08E+00	.....
M 55	2104.38	2098 -	2113	2104.00	1.80E+01	9.17	0.00E+00	.....
m 56	2109.19	2098 -	2113	2108.80	9.95E+00	10.58	0.00E+00	.....
57	2204.73	2199 -	2208	2204.30	2.74E+01	12.04	5.13E+00	BI-214
58	2260.29	2255 -	2263	2259.85	5.69E+00	7.23	4.63E+00	.....
59	2359.48	2355 -	2362	2359.00	7.00E+00	5.29	0.00E+00	.....
60	2368.15	2363 -	2372	2367.67	1.50E+01	7.75	0.00E+00	.....
61	2375.31	2373 -	2377	2374.82	6.44E+00	6.18	3.13E+00	.....
62	2615.50	2609 -	2619	2614.92	1.24E+02	22.27	0.00E+00	TL-208

Analysis Report for 1510086-17
CP0404S14-15

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.00sigma

PEAK EFFICIENCY REPORT

Peak Analysis Performed on : 11/6/2015 3:40:31PM

	Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
	1	39.60	1.00E+02	84.27	1.18E-02	1.78E-03
	2	47.55	2.05E+02	94.64	1.75E-02	1.78E-03
	3	63.66	2.24E+02	114.75	2.50E-02	1.92E-03
M	4	74.94	4.25E+02	94.39	2.75E-02	2.30E-03
m	5	77.47	7.27E+02	101.87	2.78E-02	2.39E-03
M	6	88.09	2.53E+02	86.38	2.85E-02	2.74E-03
m	7	92.67	3.91E+02	87.98	2.86E-02	2.65E-03
	8	128.81	7.77E+01	83.81	2.67E-02	2.09E-03
	9	186.01	2.17E+02	88.66	2.24E-02	2.03E-03
	10	209.12	8.85E+01	55.52	2.09E-02	1.86E-03
	11	216.55	1.19E+02	72.89	2.04E-02	1.80E-03
M	12	238.86	9.71E+02	75.12	1.92E-02	1.64E-03
m	13	241.83	2.29E+02	80.66	1.91E-02	1.61E-03
	14	270.84	9.97E+01	59.53	1.77E-02	1.40E-03
M	15	295.50	2.72E+02	48.53	1.67E-02	1.31E-03
m	16	300.19	5.26E+01	45.68	1.65E-02	1.30E-03
	17	327.92	5.60E+01	40.68	1.55E-02	1.24E-03
	18	338.57	2.21E+02	60.56	1.52E-02	1.22E-03
	19	352.16	5.37E+02	66.57	1.48E-02	1.19E-03
	20	453.36	5.63E+01	47.13	1.23E-02	1.05E-03
	21	463.47	5.50E+01	43.85	1.21E-02	1.04E-03
	22	511.11	2.14E+02	57.83	1.12E-02	9.90E-04
	23	520.56	2.49E+01	30.17	1.11E-02	9.80E-04
	24	583.49	3.22E+02	47.63	1.02E-02	9.15E-04
	25	609.81	3.79E+02	57.69	9.82E-03	8.88E-04
	26	683.63	2.27E+01	27.06	8.98E-03	8.15E-04
	27	727.53	6.80E+01	33.41	8.55E-03	7.75E-04
M	28	768.59	6.48E+01	29.60	8.19E-03	7.38E-04
m	29	772.52	2.10E+01	28.07	8.15E-03	7.35E-04
	30	785.53	1.83E+01	22.47	8.05E-03	7.23E-04
	31	796.03	2.80E+01	29.66	7.96E-03	7.14E-04
	32	860.34	4.01E+01	35.79	7.48E-03	6.56E-04
	33	911.63	2.11E+02	36.44	7.15E-03	6.15E-04
	34	935.30	3.10E+01	22.11	7.00E-03	6.03E-04

Analysis Report for 1510086-17
CP0404S14-15

	Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
M	35	965.13	5.35E+01	25.61	6.83E-03	5.87E-04
m	36	969.46	1.23E+02	29.80	6.80E-03	5.85E-04
	37	1121.03	1.11E+02	33.27	6.06E-03	5.06E-04
	38	1256.01	3.93E+01	34.98	5.55E-03	4.65E-04
	39	1322.76	1.51E+01	15.36	5.34E-03	4.53E-04
	40	1406.28	5.00E+01	22.80	5.11E-03	4.33E-04
	41	1461.49	8.58E+02	63.54	4.97E-03	4.19E-04
	42	1509.92	1.52E+01	11.70	4.86E-03	4.07E-04
	43	1531.72	1.24E+01	11.05	4.81E-03	4.02E-04
	44	1543.34	1.62E+01	12.02	4.79E-03	3.99E-04
	45	1551.61	6.44E+00	6.96	4.77E-03	3.97E-04
	46	1588.71	2.00E+01	11.18	4.69E-03	3.87E-04
	47	1622.74	1.89E+01	12.84	4.63E-03	3.79E-04
	48	1660.94	1.44E+01	9.64	4.56E-03	3.69E-04
	49	1730.52	2.01E+01	13.16	4.45E-03	3.52E-04
	50	1765.23	6.67E+01	20.81	4.39E-03	3.43E-04
M	51	1844.61	5.10E+00	4.36	4.29E-03	3.26E-04
m	52	1848.78	1.21E+01	9.11	4.28E-03	3.26E-04
	53	1948.36	5.50E+00	6.34	4.16E-03	3.26E-04
	54	1959.46	8.46E+00	9.62	4.15E-03	3.26E-04
M	55	2104.38	1.80E+01	9.17	4.02E-03	3.26E-04
m	56	2109.19	9.95E+00	10.58	4.02E-03	3.26E-04
	57	2204.73	2.74E+01	12.04	3.95E-03	3.26E-04
	58	2260.29	5.69E+00	7.23	3.91E-03	3.26E-04
	59	2359.48	7.00E+00	5.29	3.87E-03	3.26E-04
	60	2368.15	1.50E+01	7.75	3.86E-03	3.26E-04
	61	2375.31	6.44E+00	6.18	3.86E-03	3.26E-04
	62	2615.50	1.24E+02	22.27	3.79E-03	3.26E-04

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000 sigma

BACKGROUND SUBTRACT REPORT

Peak Analysis Performed on : 11/6/2015 3:40:31PM

Env. Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000028941.CNF

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
1	39.60	1.00E+02	84.27			1.00E+02	8.43E+01
2	47.55	2.05E+02	94.64	4.50E+01	8.46E+00	1.60E+02	9.50E+01

Analysis Report for 1510086-17

CP0404S14-15

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
	3	63.66	2.24E+02	114.75	7.80E+01	1.33E+01	1.46E+02	1.16E+02
M	4	74.94	4.25E+02	94.39	5.09E+00	4.37E+00	4.20E+02	9.45E+01
m	5	77.47	7.27E+02	101.87	9.75E+00	8.28E+00	7.18E+02	1.02E+02
M	6	88.09	2.53E+02	86.38			2.53E+02	8.64E+01
m	7	92.67	3.91E+02	87.98	1.34E+02	9.83E+00	2.57E+02	8.85E+01
	8	128.81	7.77E+01	83.81			7.77E+01	8.38E+01
	9	186.01	2.17E+02	88.66	6.41E+01	7.38E+00	1.53E+02	8.90E+01
	10	209.12	8.85E+01	55.52			8.85E+01	5.55E+01
	11	216.55	1.19E+02	72.89			1.19E+02	7.29E+01
M	12	238.86	9.71E+02	75.12	2.34E+01	6.34E+00	9.48E+02	7.54E+01
m	13	241.83	2.29E+02	80.66			2.29E+02	8.07E+01
	14	270.84	9.97E+01	59.53			9.97E+01	5.95E+01
M	15	295.50	2.72E+02	48.53	4.17E+00	5.50E+00	2.67E+02	4.88E+01
m	16	300.19	5.26E+01	45.68			5.26E+01	4.57E+01
	17	327.92	5.60E+01	40.68			5.60E+01	4.07E+01
	18	338.57	2.21E+02	60.56	2.22E-01	4.54E+00	2.21E+02	6.07E+01
	19	352.16	5.37E+02	66.57	8.83E+00	4.91E+00	5.28E+02	6.68E+01
	20	453.36	5.63E+01	47.13			5.63E+01	4.71E+01
	21	463.47	5.50E+01	43.85			5.50E+01	4.38E+01
	22	511.11	2.14E+02	57.83	8.12E+01	5.49E+00	1.33E+02	5.81E+01
	23	520.56	2.49E+01	30.17			2.49E+01	3.02E+01
	24	583.49	3.22E+02	47.63	6.34E+00	3.74E+00	3.15E+02	4.78E+01
	25	609.81	3.79E+02	57.69	5.20E+00	3.69E+00	3.74E+02	5.78E+01
	26	683.63	2.27E+01	27.06			2.27E+01	2.71E+01
	27	727.53	6.80E+01	33.41			6.80E+01	3.34E+01
M	28	768.59	6.48E+01	29.60			6.48E+01	2.96E+01
m	29	772.52	2.10E+01	28.07			2.10E+01	2.81E+01
	30	785.53	1.83E+01	22.47			1.83E+01	2.25E+01
	31	796.03	2.80E+01	29.66			2.80E+01	2.97E+01
	32	860.34	4.01E+01	35.79			4.01E+01	3.58E+01
	33	911.63	2.11E+02	36.44	3.28E+00	2.53E+00	2.08E+02	3.65E+01
	34	935.30	3.10E+01	22.11			3.10E+01	2.21E+01
M	35	965.13	5.35E+01	25.61			5.35E+01	2.56E+01
m	36	969.46	1.23E+02	29.80			1.23E+02	2.98E+01
	37	1121.03	1.11E+02	33.27	2.28E+00	2.55E+00	1.08E+02	3.34E+01
	38	1256.01	3.93E+01	34.98			3.93E+01	3.50E+01
	39	1322.76	1.51E+01	15.36			1.51E+01	1.54E+01
	40	1406.28	5.00E+01	22.80			5.00E+01	2.28E+01
	41	1461.49	8.58E+02	63.54	6.46E+00	2.33E+00	8.51E+02	6.36E+01
	42	1509.92	1.52E+01	11.70			1.52E+01	1.17E+01
	43	1531.72	1.24E+01	11.05			1.24E+01	1.10E+01
	44	1543.34	1.62E+01	12.02			1.62E+01	1.20E+01
	45	1551.61	6.44E+00	6.96			6.44E+00	6.96E+00
	46	1588.71	2.00E+01	11.18			2.00E+01	1.12E+01
	47	1622.74	1.89E+01	12.84			1.89E+01	1.28E+01
	48	1660.94	1.44E+01	9.64			1.44E+01	9.64E+00
	49	1730.52	2.01E+01	13.16			2.01E+01	1.32E+01
	50	1765.23	6.67E+01	20.81			6.67E+01	2.08E+01
M	51	1844.61	5.10E+00	4.36			5.10E+00	4.36E+00
m	52	1848.78	1.21E+01	9.11			1.21E+01	9.11E+00
	53	1948.36	5.50E+00	6.34			5.50E+00	6.34E+00
	54	1959.46	8.46E+00	9.62			8.46E+00	9.62E+00
M	55	2104.38	1.80E+01	9.17			1.80E+01	9.17E+00
m	56	2109.19	9.95E+00	10.58			9.95E+00	1.06E+01

Analysis Report for 1510086-17

CP0404S14-15

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
57	2204.73	2.74E+01	12.04			2.74E+01	1.20E+01
58	2260.29	5.69E+00	7.23			5.69E+00	7.23E+00
59	2359.48	7.00E+00	5.29			7.00E+00	5.29E+00
60	2368.15	1.50E+01	7.75			1.50E+01	7.75E+00
61	2375.31	6.44E+00	6.18			6.44E+00	6.18E+00
62	2615.50	1.24E+02	22.27	3.47E+00	1.48E+00	1.21E+02	2.23E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

AREA CORRECTION REPORT REFERENCE PEAK / BKG. SUBTRACT

Peak Analysis Performed on : 11/6/2015 3:40:31PM

Ref. Peak Energy : 0.00 Reference Date :
Peak Ratio : 0.00 Uncertainty : 0.00
Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000028941.CNF

Corrected Area is: Original * Peak Ratio - Background

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
	1	39.60	1.00E+02	84.27		1.00E+02	8.43E+01
	2	47.55	2.05E+02	94.64	4.50E+01	8.46E+00	1.60E+02
	3	63.66	2.24E+02	114.75	7.80E+01	1.33E+01	1.46E+02
M	4	74.94	4.25E+02	94.39	5.09E+00	4.37E+00	4.20E+02
m	5	77.47	7.27E+02	101.87	9.75E+00	8.28E+00	7.18E+02
M	6	88.09	2.53E+02	86.38			2.53E+02
m	7	92.67	3.91E+02	87.98	1.34E+02	9.83E+00	2.57E+02
	8	128.81	7.77E+01	83.81			7.77E+01
	9	186.01	2.17E+02	88.66	6.41E+01	7.38E+00	1.53E+02
	10	209.12	8.85E+01	55.52			8.85E+01
	11	216.55	1.19E+02	72.89			1.19E+02
M	12	238.86	9.71E+02	75.12	2.34E+01	6.34E+00	9.48E+02
m	13	241.83	2.29E+02	80.66			2.29E+02
	14	270.84	9.97E+01	59.53			9.97E+01
M	15	295.50	2.72E+02	48.53	4.17E+00	5.50E+00	2.67E+02
m	16	300.19	5.26E+01	45.68			5.26E+01
	17	327.92	5.60E+01	40.68			5.60E+01
	18	338.57	2.21E+02	60.56	2.22E-01	4.54E+00	2.21E+02
	19	352.16	5.37E+02	66.57	8.83E+00	4.91E+00	5.28E+02
	20	453.36	5.63E+01	47.13			5.63E+01
	21	463.47	5.50E+01	43.85			5.50E+01
	22	511.11	2.14E+02	57.83	8.12E+01	5.49E+00	1.33E+02

: 00924

Analysis Report for 1510086-17

CP0404S14-15

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
	23	520.56	2.49E+01	30.17			2.49E+01	3.02E+01
	24	583.49	3.22E+02	47.63	6.34E+00	3.74E+00	3.15E+02	4.78E+01
	25	609.81	3.79E+02	57.69	5.20E+00	3.69E+00	3.74E+02	5.78E+01
	26	683.63	2.27E+01	27.06			2.27E+01	2.71E+01
	27	727.53	6.80E+01	33.41			6.80E+01	3.34E+01
M	28	768.59	6.48E+01	29.60			6.48E+01	2.96E+01
m	29	772.52	2.10E+01	28.07			2.10E+01	2.81E+01
	30	785.53	1.83E+01	22.47			1.83E+01	2.25E+01
	31	796.03	2.80E+01	29.66			2.80E+01	2.97E+01
	32	860.34	4.01E+01	35.79			4.01E+01	3.58E+01
	33	911.63	2.11E+02	36.44	3.28E+00	2.53E+00	2.08E+02	3.65E+01
	34	935.30	3.10E+01	22.11			3.10E+01	2.21E+01
M	35	965.13	5.35E+01	25.61			5.35E+01	2.56E+01
m	36	969.46	1.23E+02	29.80			1.23E+02	2.98E+01
	37	1121.03	1.11E+02	33.27	2.28E+00	2.55E+00	1.08E+02	3.34E+01
	38	1256.01	3.93E+01	34.98			3.93E+01	3.50E+01
	39	1322.76	1.51E+01	15.36			1.51E+01	1.54E+01
	40	1406.28	5.00E+01	22.80			5.00E+01	2.28E+01
	41	1461.49	8.58E+02	63.54	6.46E+00	2.33E+00	8.51E+02	6.36E+01
	42	1509.92	1.52E+01	11.70			1.52E+01	1.17E+01
	43	1531.72	1.24E+01	11.05			1.24E+01	1.10E+01
	44	1543.34	1.62E+01	12.02			1.62E+01	1.20E+01
	45	1551.61	6.44E+00	6.96			6.44E+00	6.96E+00
	46	1588.71	2.00E+01	11.18			2.00E+01	1.12E+01
	47	1622.74	1.89E+01	12.84			1.89E+01	1.28E+01
	48	1660.94	1.44E+01	9.64			1.44E+01	9.64E+00
	49	1730.52	2.01E+01	13.16			2.01E+01	1.32E+01
	50	1765.23	6.67E+01	20.81			6.67E+01	2.08E+01
M	51	1844.61	5.10E+00	4.36			5.10E+00	4.36E+00
m	52	1848.78	1.21E+01	9.11			1.21E+01	9.11E+00
	53	1948.36	5.50E+00	6.34			5.50E+00	6.34E+00
	54	1959.46	8.46E+00	9.62			8.46E+00	9.62E+00
M	55	2104.38	1.80E+01	9.17			1.80E+01	9.17E+00
m	56	2109.19	9.95E+00	10.58			9.95E+00	1.06E+01
	57	2204.73	2.74E+01	12.04			2.74E+01	1.20E+01
	58	2260.29	5.69E+00	7.23			5.69E+00	7.23E+00
	59	2359.48	7.00E+00	5.29			7.00E+00	5.29E+00
	60	2368.15	1.50E+01	7.75			1.50E+01	7.75E+00
	61	2375.31	6.44E+00	6.18			6.44E+00	6.18E+00
	62	2615.50	1.24E+02	22.27	3.47E+00	1.48E+00	1.21E+02	2.23E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

Analysis Report for 1510086-17
CP0404S14-15

NUCLIDE IDENTIFICATION REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

IDENTIFIED NUCLIDES

Nuclide Name	Id Confidence	Energy (keV)	Yield(%)	Activity (pCi/grams)	Activity Uncertainty
K-40	0.928	1460.81 *	10.67	2.29E+01	2.63E+00
GA-67	0.639	93.31 *	35.70	1.82E+02	7.29E+02
		208.95 *	2.24	1.37E+03	5.30E+03
		300.22 *	16.00	1.44E+02	5.87E+02
		88.03 *	3.72	3.56E+00	1.28E+00
CD-109	0.999	87.57 *	37.00	3.42E-01	1.21E-01
SN-126	0.957	453.90 *	39.94	1.65E-01	1.39E-01
PM-146	0.397	735.90	14.01		
		747.13	13.10		
		583.14 *	30.22	1.47E+00	2.58E-01
		860.37 *	4.48	1.71E+00	1.53E+00
TL-208	0.936	2614.66 *	35.85	1.27E+00	2.58E-01
		727.17 *	11.80	9.62E-01	4.81E-01
		1620.62	2.75		
BI-212	0.749	238.63 *	44.60	1.58E+00	1.84E-01
		300.09 *	3.41	1.33E+00	1.16E+00
PB-212	0.992	609.31 *	46.30	1.17E+00	2.10E-01
		1120.29 *	15.10	1.69E+00	5.39E-01
		1764.49 *	15.80	1.37E+00	4.41E-01
		2204.22 *	4.98	1.99E+00	8.90E-01
PB-214	0.990	295.21 *	19.19	1.19E+00	2.37E-01
		351.92 *	37.19	1.37E+00	2.06E-01
RA-224	0.892	240.98 *	3.95	4.34E+00	1.57E+00
RA-225	0.956	40.00 *	31.00	1.54E+00	1.32E+00
RA-226	0.994	186.21 *	3.28	2.97E+00	5.72E+00
AC-228	0.968	338.32 *	11.40	1.83E+00	5.22E-01
		911.07 *	27.70	1.50E+00	2.93E-01
		969.11 *	16.60	1.56E+00	4.00E-01
		48.44 *	16.90	7.72E-01	4.66E-01
TH-230	0.856	62.85 *	4.60	1.81E+00	1.44E+00
		67.67	0.37		
		74.67 *	66.00	3.31E-01	7.94E-02
AM-243	0.989				

* = Energy line found in the spectrum.

- = Manually added nuclide.

? = Manually edited nuclide.

Energy Tolerance : 1.000 keV

Nuclide confidence index threshold = 0.30

Errors quoted at 2.000sigma

Analysis Report for 1510086-17
CP0404S14-15

UNIDENTIFIED PEAKS

Peak Locate Performed on : 11/6/2015 3:40:31PM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide	
m	5	77.47	1.99349E-01	7.12		
	8	128.81	2.15972E-02	53.90		
	11	216.55	3.30726E-02	30.61		
	14	270.84	2.76949E-02	29.85		
	17	327.92	1.55590E-02	36.31	Sum	
	21	463.47	1.52733E-02	39.87		
	22	511.11	3.68073E-02	21.92		
	23	520.56	6.92200E-03	60.54	Tol.	RB-83
	26	683.63	6.30759E-03	59.58		
M	28	768.59	1.79913E-02	22.85	Sum	
m	29	772.52	5.84439E-03	66.71		
	30	785.53	5.09335E-03	61.28		
	31	796.03	7.77778E-03	52.97	Sum	
	34	935.30	8.61328E-03	35.65	Sum	
M	35	965.13	1.48628E-02	23.93		
	38	1256.01	1.09079E-02	44.54		
	39	1322.76	4.20139E-03	50.78		
	40	1406.28	1.38889E-02	22.80		
	42	1509.92	4.21717E-03	38.55	Sum	
	43	1531.72	3.44136E-03	44.58		
	44	1543.34	4.51058E-03	37.01		
	45	1551.61	1.79012E-03	54.03		
	46	1588.71	5.55556E-03	27.95	Sum	
	47	1622.74	5.26175E-03	33.88		
	48	1660.94	4.01144E-03	33.39		
	49	1730.52	5.57044E-03	32.82	Sum	
M	51	1844.61	1.41705E-03	42.72		
m	52	1848.78	3.35154E-03	37.75	Sum	
	53	1948.36	1.52778E-03	57.68		
	54	1959.46	2.35043E-03	56.83		
M	55	2104.38	4.98688E-03	25.53	S-Esc	
m	56	2109.19	2.76478E-03	53.16		
	58	2260.29	1.57986E-03	63.55		
	59	2359.48	1.94444E-03	37.80		
	60	2368.15	4.16667E-03	25.82		
	61	2375.31	1.78819E-03	48.04	Sum	

Analysis Report for 1510086-17
CP0404S14-15

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

NUCLIDE IDENTIFICATION REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

IDENTIFIED NUCLIDES

Nuclide Name	Id Confidence	Energy (keV)		Yield(%)	Activity (pCi/grams)	Activity Uncertainty
K-40	0.92	1460.81	*	10.67	2.29E+01	2.63E+00
GA-67	0.63	93.31	*	35.70	1.82E+02	7.29E+02
		208.95	*	2.24	1.37E+03	5.30E+03
		300.22	*	16.00	1.44E+02	5.87E+02
		88.03	*	3.72	3.56E+00	1.28E+00
CD-109	0.99	87.57	*	37.00	3.42E-01	1.21E-01
SN-126	0.95	453.90	*	39.94	1.65E-01	1.39E-01
		735.90		14.01		
		747.13		13.10		
TL-208	0.93	583.14	*	30.22	1.47E+00	2.58E-01
		860.37	*	4.48	1.71E+00	1.53E+00
		2614.66	*	35.85	1.27E+00	2.58E-01
BI-212	0.74	727.17	*	11.80	9.62E-01	4.81E-01
		1620.62		2.75		
PB-212	0.99	238.63	*	44.60	1.58E+00	1.84E-01
		300.09	*	3.41	1.33E+00	1.16E+00
BI-214	0.94	609.31	*	46.30	1.17E+00	2.10E-01
		1120.29	*	15.10	1.69E+00	5.39E-01
		1764.49	*	15.80	1.37E+00	4.41E-01
		2204.22	*	4.98	1.99E+00	8.90E-01
PB-214	0.99	295.21	*	19.19	1.19E+00	2.37E-01
		351.92	*	37.19	1.37E+00	2.06E-01
RA-224	0.89	240.98	*	3.95	4.34E+00	1.57E+00
RA-225	0.95	40.00	*	31.00	1.54E+00	1.32E+00
RA-226	0.99	186.21	*	3.28	2.97E+00	5.72E+00
AC-228	0.96	338.32	*	11.40	1.83E+00	5.22E-01
		911.07	*	27.70	1.50E+00	2.93E-01
		969.11	*	16.60	1.56E+00	4.00E-01
TH-230	0.85	48.44	*	16.90	7.72E-01	4.66E-01
		62.85	*	4.60	1.81E+00	1.44E+00
		67.67	*	0.37		
AM-243	0.98	74.67	*	66.00	3.31E-01	7.94E-02

Analysis Report for 1510086-17

CP0404S14-15

* = Energy line found in the spectrum.
 - = Manually added nuclide.
 ? = Manually edited nuclide.
 @ = Energy line not used for Weighted Mean Activity
 Energy Tolerance : 1.000 keV
 Nuclide confidence index threshold = 0.30
 Errors quoted at 2.000sigma

INTERFERENCE CORRECTED REPORT

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40	0.928	2.29E+01	2.63E+00	
GA-67	0.639	1.45E+02	5.55E+02	
? CD-109	0.999	3.56E+00	1.28E+00	
? SN-126	0.957	3.42E-01	1.21E-01	
PM-146	0.397	1.65E-01	1.39E-01	
TL-208	0.936	1.37E+00	1.81E-01	
BI-212	0.749	9.62E-01	4.81E-01	
PB-212	0.992	1.54E+00	1.82E-01	
BI-214	0.944	1.29E+00	1.76E-01	
PB-214	0.990	1.30E+00	1.56E-01	
RA-224	0.892	4.34E+00	1.57E+00	
RA-225	0.956	1.54E+00	1.32E+00	
RA-226	0.994	2.97E+00	5.72E+00	
AC-228	0.968	1.57E+00	2.16E-01	
TH-230	0.856	8.70E-01	4.44E-01	
X TH-234	0.978			
AM-243	0.989	3.31E-01	7.94E-02	

? = nuclide is part of an undetermined solution
 X = nuclide rejected by the interference analysis
 @ = nuclide contains energy lines not used in Weighted Mean Activity

Errors quoted at 2.000sigma

Analysis Report for 1510086-17
CP0404S14-15

UNIDENTIFIED PEAKS

Peak Locate Performed on : 11/6/2015 3:40:31PM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
m 5	77.47	1.99349E-01	7.12		
8	128.81	2.15972E-02	53.90		
11	216.55	3.30726E-02	30.61		
14	270.84	2.76949E-02	29.85		
17	327.92	1.55590E-02	36.31	Sum	
21	463.47	1.52733E-02	39.87		
22	511.11	3.68073E-02	21.92		
23	520.56	6.92200E-03	60.54	Tol.	RB-83
26	683.63	6.30759E-03	59.58		
M 28	768.59	1.79913E-02	22.85	Sum	
m 29	772.52	5.84439E-03	66.71		
30	785.53	5.09335E-03	61.28		
31	796.03	7.77778E-03	52.97	Sum	
34	935.30	8.61328E-03	35.65	Sum	
M 35	965.13	1.48628E-02	23.93		
38	1256.01	1.09079E-02	44.54		
39	1322.76	4.20139E-03	50.78		
40	1406.28	1.38889E-02	22.80		
42	1509.92	4.21717E-03	38.55	Sum	
43	1531.72	3.44136E-03	44.58		
44	1543.34	4.51058E-03	37.01		
45	1551.61	1.79012E-03	54.03		
46	1588.71	5.55556E-03	27.95	Sum	
47	1622.74	5.26175E-03	33.88		
48	1660.94	4.01144E-03	33.39		
49	1730.52	5.57044E-03	32.82	Sum	
M 51	1844.61	1.41705E-03	42.72		
m 52	1848.78	3.35154E-03	37.75	Sum	
53	1948.36	1.52778E-03	57.68		
54	1959.46	2.35043E-03	56.83		
M 55	2104.38	4.98688E-03	25.53	S-Esc	
m 56	2109.19	2.76478E-03	53.16		
58	2260.29	1.57986E-03	63.55		
59	2359.48	1.94444E-03	37.80		
60	2368.15	4.16667E-03	25.82		

Analysis Report for 1510086-17
CP0404S14-15

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
61	2375.31	1.78819E-03	48.04	Sum	

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

NUCLIDE MDA REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	BE-7	477.59	10.42	-5.93E-02	8.80E-01	8.80E-01
+	NA-22	1274.54	99.94	3.44E-02	1.02E-01	1.02E-01
+	NA-24	1368.53	99.99	2.53E+12	5.26E+12	9.69E+12
		2754.09	99.86	0.00E+00		5.26E+12
+	AL-26	1808.65	99.76	-1.60E-02	4.66E-02	4.66E-02
+	K-40	1460.81	* 10.67	2.29E+01	1.19E+00	1.19E+00
+	@ AR-41	1293.64	99.16	1.00E+26	1.00E+26	1.00E+26
+	TI-44	67.88	94.40	-1.62E-02	7.19E-02	7.19E-02
		78.34	96.00	2.27E-01		9.18E-02
+	SC-46	889.25	99.98	1.05E-02	9.29E-02	9.29E-02
		1120.51	99.99	3.08E-01		1.75E-01
+	V-48	983.52	99.98	-2.87E-02	2.52E-01	2.52E-01
		1312.10	97.50	1.13E-02		3.01E-01
+	CR-51	320.08	9.83	-8.82E-02	1.12E+00	1.12E+00
+	MN-54	834.83	99.97	-2.34E-02	8.55E-02	8.55E-02
+	CO-56	846.75	99.96	7.60E-03	9.23E-02	9.23E-02
		1037.75	14.03	3.02E-02		6.57E-01
		1238.25	67.00	9.04E-02		2.20E-01
		1771.40	15.51	0.00E+00		5.29E-01
		2598.48	16.90	5.76E-03		3.78E-01
+	CO-57	122.06	85.51	9.24E-03	6.16E-02	6.16E-02
		136.48	10.60	-3.23E-01		5.01E-01
+	CO-58	810.76	99.40	-5.06E-02	8.27E-02	8.27E-02
+	FE-59	1099.22	56.50	-5.72E-02	2.17E-01	2.17E-01
		1291.56	43.20	-4.12E-02		2.90E-01
+	CO-60	1173.22	100.00	2.42E-02	8.32E-02	9.63E-02
		1332.49	100.00	2.08E-02		8.32E-02
+	ZN-65	1115.52	50.75	6.28E-03	1.74E-01	1.74E-01

Analysis Report for 1510086-17
CP0404S14-15

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	GA-67	93.31	*	35.70	1.82E+02	1.84E+02	1.84E+02
		208.95	*	2.24	1.37E+03		1.37E+03
		300.22	*	16.00	1.44E+02		3.44E+02
+	SE-75	121.11		16.70	4.31E-02	9.93E-02	3.52E-01
		136.00		59.20	1.47E-03		9.93E-02
		264.65		59.80	5.14E-03		1.03E-01
		279.53		25.20	1.45E-01		2.62E-01
		400.65		11.40	2.03E-01		6.01E-01
+	RB-82	776.52		13.00	-3.95E-02	1.05E+00	1.05E+00
+	RB-83	520.41		46.00	5.01E-02	1.74E-01	1.74E-01
		529.64		30.30	-4.88E-02		2.51E-01
		552.65		16.40	-1.99E-01		4.47E-01
+	KR-85	513.99		0.43	3.25E+01	2.21E+01	2.21E+01
+	SR-85	513.99		99.27	1.93E-01	1.31E-01	1.31E-01
+	Y-88	898.02		93.40	3.94E-02	7.62E-02	9.83E-02
		1836.01		99.38	9.61E-03		7.62E-02
+	NB-93M	16.57		9.43	-3.74E+00	7.68E+01	7.68E+01
+	NB-94	702.63		100.00	4.34E-02	6.92E-02	7.77E-02
		871.10		100.00	7.54E-03		6.92E-02
+	NB-95	765.79		99.81	5.71E-02	1.55E-01	1.55E-01
+	NB-95M	235.69		25.00	-7.34E+02	6.89E+01	6.89E+01
+	ZR-95	724.18		43.70	8.55E-03	1.93E-01	2.51E-01
		756.72		55.30	4.56E-03		1.93E-01
+	MO-99	181.06		6.20	3.93E+02	8.04E+02	1.33E+03
		739.58		12.80	-2.78E+01		8.04E+02
		778.00		4.50	-1.40E+02		2.09E+03
+	RU-103	497.08		89.00	4.70E-02	1.20E-01	1.20E-01
+	RU-106	621.84		9.80	-3.53E-01	6.76E-01	6.76E-01
+	AG-108M	433.93		89.90	-1.78E-02	6.82E-02	6.82E-02
		614.37		90.40	2.64E-02		7.89E-02
		722.95		90.50	4.71E-03		7.70E-02
+	CD-109	88.03	*	3.72	3.56E+00	3.63E+00	3.63E+00
+	AG-110M	657.75		93.14	-4.95E-02	7.72E-02	7.72E-02
		677.61		10.53	6.21E-02		6.82E-01
		706.67		16.46	-2.98E-01		4.65E-01
		763.93		21.98	7.07E-02		3.54E-01
		884.67		71.63	2.57E-02		1.12E-01
		1384.27		23.94	-2.85E-02		3.84E-01
+	CD-113M	263.70		0.02	6.07E+01	2.31E+02	2.31E+02
+	SN-113	255.12		1.93	-7.01E-01	9.71E-02	3.13E+00
		391.69		64.90	-1.80E-02		9.71E-02
+	TE123M	159.00		84.10	3.19E-02	7.20E-02	7.20E-02
+	SB-124	602.71		97.87	-4.13E-03	1.06E-01	1.06E-01
		645.85		7.26	-8.70E-01		1.16E+00
		722.78		11.10	5.38E-02		8.79E-01
		1691.02		49.00	2.39E-02		1.82E-01
+	I-125	35.49		6.49	-1.08E+00	2.94E+00	2.94E+00
+	SB-125	176.33		6.89	-4.03E-01	2.35E-01	7.28E-01

Analysis Report for 1510086-17
CP0404S14-15

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	SB-125	427.89	29.33	-3.68E-02	2.35E-01	2.35E-01
		463.38	10.35	6.62E-01		7.16E-01
		600.56	17.80	1.67E-01		4.24E-01
		635.90	11.32	-5.59E-02		6.41E-01
+	SB-126	414.70	83.30	4.60E-03	3.32E-01	3.96E-01
		666.33	99.60	1.07E-01		3.92E-01
		695.00	99.60	-2.30E-01		3.32E-01
		720.50	53.80	1.93E-01		7.26E-01
+	SN-126	87.57	* 37.00	3.42E-01	3.49E-01	3.49E-01
+	SB-127	473.00	25.00	4.70E+00	3.97E+01	5.01E+01
		685.20	35.70	1.84E+01		3.97E+01
		783.80	14.70	-6.28E+00		9.80E+01
+	I-129	29.78	57.00	-1.19E-01	4.77E-01	4.77E-01
		33.60	13.20	9.93E-02		1.28E+00
		39.58	7.52	1.35E+00		1.50E+00
+	I-131	284.30	6.05	-3.20E+00	8.00E-01	1.05E+01
		364.48	81.20	1.52E-02		8.00E-01
		636.97	7.26	1.86E+00		1.24E+01
		722.89	1.80	2.96E+00		4.84E+01
+	TE-132	49.72	13.10	-3.94E+02	3.04E+01	3.03E+02
		228.16	88.00	2.31E+00		3.04E+01
+	BA-133	81.00	33.00	-1.44E+00	8.41E-02	1.81E-01
		302.84	17.80	2.07E-02		3.24E-01
		356.01	60.00	-5.57E-01		8.41E-02
+	I-133	529.87	86.30	-2.04E+08	1.05E+09	1.05E+09
+	XE-133	81.00	38.00	-5.98E+01	7.51E+00	7.51E+00
+	CS-134	563.23	8.38	1.50E-01	7.97E-02	8.49E-01
		569.32	15.43	-4.33E-02		4.35E-01
		604.70	97.60	1.43E-03		7.97E-02
		795.84	85.40	1.62E-02		9.67E-02
		801.93	8.73	-2.43E-01		8.84E-01
+	CS-135	268.24	16.00	2.21E-01	3.70E-01	3.70E-01
+	@ I-135	1131.51	22.50	1.00E+26	1.00E+26	1.00E+26
	@	1260.41	28.60	1.00E+26		1.00E+26
	@	1678.03	9.54	1.00E+26		1.00E+26
+	CS-136	153.22	7.46	9.47E-01	3.28E-01	3.24E+00
		163.89	4.61	-9.61E-01		5.29E+00
		176.55	13.56	-9.39E-01		1.70E+00
		273.65	12.66	-2.75E+00		2.00E+00
		340.57	48.50	9.82E-01		6.98E-01
		818.50	99.70	1.12E-01		3.28E-01
		1048.07	79.60	1.52E-01		4.84E-01
		1235.34	19.70	-1.07E+00		2.59E+00
+	CS-137	661.65	85.12	-6.28E-03	8.54E-02	8.54E-02
+	LA-138	788.74	34.00	7.04E-02	9.88E-02	2.22E-01
		1435.80	66.00	1.02E-02		9.88E-02
+	CE-139	165.85	80.35	2.78E-02	7.40E-02	7.40E-02
+	BA-140	162.64	6.70	1.59E-01	1.29E+00	3.81E+00
		304.84	4.50	7.46E-01		5.84E+00

Analysis Report for 1510086-17
CP0404S14-15

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
BA-140	423.70	3.20	4.16E+00	1.29E+00	1.02E+01
	437.55	2.00	-1.22E+01		1.47E+01
	537.32	25.00	3.03E-01		1.29E+00
+ LA-140	328.77	20.50	8.44E-01	3.51E-01	1.43E+00
	487.03	45.50	2.52E-01		6.58E-01
	815.85	23.50	-2.61E-01		1.34E+00
+ CE-141	1596.49	95.49	9.69E-02	1.96E-01	3.51E-01
	145.44	48.40	6.47E-02	1.96E-01	1.96E-01
+ CE-143	57.36	11.80	-1.78E+05	4.95E+05	1.52E+06
	293.26	42.00	1.14E+06		4.95E+05
	664.55	5.20	2.05E+06		3.89E+06
+ CE-144	133.54	10.80	7.45E-02	4.97E-01	4.97E-01
+ PM-144	476.78	42.00	3.85E-02	7.07E-02	1.61E-01
	618.01	98.60	1.15E-04		7.07E-02
	696.49	99.49	8.06E-03		7.60E-02
+ PM-145	36.85	21.70	1.98E-01	3.15E-01	5.87E-01
	37.36	39.70	-8.85E-02		3.15E-01
	42.30	15.10	-7.99E-01		6.08E-01
	72.40	2.31	-4.63E+00		3.38E+00
+ PM-146	453.90	* 39.94	1.65E-01	2.24E-01	2.24E-01
	735.90	14.01	1.56E-01		5.09E-01
	747.13	13.10	-1.46E-01		5.05E-01
+ ND-147	91.11	28.90	-2.73E+00	1.55E+00	1.55E+00
	531.02	13.10	-1.68E+00		2.85E+00
+ PM-149	285.90	3.10	-3.97E+03	1.63E+04	1.63E+04
+ EU-152	121.78	20.50	3.59E-02	2.39E-01	2.39E-01
	244.69	5.40	-8.88E-02		1.05E+00
	344.27	19.13	-2.73E-03		2.50E-01
	778.89	9.20	-1.08E-01		6.53E-01
	964.01	10.40	-1.01E+00		1.03E+00
	1085.78	7.22	2.32E-01		1.01E+00
	1112.02	9.60	-1.27E-01		8.30E-01
	1407.95	14.94	3.65E-01		5.90E-01
	97.43	31.30	5.09E-02	1.74E-01	1.74E-01
	103.18	22.20	-6.31E-02		2.45E-01
+ EU-154	123.07	40.50	-4.11E-02	1.18E-01	1.18E-01
	723.30	19.70	2.18E-02		3.56E-01
	873.19	11.50	-1.59E-01		5.61E-01
	996.32	10.30	-3.26E-01		6.89E-01
	1004.76	17.90	-8.90E-02		4.48E-01
+ EU-155	1274.45	35.50	9.54E-02	2.24E-01	2.83E-01
	86.50	30.90	-3.70E-03	2.24E-01	2.24E-01
+ EU-156	105.30	20.70	5.60E-02		2.51E-01
	811.77	10.40	-2.24E+00	2.12E+00	2.12E+00
+ HO-166M	1153.47	7.20	2.28E+00		5.12E+00
	1230.71	8.90	2.28E+00		4.77E+00
	184.41	72.60	2.39E-01	9.70E-02	9.70E-02
	280.45	29.60	-1.05E-01		1.74E-01
	410.94	11.10	1.13E-01		5.90E-01

Analysis Report for 1510086-17
CP0404S14-15

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	HO-166M	711.69	54.10	-9.10E-03	9.70E-02	1.35E-01
+	TM-171	66.72	0.14	-1.30E+01	5.07E+01	5.07E+01
+	HF-172	81.75	4.52	-4.94E-01	4.36E-01	1.38E+00
		125.81	11.30	1.77E-02		4.36E-01
+	LU-172	181.53	20.60	1.68E+00	2.68E+00	5.35E+00
		810.06	16.63	-1.71E+00		7.92E+00
		912.12	15.25	5.54E+01		2.06E+01
		1093.66	62.50	1.12E+00		2.68E+00
+	LU-173	100.72	5.24	-1.79E-01	3.08E-01	9.95E-01
		272.11	21.20	3.56E-01		3.08E-01
+	HF-175	343.40	84.00	-1.29E-02	7.48E-02	7.48E-02
+	LU-176	88.34	13.30	8.80E-01	5.63E-02	5.32E-01
		201.83	86.00	-2.08E-02		6.23E-02
		306.78	94.00	2.61E-02		5.63E-02
+	TA-182	67.75	41.20	-4.42E-02	1.97E-01	1.97E-01
		1121.30	34.90	9.19E-01		4.73E-01
		1189.05	16.23	1.27E-02		6.75E-01
		1221.41	26.98	6.02E-03		3.97E-01
		1231.02	11.44	5.56E-01		1.16E+00
+	IR-192	308.46	29.68	-5.88E-02	1.73E-01	2.17E-01
		468.07	48.10	1.29E-02		1.73E-01
+	HG-203	279.19	77.30	5.27E-02	1.12E-01	1.12E-01
+	BI-207	569.67	97.72	1.64E-02	6.80E-02	6.80E-02
		1063.62	74.90	3.74E-03		1.14E-01
+	TL-208	583.14	* 30.22	1.47E+00	9.76E-02	2.57E-01
		860.37	* 4.48	1.71E+00		2.46E+00
		2614.66	* 35.85	1.27E+00		9.76E-02
+	BI-210M	262.00	45.00	2.23E-02	1.18E-01	1.18E-01
		300.00	23.00	-5.25E-01		2.60E-01
+	PB-210	46.50	4.25	2.38E+00	2.17E+00	2.17E+00
+	PB-211	404.84	2.90	-5.54E-01	1.85E+00	1.85E+00
		831.96	2.90	-2.25E+00		2.40E+00
+	BI-212	727.17	* 11.80	9.62E-01	7.14E-01	7.14E-01
		1620.62	2.75	1.96E-01		2.64E+00
+	PB-212	238.63	* 44.60	1.58E+00	2.12E-01	2.12E-01
		300.09	* 3.41	1.33E+00		3.19E+00
+	BI-214	609.31	* 46.30	1.17E+00	2.30E-01	2.30E-01
		1120.29	* 15.10	1.69E+00		7.11E-01
		1764.49	* 15.80	1.37E+00		4.92E-01
		2204.22	* 4.98	1.99E+00		9.06E-01
+	PB-214	295.21	* 19.19	1.19E+00	2.14E-01	5.55E-01
		351.92	* 37.19	1.37E+00		2.14E-01
+	RN-219	401.80	6.50	-1.33E-01	8.50E-01	8.50E-01
+	RA-223	323.87	3.88	-2.02E-02	1.36E+00	1.36E+00
+	RA-224	240.98	* 3.95	4.34E+00	2.40E+00	2.40E+00
+	RA-225	40.00	* 31.00	1.54E+00	2.12E+00	2.12E+00
+	RA-226	186.21	* 3.28	2.97E+00	2.79E+00	2.79E+00
+	TH-227	50.10	8.40	-1.19E+00	5.40E-01	9.17E-01

Analysis Report for 1510086-17
CP0404S14-15

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)	
	TH-227	236.00	11.50	-5.76E+00	5.40E-01	5.40E-01
		256.20	6.30	-5.70E-02		8.07E-01
+	AC-228	338.32	* 11.40	1.83E+00	2.86E-01	7.41E-01
		911.07	* 27.70	1.50E+00		2.86E-01
		969.11	* 16.60	1.56E+00		8.52E-01
+	TH-230	48.44	* 16.90	7.72E-01	7.42E-01	7.42E-01
		62.85	* 4.60	1.81E+00		2.34E+00
		67.67	0.37	-4.13E+00		1.84E+01
+	PA-231	283.67	1.60	1.04E+00	2.49E+00	3.30E+00
		302.67	2.30	1.59E-01		2.49E+00
+	TH-231	25.64	14.70	8.13E-01	9.92E-01	3.94E+00
		84.21	6.40	-1.81E+00		9.92E-01
+	PA-233	311.98	38.60	-9.04E-02	2.66E-01	2.66E-01
+	PA-234	131.20	20.40	-9.52E-02	2.52E-01	2.52E-01
		733.99	8.80	2.76E-01		8.16E-01
		946.00	12.00	-2.70E-01		5.57E-01
+	PA-234M	1001.03	0.92	6.37E-01	8.86E+00	8.86E+00
+	TH-234	63.29	* 3.80	2.19E+00	2.83E+00	2.83E+00
+	U-235	143.76	10.50	2.34E-01	4.88E-01	4.88E-01
		163.35	4.70	-2.01E-01		1.11E+00
		205.31	4.70	2.85E-01		1.15E+00
+	NP-237	86.50	12.60	-8.97E-03	5.42E-01	5.42E-01
+	NP-239	106.10	22.70	2.81E+02	1.26E+03	1.26E+03
		228.18	10.70	2.07E+02		2.73E+03
		277.60	14.10	7.94E+02		2.22E+03
+	AM-241	59.54	35.90	2.02E-02	1.95E-01	1.95E-01
+	AM-243	74.67	* 66.00	3.31E-01	1.65E-01	1.65E-01
+	CM-243	209.75	3.29	2.03E+00	4.02E-01	1.78E+00
		228.14	10.60	3.77E-02		4.97E-01
		277.60	14.00	1.44E-01		4.02E-01

- + = Nuclide identified during the nuclide identification
 * = Energy line found in the spectrum
 > = MDA value not calculated
 @ = Half-life too short to be able to perform the decay correction
 ? = CAUTION: MDA value is inconsistent with Currie MDA at 95% confidence level

Analysis Report for 1510086-17
CP0404S14-15

NUCLIDE MDA REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
BE-7	477.59	10.42	8.80E-01	8.80E-01	-5.93E-02	4.17E-01
NA-22	1274.54	99.94	1.02E-01	1.02E-01	3.44E-02	4.75E-02
NA-24	1368.53	99.99	9.69E+12	5.26E+12	2.53E+12	4.37E+12
	2754.09	99.86	5.26E+12		0.00E+00	1.97E+12
AL-26	1808.65	99.76	4.66E-02	4.66E-02	-1.60E-02	1.88E-02
+ K-40	1460.81	* 10.67	1.19E+00	1.19E+00	2.29E+01	5.59E-01
@ AR-41	1293.64	99.16	1.00E+26	1.00E+26	1.00E+26	1.00E+20
TI-44	67.88	94.40	7.19E-02	7.19E-02	-1.62E-02	3.52E-02
	78.34	96.00	9.18E-02		2.27E-01	4.52E-02
SC-46	889.25	99.98	9.29E-02	9.29E-02	1.05E-02	4.31E-02
	1120.51	99.99	1.75E-01		3.08E-01	8.35E-02
V-48	983.52	99.98	2.52E-01	2.52E-01	-2.87E-02	1.16E-01
	1312.10	97.50	3.01E-01		1.13E-02	1.38E-01
CR-51	320.08	9.83	1.12E+00	1.12E+00	-8.82E-02	5.33E-01
MN-54	834.83	99.97	8.55E-02	8.55E-02	-2.34E-02	4.01E-02
CO-56	846.75	99.96	9.23E-02	9.23E-02	7.60E-03	4.28E-02
	1037.75	14.03	6.57E-01		3.02E-02	3.01E-01
	1238.25	67.00	2.20E-01		9.04E-02	1.03E-01
	1771.40	15.51	5.29E-01		0.00E+00	2.28E-01
	2598.48	16.90	3.78E-01		5.76E-03	1.50E-01
CO-57	122.06	85.51	6.16E-02	6.16E-02	9.24E-03	2.99E-02
	136.48	10.60	5.01E-01		-3.23E-01	2.43E-01
CO-58	810.76	99.40	8.27E-02	8.27E-02	-5.06E-02	3.81E-02
FE-59	1099.22	56.50	2.17E-01	2.17E-01	-5.72E-02	9.98E-02
	1291.56	43.20	2.90E-01		-4.12E-02	1.32E-01
CO-60	1173.22	100.00	9.63E-02	8.32E-02	2.42E-02	4.48E-02
	1332.49	100.00	8.32E-02		2.08E-02	3.79E-02
ZN-65	1115.52	50.75	1.74E-01	1.74E-01	6.28E-03	8.01E-02
+ GA-67	93.31	* 35.70	1.84E+02	1.84E+02	1.82E+02	9.12E+01
	208.95	* 2.24	1.37E+03		1.37E+03	6.64E+02
	300.22	* 16.00	3.44E+02		1.44E+02	1.69E+02
SE-75	121.11	16.70	3.52E-01	9.93E-02	4.31E-02	1.71E-01
	136.00	59.20	9.93E-02		1.47E-03	4.82E-02
	264.65	59.80	1.03E-01		5.14E-03	4.94E-02
	279.53	25.20	2.62E-01		1.45E-01	1.26E-01
	400.65	11.40	6.01E-01		2.03E-01	2.86E-01
RB-82	776.52	13.00	1.05E+00	1.05E+00	-3.95E-02	4.83E-01
RB-83	520.41	46.00	1.74E-01	1.74E-01	5.01E-02	8.20E-02
	529.64	30.30	2.51E-01		-4.88E-02	1.18E-01
	552.65	16.40	4.47E-01		-1.99E-01	2.10E-01
KR-85	513.99	0.43	2.21E+01	2.21E+01	3.25E+01	1.06E+01
SR-85	513.99	99.27	1.31E-01	1.31E-01	1.93E-01	6.32E-02
Y-88	898.02	93.40	9.83E-02	7.62E-02	3.94E-02	4.57E-02
	1836.01	99.38	7.62E-02		9.61E-03	3.26E-02
NB-93M	16.57	9.43	7.68E+01	7.68E+01	-3.74E+00	3.59E+01

Analysis Report for 1510086-17
CP0404S14-15

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)	
NB-94	702.63	100.00	7.77E-02	6.92E-02	4.34E-02	3.66E-02	
	871.10	100.00	6.92E-02		7.54E-03	3.20E-02	
NB-95	765.79	99.81	1.55E-01	1.55E-01	5.71E-02	7.34E-02	
NB-95M	235.69	25.00	6.89E+01	6.89E+01	-7.34E+02	3.33E+01	
ZR-95	724.18	43.70	2.51E-01	1.93E-01	8.55E-03	1.19E-01	
	756.72	55.30	1.93E-01		4.56E-03	9.07E-02	
MO-99	181.06	6.20	1.33E+03	8.04E+02	3.93E+02	6.44E+02	
	739.58	12.80	8.04E+02		-2.78E+01	3.73E+02	
	778.00	4.50	2.09E+03		-1.40E+02	9.60E+02	
RU-103	497.08	89.00	1.20E-01	1.20E-01	4.70E-02	5.69E-02	
RU-106	621.84	9.80	6.76E-01	6.76E-01	-3.53E-01	3.16E-01	
AG-108M	433.93	89.90	6.82E-02	6.82E-02	-1.78E-02	3.24E-02	
	614.37	90.40	7.89E-02		2.64E-02	3.73E-02	
	722.95	90.50	7.70E-02		4.71E-03	3.60E-02	
+ CD-109	88.03	*	3.63E+00	3.63E+00	3.56E+00	1.80E+00	
	AG-110M	657.75	93.14	7.72E-02	7.72E-02	-4.95E-02	3.62E-02
		677.61	10.53	6.82E-01		6.21E-02	3.19E-01
		706.67	16.46	4.65E-01		-2.98E-01	2.18E-01
		763.93	21.98	3.54E-01		7.07E-02	1.66E-01
		884.67	71.63	1.12E-01		2.57E-02	5.19E-02
		1384.27	23.94	3.84E-01		-2.85E-02	1.75E-01
CD-113M	263.70	0.02	2.31E+02	2.31E+02	6.07E+01	1.11E+02	
SN-113	255.12	1.93	3.13E+00	9.71E-02	-7.01E-01	1.50E+00	
	391.69	64.90	9.71E-02		-1.80E-02	4.60E-02	
TE123M	159.00	84.10	7.20E-02	7.20E-02	3.19E-02	3.49E-02	
SB-124	602.71	97.87	1.06E-01	1.06E-01	-4.13E-03	5.03E-02	
	645.85	7.26	1.16E+00		-8.70E-01	5.42E-01	
	722.78	11.10	8.79E-01		5.38E-02	4.11E-01	
	1691.02	49.00	1.82E-01		2.39E-02	7.88E-02	
	I-125	35.49	6.49	2.94E+00	2.94E+00	-1.08E+00	1.42E+00
SB-125	176.33	6.89	7.28E-01	2.35E-01	-4.03E-01	3.52E-01	
	427.89	29.33	2.35E-01		-3.68E-02	1.12E-01	
	463.38	10.35	7.16E-01		6.62E-01	3.42E-01	
	600.56	17.80	4.24E-01		1.67E-01	2.01E-01	
	635.90	11.32	6.41E-01		-5.59E-02	3.02E-01	
SB-126	414.70	83.30	3.96E-01	3.32E-01	4.60E-03	1.89E-01	
	666.33	99.60	3.92E-01		1.07E-01	1.85E-01	
	695.00	99.60	3.32E-01		-2.30E-01	1.55E-01	
	720.50	53.80	7.26E-01		1.93E-01	3.42E-01	
+ SN-126	87.57	*	3.49E-01	3.49E-01	3.42E-01	1.73E-01	
	SB-127	473.00	25.00	5.01E+01	3.97E+01	4.70E+00	2.38E+01
		685.20	35.70	3.97E+01		1.84E+01	1.87E+01
I-129	783.80	14.70	9.80E+01		-6.28E+00	4.58E+01	
	29.78	57.00	4.77E-01	4.77E-01	-1.19E-01	2.31E-01	
	33.60	13.20	1.28E+00		9.93E-02	6.22E-01	
I-131	39.58	7.52	1.50E+00		1.35E+00	7.29E-01	
	284.30	6.05	1.05E+01	8.00E-01	-3.20E+00	4.99E+00	
	364.48	81.20	8.00E-01		1.52E-02	3.79E-01	
	636.97	7.26	1.24E+01		1.86E+00	5.87E+00	
TE-132	722.89	1.80	4.84E+01		2.96E+00	2.26E+01	
	49.72	13.10	3.03E+02	3.04E+01	-3.94E+02	1.47E+02	
BA-133	228.16	88.00	3.04E+01		2.31E+00	1.46E+01	
	81.00	33.00	1.81E-01	8.41E-02	-1.44E+00	8.83E-02	

Analysis Report for 1510086-17
CP0404S14-15

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
BA-133	302.84	17.80	3.24E-01	8.41E-02	2.07E-02	1.55E-01
	356.01	60.00	8.41E-02		-5.57E-01	3.99E-02
I-133	529.87	86.30	1.05E+09	1.05E+09	-2.04E+08	4.93E+08
XE-133	81.00	38.00	7.51E+00	7.51E+00	-5.98E+01	3.67E+00
CS-134	563.23	8.38	8.49E-01	7.97E-02	1.50E-01	4.02E-01
	569.32	15.43	4.35E-01		-4.33E-02	2.05E-01
	604.70	97.60	7.97E-02		1.43E-03	3.78E-02
	795.84	85.40	9.67E-02		1.62E-02	4.54E-02
	801.93	8.73	8.84E-01		-2.43E-01	4.13E-01
	268.24	16.00	3.70E-01	3.70E-01	2.21E-01	1.78E-01
@ I-135	1131.51	22.50	1.00E+26	1.00E+26	1.00E+26	1.00E+20
@	1260.41	28.60	1.00E+26		1.00E+26	1.00E+20
@	1678.03	9.54	1.00E+26		1.00E+26	1.00E+20
CS-136	153.22	7.46	3.24E+00	3.28E-01	9.47E-01	1.57E+00
	163.89	4.61	5.29E+00		-9.61E-01	2.56E+00
	176.55	13.56	1.70E+00		-9.39E-01	8.20E-01
	273.65	12.66	2.00E+00		-2.75E+00	9.61E-01
	340.57	48.50	6.98E-01		9.82E-01	3.37E-01
	818.50	99.70	3.28E-01		1.12E-01	1.52E-01
	1048.07	79.60	4.84E-01		1.52E-01	2.24E-01
	1235.34	19.70	2.59E+00		-1.07E+00	1.22E+00
	661.65	85.12	8.54E-02	8.54E-02	-6.28E-03	4.02E-02
	788.74	34.00	2.22E-01	9.88E-02	7.04E-02	1.04E-01
1435.80	66.00	9.88E-02		1.02E-02	4.36E-02	
CE-139	165.85	80.35	7.40E-02	7.40E-02	2.78E-02	3.58E-02
BA-140	162.64	6.70	3.81E+00	1.29E+00	1.59E-01	1.85E+00
	304.84	4.50	5.84E+00		7.46E-01	2.79E+00
	423.70	3.20	1.02E+01		4.16E+00	4.90E+00
	437.55	2.00	1.47E+01		-1.22E+01	7.00E+00
	537.32	25.00	1.29E+00		3.03E-01	6.10E-01
LA-140	328.77	20.50	1.43E+00	3.51E-01	8.44E-01	6.85E-01
	487.03	45.50	6.58E-01		2.52E-01	3.11E-01
	815.85	23.50	1.34E+00		-2.61E-01	6.20E-01
	1596.49	95.49	3.51E-01		9.69E-02	1.54E-01
CE-141	145.44	48.40	1.96E-01	1.96E-01	6.47E-02	9.51E-02
CE-143	57.36	11.80	1.52E+06	4.95E+05	-1.78E+05	7.40E+05
	293.26	42.00	4.95E+05		1.14E+06	2.40E+05
	664.55	5.20	3.89E+06		2.05E+06	1.84E+06
CE-144	133.54	10.80	4.97E-01	4.97E-01	7.45E-02	2.41E-01
PM-144	476.78	42.00	1.61E-01	7.07E-02	3.85E-02	7.64E-02
	618.01	98.60	7.07E-02		1.15E-04	3.32E-02
	696.49	99.49	7.60E-02		8.06E-03	3.57E-02
PM-145	36.85	21.70	5.87E-01	3.15E-01	1.98E-01	2.84E-01
	37.36	39.70	3.15E-01		-8.85E-02	1.53E-01
	42.30	15.10	6.08E-01		-7.99E-01	2.95E-01
	72.40	2.31	3.38E+00		-4.63E+00	1.66E+00
+ PM-146	453.90	* 39.94	2.24E-01	2.24E-01	1.65E-01	1.08E-01
	735.90	14.01	5.09E-01		1.56E-01	2.38E-01
	747.13	13.10	5.05E-01		-1.46E-01	2.35E-01
ND-147	91.11	28.90	1.55E+00	1.55E+00	-2.73E+00	7.59E-01
	531.02	13.10	2.85E+00		-1.68E+00	1.34E+00
PM-149	285.90	3.10	1.63E+04	1.63E+04	-3.97E+03	7.78E+03
EU-152	121.78	20.50	2.39E-01	2.39E-01	3.59E-02	1.16E-01

Analysis Report for 1510086-17
CP0404S14-15

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
EU-152	244.69	5.40	1.05E+00	2.39E-01	-8.88E-02	5.08E-01
	344.27	19.13	2.50E-01		-2.73E-03	1.18E-01
	778.89	9.20	6.53E-01		-1.08E-01	3.00E-01
	964.01	10.40	1.03E+00		-1.01E+00	4.86E-01
	1085.78	7.22	1.01E+00		2.32E-01	4.64E-01
	1112.02	9.60	8.30E-01		-1.27E-01	3.82E-01
	1407.95	14.94	5.90E-01		3.65E-01	2.70E-01
GD-153	97.43	31.30	1.74E-01	1.74E-01	5.09E-02	8.44E-02
	103.18	22.20	2.45E-01		-6.31E-02	1.19E-01
EU-154	123.07	40.50	1.18E-01	1.18E-01	-4.11E-02	5.70E-02
	723.30	19.70	3.56E-01		2.18E-02	1.66E-01
	873.19	11.50	5.61E-01		-1.59E-01	2.58E-01
	996.32	10.30	6.89E-01		-3.26E-01	3.16E-01
	1004.76	17.90	4.48E-01		-8.90E-02	2.08E-01
EU-155	1274.45	35.50	2.83E-01		9.54E-02	1.32E-01
	86.50	30.90	2.24E-01	2.24E-01	-3.70E-03	1.10E-01
	105.30	20.70	2.51E-01		5.60E-02	1.22E-01
EU-156	811.77	10.40	2.12E+00	2.12E+00	-2.24E+00	9.69E-01
	1153.47	7.20	5.12E+00		2.28E+00	2.39E+00
	1230.71	8.90	4.77E+00		2.28E+00	2.24E+00
HO-166M	184.41	72.60	9.70E-02	9.70E-02	2.39E-01	4.73E-02
	280.45	29.60	1.74E-01		-1.05E-01	8.32E-02
	410.94	11.10	5.90E-01		1.13E-01	2.82E-01
	711.69	54.10	1.35E-01		-9.10E-03	6.35E-02
TM-171	66.72	0.14	5.07E+01	5.07E+01	-1.30E+01	2.48E+01
HF-172	81.75	4.52	1.38E+00	4.36E-01	-4.94E-01	6.73E-01
	125.81	11.30	4.36E-01		1.77E-02	2.12E-01
LU-172	181.53	20.60	5.35E+00	2.68E+00	1.68E+00	2.59E+00
	810.06	16.63	7.92E+00		-1.71E+00	3.65E+00
	912.12	15.25	2.06E+01		5.54E+01	9.95E+00
	1093.66	62.50	2.68E+00		1.12E+00	1.23E+00
LU-173	100.72	5.24	9.95E-01	3.08E-01	-1.79E-01	4.84E-01
	272.11	21.20	3.08E-01		3.56E-01	1.49E-01
HF-175	343.40	84.00	7.48E-02	7.48E-02	-1.29E-02	3.54E-02
LU-176	88.34	13.30	5.32E-01	5.63E-02	8.80E-01	2.61E-01
	201.83	86.00	6.23E-02		-2.08E-02	3.01E-02
	306.78	94.00	5.63E-02		2.61E-02	2.69E-02
TA-182	67.75	41.20	1.97E-01	1.97E-01	-4.42E-02	9.62E-02
	1121.30	34.90	4.73E-01		9.19E-01	2.26E-01
	1189.05	16.23	6.75E-01		1.27E-02	3.13E-01
	1221.41	26.98	3.97E-01		6.02E-03	1.83E-01
	1231.02	11.44	1.16E+00		5.56E-01	5.47E-01
IR-192	308.46	29.68	2.17E-01	1.73E-01	-5.88E-02	1.03E-01
	468.07	48.10	1.73E-01		1.29E-02	8.22E-02
HG-203	279.19	77.30	1.12E-01	1.12E-01	5.27E-02	5.38E-02
BI-207	569.67	97.72	6.80E-02	6.80E-02	1.64E-02	3.21E-02
	1063.62	74.90	1.14E-01		3.74E-03	5.31E-02
	583.14	* 30.22	2.57E-01	9.76E-02	1.47E+00	1.22E-01
+ TL-208	860.37	* 4.48	2.46E+00		1.71E+00	1.17E+00
	2614.66	* 35.85	9.76E-02		1.27E+00	3.46E-02
	262.00	45.00	1.18E-01	1.18E-01	2.23E-02	5.67E-02
BI-210M	300.00	23.00	2.60E-01		-5.25E-01	1.25E-01
	PB-210	46.50	4.25	2.17E+00	2.17E+00	2.38E+00

Analysis Report for 1510086-17
CP0404S14-15

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
PB-211	404.84	2.90	1.85E+00	1.85E+00	-5.54E-01	8.75E-01
	831.96	2.90	2.40E+00		-2.25E+00	1.12E+00
+ BI-212	727.17 *	11.80	7.14E-01	7.14E-01	9.62E-01	3.38E-01
	1620.62	2.75	2.64E+00		1.96E-01	1.17E+00
+ PB-212	238.63 *	44.60	2.12E-01	2.12E-01	1.58E+00	1.04E-01
	300.09 *	3.41	3.19E+00		1.33E+00	1.56E+00
+ BI-214	609.31 *	46.30	2.30E-01	2.30E-01	1.17E+00	1.11E-01
	1120.29 *	15.10	7.11E-01		1.69E+00	3.34E-01
	1764.49 *	15.80	4.92E-01		1.37E+00	2.18E-01
	2204.22 *	4.98	9.06E-01		1.99E+00	3.55E-01
+ PB-214	295.21 *	19.19	5.55E-01	2.14E-01	1.19E+00	2.71E-01
	351.92 *	37.19	2.14E-01		1.37E+00	1.04E-01
RN-219	401.80	6.50	8.50E-01	8.50E-01	-1.33E-01	4.03E-01
RA-223	323.87	3.88	1.36E+00	1.36E+00	-2.02E-02	6.47E-01
+ RA-224	240.98 *	3.95	2.40E+00	2.40E+00	4.34E+00	1.17E+00
+ RA-225	40.00 *	31.00	2.12E+00	2.12E+00	1.54E+00	1.04E+00
+ RA-226	186.21 *	3.28	2.79E+00	2.79E+00	2.97E+00	1.37E+00
TH-227	50.10	8.40	9.17E-01	5.40E-01	-1.19E+00	4.46E-01
	236.00	11.50	5.40E-01		-5.76E+00	2.61E-01
	256.20	6.30	8.07E-01		-5.70E-02	3.87E-01
+ AC-228	338.32 *	11.40	7.41E-01	2.86E-01	1.83E+00	3.60E-01
	911.07 *	27.70	2.86E-01		1.50E+00	1.33E-01
	969.11 *	16.60	8.52E-01		1.56E+00	4.09E-01
+ TH-230	48.44 *	16.90	7.42E-01	7.42E-01	7.72E-01	3.64E-01
	62.85 *	4.60	2.34E+00		1.81E+00	1.15E+00
	67.67	0.37	1.84E+01		-4.13E+00	8.98E+00
PA-231	283.67	1.60	3.30E+00	2.49E+00	1.04E+00	1.58E+00
	302.67	2.30	2.49E+00		1.59E-01	1.19E+00
TH-231	25.64	14.70	3.94E+00	9.92E-01	8.13E-01	1.91E+00
	84.21	6.40	9.92E-01		-1.81E+00	4.85E-01
PA-233	311.98	38.60	2.66E-01	2.66E-01	-9.04E-02	1.27E-01
PA-234	131.20	20.40	2.52E-01	2.52E-01	-9.52E-02	1.22E-01
	733.99	8.80	8.16E-01		2.76E-01	3.82E-01
	946.00	12.00	5.57E-01		-2.70E-01	2.56E-01
PA-234M	1001.03	0.92	8.86E+00	8.86E+00	6.37E-01	4.11E+00
TH-234	63.29 *	3.80	2.83E+00	2.83E+00	2.19E+00	1.39E+00
U-235	143.76	10.50	4.88E-01	4.88E-01	2.34E-01	2.37E-01
	163.35	4.70	1.11E+00		-2.01E-01	5.37E-01
	205.31	4.70	1.15E+00		2.85E-01	5.55E-01
NP-237	86.50	12.60	5.42E-01	5.42E-01	-8.97E-03	2.66E-01
NP-239	106.10	22.70	1.26E+03	1.26E+03	2.81E+02	6.13E+02
	228.18	10.70	2.73E+03		2.07E+02	1.32E+03
	277.60	14.10	2.22E+03		7.94E+02	1.07E+03
AM-241	59.54	35.90	1.95E-01	1.95E-01	2.02E-02	9.51E-02
+ AM-243	74.67 *	66.00	1.65E-01	1.65E-01	3.31E-01	8.14E-02
CM-243	209.75	3.29	1.78E+00	4.02E-01	2.03E+00	8.63E-01
	228.14	10.60	4.97E-01		3.77E-02	2.39E-01
	277.60	14.00	4.02E-01		1.44E-01	1.93E-01

Analysis Report for 1510086-17
CP0404S14-15

- + = Nuclide identified during the nuclide identification
 - * = Energy line found in the spectrum
 - > = MDA value not calculated
 - @ = Half-life too short to be able to perform the decay correction
-

No Action Level results available for reporting purposes.

DATA REVIEW COMMENTS REPORT

Creation Date

Comment

User

No Data Review Comments Entered.

 ***** S P E C T R A L D A T A R E P O R T *****

Sample Title: CP0404S14-15

Elapsed Live time: 3600

Elapsed Real Time: 3601

Channel	1	9	17	25	33	41	49	57	65	73	81	89	97	105	113	121	129	137	145	153	161	169	177	185	193	201	209	217	225	233	241	249	257	265	273	281	289	297	305	313	321	329	337	345	353	361																																																																																																																																																																																																																																																																																																																																																										
1:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																																																																																																																																																																																																																																																																																																																																																						
9:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																																																																																																																																																																																																																																																																																																																																																					
17:	0	0	68	70	71	81	64	77	68	72	65	53	63	59	57	83	69	49	50	63	60	69	77	65	87	80	58	57	59	106	153	97	100	96	106	63	99	104	101	93	57:	97	91	136	112	119	131	162	295	65:	159	137	133	130	131	151	154	115	73:	143	177	383	321	383	563	124	130	81:	125	131	92	150	141	125	194	232	89:	131	176	154	134	284	220	101	76	97:	81	81	94	103	84	72	81	96	105:	83	97	96	80	89	81	86	66	113:	83	80	77	75	79	75	91	89	121:	78	72	63	77	62	69	83	64	129:	106	92	81	77	68	80	75	71	137:	72	62	74	84	65	76	64	77	145:	63	86	64	66	66	75	66	78	153:	61	84	80	47	64	66	65	64	161:	71	66	78	61	60	68	69	60	169:	43	55	43	70	53	60	65	54	66	177:	64	44	45	65	65	54	60	66	185:	76	172	167	53	53	54	66	63	193:	47	56	45	65	44	51	57	51	201:	58	52	58	57	63	47	45	63	209:	72	84	50	47	43	64	63	58	217:	62	53	49	61	35	41	35	43	225:	45	42	46	45	47	47	42	47	233:	56	36	52	46	39	134	615	276	241:	100	143	100	37	33	37	35	37	249:	44	33	47	36	34	41	36	26	257:	44	34	41	36	38	36	32	51	265:	37	33	29	36	34	52	83	49	273:	33	41	34	32	41	58	35	34	281:	29	38	28	29	40	35	23	35	289:	36	38	14	34	26	27	118	179	297:	59	31	30	57	54	32	32	31	305:	35	31	30	26	31	27	15	27	313:	26	29	30	27	23	23	24	30	321:	37	29	34	32	24	21	35	52	329:	47	24	21	29	33	33	24	22	337:	37	96	141	38	34	22	17	22	345:	18	22	24	27	19	31	71	273	353:	216	34	25	18	21	12	20	20	361:	25	17	26	28	21	21	18	24

369: 23 27 21 21 20 23 28 22

Sample Title: CP0404S14-15

Channel	-----	-----	-----	-----	-----	-----	-----	-----
377:	24	19	21	22	16	19	20	23
385:	20	13	21	27	27	22	23	16
393:	25	20	20	21	20	24	31	16
401:	19	33	25	19	22	21	17	17
409:	28	35	16	22	13	24	19	24
417:	26	18	18	16	18	18	23	24
425:	25	21	26	21	19	26	17	16
433:	31	20	15	12	13	18	18	22
441:	20	25	17	16	18	12	16	13
449:	15	17	18	21	32	21	20	21
457:	18	16	13	13	16	12	40	40
465:	17	15	20	14	18	15	19	16
473:	15	22	16	16	12	21	19	11
481:	17	12	18	9	20	12	17	13
489:	13	19	11	8	18	14	15	18
497:	22	14	15	11	5	20	12	18
505:	15	12	20	19	28	45	80	75
513:	31	19	15	9	10	10	17	13
521:	21	16	13	9	13	15	13	13
529:	13	12	13	11	12	8	19	14
537:	19	14	13	7	17	14	16	19
545:	18	14	14	15	13	11	9	11
553:	9	11	11	13	12	14	12	13
561:	11	24	14	16	19	9	14	15
569:	14	17	13	10	12	10	11	15
577:	10	19	18	11	14	22	136	178
585:	39	11	11	11	15	13	12	15
593:	12	7	18	7	10	18	14	14
601:	16	20	11	17	16	16	14	20
609:	111	217	70	19	13	11	8	16
617:	17	14	4	12	11	18	5	13
625:	10	14	10	16	2	11	17	11
633:	9	15	8	10	25	11	14	12
641:	15	14	8	5	9	5	13	10
649:	13	18	6	8	17	9	11	7
657:	14	10	8	11	14	16	16	11
665:	14	16	13	18	10	10	10	13
673:	14	12	15	11	15	12	7	6
681:	5	13	10	23	7	10	14	8
689:	9	14	9	5	8	8	13	11
697:	12	7	11	18	9	20	12	13
705:	14	8	9	11	10	11	14	14
713:	8	14	10	12	15	13	17	13
721:	14	14	5	10	8	7	37	42
729:	16	13	6	14	7	11	11	12
737:	13	6	11	9	5	7	6	6
745:	7	10	7	9	14	6	10	16
753:	8	5	18	20	11	8	11	10
761:	12	11	7	6	6	9	18	22
769:	35	19	7	15	10	12	6	5
777:	4	7	3	11	7	8	8	11
785:	10	16	10	6	7	6	17	11
793:	5	7	24	18	8	8	12	10

801: 6 14 9 10 9 11 14 9

Sample Title: CP0404S14-15

Channel	-----	-----	-----	-----	-----	-----	-----	-----
809:	4	7	6	5	3	11	3	11
817:	8	6	7	7	13	6	8	4
825:	7	11	10	6	6	10	11	5
833:	6	6	12	20	14	12	16	13
841:	13	7	9	9	12	4	6	14
849:	8	4	10	5	12	11	4	6
857:	10	10	4	15	21	18	11	6
865:	7	8	9	6	13	6	4	8
873:	7	7	7	4	6	6	11	8
881:	4	11	10	8	8	3	5	12
889:	6	9	9	11	7	6	5	9
897:	7	12	9	10	7	5	7	10
905:	12	6	2	4	3	17	73	107
913:	38	6	4	10	7	6	6	5
921:	8	8	9	8	6	9	2	3
929:	7	8	5	5	5	12	19	11
937:	11	1	8	6	6	4	6	6
945:	6	3	8	6	6	8	13	11
953:	6	5	10	4	7	11	6	7
961:	6	11	11	18	28	27	6	18
969:	58	57	12	8	8	7	10	8
977:	12	6	5	5	7	4	8	5
985:	7	3	9	7	9	3	3	8
993:	7	6	5	10	5	4	5	11
1001:	9	8	10	10	4	12	6	4
1009:	7	9	10	7	5	9	7	9
1017:	6	6	10	5	6	8	6	8
1025:	5	3	8	5	6	8	6	9
1033:	8	4	6	2	6	3	8	4
1041:	11	7	3	3	5	11	9	3
1049:	7	12	7	8	9	9	7	3
1057:	7	4	9	4	12	6	8	7
1065:	6	10	8	12	6	6	7	4
1073:	11	9	5	5	5	6	11	6
1081:	8	7	7	9	9	3	3	3
1089:	5	1	5	10	8	6	8	5
1097:	6	6	6	10	3	8	8	8
1105:	7	6	10	9	4	5	6	10
1113:	3	9	8	3	7	4	13	32
1121:	48	30	9	9	3	5	7	14
1129:	10	7	5	9	6	11	7	3
1137:	7	7	10	10	11	12	6	6
1145:	10	12	7	9	5	9	9	3
1153:	12	10	12	10	10	3	8	7
1161:	10	7	12	7	4	14	5	6
1169:	7	10	5	10	8	9	4	15
1177:	10	6	7	6	8	11	18	10
1185:	5	5	7	8	3	12	13	7
1193:	7	9	7	11	8	11	6	7
1201:	5	2	7	10	7	7	6	11
1209:	13	8	7	9	13	13	8	8
1217:	8	12	6	8	5	6	7	6
1225:	7	6	7	11	17	11	9	10

1233: 7 14 11 8 9 16 21 11

Sample Title: CP0404S14-15

Channel	7	14	11	8	9	16	21	11
1241:	6	9	7	6	2	12	5	7
1249:	6	2	6	12	8	10	3	6
1257:	10	9	4	6	6	6	5	2
1265:	5	6	7	13	8	4	7	11
1273:	7	10	8	9	7	4	10	5
1281:	9	6	3	2	5	3	12	7
1289:	4	8	4	3	7	2	5	4
1297:	2	5	6	4	1	6	3	9
1305:	2	6	7	5	6	6	3	6
1313:	8	3	5	2	7	1	5	3
1321:	6	8	6	7	2	2	4	6
1329:	7	7	4	3	8	6	1	1
1337:	6	2	8	3	2	3	4	4
1345:	2	2	1	6	3	2	3	4
1353:	3	1	8	4	4	4	1	2
1361:	3	2	3	1	1	4	6	3
1369:	1	7	6	4	4	4	4	4
1377:	6	8	10	5	3	6	3	5
1385:	5	7	7	4	3	3	1	5
1393:	1	1	5	4	1	1	1	2
1401:	7	6	4	3	1	8	1	14
1409:	7	5	2	3	1	1	3	0
1417:	4	5	2	4	4	1	1	3
1425:	2	4	2	3	2	3	3	3
1433:	2	3	6	2	2	3	1	2
1441:	2	2	1	3	1	5	2	2
1449:	2	3	4	2	3	4	3	4
1457:	2	5	14	132	352	302	59	9
1465:	7	3	1	3	2	3	1	4
1473:	1	3	5	0	1	2	2	1
1481:	1	2	5	1	1	2	2	8
1489:	0	3	5	2	3	1	2	4
1497:	1	5	1	1	1	4	4	2
1505:	2	1	2	3	4	7	5	0
1513:	1	2	0	3	5	1	1	3
1521:	2	1	1	5	1	2	0	0
1529:	0	6	2	2	2	2	2	1
1537:	1	1	0	4	2	4	2	3
1545:	1	1	3	0	0	2	1	6
1553:	0	2	0	3	1	2	2	4
1561:	1	3	3	3	5	1	1	0
1569:	3	0	2	1	1	1	0	2
1577:	2	0	3	3	1	2	2	4
1585:	2	0	1	11	12	1	1	3
1593:	4	3	2	4	1	0	4	2
1601:	1	2	1	1	3	3	2	0
1609:	2	1	2	2	2	1	2	2
1617:	3	1	0	2	7	5	2	3
1625:	3	3	1	1	2	2	4	8
1633:	2	1	2	3	3	2	1	1
1641:	2	2	1	2	0	2	1	1
1649:	2	3	2	2	2	0	0	0
1657:	1	2	0	5	3	1	3	2

1665: 0 1 2 0 1 0 0 1

Sample Title: CP0404S14-15

Channel	1	2	3	4	5	6	7	8
1673:	1	0	2	1	0	2	2	1
1681:	1	0	0	1	1	1	0	2
1689:	2	2	3	0	2	3	3	2
1697:	2	0	0	3	1	2	0	3
1705:	1	0	0	0	3	1	2	1
1713:	1	2	2	2	1	1	1	2
1721:	3	1	1	0	1	2	2	1
1729:	1	17	6	1	0	1	0	0
1737:	2	1	1	0	0	1	0	1
1745:	0	1	1	0	3	0	1	0
1753:	0	0	1	0	1	2	1	0
1761:	1	2	3	17	30	16	2	4
1769:	2	1	2	2	1	1	2	1
1777:	0	1	2	1	1	0	0	1
1785:	0	2	0	0	1	0	1	1
1793:	0	1	1	2	4	0	2	1
1801:	1	1	2	2	0	0	1	0
1809:	4	1	0	1	1	1	1	0
1817:	0	2	2	4	2	1	0	2
1825:	0	1	1	0	2	1	1	0
1833:	5	0	0	1	1	2	3	3
1841:	1	1	1	3	1	0	2	6
1849:	5	1	0	1	0	2	1	1
1857:	1	1	0	0	0	0	1	1
1865:	1	0	2	1	2	1	1	1
1873:	2	1	0	0	0	0	1	0
1881:	0	1	0	0	2	3	1	1
1889:	2	2	2	0	3	1	2	1
1897:	1	0	0	1	1	0	3	2
1905:	1	0	1	1	2	1	1	3
1913:	1	0	3	0	1	0	2	1
1921:	0	1	0	2	1	1	1	2
1929:	0	4	2	0	0	2	0	1
1937:	3	0	2	2	2	0	1	1
1945:	0	0	3	2	1	1	0	0
1953:	2	0	0	2	0	1	3	2
1961:	4	1	0	2	1	4	1	1
1969:	1	0	2	0	3	1	1	0
1977:	0	1	0	0	3	1	1	1
1985:	3	0	2	0	2	1	0	0
1993:	0	1	0	1	0	3	1	1
2001:	3	3	0	1	3	0	1	4
2009:	1	3	1	1	1	1	1	1
2017:	2	0	0	1	0	0	2	1
2025:	0	1	2	1	1	2	0	1
2033:	1	0	1	0	0	0	0	2
2041:	0	0	1	3	0	0	0	0
2049:	1	0	0	1	1	0	2	0
2057:	0	0	0	1	1	0	1	1
2065:	0	3	0	1	0	0	3	0
2073:	2	1	0	3	0	0	1	0
2081:	3	1	0	2	0	3	0	1
2089:	0	1	0	4	1	0	2	0

2097: 0 0 2 1 1 2 1 7

Sample Title: CP0404S14-15

Channel	1	2	3	4	5	6	7	8
2105:	6	3	1	4	2	1	2	2
2113:	0	0	0	3	2	0	1	2
2121:	0	0	0	1	2	1	1	1
2129:	2	0	0	0	2	1	0	0
2137:	0	0	0	1	1	0	2	1
2145:	1	1	0	0	0	1	0	3
2153:	1	2	2	1	2	0	0	0
2161:	1	0	0	2	1	0	0	0
2169:	0	0	0	1	2	0	0	2
2177:	0	1	0	1	2	1	2	1
2185:	0	1	1	0	1	1	1	1
2193:	0	0	0	1	1	1	0	1
2201:	1	2	1	14	8	1	2	0
2209:	0	0	0	2	2	0	0	2
2217:	0	1	5	0	1	2	0	3
2225:	0	1	0	3	2	0	3	1
2233:	0	0	2	1	0	0	0	0
2241:	0	0	1	1	0	1	1	0
2249:	1	2	0	1	2	1	0	1
2257:	0	0	3	1	2	1	0	0
2265:	0	1	3	1	3	1	1	3
2273:	1	2	1	1	0	3	0	1
2281:	2	0	0	0	2	0	0	2
2289:	1	2	0	1	1	3	1	0
2297:	0	2	0	0	0	1	0	0
2305:	1	1	1	2	0	0	1	2
2313:	0	0	2	2	4	3	1	0
2321:	2	0	0	1	1	2	2	3
2329:	0	1	2	1	0	0	0	1
2337:	3	0	0	3	2	1	0	0
2345:	1	0	3	0	1	1	0	1
2353:	1	0	0	0	0	4	0	2
2361:	1	0	0	3	1	0	2	2
2369:	3	3	1	0	0	4	1	3
2377:	0	1	1	2	1	1	1	1
2385:	3	0	1	0	0	0	0	1
2393:	0	2	0	0	0	0	2	0
2401:	0	0	0	0	0	0	0	0
2409:	0	2	0	2	1	1	1	1
2417:	2	0	0	0	2	0	2	0
2425:	1	1	0	1	2	1	1	0
2433:	1	1	1	1	0	3	0	0
2441:	2	0	1	2	1	0	3	3
2449:	3	0	1	0	0	1	0	0
2457:	1	0	1	3	1	0	3	2
2465:	2	0	0	1	0	1	0	2
2473:	0	2	2	1	0	2	0	1
2481:	1	0	0	0	1	0	0	0
2489:	0	0	2	0	0	0	1	1
2497:	0	0	1	1	1	0	0	1
2505:	0	2	0	0	0	0	0	0
2513:	0	0	2	2	1	1	1	0
2521:	0	0	0	0	1	0	1	0

2529: 2 0 3 0 2 0 0 0

Sample Title: CP0404S14-15

Channel	1	2	3	4	5	6	7	8	9
2537:	0	0	0	0	0	0	0	0	0
2545:	0	0	1	0	1	0	1	0	0
2553:	1	2	0	1	3	0	0	0	0
2561:	1	0	0	0	0	0	0	1	1
2569:	0	1	0	0	0	0	1	1	3
2577:	0	0	0	1	0	0	0	0	0
2585:	1	0	0	0	0	0	0	0	0
2593:	0	2	1	1	0	0	0	1	1
2601:	0	0	1	1	0	0	0	0	0
2609:	0	1	1	2	14	24	35	38	0
2617:	8	1	0	0	0	0	0	2	0
2625:	0	1	0	0	1	1	1	0	0
2633:	1	0	1	0	0	0	1	0	0
2641:	1	0	2	0	0	0	0	0	0
2649:	0	1	0	1	0	0	0	0	0
2657:	0	1	0	0	0	0	0	0	0
2665:	0	1	0	1	1	2	0	0	0
2673:	1	1	1	0	1	0	1	0	0
2681:	0	0	1	0	0	0	1	0	0
2689:	0	1	0	0	0	0	2	0	0
2697:	0	0	1	0	0	1	2	0	0
2705:	0	0	2	0	0	0	0	0	0
2713:	0	0	0	1	2	0	0	0	0
2721:	2	0	2	0	0	0	0	0	0
2729:	0	1	1	0	0	0	0	0	0
2737:	0	1	0	0	0	0	1	0	0
2745:	1	0	0	1	0	1	0	0	0
2753:	0	0	0	2	0	1	0	0	0
2761:	0	0	1	1	0	1	0	0	0
2769:	0	0	0	0	3	0	1	0	0
2777:	0	1	0	0	0	1	1	1	0
2785:	1	0	2	1	0	0	0	0	0
2793:	1	1	0	0	0	0	0	0	0
2801:	0	0	0	1	1	1	0	2	0
2809:	1	0	1	0	0	0	0	0	0
2817:	1	0	0	0	0	0	0	0	0
2825:	0	0	0	0	0	0	0	0	0
2833:	0	0	0	0	0	0	0	1	0
2841:	1	0	1	0	1	0	1	0	0
2849:	0	0	0	0	1	1	0	0	0
2857:	0	0	0	0	1	1	1	0	0
2865:	0	0	0	0	0	0	0	0	0
2873:	2	1	0	0	0	0	0	0	0
2881:	0	0	0	0	0	0	0	0	0
2889:	0	2	0	0	0	0	1	0	0
2897:	0	0	0	0	1	0	0	0	0
2905:	1	0	1	0	0	0	0	0	0
2913:	0	1	0	0	0	0	0	0	0
2921:	0	0	0	0	0	0	0	0	0
2929:	0	0	0	0	0	0	0	2	0
2937:	0	0	1	1	0	0	0	0	0
2945:	0	0	0	0	0	0	0	1	0
2953:	0	0	1	1	1	0	0	0	0

2961: 0 1 0 1 0 1 0 0

Sample Title: CP0404S14-15

Channel	1	2	3	4	5	6	7	8
2969:	0	0	1	0	0	0	0	0
2977:	0	1	0	0	0	0	1	0
2985:	1	0	1	0	0	0	1	0
2993:	0	0	1	0	1	1	0	0
3001:	0	0	0	0	0	0	1	0
3009:	0	0	0	0	0	0	0	0
3017:	0	0	0	0	0	0	0	1
3025:	0	0	0	0	0	0	0	1
3033:	0	0	1	1	0	0	1	1
3041:	0	1	0	0	0	0	1	1
3049:	0	0	0	0	0	0	1	0
3057:	0	1	0	1	0	0	0	0
3065:	0	0	2	0	0	0	1	0
3073:	0	0	0	0	1	0	0	1
3081:	0	0	0	0	1	0	0	1
3089:	0	0	0	0	0	0	1	0
3097:	1	2	0	0	1	0	0	0
3105:	0	0	0	0	0	0	0	1
3113:	1	0	0	0	0	1	0	1
3121:	1	0	0	0	1	1	0	0
3129:	0	1	0	0	0	0	0	0
3137:	0	0	0	1	0	0	0	0
3145:	0	0	2	0	0	0	0	0
3153:	0	0	0	0	0	1	0	0
3161:	1	0	1	0	1	0	0	1
3169:	0	0	0	0	3	0	0	1
3177:	0	0	0	0	0	1	0	0
3185:	0	0	0	0	0	0	0	1
3193:	0	1	0	1	0	2	1	1
3201:	0	0	0	0	0	1	0	1
3209:	1	0	0	1	0	0	0	0
3217:	0	0	0	0	0	0	0	0
3225:	0	0	0	1	0	0	1	1
3233:	0	0	0	0	0	0	1	1
3241:	1	0	0	0	0	0	0	0
3249:	0	1	0	0	0	0	0	1
3257:	0	0	0	0	0	0	0	1
3265:	0	0	1	0	1	0	1	0
3273:	0	0	0	0	1	0	0	0
3281:	0	1	0	0	0	0	0	0
3289:	0	0	0	1	0	0	1	0
3297:	1	0	0	0	0	0	0	0
3305:	0	0	0	0	0	0	0	0
3313:	0	1	0	0	0	0	0	1
3321:	0	0	1	0	0	0	0	0
3329:	0	0	1	0	0	0	0	0
3337:	0	0	0	0	0	0	0	0
3345:	0	0	0	0	0	0	0	0
3353:	1	0	0	0	0	0	0	0
3361:	0	0	0	0	0	1	0	0
3369:	0	0	0	0	0	0	0	0
3377:	0	0	0	0	0	0	0	0
3385:	0	0	0	0	0	0	0	0

3393: 0 0 0 1 0 0 0 0

Sample Title: CP0404S14-15

Channel	1	2	3	4	5	6	7	8	9
3401:	0	0	1	0	0	0	0	0	0
3409:	0	1	0	0	0	0	0	1	0
3417:	1	0	0	0	0	0	0	0	0
3425:	0	0	0	0	0	0	0	0	0
3433:	0	0	0	0	0	0	0	0	0
3441:	0	1	1	0	0	0	0	0	0
3449:	0	0	0	0	0	0	1	0	0
3457:	0	0	0	0	0	0	0	0	0
3465:	0	0	0	0	0	0	0	0	0
3473:	0	0	1	0	0	0	0	0	0
3481:	0	0	0	0	0	0	0	0	1
3489:	0	0	1	0	1	1	1	0	0
3497:	0	0	0	0	0	1	1	0	0
3505:	0	0	0	0	1	0	0	0	1
3513:	0	0	1	0	0	0	1	1	0
3521:	0	1	0	0	1	0	1	1	0
3529:	0	0	0	0	1	0	0	0	0
3537:	0	0	0	0	0	0	0	0	0
3545:	0	1	0	0	0	1	1	0	0
3553:	0	0	1	0	1	0	0	0	0
3561:	0	1	0	0	0	0	0	0	1
3569:	0	0	0	0	0	0	0	0	0
3577:	0	0	0	0	0	0	0	0	0
3585:	0	1	0	1	0	0	1	0	0
3593:	0	2	2	0	0	0	0	0	0
3601:	0	0	0	0	0	0	0	0	0
3609:	0	0	0	0	0	0	0	0	0
3617:	1	0	0	0	0	0	0	0	0
3625:	0	0	0	0	0	0	0	0	0
3633:	0	0	0	0	0	0	0	0	1
3641:	0	0	0	0	0	0	0	0	0
3649:	1	2	0	0	1	0	0	0	0
3657:	0	1	0	0	0	0	1	0	0
3665:	0	0	0	0	2	0	0	0	0
3673:	0	0	1	0	0	0	0	0	0
3681:	0	1	0	0	0	0	0	0	0
3689:	0	0	0	0	0	0	1	0	0
3697:	0	0	0	0	0	0	0	0	0
3705:	0	0	0	0	0	0	1	1	1
3713:	0	0	0	0	0	0	0	0	0
3721:	0	0	0	0	0	0	0	0	0
3729:	0	0	1	0	0	0	0	0	0
3737:	1	0	0	0	0	1	0	0	0
3745:	0	0	1	1	0	0	0	0	0
3753:	1	0	0	0	0	0	0	0	0
3761:	1	0	0	0	0	0	0	0	0
3769:	0	0	1	0	0	0	0	0	0
3777:	0	0	0	0	0	0	0	0	0
3785:	0	0	0	0	0	0	0	0	0
3793:	0	0	0	0	0	0	0	0	0
3801:	0	0	0	0	0	0	0	0	0
3809:	0	0	0	0	0	0	0	0	0
3817:	0	0	0	0	0	1	0	0	0

3825: 0 0 0 0 0 1 0 0

Sample Title: CP0404S14-15

Channel	-----	-----	-----	-----	-----	-----	-----	-----
3833:	0	0	0	0	0	0	0	0
3841:	0	1	0	0	0	0	0	0
3849:	0	0	0	0	0	0	0	0
3857:	0	0	0	0	0	0	0	0
3865:	0	0	1	0	0	2	0	0
3873:	0	0	0	0	0	0	1	0
3881:	1	0	0	0	0	0	0	0
3889:	1	1	0	0	0	0	1	0
3897:	0	0	0	0	0	0	0	0
3905:	0	0	2	0	1	0	0	0
3913:	0	0	0	0	1	0	0	0
3921:	0	0	1	0	0	1	0	0
3929:	0	0	0	0	0	1	0	0
3937:	0	0	0	0	1	0	0	0
3945:	0	0	0	1	0	0	0	0
3953:	1	0	1	0	0	1	0	1
3961:	0	0	0	0	0	0	0	0
3969:	0	1	0	0	0	0	0	0
3977:	0	1	0	0	0	0	0	0
3985:	0	0	0	0	0	1	0	0
3993:	0	0	0	1	0	1	0	0
4001:	0	0	0	0	0	0	0	0
4009:	0	0	0	0	0	0	0	0
4017:	0	0	0	0	0	0	1	0
4025:	0	0	0	0	0	0	1	0
4033:	0	1	0	0	0	0	0	0
4041:	1	0	0	0	0	0	0	0
4049:	0	0	0	0	0	0	0	1
4057:	1	0	0	1	0	0	0	0
4065:	0	0	0	0	0	0	0	1
4073:	0	0	0	0	0	0	0	0
4081:	2	0	0	0	0	1	0	0
4089:	0	0	0	0	0	0	0	1

K8
11/6/15Analysis Report for 1510086-18
CP0404S17-18

GAMMA SPECTRUM ANALYSIS

Sample Identification : 1510086-18
Sample Description : CP0404S17-18
Sample Type : SOIL

Sample Size : 5.712E+02 grams
Facility : Countroom

Sample Taken On : 10/8/2015 1:43:11PM
Acquisition Started : 11/6/2015 2:40:36PM

Procedure : GAS-1402 pCi
Operator : Administrator
Detector Name : GE2
Geometry : GAS-1402
Live Time : 3600.0 seconds
Real Time : 3601.3 seconds

Dead Time : 0.03 %

Peak Locate Threshold : 2.50
Peak Locate Range (in channels) : 1 - 4096
Peak Area Range (in channels) : 8 - 4096
Identification Energy Tolerance : 1.000 keV

Energy Calibration Used Done On : 11/2/2014
Efficiency Calibration Used Done On : 10/25/2014
Efficiency Calibration Description :

Sample Number : 29272

PEAK-TO-TOTAL CALIBRATION REPORT

Peak-to-Total Efficiency Calibration Equation

Ag
11/9/15

: 00954

Analysis Report for 1510086-18
CP0404S17-18

PEAK LOCATE REPORT

Peak Locate Performed on : 11/6/2015 3:40:50PM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096
Peak Search Sensitivity : 2.50

Peak No.	Energy (keV)	Centroid Channel	Centroid Uncertainty	Peak Significance
1	46.39	46.49	0.0000	0.00
2	64.30	64.40	0.0000	0.00
3	76.41	76.49	0.0000	0.00
4	88.22	88.30	0.0000	0.00
5	93.31	93.39	0.0000	0.00
6	105.82	105.89	0.0000	0.00
7	186.09	186.12	0.0000	0.00
8	209.72	209.73	0.0000	0.00
9	236.27	236.27	0.0000	0.00
10	241.73	241.73	0.0000	0.00
11	270.17	270.15	0.0000	0.00
12	295.17	295.14	0.0000	0.00
13	300.04	300.00	0.0000	0.00
14	328.40	328.34	0.0000	0.00
15	338.81	338.75	0.0000	0.00
16	351.98	351.92	0.0000	0.00
17	408.03	407.94	0.0000	0.00
18	463.07	462.95	0.0000	0.00
19	511.00	510.85	0.0000	0.00
20	583.41	583.23	0.0000	0.00
21	609.39	609.20	0.0000	0.00
22	649.82	649.61	0.0000	0.00
23	670.23	670.01	0.0000	0.00
24	726.92	726.67	0.0000	0.00
25	785.81	785.54	0.0000	0.00
26	794.21	793.94	0.0000	0.00
27	818.26	817.98	0.0000	0.00
28	911.50	911.18	0.0000	0.00
29	964.42	964.08	0.0000	0.00
30	969.24	968.89	0.0000	0.00
31	1043.48	1043.10	0.0000	0.00
32	1120.47	1120.06	0.0000	0.00
33	1238.51	1238.06	0.0000	0.00
34	1263.92	1263.46	0.0000	0.00
35	1277.68	1277.22	0.0000	0.00
36	1282.16	1281.69	0.0000	0.00
37	1321.86	1321.38	0.0000	0.00
38	1377.93	1377.43	0.0000	0.00
39	1396.70	1396.20	0.0000	0.00
40	1412.22	1411.71	0.0000	0.00
41	1424.79	1424.28	0.0000	0.00
42	1460.90	1460.38	0.0000	0.00

Analysis Report for 1510086-18
CP0404S17-18

Peak No.	Energy (keV)	Centroid Channel	Centroid Uncertainty	Peak Significance
43	1582.25	1581.70	0.0000	0.00
44	1593.25	1592.69	0.0000	0.00
45	1620.41	1619.84	0.0000	0.00
46	1629.96	1629.39	0.0000	0.00
47	1730.13	1729.54	0.0000	0.00
48	1738.97	1738.38	0.0000	0.00
49	1764.39	1763.79	0.0000	0.00
50	1848.21	1847.59	0.0000	0.00
51	1877.63	1877.00	0.0000	0.00
52	1953.25	1952.61	0.0000	0.00
53	1975.24	1974.59	0.0000	0.00
54	2051.17	2050.51	0.0000	0.00
55	2116.82	2116.14	0.0000	0.00
56	2203.55	2202.85	0.0000	0.00
57	2614.17	2613.43	0.0000	0.00

? = Adjacent peak noted
Errors quoted at 2.000sigma

Analysis Report for 1510086-18
CP0404S17-18

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 11/6/2015 3:40:50PM

Peak Analysis From Channel : 1
Peak Analysis To Channel : 4096

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	FWHM (keV)
1	46.39	43 -	49	46.49	1.58E+02	98.68	1.65E+03	1.64
2	64.30	60 -	68	64.40	2.31E+02	117.89	2.00E+03	1.76
3	76.41	72 -	82	76.49	1.11E+03	156.76	2.67E+03	3.75
4	88.22	86 -	91	88.30	1.92E+02	89.33	1.45E+03	3.53
5	93.31	91 -	96	93.39	2.16E+02	87.73	1.31E+03	1.33
6	105.82	104 -	108	105.89	5.16E+01	57.97	6.99E+02	2.25
7	186.09	183 -	190	186.12	2.31E+02	79.22	8.93E+02	1.65
8	209.72	206 -	213	209.73	7.11E+01	72.42	8.08E+02	1.83
M m 9	236.27	235 -	255	236.27	5.17E+01	32.19	2.70E+02	1.55
10	241.73	235 -	255	241.73	2.20E+02	71.92	3.89E+02	1.56
11	270.17	266 -	273	270.15	9.23E+01	58.62	5.09E+02	1.31
M m 12	295.17	292 -	303	295.14	2.77E+02	45.43	2.37E+02	1.50
13	300.04	292 -	303	300.00	8.33E+01	40.27	3.07E+02	1.50
14	328.40	325 -	331	328.34	6.58E+01	46.87	3.48E+02	1.95
15	338.81	335 -	343	338.75	1.55E+02	57.97	3.98E+02	1.80
16	351.98	348 -	355	351.92	5.30E+02	65.79	3.69E+02	1.38
17	408.03	404 -	412	407.94	4.51E+01	47.77	3.22E+02	1.42
18	463.07	460 -	466	462.95	4.42E+01	37.63	2.22E+02	1.96
19	511.00	507 -	516	510.85	1.99E+02	53.54	2.98E+02	2.41
20	583.41	579 -	586	583.23	2.82E+02	47.24	1.83E+02	1.60
21	609.39	605 -	614	609.20	4.33E+02	56.59	2.10E+02	1.81
22	649.82	646 -	653	649.61	2.66E+01	27.50	1.09E+02	2.99
23	670.23	668 -	673	670.01	2.12E+01	25.32	1.12E+02	1.25
24	726.92	723 -	731	726.67	5.20E+01	36.35	1.72E+02	1.56
25	785.81	783 -	788	785.54	1.77E+01	22.61	8.06E+01	3.00
26	794.21	790 -	797	793.94	2.97E+01	27.28	1.05E+02	1.34
27	818.26	814 -	823	817.98	3.69E+01	29.19	1.02E+02	7.00
28	911.50	906 -	915	911.18	1.70E+02	41.55	1.48E+02	1.64
M m 29	964.42	961 -	974	964.08	4.06E+01	23.16	5.30E+01	2.91
30	969.24	961 -	974	968.89	1.09E+02	30.79	7.09E+01	2.65
31	1043.48	1041 -	1046	1043.10	1.77E+01	16.52	4.26E+01	2.78
32	1120.47	1115 -	1125	1120.06	1.10E+02	38.92	1.44E+02	2.03
33	1238.51	1233 -	1245	1238.06	4.74E+01	39.75	1.67E+02	3.28
M m 34	1263.92	1259 -	1286	1263.46	2.09E+01	23.07	8.89E+01	2.92
35	1277.68	1259 -	1286	1277.22	1.97E+01	19.90	4.87E+01	2.42
36	1282.16	1259 -	1286	1281.69	1.93E+01	19.70	4.07E+01	2.36
37	1321.86	1317 -	1325	1321.38	2.50E+01	19.03	4.01E+01	6.06
38	1377.93	1374 -	1381	1377.43	2.45E+01	19.08	4.50E+01	2.01
39	1396.70	1393 -	1399	1396.20	1.32E+01	13.02	2.16E+01	2.58
40	1412.22	1405 -	1419	1411.71	2.85E+01	28.75	7.50E+01	10.87

Analysis Report for 1510086-18
CP0404S17-18

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	FWHM (keV)
41	1424.79	1420 -	1427	1424.28	1.32E+01	15.62	3.17E+01	3.54
42	1460.90	1453 -	1466	1460.38	7.49E+02	60.75	7.79E+01	2.34
43	1582.25	1578 -	1585	1581.70	1.47E+01	12.33	1.46E+01	3.97
44	1593.25	1586 -	1601	1592.69	4.38E+01	15.87	6.49E+00	5.93
45	1620.41	1615 -	1625	1619.84	2.50E+01	10.00	0.00E+00	3.50
46	1629.96	1626 -	1633	1629.39	1.09E+01	9.59	8.27E+00	1.18
47	1730.13	1726 -	1733	1729.54	2.80E+01	10.58	0.00E+00	3.27
48	1738.97	1735 -	1742	1738.38	7.00E+00	8.72	8.00E+00	3.38
49	1764.39	1759 -	1767	1763.79	6.58E+01	17.90	8.34E+00	2.75
50	1848.21	1842 -	1853	1847.59	2.13E+01	15.10	1.74E+01	3.49
51	1877.63	1875 -	1880	1877.00	8.00E+00	5.66	0.00E+00	1.16
52	1953.25	1949 -	1956	1952.61	1.13E+01	8.25	3.38E+00	5.80
53	1975.24	1972 -	1977	1974.59	5.71E+00	6.08	2.57E+00	1.42
54	2051.17	2047 -	2053	2050.51	7.39E+00	6.95	3.22E+00	2.90
55	2116.82	2111 -	2119	2116.14	1.45E+01	10.79	8.95E+00	3.73
56	2203.55	2198 -	2205	2202.85	1.94E+01	12.33	1.33E+01	2.03
57	2614.17	2608 -	2618	2613.43	1.12E+02	22.14	5.54E+00	4.03

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 11/6/2015 3:40:50PM

Peak Analysis From Channel : 1
Peak Analysis To Channel : 4096

Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
1	46.39	43 -	49	1.58E+02	98.68	1.65E+03	7.84E+01
2	64.30	60 -	68	2.31E+02	117.89	2.00E+03	9.36E+01
3	76.41	72 -	82	1.11E+03	156.76	2.67E+03	1.58E+02
4	88.22	86 -	91	1.92E+02	89.33	1.45E+03	6.98E+01
5	93.31	91 -	96	2.16E+02	87.73	1.31E+03	6.79E+01
6	105.82	104 -	108	5.16E+01	57.97	6.99E+02	4.62E+01
7	186.09	183 -	190	2.31E+02	79.22	8.93E+02	6.01E+01
8	209.72	206 -	213	7.11E+01	72.42	8.08E+02	5.79E+01
M 9	236.27	235 -	255	5.17E+01	32.19	2.70E+02	2.70E+01
m 10	241.73	235 -	255	2.20E+02	71.92	3.89E+02	3.24E+01
11	270.17	266 -	273	9.23E+01	58.62	5.09E+02	4.55E+01

Analysis Report for 1510086-18

CP0404S17-18

	Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
M	12	295.17	292 -	303	2.77E+02	45.43	2.37E+02	2.53E+01
m	13	300.04	292 -	303	8.33E+01	40.27	3.07E+02	2.88E+01
	14	328.40	325 -	331	6.58E+01	46.87	3.48E+02	3.61E+01
	15	338.81	335 -	343	1.55E+02	57.97	3.98E+02	4.30E+01
	16	351.98	348 -	355	5.30E+02	65.79	3.69E+02	3.86E+01
	17	408.03	404 -	412	4.51E+01	47.77	3.22E+02	3.77E+01
	18	463.07	460 -	466	4.42E+01	37.63	2.22E+02	2.89E+01
	19	511.00	507 -	516	1.99E+02	53.54	2.98E+02	3.74E+01
	20	583.41	579 -	586	2.82E+02	47.24	1.83E+02	2.73E+01
	21	609.39	605 -	614	4.33E+02	56.59	2.10E+02	3.15E+01
	22	649.82	646 -	653	2.66E+01	27.50	1.09E+02	2.10E+01
	23	670.23	668 -	673	2.12E+01	25.32	1.12E+02	1.94E+01
	24	726.92	723 -	731	5.20E+01	36.35	1.72E+02	2.74E+01
	25	785.81	783 -	788	1.77E+01	22.61	8.06E+01	1.72E+01
	26	794.21	790 -	797	2.97E+01	27.28	1.05E+02	2.06E+01
	27	818.26	814 -	823	3.69E+01	29.19	1.02E+02	2.18E+01
	28	911.50	906 -	915	1.70E+02	41.55	1.48E+02	2.66E+01
M	29	964.42	961 -	974	4.06E+01	23.16	5.30E+01	1.20E+01
m	30	969.24	961 -	974	1.09E+02	30.79	7.09E+01	1.38E+01
	31	1043.48	1041 -	1046	1.77E+01	16.52	4.26E+01	1.17E+01
	32	1120.47	1115 -	1125	1.10E+02	38.92	1.44E+02	2.69E+01
	33	1238.51	1233 -	1245	4.74E+01	39.75	1.67E+02	3.07E+01
M	34	1263.92	1259 -	1286	2.09E+01	23.07	8.89E+01	1.55E+01
m	35	1277.68	1259 -	1286	1.97E+01	19.90	4.87E+01	1.15E+01
m	36	1282.16	1259 -	1286	1.93E+01	19.70	4.07E+01	1.05E+01
	37	1321.86	1317 -	1325	2.50E+01	19.03	4.01E+01	1.33E+01
	38	1377.93	1374 -	1381	2.45E+01	19.08	4.50E+01	1.34E+01
	39	1396.70	1393 -	1399	1.32E+01	13.02	2.16E+01	8.88E+00
	40	1412.22	1405 -	1419	2.85E+01	28.75	7.50E+01	2.19E+01
	41	1424.79	1420 -	1427	1.32E+01	15.62	3.17E+01	1.14E+01
	42	1460.90	1453 -	1466	7.49E+02	60.75	7.79E+01	2.17E+01
	43	1582.25	1578 -	1585	1.47E+01	12.33	1.46E+01	7.94E+00
	44	1593.25	1586 -	1601	4.38E+01	15.87	6.49E+00	7.21E+00
	45	1620.41	1615 -	1625	2.50E+01	10.00	0.00E+00	0.00E+00
	46	1629.96	1626 -	1633	1.09E+01	9.59	8.27E+00	5.73E+00
	47	1730.13	1726 -	1733	2.80E+01	10.58	0.00E+00	0.00E+00
	48	1738.97	1735 -	1742	7.00E+00	8.72	8.00E+00	5.70E+00
	49	1764.39	1759 -	1767	6.58E+01	17.90	8.34E+00	6.22E+00
	50	1848.21	1842 -	1853	2.13E+01	15.10	1.74E+01	9.82E+00
	51	1877.63	1875 -	1880	8.00E+00	5.66	0.00E+00	0.00E+00
	52	1953.25	1949 -	1956	1.13E+01	8.25	3.38E+00	3.92E+00
	53	1975.24	1972 -	1977	5.71E+00	6.08	2.57E+00	3.09E+00
	54	2051.17	2047 -	2053	7.39E+00	6.95	3.22E+00	3.55E+00
	55	2116.82	2111 -	2119	1.45E+01	10.79	8.95E+00	6.28E+00
	56	2203.55	2198 -	2205	1.94E+01	12.33	1.33E+01	7.10E+00
	57	2614.17	2608 -	2618	1.12E+02	22.14	5.54E+00	5.28E+00

Analysis Report for 1510086-18
CP0404S17-18

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

PEAK WITH NID REPORT

Peak Analysis Performed on : 11/6/2015 3:40:50PM

Peak Analysis From Channel : 1
Peak Analysis To Channel : 4096

Tentative NID Library : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB
Peak Match Tolerance : 1.000 keV

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
1	46.39	43 -	49	46.49	1.58E+02	98.68	1.65E+03	PB-210
2	64.30	60 -	68	64.40	2.31E+02	117.89	2.00E+03	.....
3	76.41	72 -	82	76.49	1.11E+03	156.76	2.67E+03	.....
4	88.22	86 -	91	88.30	1.92E+02	89.33	1.45E+03	LU-176 CD-109 SN-126
5	93.31	91 -	96	93.39	2.16E+02	87.73	1.31E+03	GA-67
6	105.82	104 -	108	105.89	5.16E+01	57.97	6.99E+02	NP-239 EU-155
7	186.09	183 -	190	186.12	2.31E+02	79.22	8.93E+02	RA-226
8	209.72	206 -	213	209.73	7.11E+01	72.42	8.08E+02	CM-243 GA-67
M 9	236.27	235 -	255	236.27	5.17E+01	32.19	2.70E+02	TH-227 NB-95M
m 10	241.73	235 -	255	241.73	2.20E+02	71.92	3.89E+02	RA-224
11	270.17	266 -	273	270.15	9.23E+01	58.62	5.09E+02	.....
M 12	295.17	292 -	303	295.14	2.77E+02	45.43	2.37E+02	PB-214
m 13	300.04	292 -	303	300.00	8.33E+01	40.27	3.07E+02	BI-210M PB-212 GA-67
14	328.40	325 -	331	328.34	6.58E+01	46.87	3.48E+02	LA-140
15	338.81	335 -	343	338.75	1.55E+02	57.97	3.98E+02	AC-228
16	351.98	348 -	355	351.92	5.30E+02	65.79	3.69E+02	PB-214
17	408.03	404 -	412	407.94	4.51E+01	47.77	3.22E+02	.....
18	463.07	460 -	466	462.95	4.42E+01	37.63	2.22E+02	SB-125
19	511.00	507 -	516	510.85	1.99E+02	53.54	2.98E+02	.....
20	583.41	579 -	586	583.23	2.82E+02	47.24	1.83E+02	TL-208
21	609.39	605 -	614	609.20	4.33E+02	56.59	2.10E+02	BI-214
22	649.82	646 -	653	649.61	2.66E+01	27.50	1.09E+02	.....
23	670.23	668 -	673	670.01	2.12E+01	25.32	1.12E+02	.....

Analysis Report for 1510086-18

CP0404S17-18

	Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
	24	726.92	723 -	731	726.67	5.20E+01	36.35	1.72E+02	BI-212
	25	785.81	783 -	788	785.54	1.77E+01	22.61	8.06E+01	.....
	26	794.21	790 -	797	793.94	2.97E+01	27.28	1.05E+02	.....
	27	818.26	814 -	823	817.98	3.69E+01	29.19	1.02E+02	CS-136
	28	911.50	906 -	915	911.18	1.70E+02	41.55	1.48E+02	AC-228 LU-172
M	29	964.42	961 -	974	964.08	4.06E+01	23.16	5.30E+01	EU-152
m	30	969.24	961 -	974	968.89	1.09E+02	30.79	7.09E+01	AC-228
	31	1043.48	1041 -	1046	1043.10	1.77E+01	16.52	4.26E+01	.....
	32	1120.47	1115 -	1125	1120.06	1.10E+02	38.92	1.44E+02	SC-46 BI-214 TA-182
	33	1238.51	1233 -	1245	1238.06	4.74E+01	39.75	1.67E+02	CO-56
M	34	1263.92	1259 -	1286	1263.46	2.09E+01	23.07	8.89E+01	.....
m	35	1277.68	1259 -	1286	1277.22	1.97E+01	19.90	4.87E+01	.....
m	36	1282.16	1259 -	1286	1281.69	1.93E+01	19.70	4.07E+01	.....
	37	1321.86	1317 -	1325	1321.38	2.50E+01	19.03	4.01E+01	.....
	38	1377.93	1374 -	1381	1377.43	2.45E+01	19.08	4.50E+01	.....
	39	1396.70	1393 -	1399	1396.20	1.32E+01	13.02	2.16E+01	.....
	40	1412.22	1405 -	1419	1411.71	2.85E+01	28.75	7.50E+01	.....
	41	1424.79	1420 -	1427	1424.28	1.32E+01	15.62	3.17E+01	.....
	42	1460.90	1453 -	1466	1460.38	7.49E+02	60.75	7.79E+01	K-40
	43	1582.25	1578 -	1585	1581.70	1.47E+01	12.33	1.46E+01	.....
	44	1593.25	1586 -	1601	1592.69	4.38E+01	15.87	6.49E+00	.....
	45	1620.41	1615 -	1625	1619.84	2.50E+01	10.00	0.00E+00	BI-212
	46	1629.96	1626 -	1633	1629.39	1.09E+01	9.59	8.27E+00	.....
	47	1730.13	1726 -	1733	1729.54	2.80E+01	10.58	0.00E+00	.....
	48	1738.97	1735 -	1742	1738.38	7.00E+00	8.72	8.00E+00	.....
	49	1764.39	1759 -	1767	1763.79	6.58E+01	17.90	8.34E+00	BI-214
	50	1848.21	1842 -	1853	1847.59	2.13E+01	15.10	1.74E+01	.....
	51	1877.63	1875 -	1880	1877.00	8.00E+00	5.66	0.00E+00	.....
	52	1953.25	1949 -	1956	1952.61	1.13E+01	8.25	3.38E+00	.....
	53	1975.24	1972 -	1977	1974.59	5.71E+00	6.08	2.57E+00	.....
	54	2051.17	2047 -	2053	2050.51	7.39E+00	6.95	3.22E+00	.....
	55	2116.82	2111 -	2119	2116.14	1.45E+01	10.79	8.95E+00	.....
	56	2203.55	2198 -	2205	2202.85	1.94E+01	12.33	1.33E+01	BI-214
	57	2614.17	2608 -	2618	2613.43	1.12E+02	22.14	5.54E+00	TL-208

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.00sigma

PEAK EFFICIENCY REPORT

Peak Analysis Performed on : 11/6/2015 3:40:50PM

: 00961

Analysis Report for 1510086-18
CP0404S17-18

	Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
	1	46.39	1.58E+02	98.68	1.33E-02	1.68E-03
	2	64.30	2.31E+02	117.89	2.41E-02	2.15E-03
	3	76.41	1.11E+03	156.76	2.74E-02	3.35E-03
	4	88.22	1.92E+02	89.33	2.84E-02	4.50E-03
	5	93.31	2.16E+02	87.73	2.85E-02	4.27E-03
	6	105.82	5.16E+01	57.97	2.80E-02	3.71E-03
	7	186.09	2.31E+02	79.22	2.11E-02	1.65E-03
	8	209.72	7.11E+01	72.42	1.95E-02	1.63E-03
M	9	236.27	5.17E+01	32.19	1.80E-02	1.60E-03
m	10	241.73	2.20E+02	71.92	1.77E-02	1.60E-03
	11	270.17	9.23E+01	58.62	1.64E-02	1.57E-03
M	12	295.17	2.77E+02	45.43	1.55E-02	1.48E-03
m	13	300.04	8.33E+01	40.27	1.53E-02	1.46E-03
	14	328.40	6.58E+01	46.87	1.44E-02	1.32E-03
	15	338.81	1.55E+02	57.97	1.41E-02	1.27E-03
	16	351.98	5.30E+02	65.79	1.37E-02	1.21E-03
	17	408.03	4.51E+01	47.77	1.24E-02	1.00E-03
	18	463.07	4.42E+01	37.63	1.13E-02	9.47E-04
	19	511.00	1.99E+02	53.54	1.06E-02	8.98E-04
	20	583.41	2.82E+02	47.24	9.58E-03	8.25E-04
	21	609.39	4.33E+02	56.59	9.27E-03	7.98E-04
	22	649.82	2.66E+01	27.50	8.83E-03	7.57E-04
	23	670.23	2.12E+01	25.32	8.62E-03	7.40E-04
	24	726.92	5.20E+01	36.35	8.09E-03	7.03E-04
	25	785.81	1.77E+01	22.61	7.60E-03	6.65E-04
	26	794.21	2.97E+01	27.28	7.54E-03	6.60E-04
	27	818.26	3.69E+01	29.19	7.36E-03	6.45E-04
	28	911.50	1.70E+02	41.55	6.74E-03	5.86E-04
M	29	964.42	4.06E+01	23.16	6.44E-03	5.59E-04
m	30	969.24	1.09E+02	30.79	6.41E-03	5.57E-04
	31	1043.48	1.77E+01	16.52	6.04E-03	5.19E-04
	32	1120.47	1.10E+02	38.92	5.70E-03	4.80E-04
	33	1238.51	4.74E+01	39.75	5.27E-03	4.83E-04
M	34	1263.92	2.09E+01	23.07	5.19E-03	4.95E-04
m	35	1277.68	1.97E+01	19.90	5.15E-03	5.01E-04
m	36	1282.16	1.93E+01	19.70	5.13E-03	5.03E-04
	37	1321.86	2.50E+01	19.03	5.02E-03	5.21E-04
	38	1377.93	2.45E+01	19.08	4.87E-03	5.08E-04
	39	1396.70	1.32E+01	13.02	4.82E-03	5.00E-04
	40	1412.22	2.85E+01	28.75	4.78E-03	4.93E-04
	41	1424.79	1.32E+01	15.62	4.75E-03	4.88E-04
	42	1460.90	7.49E+02	60.75	4.67E-03	4.73E-04
	43	1582.25	1.47E+01	12.33	4.44E-03	4.23E-04
	44	1593.25	4.38E+01	15.87	4.42E-03	4.18E-04
	45	1620.41	2.50E+01	10.00	4.38E-03	4.07E-04
	46	1629.96	1.09E+01	9.59	4.36E-03	4.03E-04
	47	1730.13	2.80E+01	10.58	4.23E-03	3.62E-04
	48	1738.97	7.00E+00	8.72	4.21E-03	3.58E-04
	49	1764.39	6.58E+01	17.90	4.19E-03	3.48E-04
	50	1848.21	2.13E+01	15.10	4.10E-03	3.18E-04

Analysis Report for 1510086-18
CP0404S17-18

Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
51	1877.63	8.00E+00	5.66	4.08E-03	3.18E-04
52	1953.25	1.13E+01	8.25	4.02E-03	3.18E-04
53	1975.24	5.71E+00	6.08	4.01E-03	3.18E-04
54	2051.17	7.39E+00	6.95	3.97E-03	3.18E-04
55	2116.82	1.45E+01	10.79	3.95E-03	3.18E-04
56	2203.55	1.94E+01	12.33	3.93E-03	3.18E-04
57	2614.17	1.12E+02	22.14	4.05E-03	3.18E-04

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000 sigma

BACKGROUND SUBTRACT REPORT

Peak Analysis Performed on : 11/6/2015 3:40:50PM

Env. Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000028942.CNF

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.	
1	46.39	1.58E+02	98.68	6.46E+01	1.16E+01	9.37E+01	9.94E+01	
2	64.30	2.31E+02	117.89	4.34E+01	1.15E+01	1.88E+02	1.18E+02	
3	76.41	1.11E+03	156.76			1.11E+03	1.57E+02	
4	88.22	1.92E+02	89.33	1.46E+00	7.88E+00	1.91E+02	8.97E+01	
5	93.31	2.16E+02	87.73	5.70E+01	9.03E+00	1.59E+02	8.82E+01	
6	105.82	5.16E+01	57.97			5.16E+01	5.80E+01	
7	186.09	2.31E+02	79.22	4.72E+01	7.97E+00	1.83E+02	7.96E+01	
8	209.72	7.11E+01	72.42			7.11E+01	7.24E+01	
M	9	236.27	5.17E+01	32.19		5.17E+01	3.22E+01	
m	10	241.73	2.20E+02	71.92	6.38E+00	3.91E+00	2.14E+02	7.20E+01
	11	270.17	9.23E+01	58.62		9.23E+01	5.86E+01	
M	12	295.17	2.77E+02	45.43	8.57E+00	6.10E+00	2.68E+02	4.58E+01
m	13	300.04	8.33E+01	40.27		8.33E+01	4.03E+01	
	14	328.40	6.58E+01	46.87	0.00E+00	0.00E+00	6.58E+01	4.69E+01
	15	338.81	1.55E+02	57.97		1.55E+02	5.80E+01	
	16	351.98	5.30E+02	65.79	1.40E+01	5.55E+00	5.16E+02	6.60E+01
	17	408.03	4.51E+01	47.77		4.51E+01	4.78E+01	
	18	463.07	4.42E+01	37.63		4.42E+01	3.76E+01	
	19	511.00	1.99E+02	53.54	8.41E+01	5.50E+00	1.15E+02	5.38E+01
	20	583.41	2.82E+02	47.24	7.32E+00	4.08E+00	2.75E+02	4.74E+01
	21	609.39	4.33E+02	56.59	1.30E+01	3.89E+00	4.20E+02	5.67E+01
	22	649.82	2.66E+01	27.50		2.66E+01	2.75E+01	
	23	670.23	2.12E+01	25.32		2.12E+01	2.53E+01	

Analysis Report for 1510086-18

CP0404S17-18

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
	24	726.92	5.20E+01	36.35			5.20E+01	3.64E+01
	25	785.81	1.77E+01	22.61			1.77E+01	2.26E+01
	26	794.21	2.97E+01	27.28			2.97E+01	2.73E+01
	27	818.26	3.69E+01	29.19			3.69E+01	2.92E+01
	28	911.50	1.70E+02	41.55	5.60E+00	3.32E+00	1.64E+02	4.17E+01
M	29	964.42	4.06E+01	23.16			4.06E+01	2.32E+01
m	30	969.24	1.09E+02	30.79			1.09E+02	3.08E+01
	31	1043.48	1.77E+01	16.52			1.77E+01	1.65E+01
	32	1120.47	1.10E+02	38.92	3.93E+00	2.96E+00	1.06E+02	3.90E+01
	33	1238.51	4.74E+01	39.75			4.74E+01	3.98E+01
M	34	1263.92	2.09E+01	23.07			2.09E+01	2.31E+01
m	35	1277.68	1.97E+01	19.90			1.97E+01	1.99E+01
m	36	1282.16	1.93E+01	19.70			1.93E+01	1.97E+01
	37	1321.86	2.50E+01	19.03			2.50E+01	1.90E+01
	38	1377.93	2.45E+01	19.08			2.45E+01	1.91E+01
	39	1396.70	1.32E+01	13.02			1.32E+01	1.30E+01
	40	1412.22	2.85E+01	28.75			2.85E+01	2.87E+01
	41	1424.79	1.32E+01	15.62			1.32E+01	1.56E+01
	42	1460.90	7.49E+02	60.75	1.12E+01	2.55E+00	7.38E+02	6.08E+01
	43	1582.25	1.47E+01	12.33			1.47E+01	1.23E+01
	44	1593.25	4.38E+01	15.87			4.38E+01	1.59E+01
	45	1620.41	2.50E+01	10.00			2.50E+01	1.00E+01
	46	1629.96	1.09E+01	9.59			1.09E+01	9.59E+00
	47	1730.13	2.80E+01	10.58			2.80E+01	1.06E+01
	48	1738.97	7.00E+00	8.72			7.00E+00	8.72E+00
	49	1764.39	6.58E+01	17.90	4.23E+00	2.21E+00	6.16E+01	1.80E+01
	50	1848.21	2.13E+01	15.10			2.13E+01	1.51E+01
	51	1877.63	8.00E+00	5.66			8.00E+00	5.66E+00
	52	1953.25	1.13E+01	8.25			1.13E+01	8.25E+00
	53	1975.24	5.71E+00	6.08			5.71E+00	6.08E+00
	54	2051.17	7.39E+00	6.95			7.39E+00	6.95E+00
	55	2116.82	1.45E+01	10.79			1.45E+01	1.08E+01
	56	2203.55	1.94E+01	12.33	5.94E-01	1.16E+00	1.88E+01	1.24E+01
	57	2614.17	1.12E+02	22.14	7.38E+00	1.57E+00	1.05E+02	2.22E+01

M = First peak in a multiplet region

m = Other peak in a multiplet region

F = Fitted singlet

Errors quoted at 2.000sigma

Analysis Report for 1510086-18
CP0404S17-18

AREA CORRECTION REPORT REFERENCE PEAK / BKG. SUBTRACT

Peak Analysis Performed on : 11/6/2015 3:40:50PM
 Ref. Peak Energy : 0.00 Reference Date :
 Peak Ratio : 0.00 Uncertainty : 0.00
 Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000028942.CNF

Corrected Area is: Original * Peak Ratio - Background

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.	
1	46.39	1.58E+02	98.68	6.46E+01	1.16E+01	9.37E+01	9.94E+01	
2	64.30	2.31E+02	117.89	4.34E+01	1.15E+01	1.88E+02	1.18E+02	
3	76.41	1.11E+03	156.76			1.11E+03	1.57E+02	
4	88.22	1.92E+02	89.33	1.46E+00	7.88E+00	1.91E+02	8.97E+01	
5	93.31	2.16E+02	87.73	5.70E+01	9.03E+00	1.59E+02	8.82E+01	
6	105.82	5.16E+01	57.97			5.16E+01	5.80E+01	
7	186.09	2.31E+02	79.22	4.72E+01	7.97E+00	1.83E+02	7.96E+01	
8	209.72	7.11E+01	72.42			7.11E+01	7.24E+01	
M	9	236.27	5.17E+01	32.19		5.17E+01	3.22E+01	
m	10	241.73	2.20E+02	71.92	6.38E+00	3.91E+00	2.14E+02	7.20E+01
	11	270.17	9.23E+01	58.62			9.23E+01	5.86E+01
M	12	295.17	2.77E+02	45.43	8.57E+00	6.10E+00	2.68E+02	4.58E+01
m	13	300.04	8.33E+01	40.27			8.33E+01	4.03E+01
	14	328.40	6.58E+01	46.87	0.00E+00	0.00E+00	6.58E+01	4.69E+01
	15	338.81	1.55E+02	57.97			1.55E+02	5.80E+01
	16	351.98	5.30E+02	65.79	1.40E+01	5.55E+00	5.16E+02	6.60E+01
	17	408.03	4.51E+01	47.77			4.51E+01	4.78E+01
	18	463.07	4.42E+01	37.63			4.42E+01	3.76E+01
	19	511.00	1.99E+02	53.54	8.41E+01	5.50E+00	1.15E+02	5.38E+01
	20	583.41	2.82E+02	47.24	7.32E+00	4.08E+00	2.75E+02	4.74E+01
	21	609.39	4.33E+02	56.59	1.30E+01	3.89E+00	4.20E+02	5.67E+01
	22	649.82	2.66E+01	27.50			2.66E+01	2.75E+01
	23	670.23	2.12E+01	25.32			2.12E+01	2.53E+01
	24	726.92	5.20E+01	36.35			5.20E+01	3.64E+01
	25	785.81	1.77E+01	22.61			1.77E+01	2.26E+01
	26	794.21	2.97E+01	27.28			2.97E+01	2.73E+01
	27	818.26	3.69E+01	29.19			3.69E+01	2.92E+01
	28	911.50	1.70E+02	41.55	5.60E+00	3.32E+00	1.64E+02	4.17E+01
M	29	964.42	4.06E+01	23.16			4.06E+01	2.32E+01
m	30	969.24	1.09E+02	30.79			1.09E+02	3.08E+01
	31	1043.48	1.77E+01	16.52			1.77E+01	1.65E+01
	32	1120.47	1.10E+02	38.92	3.93E+00	2.96E+00	1.06E+02	3.90E+01
	33	1238.51	4.74E+01	39.75			4.74E+01	3.98E+01
M	34	1263.92	2.09E+01	23.07			2.09E+01	2.31E+01
m	35	1277.68	1.97E+01	19.90			1.97E+01	1.99E+01
m	36	1282.16	1.93E+01	19.70			1.93E+01	1.97E+01
	37	1321.86	2.50E+01	19.03			2.50E+01	1.90E+01
	38	1377.93	2.45E+01	19.08			2.45E+01	1.91E+01
	39	1396.70	1.32E+01	13.02			1.32E+01	1.30E+01
	40	1412.22	2.85E+01	28.75			2.85E+01	2.87E+01
	41	1424.79	1.32E+01	15.62			1.32E+01	1.56E+01

Analysis Report for 1510086-18
CP0404S17-18

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
42	1460.90	7.49E+02	60.75	1.12E+01	2.55E+00	7.38E+02	6.08E+01
43	1582.25	1.47E+01	12.33			1.47E+01	1.23E+01
44	1593.25	4.38E+01	15.87			4.38E+01	1.59E+01
45	1620.41	2.50E+01	10.00			2.50E+01	1.00E+01
46	1629.96	1.09E+01	9.59			1.09E+01	9.59E+00
47	1730.13	2.80E+01	10.58			2.80E+01	1.06E+01
48	1738.97	7.00E+00	8.72			7.00E+00	8.72E+00
49	1764.39	6.58E+01	17.90	4.23E+00	2.21E+00	6.16E+01	1.80E+01
50	1848.21	2.13E+01	15.10			2.13E+01	1.51E+01
51	1877.63	8.00E+00	5.66			8.00E+00	5.66E+00
52	1953.25	1.13E+01	8.25			1.13E+01	8.25E+00
53	1975.24	5.71E+00	6.08			5.71E+00	6.08E+00
54	2051.17	7.39E+00	6.95			7.39E+00	6.95E+00
55	2116.82	1.45E+01	10.79			1.45E+01	1.08E+01
56	2203.55	1.94E+01	12.33	5.94E-01	1.16E+00	1.88E+01	1.24E+01
57	2614.17	1.12E+02	22.14	7.38E+00	1.57E+00	1.05E+02	2.22E+01

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

NUCLIDE IDENTIFICATION REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

IDENTIFIED NUCLIDES

Nuclide Name	Id Confidence	Energy (keV)	Yield(%)	Activity (pCi/grams)	Activity Uncertainty
K-40	0.999	1460.81	* 10.67	1.94E+01	2.57E+00
GA-67	0.669	93.31	* 35.70	9.92E+01	3.96E+02
		208.95	* 2.24	1.03E+03	4.04E+03
		300.22	* 16.00	2.15E+02	8.57E+02
		235.69	* 25.00	4.01E+01	2.52E+01
NB-95M	0.686	88.03	* 3.72	2.47E+00	1.24E+00
CD-109	0.994	87.57	* 37.00	2.38E-01	1.18E-01
SN-126	0.934	583.14	* 30.22	1.25E+00	2.41E-01
		860.37	4.48		
		2614.66	* 35.85	9.49E-01	2.14E-01
PB-210	0.998	46.50	* 4.25	2.19E+00	2.33E+00
		727.17	* 11.80	7.15E-01	5.04E-01
BI-212	0.990	1620.62	* 2.75	2.73E+00	1.12E+00
		609.31	* 46.30	1.29E+00	2.06E-01
BI-214	0.994	1120.29	* 15.10	1.62E+00	6.11E-01

Analysis Report for 1510086-18
CP0404S17-18

Nuclide Name	Id Confidence	Energy (keV)	Yield(%)	Activity (pCi/grams)	Activity Uncertainty
BI-214	0.994	1764.49 *	15.80	1.22E+00	3.73E-01
		2204.22 *	4.98	1.26E+00	8.38E-01
PB-214	1.000	295.21 *	19.19	1.19E+00	2.33E-01
		351.92 *	37.19	1.33E+00	2.06E-01
RA-224	0.913	240.98 *	3.95	4.01E+00	1.40E+00
RA-226	0.998	186.21 *	3.28	3.49E+00	6.56E+00
AC-228	0.977	338.32 *	11.40	1.27E+00	4.88E-01
		911.07 *	27.70	1.16E+00	3.10E-01
		969.11 *	16.60	1.35E+00	3.98E-01

* = Energy line found in the spectrum.
 - = Manually added nuclide.
 ? = Manually edited nuclide.
 Energy Tolerance : 1.000 keV
 Nuclide confidence index threshold = 0.30
 Errors quoted at 2.000sigma

UNIDENTIFIED PEAKS

Peak Locate Performed on : 11/6/2015 3:40:50PM
 Peak Locate From Channel : 1
 Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
2	64.30	5.21046E-02	31.57		
3	76.41	3.08991E-01	7.05		
6	105.82	1.43225E-02	56.21	Tol.	EU-155 NP-239
11	270.17	2.56396E-02	31.75		
14	328.40	1.82824E-02	35.61	Tol.	LA-140
17	408.03	1.25378E-02	52.92		
18	463.07	1.22688E-02	42.60	Tol.	SB-125
19	511.00	3.19768E-02	23.38		
22	649.82	7.37654E-03	51.77		
23	670.23	5.87843E-03	59.82		
25	785.81	4.91858E-03	63.83		
26	794.21	8.25203E-03	45.91		
27	818.26	1.02399E-02	39.59	Sum	
M 29	964.42	1.12865E-02	28.50	Tol.	EU-152
31	1043.48	4.91809E-03	46.66		
33	1238.51	1.31658E-02	41.94		
M 34	1263.92	5.81157E-03	55.12	Sum	
m 35	1277.68	5.48139E-03	50.42		
m 36	1282.16	5.36657E-03	50.98		

Analysis Report for 1510086-18
CP0404S17-18

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
37	1321.86	6.93519E-03	38.12	Sum	
38	1377.93	6.81147E-03	38.90		
39	1396.70	3.66898E-03	49.28		
40	1412.22	7.91667E-03	50.44		
41	1424.79	3.65900E-03	59.29		
43	1582.25	4.07828E-03	41.99		
44	1593.25	1.21543E-02	18.14		
46	1629.96	3.01852E-03	44.13		
47	1730.13	7.77778E-03	18.90	Sum	
48	1738.97	1.94444E-03	62.27		
50	1848.21	5.91667E-03	35.45	Sum	
51	1877.63	2.22222E-03	35.36		
52	1953.25	3.14103E-03	36.46		
53	1975.24	1.58730E-03	53.22		
54	2051.17	2.05247E-03	47.00		
55	2116.82	4.03509E-03	37.15	Sum	

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

NUCLIDE IDENTIFICATION REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

IDENTIFIED NUCLIDES

Nuclide Name	Id Confidence	Energy (keV)	Yield(%)	Activity (pCi/grams)	Activity Uncertainty
K-40	0.99	1460.81 *	10.67	1.94E+01	2.57E+00
GA-67	0.66	93.31 *	35.70	9.92E+01	3.96E+02
		208.95 *	2.24	1.03E+03	4.04E+03
		300.22 *	16.00	2.15E+02	8.57E+02
NB-95M	0.68	235.69 *	25.00	4.01E+01	2.52E+01
CD-109	0.99	88.03 *	3.72	2.47E+00	1.24E+00
SN-126	0.93	87.57 *	37.00	2.38E-01	1.18E-01
TL-208	0.86	583.14 *	30.22	1.25E+00	2.41E-01
		860.37	4.48		
		2614.66 *	35.85	9.49E-01	2.14E-01
PB-210	0.99	46.50 *	4.25	2.19E+00	2.33E+00
BI-212	0.99	727.17 *	11.80	7.15E-01	5.04E-01

Analysis Report for 1510086-18
 CP0404S17-18

Nuclide Name	Id Confidence	Energy (keV)	Yield(%)	Activity (pCi/grams)	Activity Uncertainty
BI-212	0.99	1620.62 *	2.75	2.73E+00	1.12E+00
BI-214	0.99	609.31 *	46.30	1.29E+00	2.06E-01
		1120.29 *	15.10	1.62E+00	6.11E-01
		1764.49 *	15.80	1.22E+00	3.73E-01
		2204.22 *	4.98	1.26E+00	8.38E-01
PB-214	1.00	295.21 *	19.19	1.19E+00	2.33E-01
		351.92 *	37.19	1.33E+00	2.06E-01
RA-224	0.91	240.98 *	3.95	4.01E+00	1.40E+00
RA-226	0.99	186.21 *	3.28	3.49E+00	6.56E+00
AC-228	0.97	338.32 *	11.40	1.27E+00	4.88E-01
		911.07 *	27.70	1.16E+00	3.10E-01
		969.11 *	16.60	1.35E+00	3.98E-01

* = Energy line found in the spectrum.
 - = Manually added nuclide.
 ? = Manually edited nuclide.
 @ = Energy line not used for Weighted Mean Activity
 Energy Tolerance : 1.000 keV
 Nuclide confidence index threshold = 0.30
 Errors quoted at 2.000sigma

INTERFERENCE CORRECTED REPORT

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40	0.999	1.94E+01	2.57E+00	
GA-67	0.669	1.31E+02	5.07E+02	
NB-95M	0.686	4.01E+01	2.52E+01	
? CD-109	0.994	2.47E+00	1.24E+00	
? SN-126	0.934	2.38E-01	1.18E-01	
TL-208	0.869	1.08E+00	1.60E-01	
PB-210	0.998	2.19E+00	2.33E+00	
BI-212	0.990	1.05E+00	4.60E-01	
BI-214	0.994	1.30E+00	1.69E-01	
PB-214	1.000	1.27E+00	1.54E-01	
RA-224	0.913	4.01E+00	1.40E+00	
RA-226	0.998	3.49E+00	6.56E+00	
AC-228	0.977	1.24E+00	2.19E-01	

Analysis Report for 1510086-18

CP0404S17-18

- ? = nuclide is part of an undetermined solution
- X = nuclide rejected by the interference analysis
- @ = nuclide contains energy lines not used in Weighted Mean Activity

Errors quoted at 2.00sigma

Analysis Report for 1510086-18
CP0404S17-18

UNIDENTIFIED PEAKS

Peak Locate Performed on : 11/6/2015 3:40:50PM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
2	64.30	5.21046E-02	31.57		
3	76.41	3.08991E-01	7.05		
6	105.82	1.43225E-02	56.21	Tol.	EU-155 NP-239
11	270.17	2.56396E-02	31.75		
14	328.40	1.82824E-02	35.61	Tol.	LA-140
17	408.03	1.25378E-02	52.92		
18	463.07	1.22688E-02	42.60	Tol.	SB-125
19	511.00	3.19768E-02	23.38		
22	649.82	7.37654E-03	51.77		
23	670.23	5.87843E-03	59.82		
25	785.81	4.91858E-03	63.83		
26	794.21	8.25203E-03	45.91		
27	818.26	1.02399E-02	39.59	Sum	
M 29	964.42	1.12865E-02	28.50	Tol.	EU-152
31	1043.48	4.91809E-03	46.66		
33	1238.51	1.31658E-02	41.94		
M 34	1263.92	5.81157E-03	55.12	Sum	
m 35	1277.68	5.48139E-03	50.42		
m 36	1282.16	5.36657E-03	50.98		
37	1321.86	6.93519E-03	38.12	Sum	
38	1377.93	6.81147E-03	38.90		
39	1396.70	3.66898E-03	49.28		
40	1412.22	7.91667E-03	50.44		
41	1424.79	3.65900E-03	59.29		
43	1582.25	4.07828E-03	41.99		
44	1593.25	1.21543E-02	18.14		
46	1629.96	3.01852E-03	44.13		
47	1730.13	7.77778E-03	18.90	Sum	
48	1738.97	1.94444E-03	62.27		
50	1848.21	5.91667E-03	35.45	Sum	
51	1877.63	2.22222E-03	35.36		
52	1953.25	3.14103E-03	36.46		
53	1975.24	1.58730E-03	53.22		
54	2051.17	2.05247E-03	47.00		

Analysis Report for 1510086-18
CP0404S17-18

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
55	2116.82	4.03509E-03	37.15	Sum	

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000sigma

NUCLIDE MDA REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	BE-7	477.59	10.42	-1.49E-01	6.81E-01	6.81E-01
+	NA-22	1274.54	99.94	-1.31E-02	8.47E-02	8.47E-02
+	NA-24	1368.53	99.99	-1.63E+12	3.77E+12	5.02E+12
		2754.09	99.86	7.06E+11		3.77E+12
+	AL-26	1808.65	99.76	8.16E-03	6.20E-02	6.20E-02
+	K-40	1460.81	* 10.67	1.94E+01	1.26E+00	1.26E+00
+	@ AR-41	1293.64	99.16	1.00E+26	1.00E+26	1.00E+26
+	TI-44	67.88	94.40	-3.02E-02	5.12E-02	5.12E-02
		78.34	96.00	2.74E-01		7.35E-02
+	SC-46	889.25	99.98	1.85E-02	9.41E-02	9.41E-02
		1120.51	99.99	2.92E-01		1.76E-01
+	V-48	983.52	99.98	8.30E-02	2.61E-01	2.61E-01
		1312.10	97.50	1.05E-01		2.78E-01
+	CR-51	320.08	9.83	-2.83E-01	1.07E+00	1.07E+00
+	MN-54	834.83	99.97	-4.74E-02	7.44E-02	7.44E-02
+	CO-56	846.75	99.96	-2.21E-02	8.44E-02	8.44E-02
		1037.75	14.03	5.44E-02		6.69E-01
		1238.25	67.00	1.34E-01		2.22E-01
		1771.40	15.51	-1.98E-01		3.93E-01
		2598.48	16.90	-1.13E-01		2.68E-01
+	CO-57	122.06	85.51	-1.18E-02	5.59E-02	5.59E-02
		136.48	10.60	-3.49E-01		4.49E-01
+	CO-58	810.76	99.40	-2.30E-02	8.12E-02	8.12E-02
+	FE-59	1099.22	56.50	9.74E-03	2.37E-01	2.37E-01
		1291.56	43.20	5.86E-02		2.75E-01
+	CO-60	1173.22	100.00	3.18E-02	8.15E-02	9.72E-02
		1332.49	100.00	8.32E-03		8.15E-02
+	ZN-65	1115.52	50.75	-2.41E-02	1.60E-01	1.60E-01

Analysis Report for 1510086-18
CP0404S17-18

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	GA-67	93.31	*	35.70	9.92E+01	8.82E+01	8.82E+01
		208.95	*	2.24	1.03E+03		1.72E+03
		300.22	*	16.00	2.15E+02		3.06E+02
+	SE-75	121.11		16.70	7.31E-02	8.99E-02	3.16E-01
		136.00		59.20	-6.96E-02		8.99E-02
		264.65		59.80	3.28E-02		1.03E-01
		279.53		25.20	-1.38E-01		2.53E-01
		400.65		11.40	2.11E-01		5.90E-01
+	RB-82	776.52		13.00	-4.58E-01	1.11E+00	1.11E+00
+	RB-83	520.41		46.00	3.71E-03	1.45E-01	1.45E-01
		529.64		30.30	-5.73E-02		2.13E-01
		552.65		16.40	7.88E-02		3.93E-01
+	KR-85	513.99		0.43	-1.21E+01	1.59E+01	1.59E+01
+	SR-85	513.99		99.27	-7.17E-02	9.44E-02	9.44E-02
+	Y-88	898.02		93.40	-2.53E-02	6.47E-02	8.95E-02
		1836.01		99.38	-6.33E-03		6.47E-02
+	NB-93M	16.57		9.43	-6.98E+03	5.34E+03	5.34E+03
+	NB-94	702.63		100.00	-3.42E-04	6.56E-02	6.76E-02
		871.10		100.00	-2.54E-02		6.56E-02
+	NB-95	765.79		99.81	9.53E-02	1.52E-01	1.52E-01
+	NB-95M	235.69	*	25.00	4.01E+01	1.75E+02	1.75E+02
+	ZR-95	724.18		43.70	2.32E-02	1.84E-01	2.66E-01
		756.72		55.30	8.52E-02		1.84E-01
+	MO-99	181.06		6.20	3.51E+02	7.84E+02	1.25E+03
		739.58		12.80	1.75E+02		7.84E+02
		778.00		4.50	-3.65E+02		2.29E+03
+	RU-103	497.08		89.00	-2.84E-02	9.33E-02	9.33E-02
+	RU-106	621.84		9.80	-5.37E-01	6.71E-01	6.71E-01
+	AG-108M	433.93		89.90	-9.24E-03	5.30E-02	5.30E-02
		614.37		90.40	4.84E-03		7.24E-02
		722.95		90.50	1.51E-02		8.42E-02
+	CD-109	88.03	*	3.72	2.47E+00	1.86E+00	1.86E+00
+	AG-110M	657.75		93.14	3.15E-02	8.06E-02	8.06E-02
		677.61		10.53	-1.77E-01		6.59E-01
		706.67		16.46	1.64E-02		4.56E-01
		763.93		21.98	-2.19E-01		3.82E-01
		884.67		71.63	8.83E-03		1.12E-01
		1384.27		23.94	-7.16E-02		3.41E-01
+	CD-113M	263.70		0.02	1.43E+02	2.29E+02	2.29E+02
+	SN-113	255.12		1.93	9.46E-01	9.75E-02	3.21E+00
		391.69		64.90	2.89E-02		9.75E-02
+	TE123M	159.00		84.10	-6.45E-03	6.89E-02	6.89E-02
+	SB-124	602.71		97.87	-4.01E-04	8.84E-02	8.84E-02
		645.85		7.26	-1.11E-01		1.08E+00
		722.78		11.10	1.72E-01		9.59E-01
		1691.02		49.00	-1.53E-02		1.65E-01
+	I-125	35.49		6.49	-2.64E+00	5.16E+00	5.16E+00
+	SB-125	176.33		6.89	-1.58E-01	1.81E-01	7.28E-01

Analysis Report for 1510086-18
CP0404S17-18

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)	
SB-125	427.89	29.33	6.05E-02	1.81E-01	1.81E-01	
	463.38	10.35	5.99E-01		6.40E-01	
	600.56	17.80	1.24E-01		3.80E-01	
	635.90	11.32	1.47E-01		6.05E-01	
+ SB-126	414.70	83.30	4.64E-02	3.00E-01	3.00E-01	
	666.33	99.60	-3.39E-02		3.84E-01	
	695.00	99.60	-6.07E-02		3.56E-01	
+ SN-126	720.50	53.80	2.29E-01		6.75E-01	
	87.57	* 37.00	2.38E-01	1.79E-01	1.79E-01	
+ SB-127	473.00	25.00	2.56E+00	3.58E+01	3.93E+01	
	685.20	35.70	1.06E+01		3.58E+01	
	783.80	14.70	-1.01E+01		9.33E+01	
+ I-129	29.78	57.00	-2.12E-01	1.21E+00	1.21E+00	
	33.60	13.20	6.37E-01		2.44E+00	
	39.58	7.52	6.91E-01		2.14E+00	
+ I-131	284.30	6.05	5.04E+00	8.01E-01	1.06E+01	
	364.48	81.20	1.17E-01		8.01E-01	
	636.97	7.26	-3.00E-01		1.12E+01	
	722.89	1.80	9.30E+00		5.18E+01	
+ TE-132	49.72	13.10	8.64E+00	2.83E+01	2.77E+02	
	228.16	88.00	-6.42E+00		2.83E+01	
+ BA-133	81.00	33.00	-7.38E-03	8.61E-02	1.24E-01	
	302.84	17.80	-1.78E-02		3.01E-01	
	356.01	60.00	-1.43E-02		8.61E-02	
+ I-133	529.87	86.30	2.27E+08	7.55E+08	7.55E+08	
+ XE-133	81.00	38.00	-2.97E-01	4.99E+00	4.99E+00	
+ CS-134	563.23	8.38	1.95E-02	8.68E-02	6.73E-01	
	569.32	15.43	-1.41E-01		3.50E-01	
	604.70	97.60	1.85E-02		8.68E-02	
	795.84	85.40	5.19E-03		9.14E-02	
	801.93	8.73	-1.25E-01		8.07E-01	
+ CS-135	268.24	16.00	-1.96E-02	3.61E-01	3.61E-01	
+ @ I-135	1131.51	22.50	1.00E+26	1.00E+26	1.00E+26	
	@ 1260.41	28.60	1.00E+26		1.00E+26	
	@ 1678.03	9.54	1.00E+26		1.00E+26	
+ CS-136	153.22	7.46	1.15E+00	3.40E-01	3.13E+00	
	163.89	4.61	4.61E+00		5.21E+00	
	176.55	13.56	-5.34E-01		1.67E+00	
	273.65	12.66	-1.11E+00		1.85E+00	
	340.57	48.50	-3.66E-01		5.49E-01	
	818.50	99.70	1.91E-01		3.40E-01	
	1048.07	79.60	-7.24E-03		4.21E-01	
	1235.34	19.70	3.57E-01		2.40E+00	
	+ CS-137	661.65	85.12	1.32E-03	8.67E-02	8.67E-02
	+ LA-138	788.74	34.00	-9.75E-02	1.03E-01	1.85E-01
1435.80		66.00	2.42E-02		1.03E-01	
+ CE-139	165.85	80.35	-1.90E-03	7.29E-02	7.29E-02	
+ BA-140	162.64	6.70	-8.53E-01	9.51E-01	3.62E+00	
	304.84	4.50	3.26E+00		5.82E+00	

Analysis Report for 1510086-18
CP0404S17-18

<i>Nuclide Name</i>	<i>Energy (keV)</i>	<i>Yield(%)</i>	<i>Activity (pCi/grams)</i>	<i>Nuclide MDA (pCi/grams)</i>	<i>Line MDA (pCi/grams)</i>	
	BA-140	423.70	3.20	-1.86E+00	9.51E-01	7.82E+00
		437.55	2.00	1.56E+00		1.25E+01
		537.32	25.00	-2.02E-02		9.51E-01
+	LA-140	328.77	20.50	1.91E+00	4.31E-01	1.44E+00
		487.03	45.50	5.74E-02		5.62E-01
		815.85	23.50	4.02E-01		1.42E+00
		1596.49	95.49	4.08E-01		4.31E-01
+	CE-141	145.44	48.40	6.77E-02	1.91E-01	1.91E-01
+	CE-143	57.36	11.80	-5.02E+05	4.07E+05	9.69E+05
		293.26	42.00	-5.35E+04		4.07E+05
		664.55	5.20	-1.27E+06		3.24E+06
+	CE-144	133.54	10.80	4.29E-02	4.71E-01	4.71E-01
+	PM-144	476.78	42.00	-2.68E-02	7.08E-02	1.22E-01
		618.01	98.60	9.31E-03		7.08E-02
		696.49	99.49	-9.42E-03		7.44E-02
+	PM-145	36.85	21.70	-2.58E-01	4.89E-01	9.52E-01
		37.36	39.70	-1.33E-01		4.89E-01
		42.30	15.10	-7.42E-02		8.05E-01
		72.40	2.31	-1.25E+00		2.12E+00
+	PM-146	453.90	39.94	-6.49E-02	1.29E-01	1.29E-01
		735.90	14.01	-8.65E-02		4.62E-01
		747.13	13.10	6.30E-02		4.96E-01
+	ND-147	91.11	28.90	-9.07E-01	1.37E+00	1.37E+00
		531.02	13.10	2.88E-01		2.46E+00
+	PM-149	285.90	3.10	-4.42E+03	1.48E+04	1.48E+04
+	EU-152	121.78	20.50	-4.59E-02	2.17E-01	2.17E-01
		244.69	5.40	-2.76E+00		1.01E+00
		344.27	19.13	1.69E-01		2.60E-01
		778.89	9.20	5.61E-02		7.70E-01
		964.01	10.40	-1.71E+00		8.83E-01
		1085.78	7.22	1.72E-01		1.14E+00
		1112.02	9.60	-9.30E-02		8.21E-01
		1407.95	14.94	-5.65E-02		5.19E-01
+	GD-153	97.43	31.30	1.14E-02	1.59E-01	1.59E-01
		103.18	22.20	7.85E-02		2.19E-01
+	EU-154	123.07	40.50	-4.30E-02	1.11E-01	1.11E-01
		723.30	19.70	6.98E-02		3.89E-01
		873.19	11.50	-1.91E-01		5.81E-01
		996.32	10.30	-2.05E-01		5.68E-01
		1004.76	17.90	-5.70E-02		3.54E-01
		1274.45	35.50	-3.62E-02		2.35E-01
+	EU-155	86.50	30.90	-1.48E-01	1.98E-01	1.98E-01
		105.30	20.70	1.69E-01		2.25E-01
+	EU-156	811.77	10.40	-6.31E-01	2.09E+00	2.09E+00
		1153.47	7.20	1.76E-01		4.55E+00
		1230.71	8.90	8.99E-01		3.91E+00
+	HO-166M	184.41	72.60	2.75E-03	8.67E-02	8.67E-02
		280.45	29.60	-9.92E-02		1.82E-01
		410.94	11.10	1.40E-01		4.97E-01

Analysis Report for 1510086-18
CP0404S17-18

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	HO-166M	711.69	54.10	5.62E-02	8.67E-02	1.35E-01
+	TM-171	66.72	0.14	2.72E+01	3.73E+01	3.73E+01
+	HF-172	81.75	4.52	-7.81E-01	4.27E-01	9.14E-01
		125.81	11.30	-3.53E-01		4.27E-01
+	LU-172	181.53	20.60	1.39E+00	2.85E+00	4.99E+00
		810.06	16.63	-2.09E+00		7.38E+00
		912.12	15.25	3.97E+01		1.85E+01
		1093.66	62.50	2.70E-01		2.85E+00
+	LU-173	100.72	5.24	7.37E-01	2.91E-01	9.14E-01
		272.11	21.20	1.78E-01		2.91E-01
+	HF-175	343.40	84.00	-2.12E-02	7.50E-02	7.50E-02
+	LU-176	88.34	13.30	5.66E-01	5.55E-02	4.68E-01
		201.83	86.00	-3.00E-02		6.18E-02
		306.78	94.00	1.20E-02		5.55E-02
+	TA-182	67.75	41.20	-8.26E-02	1.40E-01	1.40E-01
		1121.30	34.90	9.16E-01		4.85E-01
		1189.05	16.23	-1.85E-01		6.88E-01
		1221.41	26.98	2.10E-02		4.35E-01
		1231.02	11.44	1.68E-01		9.13E-01
+	IR-192	308.46	29.68	-6.58E-02	1.34E-01	2.26E-01
		468.07	48.10	-1.51E-02		1.34E-01
+	HG-203	279.19	77.30	5.75E-02	1.12E-01	1.12E-01
+	BI-207	569.67	97.72	-2.17E-02	5.39E-02	5.39E-02
		1063.62	74.90	2.37E-02		9.60E-02
+	TL-208	583.14	* 30.22	1.25E+00	1.52E-01	2.65E-01
		860.37	4.48	4.79E-01		1.77E+00
		2614.66	* 35.85	9.49E-01		1.52E-01
+	BI-210M	262.00	45.00	-3.72E-02	1.17E-01	1.17E-01
		300.00	23.00	2.24E-01		2.67E-01
+	PB-210	46.50	* 4.25	2.19E+00	3.80E+00	3.80E+00
+	PB-211	404.84	2.90	-1.36E-01	1.89E+00	1.89E+00
		831.96	2.90	5.46E-01		2.40E+00
+	BI-212	727.17	* 11.80	7.15E-01	2.95E-01	7.93E-01
		1620.62	* 2.75	2.73E+00		2.95E-01
+	PB-212	238.63	44.60	7.82E-01	2.65E-01	2.65E-01
		300.09	3.41	1.51E+00		1.80E+00
+	BI-214	609.31	* 46.30	1.29E+00	2.06E-01	2.06E-01
		1120.29	* 15.10	1.62E+00		8.74E-01
		1764.49	* 15.80	1.22E+00		3.44E-01
		2204.22	* 4.98	1.26E+00		1.16E+00
+	PB-214	295.21	* 19.19	1.19E+00	2.10E-01	5.20E-01
		351.92	* 37.19	1.33E+00		2.10E-01
+	RN-219	401.80	6.50	4.21E-01	8.53E-01	8.53E-01
+	RA-223	323.87	3.88	3.73E-01	1.36E+00	1.36E+00
+	RA-224	240.98	* 3.95	4.01E+00	4.27E+00	4.27E+00
+	RA-225	40.00	31.00	6.28E-01	1.94E+00	1.94E+00
+	RA-226	186.21	* 3.28	3.49E+00	2.39E+00	2.39E+00
+	TH-227	50.10	8.40	2.74E-02	7.00E-01	8.77E-01

Analysis Report for 1510086-18
CP0404S17-18

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
TH-227	236.00	11.50	-4.60E+00	7.00E-01	7.00E-01
	256.20	6.30	2.20E-02		8.08E-01
+ AC-228	338.32 *	11.40	1.27E+00	3.99E-01	7.27E-01
	911.07 *	27.70	1.16E+00		3.99E-01
	969.11 *	16.60	1.35E+00		6.67E-01
+ TH-230	48.44	16.90	-6.92E-01	4.61E-01	4.61E-01
	62.85	4.60	1.55E+00		1.27E+00
	67.67	0.37	-7.72E+00		1.31E+01
+ PA-231	283.67	1.60	1.55E+00	2.32E+00	3.27E+00
	302.67	2.30	-1.37E-01		2.32E+00
+ TH-231	25.64	14.70	-4.38E+00	6.95E-01	1.47E+01
	84.21	6.40	1.02E+00		6.95E-01
+ PA-233	311.98	38.60	6.25E-02	2.83E-01	2.83E-01
+ PA-234	131.20	20.40	3.69E-02	2.52E-01	2.52E-01
	733.99	8.80	-1.40E-01		7.26E-01
	946.00	12.00	1.01E-01		6.12E-01
+ PA-234M	1001.03	0.92	-6.50E-01	6.64E+00	6.64E+00
+ TH-234	63.29	3.80	1.86E+00	1.53E+00	1.53E+00
+ U-235	143.76	10.50	2.15E-01	4.69E-01	4.69E-01
	163.35	4.70	-2.52E-01		1.07E+00
	205.31	4.70	8.78E-02		1.16E+00
+ NP-237	86.50	12.60	-3.60E-01	4.81E-01	4.81E-01
+ NP-239	106.10	22.70	1.63E+02	1.03E+03	1.03E+03
	228.18	10.70	-5.66E+02		2.49E+03
	277.60	14.10	1.03E+03		2.08E+03
+ AM-241	59.54	35.90	4.24E-02	1.44E-01	1.44E-01
+ AM-243	74.67	66.00	-1.81E-01	1.01E-01	1.01E-01
+ CM-243	209.75	3.29	1.52E+00	4.04E-01	1.76E+00
	228.14	10.60	-1.10E-01		4.86E-01
	277.60	14.00	2.01E-01		4.04E-01

- + = Nuclide identified during the nuclide identification
 * = Energy line found in the spectrum
 > = MDA value not calculated
 @ = Half-life too short to be able to perform the decay correction
 ? = CAUTION: MDA value is inconsistent with Currie MDA at 95% confidence level

Analysis Report for 1510086-18
CP0404S17-18

NUCLIDE MDA REPORT

Nuclide Library Used : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
BE-7	477.59	10.42	6.81E-01	6.81E-01	-1.49E-01	3.18E-01
NA-22	1274.54	99.94	8.47E-02	8.47E-02	-1.31E-02	3.88E-02
NA-24	1368.53	99.99	5.02E+12	3.77E+12	-1.63E+12	2.15E+12
	2754.09	99.86	3.77E+12		7.06E+11	1.46E+12
AL-26	1808.65	99.76	6.20E-02	6.20E-02	8.16E-03	2.67E-02
+ K-40	1460.81	* 10.67	1.26E+00	1.26E+00	1.94E+01	5.92E-01
@ AR-41	1293.64	99.16	1.00E+26	1.00E+26	1.00E+26	1.00E+20
TI-44	67.88	94.40	5.12E-02	5.12E-02	-3.02E-02	2.48E-02
	78.34	96.00	7.35E-02		2.74E-01	3.61E-02
SC-46	889.25	99.98	9.41E-02	9.41E-02	1.85E-02	4.38E-02
	1120.51	99.99	1.76E-01		2.92E-01	8.41E-02
V-48	983.52	99.98	2.61E-01	2.61E-01	8.30E-02	1.20E-01
	1312.10	97.50	2.78E-01		1.05E-01	1.26E-01
CR-51	320.08	9.83	1.07E+00	1.07E+00	-2.83E-01	5.11E-01
MN-54	834.83	99.97	7.44E-02	7.44E-02	-4.74E-02	3.46E-02
CO-56	846.75	99.96	8.44E-02	8.44E-02	-2.21E-02	3.90E-02
	1037.75	14.03	6.69E-01		5.44E-02	3.08E-01
	1238.25	67.00	2.22E-01		1.34E-01	1.04E-01
	1771.40	15.51	3.93E-01		-1.98E-01	1.61E-01
	2598.48	16.90	2.68E-01		-1.13E-01	1.00E-01
CO-57	122.06	85.51	5.59E-02	5.59E-02	-1.18E-02	2.71E-02
	136.48	10.60	4.49E-01		-3.49E-01	2.17E-01
CO-58	810.76	99.40	8.12E-02	8.12E-02	-2.30E-02	3.74E-02
FE-59	1099.22	56.50	2.37E-01	2.37E-01	9.74E-03	1.10E-01
	1291.56	43.20	2.75E-01		5.86E-02	1.25E-01
CO-60	1173.22	100.00	9.72E-02	8.15E-02	3.18E-02	4.53E-02
	1332.49	100.00	8.15E-02		8.32E-03	3.72E-02
ZN-65	1115.52	50.75	1.60E-01	1.60E-01	-2.41E-02	7.32E-02
+ GA-67	93.31	* 35.70	8.82E+01	8.82E+01	9.92E+01	4.33E+01
	208.95	* 2.24	1.72E+03		1.03E+03	8.40E+02
	300.22	* 16.00	3.06E+02		2.15E+02	1.49E+02
SE-75	121.11	16.70	3.16E-01	8.99E-02	7.31E-02	1.53E-01
	136.00	59.20	8.99E-02		-6.96E-02	4.36E-02
	264.65	59.80	1.03E-01		3.28E-02	4.94E-02
	279.53	25.20	2.53E-01		-1.38E-01	1.21E-01
	400.65	11.40	5.90E-01		2.11E-01	2.80E-01
RB-82	776.52	13.00	1.11E+00	1.11E+00	-4.58E-01	5.18E-01
RB-83	520.41	46.00	1.45E-01	1.45E-01	3.71E-03	6.79E-02
	529.64	30.30	2.13E-01		-5.73E-02	9.91E-02
	552.65	16.40	3.93E-01		7.88E-02	1.83E-01
KR-85	513.99	0.43	1.59E+01	1.59E+01	-1.21E+01	7.56E+00
SR-85	513.99	99.27	9.44E-02	9.44E-02	-7.17E-02	4.49E-02
Y-88	898.02	93.40	8.95E-02	6.47E-02	-2.53E-02	4.14E-02
	1836.01	99.38	6.47E-02		-6.33E-03	2.71E-02
NB-93M	16.57	9.43	5.34E+03	5.34E+03	-6.98E+03	2.60E+03

Analysis Report for 1510086-18

CP0404S17-18

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
NB-94	702.63	100.00	6.76E-02	6.56E-02	-3.42E-04	3.17E-02
	871.10	100.00	6.56E-02		-2.54E-02	3.03E-02
NB-95	765.79	99.81	1.52E-01	1.52E-01	9.53E-02	7.18E-02
+ NB-95M	235.69	* 25.00	1.75E+02	1.75E+02	4.01E+01	8.64E+01
ZR-95	724.18	43.70	2.66E-01	1.84E-01	2.32E-02	1.26E-01
	756.72	55.30	1.84E-01		8.52E-02	8.64E-02
MO-99	181.06	6.20	1.25E+03	7.84E+02	3.51E+02	6.04E+02
	739.58	12.80	7.84E+02		1.75E+02	3.65E+02
	778.00	4.50	2.29E+03		-3.65E+02	1.07E+03
RU-103	497.08	89.00	9.33E-02	9.33E-02	-2.84E-02	4.35E-02
RU-106	621.84	9.80	6.71E-01	6.71E-01	-5.37E-01	3.15E-01
AG-108M	433.93	89.90	5.30E-02	5.30E-02	-9.24E-03	2.48E-02
	614.37	90.40	7.24E-02		4.84E-03	3.41E-02
	722.95	90.50	8.42E-02		1.51E-02	3.97E-02
+ CD-109	88.03	* 3.72	1.86E+00	1.86E+00	2.47E+00	9.10E-01
AG-110M	657.75	93.14	8.06E-02	8.06E-02	3.15E-02	3.80E-02
	677.61	10.53	6.59E-01		-1.77E-01	3.08E-01
	706.67	16.46	4.56E-01		1.64E-02	2.14E-01
	763.93	21.98	3.82E-01		-2.19E-01	1.80E-01
	884.67	71.63	1.12E-01		8.83E-03	5.19E-02
	1384.27	23.94	3.41E-01		-7.16E-02	1.54E-01
CD-113M	263.70	0.02	2.29E+02	2.29E+02	1.43E+02	1.10E+02
SN-113	255.12	1.93	3.21E+00	9.75E-02	9.46E-01	1.54E+00
	391.69	64.90	9.75E-02		2.89E-02	4.62E-02
TE123M	159.00	84.10	6.89E-02	6.89E-02	-6.45E-03	3.34E-02
SB-124	602.71	97.87	8.84E-02	8.84E-02	-4.01E-04	4.15E-02
	645.85	7.26	1.08E+00		-1.11E-01	5.01E-01
	722.78	11.10	9.59E-01		1.72E-01	4.52E-01
	1691.02	49.00	1.65E-01		-1.53E-02	7.06E-02
I-125	35.49	6.49	5.16E+00	5.16E+00	-2.64E+00	2.50E+00
SB-125	176.33	6.89	7.28E-01	1.81E-01	-1.58E-01	3.52E-01
	427.89	29.33	1.81E-01		6.05E-02	8.51E-02
	463.38	10.35	6.40E-01		5.99E-01	3.04E-01
	600.56	17.80	3.80E-01		1.24E-01	1.79E-01
	635.90	11.32	6.05E-01		1.47E-01	2.85E-01
SB-126	414.70	83.30	3.00E-01	3.00E-01	4.64E-02	1.41E-01
	666.33	99.60	3.84E-01		-3.39E-02	1.82E-01
	695.00	99.60	3.56E-01		-6.07E-02	1.67E-01
	720.50	53.80	6.75E-01		2.29E-01	3.17E-01
+ SN-126	87.57	* 37.00	1.79E-01	1.79E-01	2.38E-01	8.76E-02
SB-127	473.00	25.00	3.93E+01	3.58E+01	2.56E+00	1.85E+01
	685.20	35.70	3.58E+01		1.06E+01	1.68E+01
	783.80	14.70	9.33E+01		-1.01E+01	4.37E+01
I-129	29.78	57.00	1.21E+00	1.21E+00	-2.12E-01	5.86E-01
	33.60	13.20	2.44E+00		6.37E-01	1.18E+00
	39.58	7.52	2.14E+00		6.91E-01	1.04E+00
I-131	284.30	6.05	1.06E+01	8.01E-01	5.04E+00	5.08E+00
	364.48	81.20	8.01E-01		1.17E-01	3.80E-01
	636.97	7.26	1.12E+01		-3.00E-01	5.27E+00
	722.89	1.80	5.18E+01		9.30E+00	2.44E+01
TE-132	49.72	13.10	2.77E+02	2.83E+01	8.64E+00	1.34E+02
	228.16	88.00	2.83E+01		-6.42E+00	1.36E+01
BA-133	81.00	33.00	1.24E-01	8.61E-02	-7.38E-03	6.01E-02

: 00979

Analysis Report for 1510086-18
CP0404S17-18

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
BA-133	302.84	17.80	3.01E-01	8.61E-02	-1.78E-02	1.44E-01
	356.01	60.00	8.61E-02		-1.43E-02	4.09E-02
I-133	529.87	86.30	7.55E+08	7.55E+08	2.27E+08	3.53E+08
XE-133	81.00	38.00	4.99E+00	4.99E+00	-2.97E-01	2.42E+00
CS-134	563.23	8.38	6.73E-01	8.68E-02	1.95E-02	3.14E-01
	569.32	15.43	3.50E-01		-1.41E-01	1.63E-01
	604.70	97.60	8.68E-02		1.85E-02	4.14E-02
	795.84	85.40	9.14E-02		5.19E-03	4.29E-02
	801.93	8.73	8.07E-01		-1.25E-01	3.76E-01
CS-135	268.24	16.00	3.61E-01	3.61E-01	-1.96E-02	1.74E-01
@ I-135	1131.51	22.50	1.00E+26	1.00E+26	1.00E+26	1.00E+20
@	1260.41	28.60	1.00E+26		1.00E+26	1.00E+20
@	1678.03	9.54	1.00E+26		1.00E+26	1.00E+20
CS-136	153.22	7.46	3.13E+00	3.40E-01	1.15E+00	1.52E+00
	163.89	4.61	5.21E+00		4.61E+00	2.53E+00
	176.55	13.56	1.67E+00		-5.34E-01	8.06E-01
	273.65	12.66	1.85E+00		-1.11E+00	8.85E-01
	340.57	48.50	5.49E-01		-3.66E-01	2.63E-01
	818.50	99.70	3.40E-01		1.91E-01	1.59E-01
	1048.07	79.60	4.21E-01		-7.24E-03	1.93E-01
	1235.34	19.70	2.40E+00		3.57E-01	1.12E+00
CS-137	661.65	85.12	8.67E-02	8.67E-02	1.32E-03	4.09E-02
LA-138	788.74	34.00	1.85E-01	1.03E-01	-9.75E-02	8.55E-02
	1435.80	66.00	1.03E-01		2.42E-02	4.60E-02
CE-139	165.85	80.35	7.29E-02	7.29E-02	-1.90E-03	3.53E-02
BA-140	162.64	6.70	3.62E+00	9.51E-01	-8.53E-01	1.76E+00
	304.84	4.50	5.82E+00		3.26E+00	2.79E+00
	423.70	3.20	7.82E+00		-1.86E+00	3.69E+00
	437.55	2.00	1.25E+01		1.56E+00	5.91E+00
	537.32	25.00	9.51E-01		-2.02E-02	4.42E-01
LA-140	328.77	20.50	1.44E+00	4.31E-01	1.91E+00	6.89E-01
	487.03	45.50	5.62E-01		5.74E-02	2.64E-01
	815.85	23.50	1.42E+00		4.02E-01	6.60E-01
	1596.49	95.49	4.31E-01		4.08E-01	1.95E-01
CE-141	145.44	48.40	1.91E-01	1.91E-01	6.77E-02	9.26E-02
CE-143	57.36	11.80	9.69E+05	4.07E+05	-5.02E+05	4.68E+05
	293.26	42.00	4.07E+05		-5.35E+04	1.97E+05
	664.55	5.20	3.24E+06		-1.27E+06	1.53E+06
CE-144	133.54	10.80	4.71E-01	4.71E-01	4.29E-02	2.28E-01
PM-144	476.78	42.00	1.22E-01	7.08E-02	-2.68E-02	5.72E-02
	618.01	98.60	7.08E-02		9.31E-03	3.33E-02
	696.49	99.49	7.44E-02		-9.42E-03	3.49E-02
PM-145	36.85	21.70	9.52E-01	4.89E-01	-2.58E-01	4.62E-01
	37.36	39.70	4.89E-01		-1.33E-01	2.37E-01
	42.30	15.10	8.05E-01		-7.42E-02	3.91E-01
	72.40	2.31	2.12E+00		-1.25E+00	1.03E+00
PM-146	453.90	39.94	1.29E-01	1.29E-01	-6.49E-02	6.05E-02
	735.90	14.01	4.62E-01		-8.65E-02	2.15E-01
	747.13	13.10	4.96E-01		6.30E-02	2.31E-01
ND-147	91.11	28.90	1.37E+00	1.37E+00	-9.07E-01	6.73E-01
	531.02	13.10	2.46E+00		2.88E-01	1.15E+00
PM-149	285.90	3.10	1.48E+04	1.48E+04	-4.42E+03	7.08E+03
EU-152	121.78	20.50	2.17E-01	2.17E-01	-4.59E-02	1.05E-01

Analysis Report for 1510086-18

CP0404S17-18

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
EU-152	244.69	5.40	1.01E+00	2.17E-01	-2.76E+00	4.89E-01
	344.27	19.13	2.60E-01		1.69E-01	1.24E-01
	778.89	9.20	7.70E-01		5.61E-02	3.59E-01
	964.01	10.40	8.83E-01		-1.71E+00	4.15E-01
	1085.78	7.22	1.14E+00		1.72E-01	5.29E-01
	1112.02	9.60	8.21E-01		-9.30E-02	3.78E-01
	1407.95	14.94	5.19E-01		-5.65E-02	2.35E-01
GD-153	97.43	31.30	1.59E-01	1.59E-01	1.14E-02	7.73E-02
	103.18	22.20	2.19E-01		7.85E-02	1.06E-01
EU-154	123.07	40.50	1.11E-01	1.11E-01	-4.30E-02	5.39E-02
	723.30	19.70	3.89E-01		6.98E-02	1.83E-01
	873.19	11.50	5.81E-01		-1.91E-01	2.68E-01
	996.32	10.30	5.68E-01		-2.05E-01	2.56E-01
	1004.76	17.90	3.54E-01		-5.70E-02	1.61E-01
EU-155	1274.45	35.50	2.35E-01		-3.62E-02	1.08E-01
	86.50	30.90	1.98E-01	1.98E-01	-1.48E-01	9.72E-02
EU-156	105.30	20.70	2.25E-01		1.69E-01	1.09E-01
	811.77	10.40	2.09E+00	2.09E+00	-6.31E-01	9.57E-01
HO-166M	1153.47	7.20	4.55E+00		1.76E-01	2.11E+00
	1230.71	8.90	3.91E+00		8.99E-01	1.81E+00
	184.41	72.60	8.67E-02	8.67E-02	2.75E-03	4.22E-02
	280.45	29.60	1.82E-01		-9.92E-02	8.75E-02
	410.94	11.10	4.97E-01		1.40E-01	2.35E-01
TM-171	711.69	54.10	1.35E-01		5.62E-02	6.37E-02
	66.72	0.14	3.73E+01	3.73E+01	2.72E+01	1.81E+01
HF-172	81.75	4.52	9.14E-01	4.27E-01	-7.81E-01	4.43E-01
	125.81	11.30	4.27E-01		-3.53E-01	2.07E-01
LU-172	181.53	20.60	4.99E+00	2.85E+00	1.39E+00	2.41E+00
	810.06	16.63	7.38E+00		-2.09E+00	3.40E+00
	912.12	15.25	1.85E+01		3.97E+01	8.90E+00
	1093.66	62.50	2.85E+00		2.70E-01	1.33E+00
LU-173	100.72	5.24	9.14E-01	2.91E-01	7.37E-01	4.45E-01
	272.11	21.20	2.91E-01		1.78E-01	1.40E-01
HF-175	343.40	84.00	7.50E-02	7.50E-02	-2.12E-02	3.55E-02
LU-176	88.34	13.30	4.68E-01	5.55E-02	5.66E-01	2.29E-01
	201.83	86.00	6.18E-02		-3.00E-02	2.99E-02
	306.78	94.00	5.55E-02		1.20E-02	2.65E-02
TA-182	67.75	41.20	1.40E-01	1.40E-01	-8.26E-02	6.79E-02
	1121.30	34.90	4.85E-01		9.16E-01	2.32E-01
	1189.05	16.23	6.88E-01		-1.85E-01	3.20E-01
	1221.41	26.98	4.35E-01		2.10E-02	2.03E-01
	1231.02	11.44	9.13E-01		1.68E-01	4.21E-01
	308.46	29.68	2.26E-01	1.34E-01	-6.58E-02	1.08E-01
IR-192	468.07	48.10	1.34E-01		-1.51E-02	6.25E-02
	279.19	77.30	1.12E-01	1.12E-01	5.75E-02	5.39E-02
BI-207	569.67	97.72	5.39E-02	5.39E-02	-2.17E-02	2.51E-02
	1063.62	74.90	9.60E-02		2.37E-02	4.40E-02
+ TL-208	583.14	* 30.22	2.65E-01	1.52E-01	1.25E+00	1.27E-01
	860.37	4.48	1.77E+00		4.79E-01	8.31E-01
	2614.66	* 35.85	1.52E-01		9.49E-01	6.37E-02
BI-210M	262.00	45.00	1.17E-01	1.17E-01	-3.72E-02	5.60E-02
	300.00	23.00	2.67E-01		2.24E-01	1.28E-01
+ PB-210	46.50	* 4.25	3.80E+00	3.80E+00	2.19E+00	1.87E+00

Analysis Report for 1510086-18
CP0404S17-18

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
PB-211	404.84	2.90	1.89E+00	1.89E+00	-1.36E-01	8.96E-01
	831.96	2.90	2.40E+00		5.46E-01	1.12E+00
+ BI-212	727.17 *	11.80	7.93E-01	2.95E-01	7.15E-01	3.78E-01
	1620.62 *	2.75	2.95E-01		2.73E+00	0.00E+00
PB-212	238.63	44.60	2.65E-01	2.65E-01	7.82E-01	1.30E-01
	300.09	3.41	1.80E+00		1.51E+00	8.65E-01
+ BI-214	609.31 *	46.30	2.06E-01	2.06E-01	1.29E+00	9.87E-02
	1120.29 *	15.10	8.74E-01		1.62E+00	4.16E-01
	1764.49 *	15.80	3.44E-01		1.22E+00	1.45E-01
	2204.22 *	4.98	1.16E+00		1.26E+00	4.89E-01
+ PB-214	295.21 *	19.19	5.20E-01	2.10E-01	1.19E+00	2.54E-01
	351.92 *	37.19	2.10E-01		1.33E+00	1.02E-01
RN-219	401.80	6.50	8.53E-01	8.53E-01	4.21E-01	4.05E-01
RA-223	323.87	3.88	1.36E+00	1.36E+00	3.73E-01	6.49E-01
+ RA-224	240.98 *	3.95	4.27E+00	4.27E+00	4.01E+00	2.11E+00
RA-225	40.00	31.00	1.94E+00	1.94E+00	6.28E-01	9.42E-01
+ RA-226	186.21 *	3.28	2.39E+00	2.39E+00	3.49E+00	1.17E+00
TH-227	50.10	8.40	8.77E-01	7.00E-01	2.74E-02	4.25E-01
	236.00	11.50	7.00E-01		-4.60E+00	3.42E-01
	256.20	6.30	8.08E-01		2.20E-02	3.88E-01
+ AC-228	338.32 *	11.40	7.27E-01	3.99E-01	1.27E+00	3.52E-01
	911.07 *	27.70	3.99E-01		1.16E+00	1.90E-01
	969.11 *	16.60	6.67E-01		1.35E+00	3.17E-01
TH-230	48.44	16.90	4.61E-01	4.61E-01	-6.92E-01	2.23E-01
	62.85	4.60	1.27E+00		1.55E+00	6.21E-01
	67.67	0.37	1.31E+01		-7.72E+00	6.35E+00
PA-231	283.67	1.60	3.27E+00	2.32E+00	1.55E+00	1.57E+00
	302.67	2.30	2.32E+00		-1.37E-01	1.11E+00
TH-231	25.64	14.70	1.47E+01	6.95E-01	-4.38E+00	7.12E+00
	84.21	6.40	6.95E-01		1.02E+00	3.38E-01
PA-233	311.98	38.60	2.83E-01	2.83E-01	6.25E-02	1.35E-01
PA-234	131.20	20.40	2.52E-01	2.52E-01	3.69E-02	1.22E-01
	733.99	8.80	7.26E-01		-1.40E-01	3.38E-01
	946.00	12.00	6.12E-01		1.01E-01	2.84E-01
PA-234M	1001.03	0.92	6.64E+00	6.64E+00	-6.50E-01	3.01E+00
TH-234	63.29	3.80	1.53E+00	1.53E+00	1.86E+00	7.46E-01
U-235	143.76	10.50	4.69E-01	4.69E-01	2.15E-01	2.28E-01
	163.35	4.70	1.07E+00		-2.52E-01	5.20E-01
	205.31	4.70	1.16E+00		8.78E-02	5.61E-01
NP-237	86.50	12.60	4.81E-01	4.81E-01	-3.60E-01	2.36E-01
NP-239	106.10	22.70	1.03E+03	1.03E+03	1.63E+02	5.00E+02
	228.18	10.70	2.49E+03		-5.66E+02	1.20E+03
	277.60	14.10	2.08E+03		1.03E+03	9.98E+02
AM-241	59.54	35.90	1.44E-01	1.44E-01	4.24E-02	6.96E-02
AM-243	74.67	66.00	1.01E-01	1.01E-01	-1.81E-01	4.96E-02
CM-243	209.75	3.29	1.76E+00	4.04E-01	1.52E+00	8.51E-01
	228.14	10.60	4.86E-01		-1.10E-01	2.34E-01
	277.60	14.00	4.04E-01		2.01E-01	1.94E-01

Analysis Report for 1510086-18
CP0404S17-18

- + = Nuclide identified during the nuclide identification
 - * = Energy line found in the spectrum
 - > = MDA value not calculated
 - @ = Half-life too short to be able to perform the decay correction
-

No Action Level results available for reporting purposes.

DATA REVIEW COMMENTS REPORT

<i>Creation Date</i>	<i>Comment</i>	<i>User</i>
----------------------	----------------	-------------

No Data Review Comments Entered.

 ***** S P E C T R A L D A T A R E P O R T *****

Sample Title: CP0404S17-18

Elapsed Live time: 3600

Elapsed Real Time: 3601

Channel	1	9	17	25	33	41	49	57	65	73	81	89	97	105	113	121	129	137	145	153	161	169	177	185	193	201	209	217	225	233	241	249	257	265	273	281	289	297	305	313	321	329	337	345	353	361		
	0	563	133	117	108	123	111	98	122	144	114	119	79	93	90	76	105	62	75	83	52	65	54	101	61	58	91	54	38	45	107	32	38	40	35	31	32	37	37	32	29	26	43	35	23	103	24	
	0	1229	143	124	136	123	116	88	137	170	93	197	82	99	85	64	96	50	77	81	70	65	59	185	64	55	75	56	49	49	176	36	35	28	25	33	37	28	37	25	31	23	102	35	31	24		
	0	1164	135	114	104	124	128	105	145	436	111	110	96	84	90	74	89	76	67	65	69	57	58	112	54	55	55	46	43	42	83	27	46	38	39	39	40	31	37	34	28	30	28	23	72	17	25	16
	0	445	125	126	99	122	124	104	126	235	136	136	87	63	84	67	71	67	70	61	88	66	62	63	43	55	41	59	41	71	38	44	37	39	34	30	30	27	34	24	22	31	17	26	24	33		
	0	636	129	122	135	127	109	114	108	485	152	275	85	74	77	75	84	64	77	71	55	66	70	57	58	67	45	54	42	55	34	44	33	34	51	31	34	38	24	30	25	33	24	23	19	27		
	0	1764	138	136	123	177	118	105	148	389	82	163	78	81	68	83	89	65	73	70	73	62	57	51	56	58	39	50	47	318	35	41	42	44	44	87	36	39	29	24	28	26	34	26	29	19	22	
	0	277	124	106	140	212	98	173	134	109	195	102	82	86	73	77	59	70	63	64	57	57	54	61	60	55	36	53	54	570	38	24	40	52	46	26	203	28	32	24	38	31	11	124	23	22		
	177	143	130	127	137	110	81	206	151	119	212	83	62	80	71	81	67	84	71	68	57	56	54	65	59	55	49	48	53	104	43	47	39	34	30	35	120	34	35	26	57	26	20	353	18	23		

369: 24 20 18 14 18 18 31 18

Sample Title: CP0404S17-18

Channel	1	2	3	4	5	6	7	8
377:	12	32	23	15	22	18	15	16
385:	18	21	24	22	32	22	22	28
393:	22	16	11	29	25	28	23	24
401:	32	22	22	16	23	27	24	24
409:	36	22	19	15	19	15	19	17
417:	16	14	16	30	21	16	15	17
425:	18	27	16	18	15	16	17	11
433:	15	16	16	17	17	16	23	18
441:	17	13	22	21	20	23	15	20
449:	16	10	20	18	20	14	15	14
457:	19	29	23	14	19	31	40	24
465:	17	10	18	5	18	20	16	21
473:	12	17	15	14	13	7	19	16
481:	16	18	17	14	15	17	15	17
489:	15	16	13	12	15	8	15	7
497:	17	14	14	16	22	19	18	17
505:	13	16	12	20	24	79	87	49
513:	33	14	16	14	17	15	15	12
521:	15	14	13	13	16	8	16	16
529:	12	10	10	20	13	8	10	19
537:	8	12	9	8	17	12	19	13
545:	15	15	13	9	16	11	11	10
553:	19	9	11	7	9	15	14	14
561:	16	12	20	9	11	12	14	9
569:	12	12	14	19	17	10	12	11
577:	10	17	13	12	11	49	175	89
585:	19	6	10	18	10	10	18	14
593:	14	10	13	10	11	15	16	11
601:	8	14	17	10	11	8	18	66
609:	239	147	14	13	13	9	12	8
617:	17	14	9	16	11	12	12	6
625:	10	17	15	15	13	17	11	8
633:	14	16	10	12	13	7	14	12
641:	11	15	5	7	7	5	4	15
649:	14	15	10	12	6	9	9	12
657:	9	10	18	16	13	13	11	17
665:	21	12	9	9	23	14	10	7
673:	14	5	10	14	8	15	9	9
681:	11	14	11	13	4	15	11	11
689:	11	7	20	12	5	15	12	17
697:	11	9	12	12	7	14	12	12
705:	5	10	12	15	11	13	9	15
713:	5	18	10	7	15	9	10	13
721:	15	11	7	14	13	18	36	20
729:	11	9	10	10	4	3	13	5
737:	16	7	13	7	12	5	9	7
745:	10	10	11	4	10	8	7	10
753:	8	12	18	11	12	9	10	11
761:	6	16	14	15	12	7	16	14
769:	27	11	9	14	9	7	9	6
777:	7	8	13	15	5	14	9	12
785:	13	12	8	4	4	5	6	11
793:	9	13	22	7	9	8	9	10

801: 4 4 13 11 10 12 9 5

Sample Title: CP0404S17-18

Channel	1	2	3	4	5	6	7	8	9
809:	6	10	5	7	4	4	8	13	
817:	12	12	7	8	8	11	5	7	
825:	10	3	13	5	6	10	8	6	
833:	7	6	16	7	4	13	12	17	
841:	8	12	5	6	6	5	9	11	
849:	8	9	5	6	10	6	4	9	
857:	5	5	13	20	15	8	8	12	
865:	10	10	11	10	4	5	9	5	
873:	7	8	8	7	14	6	8	12	
881:	8	6	12	5	5	13	11	4	
889:	9	9	7	7	10	8	8	2	
897:	6	8	10	10	7	8	9	7	
905:	13	7	9	9	12	37	98	47	
913:	11	9	5	5	14	5	6	4	
921:	8	5	11	4	7	9	5	9	
929:	11	5	1	12	13	16	6	6	
937:	7	1	7	9	9	5	9	8	
945:	6	9	8	3	10	6	7	5	
953:	6	5	4	7	5	5	9	4	
961:	3	10	12	12	23	9	13	30	
969:	53	25	11	5	7	6	4	5	
977:	8	4	3	4	8	2	9	10	
985:	8	9	5	10	13	8	5	9	
993:	4	5	2	6	5	2	5	3	
1001:	6	7	4	5	2	7	3	8	
1009:	5	10	5	4	5	7	4	6	
1017:	7	5	5	3	7	5	10	8	
1025:	5	6	5	5	6	4	3	7	
1033:	9	8	11	8	10	1	5	1	
1041:	2	8	9	12	5	3	7	9	
1049:	8	3	8	7	11	5	9	10	
1057:	1	7	6	5	8	7	6	4	
1065:	6	5	2	5	10	4	5	7	
1073:	6	11	9	7	10	10	8	4	
1081:	6	4	13	9	7	8	6	6	
1089:	7	9	11	7	4	9	12	9	
1097:	9	10	7	7	7	7	6	6	
1105:	7	5	5	7	8	8	5	10	
1113:	4	3	8	7	1	8	31	56	
1121:	32	13	11	9	6	9	5	9	
1129:	7	11	8	9	8	13	16	7	
1137:	12	10	4	6	10	8	7	6	
1145:	7	5	5	12	7	6	4	7	
1153:	10	3	14	10	5	6	5	4	
1161:	1	7	7	7	12	5	10	6	
1169:	7	11	10	11	8	5	15	5	
1177:	6	10	7	4	12	9	12	10	
1185:	12	13	10	9	5	8	8	7	
1193:	5	14	5	2	6	8	10	7	
1201:	3	9	9	18	10	7	8	10	
1209:	10	7	5	16	5	8	6	11	
1217:	3	4	9	13	9	8	11	10	
1225:	13	8	11	10	10	5	11	3	

1233: 5 5 9 13 16 17 10 10

Sample Title: CP0404S17-18

Channel	12	13	9	5	7	10	6	5
1241:	12	13	9	5	7	10	6	5
1249:	3	7	8	8	6	12	8	4
1257:	5	6	5	6	5	8	4	14
1265:	3	2	5	7	6	4	2	5
1273:	3	7	6	6	12	8	9	2
1281:	11	8	7	3	2	1	4	4
1289:	4	2	9	3	4	7	4	6
1297:	4	4	5	3	10	7	3	6
1305:	7	2	3	5	7	5	5	3
1313:	0	6	7	2	3	5	10	3
1321:	1	6	5	11	1	3	5	6
1329:	5	3	6	4	6	6	6	3
1337:	5	3	6	5	2	2	5	1
1345:	4	0	4	4	3	1	2	3
1353:	4	5	2	4	7	2	4	0
1361:	3	1	3	4	2	2	3	0
1369:	2	1	2	3	1	2	2	5
1377:	11	14	4	5	4	4	5	7
1385:	4	2	3	7	4	2	1	1
1393:	1	2	4	6	7	3	1	3
1401:	6	8	2	3	2	5	7	7
1409:	3	3	4	5	3	9	4	2
1417:	6	5	1	4	1	2	5	4
1425:	6	4	3	0	5	3	1	4
1433:	5	2	5	1	3	2	4	1
1441:	1	2	2	3	1	1	5	4
1449:	4	3	2	5	2	6	2	6
1457:	4	13	108	294	256	84	7	1
1465:	3	2	2	2	1	3	2	0
1473:	3	1	1	6	3	3	4	2
1481:	1	3	3	2	4	4	1	1
1489:	1	2	4	0	2	2	5	4
1497:	1	1	3	2	5	0	1	1
1505:	0	1	3	5	6	1	0	6
1513:	3	3	4	3	0	1	4	3
1521:	3	3	1	1	2	2	1	1
1529:	4	3	2	2	1	3	2	0
1537:	5	3	1	2	1	3	1	1
1545:	0	0	1	0	0	5	0	3
1553:	0	3	4	1	3	1	1	1
1561:	3	2	2	1	1	3	1	1
1569:	3	1	2	0	0	3	1	2
1577:	1	2	1	5	4	2	6	2
1585:	0	1	3	5	4	1	2	7
1593:	9	4	1	1	2	4	2	1
1601:	0	0	2	3	3	2	2	0
1609:	4	0	3	1	1	0	0	2
1617:	1	5	3	6	3	1	1	3
1625:	0	0	2	1	1	7	2	1
1633:	1	1	2	0	1	2	0	1
1641:	1	1	1	0	1	1	1	3
1649:	2	1	0	1	1	2	1	1
1657:	2	1	2	2	2	3	0	2

1665: 0 1 2 1 0 1 0 0

Sample Title: CP0404S17-18

Channel	1	2	3	4	5	6	7	8
1673:	3	1	1	1	1	1	2	1
1681:	0	2	0	2	2	0	2	1
1689:	0	2	2	2	1	2	1	1
1697:	1	1	0	0	0	0	0	2
1705:	1	0	1	1	0	0	1	1
1713:	1	1	1	1	1	1	2	2
1721:	1	1	2	0	0	0	3	3
1729:	8	6	6	2	0	0	1	0
1737:	2	3	2	2	1	0	1	1
1745:	0	1	1	0	1	0	0	0
1753:	1	1	2	0	1	0	0	1
1761:	0	4	26	18	16	5	0	2
1769:	0	2	1	1	0	0	1	1
1777:	2	2	2	1	3	0	1	2
1785:	3	0	2	0	2	0	2	2
1793:	0	0	1	1	5	0	0	0
1801:	2	1	0	1	0	2	3	0
1809:	1	1	3	2	1	2	1	1
1817:	1	1	2	1	2	2	0	2
1825:	1	0	1	2	1	1	0	1
1833:	0	1	1	2	2	2	0	1
1841:	2	0	1	2	2	6	5	6
1849:	3	2	1	2	0	1	2	1
1857:	1	0	0	0	1	2	2	1
1865:	3	0	0	0	0	0	0	3
1873:	2	0	0	4	1	2	1	0
1881:	0	1	3	2	1	0	1	2
1889:	2	1	2	1	0	1	3	0
1897:	1	0	1	3	1	0	1	0
1905:	0	1	0	0	3	0	1	1
1913:	3	0	1	2	2	2	0	0
1921:	1	0	2	0	1	0	1	1
1929:	0	1	1	0	2	0	0	3
1937:	0	2	0	3	1	1	0	0
1945:	1	1	3	0	1	3	1	0
1953:	3	3	2	0	0	1	2	2
1961:	2	2	2	0	0	2	0	0
1969:	2	1	1	0	0	4	2	1
1977:	0	0	0	2	0	0	2	2
1985:	1	1	0	3	2	2	2	1
1993:	1	1	5	0	2	2	1	0
2001:	0	0	0	0	0	0	2	0
2009:	1	0	3	0	1	0	2	1
2017:	2	0	1	1	3	2	1	0
2025:	2	0	1	1	2	0	0	0
2033:	1	2	0	2	4	0	0	0
2041:	1	1	1	1	1	0	1	1
2049:	0	3	1	3	0	0	1	1
2057:	0	0	0	1	1	0	1	1
2065:	1	0	1	0	1	4	1	2
2073:	1	2	0	2	1	0	0	3
2081:	1	1	0	2	1	2	1	1
2089:	2	1	1	1	2	2	1	0

2097: 1 1 1 1 3 2 2 1

Sample Title: CP0404S17-18

Channel	1	2	3	4	5	6	7	8
2105:	2	0	0	0	1	1	1	2
2113:	1	2	4	1	2	6	0	0
2121:	1	0	2	1	1	0	1	0
2129:	1	1	1	0	0	0	0	3
2137:	1	0	1	2	0	0	1	2
2145:	1	1	1	0	1	0	0	1
2153:	1	0	2	0	2	0	1	0
2161:	0	3	0	0	0	0	0	1
2169:	0	0	0	1	1	0	0	1
2177:	1	0	1	0	0	2	0	2
2185:	0	0	0	1	1	0	1	0
2193:	0	2	1	0	3	0	3	2
2201:	1	3	9	8	0	0	1	2
2209:	0	0	2	2	0	0	1	1
2217:	2	1	1	3	2	4	1	1
2225:	2	0	0	2	0	1	0	1
2233:	1	0	1	0	1	1	0	0
2241:	0	0	1	2	0	1	0	0
2249:	0	0	0	2	1	1	1	1
2257:	1	2	0	0	1	2	1	1
2265:	0	2	1	0	3	1	3	0
2273:	4	3	2	0	2	0	0	2
2281:	1	1	0	3	1	0	1	0
2289:	0	0	4	0	0	0	1	4
2297:	1	0	1	3	1	1	0	2
2305:	0	0	2	2	2	2	2	2
2313:	0	0	0	2	2	0	1	2
2321:	0	1	0	3	0	0	3	2
2329:	0	1	1	0	0	1	3	2
2337:	0	0	0	3	1	0	1	0
2345:	1	2	1	1	0	1	0	1
2353:	4	0	2	0	2	0	1	2
2361:	0	1	1	1	0	0	0	1
2369:	2	0	1	2	0	2	1	2
2377:	0	1	2	0	1	1	1	1
2385:	0	3	0	2	1	0	0	2
2393:	0	0	1	1	1	0	2	0
2401:	1	0	1	1	1	1	0	1
2409:	0	4	1	3	0	1	0	1
2417:	1	0	2	0	1	0	1	0
2425:	1	1	0	1	1	1	0	0
2433:	0	1	0	1	0	1	2	2
2441:	1	1	2	0	3	2	3	1
2449:	1	0	1	1	0	0	2	0
2457:	0	1	1	2	0	0	1	0
2465:	0	0	1	0	0	1	0	0
2473:	2	0	3	0	2	1	1	0
2481:	0	0	0	0	1	1	0	0
2489:	1	1	0	0	0	0	0	2
2497:	0	0	2	0	0	2	1	2
2505:	0	0	1	1	0	1	0	0
2513:	0	1	0	0	0	1	0	0
2521:	1	0	1	1	0	0	2	0

2529: 0 0 0 0 0 0 1 0

Sample Title: CP0404S17-18

Channel	1	2	3	4	5	6	7	8
2537:	0	1	1	0	2	0	0	1
2545:	0	1	1	0	0	0	0	2
2553:	0	0	2	0	0	0	3	1
2561:	1	0	0	1	0	0	0	0
2569:	1	0	0	1	0	0	0	0
2577:	1	0	0	1	0	0	0	0
2585:	0	0	1	0	0	0	1	1
2593:	1	0	1	0	0	0	0	1
2601:	1	0	0	1	1	3	0	0
2609:	1	0	6	26	28	25	19	8
2617:	2	0	1	0	0	0	1	1
2625:	0	0	0	0	0	0	0	0
2633:	1	1	0	0	0	1	0	0
2641:	3	0	0	0	0	0	0	0
2649:	1	0	0	1	0	0	0	0
2657:	1	0	0	0	0	0	0	0
2665:	0	0	0	0	0	0	0	0
2673:	0	0	2	0	0	0	0	0
2681:	0	1	0	0	0	2	0	0
2689:	0	0	1	0	0	0	0	0
2697:	0	0	0	0	1	0	1	0
2705:	0	1	0	0	0	0	0	0
2713:	0	1	1	1	2	1	0	0
2721:	1	0	0	0	1	1	0	2
2729:	0	0	0	0	0	0	0	0
2737:	1	0	0	0	1	1	0	0
2745:	0	0	0	0	0	0	2	0
2753:	0	1	1	0	0	0	0	1
2761:	0	0	1	0	1	0	1	0
2769:	0	1	1	0	0	0	0	1
2777:	1	0	1	1	0	0	0	0
2785:	1	0	0	0	0	0	0	1
2793:	1	1	0	0	4	1	1	1
2801:	1	1	0	0	0	0	0	0
2809:	0	0	0	0	1	0	0	0
2817:	0	0	1	0	0	0	0	1
2825:	0	0	1	0	0	0	0	1
2833:	1	0	1	0	0	1	0	1
2841:	0	0	0	0	0	1	0	0
2849:	0	0	1	0	0	0	1	1
2857:	1	0	0	0	0	0	0	0
2865:	0	0	0	0	0	1	0	0
2873:	1	0	0	0	0	0	0	0
2881:	0	0	0	1	0	0	0	0
2889:	0	0	0	0	0	0	0	0
2897:	0	0	0	1	0	0	0	0
2905:	0	0	0	0	0	0	0	0
2913:	0	0	0	2	0	0	0	0
2921:	0	0	1	0	2	0	1	0
2929:	0	0	1	0	0	0	0	0
2937:	0	0	0	0	0	0	0	0
2945:	1	0	0	1	0	0	0	0
2953:	0	0	0	0	0	3	0	0

2961: 1 0 0 0 0 0 0 0 0

Sample Title: CP0404S17-18

Channel	1	2	3	4	5	6	7	8	9
2969:	0	0	0	0	0	0	0	0	0
2977:	1	1	1	1	0	0	1	0	0
2985:	0	0	0	0	0	0	0	0	0
2993:	1	0	0	1	1	1	1	0	0
3001:	0	0	0	0	0	0	0	0	0
3009:	0	0	1	0	1	0	0	0	0
3017:	0	0	1	0	0	0	0	0	0
3025:	0	1	1	0	0	0	1	0	0
3033:	0	0	0	0	0	0	0	0	0
3041:	0	0	0	2	1	1	0	0	0
3049:	0	0	0	0	0	0	1	1	0
3057:	0	0	0	0	1	0	0	0	0
3065:	0	0	0	0	0	0	0	0	0
3073:	0	0	0	0	0	0	0	0	0
3081:	0	0	0	0	0	0	0	0	0
3089:	0	0	0	0	0	0	0	0	0
3097:	0	2	0	0	0	1	0	0	0
3105:	0	1	0	1	0	1	0	0	0
3113:	0	0	0	0	1	2	0	0	0
3121:	0	0	0	1	0	0	1	0	0
3129:	0	1	0	1	0	1	0	0	0
3137:	0	0	0	1	2	0	0	0	0
3145:	0	0	0	1	0	0	0	0	0
3153:	0	0	0	0	0	2	1	0	0
3161:	0	1	0	0	1	0	0	0	0
3169:	1	1	1	0	0	0	1	1	0
3177:	0	0	0	1	0	1	0	0	0
3185:	0	1	0	0	0	0	1	0	0
3193:	0	0	0	1	0	0	0	0	0
3201:	0	1	0	0	1	0	0	0	0
3209:	0	0	0	0	0	0	0	0	0
3217:	1	0	0	0	0	0	0	0	0
3225:	0	0	0	0	0	0	1	0	0
3233:	0	0	0	0	1	0	0	0	1
3241:	0	0	0	1	0	0	0	0	0
3249:	1	1	0	0	0	0	0	0	1
3257:	1	1	1	0	0	0	0	0	1
3265:	0	0	0	0	0	0	0	0	0
3273:	0	1	0	0	0	0	1	0	0
3281:	0	0	0	1	1	0	0	0	0
3289:	0	0	0	0	0	0	0	0	0
3297:	0	1	0	0	0	0	1	0	1
3305:	1	0	0	0	0	1	0	0	0
3313:	0	0	0	0	1	0	0	0	0
3321:	0	0	0	0	0	1	0	0	0
3329:	0	0	0	1	0	0	0	0	0
3337:	0	0	0	0	0	0	0	0	0
3345:	0	0	0	0	0	1	0	0	0
3353:	0	0	0	0	0	1	0	0	0
3361:	0	0	0	0	2	2	0	0	0
3369:	0	0	0	1	0	0	0	0	0
3377:	1	0	0	0	0	0	0	0	0
3385:	0	0	0	0	0	0	0	0	1

3393: 0 0 1 1 0 1 0 0

Sample Title: CP0404S17-18

Channel	1	2	3	4	5	6	7	8	9
3401:	0	0	0	0	0	0	0	0	1
3409:	0	0	0	0	1	0	0	0	0
3417:	0	1	1	1	0	0	0	0	0
3425:	0	0	1	0	0	0	0	0	0
3433:	0	0	1	0	0	1	0	0	0
3441:	0	0	1	0	1	0	0	0	0
3449:	0	0	0	0	0	1	0	0	0
3457:	0	0	0	0	0	0	0	0	0
3465:	0	0	0	1	1	0	0	0	1
3473:	2	0	0	0	0	1	0	0	1
3481:	0	0	0	0	0	0	0	0	0
3489:	1	0	0	0	0	0	0	0	0
3497:	0	0	0	1	0	0	0	0	0
3505:	0	0	1	0	0	0	0	0	0
3513:	0	0	1	0	0	0	0	0	1
3521:	0	0	0	0	0	0	0	0	0
3529:	0	0	0	0	0	0	0	0	0
3537:	0	0	1	1	0	0	0	1	0
3545:	0	0	1	0	0	0	0	1	0
3553:	0	0	0	0	0	0	0	0	0
3561:	0	0	0	0	0	0	0	1	0
3569:	0	0	0	0	0	0	0	1	0
3577:	0	0	0	0	0	0	0	0	0
3585:	0	0	0	0	0	0	0	0	0
3593:	0	0	0	0	0	0	1	0	0
3601:	0	0	1	0	0	0	0	1	0
3609:	0	0	0	0	0	0	0	0	0
3617:	0	0	0	0	0	0	0	0	0
3625:	0	0	0	0	2	1	0	0	0
3633:	0	1	0	0	0	0	0	0	0
3641:	0	0	0	0	1	0	0	0	0
3649:	0	0	0	0	0	0	0	1	0
3657:	1	0	0	0	0	0	0	0	0
3665:	0	0	0	0	0	0	0	0	0
3673:	1	0	0	0	1	0	0	0	0
3681:	0	0	0	0	0	0	0	0	1
3689:	0	0	0	0	0	0	0	0	0
3697:	1	0	0	0	0	0	0	0	0
3705:	1	0	0	0	0	0	0	0	0
3713:	0	1	0	0	0	0	0	0	0
3721:	1	0	0	0	0	0	0	0	0
3729:	0	0	0	0	0	0	1	0	0
3737:	0	0	0	0	0	0	0	0	0
3745:	0	0	0	0	1	0	0	0	0
3753:	0	0	0	0	1	0	0	0	0
3761:	1	0	0	0	0	0	0	0	0
3769:	1	0	1	0	1	1	0	0	0
3777:	0	0	0	0	0	0	0	0	0
3785:	0	0	0	0	0	0	0	0	0
3793:	0	0	0	0	0	0	1	0	0
3801:	0	0	0	0	0	0	0	0	0
3809:	0	0	1	0	0	0	0	0	0
3817:	0	0	0	0	0	0	0	0	0

3825: 0 0 1 0 0 1 0 0

Sample Title: CP0404S17-18

Channel	1	2	3	4	5	6	7	8	9
3833:	0	0	0	0	0	0	0	1	0
3841:	1	0	0	1	1	0	0	0	0
3849:	0	0	0	0	0	0	0	0	0
3857:	0	1	0	0	0	0	0	0	0
3865:	0	0	0	0	0	0	0	0	1
3873:	0	0	0	0	0	0	0	0	0
3881:	0	0	0	0	0	1	0	0	0
3889:	0	0	0	1	0	0	0	0	0
3897:	0	0	0	0	0	0	0	0	0
3905:	0	0	0	0	0	0	0	0	0
3913:	0	0	0	1	0	0	0	0	0
3921:	0	0	0	0	0	1	1	0	0
3929:	0	0	0	0	0	0	0	1	0
3937:	0	0	0	0	0	0	1	0	0
3945:	0	0	0	0	0	0	0	0	0
3953:	0	1	0	0	0	1	0	0	0
3961:	0	0	0	0	0	0	0	0	1
3969:	0	0	0	0	1	0	0	0	0
3977:	0	0	0	0	1	0	1	0	0
3985:	0	0	0	0	1	0	1	0	0
3993:	0	0	0	0	0	0	0	0	0
4001:	1	0	0	1	1	0	0	0	0
4009:	0	0	0	0	0	0	0	0	0
4017:	0	0	4	0	0	0	0	0	0
4025:	0	0	0	0	0	0	0	0	0
4033:	0	0	0	0	0	0	0	0	0
4041:	0	0	0	0	0	0	0	0	0
4049:	0	0	0	0	1	1	0	0	0
4057:	0	0	0	0	0	0	1	1	0
4065:	0	0	0	0	1	0	1	0	0
4073:	0	0	0	0	0	0	0	0	0
4081:	0	0	1	0	1	1	0	0	0
4089:	0	1	0	0	1	0	0	0	0

 ***** GENIE QUALITY ASSURANCE *****

Last Results Report
 11/5/15 6:00:23 AM

1115

QA File: \\OR-GAMMA1\ApexRoot\Countroom\QA\D0000000004B.QCK

Detector: GE4
 Geometry: <None>
 Certificate: <None>
 Sample ID: QA Background Ch
 Sample Desc: QA Count
 Sample Quantity: 1.0000E+000
 Sample Date: 11/5/15 5:44:53 AM
 Measurement Date: 11/5/15 5:44:56 AM
 Elapsed Live Time: 900.0 seconds
 Elapsed Real Time: 909.7 seconds

Parameter Description	Value	Deviation/Flags
[Mean +/- Std. Dev.]		< LU : SD : UD : BS >
DAILY BKG CT RATE GE4	1.4878E+000	-4.4360E-002
[SD: 8.7623E+000+/-163.99]		< : : : >
Trend Test: The last	9 samples exhibit a bias trend.	

Flags Key: LU = Lower/Upper Bounds Test (Ab = Above, Be = Below)
 SD = Sample Driven N-Sigma Test (In = Investigate, Ac = Action)
 UD = User Driven N-Sigma Test (In = Investigate, Ac = Action)
 BS = Measurement Bias Test (In = Investigate, Ac = Action)

 ***** G E N I E Q U A L I T Y A S S U R A N C E *****

Last Results Report
 11/5/15 6:00:03 AM

lu

QA File: \\OR-GAMMA1\ApexRoot\Countroom\QA\D0000000003B.QCK

Detector: GE3
 Geometry: <None>
 Certificate: <None>
 Sample ID: QA Background Ch
 Sample Desc: QA Count
 Sample Quantity: 1.0000E+000
 Sample Date: 11/5/15 5:44:46 AM
 Measurement Date: 11/5/15 5:44:48 AM
 Elapsed Live Time: 900.0 seconds
 Elapsed Real Time: 903.8 seconds

Parameter Description	Value	Deviation/Flags
[Mean +/- Std. Dev.]		< LU : SD : UD : BS >
DAILY BKG CT RATE GE3	1.7810E+003	-3.3914E-001
[SD: 2.2892E+003+/-1498.4]		< : : : >

Flags Key: LU = Lower/Upper Bounds Test (Ab = Above, Be = Below)
 SD = Sample Driven N-Sigma Test (In = Investigate, Ac = Action)
 UD = User Driven N-Sigma Test (In = Investigate, Ac = Action)
 BS = Measurement Bias Test (In = Investigate, Ac = Action)

 ***** G E N I E Q U A L I T Y A S S U R A N C E *****

Last Results Report
 11/5/15 5:30:30 AM

QA File: \\OR-GAMMA1\ApexRoot\Countroom\QA\D0000000003GAS-1402C.QC

Detector: GE3
 Geometry: <None>
 Certificate: GAS-1402
 Sample ID: QA Calibration C
 Sample Desc: QA Count
 Sample Quantity: 1.0000E+000
 Sample Date: 10/1/14 12:00:00 AM
 Measurement Date: 11/5/15 5:14:43 AM
 Elapsed Live Time: 900.0 seconds
 Elapsed Real Time: 937.2 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >				
Peak centroid 59.54 keV Boundary Limits: [5.800E+001, 6.100E+001]	5.9924E+001	<	:	:	:	>
Peak centroid 661.65 keV Boundary Limits: [6.600E+002, 6.640E+002]	6.6167E+002	<	:	:	:	>
Peak centroid 1332.49 keV Boundary Limits: [1.331E+003, 1.334E+003]	1.3324E+003	<	:	:	:	>
Peak centroid 1836.1 keV Boundary Limits: [1.833E+003, 1.838E+003]	1.8359E+003	<	:	:	:	>
Peak FWHM Am-241 Boundary Limits: [5.000E-001, 3.000E+000]	1.6194E+000	<	:	:	:	>
Peak FWHM Cs-137 Boundary Limits: [5.000E-001, 3.000E+000]	1.9018E+000	<	:	:	:	>
Peak FWHM Co-60 Boundary Limits: [5.000E-001, 3.000E+000]	2.1555E+000	<	:	:	:	>
Peak FWHM Y-88 Boundary Limits: [5.000E-001, 3.000E+000]	2.5793E+000	<	:	:	:	>
Decay corrected activity Boundary Limits: [1.223E-001, 1.834E-001] Trend Test: The last 9 samples exhibit a bias trend.	1.8008E+005	<	:	:	:	>
Decay corrected activity Boundary Limits: [4.969E-002, 7.453E-002] Trend Test: The last 9 samples exhibit a bias trend.	6.5252E+004	<	:	:	:	>

Decay corrected activity 9.8492E+004
Boundary Limits: [7.972E-002, 1.120E-001] < : : : >
Trend Test: The last 9 samples exhibit a bias trend.

Parameter Description	Value	Deviation/Flags
{Mean +/- Std. Dev.}		< LU : SD : UD : BS >

Decay corrected activity	2.0742E+005	
Boundary Limits: [1.713E-001, 2.569E-001]		< : : : >
Trend Test: The last 9 samples exhibit a bias trend.		

Flags Key: LU = Lower/Upper Bounds Test (Ab = Above, Be = Below)
SD = Sample Driven N-Sigma Test (In = Investigate, Ac = Action)
UD = User Driven N-Sigma Test (In = Investigate, Ac = Action)
BS = Measurement Bias Test (In = Investigate, Ac = Action)

 ***** GENIE QUALITY ASSURANCE *****

Last Results Report
 11/5/15 5:30:58 AM

QA File: \\OR-GAMMA1\ApexRoot\Countroom\QA\D0000000004GAW-14C.QCK

Detector: GE4
 Geometry: <None>
 Certificate: GAW-14
 Sample ID: QA Calibration C
 Sample Desc: QA Count
 Sample Quantity: 1.0000E+000
 Sample Date: 10/1/14 12:00:00 AM
 Measurement Date: 11/5/15 5:14:51 AM
 Elapsed Live Time: 900.0 seconds
 Elapsed Real Time: 955.3 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >			
Peak centroid 59.54 keV Boundary Limits: [5.800E+001, 6.100E+001]	5.8652E+001	<	:	:	>
Peak centroid 661.65 keV Boundary Limits: [6.600E+002, 6.630E+002]	6.6104E+002	<	:	:	>
Peak centroid 1332.49 keV Boundary Limits: [1.331E+003, 1.334E+003]	1.3322E+003	<	:	:	>
Peak centroid 1836.1 keV Boundary Limits: [1.834E+003, 1.838E+003] Trend Test: The last 9 samples exhibit a bias trend.	1.8360E+003	<	:	:	>
Peak FWHM Am-241 Boundary Limits: [5.000E-001, 3.000E+000]	2.2406E+000	<	:	:	>
Peak FWHM Cs-137 Boundary Limits: [5.000E-001, 3.000E+000]	2.6500E+000	<	:	:	>
Peak FWHM Co-60 Boundary Limits: [5.000E-001, 3.000E+000]	2.8722E+000	<	:	:	>
Peak FWHM Y-88 Boundary Limits: [5.000E-001, 3.500E+000]	2.8622E+000	<	:	:	>
Decay corrected activity Boundary Limits: [1.200E-001, 1.816E-001] Trend Test: The last 9 samples exhibit a bias trend.	1.2394E+005	<	:	:	>
Decay corrected activity Boundary Limits: [4.918E-002, 7.377E-002]	6.3841E+004	<	:	:	>

Decay corrected activity 9.7492E+004
Boundary Limits: [7.892E-002, 1.184E-001] < : : : >
Trend Test: The last 9 samples exhibit a bias trend.

Parameter Description	Value	Deviation/Flags
[Mean +/- Std. Dev.]		< LU : SD : UD : BS >

Decay corrected activity	2.1278E+005	
Boundary Limits: [1.695E-001, 2.543E-001]		< : : : >
Trend Test: The last 9 samples exhibit a bias trend.		

Flags Key: LU = Lower/Upper Bounds Test (Ab = Above, Be = Below)
SD = Sample Driven N-Sigma Test (In = Investigate, Ac = Action)
UD = User Driven N-Sigma Test (In = Investigate, Ac = Action)
BS = Measurement Bias Test (In = Investigate, Ac = Action)

 ***** GENIE QUALITY ASSURANCE *****

Last Results Report
 11/6/15 6:04:42 AM

QA File: \\OR-GAMMA1\ApexRoot\Countroom\QA\D0000000004B.QCK

Detector: GE4
 Geometry: <None>
 Certificate: <None>
 Sample ID: QA Background Ch
 Sample Desc: QA Count
 Sample Quantity: 1.0000E+000
 Sample Date: 11/6/15 5:49:19 AM
 Measurement Date: 11/6/15 5:49:21 AM
 Elapsed Live Time: 900.0 seconds
 Elapsed Real Time: 910.5 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
DAILY BKG CT RATE GE4 [SD: 8.7486E+000+/-163.83]	1.6278E+000	-4.3463E-002
Trend Test: The last	9 samples exhibit a bias trend.	< : : : >

Flags Key: LU = Lower/Upper Bounds Test (Ab = Above, Be = Below)
 SD = Sample Driven N-Sigma Test (In = Investigate, Ac = Action)
 UD = User Driven N-Sigma Test (In = Investigate, Ac = Action)
 BS = Measurement Bias Test (In = Investigate, Ac = Action)

 ***** GENIE QUALITY ASSURANCE *****

Last Results Report
 11/6/15 6:04:26 AM

Tull

QA File: \\OR-GAMMA1\ApexRoot\Countroom\QA\D0000000003B.QCK

Detector: GE3
 Geometry: <None>
 Certificate: <None>
 Sample ID: QA Background Ch
 Sample Desc: QA Count
 Sample Quantity: 1.0000E+000
 Sample Date: 11/6/15 5:49:12 AM
 Measurement Date: 11/6/15 5:49:14 AM
 Elapsed Live Time: 900.0 seconds
 Elapsed Real Time: 903.8 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
DAILY BKG CT RATE GE3 [SD: 2.2882E+003+/-1497.2]	1.6930E+003	-3.9756E-001 < : : : >

Flags Key: LU = Lower/Upper Bounds Test (Ab = Above, Be = Below)
 SD = Sample Driven N-Sigma Test (In = Investigate, Ac = Action)
 UD = User Driven N-Sigma Test (In = Investigate, Ac = Action)
 BS = Measurement Bias Test (In = Investigate, Ac = Action)

 ***** G E N I E Q U A L I T Y A S S U R A N C E *****

Last Results Report
 11/6/15 6:04:15 AM

1116

QA File: \\OR-GAMMA1\ApexRoot\Countroom\QA\D0000000002B.QCK

Detector: GE2
 Geometry: <None>
 Certificate: <None>
 Sample ID: QA Background Ch
 Sample Desc: QA Count
 Sample Quantity: 1.0000E+000
 Sample Date: 11/6/15 5:49:00 AM
 Measurement Date: 11/6/15 5:49:02 AM
 Elapsed Live Time: 900.0 seconds
 Elapsed Real Time: 900.1 seconds

Parameter Description	Value	Deviation/Flags
[Mean +/- Std. Dev.]		< LU : SD : UD : BS >
DAILY BKG CT RATE GE2	4.3933E+000	-5.6838E-001
[SD: 4.5529E+000+/- 0.281]		< : : : >

Flags Key: LU = Lower/Upper Bounds Test (Ab = Above, Be = Below)
 SD = Sample Driven N-Sigma Test (In = Investigate, Ac = Action)
 UD = User Driven N-Sigma Test (In = Investigate, Ac = Action)
 BS = Measurement Bias Test (In = Investigate, Ac = Action)

 ***** G E N I E Q U A L I T Y A S S U R A N C E *****

Last Results Report
 11/6/15 6:04:07 AM

✓
 1114

QA File: \\OR-GAMMA1\ApexRoot\Countroom\QA\D0000000001B.QCK

Detector: GE1
 Geometry: <None>
 Certificate: <None>
 Sample ID: QA Background Ch
 Sample Desc: QA Count
 Sample Quantity: 1.0000E+000
 Sample Date: 11/6/15 5:48:53 AM
 Measurement Date: 11/6/15 5:48:55 AM
 Elapsed Live Time: 900.0 seconds
 Elapsed Real Time: 900.1 seconds

Parameter Description	Value	Deviation/Flags
[Mean +/- Std. Dev.]		< LU : SD : UD : BS >
DAILY BKG CT RATE GE1	2.0389E+000	-1.5595E-001
[SD: 2.3030E+000+/- 1.694]		< : : : >
Trend Test: The last 9 samples exhibit a bias trend.		

Flags Key: LU = Lower/Upper Bounds Test (Ab = Above, Be = Below)
 SD = Sample Driven N-Sigma Test (In = Investigate, Ac = Action)
 UD = User Driven N-Sigma Test (In = Investigate, Ac = Action)
 BS = Measurement Bias Test (In = Investigate, Ac = Action)

 ***** GENIE QUALITY ASSURANCE *****

Last Results Report
 11/6/15 5:32:41 AM

1006

QA File: \\OR-GAMMA1\ApexRoot\Countroom\QA\D0000000003GAS-1402C.QC

Detector: GE3
 Geometry: <None>
 Certificate: GAS-1402
 Sample ID: QA Calibration C
 Sample Desc: QA Count
 Sample Quantity: 1.0000E+000
 Sample Date: 10/1/14 12:00:00 AM
 Measurement Date: 11/6/15 5:16:53 AM
 Elapsed Live Time: 900.0 seconds
 Elapsed Real Time: 937.6 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
Peak centroid 59.54 keV Boundary Limits: [5.800E+001, 6.100E+001]	5.9779E+001	< : : : >
Peak centroid 661.65 keV Boundary Limits: [6.600E+002, 6.640E+002] Trend Test: The last 9 samples exhibit a bias trend.	6.6155E+002	< : : : >
Peak centroid 1332.49 ke Boundary Limits: [1.331E+003, 1.334E+003]	1.3322E+003	< : : : >
Peak centroid 1836.1 keV Boundary Limits: [1.833E+003, 1.838E+003]	1.8356E+003	< : : : >
Peak FWHM Am-241 Boundary Limits: [5.000E-001, 3.000E+000]	1.8047E+000	< : : : >
Peak FWHM Cs-137 Boundary Limits: [5.000E-001, 3.000E+000]	2.1181E+000	< : : : >
Peak FWHM Co-60 Boundary Limits: [5.000E-001, 3.000E+000]	2.2416E+000	< : : : >
Peak FWHM Y-88 Boundary Limits: [5.000E-001, 3.000E+000]	2.5287E+000	< : : : >
Decay corrected activity Boundary Limits: [1.223E-001, 1.834E-001] Trend Test: The last 9 samples exhibit a bias trend.	1.7928E+005	< : : : >
Decay corrected activity Boundary Limits: [4.969E-002, 7.453E-002] Trend Test: The last 9 samples exhibit a bias trend.	6.4125E+004	< : : : >

Decay corrected activity 9.8562E+004
Boundary Limits: [7.972E-002, 1.120E-001] < : : : >
Trend Test: The last 9 samples exhibit a bias trend.

Parameter Description	Value	Deviation/Flags			
[Mean +/- Std. Dev.]		< LU	: SD	: UD	: BS >

Decay corrected activity 2.1725E+005
Boundary Limits: [1.713E-001, 2.569E-001] < : : : >
Trend Test: The last 9 samples exhibit a bias trend.

Flags Key: LU = Lower/Upper Bounds Test (Ab = Above, Be = Below)
SD = Sample Driven N-Sigma Test (In = Investigate, Ac = Action)
UD = User Driven N-Sigma Test (In = Investigate, Ac = Action)
BS = Measurement Bias Test (In = Investigate, Ac = Action)

 ***** G E N I E Q U A L I T Y A S S U R A N C E *****

Last Results Report
 11/6/15 5:33:12 AM

1014

QA File: \\OR-GAMMA1\ApexRoot\Countroom\QA\D0000000004GAW-14C.QCK

Detector: GE4
 Geometry: <None>
 Certificate: GAW-14
 Sample ID: QA Calibration C
 Sample Desc: QA Count
 Sample Quantity: 1.0000E+000
 Sample Date: 10/1/14 12:00:00 AM
 Measurement Date: 11/6/15 5:17:02 AM
 Elapsed Live Time: 900.0 seconds
 Elapsed Real Time: 958.7 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >			
Peak centroid 59.54 keV Boundary Limits: [5.800E+001, 6.100E+001]	5.8614E+001	<	:	:	>
Peak centroid 661.65 keV Boundary Limits: [6.600E+002, 6.630E+002]	6.6104E+002	<	:	:	>
Peak centroid 1332.49 keV Boundary Limits: [1.331E+003, 1.334E+003]	1.3322E+003	<	:	:	>
Peak centroid 1836.1 keV Boundary Limits: [1.834E+003, 1.838E+003] Trend Test: The last 9 samples exhibit a bias trend.	1.8361E+003	<	:	:	>
Peak FWHM Am-241 Boundary Limits: [5.000E-001, 3.000E+000]	2.2479E+000	<	:	:	>
Peak FWHM Cs-137 Boundary Limits: [5.000E-001, 3.000E+000]	2.6459E+000	<	:	:	>
Peak FWHM Co-60 Boundary Limits: [5.000E-001, 3.000E+000]	2.9826E+000	<	:	:	>
Peak FWHM Y-88 Boundary Limits: [5.000E-001, 3.500E+000] Trend Test: The last 9 samples exhibit a bias trend.	2.9975E+000	<	:	:	>
Decay corrected activity Boundary Limits: [1.200E-001, 1.816E-001] Trend Test: The last 9 samples exhibit a bias trend.	1.2362E+005	<	:	:	>
Decay corrected activity Boundary Limits: [4.918E-002, 7.377E-002]	6.2953E+004	<	:	:	>

Decay corrected activity 9.7706E+004
Boundary Limits: [7.892E-002, 1.184E-001] < : : : >
Trend Test: The last 9 samples exhibit a bias trend.

Parameter Description	Value	Deviation/Flags
[Mean +/- Std. Dev.]		< LU : SD : UD : BS >

Decay corrected activity 1.9965E+005
Boundary Limits: [1.695E-001, 2.543E-001] < : : : >
Trend Test: The last 9 samples exhibit a bias trend.

Flags Key: LU = Lower/Upper Bounds Test (Ab = Above, Be = Below)
SD = Sample Driven N-Sigma Test (In = Investigate, Ac = Action)
UD = User Driven N-Sigma Test (In = Investigate, Ac = Action)
BS = Measurement Bias Test (In = Investigate, Ac = Action)

 ***** GENIE QUALITY ASSURANCE *****

Last Results Report
 11/6/15 5:32:22 AM

QA File: \\OR-GAMMA1\ApexRoot\Countroom\QA\D000000002GAS-1401C.QC

Detector: GE2
 Geometry: <None>
 Certificate: GAS-1401
 Sample ID: QA Calibration C
 Sample Desc: QA Count
 Sample Quantity: 1.0000E+000
 Sample Date: 10/1/14 12:00:00 AM
 Measurement Date: 11/6/15 5:16:42 AM
 Elapsed Live Time: 900.0 seconds
 Elapsed Real Time: 926.7 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >			
Peak centroid 59.54kev Boundary Limits: [5.800E+001, 6.100E+001] Trend Test: The last 9 samples exhibit a bias trend.	6.0000E+001	<	:	:	>
Peak centroid 661.65 kev Boundary Limits: [6.600E+002, 6.640E+002] Trend Test: The last 9 samples exhibit a bias trend.	6.6145E+002	<	:	:	>
Peak centroid 1332.49 ke Boundary Limits: [1.331E+003, 1.334E+003]	1.3320E+003	<	:	:	>
Peak centroid 1836.1 kev Boundary Limits: [1.834E+003, 1.838E+003] Trend Test: The last 9 samples exhibit a bias trend.	1.8353E+003	<	:	:	>
Peak FWHM Am-241 Boundary Limits: [5.000E-001, 3.000E+000] Trend Test: The last 9 samples exhibit a bias trend.	1.3688E+000	<	:	:	>
Peak FWHM Cs-137 Boundary Limits: [5.000E-001, 3.000E+000] Trend Test: The last 9 samples exhibit a bias trend.	2.0943E+000	<	:	:	>
Peak FWHM Co-60 Boundary Limits: [5.000E-001, 3.000E+000]	2.1466E+000	<	:	:	>
Peak FWHM Y-88 Boundary Limits: [5.000E-001, 3.000E+000]	2.6645E+000	<	:	:	>
Decay corrected activity Boundary Limits: [1.224E-001, 1.836E-001] Trend Test: The last 9 samples exhibit a bias trend.	1.5434E+005	<	:	:	>

Decay corrected activity 6.3957E+004
Boundary Limits: [4.971E-002, 7.457E-002] < : : : >
Trend Test: The last 9 samples exhibit a bias trend.

Parameter Description	Value	Deviation/Flags			
[Mean +/- Std. Dev.]		< LU	: SD	: UD	: BS >

Decay corrected activity 1.0517E+005
Boundary Limits: [7.978E-002, 1.197E-001] < : : : >
Trend Test: The last 9 samples exhibit a bias trend.

Decay corrected activity 2.1367E+005
Boundary Limits: [1.714E-001, 2.571E-001] < : : : >
Trend Test: The last 9 samples exhibit a bias trend.

Flags Key: LU = Lower/Upper Bounds Test (Ab = Above, Be = Below)
SD = Sample Driven N-Sigma Test (In = Investigate, Ac = Action)
UD = User Driven N-Sigma Test (In = Investigate, Ac = Action)
BS = Measurement Bias Test (In = Investigate, Ac = Action)

 ***** GENIE QUALITY ASSURANCE *****

Last Results Report
 11/6/15 5:32:12 AM

1116

QA File: \\OR-GAMMA1\ApexRoot\Countroom\QA\D0000000001GAF-14C.QCK

Detector: GE1
 Geometry: <None>
 Certificate: GAF-14
 Sample ID: QA Calibration C
 Sample Desc: QA Count
 Sample Quantity: 1.0000E+000
 Sample Date: 10/1/14 12:00:00 AM
 Measurement Date: 11/6/15 5:16:34 AM
 Elapsed Live Time: 900.0 seconds
 Elapsed Real Time: 923.9 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
Peak centroid 59.54 keV Boundary Limits: [5.800E+001, 6.100E+001]	6.0000E+001	< : : : >
Peak centroid 661.65 keV Boundary Limits: [6.600E+002, 6.630E+002] Trend Test: The last 9 samples exhibit a bias trend.	6.6204E+002	< : : : >
Peak centroid 1332.49 ke Boundary Limits: [1.331E+003, 1.334E+003] Trend Test: The last 9 samples exhibit a bias trend.	1.3330E+003	< : : : >
Peak centroid 1836.01 ke Boundary Limits: [1.834E+003, 1.838E+003]	1.8365E+003	< : : : >
Peak FWHM Am-241 Boundary Limits: [5.000E-001, 3.000E+000]	1.2137E+000	< : : : >
Peak FWHM Cs-137 Boundary Limits: [5.000E-001, 3.000E+000] Trend Test: The last 9 samples exhibit a bias trend.	1.5719E+000	< : : : >
Peak FWHM Co-60 Boundary Limits: [5.000E-001, 3.000E+000] Trend Test: The last 9 samples exhibit a bias trend.	1.9942E+000	< : : : >
Peak FWHM Y-90 Boundary Limits: [5.000E-001, 3.000E+000]	2.3971E+000	< : : : >
Decay corrected activity Boundary Limits: [1.170E-002, 1.754E-002]	1.4515E+004	< : : : >
Decay corrected activity	6.2458E+003	

Boundary Limits: [4.716E-003, 7.075E-003] < : : : >

Decay corrected activity 1.0843E+004
Boundary Limits: [7.572E-003, 1.136E-002] < : : : >

Parameter Description Value Deviation/Flags
[Mean +/- Std. Dev.] < LU : SD : UD : BS >

Decay corrected activity 2.0967E+004
Boundary Limits: [1.626E-002, 2.440E-002] < : : : >

Flags Key: LU = Lower/Upper Bounds Test (Ab = Above, Be = Below)
 SD = Sample Driven N-Sigma Test (In = Investigate, Ac = Action)
 UD = User Driven N-Sigma Test (In = Investigate, Ac = Action)
 BS = Measurement Bias Test (In = Investigate, Ac = Action)