

ERM

0494255 Hero Lands

**STANDARD LEVEL IV
REPORT OF ANALYSIS**

WORK ORDER #19-05060-OR

September 3, 2019

**EBERLINE ANALYTICAL/OAK RIDGE LABORATORY
OAK RIDGE, TN**

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STANDARD OPERATING PROCEDURE

Sample Receiving

MP-001, Rev. 20
Effective: 1/15/19
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Eberline Services – Oak Ridge Laboratory LABORATORY DATA SUPPORT CHECKLIST

MP-001-3

Eberline Services Work Order # 19-05060

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

Date for Partial	Initials	Date	Initials	Checklist Items
		5-9-19	JB	Sample Log-In
		6/3/19	JB	Data Compilation
		6-4-19	mtt	First Technical Data Review
		6/5/19	JB	Second Technical Data Review
	9	8/3/19	JB	Data Entry/Electronic Deliverable
	9	9/3/19	JB	Case Narrative
		9/3/19	EJT	Electronic Deliverable Proof
		9/5/19	JB	Samples Analyzed within Holding Time Yes? <input checked="" type="checkbox"/> No? <input type="checkbox"/>
		9/3/19	JB	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:

Laboratory Manager

Date

9/4/19

Copy No. _____

Radiochemistry Services

0003

SECTION I
CHAIN OF CUSTODY



Richmond Laboratory

Chain of Custody

19-05060

CLIENT: ERM

ADDRESS: 840 W. Sam Houston Pkwy N #600

Houston, TX 77024

PROJECT: Hero Lands

SAMPLERS SIGNATURE: Joey Jussein

Joey Jussein

SAMPLE NO. DATE TIME LOCATION

4	R1(0-6")	5/8/19	10:10	Hero Lands
5	R1(6-12")	5/8/19	10:45	Hero Lands
6	R1(12-18")	5/8/19	10:50	Hero Lands
7	R2(0-6")	5/8/19	11:45	Hero Lands
8	R2(6-12")	5/8/19	11:50	Hero Lands
9	R3(0-6")	5/8/19	12:15	Hero Lands

PARAMETERS

REC'D MAY 09 2019

SAMPLE TYPE OR MATRIX

S
S
S
S
S
S

CONTAINERS

DATE: 5/8/19 PAGE 1 OF 1

TAT (IN DAYS)

OBSERVATIONS, COMMENTS, VOLUMES, SPECIAL OR ADDITIONAL TEST

Contact
Dave Upthegrove
w/ questions
832-786-5006

1) RELINQUISHED BY / DATE:

Joey Jussein / 5/8/19
COMPANY: ERM

2) RECEIVED BY / DATE:

Remondhi Spencer 5-9-19
COMPANY: Eberline

3) RELINQUISHED BY / DATE:

COMPANY:

4) RECEIVED BY / DATE:

COMPANY:

TOTAL NO. OF CONTAINERS:

METHOD OF SHIPMENT:

SPECIAL SHIPMENT-HANDLING, STORAGE REQUIREMENTS, OR POSSIBLE HAZARDS

5) RELINQUISHED BY / DATE:

COMPANY:

6) RECEIVED BY / DATE:

COMPANY:

7) RELINQUISHED BY / DATE:

COMPANY:

0005

2030 Wright Avenue P.O. Box 4040 Richmond, CA 94804-0040 (510) 235-2633 FAX No. (510) 235-0438

Form SCP-1-5 04-26-00

"quality environmental services"




Internal Chain of Custody

Work Order #	19-05060
Lab Deadline	5/31/2019
Analysis	Gamma - Level 4
Sample Matrix	Soil/Solid

Comments	Sample Fraction	HP 210 / 270 Detector Activity	Storage Location
21 day ingrowth: Report Ra226/228.	04	55	K1.5
	05	52	K1.5
	06	60	K1.5
	07	96	K1.5
	08	50	K1.5
	09	120	K1.5

	Location (circle one)					Initials	Date
Received by	Sample Storage	Rough Prep	Prep	Separations	Count Room	1330 ky sar	5-10-19
Relinquished by	Sample Storage	Rough Prep	Prep	Separations	Count Room	0925 ky sar	5-13-19
Received by	Sample Storage	Rough Prep	Prep	Separations	Count Room	LP 5/13/19	0926
Relinquished by	Sample Storage	Rough Prep	Prep	Separations	Count Room	10B 6/3/19	0928
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											
ERM			0494255			Environmental			05/09/2019		28		19-05060											
Project Name			Client WO			Sample Disp			Lab Deadline		Internal Deadline		Client Deadline											
HERO LANDS			HERO LANDS			H			05/31/2019		06/05/2019		06/06/2019											
Internal ID	Client ID	Sample Date	Matrix	Storage	Gamma	Gamma	Gamma	Gamma	Gamma	Gamma	Gamma	Gamma	Gamma	Gamma	Gamma	Gamma	Gamma	Gamma	Gamma	Gamma	Gamma			
01	LCS	05/09/19	SO	K1.5	X																			
02	BLANK	05/09/19	SO	K1.5	X																			
03	DUP	05/09/19	SO	K1.5	X																			
04	R1 0-6	05/08/19 10:40	SO	K1.5	X																			
05	R1 6-12	05/08/19 10:45	SO	K1.5	X																			
06	R1 12-18	05/08/19 10:50	SO	K1.5	X																			
07	R2 0-6	05/08/19 11:45	SO	K1.5	X																			
08	R2 6-12	05/08/19 11:50	SO	K1.5	X																			
09	R3 0-6	05/08/19 12:15	SO	K1.5	X																			
Totals Per Analysis (non QA samples)																								
						Invoice	Accounts Payable		Report Data															
						ERM	ERM		Dave Upthegrove															
						840 W Sam Houston Pkwy N Suite 600		840 W Sam Houston Pkwy N Suite 600																
						Houston, TX 77024		Houston, TX 77024																
						Voice	281-242-5700		Voice		832-786-5006													
						Fax	281-520-4625		Fax		832-786-5006													
						Contact	Dave Upthegrove																	
						Voice	832-786-5006																	
						Fax																		
 EBERLINE SERVICES Sample Log In Report						Oak Ridge Laboratory 601 Scarboro Rd. Oak Ridge, TN 37830 Voice: (865) 481-0683 Fax: (865) 483-4621																		



Eberline Services – Oak Ridge Laboratory

SAMPLE RECEIPT CHECKLIST
MP-001-2

WORK ORDER # 19-05060

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>Y</u>	N
Was chain of custody present upon sample receipt?	<u>Y</u>	N

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

REMARKS: _____

SIGNATURE: Randolph Spencer DATE: 5-9-19

SECTION III
CASE NARRATIVE



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

EBS-OR-45925

September 4, 2019

Dave Upthegrove
ERM
840 W Sam Houston Pkwy N #600
Houston, TX 77478

CASE NARRATIVE
Work Order # 19-05060-OR

SAMPLE RECEIPT

This work order contains six soil samples received 05/09/2019. Samples were analyzed for Radium-226/228 by Gamma Spectroscopy.

<u>CLIENT ID</u>	<u>LAB ID</u>	<u>CLIENT ID</u>	<u>LAB ID</u>
R1 0-6	19-05060-04	R2 0-6	19-05060-07
R1 6-12	19-05060-05	R2 6-12	19-05060-08
R1 12-18	19-05060-06	R3 0-6	19-05060-09

ANALYTICAL METHODS

Gamma Spectroscopy was performed using EPA Method 901.1 Modified.

ANALYTICAL RESULTS

Combined Standard Uncertainty is reported at 1-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.

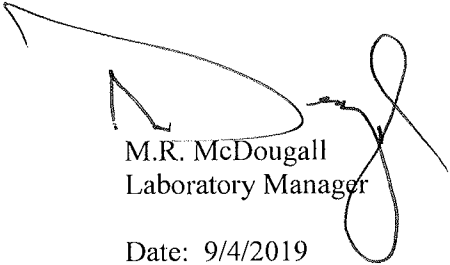
GAMMA SPECTROSCOPY

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 Radium-226 and Radium-228 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: 9/4/2019

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

SECTION IV
ANALYTICAL RESULTS SUMMARY

Eberline Analytical

Final Report of Analysis

Work Order Details:

19-05060

Dave Upthegrove

SDG:

ERM

0494255 Hero Lands

840 W Sam Houston Pkwy N Suite 600

ENVIRONMENTAL

Houston, TX 77478

SO

Lab ID	Sample Type	Client ID	Sample Date	Receipt Date	Analysis Date	Batch ID	Analyte	Method	Result	CU	CSU	MDA	Report Units
19-05060-01	LCS	KNOWN	05/09/19 00:00	5/9/2019	6/3/2019	19-05060	Cobalt-60	EPA 901.1 Modified	1.31E+02	5.10E+00			pCi/g
19-05060-01	LCS	KNOWN	05/09/19 00:00	5/9/2019	6/3/2019	19-05060	Cesium-137	EPA 901.1 Modified	8.26E+01	3.39E+00			pCi/g
19-05060-01	LCS	SPIKE	05/09/19 00:00	5/9/2019	6/3/2019	19-05060	Cobalt-60	EPA 901.1 Modified	1.42E+02	8.83E+00	1.15E+01	1.29E+00	pCi/g
19-05060-01	LCS	SPIKE	05/09/19 00:00	5/9/2019	6/3/2019	19-05060	Cesium-137	EPA 901.1 Modified	9.19E+01	9.85E+00	1.09E+01	1.38E+00	pCi/g
19-05060-02	MBL	BLANK	05/09/19 00:00	5/9/2019	6/3/2019	19-05060	Radium-226	EPA 901.1 Modified	3.93E-02	6.17E-02	6.18E-02	1.03E-01	pCi/g
19-05060-02	MBL	BLANK	05/09/19 00:00	5/9/2019	6/3/2019	19-05060	Radium-228	EPA 901.1 Modified	-8.93E-02	1.14E-01	1.14E-01	1.50E-01	pCi/g
19-05060-03	DUP	R1 0-6	05/08/19 10:40	5/9/2019	6/3/2019	19-05060	Radium-226	EPA 901.1 Modified	1.31E+00	2.28E-01	2.38E-01	2.62E-01	pCi/g
19-05060-03	DUP	R1 0-6	05/08/19 10:40	5/9/2019	6/3/2019	19-05060	Radium-228	EPA 901.1 Modified	1.09E+00	2.85E-01	2.90E-01	8.20E-01	pCi/g
19-05060-04	DO	R1 0-6	05/08/19 10:40	5/9/2019	6/3/2019	19-05060	Radium-226	EPA 901.1 Modified	1.31E+00	2.31E-01	2.40E-01	2.38E-01	pCi/g
19-05060-04	DO	R1 0-6	05/08/19 10:40	5/9/2019	6/3/2019	19-05060	Radium-228	EPA 901.1 Modified	1.37E+00	2.88E-01	2.95E-01	5.43E-01	pCi/g
19-05060-05	TRG	R1 6-12	05/08/19 10:45	5/9/2019	6/3/2019	19-05060	Radium-226	EPA 901.1 Modified	1.03E+00	1.99E-01	2.06E-01	2.69E-01	pCi/g
19-05060-05	TRG	R1 6-12	05/08/19 10:45	5/9/2019	6/3/2019	19-05060	Radium-228	EPA 901.1 Modified	1.22E+00	3.29E-01	3.38E-01	5.38E-01	pCi/g
19-05060-06	TRG	R1 12-18	05/08/19 10:50	5/9/2019	6/3/2019	19-05060	Radium-226	EPA 901.1 Modified	1.20E+00	2.54E-01	2.62E-01	3.52E-01	pCi/g
19-05060-06	TRG	R1 12-18	05/08/19 10:50	5/9/2019	6/3/2019	19-05060	Radium-228	EPA 901.1 Modified	1.47E+00	3.98E-01	4.03E-01	7.30E-01	pCi/g
19-05060-07	TRG	R2 0-6	05/08/19 11:45	5/9/2019	6/3/2019	19-05060	Radium-226	EPA 901.1 Modified	1.77E+01	1.33E+00	1.61E+00	7.79E-01	pCi/g
19-05060-07	TRG	R2 0-6	05/08/19 11:45	5/9/2019	6/3/2019	19-05060	Radium-228	EPA 901.1 Modified	4.87E+00	8.59E-01	8.94E-01	1.59E+00	pCi/g
19-05060-08	TRG	R2 6-12	05/08/19 11:50	5/9/2019	6/3/2019	19-05060	Radium-226	EPA 901.1 Modified	1.61E+00	2.18E-01	2.33E-01	3.13E-01	pCi/g
19-05060-08	TRG	R2 6-12	05/08/19 11:50	5/9/2019	6/3/2019	19-05060	Radium-228	EPA 901.1 Modified	1.51E+00	4.01E-01	4.08E-01	1.02E+00	pCi/g
19-05060-09	TRG	R3 0-6	05/08/19 12:15	5/9/2019	6/3/2019	19-05060	Radium-226	EPA 901.1 Modified	5.84E+00	5.55E-01	6.30E-01	4.91E-01	pCi/g
19-05060-09	TRG	R3 0-6	05/08/19 12:15	5/9/2019	6/3/2019	19-05060	Radium-228	EPA 901.1 Modified	3.08E+00	3.98E-01	4.28E-01	7.39E-01	pCi/g

CU=Counting Uncertainty; CSU=Combined Standard Uncertainty (1-sigma); MDA=Minimal Detected Activity; LCS=Laboratory Control Sample; MBL=Blank; DUP=Duplicate; TRG=Normal Sample; DO=Duplicate Original



EBERLINE
ANALYTICAL

EBERLINE ANALYTICAL CORPORATION

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

SECTION V
ANALYTICAL STANDARD

CERTIFICATE OF CALIBRATION
Standard Reference Source

GAS-1802

SRS Number: 109355
Source Description: Sand in 16 Ounce PP Omega Jar Filled to Capacity
Product Code: 8401-EG-SAN
Customer: Eberline Analytical Corporation
P.O. Number: OR-1802013, Item 4

This standard radionuclide source was prepared from an aliquot measured gravimetrically from a master radionuclide solution calibrated with a germanium gamma-ray spectrometer system. Additional radionuclides were added gravimetrically from solutions calibrated by gamma-ray spectrometry, ionization chamber, or liquid scintillation counting. Calibration and purity were checked using germanium gamma-ray spectrometry. 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 (NIST) 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."

Reference Date: 01-April-2018 12:00 PM EST

MGS Mixture

Isotope	Gamma-Ray Energy, keV	Half-Life, d	Activity, Bq	Flux, s ⁻¹	Uncertainty			Calibration Method**
					u _A , %	u _B , %	U, %*	
Am-241	59.5	1.580E+05	5.506E+03	1.977E+03	0.1	1.8	3.6	4π LS
Cd-109	88.0	4.614E+02	7.811E+04	2.890E+03	0.5	2.0	4.1	HPGe
Co-57	122.1	2.717E+02	1.785E+03	1.528E+03	0.4	1.7	3.4	HPGe
Ce-139	165.9	1.376E+02	2.664E+03	2.131E+03	0.4	1.7	3.6	HPGe
Hg-203	279.2	4.659E+01	5.578E+03	4.549E+03	0.3	1.7	3.5	HPGe
Sn-113	391.7	1.151E+02	4.584E+03	2.979E+03	0.4	1.9	3.9	HPGe
Cs-137	661.7	1.099E+04	2.260E+03	1.923E+03	0.7	1.9	4.1	HPGe
Y-88	898.0	1.066E+02	7.491E+03	7.019E+03	0.7	1.7	3.7	HPGe
Y-88	1836.1	—	—	7.431E+03	0.7	1.7	3.7	—
Co-60	1173.2	1.925E+03	3.528E+03	3.523E+03	0.7	1.8	3.9	HPGe
Co-60	1332.5	—	—	3.527E+03	0.7	1.8	3.9	—

Mixed Gamma (MGS) master solution is EZA's eight isotope mixture which is calibrated quarterly and consists of Cd-109, Co-57, Ce-139, Hg-203, Sn-113, Cs-137, Y-88, and Co-60. ***Uncertainty:** U - Relative expanded uncertainty, k = 2. See NIST Technical Note 1297, "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Results." ****Calibration Methods:** 4π LS - 4π Liquid Scintillation Counting, HPGe - High Purity Germanium Gamma-Ray Spectrometer, IC - Ionization Chamber.

(Certificate continued on reverse side)

CERTIFICATE OF CALIBRATION
 Standard Reference Source

GAS-1602

SRS Number: 104852
 Source Description: Sand in 16 Ounce PP Omega Jar Filled to Capacity
 Product Code: 8401-EG-SAN
 Customer: Eberline Analytical Corporation
 P.O. Number: OR-1610009, Item 4

This standard radionuclide source was prepared from an aliquot measured gravimetrically from a master radionuclide solution calibrated with a germanium gamma-ray spectrometer system. Additional radionuclides were added gravimetrically from solutions calibrated by gamma-ray spectrometry, ionization chamber, or liquid scintillation counting. Calibration and purity were checked using germanium gamma-ray spectrometry. 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 (NIST) 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."

Reference Date: 01-October-2016 12:00 PM EST

MGS Mixture

Isotope	Gamma-Ray Energy, keV	Half-Life, d	Activity, Bq	Flux, s ⁻¹	Uncertainty			Calibration Method**
					u _A , %	u _B , %	U, %*	
Am-241	59.5	1.580E+05	5.500E+03	1.975E+03	0.1	1.8	3.6	4π LS
Cd-109	88.0	4.614E+02	7.668E+04	2.837E+03	0.5	2.0	4.1	HPGe
Co-57	122.1	2.717E+02	2.240E+03	1.917E+03	0.4	1.7	3.4	HPGe
Ce-139	165.9	1.376E+02	2.655E+03	2.124E+03	0.4	1.7	3.6	HPGe
Hg-203	279.2	4.659E+01	6.065E+03	4.947E+03	0.3	1.7	3.5	HPGe
Sn-113	391.7	1.151E+02	4.528E+03	2.942E+03	0.4	1.9	3.9	HPGe
Cs-137	661.7	1.099E+04	2.249E+03	1.914E+03	0.7	1.9	4.1	HPGe
Y-88	898.0	1.066E+02	7.415E+03	6.948E+03	0.7	1.7	3.7	HPGe
Y-88	1836.1			7.356E+03	0.7	1.7	3.7	
Co-60	1173.2	1.925E+03	3.562E+03	3.557E+03	0.7	1.8	3.9	HPGe
Co-60	1332.5			3.561E+03	0.7	1.8	3.9	

Mixed Gamma (MGS) master solution is EZA's eight isotope mixture which is calibrated quarterly and consists of Cd-109, Co-57, Ce-139, Hg-203, Sn-113, Cs-137, Y-88, and Co-60. *Uncertainty: U - Relative expanded uncertainty, k = 2. See NIST Technical Note 1297, "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Results." **Calibration Methods: 4π LS - 4π Liquid Scintillation Counting, HPGe - High Purity Germanium Gamma-Ray Spectrometer, IC - Ionization Chamber.

(Certificate continued on reverse side)

SECTION VI
QUALITY CONTROL SAMPLE RESULTS SUMMARY

WO	Analysis	Run	Activity Units	Aliquot Units	Client Name
19-05060	Gamma	1	pCi	9	ERM

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	108.88%	8.05%	100.00%	3.90%	1.31E+02	5.10E+00	1.42E+02	1.15E+01	GAS-1602	1.31E+02	5.10E+00	7.36E+02
CS-137	111.28%	11.88%	100.00%	4.11%	8.26E+01	3.39E+00	9.19E+01	1.09E+01	GAS-1602	8.26E+01	3.39E+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)

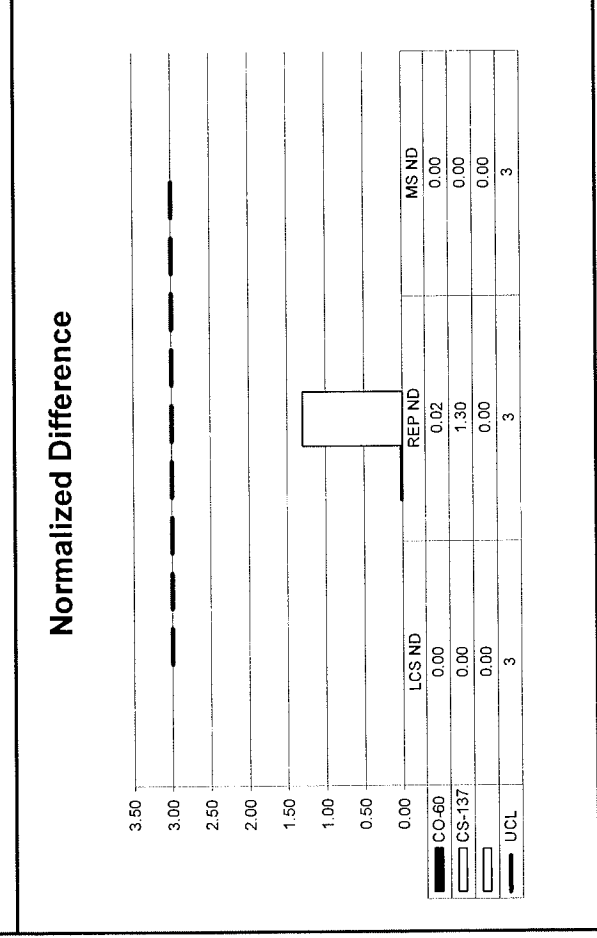
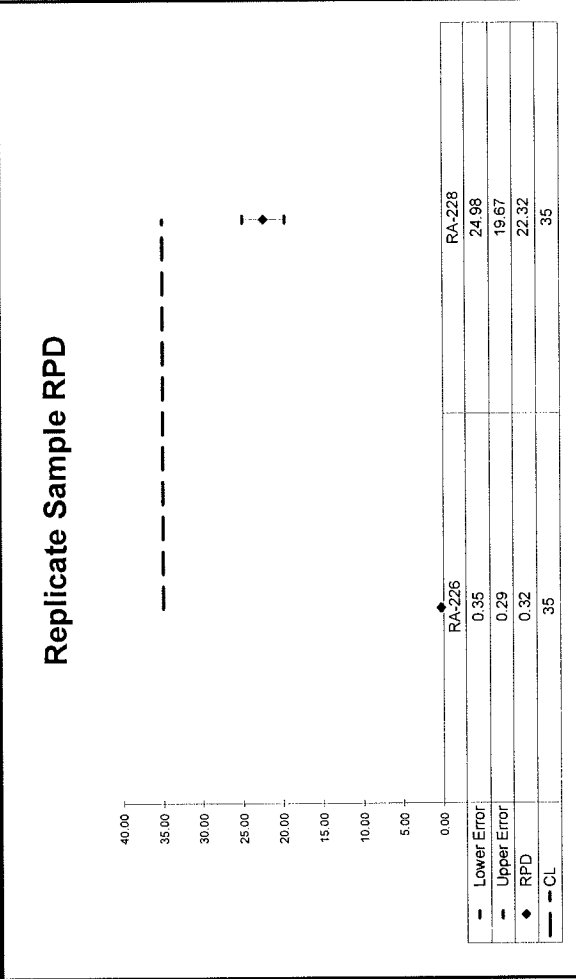
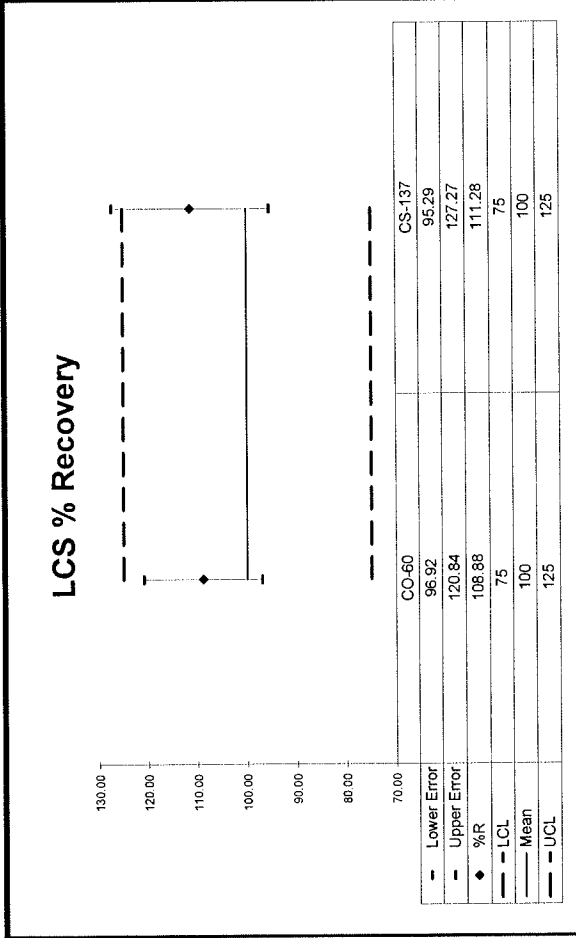
Duplicate Results

Analyte	Normalized Difference	RPD	Original Result	Original CSU	Duplicate Result	Duplicate CSU	LCS Relative Bias	LCS % R	MS % R	MS ND	Rep RPD	Rep ND
RA-226	0.02	0.32	1.31E+00	2.40E-01	1.31E+00	2.38E-01	1.09	OK	<CS-137	RA-226>	OK	OK
RA-228	1.30	22.32	1.37E+00	2.95E-01	1.09E+00	2.90E-01	1.11	OK	<CO-60	RA-228>	OK	OK

QC Summary

Analyte	Normalized Difference	RPD	Original Result	Original CSU	Duplicate Result	Duplicate CSU	LCS Relative Bias	LCS % R	MS % R	MS ND	Rep RPD	Rep ND
RA-226	0.02	0.32	1.31E+00	2.40E-01	1.31E+00	2.38E-01	1.09	OK	<CS-137	RA-226>	OK	OK
RA-228	1.30	22.32	1.37E+00	2.95E-01	1.09E+00	2.90E-01	1.11	OK	<CO-60	RA-228>	OK	OK

WO	Analysis	Run	Activity Units	Aliquot Units	Client Name
19-05060	Gamma	1	pCi	g	ERM



No Matrix Spike

SECTION VII
LABORATORY TECHNICIAN'S NOTES

DATE	SAMPLE #	Client	LoadTime	CT Time	Analysis	Tech
5/22/19	1905118-04	Harris Lowery	1653	4 hrs	Y	KB
5/23/19	Daily Bkgd	Lab	0511	15 min	Y	KP
5/23/19	GAW-18	Lab	0529	15 min	Y	KP
5/23/19	1905129-01	James R. Reed	0936	30 min	Y	KP
5/23/19	1905146-01	Univ. of GA	1536	30 mins	Y	KB
5/23/19	1905146-07	Univ. of GA	1659	4 hrs	Y	KB
5/24/19	Daily Bkgd	Lab	0510	15 min	Y	KP
5/24/19	GAW-18	Lab	0530	15 min	Y	KP
5/24/19	1905118-17	Harris Lowery	1635	4 hr	Y	KB
5/26/19	System Bkgd	Lab	0821	24 hrs	Y	KP
5/28/19	Daily Bkgd	Lab	0500	15 min	N	KP
5/28/19	GAW-18	Lab	0517	15 min	Y	KP
5/28/19	1905149-01	Env-Management	0537 0537	30 min	Y	KP
5/28/19	1905036-01	SolutientTech	0610	30 min	Y	KP
5/28/19	1905036-02	SolutientTech	0642	1 hr	Y	KP
5/28/19	1905139-01	Microtec	0902	30 min	Y	KP
5/28/19	1905140-01	Man. Sciences	1241	30 min	Y	KP
5/28/19	1905140-02	Man. Sciences	1312	1 hr	Y	KP
5/28/19	1905140-04	Manuf. Sciences	1415	1 hr	Y	KB
5/28/19	1905149-02	Env-Management	1737	4 hr	Y	KB
5/29/19	Daily Bkgd	Lab	0540	15 min	Y	AG
5/29/19	GAW-18	Lab	0601	15 min	Y	AG
5/29/19	1905140-16	Manf Sciences	0704	1 hr	Y	AG
5/29/19	1905142-01	Isotek	0903	30 mins	Y	KB
5/30/19	Daily Bkgd	Lab	0549	15 min	Y	AG
5/30/19	GAW-18	Lab	0610	15 min	Y	AG
5/31/19	Daily Bkgd	Lab	0537	15 min	Y	AG
5/31/19	GAW-18	Lab	0556	15 min	Y	AG
6/1/19	System Bkgd	Lab	1529	24 hr	Y	KB
6/3/19	Daily Bkgd	Lab	0551	15 min	Y	AG
6/3/19	GAW-18	Lab	0620	15 min	Y	AG
6/3/19	1905060-07	ERM	0653	1 hr	Y	AG
6/3/19	1905060-02	ERM	0756	1 hr	Y	AG

DATE	SAMPLE #	Client	Lead Time	CT-Time	Analysis	Tech
5/28/19	1905140-05	Manuf. Sciences	1244	1 hr	γ	KB
5/28/19	1905140-04	Manuf. Sciences	1445	1 hr	γ	KB
5/28/19	1905149-04	Env. Management	1737	4 hr	γ	KB
5/29/19	Daily Bkgd	Lab	0540	15 min	γ	AG
5/29/19	GAS-1802	Lab	0600	15 min	γ	AG
5/29/19	1905036-05	Solutient	0659	1 hr	γ	AG
5/29/19	1905140-10	Manuf. Sci	0701	1 hr	γ	AG
5/29/19	1905142-02	Isotek	0902	2 hr	γ	KB
5/30/19	Daily Bkgd	Lab	0549	15 min	γ	AG
5/30/19	GAS-1802	Lab	0609	15 min	γ	AG
5/31/19	Daily Bkgd	Lab	0537	15 min	γ	AG
5/31/19	GAS-1802	Lab	0556	15 min	γ	AG
6/1/19	System Bkgd	Lab	1528	24 hr	γ	KB
6/3/19	Daily Bkgd	Lab	0551	15 min	γ	AG
6/3/19	GAS-1802	Lab	0620	15 min	γ	AG
6/3/19	1905060-06	ERM	0652	1 hr	γ	AG
6/3/19	1905060-09	ERM	0755	1 hr	γ	AG

DATE	SAMPLE #	Client	LoadTime	CT Time	Analysis	Tech
5/29/19	1905129-03	James R. Reed	1726	4 hrs	✓	KB
5/30/19	Daily Bkgd	Lab	0549	15min	✓	AG
5/30/19	GAS-1801	Lab	0609	15min	✓	AG
5/30/19	1905129-04	James Reed	0654	4 hr	✓	AG
5/31/19	Daily Bkgd	Lab	0536	15min	✓	AG
5/31/19	GAS-1801	Lab	0556	15min	✓	AG
6/1/19	System Bkgd	Lab	1528	24 hr	✓	KB
6/3/19	Daily Bkgd	Lab	0550	15min	✓	AG
6/3/19	GAS-1801	Lab	0619	15min	✓	AG
6/3/19	1905060-05	ERM	0653	1 hr	✓	AG
6/3/19	1905060-08	ERM	0755	1 hr	✓	AG

GE 1

DATE	SAMPLE #	Client	Load Time	CT. Time	Analysis	Tech
5/24/19	Daily Bkgd	Lab	0510	15 min	Y	KP
5/24/19	GAF-18	Lab	0530	15 min	Y	KP
5/24/19	1905146-02	University of GA	0605	4 hrs	Y	KP
5/24/19	1905118-12	Harris Lowry	1210	4 hrs	Y	KP
5/24/19	1905118-14	Harris Lowry	1634	4 hr	Y	KB
5/26/19	System Bkgd	Lab	0821	24 hrs	Y	KP
5/28/19	Daily Bkgd	Lab	0500	15 min	Y	KP
5/28/19	GAF-18	Lab	0517	15 min	Y	KP
5/28/19	1905118-18	Harris Lowry	0537	4 hrs	Y	KP
5/28/19	1905139-05	Microtec	1234	1 hr	Y	KP
5/28/19	1905140-03	Manuf. Sciences	1344	1 hr	Y	KB
5/28/19	1905140-04	Manuf. Sciences	1445	1 hr	Y	KB
5/28/19	1905149-05	Env. Management	1724	4 hr	Y	KB
5/29/19	Daily Bkgd	Lab	0540	15 min	Y	AG
5/29/19	GAF-18	Lab	0600	15 min	Y	AG
5/29/19	1905140-09	Manf Sciences	0703	1 hr	Y	AG
5/29/19	1905142-05	Isotek	0902	2 hrs	Y	KB
5/29/19	1905142-06	Isotek	1221	2 hrs	Y	KB
5/29/19	1905129-02	James R. Reed	1726	4 hrs.	Y	KB
5/30/19	Daily Bkgd	Lab	0550	15 min	Y	AG
5/30/19	GAF-18	Lab	0609	15 min	Y	AG
5/31/19	Daily Bkgd	Lab	0536	15 min	Y	AG
5/31/19	GAF-18	Lab	0555	15 min	Y	AG
6/1/19	System Bkgd	Lab	1528	24 hr	Y	KB
6/3/19	Daily Bkgd	Lab	0550	15 min	Y	AG
6/3/19	GAF-18	Lab	0619	15 min	Y	AG
6/3/19	1905060-03	ERM	0651	1 hr	Y	AG
6/3/19	1905060-04	ERM	0754	1 hr	Y	AG
6/3/19	1905060-01	ERM	0756	30 min	Y	KB

SECTION VIII
ANALYTICAL DATA (GAMMA SPECTROSCOPY)

Work Order	19-05060
Analysis Code	Gamma
Run	1
Date Received	5/9/2019
Lab Deadline	5/31/2019
Client	ERM
Project	HERO LANDS
Report Level	4
Activity Units	pCi
Aliquot Units	g
Matrix	SO
Method	EPA 901.1 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		05/09/19 00:00	1.0000E+00
02	MBL	BLANK		05/09/19 00:00	1.0000E+00
03	DUP	R1 0-6	55	05/08/19 10:40	4.2967E+02
04	DO	R1 0-6	55	05/08/19 10:40	4.2967E+02
05	TRG	R1 6-12	52	05/08/19 10:45	4.3756E+02
06	TRG	R1 12-18	60	05/08/19 10:50	4.2777E+02
07	TRG	R2 0-6	96	05/08/19 11:45	4.9110E+02
08	TRG	R2 6-12	50	05/08/19 11:50	4.1427E+02
09	TRG	R3 0-6	120	05/08/19 12:15	6.7122E+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.

19-05060
Gamma
Run 1

Eberline Analytical
Oak Ridge Laboratory
Analysis Sheet

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				0.00								
02	MBL				0.00								
03	DUP				0.00								
04	DO				0.00								
05	TRG				0.00								
06	TRG				0.00								
07	TRG				0.00								
08	TRG				0.00								
09	TRG				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								
02	MBL								
03	DUP								
04	DO	05/13/19 08:58	KSALLINGS						
05	TRG	05/13/19 08:58	KSALLINGS						
06	TRG	05/13/19 08:58	KSALLINGS						
07	TRG	05/13/19 08:58	KSALLINGS						
08	TRG	05/13/19 08:58	KSALLINGS						
09	TRG	05/13/19 08:58	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.

0029

Lab Fraction	Nuclide	Sample Desc	Client Identification	Activity Units	Results	Error Estimate	MDA	LSC Known	LCS %dR	LCS Flag	RPD Flag	Sample Date	Sample Aliquot	Counting Date/Time	Identified
01	CO-60	LCS	LCS	pCi/g	1.42E+02	8.83E+00	1.29E+00	1.31E+02	108.88	OK		05/09/19 00:00	1.00E+00	06/03/19 06:56	YES
01	CS-137	LCS	LCS	pCi/g	9.19E+01	9.85E+00	1.38E+00	8.26E+01	111.28	OK		05/09/19 00:00	1.00E+00	06/03/19 06:56	YES
02	RA-228	MBL	BLANK	pCi/g	-8.93E-02	1.14E-01	1.50E-01					05/09/19 00:00	1.00E+00	06/03/19 07:56	NO
02	RA-226	MBL	BLANK	pCi/g	3.93E-02	6.17E-02	1.03E-01					05/09/19 00:00	1.00E+00	06/03/19 07:56	NO
03	RA-228	DUP	R1 0-6	pCi/g	1.09E+00	2.85E-01	8.20E-01				OK	05/08/19 10:40	4.30E+02	06/03/19 06:51	YES
03	RA-226	DUP	R1 0-6	pCi/g	1.31E+00	2.28E-01	2.62E-01				OK	05/08/19 10:40	4.30E+02	06/03/19 06:51	YES
04	RA-228	DO	R1 0-6	pCi/g	1.37E+00	2.86E-01	5.43E-01					05/08/19 10:40	4.30E+02	06/03/19 07:54	YES
04	RA-226	DO	R1 0-6	pCi/g	1.31E+00	2.31E-01	2.38E-01					05/08/19 10:40	4.30E+02	06/03/19 07:54	YES
05	RA-228	TRG	R1 6-12	pCi/g	1.22E+00	3.29E-01	5.38E-01					05/08/19 10:45	4.38E+02	06/03/19 06:52	YES
05	RA-226	TRG	R1 6-12	pCi/g	1.03E+00	1.99E-01	2.69E-01					05/08/19 10:45	4.38E+02	06/03/19 06:52	YES
06	RA-228	TRG	R1 12-18	pCi/g	1.47E+00	3.96E-01	7.30E-01					05/08/19 10:50	4.28E+02	06/03/19 06:52	YES
06	RA-226	TRG	R1 12-18	pCi/g	1.20E+00	2.54E-01	3.52E-01					05/08/19 10:50	4.28E+02	06/03/19 06:52	YES
07	RA-228	TRG	R2 0-6	pCi/g	4.87E+00	8.59E-01	1.59E+00					05/08/19 11:45	4.91E+02	06/03/19 06:53	YES
07	RA-226	TRG	R2 0-6	pCi/g	1.77E+01	1.33E+00	7.79E-01					05/08/19 11:45	4.91E+02	06/03/19 06:53	YES
08	RA-228	TRG	R2 6-12	pCi/g	1.51E+00	4.01E-01	1.02E+00					05/08/19 11:50	4.14E+02	06/03/19 07:55	YES
08	RA-226	TRG	R2 6-12	pCi/g	1.61E+00	2.18E-01	3.13E-01					05/08/19 11:50	4.14E+02	06/03/19 07:55	YES
09	RA-228	TRG	R3 0-6	pCi/g	3.08E+00	3.98E-01	7.39E-01					05/08/19 12:15	6.71E+02	06/03/19 07:55	YES
09	RA-226	TRG	R3 0-6	pCi/g	5.84E+00	5.55E-01	4.91E-01					05/08/19 12:15	6.71E+02	06/03/19 07:55	YES

19-05060-Gamma-1 (pCi/g) in SO

Tracer ID:

Count Room Report

Client: ERM

1hr

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	05/09/19 00:00	1.0000				0.00		
02	MBL	BLANK	05/09/19 00:00	1.0000				0.00		
03	DUP	R1 0-6	05/08/19 10:40	429.6700				0.00		
04	DO	R1 0-6	05/08/19 10:40	429.6700				0.00		
05	TRG	R1 6-12	05/08/19 10:45	437.5600				0.00		
06	TRG	R1 12-18	05/08/19 10:50	427.7700				0.00		
07	TRG	R2 0-6	05/08/19 11:45	491.1000				0.00		
08	TRG	R2 6-12	05/08/19 11:50	414.2700				0.00		
09	TRG	R3 0-6	05/08/19 12:15	671.2200				0.00		

Aliquot Worksheet

Work Order		Run	Analysis Code	Rpt Units	Lab Deadline	Technician						
19-05060		1	Gamma	grams	5/31/2019	KSALLINGS						
Lab Fraction	ERM Client ID	Sample Type	Muffle Data Ratio Post/Pre	Dilution Data			Aliquot Data		MS Aliquot Data		H-3 Solids Only	
				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	R1 0-6	DUP					4.2967E+02	4.2967E+02				
04	R1 0-6	DO					4.2967E+02	4.2967E+02				
05	R1 6-12	TRG					4.3756E+02	4.3756E+02				
06	R1 12-18	TRG					4.2777E+02	4.2777E+02				
07	R2 0-6	TRG					4.9110E+02	4.9110E+02				
08	R2 6-12	TRG					4.1427E+02	4.1427E+02				
09	R3 0-6	TRG					6.7122E+02	6.7122E+02				

Comments

Technician: Kerry Gray Date: 5/13/19

Rough Sample Preparation
 Log Book

Work Order	Lab Deadline	Date Received in Prep	Date Sealed	Data Returned	Technician
19-05060	5/31/2019	5/12/2019	5/13/2019	5/14/2019	KSALLINGS

Bico Pulverizer SN: 000302

Eberline Fraction	ERM 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	R1 0-6	28.8900		1417.3400	1093.1200	1388.4500	1064.2300	23.35%	76.65%	0.0000	0.0000	
05	R1 6-12	28.9400		859.6800	694.7100	830.7400	665.7700	19.86%	80.14%	0.0000	0.0000	
06	R1 12-18	28.8800		702.0700	555.1900	673.1900	526.3100	21.82%	78.18%	0.0000	0.0000	
07	R2 0-6	28.9600		1483.2400	1200.1600	1454.2800	1171.2000	19.47%	80.53%	0.0000	0.0000	
08	R2 6-12	28.8100		1133.1400	852.2600	1104.3300	823.4500	25.43%	74.57%	0.0000	0.0000	
09	R3 0-6	28.8700		1596.7200	1532.9800	1567.8500	1504.1100	4.07%	95.93%	0.0000	0.0000	

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

Technician: *Kerry Saj*

K15
6/3/19Analysis Report for 1905060-01
GAS-1602

GAMMA SPECTRUM ANALYSIS

Sample Identification : 1905060-01
Sample Description : GAS-1602
Sample Type : SOIL

Sample Size : 7.360E+02 grams
Facility : Countroom

Sample Taken On : 10/1/2016 3:30:53PM
Acquisition Started : 6/3/2019 8:56:34AM

Procedure : GAS-1802 pCi
Operator : Administrator
Detector Name : GE1
Geometry : GAS-1802
Live Time : 1800.0 seconds
Real Time : 1826.1 seconds

Dead Time : 1.43 %

Peak Locate Threshold : 2.50
Peak Locate Range (in channels) : 1 - 4096
Peak Area Range (in channels) : 16 - 4096
Identification Energy Tolerance : 1.000FWHM

Energy Calibration Used Done On : 6/16/2018
Efficiency Calibration Used Done On : 6/16/2018
Efficiency Calibration Description :

Sample Number : 82499

PEAK-TO-TOTAL CALIBRATION REPORT

Peak-to-Total Efficiency Calibration Equation

AG
6/3/19

Analysis Report for 1905060-01
GAS-1602

PEAK LOCATE REPORT

Peak Locate Performed on : 6/3/2019 9:27:04AM
 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	57.88	58.24	0.0000	0.00
2	88.02	88.38	0.0000	0.00
3	122.00	122.35	0.0000	0.00
4	136.89	137.24	0.0000	0.00
5	165.73	166.07	0.0000	0.00
6	322.92	323.22	0.0000	0.00
7	642.54	642.78	0.0000	0.00
8	661.69	661.93	0.0000	0.00
9	737.97	738.19	0.0000	0.00
10	759.97	760.18	0.0000	0.00
11	922.55	922.73	0.0000	0.00
12	1173.29	1173.43	0.0000	0.00
13	1332.56	1332.68	0.0000	0.00
14	1603.50	1603.58	0.0000	0.00
15	1662.64	1662.72	0.0000	0.00
16	1764.05	1764.12	0.0000	0.00
17	1799.27	1799.34	0.0000	0.00
18	1834.92	1834.98	0.0000	0.00
19	1838.25	1838.32	0.0000	0.00
20	1846.63	1846.69	0.0000	0.00
21	1885.88	1885.94	0.0000	0.00
22	1936.15	1936.20	0.0000	0.00
23	2505.21	2505.23	0.0000	0.00
24	2614.16	2614.19	0.0000	0.00
25	2620.73	2620.76	0.0000	0.00

? = Adjacent peak noted
 Errors quoted at 2.000sigma

Analysis Report for 1905060-01

GAS-1602

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 6/3/2019 9:27:04AM

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	57.88	45 -	70	58.24	1.28E+05	1448.30	1.06E+05	4.64	
2	88.02	82 -	96	88.38	3.65E+04	771.84	4.52E+04	4.38	
3	122.00	117 -	127	122.35	7.70E+03	449.40	2.28E+04	4.23	
4	136.89	134 -	141	137.24	6.54E+02	302.07	1.47E+04	4.45	
5	165.73	162 -	169	166.07	5.42E+02	285.69	1.32E+04	4.02	
6	322.92	321 -	326	323.22	1.49E+02	178.77	6.25E+03	3.27	
7	642.54	640 -	645	642.78	1.09E+02	126.83	3.14E+03	1.86	
8	661.69	656 -	669	661.93	3.15E+04	455.37	9.02E+03	4.44	
9	737.97	736 -	742	738.19	1.35E+02	133.64	3.17E+03	3.31	
10	759.97	758 -	763	760.18	1.22E+02	116.68	2.63E+03	2.79	
11	922.55	921 -	926	922.73	1.16E+02	141.31	3.92E+03	2.02	
12	1173.29	1166 -	1182	1173.43	2.77E+04	400.60	4.73E+03	4.60	
13	1332.56	1326 -	1341	1332.68	2.48E+04	343.28	1.86E+03	4.64	
14	1603.50	1601 -	1606	1603.58	2.15E+01	21.07	7.09E+01	2.09	
15	1662.64	1659 -	1667	1662.72	2.36E+01	30.05	1.21E+02	2.53	
16	1764.05	1760 -	1768	1764.12	4.71E+01	29.29	1.02E+02	5.34	
17	1799.27	1795 -	1804	1799.34	3.29E+01	29.41	1.04E+02	3.53	
M	18	1834.92	1830 -	1841	1834.98	5.87E+01	32.86	1.26E+02	2.73
m	19	1838.25	1830 -	1841	1838.32	3.42E+01	32.74	1.18E+02	2.73
	20	1846.63	1842 -	1852	1846.69	4.60E+01	30.77	9.40E+01	8.12
	21	1885.88	1884 -	1890	1885.94	1.91E+01	22.03	7.57E+01	1.56
	22	1936.15	1934 -	1939	1936.20	1.60E+01	19.85	6.60E+01	2.09
	23	2505.21	2499 -	2515	2505.23	4.06E+02	46.28	4.18E+01	4.41
M	24	2614.16	2610 -	2623	2614.19	5.00E+01	16.00	0.00E+00	3.23
m	25	2620.73	2610 -	2623	2620.76	7.65E+00	5.66	0.00E+00	2.67

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 1905060-01

GAS-1602

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 6/3/2019 9:27:04AM

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	57.88	45 -	70	1.28E+05	1448.30	1.06E+05	1.03E+03
2	88.02	82 -	96	3.65E+04	771.84	4.52E+04	5.51E+02
3	122.00	117 -	127	7.70E+03	449.40	2.28E+04	3.40E+02
4	136.89	134 -	141	6.54E+02	302.07	1.47E+04	2.45E+02
5	165.73	162 -	169	5.42E+02	285.69	1.32E+04	2.32E+02
6	322.92	321 -	326	1.49E+02	178.77	6.25E+03	1.46E+02
7	642.54	640 -	645	1.09E+02	126.83	3.14E+03	1.03E+02
8	661.69	656 -	669	3.15E+04	455.37	9.02E+03	2.34E+02
9	737.97	736 -	742	1.35E+02	133.64	3.17E+03	1.08E+02
10	759.97	758 -	763	1.22E+02	116.68	2.63E+03	9.42E+01
11	922.55	921 -	926	1.16E+02	141.31	3.92E+03	1.15E+02
12	1173.29	1166 -	1182	2.77E+04	400.60	4.73E+03	1.83E+02
13	1332.56	1326 -	1341	2.48E+04	343.28	1.86E+03	1.12E+02
14	1603.50	1601 -	1606	2.15E+01	21.07	7.09E+01	1.56E+01
15	1662.64	1659 -	1667	2.36E+01	30.05	1.21E+02	2.34E+01
16	1764.05	1760 -	1768	4.71E+01	29.29	1.02E+02	2.13E+01
17	1799.27	1795 -	1804	3.29E+01	29.41	1.04E+02	2.23E+01
M	1834.92	1830 -	1841	5.87E+01	32.86	1.26E+02	1.84E+01
m	1838.25	1830 -	1841	3.42E+01	32.74	1.18E+02	1.79E+01
19	1846.63	1842 -	1852	4.60E+01	30.77	9.40E+01	2.27E+01
20	1885.88	1884 -	1890	1.91E+01	22.03	7.57E+01	1.66E+01
21	1936.15	1934 -	1939	1.60E+01	19.85	6.60E+01	1.49E+01
22	2505.21	2499 -	2515	4.06E+02	46.28	4.18E+01	1.87E+01
M	2614.16	2610 -	2623	5.00E+01	16.00	0.00E+00	0.00E+00
m	2620.73	2610 -	2623	7.65E+00	5.66	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 1905060-01

GAS-1602

PEAK WITH NID REPORT

Peak Analysis Performed on : 6/3/2019 9:27:04AM

Peak Analysis From Channel : 1

Peak Analysis To Channel : 4096

Tentative NID Library : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

Peak Match Tolerance : 1.000FWHM

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
1	57.88	45 -	70	58.24	1.28E+05	1448.30	1.06E+05	CE-143
2	88.02	82 -	96	88.38	3.65E+04	771.84	4.52E+04	CD-109 LU-176 SN-126 NP-237 EU-155
3	122.00	117 -	127	122.35	7.70E+03	449.40	2.28E+04	CO-57 EU-152 SE-75 EU-154
4	136.89	134 -	141	137.24	6.54E+02	302.07	1.47E+04	CO-57 SE-75
5	165.73	162 -	169	166.07	5.42E+02	285.69	1.32E+04	CE-139
6	322.92	321 -	326	323.22	1.49E+02	178.77	6.25E+03	RA-223
7	642.54	640 -	645	642.78	1.09E+02	126.83	3.14E+03	.....
8	661.69	656 -	669	661.93	3.15E+04	455.37	9.02E+03	CS-137
9	737.97	736 -	742	738.19	1.35E+02	133.64	3.17E+03	MO-99
10	759.97	758 -	763	760.18	1.22E+02	116.68	2.63E+03	.....
11	922.55	921 -	926	922.73	1.16E+02	141.31	3.92E+03	.....
12	1173.29	1166 -	1182	1173.43	2.77E+04	400.60	4.73E+03	CO-60
13	1332.56	1326 -	1341	1332.68	2.48E+04	343.28	1.86E+03	CO-60
14	1603.50	1601 -	1606	1603.58	2.15E+01	21.07	7.09E+01	.....
15	1662.64	1659 -	1667	1662.72	2.36E+01	30.05	1.21E+02	.....
16	1764.05	1760 -	1768	1764.12	4.71E+01	29.29	1.02E+02	BI-214
17	1799.27	1795 -	1804	1799.34	3.29E+01	29.41	1.04E+02	.....
M 18	1834.92	1830 -	1841	1834.98	5.87E+01	32.86	1.26E+02	Y-88
m 19	1838.25	1830 -	1841	1838.32	3.42E+01	32.74	1.18E+02	Y-88
20	1846.63	1842 -	1852	1846.69	4.60E+01	30.77	9.40E+01	.....
21	1885.88	1884 -	1890	1885.94	1.91E+01	22.03	7.57E+01	.....
22	1936.15	1934 -	1939	1936.20	1.60E+01	19.85	6.60E+01	.....
23	2505.21	2499 -	2515	2505.23	4.06E+02	46.28	4.18E+01	.....
M 24	2614.16	2610 -	2623	2614.19	5.00E+01	16.00	0.00E+00	TL-208
m 25	2620.73	2610 -	2623	2620.76	7.65E+00	5.66	0.00E+00	.....

Analysis Report for 1905060-01
GAS-1602

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 : 6/3/2019 9:27:04AM

Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
1	57.88	1.28E+05	1448.30	2.19E-02	1.84E-03
2	88.02	3.65E+04	771.84	2.60E-02	2.36E-03
3	122.00	7.70E+03	449.40	2.54E-02	2.21E-03
4	136.89	6.54E+02	302.07	2.46E-02	2.10E-03
5	165.73	5.42E+02	285.69	2.28E-02	1.88E-03
6	322.92	1.49E+02	178.77	1.52E-02	1.36E-03
7	642.54	1.09E+02	126.83	8.94E-03	9.57E-04
8	661.69	3.15E+04	455.37	8.74E-03	9.47E-04
9	737.97	1.35E+02	133.64	8.02E-03	8.24E-04
10	759.97	1.22E+02	116.68	7.84E-03	7.88E-04
11	922.55	1.16E+02	141.31	6.73E-03	5.58E-04
12	1173.29	2.77E+04	400.60	5.60E-03	4.85E-04
13	1332.56	2.48E+04	343.28	5.10E-03	4.61E-04
14	1603.50	2.15E+01	21.07	4.46E-03	3.86E-04
15	1662.64	2.36E+01	30.05	4.35E-03	3.70E-04
16	1764.05	4.71E+01	29.29	4.18E-03	3.41E-04
17	1799.27	3.29E+01	29.41	4.12E-03	3.32E-04
M 18	1834.92	5.87E+01	32.86	4.07E-03	3.22E-04
m 19	1838.25	3.42E+01	32.74	4.07E-03	3.21E-04
20	1846.63	4.60E+01	30.77	4.05E-03	3.21E-04
21	1885.88	1.91E+01	22.03	4.00E-03	3.21E-04
22	1936.15	1.60E+01	19.85	3.93E-03	3.21E-04
23	2505.21	4.06E+02	46.28	3.36E-03	3.21E-04
M 24	2614.16	5.00E+01	16.00	3.28E-03	3.21E-04
m 25	2620.73	7.65E+00	5.66	3.27E-03	3.21E-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 1905060-01

GAS-1602

BACKGROUND SUBTRACT REPORT

Peak Analysis Performed on : 6/3/2019 9:27:04AM

Env. Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000082155.CNF

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
1	57.88	1.28E+05	1448.30			1.28E+05	1.45E+03
2	88.02	3.65E+04	771.84			3.65E+04	7.72E+02
3	122.00	7.70E+03	449.40			7.70E+03	4.49E+02
4	136.89	6.54E+02	302.07			6.54E+02	3.02E+02
5	165.73	5.42E+02	285.69			5.42E+02	2.86E+02
6	322.92	1.49E+02	178.77			1.49E+02	1.79E+02
7	642.54	1.09E+02	126.83			1.09E+02	1.27E+02
8	661.69	3.15E+04	455.37			3.15E+04	4.55E+02
9	737.97	1.35E+02	133.64			1.35E+02	1.34E+02
10	759.97	1.22E+02	116.68			1.22E+02	1.17E+02
11	922.55	1.16E+02	141.31			1.16E+02	1.41E+02
12	1173.29	2.77E+04	400.60			2.77E+04	4.01E+02
13	1332.56	2.48E+04	343.28			2.48E+04	3.43E+02
14	1603.50	2.15E+01	21.07			2.15E+01	2.11E+01
15	1662.64	2.36E+01	30.05			2.36E+01	3.00E+01
16	1764.05	4.71E+01	29.29	1.53E+00	7.60E-01	4.55E+01	2.93E+01
17	1799.27	3.29E+01	29.41			3.29E+01	2.94E+01
M	18	1834.92	5.87E+01	5.05E-01	8.05E-01	5.82E+01	3.29E+01
m	19	1838.25	3.42E+01	5.05E-01	8.05E-01	3.37E+01	3.28E+01
	20	1846.63	4.60E+01			4.60E+01	3.08E+01
	21	1885.88	1.91E+01			1.91E+01	2.20E+01
	22	1936.15	1.60E+01			1.60E+01	1.98E+01
	23	2505.21	4.06E+02			4.06E+02	4.63E+01
M	24	2614.16	5.00E+01	2.39E+00	4.87E-01	4.76E+01	1.60E+01
m	25	2620.73	7.65E+00			7.65E+00	5.66E+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 1905060-01

GAS-1602

AREA CORRECTION REPORT REFERENCE PEAK / BKG. SUBTRACT

Peak Analysis Performed on : 6/3/2019 9:27:04AM
 Ref. Peak Energy : 0.00 Reference Date :
 Peak Ratio : 0.00 Uncertainty : 0.00
 Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000082155.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	57.88	1.28E+05	1448.30			1.28E+05	1.45E+03
2	88.02	3.65E+04	771.84			3.65E+04	7.72E+02
3	122.00	7.70E+03	449.40			7.70E+03	4.49E+02
4	136.89	6.54E+02	302.07			6.54E+02	3.02E+02
5	165.73	5.42E+02	285.69			5.42E+02	2.86E+02
6	322.92	1.49E+02	178.77			1.49E+02	1.79E+02
7	642.54	1.09E+02	126.83			1.09E+02	1.27E+02
8	661.69	3.15E+04	455.37			3.15E+04	4.55E+02
9	737.97	1.35E+02	133.64			1.35E+02	1.34E+02
10	759.97	1.22E+02	116.68			1.22E+02	1.17E+02
11	922.55	1.16E+02	141.31			1.16E+02	1.41E+02
12	1173.29	2.77E+04	400.60			2.77E+04	4.01E+02
13	1332.56	2.48E+04	343.28			2.48E+04	3.43E+02
14	1603.50	2.15E+01	21.07			2.15E+01	2.11E+01
15	1662.64	2.36E+01	30.05			2.36E+01	3.00E+01
16	1764.05	4.71E+01	29.29	1.53E+00	7.60E-01	4.55E+01	2.93E+01
17	1799.27	3.29E+01	29.41			3.29E+01	2.94E+01
M 18	1834.92	5.87E+01	32.86	5.05E-01	8.05E-01	5.82E+01	3.29E+01
m 19	1838.25	3.42E+01	32.74	5.05E-01	8.05E-01	3.37E+01	3.28E+01
20	1846.63	4.60E+01	30.77			4.60E+01	3.08E+01
21	1885.88	1.91E+01	22.03			1.91E+01	2.20E+01
22	1936.15	1.60E+01	19.85			1.60E+01	1.98E+01
23	2505.21	4.06E+02	46.28			4.06E+02	4.63E+01
M 24	2614.16	5.00E+01	16.00	2.39E+00	4.87E-01	4.76E+01	1.60E+01
m 25	2620.73	7.65E+00	5.66			7.65E+00	5.66E+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

0041

Analysis Report for 1905060-01
GAS-1602

<i>Nuclide Name</i>	<i>Id Confidence</i>	<i>Energy (keV)</i>	<i>Yield(%)</i>	<i>Activity (pCi/grams)</i>	<i>Activity Uncertainty</i>
CO-57	0.937	122.06 *	85.51	8.76E+01	9.18E+00
		136.48 *	10.60	6.20E+01	2.91E+01
CO-60	0.999	1173.22 *	100.00	1.44E+02	1.26E+01
		1332.49 *	100.00	1.41E+02	1.29E+01
CD-109	0.978	88.03 *	3.72	3.31E+03	3.09E+02
SN-126	0.994	87.57 *	37.00	7.75E+01	7.23E+00
CS-137	1.000	661.65 *	85.12	9.19E+01	1.00E+01
CE-139	0.778	165.85 *	80.35	8.19E+01	4.37E+01
EU-155	0.317	86.50 *	30.90	1.35E+02	1.26E+01
		105.30	20.70		
RA-223	0.973	323.87 *	3.88	5.16E+00	6.22E+00
NP-237	0.934	86.50 *	12.60	2.28E+02	2.12E+01

* = Energy line found in the spectrum.

- = Manually added nuclide.

? = Manually edited nuclide.

Energy Tolerance : 2.000FWHM

Nuclide confidence index threshold = 0.30

Errors quoted at 2.000sigma

UNIDENTIFIED PEAKS

Peak Locate Performed on : 6/3/2019 9:27:04AM
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	57.88	7.13587E+01	0.56	Tol.	CE-143 AM-241
7	642.54	6.08318E-02	57.91		
9	737.97	7.47400E-02	49.67	Tol.	MO-99
10	759.97	6.76587E-02	47.90		
11	922.55	6.42099E-02	61.13		
14	1603.50	1.19591E-02	48.94		
15	1662.64	1.30952E-02	63.74		
16	1764.05	2.52924E-02	32.18	Tol.	BI-214
17	1799.27	1.82516E-02	44.76		
M	18	1834.92	3.23219E-02	28.25	Sum
m	19	1838.25	1.87096E-02	48.63	
	20	1846.63	2.55556E-02	33.44	

Analysis Report for 1905060-01

GAS-1602

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
	21	1885.88	1.06287E-02	57.57	
	22	1936.15	8.88889E-03	62.03	
	23	2505.21	2.25612E-01	5.70	Sum
M	24	2614.16	2.64372E-02	16.82	Tol. TL-208
m	25	2620.73	4.25197E-03	36.96	

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	0.93	122.06 *	85.51	8.76E+01	9.18E+00
		136.48 *	10.60	6.20E+01	2.91E+01
CO-60	0.99	1173.22 *	100.00	1.44E+02	1.26E+01
		1332.49 *	100.00	1.41E+02	1.29E+01
CD-109	0.97	88.03 *	3.72	3.31E+03	3.09E+02
SN-126	0.99	87.57 *	37.00	7.75E+01	7.23E+00
CS-137	1.00	661.65 *	85.12	9.19E+01	1.00E+01
CE-139	0.77	165.85 *	80.35	8.19E+01	4.37E+01
EU-155	0.31	86.50 *	30.90	1.35E+02	1.26E+01
		105.30	20.70		
RA-223	0.97	323.87 *	3.88	5.16E+00	6.22E+00
NP-237	0.93	86.50 *	12.60	2.28E+02	2.12E+01

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

Analysis Report for 1905060-01

GAS-1602

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>
CO-57	0.937	8.53E+01	8.75E+00	
CO-60	0.999	1.42E+02	9.01E+00	
? CD-109	0.978	3.31E+03	3.09E+02	
? SN-126	0.994	7.75E+01	7.23E+00	
CS-137	1.000	9.19E+01	1.00E+01	
CE-139	0.778	8.19E+01	4.37E+01	
? EU-155	0.317	1.35E+02	1.26E+01	
RA-223	0.973	5.16E+00	6.22E+00	
? NP-237	0.934	2.28E+02	2.12E+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 1905060-01

GAS-1602

UNIDENTIFIED PEAKS

Peak Locate Performed on : 6/3/2019 9:27:04AM
 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	57.88	7.13587E+01	0.56	Tol.	CE-143 AM-241
7	642.54	6.08318E-02	57.91		
9	737.97	7.47400E-02	49.67	Tol.	MO-99
10	759.97	6.76587E-02	47.90		
11	922.55	6.42099E-02	61.13		
14	1603.50	1.19591E-02	48.94		
15	1662.64	1.30952E-02	63.74		
16	1764.05	2.52924E-02	32.18	Tol.	BI-214
17	1799.27	1.82516E-02	44.76		
M 18	1834.92	3.23219E-02	28.25	Sum	
m 19	1838.25	1.87096E-02	48.63		
20	1846.63	2.55556E-02	33.44		
21	1885.88	1.06287E-02	57.57		
22	1936.15	8.88889E-03	62.03		
23	2505.21	2.25612E-01	5.70	Sum	
M 24	2614.16	2.64372E-02	16.82	Tol.	TL-208
m 25	2620.73	4.25197E-03	36.96		

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

0045

Analysis Report for 1905060-01

GAS-1602

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	BE-7	477.59	10.42	7.17E+05	1.47E+06	1.47E+06
+	NA-22	1274.54	99.94	-1.89E-01	6.01E-01	6.01E-01
+	NA-24	1368.53	99.99	6.92E-02	6.90E-02	2.23E-01
		2754.09	99.86	1.92E-02		6.90E-02
+	AL-26	1808.65	99.76	1.17E-03	1.79E-01	1.79E-01
+	K-40	1460.81	10.67	8.68E-01	2.11E+00	2.11E+00
+	@ AR-41	1293.64	99.16	1.00E+26	1.00E+26	1.00E+26
+	TI-44	67.88	94.40	-1.34E+00	4.08E-01	4.53E-01
		78.34	96.00	-3.72E-01		4.08E-01
+	SC-46	889.25	98.98	-1.58E+03	1.90E+03	1.98E+03
		1120.51	99.90	1.42E+02		1.90E+03
+	V-48	983.52	99.98	-8.74E+17	7.59E+17	1.50E+18
		1312.10	97.50	1.37E+17		7.59E+17
+	CR-51	320.08	9.83	-3.84E+10	1.53E+11	1.53E+11
+	MN-54	834.83	99.97	1.05E+00	4.96E+00	4.96E+00
+	CO-56	846.75	99.96	-8.06E+02	3.98E+03	8.56E+03
		1037.75	14.03	-1.63E+04		6.76E+04
		1238.25	67.00	1.44E+03		7.77E+03
		1771.40	15.51	-4.86E+02		1.69E+04
		2587.48	16.90	-5.41E+02		3.98E+03
+	CO-57	122.06	* 85.51	8.76E+01	7.77E+00	7.77E+00
		136.48	* 10.60	6.20E+01		4.67E+01
+	CO-58	810.76	99.40	7.46E+02	7.66E+03	7.66E+03
+	FE-59	1099.22	56.50	-6.41E+05	2.63E+06	4.40E+06
		1291.56	43.20	-9.68E+04		2.63E+06
+	CO-60	1173.22	* 100.00	1.44E+02	1.29E+00	1.91E+00
		1332.49	* 100.00	1.41E+02		1.29E+00
+	ZN-65	1115.52	50.75	1.52E+01	2.06E+01	2.06E+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	4.37E+03	1.33E+02	6.60E+02
		136.00	59.50	1.54E+02		1.33E+02
		264.65	59.80	2.27E+01		1.76E+02
		279.53	25.20	-1.91E+02		4.15E+02
		400.65	11.40	4.34E+02		1.07E+03
+	RB-82	776.52	13.00	3.02E+10	1.20E+12	1.20E+12
+	RB-83	520.41	46.00	-1.18E+02	2.42E+03	2.42E+03
		529.64	30.30	5.72E+02		3.73E+03
		552.65	16.40	2.09E+03		6.87E+03
+	KR-85	513.99	0.43	-1.50E+00	1.25E+02	1.25E+02
+	SR-85	513.99	99.27	-1.86E+02	1.54E+04	1.54E+04
+	Y-88	898.02	93.40	5.64E+01	1.65E+02	4.01E+02
		1836.01	99.38	2.21E+02		1.65E+02
+	MO-93	263.06	56.72	-2.48E-01	2.45E-01	7.75E-01
		684.67	99.68	2.23E-01		5.41E-01
		1477.11	99.08	9.00E-02		2.45E-01

Analysis Report for 1905060-01

GAS-1602

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	NB-93M	16.57	9.43	-4.10E+08	2.52E+07	2.52E+07
+	NB-94	702.63	100.00	9.24E-02	4.65E-01	4.65E-01
		871.10	100.00	1.36E-01		6.15E-01
+	NB-95	765.79	99.81	2.48E+07	1.17E+08	1.17E+08
+	@ NB-95M	235.69	25.00	1.00E+26	1.00E+26	1.00E+26
+	ZR-95	724.18	43.70	1.57E+04	3.44E+04	4.24E+04
		756.72	55.30	-8.25E+03		3.44E+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
+	TC-99M	140.51	89.00	-5.93E-03	2.98E-01	2.98E-01
+	RU-103	497.08	89.00	-5.04E+06	1.44E+07	1.44E+07
+	RU-106	621.84	9.80	7.45E+00	2.86E+01	2.86E+01
+	AG-108M	433.93	89.90	-1.25E-03	5.06E-01	5.27E-01
		614.37	90.40	-1.72E-01		5.06E-01
		722.95	90.50	8.22E-02		5.38E-01
+	CD-109	88.03	* 3.72	3.31E+03	1.00E+02	1.00E+02
+	AG-110M	657.75	93.14	7.02E+00	1.37E+01	2.16E+01
		677.61	10.53	-3.71E+01		6.40E+01
		706.67	16.46	-6.73E-02		4.20E+01
		763.93	21.98	7.84E+00		3.43E+01
		884.67	21.98	-4.69E+00		4.23E+01
		1384.27	23.94	3.29E+00		1.37E+01
+	CD-113M	263.70	0.02	2.91E+02	1.85E+03	1.85E+03
+	SN-113	255.12	1.93	4.04E+03	2.41E+02	6.83E+03
		391.69	64.90	2.15E+02		2.41E+02
+	TE-123M	159.00	84.10	-5.44E+01	8.90E+01	8.90E+01
+	SB-124	602.71	97.87	-3.09E+03	2.74E+04	3.45E+04
		645.85	7.26	-5.38E+04		4.91E+05
		722.78	11.10	4.94E+04		3.24E+05
		1691.02	49.00	4.12E+03		2.74E+04
+	I-125	35.49	6.49	-9.25E+05	7.70E+05	7.70E+05
+	SB-125	176.33	6.89	4.86E-01	3.04E+00	7.72E+00
		427.89	29.33	-1.42E+00		3.04E+00
		463.38	10.35	5.81E+00		9.55E+00
		600.56	17.80	1.47E+00		4.97E+00
		635.90	11.32	-1.56E-01		7.93E+00
+	SB-126	414.70	83.30	2.57E-01	4.63E-01	5.44E-01
		666.33	99.60	-3.03E+00		1.02E+00
		695.00	99.60	-3.52E-02		4.63E-01
		720.50	53.80	-3.24E-01		8.78E-01
+	SN-126	87.57	* 37.00	7.75E+01	2.34E+00	2.34E+00
+	@ SB-127	473.00	25.00	1.00E+26	1.00E+26	1.00E+26
	@	685.00	35.70	1.00E+26		1.00E+26
	@	783.80	14.70	1.00E+26		1.00E+26
+	I-129	29.78	57.00	-1.88E+01	2.21E+00	2.21E+00
		33.60	13.20	8.63E-01		5.84E+00
		39.58	7.52	-1.73E+01		7.50E+00

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Analysis Report for 1905060-01

GAS-1602

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	@ 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
+	BA-133	81.00	33.00	-1.06E+00	8.12E-01	1.38E+00
		302.84	17.80	1.21E-01		2.54E+00
		356.01	60.00	-1.41E-01		8.12E-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	-3.05E+00	1.12E+00	1.27E+01
		569.32	15.43	1.09E+00		7.03E+00
		604.70	97.60	-6.48E-01		1.12E+00
		795.84	85.40	-8.96E-02		1.54E+00
		801.93	8.73	2.82E+00		1.53E+01
+	CS-135	268.24	16.00	1.32E+00	2.34E+00	2.34E+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	1.00E+26	1.00E+26	1.00E+26
	@	163.89	4.61	1.00E+26		1.00E+26
	@	176.55	13.56	1.00E+26		1.00E+26
	@	273.65	12.66	1.00E+26		1.00E+26
	@	340.57	48.50	1.00E+26		1.00E+26
	@	818.50	99.70	1.00E+26		1.00E+26
	@	1048.07	79.60	1.00E+26		1.00E+26
	@	1235.34	19.70	1.00E+26		1.00E+26
+	CS-137	661.65	* 85.12	9.19E+01	1.38E+00	1.38E+00
+	LA-138	788.74	34.00	-4.58E-01	3.18E-01	1.56E+00
		1435.80	66.00	1.69E-02		3.18E-01
+	CE-139	165.85	* 80.35	8.19E+01	7.05E+01	7.05E+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	2.62E+08	5.75E+08	5.75E+08
+	@ 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	-3.33E+00	2.72E+01	2.72E+01
+	PM-144	476.78	42.00	1.89E+00	2.92E+00	7.59E+00
		618.01	98.60	-8.62E-02		2.92E+00

Analysis Report for 1905060-01

GAS-1602

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	PM-144	696.49	99.49	8.13E-01	2.92E+00	3.02E+00
+	PM-145	36.85	21.70	-3.92E+00	1.67E+00	3.11E+00
		37.36	39.70	-2.88E+00		1.67E+00
		42.30	15.10	-5.13E+00		4.25E+00
		72.40	2.31	-2.00E+01		1.85E+01
+	PM-146	453.90	39.94	-1.47E-01	1.71E+00	1.71E+00
		735.90	14.01	-1.22E+00		4.86E+00
		747.13	13.10	-1.28E+00		5.30E+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	2.19E+01	1.61E+00	2.27E+00
		244.69	5.40	2.57E+00		8.08E+00
		344.27	19.13	3.19E-01		2.41E+00
		778.89	9.10	-5.03E+00		6.48E+00
		964.01	10.40	3.27E+00		7.74E+00
		1085.78	7.22	2.44E+00		1.03E+01
		1112.02	9.60	1.43E+00		8.04E+00
		1407.95	14.94	2.63E-01		1.61E+00
+	GD-153	97.43	31.30	8.14E-01	1.41E+01	1.41E+01
		103.18	22.20	3.95E+00		1.95E+01
+	EU-154	123.07	40.50	1.28E+01	1.02E+00	1.23E+00
		723.30	19.70	1.12E+00		3.02E+00
		873.19	11.50	4.04E-01		6.60E+00
		996.32	10.30	-1.14E+00		7.75E+00
		1004.76	17.90	4.91E-01		4.41E+00
		1274.45	35.50	-3.23E-01		1.02E+00
+	EU-155	86.50	* 30.90	1.35E+02	1.85E+00	4.08E+00
		105.30	20.70	2.22E-01		1.85E+00
+	EU-156	811.77	10.40	-9.60E+19	8.09E+19	1.09E+20
		1153.47	7.20	1.78E+19		1.55E+20
		1230.71	8.90	-2.32E+19		8.09E+19
+	HO-166M	184.41	72.60	1.66E-02	3.98E-01	3.98E-01
		280.45	29.60	-1.04E-01		1.26E+00
		410.94	11.10	-3.11E-01		4.00E+00
		711.69	54.10	1.16E-01		8.73E-01
+	TM-171	66.72	0.14	-8.23E+03	8.04E+02	8.04E+02
+	HF-172	67.35	5.31	-6.23E+01	7.56E+00	2.11E+01
		125.82	11.30	-1.17E+01		7.56E+00
+	@ LU-172	181.53	20.60	1.00E+26	1.00E+26	1.00E+26
	@	900.72	29.81	1.00E+26		1.00E+26
	@	1093.66	62.50	1.00E+26		1.00E+26
+	LU-173	100.72	5.24	-1.83E+00	6.78E+00	1.95E+01
		272.11	21.20	1.07E-01		6.78E+00
+	HF-175	343.40	84.00	-2.39E+03	7.39E+03	7.39E+03
+	LU-176	88.34	13.30	1.30E+02	3.48E-01	5.22E+00
		201.83	86.00	-2.54E-02		3.48E-01
		306.78	94.00	1.98E-02		4.05E-01
+	HF-181	133.02	41.70	-1.21E+06	4.78E+06	5.42E+06

Analysis Report for 1905060-01

GAS-1602

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
HF-181	345.85	17.20	2.11E+06	4.78E+06	1.97E+07
	482.03	82.80	-1.58E+06		4.78E+06
+ TA-182	67.75	41.20	-1.09E+03	3.70E+02	3.70E+02
	1121.30	34.90	4.71E+01		6.30E+02
	1189.05	16.23	-4.05E+02		1.01E+03
	1221.41	26.98	1.71E+02		5.04E+02
	1231.02	11.44	-3.15E+02		1.10E+03
+ IR-192	308.46	29.68	-2.66E+03	9.60E+03	1.18E+04
	468.07	48.10	-5.79E+03		9.60E+03
+ HG-203	279.19	77.30	-4.38E+05	9.51E+05	9.51E+05
+ TL-204	374.74	94.11	5.06E-02	7.23E-01	7.23E-01
	899.15	99.16	4.00E-01		1.09E+00
	911.74	91.10	1.21E+00		1.22E+00
+ BI-207	569.67	97.72	7.40E-02	4.78E-01	4.78E-01
	1063.62	74.90	-4.98E-01		9.12E-01
+ TL-208	583.14	30.22	8.40E-01	7.08E-01	1.51E+00
	860.37	4.48	-2.13E+00		1.32E+01
	2614.66	35.85	9.65E-01		7.08E-01
+ BI-210M	262.00	45.00	-8.85E-02	8.27E-01	8.27E-01
	300.00	23.00	4.03E-01		1.66E+00
+ PB-210	46.50	4.25	-4.61E+01	1.71E+01	1.71E+01
+ PB-211	404.84	2.90	-6.73E-01	1.50E+01	1.50E+01
	831.96	2.90	-3.90E-01		1.93E+01
+ BI-212	727.17	11.80	1.97E+00	4.13E+00	4.13E+00
	1620.62	2.75	-6.70E-01		7.42E+00
+ PB-212	238.63	44.60	3.83E-01	8.77E-01	8.77E-01
	300.09	3.41	2.72E+00		1.12E+01
+ BI-214	609.31	46.30	5.25E-01	9.95E-01	9.95E-01
	1120.29	15.10	4.84E-01		4.05E+00
	1764.49	15.80	8.75E-01		1.39E+00
	2204.22	4.98	1.13E-01		4.22E+00
+ PB-214	295.21	19.19	7.25E-01	1.11E+00	2.00E+00
	351.92	37.19	-1.89E-02		1.11E+00
+ RN-219	401.80	6.50	7.44E-01	6.67E+00	6.67E+00
+ RA-223	323.87	* 3.88	5.16E+00	1.02E+01	1.02E+01
+ RA-224	240.98	3.95	5.92E+00	9.88E+00	9.88E+00
+ RA-225	40.00	31.00	-2.73E+20	1.19E+20	1.19E+20
+ RA-226	186.21	3.28	-2.62E+00	8.89E+00	8.89E+00
+ TH-227	50.10	8.40	1.52E+01	3.37E+00	8.78E+00
	236.00	11.50	-5.33E-01		3.37E+00
	256.20	6.30	-3.09E+00		5.86E+00
+ AC-228	338.32	11.40	-8.08E-01	2.47E+00	3.51E+00
	911.07	27.70	1.85E+00		2.47E+00
	969.11	16.60	2.24E+00		4.10E+00
+ TH-230	48.43	16.90	5.35E+00	4.31E+00	4.31E+00
	62.85	4.60	2.29E+02		1.90E+01
	67.67	0.37	-3.32E+02		1.12E+02
+ PA-231	283.67	1.60	2.73E+00	1.65E+01	2.35E+01

Analysis Report for 1905060-01

GAS-1602

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	PA-231	302.67	2.30	7.83E-01	1.65E+01	1.65E+01
+	TH-231	25.64	14.70	4.15E+02	8.38E+00	2.84E+01
		84.21	6.40	-6.72E+01		8.38E+00
+	PA-233	311.98	38.60	3.46E+10	7.35E+10	7.35E+10
+	PA-234	131.20	20.40	-5.86E-01	1.31E+00	1.31E+00
		733.99	8.80	-3.18E+00		5.40E+00
		946.00	12.00	2.56E+00		6.09E+00
+	PA-234M	1001.03	0.92	1.79E+01	7.02E+01	7.02E+01
+	TH-234	63.29	3.80	-9.27E+01	1.82E+01	1.82E+01
+	U-235	143.76	10.50	-7.62E-01	2.47E+00	2.47E+00
		163.35	4.70	8.92E-01		5.95E+00
		205.31	4.70	-2.37E+00		6.44E+00
+	NP-237	86.50	* 12.60	2.28E+02	6.89E+00	6.89E+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	1.50E+02	3.62E+00	3.62E+00
+	AM-243	74.67	66.00	2.36E-02	5.81E-01	5.81E-01
+	CM-243	209.75	3.29	1.82E+00	2.82E+00	1.01E+01
		228.14	10.60	2.38E+00		3.89E+00
		277.60	14.00	2.22E-01		2.82E+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)
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Analysis Report for 1905060-01

GAS-1602

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	1.47E+06	1.47E+06	7.17E+05	7.26E+05
NA-22	1274.54	99.94	6.01E-01	6.01E-01	-1.89E-01	2.90E-01
NA-24	1368.53	99.99	2.23E-01	6.90E-02	6.92E-02	1.06E-01
	2754.09	99.86	6.90E-02		1.92E-02	2.58E-02
AL-26	1808.65	99.76	1.79E-01	1.79E-01	1.17E-03	8.27E-02
K-40	1460.81	10.67	2.11E+00	2.11E+00	8.68E-01	1.00E+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	4.53E-01	4.08E-01	-1.34E+00	2.25E-01
	78.34	96.00	4.08E-01		-3.72E-01	2.03E-01
SC-46	889.25	98.98	1.98E+03	1.90E+03	-1.58E+03	9.76E+02
	1120.51	99.90	1.90E+03		1.42E+02	9.35E+02
V-48	983.52	99.98	1.50E+18	7.59E+17	-8.74E+17	7.41E+17
	1312.10	97.50	7.59E+17		1.37E+17	3.67E+17
CR-51	320.08	9.83	1.53E+11	1.53E+11	-3.84E+10	7.58E+10
MN-54	834.83	99.97	4.96E+00	4.96E+00	1.05E+00	2.45E+00
CO-56	846.75	99.96	8.56E+03	3.98E+03	-8.06E+02	4.22E+03
	1037.75	14.03	6.76E+04		-1.63E+04	3.33E+04
	1238.25	67.00	7.77E+03		1.44E+03	3.77E+03
	1771.40	15.51	1.69E+04		-4.86E+02	7.82E+03
	2587.48	16.90	3.98E+03		-5.41E+02	1.26E+03
+ CO-57	122.06	* 85.51	7.77E+00	7.77E+00	8.76E+01	3.87E+00
	136.48	* 10.60	4.67E+01		6.20E+01	2.32E+01
CO-58	810.76	99.40	7.66E+03	7.66E+03	7.46E+02	3.78E+03
FE-59	1099.22	56.50	4.40E+06	2.63E+06	-6.41E+05	2.17E+06
	1291.56	43.20	2.63E+06		-9.68E+04	1.27E+06
+ CO-60	1173.22	* 100.00	1.91E+00	1.29E+00	1.44E+02	9.47E-01
	1332.49	* 100.00	1.29E+00		1.41E+02	6.39E-01
ZN-65	1115.52	50.75	2.06E+01	2.06E+01	1.52E+01	1.02E+01
@ 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	6.60E+02	1.33E+02	4.37E+03	3.28E+02
	136.00	59.50	1.33E+02		1.54E+02	6.57E+01
	264.65	59.80	1.76E+02		2.27E+01	8.71E+01
	279.53	25.20	4.15E+02		-1.91E+02	2.05E+02
	400.65	11.40	1.07E+03		4.34E+02	5.32E+02
RB-82	776.52	13.00	1.20E+12	1.20E+12	3.02E+10	5.94E+11
RB-83	520.41	46.00	2.42E+03	2.42E+03	-1.18E+02	1.20E+03
	529.64	30.30	3.73E+03		5.72E+02	1.84E+03
	552.65	16.40	6.87E+03		2.09E+03	3.39E+03
KR-85	513.99	0.43	1.25E+02	1.25E+02	-1.50E+00	6.17E+01
SR-85	513.99	99.27	1.54E+04	1.54E+04	-1.86E+02	7.61E+03
Y-88	898.02	93.40	4.01E+02	1.65E+02	5.64E+01	1.98E+02
	1836.01	99.38	1.65E+02		2.21E+02	7.89E+01
MO-93	263.06	56.72	7.75E-01	2.45E-01	-2.48E-01	3.84E-01
	684.67	99.68	5.41E-01		2.23E-01	2.67E-01
	1477.11	99.08	2.45E-01		9.00E-02	1.16E-01
NB-93M	16.57	9.43	2.52E+07	2.52E+07	-4.10E+08	1.25E+07
NB-94	702.63	100.00	4.65E-01	4.65E-01	9.24E-02	2.29E-01
	871.10	100.00	6.15E-01		1.36E-01	3.04E-01
NB-95	765.79	99.81	1.17E+08	1.17E+08	2.48E+07	5.79E+07
@ NB-95M	235.69	25.00	1.00E+26	1.00E+26	1.00E+26	1.00E+20
ZR-95	724.18	43.70	4.24E+04	3.44E+04	1.57E+04	2.09E+04

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Analysis Report for 1905060-01

GAS-1602

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
ZR-95	756.72	55.30	3.44E+04	3.44E+04	-8.25E+03	1.70E+04
@ 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
TC-99M	140.51	89.00	2.98E-01	2.98E-01	-5.93E-03	1.48E-01
RU-103	497.08	89.00	1.44E+07	1.44E+07	-5.04E+06	7.14E+06
RU-106	621.84	9.80	2.86E+01	2.86E+01	7.45E+00	1.41E+01
AG-108M	433.93	89.90	5.27E-01	5.06E-01	-1.25E-03	2.61E-01
	614.37	90.40	5.06E-01		-1.72E-01	2.50E-01
	722.95	90.50	5.38E-01		8.22E-02	2.65E-01
+ CD-109	88.03	*	1.00E+02	1.00E+02	3.31E+03	4.99E+01
AG-110M	657.75	93.14	2.16E+01	1.37E+01	7.02E+00	1.08E+01
	677.61	10.53	6.40E+01		-3.71E+01	3.16E+01
	706.67	16.46	4.20E+01		-6.73E-02	2.07E+01
	763.93	21.98	3.43E+01		7.84E+00	1.69E+01
	884.67	21.98	4.23E+01		-4.69E+00	2.09E+01
	1384.27	23.94	1.37E+01		3.29E+00	6.52E+00
CD-113M	263.70	0.02	1.85E+03	1.85E+03	2.91E+02	9.17E+02
SN-113	255.12	1.93	6.83E+03	2.41E+02	4.04E+03	3.39E+03
	391.69	64.90	2.41E+02		2.15E+02	1.19E+02
TE-123M	159.00	84.10	8.90E+01	8.90E+01	-5.44E+01	4.41E+01
SB-124	602.71	97.87	3.45E+04	2.74E+04	-3.09E+03	1.70E+04
	645.85	7.26	4.91E+05		-5.38E+04	2.42E+05
	722.78	11.10	3.24E+05		4.94E+04	1.60E+05
	1691.02	49.00	2.74E+04		4.12E+03	1.27E+04
I-125	35.49	6.49	7.70E+05	7.70E+05	-9.25E+05	3.82E+05
SB-125	176.33	6.89	7.72E+00	3.04E+00	4.86E-01	3.83E+00
	427.89	29.33	3.04E+00		-1.42E+00	1.50E+00
	463.38	10.35	9.55E+00		5.81E+00	4.73E+00
	600.56	17.80	4.97E+00		1.47E+00	2.45E+00
	635.90	11.32	7.93E+00		-1.56E-01	3.91E+00
SB-126	414.70	83.30	5.44E-01	4.63E-01	2.57E-01	2.69E-01
	666.33	99.60	1.02E+00		-3.03E+00	5.05E-01
	695.00	99.60	4.63E-01		-3.52E-02	2.28E-01
	720.50	53.80	8.78E-01		-3.24E-01	4.33E-01
+ SN-126	87.57	*	2.34E+00	2.34E+00	7.75E+01	1.17E+00
@ SB-127	473.00	25.00	1.00E+26	1.00E+26	1.00E+26	1.00E+20
@	685.00	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	2.21E+00	2.21E+00	-1.88E+01	1.10E+00
	33.60	13.20	5.84E+00		8.63E-01	2.90E+00
	39.58	7.52	7.50E+00		-1.73E+01	3.72E+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	1.38E+00	8.12E-01	-1.06E+00	6.87E-01
	302.84	17.80	2.54E+00		1.21E-01	1.26E+00
	356.01	60.00	8.12E-01		-1.41E-01	4.02E-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

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Analysis Report for 1905060-01

GAS-1602

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
CS-134	563.23	8.38	1.27E+01	1.12E+00	-3.05E+00	6.29E+00
	569.32	15.43	7.03E+00		1.09E+00	3.47E+00
	604.70	97.60	1.12E+00		-6.48E-01	5.55E-01
	795.84	85.40	1.54E+00		-8.96E-02	7.59E-01
	801.93	8.73	1.53E+01		2.82E+00	7.57E+00
CS-135	268.24	16.00	2.34E+00	2.34E+00	1.32E+00	1.16E+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	1.00E+26	1.00E+26	1.00E+26	1.00E+20
@	163.89	4.61	1.00E+26		1.00E+26	1.00E+20
@	176.55	13.56	1.00E+26		1.00E+26	1.00E+20
@	273.65	12.66	1.00E+26		1.00E+26	1.00E+20
@	340.57	48.50	1.00E+26		1.00E+26	1.00E+20
@	818.50	99.70	1.00E+26		1.00E+26	1.00E+20
@	1048.07	79.60	1.00E+26		1.00E+26	1.00E+20
@	1235.34	19.70	1.00E+26		1.00E+26	1.00E+20
+ CS-137	661.65	* 85.12	1.38E+00	1.38E+00	9.19E+01	6.84E-01
LA-138	788.74	34.00	1.56E+00	3.18E-01	-4.58E-01	7.69E-01
	1435.80	66.00	3.18E-01		1.69E-02	1.50E-01
+ CE-139	165.85	* 80.35	7.05E+01	7.05E+01	8.19E+01	3.50E+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	5.75E+08	5.75E+08	2.62E+08	2.85E+08
@ 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	2.72E+01	2.72E+01	-3.33E+00	1.35E+01
PM-144	476.78	42.00	7.59E+00	2.92E+00	1.89E+00	3.76E+00
	618.01	98.60	2.92E+00		-8.62E-02	1.44E+00
	696.49	99.49	3.02E+00		8.13E-01	1.49E+00
PM-145	36.85	21.70	3.11E+00	1.67E+00	-3.92E+00	1.54E+00
	37.36	39.70	1.67E+00		-2.88E+00	8.28E-01
	42.30	15.10	4.25E+00		-5.13E+00	2.11E+00
	72.40	2.31	1.85E+01		-2.00E+01	9.18E+00
PM-146	453.90	39.94	1.71E+00	1.71E+00	-1.47E-01	8.45E-01
	735.90	14.01	4.86E+00		-1.22E+00	2.40E+00
	747.13	13.10	5.30E+00		-1.28E+00	2.61E+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	2.27E+00	1.61E+00	2.19E+01	1.13E+00
	244.69	5.40	8.08E+00		2.57E+00	4.01E+00
	344.27	19.13	2.41E+00		3.19E-01	1.19E+00
	778.89	9.10	6.48E+00		-5.03E+00	3.20E+00
	964.01	10.40	7.74E+00		3.27E+00	3.82E+00

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Analysis Report for 1905060-01

GAS-1602

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
EU-152	1085.78	7.22	1.03E+01	1.61E+00	2.44E+00	5.06E+00
	1112.02	9.60	8.04E+00		1.43E+00	3.96E+00
	1407.95	14.94	1.61E+00		2.63E-01	7.62E-01
GD-153	97.43	31.30	1.41E+01	1.41E+01	8.14E-01	7.00E+00
	103.18	22.20	1.95E+01		3.95E+00	9.67E+00
EU-154	123.07	40.50	1.23E+00	1.02E+00	1.28E+01	6.13E-01
	723.30	19.70	3.02E+00		1.12E+00	1.49E+00
	873.19	11.50	6.60E+00		4.04E-01	3.26E+00
	996.32	10.30	7.75E+00		-1.14E+00	3.82E+00
	1004.76	17.90	4.41E+00		4.91E-01	2.17E+00
+ EU-155	1274.45	35.50	1.02E+00	1.85E+00	-3.23E-01	4.94E-01
	86.50	* 30.90	4.08E+00		1.35E+02	2.03E+00
EU-156	105.30	20.70	1.85E+00	8.09E+19	2.22E-01	9.16E-01
	811.77	10.40	1.09E+20		-9.60E+19	5.40E+19
HO-166M	1153.47	7.20	1.55E+20	3.98E-01	1.78E+19	7.62E+19
	1230.71	8.90	8.09E+19		-2.32E+19	3.92E+19
	184.41	72.60	3.98E-01		1.66E-02	1.97E-01
	280.45	29.60	1.26E+00		-1.04E-01	6.26E-01
TM-171	410.94	11.10	4.00E+00	8.04E+02	-3.11E-01	1.98E+00
	711.69	54.10	8.73E-01		1.16E-01	4.31E-01
	66.72	0.14	8.04E+02		-8.23E+03	4.00E+02
HF-172	67.35	5.31	2.11E+01	7.56E+00	-6.23E+01	1.05E+01
	125.82	11.30	7.56E+00		-1.17E+01	3.75E+00
@ LU-172	181.53	20.60	1.00E+26	1.00E+26	1.00E+26	1.00E+20
@	900.72	29.81	1.00E+26	1.00E+26	1.00E+26	1.00E+20
@	1093.66	62.50	1.00E+26	1.00E+26	1.00E+26	1.00E+20
LU-173	100.72	5.24	1.95E+01	6.78E+00	-1.83E+00	9.66E+00
	272.11	21.20	6.78E+00		1.07E-01	3.36E+00
HF-175	343.40	84.00	7.39E+03	7.39E+03	-2.39E+03	3.66E+03
LU-176	88.34	13.30	5.22E+00	3.48E-01	1.30E+02	2.60E+00
	201.83	86.00	3.48E-01		-2.54E-02	1.72E-01
	306.78	94.00	4.05E-01		1.98E-02	2.01E-01
HF-181	133.02	41.70	5.42E+06	4.78E+06	-1.21E+06	2.69E+06
	345.85	17.20	1.97E+07		2.11E+06	9.74E+06
	482.03	82.80	4.78E+06		-1.58E+06	2.36E+06
TA-182	67.75	41.20	3.70E+02	3.70E+02	-1.09E+03	1.84E+02
	1121.30	34.90	6.30E+02		4.71E+01	3.10E+02
	1189.05	16.23	1.01E+03		-4.05E+02	4.93E+02
	1221.41	26.98	5.04E+02		1.71E+02	2.45E+02
	1231.02	11.44	1.10E+03		-3.15E+02	5.32E+02
IR-192	308.46	29.68	1.18E+04	9.60E+03	-2.66E+03	5.87E+03
	468.07	48.10	9.60E+03		-5.79E+03	4.75E+03
HG-203	279.19	77.30	9.51E+05	9.51E+05	-4.38E+05	4.71E+05
TL-204	374.74	94.11	7.23E-01	7.23E-01	5.06E-02	3.58E-01
	899.15	99.16	1.09E+00		4.00E-01	5.40E-01
	911.74	91.10	1.22E+00		1.21E+00	6.05E-01
BI-207	569.67	97.72	4.78E-01	4.78E-01	7.40E-02	2.36E-01
	1063.62	74.90	9.12E-01		-4.98E-01	4.50E-01
TL-208	583.14	30.22	1.51E+00	7.08E-01	8.40E-01	7.44E-01
	860.37	4.48	1.32E+01		-2.13E+00	6.51E+00
	2614.66	35.85	7.08E-01		9.65E-01	3.31E-01
BI-210M	262.00	45.00	8.27E-01	8.27E-01	-8.85E-02	4.10E-01
	300.00	23.00	1.66E+00		4.03E-01	8.25E-01

0055

Analysis Report for 1905060-01

GAS-1602

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
PB-210	46.50	4.25	1.71E+01	1.71E+01	-4.61E+01	8.49E+00
PB-211	404.84	2.90	1.50E+01	1.50E+01	-6.73E-01	7.43E+00
	831.96	2.90	1.93E+01		-3.90E-01	9.52E+00
BI-212	727.17	11.80	4.13E+00	4.13E+00	1.97E+00	2.03E+00
	1620.62	2.75	7.42E+00		-6.70E-01	3.48E+00
PB-212	238.63	44.60	8.77E-01	8.77E-01	3.83E-01	4.35E-01
	300.09	3.41	1.12E+01		2.72E+00	5.57E+00
BI-214	609.31	46.30	9.95E-01	9.95E-01	5.25E-01	4.91E-01
	1120.29	15.10	4.05E+00		4.84E-01	1.99E+00
	1764.49	15.80	1.39E+00		8.75E-01	6.56E-01
	2204.22	4.98	4.22E+00		1.13E-01	1.96E+00
PB-214	295.21	19.19	2.00E+00	1.11E+00	7.25E-01	9.89E-01
	351.92	37.19	1.11E+00		-1.89E-02	5.51E-01
RN-219	401.80	6.50	6.67E+00	6.67E+00	7.44E-01	3.30E+00
+ RA-223	323.87	* 3.88	1.02E+01	1.02E+01	5.16E+00	5.05E+00
RA-224	240.98	3.95	9.88E+00	9.88E+00	5.92E+00	4.90E+00
RA-225	40.00	31.00	1.19E+20	1.19E+20	-2.73E+20	5.89E+19
RA-226	186.21	3.28	8.89E+00	8.89E+00	-2.62E+00	4.41E+00
TH-227	50.10	8.40	8.78E+00	3.37E+00	1.52E+01	4.37E+00
	236.00	11.50	3.37E+00		-5.33E-01	1.67E+00
	256.20	6.30	5.86E+00		-3.09E+00	2.91E+00
AC-228	338.32	11.40	3.51E+00	2.47E+00	-8.08E-01	1.74E+00
	911.07	27.70	2.47E+00		1.85E+00	1.22E+00
	969.11	16.60	4.10E+00		2.24E+00	2.02E+00
TH-230	48.43	16.90	4.31E+00	4.31E+00	5.35E+00	2.15E+00
	62.85	4.60	1.90E+01		2.29E+02	9.47E+00
	67.67	0.37	1.12E+02		-3.32E+02	5.59E+01
PA-231	283.67	1.60	2.35E+01	1.65E+01	2.73E+00	1.16E+01
	302.67	2.30	1.65E+01		7.83E-01	8.18E+00
TH-231	25.64	14.70	2.84E+01	8.38E+00	4.15E+02	1.42E+01
	84.21	6.40	8.38E+00		-6.72E+01	4.17E+00
PA-233	311.98	38.60	7.35E+10	7.35E+10	3.46E+10	3.64E+10
PA-234	131.20	20.40	1.31E+00	1.31E+00	-5.86E-01	6.49E-01
	733.99	8.80	5.40E+00		-3.18E+00	2.66E+00
	946.00	12.00	6.09E+00		2.56E+00	3.01E+00
PA-234M	1001.03	0.92	7.02E+01	7.02E+01	1.79E+01	3.46E+01
TH-234	63.29	3.80	1.82E+01	1.82E+01	-9.27E+01	9.05E+00
U-235	143.76	10.50	2.47E+00	2.47E+00	-7.62E-01	1.22E+00
	163.35	4.70	5.95E+00		8.92E-01	2.95E+00
	205.31	4.70	6.44E+00		-2.37E+00	3.19E+00
+ NP-237	86.50	* 12.60	6.89E+00	6.89E+00	2.28E+02	3.43E+00
@ NP-239	106.10		1.00E+26	1.00E+26	1.00E+26	1.00E+20
@	228.18		1.00E+26		1.00E+26	1.00E+20
@	277.60		1.00E+26		1.00E+26	1.00E+20
AM-241	59.54	35.90	3.62E+00	3.62E+00	1.50E+02	1.81E+00
AM-243	74.67	66.00	5.81E-01	5.81E-01	2.36E-02	2.89E-01
CM-243	209.75	3.29	1.01E+01	2.82E+00	1.82E+00	5.01E+00
	228.14	10.60	3.89E+00		2.38E+00	1.93E+00
	277.60	14.00	2.82E+00		2.22E-01	1.40E+00

Analysis Report for 1905060-01
GAS-1602

- + = 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>
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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-1602

Elapsed Live time: 1800

Elapsed Real Time: 1826

Channel	-----	-----	-----	-----	-----	-----	-----	-----
1:	0	0	0	0	0	0	0	0
9:	0	0	0	0	0	0	0	1
17:	5	130	5658	11325	18093	22764	23197	19246
25:	14607	10300	6287	3741	2354	1667	1651	1560
33:	1582	1399	1262	1265	1253	1259	1247	1319
41:	1489	1584	1786	1873	2148	2533	2901	3566
49:	4133	4555	4861	5005	5116	5487	5842	7325
57:	10633	16318	21739	22945	19027	12451	7014	3923
65:	2678	2300	2228	2236	2168	2105	1996	1964
73:	1984	1976	2050	2039	2096	2061	2051	2014
81:	2066	2164	2256	2547	3425	5270	7641	9212
89:	8578	6585	3960	2421	1563	1235	1155	1146
97:	1008	1092	1061	1104	987	1025	1026	997
105:	1093	1028	1056	950	1016	1006	1008	1062
113:	1049	969	1074	1074	1090	1154	1388	1715
121:	2393	2725	2650	2178	1582	1262	946	1043
129:	994	971	964	950	987	958	1034	1069
137:	1071	1067	1026	886	892	865	873	904
145:	829	814	850	885	823	780	824	875
153:	840	835	904	836	801	855	822	790
161:	832	842	854	873	960	948	944	934
169:	802	836	802	753	790	798	800	796
177:	818	759	793	783	790	803	809	899
185:	824	853	851	899	855	900	877	851
193:	858	842	849	808	860	825	832	838
201:	810	823	825	829	806	854	861	794
209:	834	904	836	922	850	829	875	908
217:	866	929	878	855	915	875	882	874
225:	860	869	849	865	817	871	854	809
233:	756	806	874	825	835	840	846	873
241:	799	780	807	755	755	747	721	752
249:	698	656	676	737	679	681	662	661
257:	711	679	677	633	685	690	663	622
265:	666	633	660	670	632	661	678	604
273:	622	592	626	601	608	589	604	599
281:	622	618	584	632	630	600	554	594
289:	606	613	570	598	585	596	598	589
297:	607	607	578	581	568	575	559	563
305:	549	559	506	576	563	592	556	540
313:	574	571	517	546	530	570	501	528
321:	548	575	542	565	518	528	491	536
329:	506	537	532	537	505	568	532	585
337:	532	547	507	519	529	514	538	537
345:	474	523	525	571	525	511	538	599
353:	578	534	488	500	567	474	476	487
361:	497	500	515	463	519	466	485	480

369: 536 472 482 520 505 509 487 516

Sample Title: GAS-1602

Channel	-----	-----	-----	-----	-----	-----	-----	-----
377:	465	490	525	495	503	488	564	494
385:	516	497	472	504	522	504	536	522
393:	518	532	522	469	500	504	486	485
401:	462	496	487	515	472	463	470	484
409:	492	497	469	520	482	486	518	508
417:	502	523	533	446	483	472	490	509
425:	525	500	503	466	479	487	471	514
433:	516	503	512	487	503	511	518	496
441:	489	505	535	535	506	461	523	526
449:	530	513	514	511	529	526	502	486
457:	506	522	495	509	546	532	538	566
465:	522	519	516	487	542	472	538	545
473:	510	476	552	502	490	486	471	441
481:	433	454	431	428	388	407	430	410
489:	388	378	393	388	410	387	391	390
497:	351	372	352	383	365	392	355	375
505:	364	364	364	381	415	409	398	391
513:	365	368	345	345	347	332	335	330
521:	354	310	331	347	327	329	345	322
529:	342	366	302	333	331	341	320	326
537:	308	315	340	370	300	298	308	313
545:	295	322	299	307	310	305	328	328
553:	288	297	333	293	281	309	293	283
561:	287	311	302	281	269	287	269	315
569:	294	302	283	307	277	281	309	297
577:	262	264	289	270	293	312	297	305
585:	315	303	295	278	298	295	322	260
593:	251	291	264	291	275	290	285	300
601:	287	281	276	263	249	287	262	288
609:	277	295	315	293	261	269	269	257
617:	261	276	256	265	257	250	276	269
625:	249	226	256	270	269	274	253	276
633:	295	279	285	247	266	248	244	268
641:	269	278	320	303	239	291	235	285
649:	274	274	287	264	264	282	300	353
657:	517	1126	2376	4468	6263	7031	5700	3804
665:	2011	1047	570	417	342	296	273	268
673:	269	253	245	209	225	245	227	253
681:	213	220	252	240	241	250	197	222
689:	214	209	229	233	216	226	247	245
697:	206	245	243	245	241	225	235	224
705:	224	226	230	196	224	266	227	223
713:	234	228	233	243	242	224	208	244
721:	216	250	225	241	235	240	260	227
729:	232	248	200	239	238	228	192	229
737:	256	250	261	234	247	241	235	231
745:	250	248	221	250	223	256	252	254
753:	256	252	243	224	206	223	249	248
761:	273	230	214	231	246	219	262	227
769:	238	225	248	234	246	246	266	227
777:	252	222	245	251	237	255	247	289
785:	251	262	247	246	246	256	236	267
793:	255	249	273	229	269	239	257	252

801: 262 255 279 245 267 234 275 277

Sample Title: GAS-1602

Channel	-----	-----	-----	-----	-----	-----	-----	-----
809:	249	232	240	250	261	276	241	260
817:	287	247	260	268	289	266	268	277
825:	251	279	260	251	231	245	267	262
833:	269	247	283	271	250	291	261	270
841:	254	260	274	258	286	270	276	279
849:	255	254	267	281	282	294	255	274
857:	255	279	272	259	287	251	276	286
865:	276	299	289	291	264	272	296	325
873:	282	298	277	272	308	280	311	298
881:	287	297	282	299	320	272	297	259
889:	277	309	292	281	311	302	310	315
897:	335	328	332	315	306	323	322	305
905:	265	311	291	329	314	326	361	313
913:	331	363	330	302	289	325	304	297
921:	326	367	362	334	347	338	336	337
929:	342	364	348	349	348	350	366	394
937:	342	356	319	355	360	350	364	374
945:	348	404	323	361	348	339	340	345
953:	363	359	338	348	388	335	324	358
961:	346	328	327	305	304	320	336	285
969:	290	291	291	294	285	254	275	301
977:	289	258	260	273	255	264	266	275
985:	243	252	256	275	289	238	257	285
993:	217	281	281	252	255	256	276	261
1001:	256	287	223	242	245	250	273	235
1009:	261	218	242	230	261	225	239	266
1017:	293	258	233	254	244	230	249	225
1025:	240	244	230	250	225	245	227	242
1033:	241	237	236	245	255	208	250	243
1041:	247	256	251	242	278	267	250	241
1049:	238	261	255	234	257	255	229	245
1057:	236	267	248	230	243	233	248	208
1065:	236	242	231	261	253	231	228	231
1073:	261	222	231	233	215	243	226	256
1081:	230	207	220	216	229	202	234	243
1089:	246	221	224	247	272	226	236	200
1097:	229	236	256	231	252	236	244	244
1105:	285	230	262	238	225	237	223	257
1113:	264	228	233	216	225	211	213	196
1121:	173	176	157	175	160	159	160	146
1129:	153	164	144	155	180	147	182	168
1137:	147	146	141	159	145	165	152	124
1145:	131	151	141	140	136	127	137	127
1153:	133	139	155	149	131	136	144	154
1161:	112	137	150	132	109	159	193	306
1169:	589	1346	2784	4516	5680	5353	4086	2427
1177:	1250	560	321	220	174	149	137	129
1185:	96	112	114	82	84	96	82	80
1193:	72	111	89	79	75	77	93	79
1201:	79	68	87	78	53	73	87	80
1209:	67	64	63	64	54	75	64	80
1217:	61	61	55	69	71	67	49	48
1225:	67	54	51	52	34	53	61	47

1233: 57 53 58 55 44 54 62 57

Sample Title: GAS-1602

Channel	-----	-----	-----	-----	-----	-----	-----	-----
1241:	46	55	42	50	47	50	42	41
1249:	40	37	46	41	27	39	30	37
1257:	42	40	29	38	32	47	37	39
1265:	47	21	46	40	28	29	49	35
1273:	40	39	39	34	27	35	44	34
1281:	32	39	42	40	30	40	36	34
1289:	45	34	25	35	42	35	42	32
1297:	46	38	27	41	33	33	32	31
1305:	37	30	33	33	36	44	38	32
1313:	44	34	45	36	44	36	47	41
1321:	33	40	51	46	50	72	144	368
1329:	985	2136	3652	4878	4858	3796	2405	1284
1337:	584	256	156	85	58	54	35	26
1345:	29	16	19	24	17	14	19	24
1353:	19	20	14	22	15	18	14	11
1361:	19	9	16	13	15	19	13	19
1369:	20	23	16	15	20	13	24	23
1377:	14	12	14	18	12	21	14	17
1385:	21	16	18	13	16	17	15	19
1393:	13	16	8	14	20	13	17	9
1401:	17	17	18	14	15	17	20	19
1409:	14	12	8	13	12	14	10	14
1417:	22	10	17	8	13	11	17	11
1425:	15	17	17	8	11	18	14	16
1433:	13	10	17	14	14	15	19	12
1441:	15	15	12	9	9	11	11	18
1449:	16	16	10	15	17	12	13	18
1457:	11	14	16	19	21	18	14	13
1465:	16	9	12	12	13	15	12	12
1473:	14	19	13	15	17	10	8	11
1481:	10	9	14	17	11	20	11	14
1489:	11	10	7	14	16	15	15	16
1497:	15	12	13	16	16	13	13	12
1505:	18	14	9	11	14	17	14	10
1513:	9	16	14	12	16	10	13	17
1521:	9	13	14	18	13	14	8	21
1529:	8	12	16	16	9	20	8	6
1537:	16	9	12	13	9	8	13	11
1545:	9	13	4	11	12	6	21	11
1553:	15	11	14	18	21	10	5	16
1561:	10	11	6	11	13	13	12	14
1569:	21	7	17	12	11	11	8	11
1577:	15	6	16	12	10	8	6	13
1585:	12	11	4	17	16	15	10	14
1593:	21	18	13	13	12	6	13	9
1601:	4	11	12	17	10	3	8	15
1609:	8	11	12	9	6	14	16	10
1617:	14	10	14	11	9	11	13	12
1625:	11	13	17	10	11	12	8	10
1633:	10	9	9	5	13	12	7	7
1641:	13	10	10	10	12	12	9	11
1649:	12	11	1	12	10	13	13	13
1657:	11	7	10	8	12	11	15	6

1665: 10 5 7 4 5 13 8 9

Sample Title: GAS-1602

Channel	1	2	3	4	5	6	7	8
1673:	8	7	7	14	10	4	10	6
1681:	5	7	5	8	7	8	5	9
1689:	6	9	6	7	12	8	7	9
1697:	11	8	8	11	10	6	12	9
1705:	6	9	7	6	7	8	7	10
1713:	9	5	10	14	12	12	5	10
1721:	5	5	12	6	5	12	12	9
1729:	7	6	9	6	6	10	10	10
1737:	6	9	11	7	5	5	6	10
1745:	8	7	8	5	10	5	14	7
1753:	4	4	9	5	11	7	8	5
1761:	10	16	9	18	11	15	10	4
1769:	6	10	9	9	6	8	6	12
1777:	3	6	5	12	11	3	10	7
1785:	10	8	11	6	13	5	12	11
1793:	9	4	7	6	8	13	11	14
1801:	9	4	9	4	6	7	3	14
1809:	6	9	1	11	11	7	6	11
1817:	5	5	5	10	6	8	9	3
1825:	8	5	8	11	7	10	9	8
1833:	16	19	31	23	18	22	12	14
1841:	5	9	9	13	13	9	8	6
1849:	5	9	10	2	3	4	5	5
1857:	8	8	6	7	6	7	6	8
1865:	5	5	5	11	7	9	10	8
1873:	11	8	5	7	14	7	7	5
1881:	12	8	4	5	14	10	7	9
1889:	6	6	6	7	9	5	9	9
1897:	5	5	6	7	9	5	4	8
1905:	7	15	7	5	11	9	5	9
1913:	6	4	2	6	6	9	5	8
1921:	12	6	8	6	8	11	2	3
1929:	6	4	8	8	7	4	11	12
1937:	8	8	6	5	13	8	6	4
1945:	8	4	5	7	7	7	7	5
1953:	7	2	8	6	7	15	5	6
1961:	9	5	6	8	3	6	9	5
1969:	3	7	8	6	4	7	11	9
1977:	6	7	2	9	8	11	5	8
1985:	10	10	12	3	7	8	4	10
1993:	5	12	8	5	7	5	4	7
2001:	10	10	6	8	7	7	9	8
2009:	8	9	5	7	8	8	13	8
2017:	9	3	5	7	7	7	5	9
2025:	4	4	10	5	7	5	9	9
2033:	4	6	9	10	4	12	7	3
2041:	5	7	7	9	10	5	2	11
2049:	6	7	5	6	5	7	6	8
2057:	3	6	8	9	11	4	10	8
2065:	6	8	7	2	8	5	5	4
2073:	4	7	7	4	6	7	4	8
2081:	3	4	6	7	5	3	4	8
2089:	7	13	7	5	3	5	6	4

2097: 3 7 6 9 6 3 7 8

Sample Title: GAS-1602

Channel	1	2	3	4	5	6	7	8	9
2105:	7	10	5	7	7	5	8	9	
2113:	7	10	3	10	4	5	3	11	
2121:	6	7	5	5	4	10	2	8	
2129:	5	6	3	4	4	6	3	7	
2137:	3	5	6	7	5	6	3	7	
2145:	6	3	4	4	8	9	9	6	
2153:	3	7	9	8	3	6	2	6	
2161:	7	3	9	6	2	7	5	5	
2169:	8	9	7	7	6	6	3	12	
2177:	4	6	4	5	5	4	6	6	
2185:	4	6	5	5	1	7	4	8	
2193:	5	4	3	4	8	7	5	5	
2201:	6	5	5	7	10	8	5	4	
2209:	5	7	6	7	4	3	9	10	
2217:	8	8	2	8	6	8	4	7	
2225:	3	1	9	9	6	7	6	8	
2233:	8	7	5	6	3	4	8	6	
2241:	6	5	4	4	1	5	5	7	
2249:	2	2	4	10	6	7	11	7	
2257:	5	8	7	3	13	4	4	7	
2265:	4	5	7	5	6	8	5	9	
2273:	7	7	8	8	7	5	2	9	
2281:	9	7	5	10	9	7	6	11	
2289:	9	7	7	6	6	5	4	9	
2297:	5	4	9	3	2	7	7	6	
2305:	4	8	3	6	4	3	3	3	
2313:	4	9	4	2	5	5	2	5	
2321:	1	2	4	4	2	4	3	2	
2329:	5	4	4	3	1	2	5	3	
2337:	7	2	3	5	3	3	3	0	
2345:	2	4	6	2	1	5	3	0	
2353:	3	0	5	3	4	1	3	7	
2361:	0	6	3	4	7	1	3	2	
2369:	2	7	4	2	6	2	4	1	
2377:	2	1	3	2	4	0	4	1	
2385:	4	2	2	1	0	1	1	1	
2393:	1	5	0	2	2	3	3	1	
2401:	5	2	3	0	1	2	2	0	
2409:	1	0	3	1	2	0	2	1	
2417:	1	4	0	0	1	1	1	0	
2425:	0	1	0	0	2	1	1	3	
2433:	0	2	1	0	1	0	1	1	
2441:	0	1	1	1	2	0	1	2	
2449:	0	0	1	1	1	1	0	0	
2457:	1	1	0	0	1	0	1	2	
2465:	1	2	2	1	2	4	2	1	
2473:	2	1	0	2	1	0	0	0	
2481:	1	1	0	1	1	1	0	0	
2489:	0	1	0	0	3	0	2	1	
2497:	2	5	0	7	13	29	45	64	
2505:	84	76	49	29	18	6	2	3	
2513:	1	1	0	1	1	0	0	0	
2521:	0	0	0	0	0	0	0	2	

2529: 0 1 0 0 0 1 0 0

Sample Title: GAS-1602

Channel	1	2	3	4	5	6	7	8	9
2537:	0	0	0	1	0	0	0	0	0
2545:	1	0	0	1	0	1	2	1	1
2553:	0	1	0	0	1	1	0	0	0
2561:	0	0	0	0	1	0	0	1	1
2569:	0	1	0	0	0	0	0	1	1
2577:	0	1	0	1	0	0	1	0	0
2585:	0	0	0	1	0	0	0	0	0
2593:	0	0	1	0	0	0	0	1	1
2601:	0	0	1	0	0	0	0	0	0
2609:	0	0	4	6	11	20	10	8	8
2617:	5	2	1	1	3	1	0	0	0
2625:	0	1	0	0	0	0	0	0	0
2633:	0	0	1	0	1	0	1	0	0
2641:	0	0	2	0	1	0	0	0	0
2649:	0	1	0	0	0	0	0	0	0
2657:	0	0	0	0	1	0	0	0	0
2665:	0	1	0	2	0	0	0	0	0
2673:	0	0	0	0	2	0	0	0	0
2681:	0	0	0	0	1	0	0	0	0
2689:	0	0	1	1	0	0	0	0	0
2697:	0	0	0	0	0	0	0	0	0
2705:	1	1	0	0	0	0	0	0	0
2713:	0	0	0	0	0	0	0	0	0
2721:	0	0	1	1	1	0	1	0	0
2729:	0	0	0	0	0	0	0	1	1
2737:	0	0	0	0	0	0	0	0	0
2745:	0	0	0	0	0	0	0	1	1
2753:	0	1	0	0	1	0	0	0	0
2761:	0	0	0	0	1	0	0	0	0
2769:	0	0	0	1	0	1	0	0	0
2777:	0	0	0	0	0	0	0	1	1
2785:	0	0	1	0	0	0	0	0	0
2793:	0	0	0	0	0	1	0	0	0
2801:	0	0	0	0	0	0	0	1	1
2809:	0	0	0	0	1	0	1	0	0
2817:	0	0	0	0	1	1	0	0	0
2825:	0	0	0	0	0	0	0	0	0
2833:	0	0	0	0	1	0	0	0	0
2841:	0	1	0	1	0	0	0	0	0
2849:	0	0	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	1	0	0	0	0	0
2881:	0	0	0	0	0	0	1	0	0
2889:	1	0	0	0	0	0	0	0	0
2897:	1	0	0	0	0	0	0	0	0
2905:	0	0	0	0	0	0	1	0	0
2913:	0	0	0	0	0	0	1	0	0
2921:	0	0	0	0	0	0	0	0	0
2929:	0	1	0	0	0	0	1	1	1
2937:	0	0	0	0	0	0	0	1	1
2945:	0	0	0	0	0	0	0	0	0
2953:	0	0	0	0	0	0	0	1	1

2961: 0 0 0 0 0 0 0 0

Sample Title: GAS-1602

Channel	-----	-----	-----	-----	-----	-----	-----	-----
2969:	0	0	0	1	0	0	0	0
2977:	0	1	1	0	0	0	0	0
2985:	0	0	0	0	0	0	1	1
2993:	0	0	0	0	0	0	1	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	1
3025:	0	0	0	1	0	0	1	0
3033:	0	0	0	0	0	0	0	0
3041:	0	0	0	0	0	1	0	0
3049:	0	2	0	0	1	0	0	1
3057:	0	0	0	0	0	0	0	0
3065:	0	0	0	0	0	0	0	0
3073:	0	0	0	0	0	0	0	2
3081:	0	0	2	0	0	0	0	0
3089:	0	0	0	0	0	0	0	0
3097:	0	0	0	0	0	0	0	1
3105:	0	0	1	0	0	0	0	0
3113:	0	0	0	0	0	0	0	1
3121:	0	1	0	1	0	0	0	0
3129:	0	0	0	0	0	1	0	1
3137:	0	0	0	0	0	0	0	1
3145:	0	0	0	0	0	0	0	0
3153:	0	0	0	0	0	0	0	0
3161:	0	0	0	0	1	0	0	0
3169:	0	0	0	0	0	0	0	0
3177:	0	0	0	0	0	0	0	0
3185:	0	0	0	0	0	0	0	1
3193:	0	0	0	0	0	0	0	0
3201:	0	1	1	0	0	0	0	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	1	0	0	1	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	1
3273:	0	0	0	0	0	0	0	2
3281:	0	0	0	0	0	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:	0	0	0	0	0	0	0	0
3337:	0	0	0	0	0	1	0	0
3345:	0	0	0	0	0	0	0	0
3353:	0	0	0	0	0	0	0	0
3361:	0	0	0	0	1	0	0	0
3369:	0	0	0	0	1	0	0	0
3377:	0	0	1	0	0	0	0	0
3385:	0	0	0	1	0	0	0	1

3393: 0 0 0 0 0 0 0 0

Sample Title: GAS-1602

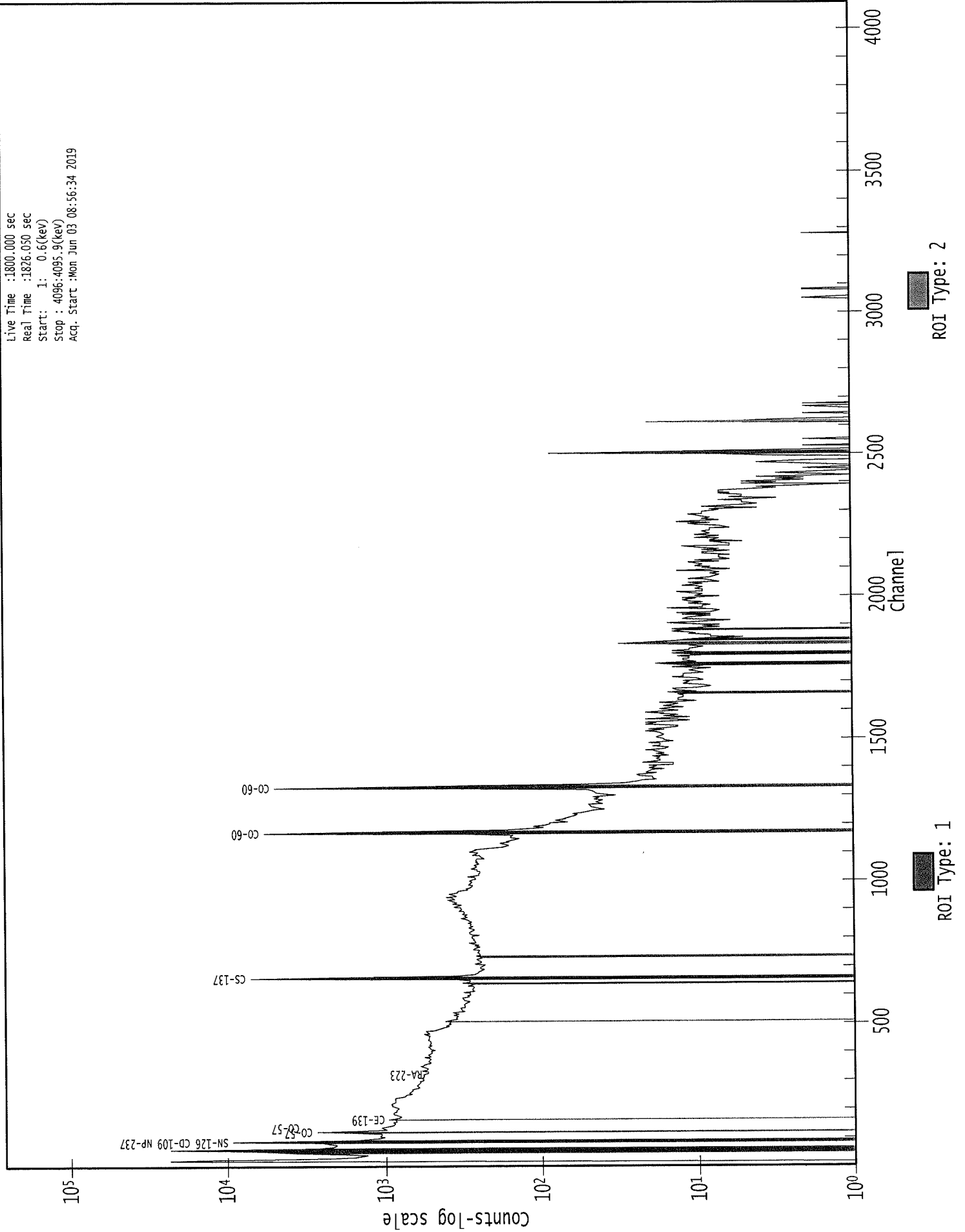
Channel	1	2	3	4	5	6	7	8
3401:	0	0	0	0	0	0	1	0
3409:	0	0	0	0	0	0	0	1
3417:	0	0	0	0	1	0	0	0
3425:	0	0	0	0	0	0	0	1
3433:	0	0	0	0	0	0	0	0
3441:	0	0	0	0	0	0	0	0
3449:	0	0	0	0	1	0	0	0
3457:	0	0	0	0	0	0	0	0
3465:	0	0	1	0	0	0	0	0
3473:	0	0	0	0	0	0	0	0
3481:	0	0	0	1	0	0	0	0
3489:	0	0	0	0	0	0	0	0
3497:	0	0	0	0	1	0	0	0
3505:	0	0	0	0	0	0	0	1
3513:	0	0	0	0	0	0	0	0
3521:	0	0	0	0	1	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	1	0	0	0	0
3553:	0	0	0	0	0	1	0	0
3561:	0	0	0	0	0	0	0	0
3569:	0	0	1	0	0	0	0	0
3577:	1	0	0	0	1	0	0	0
3585:	0	0	0	0	0	0	0	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	1	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:	1	0	0	0	0	0	0	0
3649:	0	0	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	0	0
3697:	0	0	0	0	1	0	0	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	0
3729:	0	0	0	0	0	0	0	0
3737:	0	0	0	0	0	0	0	0
3745:	0	0	1	0	0	0	0	0
3753:	0	0	0	0	1	0	0	0
3761:	0	0	0	0	0	0	0	0
3769:	0	0	0	0	0	0	0	0
3777:	0	0	0	0	0	0	0	0
3785:	0	0	0	0	1	0	0	0
3793:	0	0	0	1	0	0	0	1
3801:	0	0	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: 1 0 0 0 0 0 0 0 0

Sample Title: GAS-1602

Channel	-----	-----	-----	-----	-----	-----	-----	-----
3833:	0	0	0	0	0	0	0	0
3841:	0	0	0	0	1	0	0	0
3849:	0	0	0	0	0	0	0	0
3857:	0	0	0	0	0	0	0	0
3865:	1	0	0	0	0	0	0	0
3873:	1	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:	1	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:	0	0	0	0	0	0	0	0
3937:	0	0	0	0	0	0	0	0
3945:	0	0	0	0	0	1	0	0
3953:	0	0	0	0	0	0	0	0
3961:	1	0	1	0	0	0	0	0
3969:	0	0	0	0	0	0	1	0
3977:	0	0	0	0	1	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	0	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	1	0	0	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	0	0	0	0
4081:	0	0	0	0	0	0	0	0
4089:	0	0	0	0	0	1	0	0

Live Time :1800.000 sec
Real Time :1826.050 sec
Start : 1: 0.6(keV)
Stop : 4096:4095.9(keV)
Acq. Start :Mon Jun 03 08:56:34 2019



KJS
6/3/19Analysis Report for 1905060-02
BLANK

GAMMA SPECTRUM ANALYSIS

Sample Identification : 1905060-02
Sample Description : BLANK
Sample Type : SOIL

Sample Size : 7.834E+02 grams
Facility : Countroom

Sample Taken On : 6/3/2019 3:31:20PM
Acquisition Started : 6/3/2019 7:56:34AM

Procedure : GAS-1802 pCi
Operator : Administrator
Detector Name : GE4
Geometry : GAS-1802
Live Time : 3600.0 seconds
Real Time : 3605.9 seconds

Dead Time : 0.16 %

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

Energy Calibration Used Done On : 2/24/2018
Efficiency Calibration Used Done On : 6/16/2018
Efficiency Calibration Description :

Sample Number : 82498

PEAK-TO-TOTAL CALIBRATION REPORT

Peak-to-Total Efficiency Calibration Equation

AG
6/3/19

Analysis Report for 1905060-02

BLANK

PEAK LOCATE REPORT

Peak Locate Performed on : 6/3/2019 8:56:41AM
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	76.84	75.94	0.0000	0.00
2	93.47	92.57	0.0000	0.00
3	353.66	352.98	0.0000	0.00
4	362.94	362.27	0.0000	0.00
5	618.20	617.76	0.0000	0.00
6	683.61	683.22	0.0000	0.00
7	696.97	696.59	0.0000	0.00
8	733.18	732.84	0.0000	0.00
9	752.87	752.55	0.0000	0.00
10	804.25	803.97	0.0000	0.00
11	926.94	926.79	0.0000	0.00
12	1035.36	1035.32	0.0000	0.00
13	1618.14	1618.75	0.0000	0.00

? = Adjacent peak noted
Errors quoted at 2.000sigma

Analysis Report for 1905060-02

BLANK

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 6/3/2019 8:56:41AM

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	76.84	72 -	80	75.94	4.75E+01	38.04	1.93E+02	4.17
2	93.47	88 -	98	92.57	1.00E+02	46.61	2.36E+02	3.08
3	353.66	348 -	357	352.98	3.51E+01	20.40	3.79E+01	5.88
4	362.94	358 -	367	362.27	2.46E+01	17.61	3.09E+01	6.80
5	618.20	614 -	621	617.76	1.38E+01	13.27	2.03E+01	2.76
6	683.61	680 -	686	683.22	8.00E+00	10.44	1.40E+01	3.23
7	696.97	694 -	699	696.59	8.50E+00	11.22	1.90E+01	1.28
8	733.18	728 -	741	732.84	1.80E+01	14.07	1.40E+01	3.58
9	752.87	748 -	756	752.55	1.05E+01	11.35	1.30E+01	2.90
10	804.25	799 -	808	803.97	1.74E+01	11.75	9.27E+00	5.01
11	926.94	922 -	929	926.79	6.00E+00	8.49	8.00E+00	1.28
12	1035.36	1032 -	1038	1035.32	8.18E+00	8.28	5.64E+00	2.88
13	1618.14	1615 -	1622	1618.75	8.00E+00	5.66	0.00E+00	1.00

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 : 6/3/2019 8:56:41AM

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	76.84	72 -	80	4.75E+01	38.04	1.93E+02	2.91E+01
2	93.47	88 -	98	1.00E+02	46.61	2.36E+02	3.46E+01

0071

Analysis Report for 1905060-02

BLANK

Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
3	353.66	348 -	357	3.51E+01	20.40	3.79E+01	1.36E+01
4	362.94	358 -	367	2.46E+01	17.61	3.09E+01	1.20E+01
5	618.20	614 -	621	1.38E+01	13.27	2.03E+01	9.03E+00
6	683.61	680 -	686	8.00E+00	10.44	1.40E+01	7.21E+00
7	696.97	694 -	699	8.50E+00	11.22	1.90E+01	7.88E+00
8	733.18	728 -	741	1.80E+01	14.07	1.40E+01	9.23E+00
9	752.87	748 -	756	1.05E+01	11.35	1.30E+01	7.66E+00
10	804.25	799 -	808	1.74E+01	11.75	9.27E+00	6.81E+00
11	926.94	922 -	929	6.00E+00	8.49	8.00E+00	5.70E+00
12	1035.36	1032 -	1038	8.18E+00	8.28	5.64E+00	4.92E+00
13	1618.14	1615 -	1622	8.00E+00	5.66	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 : 6/3/2019 8:56:41AM

Peak Analysis From Channel : 1

Peak Analysis To Channel : 4096

Tentative NID Library : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

Peak Match Tolerance : 1.000FWHM

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
1	76.84	72 -	80	75.94	4.75E+01	38.04	1.93E+02	TI-44
2	93.47	88 -	98	92.57	1.00E+02	46.61	2.36E+02	GA-67
3	353.66	348 -	357	352.98	3.51E+01	20.40	3.79E+01	PB-214
4	362.94	358 -	367	362.27	2.46E+01	17.61	3.09E+01	I-131
5	618.20	614 -	621	617.76	1.38E+01	13.27	2.03E+01	PM-144
6	683.61	680 -	686	683.22	8.00E+00	10.44	1.40E+01	MO-93 SB-127
7	696.97	694 -	699	696.59	8.50E+00	11.22	1.90E+01	PM-144 SB-126
8	733.18	728 -	741	732.84	1.80E+01	14.07	1.40E+01	PA-234
9	752.87	748 -	756	752.55	1.05E+01	11.35	1.30E+01	.....
10	804.25	799 -	808	803.97	1.74E+01	11.75	9.27E+00	CS-134
11	926.94	922 -	929	926.79	6.00E+00	8.49	8.00E+00	.....
12	1035.36	1032 -	1038	1035.32	8.18E+00	8.28	5.64E+00	CO-56
13	1618.14	1615 -	1622	1618.75	8.00E+00	5.66	0.00E+00	BI-212

0072

Analysis Report for 1905060-02

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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 : 6/3/2019 8:56:41AM

<i>Peak No.</i>	<i>Energy (keV)</i>	<i>Net Peak Area</i>	<i>Net Area Uncertainty</i>	<i>Peak Efficiency</i>	<i>Efficiency Uncertainty</i>
1	76.84	4.75E+01	38.04	2.38E-02	2.03E-03
2	93.47	1.00E+02	46.61	2.32E-02	2.13E-03
3	353.66	3.51E+01	20.40	8.91E-03	7.70E-04
4	362.94	2.46E+01	17.61	8.68E-03	7.61E-04
5	618.20	1.38E+01	13.27	5.04E-03	5.53E-04
6	683.61	8.00E+00	10.44	4.56E-03	4.96E-04
7	696.97	8.50E+00	11.22	4.47E-03	4.83E-04
8	733.18	1.80E+01	14.07	4.26E-03	4.46E-04
9	752.87	1.05E+01	11.35	4.15E-03	4.26E-04
10	804.25	1.74E+01	11.75	3.90E-03	3.73E-04
11	926.94	6.00E+00	8.49	3.42E-03	2.74E-04
12	1035.36	8.18E+00	8.28	3.09E-03	2.61E-04
13	1618.14	8.00E+00	5.66	2.12E-03	1.86E-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 : 6/3/2019 8:56:41AM

Env. Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000082158.CNF

Analysis Report for 1905060-02

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Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
1	76.84	4.75E+01	38.04			4.75E+01	3.80E+01
2	93.47	1.00E+02	46.61	6.13E+01	1.05E+01	3.88E+01	4.78E+01
3	353.66	3.51E+01	20.40	7.73E+00	5.23E+00	2.73E+01	2.11E+01
4	362.94	2.46E+01	17.61			2.46E+01	1.76E+01
5	618.20	1.38E+01	13.27			1.38E+01	1.33E+01
6	683.61	8.00E+00	10.44			8.00E+00	1.04E+01
7	696.97	8.50E+00	11.22			8.50E+00	1.12E+01
8	733.18	1.80E+01	14.07			1.80E+01	1.41E+01
9	752.87	1.05E+01	11.35			1.05E+01	1.13E+01
10	804.25	1.74E+01	11.75			1.74E+01	1.17E+01
11	926.94	6.00E+00	8.49			6.00E+00	8.49E+00
12	1035.36	8.18E+00	8.28			8.18E+00	8.28E+00
13	1618.14	8.00E+00	5.66			8.00E+00	5.66E+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 : 6/3/2019 8:56:41AM
Ref. Peak Energy : 0.00 Reference Date :
Peak Ratio : 0.00 Uncertainty : 0.00
Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000082158.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	76.84	4.75E+01	38.04			4.75E+01	3.80E+01
2	93.47	1.00E+02	46.61	6.13E+01	1.05E+01	3.88E+01	4.78E+01
3	353.66	3.51E+01	20.40	7.73E+00	5.23E+00	2.73E+01	2.11E+01
4	362.94	2.46E+01	17.61			2.46E+01	1.76E+01
5	618.20	1.38E+01	13.27			1.38E+01	1.33E+01
6	683.61	8.00E+00	10.44			8.00E+00	1.04E+01
7	696.97	8.50E+00	11.22			8.50E+00	1.12E+01
8	733.18	1.80E+01	14.07			1.80E+01	1.41E+01
9	752.87	1.05E+01	11.35			1.05E+01	1.13E+01
10	804.25	1.74E+01	11.75			1.74E+01	1.17E+01
11	926.94	6.00E+00	8.49			6.00E+00	8.49E+00
12	1035.36	8.18E+00	8.28			8.18E+00	8.28E+00
13	1618.14	8.00E+00	5.66			8.00E+00	5.66E+00

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Analysis Report for 1905060-02

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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

<i>Nuclide Name</i>	<i>Id Confidence</i>	<i>Energy (keV)</i>	<i>Yield(%)</i>	<i>Activity (pCi/grams)</i>	<i>Activity Uncertainty</i>
GA-67	0.583	93.31 *	35.70	4.22E-02	5.21E-02
		208.95	2.24		
		300.22	16.00		
I-131	0.733	284.30	6.05	3.26E-02	2.35E-02
		364.48 *	81.20		
		636.97	7.26		
PM-144	0.679	722.89	1.80	2.67E-02	2.58E-02
		476.78	42.00		
		618.01 *	98.60		
PB-214	0.386	696.49 *	99.49	1.83E-02	2.42E-02
		295.21	19.19		
		351.92 *	37.19		

* = Energy line found in the spectrum.
 - = Manually added nuclide.
 ? = Manually edited nuclide.
 Energy Tolerance : 2.000FWHM
 Nuclide confidence index threshold = 0.30
 Errors quoted at 2.000sigma

UNIDENTIFIED PEAKS

Peak Locate Performed on : 6/3/2019 8:56:41AM
 Peak Locate From Channel : 1
 Peak Locate To Channel : 4096

Analysis Report for 1905060-02

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Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
1	76.84	1.31916E-02	40.05		
6	683.61	2.22222E-03	65.25	To1.	MO-93
8	733.18	5.00000E-03	39.09	To1.	SB-127
9	752.87	2.91667E-03	54.03		PA-234
10	804.25	4.82323E-03	33.83		
11	926.94	1.66667E-03	70.71		
12	1035.36	2.27273E-03	50.58		
13	1618.14	2.22222E-03	35.36		

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
GA-67	0.58	93.31 *	35.70	4.22E-02	5.21E-02
		208.95	2.24		
		300.22	16.00		
I-131	0.73	284.30	6.05		
		364.48 *	81.20	3.26E-02	2.35E-02
		636.97	7.26		
		722.89	1.80		
PM-144	0.67	476.78	42.00		
		618.01 *	98.60	2.67E-02	2.58E-02
		696.49 *	99.49	1.83E-02	2.42E-02
PB-214	0.38	295.21	19.19		
		351.92 *	37.19	7.90E-02	6.12E-02

Analysis Report for 1905060-02

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* = Energy line found in the spectrum.
 - = Manually added nuclide.
 ? = Manually edited nuclide.
 @ = Energy line not used for Weighted Mean Activity
 Energy Tolerance : 2.000FWHM
 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
GA-67	0.583	4.22E-02	5.21E-02	
I-131	0.733	3.26E-02	2.35E-02	
PM-144	0.679	2.22E-02	1.77E-02	
PB-214	0.386	7.90E-02	6.12E-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 1905060-02

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UNIDENTIFIED PEAKS

Peak Locate Performed on : 6/3/2019 8:56:41AM

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	76.84	1.31916E-02	40.05		
6	683.61	2.22222E-03	65.25	Tol.	MO-93 SB-127
8	733.18	5.00000E-03	39.09	Tol.	PA-234
9	752.87	2.91667E-03	54.03		
10	804.25	4.82323E-03	33.83		
11	926.94	1.66667E-03	70.71		
12	1035.36	2.27273E-03	50.58		
13	1618.14	2.22222E-03	35.36		

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	-1.26E-01	3.76E-01	3.76E-01
+	NA-22	1274.54	99.94	3.71E-03	5.57E-02	5.57E-02
+	NA-24	1368.53	99.99	1.18E-02	5.32E-02	6.56E-02
		2754.09	99.86	-4.82E-03		5.32E-02
+	AL-26	1808.65	99.76	9.95E-03	5.35E-02	5.35E-02
+	K-40	1460.81	10.67	-3.12E-01	2.87E-01	2.87E-01
+	AR-41	1293.64	99.16	3.59E-04	3.37E-03	3.37E-03
+	TI-44	67.88	94.40	-1.61E-02	2.11E-02	2.11E-02

Analysis Report for 1905060-02

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<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>	
	TI-44	78.34	96.00	1.42E-02	2.11E-02	2.25E-02
+	SC-46	889.25	98.98	2.56E-02	4.68E-02	5.80E-02
		1120.51	99.90	-2.76E-03		4.68E-02
+	V-48	983.52	99.98	1.11E-02	6.71E-02	6.87E-02
		1312.10	97.50	2.69E-02		6.71E-02
+	CR-51	320.08	9.83	0.00E+00	3.23E-01	3.23E-01
+	MN-54	834.83	99.97	3.05E-02	5.28E-02	5.28E-02
+	CO-56	846.75	99.96	1.09E-02	5.00E-02	5.02E-02
		1037.75	14.03	2.57E-02		4.44E-01
		1238.25	67.00	-4.94E-02		5.00E-02
		1771.40	15.51	-1.31E-01		3.77E-01
		2587.48	16.90	1.10E-01		4.81E-01
+	CO-57	122.06	85.51	-1.06E-02	1.98E-02	1.98E-02
		136.48	10.60	-1.01E-01		1.81E-01
+	CO-58	810.76	99.40	-7.77E-03	4.84E-02	4.84E-02
+	FE-59	1099.22	56.50	1.88E-02	1.00E-01	1.00E-01
		1291.56	43.20	-4.32E-03		1.04E-01
+	CO-60	1173.22	100.00	2.26E-02	4.63E-02	6.02E-02
		1332.49	100.00	-2.73E-02		4.63E-02
+	ZN-65	1115.52	50.75	2.61E-02	9.19E-02	9.19E-02
+	GA-67	93.31	* 35.70	4.22E-02	8.55E-02	8.55E-02
		208.95	2.24	-5.06E-01		1.02E+00
		300.22	16.00	-5.02E-02		1.74E-01
+	SE-75	121.11	16.70	-3.42E-02	3.27E-02	1.04E-01
		136.00	59.50	-5.63E-03		3.27E-02
		264.65	59.80	9.63E-03		4.43E-02
		279.53	25.20	-1.19E-03		1.10E-01
		400.65	11.40	-2.14E-02		2.78E-01
+	RB-82	776.52	13.00	-3.63E-02	3.97E-01	3.97E-01
+	RB-83	520.41	46.00	-1.54E-03	9.32E-02	9.32E-02
		529.64	30.30	5.15E-02		1.29E-01
		552.65	16.40	3.55E-02		2.59E-01
+	KR-85	513.99	0.43	1.52E+01	1.49E+01	1.49E+01
+	SR-85	513.99	99.27	6.62E-02	6.51E-02	6.51E-02
+	Y-88	898.02	93.40	-9.15E-03	4.37E-02	4.37E-02
		1836.01	99.38	5.05E-03		6.06E-02
+	MO-93	263.06	56.72	-1.38E-02	4.33E-02	4.33E-02
		684.67	99.68	2.64E-03		4.86E-02
		1477.11	99.08	4.24E-03		5.97E-02
+	NB-93M	16.57	9.43	6.48E-01	8.14E-01	8.14E-01
+	NB-94	702.63	100.00	-1.99E-03	4.48E-02	4.48E-02
		871.10	100.00	-5.30E-03		4.99E-02
+	NB-95	765.79	99.81	9.87E-03	5.25E-02	5.25E-02
+	NB-95M	235.69	25.00	-4.06E-03	1.02E-01	1.02E-01
+	ZR-95	724.18	43.70	-1.18E-02	9.20E-02	9.20E-02
		756.72	55.30	5.97E-03		9.39E-02
+	MO-99	181.06	6.20	-2.99E-01	2.74E-01	3.43E-01
		739.58	12.80	-3.84E-02		2.74E-01

Analysis Report for 1905060-02

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<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>
MO-99	778.00	4.50	3.36E-01	2.74E-01	1.08E+00
+ TC-99M	140.51	89.00	5.86E-03	2.35E-02	2.35E-02
+ RU-103	497.08	89.00	1.57E-02	4.43E-02	4.43E-02
+ RU-106	621.84	9.80	1.52E-02	5.50E-01	5.50E-01
+ AG-108M	433.93	89.90	-2.97E-02	3.76E-02	3.76E-02
	614.37	90.40	5.23E-03		5.53E-02
	722.95	90.50	-7.36E-03		4.62E-02
+ CD-109	88.03	3.72	1.61E-01	5.48E-01	5.48E-01
+ AG-110M	657.75	93.14	4.65E-04	4.37E-02	4.37E-02
	677.61	10.53	3.96E-02		3.98E-01
	706.67	16.46	-9.08E-02		2.96E-01
	763.93	21.98	-5.39E-02		2.21E-01
	884.67	21.98	9.40E-03		2.38E-01
	1384.27	23.94	-4.56E-02		1.99E-01
+ CD-113M	263.70	0.02	-3.21E+01	1.06E+02	1.06E+02
+ SN-113	255.12	1.93	1.09E+00	4.68E-02	1.48E+00
	391.69	64.90	-1.06E-02		4.68E-02
+ TE-123M	159.00	84.10	1.68E-03	2.36E-02	2.36E-02
+ SB-124	602.71	97.87	-2.32E-02	4.73E-02	4.73E-02
	645.85	7.26	3.00E-01		6.42E-01
	722.78	11.10	-5.01E-02		3.61E-01
	1691.02	49.00	1.75E-02		1.35E-01
+ I-125	35.49	6.49	9.51E-02	3.61E-01	3.61E-01
+ SB-125	176.33	6.89	-2.91E-02	1.26E-01	3.10E-01
	427.89	29.33	9.06E-03		1.26E-01
	463.38	10.35	1.58E-01		4.09E-01
	600.56	17.80	1.50E-01		2.74E-01
	635.90	11.32	1.03E-01		4.57E-01
+ SB-126	414.70	83.30	1.51E-02	4.59E-02	4.59E-02
	666.33	99.60	2.50E-03		4.95E-02
	695.00	99.60	5.36E-03		5.57E-02
	720.50	53.80	9.18E-03		8.01E-02
+ SN-126	87.57	37.00	1.61E-02	5.51E-02	5.51E-02
+ SB-127	473.00	25.00	-8.14E-02	1.32E-01	1.43E-01
	685.00	35.70	-1.12E-02		1.32E-01
	783.80	14.70	-8.21E-02		2.81E-01
+ I-129	29.78	57.00	-2.33E-02	4.91E-02	4.91E-02
	33.60	13.20	1.98E-02		1.84E-01
	39.58	7.52	-1.43E-01		2.85E-01
+ I-131	284.30	6.05	-1.52E-01	3.53E-02	4.16E-01
	364.48	* 81.20	3.26E-02		3.53E-02
	636.97	7.26	-1.50E-02		6.46E-01
	722.89	1.80	-3.61E-01		2.26E+00
+ TE-132	49.72	13.10	8.59E-02	2.50E-02	1.64E-01
	228.16	88.00	-4.96E-03		2.50E-02
+ BA-133	81.00	33.00	-1.75E-03	6.14E-02	6.14E-02
	302.84	17.80	2.63E-02		1.58E-01
	356.01	60.00	-1.94E-02		6.24E-02

Analysis Report for 1905060-02

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	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	I-133	529.87	86.30	1.43E-02	3.58E-02	3.58E-02
+	XE-133	81.00	38.00	-1.46E-03	5.13E-02	5.13E-02
+	CS-134	563.23	8.38	-4.57E-02	4.95E-02	4.75E-01
		569.32	15.43	-1.32E-02		2.73E-01
		604.70	97.60	-1.24E-02		4.95E-02
		795.84	85.40	-6.77E-03		4.96E-02
		801.93	8.73	3.37E-01		6.75E-01
+	CS-135	268.24	16.00	2.48E-02	1.73E-01	1.73E-01
+	I-135	1131.51	22.50	-2.31E-02	1.02E-01	1.18E-01
		1260.41	28.60	-3.85E-03		1.02E-01
		1678.03	9.54	1.81E-02		2.50E-01
+	CS-136	153.22	7.46	-7.39E-02	4.81E-02	2.76E-01
		163.89	4.61	-1.30E-01		3.92E-01
		176.55	13.56	-1.46E-02		1.55E-01
		273.65	12.66	7.70E-02		2.31E-01
		340.57	48.50	1.14E-02		6.27E-02
		818.50	99.70	-4.94E-03		4.81E-02
		1048.07	79.60	-2.05E-03		7.29E-02
		1235.34	19.70	-1.20E-01		2.17E-01
+	CS-137	661.65	85.12	2.56E-03	5.75E-02	5.75E-02
+	LA-138	788.74	34.00	7.69E-03	9.33E-02	1.34E-01
		1435.80	66.00	2.75E-02		9.33E-02
+	CE-139	165.85	80.35	1.41E-03	2.46E-02	2.46E-02
+	BA-140	162.64	6.70	-4.30E-02	1.49E-01	2.73E-01
		304.84	4.50	6.35E-02		6.28E-01
		423.70	3.20	-2.65E-01		1.09E+00
		437.55	2.00	8.45E-01		1.88E+00
		537.32	25.00	-2.02E-02		1.49E-01
+	LA-140	328.77	20.50	-5.72E-02	4.96E-02	1.27E-01
		487.03	45.50	1.79E-02		8.68E-02
		815.85	23.50	1.04E-02		2.03E-01
		1596.49	95.49	5.12E-03		4.96E-02
+	CE-141	145.44	48.40	-1.16E-02	4.41E-02	4.41E-02
+	CE-143	57.36	11.80	-6.38E-02	6.63E-02	1.26E-01
		293.26	42.00	1.83E-02		6.63E-02
		664.55	5.20	3.66E-01		8.64E-01
+	CE-144	133.54	10.80	7.70E-02	1.83E-01	1.83E-01
+	PM-144	476.78	42.00	-9.71E-03	3.98E-02	9.65E-02
		618.01	* 98.60	2.67E-02		4.01E-02
		696.49	* 99.49	1.83E-02		3.98E-02
+	PM-145	36.85	21.70	-7.50E-02	5.34E-02	9.86E-02
		37.36	39.70	-4.06E-02		5.34E-02
		42.30	15.10	-3.07E-02		1.48E-01
		72.40	2.31	1.18E-01		8.33E-01
+	PM-146	453.90	39.94	1.17E-02	9.03E-02	9.03E-02
		735.90	14.01	8.06E-02		3.44E-01
		747.13	13.10	2.92E-03		3.29E-01
+	ND-147	91.11	28.90	6.85E-02	8.54E-02	8.54E-02
		531.02	13.10	6.23E-02		2.94E-01

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Analysis Report for 1905060-02

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Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)	
+	PM-149	285.90	3.10	-3.51E-01	7.32E-01	7.32E-01
+	EU-152	121.78	20.50	-4.44E-02	8.24E-02	8.24E-02
		244.69	5.40	1.62E-01		5.26E-01
		344.27	19.13	4.68E-02		1.56E-01
		778.89	9.10	1.29E-01		5.59E-01
		964.01	10.40	-2.18E-01		5.07E-01
		1085.78	7.22	7.21E-02		6.31E-01
		1112.02	9.60	-1.37E-01		4.13E-01
		1407.95	14.94	-1.50E-02		2.91E-01
+	GD-153	97.43	31.30	6.56E-03	6.47E-02	6.47E-02
		103.18	22.20	-1.95E-02		7.96E-02
+	EU-154	123.07	40.50	-1.96E-02	4.36E-02	4.36E-02
		723.30	19.70	-3.38E-02		2.12E-01
		873.19	11.50	4.07E-02		4.64E-01
		996.32	10.30	-2.81E-01		4.37E-01
		1004.76	17.90	-3.37E-02		2.53E-01
		1274.45	35.50	1.04E-02		1.57E-01
+	EU-155	86.50	30.90	3.28E-02	6.40E-02	6.40E-02
		105.30	20.70	-2.78E-02		8.37E-02
+	EU-156	811.77	10.40	0.00E+00	4.43E-01	4.43E-01
		1153.47	7.20	7.78E-02		6.12E-01
		1230.71	8.90	2.66E-02		5.63E-01
+	HO-166M	184.41	72.60	2.65E-02	3.85E-02	3.85E-02
		280.45	29.60	5.53E-02		9.68E-02
		410.94	11.10	1.40E-01		3.63E-01
		711.69	54.10	-2.02E-03		9.29E-02
+	TM-171	66.72	0.14	-1.10E+00	1.54E+01	1.54E+01
+	HF-172	67.35	5.31	-2.90E-02	1.66E-01	4.06E-01
		125.82	11.30	3.12E-02		1.66E-01
+	LU-172	181.53	20.60	-1.65E-01	7.58E-02	1.09E-01
		900.72	29.81	-6.22E-02		1.34E-01
		1093.66	62.50	2.88E-03		7.58E-02
+	LU-173	100.72	5.24	5.63E-02	1.38E-01	3.59E-01
		272.11	21.20	1.01E-02		1.38E-01
+	HF-175	343.40	84.00	1.36E-02	3.59E-02	3.59E-02
+	LU-176	88.34	13.30	4.50E-02	2.92E-02	1.53E-01
		201.83	86.00	-1.15E-02		2.92E-02
		306.78	94.00	-1.39E-02		3.00E-02
+	HF-181	133.02	41.70	7.64E-03	4.72E-02	4.72E-02
		345.85	17.20	2.65E-02		1.69E-01
		482.03	82.80	2.04E-02		5.30E-02
+	TA-182	67.75	41.20	-3.69E-02	4.84E-02	4.84E-02
		1121.30	34.90	-7.92E-03		1.34E-01
		1189.05	16.23	3.42E-02		3.58E-01
		1221.41	26.98	6.18E-02		1.87E-01
		1231.02	11.44	2.10E-02		4.43E-01
+	IR-192	308.46	29.68	-1.75E-02	8.50E-02	9.52E-02
		468.07	48.10	-1.95E-02		8.50E-02
+	HG-203	279.19	77.30	-6.78E-03	3.60E-02	3.60E-02

Analysis Report for 1905060-02

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	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	TL-204	374.74	94.11	-5.81E-03	3.36E-02	3.36E-02
		899.15	99.16	-2.69E-02		4.13E-02
		911.74	91.10	-1.06E-02		4.81E-02
+	BI-207	569.67	97.72	-2.09E-03	4.31E-02	4.31E-02
		1063.62	74.90	1.21E-02		7.38E-02
+	TL-208	583.14	30.22	1.22E-02	1.54E-01	1.54E-01
		860.37	4.48	6.22E-01		1.40E+00
		2614.66	35.85	2.17E-02		2.51E-01
+	BI-210M	262.00	45.00	-1.35E-02	5.23E-02	5.23E-02
		300.00	23.00	-3.71E-02		1.29E-01
+	PB-210	46.50	4.25	1.97E-01	5.65E-01	5.65E-01
+	PB-211	404.84	2.90	-2.94E-01	1.18E+00	1.18E+00
		831.96	2.90	-7.85E-01		1.46E+00
+	BI-212	727.17	11.80	-1.26E-02	4.03E-01	4.03E-01
		1620.62	2.75	0.00E+00		2.32E+00
+	PB-212	238.63	44.60	8.84E-03	6.32E-02	6.32E-02
		300.09	3.41	-2.50E-01		8.69E-01
+	BI-214	609.31	46.30	3.93E-02	1.03E-01	1.03E-01
		1120.29	15.10	-1.72E-01		2.64E-01
		1764.49	15.80	1.71E-02		3.31E-01
		2204.22	4.98	1.18E-01		1.09E+00
+	PB-214	295.21	19.19	7.45E-02	9.47E-02	1.71E-01
		351.92	*	37.19	7.90E-02	9.47E-02
+	RN-219	401.80	6.50	-2.98E-01	4.72E-01	4.72E-01
+	RA-223	323.87	3.88	2.76E-01	8.05E-01	8.05E-01
+	RA-224	240.98	3.95	1.17E-01	7.15E-01	7.15E-01
+	RA-225	40.00	31.00	-3.40E-02	6.77E-02	6.77E-02
+	RA-226	186.21	3.28	5.26E-01	8.62E-01	8.62E-01
+	TH-227	50.10	8.40	1.42E-01	2.35E-01	2.72E-01
		236.00	11.50	-9.36E-03		2.35E-01
		256.20	6.30	1.88E-02		4.17E-01
+	AC-228	338.32	11.40	-7.51E-02	1.50E-01	2.73E-01
		911.07	27.70	-8.93E-02		1.50E-01
		969.11	16.60	1.26E-02		3.54E-01
+	TH-230	48.43	16.90	2.32E-02	1.38E-01	1.38E-01
		62.85	4.60	6.94E-01		5.18E-01
		67.67	0.37	-4.11E+00		5.40E+00
+	PA-231	283.67	1.60	-2.13E-01	1.22E+00	1.59E+00
		302.67	2.30	2.03E-01		1.22E+00
+	TH-231	25.64	14.70	1.14E-01	2.54E-01	2.54E-01
		84.21	6.40	1.41E-01		3.14E-01
+	PA-233	311.98	38.60	1.71E-02	8.01E-02	8.01E-02
+	PA-234	131.20	20.40	-2.19E-02	9.68E-02	9.68E-02
		733.99	8.80	2.31E-01		5.89E-01
		946.00	12.00	-8.07E-02		4.48E-01
+	PA-234M	1001.03	0.92	3.11E+00	6.15E+00	6.15E+00
+	TH-234	63.29	3.80	8.39E-01	6.27E-01	6.27E-01

Analysis Report for 1905060-02

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	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	U-235	143.76	10.50	8.48E-02	2.13E-01	2.13E-01
		163.35	4.70	-1.29E-01		3.89E-01
		205.31	4.70	2.81E-01		5.54E-01
+	NP-237	86.50	12.60	8.04E-02	1.57E-01	1.57E-01
+	NP-239	106.10	22.70	-4.26E-02	6.92E-02	6.92E-02
		228.18	10.70	-3.98E-02		2.01E-01
		277.60	14.10	1.70E-02		1.84E-01
+	AM-241	59.54	35.90	-3.73E-02	5.50E-02	5.50E-02
+	AM-243	74.67	66.00	8.66E-03	3.22E-02	3.22E-02
+	CM-243	209.75	3.29	-8.59E-02	2.03E-01	7.35E-01
		228.14	10.60	-4.38E-02		2.21E-01
		277.60	14.00	1.87E-02		2.03E-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	3.76E-01	3.76E-01	-1.26E-01	1.69E-01
NA-22	1274.54	99.94	5.57E-02	5.57E-02	3.71E-03	2.28E-02
NA-24	1368.53	99.99	6.56E-02	5.32E-02	1.18E-02	2.75E-02
	2754.09	99.86	5.32E-02		-4.82E-03	1.68E-02
AL-26	1808.65	99.76	5.35E-02	5.35E-02	9.95E-03	2.00E-02
K-40	1460.81	10.67	2.87E-01	2.87E-01	-3.12E-01	9.07E-02
AR-41	1293.64	99.16	3.37E-03	3.37E-03	3.59E-04	1.34E-03
TI-44	67.88	94.40	2.11E-02	2.11E-02	-1.61E-02	9.99E-03
	78.34	96.00	2.25E-02		1.42E-02	1.07E-02
SC-46	889.25	98.98	5.80E-02	4.68E-02	2.56E-02	2.53E-02

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Analysis Report for 1905060-02

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Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
SC-46	1120.51	99.90	4.68E-02	4.68E-02	-2.76E-03	1.89E-02
V-48	983.52	99.98	6.87E-02	6.71E-02	1.11E-02	3.04E-02
	1312.10	97.50	6.71E-02		2.69E-02	2.83E-02
CR-51	320.08	9.83	3.23E-01	3.23E-01	0.00E+00	1.48E-01
MN-54	834.83	99.97	5.28E-02	5.28E-02	3.05E-02	2.29E-02
CO-56	846.75	99.96	5.02E-02	5.00E-02	1.09E-02	2.16E-02
	1037.75	14.03	4.44E-01		2.57E-02	1.92E-01
	1238.25	67.00	5.00E-02		-4.94E-02	1.77E-02
	1771.40	15.51	3.77E-01		-1.31E-01	1.46E-01
	2587.48	16.90	4.81E-01		1.10E-01	1.86E-01
CO-57	122.06	85.51	1.98E-02	1.98E-02	-1.06E-02	9.16E-03
	136.48	10.60	1.81E-01		-1.01E-01	8.45E-02
CO-58	810.76	99.40	4.84E-02	4.84E-02	-7.77E-03	2.08E-02
FE-59	1099.22	56.50	1.00E-01	1.00E-01	1.88E-02	4.23E-02
	1291.56	43.20	1.04E-01		-4.32E-03	4.02E-02
CO-60	1173.22	100.00	6.02E-02	4.63E-02	2.26E-02	2.54E-02
	1332.49	100.00	4.63E-02		-2.73E-02	1.79E-02
ZN-65	1115.52	50.75	9.19E-02	9.19E-02	2.61E-02	3.71E-02
+ GA-67	93.31	* 35.70	8.55E-02	8.55E-02	4.22E-02	4.13E-02
	208.95	2.24	1.02E+00		-5.06E-01	4.72E-01
	300.22	16.00	1.74E-01		-5.02E-02	7.98E-02
SE-75	121.11	16.70	1.04E-01	3.27E-02	-3.42E-02	4.84E-02
	136.00	59.50	3.27E-02		-5.63E-03	1.52E-02
	264.65	59.80	4.43E-02		9.63E-03	2.03E-02
	279.53	25.20	1.10E-01		-1.19E-03	5.02E-02
	400.65	11.40	2.78E-01		-2.14E-02	1.24E-01
RB-82	776.52	13.00	3.97E-01	3.97E-01	-3.63E-02	1.74E-01
RB-83	520.41	46.00	9.32E-02	9.32E-02	-1.54E-03	4.19E-02
	529.64	30.30	1.29E-01		5.15E-02	5.71E-02
	552.65	16.40	2.59E-01		3.55E-02	1.15E-01
KR-85	513.99	0.43	1.49E+01	1.49E+01	1.52E+01	6.98E+00
SR-85	513.99	99.27	6.51E-02	6.51E-02	6.62E-02	3.04E-02
Y-88	898.02	93.40	4.37E-02	4.37E-02	-9.15E-03	1.79E-02
	1836.01	99.38	6.06E-02		5.05E-03	2.35E-02
MO-93	263.06	56.72	4.33E-02	4.33E-02	-1.38E-02	1.98E-02
	684.67	99.68	4.86E-02		2.64E-03	2.14E-02
	1477.11	99.08	5.97E-02		4.24E-03	2.41E-02
NB-93M	16.57	9.43	8.14E-01	8.14E-01	6.48E-01	3.94E-01
NB-94	702.63	100.00	4.48E-02	4.48E-02	-1.99E-03	1.95E-02
	871.10	100.00	4.99E-02		-5.30E-03	2.14E-02
NB-95	765.79	99.81	5.25E-02	5.25E-02	9.87E-03	2.31E-02
NB-95M	235.69	25.00	1.02E-01	1.02E-01	-4.06E-03	4.73E-02
ZR-95	724.18	43.70	9.20E-02	9.20E-02	-1.18E-02	3.91E-02
	756.72	55.30	9.39E-02		5.97E-03	4.13E-02
MO-99	181.06	6.20	3.43E-01	2.74E-01	-2.99E-01	1.60E-01
	739.58	12.80	2.74E-01		-3.84E-02	1.15E-01
	778.00	4.50	1.08E+00		3.36E-01	4.71E-01
TC-99M	140.51	89.00	2.35E-02	2.35E-02	5.86E-03	1.10E-02
RU-103	497.08	89.00	4.43E-02	4.43E-02	1.57E-02	1.98E-02
RU-106	621.84	9.80	5.50E-01	5.50E-01	1.52E-02	2.49E-01
AG-108M	433.93	89.90	3.76E-02	3.76E-02	-2.97E-02	1.68E-02
	614.37	90.40	5.53E-02		5.23E-03	2.48E-02
	722.95	90.50	4.62E-02		-7.36E-03	1.98E-02

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Analysis Report for 1905060-02

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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	5.48E-01	5.48E-01	1.61E-01	2.59E-01
AG-110M	657.75	93.14	4.37E-02	4.37E-02	4.65E-04	1.89E-02
	677.61	10.53	3.98E-01		3.96E-02	1.72E-01
	706.67	16.46	2.96E-01		-9.08E-02	1.30E-01
	763.93	21.98	2.21E-01		-5.39E-02	9.59E-02
	884.67	21.98	2.38E-01		9.40E-03	1.02E-01
	1384.27	23.94	1.99E-01		-4.56E-02	7.72E-02
CD-113M	263.70	0.02	1.06E+02	1.06E+02	-3.21E+01	4.82E+01
SN-113	255.12	1.93	1.48E+00	4.68E-02	1.09E+00	6.83E-01
	391.69	64.90	4.68E-02		-1.06E-02	2.09E-02
TE-123M	159.00	84.10	2.36E-02	2.36E-02	1.68E-03	1.09E-02
SB-124	602.71	97.87	4.73E-02	4.73E-02	-2.32E-02	2.11E-02
	645.85	7.26	6.42E-01		3.00E-01	2.84E-01
	722.78	11.10	3.61E-01		-5.01E-02	1.54E-01
	1691.02	49.00	1.35E-01		1.75E-02	5.44E-02
I-125	35.49	6.49	3.61E-01	3.61E-01	9.51E-02	1.70E-01
SB-125	176.33	6.89	3.10E-01	1.26E-01	-2.91E-02	1.44E-01
	427.89	29.33	1.26E-01		9.06E-03	5.68E-02
	463.38	10.35	4.09E-01		1.58E-01	1.86E-01
	600.56	17.80	2.74E-01		1.50E-01	1.23E-01
	635.90	11.32	4.57E-01		1.03E-01	2.05E-01
SB-126	414.70	83.30	4.59E-02	4.59E-02	1.51E-02	2.09E-02
	666.33	99.60	4.95E-02		2.50E-03	2.19E-02
	695.00	99.60	5.57E-02		5.36E-03	2.50E-02
	720.50	53.80	8.01E-02		9.18E-03	3.45E-02
SN-126	87.57	37.00	5.51E-02	5.51E-02	1.61E-02	2.60E-02
SB-127	473.00	25.00	1.43E-01	1.32E-01	-8.14E-02	6.39E-02
	685.00	35.70	1.32E-01		-1.12E-02	5.82E-02
	783.80	14.70	2.81E-01		-8.21E-02	1.19E-01
I-129	29.78	57.00	4.91E-02	4.91E-02	-2.33E-02	2.32E-02
	33.60	13.20	1.84E-01		1.98E-02	8.64E-02
	39.58	7.52	2.85E-01		-1.43E-01	1.34E-01
+ I-131	284.30	6.05	4.16E-01	3.53E-02	-1.52E-01	1.89E-01
	364.48	* 81.20	3.53E-02		3.26E-02	1.59E-02
	636.97	7.26	6.46E-01		-1.50E-02	2.87E-01
	722.89	1.80	2.26E+00		-3.61E-01	9.69E-01
TE-132	49.72	13.10	1.64E-01	2.50E-02	8.59E-02	7.79E-02
	228.16	88.00	2.50E-02		-4.96E-03	1.15E-02
BA-133	81.00	33.00	6.14E-02	6.14E-02	-1.75E-03	2.90E-02
	302.84	17.80	1.58E-01		2.63E-02	7.21E-02
	356.01	60.00	6.24E-02		-1.94E-02	2.88E-02
I-133	529.87	86.30	3.58E-02	3.58E-02	1.43E-02	1.59E-02
XE-133	81.00	38.00	5.13E-02	5.13E-02	-1.46E-03	2.43E-02
CS-134	563.23	8.38	4.75E-01	4.95E-02	-4.57E-02	2.10E-01
	569.32	15.43	2.73E-01		-1.32E-02	1.21E-01
	604.70	97.60	4.95E-02		-1.24E-02	2.22E-02
	795.84	85.40	4.96E-02		-6.77E-03	2.10E-02
	801.93	8.73	6.75E-01		3.37E-01	2.99E-01
CS-135	268.24	16.00	1.73E-01	1.73E-01	2.48E-02	7.98E-02
I-135	1131.51	22.50	1.18E-01	1.02E-01	-2.31E-02	4.94E-02
	1260.41	28.60	1.02E-01		-3.85E-03	4.27E-02
	1678.03	9.54	2.50E-01		1.81E-02	9.37E-02
CS-136	153.22	7.46	2.76E-01	4.81E-02	-7.39E-02	1.29E-01

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Analysis Report for 1905060-02

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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	3.92E-01	4.81E-02	-1.30E-01	1.80E-01		
	176.55	13.56	1.55E-01		-1.46E-02	7.21E-02		
	273.65	12.66	2.31E-01		7.70E-02	1.07E-01		
	340.57	48.50	6.27E-02		1.14E-02	2.85E-02		
	818.50	99.70	4.81E-02		-4.94E-03	2.07E-02		
	1048.07	79.60	7.29E-02		-2.05E-03	3.12E-02		
CS-137	661.65	85.12	5.75E-02	5.75E-02	2.56E-03	2.55E-02		
	788.74	34.00	1.34E-01		9.33E-02	7.69E-03	5.72E-02	
LA-138	1435.80	66.00	9.33E-02	2.46E-02	2.75E-02	3.82E-02		
	165.85	80.35	2.46E-02		1.41E-03	1.14E-02		
BA-140	162.64	6.70	2.73E-01	1.49E-01	-4.30E-02	1.26E-01		
	304.84	4.50	6.28E-01		6.35E-02	2.87E-01		
	423.70	3.20	1.09E+00		-2.65E-01	4.90E-01		
	437.55	2.00	1.88E+00		8.45E-01	8.52E-01		
	537.32	25.00	1.49E-01		-2.02E-02	6.59E-02		
	LA-140	328.77	20.50		1.27E-01	4.96E-02	-5.72E-02	5.69E-02
487.03		45.50	8.68E-02	1.79E-02	3.90E-02			
815.85		23.50	2.03E-01	1.04E-02	8.75E-02			
1596.49		95.49	4.96E-02	5.12E-03	1.86E-02			
CE-141	145.44	48.40	4.41E-02	4.41E-02	-1.16E-02	2.07E-02		
CE-143	57.36	11.80	1.26E-01	6.63E-02	-6.38E-02	5.90E-02		
	293.26	42.00	6.63E-02		1.83E-02	3.07E-02		
	664.55	5.20	8.64E-01		3.66E-01	3.86E-01		
CE-144	133.54	10.80	1.83E-01	1.83E-01	7.70E-02	8.57E-02		
+ PM-144	476.78	42.00	9.65E-02	3.98E-02	-9.71E-03	4.36E-02		
	618.01	* 98.60	4.01E-02		2.67E-02	1.74E-02		
	696.49	* 99.49	3.98E-02		1.83E-02	1.70E-02		
PM-145	36.85	21.70	9.86E-02	5.34E-02	-7.50E-02	4.61E-02		
	37.36	39.70	5.34E-02		-4.06E-02	2.50E-02		
	42.30	15.10	1.48E-01		-3.07E-02	6.96E-02		
	72.40	2.31	8.33E-01		1.18E-01	3.93E-01		
PM-146	453.90	39.94	9.03E-02	9.03E-02	1.17E-02	4.04E-02		
	735.90	14.01	3.44E-01		8.06E-02	1.50E-01		
	747.13	13.10	3.29E-01		2.92E-03	1.41E-01		
ND-147	91.11	28.90	8.54E-02	8.54E-02	6.85E-02	4.08E-02		
	531.02	13.10	2.94E-01		6.23E-02	1.30E-01		
PM-149	285.90	3.10	7.32E-01	7.32E-01	-3.51E-01	3.31E-01		
EU-152	121.78	20.50	8.24E-02	8.24E-02	-4.44E-02	3.82E-02		
	244.69	5.40	5.26E-01		1.62E-01	2.44E-01		
	344.27	19.13	1.56E-01		4.68E-02	7.08E-02		
	778.89	9.10	5.59E-01		1.29E-01	2.44E-01		
	964.01	10.40	5.07E-01		-2.18E-01	2.16E-01		
	1085.78	7.22	6.31E-01		7.21E-02	2.55E-01		
	1112.02	9.60	4.13E-01		-1.37E-01	1.60E-01		
	1407.95	14.94	2.91E-01		-1.50E-02	1.09E-01		
	GD-153	97.43	31.30		6.47E-02	6.47E-02	6.56E-03	3.06E-02
		103.18	22.20		7.96E-02		-1.95E-02	3.72E-02
EU-154	123.07	40.50	4.36E-02	4.36E-02	-1.96E-02	2.03E-02		
	723.30	19.70	2.12E-01		-3.38E-02	9.09E-02		
	873.19	11.50	4.64E-01		4.07E-02	2.01E-01		
	996.32	10.30	4.37E-01		-2.81E-01	1.79E-01		
	1004.76	17.90	2.53E-01		-3.37E-02	1.04E-01		

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Analysis Report for 1905060-02

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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	1.57E-01	4.36E-02	1.04E-02	6.43E-02
EU-155	86.50	30.90	6.40E-02	6.40E-02	3.28E-02	3.02E-02
	105.30	20.70	8.37E-02		-2.78E-02	3.91E-02
EU-156	811.77	10.40	4.43E-01	4.43E-01	0.00E+00	1.90E-01
	1153.47	7.20	6.12E-01		7.78E-02	2.43E-01
	1230.71	8.90	5.63E-01		2.66E-02	2.27E-01
HO-166M	184.41	72.60	3.85E-02	3.85E-02	2.65E-02	1.81E-02
	280.45	29.60	9.68E-02		5.53E-02	4.45E-02
	410.94	11.10	3.63E-01		1.40E-01	1.66E-01
	711.69	54.10	9.29E-02		-2.02E-03	4.10E-02
TM-171	66.72	0.14	1.54E+01	1.54E+01	-1.10E+00	7.32E+00
HF-172	67.35	5.31	4.06E-01	1.66E-01	-2.90E-02	1.93E-01
	125.82	11.30	1.66E-01		3.12E-02	7.77E-02
LU-172	181.53	20.60	1.09E-01	7.58E-02	-1.65E-01	5.07E-02
	900.72	29.81	1.34E-01		-6.22E-02	5.47E-02
	1093.66	62.50	7.58E-02		2.88E-03	3.11E-02
LU-173	100.72	5.24	3.59E-01	1.38E-01	5.63E-02	1.68E-01
	272.11	21.20	1.38E-01		1.01E-02	6.37E-02
HF-175	343.40	84.00	3.59E-02	3.59E-02	1.36E-02	1.63E-02
LU-176	88.34	13.30	1.53E-01	2.92E-02	4.50E-02	7.26E-02
	201.83	86.00	2.92E-02		-1.15E-02	1.36E-02
	306.78	94.00	3.00E-02		-1.39E-02	1.36E-02
HF-181	133.02	41.70	4.72E-02	4.72E-02	7.64E-03	2.21E-02
	345.85	17.20	1.69E-01		2.65E-02	7.62E-02
	482.03	82.80	5.30E-02		2.04E-02	2.41E-02
TA-182	67.75	41.20	4.84E-02	4.84E-02	-3.69E-02	2.29E-02
	1121.30	34.90	1.34E-01		-7.92E-03	5.42E-02
	1189.05	16.23	3.58E-01		3.42E-02	1.50E-01
	1221.41	26.98	1.87E-01		6.18E-02	7.54E-02
	1231.02	11.44	4.43E-01		2.10E-02	1.79E-01
IR-192	308.46	29.68	9.52E-02	8.50E-02	-1.75E-02	4.33E-02
	468.07	48.10	8.50E-02		-1.95E-02	3.85E-02
HG-203	279.19	77.30	3.60E-02	3.60E-02	-6.78E-03	1.65E-02
TL-204	374.74	94.11	3.36E-02	3.36E-02	-5.81E-03	1.52E-02
	899.15	99.16	4.13E-02		-2.69E-02	1.69E-02
	911.74	91.10	4.81E-02		-1.06E-02	2.00E-02
BI-207	569.67	97.72	4.31E-02	4.31E-02	-2.09E-03	1.91E-02
	1063.62	74.90	7.38E-02		1.21E-02	3.12E-02
TL-208	583.14	30.22	1.54E-01	1.54E-01	1.22E-02	6.91E-02
	860.37	4.48	1.40E+00		6.22E-01	6.23E-01
	2614.66	35.85	2.51E-01		2.17E-02	9.96E-02
BI-210M	262.00	45.00	5.23E-02	5.23E-02	-1.35E-02	2.38E-02
	300.00	23.00	1.29E-01		-3.71E-02	5.90E-02
PB-210	46.50	4.25	5.65E-01	5.65E-01	1.97E-01	2.68E-01
PB-211	404.84	2.90	1.18E+00	1.18E+00	-2.94E-01	5.33E-01
	831.96	2.90	1.46E+00		-7.85E-01	6.11E-01
BI-212	727.17	11.80	4.03E-01	4.03E-01	-1.26E-02	1.76E-01
	1620.62	2.75	2.32E+00		0.00E+00	9.39E-01
PB-212	238.63	44.60	6.32E-02	6.32E-02	8.84E-03	2.94E-02
	300.09	3.41	8.69E-01		-2.50E-01	3.98E-01
BI-214	609.31	46.30	1.03E-01	1.03E-01	3.93E-02	4.62E-02
	1120.29	15.10	2.64E-01		-1.72E-01	1.02E-01
	1764.49	15.80	3.31E-01		1.71E-02	1.24E-01

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Analysis Report for 1905060-02

BLANK

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
BI-214	2204.22	4.98	1.09E+00	1.03E-01	1.18E-01	3.88E-01
+ PB-214	295.21	19.19	1.71E-01	9.47E-02	7.45E-02	7.92E-02
	351.92 *	37.19	9.47E-02		7.90E-02	4.34E-02
RN-219	401.80	6.50	4.72E-01	4.72E-01	-2.98E-01	2.10E-01
RA-223	323.87	3.88	8.05E-01	8.05E-01	2.76E-01	3.68E-01
RA-224	240.98	3.95	7.15E-01	7.15E-01	1.17E-01	3.32E-01
RA-225	40.00	31.00	6.77E-02	6.77E-02	-3.40E-02	3.18E-02
RA-226	186.21	3.28	8.62E-01	8.62E-01	5.26E-01	4.07E-01
TH-227	50.10	8.40	2.72E-01	2.35E-01	1.42E-01	1.29E-01
	236.00	11.50	2.35E-01		-9.36E-03	1.09E-01
	256.20	6.30	4.17E-01		1.88E-02	1.92E-01
AC-228	338.32	11.40	2.73E-01	1.50E-01	-7.51E-02	1.24E-01
	911.07	27.70	1.50E-01		-8.93E-02	6.14E-02
	969.11	16.60	3.54E-01		1.26E-02	1.53E-01
TH-230	48.43	16.90	1.38E-01	1.38E-01	2.32E-02	6.55E-02
	62.85	4.60	5.18E-01		6.94E-01	2.47E-01
	67.67	0.37	5.40E+00		-4.11E+00	2.55E+00
PA-231	283.67	1.60	1.59E+00	1.22E+00	-2.13E-01	7.21E-01
	302.67	2.30	1.22E+00		2.03E-01	5.58E-01
TH-231	25.64	14.70	2.54E-01	2.54E-01	1.14E-01	1.21E-01
	84.21	6.40	3.14E-01		1.41E-01	1.48E-01
PA-233	311.98	38.60	8.01E-02	8.01E-02	1.71E-02	3.67E-02
PA-234	131.20	20.40	9.68E-02	9.68E-02	-2.19E-02	4.53E-02
	733.99	8.80	5.89E-01		2.31E-01	2.60E-01
	946.00	12.00	4.48E-01		-8.07E-02	1.92E-01
PA-234M	1001.03	0.92	6.15E+00	6.15E+00	3.11E+00	2.63E+00
TH-234	63.29	3.80	6.27E-01	6.27E-01	8.39E-01	2.99E-01
U-235	143.76	10.50	2.13E-01	2.13E-01	8.48E-02	1.00E-01
	163.35	4.70	3.89E-01		-1.29E-01	1.79E-01
	205.31	4.70	5.54E-01		2.81E-01	2.59E-01
NP-237	86.50	12.60	1.57E-01	1.57E-01	8.04E-02	7.41E-02
NP-239	106.10	22.70	6.92E-02	6.92E-02	-4.26E-02	3.22E-02
	228.18	10.70	2.01E-01		-3.98E-02	9.21E-02
	277.60	14.10	1.84E-01		1.70E-02	8.48E-02
AM-241	59.54	35.90	5.50E-02	5.50E-02	-3.73E-02	2.60E-02
AM-243	74.67	66.00	3.22E-02	3.22E-02	8.66E-03	1.53E-02
CM-243	209.75	3.29	7.35E-01	2.03E-01	-8.59E-02	3.40E-01
	228.14	10.60	2.21E-01		-4.38E-02	1.01E-01
	277.60	14.00	2.03E-01		1.87E-02	9.32E-02

- + = 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 1905060-02
BLANK

No Action Level results available for reporting purposes.

DATA REVIEW COMMENTS REPORT

<i>Creation Date</i>	<i>Comment</i>	<i>User</i>
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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: BLANK

Elapsed Live time: 3600

Elapsed Real Time: 3606

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	20	39	26	12	16	11	7	11	16	11	9	17	7	14	8	7	6	10	11	4	8	12	21	17	5	8	8	6	13	12	5	5	8	8	6	5	9	6	3	7	8	2	3	5	9	
	0	58	37	17	11	12	16	7	10	16	14	23	9	13	9	8	9	9	13	10	2	10	6	22	10	9	6	3	6	3	6	8	4	8	5	8	8	4	5	7	4	7	6	4	7	6	3
	0	50	32	15	14	26	14	14	13	23	17	28	12	8	14	7	10	9	9	7	10	6	6	10	11	10	9	11	5	8	9	9	6	3	5	5	3	7	9	2	5	3	3	5	6	4	
	0	58	25	13	10	7	15	11	14	19	17	39	13	8	10	5	11	14	10	8	10	6	6	11	10	9	12	5	8	9	9	6	3	6	5	8	8	6	7	5	4	6	3	3	2	3	
	0	50	21	13	9	17	15	13	11	20	15	37	10	13	9	13	10	14	8	9	4	9	10	12	17	10	12	8	8	7	8	7	6	4	8	4	5	5	6	5	3	5	2	3	0	8	
	0	46	21	10	11	22	11	35	15	18	17	16	8	14	8	10	14	14	15	9	4	4	13	11	10	9	3	4	6	9	9	5	5	12	4	6	7	6	8	6	7	5	5	0	1		
	0	55	22	9	6	26	8	33	14	14	12	14	12	11	9	16	9	9	7	6	5	4	3	11	10	5	4	9	12	8	5	8	6	6	9	6	8	8	8	8	10	4	4	1			
	0	54	23	18	16	12	8	27	8	10	10	16	8	11	10	8	7	10	8	6	12	14	13	7	8	12	3	6	5	10	8	6	2	6	5	6	6	6	2	4	2	3	9	6	3		

369: 4 3 2 3 4 2 2 5

Sample Title: BLANK

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

801: 2 3 3 5 2 2 3 0

Sample Title: BLANK

Channel	1	2	3	4	5	6	7	8	9
809:	0	2	2	2	1	1	1	3	
817:	2	0	2	1	0	3	1	2	
825:	2	3	0	1	0	0	0	3	
833:	2	2	1	0	2	3	2	0	
841:	1	0	2	2	1	3	2	1	
849:	0	0	2	3	1	0	3	1	
857:	2	4	2	2	3	4	1	2	
865:	0	1	2	0	2	1	3	0	
873:	1	1	2	2	2	2	1	2	
881:	1	0	0	1	4	1	0	4	
889:	0	3	0	2	2	1	0	2	
897:	1	0	1	2	0	0	1	2	
905:	0	4	1	1	1	0	3	1	
913:	0	0	0	2	2	1	0	1	
921:	1	0	1	1	1	1	2	4	
929:	0	1	0	1	1	1	1	6	
937:	0	2	0	1	3	1	1	1	
945:	1	2	5	0	0	1	2	2	
953:	2	1	1	2	1	2	1	0	
961:	1	2	2	2	1	2	1	0	
969:	2	3	3	1	1	0	2	1	
977:	2	3	3	3	1	3	3	1	
985:	2	3	1	1	1	3	2	0	
993:	0	2	0	0	2	1	1	1	
1001:	2	2	1	1	1	0	0	0	
1009:	0	1	0	2	0	0	0	1	
1017:	2	1	0	0	2	1	2	0	
1025:	1	1	1	0	1	2	1	1	
1033:	2	1	3	2	2	0	0	0	
1041:	3	3	1	1	1	2	1	2	
1049:	1	3	0	1	0	0	2	2	
1057:	1	0	2	3	0	1	1	1	
1065:	1	1	2	0	1	0	1	1	
1073:	1	1	0	1	0	1	0	0	
1081:	2	0	1	2	0	0	0	1	
1089:	2	0	0	1	0	0	4	1	
1097:	0	1	0	0	1	0	3	1	
1105:	0	2	2	0	0	0	0	1	
1113:	2	1	0	0	0	1	0	1	
1121:	1	0	0	1	2	3	0	1	
1129:	0	1	0	1	2	1	2	1	
1137:	2	1	0	1	2	1	0	1	
1145:	1	2	1	1	0	0	1	1	
1153:	0	0	0	0	2	1	0	0	
1161:	0	1	1	0	1	0	0	0	
1169:	0	1	3	0	2	2	1	1	
1177:	0	0	2	0	0	0	0	0	
1185:	0	1	1	3	0	0	1	1	
1193:	2	0	2	3	0	2	1	1	
1201:	0	1	1	2	2	0	0	0	
1209:	2	0	1	0	1	0	0	0	
1217:	0	0	2	0	0	0	0	1	
1225:	2	1	0	1	0	1	1	2	

1233: 1 0 0 0 0 0 0 1 0

Sample Title: BLANK

Channel	-----	-----	-----	-----	-----	-----	-----	-----
1241:	0	1	3	0	0	2	0	0
1249:	2	0	1	1	0	1	1	0
1257:	1	1	1	1	1	2	2	0
1265:	0	1	2	1	0	1	0	0
1273:	2	1	0	3	0	0	1	0
1281:	2	0	1	1	0	1	0	0
1289:	0	2	0	0	0	0	2	0
1297:	0	1	1	1	0	0	1	0
1305:	1	0	0	2	1	1	0	1
1313:	3	1	0	1	0	1	0	0
1321:	0	1	1	0	0	2	1	1
1329:	0	0	0	0	0	1	2	0
1337:	1	2	0	1	0	1	0	1
1345:	0	0	3	1	1	0	0	0
1353:	0	0	1	0	1	1	0	0
1361:	2	0	0	2	1	1	1	2
1369:	1	0	0	2	1	0	1	1
1377:	0	0	0	1	0	0	0	1
1385:	0	1	1	1	0	2	1	1
1393:	0	0	0	0	2	2	0	1
1401:	2	0	2	2	0	0	0	0
1409:	0	0	0	1	0	0	0	1
1417:	0	0	0	1	0	0	2	0
1425:	0	0	2	0	2	1	0	1
1433:	1	1	2	1	1	0	0	0
1441:	0	0	0	0	2	0	1	1
1449:	0	1	1	0	1	1	1	1
1457:	0	0	0	0	0	1	0	0
1465:	0	3	0	0	0	0	0	1
1473:	0	0	0	0	1	1	0	1
1481:	1	2	2	0	1	2	0	0
1489:	1	1	0	0	0	1	0	0
1497:	1	0	2	0	1	1	2	0
1505:	0	3	0	0	2	1	0	1
1513:	0	0	1	1	0	1	0	0
1521:	1	1	0	2	0	1	0	1
1529:	1	0	0	0	2	0	0	1
1537:	1	1	0	0	1	0	1	0
1545:	0	0	0	1	0	2	1	0
1553:	1	1	0	1	0	2	0	0
1561:	3	1	1	0	0	0	1	0
1569:	0	0	0	1	1	0	0	1
1577:	0	2	0	1	0	1	0	1
1585:	0	0	1	1	0	0	0	0
1593:	1	0	1	0	0	0	0	0
1601:	1	1	0	0	0	0	0	0
1609:	0	0	0	2	0	0	0	2
1617:	0	0	4	0	2	0	0	0
1625:	0	1	0	0	1	0	0	2
1633:	0	0	1	0	0	2	0	0
1641:	1	0	1	0	1	0	1	0
1649:	0	0	1	0	0	0	1	0
1657:	1	0	0	0	0	0	0	0

1665: 1 1 0 0 0 0 0 0

Sample Title: BLANK

Channel	-----	-----	-----	-----	-----	-----	-----	-----
1673:	0	0	0	0	0	1	0	0
1681:	1	0	1	0	1	1	0	0
1689:	1	1	1	2	0	0	1	0
1697:	0	1	0	0	0	0	0	0
1705:	0	1	1	0	0	0	0	0
1713:	0	0	0	1	2	1	2	2
1721:	0	0	0	2	0	1	0	2
1729:	0	2	1	0	0	0	1	0
1737:	1	0	0	0	0	0	0	0
1745:	0	0	0	1	1	0	0	1
1753:	0	0	0	0	0	0	0	0
1761:	0	0	0	0	1	1	0	1
1769:	0	1	1	0	1	0	0	0
1777:	2	0	1	0	0	0	0	1
1785:	1	0	1	0	0	0	1	0
1793:	1	0	0	1	0	0	0	0
1801:	0	1	0	0	0	1	0	1
1809:	0	1	0	0	0	0	0	0
1817:	2	1	0	0	1	0	0	0
1825:	1	0	0	1	0	0	1	0
1833:	0	0	2	0	1	0	0	1
1841:	0	1	0	0	0	0	2	1
1849:	1	1	0	0	1	0	0	0
1857:	0	0	0	0	0	1	2	0
1865:	0	0	0	0	1	2	0	0
1873:	0	1	1	0	1	0	0	0
1881:	0	1	0	0	0	1	0	0
1889:	0	0	0	0	0	0	0	0
1897:	0	3	0	0	0	0	0	0
1905:	1	0	1	0	1	1	0	0
1913:	0	1	0	0	0	0	0	0
1921:	2	0	0	0	0	0	0	1
1929:	0	1	1	2	0	0	0	0
1937:	0	0	1	0	0	1	0	1
1945:	0	0	0	0	0	0	1	1
1953:	0	0	0	0	0	0	0	0
1961:	1	0	1	1	0	0	0	0
1969:	0	0	1	0	1	1	0	0
1977:	0	0	0	0	0	0	0	0
1985:	1	0	0	0	0	0	0	0
1993:	0	0	1	0	1	1	0	0
2001:	0	1	0	0	0	1	0	0
2009:	0	0	0	0	0	0	0	0
2017:	0	1	0	0	0	0	0	0
2025:	0	0	0	0	0	0	0	0
2033:	0	0	0	0	0	0	0	0
2041:	0	0	0	0	0	0	0	0
2049:	1	0	0	2	0	0	0	0
2057:	0	0	0	0	0	0	0	1
2065:	1	0	1	1	0	0	0	0
2073:	0	0	0	2	0	0	1	0
2081:	0	0	0	0	1	1	0	1
2089:	0	0	0	0	0	0	0	0

2097: 0 0 0 0 0 1 0 1

Sample Title: BLANK

Channel	1	2	3	4	5	6	7	8
2105:	1	0	0	0	0	2	0	0
2113:	0	0	0	2	0	0	3	0
2121:	0	0	0	0	1	0	0	0
2129:	0	0	1	1	1	0	0	0
2137:	0	0	0	0	0	0	0	0
2145:	0	0	1	0	0	0	0	0
2153:	0	0	0	0	0	0	1	1
2161:	0	0	1	0	0	0	1	0
2169:	0	1	0	1	0	0	0	0
2177:	0	2	0	0	0	0	0	0
2185:	0	0	0	0	2	0	0	0
2193:	0	0	0	1	0	0	1	0
2201:	0	0	1	0	0	0	1	0
2209:	0	0	0	0	0	0	3	0
2217:	0	0	0	0	0	0	0	0
2225:	0	0	0	0	0	0	0	1
2233:	0	0	0	0	0	0	0	0
2241:	0	0	0	0	0	0	0	0
2249:	0	1	0	0	0	0	1	0
2257:	0	0	0	0	0	2	1	1
2265:	0	0	0	0	0	0	0	0
2273:	1	0	0	0	0	2	1	0
2281:	0	0	0	0	1	0	0	0
2289:	0	0	1	1	1	0	0	0
2297:	0	0	0	0	0	0	0	0
2305:	0	1	1	1	0	0	1	0
2313:	0	0	0	0	2	0	0	0
2321:	1	0	0	0	0	1	0	0
2329:	1	0	0	1	0	1	0	0
2337:	0	0	0	1	0	0	1	0
2345:	0	0	0	0	0	1	1	0
2353:	0	0	0	1	1	1	0	0
2361:	0	0	0	0	0	0	0	0
2369:	2	0	0	0	0	0	0	0
2377:	0	0	0	0	0	0	0	0
2385:	0	0	0	1	1	0	0	1
2393:	1	0	0	0	0	0	0	0
2401:	0	1	1	1	0	0	0	0
2409:	0	0	0	0	0	0	1	0
2417:	0	0	0	1	0	0	1	0
2425:	0	0	0	0	0	0	1	0
2433:	0	0	0	0	0	0	0	0
2441:	0	0	0	0	0	0	0	1
2449:	0	0	0	0	0	1	0	0
2457:	0	0	0	0	0	1	1	1
2465:	0	0	1	0	0	0	0	0
2473:	0	0	0	0	0	0	1	1
2481:	0	0	0	0	0	0	1	0
2489:	1	0	1	0	0	0	0	0
2497:	1	0	0	0	0	0	0	0
2505:	1	0	0	0	0	0	0	0
2513:	0	1	0	0	0	1	0	0
2521:	0	0	0	1	0	0	0	0

2529: 0 0 0 0 0 0 0 0 1

Sample Title: BLANK

Channel	-----	-----	-----	-----	-----	-----	-----	-----
2537:	0	0	0	1	0	0	0	2
2545:	0	1	1	1	1	0	1	0
2553:	0	0	0	0	0	0	0	0
2561:	0	0	0	0	2	0	0	1
2569:	0	0	0	0	0	0	0	1
2577:	0	1	1	0	1	0	0	0
2585:	0	1	2	0	0	0	1	0
2593:	0	0	0	0	0	0	0	0
2601:	0	0	0	0	0	0	0	0
2609:	0	0	0	0	0	1	1	0
2617:	0	1	1	1	0	0	1	0
2625:	1	1	0	0	0	0	0	0
2633:	0	0	1	0	0	0	0	0
2641:	0	0	0	0	0	1	0	0
2649:	0	0	0	0	0	1	0	0
2657:	0	1	0	0	0	0	0	0
2665:	1	0	1	0	0	1	0	0
2673:	0	0	0	0	0	0	1	0
2681:	0	0	0	0	0	0	0	0
2689:	0	0	0	0	0	0	0	0
2697:	0	1	0	0	0	0	1	0
2705:	2	0	0	0	0	0	0	0
2713:	0	0	0	1	0	0	0	0
2721:	0	1	0	1	1	0	0	0
2729:	0	0	0	0	0	0	0	0
2737:	0	0	0	0	0	0	0	1
2745:	0	0	0	1	0	0	0	0
2753:	0	0	0	1	0	0	0	0
2761:	0	0	0	0	0	0	0	0
2769:	1	0	0	0	1	0	0	0
2777:	0	0	0	1	0	0	0	1
2785:	0	0	0	0	0	0	0	0
2793:	0	1	0	0	0	0	0	0
2801:	0	0	0	0	1	0	0	0
2809:	1	0	0	0	0	1	0	0
2817:	0	0	0	0	0	0	1	0
2825:	0	0	0	0	0	2	0	0
2833:	0	0	0	0	0	0	0	0
2841:	0	0	1	0	0	0	0	0
2849:	0	0	0	1	1	0	0	0
2857:	0	0	0	0	0	0	1	1
2865:	0	0	0	0	0	0	0	0
2873:	0	0	0	0	0	1	0	0
2881:	0	0	1	0	0	1	1	1
2889:	1	0	0	0	0	0	0	0
2897:	1	2	0	0	0	0	0	0
2905:	0	0	0	0	0	0	0	0
2913:	1	0	0	0	0	0	0	0
2921:	0	1	1	0	0	0	0	0
2929:	0	0	0	0	1	0	0	0
2937:	0	0	0	0	0	0	0	0
2945:	0	0	0	0	1	1	0	0
2953:	0	0	0	0	0	0	0	0

2961: 0 0 0 1 0 0 0 0

Sample Title: BLANK

Channel	-----	-----	-----	-----	-----	-----	-----	-----
2969:	0	0	0	0	0	1	0	0
2977:	1	0	0	0	1	0	0	0
2985:	0	0	0	1	0	0	0	0
2993:	1	0	1	0	0	0	0	0
3001:	0	0	0	1	0	0	0	0
3009:	0	0	0	0	0	1	0	0
3017:	1	0	0	0	0	0	0	1
3025:	0	0	0	0	0	0	0	0
3033:	0	0	0	0	0	1	0	0
3041:	0	0	0	0	0	0	1	0
3049:	0	1	0	0	0	0	0	0
3057:	0	0	1	0	0	0	0	0
3065:	0	0	0	1	0	1	0	0
3073:	0	0	0	0	0	0	0	0
3081:	0	0	0	0	0	1	0	0
3089:	0	0	0	0	0	0	0	0
3097:	0	0	0	0	0	0	0	0
3105:	1	0	0	0	1	0	0	0
3113:	0	0	0	0	0	0	0	0
3121:	0	0	0	0	0	0	0	0
3129:	1	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	0	0	0	0	0
3161:	0	0	2	0	0	0	0	0
3169:	0	0	0	0	0	0	0	0
3177:	0	0	0	0	0	0	0	0
3185:	1	0	0	0	0	0	0	0
3193:	0	0	0	0	0	0	0	0
3201:	0	0	0	0	0	1	0	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	0	0	0
3233:	0	0	0	0	0	0	1	0
3241:	0	0	0	1	0	0	0	0
3249:	0	0	0	1	0	0	0	1
3257:	0	0	0	0	0	0	0	0
3265:	0	0	0	1	0	0	0	0
3273:	0	0	0	0	1	0	1	0
3281:	0	0	0	0	0	0	1	0
3289:	0	0	1	0	0	0	1	0
3297:	0	0	0	0	0	0	0	0
3305:	0	1	0	0	0	0	0	0
3313:	0	0	0	0	0	0	0	0
3321:	0	0	1	0	0	0	0	0
3329:	0	0	0	0	1	0	1	0
3337:	0	0	0	0	0	0	0	0
3345:	1	0	0	0	0	0	0	0
3353:	0	0	0	0	0	0	0	0
3361:	0	0	0	0	0	0	0	1
3369:	0	0	0	1	0	1	0	0
3377:	0	0	0	0	0	0	0	0
3385:	0	0	0	0	0	0	0	0

3393: 0 0 0 0 0 0 0 0 0

Sample Title: BLANK

Channel	-----	-----	-----	-----	-----	-----	-----	-----
3401:	0	0	0	0	0	1	0	0
3409:	0	1	0	0	1	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	1
3441:	0	0	0	0	0	0	0	0
3449:	1	1	0	0	0	0	0	0
3457:	1	0	1	0	0	0	0	0
3465:	1	0	0	0	0	1	0	0
3473:	0	0	2	0	0	0	0	0
3481:	0	0	0	0	0	0	0	0
3489:	0	0	0	0	0	0	0	0
3497:	1	0	0	0	0	1	0	0
3505:	0	0	0	0	0	0	0	0
3513:	0	0	1	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	0	0	0	1
3545:	0	0	0	0	0	0	0	0
3553:	0	0	0	0	0	0	0	0
3561:	0	0	0	0	1	1	0	0
3569:	0	1	0	1	0	0	0	0
3577:	0	0	0	0	0	0	0	0
3585:	0	0	0	1	0	0	0	0
3593:	0	0	0	0	1	0	0	0
3601:	0	0	0	0	0	0	0	0
3609:	0	0	0	1	0	0	0	0
3617:	0	0	0	0	0	0	0	0
3625:	0	1	0	0	0	0	0	0
3633:	0	0	0	0	0	0	0	0
3641:	0	1	0	0	1	0	0	0
3649:	0	0	1	0	0	0	0	0
3657:	0	1	0	1	0	1	0	0
3665:	0	0	0	0	1	0	0	0
3673:	0	0	0	0	1	0	1	1
3681:	0	0	0	0	0	1	0	0
3689:	0	0	0	0	0	0	0	0
3697:	0	1	0	0	0	0	0	0
3705:	0	0	0	0	1	0	0	0
3713:	0	0	0	0	0	1	0	0
3721:	0	0	0	0	0	1	0	0
3729:	0	0	0	0	0	0	0	0
3737:	0	0	0	0	0	0	0	0
3745:	2	0	0	0	1	0	0	1
3753:	0	0	0	0	0	0	0	0
3761:	0	1	0	0	0	0	0	0
3769:	0	1	0	0	0	0	0	0
3777:	0	0	0	0	0	0	0	0
3785:	0	0	0	1	0	0	0	0
3793:	0	0	0	0	0	0	0	0
3801:	1	0	0	0	0	0	0	0
3809:	0	1	1	0	0	0	0	0
3817:	0	0	0	0	1	0	0	0

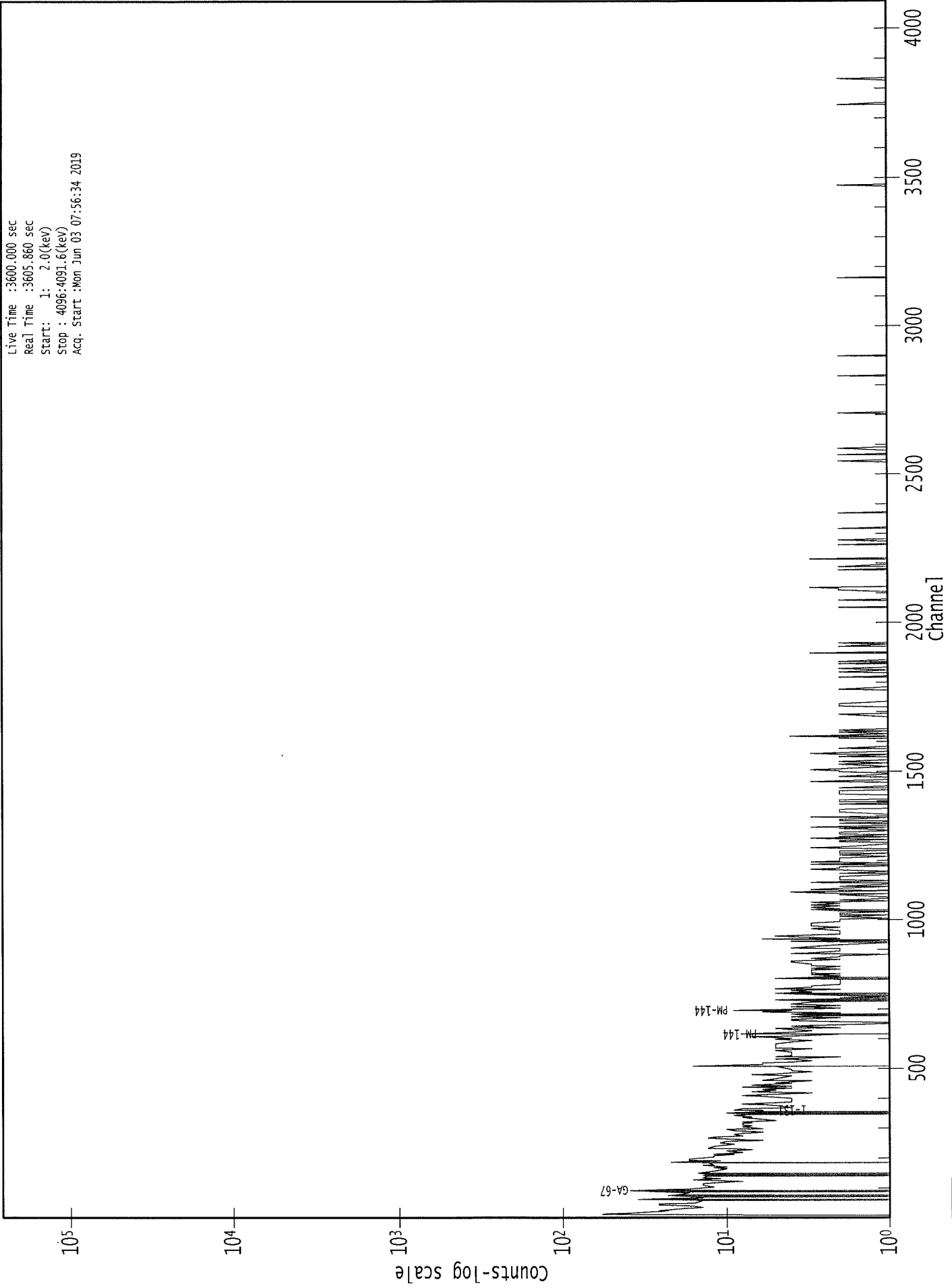
3825: 0 0 1 0 0 0 1 2

Sample Title: BLANK

Channel	-----	-----	-----	-----	-----	-----	-----	-----
3833:	0	0	0	0	0	0	0	0
3841:	0	0	0	0	0	0	1	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	0	0	0
3905:	0	0	0	0	0	0	0	0
3913:	0	1	0	0	0	0	0	0
3921:	0	0	0	1	0	0	0	0
3929:	0	0	1	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:	1	1	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	1	0	0	0	0	0	1
4001:	0	0	0	0	0	0	1	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	0	1
4033:	0	0	0	0	0	0	0	0
4041:	0	0	0	0	1	0	0	0
4049:	0	0	0	0	0	0	0	0
4057:	0	0	0	0	0	1	0	0
4065:	0	0	0	0	0	0	0	1
4073:	1	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

0000082498.CNF

Live Time :3600.000 sec
Real Time :3605.860 sec
Start : 1: 2.0(keV)
Stop : 4096.4091.6(keV)
Acq. Start :Mon Jun 03 07:56:34 2019



0101

ROI Type: 1

Analysis Report for 1905060-03
R1 0-6

GAMMA SPECTRUM ANALYSIS

Sample Identification : 1905060-03
Sample Description : R1 0-6
Sample Type : SOIL

Sample Size : 4.297E+02 grams
Facility : Countroom

Sample Taken On : 5/8/2019 3:31:42PM
Acquisition Started : 6/3/2019 6:51:45AM

Procedure : GAS-1802 pCi
Operator : Administrator
Detector Name : GE1
Geometry : GAS-1802
Live Time : 3600.0 seconds
Real Time : 3601.1 seconds

Dead Time : 0.03 %

Peak Locate Threshold : 2.50
Peak Locate Range (in channels) : 1 - 4096
Peak Area Range (in channels) : 18 - 4096
Identification Energy Tolerance : 1.000FWHM

Energy Calibration Used Done On : 6/16/2018
Efficiency Calibration Used Done On : 6/16/2018
Efficiency Calibration Description :

Sample Number : 82491

PEAK-TO-TOTAL CALIBRATION REPORT

Peak-to-Total Efficiency Calibration Equation

AG
6/3/19

Analysis Report for 1905060-03

R1 0-6

PEAK LOCATE REPORT

Peak Locate Performed on : 6/3/2019 7:51:50AM
 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	46.29	46.66	0.0000	0.00
2	75.58	75.94	0.0000	0.00
3	130.91	131.26	0.0000	0.00
4	239.14	239.46	0.0000	0.00
5	270.25	270.57	0.0000	0.00
6	296.04	296.35	0.0000	0.00
7	327.40	327.70	0.0000	0.00
8	339.62	339.92	0.0000	0.00
9	352.04	352.33	0.0000	0.00
10	357.89	358.19	0.0000	0.00
11	435.36	435.64	0.0000	0.00
12	466.95	467.22	0.0000	0.00
13	507.85	508.12	0.0000	0.00
14	548.01	548.26	0.0000	0.00
15	582.25	582.50	0.0000	0.00
16	584.89	585.13	0.0000	0.00
17	609.24	609.48	0.0000	0.00
18	661.40	661.63	0.0000	0.00
19	728.75	728.96	0.0000	0.00
20	754.88	755.10	0.0000	0.00
21	835.45	835.65	0.0000	0.00
22	909.01	909.20	0.0000	0.00
23	912.52	912.71	0.0000	0.00
24	964.10	964.27	0.0000	0.00
25	969.13	969.31	0.0000	0.00
26	1074.84	1075.00	0.0000	0.00
27	1079.50	1079.66	0.0000	0.00
28	1119.25	1119.40	0.0000	0.00
29	1168.31	1168.46	0.0000	0.00
30	1377.29	1377.40	0.0000	0.00
31	1400.33	1400.44	0.0000	0.00
32	1457.56	1457.67	0.0000	0.00
33	1460.43	1460.53	0.0000	0.00
34	1462.92	1463.02	0.0000	0.00
35	1584.90	1584.98	0.0000	0.00
36	1588.37	1588.46	0.0000	0.00
37	1632.55	1632.63	0.0000	0.00
38	1731.12	1731.19	0.0000	0.00
39	1765.42	1765.49	0.0000	0.00
40	1935.25	1935.31	0.0000	0.00
41	2044.95	2045.00	0.0000	0.00
42	2203.46	2203.50	0.0000	0.00

Analysis Report for 1905060-03

R1 0-6

Peak No.	Energy (keV)	Centroid Channel	Centroid Uncertainty	Peak Significance
43	2418.70	2418.73	0.0000	0.00
44	2612.37	2612.39	0.0000	0.00
45	2615.72	2615.75	0.0000	0.00

? = Adjacent peak noted
Errors quoted at 2.000sigma

Analysis Report for 1905060-03

R1 0-6

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 6/3/2019 7:51:50AM

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 -	51	46.66	1.44E+02	98.57	1.31E+03	3.77
2	75.58	70 -	82	75.94	7.84E+02	165.59	2.87E+03	5.04
3	130.91	128 -	134	131.26	8.12E+01	65.85	7.26E+02	4.35
4	239.14	233 -	248	239.46	7.90E+02	126.87	1.28E+03	4.49
5	270.25	267 -	273	270.57	4.13E+01	50.75	4.33E+02	1.35
6	296.04	289 -	305	296.35	2.77E+02	97.32	7.86E+02	4.76
7	327.40	323 -	331	327.70	6.05E+01	51.39	3.69E+02	4.42
8	339.62	335 -	345	339.92	1.64E+02	61.51	4.13E+02	5.23
M 9	352.04	346 -	361	352.33	3.85E+02	73.42	4.04E+02	4.54
m 10	357.89	346 -	361	358.19	2.65E+01	43.91	2.00E+02	2.57
11	435.36	431 -	440	435.64	4.71E+01	41.07	2.12E+02	7.61
12	466.95	463 -	473	467.22	3.41E+01	41.98	2.08E+02	6.50
M 13	507.85	505 -	517	508.12	6.08E+01	35.32	1.66E+02	2.95
14	548.01	546 -	551	548.26	1.70E+01	20.69	7.20E+01	2.03
M 15	582.25	577 -	589	582.50	1.35E+02	46.73	2.12E+02	3.00
m 16	584.89	577 -	589	585.13	6.34E+01	43.31	1.86E+02	2.58
17	609.24	603 -	618	609.48	2.96E+02	63.18	2.84E+02	4.24
18	661.40	656 -	667	661.63	8.46E+01	50.95	2.83E+02	1.86
19	728.75	722 -	735	728.96	8.40E+01	41.94	1.48E+02	7.42
20	754.88	751 -	759	755.10	3.71E+01	26.47	8.38E+01	2.51
21	835.45	829 -	840	835.65	3.78E+01	36.06	1.42E+02	4.70
M 22	909.01	906 -	924	909.20	4.36E+01	30.18	9.64E+01	2.19
m 23	912.52	906 -	924	912.71	8.39E+01	39.08	1.35E+02	3.21
M 24	964.10	963 -	975	964.27	1.25E+01	9.75	2.39E+01	2.67
m 25	969.13	963 -	975	969.31	9.16E+01	40.79	1.49E+02	4.35
M 26	1074.84	1073 -	1082	1075.00	1.03E+01	11.14	2.53E+01	2.05
m 27	1079.50	1073 -	1082	1079.66	1.13E+01	17.03	4.51E+01	3.31
28	1119.25	1113 -	1128	1119.40	6.96E+01	41.57	1.49E+02	3.68
29	1168.31	1160 -	1176	1168.46	4.14E+01	33.86	9.32E+01	13.53
30	1377.29	1374 -	1380	1377.40	1.49E+01	15.83	3.41E+01	2.78
31	1400.33	1397 -	1404	1400.44	1.20E+01	13.86	2.40E+01	3.37
M 32	1457.56	1454 -	1470	1457.67	6.87E+01	34.49	1.65E+01	3.74
m 33	1460.43	1454 -	1470	1460.53	4.19E+02	53.59	3.66E+01	3.83
m 34	1462.92	1454 -	1470	1463.02	2.18E+02	53.77	4.24E+01	3.74
M 35	1584.90	1578 -	1595	1584.98	1.42E+01	13.71	1.07E+01	2.65
m 36	1588.37	1578 -	1595	1588.46	1.26E+01	15.10	2.02E+01	2.65
37	1632.55	1630 -	1635	1632.63	9.00E+00	8.12	6.00E+00	2.79
38	1731.12	1728 -	1735	1731.19	1.06E+01	14.28	2.47E+01	2.10
39	1765.42	1760 -	1774	1765.49	6.77E+01	21.93	2.06E+01	4.23
40	1935.25	1931 -	1937	1935.31	4.67E+00	6.02	2.67E+00	1.89

Analysis Report for 1905060-03

R1 0-6

	Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	FWHM (keV)
	41	2044.95	2041 -	2047	2045.00	5.33E+00	7.78	7.33E+00	1.30
	42	2203.46	2200 -	2206	2203.50	1.40E+01	7.48	0.00E+00	3.80
	43	2418.70	2415 -	2421	2418.73	4.42E+00	6.02	3.17E+00	1.88
M	44	2612.37	2608 -	2621	2612.39	3.87E+01	17.33	5.86E+00	3.17
m	45	2615.72	2608 -	2621	2615.75	3.23E+01	18.14	3.01E+00	3.24

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 : 6/3/2019 7:51:50AM

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 -	51	1.44E+02	98.57	1.31E+03	7.86E+01
	2	75.58	70 -	82	7.84E+02	165.59	2.87E+03	1.28E+02
	3	130.91	128 -	134	8.12E+01	65.85	7.26E+02	5.21E+01
	4	239.14	233 -	248	7.90E+02	126.87	1.28E+03	9.35E+01
	5	270.25	267 -	273	4.13E+01	50.75	4.33E+02	4.04E+01
	6	296.04	289 -	305	2.77E+02	97.32	7.86E+02	7.52E+01
	7	327.40	323 -	331	6.05E+01	51.39	3.69E+02	4.03E+01
	8	339.62	335 -	345	1.64E+02	61.51	4.13E+02	4.60E+01
M	9	352.04	346 -	361	3.85E+02	73.42	4.04E+02	3.31E+01
m	10	357.89	346 -	361	2.65E+01	43.91	2.00E+02	2.33E+01
	11	435.36	431 -	440	4.71E+01	41.07	2.12E+02	3.18E+01
	12	466.95	463 -	473	3.41E+01	41.98	2.08E+02	3.31E+01
M	13	507.85	505 -	517	6.08E+01	35.32	1.66E+02	2.12E+01
	14	548.01	546 -	551	1.70E+01	20.69	7.20E+01	1.56E+01
M	15	582.25	577 -	589	1.35E+02	46.73	2.12E+02	2.39E+01
m	16	584.89	577 -	589	6.34E+01	43.31	1.86E+02	2.24E+01
	17	609.24	603 -	618	2.96E+02	63.18	2.84E+02	4.36E+01
	18	661.40	656 -	667	8.46E+01	50.95	2.83E+02	3.91E+01
	19	728.75	722 -	735	8.40E+01	41.94	1.48E+02	3.10E+01
	20	754.88	751 -	759	3.71E+01	26.47	8.38E+01	1.93E+01
	21	835.45	829 -	840	3.78E+01	36.06	1.42E+02	2.79E+01
M	22	909.01	906 -	924	4.36E+01	30.18	9.64E+01	1.61E+01

0106

Analysis Report for 1905060-03

R1 0-6

	Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
m	23	912.52	906 -	924	8.39E+01	39.08	1.35E+02	1.91E+01
M	24	964.10	963 -	975	1.25E+01	9.75	2.39E+01	8.03E+00
m	25	969.13	963 -	975	9.16E+01	40.79	1.49E+02	2.01E+01
M	26	1074.84	1073 -	1082	1.03E+01	11.14	2.53E+01	8.28E+00
m	27	1079.50	1073 -	1082	1.13E+01	17.03	4.51E+01	1.10E+01
	28	1119.25	1113 -	1128	6.96E+01	41.57	1.49E+02	1.28E+01
	29	1168.31	1160 -	1176	4.14E+01	33.86	9.32E+01	2.57E+01
	30	1377.29	1374 -	1380	1.49E+01	15.83	3.41E+01	1.14E+01
	31	1400.33	1397 -	1404	1.20E+01	13.86	2.40E+01	9.86E+00
M	32	1457.56	1454 -	1470	6.87E+01	34.49	1.65E+01	6.67E+00
m	33	1460.43	1454 -	1470	4.19E+02	53.59	3.66E+01	9.94E+00
m	34	1462.92	1454 -	1470	2.18E+02	53.77	4.24E+01	1.07E+01
M	35	1584.90	1578 -	1595	1.42E+01	13.71	1.07E+01	5.37E+00
m	36	1588.37	1578 -	1595	1.26E+01	15.10	2.02E+01	7.39E+00
	37	1632.55	1630 -	1635	9.00E+00	8.12	6.00E+00	4.50E+00
	38	1731.12	1728 -	1735	1.06E+01	14.28	2.47E+01	1.04E+01
	39	1765.42	1760 -	1774	6.77E+01	21.93	2.06E+01	1.19E+01
	40	1935.25	1931 -	1937	4.67E+00	6.02	2.67E+00	3.45E+00
	41	2044.95	2041 -	2047	5.33E+00	7.78	7.33E+00	5.14E+00
	42	2203.46	2200 -	2206	1.40E+01	7.48	0.00E+00	0.00E+00
	43	2418.70	2415 -	2421	4.42E+00	6.02	3.17E+00	3.54E+00
M	44	2612.37	2608 -	2621	3.87E+01	17.33	5.86E+00	3.98E+00
m	45	2615.72	2608 -	2621	3.23E+01	18.14	3.01E+00	2.85E+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 : 6/3/2019 7:51:50AM

Peak Analysis From Channel : 1

Peak Analysis To Channel : 4096

Tentative NID Library : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

Peak Match Tolerance : 1.000FWHM

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
1	46.29	42 -	51	46.66	1.44E+02	98.57	1.31E+03	PB-210
2	75.58	70 -	82	75.94	7.84E+02	165.59	2.87E+03	AM-243

0107

Analysis Report for 1905060-03

R1 0-6

	Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
	3	130.91	128 -	134	131.26	8.12E+01	65.85	7.26E+02	PA-234
	4	239.14	233 -	248	239.46	7.90E+02	126.87	1.28E+03	PB-212
	5	270.25	267 -	273	270.57	4.13E+01	50.75	4.33E+02	.....
	6	296.04	289 -	305	296.35	2.77E+02	97.32	7.86E+02	PB-214
	7	327.40	323 -	331	327.70	6.05E+01	51.39	3.69E+02	LA-140
	8	339.62	335 -	345	339.92	1.64E+02	61.51	4.13E+02	CS-136 AC-228
M	9	352.04	346 -	361	352.33	3.85E+02	73.42	4.04E+02	PB-214
m	10	357.89	346 -	361	358.19	2.65E+01	43.91	2.00E+02	.....
	11	435.36	431 -	440	435.64	4.71E+01	41.07	2.12E+02	AG-108M
	12	466.95	463 -	473	467.22	3.41E+01	41.98	2.08E+02	IR-192
M	13	507.85	505 -	517	508.12	6.08E+01	35.32	1.66E+02	.....
	14	548.01	546 -	551	548.26	1.70E+01	20.69	7.20E+01	.....
M	15	582.25	577 -	589	582.50	1.35E+02	46.73	2.12E+02	TL-208
m	16	584.89	577 -	589	585.13	6.34E+01	43.31	1.86E+02	TL-208
	17	609.24	603 -	618	609.48	2.96E+02	63.18	2.84E+02	BI-214
	18	661.40	656 -	667	661.63	8.46E+01	50.95	2.83E+02	CS-137
	19	728.75	722 -	735	728.96	8.40E+01	41.94	1.48E+02	BI-212
	20	754.88	751 -	759	755.10	3.71E+01	26.47	8.38E+01	ZR-95
	21	835.45	829 -	840	835.65	3.78E+01	36.06	1.42E+02	MN-54
M	22	909.01	906 -	924	909.20	4.36E+01	30.18	9.64E+01	.....
m	23	912.52	906 -	924	912.71	8.39E+01	39.08	1.35E+02	TL-204 AC-228
M	24	964.10	963 -	975	964.27	1.25E+01	9.75	2.39E+01	EU-152
m	25	969.13	963 -	975	969.31	9.16E+01	40.79	1.49E+02	AC-228
M	26	1074.84	1073 -	1082	1075.00	1.03E+01	11.14	2.53E+01	.....
m	27	1079.50	1073 -	1082	1079.66	1.13E+01	17.03	4.51E+01	.....
	28	1119.25	1113 -	1128	1119.40	6.96E+01	41.57	1.49E+02	BI-214 SC-46 TA-182
	29	1168.31	1160 -	1176	1168.46	4.14E+01	33.86	9.32E+01	.....
	30	1377.29	1374 -	1380	1377.40	1.49E+01	15.83	3.41E+01	.....
	31	1400.33	1397 -	1404	1400.44	1.20E+01	13.86	2.40E+01	.....
M	32	1457.56	1454 -	1470	1457.67	6.87E+01	34.49	1.65E+01	.....
m	33	1460.43	1454 -	1470	1460.53	4.19E+02	53.59	3.66E+01	K-40
m	34	1462.92	1454 -	1470	1463.02	2.18E+02	53.77	4.24E+01	K-40
M	35	1584.90	1578 -	1595	1584.98	1.42E+01	13.71	1.07E+01	.....
m	36	1588.37	1578 -	1595	1588.46	1.26E+01	15.10	2.02E+01	.....
	37	1632.55	1630 -	1635	1632.63	9.00E+00	8.12	6.00E+00	.....
	38	1731.12	1728 -	1735	1731.19	1.06E+01	14.28	2.47E+01	.....
	39	1765.42	1760 -	1774	1765.49	6.77E+01	21.93	2.06E+01	BI-214
	40	1935.25	1931 -	1937	1935.31	4.67E+00	6.02	2.67E+00	.....
	41	2044.95	2041 -	2047	2045.00	5.33E+00	7.78	7.33E+00	.....
	42	2203.46	2200 -	2206	2203.50	1.40E+01	7.48	0.00E+00	BI-214
	43	2418.70	2415 -	2421	2418.73	4.42E+00	6.02	3.17E+00	.....
M	44	2612.37	2608 -	2621	2612.39	3.87E+01	17.33	5.86E+00	TL-208
m	45	2615.72	2608 -	2621	2615.75	3.23E+01	18.14	3.01E+00	TL-208

Analysis Report for 1905060-03

R1 0-6

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 : 6/3/2019 7:51:50AM

	Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
	1	46.29	1.44E+02	98.57	1.76E-02	1.84E-03
	2	75.58	7.84E+02	165.59	2.52E-02	2.14E-03
	3	130.91	8.12E+01	65.85	2.49E-02	2.14E-03
	4	239.14	7.90E+02	126.87	1.86E-02	1.65E-03
	5	270.25	4.13E+01	50.75	1.72E-02	1.55E-03
	6	296.04	2.77E+02	97.32	1.61E-02	1.46E-03
	7	327.40	6.05E+01	51.39	1.50E-02	1.34E-03
	8	339.62	1.64E+02	61.51	1.46E-02	1.29E-03
M	9	352.04	3.85E+02	73.42	1.42E-02	1.24E-03
m	10	357.89	2.65E+01	43.91	1.41E-02	1.22E-03
	11	435.36	4.71E+01	41.07	1.21E-02	1.07E-03
	12	466.95	3.41E+01	41.98	1.15E-02	1.05E-03
M	13	507.85	6.08E+01	35.32	1.08E-02	1.03E-03
	14	548.01	1.70E+01	20.69	1.01E-02	1.01E-03
M	15	582.25	1.35E+02	46.73	9.67E-03	9.89E-04
m	16	584.89	6.34E+01	43.31	9.63E-03	9.88E-04
	17	609.24	2.96E+02	63.18	9.33E-03	9.75E-04
	18	661.40	8.46E+01	50.95	8.74E-03	9.48E-04
	19	728.75	8.40E+01	41.94	8.10E-03	8.39E-04
	20	754.88	3.71E+01	26.47	7.88E-03	7.97E-04
	21	835.45	3.78E+01	36.06	7.27E-03	6.66E-04
M	22	909.01	4.36E+01	30.18	6.81E-03	5.62E-04
m	23	912.52	8.39E+01	39.08	6.79E-03	5.61E-04
M	24	964.10	1.25E+01	9.75	6.51E-03	5.46E-04
m	25	969.13	9.16E+01	40.79	6.48E-03	5.44E-04
M	26	1074.84	1.03E+01	11.14	5.99E-03	5.14E-04
m	27	1079.50	1.13E+01	17.03	5.97E-03	5.12E-04
	28	1119.25	6.96E+01	41.57	5.80E-03	5.01E-04
	29	1168.31	4.14E+01	33.86	5.62E-03	4.86E-04
	30	1377.29	1.49E+01	15.83	4.97E-03	4.49E-04
	31	1400.33	1.20E+01	13.86	4.92E-03	4.42E-04
M	32	1457.56	6.87E+01	34.49	4.78E-03	4.27E-04
m	33	1460.43	4.19E+02	53.59	4.77E-03	4.26E-04
m	34	1462.92	2.18E+02	53.77	4.76E-03	4.25E-04

Analysis Report for 1905060-03

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	Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
M	35	1584.90	1.42E+01	13.71	4.50E-03	3.91E-04
m	36	1588.37	1.26E+01	15.10	4.49E-03	3.90E-04
	37	1632.55	9.00E+00	8.12	4.41E-03	3.78E-04
	38	1731.12	1.06E+01	14.28	4.23E-03	3.50E-04
	39	1765.42	6.77E+01	21.93	4.18E-03	3.41E-04
	40	1935.25	4.67E+00	6.02	3.93E-03	3.21E-04
	41	2044.95	5.33E+00	7.78	3.79E-03	3.21E-04
	42	2203.46	1.40E+01	7.48	3.62E-03	3.21E-04
	43	2418.70	4.42E+00	6.02	3.42E-03	3.21E-04
M	44	2612.37	3.87E+01	17.33	3.28E-03	3.21E-04
m	45	2615.72	3.23E+01	18.14	3.28E-03	3.21E-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 : 6/3/2019 7:51:50AM

Env. Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000082155.CNF

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
	1	46.29	1.44E+02	98.57			1.44E+02	9.86E+01
	2	75.58	7.84E+02	165.59			7.84E+02	1.66E+02
	3	130.91	8.12E+01	65.85			8.12E+01	6.59E+01
	4	239.14	7.90E+02	126.87			7.90E+02	1.27E+02
	5	270.25	4.13E+01	50.75			4.13E+01	5.07E+01
	6	296.04	2.77E+02	97.32			2.77E+02	9.73E+01
	7	327.40	6.05E+01	51.39			6.05E+01	5.14E+01
	8	339.62	1.64E+02	61.51			1.64E+02	6.15E+01
M	9	352.04	3.85E+02	73.42			3.85E+02	7.34E+01
m	10	357.89	2.65E+01	43.91			2.65E+01	4.39E+01
	11	435.36	4.71E+01	41.07			4.71E+01	4.11E+01
	12	466.95	3.41E+01	41.98			3.41E+01	4.20E+01
M	13	507.85	6.08E+01	35.32			6.08E+01	3.53E+01
	14	548.01	1.70E+01	20.69			1.70E+01	2.07E+01
M	15	582.25	1.35E+02	46.73			1.35E+02	4.67E+01
m	16	584.89	6.34E+01	43.31			6.34E+01	4.33E+01
	17	609.24	2.96E+02	63.18			2.96E+02	6.32E+01
	18	661.40	8.46E+01	50.95			8.46E+01	5.10E+01
	19	728.75	8.40E+01	41.94			8.40E+01	4.19E+01

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Analysis Report for 1905060-03

R1 0-6

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
	20	754.88	3.71E+01	26.47			3.71E+01	2.65E+01
	21	835.45	3.78E+01	36.06			3.78E+01	3.61E+01
M	22	909.01	4.36E+01	30.18			4.36E+01	3.02E+01
m	23	912.52	8.39E+01	39.08			8.39E+01	3.91E+01
M	24	964.10	1.25E+01	9.75			1.25E+01	9.75E+00
m	25	969.13	9.16E+01	40.79			9.16E+01	4.08E+01
M	26	1074.84	1.03E+01	11.14			1.03E+01	1.11E+01
m	27	1079.50	1.13E+01	17.03			1.13E+01	1.70E+01
	28	1119.25	6.96E+01	41.57			6.96E+01	4.16E+01
	29	1168.31	4.14E+01	33.86			4.14E+01	3.39E+01
	30	1377.29	1.49E+01	15.83			1.49E+01	1.58E+01
	31	1400.33	1.20E+01	13.86			1.20E+01	1.39E+01
M	32	1457.56	6.87E+01	34.49			6.87E+01	3.45E+01
m	33	1460.43	4.19E+02	53.59			4.19E+02	5.36E+01
m	34	1462.92	2.18E+02	53.77			2.18E+02	5.38E+01
M	35	1584.90	1.42E+01	13.71			1.42E+01	1.37E+01
m	36	1588.37	1.26E+01	15.10			1.26E+01	1.51E+01
	37	1632.55	9.00E+00	8.12			9.00E+00	8.12E+00
	38	1731.12	1.06E+01	14.28			1.06E+01	1.43E+01
	39	1765.42	6.77E+01	21.93	3.07E+00	1.52E+00	6.46E+01	2.20E+01
	40	1935.25	4.67E+00	6.02			4.67E+00	6.02E+00
	41	2044.95	5.33E+00	7.78			5.33E+00	7.78E+00
	42	2203.46	1.40E+01	7.48			1.40E+01	7.48E+00
	43	2418.70	4.42E+00	6.02			4.42E+00	6.02E+00
M	44	2612.37	3.87E+01	17.33	4.78E+00	9.74E-01	3.40E+01	1.74E+01
m	45	2615.72	3.23E+01	18.14	4.78E+00	9.74E-01	2.75E+01	1.82E+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 : 6/3/2019 7:51:50AM

Ref. Peak Energy : 0.00

Reference Date :

Peak Ratio : 0.00

Uncertainty : 0.00

Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000082155.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	1.44E+02	98.57			1.44E+02	9.86E+01
2	75.58	7.84E+02	165.59			7.84E+02	1.66E+02

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Analysis Report for 1905060-03

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	Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
	3	130.91	8.12E+01	65.85			8.12E+01	6.59E+01
	4	239.14	7.90E+02	126.87			7.90E+02	1.27E+02
	5	270.25	4.13E+01	50.75			4.13E+01	5.07E+01
	6	296.04	2.77E+02	97.32			2.77E+02	9.73E+01
	7	327.40	6.05E+01	51.39			6.05E+01	5.14E+01
	8	339.62	1.64E+02	61.51			1.64E+02	6.15E+01
M	9	352.04	3.85E+02	73.42			3.85E+02	7.34E+01
m	10	357.89	2.65E+01	43.91			2.65E+01	4.39E+01
	11	435.36	4.71E+01	41.07			4.71E+01	4.11E+01
	12	466.95	3.41E+01	41.98			3.41E+01	4.20E+01
M	13	507.85	6.08E+01	35.32			6.08E+01	3.53E+01
	14	548.01	1.70E+01	20.69			1.70E+01	2.07E+01
M	15	582.25	1.35E+02	46.73			1.35E+02	4.67E+01
m	16	584.89	6.34E+01	43.31			6.34E+01	4.33E+01
	17	609.24	2.96E+02	63.18			2.96E+02	6.32E+01
	18	661.40	8.46E+01	50.95			8.46E+01	5.10E+01
	19	728.75	8.40E+01	41.94			8.40E+01	4.19E+01
	20	754.88	3.71E+01	26.47			3.71E+01	2.65E+01
	21	835.45	3.78E+01	36.06			3.78E+01	3.61E+01
M	22	909.01	4.36E+01	30.18			4.36E+01	3.02E+01
m	23	912.52	8.39E+01	39.08			8.39E+01	3.91E+01
M	24	964.10	1.25E+01	9.75			1.25E+01	9.75E+00
m	25	969.13	9.16E+01	40.79			9.16E+01	4.08E+01
M	26	1074.84	1.03E+01	11.14			1.03E+01	1.11E+01
m	27	1079.50	1.13E+01	17.03			1.13E+01	1.70E+01
	28	1119.25	6.96E+01	41.57			6.96E+01	4.16E+01
	29	1168.31	4.14E+01	33.86			4.14E+01	3.39E+01
	30	1377.29	1.49E+01	15.83			1.49E+01	1.58E+01
	31	1400.33	1.20E+01	13.86			1.20E+01	1.39E+01
M	32	1457.56	6.87E+01	34.49			6.87E+01	3.45E+01
m	33	1460.43	4.19E+02	53.59			4.19E+02	5.36E+01
m	34	1462.92	2.18E+02	53.77			2.18E+02	5.38E+01
M	35	1584.90	1.42E+01	13.71			1.42E+01	1.37E+01
m	36	1588.37	1.26E+01	15.10			1.26E+01	1.51E+01
	37	1632.55	9.00E+00	8.12			9.00E+00	8.12E+00
	38	1731.12	1.06E+01	14.28			1.06E+01	1.43E+01
	39	1765.42	6.77E+01	21.93	3.07E+00	1.52E+00	6.46E+01	2.20E+01
	40	1935.25	4.67E+00	6.02			4.67E+00	6.02E+00
	41	2044.95	5.33E+00	7.78			5.33E+00	7.78E+00
	42	2203.46	1.40E+01	7.48			1.40E+01	7.48E+00
	43	2418.70	4.42E+00	6.02			4.42E+00	6.02E+00
M	44	2612.37	3.87E+01	17.33	4.78E+00	9.74E-01	3.40E+01	1.74E+01
m	45	2615.72	3.23E+01	18.14	4.78E+00	9.74E-01	2.75E+01	1.82E+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 1905060-03

R1 0-6

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	0.996	1460.81 *	10.67	1.44E+01	2.24E+00
MN-54	0.988	834.83 *	99.97	9.62E-02	9.21E-02
CS-137	0.998	661.65 *	85.12	1.99E-01	1.22E-01
IR-192	0.306	308.46	29.68		
		468.07 *	48.10	1.37E-01	1.69E-01
TL-208	0.861	583.14 *	30.22	8.09E-01	2.91E-01
		860.37	4.48		
		2614.66 *	35.85	4.10E-01	2.73E-01
PB-210	0.999	46.50 *	4.25	3.37E+00	2.34E+00
BI-212	0.706	727.17 *	11.80	1.53E+00	7.83E-01
		1620.62	2.75		
PB-212	0.887	238.63 *	44.60	1.67E+00	3.06E-01
		300.09	3.41		
BI-214	0.988	609.31 *	46.30	1.20E+00	2.85E-01
		1120.29 *	15.10	1.39E+00	8.37E-01
		1764.49 *	15.80	1.71E+00	5.98E-01
		2204.22 *	4.98	1.36E+00	7.35E-01
PB-214	0.993	295.21 *	19.19	1.56E+00	5.68E-01
		351.92 *	37.19	1.27E+00	2.67E-01
AC-228	0.959	338.32 *	11.40	1.72E+00	6.63E-01
		911.07 *	27.70	7.79E-01	3.69E-01
		969.11 *	16.60	1.49E+00	6.74E-01
PA-234	0.432	131.20 *	20.40	2.79E-01	2.28E-01
		733.99	8.80		
		946.00	12.00		
AM-243	0.976	74.67 *	66.00	8.25E-01	1.88E-01

* = Energy line found in the spectrum.

- = Manually added nuclide.

? = Manually edited nuclide.

Energy Tolerance : 2.000FWHM

Nuclide confidence index threshold = 0.30

Errors quoted at 2.000sigma

Analysis Report for 1905060-03

R1 0-6

UNIDENTIFIED PEAKS

Peak Locate Performed on : 6/3/2019 7:51:50AM
 Peak Locate From Channel : 1
 Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide	
	5	270.25	1.14847E-02	61.37	Tol.	LU-173
	7	327.40	1.68056E-02	42.47	Tol.	LA-140
m	10	357.89	7.35902E-03	82.87	Tol.	BA-133
	11	435.36	1.30882E-02	43.59	Tol.	AG-108M
M	13	507.85	1.68796E-02	29.06		
	14	548.01	4.72222E-03	60.85		
m	16	584.89	1.76089E-02	34.16	Tol.	TL-208
	20	754.88	1.03094E-02	35.66	Tol.	ZR-95
M	22	909.01	1.21175E-02	34.59		
M	24	964.10	3.47408E-03	38.97	Tol.	EU-152
M	26	1074.84	2.86612E-03	53.96	Sum	
m	27	1079.50	3.13526E-03	75.44	Sum	
	29	1168.31	1.15025E-02	40.89		
	30	1377.29	4.14931E-03	52.98		
	31	1400.33	3.33333E-03	57.74		
M	32	1457.56	1.90804E-02	25.11	Sum	
m	34	1462.92	6.05523E-02	12.33		
M	35	1584.90	3.93233E-03	48.43	Sum	
m	36	1588.37	3.51335E-03	59.69		
	37	1632.55	2.50000E-03	45.13		
	38	1731.12	2.95290E-03	67.18		
	40	1935.25	1.29630E-03	64.51		
	41	2044.95	1.48148E-03	72.92		
	43	2418.70	1.22685E-03	68.16		
M	44	2612.37	9.43089E-03	25.56		

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 1905060-03

R1 0-6

Nuclide Name	Id Confidence	Energy (keV)		Yield(%)	Activity (pCi/grams)	Activity Uncertainty
K-40	0.99	1460.81	*	10.67	1.44E+01	2.24E+00
MN-54	0.98	834.83	*	99.97	9.62E-02	9.21E-02
CS-137	0.99	661.65	*	85.12	1.99E-01	1.22E-01
IR-192	0.30	308.46		29.68		
		468.07	*	48.10	1.37E-01	1.69E-01
TL-208	0.86	583.14	*	30.22	8.09E-01	2.91E-01
		860.37		4.48		
		2614.66	*	35.85	4.10E-01	2.73E-01
PB-210	0.99	46.50	*	4.25	3.37E+00	2.34E+00
BI-212	0.70	727.17	*	11.80	1.53E+00	7.83E-01
		1620.62		2.75		
PB-212	0.88	238.63	*	44.60	1.67E+00	3.06E-01
		300.09		3.41		
BI-214	0.98	609.31	*	46.30	1.20E+00	2.85E-01
		1120.29	*	15.10	1.39E+00	8.37E-01
		1764.49	*	15.80	1.71E+00	5.98E-01
		2204.22	*	4.98	1.36E+00	7.35E-01
PB-214	0.99	295.21	*	19.19	1.56E+00	5.68E-01
		351.92	*	37.19	1.27E+00	2.67E-01
AC-228	0.95	338.32	*	11.40	1.72E+00	6.63E-01
		911.07	*	27.70	7.79E-01	3.69E-01
		969.11	*	16.60	1.49E+00	6.74E-01
PA-234	0.43	131.20	*	20.40	2.79E-01	2.28E-01
		733.99		8.80		
		946.00		12.00		
AM-243	0.97	74.67	*	66.00	8.25E-01	1.88E-01

* = Energy line found in the spectrum.

- = Manually added nuclide.

? = Manually edited nuclide.

@ = Energy line not used for Weighted Mean Activity

Energy Tolerance : 2.000FWHM

Nuclide confidence index threshold = 0.30

Errors quoted at 2.000sigma

INTERFERENCE CORRECTED REPORT

Analysis Report for 1905060-03

R1 0-6

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40	0.996	1.44E+01	2.24E+00	
MN-54	0.988	9.62E-02	9.21E-02	
CS-137	0.998	1.99E-01	1.22E-01	
IR-192	0.306	1.37E-01	1.69E-01	
TL-208	0.861	5.96E-01	1.99E-01	
PB-210	0.999	3.37E+00	2.34E+00	
BI-212	0.706	1.53E+00	7.83E-01	
PB-212	0.887	1.67E+00	3.06E-01	
BI-214	0.988	1.31E+00	2.33E-01	
PB-214	0.993	1.32E+00	2.41E-01	
AC-228	0.959	1.09E+00	2.91E-01	
PA-234	0.432	2.79E-01	2.28E-01	
AM-243	0.976	8.25E-01	1.88E-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 1905060-03

R1 0-6

UNIDENTIFIED PEAKS

Peak Locate Performed on : 6/3/2019 7:51:50AM

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>	
	5	270.25	1.14847E-02	61.37	Tol.	LU-173
	7	327.40	1.68056E-02	42.47	Tol.	LA-140
m	10	357.89	7.35902E-03	82.87	Tol.	BA-133
	11	435.36	1.30882E-02	43.59	Tol.	AG-108M
M	13	507.85	1.68796E-02	29.06		
	14	548.01	4.72222E-03	60.85		
m	16	584.89	1.76089E-02	34.16	Tol.	TL-208
	20	754.88	1.03094E-02	35.66	Tol.	ZR-95
M	22	909.01	1.21175E-02	34.59		
M	24	964.10	3.47408E-03	38.97	Tol.	EU-152
M	26	1074.84	2.86612E-03	53.96	Sum	
m	27	1079.50	3.13526E-03	75.44	Sum	
	29	1168.31	1.15025E-02	40.89		
	30	1377.29	4.14931E-03	52.98		
	31	1400.33	3.33333E-03	57.74		
M	32	1457.56	1.90804E-02	25.11	Sum	
m	34	1462.92	6.05523E-02	12.33		
M	35	1584.90	3.93233E-03	48.43	Sum	
m	36	1588.37	3.51335E-03	59.69		
	37	1632.55	2.50000E-03	45.13		
	38	1731.12	2.95290E-03	67.18		
	40	1935.25	1.29630E-03	64.51		
	41	2044.95	1.48148E-03	72.92		
	43	2418.70	1.22685E-03	68.16		
M	44	2612.37	9.43089E-03	25.56		

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 1905060-03

R1 0-6

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	1.83E-01	9.45E-01	9.45E-01
+	NA-22	1274.54	99.94	-4.14E-02	9.24E-02	9.24E-02
+	NA-24	1368.53	99.99	3.08E-02	5.10E-02	9.08E-02
		2754.09	99.86	-1.37E-02		5.10E-02
+	AL-26	1808.65	99.76	1.88E-02	7.42E-02	7.42E-02
+	K-40	1460.81	* 10.67	1.44E+01	1.45E+00	1.45E+00
+	@ AR-41	1293.64	99.16	1.00E+26	1.00E+26	1.00E+26
+	TI-44	67.88	94.40	-4.55E-02	8.46E-02	8.46E-02
		78.34	96.00	7.00E-02		1.02E-01
+	SC-46	889.25	98.98	-9.45E-03	1.08E-01	1.08E-01
		1120.51	99.90	1.81E-01		1.77E-01
+	V-48	983.52	99.98	4.72E-03	2.79E-01	2.79E-01
		1312.10	97.50	2.15E-01		2.85E-01
+	CR-51	320.08	9.83	1.73E-02	1.33E+00	1.33E+00
+	MN-54	834.83	* 99.97	9.62E-02	1.49E-01	1.49E-01
+	CO-56	846.75	99.96	-4.22E-02	1.07E-01	1.07E-01
		1037.75	14.03	-3.11E-01		7.01E-01
		1238.25	67.00	7.80E-02		2.46E-01
		1771.40	15.51	-2.26E-01		7.62E-01
		2587.48	16.90	6.73E-03		4.35E-01
+	CO-57	122.06	85.51	1.63E-02	7.03E-02	7.03E-02
		136.48	10.60	6.09E-02		5.91E-01
+	CO-58	810.76	99.40	2.36E-02	1.12E-01	1.12E-01
+	FE-59	1099.22	56.50	-1.21E-02	2.37E-01	2.37E-01
		1291.56	43.20	-2.08E-01		2.53E-01
+	CO-60	1173.22	100.00	-1.36E-02	8.82E-02	9.64E-02
		1332.49	100.00	2.34E-02		8.82E-02
+	ZN-65	1115.52	50.75	-3.93E-02	2.54E-01	2.54E-01
+	GA-67	93.31	35.70	5.82E+01	5.23E+01	5.23E+01
		208.95	2.24	1.81E+02		6.74E+02
		300.22	16.00	-4.31E+01		1.19E+02
+	SE-75	121.11	16.70	-8.16E-03	1.11E-01	3.87E-01
		136.00	59.50	-6.66E-03		1.11E-01
		264.65	59.80	-4.19E-03		1.38E-01
		279.53	25.20	4.75E-02		3.21E-01
		400.65	11.40	1.53E-01		7.73E-01
+	RB-82	776.52	13.00	-1.72E-01	1.35E+00	1.35E+00
+	RB-83	520.41	46.00	-2.28E-02	1.79E-01	1.79E-01
		529.64	30.30	2.94E-02		2.93E-01
		552.65	16.40	1.84E-01		5.19E-01
+	KR-85	513.99	0.43	2.10E+01	2.50E+01	2.50E+01
+	SR-85	513.99	99.27	1.21E-01	1.43E-01	1.43E-01

Analysis Report for 1905060-03

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	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	Y-88	898.02	93.40	2.63E-03	7.20E-02	1.20E-01
		1836.01	99.38	1.36E-02		7.20E-02
+	MO-93	263.06	56.72	4.06E-02	7.53E-02	1.24E-01
		684.67	99.68	2.70E-02		8.38E-02
		1477.11	99.08	4.01E-02		7.53E-02
+	NB-93M	16.57	9.43	-3.75E+00	1.85E+01	1.85E+01
+	NB-94	702.63	100.00	-1.56E-02	7.50E-02	8.61E-02
		871.10	100.00	-3.72E-02		7.50E-02
+	NB-95	765.79	99.81	3.06E-02	1.66E-01	1.66E-01
+	NB-95M	235.69	25.00	3.00E+01	6.52E+01	6.52E+01
+	ZR-95	724.18	43.70	1.03E-02	2.04E-01	2.92E-01
		756.72	55.30	3.33E-02		2.04E-01
+	MO-99	181.06	6.20	-3.91E+02	3.86E+02	6.09E+02
		739.58	12.80	7.68E+01		3.86E+02
		778.00	4.50	-7.12E+02		1.19E+03
+	TC-99M	140.51	89.00	1.26E-02	6.75E-02	6.75E-02
+	RU-103	497.08	89.00	-3.29E-02	1.25E-01	1.25E-01
+	RU-106	621.84	9.80	4.92E-01	8.82E-01	8.82E-01
+	AG-108M	433.93	89.90	3.17E-02	8.52E-02	8.52E-02
		614.37	90.40	-1.08E-01		1.10E-01
		722.95	90.50	4.74E-03		9.93E-02
+	CD-109	88.03	3.72	7.93E-01	2.31E+00	2.31E+00
+	AG-110M	657.75	93.14	3.35E-02	1.26E-01	1.26E-01
		677.61	10.53	-2.28E-01		7.99E-01
		706.67	16.46	-5.69E-02		5.76E-01
		763.93	21.98	7.70E-02		4.49E-01
		884.67	21.98	-1.12E-01		3.76E-01
		1384.27	23.94	1.65E-02		3.96E-01
+	CD-113M	263.70	0.02	-6.49E+01	3.01E+02	3.01E+02
+	SN-113	255.12	1.93	-1.51E+00	1.28E-01	3.92E+00
		391.69	64.90	-2.18E-02		1.28E-01
+	TE-123M	159.00	84.10	4.06E-02	8.14E-02	8.14E-02
+	SB-124	602.71	97.87	-9.12E-03	1.18E-01	1.18E-01
		645.85	7.26	4.54E-01		1.46E+00
		722.78	11.10	5.19E-02		1.09E+00
		1691.02	49.00	-2.97E-02		1.57E-01
+	I-125	35.49	6.49	-3.20E-01	2.58E+00	2.58E+00
+	SB-125	176.33	6.89	-5.69E-02	2.45E-01	8.57E-01
		427.89	29.33	9.92E-04		2.45E-01
		463.38	10.35	-1.24E-03		7.59E-01
		600.56	17.80	1.52E-02		4.29E-01
		635.90	11.32	3.54E-01		7.30E-01
+	SB-126	414.70	83.30	-1.45E-02	8.62E-02	8.62E-02
		666.33	99.60	8.75E-03		1.01E-01
		695.00	99.60	1.98E-02		9.14E-02
		720.50	53.80	4.75E-03		1.62E-01
+	SN-126	87.57	37.00	7.68E-02	2.24E-01	2.24E-01
+	SB-127	473.00	25.00	-4.54E+00	2.37E+01	2.67E+01

Analysis Report for 1905060-03

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	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	SB-127	685.00	35.70	7.61E+00	2.37E+01	2.37E+01
		783.80	14.70	2.37E+00		6.16E+01
+	I-129	29.78	57.00	3.07E-02	3.24E-01	3.24E-01
		33.60	13.20	5.46E-01		1.08E+00
		39.58	7.52	6.70E-01		1.43E+00
+	I-131	284.30	6.05	-1.80E+00	7.73E-01	1.03E+01
		364.48	81.20	6.63E-02		7.73E-01
		636.97	7.26	4.17E+00		1.02E+01
		722.89	1.80	2.18E+00		4.56E+01
+	TE-132	49.72	13.10	1.73E+00	1.80E+01	1.54E+02
		228.16	88.00	-1.71E+01		1.80E+01
+	BA-133	81.00	33.00	-2.15E-01	1.77E-01	2.57E-01
		302.84	17.80	-1.03E-01		4.14E-01
		356.01	60.00	1.60E-01		1.77E-01
+	I-133	529.87	86.30	6.87E+06	6.84E+07	6.84E+07
+	XE-133	81.00	38.00	-5.53E+00	6.60E+00	6.60E+00
+	CS-134	563.23	8.38	-7.38E-02	1.18E-01	9.19E-01
		569.32	15.43	-4.88E-02		5.07E-01
		604.70	97.60	-1.14E-01		1.19E-01
		795.84	85.40	5.36E-02		1.18E-01
		801.93	8.73	-3.89E-01		9.98E-01
+	CS-135	268.24	16.00	4.75E-01	4.98E-01	4.98E-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	-1.55E-01	2.84E-01	2.98E+00
		163.89	4.61	-2.10E+00		4.67E+00
		176.55	13.56	-1.10E-01		1.65E+00
		273.65	12.66	4.17E-02		2.26E+00
		340.57	48.50	1.05E+00		7.49E-01
		818.50	99.70	-4.58E-02		2.84E-01
		1048.07	79.60	-1.12E-01		4.09E-01
		1235.34	19.70	-5.69E-02		2.41E+00
+	CS-137	661.65	* 85.12	1.99E-01	1.90E-01	1.90E-01
+	LA-138	788.74	34.00	-1.42E-01	1.14E-01	2.38E-01
		1435.80	66.00	-1.65E-02		1.14E-01
+	CE-139	165.85	80.35	6.03E-02	8.35E-02	8.35E-02
+	BA-140	162.64	6.70	-3.27E-02	1.23E+00	3.41E+00
		304.84	4.50	-2.13E-01		6.03E+00
		423.70	3.20	1.51E+00		9.36E+00
		437.55	2.00	3.93E+00		1.49E+01
		537.32	25.00	-1.36E-01		1.23E+00
+	LA-140	328.77	20.50	9.19E-01	3.30E-01	1.59E+00
		487.03	45.50	8.14E-02		6.36E-01
		815.85	23.50	-5.76E-03		1.32E+00
		1596.49	95.49	6.66E-02		3.30E-01
+	CE-141	145.44	48.40	4.00E-02	2.17E-01	2.17E-01
+	CE-143	57.36	11.80	1.75E+03	9.74E+04	2.85E+05
		293.26	42.00	1.19E+05		9.74E+04

Analysis Report for 1905060-03

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	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	CE-143	664.55	5.20	-3.70E+05	9.74E+04	8.65E+05
+	CE-144	133.54	10.80	5.19E-02	5.89E-01	5.89E-01
+	PM-144	476.78	42.00	1.98E-03	8.94E-02	1.74E-01
		618.01	98.60	2.42E-02		8.94E-02
		696.49	99.49	1.76E-02		9.62E-02
+	PM-145	36.85	21.70	-5.48E-01	2.94E-01	5.34E-01
		37.36	39.70	-5.76E-02		2.94E-01
		42.30	15.10	-4.94E-01		6.84E-01
		72.40	2.31	-1.37E+00		4.23E+00
+	PM-146	453.90	39.94	-8.27E-02	1.89E-01	1.89E-01
		735.90	14.01	8.87E-02		5.31E-01
		747.13	13.10	1.24E-01		6.51E-01
+	ND-147	91.11	28.90	-3.44E-02	1.45E+00	1.45E+00
		531.02	13.10	-6.20E-01		2.75E+00
+	PM-149	285.90	3.10	-2.13E+02	6.85E+03	6.85E+03
+	EU-152	121.78	20.50	6.39E-02	2.75E-01	2.75E-01
		244.69	5.40	-2.24E+00		1.69E+00
		344.27	19.13	-6.94E-01		4.04E-01
		778.89	9.10	-5.02E-02		9.72E-01
		964.01	10.40	-1.23E-01		1.04E+00
		1085.78	7.22	6.46E-01		1.28E+00
		1112.02	9.60	-9.39E-02		9.22E-01
		1407.95	14.94	2.73E-01		6.11E-01
+	GD-153	97.43	31.30	-1.38E-01	2.15E-01	2.15E-01
		103.18	22.20	-1.28E-01		2.79E-01
+	EU-154	123.07	40.50	-8.87E-04	1.38E-01	1.38E-01
		723.30	19.70	1.73E-02		4.94E-01
		873.19	11.50	3.08E-02		6.66E-01
		996.32	10.30	-2.44E-01		9.48E-01
		1004.76	17.90	8.37E-02		5.79E-01
		1274.45	35.50	-1.15E-01		2.57E-01
+	EU-155	86.50	30.90	1.77E-03	2.67E-01	2.67E-01
		105.30	20.70	6.67E-02		2.88E-01
+	EU-156	811.77	10.40	1.36E+00	2.73E+00	2.73E+00
		1153.47	7.20	-2.30E+00		3.83E+00
		1230.71	8.90	1.87E-02		4.17E+00
+	HO-166M	184.41	72.60	6.49E-02	9.88E-02	9.88E-02
		280.45	29.60	-2.23E-02		2.29E-01
		410.94	11.10	2.24E-01		6.85E-01
		711.69	54.10	-2.59E-02		1.54E-01
+	TM-171	66.72	0.14	-3.59E+01	5.98E+01	5.98E+01
+	HF-172	67.35	5.31	-8.33E-01	5.08E-01	1.55E+00
		125.82	11.30	-6.33E-02		5.08E-01
+	LU-172	181.53	20.60	-1.23E+00	1.81E+00	4.32E+00
		900.72	29.81	1.31E+00		4.82E+00
		1093.66	62.50	-5.50E-01		1.81E+00
+	LU-173	100.72	5.24	-3.46E-01	3.82E-01	1.16E+00
		272.11	21.20	-4.43E-02		3.82E-01
+	HF-175	343.40	84.00	-1.64E-01	1.20E-01	1.20E-01

Analysis Report for 1905060-03

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	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	LU-176	88.34	13.30	2.47E-01	7.21E-02	6.30E-01
		201.83	86.00	3.05E-02		7.25E-02
		306.78	94.00	4.02E-02		7.21E-02
+	HF-181	133.02	41.70	-1.78E-02	1.31E-01	2.18E-01
		345.85	17.20	-2.21E+00		6.79E-01
		482.03	82.80	-4.49E-02		1.31E-01
+	TA-182	67.75	41.20	-1.22E-01	2.26E-01	2.26E-01
		1121.30	34.90	4.89E-01		4.80E-01
		1189.05	16.23	1.42E-01		7.53E-01
		1221.41	26.98	-1.09E-01		4.57E-01
		1231.02	11.44	5.28E-03		1.18E+00
+	IR-192	308.46	29.68	6.32E-03	2.78E-01	2.90E-01
		468.07	*	48.10	1.37E-01	2.78E-01
+	HG-203	279.19	77.30	1.96E-02	1.32E-01	1.32E-01
+	TL-204	374.74	94.11	-1.02E-02	7.77E-02	7.77E-02
		899.15	99.16	2.60E-03		9.91E-02
		911.74	91.10	3.63E-01		1.90E-01
+	BI-207	569.67	97.72	-7.54E-03	7.83E-02	7.83E-02
		1063.62	74.90	-4.96E-02		1.22E-01
+	TL-208	583.14	*	30.22	8.09E-01	2.52E-01
		860.37	4.48	2.74E-01		2.14E+00
		2614.66	*	35.85	4.10E-01	2.52E-01
+	BI-210M	262.00	45.00	-5.73E-02	1.49E-01	1.49E-01
		300.00	23.00	1.10E-01		3.80E-01
+	PB-210	46.50	*	4.25	3.37E+00	3.75E+00
+	PB-211	404.84	2.90	1.60E-01	2.61E+00	2.61E+00
		831.96	2.90	-1.15E+00		3.20E+00
+	BI-212	727.17	*	11.80	1.53E+00	1.18E+00
		1620.62	2.75	-1.34E-01		2.28E+00
+	PB-212	238.63	*	44.60	1.67E+00	4.00E-01
		300.09	3.41	7.40E-01		2.56E+00
+	BI-214	609.31	*	46.30	1.20E+00	2.62E-01
		1120.29	*	15.10	1.39E+00	1.30E+00
		1764.49	*	15.80	1.71E+00	7.24E-01
		2204.22	*	4.98	1.36E+00	2.62E-01
+	PB-214	295.21	*	19.19	1.56E+00	3.74E-01
		351.92	*	37.19	1.27E+00	3.74E-01
+	RN-219	401.80	6.50	-1.12E-01	1.15E+00	1.15E+00
+	RA-223	323.87	3.88	-1.50E-01	1.88E+00	1.88E+00
+	RA-224	240.98	3.95	1.14E+01	3.44E+00	3.44E+00
+	RA-225	40.00	31.00	5.32E-01	1.14E+00	1.14E+00
+	RA-226	186.21	3.28	1.51E+00	2.22E+00	2.22E+00
+	TH-227	50.10	8.40	1.14E-02	1.01E+00	1.01E+00
		236.00	11.50	4.74E-01		1.03E+00
		256.20	6.30	1.01E-01		1.05E+00
+	AC-228	338.32	*	11.40	1.72E+00	8.20E-01
		911.07	*	27.70	7.79E-01	8.20E-01
		969.11	*	16.60	1.49E+00	9.96E-01

Analysis Report for 1905060-03

R1 0-6

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	TH-230	48.43	16.90	7.35E-02	5.41E-01	5.41E-01
		62.85	4.60	1.46E+00		1.92E+00
		67.67	0.37	-1.16E+01		2.16E+01
+	PA-231	283.67	1.60	-1.22E+00	3.19E+00	4.20E+00
		302.67	2.30	-7.95E-01		3.19E+00
+	TH-231	25.64	14.70	-1.34E+01	1.25E+00	2.26E+00
		84.21	6.40	-3.87E-01		1.25E+00
+	PA-233	311.98	38.60	1.57E-02	3.41E-01	3.41E-01
+	PA-234	131.20	* 20.40	2.79E-01	3.67E-01	3.67E-01
		733.99	8.80	-9.25E-03		8.94E-01
		946.00	12.00	-2.54E-01		6.75E-01
+	PA-234M	1001.03	0.92	8.53E+00	1.26E+01	1.26E+01
+	TH-234	63.29	3.80	9.89E-01	2.32E+00	2.32E+00
+	U-235	143.76	10.50	2.86E-01	5.91E-01	5.91E-01
		163.35	4.70	-5.32E-01		1.18E+00
		205.31	4.70	-8.55E-01		1.31E+00
+	NP-237	86.50	12.60	4.30E-03	6.49E-01	6.49E-01
+	NP-239	106.10	22.70	1.15E+02	4.95E+02	4.95E+02
		228.18	10.70	-1.10E+03		1.22E+03
		277.60	14.10	3.78E+02		9.66E+02
+	AM-241	59.54	35.90	-8.93E-02	2.34E-01	2.34E-01
+	AM-243	74.67	* 66.00	8.25E-01	2.72E-01	2.72E-01
+	CM-243	209.75	3.29	8.45E-01	5.12E-01	1.98E+00
		228.14	10.60	-6.04E-01		6.37E-01
		277.60	14.00	2.00E-01		5.12E-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

0123

Analysis Report for 1905060-03

R1 0-6

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	9.45E-01	9.45E-01	1.83E-01	4.44E-01
NA-22	1274.54	99.94	9.24E-02	9.24E-02	-4.14E-02	4.16E-02
NA-24	1368.53	99.99	9.08E-02	5.10E-02	3.08E-02	4.07E-02
	2754.09	99.86	5.10E-02		-1.37E-02	1.81E-02
AL-26	1808.65	99.76	7.42E-02	7.42E-02	1.88E-02	3.14E-02
+ K-40	1460.81	* 10.67	1.45E+00	1.45E+00	1.44E+01	6.80E-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	8.46E-02	8.46E-02	-4.55E-02	4.13E-02
	78.34	96.00	1.02E-01		7.00E-02	5.00E-02
SC-46	889.25	98.98	1.08E-01	1.08E-01	-9.45E-03	4.97E-02
	1120.51	99.90	1.77E-01		1.81E-01	8.36E-02
V-48	983.52	99.98	2.79E-01	2.79E-01	4.72E-03	1.28E-01
	1312.10	97.50	2.85E-01		2.15E-01	1.28E-01
CR-51	320.08	9.83	1.33E+00	1.33E+00	1.73E-02	6.35E-01
+ MN-54	834.83	* 99.97	1.49E-01	1.49E-01	9.62E-02	7.09E-02
CO-56	846.75	99.96	1.07E-01	1.07E-01	-4.22E-02	4.93E-02
	1037.75	14.03	7.01E-01		-3.11E-01	3.15E-01
	1238.25	67.00	2.46E-01		7.80E-02	1.14E-01
	1771.40	15.51	7.62E-01		-2.26E-01	3.34E-01
	2587.48	16.90	4.35E-01		6.73E-03	1.63E-01
CO-57	122.06	85.51	7.03E-02	7.03E-02	1.63E-02	3.40E-02
	136.48	10.60	5.91E-01		6.09E-02	2.86E-01
CO-58	810.76	99.40	1.12E-01	1.12E-01	2.36E-02	5.19E-02
FE-59	1099.22	56.50	2.37E-01	2.37E-01	-1.21E-02	1.08E-01
	1291.56	43.20	2.53E-01		-2.08E-01	1.11E-01
CO-60	1173.22	100.00	9.64E-02	8.82E-02	-1.36E-02	4.39E-02
	1332.49	100.00	8.82E-02		2.34E-02	3.94E-02
ZN-65	1115.52	50.75	2.54E-01	2.54E-01	-3.93E-02	1.18E-01
GA-67	93.31	35.70	5.23E+01	5.23E+01	5.82E+01	2.56E+01
	208.95	2.24	6.74E+02		1.81E+02	3.25E+02
	300.22	16.00	1.19E+02		-4.31E+01	5.73E+01
SE-75	121.11	16.70	3.87E-01	1.11E-01	-8.16E-03	1.87E-01
	136.00	59.50	1.11E-01		-6.66E-03	5.35E-02
	264.65	59.80	1.38E-01		-4.19E-03	6.61E-02
	279.53	25.20	3.21E-01		4.75E-02	1.54E-01
	400.65	11.40	7.73E-01		1.53E-01	3.68E-01
RB-82	776.52	13.00	1.35E+00	1.35E+00	-1.72E-01	6.25E-01
RB-83	520.41	46.00	1.79E-01	1.79E-01	-2.28E-02	8.36E-02
	529.64	30.30	2.93E-01		2.94E-02	1.37E-01
	552.65	16.40	5.19E-01		1.84E-01	2.42E-01
KR-85	513.99	0.43	2.50E+01	2.50E+01	2.10E+01	1.20E+01
SR-85	513.99	99.27	1.43E-01	1.43E-01	1.21E-01	6.87E-02
Y-88	898.02	93.40	1.20E-01	7.20E-02	2.63E-03	5.55E-02
	1836.01	99.38	7.20E-02		1.36E-02	2.91E-02
MO-93	263.06	56.72	1.24E-01	7.53E-02	4.06E-02	5.94E-02
	684.67	99.68	8.38E-02		2.70E-02	3.91E-02
	1477.11	99.08	7.53E-02		4.01E-02	3.26E-02
NB-93M	16.57	9.43	1.85E+01	1.85E+01	-3.75E+00	8.87E+00
NB-94	702.63	100.00	8.61E-02	7.50E-02	-1.56E-02	4.02E-02
	871.10	100.00	7.50E-02		-3.72E-02	3.42E-02
NB-95	765.79	99.81	1.66E-01	1.66E-01	3.06E-02	7.82E-02
NB-95M	235.69	25.00	6.52E+01	6.52E+01	3.00E+01	3.19E+01
ZR-95	724.18	43.70	2.92E-01	2.04E-01	1.03E-02	1.37E-01

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Analysis Report for 1905060-03

R1 0-6

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
ZR-95	756.72	55.30	2.04E-01	2.04E-01	3.33E-02	9.48E-02
MO-99	181.06	6.20	6.09E+02	3.86E+02	-3.91E+02	2.93E+02
	739.58	12.80	3.86E+02		7.68E+01	1.78E+02
	778.00	4.50	1.19E+03		-7.12E+02	5.49E+02
TC-99M	140.51	89.00	6.75E-02	6.75E-02	1.26E-02	3.26E-02
RU-103	497.08	89.00	1.25E-01	1.25E-01	-3.29E-02	5.87E-02
RU-106	621.84	9.80	8.82E-01	8.82E-01	4.92E-01	4.13E-01
AG-108M	433.93	89.90	8.52E-02	8.52E-02	3.17E-02	4.04E-02
	614.37	90.40	1.10E-01		-1.08E-01	5.21E-02
	722.95	90.50	9.93E-02		4.74E-03	4.65E-02
CD-109	88.03	3.72	2.31E+00	2.31E+00	7.93E-01	1.13E+00
AG-110M	657.75	93.14	1.26E-01	1.26E-01	3.35E-02	6.01E-02
	677.61	10.53	7.99E-01		-2.28E-01	3.71E-01
	706.67	16.46	5.76E-01		-5.69E-02	2.69E-01
	763.93	21.98	4.49E-01		7.70E-02	2.10E-01
	884.67	21.98	3.76E-01		-1.12E-01	1.71E-01
	1384.27	23.94	3.96E-01		1.65E-02	1.76E-01
CD-113M	263.70	0.02	3.01E+02	3.01E+02	-6.49E+01	1.44E+02
SN-113	255.12	1.93	3.92E+00	1.28E-01	-1.51E+00	1.88E+00
	391.69	64.90	1.28E-01		-2.18E-02	6.07E-02
TE-123M	159.00	84.10	8.14E-02	8.14E-02	4.06E-02	3.93E-02
SB-124	602.71	97.87	1.18E-01	1.18E-01	-9.12E-03	5.56E-02
	645.85	7.26	1.46E+00		4.54E-01	6.81E-01
	722.78	11.10	1.09E+00		5.19E-02	5.09E-01
	1691.02	49.00	1.57E-01		-2.97E-02	6.35E-02
I-125	35.49	6.49	2.58E+00	2.58E+00	-3.20E-01	1.25E+00
SB-125	176.33	6.89	8.57E-01	2.45E-01	-5.69E-02	4.13E-01
	427.89	29.33	2.45E-01		9.92E-04	1.16E-01
	463.38	10.35	7.59E-01		-1.24E-03	3.59E-01
	600.56	17.80	4.29E-01		1.52E-02	2.00E-01
	635.90	11.32	7.30E-01		3.54E-01	3.41E-01
SB-126	414.70	83.30	8.62E-02	8.62E-02	-1.45E-02	4.09E-02
	666.33	99.60	1.01E-01		8.75E-03	4.77E-02
	695.00	99.60	9.14E-02		1.98E-02	4.29E-02
	720.50	53.80	1.62E-01		4.75E-03	7.57E-02
SN-126	87.57	37.00	2.24E-01	2.24E-01	7.68E-02	1.09E-01
SB-127	473.00	25.00	2.67E+01	2.37E+01	-4.54E+00	1.25E+01
	685.00	35.70	2.37E+01		7.61E+00	1.10E+01
	783.80	14.70	6.16E+01		2.37E+00	2.87E+01
I-129	29.78	57.00	3.24E-01	3.24E-01	3.07E-02	1.57E-01
	33.60	13.20	1.08E+00		5.46E-01	5.23E-01
	39.58	7.52	1.43E+00		6.70E-01	6.93E-01
I-131	284.30	6.05	1.03E+01	7.73E-01	-1.80E+00	4.94E+00
	364.48	81.20	7.73E-01		6.63E-02	3.67E-01
	636.97	7.26	1.02E+01		4.17E+00	4.78E+00
	722.89	1.80	4.56E+01		2.18E+00	2.13E+01
TE-132	49.72	13.10	1.54E+02	1.80E+01	1.73E+00	7.46E+01
	228.16	88.00	1.80E+01		-1.71E+01	8.67E+00
BA-133	81.00	33.00	2.57E-01	1.77E-01	-2.15E-01	1.26E-01
	302.84	17.80	4.14E-01		-1.03E-01	1.99E-01
	356.01	60.00	1.77E-01		1.60E-01	8.55E-02
I-133	529.87	86.30	6.84E+07	6.84E+07	6.87E+06	3.20E+07
XE-133	81.00	38.00	6.60E+00	6.60E+00	-5.53E+00	3.23E+00

Analysis Report for 1905060-03

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Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)	
CS-134	563.23	8.38	9.19E-01	1.18E-01	-7.38E-02	4.31E-01	
	569.32	15.43	5.07E-01		-4.88E-02	2.37E-01	
	604.70	97.60	1.19E-01		-1.14E-01	5.69E-02	
	795.84	85.40	1.18E-01		5.36E-02	5.51E-02	
	801.93	8.73	9.98E-01		-3.89E-01	4.62E-01	
CS-135	268.24	16.00	4.98E-01	4.98E-01	4.75E-01	2.40E-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	2.98E+00	2.84E-01	-1.55E-01	1.44E+00	
	163.89	4.61	4.67E+00		-2.10E+00	2.25E+00	
	176.55	13.56	1.65E+00		-1.10E-01	7.97E-01	
	273.65	12.66	2.26E+00		4.17E-02	1.09E+00	
	340.57	48.50	7.49E-01		1.05E+00	3.62E-01	
	818.50	99.70	2.84E-01		-4.58E-02	1.30E-01	
	1048.07	79.60	4.09E-01		-1.12E-01	1.86E-01	
	1235.34	19.70	2.41E+00		-5.69E-02	1.12E+00	
	+ CS-137	661.65	* 85.12	1.90E-01	1.90E-01	1.99E-01	9.19E-02
		LA-138	788.74	34.00	2.38E-01	1.14E-01	-1.42E-01
	1435.80	66.00	1.14E-01		-1.65E-02	4.94E-02	
CE-139	165.85	80.35	8.35E-02	8.35E-02	6.03E-02	4.03E-02	
BA-140	162.64	6.70	3.41E+00	1.23E+00	-3.27E-02	1.64E+00	
	304.84	4.50	6.03E+00		-2.13E-01	2.88E+00	
	423.70	3.20	9.36E+00		1.51E+00	4.44E+00	
	437.55	2.00	1.49E+01		3.93E+00	7.06E+00	
	537.32	25.00	1.23E+00		-1.36E-01	5.78E-01	
LA-140	328.77	20.50	1.59E+00	3.30E-01	9.19E-01	7.62E-01	
	487.03	45.50	6.36E-01		8.14E-02	2.99E-01	
	815.85	23.50	1.32E+00		-5.76E-03	6.08E-01	
	1596.49	95.49	3.30E-01		6.66E-02	1.43E-01	
CE-141	145.44	48.40	2.17E-01	2.17E-01	4.00E-02	1.05E-01	
CE-143	57.36	11.80	2.85E+05	9.74E+04	1.75E+03	1.39E+05	
	293.26	42.00	9.74E+04		1.19E+05	4.73E+04	
	664.55	5.20	8.65E+05		-3.70E+05	4.11E+05	
CE-144	133.54	10.80	5.89E-01	5.89E-01	5.19E-02	2.85E-01	
PM-144	476.78	42.00	1.74E-01	8.94E-02	1.98E-03	8.19E-02	
	618.01	98.60	8.94E-02		2.42E-02	4.20E-02	
	696.49	99.49	9.62E-02		1.76E-02	4.51E-02	
PM-145	36.85	21.70	5.34E-01	2.94E-01	-5.48E-01	2.58E-01	
	37.36	39.70	2.94E-01		-5.76E-02	1.42E-01	
	42.30	15.10	6.84E-01		-4.94E-01	3.32E-01	
	72.40	2.31	4.23E+00		-1.37E+00	2.07E+00	
PM-146	453.90	39.94	1.89E-01	1.89E-01	-8.27E-02	8.92E-02	
	735.90	14.01	5.31E-01		8.87E-02	2.44E-01	
	747.13	13.10	6.51E-01		1.24E-01	3.03E-01	
ND-147	91.11	28.90	1.45E+00	1.45E+00	-3.44E-02	7.09E-01	
	531.02	13.10	2.75E+00		-6.20E-01	1.29E+00	
PM-149	285.90	3.10	6.85E+03	6.85E+03	-2.13E+02	3.28E+03	
EU-152	121.78	20.50	2.75E-01	2.75E-01	6.39E-02	1.33E-01	
	244.69	5.40	1.69E+00		-2.24E+00	8.19E-01	
	344.27	19.13	4.04E-01		-6.94E-01	1.93E-01	
	778.89	9.10	9.72E-01		-5.02E-02	4.52E-01	
	964.01	10.40	1.04E+00		-1.23E-01	4.86E-01	

Analysis Report for 1905060-03

R1 0-6

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
EU-152	1085.78	7.22	1.28E+00	2.75E-01	6.46E-01	5.86E-01
	1112.02	9.60	9.22E-01		-9.39E-02	4.18E-01
	1407.95	14.94	6.11E-01		2.73E-01	2.73E-01
GD-153	97.43	31.30	2.15E-01	2.15E-01	-1.38E-01	1.05E-01
	103.18	22.20	2.79E-01		-1.28E-01	1.35E-01
EU-154	123.07	40.50	1.38E-01	1.38E-01	-8.87E-04	6.69E-02
	723.30	19.70	4.94E-01		1.73E-02	2.32E-01
	873.19	11.50	6.66E-01		3.08E-02	3.03E-01
	996.32	10.30	9.48E-01		-2.44E-01	4.38E-01
	1004.76	17.90	5.79E-01		8.37E-02	2.69E-01
	1274.45	35.50	2.57E-01		-1.15E-01	1.16E-01
EU-155	86.50	30.90	2.67E-01	2.67E-01	1.77E-03	1.31E-01
	105.30	20.70	2.88E-01		6.67E-02	1.40E-01
EU-156	811.77	10.40	2.73E+00	2.73E+00	1.36E+00	1.27E+00
	1153.47	7.20	3.83E+00		-2.30E+00	1.73E+00
	1230.71	8.90	4.17E+00		1.87E-02	1.93E+00
HO-166M	184.41	72.60	9.88E-02	9.88E-02	6.49E-02	4.79E-02
	280.45	29.60	2.29E-01		-2.23E-02	1.10E-01
	410.94	11.10	6.85E-01		2.24E-01	3.26E-01
	711.69	54.10	1.54E-01		-2.59E-02	7.17E-02
TM-171	66.72	0.14	5.98E+01	5.98E+01	-3.59E+01	2.92E+01
HF-172	67.35	5.31	1.55E+00	5.08E-01	-8.33E-01	7.55E-01
	125.82	11.30	5.08E-01		-6.33E-02	2.45E-01
LU-172	181.53	20.60	4.32E+00	1.81E+00	-1.23E+00	2.08E+00
	900.72	29.81	4.82E+00		1.31E+00	2.24E+00
	1093.66	62.50	1.81E+00		-5.50E-01	8.13E-01
LU-173	100.72	5.24	1.16E+00	3.82E-01	-3.46E-01	5.60E-01
	272.11	21.20	3.82E-01		-4.43E-02	1.84E-01
HF-175	343.40	84.00	1.20E-01	1.20E-01	-1.64E-01	5.74E-02
LU-176	88.34	13.30	6.30E-01	7.21E-02	2.47E-01	3.08E-01
	201.83	86.00	7.25E-02		3.05E-02	3.49E-02
	306.78	94.00	7.21E-02		4.02E-02	3.45E-02
HF-181	133.02	41.70	2.18E-01	1.31E-01	-1.78E-02	1.05E-01
	345.85	17.20	6.79E-01		-2.21E+00	3.25E-01
	482.03	82.80	1.31E-01		-4.49E-02	6.14E-02
TA-182	67.75	41.20	2.26E-01	2.26E-01	-1.22E-01	1.10E-01
	1121.30	34.90	4.80E-01		4.89E-01	2.26E-01
	1189.05	16.23	7.53E-01		1.42E-01	3.46E-01
	1221.41	26.98	4.57E-01		-1.09E-01	2.10E-01
	1231.02	11.44	1.18E+00		5.28E-03	5.43E-01
	308.46	29.68	2.90E-01		2.78E-01	6.32E-03	1.38E-01
+ IR-192	468.07	* 48.10	2.78E-01	2.78E-01	1.37E-01	1.33E-01
	279.19	77.30	1.32E-01		1.32E-01	1.96E-02	6.34E-02
HG-203	374.74	94.11	7.77E-02	7.77E-02	-1.02E-02	3.70E-02
	899.15	99.16	9.91E-02		2.60E-03	4.60E-02
TL-204	911.74	91.10	1.90E-01	7.83E-02	3.63E-01	9.12E-02
	569.67	97.72	7.83E-02		-7.54E-03	3.67E-02
	1063.62	74.90	1.22E-01		-4.96E-02	5.55E-02
+ TL-208	583.14	* 30.22	4.99E-01	2.52E-01	8.09E-01	2.41E-01
	860.37	4.48	2.14E+00		2.74E-01	9.97E-01
	2614.66	* 35.85	2.52E-01		4.10E-01	1.06E-01
BI-210M	262.00	45.00	1.49E-01	1.49E-01	-5.73E-02	7.13E-02
	300.00	23.00	3.80E-01		1.10E-01	1.84E-01

0127

Analysis Report for 1905060-03

R1 0-6

	Nuclide Name	Energy (keV)		Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
+	PB-210	46.50	*	4.25	3.75E+00	3.75E+00	3.37E+00	1.85E+00
	PB-211	404.84		2.90	2.61E+00	2.61E+00	1.60E-01	1.24E+00
		831.96		2.90	3.20E+00		-1.15E+00	1.49E+00
+	BI-212	727.17	*	11.80	1.18E+00	1.18E+00	1.53E+00	5.67E-01
		1620.62		2.75	2.28E+00		-1.34E-01	9.44E-01
+	PB-212	238.63	*	44.60	4.00E-01	4.00E-01	1.67E+00	1.97E-01
		300.09		3.41	2.56E+00		7.40E-01	1.24E+00
+	BI-214	609.31	*	46.30	3.64E-01	2.62E-01	1.20E+00	1.76E-01
		1120.29	*	15.10	1.30E+00		1.39E+00	6.24E-01
		1764.49	*	15.80	7.24E-01		1.71E+00	3.26E-01
		2204.22	*	4.98	2.62E-01		1.36E+00	0.00E+00
+	PB-214	295.21	*	19.19	8.65E-01	3.74E-01	1.56E+00	4.25E-01
		351.92	*	37.19	3.74E-01		1.27E+00	1.83E-01
	RN-219	401.80		6.50	1.15E+00	1.15E+00	-1.12E-01	5.47E-01
	RA-223	323.87		3.88	1.88E+00	1.88E+00	-1.50E-01	9.01E-01
	RA-224	240.98		3.95	3.44E+00	3.44E+00	1.14E+01	1.69E+00
	RA-225	40.00		31.00	1.14E+00	1.14E+00	5.32E-01	5.50E-01
	RA-226	186.21		3.28	2.22E+00	2.22E+00	1.51E+00	1.08E+00
	TH-227	50.10		8.40	1.01E+00	1.01E+00	1.14E-02	4.92E-01
		236.00		11.50	1.03E+00		4.74E-01	5.03E-01
		256.20		6.30	1.05E+00		1.01E-01	5.02E-01
+	AC-228	338.32	*	11.40	9.93E-01	8.20E-01	1.72E+00	4.82E-01
		911.07	*	27.70	8.20E-01		7.79E-01	3.97E-01
		969.11	*	16.60	9.96E-01		1.49E+00	4.76E-01
	TH-230	48.43		16.90	5.41E-01	5.41E-01	7.35E-02	2.63E-01
		62.85		4.60	1.92E+00		1.46E+00	9.40E-01
		67.67		0.37	2.16E+01		-1.16E+01	1.05E+01
	PA-231	283.67		1.60	4.20E+00	3.19E+00	-1.22E+00	2.01E+00
		302.67		2.30	3.19E+00		-7.95E-01	1.53E+00
	TH-231	25.64		14.70	2.26E+00	1.25E+00	-1.34E+01	1.10E+00
		84.21		6.40	1.25E+00		-3.87E-01	6.09E-01
	PA-233	311.98		38.60	3.41E-01	3.41E-01	1.57E-02	1.63E-01
+	PA-234	131.20	*	20.40	3.67E-01	3.67E-01	2.79E-01	1.79E-01
		733.99		8.80	8.94E-01		-9.25E-03	4.14E-01
		946.00		12.00	6.75E-01		-2.54E-01	3.08E-01
	PA-234M	1001.03		0.92	1.26E+01	1.26E+01	8.53E+00	5.89E+00
	TH-234	63.29		3.80	2.32E+00	2.32E+00	9.89E-01	1.13E+00
	U-235	143.76		10.50	5.91E-01	5.91E-01	2.86E-01	2.86E-01
		163.35		4.70	1.18E+00		-5.32E-01	5.70E-01
		205.31		4.70	1.31E+00		-8.55E-01	6.32E-01
	NP-237	86.50		12.60	6.49E-01	6.49E-01	4.30E-03	3.17E-01
	NP-239	106.10		22.70	4.95E+02	4.95E+02	1.15E+02	2.40E+02
		228.18		10.70	1.22E+03		-1.10E+03	5.88E+02
		277.60		14.10	9.66E+02		3.78E+02	4.64E+02
	AM-241	59.54		35.90	2.34E-01	2.34E-01	-8.93E-02	1.14E-01
+	AM-243	74.67	*	66.00	2.72E-01	2.72E-01	8.25E-01	1.35E-01
	CM-243	209.75		3.29	1.98E+00	5.12E-01	8.45E-01	9.56E-01
		228.14		10.60	6.37E-01		-6.04E-01	3.07E-01
		277.60		14.00	5.12E-01		2.00E-01	2.46E-01

Analysis Report for 1905060-03

R1 0-6

-
- + = 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 15 19 25 15 17 20

Sample Title: R1 0-6

Channel	-----	-----	-----	-----	-----	-----	-----	-----
377:	19	17	22	17	18	28	12	25
385:	15	19	18	15	19	15	23	12
393:	20	24	6	17	22	17	16	18
401:	23	23	14	21	12	19	18	22
409:	16	16	20	21	17	15	10	17
417:	19	12	11	22	9	28	18	12
425:	15	17	17	16	13	14	10	21
433:	13	13	20	22	19	10	19	6
441:	13	12	16	19	19	9	15	18
449:	16	20	16	18	15	18	10	14
457:	13	25	11	23	17	13	12	17
465:	22	17	10	6	12	17	11	10
473:	4	11	11	10	11	21	8	11
481:	13	18	9	9	17	16	10	10
489:	14	10	10	10	19	13	7	11
497:	15	10	13	11	11	13	11	13
505:	11	12	24	18	35	33	35	51
513:	29	28	13	16	13	10	13	8
521:	14	5	11	5	8	7	15	3
529:	17	11	8	6	15	13	11	14
537:	9	10	18	11	10	10	13	6
545:	6	6	9	15	12	7	4	8
553:	12	10	9	14	6	13	16	10
561:	10	7	8	12	14	13	8	8
569:	11	14	12	15	7	6	13	12
577:	12	17	15	19	33	56	52	48
585:	34	34	13	11	13	10	12	10
593:	12	7	7	7	10	10	11	7
601:	10	9	7	12	17	26	28	58
609:	68	64	43	36	24	12	11	16
617:	11	5	14	10	13	12	5	7
625:	15	7	7	8	9	10	11	9
633:	7	14	9	9	6	16	10	7
641:	3	12	6	12	6	12	10	10
649:	9	5	10	9	13	9	13	9
657:	10	8	18	41	28	22	23	21
665:	17	14	15	10	15	11	11	6
673:	11	9	13	12	6	7	7	5
681:	9	12	8	7	6	14	10	9
689:	10	6	13	15	5	16	8	9
697:	15	10	11	9	11	9	7	11
705:	10	11	15	7	12	5	7	18
713:	5	9	6	8	10	9	8	7
721:	12	6	11	14	8	13	19	15
729:	16	16	15	7	12	6	0	5
737:	7	7	8	5	9	9	4	8
745:	9	11	7	9	9	6	5	11
753:	8	6	13	16	11	5	4	4
761:	7	6	12	7	13	14	9	16
769:	10	14	13	9	11	11	5	9
777:	9	8	10	7	5	12	9	10
785:	10	8	7	9	8	4	8	5
793:	11	9	14	10	10	8	11	7

801: 10 5 5 6 9 9 11 4

Sample Title: R1 0-6

Channel	1	2	3	4	5	6	7	8
809:	10	10	7	8	9	6	6	2
817:	6	6	7	6	4	6	8	4
825:	6	5	7	10	5	11	6	6
833:	10	10	12	16	9	7	13	4
841:	5	7	10	7	5	10	6	6
849:	5	7	10	7	3	10	6	9
857:	7	9	13	8	7	9	6	9
865:	8	8	10	7	4	8	2	6
873:	5	3	2	10	3	6	2	9
881:	5	3	5	7	3	6	10	2
889:	8	4	12	4	10	7	3	9
897:	7	3	14	12	7	6	8	13
905:	6	8	10	8	24	29	38	28
913:	35	18	16	8	9	5	10	6
921:	11	10	6	5	8	7	5	4
929:	7	6	7	8	6	9	6	8
937:	7	8	5	11	6	7	6	3
945:	6	7	6	2	6	8	6	11
953:	6	6	7	4	6	6	8	5
961:	6	6	6	12	7	9	19	23
969:	24	19	25	14	7	5	3	8
977:	8	6	9	11	5	9	4	4
985:	6	8	8	4	2	5	8	5
993:	6	8	3	9	2	8	13	12
1001:	8	11	14	5	6	7	6	6
1009:	4	7	8	5	6	9	7	4
1017:	4	1	8	4	5	5	4	8
1025:	5	6	5	3	5	4	6	6
1033:	8	5	7	3	5	1	4	3
1041:	4	2	8	5	6	5	7	6
1049:	1	4	4	5	6	3	5	6
1057:	6	6	2	7	7	3	8	8
1065:	4	4	4	8	10	2	5	4
1073:	2	4	8	3	11	4	13	3
1081:	6	4	4	9	6	6	3	7
1089:	3	2	2	5	2	6	5	6
1097:	1	6	8	5	3	6	4	6
1105:	3	6	5	2	2	5	8	1
1113:	5	6	6	9	5	13	20	13
1121:	21	7	12	7	4	8	5	3
1129:	9	6	3	9	9	5	5	8
1137:	7	9	3	5	6	8	5	1
1145:	9	7	4	7	10	5	2	3
1153:	5	2	6	5	6	7	4	2
1161:	2	13	4	8	3	5	4	4
1169:	7	1	4	7	6	8	8	2
1177:	3	9	8	7	7	4	5	6
1185:	7	7	8	8	6	3	7	4
1193:	3	6	2	7	5	4	5	8
1201:	7	7	5	3	6	5	6	13
1209:	4	7	9	5	4	11	7	10
1217:	8	9	8	5	4	4	8	4
1225:	9	7	5	8	6	6	9	4

1233: 9 8 3 13 12 8 13 5

Sample Title: R1 0-6

Channel	-----	-----	-----	-----	-----	-----	-----	-----
1241:	8	7	5	5	3	6	3	2
1249:	8	11	5	6	2	2	9	5
1257:	6	1	5	4	1	2	2	5
1265:	3	4	2	8	6	6	10	2
1273:	4	3	4	3	8	4	5	2
1281:	8	4	8	3	1	6	5	5
1289:	3	2	3	1	5	1	2	5
1297:	5	6	5	4	5	1	4	3
1305:	3	6	3	0	3	4	3	4
1313:	6	1	6	1	0	4	3	1
1321:	3	4	6	4	4	1	6	4
1329:	3	1	4	6	2	2	3	6
1337:	0	3	0	5	5	4	2	5
1345:	5	5	5	4	7	3	2	3
1353:	2	3	1	3	1	2	3	3
1361:	2	2	4	0	3	3	2	6
1369:	0	7	4	3	4	2	6	4
1377:	7	3	9	1	3	3	5	5
1385:	4	1	2	2	2	4	4	3
1393:	6	4	4	1	2	0	6	5
1401:	2	4	3	2	1	4	3	2
1409:	2	6	6	1	1	2	1	4
1417:	2	2	2	1	1	2	1	2
1425:	1	2	1	1	3	4	1	2
1433:	3	4	1	4	3	0	0	4
1441:	2	2	3	1	1	3	1	2
1449:	2	0	4	3	1	1	4	13
1457:	14	47	81	116	123	111	71	58
1465:	27	17	5	2	1	1	4	2
1473:	0	2	2	0	2	2	6	0
1481:	0	0	1	2	5	1	2	1
1489:	2	2	3	2	2	2	2	1
1497:	1	2	1	2	3	1	3	1
1505:	4	2	3	2	2	3	3	1
1513:	3	4	1	3	1	0	2	1
1521:	4	3	0	2	2	2	1	2
1529:	2	4	0	2	2	1	1	3
1537:	2	3	1	6	1	4	3	0
1545:	2	2	1	2	2	2	2	0
1553:	0	2	0	3	0	2	1	2
1561:	2	1	0	3	2	0	1	1
1569:	1	2	0	1	2	1	2	0
1577:	0	0	1	2	1	1	1	3
1585:	7	4	3	7	5	3	5	3
1593:	2	3	2	3	2	3	1	0
1601:	0	1	3	1	1	1	2	1
1609:	3	2	0	0	1	0	2	1
1617:	1	0	2	0	4	0	1	1
1625:	3	0	2	2	0	1	1	4
1633:	3	3	0	1	1	4	3	3
1641:	6	1	1	6	2	1	1	1
1649:	0	0	0	0	0	2	1	3
1657:	1	1	3	3	0	0	2	1

1665: 1 2 2 0 1 1 1 2

Sample Title: R1 0-6

Channel	1	2	3	4	5	6	7	8
1673:	2	2	1	2	2	0	1	2
1681:	0	1	0	1	0	3	0	0
1689:	1	1	1	2	0	1	0	2
1697:	2	1	0	0	1	2	1	0
1705:	1	1	2	0	2	0	1	0
1713:	0	0	1	2	1	0	0	0
1721:	1	0	1	2	3	2	2	3
1729:	4	0	6	6	3	1	0	2
1737:	0	2	1	1	0	0	1	2
1745:	1	1	1	0	2	1	1	1
1753:	0	0	0	1	0	1	2	0
1761:	4	5	10	17	6	10	9	4
1769:	4	3	3	1	2	0	1	1
1777:	1	0	2	1	2	0	0	1
1785:	1	0	0	0	0	3	0	0
1793:	2	0	0	0	0	1	0	1
1801:	3	0	3	1	2	2	3	1
1809:	2	1	0	1	1	0	0	2
1817:	1	0	1	0	0	0	2	1
1825:	1	2	0	0	1	0	0	2
1833:	0	2	1	0	0	2	1	0
1841:	0	0	1	0	2	3	1	2
1849:	4	2	0	1	1	3	1	0
1857:	0	0	1	2	1	0	1	3
1865:	0	1	0	2	1	1	0	1
1873:	1	1	1	0	0	2	0	0
1881:	0	1	0	1	2	2	2	1
1889:	2	3	1	0	1	0	0	0
1897:	1	0	3	0	0	0	1	2
1905:	0	1	0	1	0	0	1	0
1913:	0	0	0	1	3	1	0	3
1921:	1	0	2	2	1	1	0	1
1929:	2	0	0	0	0	1	2	3
1937:	0	1	1	1	3	1	0	1
1945:	1	1	1	1	0	2	0	0
1953:	0	0	1	1	1	0	0	0
1961:	2	1	2	0	1	2	1	0
1969:	0	0	0	0	1	1	1	0
1977:	1	0	1	0	0	1	0	0
1985:	0	0	0	0	0	2	0	2
1993:	0	0	0	1	1	1	2	0
2001:	2	1	1	1	0	2	2	1
2009:	0	1	2	1	0	1	1	1
2017:	3	2	1	0	1	1	2	0
2025:	1	2	2	2	0	1	1	0
2033:	0	1	1	0	2	1	0	2
2041:	0	2	0	1	2	4	0	0
2049:	0	1	0	1	1	0	0	0
2057:	0	2	0	0	2	0	2	4
2065:	0	0	2	0	1	1	1	1
2073:	0	1	0	0	1	2	1	1
2081:	1	0	0	1	0	1	1	1
2089:	0	2	1	1	3	2	0	2

2097: 3 1 2 0 2 1 1 2

Sample Title: R1 0-6

Channel	1	2	3	4	5	6	7	8
2105:	2	1	1	0	0	1	0	0
2113:	0	0	2	1	1	2	2	2
2121:	1	3	1	0	0	1	1	1
2129:	2	0	0	0	1	1	0	2
2137:	0	0	0	1	1	5	0	2
2145:	1	0	2	1	1	0	1	1
2153:	1	1	0	3	3	0	0	1
2161:	1	2	2	1	1	1	0	1
2169:	3	0	0	1	0	0	0	2
2177:	0	1	1	0	1	2	2	1
2185:	2	2	0	0	1	1	1	1
2193:	1	1	2	1	2	1	0	0
2201:	2	3	0	4	5	0	0	1
2209:	0	0	2	0	1	1	0	0
2217:	0	0	1	0	1	0	1	2
2225:	0	0	2	1	0	1	1	1
2233:	1	2	1	1	1	0	0	0
2241:	0	0	1	1	0	2	1	0
2249:	0	0	1	1	0	1	1	1
2257:	0	0	0	1	0	1	0	2
2265:	1	1	2	0	0	1	0	1
2273:	1	0	0	1	1	1	2	0
2281:	0	0	0	2	1	2	2	0
2289:	0	0	4	0	0	2	1	0
2297:	0	0	0	1	0	0	0	1
2305:	1	1	2	0	0	0	1	3
2313:	2	2	0	3	2	1	0	2
2321:	0	1	1	0	0	1	2	0
2329:	2	3	1	2	3	0	0	1
2337:	0	3	0	2	2	1	0	0
2345:	0	2	1	1	0	1	0	0
2353:	1	0	2	2	2	0	1	1
2361:	0	0	0	2	0	2	3	1
2369:	1	3	0	0	2	0	4	2
2377:	0	0	0	1	0	1	1	0
2385:	0	0	1	0	1	0	0	0
2393:	1	1	0	2	1	3	0	3
2401:	2	1	1	1	0	0	1	1
2409:	2	0	1	0	0	0	0	0
2417:	0	2	3	1	0	1	1	0
2425:	0	2	0	1	0	0	1	1
2433:	1	0	0	0	1	2	0	0
2441:	0	1	1	1	4	0	1	2
2449:	0	0	1	2	0	0	1	0
2457:	0	0	0	1	3	0	0	0
2465:	3	2	0	1	0	0	1	0
2473:	0	1	2	0	1	0	1	1
2481:	2	0	0	2	0	1	1	0
2489:	1	1	1	1	1	0	1	1
2497:	0	0	0	2	1	0	1	2
2505:	1	0	0	0	1	2	0	0
2513:	0	0	0	0	0	0	0	0
2521:	0	0	0	0	0	0	0	0

2529: 0 0 0 1 1 1 0 0

Sample Title: R1 0-6

Channel	1	2	3	4	5	6	7	8
2537:	1	1	0	0	0	0	0	0
2545:	0	0	0	0	2	0	0	1
2553:	0	0	1	0	0	1	1	0
2561:	0	0	0	0	0	0	1	1
2569:	1	0	0	0	0	0	0	1
2577:	0	0	0	0	0	0	1	0
2585:	0	0	0	1	1	0	0	1
2593:	0	0	1	0	0	0	0	0
2601:	1	0	0	0	1	0	1	0
2609:	1	2	6	16	11	11	10	13
2617:	4	3	1	1	0	0	0	0
2625:	0	2	0	0	0	0	0	1
2633:	1	0	1	0	0	0	1	0
2641:	0	0	0	0	0	1	1	0
2649:	0	0	0	0	2	0	0	0
2657:	1	0	4	0	1	0	0	0
2665:	0	1	0	0	1	0	0	0
2673:	0	0	1	0	0	0	0	0
2681:	0	0	0	1	0	0	0	1
2689:	0	0	0	0	0	1	0	0
2697:	0	0	1	1	0	0	0	0
2705:	0	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	1	0	0	0	0	0	0
2745:	0	0	0	1	0	0	1	0
2753:	0	0	0	0	0	1	1	0
2761:	0	2	1	0	1	1	2	0
2769:	0	0	0	0	1	1	0	1
2777:	0	0	0	0	0	0	0	1
2785:	0	1	0	0	0	0	0	0
2793:	0	0	1	1	0	0	1	0
2801:	0	1	0	0	0	0	0	0
2809:	0	0	0	1	0	0	1	0
2817:	0	0	1	0	1	0	0	0
2825:	0	0	2	0	0	0	0	0
2833:	0	1	1	0	0	0	0	0
2841:	0	0	0	0	0	0	1	0
2849:	1	0	1	0	0	0	1	0
2857:	2	0	0	0	1	0	0	0
2865:	0	0	0	0	1	0	0	0
2873:	1	0	1	0	0	0	1	0
2881:	0	0	0	0	0	1	1	0
2889:	0	0	0	0	0	0	0	0
2897:	0	0	0	0	0	0	0	0
2905:	0	0	0	0	1	0	0	1
2913:	0	1	0	1	0	0	0	0
2921:	0	0	0	0	0	1	0	0
2929:	1	0	0	0	0	0	0	0
2937:	0	0	0	0	0	0	1	0
2945:	0	0	0	0	0	0	0	0
2953:	0	0	0	0	1	0	1	0

2961: 0 0 0 0 0 0 0 0

Sample Title: R1 0-6

Channel	-----	-----	-----	-----	-----	-----	-----	-----
2969:	1	0	1	0	0	1	1	0
2977:	0	0	0	0	0	0	0	1
2985:	0	1	0	0	1	0	0	0
2993:	0	1	0	0	0	0	0	1
3001:	0	0	0	0	1	0	0	0
3009:	0	0	0	0	0	1	0	0
3017:	0	0	1	0	2	0	1	1
3025:	1	0	0	0	0	0	0	0
3033:	0	0	0	0	0	0	0	1
3041:	0	1	0	1	0	1	0	0
3049:	0	2	0	0	0	0	0	1
3057:	0	0	1	0	0	0	0	1
3065:	0	0	0	0	0	0	0	0
3073:	0	1	0	0	0	0	0	0
3081:	0	0	0	0	0	0	0	0
3089:	0	0	1	0	0	0	0	0
3097:	0	0	0	0	0	0	0	0
3105:	0	0	0	0	1	0	0	0
3113:	0	0	0	0	0	0	1	0
3121:	0	0	0	0	0	0	0	1
3129:	1	0	0	0	0	0	0	0
3137:	0	0	0	0	1	0	0	0
3145:	0	0	0	0	1	1	0	0
3153:	0	0	0	0	1	0	0	0
3161:	1	2	0	0	0	0	0	0
3169:	0	1	0	0	0	0	0	1
3177:	0	1	1	0	0	0	0	0
3185:	0	0	0	0	0	0	0	0
3193:	0	0	0	0	0	0	0	0
3201:	0	0	0	0	0	0	0	0
3209:	0	0	0	0	0	0	0	0
3217:	0	0	1	0	0	0	0	1
3225:	0	0	0	0	0	0	0	0
3233:	0	0	0	1	0	0	0	0
3241:	0	1	0	0	0	0	1	0
3249:	0	0	0	0	0	1	0	1
3257:	0	4	0	0	0	0	0	0
3265:	0	0	0	1	0	1	0	1
3273:	1	0	0	0	0	0	1	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	1	0	0	0	0	0
3313:	0	0	0	0	0	1	0	0
3321:	0	0	0	0	1	0	0	0
3329:	0	0	0	0	0	0	0	1
3337:	0	0	1	0	0	0	0	1
3345:	0	0	0	0	1	0	0	0
3353:	0	1	1	0	1	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	1	0	0

3393: 0 1 0 0 0 0 0 1

Sample Title: R1 0-6

Channel	1	2	3	4	5	6	7	8
3401:	0	0	0	0	0	0	0	0
3409:	0	0	0	0	2	1	0	0
3417:	0	0	0	0	0	0	0	0
3425:	0	0	0	0	0	1	0	0
3433:	0	0	0	0	1	0	0	0
3441:	0	0	0	0	0	0	0	0
3449:	0	1	0	0	0	1	1	0
3457:	0	0	2	0	0	2	0	0
3465:	0	0	0	0	0	1	0	1
3473:	0	0	0	1	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	1
3505:	0	0	0	0	0	1	0	0
3513:	0	0	0	0	1	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	0	0	0	0
3545:	0	0	1	0	0	0	0	0
3553:	0	0	0	0	1	0	1	0
3561:	0	0	0	0	1	0	0	0
3569:	0	0	0	0	0	1	0	0
3577:	0	0	0	1	0	0	0	0
3585:	0	0	0	0	0	0	0	0
3593:	0	0	0	1	0	0	0	0
3601:	0	0	0	0	0	0	0	0
3609:	0	2	1	0	0	0	0	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	0
3641:	0	0	0	1	0	0	0	0
3649:	0	0	0	0	0	0	0	0
3657:	0	0	0	0	0	0	0	0
3665:	1	0	0	1	0	0	1	0
3673:	0	1	1	0	0	0	0	0
3681:	0	1	1	1	0	0	0	0
3689:	0	0	0	0	0	0	0	0
3697:	0	0	0	0	0	0	0	1
3705:	0	0	0	0	0	0	0	1
3713:	0	0	0	0	0	0	0	0
3721:	0	0	1	0	0	0	0	0
3729:	1	0	0	0	0	0	1	1
3737:	0	0	0	1	0	0	0	1
3745:	0	0	0	0	0	0	0	0
3753:	1	2	0	0	0	0	0	0
3761:	0	1	1	0	0	0	0	0
3769:	1	0	0	0	0	0	0	0
3777:	0	0	0	0	0	0	0	0
3785:	0	0	0	0	1	0	0	0
3793:	0	0	1	0	0	0	0	0
3801:	0	0	0	0	0	0	0	0
3809:	1	0	0	0	0	0	0	0
3817:	0	0	0	0	1	0	0	0

3825: 0 0 0 0 0 0 0 0 0

Sample Title: R1 0-6

Channel	-----	-----	-----	-----	-----	-----	-----	-----
3833:	0	0	0	1	0	0	0	0
3841:	0	0	0	0	1	0	1	1
3849:	0	0	0	0	0	0	0	0
3857:	0	0	0	0	0	0	1	0
3865:	0	0	0	0	0	1	0	0
3873:	0	0	0	0	0	0	0	0
3881:	0	0	0	0	0	1	0	0
3889:	1	0	0	0	0	1	1	0
3897:	0	0	0	0	0	0	0	0
3905:	0	1	0	1	0	0	0	1
3913:	1	2	0	0	0	0	0	0
3921:	0	1	0	0	0	0	0	0
3929:	0	0	0	0	0	1	1	1
3937:	0	1	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	1	0	0	0	0
3969:	1	0	0	0	0	0	1	0
3977:	0	0	0	0	0	1	0	0
3985:	0	0	0	0	0	0	1	0
3993:	1	0	0	0	0	0	0	0
4001:	0	0	0	0	0	0	0	0
4009:	0	0	0	0	0	0	0	1
4017:	0	0	0	0	0	1	0	0
4025:	0	0	0	1	0	0	0	0
4033:	0	0	0	0	0	0	0	0
4041:	0	0	0	0	0	0	0	0
4049:	0	0	0	1	0	1	0	0
4057:	0	0	0	0	0	0	0	0
4065:	0	1	0	0	0	1	1	0
4073:	0	0	0	0	0	0	0	0
4081:	0	0	0	0	0	0	1	0
4089:	1	0	0	0	0	0	0	0

WZ
6/3/19Analysis Report for 1905060-04
R1 0-6

GAMMA SPECTRUM ANALYSIS

Sample Identification : 1905060-04
Sample Description : R1 0-6
Sample Type : SOIL

Sample Size : 4.297E+02 grams
Facility : Countroom

Sample Taken On : 5/8/2019 3:32:13PM
Acquisition Started : 6/3/2019 7:54:36AM

Procedure : GAS-1802 pCi
Operator : Administrator
Detector Name : GE1
Geometry : GAS-1802
Live Time : 3600.0 seconds
Real Time : 3601.1 seconds

Dead Time : 0.03 %

Peak Locate Threshold : 2.50
Peak Locate Range (in channels) : 1 - 4096
Peak Area Range (in channels) : 18 - 4096
Identification Energy Tolerance : 1.000FWHM

Energy Calibration Used Done On : 6/16/2018
Efficiency Calibration Used Done On : 6/16/2018
Efficiency Calibration Description :

Sample Number : 82495

PEAK-TO-TOTAL CALIBRATION REPORT

Peak-to-Total Efficiency Calibration Equation

AG
6/3/19

Analysis Report for 1905060-04

R1 0-6

PEAK LOCATE REPORT

Peak Locate Performed on : 6/3/2019 8:54:40AM
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	47.42	47.79	0.0000	0.00
2	63.28	63.65	0.0000	0.00
3	74.18	74.55	0.0000	0.00
4	76.96	77.33	0.0000	0.00
5	184.94	185.27	0.0000	0.00
6	209.68	210.01	0.0000	0.00
7	228.59	228.91	0.0000	0.00
8	239.53	239.85	0.0000	0.00
9	270.40	270.71	0.0000	0.00
10	297.36	297.67	0.0000	0.00
11	338.05	338.35	0.0000	0.00
12	351.38	351.68	0.0000	0.00
13	355.73	356.02	0.0000	0.00
14	463.28	463.55	0.0000	0.00
15	507.55	507.81	0.0000	0.00
16	513.89	514.15	0.0000	0.00
17	537.17	537.43	0.0000	0.00
18	583.23	583.48	0.0000	0.00
19	610.10	610.34	0.0000	0.00
20	657.75	657.98	0.0000	0.00
21	661.30	661.54	0.0000	0.00
22	727.24	727.46	0.0000	0.00
23	794.29	794.50	0.0000	0.00
24	807.05	807.25	0.0000	0.00
25	862.31	862.51	0.0000	0.00
26	912.01	912.19	0.0000	0.00
27	965.05	965.22	0.0000	0.00
28	968.49	968.67	0.0000	0.00
29	1105.00	1105.16	0.0000	0.00
30	1120.20	1120.35	0.0000	0.00
31	1367.40	1367.51	0.0000	0.00
32	1376.70	1376.81	0.0000	0.00
33	1460.56	1460.67	0.0000	0.00
34	1464.68	1464.78	0.0000	0.00
35	1579.19	1579.27	0.0000	0.00
36	1686.35	1686.43	0.0000	0.00
37	1724.16	1724.24	0.0000	0.00
38	1730.21	1730.29	0.0000	0.00
39	1764.19	1764.26	0.0000	0.00
40	1824.94	1825.00	0.0000	0.00
41	1848.23	1848.30	0.0000	0.00
42	2001.68	2001.73	0.0000	0.00

Analysis Report for 1905060-04

R1 0-6

Peak No.	Energy (keV)	Centroid Channel	Centroid Uncertainty	Peak Significance
43	2034.25	2034.30	0.0000	0.00
44	2133.46	2133.50	0.0000	0.00
45	2292.78	2292.81	0.0000	0.00
46	2461.95	2461.98	0.0000	0.00
47	2614.10	2614.12	0.0000	0.00

? = Adjacent peak noted

Errors quoted at 2.000sigma

Analysis Report for 1905060-04

R1 0-6

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 6/3/2019 8:54:40AM

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	44 -	52	47.79	8.60E+01	90.24	1.21E+03	2.06
	2	58 -	69	63.65	2.35E+02	135.23	2.18E+03	4.12
M	3	71 -	82	74.55	3.06E+02	87.57	1.24E+03	2.73
m	4	71 -	82	77.33	4.81E+02	115.00	1.65E+03	2.73
	5	180 -	189	185.27	1.79E+02	82.95	8.83E+02	4.40
	6	207 -	213	210.01	6.39E+01	56.56	5.22E+02	2.83
	7	226 -	232	228.91	5.90E+01	49.57	4.06E+02	4.24
	8	233 -	249	239.85	9.87E+02	115.20	8.67E+02	6.06
	9	266 -	274	270.71	5.06E+01	57.64	4.77E+02	4.58
	10	289 -	310	297.67	3.50E+02	118.85	9.78E+02	4.86
	11	334 -	344	338.35	1.52E+02	63.49	4.56E+02	6.89
M	12	346 -	359	351.68	3.44E+02	71.08	4.34E+02	3.97
m	13	346 -	359	356.02	6.90E+01	44.88	2.26E+02	2.90
	14	459 -	469	463.55	9.81E+01	42.74	1.88E+02	5.35
M	15	505 -	523	507.81	3.54E+01	29.07	1.13E+02	2.68
m	16	505 -	523	514.15	6.33E+01	37.79	1.24E+02	2.69
	17	535 -	540	537.43	2.45E+01	22.80	8.50E+01	1.59
	18	578 -	590	583.48	1.82E+02	58.07	3.09E+02	4.65
	19	603 -	620	610.34	3.27E+02	68.19	2.93E+02	5.03
M	20	655 -	669	657.98	2.93E+01	21.68	4.17E+01	3.36
m	21	655 -	669	661.54	8.74E+01	34.61	8.53E+01	3.36
	22	722 -	732	727.46	6.51E+01	36.48	1.42E+02	3.82
	23	788 -	802	794.50	6.55E+01	42.68	1.61E+02	7.95
	24	803 -	811	807.25	2.27E+01	23.58	7.06E+01	1.15
	25	857 -	870	862.51	3.50E+01	42.12	1.80E+02	6.67
	26	907 -	919	912.19	1.60E+02	42.28	1.30E+02	3.39
M	27	957 -	974	965.22	3.34E+01	27.86	7.53E+01	2.68
m	28	957 -	974	968.67	6.44E+01	31.81	9.55E+01	2.68
	29	1103 -	1108	1105.16	1.28E+01	14.66	3.23E+01	1.52
	30	1113 -	1127	1120.35	5.79E+01	42.40	1.64E+02	2.67
	31	1361 -	1371	1367.51	1.50E+01	18.54	3.60E+01	2.93
	32	1372 -	1381	1376.81	2.30E+01	15.23	1.99E+01	3.26
M	33	1455 -	1468	1460.67	4.30E+02	53.61	9.02E+01	3.83
m	34	1455 -	1468	1464.78	6.80E+01	40.94	7.22E+01	2.38
	35	1576 -	1582	1579.27	8.42E+00	8.51	7.17E+00	1.46
	36	1683 -	1689	1686.43	6.44E+00	6.65	3.13E+00	2.75
M	37	1721 -	1735	1724.24	8.56E+00	8.28	1.13E+01	3.59
m	38	1721 -	1735	1730.29	1.07E+01	12.19	6.89E+00	3.59
	39	1757 -	1770	1764.26	5.30E+01	14.56	0.00E+00	9.22
	40	1822 -	1827	1825.00	7.00E+00	5.29	0.00E+00	1.47

0144

Analysis Report for 1905060-04

R1 0-6

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	FWHM (keV)
41	1848.23	1842 - 1854		1848.30	1.72E+01	13.29	1.17E+01	2.25
42	2001.68	1998 - 2004		2001.73	4.42E+00	6.02	3.17E+00	1.88
43	2034.25	2031 - 2037		2034.30	1.00E+01	6.32	0.00E+00	4.44
44	2133.46	2129 - 2137		2133.50	6.50E+00	9.19	9.00E+00	4.25
45	2292.78	2290 - 2297		2292.81	7.00E+00	8.72	8.00E+00	1.91
46	2461.95	2459 - 2464		2461.98	8.45E+00	7.87	5.09E+00	1.87
47	2614.10	2607 - 2620		2614.12	8.55E+01	20.12	7.01E+00	4.83

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 : 6/3/2019 8:54:40AM

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
	47.42	44 -	52	8.60E+01	90.24	1.21E+03	7.26E+01
	63.28	58 -	69	2.35E+02	135.23	2.18E+03	1.08E+02
M	74.18	71 -	82	3.06E+02	87.57	1.24E+03	5.79E+01
m	76.96	71 -	82	4.81E+02	115.00	1.65E+03	6.67E+01
	184.94	180 -	189	1.79E+02	82.95	8.83E+02	6.45E+01
	209.68	207 -	213	6.39E+01	56.56	5.22E+02	4.46E+01
	228.59	226 -	232	5.90E+01	49.57	4.06E+02	3.87E+01
	239.53	233 -	249	9.87E+02	115.20	8.67E+02	7.94E+01
	270.40	266 -	274	5.06E+01	57.64	4.77E+02	4.59E+01
	297.36	289 -	310	3.50E+02	118.85	9.78E+02	9.27E+01
	338.05	334 -	344	1.52E+02	63.49	4.56E+02	4.81E+01
M	351.38	346 -	359	3.44E+02	71.08	4.34E+02	3.43E+01
m	355.73	346 -	359	6.90E+01	44.88	2.26E+02	2.47E+01
	463.28	459 -	469	9.81E+01	42.74	1.88E+02	3.11E+01
M	507.55	505 -	523	3.54E+01	29.07	1.13E+02	1.75E+01
m	513.89	505 -	523	6.33E+01	37.79	1.24E+02	1.83E+01
	537.17	535 -	540	2.45E+01	22.80	8.50E+01	1.69E+01
	583.23	578 -	590	1.82E+02	58.07	3.09E+02	4.23E+01
	610.10	603 -	620	3.27E+02	68.19	2.93E+02	4.75E+01
M	657.75	655 -	669	2.93E+01	21.68	4.17E+01	1.06E+01

0145

Analysis Report for 1905060-04

R1 0-6

	Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
m	21	661.30	655 -	669	8.74E+01	34.61	8.53E+01	1.52E+01
	22	727.24	722 -	732	6.51E+01	36.48	1.42E+02	2.69E+01
	23	794.29	788 -	802	6.55E+01	42.68	1.61E+02	3.25E+01
	24	807.05	803 -	811	2.27E+01	23.58	7.06E+01	1.77E+01
	25	862.31	857 -	870	3.50E+01	42.12	1.80E+02	1.58E+01
	26	912.01	907 -	919	1.60E+02	42.28	1.30E+02	2.79E+01
M	27	965.05	957 -	974	3.34E+01	27.86	7.53E+01	1.43E+01
m	28	968.49	957 -	974	6.44E+01	31.81	9.55E+01	1.61E+01
	29	1105.00	1103 -	1108	1.28E+01	14.66	3.23E+01	1.05E+01
	30	1120.20	1113 -	1127	5.79E+01	42.40	1.64E+02	3.25E+01
	31	1367.40	1361 -	1371	1.50E+01	18.54	3.60E+01	1.38E+01
	32	1376.70	1372 -	1381	2.30E+01	15.23	1.99E+01	9.72E+00
M	33	1460.56	1455 -	1468	4.30E+02	53.61	9.02E+01	1.56E+01
m	34	1464.68	1455 -	1468	6.80E+01	40.94	7.22E+01	1.40E+01
	35	1579.19	1576 -	1582	8.42E+00	8.51	7.17E+00	5.12E+00
	36	1686.35	1683 -	1689	6.44E+00	6.65	3.13E+00	3.54E+00
M	37	1724.16	1721 -	1735	8.56E+00	8.28	1.13E+01	5.52E+00
m	38	1730.21	1721 -	1735	1.07E+01	12.19	6.89E+00	4.32E+00
	39	1764.19	1757 -	1770	5.30E+01	14.56	0.00E+00	0.00E+00
	40	1824.94	1822 -	1827	7.00E+00	5.29	0.00E+00	0.00E+00
	41	1848.23	1842 -	1854	1.72E+01	13.29	1.17E+01	8.53E+00
	42	2001.68	1998 -	2004	4.42E+00	6.02	3.17E+00	3.54E+00
	43	2034.25	2031 -	2037	1.00E+01	6.32	0.00E+00	0.00E+00
	44	2133.46	2129 -	2137	6.50E+00	9.19	9.00E+00	6.29E+00
	45	2292.78	2290 -	2297	7.00E+00	8.72	8.00E+00	5.70E+00
	46	2461.95	2459 -	2464	8.45E+00	7.87	5.09E+00	4.36E+00
	47	2614.10	2607 -	2620	8.55E+01	20.12	7.01E+00	6.53E+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 : 6/3/2019 8:54:40AM

Peak Analysis From Channel : 1

Peak Analysis To Channel : 4096

Tentative NID Library : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

Peak Match Tolerance : 1.000FWHM

Analysis Report for 1905060-04

R1 0-6

	Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
	1	47.42	44 -	52	47.79	8.60E+01	90.24	1.21E+03	PB-210 TH-230
	2	63.28	58 -	69	63.65	2.35E+02	135.23	2.18E+03	TH-234 TH-230
M	3	74.18	71 -	82	74.55	3.06E+02	87.57	1.24E+03	AM-243
m	4	76.96	71 -	82	77.33	4.81E+02	115.00	1.65E+03	TI-44
	5	184.94	180 -	189	185.27	1.79E+02	82.95	8.83E+02	HO-166M RA-226
	6	209.68	207 -	213	210.01	6.39E+01	56.56	5.22E+02	CM-243 GA-67
	7	228.59	226 -	232	228.91	5.90E+01	49.57	4.06E+02	NP-239 TE-132 CM-243
	8	239.53	233 -	249	239.85	9.87E+02	115.20	8.67E+02	PB-212 RA-224
	9	270.40	266 -	274	270.71	5.06E+01	57.64	4.77E+02	.....
	10	297.36	289 -	310	297.67	3.50E+02	118.85	9.78E+02	.....
	11	338.05	334 -	344	338.35	1.52E+02	63.49	4.56E+02	AC-228
M	12	351.38	346 -	359	351.68	3.44E+02	71.08	4.34E+02	PB-214
m	13	355.73	346 -	359	356.02	6.90E+01	44.88	2.26E+02	BA-133
	14	463.28	459 -	469	463.55	9.81E+01	42.74	1.88E+02	SB-125
M	15	507.55	505 -	523	507.81	3.54E+01	29.07	1.13E+02	.....
m	16	513.89	505 -	523	514.15	6.33E+01	37.79	1.24E+02	SR-85 KR-85
	17	537.17	535 -	540	537.43	2.45E+01	22.80	8.50E+01	BA-140
	18	583.23	578 -	590	583.48	1.82E+02	58.07	3.09E+02	TL-208
	19	610.10	603 -	620	610.34	3.27E+02	68.19	2.93E+02	BI-214
M	20	657.75	655 -	669	657.98	2.93E+01	21.68	4.17E+01	AG-110M
m	21	661.30	655 -	669	661.54	8.74E+01	34.61	8.53E+01	CS-137
	22	727.24	722 -	732	727.46	6.51E+01	36.48	1.42E+02	BI-212
	23	794.29	788 -	802	794.50	6.55E+01	42.68	1.61E+02	CS-134
	24	807.05	803 -	811	807.25	2.27E+01	23.58	7.06E+01	.....
	25	862.31	857 -	870	862.51	3.50E+01	42.12	1.80E+02	TL-208
	26	912.01	907 -	919	912.19	1.60E+02	42.28	1.30E+02	TL-204 AC-228
M	27	965.05	957 -	974	965.22	3.34E+01	27.86	7.53E+01	EU-152
m	28	968.49	957 -	974	968.67	6.44E+01	31.81	9.55E+01	AC-228
	29	1105.00	1103 -	1108	1105.16	1.28E+01	14.66	3.23E+01	.....
	30	1120.20	1113 -	1127	1120.35	5.79E+01	42.40	1.64E+02	BI-214 SC-46 TA-182
	31	1367.40	1361 -	1371	1367.51	1.50E+01	18.54	3.60E+01	NA-24
	32	1376.70	1372 -	1381	1376.81	2.30E+01	15.23	1.99E+01	.....
M	33	1460.56	1455 -	1468	1460.67	4.30E+02	53.61	9.02E+01	K-40
m	34	1464.68	1455 -	1468	1464.78	6.80E+01	40.94	7.22E+01	.....
	35	1579.19	1576 -	1582	1579.27	8.42E+00	8.51	7.17E+00	.....
	36	1686.35	1683 -	1689	1686.43	6.44E+00	6.65	3.13E+00	.....
M	37	1724.16	1721 -	1735	1724.24	8.56E+00	8.28	1.13E+01	.....
m	38	1730.21	1721 -	1735	1730.29	1.07E+01	12.19	6.89E+00	.....
	39	1764.19	1757 -	1770	1764.26	5.30E+01	14.56	0.00E+00	BI-214
	40	1824.94	1822 -	1827	1825.00	7.00E+00	5.29	0.00E+00	.....
	41	1848.23	1842 -	1854	1848.30	1.72E+01	13.29	1.17E+01	.....
	42	2001.68	1998 -	2004	2001.73	4.42E+00	6.02	3.17E+00	.....
	43	2034.25	2031 -	2037	2034.30	1.00E+01	6.32	0.00E+00	.....

Analysis Report for 1905060-04

R1 0-6

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
44	2133.46	2129 -	2137	2133.50	6.50E+00	9.19	9.00E+00	.....
45	2292.78	2290 -	2297	2292.81	7.00E+00	8.72	8.00E+00	.....
46	2461.95	2459 -	2464	2461.98	8.45E+00	7.87	5.09E+00	.....
47	2614.10	2607 -	2620	2614.12	8.55E+01	20.12	7.01E+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 : 6/3/2019 8:54:40AM

Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty	
	1	47.42	8.60E+01	90.24	1.81E-02	1.84E-03
	2	63.28	2.35E+02	135.23	2.32E-02	1.91E-03
M	3	74.18	3.06E+02	87.57	2.50E-02	2.11E-03
m	4	76.96	4.81E+02	115.00	2.53E-02	2.16E-03
	5	184.94	1.79E+02	82.95	2.16E-02	1.82E-03
	6	209.68	6.39E+01	56.56	2.01E-02	1.74E-03
	7	228.59	5.90E+01	49.57	1.91E-02	1.68E-03
	8	239.53	9.87E+02	115.20	1.86E-02	1.65E-03
	9	270.40	5.06E+01	57.64	1.72E-02	1.55E-03
	10	297.36	3.50E+02	118.85	1.61E-02	1.45E-03
	11	338.05	1.52E+02	63.49	1.47E-02	1.30E-03
M	12	351.38	3.44E+02	71.08	1.43E-02	1.24E-03
m	13	355.73	6.90E+01	44.88	1.41E-02	1.23E-03
	14	463.28	9.81E+01	42.74	1.16E-02	1.05E-03
M	15	507.55	3.54E+01	29.07	1.08E-02	1.03E-03
m	16	513.89	6.33E+01	37.79	1.07E-02	1.02E-03
	17	537.17	2.45E+01	22.80	1.03E-02	1.01E-03
	18	583.23	1.82E+02	58.07	9.65E-03	9.88E-04
	19	610.10	3.27E+02	68.19	9.32E-03	9.74E-04
M	20	657.75	2.93E+01	21.68	8.78E-03	9.49E-04
m	21	661.30	8.74E+01	34.61	8.74E-03	9.48E-04
	22	727.24	6.51E+01	36.48	8.11E-03	8.41E-04
	23	794.29	6.55E+01	42.68	7.57E-03	7.33E-04
	24	807.05	2.27E+01	23.58	7.47E-03	7.12E-04
	25	862.31	3.50E+01	42.12	7.10E-03	6.23E-04
	26	912.01	1.60E+02	42.28	6.79E-03	5.61E-04

Analysis Report for 1905060-04

R1 0-6

	Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
M	27	965.05	3.34E+01	27.86	6.50E-03	5.46E-04
m	28	968.49	6.44E+01	31.81	6.48E-03	5.45E-04
	29	1105.00	1.28E+01	14.66	5.86E-03	5.05E-04
	30	1120.20	5.79E+01	42.40	5.80E-03	5.00E-04
	31	1367.40	1.50E+01	18.54	5.00E-03	4.52E-04
	32	1376.70	2.30E+01	15.23	4.98E-03	4.49E-04
M	33	1460.56	4.30E+02	53.61	4.77E-03	4.26E-04
m	34	1464.68	6.80E+01	40.94	4.76E-03	4.25E-04
	35	1579.19	8.42E+00	8.51	4.51E-03	3.93E-04
	36	1686.35	6.44E+00	6.65	4.31E-03	3.63E-04
M	37	1724.16	8.56E+00	8.28	4.25E-03	3.52E-04
m	38	1730.21	1.07E+01	12.19	4.23E-03	3.51E-04
	39	1764.19	5.30E+01	14.56	4.18E-03	3.41E-04
	40	1824.94	7.00E+00	5.29	4.09E-03	3.24E-04
	41	1848.23	1.72E+01	13.29	4.05E-03	3.21E-04
	42	2001.68	4.42E+00	6.02	3.85E-03	3.21E-04
	43	2034.25	1.00E+01	6.32	3.81E-03	3.21E-04
	44	2133.46	6.50E+00	9.19	3.69E-03	3.21E-04
	45	2292.78	7.00E+00	8.72	3.53E-03	3.21E-04
	46	2461.95	8.45E+00	7.87	3.39E-03	3.21E-04
	47	2614.10	8.55E+01	20.12	3.28E-03	3.21E-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 : 6/3/2019 8:54:40AM

Env. Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000082155.CNF

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
	1	47.42	8.60E+01	90.24			8.60E+01	9.02E+01
	2	63.28	2.35E+02	135.23	7.28E+01	8.17E+00	1.62E+02	1.35E+02
M	3	74.18	3.06E+02	87.57			3.06E+02	8.76E+01
m	4	76.96	4.81E+02	115.00			4.81E+02	1.15E+02
	5	184.94	1.79E+02	82.95	5.94E+01	7.17E+00	1.19E+02	8.33E+01
	6	209.68	6.39E+01	56.56			6.39E+01	5.66E+01
	7	228.59	5.90E+01	49.57			5.90E+01	4.96E+01
	8	239.53	9.87E+02	115.20			9.87E+02	1.15E+02
	9	270.40	5.06E+01	57.64			5.06E+01	5.76E+01

0149

Analysis Report for 1905060-04

R1 0-6

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
	10	297.36	3.50E+02	118.85			3.50E+02	1.19E+02
	11	338.05	1.52E+02	63.49			1.52E+02	6.35E+01
M	12	351.38	3.44E+02	71.08			3.44E+02	7.11E+01
m	13	355.73	6.90E+01	44.88			6.90E+01	4.49E+01
	14	463.28	9.81E+01	42.74			9.81E+01	4.27E+01
M	15	507.55	3.54E+01	29.07			3.54E+01	2.91E+01
m	16	513.89	6.33E+01	37.79			6.33E+01	3.78E+01
	17	537.17	2.45E+01	22.80			2.45E+01	2.28E+01
	18	583.23	1.82E+02	58.07			1.82E+02	5.81E+01
	19	610.10	3.27E+02	68.19			3.27E+02	6.82E+01
M	20	657.75	2.93E+01	21.68			2.93E+01	2.17E+01
m	21	661.30	8.74E+01	34.61			8.74E+01	3.46E+01
	22	727.24	6.51E+01	36.48			6.51E+01	3.65E+01
	23	794.29	6.55E+01	42.68			6.55E+01	4.27E+01
	24	807.05	2.27E+01	23.58			2.27E+01	2.36E+01
	25	862.31	3.50E+01	42.12			3.50E+01	4.21E+01
	26	912.01	1.60E+02	42.28			1.60E+02	4.23E+01
M	27	965.05	3.34E+01	27.86			3.34E+01	2.79E+01
m	28	968.49	6.44E+01	31.81			6.44E+01	3.18E+01
	29	1105.00	1.28E+01	14.66			1.28E+01	1.47E+01
	30	1120.20	5.79E+01	42.40			5.79E+01	4.24E+01
	31	1367.40	1.50E+01	18.54			1.50E+01	1.85E+01
	32	1376.70	2.30E+01	15.23			2.30E+01	1.52E+01
M	33	1460.56	4.30E+02	53.61			4.30E+02	5.36E+01
m	34	1464.68	6.80E+01	40.94			6.80E+01	4.09E+01
	35	1579.19	8.42E+00	8.51			8.42E+00	8.51E+00
	36	1686.35	6.44E+00	6.65			6.44E+00	6.65E+00
M	37	1724.16	8.56E+00	8.28			8.56E+00	8.28E+00
m	38	1730.21	1.07E+01	12.19			1.07E+01	1.22E+01
	39	1764.19	5.30E+01	14.56	3.07E+00	1.52E+00	4.99E+01	1.46E+01
	40	1824.94	7.00E+00	5.29			7.00E+00	5.29E+00
	41	1848.23	1.72E+01	13.29			1.72E+01	1.33E+01
	42	2001.68	4.42E+00	6.02			4.42E+00	6.02E+00
	43	2034.25	1.00E+01	6.32			1.00E+01	6.32E+00
	44	2133.46	6.50E+00	9.19			6.50E+00	9.19E+00
	45	2292.78	7.00E+00	8.72			7.00E+00	8.72E+00
	46	2461.95	8.45E+00	7.87			8.45E+00	7.87E+00
	47	2614.10	8.55E+01	20.12	4.78E+00	9.74E-01	8.07E+01	2.01E+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 1905060-04

R1 0-6

AREA CORRECTION REPORT REFERENCE PEAK / BKG. SUBTRACT

Peak Analysis Performed on : 6/3/2019 8:54:40AM
 Ref. Peak Energy : 0.00 Reference Date :
 Peak Ratio : 0.00 Uncertainty : 0.00
 Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000082155.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	47.42	8.60E+01	90.24		8.60E+01	9.02E+01
	2	63.28	2.35E+02	135.23	7.28E+01	8.17E+00	1.62E+02
M	3	74.18	3.06E+02	87.57			3.06E+02
m	4	76.96	4.81E+02	115.00			4.81E+02
	5	184.94	1.79E+02	82.95	5.94E+01	7.17E+00	1.19E+02
	6	209.68	6.39E+01	56.56			6.39E+01
	7	228.59	5.90E+01	49.57			5.90E+01
	8	239.53	9.87E+02	115.20			9.87E+02
	9	270.40	5.06E+01	57.64			5.06E+01
	10	297.36	3.50E+02	118.85			3.50E+02
	11	338.05	1.52E+02	63.49			1.52E+02
M	12	351.38	3.44E+02	71.08			3.44E+02
m	13	355.73	6.90E+01	44.88			6.90E+01
	14	463.28	9.81E+01	42.74			9.81E+01
M	15	507.55	3.54E+01	29.07			3.54E+01
m	16	513.89	6.33E+01	37.79			6.33E+01
	17	537.17	2.45E+01	22.80			2.45E+01
	18	583.23	1.82E+02	58.07			1.82E+02
	19	610.10	3.27E+02	68.19			3.27E+02
M	20	657.75	2.93E+01	21.68			2.93E+01
m	21	661.30	8.74E+01	34.61			8.74E+01
	22	727.24	6.51E+01	36.48			6.51E+01
	23	794.29	6.55E+01	42.68			6.55E+01
	24	807.05	2.27E+01	23.58			2.27E+01
	25	862.31	3.50E+01	42.12			3.50E+01
	26	912.01	1.60E+02	42.28			1.60E+02
M	27	965.05	3.34E+01	27.86			3.34E+01
m	28	968.49	6.44E+01	31.81			6.44E+01
	29	1105.00	1.28E+01	14.66			1.28E+01
	30	1120.20	5.79E+01	42.40			5.79E+01
	31	1367.40	1.50E+01	18.54			1.50E+01
	32	1376.70	2.30E+01	15.23			2.30E+01
M	33	1460.56	4.30E+02	53.61			4.30E+02
m	34	1464.68	6.80E+01	40.94			6.80E+01
	35	1579.19	8.42E+00	8.51			8.42E+00
	36	1686.35	6.44E+00	6.65			6.44E+00
M	37	1724.16	8.56E+00	8.28			8.56E+00
m	38	1730.21	1.07E+01	12.19			1.07E+01
	39	1764.19	5.30E+01	14.56	3.07E+00	1.52E+00	4.99E+01
	40	1824.94	7.00E+00	5.29			7.00E+00
	41	1848.23	1.72E+01	13.29			1.72E+01

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Analysis Report for 1905060-04

R1 0-6

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
42	2001.68	4.42E+00	6.02			4.42E+00	6.02E+00
43	2034.25	1.00E+01	6.32			1.00E+01	6.32E+00
44	2133.46	6.50E+00	9.19			6.50E+00	9.19E+00
45	2292.78	7.00E+00	8.72			7.00E+00	8.72E+00
46	2461.95	8.45E+00	7.87			8.45E+00	7.87E+00
47	2614.10	8.55E+01	20.12	4.78E+00	9.74E-01	8.07E+01	2.01E+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	0.998	1460.81 *	10.67	1.48E+01	2.26E+00
KR-85	1.000	513.99 *	0.43	2.40E+01	1.45E+01
SR-85	0.999	513.99 *	99.27	1.38E-01	8.32E-02
TE-132	0.578	49.72	13.10		
		228.16 *	88.00	1.45E+01	1.23E+01
CS-137	0.996	661.65 *	85.12	2.06E-01	8.44E-02
TL-208	0.988	583.14 *	30.22	1.09E+00	3.65E-01
		860.37 *	4.48	1.93E+00	2.32E+00
		2614.66 *	35.85	1.20E+00	3.22E-01
BI-212	0.765	727.17 *	11.80	1.19E+00	6.77E-01
		1620.62	2.75		
PB-212	0.872	238.63 *	44.60	2.08E+00	3.05E-01
		300.09	3.41		
BI-214	0.920	609.31 *	46.30	1.33E+00	3.09E-01
		1120.29 *	15.10	1.16E+00	8.52E-01
		1764.49 *	15.80	1.32E+00	4.02E-01
		2204.22	4.98		
PB-214	0.427	295.21	19.19		
		351.92 *	37.19	1.13E+00	2.54E-01
RA-224	0.939	240.98 *	3.95	2.35E+01	3.45E+00
RA-226	0.953	186.21 *	3.28	2.94E+00	2.07E+00
AC-228	0.983	338.32 *	11.40	1.59E+00	6.79E-01
		911.07 *	27.70	1.48E+00	4.11E-01
		969.11 *	16.60	1.04E+00	5.24E-01
TH-230	0.945	48.43 *	16.90	4.92E-01	5.19E-01

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Analysis Report for 1905060-04

R1 0-6

Nuclide Name	Id Confidence	Energy (keV)	Yield(%)	Activity (pCi/grams)	Activity Uncertainty
TH-230	0.945	62.85 *	4.60	2.65E+00	2.22E+00
		67.67	0.37		
TH-234	1.000	63.29 *	3.80	3.21E+00	2.69E+00
AM-243	0.993	74.67 *	66.00	3.24E-01	9.66E-02

* = Energy line found in the spectrum.

- = Manually added nuclide.

? = Manually edited nuclide.

Energy Tolerance : 2.000FWHM

Nuclide confidence index threshold = 0.30

Errors quoted at 2.000sigma

UNIDENTIFIED PEAKS

Peak Locate Performed on : 6/3/2019 8:54:40AM
 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 4	76.96	1.33538E-01	11.96		
6	209.68	1.77376E-02	44.29	Tol.	CM-243
9	270.40	1.40451E-02	57.00	Tol.	LU-173
10	297.36	9.72618E-02	16.97		
m 13	355.73	1.91664E-02	32.52	Tol.	BA-133
14	463.28	2.72410E-02	21.79	Tol.	SB-125
M 15	507.55	9.81999E-03	41.11		
17	537.17	6.81177E-03	46.50	Sum	
M 20	657.75	8.14773E-03	36.96	Sum	
23	794.29	1.82059E-02	32.56	Sum	
24	807.05	6.30268E-03	51.96		
M 27	965.05	9.27563E-03	41.71	Sum	
29	1105.00	3.56801E-03	57.08		
31	1367.40	4.16667E-03	61.80		
32	1376.70	6.39731E-03	33.07	Sum	
m 34	1464.68	1.88975E-02	30.09		
35	1579.19	2.33796E-03	50.58	Sum	
36	1686.35	1.78819E-03	51.67		
M 37	1724.16	2.37899E-03	48.32	Sum	
m 38	1730.21	2.96031E-03	57.17	Sum	
40	1824.94	1.94444E-03	37.80	Sum	
41	1848.23	4.77053E-03	38.68	Sum	
42	2001.68	1.22685E-03	68.16		
43	2034.25	2.77778E-03	31.62		

Analysis Report for 1905060-04

R1 0-6

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
44	2133.46	1.80556E-03	70.71		
45	2292.78	1.94444E-03	62.27		
46	2461.95	2.34848E-03	46.57		

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	1.48E+01	2.26E+00
KR-85	1.00	513.99 *	0.43	2.40E+01	1.45E+01
SR-85	0.99	513.99 *	99.27	1.38E-01	8.32E-02
TE-132	0.57	49.72	13.10		
		228.16 *	88.00	1.45E+01	1.23E+01
CS-137	0.99	661.65 *	85.12	2.06E-01	8.44E-02
TL-208	0.98	583.14 *	30.22	1.09E+00	3.65E-01
		860.37 *	4.48	1.93E+00	2.32E+00
		2614.66 *	35.85	1.20E+00	3.22E-01
BI-212	0.76	727.17 *	11.80	1.19E+00	6.77E-01
		1620.62	2.75		
PB-212	0.87	238.63 *	44.60	2.08E+00	3.05E-01
		300.09	3.41		
BI-214	0.92	609.31 *	46.30	1.33E+00	3.09E-01
		1120.29 *	15.10	1.16E+00	8.52E-01
		1764.49 *	15.80	1.32E+00	4.02E-01
		2204.22	4.98		
PB-214	0.42	295.21	19.19		
		351.92 *	37.19	1.13E+00	2.54E-01
RA-224	0.93	240.98 *	3.95	2.35E+01	3.45E+00
RA-226	0.95	186.21 *	3.28	2.94E+00	2.07E+00
AC-228	0.98	338.32 *	11.40	1.59E+00	6.79E-01
		911.07 *	27.70	1.48E+00	4.11E-01
		969.11 *	16.60	1.04E+00	5.24E-01
TH-230	0.94	48.43 *	16.90	4.92E-01	5.19E-01

Analysis Report for 1905060-04

R1 0-6

Nuclide Name	Id Confidence	Energy (keV)	Yield(%)	Activity (pCi/grams)	Activity Uncertainty
TH-230	0.94	62.85 * 67.67	4.60 0.37	2.65E+00	2.22E+00
TH-234	1.00	63.29 *	3.80	3.21E+00	2.69E+00
AM-243	0.99	74.67 *	66.00	3.24E-01	9.66E-02

* = Energy line found in the spectrum.

- = Manually added nuclide.

? = Manually edited nuclide.

@ = Energy line not used for Weighted Mean Activity

Energy Tolerance : 2.000FWHM

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	1.48E+01	2.26E+00
?	KR-85	1.000	2.40E+01	1.45E+01
?	SR-85	0.999	1.38E-01	8.32E-02
	TE-132	0.578	1.45E+01	1.23E+01
	CS-137	0.996	2.06E-01	8.44E-02
	TL-208	0.988	1.16E+00	2.40E-01
X	PB-210	0.975		
	BI-212	0.765	1.19E+00	6.77E-01
?	PB-212	0.872	2.08E+00	3.05E-01
	BI-214	0.920	1.31E+00	2.35E-01
	PB-214	0.427	1.13E+00	2.54E-01
?	RA-224	0.939	2.35E+01	3.45E+00
	RA-226	0.953	2.94E+00	2.07E+00
	AC-228	0.983	1.37E+00	2.92E-01
	TH-230	0.945	4.92E-01	5.19E-01
	TH-234	1.000	2.61E+00	2.77E+00
	AM-243	0.993	3.24E-01	9.66E-02

Analysis Report for 1905060-04

R1 0-6

- ? = 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 1905060-04

R1 0-6

UNIDENTIFIED PEAKS

Peak Locate Performed on : 6/3/2019 8:54:40AM

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>
m	4	76.96	1.33538E-01	11.96	
	6	209.68	1.77376E-02	44.29	Tol. CM-243
	9	270.40	1.40451E-02	57.00	Tol. LU-173
	10	297.36	9.72618E-02	16.97	
m	13	355.73	1.91664E-02	32.52	Tol. BA-133
	14	463.28	2.72410E-02	21.79	Tol. SB-125
M	15	507.55	9.81999E-03	41.11	
	17	537.17	6.81177E-03	46.50	Sum
M	20	657.75	8.14773E-03	36.96	Sum
	23	794.29	1.82059E-02	32.56	Sum
	24	807.05	6.30268E-03	51.96	
M	27	965.05	9.27563E-03	41.71	Sum
	29	1105.00	3.56801E-03	57.08	
	31	1367.40	4.16667E-03	61.80	
	32	1376.70	6.39731E-03	33.07	Sum
m	34	1464.68	1.88975E-02	30.09	
	35	1579.19	2.33796E-03	50.58	Sum
	36	1686.35	1.78819E-03	51.67	
M	37	1724.16	2.37899E-03	48.32	Sum
m	38	1730.21	2.96031E-03	57.17	Sum
	40	1824.94	1.94444E-03	37.80	Sum
	41	1848.23	4.77053E-03	38.68	Sum
	42	2001.68	1.22685E-03	68.16	
	43	2034.25	2.77778E-03	31.62	
	44	2133.46	1.80556E-03	70.71	
	45	2292.78	1.94444E-03	62.27	
	46	2461.95	2.34848E-03	46.57	

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 1905060-04

R1 0-6

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	-7.35E-03	1.04E+00	1.04E+00
+	NA-22	1274.54	99.94	-1.80E-02	1.01E-01	1.01E-01
+	NA-24	1368.53	99.99	4.33E-02	5.10E-02	8.40E-02
		2754.09	99.86	1.10E-02		5.10E-02
+	AL-26	1808.65	99.76	2.07E-02	6.40E-02	6.40E-02
+	K-40	1460.81	*	10.67	1.89E+00	1.89E+00
+	@ AR-41	1293.64	99.16	1.00E+26	1.00E+26	1.00E+26
+	TI-44	67.88	94.40	-4.16E-02	8.58E-02	8.58E-02
		78.34	96.00	2.38E-01		1.08E-01
+	SC-46	889.25	98.98	1.77E-02	1.11E-01	1.11E-01
		1120.51	99.90	1.82E-01		1.77E-01
+	V-48	983.52	99.98	-6.54E-03	2.52E-01	2.52E-01
		1312.10	97.50	-3.18E-02		3.03E-01
+	CR-51	320.08	9.83	7.56E-01	1.41E+00	1.41E+00
+	MN-54	834.83	99.97	-2.04E-02	1.00E-01	1.00E-01
+	CO-56	846.75	99.96	2.46E-02	1.13E-01	1.13E-01
		1037.75	14.03	-1.55E-01		7.01E-01
		1238.25	67.00	6.24E-02		2.40E-01
		1771.40	15.51	-2.96E-01		5.80E-01
		2587.48	16.90	-8.08E-02		5.30E-01
+	CO-57	122.06	85.51	1.29E-02	7.22E-02	7.22E-02
		136.48	10.60	4.73E-02		5.77E-01
+	CO-58	810.76	99.40	-1.81E-02	9.30E-02	9.30E-02
+	FE-59	1099.22	56.50	1.50E-01	2.76E-01	2.76E-01
		1291.56	43.20	9.31E-02		3.11E-01
+	CO-60	1173.22	100.00	5.70E-03	7.77E-02	9.76E-02
		1332.49	100.00	-9.80E-03		7.77E-02
+	ZN-65	1115.52	50.75	-1.43E-01	2.41E-01	2.41E-01
+	GA-67	93.31	35.70	3.57E+01	5.30E+01	5.30E+01
		208.95	2.24	5.72E+02		7.04E+02
		300.22	16.00	-4.70E+01		1.29E+02
+	SE-75	121.11	16.70	-1.20E-01	1.13E-01	3.97E-01
		136.00	59.50	4.65E-02		1.13E-01
		264.65	59.80	-5.94E-03		1.30E-01
		279.53	25.20	7.36E-02		3.27E-01
		400.65	11.40	-2.00E-01		7.50E-01
+	RB-82	776.52	13.00	-4.67E-01	1.30E+00	1.30E+00
+	RB-83	520.41	46.00	-7.39E-02	1.79E-01	1.79E-01
		529.64	30.30	5.02E-02		2.85E-01
		552.65	16.40	1.81E-01		5.76E-01

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	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	KR-85	513.99	*	0.43	2.40E+01	3.65E+01	3.65E+01
+	SR-85	513.99	*	99.27	1.38E-01	2.09E-01	2.09E-01
+	Y-88	898.02		93.40	-2.57E-02	7.20E-02	1.05E-01
		1836.01		99.38	5.11E-03		7.20E-02
+	MO-93	263.06		56.72	1.21E-02	7.30E-02	1.19E-01
		684.67		99.68	1.25E-03		7.30E-02
		1477.11		99.08	-2.37E-02		7.76E-02
+	NB-93M	16.57		9.43	-2.93E+01	1.63E+01	1.63E+01
+	NB-94	702.63		100.00	-3.65E-02	7.88E-02	8.67E-02
		871.10		100.00	-3.90E-03		7.88E-02
+	NB-95	765.79		99.81	4.84E-02	1.48E-01	1.48E-01
+	NB-95M	235.69		25.00	4.03E+01	6.40E+01	6.40E+01
+	ZR-95	724.18		43.70	-1.42E-01	1.98E-01	2.84E-01
		756.72		55.30	6.53E-02		1.98E-01
+	MO-99	181.06		6.20	-8.19E+02	4.29E+02	6.03E+02
		739.58		12.80	9.15E+01		4.29E+02
		778.00		4.50	-1.25E+03		1.18E+03
+	TC-99M	140.51		89.00	-4.37E-02	6.35E-02	6.35E-02
+	RU-103	497.08		89.00	-5.67E-02	1.30E-01	1.30E-01
+	RU-106	621.84		9.80	-1.33E-01	8.49E-01	8.49E-01
+	AG-108M	433.93		89.90	-2.30E-02	7.91E-02	7.91E-02
		614.37		90.40	-1.58E-01		1.10E-01
		722.95		90.50	4.74E-03		9.67E-02
+	CD-109	88.03		3.72	4.34E-01	2.29E+00	2.29E+00
+	AG-110M	657.75		93.14	3.09E-02	1.17E-01	1.17E-01
		677.61		10.53	3.09E-01		8.71E-01
		706.67		16.46	1.78E-01		6.12E-01
		763.93		21.98	-1.20E-01		3.82E-01
		884.67		21.98	-7.99E-02		3.81E-01
		1384.27		23.94	8.06E-02		3.37E-01
+	CD-113M	263.70		0.02	2.82E+00	2.91E+02	2.91E+02
+	SN-113	255.12		1.93	-1.40E+00	1.28E-01	3.90E+00
		391.69		64.90	-1.89E-02		1.28E-01
+	TE-123M	159.00		84.10	6.08E-02	8.50E-02	8.50E-02
+	SB-124	602.71		97.87	3.06E-02	1.13E-01	1.13E-01
		645.85		7.26	1.78E-01		1.51E+00
		722.78		11.10	5.19E-02		1.06E+00
		1691.02		49.00	-2.23E-02		1.46E-01
+	I-125	35.49		6.49	-2.73E-01	2.49E+00	2.49E+00
+	SB-125	176.33		6.89	-2.51E-01	2.60E-01	8.30E-01
		427.89		29.33	1.00E-01		2.60E-01
		463.38		10.35	1.24E+00		8.90E-01
		600.56		17.80	5.38E-02		4.13E-01
		635.90		11.32	4.50E-02		6.70E-01
+	SB-126	414.70		83.30	1.14E-02	8.74E-02	9.33E-02
		666.33		99.60	-2.82E-02		9.10E-02
		695.00		99.60	-1.76E-04		8.74E-02
		720.50		53.80	3.64E-02		1.47E-01

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	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	SN-126	87.57	37.00	4.20E-02	2.22E-01	2.22E-01
+	SB-127	473.00	25.00	8.15E+00	2.08E+01	3.08E+01
		685.00	35.70	3.55E-01		2.08E+01
		783.80	14.70	4.26E+01		6.53E+01
+	I-129	29.78	57.00	2.40E-01	3.24E-01	3.24E-01
		33.60	13.20	-3.87E-01		9.94E-01
		39.58	7.52	2.92E-01		1.39E+00
+	I-131	284.30	6.05	5.65E+00	7.87E-01	1.06E+01
		364.48	81.20	1.28E-01		7.87E-01
		636.97	7.26	1.29E-02		9.27E+00
		722.89	1.80	2.18E+00		4.45E+01
+	TE-132	49.72	13.10	-1.82E+01	1.97E+01	1.58E+02
		228.16	*	88.00	1.45E+01	1.97E+01
+	BA-133	81.00	33.00	-2.07E-01	1.68E-01	2.60E-01
		302.84	17.80	-5.06E-02		4.56E-01
		356.01	60.00	1.30E-02		1.68E-01
+	I-133	529.87	86.30	1.21E+07	6.90E+07	6.90E+07
+	XE-133	81.00	38.00	-5.36E+00	6.73E+00	6.73E+00
+	CS-134	563.23	8.38	4.89E-02	1.18E-01	9.97E-01
		569.32	15.43	-2.42E-02		5.22E-01
		604.70	97.60	-1.42E-01		1.18E-01
		795.84	85.40	2.72E-02		1.22E-01
		801.93	8.73	-3.35E-01		9.25E-01
+	CS-135	268.24	16.00	2.18E-01	4.65E-01	4.65E-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	-8.42E-01	2.59E-01	2.98E+00
		163.89	4.61	-2.25E+00		4.64E+00
		176.55	13.56	-4.85E-01		1.61E+00
		273.65	12.66	-2.42E-01		2.26E+00
		340.57	48.50	5.18E-01		7.21E-01
		818.50	99.70	-5.69E-02		2.59E-01
		1048.07	79.60	1.08E-01		4.48E-01
		1235.34	19.70	4.71E-01		2.56E+00
+	CS-137	661.65	*	85.12	2.06E-01	1.39E-01
+	LA-138	788.74	34.00	2.93E-02	1.14E-01	2.75E-01
		1435.80	66.00	-8.23E-03		1.14E-01
+	CE-139	165.85	80.35	-1.41E-02	7.83E-02	7.83E-02
+	BA-140	162.64	6.70	-1.71E+00	1.17E+00	3.34E+00
		304.84	4.50	-1.88E+00		6.80E+00
		423.70	3.20	1.02E+00		9.07E+00
		437.55	2.00	1.61E+00		1.44E+01
		537.32	25.00	4.18E-01		1.17E+00
+	LA-140	328.77	20.50	1.19E+00	3.51E-01	1.56E+00
		487.03	45.50	-2.71E-01		6.45E-01
		815.85	23.50	5.57E-01		1.16E+00
		1596.49	95.49	2.47E-02		3.51E-01
+	CE-141	145.44	48.40	8.68E-02	2.15E-01	2.15E-01

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	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	CE-143	57.36	11.80	-1.76E+04	9.91E+04	2.76E+05
		293.26	42.00	1.25E+05		9.91E+04
		664.55	5.20	4.25E+05		8.74E+05
+	CE-144	133.54	10.80	-3.92E-01	5.55E-01	5.55E-01
+	PM-144	476.78	42.00	6.72E-02	8.73E-02	1.94E-01
		618.01	98.60	-1.80E-02		8.73E-02
		696.49	99.49	8.02E-03		9.33E-02
+	PM-145	36.85	21.70	-1.67E-01	2.81E-01	5.17E-01
		37.36	39.70	-2.56E-02		2.81E-01
		42.30	15.10	8.10E-02		6.50E-01
		72.40	2.31	-4.25E+00		4.03E+00
+	PM-146	453.90	39.94	1.07E-01	1.88E-01	1.88E-01
		735.90	14.01	2.97E-03		5.97E-01
		747.13	13.10	1.07E-01		6.86E-01
+	ND-147	91.11	28.90	4.34E-01	1.47E+00	1.47E+00
		531.02	13.10	6.90E-01		2.71E+00
+	PM-149	285.90	3.10	1.24E+03	6.95E+03	6.95E+03
+	EU-152	121.78	20.50	5.07E-02	2.83E-01	2.83E-01
		244.69	5.40	-5.02E-01		1.72E+00
		344.27	19.13	-1.01E+00		3.97E-01
		778.89	9.10	-6.65E-01		9.17E-01
		964.01	10.40	-1.18E+00		1.12E+00
		1085.78	7.22	-1.69E-01		1.12E+00
		1112.02	9.60	1.05E-01		9.47E-01
		1407.95	14.94	6.85E-03		4.82E-01
+	GD-153	97.43	31.30	-7.83E-02	2.22E-01	2.22E-01
		103.18	22.20	-3.43E-02		2.73E-01
+	EU-154	123.07	40.50	-3.13E-02	1.43E-01	1.43E-01
		723.30	19.70	-2.40E-01		4.79E-01
		873.19	11.50	2.93E-02		6.82E-01
		996.32	10.30	8.64E-02		8.83E-01
		1004.76	17.90	9.45E-02		4.83E-01
		1274.45	35.50	-5.00E-02		2.80E-01
+	EU-155	86.50	30.90	-4.46E-02	2.63E-01	2.63E-01
		105.30	20.70	-2.10E-02		2.76E-01
+	EU-156	811.77	10.40	1.42E-01	2.24E+00	2.24E+00
		1153.47	7.20	1.05E+00		4.92E+00
		1230.71	8.90	2.89E+00		4.58E+00
+	HO-166M	184.41	72.60	7.24E-02	9.98E-02	9.98E-02
		280.45	29.60	-1.15E-01		2.34E-01
		410.94	11.10	1.44E-01		7.27E-01
		711.69	54.10	-1.98E-02		1.60E-01
+	TM-171	66.72	0.14	-6.04E+00	6.12E+01	6.12E+01
+	HF-172	67.35	5.31	-7.61E-01	5.41E-01	1.57E+00
		125.82	11.30	-1.20E-01		5.41E-01
+	LU-172	181.53	20.60	-2.91E+00	2.20E+00	4.29E+00
		900.72	29.81	1.17E+00		4.30E+00
		1093.66	62.50	7.71E-01		2.20E+00
+	LU-173	100.72	5.24	-2.99E-01	3.66E-01	1.14E+00

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Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
LU-173	272.11	21.20	5.71E-02	3.66E-01	3.66E-01
+ HF-175	343.40	84.00	-1.83E-01	1.18E-01	1.18E-01
+ LU-176	88.34	13.30	1.99E-01	6.66E-02	6.28E-01
	201.83	86.00	-3.40E-02		6.66E-02
	306.78	94.00	2.28E-03		7.82E-02
+ HF-181	133.02	41.70	-7.83E-03	1.38E-01	2.16E-01
	345.85	17.20	-2.52E+00		6.86E-01
	482.03	82.80	-4.84E-03		1.38E-01
+ TA-182	67.75	41.20	-1.11E-01	2.30E-01	2.30E-01
	1121.30	34.90	4.93E-01		4.78E-01
	1189.05	16.23	7.94E-02		6.58E-01
	1221.41	26.98	1.74E-01		5.00E-01
	1231.02	11.44	8.13E-01		1.29E+00
+ IR-192	308.46	29.68	-1.20E-02	1.96E-01	3.03E-01
	468.07	48.10	2.52E-02		1.96E-01
+ HG-203	279.19	77.30	3.03E-02	1.35E-01	1.35E-01
+ TL-204	374.74	94.11	-7.36E-03	7.49E-02	7.49E-02
	899.15	99.16	-4.22E-02		8.35E-02
	911.74	91.10	2.78E-01		1.82E-01
+ BI-207	569.67	97.72	-3.73E-03	8.07E-02	8.07E-02
	1063.62	74.90	6.51E-02		1.37E-01
+ TL-208	583.14	* 30.22	1.09E+00	2.63E-01	5.23E-01
	860.37	* 4.48	1.93E+00		3.80E+00
	2614.66	* 35.85	1.20E+00		2.63E-01
+ BI-210M	262.00	45.00	3.26E-02	1.51E-01	1.51E-01
	300.00	23.00	1.25E-01		4.09E-01
+ PB-210	46.50	* 4.25	1.96E+00	3.37E+00	3.37E+00
+ PB-211	404.84	2.90	-4.99E-01	2.74E+00	2.74E+00
	831.96	2.90	-1.21E+00		2.99E+00
+ BI-212	727.17	* 11.80	1.19E+00	1.03E+00	1.03E+00
	1620.62	2.75	8.86E-01		3.14E+00
+ PB-212	238.63	* 44.60	2.08E+00	3.41E-01	3.41E-01
	300.09	3.41	8.47E-01		2.76E+00
+ BI-214	609.31	* 46.30	1.33E+00	2.38E-01	3.96E-01
	1120.29	* 15.10	1.16E+00		1.35E+00
	1764.49	* 15.80	1.32E+00		2.38E-01
	2204.22	4.98	1.34E+00		2.07E+00
+ PB-214	295.21	19.19	9.15E-01	3.69E-01	5.43E-01
	351.92	* 37.19	1.13E+00		3.69E-01
+ RN-219	401.80	6.50	-3.27E-01	1.15E+00	1.15E+00
+ RA-223	323.87	3.88	-6.78E-01	1.90E+00	1.90E+00
+ RA-224	240.98	* 3.95	2.35E+01	3.85E+00	3.85E+00
+ RA-225	40.00	31.00	2.32E-01	1.10E+00	1.10E+00
+ RA-226	186.21	* 3.28	2.94E+00	3.33E+00	3.33E+00
+ TH-227	50.10	8.40	-1.19E-01	1.00E+00	1.03E+00
	236.00	11.50	6.30E-01		1.00E+00
	256.20	6.30	6.18E-02		1.06E+00
+ AC-228	338.32	* 11.40	1.59E+00	5.43E-01	1.03E+00

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Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
AC-228	911.07	*	27.70	1.48E+00	5.43E-01	5.43E-01
	969.11	*	16.60	1.04E+00		1.23E+00
+ TH-230	48.43	*	16.90	4.92E-01	8.46E-01	8.46E-01
	62.85	*	4.60	2.65E+00		3.62E+00
	67.67		0.37	-1.06E+01		2.19E+01
+ PA-231	283.67		1.60	-8.52E-02	3.51E+00	4.30E+00
	302.67		2.30	-3.90E-01		3.51E+00
+ TH-231	25.64		14.70	-1.14E+01	1.20E+00	2.42E+00
	84.21		6.40	-6.05E-01		1.20E+00
+ PA-233	311.98		38.60	-1.32E-01	3.42E-01	3.42E-01
+ PA-234	131.20		20.40	9.56E-02	2.96E-01	2.96E-01
	733.99		8.80	-2.24E-02		8.78E-01
	946.00		12.00	6.24E-02		7.17E-01
+ PA-234M	1001.03		0.92	4.67E-02	1.02E+01	1.02E+01
+ TH-234	63.29	*	3.80	3.21E+00	4.38E+00	4.38E+00
+ U-235	143.76		10.50	3.75E-01	5.80E-01	5.80E-01
	163.35		4.70	-5.69E-01		1.17E+00
	205.31		4.70	-1.72E-02		1.31E+00
+ NP-237	86.50		12.60	-1.08E-01	6.38E-01	6.38E-01
+ NP-239	106.10		22.70	-3.65E+01	4.81E+02	4.81E+02
	228.18		10.70	9.89E+01		1.28E+03
	277.60		14.10	-2.34E+02		9.64E+02
+ AM-241	59.54		35.90	-2.03E-01	2.24E-01	2.24E-01
+ AM-243	74.67	*	66.00	3.24E-01	2.32E-01	2.32E-01
+ CM-243	209.75		3.29	1.68E+00	5.05E-01	2.01E+00
	228.14		10.60	1.70E-02		6.74E-01
	277.60		14.00	-1.23E-01		5.05E-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

? = 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 1905060-04

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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	1.04E+00	1.04E+00	-7.35E-03	4.89E-01
NA-22	1274.54	99.94	1.01E-01	1.01E-01	-1.80E-02	4.59E-02
NA-24	1368.53	99.99	8.40E-02	5.10E-02	4.33E-02	3.73E-02
	2754.09	99.86	5.10E-02		1.10E-02	1.81E-02
AL-26	1808.65	99.76	6.40E-02	6.40E-02	2.07E-02	2.62E-02
+ K-40	1460.81	*	10.67	1.89E+00	1.48E+01	8.99E-01
@ AR-41	1293.64		99.16	1.00E+26	1.00E+26	1.00E+20
TI-44	67.88	94.40	8.58E-02	8.58E-02	-4.16E-02	4.19E-02
	78.34	96.00	1.08E-01		2.38E-01	5.29E-02
SC-46	889.25	98.98	1.11E-01	1.11E-01	1.77E-02	5.13E-02
	1120.51	99.90	1.77E-01		1.82E-01	8.32E-02
V-48	983.52	99.98	2.52E-01	2.52E-01	-6.54E-03	1.15E-01
	1312.10	97.50	3.03E-01		-3.18E-02	1.37E-01
CR-51	320.08	9.83	1.41E+00	1.41E+00	7.56E-01	6.74E-01
MN-54	834.83	99.97	1.00E-01	1.00E-01	-2.04E-02	4.66E-02
CO-56	846.75	99.96	1.13E-01	1.13E-01	2.46E-02	5.25E-02
	1037.75	14.03	7.01E-01		-1.55E-01	3.15E-01
	1238.25	67.00	2.40E-01		6.24E-02	1.12E-01
	1771.40	15.51	5.80E-01		-2.96E-01	2.43E-01
	2587.48	16.90	5.30E-01		-8.08E-02	2.10E-01
CO-57	122.06	85.51	7.22E-02	7.22E-02	1.29E-02	3.49E-02
	136.48	10.60	5.77E-01		4.73E-02	2.79E-01
CO-58	810.76	99.40	9.30E-02	9.30E-02	-1.81E-02	4.24E-02
FE-59	1099.22	56.50	2.76E-01	2.76E-01	1.50E-01	1.28E-01
	1291.56	43.20	3.11E-01		9.31E-02	1.40E-01
CO-60	1173.22	100.00	9.76E-02	7.77E-02	5.70E-03	4.45E-02
	1332.49	100.00	7.77E-02		-9.80E-03	3.42E-02
ZN-65	1115.52	50.75	2.41E-01	2.41E-01	-1.43E-01	1.12E-01
GA-67	93.31	35.70	5.30E+01	5.30E+01	3.57E+01	2.59E+01
	208.95	2.24	7.04E+02		5.72E+02	3.40E+02
	300.22	16.00	1.29E+02		-4.70E+01	6.21E+01
SE-75	121.11	16.70	3.97E-01	1.13E-01	-1.20E-01	1.92E-01
	136.00	59.50	1.13E-01		4.65E-02	5.44E-02
	264.65	59.80	1.30E-01		-5.94E-03	6.21E-02
	279.53	25.20	3.27E-01		7.36E-02	1.57E-01
	400.65	11.40	7.50E-01		-2.00E-01	3.57E-01
RB-82	776.52	13.00	1.30E+00	1.30E+00	-4.67E-01	6.04E-01
RB-83	520.41	46.00	1.79E-01	1.79E-01	-7.39E-02	8.36E-02
	529.64	30.30	2.85E-01		5.02E-02	1.33E-01
	552.65	16.40	5.76E-01		1.81E-01	2.71E-01
+ KR-85	513.99	*	0.43	3.65E+01	2.40E+01	1.77E+01
+ SR-85	513.99	*	99.27	2.09E-01	1.38E-01	1.01E-01
Y-88	898.02	93.40	1.05E-01	7.20E-02	-2.57E-02	4.79E-02
	1836.01	99.38	7.20E-02		5.11E-03	2.91E-02
MO-93	263.06	56.72	1.19E-01	7.30E-02	1.21E-02	5.72E-02
	684.67	99.68	7.30E-02		1.25E-03	3.37E-02
	1477.11	99.08	7.76E-02		-2.37E-02	3.37E-02
NB-93M	16.57	9.43	1.63E+01	1.63E+01	-2.93E+01	7.78E+00
NB-94	702.63	100.00	8.67E-02	7.88E-02	-3.65E-02	4.05E-02
	871.10	100.00	7.88E-02		-3.90E-03	3.61E-02
NB-95	765.79	99.81	1.48E-01	1.48E-01	4.84E-02	6.90E-02

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Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
NB-95M	235.69	25.00	6.40E+01	6.40E+01	4.03E+01	3.13E+01
ZR-95	724.18	43.70	2.84E-01	1.98E-01	-1.42E-01	1.33E-01
	756.72	55.30	1.98E-01		6.53E-02	9.16E-02
MO-99	181.06	6.20	6.03E+02	4.29E+02	-8.19E+02	2.90E+02
	739.58	12.80	4.29E+02		9.15E+01	1.99E+02
	778.00	4.50	1.18E+03		-1.25E+03	5.44E+02
TC-99M	140.51	89.00	6.35E-02	6.35E-02	-4.37E-02	3.06E-02
RU-103	497.08	89.00	1.30E-01	1.30E-01	-5.67E-02	6.12E-02
RU-106	621.84	9.80	8.49E-01	8.49E-01	-1.33E-01	3.97E-01
AG-108M	433.93	89.90	7.91E-02	7.91E-02	-2.30E-02	3.74E-02
	614.37	90.40	1.10E-01		-1.58E-01	5.21E-02
	722.95	90.50	9.67E-02		4.74E-03	4.51E-02
CD-109	88.03	3.72	2.29E+00	2.29E+00	4.34E-01	1.12E+00
AG-110M	657.75	93.14	1.17E-01	1.17E-01	3.09E-02	5.55E-02
	677.61	10.53	8.71E-01		3.09E-01	4.07E-01
	706.67	16.46	6.12E-01		1.78E-01	2.88E-01
	763.93	21.98	3.82E-01		-1.20E-01	1.76E-01
	884.67	21.98	3.81E-01		-7.99E-02	1.74E-01
	1384.27	23.94	3.37E-01		8.06E-02	1.47E-01
CD-113M	263.70	0.02	2.91E+02	2.91E+02	2.82E+00	1.40E+02
SN-113	255.12	1.93	3.90E+00	1.28E-01	-1.40E+00	1.87E+00
	391.69	64.90	1.28E-01		-1.89E-02	6.07E-02
TE-123M	159.00	84.10	8.50E-02	8.50E-02	6.08E-02	4.11E-02
SB-124	602.71	97.87	1.13E-01	1.13E-01	3.06E-02	5.31E-02
	645.85	7.26	1.51E+00		1.78E-01	7.07E-01
	722.78	11.10	1.06E+00		5.19E-02	4.94E-01
	1691.02	49.00	1.46E-01		-2.23E-02	5.80E-02
I-125	35.49	6.49	2.49E+00	2.49E+00	-2.73E-01	1.20E+00
SB-125	176.33	6.89	8.30E-01	2.60E-01	-2.51E-01	3.99E-01
	427.89	29.33	2.60E-01		1.00E-01	1.23E-01
	463.38	10.35	8.90E-01		1.24E+00	4.25E-01
	600.56	17.80	4.13E-01		5.38E-02	1.92E-01
	635.90	11.32	6.70E-01		4.50E-02	3.11E-01
SB-126	414.70	83.30	9.33E-02	8.74E-02	1.14E-02	4.44E-02
	666.33	99.60	9.10E-02		-2.82E-02	4.28E-02
	695.00	99.60	8.74E-02		-1.76E-04	4.09E-02
	720.50	53.80	1.47E-01		3.64E-02	6.79E-02
SN-126	87.57	37.00	2.22E-01	2.22E-01	4.20E-02	1.09E-01
SB-127	473.00	25.00	3.08E+01	2.08E+01	8.15E+00	1.46E+01
	685.00	35.70	2.08E+01		3.55E-01	9.59E+00
	783.80	14.70	6.53E+01		4.26E+01	3.05E+01
I-129	29.78	57.00	3.24E-01	3.24E-01	2.40E-01	1.57E-01
	33.60	13.20	9.94E-01		-3.87E-01	4.80E-01
	39.58	7.52	1.39E+00		2.92E-01	6.71E-01
I-131	284.30	6.05	1.06E+01	7.87E-01	5.65E+00	5.08E+00
	364.48	81.20	7.87E-01		1.28E-01	3.74E-01
	636.97	7.26	9.27E+00		1.29E-02	4.30E+00
	722.89	1.80	4.45E+01		2.18E+00	2.08E+01
+ TE-132	49.72	13.10	1.58E+02	1.97E+01	-1.82E+01	7.67E+01
	228.16	* 88.00	1.97E+01		1.45E+01	9.54E+00
BA-133	81.00	33.00	2.60E-01	1.68E-01	-2.07E-01	1.27E-01
	302.84	17.80	4.56E-01		-5.06E-02	2.20E-01
	356.01	60.00	1.68E-01		1.30E-02	8.11E-02

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Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
I-133	529.87	86.30	6.90E+07	6.90E+07	1.21E+07	3.23E+07
XE-133	81.00	38.00	6.73E+00	6.73E+00	-5.36E+00	3.29E+00
CS-134	563.23	8.38	9.97E-01	1.18E-01	4.89E-02	4.70E-01
	569.32	15.43	5.22E-01		-2.42E-02	2.45E-01
	604.70	97.60	1.18E-01		-1.42E-01	5.62E-02
	795.84	85.40	1.22E-01		2.72E-02	5.73E-02
	801.93	8.73	9.25E-01		-3.35E-01	4.26E-01
CS-135	268.24	16.00	4.65E-01	4.65E-01	2.18E-01	2.24E-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	2.98E+00	2.59E-01	-8.42E-01	1.44E+00
	163.89	4.61	4.64E+00		-2.25E+00	2.23E+00
	176.55	13.56	1.61E+00		-4.85E-01	7.72E-01
	273.65	12.66	2.26E+00		-2.42E-01	1.09E+00
	340.57	48.50	7.21E-01		5.18E-01	3.48E-01
	818.50	99.70	2.59E-01		-5.69E-02	1.17E-01
	1048.07	79.60	4.48E-01		1.08E-01	2.05E-01
	1235.34	19.70	2.56E+00		4.71E-01	1.20E+00
+ CS-137	661.65	* 85.12	1.39E-01	1.39E-01	2.06E-01	6.65E-02
LA-138	788.74	34.00	2.75E-01	1.14E-01	2.93E-02	1.29E-01
	1435.80	66.00	1.14E-01		-8.23E-03	4.94E-02
CE-139	165.85	80.35	7.83E-02	7.83E-02	-1.41E-02	3.77E-02
BA-140	162.64	6.70	3.34E+00	1.17E+00	-1.71E+00	1.61E+00
	304.84	4.50	6.80E+00		-1.88E+00	3.27E+00
	423.70	3.20	9.07E+00		1.02E+00	4.29E+00
	437.55	2.00	1.44E+01		1.61E+00	6.81E+00
	537.32	25.00	1.17E+00		4.18E-01	5.47E-01
LA-140	328.77	20.50	1.56E+00	3.51E-01	1.19E+00	7.47E-01
	487.03	45.50	6.45E-01		-2.71E-01	3.04E-01
	815.85	23.50	1.16E+00		5.57E-01	5.23E-01
	1596.49	95.49	3.51E-01		2.47E-02	1.53E-01
CE-141	145.44	48.40	2.15E-01	2.15E-01	8.68E-02	1.04E-01
CE-143	57.36	11.80	2.76E+05	9.91E+04	-1.76E+04	1.34E+05
	293.26	42.00	9.91E+04		1.25E+05	4.81E+04
	664.55	5.20	8.74E+05		4.25E+05	4.15E+05
CE-144	133.54	10.80	5.55E-01	5.55E-01	-3.92E-01	2.68E-01
PM-144	476.78	42.00	1.94E-01	8.73E-02	6.72E-02	9.17E-02
	618.01	98.60	8.73E-02		-1.80E-02	4.09E-02
	696.49	99.49	9.33E-02		8.02E-03	4.37E-02
PM-145	36.85	21.70	5.17E-01	2.81E-01	-1.67E-01	2.50E-01
	37.36	39.70	2.81E-01		-2.56E-02	1.36E-01
	42.30	15.10	6.50E-01		8.10E-02	3.15E-01
	72.40	2.31	4.03E+00		-4.25E+00	1.97E+00
PM-146	453.90	39.94	1.88E-01	1.88E-01	1.07E-01	8.87E-02
	735.90	14.01	5.97E-01		2.97E-03	2.77E-01
	747.13	13.10	6.86E-01		1.07E-01	3.20E-01
ND-147	91.11	28.90	1.47E+00	1.47E+00	4.34E-01	7.21E-01
	531.02	13.10	2.71E+00		6.90E-01	1.27E+00
PM-149	285.90	3.10	6.95E+03	6.95E+03	1.24E+03	3.33E+03
EU-152	121.78	20.50	2.83E-01	2.83E-01	5.07E-02	1.37E-01
	244.69	5.40	1.72E+00		-5.02E-01	8.35E-01
	344.27	19.13	3.97E-01		-1.01E+00	1.90E-01

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Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
EU-152	778.89	9.10	9.17E-01	2.83E-01	-6.65E-01	4.25E-01
	964.01	10.40	1.12E+00		-1.18E+00	5.25E-01
	1085.78	7.22	1.12E+00		-1.69E-01	5.03E-01
	1112.02	9.60	9.47E-01		1.05E-01	4.31E-01
	1407.95	14.94	4.82E-01		6.85E-03	2.09E-01
GD-153	97.43	31.30	2.22E-01	2.22E-01	-7.83E-02	1.08E-01
	103.18	22.20	2.73E-01		-3.43E-02	1.32E-01
EU-154	123.07	40.50	1.43E-01	1.43E-01	-3.13E-02	6.92E-02
	723.30	19.70	4.79E-01		-2.40E-01	2.25E-01
	873.19	11.50	6.82E-01		2.93E-02	3.12E-01
	996.32	10.30	8.83E-01		8.64E-02	4.05E-01
	1004.76	17.90	4.83E-01		9.45E-02	2.20E-01
	1274.45	35.50	2.80E-01		-5.00E-02	1.27E-01
EU-155	86.50	30.90	2.63E-01	2.63E-01	-4.46E-02	1.28E-01
	105.30	20.70	2.76E-01		-2.10E-02	1.34E-01
EU-156	811.77	10.40	2.24E+00	2.24E+00	1.42E-01	1.02E+00
	1153.47	7.20	4.92E+00		1.05E+00	2.27E+00
	1230.71	8.90	4.58E+00		2.89E+00	2.13E+00
HO-166M	184.41	72.60	9.98E-02	9.98E-02	7.24E-02	4.84E-02
	280.45	29.60	2.34E-01		-1.15E-01	1.12E-01
	410.94	11.10	7.27E-01		1.44E-01	3.47E-01
	711.69	54.10	1.60E-01		-1.98E-02	7.45E-02
TM-171	66.72	0.14	6.12E+01	6.12E+01	-6.04E+00	2.99E+01
HF-172	67.35	5.31	1.57E+00	5.41E-01	-7.61E-01	7.66E-01
	125.82	11.30	5.41E-01		-1.20E-01	2.62E-01
LU-172	181.53	20.60	4.29E+00	2.20E+00	-2.91E+00	2.07E+00
	900.72	29.81	4.30E+00		1.17E+00	1.99E+00
	1093.66	62.50	2.20E+00		7.71E-01	1.01E+00
LU-173	100.72	5.24	1.14E+00	3.66E-01	-2.99E-01	5.54E-01
	272.11	21.20	3.66E-01		5.71E-02	1.76E-01
HF-175	343.40	84.00	1.18E-01	1.18E-01	-1.83E-01	5.63E-02
LU-176	88.34	13.30	6.28E-01	6.66E-02	1.99E-01	3.07E-01
	201.83	86.00	6.66E-02		-3.40E-02	3.20E-02
	306.78	94.00	7.82E-02		2.28E-03	3.75E-02
HF-181	133.02	41.70	2.16E-01	1.38E-01	-7.83E-03	1.05E-01
	345.85	17.20	6.86E-01		-2.52E+00	3.28E-01
	482.03	82.80	1.38E-01		-4.84E-03	6.53E-02
TA-182	67.75	41.20	2.30E-01	2.30E-01	-1.11E-01	1.12E-01
	1121.30	34.90	4.78E-01		4.93E-01	2.25E-01
	1189.05	16.23	6.58E-01		7.94E-02	2.98E-01
	1221.41	26.98	5.00E-01		1.74E-01	2.31E-01
	1231.02	11.44	1.29E+00		8.13E-01	6.00E-01
IR-192	308.46	29.68	3.03E-01	1.96E-01	-1.20E-02	1.45E-01
	468.07	48.10	1.96E-01		2.52E-02	9.23E-02
HG-203	279.19	77.30	1.35E-01	1.35E-01	3.03E-02	6.46E-02
TL-204	374.74	94.11	7.49E-02	7.49E-02	-7.36E-03	3.56E-02
	899.15	99.16	8.35E-02		-4.22E-02	3.82E-02
	911.74	91.10	1.82E-01		2.78E-01	8.70E-02
BI-207	569.67	97.72	8.07E-02	8.07E-02	-3.73E-03	3.79E-02
	1063.62	74.90	1.37E-01		6.51E-02	6.30E-02
+ TL-208	583.14	*	30.22	2.63E-01	1.09E+00	2.53E-01
	860.37	*	4.48		1.93E+00	1.83E+00
	2614.66	*	35.85		1.20E+00	1.12E-01

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Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
BI-210M	262.00	45.00	1.51E-01	1.51E-01	3.26E-02	7.27E-02
	300.00	23.00	4.09E-01		1.25E-01	1.98E-01
PB-210	46.50	*	4.25	3.37E+00	3.37E+00	1.66E+00
PB-211	404.84		2.90	2.74E+00	2.74E+00	-4.99E-01
	831.96		2.90	2.99E+00		-1.21E+00
+ BI-212	727.17	*	11.80	1.03E+00	1.03E+00	1.19E+00
	1620.62		2.75	3.14E+00		8.86E-01
+ PB-212	238.63	*	44.60	3.41E-01	3.41E-01	2.08E+00
	300.09		3.41	2.76E+00		8.47E-01
+ BI-214	609.31	*	46.30	3.96E-01	2.38E-01	1.33E+00
	1120.29	*	15.10	1.35E+00		1.16E+00
	1764.49	*	15.80	2.38E-01		1.32E+00
	2204.22		4.98	2.07E+00		1.34E+00
+ PB-214	295.21		19.19	5.43E-01	3.69E-01	9.15E-01
	351.92	*	37.19	3.69E-01		1.13E+00
RN-219	401.80		6.50	1.15E+00	1.15E+00	-3.27E-01
RA-223	323.87		3.88	1.90E+00	1.90E+00	-6.78E-01
+ RA-224	240.98	*	3.95	3.85E+00	3.85E+00	2.35E+01
RA-225	40.00		31.00	1.10E+00	1.10E+00	2.32E-01
+ RA-226	186.21	*	3.28	3.33E+00	3.33E+00	2.94E+00
TH-227	50.10		8.40	1.03E+00	1.00E+00	-1.19E-01
	236.00		11.50	1.00E+00		6.30E-01
	256.20		6.30	1.06E+00		6.18E-02
+ AC-228	338.32	*	11.40	1.03E+00	5.43E-01	1.59E+00
	911.07	*	27.70	5.43E-01		1.48E+00
	969.11	*	16.60	1.23E+00		1.04E+00
+ TH-230	48.43	*	16.90	8.46E-01	8.46E-01	4.92E-01
	62.85	*	4.60	3.62E+00		2.65E+00
	67.67		0.37	2.19E+01		-1.06E+01
PA-231	283.67		1.60	4.30E+00	3.51E+00	-8.52E-02
	302.67		2.30	3.51E+00		-3.90E-01
TH-231	25.64		14.70	2.42E+00	1.20E+00	-1.14E+01
	84.21		6.40	1.20E+00		-6.05E-01
PA-233	311.98		38.60	3.42E-01	3.42E-01	-1.32E-01
PA-234	131.20		20.40	2.96E-01	2.96E-01	9.56E-02
	733.99		8.80	8.78E-01		-2.24E-02
	946.00		12.00	7.17E-01		6.24E-02
PA-234M	1001.03		0.92	1.02E+01	1.02E+01	4.67E-02
+ TH-234	63.29	*	3.80	4.38E+00	4.38E+00	3.21E+00
U-235	143.76		10.50	5.80E-01	5.80E-01	3.75E-01
	163.35		4.70	1.17E+00		-5.69E-01
	205.31		4.70	1.31E+00		-1.72E-02
NP-237	86.50		12.60	6.38E-01	6.38E-01	-1.08E-01
NP-239	106.10		22.70	4.81E+02	4.81E+02	-3.65E+01
	228.18		10.70	1.28E+03		9.89E+01
	277.60		14.10	9.64E+02		-2.34E+02
AM-241	59.54		35.90	2.24E-01	2.24E-01	-2.03E-01
+ AM-243	74.67	*	66.00	2.32E-01	2.32E-01	3.24E-01
CM-243	209.75		3.29	2.01E+00	5.05E-01	1.68E+00
	228.14		10.60	6.74E-01		1.70E-02
	277.60		14.00	5.05E-01		-1.23E-01

Analysis Report for 1905060-04

R1 0-6

-
- + = 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: R1 0-6

Elapsed Live time: 3600

Elapsed Real Time: 3601

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	7	152	258	178	251	638	223	
25:	106	63	51	67	54	66	70	48	
33:	47	64	46	59	51	55	63	57	
41:	67	63	62	62	76	79	77	86	
49:	99	76	74	60	82	84	80	66	
57:	84	68	85	96	96	119	138	144	
65:	138	119	112	110	98	111	97	119	
73:	151	215	187	221	280	235	208	161	
81:	124	98	106	104	121	117	120	140	
89:	130	152	142	134	138	137	129	98	
97:	92	87	72	58	70	58	65	61	
105:	51	70	62	63	65	62	78	66	
113:	70	48	61	61	76	66	53	65	
121:	58	59	64	59	62	52	83	63	
129:	70	74	80	45	62	60	59	49	
137:	62	56	54	43	58	48	64	70	
145:	66	59	45	56	44	57	50	60	
153:	46	58	46	48	62	53	49	72	
161:	53	39	52	45	39	49	48	41	
169:	51	45	52	38	51	44	34	49	
177:	51	52	30	46	49	52	44	65	
185:	81	73	86	75	49	51	59	44	
193:	45	54	45	45	45	39	53	47	
201:	34	41	34	38	45	46	46	47	
209:	52	58	54	38	30	33	36	48	
217:	38	34	37	30	31	43	46	44	
225:	28	26	41	44	37	48	39	27	
233:	34	40	49	103	111	164	174	178	
241:	139	113	91	63	35	40	36	32	
249:	19	25	32	22	28	34	28	17	
257:	32	23	33	28	32	26	26	22	
265:	32	27	24	31	39	37	41	32	
273:	33	25	23	39	28	29	40	21	
281:	17	32	31	17	28	32	24	23	
289:	22	25	26	28	38	61	67	65	
297:	77	54	43	45	36	40	26	30	
305:	29	25	23	28	23	28	16	27	
313:	18	25	18	20	31	13	25	25	
321:	23	24	30	22	18	28	27	30	
329:	30	30	32	19	25	17	39	38	
337:	42	52	45	36	37	36	20	18	
345:	23	18	19	32	43	64	97	97	
353:	80	59	42	44	20	25	13	18	
361:	16	25	19	14	15	22	11	22	

369: 20 14 24 18 10 16 18 23

Sample Title: R1 0-6

Channel	-----	-----	-----	-----	-----	-----	-----	-----
377:	18	19	14	21	15	20	20	17
385:	19	11	19	15	12	17	25	14
393:	17	17	17	22	16	15	13	18
401:	18	18	19	23	18	23	26	16
409:	31	19	22	20	15	21	14	16
417:	23	22	11	20	19	19	10	16
425:	14	16	14	12	16	23	20	12
433:	16	16	9	15	13	13	16	18
441:	17	15	8	13	12	20	15	12
449:	15	8	13	16	17	12	17	19
457:	9	11	9	18	19	26	23	29
465:	18	20	16	9	5	10	19	13
473:	14	10	18	15	16	17	14	14
481:	9	14	19	14	12	11	13	12
489:	13	13	14	15	9	11	6	8
497:	13	20	15	14	21	16	18	10
505:	10	13	25	22	25	42	43	34
513:	32	24	27	12	11	13	11	10
521:	9	10	6	7	16	8	6	10
529:	7	14	12	12	10	5	8	11
537:	12	18	10	8	7	8	10	14
545:	9	7	8	12	11	11	15	12
553:	10	8	15	9	8	8	20	13
561:	14	13	13	11	11	13	11	11
569:	9	14	9	15	11	12	11	13
577:	16	10	16	17	31	43	50	48
585:	42	26	17	12	12	12	10	11
593:	17	13	9	8	6	7	3	13
601:	8	13	8	9	11	18	40	54
609:	68	65	65	38	17	14	12	15
617:	8	11	17	4	9	10	10	13
625:	7	8	15	11	5	7	4	8
633:	10	6	10	11	7	7	8	8
641:	11	4	6	13	4	9	12	14
649:	12	11	11	14	8	3	3	12
657:	17	6	16	23	31	22	26	24
665:	10	12	13	12	5	7	10	8
673:	6	13	8	13	10	13	12	8
681:	7	7	7	8	5	9	10	3
689:	9	4	12	13	8	16	12	5
697:	7	10	13	10	7	12	8	12
705:	11	9	10	16	10	13	10	9
713:	7	9	9	6	11	12	7	5
721:	10	5	5	10	13	19	16	26
729:	21	10	6	5	6	11	8	9
737:	5	6	13	12	9	7	8	6
745:	7	10	10	10	10	13	7	12
753:	9	10	9	10	6	8	8	4
761:	2	5	8	6	9	10	8	7
769:	15	11	10	9	13	13	7	2
777:	9	14	7	3	9	9	16	9
785:	7	10	8	5	8	8	18	10
793:	18	15	9	10	5	12	10	7

801: 8 3 6 6 5 9 7 6

Sample Title: R1 0-6

Channel	-----	-----	-----	-----	-----	-----	-----	-----
809:	14	4	1	6	3	2	6	7
817:	2	5	6	0	3	7	2	10
825:	7	6	7	5	8	10	4	11
833:	4	7	8	13	11	8	8	17
841:	10	4	8	8	8	11	4	10
849:	7	4	8	5	6	9	11	6
857:	8	8	8	9	19	16	7	6
865:	6	7	13	8	5	5	7	4
873:	4	6	1	11	6	5	4	7
881:	6	5	6	7	4	3	4	8
889:	8	4	8	14	7	7	8	2
897:	6	7	8	5	5	7	7	10
905:	5	9	4	14	15	28	36	41
913:	24	15	12	12	11	10	3	5
921:	10	8	4	9	2	8	5	3
929:	4	4	8	8	9	9	4	8
937:	6	7	6	1	5	5	3	5
945:	3	2	9	10	9	7	5	9
953:	9	6	7	4	3	3	11	9
961:	8	3	7	11	21	11	15	30
969:	21	29	26	12	11	4	11	8
977:	5	0	5	4	8	3	5	6
985:	4	6	3	6	5	4	5	4
993:	5	4	4	11	3	6	9	7
1001:	6	4	7	6	7	5	3	5
1009:	3	3	8	3	2	6	4	6
1017:	7	7	7	6	1	8	4	1
1025:	10	5	6	6	3	2	4	8
1033:	4	7	2	3	5	6	2	4
1041:	5	6	2	5	10	1	5	4
1049:	5	8	7	7	4	5	8	7
1057:	6	5	7	0	6	4	8	10
1065:	6	9	6	7	4	5	11	8
1073:	10	7	6	2	3	7	13	10
1081:	10	1	6	3	4	4	4	4
1089:	3	3	5	5	3	2	9	9
1097:	8	10	1	10	7	4	2	5
1105:	11	6	3	2	3	6	3	7
1113:	5	5	6	8	8	12	13	21
1121:	16	12	10	8	5	5	6	4
1129:	5	6	1	4	9	4	7	2
1137:	6	5	4	6	5	3	2	7
1145:	5	3	3	11	6	5	8	4
1153:	8	5	11	7	7	7	6	6
1161:	7	6	6	4	6	2	8	2
1169:	4	5	5	8	4	4	6	5
1177:	4	9	3	4	5	4	8	5
1185:	2	5	6	3	4	3	6	5
1193:	4	5	4	3	3	5	5	6
1201:	11	4	6	9	6	6	7	12
1209:	9	5	9	11	4	7	10	3
1217:	6	5	8	9	8	6	7	6
1225:	7	5	6	10	7	15	4	11

1233: 8 6 5 5 11 19 6 8

Sample Title: R1 0-6

Channel	-----	-----	-----	-----	-----	-----	-----	-----
1241:	5	8	6	5	10	8	2	4
1249:	6	9	5	5	4	5	7	5
1257:	4	1	2	3	10	5	5	3
1265:	4	7	3	4	6	6	3	4
1273:	5	5	5	4	7	4	6	7
1281:	8	7	3	3	5	7	4	2
1289:	4	2	7	4	4	2	4	1
1297:	4	6	4	1	2	5	3	5
1305:	7	2	5	3	5	5	2	5
1313:	4	7	3	6	5	1	2	6
1321:	3	5	1	5	2	1	4	3
1329:	1	5	2	3	3	0	3	2
1337:	5	2	3	5	2	3	3	1
1345:	3	6	2	2	4	3	2	2
1353:	6	0	2	3	4	0	3	4
1361:	2	3	2	3	3	5	2	7
1369:	3	3	0	1	0	1	8	3
1377:	7	4	4	4	1	2	4	1
1385:	3	1	4	2	0	2	2	2
1393:	3	1	0	1	5	3	0	5
1401:	1	3	3	2	2	2	1	4
1409:	0	1	4	2	1	1	0	3
1417:	2	4	1	1	3	1	2	3
1425:	1	0	2	1	1	2	2	1
1433:	2	2	0	3	7	0	1	4
1441:	2	3	4	0	4	3	2	5
1449:	1	3	3	4	7	4	2	8
1457:	15	37	74	95	109	98	76	46
1465:	30	3	5	4	7	2	2	1
1473:	2	1	5	2	1	3	2	1
1481:	4	4	1	0	1	4	3	2
1489:	6	1	0	2	2	3	0	2
1497:	5	1	0	3	5	0	3	1
1505:	2	1	1	4	5	3	2	6
1513:	2	4	1	3	2	1	2	2
1521:	2	3	4	1	0	0	0	0
1529:	4	2	2	3	2	1	1	3
1537:	2	0	3	1	2	1	1	2
1545:	3	2	1	1	0	1	4	2
1553:	0	2	1	2	1	1	5	2
1561:	1	3	3	2	1	0	5	0
1569:	3	0	1	0	2	1	0	0
1577:	1	2	2	5	2	0	2	1
1585:	1	1	3	3	3	3	2	3
1593:	4	2	2	3	3	1	3	2
1601:	0	2	2	0	1	0	1	0
1609:	2	0	1	3	0	2	3	1
1617:	1	1	3	4	1	3	2	3
1625:	3	1	0	2	4	1	3	4
1633:	1	4	1	2	2	2	1	1
1641:	0	1	1	0	1	2	1	2
1649:	1	0	1	0	0	1	2	3
1657:	0	4	4	3	3	4	2	3

1665: 3 1 0 0 3 0 1 1

Sample Title: R1 0-6

Channel	1	2	3	4	5	6	7	8
1673:	2	1	3	2	1	0	4	1
1681:	2	0	1	1	0	2	2	2
1689:	0	0	0	0	1	2	1	1
1697:	2	1	1	2	0	2	1	0
1705:	2	0	1	0	1	4	1	1
1713:	2	3	1	1	0	0	0	1
1721:	1	0	0	4	3	2	1	2
1729:	2	5	3	1	2	1	0	0
1737:	0	3	1	2	3	1	1	3
1745:	2	0	0	0	1	2	2	1
1753:	2	2	0	0	0	1	1	4
1761:	5	5	7	5	5	5	8	1
1769:	6	0	0	0	1	1	3	1
1777:	1	0	1	1	0	1	1	2
1785:	2	1	3	1	2	1	2	1
1793:	1	0	0	1	1	0	1	0
1801:	3	1	1	0	0	3	0	1
1809:	0	0	1	2	0	1	3	0
1817:	0	1	1	3	0	0	1	0
1825:	4	2	0	0	1	0	0	0
1833:	1	2	1	0	2	0	0	1
1841:	1	1	0	0	1	3	6	6
1849:	1	2	1	1	1	0	0	0
1857:	0	0	0	0	1	3	1	1
1865:	1	1	1	2	1	1	1	0
1873:	1	1	2	1	1	1	0	0
1881:	1	0	0	1	0	2	1	0
1889:	2	1	0	1	0	1	0	1
1897:	2	0	0	0	1	1	1	1
1905:	1	2	1	0	2	2	0	1
1913:	1	3	1	2	2	0	1	2
1921:	2	0	1	2	0	2	2	0
1929:	2	0	1	0	1	2	1	2
1937:	1	2	0	1	1	0	1	0
1945:	0	0	1	0	1	1	2	2
1953:	0	1	1	2	0	1	0	1
1961:	1	1	2	0	2	0	0	0
1969:	0	3	0	0	2	1	1	0
1977:	1	2	1	1	1	0	1	1
1985:	2	1	3	0	0	1	1	0
1993:	0	1	0	1	0	0	0	0
2001:	2	3	1	0	1	0	3	1
2009:	0	0	1	0	1	1	1	1
2017:	1	0	0	0	0	1	0	1
2025:	0	0	2	0	1	0	0	2
2033:	0	3	3	2	0	0	0	1
2041:	0	0	0	2	0	2	2	0
2049:	0	1	0	0	0	1	1	0
2057:	1	0	0	4	0	2	0	1
2065:	2	2	0	0	0	1	0	1
2073:	1	2	1	0	1	1	0	0
2081:	1	1	1	0	1	1	2	0
2089:	1	3	1	0	2	1	1	0

2097: 2 1 1 0 6 1 2 1

Sample Title: R1 0-6

Channel	-----	-----	-----	-----	-----	-----	-----	-----
2105:	2	0	2	0	0	0	0	0
2113:	1	1	0	1	1	2	3	1
2121:	3	1	3	0	2	0	0	1
2129:	0	1	0	2	3	2	1	2
2137:	0	1	1	0	0	1	0	0
2145:	0	1	2	2	1	1	1	0
2153:	2	1	1	0	2	1	2	1
2161:	0	2	1	2	0	1	0	1
2169:	3	0	1	1	0	1	1	0
2177:	0	1	1	2	2	0	1	2
2185:	1	1	1	0	0	1	1	1
2193:	2	0	1	1	1	0	0	1
2201:	1	0	3	3	1	4	1	2
2209:	1	0	3	1	0	1	0	1
2217:	0	0	0	1	0	1	1	0
2225:	1	0	1	0	2	1	0	3
2233:	0	2	0	0	1	1	0	1
2241:	1	1	0	0	1	2	1	1
2249:	0	0	0	0	0	1	1	2
2257:	2	2	1	0	0	1	0	0
2265:	1	0	1	0	1	1	1	0
2273:	0	0	0	1	0	0	2	0
2281:	2	0	1	0	1	1	1	2
2289:	1	0	1	4	3	1	1	1
2297:	0	1	1	0	0	0	1	1
2305:	1	0	0	1	0	2	1	0
2313:	1	0	2	0	1	0	1	2
2321:	2	0	2	0	2	1	0	1
2329:	2	0	3	2	1	3	0	2
2337:	1	0	0	0	0	1	1	0
2345:	0	1	1	2	1	0	2	1
2353:	2	0	1	0	0	1	2	2
2361:	0	2	0	1	2	0	0	1
2369:	1	2	0	1	0	1	1	1
2377:	1	1	2	0	0	2	1	0
2385:	1	0	1	1	2	1	1	1
2393:	1	0	1	1	0	0	1	2
2401:	2	0	0	1	1	2	0	1
2409:	0	0	1	2	1	1	1	1
2417:	0	0	1	0	2	1	1	2
2425:	1	0	1	0	0	0	0	2
2433:	1	1	0	0	0	0	0	2
2441:	0	0	0	1	1	2	0	1
2449:	0	0	1	1	0	1	1	3
2457:	0	1	1	2	1	4	3	0
2465:	0	1	2	0	0	0	0	0
2473:	1	1	0	1	0	0	1	0
2481:	2	1	1	1	0	0	2	0
2489:	0	1	0	0	0	0	0	0
2497:	1	0	0	0	0	0	2	0
2505:	0	1	0	0	1	0	0	0
2513:	1	1	0	0	0	0	0	1
2521:	0	0	1	0	0	0	0	0

2529: 0 0 2 0 0 1 0 0

Sample Title: R1 0-6

Channel	1	2	3	4	5	6	7	8
2537:	0	1	0	1	1	0	0	0
2545:	0	0	1	0	0	0	0	0
2553:	1	0	0	0	0	1	0	0
2561:	1	0	0	0	0	0	1	0
2569:	0	0	0	1	1	0	1	0
2577:	0	0	1	0	0	1	0	0
2585:	1	1	1	0	0	1	0	1
2593:	0	2	0	1	1	0	1	0
2601:	1	1	1	0	0	1	0	1
2609:	1	3	7	10	13	14	16	16
2617:	3	4	1	0	0	1	0	2
2625:	1	0	0	0	0	0	0	0
2633:	0	0	2	2	0	0	0	0
2641:	0	0	0	1	0	0	0	0
2649:	1	0	0	0	0	0	0	0
2657:	0	1	0	2	0	0	0	0
2665:	0	0	1	1	1	0	1	0
2673:	1	1	0	1	1	0	0	0
2681:	0	0	0	1	1	1	1	0
2689:	1	0	0	1	0	0	0	0
2697:	0	0	0	1	0	1	0	0
2705:	1	0	0	0	0	1	0	1
2713:	0	0	0	0	0	0	0	0
2721:	0	2	0	0	0	0	0	0
2729:	1	0	0	1	0	1	0	0
2737:	1	2	0	1	0	1	0	0
2745:	0	0	0	0	0	0	1	0
2753:	0	0	0	0	1	0	0	0
2761:	0	0	0	1	0	1	0	1
2769:	0	0	0	0	0	0	1	0
2777:	0	0	0	0	0	1	0	0
2785:	1	0	0	0	1	0	1	0
2793:	0	0	1	0	0	0	0	1
2801:	1	0	1	0	1	0	2	0
2809:	0	0	0	0	1	0	0	0
2817:	1	0	0	0	0	0	0	3
2825:	1	0	1	0	1	0	0	1
2833:	1	0	0	1	0	2	0	0
2841:	0	0	0	0	0	1	0	0
2849:	0	0	1	1	0	2	0	1
2857:	0	0	1	1	1	0	0	0
2865:	1	0	0	0	0	0	1	0
2873:	0	1	0	0	0	1	0	0
2881:	1	0	0	0	0	1	0	1
2889:	0	0	0	0	0	0	0	0
2897:	0	1	0	0	0	1	0	0
2905:	0	0	0	1	0	0	0	0
2913:	0	0	0	0	0	0	0	0
2921:	0	0	0	1	0	0	0	0
2929:	1	0	0	0	0	0	0	1
2937:	2	0	1	0	0	1	0	0
2945:	0	0	0	0	0	0	0	0
2953:	0	0	0	0	1	0	0	0

2961: 0 1 0 0 0 0 0 0 0

Sample Title: R1 0-6

Channel	1	2	3	4	5	6	7	8
2969:	0	0	0	0	0	1	0	2
2977:	1	0	1	0	0	0	0	1
2985:	0	0	0	0	0	0	2	1
2993:	0	0	0	1	0	1	0	0
3001:	0	0	0	0	0	0	0	1
3009:	0	1	0	0	0	2	0	0
3017:	0	0	0	0	0	1	0	0
3025:	0	0	0	0	0	0	0	0
3033:	0	1	1	0	0	0	0	1
3041:	1	0	1	0	0	0	0	0
3049:	0	0	0	0	0	0	0	1
3057:	0	0	1	0	0	0	0	0
3065:	0	0	1	1	0	0	1	0
3073:	0	0	0	0	0	0	0	1
3081:	0	0	0	1	0	0	0	0
3089:	0	0	0	0	0	0	0	0
3097:	0	0	0	0	0	1	0	0
3105:	1	0	0	1	0	1	0	1
3113:	0	0	1	0	0	0	0	1
3121:	0	0	0	0	0	0	0	0
3129:	1	0	0	0	0	0	1	0
3137:	0	0	0	0	0	0	0	0
3145:	1	0	0	0	0	0	0	0
3153:	0	0	0	0	0	0	0	0
3161:	1	0	0	1	0	1	0	0
3169:	0	0	0	0	0	0	1	0
3177:	0	0	0	0	0	0	0	0
3185:	0	0	0	1	0	0	0	1
3193:	1	1	0	2	2	1	0	1
3201:	0	0	0	0	1	0	0	0
3209:	0	0	0	0	0	0	0	0
3217:	0	0	0	1	1	0	0	0
3225:	0	0	0	1	0	0	0	0
3233:	0	0	0	0	1	1	0	1
3241:	0	0	0	0	0	0	0	0
3249:	1	0	0	0	0	0	0	0
3257:	1	0	0	0	0	1	1	0
3265:	0	0	0	1	0	0	0	0
3273:	0	0	0	0	0	0	0	1
3281:	0	0	0	0	0	0	1	1
3289:	0	0	0	0	1	0	1	1
3297:	0	0	0	1	1	0	0	0
3305:	0	0	1	0	0	0	2	1
3313:	1	0	0	0	0	0	0	0
3321:	0	0	0	0	1	1	0	0
3329:	0	0	0	0	0	0	0	0
3337:	0	1	1	0	0	0	0	0
3345:	0	0	0	0	0	0	1	0
3353:	0	0	0	0	0	0	0	0
3361:	0	0	0	0	0	1	0	0
3369:	0	0	0	1	1	1	0	1
3377:	1	0	0	0	1	0	0	0
3385:	0	1	0	1	2	0	0	2

3393: 0 0 0 0 0 0 0 0 0

Sample Title: R1 0-6

Channel	-----	-----	-----	-----	-----	-----	-----	-----
3401:	0	0	0	1	0	0	1	0
3409:	0	0	0	0	0	0	0	0
3417:	0	0	0	0	0	0	0	1
3425:	0	1	0	2	0	0	0	1
3433:	0	0	1	0	0	0	0	0
3441:	0	0	0	0	0	0	0	0
3449:	0	0	0	0	0	0	0	0
3457:	0	0	0	0	0	2	0	0
3465:	0	0	0	0	0	0	0	0
3473:	0	0	0	0	0	0	0	0
3481:	1	0	0	0	0	0	0	0
3489:	0	1	1	0	0	0	0	0
3497:	0	1	0	0	0	0	2	0
3505:	1	0	0	0	1	0	0	0
3513:	0	0	0	0	0	0	0	1
3521:	0	0	0	0	0	0	1	0
3529:	0	0	0	0	0	0	2	0
3537:	0	0	0	0	0	1	0	1
3545:	0	0	0	0	1	0	0	0
3553:	0	0	0	0	0	0	0	0
3561:	1	0	0	0	0	0	0	0
3569:	0	0	0	0	0	0	0	1
3577:	0	0	1	0	0	0	0	0
3585:	1	0	0	1	0	0	0	0
3593:	1	1	0	0	0	0	0	0
3601:	0	0	1	0	0	0	0	0
3609:	0	0	0	1	0	0	0	0
3617:	0	0	0	0	0	1	0	0
3625:	0	0	0	0	0	1	0	1
3633:	0	0	0	0	0	0	0	0
3641:	0	0	0	0	0	0	0	0
3649:	0	0	1	0	0	0	0	0
3657:	0	0	1	1	0	0	0	0
3665:	0	0	0	0	0	0	1	1
3673:	0	0	0	0	0	0	0	1
3681:	0	0	0	0	1	0	0	0
3689:	0	0	0	0	0	0	0	0
3697:	0	0	0	0	0	0	0	0
3705:	1	0	1	0	0	0	0	0
3713:	0	0	1	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	1	0	0	0	0	0	1
3745:	0	0	0	0	0	0	0	1
3753:	0	0	0	0	0	0	0	2
3761:	0	0	0	0	0	0	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	1
3793:	0	0	0	0	0	0	1	0
3801:	0	0	0	0	0	0	0	2
3809:	1	0	0	0	1	0	0	0
3817:	0	0	0	0	1	0	0	0

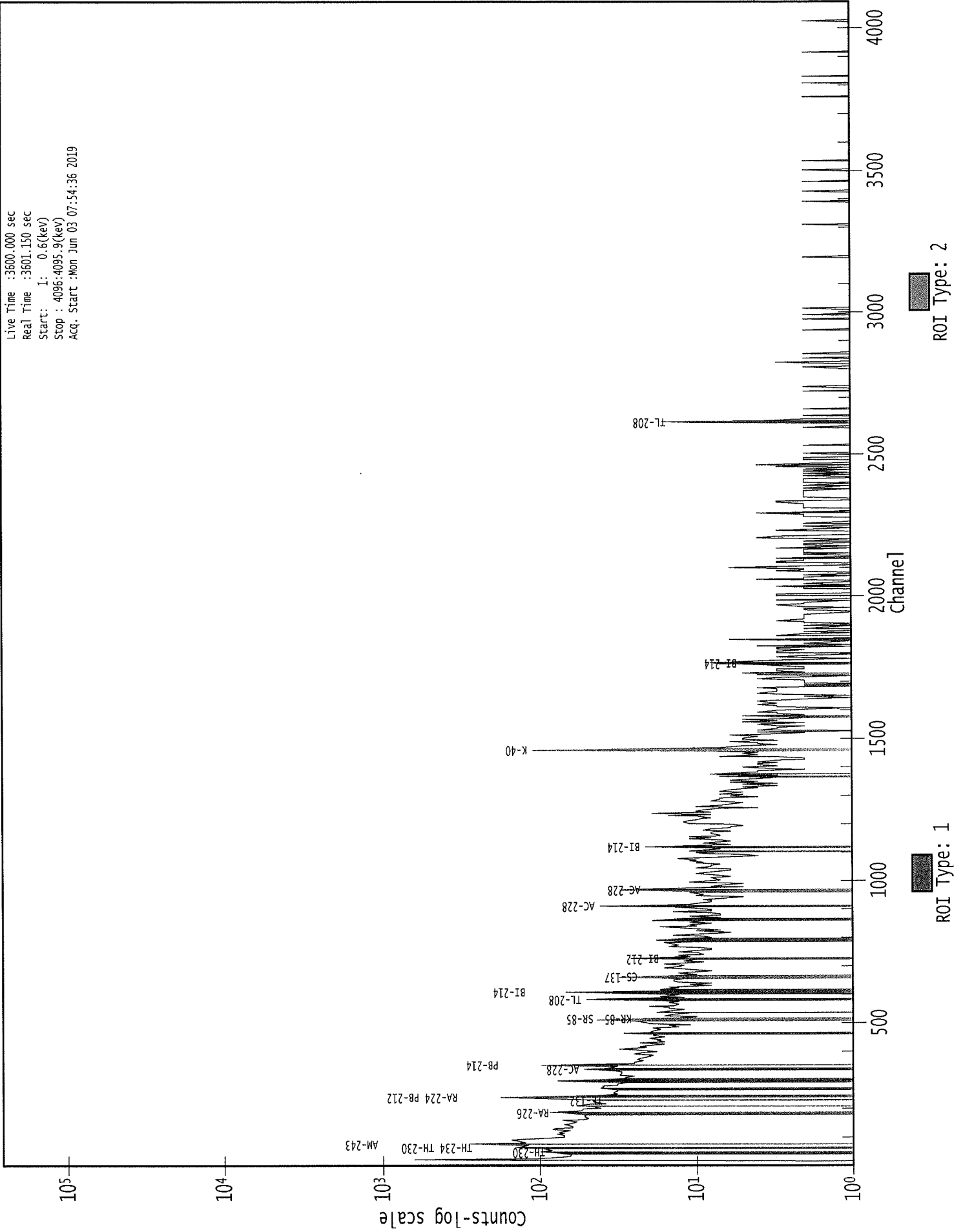
3825: 0 0 0 0 0 0 2 0

Sample Title: R1 0-6

Channel	1	2	3	4	5	6	7	8
3833:	0	0	0	0	0	0	0	0
3841:	0	0	0	0	0	0	1	0
3849:	0	0	0	0	0	0	0	0
3857:	0	0	0	0	0	0	0	0
3865:	1	0	0	0	0	0	0	1
3873:	0	1	0	0	0	0	0	0
3881:	0	0	0	0	0	0	0	0
3889:	0	0	0	0	0	0	0	1
3897:	0	0	0	0	0	1	0	0
3905:	0	0	0	1	0	0	0	0
3913:	0	0	0	2	1	1	1	0
3921:	1	0	0	0	0	0	0	0
3929:	0	0	0	1	0	0	0	0
3937:	0	0	1	0	0	0	0	0
3945:	0	0	0	1	0	0	1	1
3953:	0	0	0	0	0	0	0	0
3961:	0	0	0	0	1	0	0	0
3969:	0	0	0	0	0	0	0	0
3977:	0	0	0	0	1	1	0	0
3985:	0	0	0	0	0	0	0	0
3993:	0	0	0	1	0	0	0	0
4001:	0	0	0	0	0	0	0	0
4009:	1	1	0	0	0	0	0	1
4017:	0	0	0	0	1	0	0	0
4025:	2	0	0	0	0	0	0	0
4033:	0	0	0	0	0	0	1	0
4041:	1	0	0	1	1	0	0	0
4049:	0	0	0	0	0	0	0	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	0	1	0
4081:	1	0	0	1	0	0	0	0
4089:	0	0	1	0	0	1	1	0

0000082495.CNF

Live Time :3600.000 sec
Real Time :3601.150 sec
Start: 1: 0.6(keV)
Stop : 4096:4095.9(keV)
Acq. Start :Mon Jun 03 07:54:36 2019



Analysis Report for 1905060-05
R1 6-12

GAMMA SPECTRUM ANALYSIS

Sample Identification : 1905060-05
Sample Description : R1 6-12
Sample Type : SOIL

Sample Size : 4.376E+02 grams
Facility : Countroom

Sample Taken On : 5/8/2019 3:32:41PM
Acquisition Started : 6/3/2019 6:52:20AM

Procedure : GAS-1802 pCi
Operator : Administrator
Detector Name : GE2
Geometry : GAS-1802
Live Time : 3600.0 seconds
Real Time : 3600.9 seconds

Dead Time : 0.02 %

Peak Locate Threshold : 2.50
Peak Locate Range (in channels) : 1 - 4096
Peak Area Range (in channels) : 26 - 4096
Identification Energy Tolerance : 1.000FWHM

Energy Calibration Used Done On : 2/17/2018
Efficiency Calibration Used Done On : 6/16/2018
Efficiency Calibration Description :

Sample Number : 82492

PEAK-TO-TOTAL CALIBRATION REPORT

Peak-to-Total Efficiency Calibration Equation

AG
6/3/19

Analysis Report for 1905060-05

R1 6-12

PEAK LOCATE REPORT

Peak Locate Performed on : 6/3/2019 7:52:24AM
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	54.52	54.29	0.0000	0.00
2	63.26	63.03	0.0000	0.00
3	76.70	76.46	0.0000	0.00
4	87.65	87.41	0.0000	0.00
5	92.86	92.62	0.0000	0.00
6	115.22	114.96	0.0000	0.00
7	130.91	130.64	0.0000	0.00
8	186.33	186.05	0.0000	0.00
9	209.20	208.90	0.0000	0.00
10	239.08	238.77	0.0000	0.00
11	242.07	241.76	0.0000	0.00
12	269.94	269.61	0.0000	0.00
13	295.48	295.14	0.0000	0.00
14	327.95	327.60	0.0000	0.00
15	338.79	338.43	0.0000	0.00
16	352.27	351.90	0.0000	0.00
17	387.59	387.21	0.0000	0.00
18	463.37	462.95	0.0000	0.00
19	511.48	511.04	0.0000	0.00
20	522.10	521.64	0.0000	0.00
21	579.83	579.35	0.0000	0.00
22	583.61	583.12	0.0000	0.00
23	609.63	609.13	0.0000	0.00
24	649.67	649.15	0.0000	0.00
25	727.90	727.34	0.0000	0.00
26	768.92	768.34	0.0000	0.00
27	796.23	795.63	0.0000	0.00
28	911.68	911.02	0.0000	0.00
29	944.68	944.00	0.0000	0.00
30	951.04	950.35	0.0000	0.00
31	1065.69	1064.94	0.0000	0.00
32	1073.24	1072.48	0.0000	0.00
33	1120.99	1120.20	0.0000	0.00
34	1226.06	1225.21	0.0000	0.00
35	1228.65	1227.79	0.0000	0.00
36	1239.07	1238.21	0.0000	0.00
37	1381.41	1380.46	0.0000	0.00
38	1461.11	1460.11	0.0000	0.00
39	1764.74	1763.54	0.0000	0.00
40	1843.42	1842.16	0.0000	0.00
41	1847.76	1846.50	0.0000	0.00
42	1938.62	1937.29	0.0000	0.00

Analysis Report for 1905060-05

R1 6-12

Peak No.	Energy (keV)	Centroid Channel	Centroid Uncertainty	Peak Significance
43	2204.17	2202.64	0.0000	0.00
44	2309.44	2307.83	0.0000	0.00
45	2615.00	2613.15	0.0000	0.00

? = Adjacent peak noted
Errors quoted at 2.000sigma

Analysis Report for 1905060-05

R1 6-12

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 6/3/2019 7:52:24AM

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	54.52	53 -	56	54.29	4.01E+01	45.96	4.84E+02	1.86
2	63.26	60 -	65	63.03	1.29E+02	70.11	8.86E+02	1.85
3	76.70	72 -	80	76.46	8.85E+02	115.39	1.49E+03	3.69
4	87.65	86 -	89	87.41	4.77E+01	57.24	7.77E+02	1.46
5	92.86	90 -	96	92.62	2.13E+02	82.51	1.04E+03	1.55
6	115.22	113 -	117	114.96	4.92E+01	46.43	4.30E+02	3.19
7	130.91	126 -	135	130.64	1.07E+02	82.58	9.09E+02	2.21
8	186.33	182 -	189	186.05	1.50E+02	67.50	6.59E+02	1.40
9	209.20	206 -	212	208.90	5.34E+01	54.52	4.97E+02	1.55
M 10	239.08	234 -	245	238.77	6.89E+02	62.73	2.79E+02	1.71
m 11	242.07	234 -	245	241.76	1.84E+02	64.33	3.13E+02	2.13
12	269.94	265 -	274	269.61	8.04E+01	60.73	4.83E+02	2.15
13	295.48	292 -	298	295.14	2.05E+02	49.81	3.05E+02	1.67
14	327.95	325 -	331	327.60	3.79E+01	41.57	2.92E+02	1.58
15	338.79	334 -	342	338.43	1.37E+02	51.52	3.23E+02	1.55
16	352.27	348 -	356	351.90	3.87E+02	60.38	3.20E+02	1.58
17	387.59	384 -	390	387.21	3.41E+01	33.48	1.74E+02	2.81
18	463.37	459 -	465	462.95	2.83E+01	32.19	1.67E+02	1.16
19	511.48	506 -	517	511.04	1.68E+02	48.79	2.05E+02	2.75
20	522.10	517 -	526	521.64	3.60E+01	37.47	1.80E+02	2.96
M 21	579.83	577 -	588	579.35	2.24E+01	16.25	5.20E+01	1.99
m 22	583.61	577 -	588	583.12	1.81E+02	34.55	7.80E+01	2.00
23	609.63	605 -	613	609.13	2.45E+02	46.02	1.74E+02	1.78
24	649.67	645 -	652	649.15	2.59E+01	25.46	8.82E+01	1.09
25	727.90	724 -	730	727.34	5.62E+01	25.49	7.76E+01	1.62
26	768.92	766 -	771	768.34	2.74E+01	22.23	7.51E+01	2.02
27	796.23	791 -	801	795.63	3.16E+01	28.74	9.28E+01	1.82
28	911.68	907 -	915	911.02	1.04E+02	35.49	1.27E+02	1.54
m 29	944.68	937 -	946	944.00	1.39E+01	14.90	2.69E+01	1.90
30	951.04	947 -	955	950.35	2.98E+01	20.36	4.65E+01	3.75
31	1065.69	1060 -	1069	1064.94	3.32E+01	21.10	4.36E+01	4.88
32	1073.24	1070 -	1075	1072.48	1.03E+01	12.12	2.15E+01	1.83
33	1120.99	1116 -	1123	1120.20	3.53E+01	28.84	1.13E+02	1.44
M 34	1226.06	1224 -	1246	1225.21	1.70E+01	9.42	1.25E+01	2.27
m 35	1228.65	1224 -	1246	1227.79	2.74E+01	17.85	3.14E+01	2.27
m 36	1239.07	1224 -	1246	1238.21	3.47E+01	19.46	4.18E+01	2.28
37	1381.41	1373 -	1388	1380.46	3.03E+01	22.80	3.93E+01	9.14
38	1461.11	1454 -	1466	1460.11	4.77E+02	50.13	6.91E+01	2.25
39	1764.74	1758 -	1769	1763.54	3.62E+01	19.60	2.95E+01	2.60
M 40	1843.42	1840 -	1853	1842.16	8.79E+00	5.66	0.00E+00	3.08

Analysis Report for 1905060-05

R1 6-12

	Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	FWHM (keV)
m	41	1847.76	1840 -	1853	1846.50	1.23E+01	9.80	0.00E+00	2.87
	42	1938.62	1935 -	1940	1937.29	5.21E+00	6.08	3.57E+00	1.95
	43	2204.17	2199 -	2205	2202.64	1.52E+01	8.96	3.53E+00	2.81
	44	2309.44	2305 -	2310	2307.83	6.00E+00	4.90	0.00E+00	2.74
	45	2615.00	2608 -	2617	2613.15	7.40E+01	19.13	1.01E+01	2.03

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 : 6/3/2019 7:52:24AM

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	54.52	53 -	56	4.01E+01	45.96	4.84E+02	3.63E+01
	2	63.26	60 -	65	1.29E+02	70.11	8.86E+02	5.45E+01
	3	76.70	72 -	80	8.85E+02	115.39	1.49E+03	8.13E+01
	4	87.65	86 -	89	4.77E+01	57.24	7.77E+02	4.57E+01
	5	92.86	90 -	96	2.13E+02	82.51	1.04E+03	6.34E+01
	6	115.22	113 -	117	4.92E+01	46.43	4.30E+02	3.64E+01
	7	130.91	126 -	135	1.07E+02	82.58	9.09E+02	6.57E+01
	8	186.33	182 -	189	1.50E+02	67.50	6.59E+02	5.17E+01
	9	209.20	206 -	212	5.34E+01	54.52	4.97E+02	4.32E+01
M	10	239.08	234 -	245	6.89E+02	62.73	2.79E+02	2.75E+01
m	11	242.07	234 -	245	1.84E+02	64.33	3.13E+02	2.91E+01
	12	269.94	265 -	274	8.04E+01	60.73	4.83E+02	4.77E+01
	13	295.48	292 -	298	2.05E+02	49.81	3.05E+02	3.35E+01
	14	327.95	325 -	331	3.79E+01	41.57	2.92E+02	3.26E+01
	15	338.79	334 -	342	1.37E+02	51.52	3.23E+02	3.77E+01
	16	352.27	348 -	356	3.87E+02	60.38	3.20E+02	3.77E+01
	17	387.59	384 -	390	3.41E+01	33.48	1.74E+02	2.58E+01
	18	463.37	459 -	465	2.83E+01	32.19	1.67E+02	2.50E+01
	19	511.48	506 -	517	1.68E+02	48.79	2.05E+02	3.40E+01
	20	522.10	517 -	526	3.60E+01	37.47	1.80E+02	2.92E+01
M	21	579.83	577 -	588	2.24E+01	16.25	5.20E+01	1.19E+01
m	22	583.61	577 -	588	1.81E+02	34.55	7.80E+01	1.45E+01

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Analysis Report for 1905060-05

R1 6-12

Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
23	609.63	605 -	613	2.45E+02	46.02	1.74E+02	2.77E+01
24	649.67	645 -	652	2.59E+01	25.46	8.82E+01	1.92E+01
25	727.90	724 -	730	5.62E+01	25.49	7.76E+01	1.69E+01
26	768.92	766 -	771	2.74E+01	22.23	7.51E+01	1.61E+01
27	796.23	791 -	801	3.16E+01	28.74	9.28E+01	2.17E+01
28	911.68	907 -	915	1.04E+02	35.49	1.27E+02	2.39E+01
m 29	944.68	937 -	946	1.39E+01	14.90	2.69E+01	8.52E+00
30	951.04	947 -	955	2.98E+01	20.36	4.65E+01	1.41E+01
31	1065.69	1060 -	1069	3.32E+01	21.10	4.36E+01	1.45E+01
32	1073.24	1070 -	1075	1.03E+01	12.12	2.15E+01	8.46E+00
33	1120.99	1116 -	1123	3.53E+01	28.84	1.13E+02	2.16E+01
M 34	1226.06	1224 -	1246	1.70E+01	9.42	1.25E+01	5.82E+00
m 35	1228.65	1224 -	1246	2.74E+01	17.85	3.14E+01	9.21E+00
m 36	1239.07	1224 -	1246	3.47E+01	19.46	4.18E+01	1.06E+01
37	1381.41	1373 -	1388	3.03E+01	22.80	3.93E+01	1.64E+01
38	1461.11	1454 -	1466	4.77E+02	50.13	6.91E+01	2.02E+01
39	1764.74	1758 -	1769	3.62E+01	19.60	2.95E+01	1.27E+01
M 40	1843.42	1840 -	1853	8.79E+00	5.66	0.00E+00	0.00E+00
m 41	1847.76	1840 -	1853	1.23E+01	9.80	0.00E+00	0.00E+00
42	1938.62	1935 -	1940	5.21E+00	6.08	3.57E+00	3.30E+00
43	2204.17	2199 -	2205	1.52E+01	8.96	3.53E+00	3.61E+00
44	2309.44	2305 -	2310	6.00E+00	4.90	0.00E+00	0.00E+00
45	2615.00	2608 -	2617	7.40E+01	19.13	1.01E+01	6.88E+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 : 6/3/2019 7:52:24AM

Peak Analysis From Channel : 1

Peak Analysis To Channel : 4096

Tentative NID Library : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

Peak Match Tolerance : 1.000FWHM

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
1	54.52	53 -	56	54.29	4.01E+01	45.96	4.84E+02	.....
2	63.26	60 -	65	63.03	1.29E+02	70.11	8.86E+02	TH-234

Analysis Report for 1905060-05

R1 6-12

	Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
	3	76.70	72 -	80	76.46	8.85E+02	115.39	1.49E+03	TH-230
	4	87.65	86 -	89	87.41	4.77E+01	57.24	7.77E+02	..... SN-126 CD-109 LU-176
	5	92.86	90 -	96	92.62	2.13E+02	82.51	1.04E+03	GA-67
	6	115.22	113 -	117	114.96	4.92E+01	46.43	4.30E+02	.....
	7	130.91	126 -	135	130.64	1.07E+02	82.58	9.09E+02	PA-234
	8	186.33	182 -	189	186.05	1.50E+02	67.50	6.59E+02	RA-226
	9	209.20	206 -	212	208.90	5.34E+01	54.52	4.97E+02	GA-67 CM-243
M	10	239.08	234 -	245	238.77	6.89E+02	62.73	2.79E+02	PB-212
m	11	242.07	234 -	245	241.76	1.84E+02	64.33	3.13E+02	RA-224
	12	269.94	265 -	274	269.61	8.04E+01	60.73	4.83E+02	.....
	13	295.48	292 -	298	295.14	2.05E+02	49.81	3.05E+02	PB-214
	14	327.95	325 -	331	327.60	3.79E+01	41.57	2.92E+02	LA-140
	15	338.79	334 -	342	338.43	1.37E+02	51.52	3.23E+02	AC-228
	16	352.27	348 -	356	351.90	3.87E+02	60.38	3.20E+02	PB-214
	17	387.59	384 -	390	387.21	3.41E+01	33.48	1.74E+02	.....
	18	463.37	459 -	465	462.95	2.83E+01	32.19	1.67E+02	SB-125
	19	511.48	506 -	517	511.04	1.68E+02	48.79	2.05E+02	.....
	20	522.10	517 -	526	521.64	3.60E+01	37.47	1.80E+02	.....
M	21	579.83	577 -	588	579.35	2.24E+01	16.25	5.20E+01	.....
m	22	583.61	577 -	588	583.12	1.81E+02	34.55	7.80E+01	TL-208
	23	609.63	605 -	613	609.13	2.45E+02	46.02	1.74E+02	BI-214
	24	649.67	645 -	652	649.15	2.59E+01	25.46	8.82E+01	.....
	25	727.90	724 -	730	727.34	5.62E+01	25.49	7.76E+01	BI-212
	26	768.92	766 -	771	768.34	2.74E+01	22.23	7.51E+01	.....
	27	796.23	791 -	801	795.63	3.16E+01	28.74	9.28E+01	CS-134
	28	911.68	907 -	915	911.02	1.04E+02	35.49	1.27E+02	TL-204 AC-228
m	29	944.68	937 -	946	944.00	1.39E+01	14.90	2.69E+01	PA-234
	30	951.04	947 -	955	950.35	2.98E+01	20.36	4.65E+01	.....
	31	1065.69	1060 -	1069	1064.94	3.32E+01	21.10	4.36E+01	.....
	32	1073.24	1070 -	1075	1072.48	1.03E+01	12.12	2.15E+01	.....
	33	1120.99	1116 -	1123	1120.20	3.53E+01	28.84	1.13E+02	TA-182 SC-46 BI-214
M	34	1226.06	1224 -	1246	1225.21	1.70E+01	9.42	1.25E+01	.....
m	35	1228.65	1224 -	1246	1227.79	2.74E+01	17.85	3.14E+01	EU-156
m	36	1239.07	1224 -	1246	1238.21	3.47E+01	19.46	4.18E+01	CO-56
	37	1381.41	1373 -	1388	1380.46	3.03E+01	22.80	3.93E+01	.....
	38	1461.11	1454 -	1466	1460.11	4.77E+02	50.13	6.91E+01	K-40
	39	1764.74	1758 -	1769	1763.54	3.62E+01	19.60	2.95E+01	BI-214
M	40	1843.42	1840 -	1853	1842.16	8.79E+00	5.66	0.00E+00	.....
m	41	1847.76	1840 -	1853	1846.50	1.23E+01	9.80	0.00E+00	.....
	42	1938.62	1935 -	1940	1937.29	5.21E+00	6.08	3.57E+00	.....
	43	2204.17	2199 -	2205	2202.64	1.52E+01	8.96	3.53E+00	BI-214
	44	2309.44	2305 -	2310	2307.83	6.00E+00	4.90	0.00E+00	.....
	45	2615.00	2608 -	2617	2613.15	7.40E+01	19.13	1.01E+01	TL-208

Analysis Report for 1905060-05

R1 6-12

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 : 6/3/2019 7:52:24AM

	Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
	1	54.52	4.01E+01	45.96	1.65E-02	1.67E-03
	2	63.26	1.29E+02	70.11	2.23E-02	2.43E-03
	3	76.70	8.85E+02	115.39	2.68E-02	5.18E-03
	4	87.65	4.77E+01	57.24	2.77E-02	7.43E-03
	5	92.86	2.13E+02	82.51	2.76E-02	7.10E-03
	6	115.22	4.92E+01	46.43	2.54E-02	5.25E-03
	7	130.91	1.07E+02	82.58	2.35E-02	4.03E-03
	8	186.33	1.50E+02	67.50	1.81E-02	1.53E-03
	9	209.20	5.34E+01	54.52	1.67E-02	1.58E-03
M	10	239.08	6.89E+02	62.73	1.52E-02	1.66E-03
m	11	242.07	1.84E+02	64.33	1.51E-02	1.67E-03
	12	269.94	8.04E+01	60.73	1.40E-02	1.74E-03
	13	295.48	2.05E+02	49.81	1.32E-02	1.64E-03
	14	327.95	3.79E+01	41.57	1.24E-02	1.39E-03
	15	338.79	1.37E+02	51.52	1.22E-02	1.31E-03
	16	352.27	3.87E+02	60.38	1.19E-02	1.20E-03
	17	387.59	3.41E+01	33.48	1.12E-02	9.34E-04
	18	463.37	2.83E+01	32.19	1.00E-02	8.92E-04
	19	511.48	1.68E+02	48.79	9.38E-03	8.84E-04
	20	522.10	3.60E+01	37.47	9.25E-03	8.83E-04
M	21	579.83	2.24E+01	16.25	8.59E-03	8.74E-04
m	22	583.61	1.81E+02	34.55	8.55E-03	8.73E-04
	23	609.63	2.45E+02	46.02	8.28E-03	8.69E-04
	24	649.67	2.59E+01	25.46	7.89E-03	8.63E-04
	25	727.90	5.62E+01	25.49	7.19E-03	7.81E-04
	26	768.92	2.74E+01	22.23	6.86E-03	7.32E-04
	27	796.23	3.16E+01	28.74	6.65E-03	6.99E-04
	28	911.68	1.04E+02	35.49	5.88E-03	5.72E-04
m	29	944.68	1.39E+01	14.90	5.69E-03	5.62E-04
	30	951.04	2.98E+01	20.36	5.65E-03	5.60E-04
	31	1065.69	3.32E+01	21.10	5.08E-03	5.26E-04
	32	1073.24	1.03E+01	12.12	5.04E-03	5.23E-04
	33	1120.99	3.53E+01	28.84	4.84E-03	5.09E-04
M	34	1226.06	1.70E+01	9.42	4.45E-03	4.69E-04

Analysis Report for 1905060-05

R1 6-12

	Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
m	35	1228.65	2.74E+01	17.85	4.44E-03	4.68E-04
m	36	1239.07	3.47E+01	19.46	4.41E-03	4.63E-04
	37	1381.41	3.03E+01	22.80	4.02E-03	4.06E-04
	38	1461.11	4.77E+02	50.13	3.84E-03	3.82E-04
	39	1764.74	3.62E+01	19.60	3.45E-03	2.94E-04
M	40	1843.42	8.79E+00	5.66	3.41E-03	2.73E-04
m	41	1847.76	1.23E+01	9.80	3.40E-03	2.73E-04
	42	1938.62	5.21E+00	6.08	3.38E-03	2.73E-04
	43	2204.17	1.52E+01	8.96	3.45E-03	2.73E-04
	44	2309.44	6.00E+00	4.90	3.55E-03	2.73E-04
	45	2615.00	7.40E+01	19.13	4.03E-03	2.73E-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 : 6/3/2019 7:52:24AM

Env. Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000082156.CNF

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
	1	54.52	4.01E+01	45.96			4.01E+01	4.60E+01
	2	63.26	1.29E+02	70.11	2.77E+01	1.04E+01	1.01E+02	7.09E+01
	3	76.70	8.85E+02	115.39			8.85E+02	1.15E+02
	4	87.65	4.77E+01	57.24			4.77E+01	5.72E+01
	5	92.86	2.13E+02	82.51	6.19E+01	1.42E+01	1.51E+02	8.37E+01
	6	115.22	4.92E+01	46.43			4.92E+01	4.64E+01
	7	130.91	1.07E+02	82.58			1.07E+02	8.26E+01
	8	186.33	1.50E+02	67.50	3.71E+01	7.15E+00	1.12E+02	6.79E+01
	9	209.20	5.34E+01	54.52			5.34E+01	5.45E+01
M	10	239.08	6.89E+02	62.73	1.85E+01	2.89E+00	6.70E+02	6.28E+01
m	11	242.07	1.84E+02	64.33	1.11E+01	2.59E+00	1.73E+02	6.44E+01
	12	269.94	8.04E+01	60.73			8.04E+01	6.07E+01
	13	295.48	2.05E+02	49.81	9.91E+00	6.34E+00	1.95E+02	5.02E+01
	14	327.95	3.79E+01	41.57			3.79E+01	4.16E+01
	15	338.79	1.37E+02	51.52			1.37E+02	5.15E+01
	16	352.27	3.87E+02	60.38	1.92E+01	5.24E+00	3.68E+02	6.06E+01
	17	387.59	3.41E+01	33.48			3.41E+01	3.35E+01
	18	463.37	2.83E+01	32.19			2.83E+01	3.22E+01
	19	511.48	1.68E+02	48.79	7.69E+01	5.30E+00	9.14E+01	4.91E+01

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Analysis Report for 1905060-05

R1 6-12

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
	20	522.10	3.60E+01	37.47			3.60E+01	3.75E+01
M	21	579.83	2.24E+01	16.25			2.24E+01	1.62E+01
m	22	583.61	1.81E+02	34.55	1.07E+01	3.54E+00	1.70E+02	3.47E+01
	23	609.63	2.45E+02	46.02	1.53E+01	4.10E+00	2.30E+02	4.62E+01
	24	649.67	2.59E+01	25.46			2.59E+01	2.55E+01
	25	727.90	5.62E+01	25.49			5.62E+01	2.55E+01
	26	768.92	2.74E+01	22.23			2.74E+01	2.22E+01
	27	796.23	3.16E+01	28.74	0.00E+00	0.00E+00	3.16E+01	2.87E+01
	28	911.68	1.04E+02	35.49	3.90E+00	2.73E+00	1.00E+02	3.56E+01
m	29	944.68	1.39E+01	14.90			1.39E+01	1.49E+01
	30	951.04	2.98E+01	20.36			2.98E+01	2.04E+01
	31	1065.69	3.32E+01	21.10			3.32E+01	2.11E+01
	32	1073.24	1.03E+01	12.12			1.03E+01	1.21E+01
	33	1120.99	3.53E+01	28.84	2.74E+00	2.62E+00	3.26E+01	2.90E+01
M	34	1226.06	1.70E+01	9.42			1.70E+01	9.42E+00
m	35	1228.65	2.74E+01	17.85			2.74E+01	1.79E+01
m	36	1239.07	3.47E+01	19.46			3.47E+01	1.95E+01
	37	1381.41	3.03E+01	22.80			3.03E+01	2.28E+01
	38	1461.11	4.77E+02	50.13	8.88E+00	2.10E+00	4.69E+02	5.02E+01
	39	1764.74	3.62E+01	19.60	3.76E+00	1.92E+00	3.25E+01	1.97E+01
M	40	1843.42	8.79E+00	5.66			8.79E+00	5.66E+00
m	41	1847.76	1.23E+01	9.80			1.23E+01	9.80E+00
	42	1938.62	5.21E+00	6.08			5.21E+00	6.08E+00
	43	2204.17	1.52E+01	8.96			1.52E+01	8.96E+00
	44	2309.44	6.00E+00	4.90			6.00E+00	4.90E+00
	45	2615.00	7.40E+01	19.13	5.68E+00	1.32E+00	6.83E+01	1.92E+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 : 6/3/2019 7:52:24AM

Ref. Peak Energy : 0.00

Reference Date :

Peak Ratio : 0.00

Uncertainty : 0.00

Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000082156.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	54.52	4.01E+01	45.96			4.01E+01	4.60E+01
2	63.26	1.29E+02	70.11	2.77E+01	1.04E+01	1.01E+02	7.09E+01

Analysis Report for 1905060-05

R1 6-12

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
3	76.70	8.85E+02	115.39			8.85E+02	1.15E+02
4	87.65	4.77E+01	57.24			4.77E+01	5.72E+01
5	92.86	2.13E+02	82.51	6.19E+01	1.42E+01	1.51E+02	8.37E+01
6	115.22	4.92E+01	46.43			4.92E+01	4.64E+01
7	130.91	1.07E+02	82.58			1.07E+02	8.26E+01
8	186.33	1.50E+02	67.50	3.71E+01	7.15E+00	1.12E+02	6.79E+01
9	209.20	5.34E+01	54.52			5.34E+01	5.45E+01
M 10	239.08	6.89E+02	62.73	1.85E+01	2.89E+00	6.70E+02	6.28E+01
m 11	242.07	1.84E+02	64.33	1.11E+01	2.59E+00	1.73E+02	6.44E+01
12	269.94	8.04E+01	60.73			8.04E+01	6.07E+01
13	295.48	2.05E+02	49.81	9.91E+00	6.34E+00	1.95E+02	5.02E+01
14	327.95	3.79E+01	41.57			3.79E+01	4.16E+01
15	338.79	1.37E+02	51.52			1.37E+02	5.15E+01
16	352.27	3.87E+02	60.38	1.92E+01	5.24E+00	3.68E+02	6.06E+01
17	387.59	3.41E+01	33.48			3.41E+01	3.35E+01
18	463.37	2.83E+01	32.19			2.83E+01	3.22E+01
19	511.48	1.68E+02	48.79	7.69E+01	5.30E+00	9.14E+01	4.91E+01
20	522.10	3.60E+01	37.47			3.60E+01	3.75E+01
M 21	579.83	2.24E+01	16.25			2.24E+01	1.62E+01
m 22	583.61	1.81E+02	34.55	1.07E+01	3.54E+00	1.70E+02	3.47E+01
23	609.63	2.45E+02	46.02	1.53E+01	4.10E+00	2.30E+02	4.62E+01
24	649.67	2.59E+01	25.46			2.59E+01	2.55E+01
25	727.90	5.62E+01	25.49			5.62E+01	2.55E+01
26	768.92	2.74E+01	22.23			2.74E+01	2.22E+01
27	796.23	3.16E+01	28.74	0.00E+00	0.00E+00	3.16E+01	2.87E+01
28	911.68	1.04E+02	35.49	3.90E+00	2.73E+00	1.00E+02	3.56E+01
m 29	944.68	1.39E+01	14.90			1.39E+01	1.49E+01
30	951.04	2.98E+01	20.36			2.98E+01	2.04E+01
31	1065.69	3.32E+01	21.10			3.32E+01	2.11E+01
32	1073.24	1.03E+01	12.12			1.03E+01	1.21E+01
33	1120.99	3.53E+01	28.84	2.74E+00	2.62E+00	3.26E+01	2.90E+01
M 34	1226.06	1.70E+01	9.42			1.70E+01	9.42E+00
m 35	1228.65	2.74E+01	17.85			2.74E+01	1.79E+01
m 36	1239.07	3.47E+01	19.46			3.47E+01	1.95E+01
37	1381.41	3.03E+01	22.80			3.03E+01	2.28E+01
38	1461.11	4.77E+02	50.13	8.88E+00	2.10E+00	4.69E+02	5.02E+01
39	1764.74	3.62E+01	19.60	3.76E+00	1.92E+00	3.25E+01	1.97E+01
M 40	1843.42	8.79E+00	5.66			8.79E+00	5.66E+00
m 41	1847.76	1.23E+01	9.80			1.23E+01	9.80E+00
42	1938.62	5.21E+00	6.08			5.21E+00	6.08E+00
43	2204.17	1.52E+01	8.96			1.52E+01	8.96E+00
44	2309.44	6.00E+00	4.90			6.00E+00	4.90E+00
45	2615.00	7.40E+01	19.13	5.68E+00	1.32E+00	6.83E+01	1.92E+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 1905060-05

R1 6-12

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	1.96E+01	2.86E+00
GA-67	0.464	93.31 *	35.70	6.16E+01	3.76E+01
		208.95 *	2.24	5.74E+02	5.88E+02
		300.22	16.00		
CD-109	0.996	88.03 *	3.72	8.26E-01	1.01E+00
SN-126	1.000	87.57 *	37.00	7.99E-02	9.82E-02
TL-208	0.892	583.14 *	30.22	1.13E+00	2.58E-01
		860.37	4.48		
BI-212	0.762	2614.66 *	35.85	8.10E-01	2.34E-01
		727.17 *	11.80	1.14E+00	5.30E-01
		1620.62	2.75		
PB-212	0.889	238.63 *	44.60	1.70E+00	2.45E-01
		300.09	3.41		
BI-214	0.996	609.31 *	46.30	1.03E+00	2.33E-01
		1120.29 *	15.10	7.65E-01	6.85E-01
		1764.49 *	15.80	1.02E+00	6.26E-01
		2204.22 *	4.98	1.52E+00	9.01E-01
PB-214	0.997	295.21 *	19.19	1.32E+00	3.77E-01
		351.92 *	37.19	1.43E+00	2.77E-01
RA-224	0.969	240.98 *	3.95	5.00E+00	1.94E+00
RA-226	1.000	186.21 *	3.28	3.24E+00	1.98E+00
AC-228	0.565	338.32 *	11.40	1.70E+00	6.64E-01
		911.07 *	27.70	1.06E+00	3.89E-01
		969.11	16.60		
PA-234	0.736	131.20 *	20.40	3.81E-01	3.03E-01
		733.99	8.80		
		946.00 *	12.00	3.49E-01	3.76E-01
TH-234	1.000	63.29 *	3.80	2.05E+00	1.45E+00

* = Energy line found in the spectrum.

- = Manually added nuclide.

? = Manually edited nuclide.

Energy Tolerance : 2.000FWHM

Nuclide confidence index threshold = 0.30

Errors quoted at 2.000sigma

Analysis Report for 1905060-05

R1 6-12

UNIDENTIFIED PEAKS

Peak Locate Performed on : 6/3/2019 7:52:24AM
 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	54.52	1.11377E-02	57.31		
3	76.70	2.45957E-01	6.52		
6	115.22	1.36616E-02	47.21		
12	269.94	2.23292E-02	37.77	To1.	CS-135
14	327.95	1.05171E-02	54.90	Sum	
17	387.59	9.48232E-03	49.04	Sum	
18	463.37	7.85466E-03	56.91		
19	511.48	2.53896E-02	26.84		
20	522.10	1.00000E-02	52.04	To1.	RB-83
M 21	579.83	6.21411E-03	36.32	Sum	
24	649.67	7.19444E-03	49.14	Sum	
26	768.92	7.62393E-03	40.49	Sum	
27	796.23	8.77493E-03	45.50	Sum	
30	951.04	8.26520E-03	34.21	S-Esc	
31	1065.69	9.21717E-03	31.79	Sum	
32	1073.24	2.85053E-03	59.07		
M 34	1226.06	4.73124E-03	27.66		
m 35	1228.65	7.60212E-03	32.62		
m 36	1239.07	9.64755E-03	28.02	Sum	
37	1381.41	8.42778E-03	37.58		
M 40	1843.42	2.44264E-03	32.17		
m 41	1847.76	3.41936E-03	39.80	Sum	
42	1938.62	1.44841E-03	58.33		
44	2309.44	1.66667E-03	40.82		

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 1905060-05

R1 6-12

Nuclide Name	Id Confidence	Energy (keV)		Yield(%)	Activity (pCi/grams)	Activity Uncertainty
K-40	0.99	1460.81	*	10.67	1.96E+01	2.86E+00
GA-67	0.46	93.31	*	35.70	6.16E+01	3.76E+01
		208.95	*	2.24	5.74E+02	5.88E+02
		300.22		16.00		
CD-109	0.99	88.03	*	3.72	8.26E-01	1.01E+00
SN-126	1.00	87.57	*	37.00	7.99E-02	9.82E-02
TL-208	0.89	583.14	*	30.22	1.13E+00	2.58E-01
		860.37		4.48		
		2614.66	*	35.85	8.10E-01	2.34E-01
BI-212	0.76	727.17	*	11.80	1.14E+00	5.30E-01
		1620.62		2.75		
PB-212	0.88	238.63	*	44.60	1.70E+00	2.45E-01
		300.09		3.41		
BI-214	0.99	609.31	*	46.30	1.03E+00	2.33E-01
		1120.29	*	15.10	7.65E-01	6.85E-01
		1764.49	*	15.80	1.02E+00	6.26E-01
		2204.22	*	4.98	1.52E+00	9.01E-01
PB-214	0.99	295.21	*	19.19	1.32E+00	3.77E-01
		351.92	*	37.19	1.43E+00	2.77E-01
RA-224	0.96	240.98	*	3.95	5.00E+00	1.94E+00
RA-226	1.00	186.21	*	3.28	3.24E+00	1.98E+00
AC-228	0.56	338.32	*	11.40	1.70E+00	6.64E-01
		911.07	*	27.70	1.06E+00	3.89E-01
		969.11		16.60		
PA-234	0.73	131.20	*	20.40	3.81E-01	3.03E-01
		733.99		8.80		
		946.00	*	12.00	3.49E-01	3.76E-01
TH-234	1.00	63.29	*	3.80	2.05E+00	1.45E+00

* = Energy line found in the spectrum.

- = Manually added nuclide.

? = Manually edited nuclide.

@ = Energy line not used for Weighted Mean Activity

Energy Tolerance : 2.000FWHM

Nuclide confidence index threshold = 0.30

Errors quoted at 2.000sigma

INTERFERENCE CORRECTED REPORT

Analysis Report for 1905060-05

R1 6-12

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40	0.998	1.96E+01	2.86E+00	
GA-67	0.464	6.37E+01	3.75E+01	
? CD-109	0.996	8.26E-01	1.01E+00	
? SN-126	1.000	7.99E-02	9.82E-02	
TL-208	0.892	9.54E-01	1.73E-01	
BI-212	0.762	1.14E+00	5.30E-01	
PB-212	0.889	1.70E+00	2.45E-01	
BI-214	0.996	1.03E+00	2.03E-01	
PB-214	0.997	1.39E+00	2.23E-01	
RA-224	0.969	5.00E+00	1.94E+00	
RA-226	1.000	3.24E+00	1.98E+00	
AC-228	0.565	1.22E+00	3.35E-01	
PA-234	0.736	3.69E-01	2.36E-01	
TH-234	1.000	2.05E+00	1.45E+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 1905060-05

R1 6-12

UNIDENTIFIED PEAKS

Peak Locate Performed on : 6/3/2019 7:52:24AM

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	54.52	1.11377E-02	57.31		
3	76.70	2.45957E-01	6.52		
6	115.22	1.36616E-02	47.21		
12	269.94	2.23292E-02	37.77	Tol.	CS-135
14	327.95	1.05171E-02	54.90	Sum	
17	387.59	9.48232E-03	49.04	Sum	
18	463.37	7.85466E-03	56.91		
19	511.48	2.53896E-02	26.84		
20	522.10	1.00000E-02	52.04	Tol.	RB-83
M 21	579.83	6.21411E-03	36.32	Sum	
24	649.67	7.19444E-03	49.14	Sum	
26	768.92	7.62393E-03	40.49	Sum	
27	796.23	8.77493E-03	45.50	Sum	
30	951.04	8.26520E-03	34.21	S-Esc	
31	1065.69	9.21717E-03	31.79	Sum	
32	1073.24	2.85053E-03	59.07		
M 34	1226.06	4.73124E-03	27.66		
m 35	1228.65	7.60212E-03	32.62		
m 36	1239.07	9.64755E-03	28.02	Sum	
37	1381.41	8.42778E-03	37.58		
M 40	1843.42	2.44264E-03	32.17		
m 41	1847.76	3.41936E-03	39.80	Sum	
42	1938.62	1.44841E-03	58.33		
44	2309.44	1.66667E-03	40.82		

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 1905060-05

R1 6-12

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	-7.08E-02	8.55E-01	8.55E-01
+	NA-22	1274.54	99.94	3.28E-02	1.11E-01	1.11E-01
+	NA-24	1368.53	99.99	8.75E-03	5.14E-02	9.04E-02
		2754.09	99.86	-3.92E-03		5.14E-02
+	AL-26	1808.65	99.76	-1.41E-02	6.59E-02	6.59E-02
+	K-40	1460.81	* 10.67	1.96E+01	1.86E+00	1.86E+00
+	@ AR-41	1293.64	99.16	1.00E+26	1.00E+26	1.00E+26
+	TI-44	67.88	94.40	7.61E-03	7.44E-02	7.44E-02
		78.34	96.00	1.47E-01		9.74E-02
+	SC-46	889.25	98.98	-2.44E-02	1.23E-01	1.23E-01
		1120.51	99.90	1.83E-01		2.01E-01
+	V-48	983.52	99.98	2.96E-02	3.14E-01	3.30E-01
		1312.10	97.50	-8.42E-03		3.14E-01
+	CR-51	320.08	9.83	-3.75E-01	1.25E+00	1.25E+00
+	MN-54	834.83	99.97	-3.92E-02	1.00E-01	1.00E-01
+	CO-56	846.75	99.96	-3.55E-03	1.11E-01	1.11E-01
		1037.75	14.03	-2.19E-01		7.42E-01
		1238.25	67.00	4.79E-02		2.87E-01
		1771.40	15.51	3.54E-02		7.78E-01
		2587.48	16.90	-1.97E-01		3.54E-01
+	CO-57	122.06	85.51	-1.47E-02	6.28E-02	6.28E-02
		136.48	10.60	-6.74E-02		5.64E-01
+	CO-58	810.76	99.40	-6.92E-02	1.13E-01	1.13E-01
+	FE-59	1099.22	56.50	-2.27E-02	2.63E-01	2.63E-01
		1291.56	43.20	1.85E-02		3.48E-01
+	CO-60	1173.22	100.00	1.29E-02	1.03E-01	1.20E-01
		1332.49	100.00	1.90E-04		1.03E-01
+	ZN-65	1115.52	50.75	5.24E-02	2.74E-01	2.74E-01
+	GA-67	93.31	* 35.70	6.16E+01	5.47E+01	5.47E+01
		208.95	* 2.24	5.74E+02		9.56E+02
		300.22	16.00	9.85E+01		1.11E+02
+	SE-75	121.11	16.70	2.22E-01	1.09E-01	3.53E-01
		136.00	59.50	-1.30E-02		1.09E-01
		264.65	59.80	-9.15E-03		1.25E-01
		279.53	25.20	9.03E-02		3.27E-01
		400.65	11.40	-1.65E-01		7.42E-01
+	RB-82	776.52	13.00	9.45E-01	1.50E+00	1.50E+00
+	RB-83	520.41	46.00	8.73E-02	2.09E-01	2.09E-01
		529.64	30.30	-8.56E-02		2.87E-01
		552.65	16.40	6.99E-02		5.05E-01
+	KR-85	513.99	0.43	-3.96E+00	1.98E+01	1.98E+01
+	SR-85	513.99	99.27	-2.27E-02	1.13E-01	1.13E-01

Analysis Report for 1905060-05

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	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	Y-88	898.02	93.40	2.27E-03	9.49E-02	1.17E-01
		1836.01	99.38	-6.73E-03		9.49E-02
+	MO-93	263.06	56.72	1.84E-02	8.58E-02	1.15E-01
		684.67	99.68	-1.70E-02		8.58E-02
		1477.11	99.08	2.20E-02		8.59E-02
+	NB-93M	16.57	9.43	0.00E+00	9.44E+04	9.44E+04
+	NB-94	702.63	100.00	-3.48E-03	9.32E-02	9.32E-02
		871.10	100.00	2.84E-02		1.03E-01
+	NB-95	765.79	99.81	2.39E-02	1.81E-01	1.81E-01
+	NB-95M	235.69	25.00	-3.10E+02	3.99E+01	3.99E+01
+	ZR-95	724.18	43.70	-3.05E-02	2.19E-01	3.07E-01
		756.72	55.30	2.66E-02		2.19E-01
+	MO-99	181.06	6.20	-1.43E+02	4.40E+02	6.60E+02
		739.58	12.80	-2.59E+01		4.40E+02
		778.00	4.50	4.15E+02		1.36E+03
+	TC-99M	140.51	89.00	1.98E-02	6.80E-02	6.80E-02
+	RU-103	497.08	89.00	-3.26E-02	1.11E-01	1.11E-01
+	RU-106	621.84	9.80	-3.53E-01	8.73E-01	8.73E-01
+	AG-108M	433.93	89.90	-1.45E-02	6.69E-02	6.69E-02
		614.37	90.40	-8.97E-04		9.54E-02
		722.95	90.50	9.18E-03		8.99E-02
+	CD-109	88.03	* 3.72	8.26E-01	1.63E+00	1.63E+00
+	AG-110M	657.75	93.14	-1.12E-02	9.43E-02	9.43E-02
		677.61	10.53	7.36E-02		9.03E-01
		706.67	16.46	4.81E-02		5.89E-01
		763.93	21.98	5.11E-02		4.71E-01
		884.67	21.98	-1.64E-01		5.11E-01
		1384.27	23.94	-1.82E-01		4.31E-01
+	CD-113M	263.70	0.02	4.53E+01	2.83E+02	2.83E+02
+	SN-113	255.12	1.93	4.67E-01	1.12E-01	4.08E+00
		391.69	64.90	1.61E-02		1.12E-01
+	TE-123M	159.00	84.10	1.55E-02	8.46E-02	8.46E-02
+	SB-124	602.71	97.87	2.67E-02	1.06E-01	1.06E-01
		645.85	7.26	-2.10E-02		1.45E+00
		722.78	11.10	1.01E-01		9.84E-01
		1691.02	49.00	-4.46E-03		1.89E-01
+	I-125	35.49	6.49	-1.17E+00	1.40E+01	1.40E+01
+	SB-125	176.33	6.89	6.30E-01	2.59E-01	9.58E-01
		427.89	29.33	4.50E-02		2.59E-01
		463.38	10.35	4.86E-01		7.89E-01
		600.56	17.80	5.96E-02		4.32E-01
		635.90	11.32	1.07E-01		8.22E-01
+	SB-126	414.70	83.30	-4.79E-03	8.50E-02	8.50E-02
		666.33	99.60	-1.68E-02		8.90E-02
		695.00	99.60	-4.04E-03		9.73E-02
		720.50	53.80	3.74E-02		1.58E-01
+	SN-126	87.57	* 37.00	7.99E-02	1.58E-01	1.58E-01
+	SB-127	473.00	25.00	-1.26E+01	2.42E+01	2.49E+01

Analysis Report for 1905060-05

R1 6-12

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	SB-127	685.00	35.70	-4.80E+00	2.42E+01	2.42E+01
		783.80	14.70	-2.39E+01		6.02E+01
+	I-129	29.78	57.00	1.35E+01	3.87E+00	7.86E+00
		33.60	13.20	-1.30E+00		9.31E+00
		39.58	7.52	3.32E-01		3.87E+00
+	I-131	284.30	6.05	-3.93E+00	8.29E-01	1.02E+01
		364.48	81.20	1.77E-01		8.29E-01
		636.97	7.26	7.01E+00		1.17E+01
		722.89	1.80	4.21E+00		4.13E+01
+	TE-132	49.72	13.10	-2.13E+02	1.72E+01	1.51E+02
		228.16	88.00	-1.05E+01		1.72E+01
+	BA-133	81.00	33.00	-1.13E-01	1.10E-01	1.78E-01
		302.84	17.80	3.88E-02		4.09E-01
		356.01	60.00	-1.54E-02		1.10E-01
+	I-133	529.87	86.30	-2.00E+07	6.71E+07	6.71E+07
+	XE-133	81.00	38.00	-2.89E+00	4.58E+00	4.58E+00
+	CS-134	563.23	8.38	-1.95E-02	7.69E-02	8.81E-01
		569.32	15.43	8.91E-03		4.87E-01
		604.70	97.60	-1.29E-03		7.69E-02
		795.84	85.40	3.99E-02		1.15E-01
		801.93	8.73	-2.54E-01		9.78E-01
+	CS-135	268.24	16.00	5.65E-02	4.87E-01	4.87E-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	-1.70E+00	3.29E-01	3.25E+00
		163.89	4.61	-3.38E+00		5.10E+00
		176.55	13.56	1.22E+00		1.85E+00
		273.65	12.66	-1.42E+00		2.27E+00
		340.57	48.50	1.50E+00		8.14E-01
		818.50	99.70	-2.22E-01		3.29E-01
		1048.07	79.60	5.94E-02		5.01E-01
		1235.34	19.70	-1.94E+00		2.55E+00
+	CS-137	661.65	85.12	5.68E-02	1.10E-01	1.10E-01
+	LA-138	788.74	34.00	1.43E-01	1.46E-01	2.75E-01
		1435.80	66.00	7.34E-02		1.46E-01
+	CE-139	165.85	80.35	8.71E-02	9.26E-02	9.26E-02
+	BA-140	162.64	6.70	-3.69E+00	1.09E+00	3.54E+00
		304.84	4.50	-3.97E+00		5.65E+00
		423.70	3.20	-7.89E-01		8.90E+00
		437.55	2.00	-1.05E+00		1.25E+01
		537.32	25.00	-3.55E-01		1.09E+00
+	LA-140	328.77	20.50	1.28E+00	3.47E-01	1.60E+00
		487.03	45.50	8.59E-02		5.72E-01
		815.85	23.50	7.16E-02		1.53E+00
		1596.49	95.49	-6.18E-02		3.47E-01
+	CE-141	145.44	48.40	2.74E-02	2.17E-01	2.17E-01
+	CE-143	57.36	11.80	4.60E+04	9.71E+04	2.81E+05
		293.26	42.00	1.09E+04		9.71E+04

Analysis Report for 1905060-05

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	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	CE-143	664.55	5.20	3.12E+05	9.71E+04	7.50E+05
+	CE-144	133.54	10.80	-9.31E-02	5.70E-01	5.70E-01
+	PM-144	476.78	42.00	-3.14E-02	9.10E-02	1.58E-01
		618.01	98.60	3.01E-02		9.10E-02
		696.49	99.49	4.73E-02		1.06E-01
+	PM-145	36.85	21.70	1.82E-01	1.13E+00	2.28E+00
		37.36	39.70	9.04E-02		1.13E+00
		42.30	15.10	-6.37E-02		1.19E+00
		72.40	2.31	-6.36E-01		3.11E+00
+	PM-146	453.90	39.94	1.14E-01	1.93E-01	1.93E-01
		735.90	14.01	3.63E-02		6.34E-01
		747.13	13.10	-3.39E-02		7.05E-01
+	ND-147	91.11	28.90	-4.91E-01	1.23E+00	1.23E+00
		531.02	13.10	5.93E-01		2.93E+00
+	PM-149	285.90	3.10	4.58E+03	7.15E+03	7.15E+03
+	EU-152	121.78	20.50	-5.74E-02	2.46E-01	2.46E-01
		244.69	5.40	-2.26E-01		1.56E+00
		344.27	19.13	-9.90E-02		3.26E-01
		778.89	9.10	1.94E-01		1.02E+00
		964.01	10.40	-4.66E-02		1.23E+00
		1085.78	7.22	-3.36E-02		1.48E+00
		1112.02	9.60	-5.53E-01		1.18E+00
		1407.95	14.94	2.35E-01		6.21E-01
+	GD-153	97.43	31.30	-3.89E-02	1.82E-01	1.82E-01
		103.18	22.20	-4.76E-02		2.53E-01
+	EU-154	123.07	40.50	-4.37E-02	1.25E-01	1.25E-01
		723.30	19.70	-3.13E-02		4.27E-01
		873.19	11.50	4.82E-01		9.12E-01
		996.32	10.30	2.31E-01		1.04E+00
		1004.76	17.90	8.88E-02		6.09E-01
+	EU-155	1274.45	35.50	9.12E-02		3.09E-01
		86.50	30.90	1.63E-01	2.33E-01	2.33E-01
		105.30	20.70	-2.28E-01		2.45E-01
+	EU-156	811.77	10.40	-1.64E+00	2.64E+00	2.64E+00
		1153.47	7.20	2.12E+00		6.07E+00
		1230.71	8.90	1.27E+00		5.04E+00
+	HO-166M	184.41	72.60	6.46E-02	1.12E-01	1.12E-01
		280.45	29.60	-2.96E-02		2.29E-01
		410.94	11.10	1.93E-01		6.84E-01
		711.69	54.10	-1.97E-02		1.57E-01
+	TM-171	66.72	0.14	2.25E+01	5.50E+01	5.50E+01
+	HF-172	67.35	5.31	5.74E-01	4.78E-01	1.35E+00
		125.82	11.30	-4.52E-02		4.78E-01
+	LU-172	181.53	20.60	-9.57E-01	2.44E+00	4.41E+00
		900.72	29.81	-1.43E+00		4.16E+00
		1093.66	62.50	8.84E-01		2.44E+00
+	LU-173	100.72	5.24	6.03E-01	3.94E-01	1.09E+00
		272.11	21.20	1.97E-01		3.94E-01
+	HF-175	343.40	84.00	2.16E-02	1.02E-01	1.02E-01

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	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	LU-176	88.34	13.30	1.92E-01	6.69E-02	5.27E-01
		201.83	86.00	-1.89E-02		7.90E-02
		306.78	94.00	-2.23E-02		6.69E-02
+	HF-181	133.02	41.70	-3.44E-02	1.22E-01	2.11E-01
		345.85	17.20	-1.89E-01		5.57E-01
		482.03	82.80	3.59E-02		1.22E-01
+	TA-182	67.75	41.20	2.04E-02	1.99E-01	1.99E-01
		1121.30	34.90	4.99E-01		5.38E-01
		1189.05	16.23	2.15E-01		8.57E-01
		1221.41	26.98	4.46E-02		5.28E-01
		1231.02	11.44	3.57E-01		1.42E+00
+	IR-192	308.46	29.68	-2.76E-01	1.91E-01	2.73E-01
		468.07	48.10	8.05E-02		1.91E-01
+	HG-203	279.19	77.30	3.71E-02	1.35E-01	1.35E-01
+	TL-204	374.74	94.11	4.85E-03	7.29E-02	7.29E-02
		899.15	99.16	-2.21E-02		8.89E-02
		911.74	91.10	3.34E-01		1.95E-01
+	BI-207	569.67	97.72	1.38E-03	7.52E-02	7.52E-02
		1063.62	74.90	5.09E-02		1.47E-01
+	TL-208	583.14	* 30.22	1.13E+00	2.22E-01	3.88E-01
		860.37	4.48	1.85E+00		2.39E+00
		2614.66	* 35.85	8.10E-01		2.22E-01
+	BI-210M	262.00	45.00	-7.43E-02	1.44E-01	1.44E-01
		300.00	23.00	2.93E-01		3.30E-01
+	PB-210	46.50	4.25	2.60E+00	3.07E+00	3.07E+00
+	PB-211	404.84	2.90	7.02E-01	2.54E+00	2.54E+00
		831.96	2.90	-2.88E-01		3.20E+00
+	BI-212	727.17	* 11.80	1.14E+00	7.40E-01	7.40E-01
		1620.62	2.75	2.90E-02		2.90E+00
+	PB-212	238.63	* 44.60	1.70E+00	2.90E-01	2.90E-01
		300.09	3.41	1.98E+00		2.23E+00
+	BI-214	609.31	* 46.30	1.03E+00	2.69E-01	2.69E-01
		1120.29	* 15.10	7.65E-01		1.09E+00
		1764.49	* 15.80	1.02E+00		9.16E-01
		2204.22	* 4.98	1.52E+00		9.91E-01
+	PB-214	295.21	* 19.19	1.32E+00	3.11E-01	4.83E-01
		351.92	* 37.19	1.43E+00		3.11E-01
+	RN-219	401.80	6.50	1.53E-01	1.16E+00	1.16E+00
+	RA-223	323.87	3.88	2.07E-01	1.72E+00	1.72E+00
+	RA-224	240.98	* 3.95	5.00E+00	3.31E+00	3.31E+00
+	RA-225	40.00	31.00	1.07E+00	2.87E+00	2.87E+00
+	RA-226	186.21	* 3.28	3.24E+00	3.14E+00	3.14E+00
+	TH-227	50.10	8.40	-9.52E-02	8.86E-01	1.00E+00
		236.00	11.50	-5.34E+00		8.86E-01
		256.20	6.30	-9.57E-01		1.06E+00
+	AC-228	338.32	* 11.40	1.70E+00	5.38E-01	9.68E-01
		911.07	* 27.70	1.06E+00		5.38E-01
		969.11	16.60	6.68E-01		9.29E-01

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	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	TH-230	48.43	16.90	4.87E-01	6.40E-01	6.40E-01
		62.85	4.60	1.87E+00		1.82E+00
		67.67	0.37	7.98E+00		1.88E+01
+	PA-231	283.67	1.60	-1.79E+00	3.15E+00	4.14E+00
		302.67	2.30	2.99E-01		3.15E+00
+	TH-231	25.64	14.70	1.93E+00	9.78E-01	1.42E+01
		84.21	6.40	8.31E-01		9.78E-01
+	PA-233	311.98	38.60	-3.43E-02	3.56E-01	3.56E-01
+	PA-234	131.20	* 20.40	3.81E-01	4.81E-01	4.81E-01
		733.99	8.80	2.44E-01		1.01E+00
		946.00	* 12.00	3.49E-01		7.88E-01
+	PA-234M	1001.03	0.92	2.65E-01	1.20E+01	1.20E+01
+	TH-234	63.29	* 3.80	2.05E+00	2.32E+00	2.32E+00
+	U-235	143.76	10.50	3.99E-01	6.03E-01	6.03E-01
		163.35	4.70	9.85E-01		1.32E+00
		205.31	4.70	2.43E-01		1.47E+00
+	NP-237	86.50	12.60	3.96E-01	5.67E-01	5.67E-01
+	NP-239	106.10	22.70	-5.47E+01	4.27E+02	4.27E+02
		228.18	10.70	-6.97E+02		1.15E+03
		277.60	14.10	3.24E+02		9.79E+02
+	AM-241	59.54	35.90	3.38E-02	2.12E-01	2.12E-01
+	AM-243	74.67	66.00	-3.71E-01	1.34E-01	1.34E-01
+	CM-243	209.75	3.29	2.49E+00	5.19E-01	2.34E+00
		228.14	10.60	-3.70E-01		6.10E-01
		277.60	14.00	1.72E-01		5.19E-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 1905060-05

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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	8.55E-01	8.55E-01	-7.08E-02	3.96E-01
NA-22	1274.54	99.94	1.11E-01	1.11E-01	3.28E-02	5.01E-02
NA-24	1368.53	99.99	9.04E-02	5.14E-02	8.75E-03	3.95E-02
	2754.09	99.86	5.14E-02		-3.92E-03	2.04E-02
AL-26	1808.65	99.76	6.59E-02	6.59E-02	-1.41E-02	2.61E-02
+ K-40	1460.81	* 10.67	1.86E+00	1.86E+00	1.96E+01	8.72E-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	7.44E-02	7.44E-02	7.61E-03	3.62E-02
	78.34	96.00	9.74E-02		1.47E-01	4.78E-02
SC-46	889.25	98.98	1.23E-01	1.23E-01	-2.44E-02	5.68E-02
	1120.51	99.90	2.01E-01		1.83E-01	9.47E-02
V-48	983.52	99.98	3.30E-01	3.14E-01	2.96E-02	1.52E-01
	1312.10	97.50	3.14E-01		-8.42E-03	1.39E-01
CR-51	320.08	9.83	1.25E+00	1.25E+00	-3.75E-01	5.88E-01
MN-54	834.83	99.97	1.00E-01	1.00E-01	-3.92E-02	4.64E-02
CO-56	846.75	99.96	1.11E-01	1.11E-01	-3.55E-03	5.10E-02
	1037.75	14.03	7.42E-01		-2.19E-01	3.30E-01
	1238.25	67.00	2.87E-01		4.79E-02	1.34E-01
	1771.40	15.51	7.78E-01		3.54E-02	3.33E-01
	2587.48	16.90	3.54E-01		-1.97E-01	1.32E-01
CO-57	122.06	85.51	6.28E-02	6.28E-02	-1.47E-02	3.02E-02
	136.48	10.60	5.64E-01		-6.74E-02	2.72E-01
CO-58	810.76	99.40	1.13E-01	1.13E-01	-6.92E-02	5.17E-02
FE-59	1099.22	56.50	2.63E-01	2.63E-01	-2.27E-02	1.19E-01
	1291.56	43.20	3.48E-01		1.85E-02	1.55E-01
CO-60	1173.22	100.00	1.20E-01	1.03E-01	1.29E-02	5.50E-02
	1332.49	100.00	1.03E-01		1.90E-04	4.57E-02
ZN-65	1115.52	50.75	2.74E-01	2.74E-01	5.24E-02	1.27E-01
+ GA-67	93.31	* 35.70	5.47E+01	5.47E+01	6.16E+01	2.68E+01
	208.95	* 2.24	9.56E+02		5.74E+02	4.64E+02
	300.22	16.00	1.11E+02		9.85E+01	5.28E+01
SE-75	121.11	16.70	3.53E-01	1.09E-01	2.22E-01	1.70E-01
	136.00	59.50	1.09E-01		-1.30E-02	5.25E-02
	264.65	59.80	1.25E-01		-9.15E-03	5.95E-02
	279.53	25.20	3.27E-01		9.03E-02	1.56E-01
	400.65	11.40	7.42E-01		-1.65E-01	3.49E-01
RB-82	776.52	13.00	1.50E+00	1.50E+00	9.45E-01	6.95E-01
RB-83	520.41	46.00	2.09E-01	2.09E-01	8.73E-02	9.76E-02
	529.64	30.30	2.87E-01		-8.56E-02	1.33E-01
	552.65	16.40	5.05E-01		6.99E-02	2.33E-01
KR-85	513.99	0.43	1.98E+01	1.98E+01	-3.96E+00	9.32E+00
SR-85	513.99	99.27	1.13E-01	1.13E-01	-2.27E-02	5.34E-02
Y-88	898.02	93.40	1.17E-01	9.49E-02	2.27E-03	5.35E-02
	1836.01	99.38	9.49E-02		-6.73E-03	3.94E-02
MO-93	263.06	56.72	1.15E-01	8.58E-02	1.84E-02	5.44E-02
	684.67	99.68	8.58E-02		-1.70E-02	3.98E-02
	1477.11	99.08	8.59E-02		2.20E-02	3.68E-02
NB-93M	16.57	9.43	9.44E+04	9.44E+04	0.00E+00	0.00E+00
NB-94	702.63	100.00	9.32E-02	9.32E-02	-3.48E-03	4.35E-02
	871.10	100.00	1.03E-01		2.84E-02	4.78E-02
NB-95	765.79	99.81	1.81E-01	1.81E-01	2.39E-02	8.47E-02
NB-95M	235.69	25.00	3.99E+01	3.99E+01	-3.10E+02	1.91E+01
ZR-95	724.18	43.70	3.07E-01	2.19E-01	-3.05E-02	1.44E-01

0203

Analysis Report for 1905060-05

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Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
ZR-95	756.72	55.30	2.19E-01	2.19E-01	2.66E-02	1.02E-01
MO-99	181.06	6.20	6.60E+02	4.40E+02	-1.43E+02	3.17E+02
	739.58	12.80	4.40E+02		-2.59E+01	2.04E+02
	778.00	4.50	1.36E+03		4.15E+02	6.33E+02
TC-99M	140.51	89.00	6.80E-02	6.80E-02	1.98E-02	3.28E-02
RU-103	497.08	89.00	1.11E-01	1.11E-01	-3.26E-02	5.10E-02
RU-106	621.84	9.80	8.73E-01	8.73E-01	-3.53E-01	4.06E-01
AG-108M	433.93	89.90	6.69E-02	6.69E-02	-1.45E-02	3.10E-02
	614.37	90.40	9.54E-02		-8.97E-04	4.46E-02
	722.95	90.50	8.99E-02		9.18E-03	4.14E-02
+ CD-109	88.03	*	1.63E+00	1.63E+00	8.26E-01	7.91E-01
AG-110M	657.75	93.14	9.43E-02	9.43E-02	-1.12E-02	4.37E-02
	677.61	10.53	9.03E-01		7.36E-02	4.20E-01
	706.67	16.46	5.89E-01		4.81E-02	2.74E-01
	763.93	21.98	4.71E-01		5.11E-02	2.19E-01
	884.67	21.98	5.11E-01		-1.64E-01	2.37E-01
	1384.27	23.94	4.31E-01		-1.82E-01	1.89E-01
CD-113M	263.70	0.02	2.83E+02	2.83E+02	4.53E+01	1.34E+02
SN-113	255.12	1.93	4.08E+00	1.12E-01	4.67E-01	1.94E+00
	391.69	64.90	1.12E-01		1.61E-02	5.24E-02
TE-123M	159.00	84.10	8.46E-02	8.46E-02	1.55E-02	4.07E-02
SB-124	602.71	97.87	1.06E-01	1.06E-01	2.67E-02	4.91E-02
	645.85	7.26	1.45E+00		-2.10E-02	6.73E-01
	722.78	11.10	9.84E-01		1.01E-01	4.53E-01
	1691.02	49.00	1.89E-01		-4.46E-03	7.63E-02
I-125	35.49	6.49	1.40E+01	1.40E+01	-1.17E+00	6.76E+00
SB-125	176.33	6.89	9.58E-01	2.59E-01	6.30E-01	4.61E-01
	427.89	29.33	2.59E-01		4.50E-02	1.22E-01
	463.38	10.35	7.89E-01		4.86E-01	3.72E-01
	600.56	17.80	4.32E-01		5.96E-02	2.00E-01
	635.90	11.32	8.22E-01		1.07E-01	3.85E-01
SB-126	414.70	83.30	8.50E-02	8.50E-02	-4.79E-03	3.99E-02
	666.33	99.60	8.90E-02		-1.68E-02	4.15E-02
	695.00	99.60	9.73E-02		-4.04E-03	4.55E-02
	720.50	53.80	1.58E-01		3.74E-02	7.31E-02
+ SN-126	87.57	*	1.58E-01	1.58E-01	7.99E-02	7.65E-02
SB-127	473.00	25.00	2.49E+01	2.42E+01	-1.26E+01	1.15E+01
	685.00	35.70	2.42E+01		-4.80E+00	1.12E+01
	783.80	14.70	6.02E+01		-2.39E+01	2.77E+01
I-129	29.78	57.00	7.86E+00	3.87E+00	1.35E+01	3.83E+00
	33.60	13.20	9.31E+00		-1.30E+00	4.52E+00
	39.58	7.52	3.87E+00		3.32E-01	1.86E+00
I-131	284.30	6.05	1.02E+01	8.29E-01	-3.93E+00	4.85E+00
	364.48	81.20	8.29E-01		1.77E-01	3.92E-01
	636.97	7.26	1.17E+01		7.01E+00	5.50E+00
	722.89	1.80	4.13E+01		4.21E+00	1.90E+01
TE-132	49.72	13.10	1.51E+02	1.72E+01	-2.13E+02	7.20E+01
	228.16	88.00	1.72E+01		-1.05E+01	8.21E+00
BA-133	81.00	33.00	1.78E-01	1.10E-01	-1.13E-01	8.66E-02
	302.84	17.80	4.09E-01		3.88E-02	1.94E-01
	356.01	60.00	1.10E-01		-1.54E-02	5.16E-02
I-133	529.87	86.30	6.71E+07	6.71E+07	-2.00E+07	3.12E+07
XE-133	81.00	38.00	4.58E+00	4.58E+00	-2.89E+00	2.23E+00

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Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)	
CS-134	563.23	8.38	8.81E-01	7.69E-02	-1.95E-02	4.08E-01	
	569.32	15.43	4.87E-01		8.91E-03	2.26E-01	
	604.70	97.60	7.69E-02		-1.29E-03	3.55E-02	
	795.84	85.40	1.15E-01		3.99E-02	5.33E-02	
	801.93	8.73	9.78E-01		-2.54E-01	4.48E-01	
CS-135	268.24	16.00	4.87E-01	4.87E-01	5.65E-02	2.33E-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	3.25E+00	3.29E-01	-1.70E+00	1.57E+00	
	163.89	4.61	5.10E+00		-3.38E+00	2.45E+00	
	176.55	13.56	1.85E+00		1.22E+00	8.90E-01	
	273.65	12.66	2.27E+00		-1.42E+00	1.09E+00	
	340.57	48.50	8.14E-01		1.50E+00	3.92E-01	
	818.50	99.70	3.29E-01		-2.22E-01	1.51E-01	
	1048.07	79.60	5.01E-01		5.94E-02	2.29E-01	
	1235.34	19.70	2.55E+00		-1.94E+00	1.17E+00	
	CS-137	661.65	85.12		1.10E-01	1.10E-01	5.68E-02	5.13E-02
LA-138	788.74	34.00	2.75E-01	1.46E-01	1.43E-01	1.27E-01	
	1435.80	66.00	1.46E-01		7.34E-02	6.40E-02	
CE-139	165.85	80.35	9.26E-02	9.26E-02	8.71E-02	4.46E-02	
BA-140	162.64	6.70	3.54E+00	1.09E+00	-3.69E+00	1.70E+00	
	304.84	4.50	5.65E+00		-3.97E+00	2.66E+00	
	423.70	3.20	8.90E+00		-7.89E-01	4.18E+00	
	437.55	2.00	1.25E+01		-1.05E+00	5.78E+00	
	537.32	25.00	1.09E+00		-3.55E-01	5.05E-01	
LA-140	328.77	20.50	1.60E+00	3.47E-01	1.28E+00	7.61E-01	
	487.03	45.50	5.72E-01		8.59E-02	2.65E-01	
	815.85	23.50	1.53E+00		7.16E-02	7.03E-01	
	1596.49	95.49	3.47E-01		-6.18E-02	1.47E-01	
CE-141	145.44	48.40	2.17E-01	2.17E-01	2.74E-02	1.05E-01	
CE-143	57.36	11.80	2.81E+05	9.71E+04	4.60E+04	1.36E+05	
	293.26	42.00	9.71E+04		1.09E+04	4.68E+04	
	664.55	5.20	7.50E+05		3.12E+05	3.51E+05	
CE-144	133.54	10.80	5.70E-01	5.70E-01	-9.31E-02	2.75E-01	
PM-144	476.78	42.00	1.58E-01	9.10E-02	-3.14E-02	7.32E-02	
	618.01	98.60	9.10E-02		3.01E-02	4.25E-02	
	696.49	99.49	1.06E-01		4.73E-02	4.96E-02	
	36.85	21.70	2.28E+00		1.13E+00	1.82E-01	1.10E+00
PM-145	37.36	39.70	1.13E+00	1.13E+00	9.04E-02	5.45E-01	
	42.30	15.10	1.19E+00		-6.37E-02	5.68E-01	
	72.40	2.31	3.11E+00		-6.36E-01	1.52E+00	
	453.90	39.94	1.93E-01		1.93E-01	1.14E-01	9.05E-02
	735.90	14.01	6.34E-01		3.63E-02	2.94E-01	
PM-146	747.13	13.10	7.05E-01	1.93E-01	-3.39E-02	3.27E-01	
	91.11	28.90	1.23E+00		1.23E+00	-4.91E-01	6.02E-01
	531.02	13.10	2.93E+00		5.93E-01	1.37E+00	
PM-149	285.90	3.10	7.15E+03	7.15E+03	4.58E+03	3.40E+03	
EU-152	121.78	20.50	2.46E-01	2.46E-01	-5.74E-02	1.18E-01	
	244.69	5.40	1.56E+00		-2.26E-01	7.50E-01	
	344.27	19.13	3.26E-01		-9.90E-02	1.53E-01	
	778.89	9.10	1.02E+00		1.94E-01	4.73E-01	
	964.01	10.40	1.23E+00		-4.66E-02	5.77E-01	

Analysis Report for 1905060-05

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Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
EU-152	1085.78	7.22	1.48E+00	2.46E-01	-3.36E-02	6.77E-01
	1112.02	9.60	1.18E+00		-5.53E-01	5.41E-01
	1407.95	14.94	6.21E-01		2.35E-01	2.71E-01
GD-153	97.43	31.30	1.82E-01	1.82E-01	-3.89E-02	8.81E-02
	103.18	22.20	2.53E-01		-4.76E-02	1.22E-01
EU-154	123.07	40.50	1.25E-01	1.25E-01	-4.37E-02	6.01E-02
	723.30	19.70	4.27E-01		-3.13E-02	1.97E-01
	873.19	11.50	9.12E-01		4.82E-01	4.23E-01
	996.32	10.30	1.04E+00		2.31E-01	4.78E-01
	1004.76	17.90	6.09E-01		8.88E-02	2.80E-01
	1274.45	35.50	3.09E-01		9.12E-02	1.39E-01
EU-155	86.50	30.90	2.33E-01	2.33E-01	1.63E-01	1.14E-01
	105.30	20.70	2.45E-01		-2.28E-01	1.18E-01
EU-156	811.77	10.40	2.64E+00	2.64E+00	-1.64E+00	1.21E+00
	1153.47	7.20	6.07E+00		2.12E+00	2.82E+00
	1230.71	8.90	5.04E+00		1.27E+00	2.33E+00
HO-166M	184.41	72.60	1.12E-01	1.12E-01	6.46E-02	5.43E-02
	280.45	29.60	2.29E-01		-2.96E-02	1.09E-01
	410.94	11.10	6.84E-01		1.93E-01	3.23E-01
	711.69	54.10	1.57E-01		-1.97E-02	7.26E-02
TM-171	66.72	0.14	5.50E+01	5.50E+01	2.25E+01	2.68E+01
HF-172	67.35	5.31	1.35E+00	4.78E-01	5.74E-01	6.57E-01
	125.82	11.30	4.78E-01		-4.52E-02	2.30E-01
LU-172	181.53	20.60	4.41E+00	2.44E+00	-9.57E-01	2.12E+00
	900.72	29.81	4.16E+00		-1.43E+00	1.89E+00
	1093.66	62.50	2.44E+00		8.84E-01	1.12E+00
LU-173	100.72	5.24	1.09E+00	3.94E-01	6.03E-01	5.26E-01
	272.11	21.20	3.94E-01		1.97E-01	1.89E-01
HF-175	343.40	84.00	1.02E-01	1.02E-01	2.16E-02	4.80E-02
LU-176	88.34	13.30	5.27E-01	6.69E-02	1.92E-01	2.57E-01
	201.83	86.00	7.90E-02		-1.89E-02	3.79E-02
	306.78	94.00	6.69E-02		-2.23E-02	3.15E-02
HF-181	133.02	41.70	2.11E-01	1.22E-01	-3.44E-02	1.02E-01
	345.85	17.20	5.57E-01		-1.89E-01	2.61E-01
	482.03	82.80	1.22E-01		3.59E-02	5.67E-02
TA-182	67.75	41.20	1.99E-01	1.99E-01	2.04E-02	9.70E-02
	1121.30	34.90	5.38E-01		4.99E-01	2.53E-01
	1189.05	16.23	8.57E-01		2.15E-01	3.92E-01
	1221.41	26.98	5.28E-01		4.46E-02	2.42E-01
	1231.02	11.44	1.42E+00		3.57E-01	6.56E-01
IR-192	308.46	29.68	2.73E-01	1.91E-01	-2.76E-01	1.29E-01
	468.07	48.10	1.91E-01		8.05E-02	8.94E-02
HG-203	279.19	77.30	1.35E-01	1.35E-01	3.71E-02	6.41E-02
TL-204	374.74	94.11	7.29E-02	7.29E-02	4.85E-03	3.42E-02
	899.15	99.16	8.89E-02		-2.21E-02	4.05E-02
	911.74	91.10	1.95E-01		3.34E-01	9.30E-02
BI-207	569.67	97.72	7.52E-02	7.52E-02	1.38E-03	3.49E-02
	1063.62	74.90	1.47E-01		5.09E-02	6.72E-02
+ TL-208	583.14	*	30.22	2.22E-01	1.13E+00	1.85E-01
	860.37		4.48		1.85E+00	1.11E+00
	2614.66	*	35.85		8.10E-01	9.49E-02
BI-210M	262.00		1.44E-01	1.44E-01	-7.43E-02	6.83E-02
	300.00		23.00		3.30E-01	2.93E-01

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Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
PB-210	46.50	4.25	3.07E+00	3.07E+00	2.60E+00	1.48E+00
PB-211	404.84	2.90	2.54E+00	2.54E+00	7.02E-01	1.20E+00
	831.96	2.90	3.20E+00		-2.88E-01	1.47E+00
+ BI-212	727.17 *	11.80	7.40E-01	7.40E-01	1.14E+00	3.43E-01
	1620.62	2.75	2.90E+00		2.90E-02	1.21E+00
+ PB-212	238.63 *	44.60	2.90E-01	2.90E-01	1.70E+00	1.41E-01
	300.09	3.41	2.23E+00		1.98E+00	1.06E+00
+ BI-214	609.31 *	46.30	2.69E-01	2.69E-01	1.03E+00	1.28E-01
	1120.29 *	15.10	1.09E+00		7.65E-01	5.14E-01
	1764.49 *	15.80	9.16E-01		1.02E+00	4.16E-01
	2204.22 *	4.98	9.91E-01		1.52E+00	3.60E-01
+ PB-214	295.21 *	19.19	4.83E-01	3.11E-01	1.32E+00	2.32E-01
	351.92 *	37.19	3.11E-01		1.43E+00	1.50E-01
RN-219	401.80	6.50	1.16E+00	1.16E+00	1.53E-01	5.46E-01
RA-223	323.87	3.88	1.72E+00	1.72E+00	2.07E-01	8.11E-01
+ RA-224	240.98 *	3.95	3.31E+00	3.31E+00	5.00E+00	1.62E+00
RA-225	40.00	31.00	2.87E+00	2.87E+00	1.07E+00	1.38E+00
+ RA-226	186.21 *	3.28	3.14E+00	3.14E+00	3.24E+00	1.53E+00
TH-227	50.10	8.40	1.00E+00	8.86E-01	-9.52E-02	4.79E-01
	236.00	11.50	8.86E-01		-5.34E+00	4.30E-01
	256.20	6.30	1.06E+00		-9.57E-01	5.06E-01
+ AC-228	338.32 *	11.40	9.68E-01	5.38E-01	1.70E+00	4.67E-01
	911.07 *	27.70	5.38E-01		1.06E+00	2.55E-01
	969.11	16.60	9.29E-01		6.68E-01	4.39E-01
TH-230	48.43	16.90	6.40E-01	6.40E-01	4.87E-01	3.08E-01
	62.85	4.60	1.82E+00		1.87E+00	8.88E-01
	67.67	0.37	1.88E+01		7.98E+00	9.14E+00
PA-231	283.67	1.60	4.14E+00	3.15E+00	-1.79E+00	1.96E+00
	302.67	2.30	3.15E+00		2.99E-01	1.50E+00
TH-231	25.64	14.70	1.42E+01	9.78E-01	1.93E+00	4.49E+00
	84.21	6.40	9.78E-01		8.31E-01	4.76E-01
PA-233	311.98	38.60	3.56E-01	3.56E-01	-3.43E-02	1.69E-01
+ PA-234	131.20 *	20.40	4.81E-01	4.81E-01	3.81E-01	2.35E-01
	733.99	8.80	1.01E+00		2.44E-01	4.67E-01
	946.00 *	12.00	7.88E-01		3.49E-01	3.60E-01
PA-234M	1001.03	0.92	1.20E+01	1.20E+01	2.65E-01	5.52E+00
+ TH-234	63.29 *	3.80	2.32E+00	2.32E+00	2.05E+00	1.13E+00
U-235	143.76	10.50	6.03E-01	6.03E-01	3.99E-01	2.91E-01
	163.35	4.70	1.32E+00		9.85E-01	6.35E-01
	205.31	4.70	1.47E+00		2.43E-01	7.04E-01
NP-237	86.50	12.60	5.67E-01	5.67E-01	3.96E-01	2.77E-01
NP-239	106.10	22.70	4.27E+02	4.27E+02	-5.47E+01	2.06E+02
	228.18	10.70	1.15E+03		-6.97E+02	5.47E+02
	277.60	14.10	9.79E+02		3.24E+02	4.67E+02
AM-241	59.54	35.90	2.12E-01	2.12E-01	3.38E-02	1.03E-01
AM-243	74.67	66.00	1.34E-01	1.34E-01	-3.71E-01	6.56E-02
CM-243	209.75	3.29	2.34E+00	5.19E-01	2.49E+00	1.13E+00
	228.14	10.60	6.10E-01		-3.70E-01	2.91E-01
	277.60	14.00	5.19E-01		1.72E-01	2.47E-01

Analysis Report for 1905060-05

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- + = 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 18 16 13 13 17 19 21

Sample Title: R1 6-12

Channel	-----	-----	-----	-----	-----	-----	-----	-----
377:	16	15	15	12	20	13	20	13
385:	13	25	24	24	11	11	8	16
393:	20	14	16	12	21	13	18	19
401:	18	21	19	21	18	11	14	22
409:	24	17	16	24	13	20	10	13
417:	19	14	8	17	9	12	25	16
425:	16	21	18	14	17	11	14	12
433:	8	14	11	8	7	17	13	11
441:	14	16	17	12	15	15	8	16
449:	10	10	21	17	12	16	17	11
457:	13	12	13	9	15	12	37	18
465:	8	15	11	11	21	13	8	10
473:	8	10	13	12	9	8	11	16
481:	9	13	10	9	12	6	17	11
489:	7	10	9	11	13	13	14	11
497:	8	8	7	12	10	16	13	15
505:	11	12	14	17	18	58	56	38
513:	20	8	12	11	7	6	17	11
521:	23	15	11	14	14	8	10	12
529:	10	15	10	14	17	12	12	11
537:	12	11	5	12	11	6	10	11
545:	14	11	6	11	12	17	10	9
553:	8	4	11	4	8	14	8	8
561:	9	14	10	8	13	10	16	11
569:	7	9	12	12	9	8	11	6
577:	7	6	16	11	20	37	108	52
585:	12	12	9	5	8	7	9	6
593:	11	12	2	10	9	9	9	11
601:	14	11	8	12	9	10	12	56
609:	138	74	18	7	8	10	5	16
617:	5	6	14	11	10	6	7	6
625:	10	12	12	9	11	13	6	8
633:	11	12	8	11	13	11	11	9
641:	6	7	6	8	7	7	10	7
649:	19	6	10	4	4	8	9	7
657:	4	10	8	9	14	10	9	12
665:	7	10	11	8	7	10	8	6
673:	9	9	8	8	13	14	5	5
681:	10	8	12	5	11	4	6	11
689:	12	8	7	10	11	8	11	16
697:	9	10	12	6	10	11	10	13
705:	3	8	11	7	8	8	5	9
713:	8	7	7	7	6	10	10	9
721:	6	5	5	5	6	13	34	19
729:	14	4	8	12	6	12	5	7
737:	4	7	3	13	9	9	9	5
745:	7	3	10	9	13	9	9	6
753:	8	6	7	13	7	8	6	8
761:	6	6	20	5	8	7	11	20
769:	15	8	4	7	6	9	11	7
777:	6	6	14	4	5	8	4	6
785:	8	11	7	7	11	5	4	6
793:	3	15	17	5	6	3	7	7

801: 5 3 6 9 11 11 9 4

Sample Title: R1 6-12

Channel	1	2	3	4	5	6	7	8	9
809:	3	8	5	4	10	7	8	7	
817:	3	6	6	6	4	9	9	4	
825:	8	8	3	3	8	11	3	10	
833:	4	8	9	8	7	10	7	11	
841:	6	6	3	5	7	7	9	6	
849:	2	6	5	6	6	3	3	1	
857:	5	8	7	17	13	5	5	6	
865:	6	6	7	6	7	6	10	7	
873:	11	9	4	8	4	4	11	9	
881:	10	9	5	7	9	5	9	8	
889:	10	7	3	5	5	10	1	9	
897:	8	4	2	6	5	7	3	8	
905:	7	9	8	4	9	33	73	27	
913:	4	2	8	4	3	3	4	2	
921:	5	4	7	6	8	5	6	6	
929:	4	5	9	7	7	3	6	3	
937:	3	4	4	9	1	12	5	9	
945:	3	3	1	8	7	11	8	6	
953:	4	6	2	4	5	3	7	9	
961:	7	9	5	17	12	11	9	21	
969:	31	16	3	10	7	6	8	2	
977:	7	4	8	4	8	6	6	11	
985:	3	9	6	7	6	3	4	5	
993:	3	5	5	7	7	6	11	6	
1001:	6	6	5	9	5	7	7	2	
1009:	5	4	7	5	6	6	6	8	
1017:	3	10	3	8	2	3	6	6	
1025:	8	3	3	6	5	1	6	6	
1033:	8	5	1	2	5	2	3	4	
1041:	1	3	1	7	3	4	6	5	
1049:	5	7	5	9	4	5	5	1	
1057:	8	4	2	4	4	2	9	8	
1065:	7	7	9	2	3	0	2	9	
1073:	7	3	0	4	6	6	8	9	
1081:	3	8	7	3	4	5	5	5	
1089:	3	7	8	4	5	4	6	3	
1097:	5	2	5	4	6	8	2	2	
1105:	3	4	8	3	7	6	6	4	
1113:	6	8	13	6	6	10	13	29	
1121:	14	8	6	4	4	8	4	3	
1129:	2	4	4	5	7	3	3	9	
1137:	2	4	4	2	1	2	5	7	
1145:	7	4	4	7	5	7	5	8	
1153:	9	10	10	6	5	7	7	1	
1161:	4	5	5	3	3	4	6	5	
1169:	4	6	6	7	7	4	6	6	
1177:	4	4	9	5	10	4	8	3	
1185:	3	7	7	6	2	4	10	4	
1193:	3	6	4	5	5	9	6	9	
1201:	7	5	7	6	8	9	6	7	
1209:	8	7	10	6	6	8	6	6	
1217:	7	4	8	10	7	6	3	1	
1225:	10	5	7	15	5	3	4	10	

1233: 7 3 7 5 8 19 10 7

Sample Title: R1 6-12

Channel	-----	-----	-----	-----	-----	-----	-----	-----
1241:	5	8	8	4	6	2	5	3
1249:	5	4	4	7	7	1	5	4
1257:	4	9	9	4	8	3	3	2
1265:	3	7	7	5	2	5	4	4
1273:	10	1	5	3	1	2	3	6
1281:	4	0	6	5	4	5	3	2
1289:	5	4	4	2	5	1	2	3
1297:	3	8	4	0	3	1	4	0
1305:	3	3	4	3	4	2	1	5
1313:	0	7	3	3	3	4	4	5
1321:	6	1	2	3	3	2	2	1
1329:	4	4	0	3	2	5	4	5
1337:	4	2	6	2	5	1	6	4
1345:	4	3	1	1	4	2	4	1
1353:	3	3	4	0	2	2	0	3
1361:	1	4	3	2	1	2	4	1
1369:	2	2	4	2	1	3	4	3
1377:	6	7	3	1	1	1	2	4
1385:	7	2	4	1	1	2	3	1
1393:	3	1	3	0	4	2	5	2
1401:	5	1	0	4	1	2	4	1
1409:	4	0	2	1	1	2	3	1
1417:	2	2	0	4	1	2	1	2
1425:	0	1	2	1	3	0	0	3
1433:	2	2	2	3	3	2	2	1
1441:	4	2	2	2	1	3	1	1
1449:	3	2	2	0	5	3	3	4
1457:	11	32	88	193	130	39	5	1
1465:	1	2	1	4	0	1	2	1
1473:	2	1	0	3	1	0	5	0
1481:	1	2	2	0	1	2	5	1
1489:	1	3	3	1	0	1	2	3
1497:	1	3	0	2	0	0	1	1
1505:	2	3	1	0	5	2	1	0
1513:	1	2	3	1	1	3	2	4
1521:	1	2	0	2	2	2	4	1
1529:	2	3	1	0	0	3	2	0
1537:	2	2	1	0	1	2	1	4
1545:	2	0	1	3	2	0	0	0
1553:	1	1	0	0	2	1	2	2
1561:	1	1	2	3	1	1	2	3
1569:	1	1	2	0	0	2	2	2
1577:	2	2	5	3	3	5	2	3
1585:	3	4	1	5	3	1	2	1
1593:	5	1	2	0	1	0	1	3
1601:	1	0	2	3	1	3	5	3
1609:	0	2	4	1	1	1	1	2
1617:	0	1	1	1	4	1	1	2
1625:	0	1	1	1	3	1	3	2
1633:	1	0	1	1	1	2	1	1
1641:	1	1	1	0	0	3	0	0
1649:	2	1	2	0	1	0	2	0
1657:	1	3	0	3	0	3	0	1

1665: 0 0 1 0 2 1 0 0

Sample Title: R1 6-12

Channel	1	2	3	4	5	6	7	8
1673:	0	1	2	0	1	1	1	0
1681:	1	1	3	1	3	0	1	1
1689:	1	1	0	1	1	0	1	0
1697:	0	1	0	0	0	1	0	1
1705:	1	2	0	0	0	0	0	1
1713:	0	3	2	1	0	2	2	3
1721:	1	2	0	4	3	1	1	3
1729:	3	1	1	0	0	1	3	1
1737:	0	1	0	1	0	2	3	0
1745:	1	0	3	2	2	2	1	1
1753:	1	1	1	1	3	0	2	2
1761:	4	5	11	14	8	1	1	1
1769:	2	0	3	1	1	2	1	1
1777:	0	2	0	2	1	0	1	0
1785:	0	1	1	1	3	1	1	1
1793:	0	0	1	1	0	0	0	3
1801:	4	0	2	1	0	1	0	0
1809:	0	1	0	0	1	0	1	0
1817:	2	0	3	0	1	0	1	0
1825:	0	3	0	1	2	1	0	0
1833:	1	1	2	1	2	1	0	0
1841:	1	4	2	1	2	5	4	2
1849:	2	2	2	3	0	0	3	1
1857:	2	2	0	0	2	0	0	0
1865:	2	1	0	2	1	1	3	1
1873:	0	1	2	0	0	0	0	1
1881:	0	0	0	0	0	0	2	0
1889:	0	1	0	0	2	0	0	0
1897:	0	4	0	0	0	0	1	0
1905:	1	1	0	0	1	0	0	0
1913:	1	0	2	0	0	0	0	1
1921:	2	0	0	0	1	1	0	2
1929:	0	1	1	0	1	0	0	1
1937:	3	2	1	0	1	0	0	3
1945:	1	1	3	2	0	0	1	0
1953:	0	2	0	0	1	0	0	1
1961:	2	1	0	0	0	1	2	0
1969:	2	1	3	3	0	2	1	0
1977:	0	2	2	0	1	1	0	0
1985:	1	0	1	1	3	0	1	1
1993:	0	1	1	1	1	2	1	0
2001:	1	1	3	0	1	1	1	1
2009:	2	0	0	0	1	1	1	2
2017:	1	0	0	0	1	0	0	1
2025:	0	0	1	0	0	0	1	0
2033:	0	0	1	1	1	0	1	3
2041:	2	0	2	2	0	0	0	0
2049:	0	0	0	1	1	1	1	1
2057:	0	1	1	0	0	0	1	1
2065:	0	0	1	0	0	0	0	0
2073:	1	0	0	0	1	0	0	1
2081:	0	1	0	1	1	1	1	0
2089:	0	2	0	0	0	0	0	1

2097: 0 0 0 4 3 1 0 5

Sample Title: R1 6-12

Channel	-----	-----	-----	-----	-----	-----	-----	-----
2105:	0	1	1	1	0	1	1	0
2113:	1	1	1	0	1	1	2	1
2121:	2	1	0	1	0	0	1	0
2129:	0	0	1	1	0	0	1	0
2137:	0	2	0	1	0	0	0	2
2145:	2	1	0	2	0	1	2	1
2153:	2	1	1	0	0	1	4	0
2161:	2	0	1	1	1	3	0	2
2169:	1	1	0	0	2	2	0	1
2177:	0	0	2	0	0	0	0	0
2185:	0	2	3	0	2	2	0	1
2193:	0	2	2	1	0	1	0	2
2201:	2	4	3	6	0	0	0	0
2209:	0	0	0	0	0	0	0	0
2217:	1	0	0	0	2	1	0	1
2225:	0	0	0	0	0	4	0	0
2233:	0	2	0	1	2	0	1	1
2241:	3	1	2	0	1	1	0	0
2249:	0	0	0	0	0	0	2	3
2257:	1	2	2	0	2	0	2	0
2265:	1	1	0	0	3	1	1	0
2273:	0	0	0	0	1	0	1	0
2281:	0	0	2	0	0	2	1	0
2289:	2	0	1	2	1	2	0	1
2297:	1	0	2	0	0	1	1	0
2305:	0	0	3	1	2	0	0	0
2313:	0	0	2	0	2	0	1	2
2321:	2	4	0	2	0	1	3	0
2329:	0	0	0	0	0	0	0	2
2337:	0	2	3	1	0	0	4	0
2345:	0	0	1	2	0	0	2	0
2353:	0	4	2	0	1	0	0	1
2361:	2	3	0	0	1	1	0	1
2369:	0	0	0	0	2	0	1	0
2377:	1	0	0	0	0	1	0	0
2385:	1	1	0	0	1	1	1	1
2393:	3	2	0	1	1	0	1	1
2401:	2	0	0	2	0	0	1	3
2409:	1	1	0	1	1	0	0	0
2417:	0	0	0	0	0	2	1	0
2425:	0	0	1	1	0	1	0	0
2433:	0	0	2	1	1	0	0	0
2441:	0	1	0	1	0	2	0	1
2449:	1	1	2	0	0	1	0	0
2457:	0	0	0	0	1	2	2	0
2465:	1	0	2	0	1	0	0	2
2473:	0	0	0	1	1	0	0	0
2481:	1	1	0	0	0	0	0	1
2489:	1	0	1	0	2	0	0	0
2497:	0	1	0	0	0	0	0	2
2505:	0	1	0	0	1	0	0	0
2513:	0	0	1	0	1	0	1	2
2521:	0	0	0	2	1	1	0	1

2529: 0 0 0 0 0 0 0 0 0

Sample Title: R1 6-12

Channel	-----	-----	-----	-----	-----	-----	-----	-----
2537:	0	1	0	0	0	0	0	0
2545:	0	2	1	0	0	0	0	1
2553:	0	0	2	0	0	0	0	0
2561:	2	0	0	0	0	0	0	2
2569:	0	0	1	0	0	1	0	0
2577:	0	1	1	0	2	0	0	1
2585:	0	1	0	0	0	1	1	0
2593:	2	0	0	0	0	1	1	0
2601:	0	1	0	1	0	1	2	0
2609:	4	5	4	10	18	28	6	4
2617:	0	0	0	0	1	0	0	0
2625:	0	0	0	1	1	0	0	0
2633:	1	0	1	0	0	0	1	0
2641:	0	1	1	0	0	1	2	0
2649:	1	0	0	0	0	0	0	0
2657:	0	0	0	0	0	0	0	0
2665:	1	1	0	0	1	0	0	0
2673:	1	0	0	0	0	0	1	1
2681:	0	0	1	2	0	0	1	1
2689:	0	2	0	0	0	1	0	0
2697:	0	0	1	0	1	0	0	0
2705:	1	0	0	0	0	0	0	1
2713:	0	0	0	1	0	0	0	0
2721:	0	1	0	1	0	0	0	0
2729:	0	0	0	0	0	0	0	0
2737:	0	0	0	1	0	0	0	1
2745:	1	0	1	0	1	0	2	0
2753:	1	1	0	0	1	0	1	0
2761:	0	0	0	0	0	0	0	0
2769:	0	0	1	0	0	0	0	1
2777:	1	0	0	0	1	0	0	1
2785:	0	0	0	0	0	0	0	0
2793:	0	1	0	0	0	0	0	0
2801:	1	0	0	1	0	0	0	1
2809:	0	0	1	0	0	0	0	0
2817:	0	0	0	0	2	0	0	1
2825:	0	1	0	0	0	0	0	0
2833:	1	0	0	0	0	0	0	0
2841:	0	0	1	0	0	0	0	1
2849:	0	2	1	0	0	0	1	0
2857:	1	1	0	1	0	0	0	0
2865:	1	0	2	1	0	0	2	0
2873:	0	0	0	0	0	1	0	0
2881:	0	1	0	1	0	0	0	1
2889:	1	1	1	0	1	0	1	0
2897:	0	0	0	0	0	0	0	0
2905:	0	0	0	0	1	0	0	0
2913:	0	0	0	0	1	0	1	0
2921:	0	1	0	0	1	0	1	0
2929:	0	0	0	0	0	0	0	2
2937:	0	0	1	0	0	0	0	0
2945:	1	0	0	0	0	0	0	0
2953:	0	0	0	0	1	0	0	0

2961: 0 0 0 0 0 0 0 0

Sample Title: R1 6-12

Channel	1	2	3	4	5	6	7	8	9
2969:	0	0	0	0	0	1	0	0	0
2977:	0	0	0	0	0	0	1	0	0
2985:	0	0	0	0	1	0	0	0	0
2993:	0	0	0	0	2	1	1	0	0
3001:	1	0	1	0	0	0	0	0	0
3009:	0	0	0	1	0	0	0	0	0
3017:	0	0	0	0	0	0	0	0	0
3025:	0	1	0	0	0	0	0	0	0
3033:	1	0	0	1	0	0	0	0	0
3041:	0	0	0	0	0	0	0	0	0
3049:	0	0	0	0	0	1	1	0	0
3057:	0	0	0	1	0	0	0	0	0
3065:	0	0	0	1	0	1	0	0	0
3073:	0	0	0	0	1	0	0	0	0
3081:	1	0	0	0	1	0	0	0	0
3089:	0	0	0	0	1	1	0	0	0
3097:	0	0	0	1	0	0	0	0	0
3105:	1	1	0	0	0	1	0	0	0
3113:	0	0	0	0	0	0	1	0	0
3121:	0	0	0	0	0	0	0	1	0
3129:	0	0	0	0	0	1	0	0	0
3137:	0	0	0	0	0	0	0	0	0
3145:	0	0	0	0	0	0	0	0	0
3153:	0	0	0	0	1	0	0	1	0
3161:	0	0	1	0	1	0	0	0	0
3169:	0	1	0	0	0	0	0	0	0
3177:	0	0	0	0	0	0	2	0	0
3185:	1	1	0	0	0	1	1	0	0
3193:	0	0	0	1	4	0	0	1	0
3201:	0	0	1	0	0	0	0	0	0
3209:	0	0	0	0	0	0	0	0	0
3217:	0	0	0	0	0	1	0	0	0
3225:	0	0	0	0	0	1	1	0	0
3233:	0	1	0	1	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	0	0	0	1	0	0
3265:	0	0	0	0	0	0	1	0	0
3273:	1	0	0	0	0	0	0	1	0
3281:	0	0	0	0	0	0	0	0	0
3289:	2	0	0	0	0	0	0	0	0
3297:	0	1	0	0	1	0	1	0	0
3305:	0	0	0	0	0	0	0	0	0
3313:	0	0	2	0	0	0	0	0	0
3321:	0	1	0	0	0	0	0	0	0
3329:	0	0	0	1	0	0	1	0	0
3337:	0	3	1	0	0	0	1	0	0
3345:	0	0	0	0	0	0	1	0	0
3353:	0	0	0	0	0	0	0	0	0
3361:	1	0	1	1	2	1	0	0	0
3369:	0	0	0	0	0	0	0	0	0
3377:	0	0	0	0	0	0	1	0	0
3385:	0	1	0	0	0	0	0	0	0

3393: 0 0 0 0 0 0 0 0

Sample Title: R1 6-12

Channel	-----	-----	-----	-----	-----	-----	-----	-----
3401:	0	0	0	0	0	0	0	0
3409:	1	1	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	1	0	0	0
3441:	0	0	0	0	0	1	0	0
3449:	0	0	0	0	0	0	0	0
3457:	1	0	0	1	0	0	0	0
3465:	0	0	0	0	0	0	0	0
3473:	0	0	0	0	0	0	0	0
3481:	0	1	0	0	0	0	0	0
3489:	0	0	0	0	0	0	0	0
3497:	0	0	0	0	0	0	1	0
3505:	0	0	0	0	0	0	0	0
3513:	0	0	0	0	0	1	1	0
3521:	0	0	0	0	0	0	0	0
3529:	0	0	0	0	0	0	0	0
3537:	0	0	0	0	0	0	1	1
3545:	0	0	1	0	0	0	0	0
3553:	0	0	0	0	1	0	0	0
3561:	0	0	0	1	0	0	0	0
3569:	0	0	0	2	0	0	0	0
3577:	0	0	0	0	0	1	0	0
3585:	0	0	0	0	0	0	0	0
3593:	0	0	0	0	0	1	0	0
3601:	0	0	0	1	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	1	0	0	0
3633:	0	0	0	0	0	0	0	0
3641:	0	0	0	0	0	0	0	0
3649:	0	0	0	0	0	0	0	0
3657:	0	0	0	1	0	0	0	0
3665:	0	0	0	0	0	0	0	0
3673:	0	0	0	0	0	0	1	0
3681:	0	0	0	0	0	0	0	1
3689:	0	0	0	1	0	0	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	0	0	0
3721:	1	0	0	0	0	1	0	1
3729:	0	2	0	1	0	0	0	0
3737:	0	1	0	0	0	0	0	0
3745:	0	0	1	0	0	0	2	0
3753:	0	0	0	0	0	1	0	0
3761:	1	0	0	0	0	0	0	0
3769:	0	1	0	1	0	0	0	0
3777:	0	0	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	1	0	0	0	0	0	0
3809:	0	0	0	1	0	0	0	0
3817:	0	0	0	0	0	0	0	0

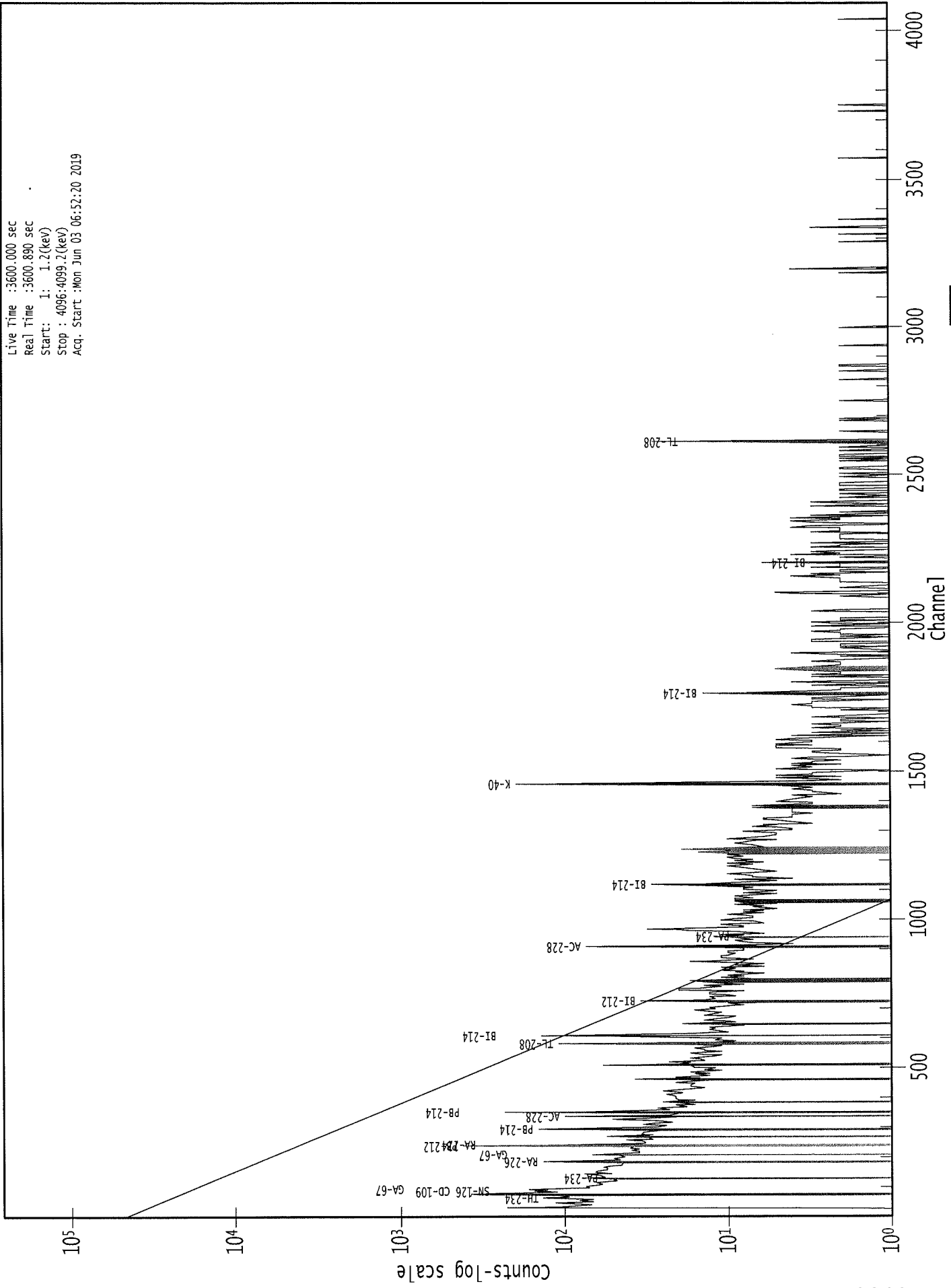
3825: 0 0 0 0 0 0 0 0 0

Sample Title: R1 6-12

Channel	-----	-----	-----	-----	-----	-----	-----	-----
3833:	1	0	0	0	0	0	0	0
3841:	0	0	0	0	1	0	0	0
3849:	0	0	0	0	0	1	0	0
3857:	0	1	0	0	0	0	0	0
3865:	0	1	0	0	0	0	0	0
3873:	0	0	0	0	0	0	0	0
3881:	0	0	0	0	0	1	0	0
3889:	0	0	0	0	0	0	0	1
3897:	0	0	0	0	0	0	0	0
3905:	0	0	0	0	0	0	0	0
3913:	0	0	1	0	0	1	0	0
3921:	0	0	0	0	0	0	1	0
3929:	0	0	0	0	0	1	0	1
3937:	0	0	0	0	1	0	0	0
3945:	0	0	0	1	0	0	0	0
3953:	0	0	0	0	0	0	0	0
3961:	1	0	0	0	0	0	0	0
3969:	0	0	0	0	1	0	0	0
3977:	0	0	1	1	0	0	0	0
3985:	0	0	0	0	1	0	0	1
3993:	1	0	0	0	0	0	0	0
4001:	0	1	0	0	0	0	0	0
4009:	0	0	0	0	0	0	0	0
4017:	0	1	0	1	0	0	0	0
4025:	0	0	0	0	0	1	0	0
4033:	0	0	0	0	0	2	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:	0	0	0	0	0	0	0	0
4073:	0	0	0	0	0	0	0	0
4081:	0	1	0	0	0	0	0	0
4089:	0	1	0	1	0	1	0	0

0000082492.CNF

Live Time :3600.000 sec
Real Time :3600.890 sec
Start : 1: 1.2(keV)
Stop : 4096:4099.2(keV)
Acq. Start :Mon Jun 03 06:52:20 2019



ROI Type: 2

ROI Type: 1

Analysis Report for 1905060-06
R1 12-18

GAMMA SPECTRUM ANALYSIS

Sample Identification : 1905060-06
Sample Description : R1 12-18
Sample Type : SOIL

Sample Size : 4.278E+02 grams
Facility : Countroom

Sample Taken On : 5/8/2019 3:33:07PM
Acquisition Started : 6/3/2019 6:52:39AM

Procedure : GAS-1802 pCi
Operator : Administrator
Detector Name : GE3
Geometry : GAS-1802
Live Time : 3600.0 seconds
Real Time : 3608.2 seconds

Dead Time : 0.23 %

Peak Locate Threshold : 2.50
Peak Locate Range (in channels) : 1 - 4096
Peak Area Range (in channels) : 8 - 4096
Identification Energy Tolerance : 1.000FWHM

Energy Calibration Used Done On : 7/21/2018
Efficiency Calibration Used Done On : 7/21/2018
Efficiency Calibration Description :

Sample Number : 82493

PEAK-TO-TOTAL CALIBRATION REPORT

Peak-to-Total Efficiency Calibration Equation

AG
6/3/19

Analysis Report for 1905060-06

R1 12-18

PEAK LOCATE REPORT

Peak Locate Performed on : 6/3/2019 7:52:56AM
 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	46.18	46.53	0.0000	0.00
2	63.57	63.92	0.0000	0.00
3	71.10	71.45	0.0000	0.00
4	76.26	76.60	0.0000	0.00
5	87.77	88.11	0.0000	0.00
6	93.37	93.70	0.0000	0.00
7	130.20	130.51	0.0000	0.00
8	155.26	155.57	0.0000	0.00
9	185.96	186.26	0.0000	0.00
10	238.80	239.07	0.0000	0.00
11	242.01	242.28	0.0000	0.00
12	278.19	278.45	0.0000	0.00
13	295.44	295.69	0.0000	0.00
14	328.67	328.90	0.0000	0.00
15	338.59	338.83	0.0000	0.00
16	352.26	352.48	0.0000	0.00
17	463.86	464.04	0.0000	0.00
18	493.61	493.78	0.0000	0.00
19	510.37	510.53	0.0000	0.00
20	583.52	583.65	0.0000	0.00
21	609.35	609.48	0.0000	0.00
22	659.96	660.07	0.0000	0.00
23	680.72	680.83	0.0000	0.00
24	785.19	785.25	0.0000	0.00
25	910.91	910.94	0.0000	0.00
26	967.99	968.00	0.0000	0.00
27	998.23	998.23	0.0000	0.00
28	1044.86	1044.85	0.0000	0.00
29	1120.83	1120.80	0.0000	0.00
30	1239.30	1239.24	0.0000	0.00
31	1246.21	1246.15	0.0000	0.00
32	1460.86	1460.73	0.0000	0.00
33	1488.89	1488.76	0.0000	0.00
34	1530.43	1530.29	0.0000	0.00
35	1536.58	1536.44	0.0000	0.00
36	1582.18	1582.03	0.0000	0.00
37	1630.48	1630.32	0.0000	0.00
38	1764.85	1764.66	0.0000	0.00
39	1894.16	1893.96	0.0000	0.00
40	1954.18	1953.96	0.0000	0.00
41	2085.96	2085.72	0.0000	0.00
42	2103.88	2103.65	0.0000	0.00

Analysis Report for 1905060-06

R1 12-18

Peak No.	Energy (keV)	Centroid Channel	Centroid Uncertainty	Peak Significance
43	2614.66	2614.38	0.0000	0.00

? = Adjacent peak noted
Errors quoted at 2.000sigma

Analysis Report for 1905060-06

R1 12-18

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 6/3/2019 7:52:56AM

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	46.18	43 -	50	46.53	1.28E+02	78.69	9.52E+02	1.50
	2	63.57	58 -	69	63.92	2.58E+02	128.81	1.95E+03	2.11
M	3	71.10	70 -	83	71.45	6.69E+01	32.76	3.36E+02	1.38
m	4	76.26	70 -	83	76.60	1.02E+03	133.17	1.83E+03	3.67
	5	87.77	86 -	91	88.11	8.94E+01	81.13	1.25E+03	1.37
	6	93.37	91 -	97	93.70	1.63E+02	85.61	1.15E+03	1.72
	7	130.20	127 -	134	130.51	6.06E+01	71.36	8.01E+02	1.56
	8	155.26	152 -	159	155.57	6.23E+01	64.90	6.61E+02	3.34
	9	185.96	183 -	190	186.26	1.63E+02	63.28	5.65E+02	2.24
M	10	238.80	234 -	246	239.07	6.03E+02	63.69	3.09E+02	2.14
m	11	242.01	234 -	246	242.28	1.84E+02	76.58	4.27E+02	2.92
	12	278.19	276 -	282	278.45	3.33E+01	42.01	2.95E+02	2.00
	13	295.44	290 -	301	295.69	2.17E+02	69.31	4.92E+02	1.84
	14	328.67	324 -	333	328.90	5.86E+01	53.36	3.69E+02	3.39
	15	338.59	334 -	345	338.83	1.17E+02	61.55	4.18E+02	2.41
	16	352.26	349 -	357	352.48	3.40E+02	53.75	2.28E+02	1.99
	17	463.86	460 -	470	464.04	3.43E+01	42.31	2.21E+02	1.41
	18	493.61	491 -	497	493.78	1.97E+01	25.36	1.05E+02	2.93
	19	510.37	504 -	517	510.53	1.32E+02	53.45	2.57E+02	3.35
	20	583.52	580 -	589	583.65	1.75E+02	46.77	2.07E+02	1.91
	21	609.35	603 -	613	609.48	2.09E+02	46.93	1.85E+02	2.20
	22	659.96	650 -	667	660.07	4.15E+01	45.24	1.71E+02	15.22
	23	680.72	676 -	684	680.83	2.16E+01	27.38	9.87E+01	3.22
	24	785.19	782 -	789	785.25	2.07E+01	23.66	7.86E+01	1.98
	25	910.91	904 -	917	910.94	1.12E+02	37.30	1.05E+02	2.50
	26	967.99	960 -	974	968.00	5.83E+01	41.58	1.57E+02	1.32
	27	998.23	993 -	1004	998.23	2.47E+01	25.06	6.67E+01	4.81
	28	1044.86	1039 -	1049	1044.85	2.05E+01	25.68	7.70E+01	7.04
	29	1120.83	1117 -	1127	1120.80	4.06E+01	28.88	7.88E+01	2.78
M	30	1239.30	1235 -	1249	1239.24	1.85E+01	26.55	9.67E+01	3.02
m	31	1246.21	1235 -	1249	1246.15	1.73E+01	19.31	4.32E+01	3.02
	32	1460.86	1454 -	1466	1460.73	4.27E+02	43.92	2.55E+01	2.36
	33	1488.89	1484 -	1493	1488.76	8.73E+00	8.31	4.55E+00	6.88
	34	1530.43	1527 -	1533	1530.29	7.50E+00	8.28	7.00E+00	1.31
	35	1536.58	1534 -	1539	1536.44	5.86E+00	6.08	2.29E+00	2.49
	36	1582.18	1578 -	1585	1582.03	8.21E+00	10.20	1.16E+01	2.03
	37	1630.48	1627 -	1633	1630.32	8.20E+00	7.23	3.60E+00	4.61
	38	1764.85	1760 -	1769	1764.66	4.24E+01	14.32	5.27E+00	2.34
	39	1894.16	1889 -	1897	1893.96	8.68E+00	8.02	4.64E+00	4.48
	40	1954.18	1950 -	1957	1953.96	6.06E+00	6.93	3.88E+00	1.34

0223

Analysis Report for 1905060-06

R1 12-18

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	FWHM (keV)
41	2085.96	2082 - 2089		2085.72	7.00E+00	7.21	4.00E+00	2.09
42	2103.88	2099 - 2107		2103.65	1.38E+01	9.18	4.50E+00	3.14
43	2614.66	2610 - 2619		2614.38	6.10E+01	15.62	0.00E+00	2.30

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 : 6/3/2019 7:52:56AM

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	46.18	43 - 50	1.28E+02	78.69	9.52E+02	6.20E+01
	2	63.57	58 - 69	2.58E+02	128.81	1.95E+03	1.03E+02
M	3	71.10	70 - 83	6.69E+01	32.76	3.36E+02	3.01E+01
m	4	76.26	70 - 83	1.02E+03	133.17	1.83E+03	7.04E+01
	5	87.77	86 - 91	8.94E+01	81.13	1.25E+03	6.49E+01
	6	93.37	91 - 97	1.63E+02	85.61	1.15E+03	6.72E+01
	7	130.20	127 - 134	6.06E+01	71.36	8.01E+02	5.72E+01
	8	155.26	152 - 159	6.23E+01	64.90	6.61E+02	5.17E+01
	9	185.96	183 - 190	1.63E+02	63.28	5.65E+02	4.76E+01
M	10	238.80	234 - 246	6.03E+02	63.69	3.09E+02	2.89E+01
m	11	242.01	234 - 246	1.84E+02	76.58	4.27E+02	3.40E+01
	12	278.19	276 - 282	3.33E+01	42.01	2.95E+02	3.32E+01
	13	295.44	290 - 301	2.17E+02	69.31	4.92E+02	5.16E+01
	14	328.67	324 - 333	5.86E+01	53.36	3.69E+02	4.20E+01
	15	338.59	334 - 345	1.17E+02	61.55	4.18E+02	4.74E+01
	16	352.26	349 - 357	3.40E+02	53.75	2.28E+02	3.21E+01
	17	463.86	460 - 470	3.43E+01	42.31	2.21E+02	3.34E+01
	18	493.61	491 - 497	1.97E+01	25.36	1.05E+02	1.95E+01
	19	510.37	504 - 517	1.32E+02	53.45	2.57E+02	3.97E+01
	20	583.52	580 - 589	1.75E+02	46.77	2.07E+02	3.17E+01
	21	609.35	603 - 613	2.09E+02	46.93	1.85E+02	3.04E+01
	22	659.96	650 - 667	4.15E+01	45.24	1.71E+02	3.57E+01
	23	680.72	676 - 684	2.16E+01	27.38	9.87E+01	2.12E+01
	24	785.19	782 - 789	2.07E+01	23.66	7.86E+01	1.80E+01

0224

Analysis Report for 1905060-06

R1 12-18

Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
25	910.91	904 -	917	1.12E+02	37.30	1.05E+02	2.53E+01
26	967.99	960 -	974	5.83E+01	41.58	1.57E+02	3.18E+01
27	998.23	993 -	1004	2.47E+01	25.06	6.67E+01	1.89E+01
28	1044.86	1039 -	1049	2.05E+01	25.68	7.70E+01	1.98E+01
29	1120.83	1117 -	1127	4.06E+01	28.88	7.88E+01	2.13E+01
M	30	1239.30	1235 - 1249	1.85E+01	26.55	9.67E+01	1.62E+01
m	31	1246.21	1235 - 1249	1.73E+01	19.31	4.32E+01	1.08E+01
32	1460.86	1454 -	1466	4.27E+02	43.92	2.55E+01	1.22E+01
33	1488.89	1484 -	1493	8.73E+00	8.31	4.55E+00	4.80E+00
34	1530.43	1527 -	1533	7.50E+00	8.28	7.00E+00	5.10E+00
35	1536.58	1534 -	1539	5.86E+00	6.08	2.29E+00	3.03E+00
36	1582.18	1578 -	1585	8.21E+00	10.20	1.16E+01	6.93E+00
37	1630.48	1627 -	1633	8.20E+00	7.23	3.60E+00	3.63E+00
38	1764.85	1760 -	1769	4.24E+01	14.32	5.27E+00	4.90E+00
39	1894.16	1889 -	1897	8.68E+00	8.02	4.64E+00	4.47E+00
40	1954.18	1950 -	1957	6.06E+00	6.93	3.88E+00	4.01E+00
41	2085.96	2082 -	2089	7.00E+00	7.21	4.00E+00	4.03E+00
42	2103.88	2099 -	2107	1.38E+01	9.18	4.50E+00	4.45E+00
43	2614.66	2610 -	2619	6.10E+01	15.62	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 : 6/3/2019 7:52:56AM

Peak Analysis From Channel : 1

Peak Analysis To Channel : 4096

Tentative NID Library : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

Peak Match Tolerance : 1.000FWHM

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
1	46.18	43 -	50	46.53	1.28E+02	78.69	9.52E+02	PB-210
2	63.57	58 -	69	63.92	2.58E+02	128.81	1.95E+03	TH-234 TH-230
M	3	71.10	70 - 83	71.45	6.69E+01	32.76	3.36E+02	PM-145
m	4	76.26	70 - 83	76.60	1.02E+03	133.17	1.83E+03	AM-243
5	87.77	86 -	91	88.11	8.94E+01	81.13	1.25E+03	SN-126

0225

Analysis Report for 1905060-06

R1 12-18

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
								CD-109
								LU-176
								NP-237
								EU-155
6	93.37	91 -	97	93.70	1.63E+02	85.61	1.15E+03	GA-67
7	130.20	127 -	134	130.51	6.06E+01	71.36	8.01E+02	PA-234
8	155.26	152 -	159	155.57	6.23E+01	64.90	6.61E+02	CS-136
9	185.96	183 -	190	186.26	1.63E+02	63.28	5.65E+02	RA-226
								HO-166M
M 10	238.80	234 -	246	239.07	6.03E+02	63.69	3.09E+02	PB-212
								RA-224
m 11	242.01	234 -	246	242.28	1.84E+02	76.58	4.27E+02	RA-224
12	278.19	276 -	282	278.45	3.33E+01	42.01	2.95E+02	CM-243
								NP-239
								HG-203
								SE-75
								HO-166M
13	295.44	290 -	301	295.69	2.17E+02	69.31	4.92E+02	PB-214
								CE-143
14	328.67	324 -	333	328.90	5.86E+01	53.36	3.69E+02	LA-140
15	338.59	334 -	345	338.83	1.17E+02	61.55	4.18E+02	AC-228
								CS-136
16	352.26	349 -	357	352.48	3.40E+02	53.75	2.28E+02	PB-214
17	463.86	460 -	470	464.04	3.43E+01	42.31	2.21E+02	SB-125
18	493.61	491 -	497	493.78	1.97E+01	25.36	1.05E+02	.....
19	510.37	504 -	517	510.53	1.32E+02	53.45	2.57E+02	.....
20	583.52	580 -	589	583.65	1.75E+02	46.77	2.07E+02	TL-208
21	609.35	603 -	613	609.48	2.09E+02	46.93	1.85E+02	BI-214
22	659.96	650 -	667	660.07	4.15E+01	45.24	1.71E+02	CS-137
								AG-110M
23	680.72	676 -	684	680.83	2.16E+01	27.38	9.87E+01	.....
24	785.19	782 -	789	785.25	2.07E+01	23.66	7.86E+01	SB-127
25	910.91	904 -	917	910.94	1.12E+02	37.30	1.05E+02	AC-228
								TL-204
26	967.99	960 -	974	968.00	5.83E+01	41.58	1.57E+02	AC-228
27	998.23	993 -	1004	998.23	2.47E+01	25.06	6.67E+01	EU-154
28	1044.86	1039 -	1049	1044.85	2.05E+01	25.68	7.70E+01	.....
29	1120.83	1117 -	1127	1120.80	4.06E+01	28.88	7.88E+01	SC-46
								TA-182
								BI-214
M 30	1239.30	1235 -	1249	1239.24	1.85E+01	26.55	9.67E+01	CO-56
m 31	1246.21	1235 -	1249	1246.15	1.73E+01	19.31	4.32E+01	.....
32	1460.86	1454 -	1466	1460.73	4.27E+02	43.92	2.55E+01	K-40
33	1488.89	1484 -	1493	1488.76	8.73E+00	8.31	4.55E+00	.....
34	1530.43	1527 -	1533	1530.29	7.50E+00	8.28	7.00E+00	.....
35	1536.58	1534 -	1539	1536.44	5.86E+00	6.08	2.29E+00	.....
36	1582.18	1578 -	1585	1582.03	8.21E+00	10.20	1.16E+01	.....
37	1630.48	1627 -	1633	1630.32	8.20E+00	7.23	3.60E+00	.....
38	1764.85	1760 -	1769	1764.66	4.24E+01	14.32	5.27E+00	BI-214
39	1894.16	1889 -	1897	1893.96	8.68E+00	8.02	4.64E+00	.....
40	1954.18	1950 -	1957	1953.96	6.06E+00	6.93	3.88E+00	.....
41	2085.96	2082 -	2089	2085.72	7.00E+00	7.21	4.00E+00	.....
42	2103.88	2099 -	2107	2103.65	1.38E+01	9.18	4.50E+00	.....
43	2614.66	2610 -	2619	2614.38	6.10E+01	15.62	0.00E+00	TL-208

Analysis Report for 1905060-06

R1 12-18

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 : 6/3/2019 7:52:56AM

	Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
	1	46.18	1.28E+02	78.69	2.51E-02	2.56E-03
	2	63.57	2.58E+02	128.81	3.48E-02	2.95E-03
M	3	71.10	6.69E+01	32.76	3.61E-02	3.68E-03
m	4	76.26	1.02E+03	133.17	3.63E-02	4.17E-03
	5	87.77	8.94E+01	81.13	3.56E-02	5.28E-03
	6	93.37	1.63E+02	85.61	3.49E-02	5.21E-03
	7	130.20	6.06E+01	71.36	2.84E-02	4.22E-03
	8	155.26	6.23E+01	64.90	2.45E-02	2.81E-03
	9	185.96	1.63E+02	63.28	2.07E-02	2.05E-03
M	10	238.80	6.03E+02	63.69	1.62E-02	1.61E-03
m	11	242.01	1.84E+02	76.58	1.60E-02	1.58E-03
	12	278.19	3.33E+01	42.01	1.40E-02	1.28E-03
	13	295.44	2.17E+02	69.31	1.32E-02	1.21E-03
	14	328.67	5.86E+01	53.36	1.20E-02	1.08E-03
	15	338.59	1.17E+02	61.55	1.17E-02	1.04E-03
	16	352.26	3.40E+02	53.75	1.13E-02	9.91E-04
	17	463.86	3.43E+01	42.31	8.83E-03	7.74E-04
	18	493.61	1.97E+01	25.36	8.36E-03	7.47E-04
	19	510.37	1.32E+02	53.45	8.13E-03	7.31E-04
	20	583.52	1.75E+02	46.77	7.23E-03	6.64E-04
	21	609.35	2.09E+02	46.93	6.96E-03	6.40E-04
	22	659.96	4.15E+01	45.24	6.47E-03	5.93E-04
	23	680.72	2.16E+01	27.38	6.29E-03	5.73E-04
	24	785.19	2.07E+01	23.66	5.48E-03	4.75E-04
	25	910.91	1.12E+02	37.30	4.67E-03	3.68E-04
	26	967.99	5.83E+01	41.58	4.35E-03	3.68E-04
	27	998.23	2.47E+01	25.06	4.19E-03	3.68E-04
	28	1044.86	2.05E+01	25.68	3.95E-03	3.68E-04
	29	1120.83	4.06E+01	28.88	3.59E-03	3.68E-04
M	30	1239.30	1.85E+01	26.55	3.09E-03	3.68E-04
m	31	1246.21	1.73E+01	19.31	3.06E-03	3.68E-04
	32	1460.86	4.27E+02	43.92	2.31E-03	3.68E-04
	33	1488.89	8.73E+00	8.31	2.23E-03	3.68E-04
	34	1530.43	7.50E+00	8.28	2.11E-03	3.68E-04

Analysis Report for 1905060-06

R1 12-18

Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
35	1536.58	5.86E+00	6.08	2.09E-03	3.68E-04
36	1582.18	8.21E+00	10.20	1.96E-03	3.68E-04
37	1630.48	8.20E+00	7.23	1.84E-03	3.68E-04
38	1764.85	4.24E+01	14.32	1.53E-03	3.68E-04
39	1894.16	8.68E+00	8.02	1.27E-03	3.68E-04
40	1954.18	6.06E+00	6.93	1.17E-03	3.68E-04
41	2085.96	7.00E+00	7.21	9.63E-04	3.68E-04
42	2103.88	1.38E+01	9.18	9.38E-04	3.68E-04
43	2614.66	6.10E+01	15.62	4.34E-04	3.68E-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 : 6/3/2019 7:52:56AM

Env. Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000082157.CNF

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.	
	1	46.18	1.28E+02	78.69	3.74E+01	7.97E+00	9.04E+01	7.91E+01
	2	63.57	2.58E+02	128.81	6.33E+01	8.10E+00	1.95E+02	1.29E+02
M	3	71.10	6.69E+01	32.76			6.69E+01	3.28E+01
m	4	76.26	1.02E+03	133.17	1.40E+01	3.62E+00	1.00E+03	1.33E+02
	5	87.77	8.94E+01	81.13			8.94E+01	8.11E+01
	6	93.37	1.63E+02	85.61	8.61E+01	1.50E+01	7.65E+01	8.69E+01
	7	130.20	6.06E+01	71.36			6.06E+01	7.14E+01
	8	155.26	6.23E+01	64.90			6.23E+01	6.49E+01
	9	185.96	1.63E+02	63.28	3.31E+01	6.61E+00	1.30E+02	6.36E+01
M	10	238.80	6.03E+02	63.69	1.58E+01	5.45E+00	5.87E+02	6.39E+01
m	11	242.01	1.84E+02	76.58			1.84E+02	7.66E+01
	12	278.19	3.33E+01	42.01			3.33E+01	4.20E+01
	13	295.44	2.17E+02	69.31	1.24E+01	5.72E+00	2.04E+02	6.95E+01
	14	328.67	5.86E+01	53.36			5.86E+01	5.34E+01
	15	338.59	1.17E+02	61.55	6.77E-01	4.03E+00	1.16E+02	6.17E+01
	16	352.26	3.40E+02	53.75	7.92E+00	4.39E+00	3.32E+02	5.39E+01
	17	463.86	3.43E+01	42.31			3.43E+01	4.23E+01
	18	493.61	1.97E+01	25.36			1.97E+01	2.54E+01
	19	510.37	1.32E+02	53.45	6.19E+01	5.33E+00	7.04E+01	5.37E+01
	20	583.52	1.75E+02	46.77	4.68E-01	3.90E+00	1.74E+02	4.69E+01
	21	609.35	2.09E+02	46.93	7.09E+00	4.24E+00	2.02E+02	4.71E+01

0228

Analysis Report for 1905060-06

R1 12-18

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
22	659.96	4.15E+01	45.24	4.23E+00	3.47E+00	3.73E+01	4.54E+01
23	680.72	2.16E+01	27.38			2.16E+01	2.74E+01
24	785.19	2.07E+01	23.66			2.07E+01	2.37E+01
25	910.91	1.12E+02	37.30	3.38E+00	2.28E+00	1.08E+02	3.74E+01
26	967.99	5.83E+01	41.58	6.27E-01	2.01E+00	5.77E+01	4.16E+01
27	998.23	2.47E+01	25.06			2.47E+01	2.51E+01
28	1044.86	2.05E+01	25.68			2.05E+01	2.57E+01
29	1120.83	4.06E+01	28.88			4.06E+01	2.89E+01
M 30	1239.30	1.85E+01	26.55			1.85E+01	2.66E+01
m 31	1246.21	1.73E+01	19.31			1.73E+01	1.93E+01
32	1460.86	4.27E+02	43.92	3.34E+00	1.76E+00	4.24E+02	4.40E+01
33	1488.89	8.73E+00	8.31			8.73E+00	8.31E+00
34	1530.43	7.50E+00	8.28			7.50E+00	8.28E+00
35	1536.58	5.86E+00	6.08			5.86E+00	6.08E+00
36	1582.18	8.21E+00	10.20			8.21E+00	1.02E+01
37	1630.48	8.20E+00	7.23			8.20E+00	7.23E+00
38	1764.85	4.24E+01	14.32			4.24E+01	1.43E+01
39	1894.16	8.68E+00	8.02			8.68E+00	8.02E+00
40	1954.18	6.06E+00	6.93			6.06E+00	6.93E+00
41	2085.96	7.00E+00	7.21			7.00E+00	7.21E+00
42	2103.88	1.38E+01	9.18			1.38E+01	9.18E+00
43	2614.66	6.10E+01	15.62	1.89E+00	1.25E+00	5.91E+01	1.57E+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 : 6/3/2019 7:52:56AM
Ref. Peak Energy : 0.00 Reference Date :
Peak Ratio : 0.00 Uncertainty : 0.00
Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000082157.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	46.18	1.28E+02	78.69	3.74E+01	7.97E+00	9.04E+01	7.91E+01
2	63.57	2.58E+02	128.81	6.33E+01	8.10E+00	1.95E+02	1.29E+02
M 3	71.10	6.69E+01	32.76			6.69E+01	3.28E+01
m 4	76.26	1.02E+03	133.17	1.40E+01	3.62E+00	1.00E+03	1.33E+02
5	87.77	8.94E+01	81.13			8.94E+01	8.11E+01
6	93.37	1.63E+02	85.61	8.61E+01	1.50E+01	7.65E+01	8.69E+01

0229

Analysis Report for 1905060-06

R1 12-18

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.	
	7	130.20	6.06E+01	71.36		6.06E+01	7.14E+01	
	8	155.26	6.23E+01	64.90		6.23E+01	6.49E+01	
	9	185.96	1.63E+02	63.28	3.31E+01	6.61E+00	1.30E+02	6.36E+01
M	10	238.80	6.03E+02	63.69	1.58E+01	5.45E+00	5.87E+02	6.39E+01
m	11	242.01	1.84E+02	76.58			1.84E+02	7.66E+01
	12	278.19	3.33E+01	42.01			3.33E+01	4.20E+01
	13	295.44	2.17E+02	69.31	1.24E+01	5.72E+00	2.04E+02	6.95E+01
	14	328.67	5.86E+01	53.36			5.86E+01	5.34E+01
	15	338.59	1.17E+02	61.55	6.77E-01	4.03E+00	1.16E+02	6.17E+01
	16	352.26	3.40E+02	53.75	7.92E+00	4.39E+00	3.32E+02	5.39E+01
	17	463.86	3.43E+01	42.31			3.43E+01	4.23E+01
	18	493.61	1.97E+01	25.36			1.97E+01	2.54E+01
	19	510.37	1.32E+02	53.45	6.19E+01	5.33E+00	7.04E+01	5.37E+01
	20	583.52	1.75E+02	46.77	4.68E-01	3.90E+00	1.74E+02	4.69E+01
	21	609.35	2.09E+02	46.93	7.09E+00	4.24E+00	2.02E+02	4.71E+01
	22	659.96	4.15E+01	45.24	4.23E+00	3.47E+00	3.73E+01	4.54E+01
	23	680.72	2.16E+01	27.38			2.16E+01	2.74E+01
	24	785.19	2.07E+01	23.66			2.07E+01	2.37E+01
	25	910.91	1.12E+02	37.30	3.38E+00	2.28E+00	1.08E+02	3.74E+01
	26	967.99	5.83E+01	41.58	6.27E-01	2.01E+00	5.77E+01	4.16E+01
	27	998.23	2.47E+01	25.06			2.47E+01	2.51E+01
	28	1044.86	2.05E+01	25.68			2.05E+01	2.57E+01
	29	1120.83	4.06E+01	28.88			4.06E+01	2.89E+01
M	30	1239.30	1.85E+01	26.55			1.85E+01	2.66E+01
m	31	1246.21	1.73E+01	19.31			1.73E+01	1.93E+01
	32	1460.86	4.27E+02	43.92	3.34E+00	1.76E+00	4.24E+02	4.40E+01
	33	1488.89	8.73E+00	8.31			8.73E+00	8.31E+00
	34	1530.43	7.50E+00	8.28			7.50E+00	8.28E+00
	35	1536.58	5.86E+00	6.08			5.86E+00	6.08E+00
	36	1582.18	8.21E+00	10.20			8.21E+00	1.02E+01
	37	1630.48	8.20E+00	7.23			8.20E+00	7.23E+00
	38	1764.85	4.24E+01	14.32			4.24E+01	1.43E+01
	39	1894.16	8.68E+00	8.02			8.68E+00	8.02E+00
	40	1954.18	6.06E+00	6.93			6.06E+00	6.93E+00
	41	2085.96	7.00E+00	7.21			7.00E+00	7.21E+00
	42	2103.88	1.38E+01	9.18			1.38E+01	9.18E+00
	43	2614.66	6.10E+01	15.62	1.89E+00	1.25E+00	5.91E+01	1.57E+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 1905060-06

R1 12-18

<i>Nuclide Name</i>	<i>Id Confidence</i>	<i>Energy (keV)</i>	<i>Yield(%)</i>	<i>Activity (pCi/grams)</i>	<i>Activity Uncertainty</i>
K-40	1.000	1460.81 *	10.67	3.02E+01	5.73E+00
GA-67	0.450	93.31 *	35.70	2.52E+01	2.89E+01
		208.95	2.24		
		300.22	16.00		
CD-109	0.999	88.03 *	3.72	1.23E+00	1.13E+00
SN-126	0.999	87.57 *	37.00	1.19E-01	1.10E-01
CS-137	0.950	661.65 *	85.12	1.19E-01	1.45E-01
EU-155	0.357	86.50 *	30.90	1.44E-01	1.32E-01
		105.30	20.70		
TL-208	0.860	583.14 *	30.22	1.40E+00	3.98E-01
		860.37	4.48		
		2614.66 *	35.85	6.66E+00	5.92E+00
PB-210	0.998	46.50 *	4.25	1.49E+00	1.31E+00
PB-212	0.897	238.63 *	44.60	1.42E+00	2.10E-01
		300.09	3.41		
BI-214	0.958	609.31 *	46.30	1.10E+00	2.76E-01
		1120.29 *	15.10	1.32E+00	9.45E-01
		1764.49 *	15.80	3.08E+00	1.28E+00
		2204.22	4.98		
PB-214	0.998	295.21 *	19.19	1.41E+00	4.97E-01
		351.92 *	37.19	1.39E+00	2.57E-01
RA-224	0.981	240.98 *	3.95	5.10E+00	2.18E+00
RA-226	0.999	186.21 *	3.28	3.35E+00	1.68E+00
AC-228	0.993	338.32 *	11.40	1.54E+00	8.25E-01
		911.07 *	27.70	1.47E+00	5.20E-01
		969.11 *	16.60	1.40E+00	1.02E+00
PA-234	0.510	131.20 *	20.40	1.84E-01	2.18E-01
		733.99	8.80		
		946.00	12.00		
TH-234	0.999	63.29 *	3.80	2.58E+00	1.73E+00
NP-237	0.972	86.50 *	12.60	3.50E-01	3.22E-01
AM-243	0.956	74.67 *	66.00	7.33E-01	1.29E-01

* = Energy line found in the spectrum.

- = Manually added nuclide.

? = Manually edited nuclide.

Energy Tolerance : 2.000FWHM

Nuclide confidence index threshold = 0.30

Errors quoted at 2.000sigma

UNIDENTIFIED PEAKS

Peak Locate Performed on : 6/3/2019 7:52:56AM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096

0231

Analysis Report for 1905060-06

R1 12-18

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
M 3	71.10	1.85898E-02	24.47	Tol.	PM-145
8	155.26	1.73007E-02	52.10	Sum	
12	278.19	9.24954E-03	63.09	Sum	
14	328.67	1.62906E-02	45.49	Sum	SB-127
17	463.86	9.51628E-03	61.75		
18	493.61	5.47068E-03	64.39		
19	510.37	1.95480E-02	38.17		
23	680.72	6.00743E-03	63.30		
24	785.19	5.74537E-03	57.21	Tol.	
27	998.23	6.85105E-03	50.80	Sum	
28	1044.86	5.69444E-03	62.64	Sum	CO-56
M 30	1239.30	5.14501E-03	71.68	Tol.	
m 31	1246.21	4.80785E-03	55.79		
33	1488.89	2.42424E-03	47.59		
34	1530.43	2.08333E-03	55.18		
35	1536.58	1.62698E-03	51.93	Sum	
36	1582.18	2.28175E-03	62.08		
37	1630.48	2.27778E-03	44.08		
39	1894.16	2.41162E-03	46.16	Sum	
40	1954.18	1.68403E-03	57.14		
41	2085.96	1.94444E-03	51.51		S-Esc
42	2103.88	3.81944E-03	33.38		

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
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Analysis Report for 1905060-06

R1 12-18

Nuclide Name	Id Confidence	Energy (keV)	Yield(%)	Activity (pCi/grams)	Activity Uncertainty
K-40	1.00	1460.81 *	10.67	3.02E+01	5.73E+00
GA-67	0.45	93.31 *	35.70	2.52E+01	2.89E+01
		208.95	2.24		
		300.22	16.00		
CD-109	0.99	88.03 *	3.72	1.23E+00	1.13E+00
SN-126	0.99	87.57 *	37.00	1.19E-01	1.10E-01
CS-137	0.95	661.65 *	85.12	1.19E-01	1.45E-01
EU-155	0.35	86.50 *	30.90	1.44E-01	1.32E-01
		105.30	20.70		
TL-208	0.86	583.14 *	30.22	1.40E+00	3.98E-01
		860.37	4.48		
		2614.66 *	35.85	6.66E+00	5.92E+00
PB-210	0.99	46.50 *	4.25	1.49E+00	1.31E+00
PB-212	0.89	238.63 *	44.60	1.42E+00	2.10E-01
		300.09	3.41		
BI-214	0.95	609.31 *	46.30	1.10E+00	2.76E-01
		1120.29 *	15.10	1.32E+00	9.45E-01
		1764.49 *	15.80	3.08E+00	1.28E+00
		2204.22	4.98		
PB-214	0.99	295.21 *	19.19	1.41E+00	4.97E-01
		351.92 *	37.19	1.39E+00	2.57E-01
RA-224	0.98	240.98 *	3.95	5.10E+00	2.18E+00
RA-226	0.99	186.21 *	3.28	3.35E+00	1.68E+00
AC-228	0.99	338.32 *	11.40	1.54E+00	8.25E-01
		911.07 *	27.70	1.47E+00	5.20E-01
		969.11 *	16.60	1.40E+00	1.02E+00
PA-234	0.51	131.20 *	20.40	1.84E-01	2.18E-01
		733.99	8.80		
		946.00	12.00		
TH-234	0.99	63.29 *	3.80	2.58E+00	1.73E+00
NP-237	0.97	86.50 *	12.60	3.50E-01	3.22E-01
AM-243	0.95	74.67 *	66.00	7.33E-01	1.29E-01

* = Energy line found in the spectrum.

- = Manually added nuclide.

? = Manually edited nuclide.

@ = Energy line not used for Weighted Mean Activity

Energy Tolerance : 2.000FWHM

Nuclide confidence index threshold = 0.30

Errors quoted at 2.000sigma

INTERFERENCE CORRECTED REPORT

Analysis Report for 1905060-06

R1 12-18

	Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
	K-40	1.000	3.02E+01	5.73E+00	
	GA-67	0.450	2.52E+01	2.89E+01	
?	CD-109	0.999	1.23E+00	1.13E+00	
?	SN-126	0.999	1.19E-01	1.10E-01	
	CS-137	0.950	1.19E-01	1.45E-01	
?	EU-155	0.357	1.44E-01	1.32E-01	
X	HO-166M	0.526			
X	HG-203	0.981			
	TL-208	0.860	1.42E+00	3.97E-01	
	PB-210	0.998	1.49E+00	1.31E+00	
	PB-212	0.897	1.42E+00	2.10E-01	
	BI-214	0.958	1.20E+00	2.59E-01	
	PB-214	0.998	1.40E+00	2.28E-01	
	RA-224	0.981	5.10E+00	2.18E+00	
	RA-226	0.999	3.35E+00	1.68E+00	
	AC-228	0.993	1.47E+00	4.04E-01	
	PA-234	0.510	1.84E-01	2.18E-01	
	TH-234	0.999	2.58E+00	1.73E+00	
?	NP-237	0.972	3.50E-01	3.22E-01	
	AM-243	0.956	7.33E-01	1.29E-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 1905060-06

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UNIDENTIFIED PEAKS

Peak Locate Performed on : 6/3/2019 7:52:56AM

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>	
M	3	71.10	1.85898E-02	24.47	Tol.	PM-145
	8	155.26	1.73007E-02	52.10	Sum	
	12	278.19	9.24954E-03	63.09	Sum	
	14	328.67	1.62906E-02	45.49	Sum	SB-127
	17	463.86	9.51628E-03	61.75		
	18	493.61	5.47068E-03	64.39		
	19	510.37	1.95480E-02	38.17		
	23	680.72	6.00743E-03	63.30		
	24	785.19	5.74537E-03	57.21	Tol.	
	27	998.23	6.85105E-03	50.80	Sum	
	28	1044.86	5.69444E-03	62.64	Sum	CO-56
M	30	1239.30	5.14501E-03	71.68	Tol.	
m	31	1246.21	4.80785E-03	55.79		
	33	1488.89	2.42424E-03	47.59		
	34	1530.43	2.08333E-03	55.18		
	35	1536.58	1.62698E-03	51.93	Sum	
	36	1582.18	2.28175E-03	62.08		
	37	1630.48	2.27778E-03	44.08		
	39	1894.16	2.41162E-03	46.16	Sum	
	40	1954.18	1.68403E-03	57.14		
	41	2085.96	1.94444E-03	51.51		S-Esc
	42	2103.88	3.81944E-03	33.38		

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 1905060-06

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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	5.11E-01	1.32E+00	1.32E+00
+	NA-22	1274.54	99.94	-6.65E-02	1.86E-01	1.86E-01
+	NA-24	1368.53	99.99	-6.30E-02	1.39E-01	1.39E-01
		2754.09	99.86	1.01E-01		4.67E-01
+	AL-26	1808.65	99.76	-4.09E-02	1.73E-01	1.73E-01
+	K-40	1460.81	* 10.67	3.02E+01	1.99E+00	1.99E+00
+	@ AR-41	1293.64	99.16	1.00E+26	1.00E+26	1.00E+26
+	TI-44	67.88	94.40	-8.19E-02	6.48E-02	6.48E-02
		78.34	96.00	2.37E-01		8.54E-02
+	SC-46	889.25	98.98	-2.73E-02	1.61E-01	1.61E-01
		1120.51	99.90	2.53E-01		2.68E-01
+	V-48	983.52	99.98	1.03E-01	4.21E-01	4.21E-01
		1312.10	97.50	1.00E-01		5.82E-01
+	CR-51	320.08	9.83	-4.60E-01	1.54E+00	1.54E+00
+	MN-54	834.83	99.97	5.35E-02	1.40E-01	1.40E-01
+	CO-56	846.75	99.96	1.53E-02	1.70E-01	1.70E-01
		1037.75	14.03	-2.64E-01		1.19E+00
		1238.25	67.00	2.75E-01		4.81E-01
		1771.40	15.51	-6.10E-01		1.45E+00
		2587.48	16.90	8.37E-01		3.55E+00
+	CO-57	122.06	85.51	4.94E-03	6.73E-02	6.73E-02
		136.48	10.60	2.79E-01		5.97E-01
+	CO-58	810.76	99.40	-3.79E-02	1.55E-01	1.55E-01
+	FE-59	1099.22	56.50	-1.09E-01	4.30E-01	4.30E-01
		1291.56	43.20	1.73E-01		6.26E-01
+	CO-60	1173.22	100.00	-6.90E-02	1.75E-01	1.75E-01
		1332.49	100.00	9.22E-02		1.98E-01
+	ZN-65	1115.52	50.75	-2.95E-02	4.14E-01	4.14E-01
+	GA-67	93.31	* 35.70	2.52E+01	4.70E+01	4.70E+01
		208.95	2.24	4.85E+02		8.03E+02
		300.22	16.00	4.76E+00		1.35E+02
+	SE-75	121.11	16.70	-1.72E-03	1.15E-01	3.71E-01
		136.00	59.50	2.41E-02		1.15E-01
		264.65	59.80	-1.53E-01		1.44E-01
		279.53	25.20	3.47E-02		3.83E-01
		400.65	11.40	6.61E-01		1.07E+00
+	RB-82	776.52	13.00	3.20E-01	1.99E+00	1.99E+00
+	RB-83	520.41	46.00	1.80E-01	2.94E-01	2.94E-01
		529.64	30.30	2.25E-01		4.17E-01
		552.65	16.40	4.46E-02		7.78E-01
+	KR-85	513.99	0.43	3.20E+01	3.36E+01	3.36E+01
+	SR-85	513.99	99.27	1.83E-01	1.92E-01	1.92E-01

Analysis Report for 1905060-06

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	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	Y-88	898.02	93.40	2.54E-02	1.65E-01	1.65E-01
		1836.01	99.38	2.52E-03		2.13E-01
+	MO-93	263.06	56.72	1.22E-02	1.19E-01	1.36E-01
		684.67	99.68	-8.41E-03		1.19E-01
		1477.11	99.08	3.17E-02		1.48E-01
+	NB-93M	16.57	9.43	-3.50E+01	1.56E+02	1.56E+02
+	NB-94	702.63	100.00	9.75E-02	1.30E-01	1.30E-01
		871.10	100.00	2.79E-02		1.30E-01
+	NB-95	765.79	99.81	7.54E-02	2.33E-01	2.33E-01
+	NB-95M	235.69	25.00	9.77E+01	6.92E+01	6.92E+01
+	ZR-95	724.18	43.70	8.58E-02	2.81E-01	4.17E-01
		756.72	55.30	-1.38E-01		2.81E-01
+	MO-99	181.06	6.20	1.23E+02	5.29E+02	6.83E+02
		739.58	12.80	-1.15E+02		5.29E+02
		778.00	4.50	1.49E+02		1.84E+03
+	TC-99M	140.51	89.00	-3.31E-02	6.66E-02	6.66E-02
+	RU-103	497.08	89.00	2.15E-02	1.86E-01	1.86E-01
+	RU-106	621.84	9.80	-9.41E-02	1.18E+00	1.18E+00
+	AG-108M	433.93	89.90	-2.64E-02	1.08E-01	1.08E-01
		614.37	90.40	-1.08E-02		1.84E-01
		722.95	90.50	-5.42E-02		1.46E-01
+	CD-109	88.03	* 3.72	1.23E+00	1.82E+00	1.82E+00
+	AG-110M	657.75	93.14	2.01E-02	1.23E-01	1.23E-01
		677.61	10.53	9.82E-02		1.23E+00
		706.67	16.46	-1.89E-02		8.06E-01
		763.93	21.98	-1.77E-01		6.47E-01
		884.67	21.98	-7.30E-02		6.15E-01
		1384.27	23.94	-2.10E-01		6.56E-01
+	CD-113M	263.70	0.02	-1.84E+02	3.22E+02	3.22E+02
+	SN-113	255.12	1.93	9.89E-01	1.71E-01	4.76E+00
		391.69	64.90	-9.37E-02		1.71E-01
+	TE-123M	159.00	84.10	2.91E-03	8.94E-02	8.94E-02
+	SB-124	602.71	97.87	4.46E-02	1.64E-01	1.64E-01
		645.85	7.26	-5.40E-01		1.96E+00
		722.78	11.10	-5.93E-01		1.59E+00
		1691.02	49.00	-9.96E-02		4.51E-01
+	I-125	35.49	6.49	-9.48E-01	2.51E+00	2.51E+00
+	SB-125	176.33	6.89	-4.84E-02	3.48E-01	9.65E-01
		427.89	29.33	1.01E-01		3.48E-01
		463.38	10.35	4.48E-01		1.07E+00
		600.56	17.80	4.68E-02		6.38E-01
		635.90	11.32	-1.30E-01		9.20E-01
+	SB-126	414.70	83.30	-5.43E-02	1.14E-01	1.17E-01
		666.33	99.60	5.80E-03		1.14E-01
		695.00	99.60	-4.86E-02		1.17E-01
		720.50	53.80	-1.66E-01		2.32E-01
+	SN-126	87.57	* 37.00	1.19E-01	1.77E-01	1.77E-01
+	SB-127	473.00	25.00	1.14E+01	3.37E+01	4.08E+01

Analysis Report for 1905060-06

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	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	SB-127	685.00	35.70	-2.37E+00	3.37E+01	3.37E+01
		783.80	14.70	-8.76E+00		8.89E+01
+	I-129	29.78	57.00	-1.72E-02	4.04E-01	4.04E-01
		33.60	13.20	4.30E-02		1.10E+00
		39.58	7.52	1.20E-01		1.22E+00
+	I-131	284.30	6.05	6.91E+00	1.01E+00	1.17E+01
		364.48	81.20	9.51E-02		1.01E+00
		636.97	7.26	-2.19E+00		1.28E+01
		722.89	1.80	-2.49E+01		6.68E+01
+	TE-132	49.72	13.10	-1.74E+01	2.16E+01	1.23E+02
		228.16	88.00	1.35E+01		2.16E+01
+	BA-133	81.00	33.00	-1.49E-01	1.91E-01	2.12E-01
		302.84	17.80	-2.56E-01		4.81E-01
		356.01	60.00	-4.61E-03		1.91E-01
+	I-133	529.87	86.30	5.25E+07	9.75E+07	9.75E+07
+	XE-133	81.00	38.00	-3.83E+00	5.45E+00	5.45E+00
+	CS-134	563.23	8.38	3.46E-01	1.63E-01	1.32E+00
		569.32	15.43	-1.52E-01		6.61E-01
		604.70	97.60	1.01E-02		1.73E-01
		795.84	85.40	1.19E-01		1.63E-01
		801.93	8.73	3.28E-01		1.58E+00
+	CS-135	268.24	16.00	2.27E-01	5.40E-01	5.40E-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	1.58E+00	4.21E-01	3.29E+00
		163.89	4.61	1.70E+00		5.53E+00
		176.55	13.56	-9.35E-02		1.86E+00
		273.65	12.66	6.26E-01		2.67E+00
		340.57	48.50	1.25E+00		8.92E-01
		818.50	99.70	-1.09E-01		4.21E-01
		1048.07	79.60	-1.53E-01		7.64E-01
		1235.34	19.70	5.01E-01		4.92E+00
+	CS-137	661.65	* 85.12	1.19E-01	2.38E-01	2.38E-01
+	LA-138	788.74	34.00	-6.63E-02	2.56E-01	3.81E-01
		1435.80	66.00	-4.41E-02		2.56E-01
+	CE-139	165.85	80.35	4.41E-02	9.40E-02	9.40E-02
+	BA-140	162.64	6.70	1.75E+00	1.62E+00	3.94E+00
		304.84	4.50	-3.08E+00		7.27E+00
		423.70	3.20	1.96E+00		1.28E+01
		437.55	2.00	4.58E+00		1.97E+01
		537.32	25.00	-4.02E-01		1.62E+00
+	LA-140	328.77	20.50	1.75E+00	8.39E-01	1.90E+00
		487.03	45.50	5.45E-01		8.53E-01
		815.85	23.50	-4.56E-01		1.89E+00
		1596.49	95.49	-1.56E-01		8.39E-01
+	CE-141	145.44	48.40	1.96E-01	2.22E-01	2.22E-01
+	CE-143	57.36	11.80	-1.66E+04	1.13E+05	2.17E+05
		293.26	42.00	2.44E+05		1.13E+05

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	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	CE-143	664.55	5.20	-7.01E+04	1.13E+05	9.06E+05
+	CE-144	133.54	10.80	2.39E-02	5.73E-01	5.73E-01
+	PM-144	476.78	42.00	1.07E-01	1.19E-01	2.49E-01
		618.01	98.60	1.47E-03		1.19E-01
		696.49	99.49	-5.62E-02		1.25E-01
+	PM-145	36.85	21.70	-2.29E-01	2.66E-01	4.98E-01
		37.36	39.70	-2.28E-02		2.66E-01
		42.30	15.10	9.62E-03		5.54E-01
		72.40	2.31	-9.35E+00		3.16E+00
+	PM-146	453.90	39.94	1.70E-01	2.64E-01	2.64E-01
		735.90	14.01	-3.55E-01		7.63E-01
		747.13	13.10	2.91E-01		9.24E-01
+	ND-147	91.11	28.90	2.79E+00	1.26E+00	1.26E+00
		531.02	13.10	1.36E+00		3.84E+00
+	PM-149	285.90	3.10	2.91E+03	7.69E+03	7.69E+03
+	EU-152	121.78	20.50	1.93E-02	2.63E-01	2.63E-01
		244.69	5.40	2.37E-01		1.70E+00
		344.27	19.13	1.60E-02		4.43E-01
		778.89	9.10	-1.28E-01		1.38E+00
		964.01	10.40	-2.21E+00		1.55E+00
		1085.78	7.22	-6.03E-01		2.16E+00
		1112.02	9.60	-1.16E-01		1.91E+00
		1407.95	14.94	1.27E-01		1.26E+00
+	GD-153	97.43	31.30	2.18E-02	1.80E-01	1.80E-01
		103.18	22.20	3.25E-02		2.62E-01
+	EU-154	123.07	40.50	2.04E-02	1.36E-01	1.36E-01
		723.30	19.70	-2.50E-01		6.73E-01
		873.19	11.50	1.57E-01		1.15E+00
		996.32	10.30	-3.77E-02		1.30E+00
		1004.76	17.90	4.75E-02		7.80E-01
		1274.45	35.50	-1.85E-01		5.16E-01
+	EU-155	86.50	* 30.90	1.44E-01	2.13E-01	2.13E-01
		105.30	20.70	2.29E-01		2.72E-01
+	EU-156	811.77	10.40	5.61E-01	3.70E+00	3.70E+00
		1153.47	7.20	-1.56E+00		8.28E+00
		1230.71	8.90	-1.54E+00		7.77E+00
+	HO-166M	184.41	* 72.60	1.52E-01	1.17E-01	1.17E-01
		280.45	* 29.60	1.41E-01		2.93E-01
		410.94	11.10	3.10E-01		9.43E-01
		711.69	54.10	-1.16E-01		2.10E-01
+	TM-171	66.72	0.14	-1.40E+01	4.68E+01	4.68E+01
+	HF-172	67.35	5.31	-1.50E+00	5.10E-01	1.18E+00
		125.82	11.30	3.28E-02		5.10E-01
+	LU-172	181.53	20.60	3.87E-01	4.07E+00	4.69E+00
		900.72	29.81	-1.28E+00		6.13E+00
		1093.66	62.50	2.43E+00		4.07E+00
+	LU-173	100.72	5.24	-1.04E+00	4.45E-01	1.00E+00
		272.11	21.20	4.11E-01		4.45E-01
+	HF-175	343.40	84.00	0.00E+00	1.27E-01	1.27E-01

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	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	LU-176	88.34	13.30	-4.85E-01	8.52E-02	5.05E-01
		201.83	86.00	8.67E-03		8.97E-02
		306.78	94.00	5.00E-03		8.52E-02
+	HF-181	133.02	41.70	-4.97E-02	1.74E-01	2.15E-01
		345.85	17.20	2.71E-02		7.22E-01
		482.03	82.80	-1.03E-01		1.74E-01
+	TA-182	67.75	41.20	-2.19E-01	1.73E-01	1.73E-01
		1121.30	34.90	6.02E-01		7.00E-01
		1189.05	16.23	2.87E-02		1.35E+00
		1221.41	26.98	-1.93E-01		8.64E-01
		1231.02	11.44	-4.35E-01		2.19E+00
+	IR-192	308.46	29.68	8.97E-02	2.70E-01	3.42E-01
		468.07	48.10	3.45E-03		2.70E-01
+	HG-203	279.19	*	77.30	7.90E-02	1.64E-01
+	TL-204	374.74	94.11	7.24E-02	1.05E-01	1.05E-01
		899.15	99.16	-4.26E-03		1.32E-01
		911.74	91.10	3.81E-01		2.39E-01
+	BI-207	569.67	97.72	3.11E-02	1.04E-01	1.04E-01
		1063.62	74.90	2.35E-02		2.15E-01
+	TL-208	583.14	*	30.22	1.40E+00	5.35E-01
		860.37	4.48	1.12E+00		3.05E+00
		2614.66	*	35.85	6.66E+00	8.65E-01
+	BI-210M	262.00	45.00	-2.22E-02	1.68E-01	1.68E-01
		300.00	23.00	1.42E-02		4.03E-01
+	PB-210	46.50	*	4.25	1.49E+00	2.13E+00
+	PB-211	404.84	2.90	-2.35E+00	3.53E+00	3.53E+00
		831.96	2.90	-1.24E-01		4.22E+00
+	BI-212	727.17	11.80	7.42E-01	1.19E+00	1.19E+00
		1620.62	2.75	5.46E+00		8.23E+00
+	PB-212	238.63	*	44.60	1.42E+00	2.88E-01
		300.09	3.41	9.56E-02		2.72E+00
+	BI-214	609.31	*	46.30	1.10E+00	3.52E-01
		1120.29	*	15.10	1.32E+00	1.47E+00
		1764.49	*	15.80	3.08E+00	9.11E-01
		2204.22	4.98	2.47E+00		8.49E+00
+	PB-214	295.21	*	19.19	1.41E+00	2.85E-01
		351.92	*	37.19	1.39E+00	2.85E-01
+	RN-219	401.80	6.50	7.33E-01	1.62E+00	1.62E+00
+	RA-223	323.87	3.88	-3.06E-02	2.20E+00	2.20E+00
+	RA-224	240.98	*	3.95	5.10E+00	3.34E+00
+	RA-225	40.00	31.00	9.44E-02	9.62E-01	9.62E-01
+	RA-226	186.21	*	3.28	3.35E+00	2.60E+00
+	TH-227	50.10	8.40	-1.14E-01	8.10E-01	8.10E-01
		236.00	11.50	1.54E+00		1.09E+00
		256.20	6.30	3.72E-01		1.27E+00
+	AC-228	338.32	*	11.40	1.54E+00	7.30E-01
		911.07	*	27.70	1.47E+00	7.30E-01
		969.11	*	16.60	1.40E+00	1.62E+00

Analysis Report for 1905060-06

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	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	TH-230	48.43	16.90	-6.29E-02	4.25E-01	4.25E-01
		62.85	4.60	1.58E+00		1.47E+00
		67.67	0.37	-2.09E+01		1.65E+01
+	PA-231	283.67	1.60	2.36E+00	3.70E+00	4.95E+00
		302.67	2.30	-1.97E+00		3.70E+00
+	TH-231	25.64	14.70	1.33E+00	9.84E-01	3.26E+00
		84.21	6.40	2.19E-01		9.84E-01
+	PA-233	311.98	38.60	-1.96E-01	3.84E-01	3.84E-01
+	PA-234	131.20	*	20.40	1.84E-01	3.55E-01
		733.99	8.80	-8.65E-01		1.28E+00
		946.00	12.00	8.44E-02		1.12E+00
+	PA-234M	1001.03	0.92	5.69E+00	1.61E+01	1.61E+01
+	TH-234	63.29	*	3.80	2.79E+00	2.79E+00
+	U-235	143.76	10.50	-5.85E-02	5.77E-01	5.77E-01
		163.35	4.70	4.30E-01		1.40E+00
		205.31	4.70	-1.77E+00		1.54E+00
+	NP-237	86.50	*	12.60	3.50E-01	5.18E-01
+	NP-239	106.10	22.70	3.96E+02	4.70E+02	4.70E+02
		228.18	10.70	9.00E+02		1.44E+03
		277.60	14.10	5.36E+02		1.12E+03
+	AM-241	59.54	35.90	-9.93E-02	1.78E-01	1.78E-01
+	AM-243	74.67	*	66.00	7.33E-01	1.72E-01
+	CM-243	209.75	3.29	8.35E-01	5.96E-01	2.33E+00
		228.14	10.60	4.78E-01		7.64E-01
		277.60	14.00	2.84E-01		5.96E-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 1905060-06

R1 12-18

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	1.32E+00	1.32E+00	5.11E-01	6.25E-01
NA-22	1274.54	99.94	1.86E-01	1.86E-01	-6.65E-02	8.46E-02
NA-24	1368.53	99.99	1.39E-01	1.39E-01	-6.30E-02	6.06E-02
	2754.09	99.86	4.67E-01		1.01E-01	1.65E-01
AL-26	1808.65	99.76	1.73E-01	1.73E-01	-4.09E-02	6.99E-02
+ K-40	1460.81	* 10.67	1.99E+00	1.99E+00	3.02E+01	9.00E-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	6.48E-02	6.48E-02	-8.19E-02	3.17E-02
	78.34	96.00	8.54E-02		2.37E-01	4.20E-02
SC-46	889.25	98.98	1.61E-01	1.61E-01	-2.73E-02	7.44E-02
	1120.51	99.90	2.68E-01		2.53E-01	1.26E-01
V-48	983.52	99.98	4.21E-01	4.21E-01	1.03E-01	1.93E-01
	1312.10	97.50	5.82E-01		1.00E-01	2.65E-01
CR-51	320.08	9.83	1.54E+00	1.54E+00	-4.60E-01	7.32E-01
MN-54	834.83	99.97	1.40E-01	1.40E-01	5.35E-02	6.52E-02
CO-56	846.75	99.96	1.70E-01	1.70E-01	1.53E-02	7.91E-02
	1037.75	14.03	1.19E+00		-2.64E-01	5.40E-01
	1238.25	67.00	4.81E-01		2.75E-01	2.26E-01
	1771.40	15.51	1.45E+00		-6.10E-01	5.93E-01
	2587.48	16.90	3.55E+00		8.37E-01	1.37E+00
CO-57	122.06	85.51	6.73E-02	6.73E-02	4.94E-03	3.27E-02
	136.48	10.60	5.97E-01		2.79E-01	2.90E-01
CO-58	810.76	99.40	1.55E-01	1.55E-01	-3.79E-02	7.19E-02
FE-59	1099.22	56.50	4.30E-01	4.30E-01	-1.09E-01	1.98E-01
	1291.56	43.20	6.26E-01		1.73E-01	2.84E-01
CO-60	1173.22	100.00	1.75E-01	1.75E-01	-6.90E-02	8.04E-02
	1332.49	100.00	1.98E-01		9.22E-02	9.03E-02
ZN-65	1115.52	50.75	4.14E-01	4.14E-01	-2.95E-02	1.93E-01
+ GA-67	93.31	* 35.70	4.70E+01	4.70E+01	2.52E+01	2.31E+01
	208.95	2.24	8.03E+02		4.85E+02	3.88E+02
	300.22	16.00	1.35E+02		4.76E+00	6.51E+01
SE-75	121.11	16.70	3.71E-01	1.15E-01	-1.72E-03	1.80E-01
	136.00	59.50	1.15E-01		2.41E-02	5.56E-02
	264.65	59.80	1.44E-01		-1.53E-01	6.88E-02
	279.53	25.20	3.83E-01		3.47E-02	1.84E-01
	400.65	11.40	1.07E+00		6.61E-01	5.09E-01
RB-82	776.52	13.00	1.99E+00	1.99E+00	3.20E-01	9.31E-01
RB-83	520.41	46.00	2.94E-01	2.94E-01	1.80E-01	1.39E-01
	529.64	30.30	4.17E-01		2.25E-01	1.96E-01
	552.65	16.40	7.78E-01		4.46E-02	3.65E-01
KR-85	513.99	0.43	3.36E+01	3.36E+01	3.20E+01	1.61E+01
SR-85	513.99	99.27	1.92E-01	1.92E-01	1.83E-01	9.23E-02
Y-88	898.02	93.40	1.65E-01	1.65E-01	2.54E-02	7.62E-02
	1836.01	99.38	2.13E-01		2.52E-03	8.61E-02
MO-93	263.06	56.72	1.36E-01	1.19E-01	1.22E-02	6.51E-02
	684.67	99.68	1.19E-01		-8.41E-03	5.58E-02
	1477.11	99.08	1.48E-01		3.17E-02	6.34E-02
NB-93M	16.57	9.43	1.56E+02	1.56E+02	-3.50E+01	7.62E+01
NB-94	702.63	100.00	1.30E-01	1.30E-01	9.75E-02	6.09E-02
	871.10	100.00	1.30E-01		2.79E-02	6.00E-02
NB-95	765.79	99.81	2.33E-01	2.33E-01	7.54E-02	1.10E-01
NB-95M	235.69	25.00	6.92E+01	6.92E+01	9.77E+01	3.38E+01
ZR-95	724.18	43.70	4.17E-01	2.81E-01	8.58E-02	1.96E-01

Analysis Report for 1905060-06

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Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
ZR-95	756.72	55.30	2.81E-01	2.81E-01	-1.38E-01	1.31E-01
MO-99	181.06	6.20	6.83E+02	5.29E+02	1.23E+02	3.30E+02
	739.58	12.80	5.29E+02		-1.15E+02	2.44E+02
	778.00	4.50	1.84E+03		1.49E+02	8.56E+02
TC-99M	140.51	89.00	6.66E-02	6.66E-02	-3.31E-02	3.23E-02
RU-103	497.08	89.00	1.86E-01	1.86E-01	2.15E-02	8.80E-02
RU-106	621.84	9.80	1.18E+00	1.18E+00	-9.41E-02	5.54E-01
AG-108M	433.93	89.90	1.08E-01	1.08E-01	-2.64E-02	5.14E-02
	614.37	90.40	1.84E-01		-1.08E-02	8.83E-02
	722.95	90.50	1.46E-01		-5.42E-02	6.84E-02
+ CD-109	88.03	* 3.72	1.82E+00	1.82E+00	1.23E+00	8.93E-01
AG-110M	657.75	93.14	1.23E-01	1.23E-01	2.01E-02	5.71E-02
	677.61	10.53	1.23E+00		9.82E-02	5.75E-01
	706.67	16.46	8.06E-01		-1.89E-02	3.77E-01
	763.93	21.98	6.47E-01		-1.77E-01	3.03E-01
	884.67	21.98	6.15E-01		-7.30E-02	2.83E-01
	1384.27	23.94	6.56E-01		-2.10E-01	2.86E-01
CD-113M	263.70	0.02	3.22E+02	3.22E+02	-1.84E+02	1.54E+02
SN-113	255.12	1.93	4.76E+00	1.71E-01	9.89E-01	2.29E+00
	391.69	64.90	1.71E-01		-9.37E-02	8.15E-02
TE-123M	159.00	84.10	8.94E-02	8.94E-02	2.91E-03	4.33E-02
SB-124	602.71	97.87	1.64E-01	1.64E-01	4.46E-02	7.74E-02
	645.85	7.26	1.96E+00		-5.40E-01	9.16E-01
	722.78	11.10	1.59E+00		-5.93E-01	7.49E-01
	1691.02	49.00	4.51E-01		-9.96E-02	1.87E-01
I-125	35.49	6.49	2.51E+00	2.51E+00	-9.48E-01	1.22E+00
SB-125	176.33	6.89	9.65E-01	3.48E-01	-4.84E-02	4.67E-01
	427.89	29.33	3.48E-01		1.01E-01	1.65E-01
	463.38	10.35	1.07E+00		4.48E-01	5.08E-01
	600.56	17.80	6.38E-01		4.68E-02	3.00E-01
	635.90	11.32	9.20E-01		-1.30E-01	4.28E-01
SB-126	414.70	83.30	1.17E-01	1.14E-01	-5.43E-02	5.54E-02
	666.33	99.60	1.14E-01		5.80E-03	5.35E-02
	695.00	99.60	1.17E-01		-4.86E-02	5.48E-02
	720.50	53.80	2.32E-01		-1.66E-01	1.09E-01
+ SN-126	87.57	* 37.00	1.77E-01	1.77E-01	1.19E-01	8.64E-02
SB-127	473.00	25.00	4.08E+01	3.37E+01	1.14E+01	1.93E+01
	685.00	35.70	3.37E+01		-2.37E+00	1.58E+01
	783.80	14.70	8.89E+01		-8.76E+00	4.14E+01
I-129	29.78	57.00	4.04E-01	4.04E-01	-1.72E-02	1.97E-01
	33.60	13.20	1.10E+00		4.30E-02	5.35E-01
	39.58	7.52	1.22E+00		1.20E-01	5.94E-01
I-131	284.30	6.05	1.17E+01	1.01E+00	6.91E+00	5.57E+00
	364.48	81.20	1.01E+00		9.51E-02	4.82E-01
	636.97	7.26	1.28E+01		-2.19E+00	5.95E+00
	722.89	1.80	6.68E+01		-2.49E+01	3.14E+01
TE-132	49.72	13.10	1.23E+02	2.16E+01	-1.74E+01	6.01E+01
	228.16	88.00	2.16E+01		1.35E+01	1.04E+01
BA-133	81.00	33.00	2.12E-01	1.91E-01	-1.49E-01	1.04E-01
	302.84	17.80	4.81E-01		-2.56E-01	2.30E-01
	356.01	60.00	1.91E-01		-4.61E-03	9.20E-02
I-133	529.87	86.30	9.75E+07	9.75E+07	5.25E+07	4.59E+07
XE-133	81.00	38.00	5.45E+00	5.45E+00	-3.83E+00	2.68E+00

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Analysis Report for 1905060-06

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Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
CS-134	563.23	8.38	1.32E+00	1.63E-01	3.46E-01	6.20E-01
	569.32	15.43	6.61E-01		-1.52E-01	3.09E-01
	604.70	97.60	1.73E-01		1.01E-02	8.32E-02
	795.84	85.40	1.63E-01		1.19E-01	7.64E-02
	801.93	8.73	1.58E+00		3.28E-01	7.37E-01
CS-135	268.24	16.00	5.40E-01	5.40E-01	2.27E-01	2.60E-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	3.29E+00	4.21E-01	1.58E+00	1.60E+00
	163.89	4.61	5.53E+00		1.70E+00	2.68E+00
	176.55	13.56	1.86E+00		-9.35E-02	9.01E-01
	273.65	12.66	2.67E+00		6.26E-01	1.28E+00
	340.57	48.50	8.92E-01		1.25E+00	4.29E-01
	818.50	99.70	4.21E-01		-1.09E-01	1.93E-01
	1048.07	79.60	7.64E-01		-1.53E-01	3.53E-01
	1235.34	19.70	4.92E+00		5.01E-01	2.31E+00
+ CS-137	661.65	* 85.12	2.38E-01	2.38E-01	1.19E-01	1.15E-01
LA-138	788.74	34.00	3.81E-01	2.56E-01	-6.63E-02	1.78E-01
	1435.80	66.00	2.56E-01		-4.41E-02	1.13E-01
CE-139	165.85	80.35	9.40E-02	9.40E-02	4.41E-02	4.55E-02
BA-140	162.64	6.70	3.94E+00	1.62E+00	1.75E+00	1.91E+00
	304.84	4.50	7.27E+00		-3.08E+00	3.47E+00
	423.70	3.20	1.28E+01		1.96E+00	6.07E+00
	437.55	2.00	1.97E+01		4.58E+00	9.34E+00
	537.32	25.00	1.62E+00		-4.02E-01	7.60E-01
LA-140	328.77	20.50	1.90E+00	8.39E-01	1.75E+00	9.10E-01
	487.03	45.50	8.53E-01		5.45E-01	4.02E-01
	815.85	23.50	1.89E+00		-4.56E-01	8.69E-01
	1596.49	95.49	8.39E-01		-1.56E-01	3.68E-01
CE-141	145.44	48.40	2.22E-01	2.22E-01	1.96E-01	1.08E-01
CE-143	57.36	11.80	2.17E+05	1.13E+05	-1.66E+04	1.06E+05
	293.26	42.00	1.13E+05		2.44E+05	5.47E+04
	664.55	5.20	9.06E+05		-7.01E+04	4.24E+05
CE-144	133.54	10.80	5.73E-01	5.73E-01	2.39E-02	2.78E-01
PM-144	476.78	42.00	2.49E-01	1.19E-01	1.07E-01	1.18E-01
	618.01	98.60	1.19E-01		1.47E-03	5.59E-02
	696.49	99.49	1.25E-01		-5.62E-02	5.86E-02
PM-145	36.85	21.70	4.98E-01	2.66E-01	-2.29E-01	2.42E-01
	37.36	39.70	2.66E-01		-2.28E-02	1.29E-01
	42.30	15.10	5.54E-01		9.62E-03	2.70E-01
	72.40	2.31	3.16E+00		-9.35E+00	1.55E+00
PM-146	453.90	39.94	2.64E-01	2.64E-01	1.70E-01	1.26E-01
	735.90	14.01	7.63E-01		-3.55E-01	3.52E-01
	747.13	13.10	9.24E-01		2.91E-01	4.30E-01
ND-147	91.11	28.90	1.26E+00	1.26E+00	2.79E+00	6.18E-01
	531.02	13.10	3.84E+00		1.36E+00	1.80E+00
PM-149	285.90	3.10	7.69E+03	7.69E+03	2.91E+03	3.67E+03
EU-152	121.78	20.50	2.63E-01	2.63E-01	1.93E-02	1.28E-01
	244.69	5.40	1.70E+00		2.37E-01	8.21E-01
	344.27	19.13	4.43E-01		1.60E-02	2.11E-01
	778.89	9.10	1.38E+00		-1.28E-01	6.42E-01
	964.01	10.40	1.55E+00		-2.21E+00	7.22E-01

Analysis Report for 1905060-06

R1 12-18

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
EU-152	1085.78	7.22	2.16E+00	2.63E-01	-6.03E-01	9.92E-01
	1112.02	9.60	1.91E+00		-1.16E-01	8.88E-01
	1407.95	14.94	1.26E+00		1.27E-01	5.64E-01
GD-153	97.43	31.30	1.80E-01	1.80E-01	2.18E-02	8.78E-02
	103.18	22.20	2.62E-01		3.25E-02	1.27E-01
EU-154	123.07	40.50	1.36E-01	1.36E-01	2.04E-02	6.58E-02
	723.30	19.70	6.73E-01		-2.50E-01	3.16E-01
	873.19	11.50	1.15E+00		1.57E-01	5.31E-01
	996.32	10.30	1.30E+00		-3.77E-02	5.93E-01
	1004.76	17.90	7.80E-01		4.75E-02	3.58E-01
	1274.45	35.50	5.16E-01		-1.85E-01	2.35E-01
+ EU-155	86.50	* 30.90	2.13E-01	2.13E-01	1.44E-01	1.05E-01
	105.30	20.70	2.72E-01		2.29E-01	1.33E-01
EU-156	811.77	10.40	3.70E+00	3.70E+00	5.61E-01	1.71E+00
	1153.47	7.20	8.28E+00		-1.56E+00	3.83E+00
	1230.71	8.90	7.77E+00		-1.54E+00	3.61E+00
HO-166M	184.41	* 72.60	1.17E-01	1.17E-01	1.52E-01	5.72E-02
	280.45	* 29.60	2.93E-01		1.41E-01	1.41E-01
	410.94	11.10	9.43E-01		3.10E-01	4.50E-01
	711.69	54.10	2.10E-01		-1.16E-01	9.77E-02
TM-171	66.72	0.14	4.68E+01	4.68E+01	-1.40E+01	2.29E+01
HF-172	67.35	5.31	1.18E+00	5.10E-01	-1.50E+00	5.79E-01
	125.82	11.30	5.10E-01		3.28E-02	2.48E-01
LU-172	181.53	20.60	4.69E+00	4.07E+00	3.87E-01	2.27E+00
	900.72	29.81	6.13E+00		-1.28E+00	2.82E+00
	1093.66	62.50	4.07E+00		2.43E+00	1.89E+00
LU-173	100.72	5.24	1.00E+00	4.45E-01	-1.04E+00	4.88E-01
	272.11	21.20	4.45E-01		4.11E-01	2.14E-01
HF-175	343.40	84.00	1.27E-01	1.27E-01	0.00E+00	6.06E-02
LU-176	88.34	13.30	5.05E-01	8.52E-02	-4.85E-01	2.48E-01
	201.83	86.00	8.97E-02		8.67E-03	4.34E-02
	306.78	94.00	8.52E-02		5.00E-03	4.06E-02
HF-181	133.02	41.70	2.15E-01	1.74E-01	-4.97E-02	1.04E-01
	345.85	17.20	7.22E-01		2.71E-02	3.43E-01
	482.03	82.80	1.74E-01		-1.03E-01	8.19E-02
TA-182	67.75	41.20	1.73E-01	1.73E-01	-2.19E-01	8.48E-02
	1121.30	34.90	7.00E-01		6.02E-01	3.28E-01
	1189.05	16.23	1.35E+00		2.87E-02	6.25E-01
	1221.41	26.98	8.64E-01		-1.93E-01	4.00E-01
	1231.02	11.44	2.19E+00		-4.35E-01	1.02E+00
	308.46	29.68	3.42E-01		2.70E-01	8.97E-02	1.63E-01
468.07	48.10	2.70E-01	3.45E-03	1.28E-01		
HG-203	279.19	* 77.30	1.64E-01	1.64E-01	7.90E-02	7.89E-02
TL-204	374.74	94.11	1.05E-01	1.05E-01	7.24E-02	4.99E-02
	899.15	99.16	1.32E-01		-4.26E-03	6.10E-02
	911.74	91.10	2.39E-01		3.81E-01	1.14E-01
BI-207	569.67	97.72	1.04E-01	1.04E-01	3.11E-02	4.87E-02
	1063.62	74.90	2.15E-01		2.35E-02	9.91E-02
+ TL-208	583.14	* 30.22	5.35E-01	5.35E-01	1.40E+00	2.56E-01
	860.37	4.48	3.05E+00		1.12E+00	1.42E+00
BI-210M	2614.66	* 35.85	8.65E-01	1.68E-01	6.66E+00	2.80E-01
	262.00	45.00	1.68E-01		-2.22E-02	8.07E-02
	300.00	23.00	4.03E-01		1.42E-02	1.94E-01

0245

Analysis Report for 1905060-06

R1 12-18

	Nuclide Name	Energy (keV)		Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
+	PB-210	46.50	*	4.25	2.13E+00	2.13E+00	1.49E+00	1.04E+00
	PB-211	404.84		2.90	3.53E+00	3.53E+00	-2.35E+00	1.68E+00
		831.96		2.90	4.22E+00		-1.24E-01	1.95E+00
	BI-212	727.17		11.80	1.19E+00	1.19E+00	7.42E-01	5.62E-01
		1620.62		2.75	8.23E+00		5.46E+00	3.65E+00
+	PB-212	238.63	*	44.60	2.88E-01	2.88E-01	1.42E+00	1.41E-01
		300.09		3.41	2.72E+00		9.56E-02	1.31E+00
+	BI-214	609.31	*	46.30	3.52E-01	3.52E-01	1.10E+00	1.69E-01
		1120.29	*	15.10	1.47E+00		1.32E+00	6.90E-01
		1764.49	*	15.80	9.11E-01		3.08E+00	3.57E-01
		2204.22		4.98	8.49E+00		2.47E+00	3.65E+00
+	PB-214	295.21	*	19.19	7.39E-01	2.85E-01	1.41E+00	3.60E-01
		351.92	*	37.19	2.85E-01		1.39E+00	1.37E-01
	RN-219	401.80		6.50	1.62E+00	1.62E+00	7.33E-01	7.74E-01
	RA-223	323.87		3.88	2.20E+00	2.20E+00	-3.06E-02	1.05E+00
+	RA-224	240.98	*	3.95	3.34E+00	3.34E+00	5.10E+00	1.63E+00
	RA-225	40.00		31.00	9.62E-01	9.62E-01	9.44E-02	4.67E-01
+	RA-226	186.21	*	3.28	2.60E+00	2.60E+00	3.35E+00	1.26E+00
	TH-227	50.10		8.40	8.10E-01	8.10E-01	-1.14E-01	3.95E-01
		236.00		11.50	1.09E+00		1.54E+00	5.33E-01
		256.20		6.30	1.27E+00		3.72E-01	6.11E-01
+	AC-228	338.32	*	11.40	1.29E+00	7.30E-01	1.54E+00	6.27E-01
		911.07	*	27.70	7.30E-01		1.47E+00	3.46E-01
		969.11	*	16.60	1.62E+00		1.40E+00	7.75E-01
	TH-230	48.43		16.90	4.25E-01	4.25E-01	-6.29E-02	2.07E-01
		62.85		4.60	1.47E+00		1.58E+00	7.20E-01
		67.67		0.37	1.65E+01		-2.09E+01	8.08E+00
	PA-231	283.67		1.60	4.95E+00	3.70E+00	2.36E+00	2.37E+00
		302.67		2.30	3.70E+00		-1.97E+00	1.77E+00
	TH-231	25.64		14.70	3.26E+00	9.84E-01	1.33E+00	1.59E+00
		84.21		6.40	9.84E-01		2.19E-01	4.82E-01
	PA-233	311.98		38.60	3.84E-01	3.84E-01	-1.96E-01	1.82E-01
+	PA-234	131.20	*	20.40	3.55E-01	3.55E-01	1.84E-01	1.73E-01
		733.99		8.80	1.28E+00		-8.65E-01	5.93E-01
		946.00		12.00	1.12E+00		8.44E-02	5.16E-01
	PA-234M	1001.03		0.92	1.61E+01	1.61E+01	5.69E+00	7.45E+00
+	TH-234	63.29	*	3.80	2.79E+00	2.79E+00	2.58E+00	1.38E+00
	U-235	143.76		10.50	5.77E-01	5.77E-01	-5.85E-02	2.80E-01
		163.35		4.70	1.40E+00		4.30E-01	6.79E-01
		205.31		4.70	1.54E+00		-1.77E+00	7.46E-01
+	NP-237	86.50	*	12.60	5.18E-01	5.18E-01	3.50E-01	2.54E-01
	NP-239	106.10		22.70	4.70E+02	4.70E+02	3.96E+02	2.29E+02
		228.18		10.70	1.44E+03		9.00E+02	6.95E+02
		277.60		14.10	1.12E+03		5.36E+02	5.40E+02
	AM-241	59.54		35.90	1.78E-01	1.78E-01	-9.93E-02	8.72E-02
+	AM-243	74.67	*	66.00	1.72E-01	1.72E-01	7.33E-01	8.52E-02
	CM-243	209.75		3.29	2.33E+00	5.96E-01	8.35E-01	1.12E+00
		228.14		10.60	7.64E-01		4.78E-01	3.69E-01
		277.60		14.00	5.96E-01		2.84E-01	2.86E-01

Analysis Report for 1905060-06

R1 12-18

-
- + = 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

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: R1 12-18

Elapsed Live time: 3600

Elapsed Real Time: 3608

Channel	1	2	3	4	5	6	7	8	9
1:	0	0	0	0	0	0	0	0	1
9:	2	145	143	123	103	92	89	104	
17:	91	72	71	60	64	75	61	88	
25:	65	76	69	52	67	58	56	61	
33:	64	63	47	54	62	58	50	54	
41:	75	47	61	59	75	79	123	83	
49:	58	66	62	65	70	80	71	77	
57:	80	76	86	83	106	107	122	154	
65:	108	107	95	107	81	87	98	120	
73:	95	119	272	216	315	358	150	91	
81:	81	74	70	95	123	76	131	169	
89:	104	127	107	108	147	166	74	74	
97:	63	60	62	62	64	44	62	61	
105:	76	79	72	69	61	53	62	50	
113:	61	55	54	55	46	45	53	66	
121:	39	57	48	55	48	58	53	52	
129:	66	79	54	56	53	48	44	50	
137:	66	55	51	58	39	49	58	43	
145:	60	52	54	44	56	40	37	44	
153:	37	52	61	53	66	42	38	46	
161:	50	44	47	50	56	42	44	44	
169:	46	41	33	43	51	29	40	41	
177:	42	44	44	43	42	30	31	40	
185:	60	91	105	47	35	36	42	48	
193:	37	35	40	41	34	49	52	49	
201:	46	41	47	35	35	45	41	28	
209:	29	71	37	33	38	27	37	36	
217:	40	23	36	34	44	33	38	35	
225:	48	40	33	32	37	35	38	27	
233:	26	30	25	34	38	147	308	186	
241:	74	87	73	31	28	21	24	30	
249:	24	16	26	23	27	40	31	21	
257:	25	32	28	33	22	25	24	24	
265:	18	31	18	23	30	43	55	34	
273:	26	24	24	20	32	37	27	21	
281:	28	16	25	27	29	18	20	19	
289:	12	16	16	18	29	28	82	117	
297:	37	23	32	38	27	27	19	20	
305:	18	18	26	22	10	29	18	17	
313:	15	19	18	25	16	17	24	14	
321:	16	20	23	20	21	19	28	37	
329:	31	30	22	19	16	16	19	20	
337:	19	60	61	39	16	22	22	15	
345:	17	20	12	20	12	22	54	165	
353:	111	43	17	19	11	10	14	10	
361:	14	12	18	16	17	12	14	17	

369: 11 9 22 13 15 16 19 13

Sample Title: R1 12-18

Channel	1	2	3	4	5	6	7	8
377:	14	13	21	15	11	14	13	9
385:	22	12	24	18	11	17	15	17
393:	12	12	15	12	14	21	14	22
401:	19	11	20	15	15	15	9	20
409:	17	25	18	14	15	11	15	15
417:	11	14	8	13	13	15	21	15
425:	15	11	11	14	18	12	15	11
433:	6	8	21	10	18	11	9	15
441:	9	11	12	14	8	11	13	12
449:	7	12	21	13	14	9	7	15
457:	12	17	9	10	9	15	26	14
465:	15	11	12	13	12	8	13	10
473:	8	15	9	14	13	9	10	14
481:	7	6	7	10	13	11	12	12
489:	13	6	5	9	17	10	14	11
497:	6	12	15	7	11	7	14	6
505:	18	14	12	21	10	37	44	35
513:	26	13	9	9	7	10	13	14
521:	17	11	14	8	10	9	8	7
529:	9	10	13	8	13	10	3	7
537:	4	13	12	7	12	10	10	16
545:	6	7	7	5	4	12	13	9
553:	9	8	14	8	5	12	10	7
561:	12	10	11	12	4	9	11	8
569:	8	8	12	9	2	7	7	5
577:	8	12	17	8	12	23	80	97
585:	16	15	11	6	10	8	4	15
593:	6	14	11	11	5	10	12	10
601:	8	13	7	8	9	10	17	28
609:	85	95	32	7	3	10	10	10
617:	8	7	14	11	2	6	8	14
625:	6	7	8	9	6	6	7	10
633:	5	11	6	3	7	8	5	6
641:	9	7	6	8	10	6	5	11
649:	3	8	10	2	4	4	9	8
657:	9	4	4	4	9	11	6	12
665:	12	8	3	5	4	9	3	5
673:	3	6	9	7	10	3	4	14
681:	12	11	8	2	5	7	7	8
689:	12	13	8	8	8	12	6	4
697:	9	7	6	10	8	7	9	14
705:	8	10	11	3	6	4	9	7
713:	7	11	5	9	4	9	13	8
721:	7	9	9	7	7	5	16	21
729:	9	11	7	6	7	5	6	4
737:	7	3	6	5	5	8	5	5
745:	7	7	5	8	3	9	13	6
753:	3	6	2	6	9	9	7	9
761:	7	7	5	11	10	6	4	14
769:	15	10	6	6	10	10	7	8
777:	6	8	9	7	2	9	6	4
785:	12	11	7	7	4	5	5	7
793:	7	6	9	12	8	4	10	8

801: 7 3 3 13 12 8 4 7

Sample Title: R1 12-18

Channel	-----	-----	-----	-----	-----	-----	-----	-----
809:	0	6	7	10	6	5	7	3
817:	3	2	3	4	6	4	9	4
825:	5	3	3	6	4	4	9	5
833:	4	5	5	9	9	7	7	3
841:	8	5	10	4	8	2	7	5
849:	7	5	10	5	11	4	3	9
857:	1	3	5	15	13	4	6	4
865:	3	5	5	6	4	8	5	4
873:	12	2	6	7	5	5	6	5
881:	0	8	6	6	4	6	6	4
889:	7	8	5	5	4	4	5	8
897:	5	4	4	4	6	9	3	5
905:	7	7	5	6	5	22	39	40
913:	12	4	6	3	3	4	6	3
921:	1	4	3	4	4	6	3	2
929:	9	3	6	4	4	6	13	2
937:	5	10	3	6	3	7	4	4
945:	11	5	5	5	2	3	7	6
953:	3	3	6	3	5	6	8	3
961:	4	5	7	17	5	9	4	10
969:	39	16	7	4	4	3	7	7
977:	6	3	4	5	6	1	4	5
985:	6	6	8	3	2	4	5	1
993:	3	4	4	1	8	7	8	3
1001:	8	4	4	4	3	6	3	5
1009:	5	5	3	4	1	3	8	3
1017:	6	2	8	3	5	4	8	2
1025:	2	7	3	8	2	1	3	4
1033:	6	1	4	3	3	5	2	3
1041:	9	3	6	3	11	4	11	6
1049:	1	6	2	5	9	10	2	3
1057:	8	7	4	6	5	6	5	4
1065:	9	5	3	6	5	5	2	8
1073:	5	3	8	8	3	3	7	3
1081:	3	5	4	4	8	4	3	5
1089:	4	6	6	5	10	2	7	4
1097:	7	10	2	3	6	2	5	8
1105:	3	8	3	7	3	7	7	6
1113:	4	8	6	9	4	9	12	14
1121:	17	8	5	2	3	2	4	0
1129:	7	2	4	9	3	1	5	6
1137:	4	7	5	5	7	2	6	3
1145:	2	3	12	11	5	7	4	6
1153:	3	8	7	4	8	2	7	5
1161:	5	6	2	6	8	6	9	6
1169:	4	6	5	7	6	3	2	4
1177:	6	6	2	9	4	4	7	2
1185:	10	6	6	3	6	5	2	7
1193:	4	4	8	6	6	2	10	3
1201:	5	4	6	10	2	4	6	4
1209:	4	4	4	8	5	7	9	10
1217:	6	4	7	6	4	3	5	8
1225:	8	5	2	7	5	5	8	5

1233: 11 8 7 7 9 14 11 9

Sample Title: R1 12-18

Channel	1	2	3	4	5	6	7	8	9
1241:	6	8	4	5	4	9	7	2	
1249:	1	4	4	5	3	4	5	4	
1257:	7	3	5	5	2	6	3	6	
1265:	6	5	7	2	4	1	3	7	
1273:	4	5	4	5	3	4	2	8	
1281:	8	5	3	4	5	2	8	1	
1289:	4	2	5	7	2	1	4	3	
1297:	3	1	3	2	1	3	5	2	
1305:	3	1	5	5	3	4	6	4	
1313:	5	5	0	2	5	5	0	3	
1321:	3	2	3	1	6	4	2	4	
1329:	2	4	6	3	5	1	6	5	
1337:	1	1	1	1	0	5	3	3	
1345:	2	1	2	2	2	1	5	0	
1353:	3	2	2	3	2	2	2	1	
1361:	3	4	0	2	1	1	3	3	
1369:	0	1	3	1	1	5	3	2	
1377:	4	8	2	3	2	1	4	1	
1385:	1	1	3	0	3	1	0	1	
1393:	2	2	1	2	2	3	3	2	
1401:	3	3	4	1	4	1	5	3	
1409:	6	3	1	2	1	4	1	2	
1417:	0	1	2	3	2	2	3	3	
1425:	4	2	0	0	2	2	3	5	
1433:	3	2	1	2	1	1	2	2	
1441:	1	3	4	1	0	3	1	2	
1449:	1	4	2	1	1	0	3	2	
1457:	2	9	37	114	167	82	19	1	
1465:	4	0	3	1	1	1	1	0	
1473:	2	3	0	3	0	2	0	1	
1481:	1	2	1	0	3	1	1	0	
1489:	0	1	4	1	0	0	1	0	
1497:	0	1	1	3	1	0	2	2	
1505:	0	3	0	3	2	2	2	1	
1513:	1	1	1	0	0	3	3	1	
1521:	1	2	0	2	0	0	1	0	
1529:	2	2	5	1	0	1	0	4	
1537:	0	2	0	0	0	0	0	2	
1545:	4	1	2	3	0	0	4	2	
1553:	1	2	1	0	2	0	0	1	
1561:	1	2	0	1	1	2	0	0	
1569:	0	0	1	2	0	2	1	2	
1577:	0	2	2	1	0	2	4	3	
1585:	0	1	2	5	5	2	3	5	
1593:	3	2	3	2	0	0	1	1	
1601:	3	1	2	3	0	0	4	2	
1609:	1	1	2	3	1	0	2	5	
1617:	2	3	2	1	3	3	2	0	
1625:	1	0	0	2	0	3	2	3	
1633:	0	1	0	1	1	2	0	0	
1641:	1	0	1	2	1	1	1	1	
1649:	1	0	1	0	2	1	0	0	
1657:	3	1	1	2	3	1	2	1	

1665: 1 2 0 0 0 1 1 0

Sample Title: R1 12-18

Channel	1	2	3	4	5	6	7	8
1673:	3	1	0	0	1	1	2	1
1681:	2	1	1	1	1	4	0	0
1689:	3	1	0	2	1	0	1	1
1697:	1	0	2	3	1	0	0	2
1705:	1	0	0	0	0	1	0	1
1713:	2	2	1	3	0	1	3	2
1721:	0	0	1	1	0	1	1	1
1729:	5	2	1	0	3	1	0	0
1737:	1	1	0	0	0	1	0	2
1745:	0	0	0	1	0	0	0	0
1753:	0	0	3	0	2	1	0	0
1761:	1	1	4	15	13	6	3	2
1769:	0	1	0	1	0	0	0	1
1777:	1	2	0	1	1	0	0	1
1785:	0	0	1	1	4	0	1	0
1793:	3	1	1	2	0	0	0	2
1801:	3	2	0	2	0	0	1	1
1809:	1	0	0	1	0	0	2	0
1817:	1	1	0	2	1	0	0	0
1825:	2	0	0	0	1	0	0	0
1833:	0	0	1	0	1	1	1	2
1841:	1	2	1	0	1	0	2	1
1849:	0	2	3	1	0	1	2	0
1857:	1	0	0	0	0	0	0	0
1865:	2	0	1	0	1	1	1	0
1873:	0	0	1	1	1	0	1	1
1881:	3	0	0	0	0	0	1	1
1889:	0	1	1	2	0	2	3	2
1897:	0	0	0	1	0	0	1	1
1905:	0	2	0	1	0	1	0	2
1913:	1	0	0	1	0	0	2	2
1921:	0	1	2	2	1	1	0	1
1929:	0	0	1	0	1	2	2	0
1937:	0	0	0	0	2	1	0	0
1945:	0	0	1	0	0	0	1	0
1953:	0	4	2	1	0	1	1	0
1961:	0	0	0	0	0	1	2	1
1969:	0	2	0	2	0	0	0	1
1977:	0	0	2	2	1	0	2	1
1985:	0	1	0	1	1	0	0	0
1993:	1	1	2	0	0	0	0	0
2001:	0	1	0	2	0	1	0	1
2009:	1	2	0	4	0	1	0	1
2017:	0	1	1	0	1	2	2	0
2025:	2	0	2	0	1	0	2	1
2033:	2	0	2	1	1	1	2	1
2041:	0	0	0	1	1	0	0	1
2049:	0	0	2	2	1	0	1	0
2057:	0	1	1	0	1	1	1	0
2065:	1	0	0	1	1	2	0	0
2073:	0	0	0	1	2	1	0	0
2081:	0	0	0	1	3	3	0	1
2089:	1	0	2	0	0	0	0	0

2097: 0 1 0 1 0 3 4 4

Sample Title: R1 12-18

Channel	1	2	3	4	5	6	7	8
2105:	2	2	0	0	0	2	0	0
2113:	0	1	0	0	1	2	0	2
2121:	0	0	1	3	0	0	1	0
2129:	3	0	0	2	0	0	1	2
2137:	1	1	1	2	2	1	0	0
2145:	0	1	1	0	1	0	0	0
2153:	0	0	3	1	1	1	1	0
2161:	1	0	1	0	0	0	0	0
2169:	2	1	0	1	0	0	0	2
2177:	0	0	2	0	0	0	1	1
2185:	0	1	0	1	0	1	0	1
2193:	0	0	0	1	1	0	1	0
2201:	0	0	2	1	6	1	0	2
2209:	0	2	0	0	0	1	0	1
2217:	1	1	1	1	0	1	0	0
2225:	1	0	0	1	0	0	0	1
2233:	1	1	2	0	0	1	1	1
2241:	0	2	0	0	0	0	1	0
2249:	2	2	1	0	1	1	1	0
2257:	0	0	1	0	2	1	1	1
2265:	1	0	2	0	2	3	3	2
2273:	2	1	1	0	2	0	0	1
2281:	1	0	0	1	0	1	1	0
2289:	0	2	0	1	2	1	0	1
2297:	0	1	0	2	2	0	0	2
2305:	0	0	0	2	0	0	1	1
2313:	0	1	3	1	0	0	0	0
2321:	0	0	0	1	0	0	1	0
2329:	1	0	1	0	1	1	0	0
2337:	1	0	0	0	0	1	0	1
2345:	3	0	0	4	2	2	1	0
2353:	0	1	0	1	2	1	0	0
2361:	1	0	0	0	1	1	2	1
2369:	1	0	0	0	1	1	1	2
2377:	2	1	1	0	2	2	0	1
2385:	3	0	0	1	1	0	1	1
2393:	0	1	0	1	1	0	0	1
2401:	1	2	1	1	1	0	1	0
2409:	0	0	0	0	0	1	2	0
2417:	1	0	0	0	2	1	0	1
2425:	0	0	2	0	1	1	0	0
2433:	1	0	1	0	0	1	0	0
2441:	0	0	1	0	1	0	0	2
2449:	0	0	1	1	0	1	1	1
2457:	1	0	0	0	2	0	0	0
2465:	0	1	1	0	0	0	0	1
2473:	0	0	1	0	0	0	1	0
2481:	0	2	1	0	0	0	1	1
2489:	0	0	0	0	0	0	0	0
2497:	0	2	0	0	0	0	2	1
2505:	0	1	0	0	0	0	0	0
2513:	1	0	0	0	1	0	0	0
2521:	0	0	1	0	2	0	0	0

2529: 1 0 0 0 0 1 1 0

Sample Title: R1 12-18

Channel	1	2	3	4	5	6	7	8	9
2537:	1	0	0	1	1	2	0	0	
2545:	0	0	1	1	0	0	0	1	
2553:	0	0	0	1	0	0	0	0	
2561:	1	0	1	0	0	0	0	1	
2569:	0	0	0	0	0	1	1	1	
2577:	0	0	0	0	1	0	1	1	
2585:	0	0	1	1	0	0	0	0	
2593:	0	0	0	0	1	0	0	0	
2601:	0	0	0	0	0	1	1	1	
2609:	0	0	1	5	6	21	18	7	
2617:	2	1	0	0	0	0	1	0	
2625:	0	1	0	0	0	1	0	1	
2633:	1	0	0	0	0	0	0	0	
2641:	0	0	0	0	1	0	1	0	
2649:	1	1	0	1	0	1	1	1	
2657:	3	0	0	0	0	0	1	0	
2665:	1	0	1	0	0	0	0	0	
2673:	0	0	0	0	0	0	0	0	
2681:	0	0	0	0	0	0	0	0	
2689:	0	0	0	0	0	0	0	1	
2697:	0	0	0	1	0	0	0	0	
2705:	0	1	0	0	1	0	0	0	
2713:	0	0	0	0	1	0	0	0	
2721:	0	0	0	0	1	0	0	0	
2729:	0	1	0	1	0	0	0	1	
2737:	0	0	0	0	0	0	0	0	
2745:	1	0	0	0	0	0	0	1	
2753:	0	0	1	0	0	0	0	0	
2761:	0	0	0	0	1	0	0	0	
2769:	0	0	0	1	0	0	0	0	
2777:	1	0	1	1	0	0	0	0	
2785:	0	0	0	0	0	0	0	0	
2793:	0	0	0	1	1	0	0	0	
2801:	0	0	1	0	0	0	0	0	
2809:	0	0	1	0	0	0	0	0	
2817:	0	0	0	1	0	0	0	0	
2825:	0	0	0	0	0	0	0	0	
2833:	0	1	0	0	1	0	0	0	
2841:	0	0	0	0	0	1	0	0	
2849:	0	0	0	1	0	0	0	0	
2857:	0	1	0	0	0	0	0	0	
2865:	0	0	0	0	0	0	0	0	
2873:	0	0	1	0	0	0	2	0	
2881:	0	0	0	1	1	1	0	0	
2889:	0	0	0	0	0	0	1	0	
2897:	0	1	0	0	1	0	0	1	
2905:	0	1	0	0	0	0	0	0	
2913:	0	0	1	0	0	0	0	0	
2921:	0	0	2	0	0	0	0	0	
2929:	1	0	1	1	0	0	1	0	
2937:	0	0	0	1	0	0	1	0	
2945:	0	0	0	0	0	0	0	1	
2953:	0	0	0	0	0	0	0	1	

2961: 0 1 0 0 0 0 0 0

Sample Title: R1 12-18

Channel	1	2	3	4	5	6	7	8
2969:	0	0	0	0	0	0	1	0
2977:	1	0	0	0	0	0	0	1
2985:	0	0	0	1	0	0	0	1
2993:	0	0	0	0	0	1	0	1
3001:	0	0	0	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	0	0	0	0	0
3033:	0	0	0	2	0	0	0	0
3041:	0	0	0	0	0	0	0	0
3049:	0	0	0	0	0	0	0	0
3057:	0	0	0	0	0	0	0	0
3065:	0	0	0	0	0	0	3	0
3073:	0	0	1	1	0	0	0	0
3081:	2	0	0	0	0	1	0	0
3089:	0	0	0	0	0	0	0	0
3097:	2	0	0	0	1	0	0	0
3105:	0	0	1	0	0	0	0	0
3113:	0	0	0	0	1	0	0	0
3121:	0	0	3	0	0	1	0	0
3129:	0	0	0	0	0	0	0	1
3137:	0	0	0	0	0	0	0	1
3145:	0	0	0	0	0	0	0	0
3153:	0	0	0	0	0	0	0	0
3161:	2	0	1	1	0	0	0	1
3169:	0	0	0	0	0	0	0	0
3177:	0	1	1	1	1	0	0	0
3185:	0	1	0	0	0	0	0	0
3193:	1	0	0	0	1	0	0	0
3201:	0	0	0	0	0	1	1	0
3209:	0	0	0	0	0	1	0	0
3217:	0	1	0	0	1	0	1	0
3225:	0	1	0	0	0	0	0	0
3233:	0	0	0	0	0	0	0	1
3241:	0	0	0	0	1	0	0	0
3249:	0	1	0	0	0	0	0	0
3257:	0	0	0	1	0	0	0	0
3265:	0	0	0	1	0	0	0	0
3273:	0	0	0	0	0	0	0	1
3281:	0	0	0	1	0	0	0	0
3289:	0	0	1	0	0	0	1	0
3297:	1	0	0	0	1	1	0	0
3305:	0	0	0	0	0	0	1	0
3313:	0	0	0	0	0	0	0	0
3321:	0	0	0	0	0	0	0	0
3329:	0	0	0	1	0	0	0	0
3337:	0	0	1	1	0	0	0	0
3345:	0	1	0	0	0	0	0	0
3353:	0	0	0	0	1	0	1	0
3361:	0	0	0	0	0	0	0	1
3369:	0	1	0	0	0	0	0	0
3377:	0	0	0	0	0	1	0	0
3385:	0	0	1	1	0	0	0	0

3393: 0 0 0 0 1 0 0 0

Sample Title: R1 12-18

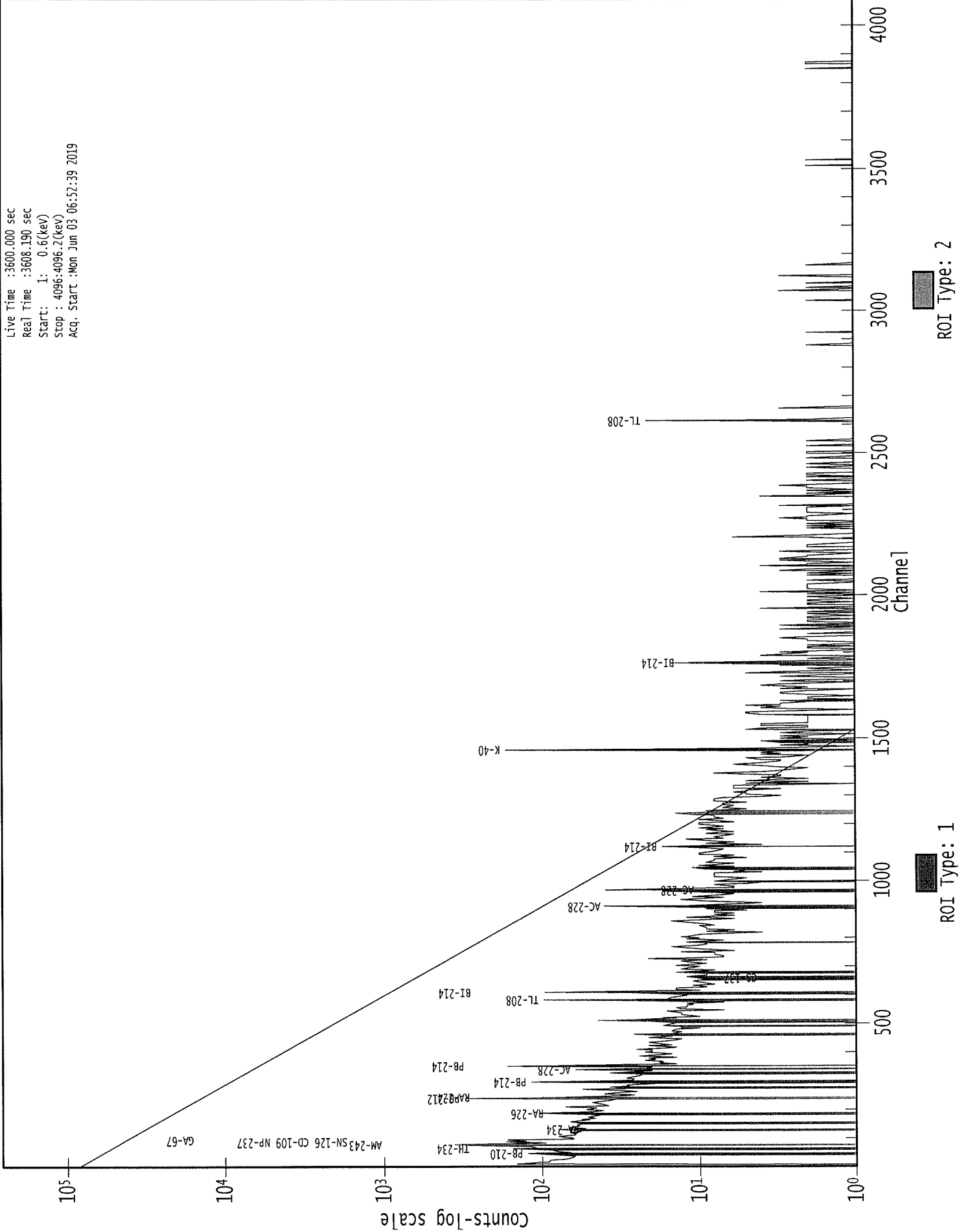
Channel								
3401:	0	1	0	0	0	0	0	0
3409:	1	0	0	0	0	0	0	0
3417:	1	0	0	0	0	0	0	0
3425:	0	0	1	0	0	0	0	0
3433:	0	0	0	0	0	1	0	0
3441:	0	0	0	0	0	0	0	1
3449:	0	0	0	0	0	0	0	0
3457:	0	0	0	0	0	0	0	1
3465:	0	0	0	0	0	0	0	0
3473:	0	1	0	0	0	0	0	0
3481:	0	0	0	1	1	0	0	0
3489:	0	0	0	0	0	1	0	1
3497:	0	0	1	0	0	0	0	0
3505:	0	0	0	0	0	1	2	0
3513:	0	0	0	0	0	0	0	0
3521:	0	0	0	0	0	0	0	0
3529:	0	0	2	0	0	0	0	0
3537:	1	0	1	0	0	0	0	0
3545:	0	0	0	0	0	0	0	0
3553:	0	1	0	0	0	0	0	1
3561:	0	0	0	0	0	0	0	0
3569:	0	0	1	0	0	1	0	0
3577:	0	0	0	1	0	0	0	0
3585:	0	0	0	0	0	0	0	0
3593:	0	0	0	1	0	0	0	0
3601:	0	0	0	0	0	0	0	0
3609:	1	0	0	0	0	0	0	0
3617:	0	0	1	0	0	0	0	0
3625:	0	0	0	0	0	0	0	1
3633:	0	0	0	0	1	0	0	0
3641:	0	0	1	0	0	0	0	0
3649:	0	0	0	0	0	0	0	0
3657:	0	0	1	0	0	0	0	0
3665:	0	0	0	0	0	1	0	1
3673:	1	0	0	0	0	1	0	0
3681:	0	0	1	0	0	0	0	0
3689:	1	1	0	0	0	0	0	0
3697:	1	0	0	0	1	0	0	1
3705:	0	0	0	0	0	1	0	1
3713:	0	0	0	0	0	1	0	0
3721:	0	0	0	0	0	0	0	0
3729:	0	1	0	0	0	0	0	0
3737:	0	0	0	1	0	0	0	0
3745:	0	0	0	1	0	0	0	0
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	1	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	0	0	0	0
3809:	0	1	0	0	0	0	0	0
3817:	0	0	1	0	0	0	0	0

3825: 0 0 0 0 0 0 0 0 0

Sample Title: R1 12-18

Channel	-----	-----	-----	-----	-----	-----	-----	-----
3833:	0	0	0	0	0	0	0	0
3841:	0	0	0	0	0	0	0	0
3849:	2	0	0	0	0	0	0	0
3857:	0	0	0	0	0	0	0	0
3865:	0	2	0	0	0	1	0	2
3873:	0	0	0	0	0	0	0	1
3881:	0	0	1	0	0	0	0	0
3889:	0	0	0	0	0	0	0	0
3897:	0	1	0	0	0	0	0	0
3905:	0	0	0	1	0	1	0	1
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	1	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	1	0	0	0	1	0	0
3985:	0	1	0	0	0	1	0	1
3993:	0	0	0	0	0	0	0	0
4001:	1	0	0	0	0	0	0	0
4009:	0	0	0	0	0	1	0	0
4017:	0	0	0	1	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	1	0	0	0
4049:	0	0	0	0	1	0	0	0
4057:	0	0	0	1	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	1	0
4089:	0	0	0	0	0	0	1	0

0000082493.CNF



Analysis Report for 1905060-07
R2 0-6

GAMMA SPECTRUM ANALYSIS

Sample Identification : 1905060-07
Sample Description : R2 0-6
Sample Type : SOIL

Sample Size : 4.911E+02 grams
Facility : Countroom

Sample Taken On : 5/8/2019 3:33:32PM
Acquisition Started : 6/3/2019 6:53:22AM

Procedure : GAS-1802 pCi
Operator : Administrator
Detector Name : GE4
Geometry : GAS-1802
Live Time : 3600.0 seconds
Real Time : 3624.9 seconds

Dead Time : 0.69 %

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

Energy Calibration Used Done On : 2/24/2018
Efficiency Calibration Used Done On : 6/16/2018
Efficiency Calibration Description :

Sample Number : 82494

PEAK-TO-TOTAL CALIBRATION REPORT

Peak-to-Total Efficiency Calibration Equation

AG
6/3/19

Analysis Report for 1905060-07

R2 0-6

PEAK LOCATE REPORT

Peak Locate Performed on : 6/3/2019 7:53:49AM
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	28.15	27.20	0.0000	0.00
2	31.91	30.97	0.0000	0.00
3	46.58	45.65	0.0000	0.00
4	76.34	75.43	0.0000	0.00
5	87.11	86.21	0.0000	0.00
6	89.68	88.79	0.0000	0.00
7	92.68	91.79	0.0000	0.00
8	129.17	128.31	0.0000	0.00
9	186.34	185.53	0.0000	0.00
10	209.50	208.70	0.0000	0.00
11	238.78	238.00	0.0000	0.00
12	242.01	241.24	0.0000	0.00
13	259.17	258.40	0.0000	0.00
14	277.78	277.03	0.0000	0.00
15	295.33	294.60	0.0000	0.00
16	338.95	338.26	0.0000	0.00
17	352.01	351.33	0.0000	0.00
18	361.99	361.31	0.0000	0.00
19	388.26	387.61	0.0000	0.00
20	461.72	461.13	0.0000	0.00
21	510.70	510.16	0.0000	0.00
22	583.34	582.86	0.0000	0.00
23	609.34	608.88	0.0000	0.00
24	663.81	663.40	0.0000	0.00
25	715.09	714.74	0.0000	0.00
26	720.78	720.43	0.0000	0.00
27	727.11	726.76	0.0000	0.00
28	755.10	754.78	0.0000	0.00
29	768.33	768.02	0.0000	0.00
30	786.13	785.84	0.0000	0.00
31	794.48	794.19	0.0000	0.00
32	806.38	806.11	0.0000	0.00
33	878.96	878.76	0.0000	0.00
34	911.15	910.98	0.0000	0.00
35	920.42	920.26	0.0000	0.00
36	933.89	933.74	0.0000	0.00
37	968.08	967.97	0.0000	0.00
38	1014.09	1014.03	0.0000	0.00
39	1119.96	1120.00	0.0000	0.00
40	1156.95	1157.03	0.0000	0.00
41	1198.10	1198.23	0.0000	0.00
42	1206.63	1206.77	0.0000	0.00

Analysis Report for 1905060-07

R2 0-6

Peak No.	Energy (keV)	Centroid Channel	Centroid Uncertainty	Peak Significance
43	1238.11	1238.28	0.0000	0.00
44	1280.41	1280.63	0.0000	0.00
45	1349.29	1349.59	0.0000	0.00
46	1376.86	1377.19	0.0000	0.00
47	1401.57	1401.93	0.0000	0.00
48	1407.61	1407.97	0.0000	0.00
49	1459.88	1460.30	0.0000	0.00
50	1508.97	1509.44	0.0000	0.00
51	1534.76	1535.27	0.0000	0.00
52	1600.36	1600.95	0.0000	0.00
53	1659.31	1659.97	0.0000	0.00
54	1712.72	1713.44	0.0000	0.00
55	1729.08	1729.82	0.0000	0.00
56	1763.93	1764.71	0.0000	0.00
57	1792.95	1793.77	0.0000	0.00
58	1847.14	1848.03	0.0000	0.00
59	1889.54	1890.48	0.0000	0.00
60	2103.42	2104.63	0.0000	0.00
61	2118.02	2119.26	0.0000	0.00
62	2202.91	2204.26	0.0000	0.00
63	2235.50	2236.90	0.0000	0.00
64	2446.38	2448.06	0.0000	0.00
65	2613.25	2615.17	0.0000	0.00

? = Adjacent peak noted

Errors quoted at 2.000sigma

Analysis Report for 1905060-07

R2 0-6

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 6/3/2019 7:53:49AM

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	28.15	26 -	35	27.20	7.99E+01	55.82	9.70E+02	1.84
m	2	31.91	26 -	35	30.97	2.95E+02	130.32	3.16E+03	2.08
	3	46.58	43 -	49	45.65	2.79E+02	140.78	3.43E+03	1.85
	4	76.34	70 -	81	75.43	6.82E+03	320.95	9.35E+03	3.95
M	5	87.11	82 -	98	86.21	1.21E+03	177.66	4.51E+03	2.35
m	6	89.68	82 -	98	88.79	6.44E+02	177.33	4.41E+03	2.35
m	7	92.68	82 -	98	91.79	3.76E+02	165.67	4.29E+03	2.35
	8	129.17	125 -	131	128.31	1.24E+02	148.62	3.92E+03	1.59
	9	186.34	182 -	190	185.53	8.40E+02	177.85	4.34E+03	2.21
	10	209.50	206 -	212	208.70	1.13E+02	124.95	2.75E+03	2.15
M	11	238.78	232 -	246	238.00	2.42E+03	143.81	1.99E+03	2.16
m	12	242.01	232 -	246	241.24	1.29E+03	156.92	2.31E+03	2.25
	13	259.17	256 -	262	258.40	8.95E+01	94.68	1.57E+03	1.84
	14	277.78	273 -	282	277.03	2.13E+02	128.58	2.23E+03	5.53
	15	295.33	291 -	298	294.60	2.26E+03	142.72	1.90E+03	2.29
	16	338.95	334 -	343	338.26	2.78E+02	121.16	1.93E+03	1.81
	17	352.01	345 -	356	351.33	4.00E+03	176.75	1.91E+03	2.31
	18	361.99	358 -	364	361.31	6.84E+01	72.61	9.13E+02	3.23
	19	388.26	385 -	391	387.61	6.11E+01	75.49	1.00E+03	3.61
	20	461.72	457 -	466	461.13	8.19E+01	88.70	1.08E+03	4.86
	21	510.70	505 -	516	510.16	3.15E+02	94.89	9.74E+02	2.57
	22	583.34	576 -	589	582.86	6.07E+02	110.10	1.07E+03	2.22
	23	609.34	604 -	614	608.88	2.70E+03	126.14	6.70E+02	2.34
	24	663.81	656 -	669	663.40	1.75E+02	88.71	7.92E+02	1.37
	25	715.09	712 -	717	714.74	4.67E+01	35.37	2.13E+02	3.53
M	26	720.78	718 -	733	720.43	6.66E+01	33.20	1.83E+02	2.86
m	27	727.11	718 -	733	726.76	1.38E+02	55.03	3.70E+02	3.03
	28	755.10	752 -	758	754.78	4.19E+01	42.06	2.92E+02	4.34
	29	768.33	762 -	772	768.02	2.79E+02	66.13	4.34E+02	2.56
	30	786.13	780 -	790	785.84	9.22E+01	56.63	3.76E+02	2.95
	31	794.48	791 -	801	794.19	8.17E+01	58.73	4.27E+02	3.07
	32	806.38	801 -	812	806.11	1.20E+02	62.67	4.29E+02	3.83
	33	878.96	877 -	881	878.76	4.13E+01	28.50	1.45E+02	2.97
	34	911.15	905 -	917	910.98	3.31E+02	69.48	3.99E+02	3.00
M	35	920.42	917 -	943	920.26	2.97E+01	29.17	1.19E+02	2.83
m	36	933.89	917 -	943	933.74	1.48E+02	45.16	2.19E+02	2.83
	37	968.08	962 -	974	967.97	1.72E+02	67.05	4.45E+02	2.37
	38	1014.09	1008 -	1020	1014.03	4.85E+01	52.34	3.01E+02	8.92
	39	1119.96	1113 -	1124	1120.00	5.18E+02	63.59	2.48E+02	2.35
	40	1156.95	1150 -	1165	1157.03	1.08E+02	58.89	3.03E+02	6.33

Analysis Report for 1905060-07

R2 0-6

	Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	FWHM (keV)
	41	1198.10	1196 -	1202	1198.23	2.14E+01	26.15	1.09E+02	3.02
	42	1206.63	1203 -	1211	1206.77	2.93E+01	35.12	1.73E+02	2.06
	43	1238.11	1233 -	1243	1238.28	1.92E+02	49.13	2.18E+02	2.83
	44	1280.41	1275 -	1284	1280.63	5.88E+01	38.20	1.74E+02	2.95
	45	1349.29	1345 -	1354	1349.59	4.43E+01	30.15	1.03E+02	5.01
	46	1376.86	1371 -	1382	1377.19	1.28E+02	44.72	1.86E+02	2.30
M	47	1401.57	1396 -	1418	1401.93	3.92E+01	34.88	1.70E+02	2.99
m	48	1407.61	1396 -	1418	1407.97	9.40E+01	34.70	1.36E+02	2.76
	49	1459.88	1454 -	1465	1460.30	1.40E+02	40.20	1.32E+02	2.96
	50	1508.97	1506 -	1514	1509.44	5.68E+01	33.28	1.36E+02	2.85
	51	1534.76	1532 -	1538	1535.27	2.35E+01	23.96	8.70E+01	3.38
	52	1600.36	1597 -	1607	1600.95	3.18E+01	29.20	9.04E+01	2.69
	53	1659.31	1654 -	1665	1659.97	4.59E+01	23.83	4.82E+01	4.14
	54	1712.72	1708 -	1718	1713.44	3.09E+01	20.29	3.81E+01	2.34
	55	1729.08	1725 -	1737	1729.82	1.04E+02	28.49	4.95E+01	3.58
	56	1763.93	1760 -	1772	1764.71	3.46E+02	45.51	9.03E+01	2.80
	57	1792.95	1790 -	1797	1793.77	1.56E+01	14.28	2.29E+01	2.56
m	58	1847.14	1836 -	1859	1848.03	3.38E+01	21.63	4.00E+01	3.43
	59	1889.54	1887 -	1893	1890.48	1.22E+01	15.96	3.57E+01	2.51
	60	2103.42	2100 -	2109	2104.63	2.49E+01	23.26	5.81E+01	1.29
	61	2118.02	2112 -	2123	2119.26	1.96E+01	22.63	5.48E+01	2.96
	62	2202.91	2199 -	2209	2204.26	1.13E+02	27.96	4.44E+01	2.17
	63	2235.50	2231 -	2244	2236.90	1.60E+01	19.42	3.41E+01	11.59
	64	2446.38	2443 -	2454	2448.06	2.87E+01	16.12	1.86E+01	3.75
	65	2613.25	2609 -	2619	2615.17	1.81E+02	26.91	0.00E+00	2.29

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 : 6/3/2019 7:53:49AM

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	28.15	26 -	35	7.99E+01	55.82	9.70E+02	5.12E+01
m	2	31.91	26 -	35	2.95E+02	130.32	3.16E+03	9.24E+01
	3	46.58	43 -	49	2.79E+02	140.78	3.43E+03	1.12E+02

0263

Analysis Report for 1905060-07

R2 0-6

	Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
	4	76.34	70 -	81	6.82E+03	320.95	9.35E+03	2.26E+02
M	5	87.11	82 -	98	1.21E+03	177.66	4.51E+03	1.10E+02
m	6	89.68	82 -	98	6.44E+02	177.33	4.41E+03	1.09E+02
m	7	92.68	82 -	98	3.76E+02	165.67	4.29E+03	1.08E+02
	8	129.17	125 -	131	1.24E+02	148.62	3.92E+03	1.21E+02
	9	186.34	182 -	190	8.40E+02	177.85	4.34E+03	1.38E+02
	10	209.50	206 -	212	1.13E+02	124.95	2.75E+03	1.01E+02
M	11	238.78	232 -	246	2.42E+03	143.81	1.99E+03	7.32E+01
m	12	242.01	232 -	246	1.29E+03	156.92	2.31E+03	7.90E+01
	13	259.17	256 -	262	8.95E+01	94.68	1.57E+03	7.63E+01
	14	277.78	273 -	282	2.13E+02	128.58	2.23E+03	6.55E+01
	15	295.33	291 -	298	2.26E+03	142.72	1.90E+03	8.75E+01
	16	338.95	334 -	343	2.78E+02	121.16	1.93E+03	9.58E+01
	17	352.01	345 -	356	4.00E+03	176.75	1.91E+03	1.01E+02
	18	361.99	358 -	364	6.84E+01	72.61	9.13E+02	5.81E+01
	19	388.26	385 -	391	6.11E+01	75.49	1.00E+03	6.07E+01
	20	461.72	457 -	466	8.19E+01	88.70	1.08E+03	7.14E+01
	21	510.70	505 -	516	3.15E+02	94.89	9.74E+02	7.23E+01
	22	583.34	576 -	589	6.07E+02	110.10	1.07E+03	8.09E+01
	23	609.34	604 -	614	2.70E+03	126.14	6.70E+02	5.87E+01
	24	663.81	656 -	669	1.75E+02	88.71	7.92E+02	6.96E+01
	25	715.09	712 -	717	4.67E+01	35.37	2.13E+02	2.68E+01
M	26	720.78	718 -	733	6.66E+01	33.20	1.83E+02	2.23E+01
m	27	727.11	718 -	733	1.38E+02	55.03	3.70E+02	3.16E+01
	28	755.10	752 -	758	4.19E+01	42.06	2.92E+02	3.29E+01
	29	768.33	762 -	772	2.79E+02	66.13	4.34E+02	4.69E+01
	30	786.13	780 -	790	9.22E+01	56.63	3.76E+02	4.38E+01
	31	794.48	791 -	801	8.17E+01	58.73	4.27E+02	4.59E+01
	32	806.38	801 -	812	1.20E+02	62.67	4.29E+02	4.83E+01
	33	878.96	877 -	881	4.13E+01	28.50	1.45E+02	2.09E+01
	34	911.15	905 -	917	3.31E+02	69.48	3.99E+02	4.86E+01
M	35	920.42	917 -	943	2.97E+01	29.17	1.19E+02	1.79E+01
m	36	933.89	917 -	943	1.48E+02	45.16	2.19E+02	2.44E+01
	37	968.08	962 -	974	1.72E+02	67.05	4.45E+02	5.07E+01
	38	1014.09	1008 -	1020	4.85E+01	52.34	3.01E+02	4.15E+01
	39	1119.96	1113 -	1124	5.18E+02	63.59	2.48E+02	3.65E+01
	40	1156.95	1150 -	1165	1.08E+02	58.89	3.03E+02	4.53E+01
	41	1198.10	1196 -	1202	2.14E+01	26.15	1.09E+02	2.01E+01
	42	1206.63	1203 -	1211	2.93E+01	35.12	1.73E+02	2.75E+01
	43	1238.11	1233 -	1243	1.92E+02	49.13	2.18E+02	3.34E+01
	44	1280.41	1275 -	1284	5.88E+01	38.20	1.74E+02	2.88E+01
	45	1349.29	1345 -	1354	4.43E+01	30.15	1.03E+02	2.22E+01
	46	1376.86	1371 -	1382	1.28E+02	44.72	1.86E+02	3.17E+01
M	47	1401.57	1396 -	1418	3.92E+01	34.88	1.70E+02	2.14E+01
m	48	1407.61	1396 -	1418	9.40E+01	34.70	1.36E+02	1.92E+01
	49	1459.88	1454 -	1465	1.40E+02	40.20	1.32E+02	2.67E+01
	50	1508.97	1506 -	1514	5.68E+01	33.28	1.36E+02	2.44E+01
	51	1534.76	1532 -	1538	2.35E+01	23.96	8.70E+01	1.80E+01
	52	1600.36	1597 -	1607	3.18E+01	29.20	9.04E+01	2.21E+01
	53	1659.31	1654 -	1665	4.59E+01	23.83	4.82E+01	1.61E+01
	54	1712.72	1708 -	1718	3.09E+01	20.29	3.81E+01	1.40E+01

Analysis Report for 1905060-07

R2 0-6

Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
	55	1729.08	1725 - 1737	1.04E+02	28.49	4.95E+01	1.63E+01
	56	1763.93	1760 - 1772	3.46E+02	45.51	9.03E+01	2.16E+01
	57	1792.95	1790 - 1797	1.56E+01	14.28	2.29E+01	9.79E+00
m	58	1847.14	1836 - 1859	3.38E+01	21.63	4.00E+01	1.04E+01
	59	1889.54	1887 - 1893	1.22E+01	15.96	3.57E+01	1.18E+01
	60	2103.42	2100 - 2109	2.49E+01	23.26	5.81E+01	1.73E+01
	61	2118.02	2112 - 2123	1.96E+01	22.63	5.48E+01	1.71E+01
	62	2202.91	2199 - 2209	1.13E+02	27.96	4.44E+01	1.49E+01
	63	2235.50	2231 - 2244	1.60E+01	19.42	3.41E+01	1.45E+01
	64	2446.38	2443 - 2454	2.87E+01	16.12	1.86E+01	9.91E+00
	65	2613.25	2609 - 2619	1.81E+02	26.91	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 : 6/3/2019 7:53:49AM

Peak Analysis From Channel : 1

Peak Analysis To Channel : 4096

Tentative NID Library : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

Peak Match Tolerance : 1.000FWHM

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
M	1	28.15	26 - 35	27.20	7.99E+01	55.82	9.70E+02	I-129
m	2	31.91	26 - 35	30.97	2.95E+02	130.32	3.16E+03	I-129
	3	46.58	43 - 49	45.65	2.79E+02	140.78	3.43E+03	PB-210 TH-230
	4	76.34	70 - 81	75.43	6.82E+03	320.95	9.35E+03	AM-243 TI-44
M	5	87.11	82 - 98	86.21	1.21E+03	177.66	4.51E+03	SN-126 NP-237 EU-155 CD-109 LU-176
m	6	89.68	82 - 98	88.79	6.44E+02	177.33	4.41E+03	LU-176 ND-147 CD-109 SN-126

0265

Analysis Report for 1905060-07

R2 0-6

	Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
m	7	92.68	82 -	98	91.79	3.76E+02	165.67	4.29E+03	GA-67 ND-147
	8	129.17	125 -	131	128.31	1.24E+02	148.62	3.92E+03	PA-234
	9	186.34	182 -	190	185.53	8.40E+02	177.85	4.34E+03	RA-226 HO-166M
	10	209.50	206 -	212	208.70	1.13E+02	124.95	2.75E+03	CM-243 GA-67
M	11	238.78	232 -	246	238.00	2.42E+03	143.81	1.99E+03	PB-212 RA-224
m	12	242.01	232 -	246	241.24	1.29E+03	156.92	2.31E+03	RA-224
	13	259.17	256 -	262	258.40	8.95E+01	94.68	1.57E+03	.....
	14	277.78	273 -	282	277.03	2.13E+02	128.58	2.23E+03	CM-243 NP-239 HG-203 SE-75
	15	295.33	291 -	298	294.60	2.26E+03	142.72	1.90E+03	PB-214 CE-143
	16	338.95	334 -	343	338.26	2.78E+02	121.16	1.93E+03	AC-228 CS-136
	17	352.01	345 -	356	351.33	4.00E+03	176.75	1.91E+03	PB-214
	18	361.99	358 -	364	361.31	6.84E+01	72.61	9.13E+02	.....
	19	388.26	385 -	391	387.61	6.11E+01	75.49	1.00E+03	.....
	20	461.72	457 -	466	461.13	8.19E+01	88.70	1.08E+03	SB-125
	21	510.70	505 -	516	510.16	3.15E+02	94.89	9.74E+02	.....
	22	583.34	576 -	589	582.86	6.07E+02	110.10	1.07E+03	TL-208
	23	609.34	604 -	614	608.88	2.70E+03	126.14	6.70E+02	BI-214
	24	663.81	656 -	669	663.40	1.75E+02	88.71	7.92E+02	CE-143 CS-137
	25	715.09	712 -	717	714.74	4.67E+01	35.37	2.13E+02	.....
M	26	720.78	718 -	733	720.43	6.66E+01	33.20	1.83E+02	SB-126 SB-124 I-131 AG-108M
m	27	727.11	718 -	733	726.76	1.38E+02	55.03	3.70E+02	BI-212
	28	755.10	752 -	758	754.78	4.19E+01	42.06	2.92E+02	ZR-95
	29	768.33	762 -	772	768.02	2.79E+02	66.13	4.34E+02	.....
	30	786.13	780 -	790	785.84	9.22E+01	56.63	3.76E+02	SB-127
	31	794.48	791 -	801	794.19	8.17E+01	58.73	4.27E+02	CS-134
	32	806.38	801 -	812	806.11	1.20E+02	62.67	4.29E+02	.....
	33	878.96	877 -	881	878.76	4.13E+01	28.50	1.45E+02	.....
	34	911.15	905 -	917	910.98	3.31E+02	69.48	3.99E+02	AC-228 TL-204
M	35	920.42	917 -	943	920.26	2.97E+01	29.17	1.19E+02	.....
m	36	933.89	917 -	943	933.74	1.48E+02	45.16	2.19E+02	.....
	37	968.08	962 -	974	967.97	1.72E+02	67.05	4.45E+02	AC-228
	38	1014.09	1008 -	1020	1014.03	4.85E+01	52.34	3.01E+02	.....
	39	1119.96	1113 -	1124	1120.00	5.18E+02	63.59	2.48E+02	BI-214 SC-46 TA-182
	40	1156.95	1150 -	1165	1157.03	1.08E+02	58.89	3.03E+02	.....
	41	1198.10	1196 -	1202	1198.23	2.14E+01	26.15	1.09E+02	.....
	42	1206.63	1203 -	1211	1206.77	2.93E+01	35.12	1.73E+02	.....
	43	1238.11	1233 -	1243	1238.28	1.92E+02	49.13	2.18E+02	CO-56
	44	1280.41	1275 -	1284	1280.63	5.88E+01	38.20	1.74E+02	.....

Analysis Report for 1905060-07

R2 0-6

	Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
	45	1349.29	1345 -	1354	1349.59	4.43E+01	30.15	1.03E+02	.....
	46	1376.86	1371 -	1382	1377.19	1.28E+02	44.72	1.86E+02	.....
M	47	1401.57	1396 -	1418	1401.93	3.92E+01	34.88	1.70E+02	.....
m	48	1407.61	1396 -	1418	1407.97	9.40E+01	34.70	1.36E+02	EU-152
	49	1459.88	1454 -	1465	1460.30	1.40E+02	40.20	1.32E+02	K-40
	50	1508.97	1506 -	1514	1509.44	5.68E+01	33.28	1.36E+02	.....
	51	1534.76	1532 -	1538	1535.27	2.35E+01	23.96	8.70E+01	.....
	52	1600.36	1597 -	1607	1600.95	3.18E+01	29.20	9.04E+01	.....
	53	1659.31	1654 -	1665	1659.97	4.59E+01	23.83	4.82E+01	.....
	54	1712.72	1708 -	1718	1713.44	3.09E+01	20.29	3.81E+01	.....
	55	1729.08	1725 -	1737	1729.82	1.04E+02	28.49	4.95E+01	.....
	56	1763.93	1760 -	1772	1764.71	3.46E+02	45.51	9.03E+01	BI-214
	57	1792.95	1790 -	1797	1793.77	1.56E+01	14.28	2.29E+01	.....
m	58	1847.14	1836 -	1859	1848.03	3.38E+01	21.63	4.00E+01	.....
	59	1889.54	1887 -	1893	1890.48	1.22E+01	15.96	3.57E+01	.....
	60	2103.42	2100 -	2109	2104.63	2.49E+01	23.26	5.81E+01	.....
	61	2118.02	2112 -	2123	2119.26	1.96E+01	22.63	5.48E+01	.....
	62	2202.91	2199 -	2209	2204.26	1.13E+02	27.96	4.44E+01	BI-214
	63	2235.50	2231 -	2244	2236.90	1.60E+01	19.42	3.41E+01	.....
	64	2446.38	2443 -	2454	2448.06	2.87E+01	16.12	1.86E+01	.....
	65	2613.25	2609 -	2619	2615.17	1.81E+02	26.91	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 : 6/3/2019 7:53:49AM

	Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
M	1	28.15	7.99E+01	55.82	1.58E-02	1.82E-03
m	2	31.91	2.95E+02	130.32	1.73E-02	1.82E-03
	3	46.58	2.79E+02	140.78	2.15E-02	1.82E-03
	4	76.34	6.82E+03	320.95	2.38E-02	2.03E-03
M	5	87.11	1.21E+03	177.66	2.35E-02	2.16E-03
m	6	89.68	6.44E+02	177.33	2.34E-02	2.16E-03
m	7	92.68	3.76E+02	165.67	2.32E-02	2.14E-03
	8	129.17	1.24E+02	148.62	2.05E-02	1.81E-03
	9	186.34	8.40E+02	177.85	1.61E-02	1.28E-03

Analysis Report for 1905060-07

R2 0-6

	Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
	10	209.50	1.13E+02	124.95	1.46E-02	1.17E-03
M	11	238.78	2.42E+03	143.81	1.31E-02	1.03E-03
m	12	242.01	1.29E+03	156.92	1.29E-02	1.02E-03
	13	259.17	8.95E+01	94.68	1.21E-02	9.38E-04
	14	277.78	2.13E+02	128.58	1.13E-02	8.50E-04
	15	295.33	2.26E+03	142.72	1.07E-02	8.28E-04
	16	338.95	2.78E+02	121.16	9.31E-03	7.85E-04
	17	352.01	4.00E+03	176.75	8.96E-03	7.72E-04
	18	361.99	6.84E+01	72.61	8.71E-03	7.62E-04
	19	388.26	6.11E+01	75.49	8.10E-03	7.36E-04
	20	461.72	8.19E+01	88.70	6.78E-03	6.77E-04
	21	510.70	3.15E+02	94.89	6.11E-03	6.38E-04
	22	583.34	6.07E+02	110.10	5.34E-03	5.81E-04
	23	609.34	2.70E+03	126.14	5.11E-03	5.60E-04
	24	663.81	1.75E+02	88.71	4.69E-03	5.17E-04
	25	715.09	4.67E+01	35.37	4.36E-03	4.64E-04
M	26	720.78	6.66E+01	33.20	4.33E-03	4.58E-04
m	27	727.11	1.38E+02	55.03	4.29E-03	4.52E-04
	28	755.10	4.19E+01	42.06	4.14E-03	4.23E-04
	29	768.33	2.79E+02	66.13	4.07E-03	4.10E-04
	30	786.13	9.22E+01	56.63	3.98E-03	3.92E-04
	31	794.48	8.17E+01	58.73	3.94E-03	3.83E-04
	32	806.38	1.20E+02	62.67	3.89E-03	3.71E-04
	33	878.96	4.13E+01	28.50	3.59E-03	2.97E-04
	34	911.15	3.31E+02	69.48	3.47E-03	2.76E-04
M	35	920.42	2.97E+01	29.17	3.44E-03	2.75E-04
m	36	933.89	1.48E+02	45.16	3.39E-03	2.73E-04
	37	968.08	1.72E+02	67.05	3.28E-03	2.69E-04
	38	1014.09	4.85E+01	52.34	3.15E-03	2.63E-04
	39	1119.96	5.18E+02	63.59	2.89E-03	2.50E-04
	40	1156.95	1.08E+02	58.89	2.81E-03	2.46E-04
	41	1198.10	2.14E+01	26.15	2.72E-03	2.42E-04
	42	1206.63	2.93E+01	35.12	2.71E-03	2.42E-04
	43	1238.11	1.92E+02	49.13	2.65E-03	2.41E-04
	44	1280.41	5.88E+01	38.20	2.57E-03	2.38E-04
	45	1349.29	4.43E+01	30.15	2.46E-03	2.33E-04
	46	1376.86	1.28E+02	44.72	2.42E-03	2.28E-04
M	47	1401.57	3.92E+01	34.88	2.39E-03	2.24E-04
m	48	1407.61	9.40E+01	34.70	2.38E-03	2.23E-04
	49	1459.88	1.40E+02	40.20	2.31E-03	2.14E-04
	50	1508.97	5.68E+01	33.28	2.24E-03	2.05E-04
	51	1534.76	2.35E+01	23.96	2.21E-03	2.01E-04
	52	1600.36	3.18E+01	29.20	2.14E-03	1.89E-04
	53	1659.31	4.59E+01	23.83	2.07E-03	1.79E-04
	54	1712.72	3.09E+01	20.29	2.02E-03	1.69E-04
	55	1729.08	1.04E+02	28.49	2.00E-03	1.67E-04
	56	1763.93	3.46E+02	45.51	1.97E-03	1.61E-04
	57	1792.95	1.56E+01	14.28	1.95E-03	1.55E-04
m	58	1847.14	3.38E+01	21.63	1.90E-03	1.48E-04
	59	1889.54	1.22E+01	15.96	1.86E-03	1.48E-04
	60	2103.42	2.49E+01	23.26	1.70E-03	1.48E-04
	61	2118.02	1.96E+01	22.63	1.69E-03	1.48E-04
	62	2202.91	1.13E+02	27.96	1.63E-03	1.48E-04

Analysis Report for 1905060-07

R2 0-6

Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
63	2235.50	1.60E+01	19.42	1.61E-03	1.48E-04
64	2446.38	2.87E+01	16.12	1.49E-03	1.48E-04
65	2613.25	1.81E+02	26.91	1.40E-03	1.48E-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 : 6/3/2019 7:53:49AM

Env. Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000082158.CNF

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
M	1	28.15	7.99E+01	55.82			7.99E+01	5.58E+01
m	2	31.91	2.95E+02	130.32			2.95E+02	1.30E+02
	3	46.58	2.79E+02	140.78	3.07E+01	7.73E+00	2.49E+02	1.41E+02
	4	76.34	6.82E+03	320.95			6.82E+03	3.21E+02
M	5	87.11	1.21E+03	177.66			1.21E+03	1.78E+02
m	6	89.68	6.44E+02	177.33			6.44E+02	1.77E+02
m	7	92.68	3.76E+02	165.67	6.13E+01	1.05E+01	3.15E+02	1.66E+02
	8	129.17	1.24E+02	148.62			1.24E+02	1.49E+02
	9	186.34	8.40E+02	177.85	3.03E+01	7.13E+00	8.10E+02	1.78E+02
	10	209.50	1.13E+02	124.95			1.13E+02	1.25E+02
M	11	238.78	2.42E+03	143.81	9.32E+00	6.51E+00	2.42E+03	1.44E+02
m	12	242.01	1.29E+03	156.92			1.29E+03	1.57E+02
	13	259.17	8.95E+01	94.68			8.95E+01	9.47E+01
	14	277.78	2.13E+02	128.58			2.13E+02	1.29E+02
	15	295.33	2.26E+03	142.72			2.26E+03	1.43E+02
	16	338.95	2.78E+02	121.16			2.78E+02	1.21E+02
	17	352.01	4.00E+03	176.75	7.73E+00	5.23E+00	4.00E+03	1.77E+02
	18	361.99	6.84E+01	72.61			6.84E+01	7.26E+01
	19	388.26	6.11E+01	75.49			6.11E+01	7.55E+01
	20	461.72	8.19E+01	88.70			8.19E+01	8.87E+01
	21	510.70	3.15E+02	94.89	5.74E+01	5.38E+00	2.58E+02	9.50E+01
	22	583.34	6.07E+02	110.10	0.00E+00	0.00E+00	6.07E+02	1.10E+02
	23	609.34	2.70E+03	126.14	6.57E+00	4.01E+00	2.70E+03	1.26E+02
	24	663.81	1.75E+02	88.71			1.75E+02	8.87E+01
	25	715.09	4.67E+01	35.37			4.67E+01	3.54E+01
M	26	720.78	6.66E+01	33.20			6.66E+01	3.32E+01
m	27	727.11	1.38E+02	55.03			1.38E+02	5.50E+01

0269

Analysis Report for 1905060-07

R2 0-6

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
28	755.10	4.19E+01	42.06			4.19E+01	4.21E+01
29	768.33	2.79E+02	66.13			2.79E+02	6.61E+01
30	786.13	9.22E+01	56.63			9.22E+01	5.66E+01
31	794.48	8.17E+01	58.73			8.17E+01	5.87E+01
32	806.38	1.20E+02	62.67	0.00E+00	0.00E+00	1.20E+02	6.27E+01
33	878.96	4.13E+01	28.50			4.13E+01	2.85E+01
34	911.15	3.31E+02	69.48			3.31E+02	6.95E+01
M	35	920.42	2.97E+01			2.97E+01	2.92E+01
m	36	933.89	1.48E+02			1.48E+02	4.52E+01
	37	968.08	1.72E+02			1.72E+02	6.70E+01
	38	1014.09	4.85E+01			4.85E+01	5.23E+01
	39	1119.96	5.18E+02			5.18E+02	6.36E+01
	40	1156.95	1.08E+02			1.08E+02	5.89E+01
	41	1198.10	2.14E+01			2.14E+01	2.61E+01
	42	1206.63	2.93E+01			2.93E+01	3.51E+01
	43	1238.11	1.92E+02			1.92E+02	4.91E+01
	44	1280.41	5.88E+01			5.88E+01	3.82E+01
	45	1349.29	4.43E+01			4.43E+01	3.01E+01
	46	1376.86	1.28E+02			1.28E+02	4.47E+01
M	47	1401.57	3.92E+01			3.92E+01	3.49E+01
m	48	1407.61	9.40E+01			9.40E+01	3.47E+01
	49	1459.88	1.40E+02			1.40E+02	4.02E+01
	50	1508.97	5.68E+01			5.68E+01	3.33E+01
	51	1534.76	2.35E+01			2.35E+01	2.40E+01
	52	1600.36	3.18E+01			3.18E+01	2.92E+01
	53	1659.31	4.59E+01			4.59E+01	2.38E+01
	54	1712.72	3.09E+01			3.09E+01	2.03E+01
	55	1729.08	1.04E+02			1.04E+02	2.85E+01
	56	1763.93	3.46E+02	2.14E-01	1.10E+00	3.46E+02	4.55E+01
	57	1792.95	1.56E+01			1.56E+01	1.43E+01
m	58	1847.14	3.38E+01			3.38E+01	2.16E+01
	59	1889.54	1.22E+01			1.22E+01	1.60E+01
	60	2103.42	2.49E+01			2.49E+01	2.33E+01
	61	2118.02	1.96E+01			1.96E+01	2.26E+01
	62	2202.91	1.13E+02			1.13E+02	2.80E+01
	63	2235.50	1.60E+01			1.60E+01	1.94E+01
	64	2446.38	2.87E+01			2.87E+01	1.61E+01
	65	2613.25	1.81E+02	2.15E+00	1.06E+00	1.79E+02	2.69E+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 1905060-07

R2 0-6

AREA CORRECTION REPORT REFERENCE PEAK / BKG. SUBTRACT

Peak Analysis Performed on : 6/3/2019 7:53:49AM

Ref. Peak Energy : 0.00 Reference Date :
 Peak Ratio : 0.00 Uncertainty : 0.00
 Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000082158.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	28.15	7.99E+01	55.82			7.99E+01	5.58E+01
m	2	31.91	2.95E+02	130.32			2.95E+02	1.30E+02
	3	46.58	2.79E+02	140.78	3.07E+01	7.73E+00	2.49E+02	1.41E+02
	4	76.34	6.82E+03	320.95			6.82E+03	3.21E+02
M	5	87.11	1.21E+03	177.66			1.21E+03	1.78E+02
m	6	89.68	6.44E+02	177.33			6.44E+02	1.77E+02
m	7	92.68	3.76E+02	165.67	6.13E+01	1.05E+01	3.15E+02	1.66E+02
	8	129.17	1.24E+02	148.62			1.24E+02	1.49E+02
	9	186.34	8.40E+02	177.85	3.03E+01	7.13E+00	8.10E+02	1.78E+02
	10	209.50	1.13E+02	124.95			1.13E+02	1.25E+02
M	11	238.78	2.42E+03	143.81	9.32E+00	6.51E+00	2.42E+03	1.44E+02
m	12	242.01	1.29E+03	156.92			1.29E+03	1.57E+02
	13	259.17	8.95E+01	94.68			8.95E+01	9.47E+01
	14	277.78	2.13E+02	128.58			2.13E+02	1.29E+02
	15	295.33	2.26E+03	142.72			2.26E+03	1.43E+02
	16	338.95	2.78E+02	121.16			2.78E+02	1.21E+02
	17	352.01	4.00E+03	176.75	7.73E+00	5.23E+00	4.00E+03	1.77E+02
	18	361.99	6.84E+01	72.61			6.84E+01	7.26E+01
	19	388.26	6.11E+01	75.49			6.11E+01	7.55E+01
	20	461.72	8.19E+01	88.70			8.19E+01	8.87E+01
	21	510.70	3.15E+02	94.89	5.74E+01	5.38E+00	2.58E+02	9.50E+01
	22	583.34	6.07E+02	110.10	0.00E+00	0.00E+00	6.07E+02	1.10E+02
	23	609.34	2.70E+03	126.14	6.57E+00	4.01E+00	2.70E+03	1.26E+02
	24	663.81	1.75E+02	88.71			1.75E+02	8.87E+01
	25	715.09	4.67E+01	35.37			4.67E+01	3.54E+01
M	26	720.78	6.66E+01	33.20			6.66E+01	3.32E+01
m	27	727.11	1.38E+02	55.03			1.38E+02	5.50E+01
	28	755.10	4.19E+01	42.06			4.19E+01	4.21E+01
	29	768.33	2.79E+02	66.13			2.79E+02	6.61E+01
	30	786.13	9.22E+01	56.63			9.22E+01	5.66E+01
	31	794.48	8.17E+01	58.73			8.17E+01	5.87E+01
	32	806.38	1.20E+02	62.67	0.00E+00	0.00E+00	1.20E+02	6.27E+01
	33	878.96	4.13E+01	28.50			4.13E+01	2.85E+01
	34	911.15	3.31E+02	69.48			3.31E+02	6.95E+01
M	35	920.42	2.97E+01	29.17			2.97E+01	2.92E+01
m	36	933.89	1.48E+02	45.16			1.48E+02	4.52E+01
	37	968.08	1.72E+02	67.05			1.72E+02	6.70E+01
	38	1014.09	4.85E+01	52.34			4.85E+01	5.23E+01
	39	1119.96	5.18E+02	63.59			5.18E+02	6.36E+01
	40	1156.95	1.08E+02	58.89			1.08E+02	5.89E+01
	41	1198.10	2.14E+01	26.15			2.14E+01	2.61E+01

0271

Analysis Report for 1905060-07

R2 0-6

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
	42	1206.63	2.93E+01			2.93E+01	3.51E+01
	43	1238.11	1.92E+02			1.92E+02	4.91E+01
	44	1280.41	5.88E+01			5.88E+01	3.82E+01
	45	1349.29	4.43E+01			4.43E+01	3.01E+01
	46	1376.86	1.28E+02			1.28E+02	4.47E+01
M	47	1401.57	3.92E+01			3.92E+01	3.49E+01
m	48	1407.61	9.40E+01			9.40E+01	3.47E+01
	49	1459.88	1.40E+02			1.40E+02	4.02E+01
	50	1508.97	5.68E+01			5.68E+01	3.33E+01
	51	1534.76	2.35E+01			2.35E+01	2.40E+01
	52	1600.36	3.18E+01			3.18E+01	2.92E+01
	53	1659.31	4.59E+01			4.59E+01	2.38E+01
	54	1712.72	3.09E+01			3.09E+01	2.03E+01
	55	1729.08	1.04E+02			1.04E+02	2.85E+01
	56	1763.93	3.46E+02	2.14E-01	1.10E+00	3.46E+02	4.55E+01
	57	1792.95	1.56E+01			1.56E+01	1.43E+01
m	58	1847.14	3.38E+01			3.38E+01	2.16E+01
	59	1889.54	1.22E+01			1.22E+01	1.60E+01
	60	2103.42	2.49E+01			2.49E+01	2.33E+01
	61	2118.02	1.96E+01			1.96E+01	2.26E+01
	62	2202.91	1.13E+02			1.13E+02	2.80E+01
	63	2235.50	1.60E+01			1.60E+01	1.94E+01
	64	2446.38	2.87E+01			2.87E+01	1.61E+01
	65	2613.25	1.81E+02	2.15E+00	1.06E+00	1.79E+02	2.69E+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	0.983	1460.81	*	10.67	8.70E+00	2.62E+00
GA-67	0.468	93.31	*	35.70	1.36E+02	7.26E+01
		208.95	*	2.24	1.23E+03	1.36E+03
		300.22		16.00		
CD-109	0.984	88.03	*	3.72	2.20E+01	3.81E+00
SN-126	0.996	87.57	*	37.00	2.13E+00	3.69E-01
I-129	0.787	29.78	*	57.00	1.36E-01	9.61E-02

0272

Analysis Report for 1905060-07

R2 0-6

<i>Nuclide Name</i>	<i>Id Confidence</i>	<i>Energy (keV)</i>		<i>Yield(%)</i>	<i>Activity (pCi/grams)</i>	<i>Activity Uncertainty</i>
I-129	0.787	33.60 *		13.20	1.97E+00	8.97E-01
		39.58		7.52		
CS-137	0.914	661.65 *		85.12	6.71E-01	3.48E-01
ND-147	0.659	91.11 *		28.90	7.36E+00	2.14E+00
		531.02		13.10		
EU-155	0.363	86.50 *		30.90	2.57E+00	4.46E-01
		105.30		20.70		
TL-208	0.867	583.14 *		30.22	5.75E+00	1.22E+00
		860.37		4.48		
		2614.66 *		35.85	5.46E+00	1.00E+00
PB-210	1.000	46.50 *		4.25	4.16E+00	2.39E+00
BI-212	0.775	727.17 *		11.80	4.17E+00	1.72E+00
		1620.62		2.75		
PB-212	0.897	238.63 *		44.60	6.34E+00	6.29E-01
		300.09		3.41		
BI-214	0.996	609.31 *		46.30	1.74E+01	2.08E+00
		1120.29 *		15.10	1.82E+01	2.73E+00
		1764.49 *		15.80	1.70E+01	2.63E+00
		2204.22 *		4.98	2.12E+01	5.60E+00
PB-214	1.000	295.21 *		19.19	1.69E+01	1.69E+00
		351.92 *		37.19	1.83E+01	1.78E+00
RA-224	0.980	240.98 *		3.95	3.88E+01	5.62E+00
RA-226	1.000	186.21 *		3.28	2.34E+01	5.48E+00
AC-228	0.992	338.32 *		11.40	4.00E+00	1.78E+00
		911.07 *		27.70	5.27E+00	1.18E+00
		969.11 *		16.60	4.84E+00	1.92E+00
TH-230	0.576	48.43 *		16.90	1.04E+00	5.99E-01
		62.85		4.60		
		67.67		0.37		
PA-234	0.476	131.20 *		20.40	4.53E-01	5.45E-01
		733.99		8.80		
		946.00		12.00		
NP-237	0.993	86.50 *		12.60	6.24E+00	1.08E+00
AM-243	0.948	74.67 *		66.00	6.63E+00	6.45E-01
CM-243	0.367	209.75 *		3.29	3.60E+00	3.98E+00
		228.14		10.60		
		277.60 *		14.00	2.05E+00	1.25E+00

* = Energy line found in the spectrum.

- = Manually added nuclide.

? = Manually edited nuclide.

Energy Tolerance : 2.000FWHM

Nuclide confidence index threshold = 0.30

Errors quoted at 2.000sigma

Analysis Report for 1905060-07

R2 0-6

UNIDENTIFIED PEAKS

Peak Locate Performed on : 6/3/2019 7:53:49AM
 Peak Locate From Channel : 1
 Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
13	259.17	2.48554E-02	52.90	Sum	
18	361.99	1.90063E-02	53.06		
19	388.26	1.69638E-02	61.81	Sum	
20	461.72	2.27533E-02	54.14	Tol.	SB-125
21	510.70	7.15307E-02	18.45		
25	715.09	1.29702E-02	37.87		
M 26	720.78	1.85122E-02	24.91	Tol.	SB-124 SB-126
28	755.10	1.16356E-02	50.20	Sum	
29	768.33	7.74936E-02	11.85	Sum	
30	786.13	2.56007E-02	30.72		
31	794.48	2.27001E-02	35.93	Sum	
32	806.38	3.31953E-02	26.22		
33	878.96	1.14790E-02	34.48	Sum	
M 35	920.42	8.24802E-03	49.12	Sum	
m 36	933.89	4.11836E-02	15.23	Sum	
38	1014.09	1.34680E-02	53.98	Sum	
40	1156.95	2.99142E-02	27.34		
41	1198.10	5.94664E-03	61.07	Sum	
42	1206.63	8.13458E-03	59.97	Sum	
43	1238.11	5.32853E-02	12.81		
44	1280.41	1.63470E-02	32.45		
45	1349.29	1.22960E-02	34.06		
46	1376.86	3.55380E-02	17.48		
M 47	1401.57	1.08804E-02	44.53		
m 48	1407.61	2.61132E-02	18.46	Tol.	EU-152
50	1508.97	1.57889E-02	29.27		
51	1534.76	6.52778E-03	50.99	Sum	
52	1600.36	8.83478E-03	45.90		
53	1659.31	1.27500E-02	25.96		
54	1712.72	8.59167E-03	32.80		
55	1729.08	2.89567E-02	13.67	Sum	
57	1792.95	4.32099E-03	45.91	Sum	
m 58	1847.14	9.37990E-03	32.03	Sum	
59	1889.54	3.37963E-03	65.59		
60	2103.42	6.92644E-03	46.64	S-Esc	
61	2118.02	5.44031E-03	57.77		
63	2235.50	4.43182E-03	60.85	Sum	
64	2446.38	7.96784E-03	28.11	Sum	

Analysis Report for 1905060-07

R2 0-6

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	0.98	1460.81 *	10.67	8.70E+00	2.62E+00
GA-67	0.46	93.31 *	35.70	1.36E+02	7.26E+01
		208.95 *	2.24	1.23E+03	1.36E+03
		300.22	16.00		
		88.03 *	3.72	2.20E+01	3.81E+00
CD-109	0.98	88.03 *	3.72	2.20E+01	3.81E+00
SN-126	0.99	87.57 *	37.00	2.13E+00	3.69E-01
I-129	0.78	29.78 *	57.00	1.36E-01	9.61E-02
		33.60 *	13.20	1.97E+00	8.97E-01
		39.58	7.52		
CS-137	0.91	661.65 *	85.12	6.71E-01	3.48E-01
ND-147	0.65	91.11 *	28.90	7.36E+00	2.14E+00
		531.02	13.10		
EU-155	0.36	86.50 *	30.90	2.57E+00	4.46E-01
		105.30	20.70		
TL-208	0.86	583.14 *	30.22	5.75E+00	1.22E+00
		860.37	4.48		
		2614.66 *	35.85	5.46E+00	1.00E+00
PB-210	1.00	46.50 *	4.25	4.16E+00	2.39E+00
BI-212	0.77	727.17 *	11.80	4.17E+00	1.72E+00
		1620.62	2.75		
PB-212	0.89	238.63 *	44.60	6.34E+00	6.29E-01
		300.09	3.41		
BI-214	0.99	609.31 *	46.30	1.74E+01	2.08E+00
		1120.29 *	15.10	1.82E+01	2.73E+00
		1764.49 *	15.80	1.70E+01	2.63E+00
		2204.22 *	4.98	2.12E+01	5.60E+00
PB-214	1.00	295.21 *	19.19	1.69E+01	1.69E+00
		351.92 *	37.19	1.83E+01	1.78E+00
RA-224	0.98	240.98 *	3.95	3.88E+01	5.62E+00
RA-226	1.00	186.21 *	3.28	2.34E+01	5.48E+00
AC-228	0.99	338.32 *	11.40	4.00E+00	1.78E+00
		911.07 *	27.70	5.27E+00	1.18E+00

Analysis Report for 1905060-07

R2 0-6

Nuclide Name	Id Confidence	Energy (keV)	Yield(%)	Activity (pCi/grams)	Activity Uncertainty
AC-228	0.99	969.11 *	16.60	4.84E+00	1.92E+00
TH-230	0.57	48.43 *	16.90	1.04E+00	5.99E-01
		62.85	4.60		
		67.67	0.37		
PA-234	0.47	131.20 *	20.40	4.53E-01	5.45E-01
		733.99	8.80		
		946.00	12.00		
NP-237	0.99	86.50 *	12.60	6.24E+00	1.08E+00
AM-243	0.94	74.67 *	66.00	6.63E+00	6.45E-01
CM-243	0.36	209.75 *	3.29	3.60E+00	3.98E+00
		228.14	10.60		
		277.60 *	14.00	2.05E+00	1.25E+00

* = Energy line found in the spectrum.

- = Manually added nuclide.

? = Manually edited nuclide.

@ = Energy line not used for Weighted Mean Activity

Energy Tolerance : 2.000FWHM

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	0.983	8.70E+00	2.62E+00	
GA-67	0.468	1.37E+02	7.25E+01	
? CD-109	0.984	2.20E+01	3.81E+00	
? SN-126	0.996	2.13E+00	3.69E-01	
I-129	0.787	1.57E-01	9.55E-02	
CS-137	0.914	6.71E-01	3.48E-01	
ND-147	0.659	7.36E+00	2.14E+00	
? EU-155	0.363	2.57E+00	4.46E-01	
X HG-203	0.961			
TL-208	0.867	5.58E+00	7.75E-01	
? PB-210	1.000	4.16E+00	2.39E+00	
BI-212	0.775	4.17E+00	1.72E+00	
PB-212	0.897	6.34E+00	6.29E-01	
BI-214	0.996	1.77E+01	1.36E+00	
PB-214	1.000	1.76E+01	1.22E+00	

Analysis Report for 1905060-07

R2 0-6

<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>
RA-224	0.980	3.88E+01	5.62E+00	
RA-226	1.000	2.34E+01	5.48E+00	
AC-228	0.992	4.87E+00	8.76E-01	
? TH-230	0.576	1.04E+00	5.99E-01	
PA-234	0.476	4.53E-01	5.45E-01	
? NP-237	0.993	6.24E+00	1.08E+00	
AM-243	0.948	6.63E+00	6.45E-01	
CM-243	0.367	2.16E+00	1.19E+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 1905060-07

R2 0-6

UNIDENTIFIED PEAKS

Peak Locate Performed on : 6/3/2019 7:53:49AM

Peak Locate From Channel : 1

Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
13	259.17	2.48554E-02	52.90	Sum	
18	361.99	1.90063E-02	53.06		
19	388.26	1.69638E-02	61.81	Sum	
20	461.72	2.27533E-02	54.14	Tol.	SB-125
21	510.70	7.15307E-02	18.45		
25	715.09	1.29702E-02	37.87		
M 26	720.78	1.85122E-02	24.91	Tol.	SB-124 SB-126
28	755.10	1.16356E-02	50.20	Sum	
29	768.33	7.74936E-02	11.85	Sum	
30	786.13	2.56007E-02	30.72		
31	794.48	2.27001E-02	35.93	Sum	
32	806.38	3.31953E-02	26.22		
33	878.96	1.14790E-02	34.48	Sum	
M 35	920.42	8.24802E-03	49.12	Sum	
m 36	933.89	4.11836E-02	15.23	Sum	
38	1014.09	1.34680E-02	53.98	Sum	
40	1156.95	2.99142E-02	27.34		
41	1198.10	5.94664E-03	61.07	Sum	
42	1206.63	8.13458E-03	59.97	Sum	
43	1238.11	5.32853E-02	12.81		
44	1280.41	1.63470E-02	32.45		
45	1349.29	1.22960E-02	34.06		
46	1376.86	3.55380E-02	17.48		
M 47	1401.57	1.08804E-02	44.53		
m 48	1407.61	2.61132E-02	18.46	Tol.	EU-152
50	1508.97	1.57889E-02	29.27		
51	1534.76	6.52778E-03	50.99	Sum	
52	1600.36	8.83478E-03	45.90		
53	1659.31	1.27500E-02	25.96		
54	1712.72	8.59167E-03	32.80		
55	1729.08	2.89567E-02	13.67	Sum	
57	1792.95	4.32099E-03	45.91	Sum	

Analysis Report for 1905060-07

R2 0-6

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
m 58	1847.14	9.37990E-03	32.03	Sum	
59	1889.54	3.37963E-03	65.59		
60	2103.42	6.92644E-03	46.64	S-Esc	
61	2118.02	5.44031E-03	57.77		
63	2235.50	4.43182E-03	60.85	Sum	
64	2446.38	7.96784E-03	28.11	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	7.72E-01	3.22E+00	3.22E+00
+	NA-22	1274.54	99.94	1.87E-02	3.03E-01	3.03E-01
+	NA-24	1368.53	99.99	2.01E-03	1.07E-01	2.65E-01
		2754.09	99.86	-1.92E-02		1.07E-01
+	AL-26	1808.65	99.76	3.17E-02	2.20E-01	2.20E-01
+	K-40	1460.81	* 10.67	8.70E+00	3.49E+00	3.49E+00
+	@ AR-41	1293.64	99.16	1.00E+26	1.00E+26	1.00E+26
+	TI-44	67.88	94.40	1.77E-03	1.80E-01	1.80E-01
		78.34	96.00	3.52E+00		2.91E-01
+	SC-46	889.25	98.98	1.41E-01	3.83E-01	3.83E-01
		1120.51	99.90	3.02E+00		7.60E-01
+	V-48	983.52	99.98	1.98E-01	9.09E-01	9.09E-01
		1312.10	97.50	8.53E-02		9.10E-01
+	CR-51	320.08	9.83	-1.09E+00	3.70E+00	3.70E+00
+	MN-54	834.83	99.97	6.54E-02	3.14E-01	3.14E-01
+	CO-56	846.75	99.96	-1.64E-01	3.51E-01	3.51E-01
		1037.75	14.03	-2.99E-01		2.50E+00
		1238.25	67.00	2.12E+00		9.00E-01
		1771.40	15.51	-1.16E-01		1.87E+00
		2587.48	16.90	-6.33E-01		7.67E-01
+	CO-57	122.06	85.51	4.76E-02	1.88E-01	1.88E-01
		136.48	10.60	-8.53E-02		1.61E+00
+	CO-58	810.76	99.40	1.50E-02	3.82E-01	3.82E-01

Analysis Report for 1905060-07

R2 0-6

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	FE-59	1099.22	56.50	-2.00E-01	7.49E-01	7.49E-01
		1291.56	43.20	2.92E-01		1.03E+00
+	CO-60	1173.22	100.00	-4.49E-02	2.65E-01	2.65E-01
		1332.49	100.00	5.10E-02		2.89E-01
+	ZN-65	1115.52	50.75	1.68E+00	1.10E+00	1.10E+00
+	GA-67	93.31	* 35.70	1.36E+02	2.25E+02	2.25E+02
		208.95	* 2.24	1.23E+03		2.23E+03
		300.22	16.00	1.79E+02		3.49E+02
+	SE-75	121.11	16.70	-4.34E-01	3.09E-01	1.03E+00
		136.00	59.50	-1.32E-01		3.09E-01
		264.65	59.80	-1.65E-01		3.42E-01
		279.53	25.20	4.78E-01		9.01E-01
		400.65	11.40	-8.26E-01		2.52E+00
+	RB-82	776.52	13.00	-1.49E+00	3.74E+00	3.74E+00
+	RB-83	520.41	46.00	-7.86E-02	6.55E-01	6.55E-01
		529.64	30.30	2.24E-01		9.82E-01
		552.65	16.40	1.50E-01		1.77E+00
+	KR-85	513.99	0.43	1.41E+02	7.15E+01	7.15E+01
+	SR-85	513.99	99.27	8.08E-01	4.09E-01	4.09E-01
+	Y-88	898.02	93.40	1.21E-01	2.92E-01	3.82E-01
		1836.01	99.38	-1.27E-02		2.92E-01
+	MO-93	263.06	56.72	1.96E-02	2.55E-01	3.13E-01
		684.67	99.68	-6.46E-02		2.55E-01
		1477.11	99.08	-1.09E-01		2.73E-01
+	NB-93M	16.57	9.43	3.15E+00	4.79E+00	4.79E+00
+	NB-94	702.63	100.00	8.57E-02	2.68E-01	2.68E-01
		871.10	100.00	1.09E-01		2.85E-01
+	NB-95	765.79	99.81	1.18E+00	6.16E-01	6.16E-01
+	NB-95M	235.69	25.00	3.72E+02	1.62E+02	1.62E+02
+	ZR-95	724.18	43.70	1.19E+00	6.61E-01	9.70E-01
		756.72	55.30	2.62E-02		6.61E-01
+	MO-99	181.06	6.20	7.30E+02	1.35E+03	1.90E+03
		739.58	12.80	5.63E+02		1.35E+03
		778.00	4.50	-1.60E+02		3.49E+03
+	TC-99M	140.51	89.00	-2.05E-02	1.85E-01	1.85E-01
+	RU-103	497.08	89.00	-1.59E-01	4.04E-01	4.04E-01
+	RU-106	621.84	9.80	9.08E-04	2.50E+00	2.50E+00
+	AG-108M	433.93	89.90	-8.68E-03	2.65E-01	2.65E-01
		614.37	90.40	1.03E-03		4.83E-01
		722.95	90.50	3.72E-01		3.49E-01
+	CD-109	88.03	* 3.72	2.20E+01	9.50E+00	9.50E+00
+	AG-110M	657.75	93.14	-2.04E-02	3.18E-01	3.18E-01
		677.61	10.53	8.37E-01		2.63E+00
		706.67	16.46	1.64E+00		1.76E+00
		763.93	21.98	3.26E-02		1.70E+00
		884.67	21.98	1.68E-01		1.45E+00
		1384.27	23.94	3.83E-01		1.33E+00
+	CD-113M	263.70	0.02	3.92E+02	7.75E+02	7.75E+02

Analysis Report for 1905060-07

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	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	SN-113	255.12	1.93	-8.91E-01	4.46E-01	1.03E+01
		391.69	64.90	1.06E-01		4.46E-01
+	TE-123M	159.00	84.10	-6.75E-02	2.38E-01	2.38E-01
+	SB-124	602.71	97.87	5.13E-02	3.62E-01	3.62E-01
		645.85	7.26	-1.67E+00		4.55E+00
		722.78	11.10	-2.01E+00		3.53E+00
		1691.02	49.00	7.36E-02		7.31E-01
+	I-125	35.49	6.49	1.40E+00	3.57E+00	3.57E+00
+	SB-125	176.33	6.89	-1.54E+00	8.53E-01	2.62E+00
		427.89	29.33	4.54E-02		8.53E-01
		463.38	10.35	2.48E+00		2.58E+00
		600.56	17.80	6.20E-01		1.51E+00
		635.90	11.32	1.80E+00		2.28E+00
+	SB-126	414.70	83.30	-5.77E-02	2.50E-01	3.07E-01
		666.33	99.60	1.81E-01		3.04E-01
		695.00	99.60	-5.13E-02		2.50E-01
		720.50	53.80	-9.50E-01		4.96E-01
+	SN-126	87.57	* 37.00	2.13E+00	9.19E-01	9.19E-01
+	SB-127	473.00	25.00	1.68E+00	7.16E+01	9.90E+01
		685.00	35.70	-3.53E+01		7.16E+01
		783.80	14.70	2.51E+02		2.02E+02
+	I-129	29.78	* 57.00	1.36E-01	4.72E-01	4.72E-01
		33.60	* 13.20	1.97E+00		2.00E+00
		39.58	7.52	1.34E+00		2.06E+00
+	I-131	284.30	6.05	1.28E+00	2.48E+00	2.76E+01
		364.48	81.20	1.91E-01		2.48E+00
		636.97	7.26	9.17E+00		3.20E+01
		722.89	1.80	1.71E+02		1.60E+02
+	TE-132	49.72	13.10	-3.29E+00	4.89E+01	2.65E+02
		228.16	88.00	-9.58E+00		4.89E+01
+	BA-133	81.00	33.00	-3.37E+00	6.02E-01	6.02E-01
		302.84	17.80	2.16E-01		1.12E+00
		356.01	60.00	7.94E+00		8.46E-01
+	I-133	529.87	86.30	5.23E+07	2.30E+08	2.30E+08
+	XE-133	81.00	38.00	-8.65E+01	1.55E+01	1.55E+01
+	CS-134	563.23	8.38	1.04E+00	3.59E-01	2.96E+00
		569.32	15.43	-5.35E-01		1.56E+00
		604.70	97.60	2.36E-02		5.19E-01
		795.84	85.40	3.23E-01		3.59E-01
		801.93	8.73	-1.06E+00		3.45E+00
+	CS-135	268.24	16.00	9.38E-01	1.19E+00	1.19E+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	1.91E+00	1.08E+00	9.13E+00
		163.89	4.61	-3.44E+00		1.42E+01
		176.55	13.56	-2.98E+00		5.06E+00
		273.65	12.66	-4.65E-01		5.90E+00
		340.57	48.50	3.64E+00		1.91E+00

Analysis Report for 1905060-07

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Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
CS-136	818.50	99.70	4.37E-01	1.08E+00	1.08E+00
	1048.07	79.60	-4.18E-01		1.34E+00
	1235.34	19.70	1.67E+01		9.01E+00
+ CS-137	661.65	* 85.12	6.71E-01	5.44E-01	5.44E-01
+ LA-138	788.74	34.00	-8.00E-01	4.69E-01	8.45E-01
	1435.80	66.00	1.59E-01		4.69E-01
+ CE-139	165.85	80.35	-6.21E-02	2.42E-01	2.42E-01
+ BA-140	162.64	6.70	-5.96E+00	3.98E+00	1.01E+01
	304.84	4.50	-1.72E+01		1.68E+01
	423.70	3.20	1.23E+01		3.16E+01
	437.55	2.00	2.00E+01		4.81E+01
	537.32	25.00	5.06E-01		3.98E+00
+ LA-140	328.77	20.50	-9.35E-01	1.46E+00	3.91E+00
	487.03	45.50	-6.14E-01		2.09E+00
	815.85	23.50	-9.43E-01		4.58E+00
	1596.49	95.49	3.89E-01		1.46E+00
+ CE-141	145.44	48.40	-1.33E-02	6.04E-01	6.04E-01
+ CE-143	57.36	11.80	-5.29E+05	3.66E+05	5.19E+05
	293.26	42.00	3.14E+06		3.66E+05
	664.55	5.20	4.18E+06		2.56E+06
+ CE-144	133.54	10.80	-1.94E-01	1.55E+00	1.55E+00
+ PM-144	476.78	42.00	2.10E-02	2.48E-01	6.02E-01
	618.01	98.60	5.61E-02		2.48E-01
	696.49	99.49	-1.79E-01		2.60E-01
+ PM-145	36.85	21.70	1.97E-01	4.10E-01	7.57E-01
	37.36	39.70	1.07E-01		4.10E-01
	42.30	15.10	-2.34E-01		9.62E-01
	72.40	2.31	-9.19E-02		9.30E+00
+ PM-146	453.90	39.94	4.17E-01	5.97E-01	5.97E-01
	735.90	14.01	-1.05E+00		1.82E+00
	747.13	13.10	-1.10E+00		2.01E+00
+ ND-147	91.11	* 28.90	7.36E+00	5.97E+00	5.97E+00
	531.02	13.10	1.01E+00		9.30E+00
+ PM-149	285.90	3.10	2.06E+03	1.85E+04	1.85E+04
+ EU-152	121.78	20.50	1.87E-01	7.35E-01	7.35E-01
	244.69	5.40	5.63E+00		4.80E+00
	344.27	19.13	-1.63E+00		1.09E+00
	778.89	9.10	3.78E-01		2.73E+00
	964.01	10.40	3.82E-02		3.52E+00
	1085.78	7.22	-1.91E+00		3.85E+00
	1112.02	9.60	-8.45E-02		3.06E+00
	1407.95	14.94	1.87E+00		2.75E+00
	97.43	31.30	1.22E-01	4.83E-01	4.83E-01
	103.18	22.20	4.30E-01		6.90E-01
+ EU-154	123.07	40.50	1.35E-01	3.76E-01	3.76E-01
	723.30	19.70	1.72E+00		1.61E+00
	873.19	11.50	-8.14E-01		2.37E+00
	996.32	10.30	-1.17E+00		2.67E+00
	1004.76	17.90	3.69E-01		1.48E+00

Analysis Report for 1905060-07

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	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	EU-154	1274.45		35.50	5.20E-02	3.76E-01	8.41E-01
+	EU-155	86.50	*	30.90	2.57E+00	6.87E-01	1.11E+00
		105.30		20.70	-1.71E-01		6.87E-01
+	EU-156	811.77		10.40	-8.60E-01	8.33E+00	8.33E+00
		1153.47		7.20	1.17E+01		1.50E+01
		1230.71		8.90	3.17E+00		1.11E+01
+	HO-166M	184.41		72.60	1.03E+00	3.09E-01	3.09E-01
		280.45		29.60	-3.48E-03		6.49E-01
		410.94		11.10	-4.83E-01		2.33E+00
		711.69		54.10	-3.86E-02		4.64E-01
+	TM-171	66.72		0.14	-5.74E-01	1.24E+02	1.24E+02
+	HF-172	67.35		5.31	-1.51E-02	1.42E+00	3.27E+00
		125.82		11.30	4.02E-02		1.42E+00
+	LU-172	181.53		20.60	3.71E+00	6.89E+00	1.30E+01
		900.72		29.81	6.55E-01		1.42E+01
		1093.66		62.50	3.13E+00		6.89E+00
+	LU-173	100.72		5.24	-7.74E-01	9.47E-01	2.76E+00
		272.11		21.20	4.27E-01		9.47E-01
+	HF-175	343.40		84.00	-5.64E-01	3.21E-01	3.21E-01
+	LU-176	88.34		13.30	6.62E+00	2.00E-01	1.47E+00
		201.83		86.00	8.39E-03		2.14E-01
		306.78		94.00	-2.70E-03		2.00E-01
+	HF-181	133.02		41.70	3.73E-02	4.31E-01	5.80E-01
		345.85		17.20	-2.07E+01		1.84E+00
		482.03		82.80	-2.07E-01		4.31E-01
+	TA-182	67.75		41.20	4.73E-03	4.81E-01	4.81E-01
		1121.30		34.90	8.17E+00		2.06E+00
		1189.05		16.23	9.32E-01		2.13E+00
		1221.41		26.98	-8.95E-01		1.23E+00
		1231.02		11.44	8.94E-01		3.12E+00
+	IR-192	308.46		29.68	1.40E-01	6.63E-01	8.11E-01
		468.07		48.10	1.86E-01		6.63E-01
+	HG-203	279.19	*	77.30	5.44E-01	5.34E-01	5.34E-01
+	TL-204	374.74		94.11	1.83E-01	2.43E-01	2.43E-01
		899.15		99.16	5.96E-02		3.08E-01
		911.74		91.10	1.49E+00		5.03E-01
+	BI-207	569.67		97.72	-8.27E-02	2.41E-01	2.41E-01
		1063.62		74.90	-2.43E-03		3.96E-01
+	TL-208	583.14	*	30.22	5.75E+00	2.39E-01	1.56E+00
		860.37		4.48	5.49E+00		7.03E+00
		2614.66	*	35.85	5.46E+00		2.39E-01
+	BI-210M	262.00		45.00	-7.44E-02	3.99E-01	3.99E-01
		300.00		23.00	5.34E-01		1.04E+00
+	PB-210	46.50	*	4.25	4.16E+00	3.83E+00	3.83E+00
+	PB-211	404.84		2.90	-2.16E-01	8.74E+00	8.74E+00
		831.96		2.90	-5.47E+00		9.70E+00
+	BI-212	727.17	*	11.80	4.17E+00	3.90E+00	3.90E+00
		1620.62		2.75	4.98E+00		1.04E+01

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	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	PB-212	238.63	*	44.60	6.34E+00	8.84E-01	8.84E-01
		300.09		3.41	3.60E+00		7.00E+00
+	BI-214	609.31	*	46.30	1.74E+01	7.79E-01	7.79E-01
		1120.29	*	15.10	1.82E+01		2.66E+00
		1764.49	*	15.80	1.70E+01		2.25E+00
		2204.22	*	4.98	2.12E+01		6.13E+00
+	PB-214	295.21	*	19.19	1.69E+01	9.46E-01	1.33E+00
		351.92	*	37.19	1.83E+01		9.46E-01
+	RN-219	401.80		6.50	-8.86E-01	3.82E+00	3.82E+00
+	RA-223	323.87		3.88	-4.50E-01	5.13E+00	5.13E+00
+	RA-224	240.98	*	3.95	3.88E+01	1.02E+01	1.02E+01
+	RA-225	40.00		31.00	1.07E+00	1.65E+00	1.65E+00
+	RA-226	186.21	*	3.28	2.34E+01	8.10E+00	8.10E+00
+	TH-227	50.10		8.40	-2.18E-02	1.76E+00	1.76E+00
		236.00		11.50	5.87E+00		2.56E+00
		256.20		6.30	1.26E-01		2.78E+00
+	AC-228	338.32	*	11.40	4.00E+00	1.59E+00	2.80E+00
		911.07	*	27.70	5.27E+00		1.59E+00
		969.11	*	16.60	4.84E+00		2.92E+00
+	TH-230	48.43	*	16.90	1.04E+00	9.61E-01	9.61E-01
		62.85		4.60	1.38E+00		3.57E+00
		67.67		0.37	4.51E-01		4.58E+01
+	PA-231	283.67		1.60	-1.75E+00	8.63E+00	1.16E+01
		302.67		2.30	1.66E+00		8.63E+00
+	TH-231	25.64		14.70	-1.45E-01	1.42E+00	1.42E+00
		84.21		6.40	-1.08E+01		2.69E+00
+	PA-233	311.98		38.60	2.41E-01	9.51E-01	9.51E-01
+	PA-234	131.20	*	20.40	4.53E-01	8.93E-01	8.93E-01
		733.99		8.80	-3.02E-01		2.99E+00
		946.00		12.00	-5.93E-01		2.29E+00
+	PA-234M	1001.03		0.92	2.38E+01	3.15E+01	3.15E+01
+	TH-234	63.29		3.80	1.67E+00	4.31E+00	4.31E+00
+	U-235	143.76		10.50	-6.72E-01	1.59E+00	1.59E+00
		163.35		4.70	-8.72E-01		3.60E+00
		205.31		4.70	6.61E-01		3.91E+00
+	NP-237	86.50	*	12.60	6.24E+00	2.70E+00	2.70E+00
+	NP-239	106.10		22.70	1.84E+01	1.18E+03	1.18E+03
		228.18		10.70	-6.39E+02		3.26E+03
		277.60		14.10	3.59E+03		2.71E+03
+	AM-241	59.54		35.90	7.98E-02	4.37E-01	4.37E-01
+	AM-243	74.67	*	66.00	6.63E+00	4.43E-01	4.43E-01
+	CM-243	209.75	*	3.29	3.60E+00	1.73E+00	6.52E+00
		228.14		10.60	-3.39E-01		1.73E+00
		277.60	*	14.00	2.05E+00		2.01E+00

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- + = 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	3.22E+00	3.22E+00	7.72E-01	1.57E+00
NA-22	1274.54	99.94	3.03E-01	3.03E-01	1.87E-02	1.43E-01
NA-24	1368.53	99.99	2.65E-01	1.07E-01	2.01E-03	1.24E-01
	2754.09	99.86	1.07E-01		-1.92E-02	3.79E-02
AL-26	1808.65	99.76	2.20E-01	2.20E-01	3.17E-02	9.94E-02
+ K-40	1460.81	* 10.67	3.49E+00	3.49E+00	8.70E+00	1.66E+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	1.80E-01	1.80E-01	1.77E-03	8.89E-02
	78.34	96.00	2.91E-01		3.52E+00	1.45E-01
SC-46	889.25	98.98	3.83E-01	3.83E-01	1.41E-01	1.84E-01
	1120.51	99.90	7.60E-01		3.02E+00	3.71E-01
V-48	983.52	99.98	9.09E-01	9.09E-01	1.98E-01	4.35E-01
	1312.10	97.50	9.10E-01		8.53E-02	4.29E-01
CR-51	320.08	9.83	3.70E+00	3.70E+00	-1.09E+00	1.81E+00
MN-54	834.83	99.97	3.14E-01	3.14E-01	6.54E-02	1.51E-01
CO-56	846.75	99.96	3.51E-01	3.51E-01	-1.64E-01	1.68E-01
	1037.75	14.03	2.50E+00		-2.99E-01	1.19E+00
	1238.25	67.00	9.00E-01		2.12E+00	4.35E-01
	1771.40	15.51	1.87E+00		-1.16E-01	8.50E-01
	2587.48	16.90	7.67E-01		-6.33E-01	2.72E-01
CO-57	122.06	85.51	1.88E-01	1.88E-01	4.76E-02	9.27E-02
	136.48	10.60	1.61E+00		-8.53E-02	7.93E-01
CO-58	810.76	99.40	3.82E-01	3.82E-01	1.50E-02	1.84E-01
FE-59	1099.22	56.50	7.49E-01	7.49E-01	-2.00E-01	3.56E-01
	1291.56	43.20	1.03E+00		2.92E-01	4.85E-01
CO-60	1173.22	100.00	2.65E-01	2.65E-01	-4.49E-02	1.25E-01
	1332.49	100.00	2.89E-01		5.10E-02	1.36E-01
ZN-65	1115.52	50.75	1.10E+00	1.10E+00	1.68E+00	5.36E-01
+ GA-67	93.31	* 35.70	2.25E+02	2.25E+02	1.36E+02	1.12E+02

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Analysis Report for 1905060-07

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Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)		
GA-67	208.95 *	2.24	2.23E+03	2.25E+02	1.23E+03	1.10E+03		
	300.22	16.00	3.49E+02		1.79E+02	1.71E+02		
SE-75	121.11	16.70	1.03E+00	3.09E-01	-4.34E-01	5.07E-01		
	136.00	59.50	3.09E-01		-1.32E-01	1.53E-01		
	264.65	59.80	3.42E-01		-1.65E-01	1.68E-01		
	279.53	25.20	9.01E-01		4.78E-01	4.42E-01		
	400.65	11.40	2.52E+00		-8.26E-01	1.23E+00		
RB-82	776.52	13.00	3.74E+00	3.74E+00	-1.49E+00	1.79E+00		
RB-83	520.41	46.00	6.55E-01	6.55E-01	-7.86E-02	3.18E-01		
	529.64	30.30	9.82E-01		2.24E-01	4.77E-01		
	552.65	16.40	1.77E+00		1.50E-01	8.60E-01		
KR-85	513.99	0.43	7.15E+01	7.15E+01	1.41E+02	3.50E+01		
SR-85	513.99	99.27	4.09E-01	4.09E-01	8.08E-01	2.00E-01		
Y-88	898.02	93.40	3.82E-01	2.92E-01	1.21E-01	1.84E-01		
	1836.01	99.38	2.92E-01		-1.27E-02	1.33E-01		
MO-93	263.06	56.72	3.13E-01	2.55E-01	1.96E-02	1.54E-01		
	684.67	99.68	2.55E-01		-6.46E-02	1.23E-01		
	1477.11	99.08	2.73E-01		-1.09E-01	1.27E-01		
NB-93M	16.57	9.43	4.79E+00	4.79E+00	3.15E+00	2.37E+00		
NB-94	702.63	100.00	2.68E-01	2.68E-01	8.57E-02	1.29E-01		
	871.10	100.00	2.85E-01		1.09E-01	1.37E-01		
NB-95	765.79	99.81	6.16E-01	6.16E-01	1.18E+00	2.99E-01		
NB-95M	235.69	25.00	1.62E+02	1.62E+02	3.72E+02	8.02E+01		
ZR-95	724.18	43.70	9.70E-01	6.61E-01	1.19E+00	4.70E-01		
	756.72	55.30	6.61E-01		2.62E-02	3.18E-01		
MO-99	181.06	6.20	1.90E+03	1.35E+03	7.30E+02	9.38E+02		
	739.58	12.80	1.35E+03		5.63E+02	6.52E+02		
	778.00	4.50	3.49E+03		-1.60E+02	1.67E+03		
TC-99M	140.51	89.00	1.85E-01	1.85E-01	-2.05E-02	9.12E-02		
RU-103	497.08	89.00	4.04E-01	4.04E-01	-1.59E-01	1.96E-01		
RU-106	621.84	9.80	2.50E+00	2.50E+00	9.08E-04	1.21E+00		
AG-108M	433.93	89.90	2.65E-01	2.65E-01	-8.68E-03	1.29E-01		
	614.37	90.40	4.83E-01		1.03E-03	2.37E-01		
	722.95	90.50	3.49E-01		3.72E-01	1.69E-01		
+ CD-109	88.03 *	3.72	9.50E+00	9.50E+00	2.20E+01	4.72E+00		
	AG-110M	657.75	93.14		3.18E-01	3.18E-01	-2.04E-02	1.54E-01
		677.61	10.53		2.63E+00	8.37E-01	1.27E+00	
		706.67	16.46		1.76E+00	1.64E+00	8.49E-01	
		763.93	21.98		1.70E+00	3.26E-02	8.27E-01	
		884.67	21.98		1.45E+00	1.68E-01	6.98E-01	
1384.27	23.94	1.33E+00	3.83E-01	6.28E-01				
CD-113M	263.70	0.02	7.75E+02	7.75E+02	3.92E+02	3.80E+02		
SN-113	255.12	1.93	1.03E+01	4.46E-01	-8.91E-01	5.06E+00		
	391.69	64.90	4.46E-01		1.06E-01	2.18E-01		
TE-123M	159.00	84.10	2.38E-01	2.38E-01	-6.75E-02	1.18E-01		
SB-124	602.71	97.87	3.62E-01	3.62E-01	5.13E-02	1.76E-01		
	645.85	7.26	4.55E+00		-1.67E+00	2.20E+00		
	722.78	11.10	3.53E+00		-2.01E+00	1.71E+00		
	1691.02	49.00	7.31E-01		7.36E-02	3.38E-01		
I-125	35.49	6.49	3.57E+00	3.57E+00	1.40E+00	1.76E+00		
SB-125	176.33	6.89	2.62E+00	8.53E-01	-1.54E+00	1.29E+00		
	427.89	29.33	8.53E-01		4.54E-02	4.17E-01		
	463.38	10.35	2.58E+00		2.48E+00	1.26E+00		

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Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
SB-125	600.56	17.80	1.51E+00	8.53E-01	6.20E-01	7.33E-01
	635.90	11.32	2.28E+00		1.80E+00	1.10E+00
SB-126	414.70	83.30	3.07E-01	2.50E-01	-5.77E-02	1.50E-01
	666.33	99.60	3.04E-01		1.81E-01	1.48E-01
	695.00	99.60	2.50E-01		-5.13E-02	1.20E-01
	720.50	53.80	4.96E-01		-9.50E-01	2.39E-01
+ SN-126	87.57 *	37.00	9.19E-01	9.19E-01	2.13E+00	4.57E-01
SB-127	473.00	25.00	9.90E+01	7.16E+01	1.68E+00	4.82E+01
	685.00	35.70	7.16E+01		-3.53E+01	3.45E+01
	783.80	14.70	2.02E+02		2.51E+02	9.74E+01
+ I-129	29.78 *	57.00	4.72E-01	4.72E-01	1.36E-01	2.34E-01
	33.60 *	13.20	2.00E+00		1.97E+00	9.91E-01
	39.58	7.52	2.06E+00		1.34E+00	1.02E+00
I-131	284.30	6.05	2.76E+01	2.48E+00	1.28E+00	1.35E+01
	364.48	81.20	2.48E+00		1.91E-01	1.21E+00
	636.97	7.26	3.20E+01		9.17E+00	1.55E+01
	722.89	1.80	1.60E+02		1.71E+02	7.78E+01
TE-132	49.72	13.10	2.65E+02	4.89E+01	-3.29E+00	1.31E+02
	228.16	88.00	4.89E+01		-9.58E+00	2.40E+01
BA-133	81.00	33.00	6.02E-01	6.02E-01	-3.37E+00	2.98E-01
	302.84	17.80	1.12E+00		2.16E-01	5.49E-01
	356.01	60.00	8.46E-01		7.94E+00	4.19E-01
I-133	529.87	86.30	2.30E+08	2.30E+08	5.23E+07	1.11E+08
XE-133	81.00	38.00	1.55E+01	1.55E+01	-8.65E+01	7.67E+00
CS-134	563.23	8.38	2.96E+00	3.59E-01	1.04E+00	1.43E+00
	569.32	15.43	1.56E+00		-5.35E-01	7.54E-01
	604.70	97.60	5.19E-01		2.36E-02	2.55E-01
	795.84	85.40	3.59E-01		3.23E-01	1.73E-01
	801.93	8.73	3.45E+00		-1.06E+00	1.66E+00
CS-135	268.24	16.00	1.19E+00	1.19E+00	9.38E-01	5.84E-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	9.13E+00	1.08E+00	1.91E+00	4.51E+00
	163.89	4.61	1.42E+01		-3.44E+00	7.01E+00
	176.55	13.56	5.06E+00		-2.98E+00	2.49E+00
	273.65	12.66	5.90E+00		-4.65E-01	2.89E+00
	340.57	48.50	1.91E+00		3.64E+00	9.39E-01
	818.50	99.70	1.08E+00		4.37E-01	5.20E-01
	1048.07	79.60	1.34E+00		-4.18E-01	6.38E-01
	1235.34	19.70	9.01E+00		1.67E+01	4.35E+00
+ CS-137	661.65 *	85.12	5.44E-01	5.44E-01	6.71E-01	2.67E-01
LA-138	788.74	34.00	8.45E-01	4.69E-01	-8.00E-01	4.07E-01
	1435.80	66.00	4.69E-01		1.59E-01	2.21E-01
CE-139	165.85	80.35	2.42E-01	2.42E-01	-6.21E-02	1.19E-01
BA-140	162.64	6.70	1.01E+01	3.98E+00	-5.96E+00	5.00E+00
	304.84	4.50	1.68E+01		-1.72E+01	8.24E+00
	423.70	3.20	3.16E+01		1.23E+01	1.55E+01
	437.55	2.00	4.81E+01		2.00E+01	2.35E+01
	537.32	25.00	3.98E+00		5.06E-01	1.93E+00
LA-140	328.77	20.50	3.91E+00	1.46E+00	-9.35E-01	1.91E+00
	487.03	45.50	2.09E+00		-6.14E-01	1.02E+00
	815.85	23.50	4.58E+00		-9.43E-01	2.20E+00

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Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
LA-140	1596.49	95.49	1.46E+00	1.46E+00	3.89E-01	6.92E-01
CE-141	145.44	48.40	6.04E-01	6.04E-01	-1.33E-02	2.98E-01
CE-143	57.36	11.80	5.19E+05	3.66E+05	-5.29E+05	2.56E+05
	293.26	42.00	3.66E+05		3.14E+06	1.81E+05
	664.55	5.20	2.56E+06		4.18E+06	1.24E+06
CE-144	133.54	10.80	1.55E+00	1.55E+00	-1.94E-01	7.66E-01
PM-144	476.78	42.00	6.02E-01	2.48E-01	2.10E-02	2.93E-01
	618.01	98.60	2.48E-01		5.61E-02	1.20E-01
	696.49	99.49	2.60E-01		-1.79E-01	1.25E-01
PM-145	36.85	21.70	7.57E-01	4.10E-01	1.97E-01	3.73E-01
	37.36	39.70	4.10E-01		1.07E-01	2.02E-01
	42.30	15.10	9.62E-01		-2.34E-01	4.74E-01
	72.40	2.31	9.30E+00		-9.19E-02	4.61E+00
PM-146	453.90	39.94	5.97E-01	5.97E-01	4.17E-01	2.91E-01
	735.90	14.01	1.82E+00		-1.05E+00	8.75E-01
	747.13	13.10	2.01E+00		-1.10E+00	9.69E-01
+ ND-147	91.11	* 28.90	5.97E+00	5.97E+00	7.36E+00	2.97E+00
	531.02	13.10	9.30E+00		1.01E+00	4.52E+00
PM-149	285.90	3.10	1.85E+04	1.85E+04	2.06E+03	9.07E+03
EU-152	121.78	20.50	7.35E-01	7.35E-01	1.87E-01	3.63E-01
	244.69	5.40	4.80E+00		5.63E+00	2.37E+00
	344.27	19.13	1.09E+00		-1.63E+00	5.35E-01
	778.89	9.10	2.73E+00		3.78E-01	1.31E+00
	964.01	10.40	3.52E+00		3.82E-02	1.70E+00
	1085.78	7.22	3.85E+00		-1.91E+00	1.83E+00
	1112.02	9.60	3.06E+00		-8.45E-02	1.45E+00
	1407.95	14.94	2.75E+00		1.87E+00	1.31E+00
GD-153	97.43	31.30	4.83E-01	4.83E-01	1.22E-01	2.39E-01
	103.18	22.20	6.90E-01		4.30E-01	3.41E-01
EU-154	123.07	40.50	3.76E-01	3.76E-01	1.35E-01	1.86E-01
	723.30	19.70	1.61E+00		1.72E+00	7.83E-01
	873.19	11.50	2.37E+00		-8.14E-01	1.13E+00
	996.32	10.30	2.67E+00		-1.17E+00	1.27E+00
	1004.76	17.90	1.48E+00		3.69E-01	7.03E-01
	1274.45	35.50	8.41E-01		5.20E-02	3.98E-01
+ EU-155	86.50	* 30.90	1.11E+00	6.87E-01	2.57E+00	5.53E-01
	105.30	20.70	6.87E-01		-1.71E-01	3.39E-01
EU-156	811.77	10.40	8.33E+00	8.33E+00	-8.60E-01	4.00E+00
	1153.47	7.20	1.50E+01		1.17E+01	7.16E+00
	1230.71	8.90	1.11E+01		3.17E+00	5.26E+00
HO-166M	184.41	72.60	3.09E-01	3.09E-01	1.03E+00	1.53E-01
	280.45	29.60	6.49E-01		-3.48E-03	3.18E-01
	410.94	11.10	2.33E+00		-4.83E-01	1.14E+00
	711.69	54.10	4.64E-01		-3.86E-02	2.23E-01
TM-171	66.72	0.14	1.24E+02	1.24E+02	-5.74E-01	6.13E+01
HF-172	67.35	5.31	3.27E+00	1.42E+00	-1.51E-02	1.62E+00
	125.82	11.30	1.42E+00		4.02E-02	7.02E-01
LU-172	181.53	20.60	1.30E+01	6.89E+00	3.71E+00	6.43E+00
	900.72	29.81	1.42E+01		6.55E-01	6.82E+00
	1093.66	62.50	6.89E+00		3.13E+00	3.28E+00
LU-173	100.72	5.24	2.76E+00	9.47E-01	-7.74E-01	1.36E+00
	272.11	21.20	9.47E-01		4.27E-01	4.65E-01
HF-175	343.40	84.00	3.21E-01	3.21E-01	-5.64E-01	1.57E-01

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Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
LU-176	88.34	13.30	1.47E+00	2.00E-01	6.62E+00	7.28E-01
	201.83	86.00	2.14E-01		8.39E-03	1.05E-01
	306.78	94.00	2.00E-01		-2.70E-03	9.80E-02
HF-181	133.02	41.70	5.80E-01	4.31E-01	3.73E-02	2.86E-01
	345.85	17.20	1.84E+00		-2.07E+01	9.02E-01
	482.03	82.80	4.31E-01		-2.07E-01	2.10E-01
TA-182	67.75	41.20	4.81E-01	4.81E-01	4.73E-03	2.38E-01
	1121.30	34.90	2.06E+00		8.17E+00	1.00E+00
	1189.05	16.23	2.13E+00		9.32E-01	1.01E+00
	1221.41	26.98	1.23E+00		-8.95E-01	5.83E-01
	1231.02	11.44	3.12E+00		8.94E-01	1.48E+00
IR-192	308.46	29.68	8.11E-01	6.63E-01	1.40E-01	3.97E-01
	468.07	48.10	6.63E-01		1.86E-01	3.23E-01
HG-203	279.19	*	77.30	5.34E-01	5.44E-01	2.63E-01
TL-204	374.74	94.11	2.43E-01	2.43E-01	1.83E-01	1.19E-01
	899.15	99.16	3.08E-01		5.96E-02	1.48E-01
	911.74	91.10	5.03E-01		1.49E+00	2.45E-01
BI-207	569.67	97.72	2.41E-01	2.41E-01	-8.27E-02	1.17E-01
	1063.62	74.90	3.96E-01		-2.43E-03	1.89E-01
+ TL-208	583.14	*	30.22	2.39E-01	5.75E+00	7.67E-01
	860.37	4.48	7.03E+00		5.49E+00	3.39E+00
	2614.66	*	35.85	2.39E-01	5.46E+00	7.82E-02
BI-210M	262.00	45.00	3.99E-01	3.99E-01	-7.44E-02	1.96E-01
	300.00	23.00	1.04E+00		5.34E-01	5.11E-01
+ PB-210	46.50	*	4.25	3.83E+00	4.16E+00	1.89E+00
PB-211	404.84	2.90	8.74E+00	8.74E+00	-2.16E-01	4.28E+00
	831.96	2.90	9.70E+00		-5.47E+00	4.66E+00
+ BI-212	727.17	*	11.80	3.90E+00	4.17E+00	1.91E+00
	1620.62	2.75	1.04E+01		4.98E+00	4.85E+00
+ PB-212	238.63	*	44.60	8.84E-01	6.34E+00	4.38E-01
	300.09	3.41	7.00E+00		3.60E+00	3.44E+00
+ BI-214	609.31	*	46.30	7.79E-01	1.74E+01	3.81E-01
	1120.29	*	15.10	2.66E+00	1.82E+01	1.28E+00
	1764.49	*	15.80	2.25E+00	1.70E+01	1.06E+00
	2204.22	*	4.98	6.13E+00	2.12E+01	2.81E+00
+ PB-214	295.21	*	19.19	1.33E+00	1.69E+01	6.53E-01
	351.92	*	37.19	9.46E-01	1.83E+01	4.67E-01
RN-219	401.80	6.50	3.82E+00	3.82E+00	-8.86E-01	1.87E+00
RA-223	323.87	3.88	5.13E+00	5.13E+00	-4.50E-01	2.51E+00
+ RA-224	240.98	*	3.95	1.02E+01	3.88E+01	5.05E+00
RA-225	40.00	31.00	1.65E+00	1.65E+00	1.07E+00	8.16E-01
+ RA-226	186.21	*	3.28	8.10E+00	2.34E+01	4.01E+00
TH-227	50.10	8.40	1.76E+00	1.76E+00	-2.18E-02	8.67E-01
	236.00	11.50	2.56E+00		5.87E+00	1.27E+00
	256.20	6.30	2.78E+00		1.26E-01	1.36E+00
+ AC-228	338.32	*	11.40	2.80E+00	4.00E+00	1.38E+00
	911.07	*	27.70	1.59E+00	5.27E+00	7.74E-01
	969.11	*	16.60	2.92E+00	4.84E+00	1.42E+00
+ TH-230	48.43	*	16.90	9.61E-01	1.04E+00	4.75E-01
	62.85	4.60	3.57E+00		1.38E+00	1.76E+00
	67.67	0.37	4.58E+01		4.51E-01	2.27E+01
PA-231	283.67	1.60	1.16E+01	8.63E+00	-1.75E+00	5.66E+00
	302.67	2.30	8.63E+00		1.66E+00	4.23E+00

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Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
TH-231	25.64	14.70	1.42E+00	1.42E+00	-1.45E-01	6.99E-01
	84.21	6.40	2.69E+00		-1.08E+01	1.33E+00
PA-233	311.98	38.60	9.51E-01	9.51E-01	2.41E-01	4.65E-01
+ PA-234	131.20 *	20.40	8.93E-01	8.93E-01	4.53E-01	4.42E-01
	733.99	8.80	2.99E+00		-3.02E-01	1.44E+00
	946.00	12.00	2.29E+00		-5.93E-01	1.09E+00
PA-234M	1001.03	0.92	3.15E+01	3.15E+01	2.38E+01	1.51E+01
TH-234	63.29	3.80	4.31E+00	4.31E+00	1.67E+00	2.13E+00
U-235	143.76	10.50	1.59E+00	1.59E+00	-6.72E-01	7.82E-01
	163.35	4.70	3.60E+00		-8.72E-01	1.78E+00
	205.31	4.70	3.91E+00		6.61E-01	1.93E+00
+ NP-237	86.50 *	12.60	2.70E+00	2.70E+00	6.24E+00	1.34E+00
NP-239	106.10	22.70	1.18E+03	1.18E+03	1.84E+01	5.85E+02
	228.18	10.70	3.26E+03		-6.39E+02	1.60E+03
	277.60	14.10	2.71E+03		3.59E+03	1.33E+03
AM-241	59.54	35.90	4.37E-01	4.37E-01	7.98E-02	2.16E-01
+ AM-243	74.67 *	66.00	4.43E-01	4.43E-01	6.63E+00	2.20E-01
+ CM-243	209.75 *	3.29	6.52E+00	1.73E+00	3.60E+00	3.22E+00
	228.14	10.60	1.73E+00		-3.39E-01	8.51E-01
	277.60 *	14.00	2.01E+00		2.05E+00	9.94E-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
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Analysis Report for 1905060-07

R2 0-6

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: R2 0-6

Elapsed Live time: 3600

Elapsed Real Time: 3625

Channel	1	2	3	4	5	6	7	8	9
1:	0	0	0	0	0	0	0	0	0
9:	112	358	347	369	341	349	366	343	
17:	287	293	283	249	279	255	249	283	
25:	236	236	282	262	279	326	406	347	
33:	277	255	253	319	267	252	244	258	
41:	260	223	213	254	337	393	266	275	
49:	255	276	291	305	329	282	276	317	
57:	318	361	364	395	402	426	417	450	
65:	432	462	429	453	469	443	494	627	
73:	985	1599	1658	2140	1705	716	408	375	
81:	338	335	398	429	512	812	793	522	
89:	569	438	360	452	368	297	299	271	
97:	280	272	314	269	266	257	283	298	
105:	298	251	262	269	277	279	267	253	
113:	277	285	284	279	238	264	290	287	
121:	261	283	263	288	276	278	298	353	
129:	314	292	275	283	281	256	281	271	
137:	259	295	297	285	272	304	282	301	
145:	294	251	277	318	322	276	273	301	
153:	298	307	282	272	289	274	269	224	
161:	270	265	252	235	230	263	246	240	
169:	255	265	245	275	215	251	213	270	
177:	239	240	279	249	272	218	262	333	
185:	571	581	324	226	256	241	236	229	
193:	258	235	226	220	232	236	222	208	
201:	199	188	223	203	194	204	174	253	
209:	258	223	192	186	204	180	200	169	
217:	180	167	174	160	175	201	168	160	
225:	165	181	159	177	190	154	170	162	
233:	181	173	175	245	762	1216	782	503	
241:	683	576	238	134	132	143	186	109	
249:	149	135	126	120	107	135	122	101	
257:	124	163	142	120	108	114	110	124	
265:	130	144	101	116	186	146	130	119	
273:	118	139	146	142	168	135	119	141	
281:	110	109	103	111	120	106	121	116	
289:	108	114	104	119	312	963	1018	437	
297:	147	108	145	153	116	99	101	93	
305:	106	102	104	104	99	97	97	96	
313:	102	104	99	80	102	94	94	103	
321:	112	89	108	95	97	109	115	106	
329:	101	76	89	114	95	104	108	91	
337:	159	220	144	105	101	114	99	90	
345:	95	95	95	96	155	718	1675	1365	
353:	431	77	82	73	59	62	64	90	
361:	73	84	79	73	65	81	73	71	

369: 62 71 54 81 72 74 92 71

Sample Title: R2 0-6

Channel	-----	-----	-----	-----	-----	-----	-----	-----
377:	79	86	58	70	78	93	78	65
385:	63	86	85	90	97	68	72	82
393:	93	86	79	85	78	83	87	71
401:	79	73	81	79	85	86	81	98
409:	88	70	90	82	74	73	92	84
417:	76	69	68	77	73	83	78	70
425:	70	67	71	70	58	65	64	55
433:	64	80	59	52	61	59	53	61
441:	65	47	61	63	65	52	46	55
449:	52	56	65	57	52	69	50	55
457:	44	47	75	61	78	75	79	57
465:	51	56	60	58	60	55	53	53
473:	46	63	52	48	51	51	48	55
481:	50	49	42	38	49	50	62	55
489:	36	50	57	43	44	43	38	52
497:	46	45	38	33	46	59	30	36
505:	36	40	44	60	97	148	120	68
513:	47	51	45	46	43	49	40	49
521:	50	37	48	41	41	52	39	44
529:	36	36	45	39	47	36	36	44
537:	51	38	48	42	43	50	32	40
545:	41	34	45	31	34	41	44	29
553:	36	39	39	38	37	29	38	36
561:	40	41	36	35	31	41	35	43
569:	25	35	33	31	32	32	45	37
577:	39	43	43	50	82	221	278	130
585:	54	42	46	46	33	39	24	19
593:	37	34	37	38	43	39	41	34
601:	34	49	36	35	33	44	226	750
609:	1143	605	118	31	36	19	34	30
617:	33	25	32	32	23	26	30	24
625:	27	22	28	22	16	25	27	30
633:	32	31	43	33	29	32	29	27
641:	29	31	28	32	28	25	26	36
649:	24	29	41	24	30	29	29	35
657:	26	32	37	45	54	53	40	35
665:	82	47	32	34	19	31	23	30
673:	29	33	35	26	25	29	30	28
681:	23	26	25	25	32	21	27	37
689:	25	33	32	25	20	26	26	30
697:	23	24	22	27	24	33	41	31
705:	36	23	24	28	27	18	21	15
713:	29	26	34	28	21	14	35	37
721:	32	31	22	25	39	58	67	45
729:	32	28	34	23	20	26	22	35
737:	17	24	25	18	37	36	24	25
745:	22	22	28	19	35	26	18	22
753:	29	31	28	33	27	18	25	27
761:	24	20	28	27	24	37	79	114
769:	74	46	34	13	22	19	18	28
777:	12	22	21	18	17	21	22	24
785:	45	46	36	22	19	10	20	17
793:	37	51	39	36	17	18	22	18

801: 20 25 25 34 37 44 39 24

Sample Title: R2 0-6

Channel	-----	-----	-----	-----	-----	-----	-----	-----
809:	22	25	24	15	19	28	21	18
817:	28	24	21	19	24	26	28	14
825:	20	30	28	20	20	23	23	23
833:	18	27	29	23	30	24	31	33
841:	24	21	24	23	23	18	18	17
849:	20	18	25	23	22	23	20	15
857:	22	20	41	46	33	26	21	20
865:	21	14	24	23	15	27	15	25
873:	17	20	28	9	17	31	23	29
881:	14	17	24	17	35	19	28	22
889:	29	20	17	20	26	19	21	27
897:	29	18	19	28	16	29	18	17
905:	25	21	16	27	48	90	117	96
913:	32	21	19	11	8	14	25	19
921:	22	19	13	12	18	18	23	16
929:	21	11	24	22	62	60	34	23
937:	15	16	15	24	22	20	10	18
945:	16	16	24	16	11	22	15	28
953:	22	24	13	24	22	14	15	22
961:	19	18	24	21	39	20	36	67
969:	71	34	13	18	14	20	12	18
977:	12	16	26	18	13	15	21	23
985:	25	14	14	18	16	22	15	11
993:	14	13	13	17	19	13	19	18
1001:	26	13	16	17	13	12	11	8
1009:	9	18	22	18	14	9	19	19
1017:	14	23	17	9	18	12	14	16
1025:	19	15	17	11	21	16	16	15
1033:	20	12	17	18	12	17	10	9
1041:	18	13	12	8	19	14	14	12
1049:	18	14	15	14	25	14	14	22
1057:	21	10	11	12	22	16	18	14
1065:	16	12	13	21	19	13	21	13
1073:	16	18	13	12	14	16	14	15
1081:	13	15	11	11	10	15	10	16
1089:	18	14	22	14	19	17	14	12
1097:	17	14	10	6	19	19	13	15
1105:	14	14	10	17	9	15	19	9
1113:	13	12	20	15	21	36	98	200
1121:	143	57	18	9	10	11	17	14
1129:	10	15	12	13	21	21	10	16
1137:	5	13	14	14	13	7	7	8
1145:	15	10	7	9	11	9	7	14
1153:	22	19	28	27	17	17	19	13
1161:	16	13	15	14	9	9	16	11
1169:	11	12	8	14	13	7	8	12
1177:	8	7	10	15	9	12	13	10
1185:	15	10	12	10	13	10	18	15
1193:	14	13	11	4	17	14	15	12
1201:	8	6	10	11	10	12	20	21
1209:	11	11	10	12	10	10	15	9
1217:	15	17	14	6	10	11	10	10
1225:	11	14	14	14	24	10	11	11

1233: 11 8 15 17 53 73 65 21

Sample Title: R2 0-6

Channel	-----	-----	-----	-----	-----	-----	-----	-----
1241:	20	12	6	12	11	16	17	7
1249:	13	5	10	9	20	19	9	16
1257:	10	7	15	9	5	10	9	10
1265:	13	11	9	11	16	8	17	13
1273:	7	9	10	10	11	14	13	22
1281:	27	18	17	4	12	14	8	12
1289:	14	11	13	10	14	12	9	7
1297:	11	6	9	14	9	5	10	16
1305:	12	9	7	14	9	6	9	12
1313:	9	12	13	11	8	12	12	10
1321:	8	12	14	10	4	7	11	5
1329:	7	9	16	12	9	10	4	11
1337:	11	15	6	9	8	9	7	8
1345:	4	13	6	11	12	17	10	9
1353:	9	5	4	10	9	9	7	10
1361:	8	10	5	6	9	6	9	7
1369:	8	8	7	7	11	19	12	20
1377:	51	43	23	11	13	4	12	11
1385:	17	9	7	8	9	5	7	12
1393:	7	9	13	7	11	14	9	13
1401:	18	23	18	11	10	17	29	44
1409:	26	17	7	10	10	11	9	8
1417:	10	4	11	7	12	11	12	8
1425:	11	15	11	16	9	12	11	13
1433:	9	10	6	15	7	11	8	13
1441:	7	7	6	9	8	5	10	9
1449:	8	6	14	9	7	5	6	8
1457:	16	15	18	40	45	32	10	6
1465:	5	5	10	5	11	8	9	11
1473:	7	5	11	8	7	8	6	8
1481:	3	9	10	8	9	8	6	6
1489:	13	14	9	3	11	6	12	16
1497:	11	10	14	6	10	6	13	6
1505:	9	5	11	14	28	24	20	8
1513:	7	8	8	6	11	9	9	10
1521:	7	11	10	7	9	13	4	7
1529:	10	9	7	6	8	12	13	14
1537:	10	4	8	11	5	7	13	10
1545:	7	5	9	9	4	12	2	6
1553:	4	3	9	6	9	7	7	1
1561:	12	10	4	6	8	5	6	5
1569:	2	5	12	5	5	5	4	5
1577:	11	6	11	7	12	14	16	12
1585:	6	6	14	7	11	7	14	12
1593:	20	16	7	7	5	14	7	18
1601:	4	4	4	6	7	7	1	5
1609:	8	4	8	5	11	4	5	3
1617:	3	7	8	7	7	10	12	3
1625:	6	6	6	5	5	9	9	3
1633:	4	7	3	7	6	7	13	2
1641:	6	6	5	6	6	2	4	4
1649:	2	5	4	5	1	2	4	6
1657:	5	3	6	11	11	8	8	5

1665: 1 4 4 5 5 3 6 4

Sample Title: R2 0-6

Channel	1	2	3	4	5	6	7	8
1673:	2	2	5	1	4	2	5	3
1681:	1	1	10	3	8	2	5	5
1689:	3	3	4	6	6	7	7	9
1697:	5	7	4	2	4	1	4	3
1705:	1	5	1	1	4	5	2	3
1713:	6	7	11	3	4	4	1	3
1721:	6	2	5	1	1	5	8	18
1729:	29	18	18	10	7	4	7	3
1737:	1	4	2	1	3	2	2	3
1745:	2	1	4	4	2	1	3	4
1753:	7	4	3	2	2	3	1	1
1761:	2	13	43	92	124	76	21	4
1769:	2	6	2	5	5	1	3	4
1777:	4	2	4	5	3	2	1	4
1785:	2	4	2	6	0	4	2	3
1793:	2	7	4	4	1	1	4	2
1801:	3	5	2	2	6	5	4	3
1809:	4	0	1	5	1	4	2	2
1817:	5	5	1	3	1	1	2	1
1825:	3	3	1	2	3	7	1	7
1833:	6	0	3	1	4	4	9	5
1841:	4	2	2	6	3	5	14	12
1849:	12	7	5	1	3	3	2	7
1857:	5	5	1	3	4	3	1	6
1865:	1	2	0	5	2	4	2	2
1873:	4	4	5	5	7	4	2	2
1881:	2	0	4	3	3	2	6	3
1889:	1	6	6	7	1	2	8	5
1897:	3	4	4	1	3	2	7	4
1905:	3	0	2	3	3	1	2	3
1913:	2	3	3	3	2	4	4	0
1921:	5	3	6	5	2	1	6	4
1929:	2	5	3	6	1	3	6	2
1937:	7	3	4	5	2	3	3	3
1945:	2	3	5	4	4	2	4	2
1953:	4	3	6	4	5	1	3	6
1961:	2	1	7	5	4	4	5	5
1969:	1	4	2	3	2	3	4	3
1977:	7	2	1	1	1	0	2	2
1985:	5	2	3	2	2	1	5	1
1993:	1	1	4	2	6	1	3	0
2001:	2	3	1	3	2	4	3	2
2009:	4	2	2	3	0	1	2	3
2017:	3	5	2	3	4	1	5	2
2025:	3	2	1	1	0	1	2	1
2033:	3	1	3	3	2	4	7	2
2041:	3	2	1	0	3	1	5	4
2049:	0	2	2	3	2	1	4	5
2057:	4	1	4	0	2	2	2	2
2065:	0	2	2	1	4	1	4	1
2073:	2	3	5	2	1	2	1	3
2081:	2	4	1	2	1	2	3	1
2089:	3	3	1	1	4	1	0	2

2097: 0 6 6 4 4 4 14 7

Sample Title: R2 0-6

Channel	1	2	3	4	5	6	7	8
2105:	7	3	7	3	1	2	4	2
2113:	2	2	2	1	5	11	5	7
2121:	4	5	1	2	2	4	1	3
2129:	4	1	3	1	4	0	2	1
2137:	4	3	3	1	3	1	1	2
2145:	1	6	2	3	3	2	1	4
2153:	3	1	2	0	2	5	3	1
2161:	2	2	1	0	2	1	4	2
2169:	2	1	6	1	1	4	2	1
2177:	1	4	1	3	1	0	3	2
2185:	3	3	3	4	1	4	2	1
2193:	1	5	2	0	4	1	2	5
2201:	6	8	20	24	42	12	7	6
2209:	3	2	0	2	3	2	4	1
2217:	4	4	3	3	2	1	0	2
2225:	1	1	3	2	2	0	0	3
2233:	4	1	1	1	4	2	5	1
2241:	3	1	5	2	3	5	3	3
2249:	1	1	2	3	1	0	0	3
2257:	2	1	2	5	2	1	3	0
2265:	3	3	0	1	2	3	1	3
2273:	1	4	2	3	3	2	4	5
2281:	2	1	3	4	3	7	4	1
2289:	4	2	2	5	1	5	2	2
2297:	2	2	1	2	4	2	1	1
2305:	2	2	2	3	1	3	3	2
2313:	3	4	3	4	2	2	0	0
2321:	5	2	9	3	3	2	5	1
2329:	2	3	3	0	3	1	1	1
2337:	1	3	2	1	4	1	3	2
2345:	1	1	2	2	5	2	3	2
2353:	2	5	3	1	3	1	2	5
2361:	4	3	3	4	4	4	1	4
2369:	1	2	3	3	2	6	3	3
2377:	2	5	3	2	1	3	2	3
2385:	1	1	3	6	2	3	0	4
2393:	1	1	2	2	0	1	1	1
2401:	1	1	1	1	6	2	1	2
2409:	3	2	2	0	2	0	3	2
2417:	3	4	0	3	1	3	2	1
2425:	0	4	1	2	2	1	1	1
2433:	0	2	1	1	0	0	4	1
2441:	1	0	1	1	1	6	2	8
2449:	10	3	3	1	1	1	1	1
2457:	2	2	1	1	1	0	3	0
2465:	0	1	3	2	2	0	2	2
2473:	4	5	0	1	2	0	1	1
2481:	0	0	2	1	1	3	0	1
2489:	0	0	3	1	1	1	2	0
2497:	1	0	0	0	1	1	1	3
2505:	0	0	2	0	0	1	2	0
2513:	0	0	0	0	0	0	0	1
2521:	2	1	0	0	1	0	0	0

2529: 0 0 2 2 0 1 0 1

Sample Title: R2 0-6

Channel	1	2	3	4	5	6	7	8	9
2537:	0	0	1	1	0	1	0	0	
2545:	0	0	0	1	0	0	1	1	
2553:	0	0	1	1	0	0	0	0	
2561:	0	1	0	0	1	0	1	0	
2569:	1	0	1	0	0	1	0	1	
2577:	0	0	0	0	2	1	0	0	
2585:	0	0	0	1	0	0	0	0	
2593:	0	1	1	0	1	1	1	1	
2601:	0	0	0	0	0	0	0	0	
2609:	0	1	2	5	14	28	43	66	
2617:	17	5	0	0	0	0	0	0	
2625:	1	0	0	1	0	0	1	0	
2633:	1	0	1	0	0	1	0	0	
2641:	0	1	1	0	0	0	0	0	
2649:	1	0	0	0	0	0	1	0	
2657:	0	0	1	0	0	0	2	0	
2665:	0	2	0	1	1	0	1	0	
2673:	1	1	1	2	0	0	0	0	
2681:	1	0	0	0	2	1	1	0	
2689:	0	0	0	0	0	0	1	0	
2697:	2	0	0	1	0	0	1	1	
2705:	1	1	1	1	0	0	0	1	
2713:	0	0	0	0	1	0	0	0	
2721:	1	0	0	2	0	0	0	0	
2729:	0	0	0	0	0	0	1	1	
2737:	0	0	0	0	1	0	0	1	
2745:	1	0	1	0	0	1	0	0	
2753:	0	1	0	1	0	0	0	0	
2761:	0	0	1	0	1	1	0	0	
2769:	1	0	0	0	0	1	0	1	
2777:	0	0	0	1	0	0	0	0	
2785:	0	0	0	1	1	0	0	0	
2793:	0	0	0	0	0	0	1	0	
2801:	0	0	1	0	0	1	0	0	
2809:	0	1	0	0	1	1	0	0	
2817:	1	1	0	1	0	1	0	0	
2825:	0	0	1	0	0	0	0	0	
2833:	0	0	0	0	0	0	0	0	
2841:	0	0	0	0	0	0	0	1	
2849:	0	1	1	0	0	0	1	1	
2857:	1	0	0	0	1	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	2	0	
2889:	0	0	1	0	0	0	0	0	
2897:	0	0	0	2	0	0	1	0	
2905:	0	0	0	0	0	0	0	0	
2913:	1	0	0	0	1	0	0	0	
2921:	0	2	0	0	0	1	0	0	
2929:	0	0	0	1	1	0	0	2	
2937:	0	0	0	1	0	0	0	0	
2945:	0	0	1	0	0	0	0	0	
2953:	0	0	0	1	0	1	0	1	

2961: 0 1 1 0 0 0 0 0

Sample Title: R2 0-6

Channel	1	2	3	4	5	6	7	8
2969:	0	0	0	0	0	0	0	0
2977:	0	1	0	0	0	0	1	0
2985:	0	0	0	0	0	0	0	0
2993:	0	0	0	0	0	0	1	0
3001:	0	0	0	1	0	0	1	0
3009:	0	1	0	0	0	0	1	0
3017:	0	0	0	0	1	0	1	0
3025:	0	0	0	0	0	0	0	0
3033:	0	0	0	0	0	1	0	1
3041:	0	0	0	0	1	0	0	0
3049:	0	0	0	0	0	0	0	1
3057:	1	0	0	0	0	0	0	0
3065:	0	0	0	0	0	0	1	0
3073:	0	0	1	0	0	0	0	0
3081:	0	0	1	0	0	0	0	0
3089:	1	1	0	0	0	0	0	0
3097:	0	1	0	0	0	0	0	0
3105:	0	0	1	0	0	0	0	0
3113:	0	0	0	0	0	0	1	2
3121:	0	0	0	0	0	1	2	0
3129:	0	0	0	1	0	0	0	0
3137:	0	0	1	0	2	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	1	0	0	0
3169:	0	0	1	0	0	0	0	0
3177:	0	0	0	0	0	0	0	0
3185:	0	0	0	1	0	0	1	0
3193:	0	1	1	0	0	2	0	0
3201:	1	0	0	0	0	1	1	0
3209:	0	0	0	0	0	0	0	0
3217:	1	0	0	0	0	0	0	0
3225:	0	0	0	0	0	0	1	0
3233:	0	1	0	0	1	1	0	0
3241:	0	0	0	1	0	0	0	0
3249:	0	0	0	0	1	0	0	0
3257:	0	0	0	0	0	1	0	0
3265:	0	0	0	0	0	0	0	0
3273:	0	0	0	0	0	0	0	0
3281:	0	0	0	0	0	0	0	0
3289:	0	0	0	0	0	0	0	0
3297:	0	0	1	0	0	0	0	1
3305:	0	0	0	0	0	0	0	0
3313:	0	1	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	1	0	1	0	0
3345:	0	0	0	0	0	0	0	0
3353:	0	0	0	0	0	0	1	0
3361:	0	0	1	0	0	0	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	1	2	0

3393: 0 0 0 1 0 0 0 0

Sample Title: R2 0-6

Channel	1	2	3	4	5	6	7	8
3401:	0	0	0	0	0	0	0	1
3409:	0	0	0	0	0	0	0	0
3417:	0	0	0	0	0	0	0	0
3425:	0	0	0	0	0	1	0	0
3433:	0	0	0	0	0	0	1	1
3441:	0	0	0	1	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	1	0	0	0
3473:	0	0	0	1	0	0	0	1
3481:	0	0	0	0	0	0	0	0
3489:	0	0	0	0	0	0	0	0
3497:	0	1	0	0	0	1	0	0
3505:	0	0	0	0	0	0	0	1
3513:	0	0	1	0	0	0	0	1
3521:	0	0	0	0	0	0	1	0
3529:	0	0	0	0	0	0	0	0
3537:	0	1	0	0	0	0	2	1
3545:	1	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:	0	0	0	0	1	0	1	0
3577:	0	0	0	0	0	0	0	0
3585:	0	0	0	0	0	0	0	0
3593:	0	1	0	0	0	0	0	0
3601:	0	0	1	0	2	0	0	0
3609:	0	0	0	0	0	0	1	0
3617:	0	0	1	0	0	0	0	0
3625:	0	0	0	0	0	0	0	1
3633:	0	1	0	0	0	0	0	0
3641:	0	1	0	0	0	0	0	0
3649:	0	1	0	1	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	1	1	0	0	1
3689:	0	1	0	0	1	0	0	0
3697:	0	0	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	1	0	0	0	0
3737:	1	0	0	0	0	0	0	1
3745:	0	0	0	0	0	0	0	0
3753:	0	0	0	0	1	0	0	0
3761:	0	0	1	0	1	0	0	0
3769:	1	0	0	0	1	0	0	0
3777:	0	0	1	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	1	0	0	0	0	0
3809:	0	0	0	0	0	0	0	0
3817:	0	0	0	0	0	0	0	0

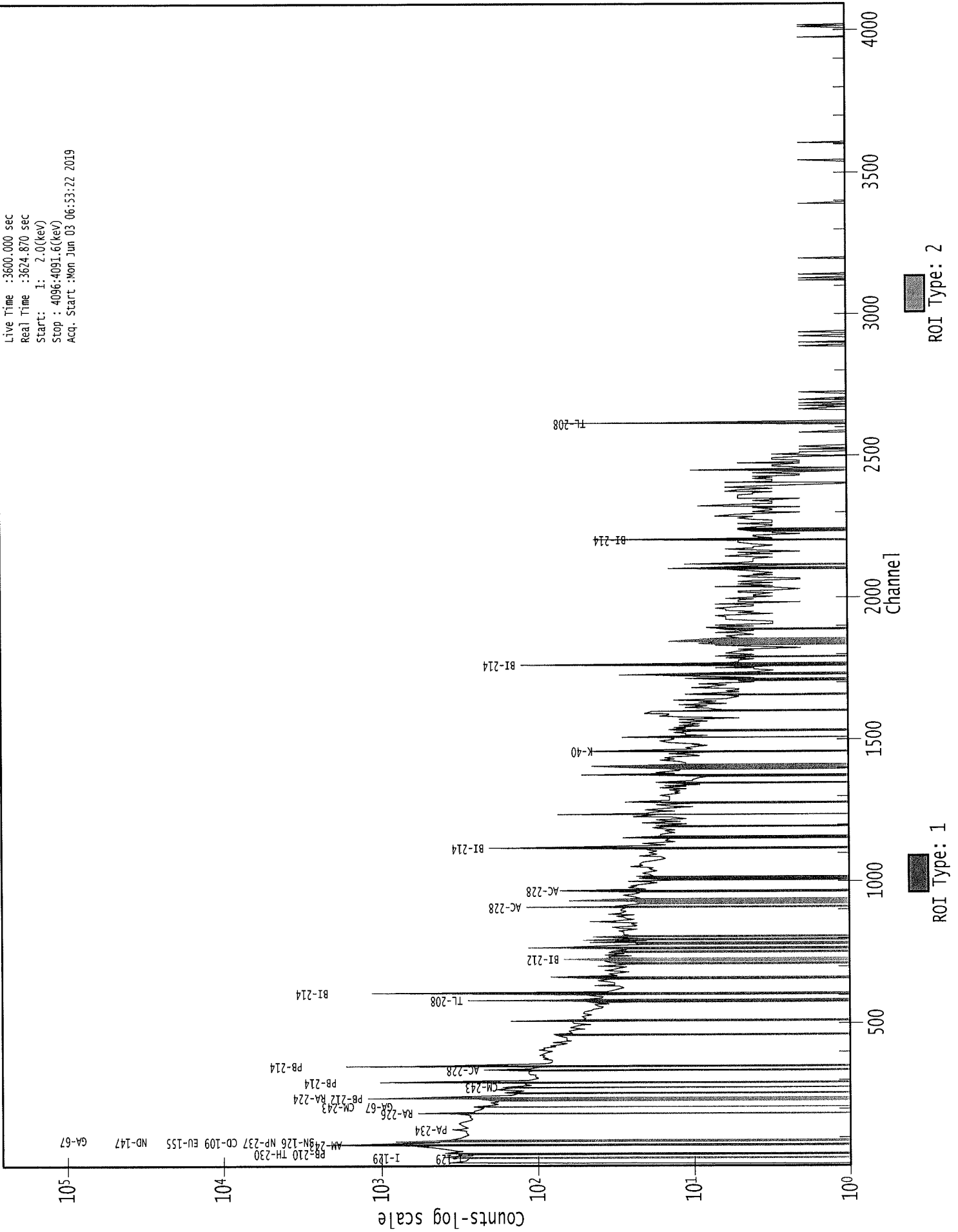
3825: 0 0 0 0 1 0 0 0

Sample Title: R2 0-6

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	1
3865:	0	0	0	0	1	0	0	0
3873:	0	0	0	0	0	0	0	0
3881:	0	0	0	1	0	0	0	0
3889:	0	1	0	0	0	0	0	1
3897:	0	0	0	0	0	0	1	0
3905:	0	0	0	0	0	0	0	0
3913:	1	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	0	0	0	1	0	0	0
3953:	0	1	0	0	0	0	0	0
3961:	0	0	0	0	0	0	0	0
3969:	0	0	0	0	0	0	2	0
3977:	0	0	0	0	0	1	1	0
3985:	0	0	0	0	1	0	0	0
3993:	0	0	0	0	0	0	0	0
4001:	1	0	0	0	1	0	1	0
4009:	0	1	0	2	0	0	1	0
4017:	0	2	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	1	0	0	0
4049:	1	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	1
4081:	0	0	0	0	0	0	0	0
4089:	0	1	0	0	0	0	0	0

0000082494.CNF

Live Time :3600.000 sec
Real Time :3624.870 sec
Start : 1: 2.0(keV)
Stop : 4096:4091.6(keV)
Acq. Start :Mon Jun 03 06:53:22 2019



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6/3/19Analysis Report for 1905060-08
R2 6-12

GAMMA SPECTRUM ANALYSIS

Sample Identification : 1905060-08
Sample Description : R2 6-12
Sample Type : SOIL

Sample Size : 4.143E+02 grams
Facility : Countroom

Sample Taken On : 5/8/2019 3:33:57PM
Acquisition Started : 6/3/2019 7:55:05AM

Procedure : GAS-1802 pCi
Operator : Administrator
Detector Name : GE2
Geometry : GAS-1802
Live Time : 3600.0 seconds
Real Time : 3600.9 seconds

Dead Time : 0.03 %

Peak Locate Threshold : 2.50
Peak Locate Range (in channels) : 1 - 4096
Peak Area Range (in channels) : 27 - 4096
Identification Energy Tolerance : 1.000FWHM

Energy Calibration Used Done On : 2/17/2018
Efficiency Calibration Used Done On : 6/16/2018
Efficiency Calibration Description :

Sample Number : 82496

PEAK-TO-TOTAL CALIBRATION REPORT

Peak-to-Total Efficiency Calibration Equation

AG
6/3/19

Analysis Report for 1905060-08

R2 6-12

PEAK LOCATE REPORT

Peak Locate Performed on : 6/3/2019 8:55:13AM
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	63.67	63.44	0.0000	0.00
2	76.71	76.47	0.0000	0.00
3	87.76	87.52	0.0000	0.00
4	93.55	93.31	0.0000	0.00
5	107.05	106.80	0.0000	0.00
6	186.32	186.03	0.0000	0.00
7	239.23	238.92	0.0000	0.00
8	242.29	241.98	0.0000	0.00
9	274.66	274.33	0.0000	0.00
10	295.48	295.14	0.0000	0.00
11	300.48	300.14	0.0000	0.00
12	338.61	338.25	0.0000	0.00
13	352.35	351.98	0.0000	0.00
14	383.34	382.95	0.0000	0.00
15	463.73	463.31	0.0000	0.00
16	511.24	510.79	0.0000	0.00
17	583.48	582.99	0.0000	0.00
18	605.33	604.83	0.0000	0.00
19	609.67	609.17	0.0000	0.00
20	613.50	613.00	0.0000	0.00
21	724.14	723.58	0.0000	0.00
22	727.67	727.11	0.0000	0.00
23	760.37	759.79	0.0000	0.00
24	768.30	767.71	0.0000	0.00
25	785.72	785.12	0.0000	0.00
26	795.57	794.97	0.0000	0.00
27	912.42	911.76	0.0000	0.00
28	934.87	934.19	0.0000	0.00
29	941.49	940.80	0.0000	0.00
30	969.70	969.00	0.0000	0.00
31	1093.65	1092.88	0.0000	0.00
32	1120.33	1119.54	0.0000	0.00
33	1129.46	1128.67	0.0000	0.00
34	1139.25	1138.45	0.0000	0.00
35	1346.37	1345.44	0.0000	0.00
36	1377.79	1376.84	0.0000	0.00
37	1391.26	1390.30	0.0000	0.00
38	1402.16	1401.20	0.0000	0.00
39	1408.11	1407.14	0.0000	0.00
40	1461.24	1460.24	0.0000	0.00
41	1547.77	1546.71	0.0000	0.00
42	1631.44	1630.33	0.0000	0.00

Analysis Report for 1905060-08
R2 6-12

Peak No.	Energy (keV)	Centroid Channel	Centroid Uncertainty	Peak Significance
43	1641.23	1640.11	0.0000	0.00
44	1728.32	1727.14	0.0000	0.00
45	1764.76	1763.56	0.0000	0.00
46	2101.00	2099.56	0.0000	0.00
47	2105.33	2103.88	0.0000	0.00
48	2188.55	2187.04	0.0000	0.00
49	2204.74	2203.22	0.0000	0.00
50	2614.78	2612.94	0.0000	0.00

? = Adjacent peak noted
Errors quoted at 2.000sigma

Analysis Report for 1905060-08

R2 6-12

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 6/3/2019 8:55:13AM

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	63.67	59 -	68	63.44	2.47E+02	109.55	1.58E+03	2.04
2	76.71	72 -	80	76.47	8.69E+02	117.70	1.58E+03	3.62
3	87.76	86 -	89	87.52	5.69E+01	58.99	8.14E+02	1.53
4	93.55	91 -	96	93.31	1.35E+02	74.06	9.38E+02	1.31
5	107.05	102 -	111	106.80	1.53E+02	84.56	9.32E+02	4.77
6	186.32	183 -	188	186.03	1.42E+02	56.67	5.30E+02	1.60
M	7	234 -	245	238.92	5.66E+02	59.80	2.68E+02	1.45
m	8	234 -	245	241.98	1.25E+02	42.80	2.88E+02	1.45
9	274.66	266 -	280	274.33	1.47E+02	84.06	6.79E+02	9.69
M	10	291 -	309	295.14	2.25E+02	42.75	1.94E+02	1.52
m	11	291 -	309	300.14	5.70E+01	32.73	1.97E+02	1.53
12	338.61	334 -	342	338.25	1.11E+02	55.88	4.09E+02	1.49
13	352.35	348 -	355	351.98	4.17E+02	58.89	2.99E+02	1.38
14	383.34	371 -	393	382.95	1.38E+02	91.19	5.75E+02	17.56
15	463.73	460 -	467	463.31	5.19E+01	34.47	1.62E+02	2.63
16	511.24	505 -	517	510.79	1.35E+02	58.46	3.40E+02	2.33
17	583.48	578 -	587	582.99	2.34E+02	47.56	1.88E+02	1.49
M	18	604 -	616	604.83	1.23E+01	5.96	1.60E+01	1.83
m	19	604 -	616	609.17	3.52E+02	41.37	7.46E+01	1.77
m	20	604 -	616	613.00	1.41E+01	28.35	7.08E+01	1.67
M	21	722 -	731	723.58	1.66E+01	13.32	3.50E+01	2.34
m	22	722 -	731	727.11	4.13E+01	26.03	7.52E+01	2.34
23	760.37	758 -	762	759.79	1.55E+01	18.38	6.30E+01	3.07
24	768.30	765 -	771	767.71	2.25E+01	24.71	9.51E+01	1.24
25	785.72	782 -	789	785.12	2.50E+01	26.68	9.81E+01	3.48
26	795.57	792 -	797	794.97	2.43E+01	20.45	6.13E+01	1.40
27	912.42	906 -	928	911.76	1.45E+02	59.81	2.41E+02	1.73
28	934.87	931 -	937	934.19	3.16E+01	17.73	3.28E+01	1.74
29	941.49	938 -	943	940.80	1.44E+01	12.77	2.13E+01	3.04
30	969.70	965 -	974	969.00	7.81E+01	34.55	1.16E+02	2.13
31	1093.65	1089 -	1098	1092.88	1.80E+01	22.09	5.81E+01	1.99
M	32	1113 -	1143	1119.54	6.45E+01	28.07	6.32E+01	3.23
m	33	1113 -	1143	1128.67	1.48E+01	18.65	4.54E+01	2.68
m	34	1113 -	1143	1138.45	1.73E+01	20.86	4.70E+01	2.95
35	1346.37	1341 -	1349	1345.44	1.23E+01	15.93	3.14E+01	1.53
36	1377.79	1372 -	1382	1376.84	2.03E+01	23.17	6.14E+01	2.06
37	1391.26	1387 -	1393	1390.30	1.05E+01	9.84	9.00E+00	3.25
38	1402.16	1398 -	1403	1401.20	1.05E+01	10.63	1.29E+01	2.63
39	1408.11	1404 -	1411	1407.14	1.91E+01	12.33	1.38E+01	4.43
40	1461.24	1455 -	1465	1460.24	5.45E+02	50.48	4.79E+01	2.51

Analysis Report for 1905060-08

R2 6-12

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	FWHM (keV)
	41	1547.77	1544 - 1549	1546.71	9.29E+00	9.59	9.43E+00	1.98
	42	1631.44	1627 - 1633	1630.33	6.58E+00	9.21	1.08E+01	2.08
	43	1641.23	1637 - 1643	1640.11	8.50E+00	8.51	7.00E+00	3.12
	44	1728.32	1723 - 1731	1727.14	1.16E+01	8.73	4.71E+00	4.35
	45	1764.76	1759 - 1768	1763.56	5.47E+01	18.97	2.05E+01	2.24
M	46	2101.00	2097 - 2107	2099.56	8.29E+00	6.36	8.10E+00	4.40
m	47	2105.33	2097 - 2107	2103.88	1.14E+01	10.61	6.90E+00	4.40
	48	2188.55	2183 - 2189	2187.04	5.07E+00	6.34	3.86E+00	1.90
	49	2204.74	2199 - 2206	2203.22	1.80E+01	9.80	4.05E+00	3.19
	50	2614.78	2608 - 2616	2612.94	8.00E+01	17.89	0.00E+00	2.88

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 : 6/3/2019 8:55:13AM

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	63.67	59 - 68	2.47E+02	109.55	1.58E+03	8.63E+01
	2	76.71	72 - 80	8.69E+02	117.70	1.58E+03	8.37E+01
	3	87.76	86 - 89	5.69E+01	58.99	8.14E+02	4.69E+01
	4	93.55	91 - 96	1.35E+02	74.06	9.38E+02	5.78E+01
	5	107.05	102 - 111	1.53E+02	84.56	9.32E+02	6.65E+01
	6	186.32	183 - 188	1.42E+02	56.67	5.30E+02	4.23E+01
M	7	239.23	234 - 245	5.66E+02	59.80	2.68E+02	2.69E+01
m	8	242.29	234 - 245	1.25E+02	42.80	2.88E+02	2.79E+01
	9	274.66	266 - 280	1.47E+02	84.06	6.79E+02	6.62E+01
M	10	295.48	291 - 309	2.25E+02	42.75	1.94E+02	2.29E+01
m	11	300.48	291 - 309	5.70E+01	32.73	1.97E+02	2.31E+01
	12	338.61	334 - 342	1.11E+02	55.88	4.09E+02	4.26E+01
	13	352.35	348 - 355	4.17E+02	58.89	2.99E+02	3.49E+01
	14	383.34	371 - 393	1.38E+02	91.19	5.75E+02	7.24E+01
	15	463.73	460 - 467	5.19E+01	34.47	1.62E+02	2.57E+01
	16	511.24	505 - 517	1.35E+02	58.46	3.40E+02	4.41E+01
	17	583.48	578 - 587	2.34E+02	47.56	1.88E+02	2.99E+01

0307

Analysis Report for 1905060-08

R2 6-12

	Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
M	18	605.33	604 -	616	1.23E+01	5.96	1.60E+01	6.57E+00
m	19	609.67	604 -	616	3.52E+02	41.37	7.46E+01	1.42E+01
m	20	613.50	604 -	616	1.41E+01	28.35	7.08E+01	1.38E+01
M	21	724.14	722 -	731	1.66E+01	13.32	3.50E+01	9.73E+00
m	22	727.67	722 -	731	4.13E+01	26.03	7.52E+01	1.43E+01
	23	760.37	758 -	762	1.55E+01	18.38	6.30E+01	1.37E+01
	24	768.30	765 -	771	2.25E+01	24.71	9.51E+01	1.88E+01
	25	785.72	782 -	789	2.50E+01	26.68	9.81E+01	2.03E+01
	26	795.57	792 -	797	2.43E+01	20.45	6.13E+01	1.47E+01
	27	912.42	906 -	928	1.45E+02	59.81	2.41E+02	1.17E+01
	28	934.87	931 -	937	3.16E+01	17.73	3.28E+01	1.13E+01
	29	941.49	938 -	943	1.44E+01	12.77	2.13E+01	8.45E+00
	30	969.70	965 -	974	7.81E+01	34.55	1.16E+02	2.44E+01
	31	1093.65	1089 -	1098	1.80E+01	22.09	5.81E+01	1.68E+01
M	32	1120.33	1113 -	1143	6.45E+01	28.07	6.32E+01	1.31E+01
m	33	1129.46	1113 -	1143	1.48E+01	18.65	4.54E+01	1.11E+01
m	34	1139.25	1113 -	1143	1.73E+01	20.86	4.70E+01	1.13E+01
	35	1346.37	1341 -	1349	1.23E+01	15.93	3.14E+01	1.18E+01
	36	1377.79	1372 -	1382	2.03E+01	23.17	6.14E+01	1.75E+01
	37	1391.26	1387 -	1393	1.05E+01	9.84	9.00E+00	6.08E+00
	38	1402.16	1398 -	1403	1.05E+01	10.63	1.29E+01	6.92E+00
	39	1408.11	1404 -	1411	1.91E+01	12.33	1.38E+01	7.15E+00
	40	1461.24	1455 -	1465	5.45E+02	50.48	4.79E+01	1.58E+01
	41	1547.77	1544 -	1549	9.29E+00	9.59	9.43E+00	6.09E+00
	42	1631.44	1627 -	1633	6.58E+00	9.21	1.08E+01	6.28E+00
	43	1641.23	1637 -	1643	8.50E+00	8.51	7.00E+00	5.10E+00
	44	1728.32	1723 -	1731	1.16E+01	8.73	4.71E+00	4.48E+00
	45	1764.76	1759 -	1768	5.47E+01	18.97	2.05E+01	9.76E+00
M	46	2101.00	2097 -	2107	8.29E+00	6.36	8.10E+00	4.68E+00
m	47	2105.33	2097 -	2107	1.14E+01	10.61	6.90E+00	4.32E+00
	48	2188.55	2183 -	2189	5.07E+00	6.34	3.86E+00	3.67E+00
	49	2204.74	2199 -	2206	1.80E+01	9.80	4.05E+00	4.04E+00
	50	2614.78	2608 -	2616	8.00E+01	17.89	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

Analysis Report for 1905060-08

R2 6-12

PEAK WITH NID REPORT

Peak Analysis Performed on : 6/3/2019 8:55:13AM

Peak Analysis From Channel : 1

Peak Analysis To Channel : 4096

Tentative NID Library : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

Peak Match Tolerance : 1.000FWHM

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
1	63.67	59 -	68	63.44	2.47E+02	109.55	1.58E+03	TH-234 TH-230
2	76.71	72 -	80	76.47	8.69E+02	117.70	1.58E+03	.....
3	87.76	86 -	89	87.52	5.69E+01	58.99	8.14E+02	SN-126 CD-109 LU-176
4	93.55	91 -	96	93.31	1.35E+02	74.06	9.38E+02	GA-67
5	107.05	102 -	111	106.80	1.53E+02	84.56	9.32E+02	NP-239
6	186.32	183 -	188	186.03	1.42E+02	56.67	5.30E+02	RA-226
M m 7	239.23	234 -	245	238.92	5.66E+02	59.80	2.68E+02	PB-212
8	242.29	234 -	245	241.98	1.25E+02	42.80	2.88E+02	RA-224
9	274.66	266 -	280	274.33	1.47E+02	84.06	6.79E+02	CS-136
M m 10	295.48	291 -	309	295.14	2.25E+02	42.75	1.94E+02	PB-214
11	300.48	291 -	309	300.14	5.70E+01	32.73	1.97E+02	GA-67 PB-212 BI-210M
12	338.61	334 -	342	338.25	1.11E+02	55.88	4.09E+02	AC-228
13	352.35	348 -	355	351.98	4.17E+02	58.89	2.99E+02	PB-214
14	383.34	371 -	393	382.95	1.38E+02	91.19	5.75E+02	.....
15	463.73	460 -	467	463.31	5.19E+01	34.47	1.62E+02	SB-125
16	511.24	505 -	517	510.79	1.35E+02	58.46	3.40E+02	.....
17	583.48	578 -	587	582.99	2.34E+02	47.56	1.88E+02	TL-208
M m 18	605.33	604 -	616	604.83	1.23E+01	5.96	1.60E+01	CS-134
19	609.67	604 -	616	609.17	3.52E+02	41.37	7.46E+01	BI-214
m 20	613.50	604 -	616	613.00	1.41E+01	28.35	7.08E+01	AG-108M
M 21	724.14	722 -	731	723.58	1.66E+01	13.32	3.50E+01	ZR-95 EU-154 AG-108M I-131 SB-124
m 22	727.67	722 -	731	727.11	4.13E+01	26.03	7.52E+01	BI-212
23	760.37	758 -	762	759.79	1.55E+01	18.38	6.30E+01	.....
24	768.30	765 -	771	767.71	2.25E+01	24.71	9.51E+01	.....
25	785.72	782 -	789	785.12	2.50E+01	26.68	9.81E+01	.....
26	795.57	792 -	797	794.97	2.43E+01	20.45	6.13E+01	CS-134
27	912.42	906 -	928	911.76	1.45E+02	59.81	2.41E+02	TL-204 AC-228
28	934.87	931 -	937	934.19	3.16E+01	17.73	3.28E+01	.....
29	941.49	938 -	943	940.80	1.44E+01	12.77	2.13E+01	.....
30	969.70	965 -	974	969.00	7.81E+01	34.55	1.16E+02	AC-228
31	1093.65	1089 -	1098	1092.88	1.80E+01	22.09	5.81E+01	LU-172

Analysis Report for 1905060-08

R2 6-12

	Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
M	32	1120.33	1113 -	1143	1119.54	6.45E+01	28.07	6.32E+01	BI-214 SC-46 TA-182
m	33	1129.46	1113 -	1143	1128.67	1.48E+01	18.65	4.54E+01	.....
m	34	1139.25	1113 -	1143	1138.45	1.73E+01	20.86	4.70E+01	.....
	35	1346.37	1341 -	1349	1345.44	1.23E+01	15.93	3.14E+01	.....
	36	1377.79	1372 -	1382	1376.84	2.03E+01	23.17	6.14E+01	.....
	37	1391.26	1387 -	1393	1390.30	1.05E+01	9.84	9.00E+00	.....
	38	1402.16	1398 -	1403	1401.20	1.05E+01	10.63	1.29E+01	.....
	39	1408.11	1404 -	1411	1407.14	1.91E+01	12.33	1.38E+01	EU-152
	40	1461.24	1455 -	1465	1460.24	5.45E+02	50.48	4.79E+01	K-40
	41	1547.77	1544 -	1549	1546.71	9.29E+00	9.59	9.43E+00	.....
	42	1631.44	1627 -	1633	1630.33	6.58E+00	9.21	1.08E+01	.....
	43	1641.23	1637 -	1643	1640.11	8.50E+00	8.51	7.00E+00	.....
	44	1728.32	1723 -	1731	1727.14	1.16E+01	8.73	4.71E+00	.....
	45	1764.76	1759 -	1768	1763.56	5.47E+01	18.97	2.05E+01	BI-214
M	46	2101.00	2097 -	2107	2099.56	8.29E+00	6.36	8.10E+00	.....
m	47	2105.33	2097 -	2107	2103.88	1.14E+01	10.61	6.90E+00	.....
	48	2188.55	2183 -	2189	2187.04	5.07E+00	6.34	3.86E+00	.....
	49	2204.74	2199 -	2206	2203.22	1.80E+01	9.80	4.05E+00	BI-214
	50	2614.78	2608 -	2616	2612.94	8.00E+01	17.89	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

PEAK EFFICIENCY REPORT

Peak Analysis Performed on : 6/3/2019 8:55:13AM

	Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
	1	63.67	2.47E+02	109.55	2.25E-02	2.51E-03
	2	76.71	8.69E+02	117.70	2.68E-02	5.18E-03
	3	87.76	5.69E+01	58.99	2.77E-02	7.45E-03
	4	93.55	1.35E+02	74.06	2.75E-02	7.05E-03
	5	107.05	1.53E+02	84.56	2.64E-02	5.93E-03
	6	186.32	1.42E+02	56.67	1.81E-02	1.53E-03
M	7	239.23	5.66E+02	59.80	1.52E-02	1.66E-03
m	8	242.29	1.25E+02	42.80	1.50E-02	1.67E-03
	9	274.66	1.47E+02	84.06	1.39E-02	1.75E-03

0310

Analysis Report for 1905060-08

R2 6-12

	Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
M	10	295.48	2.25E+02	42.75	1.32E-02	1.64E-03
m	11	300.48	5.70E+01	32.73	1.31E-02	1.60E-03
	12	338.61	1.11E+02	55.88	1.22E-02	1.31E-03
	13	352.35	4.17E+02	58.89	1.19E-02	1.20E-03
	14	383.34	1.38E+02	91.19	1.13E-02	9.67E-04
	15	463.73	5.19E+01	34.47	1.00E-02	8.92E-04
	16	511.24	1.35E+02	58.46	9.39E-03	8.85E-04
	17	583.48	2.34E+02	47.56	8.55E-03	8.73E-04
M	18	605.33	1.23E+01	5.96	8.32E-03	8.70E-04
m	19	609.67	3.52E+02	41.37	8.28E-03	8.69E-04
m	20	613.50	1.41E+01	28.35	8.24E-03	8.69E-04
M	21	724.14	1.66E+01	13.32	7.22E-03	7.86E-04
m	22	727.67	4.13E+01	26.03	7.19E-03	7.82E-04
	23	760.37	1.55E+01	18.38	6.93E-03	7.42E-04
	24	768.30	2.25E+01	24.71	6.86E-03	7.33E-04
	25	785.72	2.50E+01	26.68	6.73E-03	7.12E-04
	26	795.57	2.43E+01	20.45	6.66E-03	7.00E-04
	27	912.42	1.45E+02	59.81	5.88E-03	5.72E-04
	28	934.87	3.16E+01	17.73	5.75E-03	5.65E-04
	29	941.49	1.44E+01	12.77	5.71E-03	5.63E-04
	30	969.70	7.81E+01	34.55	5.55E-03	5.55E-04
	31	1093.65	1.80E+01	22.09	4.95E-03	5.17E-04
M	32	1120.33	6.45E+01	28.07	4.84E-03	5.09E-04
m	33	1129.46	1.48E+01	18.65	4.80E-03	5.06E-04
m	34	1139.25	1.73E+01	20.86	4.76E-03	5.03E-04
	35	1346.37	1.23E+01	15.93	4.10E-03	4.16E-04
	36	1377.79	2.03E+01	23.17	4.02E-03	4.07E-04
	37	1391.26	1.05E+01	9.84	3.99E-03	4.03E-04
	38	1402.16	1.05E+01	10.63	3.97E-03	4.00E-04
	39	1408.11	1.91E+01	12.33	3.95E-03	3.98E-04
	40	1461.24	5.45E+02	50.48	3.84E-03	3.82E-04
	41	1547.77	9.29E+00	9.59	3.69E-03	3.57E-04
	42	1631.44	6.58E+00	9.21	3.58E-03	3.33E-04
	43	1641.23	8.50E+00	8.51	3.57E-03	3.30E-04
	44	1728.32	1.16E+01	8.73	3.48E-03	3.04E-04
	45	1764.76	5.47E+01	18.97	3.45E-03	2.94E-04
M	46	2101.00	8.29E+00	6.36	3.40E-03	2.73E-04
m	47	2105.33	1.14E+01	10.61	3.40E-03	2.73E-04
	48	2188.55	5.07E+00	6.34	3.44E-03	2.73E-04
	49	2204.74	1.80E+01	9.80	3.45E-03	2.73E-04
	50	2614.78	8.00E+01	17.89	4.03E-03	2.73E-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 1905060-08

R2 6-12

BACKGROUND SUBTRACT REPORT

Peak Analysis Performed on : 6/3/2019 8:55:13AM

Env. Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000082156.CNF

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
1	63.67	2.47E+02	109.55	2.77E+01	1.04E+01	2.19E+02	1.10E+02
2	76.71	8.69E+02	117.70			8.69E+02	1.18E+02
3	87.76	5.69E+01	58.99			5.69E+01	5.90E+01
4	93.55	1.35E+02	74.06	6.19E+01	1.42E+01	7.31E+01	7.54E+01
5	107.05	1.53E+02	84.56			1.53E+02	8.46E+01
6	186.32	1.42E+02	56.67	3.71E+01	7.15E+00	1.05E+02	5.71E+01
M	7	239.23	5.66E+02	1.85E+01	2.89E+00	5.48E+02	5.99E+01
m	8	242.29	1.25E+02	1.11E+01	2.59E+00	1.14E+02	4.29E+01
	9	274.66	1.47E+02			1.47E+02	8.41E+01
M	10	295.48	2.25E+02	9.91E+00	6.34E+00	2.15E+02	4.32E+01
m	11	300.48	5.70E+01			5.70E+01	3.27E+01
	12	338.61	1.11E+02			1.11E+02	5.59E+01
	13	352.35	4.17E+02	1.92E+01	5.24E+00	3.98E+02	5.91E+01
	14	383.34	1.38E+02			1.38E+02	9.12E+01
	15	463.73	5.19E+01			5.19E+01	3.45E+01
	16	511.24	1.35E+02	58.46	7.69E+01	5.83E+01	5.87E+01
	17	583.48	2.34E+02	47.56	1.07E+01	2.23E+02	4.77E+01
M	18	605.33	1.23E+01	5.96		1.23E+01	5.96E+00
m	19	609.67	3.52E+02	41.37	1.53E+01	3.37E+02	4.16E+01
m	20	613.50	1.41E+01	28.35		1.41E+01	2.83E+01
M	21	724.14	1.66E+01	13.32		1.66E+01	1.33E+01
m	22	727.67	4.13E+01	26.03		4.13E+01	2.60E+01
	23	760.37	1.55E+01	18.38		1.55E+01	1.84E+01
	24	768.30	2.25E+01	24.71		2.25E+01	2.47E+01
	25	785.72	2.50E+01	26.68		2.50E+01	2.67E+01
	26	795.57	2.43E+01	20.45	0.00E+00	2.43E+01	2.04E+01
	27	912.42	1.45E+02	59.81	3.90E+00	1.41E+02	5.99E+01
	28	934.87	3.16E+01	17.73		3.16E+01	1.77E+01
	29	941.49	1.44E+01	12.77	0.00E+00	1.44E+01	1.28E+01
	30	969.70	7.81E+01	34.55	1.44E+00	7.66E+01	3.46E+01
	31	1093.65	1.80E+01	22.09		1.80E+01	2.21E+01
M	32	1120.33	6.45E+01	28.07	2.74E+00	6.18E+01	2.82E+01
m	33	1129.46	1.48E+01	18.65		1.48E+01	1.87E+01
m	34	1139.25	1.73E+01	20.86		1.73E+01	2.09E+01
	35	1346.37	1.23E+01	15.93		1.23E+01	1.59E+01
	36	1377.79	2.03E+01	23.17	9.57E-01	1.94E+01	2.32E+01
	37	1391.26	1.05E+01	9.84		1.05E+01	9.84E+00
	38	1402.16	1.05E+01	10.63		1.05E+01	1.06E+01
	39	1408.11	1.91E+01	12.33		1.91E+01	1.23E+01
	40	1461.24	5.45E+02	50.48	8.88E+00	5.36E+02	5.05E+01
	41	1547.77	9.29E+00	9.59		9.29E+00	9.59E+00
	42	1631.44	6.58E+00	9.21		6.58E+00	9.21E+00
	43	1641.23	8.50E+00	8.51		8.50E+00	8.51E+00
	44	1728.32	1.16E+01	8.73		1.16E+01	8.73E+00

Analysis Report for 1905060-08

R2 6-12

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
	45	1764.76	5.47E+01	18.97	3.76E+00	1.92E+00	5.10E+01	1.91E+01
M	46	2101.00	8.29E+00	6.36			8.29E+00	6.36E+00
m	47	2105.33	1.14E+01	10.61			1.14E+01	1.06E+01
	48	2188.55	5.07E+00	6.34			5.07E+00	6.34E+00
	49	2204.74	1.80E+01	9.80			1.80E+01	9.80E+00
	50	2614.78	8.00E+01	17.89	5.68E+00	1.32E+00	7.43E+01	1.79E+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 : 6/3/2019 8:55:13AM
Ref. Peak Energy : 0.00 Reference Date :
Peak Ratio : 0.00 Uncertainty : 0.00
Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000082156.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	63.67	2.47E+02	109.55	2.77E+01	1.04E+01	2.19E+02	1.10E+02
	2	76.71	8.69E+02	117.70			8.69E+02	1.18E+02
	3	87.76	5.69E+01	58.99			5.69E+01	5.90E+01
	4	93.55	1.35E+02	74.06	6.19E+01	1.42E+01	7.31E+01	7.54E+01
	5	107.05	1.53E+02	84.56			1.53E+02	8.46E+01
	6	186.32	1.42E+02	56.67	3.71E+01	7.15E+00	1.05E+02	5.71E+01
M	7	239.23	5.66E+02	59.80	1.85E+01	2.89E+00	5.48E+02	5.99E+01
m	8	242.29	1.25E+02	42.80	1.11E+01	2.59E+00	1.14E+02	4.29E+01
	9	274.66	1.47E+02	84.06			1.47E+02	8.41E+01
M	10	295.48	2.25E+02	42.75	9.91E+00	6.34E+00	2.15E+02	4.32E+01
m	11	300.48	5.70E+01	32.73			5.70E+01	3.27E+01
	12	338.61	1.11E+02	55.88			1.11E+02	5.59E+01
	13	352.35	4.17E+02	58.89	1.92E+01	5.24E+00	3.98E+02	5.91E+01
	14	383.34	1.38E+02	91.19			1.38E+02	9.12E+01
	15	463.73	5.19E+01	34.47			5.19E+01	3.45E+01
	16	511.24	1.35E+02	58.46	7.69E+01	5.30E+00	5.83E+01	5.87E+01
	17	583.48	2.34E+02	47.56	1.07E+01	3.54E+00	2.23E+02	4.77E+01
M	18	605.33	1.23E+01	5.96			1.23E+01	5.96E+00
m	19	609.67	3.52E+02	41.37	1.53E+01	4.10E+00	3.37E+02	4.16E+01
m	20	613.50	1.41E+01	28.35			1.41E+01	2.83E+01
M	21	724.14	1.66E+01	13.32			1.66E+01	1.33E+01
m	22	727.67	4.13E+01	26.03			4.13E+01	2.60E+01

0313

Analysis Report for 1905060-08

R2 6-12

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
23	760.37	1.55E+01	18.38			1.55E+01	1.84E+01
24	768.30	2.25E+01	24.71			2.25E+01	2.47E+01
25	785.72	2.50E+01	26.68			2.50E+01	2.67E+01
26	795.57	2.43E+01	20.45	0.00E+00	0.00E+00	2.43E+01	2.04E+01
27	912.42	1.45E+02	59.81	3.90E+00	2.73E+00	1.41E+02	5.99E+01
28	934.87	3.16E+01	17.73			3.16E+01	1.77E+01
29	941.49	1.44E+01	12.77	0.00E+00	0.00E+00	1.44E+01	1.28E+01
30	969.70	7.81E+01	34.55	1.44E+00	2.42E+00	7.66E+01	3.46E+01
31	1093.65	1.80E+01	22.09			1.80E+01	2.21E+01
M 32	1120.33	6.45E+01	28.07	2.74E+00	2.62E+00	6.18E+01	2.82E+01
m 33	1129.46	1.48E+01	18.65			1.48E+01	1.87E+01
m 34	1139.25	1.73E+01	20.86			1.73E+01	2.09E+01
35	1346.37	1.23E+01	15.93			1.23E+01	1.59E+01
36	1377.79	2.03E+01	23.17	9.57E-01	1.87E+00	1.94E+01	2.32E+01
37	1391.26	1.05E+01	9.84			1.05E+01	9.84E+00
38	1402.16	1.05E+01	10.63			1.05E+01	1.06E+01
39	1408.11	1.91E+01	12.33			1.91E+01	1.23E+01
40	1461.24	5.45E+02	50.48	8.88E+00	2.10E+00	5.36E+02	5.05E+01
41	1547.77	9.29E+00	9.59			9.29E+00	9.59E+00
42	1631.44	6.58E+00	9.21			6.58E+00	9.21E+00
43	1641.23	8.50E+00	8.51			8.50E+00	8.51E+00
44	1728.32	1.16E+01	8.73			1.16E+01	8.73E+00
45	1764.76	5.47E+01	18.97	3.76E+00	1.92E+00	5.10E+01	1.91E+01
M 46	2101.00	8.29E+00	6.36			8.29E+00	6.36E+00
m 47	2105.33	1.14E+01	10.61			1.14E+01	1.06E+01
48	2188.55	5.07E+00	6.34			5.07E+00	6.34E+00
49	2204.74	1.80E+01	9.80			1.80E+01	9.80E+00
50	2614.78	8.00E+01	17.89	5.68E+00	1.32E+00	7.43E+01	1.79E+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	0.995	1460.81	* 10.67	2.37E+01	3.25E+00
GA-67	0.690	93.31	* 35.70	3.17E+01	3.37E+01
		208.95	2.24		

0314

Analysis Report for 1905060-08

R2 6-12

<i>Nuclide Name</i>	<i>Id Confidence</i>	<i>Energy (keV)</i>	<i>Yield(%)</i>	<i>Activity (pCi/grams)</i>	<i>Activity Uncertainty</i>
GA-67	0.690	300.22 *	16.00	1.16E+02	6.83E+01
AG-108M	0.395	433.93	89.90		
		614.37 *	90.40	3.43E-02	6.91E-02
		722.95 *	90.50	4.59E-02	3.73E-02
CD-109	0.998	88.03 *	3.72	1.04E+00	1.11E+00
SN-126	0.999	87.57 *	37.00	1.01E-01	1.08E-01
CS-134	0.745	563.23	8.38		
		569.32	15.43		
		604.70 *	97.60	2.81E-02	1.39E-02
		795.84 *	85.40	7.94E-02	6.72E-02
		801.93	8.73		
TL-208	0.894	583.14 *	30.22	1.57E+00	3.71E-01
		860.37	4.48		
		2614.66 *	35.85	9.31E-01	2.33E-01
BI-212	0.768	727.17 *	11.80	8.82E-01	5.64E-01
		1620.62	2.75		
PB-212	0.991	238.63 *	44.60	1.47E+00	2.27E-01
		300.09 *	3.41	2.31E+00	1.36E+00
BI-214	0.997	609.31 *	46.30	1.59E+00	2.58E-01
		1120.29 *	15.10	1.53E+00	7.17E-01
		1764.49 *	15.80	1.69E+00	6.50E-01
		2204.22 *	4.98	1.89E+00	1.04E+00
PB-214	0.996	295.21 *	19.19	1.54E+00	3.63E-01
		351.92 *	37.19	1.64E+00	2.94E-01
RA-224	0.956	240.98 *	3.95	3.49E+00	1.36E+00
RA-226	1.000	186.21 *	3.28	3.20E+00	1.76E+00
AC-228	0.973	338.32 *	11.40	1.45E+00	7.47E-01
		911.07 *	27.70	1.57E+00	6.84E-01
		969.11 *	16.60	1.51E+00	6.98E-01
TH-234	0.996	63.29 *	3.80	4.65E+00	2.39E+00

* = Energy line found in the spectrum.

- = Manually added nuclide.

? = Manually edited nuclide.

Energy Tolerance : 2.000FWHM

Nuclide confidence index threshold = 0.30

Errors quoted at 2.000sigma

UNIDENTIFIED PEAKS

Peak Locate Performed on : 6/3/2019 8:55:13AM
 Peak Locate From Channel : 1
 Peak Locate To Channel : 4096

Analysis Report for 1905060-08

R2 6-12

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
2	76.71	2.41517E-01	6.77		
5	107.05	4.25263E-02	27.62	Tol.	EU-155 NP-239
9	274.66	4.09106E-02	28.54	Sum	
14	383.34	3.84507E-02	32.94	Sum	
15	463.73	1.44236E-02	33.19	Tol.	SB-125
16	511.24	1.61839E-02	50.37		
23	760.37	4.30556E-03	59.31		
24	768.30	6.24206E-03	54.99	Sum	
25	785.72	6.93318E-03	53.45	Tol.	SB-127
28	934.87	8.78472E-03	28.04	Sum	
29	941.49	3.98889E-03	44.45		
31	1093.65	4.98818E-03	61.51	Tol.	LU-172
m	33	1129.46	4.11135E-03	63.02	
m	34	1139.25	4.80927E-03	60.23	
	35	1346.37	3.41270E-03	64.83	
	36	1377.79	5.37948E-03	60.01	Sum
	37	1391.26	2.91667E-03	46.84	
	38	1402.16	2.92484E-03	50.48	Sum
	39	1408.11	5.29915E-03	32.31	Sum
	41	1547.77	2.57936E-03	51.65	Sum
	42	1631.44	1.82870E-03	69.92	
	43	1641.23	2.36111E-03	50.09	Sum
	44	1728.32	3.23413E-03	37.50	Sum
M	46	2101.00	2.30318E-03	38.38	
m	47	2105.33	3.16065E-03	46.61	S-Esc
	48	2188.55	1.40873E-03	62.55	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
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Analysis Report for 1905060-08

R2 6-12

Nuclide Name	Id Confidence	Energy (keV)	Yield(%)	Activity (pCi/grams)	Activity Uncertainty
K-40	0.99	1460.81 *	10.67	2.37E+01	3.25E+00
GA-67	0.69	93.31 *	35.70	3.17E+01	3.37E+01
		208.95	2.24		
		300.22 *	16.00	1.16E+02	6.83E+01
AG-108M	0.39	433.93	89.90		
		614.37 *	90.40	3.43E-02	6.91E-02
		722.95 *	90.50	4.59E-02	3.73E-02
CD-109	0.99	88.03 *	3.72	1.04E+00	1.11E+00
SN-126	0.99	87.57 *	37.00	1.01E-01	1.08E-01
CS-134	0.74	563.23	8.38		
		569.32	15.43		
		604.70 *	97.60	2.81E-02	1.39E-02
		795.84 *	85.40	7.94E-02	6.72E-02
		801.93	8.73		
TL-208	0.89	583.14 *	30.22	1.57E+00	3.71E-01
		860.37	4.48		
		2614.66 *	35.85	9.31E-01	2.33E-01
BI-212	0.76	727.17 *	11.80	8.82E-01	5.64E-01
		1620.62	2.75		
PB-212	0.99	238.63 *	44.60	1.47E+00	2.27E-01
		300.09 *	3.41	2.31E+00	1.36E+00
BI-214	0.99	609.31 *	46.30	1.59E+00	2.58E-01
		1120.29 *	15.10	1.53E+00	7.17E-01
		1764.49 *	15.80	1.69E+00	6.50E-01
		2204.22 *	4.98	1.89E+00	1.04E+00
PB-214	0.99	295.21 *	19.19	1.54E+00	3.63E-01
		351.92 *	37.19	1.64E+00	2.94E-01
RA-224	0.95	240.98 *	3.95	3.49E+00	1.36E+00
RA-226	1.00	186.21 *	3.28	3.20E+00	1.76E+00
AC-228	0.97	338.32 *	11.40	1.45E+00	7.47E-01
		911.07 *	27.70	1.57E+00	6.84E-01
		969.11 *	16.60	1.51E+00	6.98E-01
TH-234	0.99	63.29 *	3.80	4.65E+00	2.39E+00

* = Energy line found in the spectrum.

- = Manually added nuclide.

? = Manually edited nuclide.

@ = Energy line not used for Weighted Mean Activity

Energy Tolerance : 2.000FWHM

Nuclide confidence index threshold = 0.30

Errors quoted at 2.000sigma

INTERFERENCE CORRECTED REPORT

Analysis Report for 1905060-08

R2 6-12

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40	0.995	2.37E+01	3.25E+00	
GA-67	0.690	3.38E+01	3.03E+01	
AG-108M	0.395	4.33E-02	3.28E-02	
? CD-109	0.998	1.04E+00	1.11E+00	
? SN-126	0.999	1.01E-01	1.08E-01	
CS-134	0.745	3.03E-02	1.36E-02	
TL-208	0.894	1.11E+00	1.97E-01	
BI-212	0.768	8.82E-01	5.64E-01	
PB-212	0.991	1.47E+00	2.24E-01	
BI-214	0.997	1.61E+00	2.22E-01	
PB-214	0.996	1.60E+00	2.28E-01	
RA-224	0.956	3.49E+00	1.36E+00	
RA-226	1.000	3.20E+00	1.76E+00	
AC-228	0.973	1.51E+00	4.09E-01	
TH-234	0.996	4.65E+00	2.39E+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 2.00sigma

Analysis Report for 1905060-08

R2 6-12

UNIDENTIFIED PEAKS

Peak Locate Performed on : 6/3/2019 8:55:13AM

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	76.71	2.41517E-01	6.77		
5	107.05	4.25263E-02	27.62	Tol.	EU-155 NP-239
9	274.66	4.09106E-02	28.54	Sum	
14	383.34	3.84507E-02	32.94	Sum	
15	463.73	1.44236E-02	33.19	Tol.	SB-125
16	511.24	1.61839E-02	50.37		
23	760.37	4.30556E-03	59.31		
24	768.30	6.24206E-03	54.99	Sum	
25	785.72	6.93318E-03	53.45	Tol.	SB-127
28	934.87	8.78472E-03	28.04	Sum	
29	941.49	3.98889E-03	44.45		
31	1093.65	4.98818E-03	61.51	Tol.	LU-172
m	33	1129.46	4.11135E-03	63.02	
m	34	1139.25	4.80927E-03	60.23	
	35	1346.37	3.41270E-03	64.83	
	36	1377.79	5.37948E-03	60.01	Sum
	37	1391.26	2.91667E-03	46.84	
	38	1402.16	2.92484E-03	50.48	Sum
	39	1408.11	5.29915E-03	32.31	Sum
	41	1547.77	2.57936E-03	51.65	Sum
	42	1631.44	1.82870E-03	69.92	
	43	1641.23	2.36111E-03	50.09	Sum
	44	1728.32	3.23413E-03	37.50	Sum
M	46	2101.00	2.30318E-03	38.38	
m	47	2105.33	3.16065E-03	46.61	S-Esc
	48	2188.55	1.40873E-03	62.55	Sum

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 1905060-08

R2 6-12

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	-1.14E-01	9.20E-01	9.20E-01
+	NA-22	1274.54	99.94	-9.66E-02	1.12E-01	1.12E-01
+	NA-24	1368.53	99.99	-4.65E-03	3.84E-02	8.73E-02
		2754.09	99.86	8.28E-03		3.84E-02
+	AL-26	1808.65	99.76	-2.21E-02	5.71E-02	5.71E-02
+	K-40	1460.81	*	10.67	2.37E+01	1.59E+00
+	@ AR-41	1293.64	99.16	1.00E+26	1.00E+26	1.00E+26
+	TI-44	67.88	94.40	-1.21E-02	8.05E-02	8.05E-02
		78.34	96.00	1.47E-01		1.04E-01
+	SC-46	889.25	98.98	5.69E-02	1.31E-01	1.31E-01
		1120.51	99.90	2.58E-01		2.26E-01
+	V-48	983.52	99.98	-4.67E-02	2.89E-01	2.89E-01
		1312.10	97.50	1.23E-01		3.70E-01
+	CR-51	320.08	9.83	-5.28E-01	1.38E+00	1.38E+00
+	MN-54	834.83	99.97	-1.70E-02	1.04E-01	1.04E-01
+	CO-56	846.75	99.96	5.18E-02	1.34E-01	1.34E-01
		1037.75	14.03	3.78E-01		9.91E-01
		1238.25	67.00	8.94E-02		3.11E-01
		1771.40	15.51	1.71E-01		9.31E-01
		2587.48	16.90	5.79E-03		4.17E-01
+	CO-57	122.06	85.51	-3.77E-02	7.26E-02	7.26E-02
		136.48	10.60	2.62E-02		6.42E-01
+	CO-58	810.76	99.40	-6.93E-02	1.08E-01	1.08E-01
+	FE-59	1099.22	56.50	-6.31E-02	2.38E-01	2.38E-01
		1291.56	43.20	-9.24E-02		4.15E-01
+	CO-60	1173.22	100.00	9.86E-03	1.11E-01	1.28E-01
		1332.49	100.00	1.60E-02		1.11E-01
+	ZN-65	1115.52	50.75	-5.66E-01	2.65E-01	2.65E-01
+	GA-67	93.31	*	35.70	3.17E+01	5.36E+01
		208.95	2.24	5.87E+02		8.65E+02
		300.22	*	16.00	1.16E+02	2.95E+02
+	SE-75	121.11	16.70	-5.02E-02	1.24E-01	4.03E-01
		136.00	59.50	5.05E-03		1.24E-01
		264.65	59.80	-9.12E-03		1.37E-01
		279.53	25.20	1.68E-01		3.87E-01
		400.65	11.40	9.67E-02		7.45E-01
+	RB-82	776.52	13.00	-8.95E-01	1.32E+00	1.32E+00
+	RB-83	520.41	46.00	-1.24E-01	1.82E-01	1.82E-01
		529.64	30.30	-4.01E-03		2.75E-01
		552.65	16.40	1.11E-01		5.73E-01

Analysis Report for 1905060-08

R2 6-12

	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	KR-85	513.99	0.43	-2.22E+01	2.17E+01	2.17E+01
+	SR-85	513.99	99.27	-1.27E-01	1.24E-01	1.24E-01
+	Y-88	898.02	93.40	-2.58E-02	1.00E-01	1.16E-01
		1836.01	99.38	-3.32E-02		1.00E-01
+	MO-93	263.06	56.72	-7.05E-03	6.32E-02	1.23E-01
		684.67	99.68	3.35E-02		9.43E-02
		1477.11	99.08	-7.71E-02		6.32E-02
+	NB-93M	16.57	9.43	0.00E+00	9.98E+04	9.98E+04
+	NB-94	702.63	100.00	6.11E-02	9.38E-02	1.02E-01
		871.10	100.00	2.87E-02		9.38E-02
+	NB-95	765.79	99.81	7.67E-03	1.87E-01	1.87E-01
+	NB-95M	235.69	25.00	-3.65E+02	4.25E+01	4.25E+01
+	ZR-95	724.18	43.70	-4.75E-02	2.39E-01	3.57E-01
		756.72	55.30	-1.68E-02		2.39E-01
+	MO-99	181.06	6.20	2.61E+02	5.14E+02	7.58E+02
		739.58	12.80	1.83E+01		5.14E+02
		778.00	4.50	-5.09E+02		1.25E+03
+	TC-99M	140.51	89.00	1.39E-02	7.04E-02	7.04E-02
+	RU-103	497.08	89.00	3.40E-02	1.28E-01	1.28E-01
+	RU-106	621.84	9.80	3.40E-01	9.15E-01	9.15E-01
+	AG-108M	433.93	89.90	-2.71E-02	7.93E-02	7.93E-02
		614.37	* 90.40	3.43E-02		1.57E-01
		722.95	* 90.50	4.59E-02		1.21E-01
+	CD-109	88.03	* 3.72	1.04E+00	1.76E+00	1.76E+00
+	AG-110M	657.75	93.14	-1.08E-02	1.09E-01	1.09E-01
		677.61	10.53	2.61E-01		9.24E-01
		706.67	16.46	3.81E-02		6.41E-01
		763.93	21.98	2.25E-02		5.01E-01
		884.67	21.98	9.51E-02		5.07E-01
		1384.27	23.94	6.59E-02		4.20E-01
+	CD-113M	263.70	0.02	-1.74E+01	3.03E+02	3.03E+02
+	SN-113	255.12	1.93	1.93E-01	1.38E-01	4.42E+00
		391.69	64.90	1.40E-02		1.38E-01
+	TE-123M	159.00	84.10	-3.78E-02	9.23E-02	9.23E-02
+	SB-124	602.71	97.87	7.86E-03	1.07E-01	1.07E-01
		645.85	7.26	-7.20E-01		1.56E+00
		722.78	11.10	-4.45E-02		1.31E+00
		1691.02	49.00	-1.02E-01		1.86E-01
+	I-125	35.49	6.49	-1.31E+01	1.54E+01	1.54E+01
+	SB-125	176.33	6.89	1.32E-01	2.58E-01	1.00E+00
		427.89	29.33	-8.18E-02		2.58E-01
		463.38	10.35	1.05E+00		9.08E-01
		600.56	17.80	9.90E-02		4.53E-01
		635.90	11.32	3.41E-01		8.63E-01
+	SB-126	414.70	83.30	-2.48E-02	9.21E-02	9.34E-02
		666.33	99.60	-8.24E-03		9.93E-02
		695.00	99.60	-1.17E-02		9.21E-02
		720.50	53.80	-1.91E-02		1.92E-01

Analysis Report for 1905060-08

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	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	SN-126	87.57	*	37.00	1.01E-01	1.71E-01	1.71E-01
+	SB-127	473.00		25.00	6.03E+00	2.68E+01	2.88E+01
		685.00		35.70	9.54E+00		2.68E+01
		783.80		14.70	4.21E+00		8.14E+01
+	I-129	29.78		57.00	7.33E+00	4.20E+00	7.83E+00
		33.60		13.20	8.08E+00		1.06E+01
		39.58		7.52	-1.16E+00		4.20E+00
+	I-131	284.30		6.05	2.85E+00	8.50E-01	1.13E+01
		364.48		81.20	8.58E-02		8.50E-01
		636.97		7.26	-1.07E+00		1.14E+01
		722.89		1.80	-1.87E+00		5.49E+01
+	TE-132	49.72		13.10	-1.23E+02	2.07E+01	1.78E+02
		228.16		88.00	-3.15E+00		2.07E+01
+	BA-133	81.00		33.00	-8.21E-02	1.13E-01	1.95E-01
		302.84		17.80	1.56E-01		4.58E-01
		356.01		60.00	-5.03E-02		1.13E-01
+	I-133	529.87		86.30	-9.70E+05	6.65E+07	6.65E+07
+	XE-133	81.00		38.00	-2.12E+00	5.05E+00	5.05E+00
+	CS-134	563.23		8.38	-1.66E-01	1.05E-01	9.93E-01
		569.32		15.43	1.08E-01		5.43E-01
		604.70	*	97.60	2.81E-02		1.42E-01
		795.84	*	85.40	7.94E-02		1.05E-01
		801.93		8.73	-3.34E-01		1.10E+00
+	CS-135	268.24		16.00	6.71E-02	4.90E-01	4.90E-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	2.42E+00	3.56E-01	3.71E+00
		163.89		4.61	-8.26E-01		5.82E+00
		176.55		13.56	2.56E-01		1.94E+00
		273.65		12.66	-1.58E+00		2.43E+00
		340.57		48.50	1.50E+00		8.70E-01
		818.50		99.70	-2.14E-02		3.56E-01
		1048.07		79.60	-7.05E-02		5.03E-01
		1235.34		19.70	-2.52E+00		2.87E+00
+	CS-137	661.65		85.12	3.58E-03	1.17E-01	1.17E-01
+	LA-138	788.74		34.00	3.18E-02	1.37E-01	3.10E-01
		1435.80		66.00	3.74E-02		1.37E-01
+	CE-139	165.85		80.35	3.10E-02	9.80E-02	9.80E-02
+	BA-140	162.64		6.70	3.58E+00	1.17E+00	4.19E+00
		304.84		4.50	-1.99E-01		6.47E+00
		423.70		3.20	-1.93E+00		9.48E+00
		437.55		2.00	6.61E+00		1.49E+01
		537.32		25.00	3.07E-01		1.17E+00
+	LA-140	328.77		20.50	7.28E-01	4.37E-01	1.61E+00
		487.03		45.50	-7.37E-02		6.36E-01
		815.85		23.50	-1.62E-01		1.48E+00
		1596.49		95.49	-5.27E-02		4.37E-01
+	CE-141	145.44		48.40	5.97E-02	2.46E-01	2.46E-01

Analysis Report for 1905060-08

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	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	CE-143	57.36	11.80	-1.25E+05	1.09E+05	3.10E+05
		293.26	42.00	6.30E+04		1.09E+05
		664.55	5.20	3.99E+05		8.40E+05
+	CE-144	133.54	10.80	9.22E-02	6.35E-01	6.35E-01
		476.78	42.00	-1.21E-02	9.20E-02	1.76E-01
+	PM-144	618.01	98.60	2.77E-02		9.20E-02
		696.49	99.49	-3.24E-02		9.63E-02
		36.85	21.70	1.98E+00	1.29E+00	2.59E+00
+	PM-145	37.36	39.70	9.82E-01		1.29E+00
		42.30	15.10	3.43E-01		1.34E+00
		72.40	2.31	-1.70E-01		3.32E+00
		453.90	39.94	-4.28E-02	1.93E-01	1.93E-01
+	PM-146	735.90	14.01	-7.78E-02		6.82E-01
		747.13	13.10	2.44E-02		7.63E-01
		91.11	28.90	-1.38E+00	1.31E+00	1.31E+00
+	ND-147	531.02	13.10	2.69E-01		2.65E+00
		285.90	3.10	5.39E+02	7.60E+03	7.60E+03
+	EU-152	121.78	20.50	-1.47E-01	2.84E-01	2.84E-01
		244.69	5.40	3.23E-01		1.80E+00
		344.27	19.13	-3.58E-02		3.85E-01
		778.89	9.10	-3.94E-01		1.01E+00
		964.01	10.40	3.62E-01		1.30E+00
		1085.78	7.22	5.93E-01		1.53E+00
		1112.02	9.60	2.69E-01		1.14E+00
		1407.95	14.94	3.21E-01		8.14E-01
		97.43	31.30	5.13E-02	1.86E-01	1.86E-01
		103.18	22.20	-2.04E-01		2.65E-01
+	EU-154	123.07	40.50	-2.08E-03	1.47E-01	1.47E-01
		723.30	19.70	-8.14E-03		5.80E-01
		873.19	11.50	-8.37E-02		7.72E-01
		996.32	10.30	-7.74E-01		9.08E-01
		1004.76	17.90	-8.72E-02		6.16E-01
		1274.45	35.50	-2.68E-01		3.10E-01
+	EU-155	86.50	30.90	1.29E-01	2.53E-01	2.53E-01
		105.30	20.70	1.67E-01		2.93E-01
+	EU-156	811.77	10.40	-9.89E-01	2.64E+00	2.64E+00
		1153.47	7.20	1.73E-01		5.74E+00
		1230.71	8.90	1.32E+00		5.66E+00
+	HO-166M	184.41	72.60	-7.07E-03	1.19E-01	1.19E-01
		280.45	29.60	4.45E-02		2.70E-01
		410.94	11.10	1.10E-02		7.01E-01
		711.69	54.10	7.41E-02		1.85E-01
+	TM-171	66.72	0.14	2.20E+01	6.21E+01	6.21E+01
		67.35	5.31	-1.67E+00	5.66E-01	1.51E+00
+	HF-172	125.82	11.30	-6.67E-02		5.66E-01
		181.53	20.60	1.73E+00	2.62E+00	5.03E+00
		900.72	29.81	2.25E+00		4.95E+00
+	LU-172	1093.66	62.50	1.47E+00		2.62E+00
		100.72	5.24	2.91E-01	4.17E-01	1.02E+00

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Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)	
	LU-173	272.11	21.20	1.75E-01	4.17E-01	4.17E-01
+	HF-175	343.40	84.00	2.35E-03	1.14E-01	1.14E-01
+	LU-176	88.34	13.30	4.33E-01	7.65E-02	5.74E-01
		201.83	86.00	-2.63E-02		8.50E-02
		306.78	94.00	2.78E-02		7.65E-02
+	HF-181	133.02	41.70	3.40E-02	1.35E-01	2.34E-01
		345.85	17.20	2.66E-02		6.55E-01
		482.03	82.80	-6.83E-03		1.35E-01
+	TA-182	67.75	41.20	-3.25E-02	2.16E-01	2.16E-01
		1121.30	34.90	8.79E-01		6.18E-01
		1189.05	16.23	-5.96E-01		9.16E-01
		1221.41	26.98	-1.07E-01		5.51E-01
		1231.02	11.44	3.71E-01		1.59E+00
+	IR-192	308.46	29.68	1.56E-02	1.73E-01	3.08E-01
		468.07	48.10	-4.31E-03		1.73E-01
+	HG-203	279.19	77.30	6.90E-02	1.59E-01	1.59E-01
+	TL-204	374.74	94.11	5.29E-02	8.04E-02	8.04E-02
		899.15	99.16	3.61E-02		1.03E-01
		911.74	91.10	4.60E-01		2.15E-01
+	BI-207	569.67	97.72	1.67E-02	8.39E-02	8.39E-02
		1063.62	74.90	3.67E-02		1.55E-01
+	TL-208	583.14	* 30.22	1.57E+00	1.36E-01	4.48E-01
		860.37	4.48	8.47E-01		2.56E+00
		2614.66	* 35.85	9.31E-01		1.36E-01
+	BI-210M	262.00	45.00	-8.46E-03	1.53E-01	1.53E-01
		300.00	23.00	2.09E-01		3.54E-01
+	PB-210	46.50	4.25	3.14E+00	3.32E+00	3.32E+00
+	PB-211	404.84	2.90	1.58E-01	2.75E+00	2.75E+00
		831.96	2.90	3.91E-02		3.31E+00
+	BI-212	727.17	* 11.80	8.82E-01	9.87E-01	9.87E-01
		1620.62	2.75	-1.76E-01		3.58E+00
+	PB-212	238.63	* 44.60	1.47E+00	3.33E-01	3.33E-01
		300.09	* 3.41	2.31E+00		5.87E+00
+	BI-214	609.31	* 46.30	1.59E+00	3.13E-01	3.13E-01
		1120.29	* 15.10	1.53E+00		2.31E+00
		1764.49	* 15.80	1.69E+00		7.81E-01
		2204.22	* 4.98	1.89E+00		1.14E+00
+	PB-214	295.21	* 19.19	1.54E+00	3.06E-01	1.04E+00
		351.92	* 37.19	1.64E+00		3.06E-01
+	RN-219	401.80	6.50	1.78E-01	1.13E+00	1.13E+00
+	RA-223	323.87	3.88	-6.03E-01	1.87E+00	1.87E+00
+	RA-224	240.98	* 3.95	3.49E+00	3.80E+00	3.80E+00
+	RA-225	40.00	31.00	3.80E-01	3.15E+00	3.15E+00
+	RA-226	186.21	* 3.28	3.20E+00	2.76E+00	2.76E+00
+	TH-227	50.10	8.40	4.55E-01	9.61E-01	1.15E+00
		236.00	11.50	-5.32E+00		9.61E-01
		256.20	6.30	3.77E-01		1.16E+00
+	AC-228	338.32	* 11.40	1.45E+00	1.02E+00	1.15E+00

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	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	AC-228	911.07	*	27.70	1.57E+00	1.02E+00	1.04E+00
		969.11	*	16.60	1.51E+00		1.02E+00
+	TH-230	48.43		16.90	3.73E-01	7.12E-01	7.12E-01
		62.85		4.60	2.41E+00		2.07E+00
		67.67		0.37	-2.32E+01		2.10E+01
+	PA-231	283.67		1.60	3.12E+00	3.53E+00	4.71E+00
		302.67		2.30	1.20E+00		3.53E+00
+	TH-231	25.64		14.70	0.00E+00	1.06E+00	5.51E+00
		84.21		6.40	6.73E-01		1.06E+00
+	PA-233	311.98		38.60	-2.23E-02	3.46E-01	3.46E-01
+	PA-234	131.20		20.40	9.61E-02	3.22E-01	3.22E-01
		733.99		8.80	5.27E-01		1.11E+00
		946.00		12.00	-2.16E-01		7.38E-01
+	PA-234M	1001.03		0.92	5.94E+00	1.28E+01	1.28E+01
+	TH-234	63.29	*	3.80	4.65E+00	3.75E+00	3.75E+00
+	U-235	143.76		10.50	-3.58E-02	6.30E-01	6.30E-01
		163.35		4.70	-2.62E-01		1.46E+00
		205.31		4.70	5.48E-01		1.66E+00
+	NP-237	86.50		12.60	3.12E-01	6.15E-01	6.15E-01
+	NP-239	106.10		22.70	1.50E+02	5.22E+02	5.22E+02
		228.18		10.70	-2.11E+02		1.38E+03
		277.60		14.10	1.39E+03		1.20E+03
+	AM-241	59.54		35.90	-2.48E-03	2.42E-01	2.42E-01
+	AM-243	74.67		66.00	-4.26E-01	1.42E-01	1.42E-01
+	CM-243	209.75		3.29	1.70E+00	6.28E-01	2.51E+00
		228.14		10.60	-1.11E-01		7.27E-01
		277.60		14.00	7.25E-01		6.28E-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

0325

Analysis Report for 1905060-08

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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	9.20E-01	9.20E-01	-1.14E-01	4.26E-01
NA-22	1274.54	99.94	1.12E-01	1.12E-01	-9.66E-02	5.00E-02
NA-24	1368.53	99.99	8.73E-02	3.84E-02	-4.65E-03	3.76E-02
	2754.09	99.86	3.84E-02		8.28E-03	1.36E-02
AL-26	1808.65	99.76	5.71E-02	5.71E-02	-2.21E-02	2.14E-02
+ K-40	1460.81	*	10.67	1.59E+00	2.37E+01	7.34E-01
@ AR-41	1293.64		1.00E+26	1.00E+26	1.00E+26	1.00E+20
TI-44	67.88	94.40	8.05E-02	8.05E-02	-1.21E-02	3.92E-02
	78.34	96.00	1.04E-01		1.47E-01	5.11E-02
SC-46	889.25	98.98	1.31E-01	1.31E-01	5.69E-02	6.06E-02
	1120.51	99.90	2.26E-01		2.58E-01	1.07E-01
V-48	983.52	99.98	2.89E-01	2.89E-01	-4.67E-02	1.31E-01
	1312.10	97.50	3.70E-01		1.23E-01	1.67E-01
CR-51	320.08	9.83	1.38E+00	1.38E+00	-5.28E-01	6.52E-01
MN-54	834.83	99.97	1.04E-01	1.04E-01	-1.70E-02	4.80E-02
CO-56	846.75	99.96	1.34E-01	1.34E-01	5.18E-02	6.22E-02
	1037.75	14.03	9.91E-01		3.78E-01	4.52E-01
	1238.25	67.00	3.11E-01		8.94E-02	1.45E-01
	1771.40	15.51	9.31E-01		1.71E-01	4.06E-01
	2587.48	16.90	4.17E-01		5.79E-03	1.62E-01
CO-57	122.06	85.51	7.26E-02	7.26E-02	-3.77E-02	3.51E-02
	136.48	10.60	6.42E-01		2.62E-02	3.10E-01
CO-58	810.76	99.40	1.08E-01	1.08E-01	-6.93E-02	4.93E-02
FE-59	1099.22	56.50	2.38E-01	2.38E-01	-6.31E-02	1.06E-01
	1291.56	43.20	4.15E-01		-9.24E-02	1.87E-01
CO-60	1173.22	100.00	1.28E-01	1.11E-01	9.86E-03	5.88E-02
	1332.49	100.00	1.11E-01		1.60E-02	4.93E-02
ZN-65	1115.52	50.75	2.65E-01	2.65E-01	-5.66E-01	1.22E-01
+ GA-67	93.31	*	35.70	5.36E+01	3.17E+01	2.62E+01
	208.95	2.24	8.65E+02		5.87E+02	4.17E+02
	300.22	*	16.00		1.16E+02	1.45E+02
SE-75	121.11	16.70	4.03E-01	1.24E-01	-5.02E-02	1.94E-01
	136.00	59.50	1.24E-01		5.05E-03	5.99E-02
	264.65	59.80	1.37E-01		-9.12E-03	6.50E-02
	279.53	25.20	3.87E-01		1.68E-01	1.85E-01
	400.65	11.40	7.45E-01		9.67E-02	3.50E-01
RB-82	776.52	13.00	1.32E+00	1.32E+00	-8.95E-01	6.06E-01
RB-83	520.41	46.00	1.82E-01	1.82E-01	-1.24E-01	8.42E-02
	529.64	30.30	2.75E-01		-4.01E-03	1.27E-01
	552.65	16.40	5.73E-01		1.11E-01	2.66E-01
KR-85	513.99	0.43	2.17E+01	2.17E+01	-2.22E+01	1.02E+01
SR-85	513.99	99.27	1.24E-01	1.24E-01	-1.27E-01	5.86E-02
Y-88	898.02	93.40	1.16E-01	1.00E-01	-2.58E-02	5.29E-02
	1836.01	99.38	1.00E-01		-3.32E-02	4.16E-02
MO-93	263.06	56.72	1.23E-01	6.32E-02	-7.05E-03	5.84E-02
	684.67	99.68	9.43E-02		3.35E-02	4.39E-02
	1477.11	99.08	6.32E-02		-7.71E-02	2.51E-02
NB-93M	16.57	9.43	9.98E+04	9.98E+04	0.00E+00	0.00E+00
NB-94	702.63	100.00	1.02E-01	9.38E-02	6.11E-02	4.76E-02
	871.10	100.00	9.38E-02		2.87E-02	4.29E-02
NB-95	765.79	99.81	1.87E-01	1.87E-01	7.67E-03	8.77E-02

Analysis Report for 1905060-08

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Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
NB-95M	235.69	25.00	4.25E+01	4.25E+01	-3.65E+02	2.04E+01
ZR-95	724.18	43.70	3.57E-01	2.39E-01	-4.75E-02	1.68E-01
	756.72	55.30	2.39E-01		-1.68E-02	1.11E-01
MO-99	181.06	6.20	7.58E+02	5.14E+02	2.61E+02	3.65E+02
	739.58	12.80	5.14E+02		1.83E+01	2.39E+02
	778.00	4.50	1.25E+03		-5.09E+02	5.73E+02
TC-99M	140.51	89.00	7.04E-02	7.04E-02	1.39E-02	3.40E-02
RU-103	497.08	89.00	1.28E-01	1.28E-01	3.40E-02	5.93E-02
RU-106	621.84	9.80	9.15E-01	9.15E-01	3.40E-01	4.25E-01
+ AG-108M	433.93	89.90	7.93E-02	7.93E-02	-2.71E-02	3.70E-02
	614.37	* 90.40	1.57E-01		3.43E-02	7.51E-02
	722.95	* 90.50	1.21E-01		4.59E-02	5.68E-02
+ CD-109	88.03	* 3.72	1.76E+00	1.76E+00	1.04E+00	8.57E-01
AG-110M	657.75	93.14	1.09E-01	1.09E-01	-1.08E-02	5.10E-02
	677.61	10.53	9.24E-01		2.61E-01	4.29E-01
	706.67	16.46	6.41E-01		3.81E-02	2.99E-01
	763.93	21.98	5.01E-01		2.25E-02	2.33E-01
	884.67	21.98	5.07E-01		9.51E-02	2.33E-01
	1384.27	23.94	4.20E-01		6.59E-02	1.83E-01
CD-113M	263.70	0.02	3.03E+02	3.03E+02	-1.74E+01	1.44E+02
SN-113	255.12	1.93	4.42E+00	1.38E-01	1.93E-01	2.11E+00
	391.69	64.90	1.38E-01		1.40E-02	6.50E-02
TE-123M	159.00	84.10	9.23E-02	9.23E-02	-3.78E-02	4.45E-02
SB-124	602.71	97.87	1.07E-01	1.07E-01	7.86E-03	4.95E-02
	645.85	7.26	1.56E+00		-7.20E-01	7.24E-01
	722.78	11.10	1.31E+00		-4.45E-02	6.11E-01
	1691.02	49.00	1.86E-01		-1.02E-01	7.36E-02
I-125	35.49	6.49	1.54E+01	1.54E+01	-1.31E+01	7.44E+00
SB-125	176.33	6.89	1.00E+00	2.58E-01	1.32E-01	4.83E-01
	427.89	29.33	2.58E-01		-8.18E-02	1.21E-01
	463.38	10.35	9.08E-01		1.05E+00	4.30E-01
	600.56	17.80	4.53E-01		9.90E-02	2.10E-01
	635.90	11.32	8.63E-01		3.41E-01	4.04E-01
SB-126	414.70	83.30	9.34E-02	9.21E-02	-2.48E-02	4.39E-02
	666.33	99.60	9.93E-02		-8.24E-03	4.65E-02
	695.00	99.60	9.21E-02		-1.17E-02	4.28E-02
	720.50	53.80	1.92E-01		-1.91E-02	8.98E-02
+ SN-126	87.57	* 37.00	1.71E-01	1.71E-01	1.01E-01	8.30E-02
SB-127	473.00	25.00	2.88E+01	2.68E+01	6.03E+00	1.34E+01
	685.00	35.70	2.68E+01		9.54E+00	1.25E+01
	783.80	14.70	8.14E+01		4.21E+00	3.82E+01
I-129	29.78	57.00	7.83E+00	4.20E+00	7.33E+00	3.81E+00
	33.60	13.20	1.06E+01		8.08E+00	5.17E+00
	39.58	7.52	4.20E+00		-1.16E+00	2.02E+00
I-131	284.30	6.05	1.13E+01	8.50E-01	2.85E+00	5.40E+00
	364.48	81.20	8.50E-01		8.58E-02	4.01E-01
	636.97	7.26	1.14E+01		-1.07E+00	5.32E+00
	722.89	1.80	5.49E+01		-1.87E+00	2.57E+01
TE-132	49.72	13.10	1.78E+02	2.07E+01	-1.23E+02	8.56E+01
	228.16	88.00	2.07E+01		-3.15E+00	9.93E+00
BA-133	81.00	33.00	1.95E-01	1.13E-01	-8.21E-02	9.49E-02
	302.84	17.80	4.58E-01		1.56E-01	2.19E-01
	356.01	60.00	1.13E-01		-5.03E-02	5.32E-02

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Analysis Report for 1905060-08

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Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
I-133	529.87	86.30	6.65E+07	6.65E+07	-9.70E+05	3.06E+07
XE-133	81.00	38.00	5.05E+00	5.05E+00	-2.12E+00	2.45E+00
+ CS-134	563.23	8.38	9.93E-01	1.05E-01	-1.66E-01	4.62E-01
	569.32	15.43	5.43E-01		1.08E-01	2.53E-01
	604.70	* 97.60	1.42E-01		2.81E-02	6.77E-02
	795.84	* 85.40	1.05E-01		7.94E-02	4.81E-02
	801.93	8.73	1.10E+00		-3.34E-01	5.07E-01
CS-135	268.24	16.00	4.90E-01	4.90E-01	6.71E-02	2.34E-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	3.71E+00	3.56E-01	2.42E+00	1.80E+00
	163.89	4.61	5.82E+00		-8.26E-01	2.81E+00
	176.55	13.56	1.94E+00		2.56E-01	9.35E-01
	273.65	12.66	2.43E+00		-1.58E+00	1.16E+00
	340.57	48.50	8.70E-01		1.50E+00	4.19E-01
	818.50	99.70	3.56E-01		-2.14E-02	1.63E-01
	1048.07	79.60	5.03E-01		-7.05E-02	2.28E-01
	1235.34	19.70	2.87E+00		-2.52E+00	1.33E+00
CS-137	661.65	85.12	1.17E-01	1.17E-01	3.58E-03	5.49E-02
LA-138	788.74	34.00	3.10E-01	1.37E-01	3.18E-02	1.44E-01
	1435.80	66.00	1.37E-01		3.74E-02	5.91E-02
CE-139	165.85	80.35	9.80E-02	9.80E-02	3.10E-02	4.73E-02
BA-140	162.64	6.70	4.19E+00	1.17E+00	3.58E+00	2.02E+00
	304.84	4.50	6.47E+00		-1.99E-01	3.07E+00
	423.70	3.20	9.48E+00		-1.93E+00	4.45E+00
	437.55	2.00	1.49E+01		6.61E+00	6.98E+00
	537.32	25.00	1.17E+00		3.07E-01	5.40E-01
LA-140	328.77	20.50	1.61E+00	4.37E-01	7.28E-01	7.66E-01
	487.03	45.50	6.36E-01		-7.37E-02	2.96E-01
	815.85	23.50	1.48E+00		-1.62E-01	6.75E-01
	1596.49	95.49	4.37E-01		-5.27E-02	1.90E-01
CE-141	145.44	48.40	2.46E-01	2.46E-01	5.97E-02	1.19E-01
CE-143	57.36	11.80	3.10E+05	1.09E+05	-1.25E+05	1.50E+05
	293.26	42.00	1.09E+05		6.30E+04	5.27E+04
	664.55	5.20	8.40E+05		3.99E+05	3.94E+05
CE-144	133.54	10.80	6.35E-01	6.35E-01	9.22E-02	3.07E-01
PM-144	476.78	42.00	1.76E-01	9.20E-02	-1.21E-02	8.17E-02
	618.01	98.60	9.20E-02		2.77E-02	4.28E-02
	696.49	99.49	9.63E-02		-3.24E-02	4.47E-02
PM-145	36.85	21.70	2.59E+00	1.29E+00	1.98E+00	1.25E+00
	37.36	39.70	1.29E+00		9.82E-01	6.22E-01
	42.30	15.10	1.34E+00		3.43E-01	6.42E-01
	72.40	2.31	3.32E+00		-1.70E-01	1.62E+00
PM-146	453.90	39.94	1.93E-01	1.93E-01	-4.28E-02	9.03E-02
	735.90	14.01	6.82E-01		-7.78E-02	3.16E-01
	747.13	13.10	7.63E-01		2.44E-02	3.55E-01
ND-147	91.11	28.90	1.31E+00	1.31E+00	-1.38E+00	6.39E-01
	531.02	13.10	2.65E+00		2.69E-01	1.22E+00
PM-149	285.90	3.10	7.60E+03	7.60E+03	5.39E+02	3.62E+03
EU-152	121.78	20.50	2.84E-01	2.84E-01	-1.47E-01	1.37E-01
	244.69	5.40	1.80E+00		3.23E-01	8.71E-01
	344.27	19.13	3.85E-01		-3.58E-02	1.82E-01

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Analysis Report for 1905060-08

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Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
EU-152	778.89	9.10	1.01E+00	2.84E-01	-3.94E-01	4.65E-01
	964.01	10.40	1.30E+00		3.62E-01	6.05E-01
	1085.78	7.22	1.53E+00		5.93E-01	6.95E-01
	1112.02	9.60	1.14E+00		2.69E-01	5.19E-01
	1407.95	14.94	8.14E-01		3.21E-01	3.65E-01
GD-153	97.43	31.30	1.86E-01	1.86E-01	5.13E-02	9.01E-02
	103.18	22.20	2.65E-01		-2.04E-01	1.28E-01
EU-154	123.07	40.50	1.47E-01	1.47E-01	-2.08E-03	7.11E-02
	723.30	19.70	5.80E-01		-8.14E-03	2.73E-01
	873.19	11.50	7.72E-01		-8.37E-02	3.51E-01
	996.32	10.30	9.08E-01		-7.74E-01	4.10E-01
	1004.76	17.90	6.16E-01		-8.72E-02	2.83E-01
EU-155	1274.45	35.50	3.10E-01	2.53E-01	-2.68E-01	1.39E-01
	86.50	30.90	2.53E-01		1.29E-01	1.24E-01
EU-156	105.30	20.70	2.93E-01	2.64E+00	1.67E-01	1.42E-01
	811.77	10.40	2.64E+00		-9.89E-01	1.20E+00
HO-166M	1153.47	7.20	5.74E+00	1.19E-01	1.73E-01	2.64E+00
	1230.71	8.90	5.66E+00		1.32E+00	2.63E+00
	184.41	72.60	1.19E-01		-7.07E-03	5.76E-02
TM-171	280.45	29.60	2.70E-01	6.21E+01	4.45E-02	1.29E-01
	410.94	11.10	7.01E-01		1.10E-02	3.30E-01
	711.69	54.10	1.85E-01		7.41E-02	8.64E-02
HF-172	66.72	0.14	6.21E+01	5.66E-01	2.20E+01	3.03E+01
	67.35	5.31	1.51E+00		-1.67E+00	7.34E-01
LU-172	125.82	11.30	5.66E-01	2.62E+00	-6.67E-02	2.74E-01
	181.53	20.60	5.03E+00		1.73E+00	2.42E+00
	900.72	29.81	4.95E+00		2.25E+00	2.28E+00
LU-173	1093.66	62.50	2.62E+00	4.17E-01	1.47E+00	1.20E+00
	100.72	5.24	1.02E+00		2.91E-01	4.93E-01
HF-175	272.11	21.20	4.17E-01	1.14E-01	1.75E-01	2.00E-01
	343.40	84.00	1.14E-01		2.35E-03	5.40E-02
LU-176	88.34	13.30	5.74E-01	7.65E-02	4.33E-01	2.80E-01
	201.83	86.00	8.50E-02		-2.63E-02	4.08E-02
	306.78	94.00	7.65E-02		2.78E-02	3.63E-02
HF-181	133.02	41.70	2.34E-01	1.35E-01	3.40E-02	1.13E-01
	345.85	17.20	6.55E-01		2.66E-02	3.09E-01
	482.03	82.80	1.35E-01		-6.83E-03	6.30E-02
TA-182	67.75	41.20	2.16E-01	2.16E-01	-3.25E-02	1.05E-01
	1121.30	34.90	6.18E-01		8.79E-01	2.92E-01
	1189.05	16.23	9.16E-01		-5.96E-01	4.19E-01
	1221.41	26.98	5.51E-01		-1.07E-01	2.52E-01
	1231.02	11.44	1.59E+00		3.71E-01	7.39E-01
IR-192	308.46	29.68	3.08E-01	1.73E-01	1.56E-02	1.46E-01
	468.07	48.10	1.73E-01		-4.31E-03	8.00E-02
HG-203	279.19	77.30	1.59E-01	1.59E-01	6.90E-02	7.63E-02
TL-204	374.74	94.11	8.04E-02	8.04E-02	5.29E-02	3.79E-02
	899.15	99.16	1.03E-01		3.61E-02	4.74E-02
	911.74	91.10	2.15E-01		4.60E-01	1.03E-01
BI-207	569.67	97.72	8.39E-02	8.39E-02	1.67E-02	3.91E-02
	1063.62	74.90	1.55E-01		3.67E-02	7.10E-02
+ TL-208	583.14	*	30.22	1.36E-01	1.57E+00	2.14E-01
	860.37		4.48		8.47E-01	1.19E+00
	2614.66	*	35.85		9.31E-01	5.10E-02

Analysis Report for 1905060-08

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Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
BI-210M	262.00	45.00	1.53E-01	1.53E-01	-8.46E-03	7.25E-02
	300.00	23.00	3.54E-01		2.09E-01	1.69E-01
PB-210	46.50	4.25	3.32E+00	3.32E+00	3.14E+00	1.60E+00
PB-211	404.84	2.90	2.75E+00	2.75E+00	1.58E-01	1.30E+00
	831.96	2.90	3.31E+00		3.91E-02	1.52E+00
+ BI-212	727.17 *	11.80	9.87E-01	9.87E-01	8.82E-01	4.65E-01
	1620.62	2.75	3.58E+00		-1.76E-01	1.54E+00
+ PB-212	238.63 *	44.60	3.33E-01	3.33E-01	1.47E+00	1.63E-01
	300.09 *	3.41	5.87E+00		2.31E+00	2.88E+00
+ BI-214	609.31 *	46.30	3.13E-01	3.13E-01	1.59E+00	1.50E-01
	1120.29 *	15.10	2.31E+00		1.53E+00	1.12E+00
	1764.49 *	15.80	7.81E-01		1.69E+00	3.46E-01
	2204.22 *	4.98	1.14E+00		1.89E+00	4.25E-01
+ PB-214	295.21 *	19.19	1.04E+00	3.06E-01	1.54E+00	5.09E-01
	351.92 *	37.19	3.06E-01		1.64E+00	1.47E-01
RN-219	401.80	6.50	1.13E+00	1.13E+00	1.78E-01	5.30E-01
RA-223	323.87	3.88	1.87E+00	1.87E+00	-6.03E-01	8.83E-01
+ RA-224	240.98 *	3.95	3.80E+00	3.80E+00	3.49E+00	1.86E+00
RA-225	40.00	31.00	3.15E+00	3.15E+00	3.80E-01	1.52E+00
+ RA-226	186.21 *	3.28	2.76E+00	2.76E+00	3.20E+00	1.34E+00
TH-227	50.10	8.40	1.15E+00	9.61E-01	4.55E-01	5.52E-01
	236.00	11.50	9.61E-01		-5.32E+00	4.67E-01
	256.20	6.30	1.16E+00		3.77E-01	5.54E-01
+ AC-228	338.32 *	11.40	1.15E+00	1.02E+00	1.45E+00	5.57E-01
	911.07 *	27.70	1.04E+00		1.57E+00	5.03E-01
	969.11 *	16.60	1.02E+00		1.51E+00	4.83E-01
TH-230	48.43	16.90	7.12E-01	7.12E-01	3.73E-01	3.43E-01
	62.85	4.60	2.07E+00		2.41E+00	1.01E+00
	67.67	0.37	2.10E+01		-2.32E+01	1.02E+01
PA-231	283.67	1.60	4.71E+00	3.53E+00	3.12E+00	2.24E+00
	302.67	2.30	3.53E+00		1.20E+00	1.68E+00
TH-231	25.64	14.70	5.51E+00	1.06E+00	0.00E+00	0.00E+00
	84.21	6.40	1.06E+00		6.73E-01	5.17E-01
PA-233	311.98	38.60	3.46E-01	3.46E-01	-2.23E-02	1.64E-01
PA-234	131.20	20.40	3.22E-01	3.22E-01	9.61E-02	1.56E-01
	733.99	8.80	1.11E+00		5.27E-01	5.15E-01
	946.00	12.00	7.38E-01		-2.16E-01	3.33E-01
PA-234M	1001.03	0.92	1.28E+01	1.28E+01	5.94E+00	5.89E+00
+ TH-234	63.29 *	3.80	3.75E+00	3.75E+00	4.65E+00	1.85E+00
U-235	143.76	10.50	6.30E-01	6.30E-01	-3.58E-02	3.04E-01
	163.35	4.70	1.46E+00		-2.62E-01	7.06E-01
	205.31	4.70	1.66E+00		5.48E-01	8.00E-01
NP-237	86.50	12.60	6.15E-01	6.15E-01	3.12E-01	3.00E-01
NP-239	106.10	22.70	5.22E+02	5.22E+02	1.50E+02	2.53E+02
	228.18	10.70	1.38E+03		-2.11E+02	6.64E+02
	277.60	14.10	1.20E+03		1.39E+03	5.76E+02
AM-241	59.54	35.90	2.42E-01	2.42E-01	-2.48E-03	1.18E-01
AM-243	74.67	66.00	1.42E-01	1.42E-01	-4.26E-01	6.98E-02
CM-243	209.75	3.29	2.51E+00	6.28E-01	1.70E+00	1.21E+00
	228.14	10.60	7.27E-01		-1.11E-01	3.48E-01
	277.60	14.00	6.28E-01		7.25E-01	3.01E-01

Analysis Report for 1905060-08

R2 6-12

-
- + = 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: 11 12 12 14 13 21 20 23

Sample Title: R2 6-12

Channel	1	2	3	4	5	6	7	8
377:	12	19	15	17	17	22	26	20
385:	18	26	15	25	19	23	22	14
393:	13	13	16	16	16	14	17	12
401:	19	18	14	15	23	25	18	15
409:	14	26	23	12	13	15	21	26
417:	21	10	12	18	9	19	17	22
425:	12	23	16	12	13	17	17	14
433:	10	17	15	12	15	17	14	7
441:	11	13	12	21	17	13	12	15
449:	18	8	14	19	13	15	13	17
457:	21	9	15	7	12	23	28	32
465:	13	11	7	12	8	13	11	14
473:	12	13	9	12	8	16	10	13
481:	10	12	14	14	15	11	15	11
489:	7	13	11	10	13	10	9	10
497:	12	12	15	9	7	11	11	15
505:	9	12	17	14	18	59	65	36
513:	16	12	17	15	15	13	12	3
521:	10	10	14	14	11	7	9	9
529:	9	11	8	10	9	11	6	15
537:	13	10	8	10	5	11	9	11
545:	10	19	7	14	6	5	11	13
553:	9	18	8	11	12	14	12	10
561:	14	9	13	16	10	11	20	12
569:	10	12	8	14	8	8	20	9
577:	9	13	13	13	16	42	143	62
585:	15	7	4	12	11	5	13	9
593:	7	15	7	9	12	13	5	12
601:	15	8	9	7	15	10	9	59
609:	191	114	8	8	15	9	11	4
617:	10	13	10	5	8	9	4	10
625:	8	4	14	9	10	15	9	15
633:	18	6	11	7	14	2	6	6
641:	11	7	7	9	4	10	8	9
649:	14	9	10	7	8	11	12	7
657:	10	11	3	13	11	13	13	10
665:	13	11	8	5	12	13	7	5
673:	6	14	9	3	9	9	9	5
681:	8	7	11	3	12	9	11	6
689:	7	10	11	8	14	9	6	4
697:	5	9	9	11	9	8	13	13
705:	7	6	6	7	12	11	7	8
713:	8	13	12	4	5	11	8	18
721:	4	8	15	9	13	17	25	20
729:	10	8	5	5	7	6	11	17
737:	5	4	11	9	6	11	10	8
745:	10	7	8	8	7	11	7	6
753:	8	11	12	7	2	7	12	8
761:	14	6	9	9	4	11	12	23
769:	7	4	9	5	10	4	5	3
777:	8	5	5	11	9	7	13	9
785:	16	12	8	7	2	8	8	7
793:	6	11	21	8	2	5	4	9

801: 6 11 7 4 14 7 6 6

Sample Title: R2 6-12

Channel	1	2	3	4	5	6	7	8
809:	6	4	4	4	5	7	5	9
817:	6	1	8	6	7	4	9	7
825:	5	3	8	8	3	8	9	4
833:	8	5	8	6	7	4	14	9
841:	9	3	9	4	9	8	5	10
849:	7	5	5	8	4	9	7	7
857:	7	6	6	16	13	8	6	5
865:	9	1	5	4	6	4	8	8
873:	4	3	4	3	3	8	7	4
881:	6	9	4	8	5	10	5	6
889:	6	10	7	4	5	2	5	4
897:	6	4	5	9	10	5	6	3
905:	5	1	6	8	14	35	68	26
913:	10	6	5	6	12	5	9	12
921:	4	5	7	5	7	8	4	3
929:	10	4	3	4	7	19	11	2
937:	2	1	3	7	6	7	1	3
945:	6	4	5	3	5	9	7	6
953:	3	6	5	10	3	9	2	7
961:	10	7	15	11	8	11	13	28
969:	35	15	10	8	4	4	3	5
977:	1	3	6	7	3	1	6	8
985:	2	4	7	4	2	3	7	7
993:	1	3	6	6	4	6	3	8
1001:	8	10	9	3	3	4	4	5
1009:	9	3	4	2	8	5	3	7
1017:	3	6	8	7	7	7	4	7
1025:	5	9	4	5	6	3	2	3
1033:	3	9	3	7	4	2	5	7
1041:	7	1	6	5	3	2	4	10
1049:	1	8	7	7	7	7	5	6
1057:	4	8	6	10	5	8	4	3
1065:	8	3	5	2	4	7	8	6
1073:	1	8	6	9	2	4	2	3
1081:	3	10	5	4	3	3	7	3
1089:	4	3	5	9	10	3	4	4
1097:	2	3	2	5	2	4	9	1
1105:	3	1	3	3	3	8	7	3
1113:	4	5	8	10	4	10	27	25
1121:	21	7	4	6	2	4	2	10
1129:	5	5	7	4	7	4	2	5
1137:	8	4	11	5	4	5	2	3
1145:	3	5	8	7	5	4	3	6
1153:	9	6	7	8	5	7	9	10
1161:	8	8	3	6	3	6	8	3
1169:	5	1	13	4	6	7	5	4
1177:	7	3	2	6	7	7	7	6
1185:	4	6	3	9	7	7	4	11
1193:	10	5	6	6	3	3	7	11
1201:	5	7	2	8	5	2	6	5
1209:	1	13	4	11	5	5	2	5
1217:	2	7	1	10	5	4	1	10
1225:	10	7	9	9	11	8	6	4

1233: 11 4 8 7 10 15 12 6

Sample Title: R2 6-12

Channel	1	2	3	4	5	6	7	8
1241:	10	4	11	5	6	10	5	6
1249:	10	2	4	4	4	6	5	6
1257:	2	3	4	2	4	4	3	3
1265:	7	4	4	3	4	6	3	3
1273:	6	3	5	3	2	8	8	10
1281:	7	4	2	5	9	5	6	7
1289:	5	2	6	4	2	4	4	6
1297:	4	2	1	8	9	2	7	2
1305:	4	2	4	5	3	4	5	5
1313:	2	4	2	3	6	5	1	5
1321:	1	3	3	5	5	4	4	3
1329:	7	3	5	4	2	2	0	1
1337:	4	2	3	3	0	3	4	2
1345:	2	5	8	2	2	2	1	3
1353:	1	1	2	3	2	4	5	1
1361:	1	3	2	3	0	4	2	0
1369:	1	2	4	0	3	2	7	5
1377:	12	12	3	2	1	4	3	1
1385:	2	2	1	0	5	3	4	2
1393:	0	0	1	4	3	2	1	5
1401:	3	6	0	0	6	1	6	6
1409:	4	3	0	3	2	3	2	2
1417:	2	4	2	0	3	2	3	4
1425:	2	1	4	0	1	0	0	2
1433:	2	2	1	2	0	4	2	2
1441:	4	1	0	1	1	4	5	2
1449:	2	1	1	3	2	5	2	7
1457:	8	26	92	193	186	50	2	3
1465:	0	2	2	1	4	1	3	3
1473:	1	1	0	2	0	0	1	6
1481:	0	3	2	2	1	2	0	2
1489:	1	1	2	2	1	1	1	1
1497:	1	1	2	1	4	2	4	0
1505:	3	3	1	2	6	3	0	2
1513:	3	1	1	1	3	2	1	0
1521:	1	1	0	1	3	2	1	2
1529:	1	0	1	1	2	3	0	4
1537:	1	5	4	1	2	2	3	1
1545:	1	6	4	2	0	0	2	1
1553:	2	0	0	2	4	1	3	3
1561:	1	0	2	3	0	1	1	2
1569:	0	4	1	1	1	0	2	2
1577:	1	1	2	1	1	1	3	5
1585:	3	2	7	4	3	4	1	6
1593:	4	1	1	2	1	0	4	1
1601:	0	0	1	1	2	1	1	0
1609:	2	2	2	0	1	1	2	3
1617:	2	1	1	2	2	2	3	1
1625:	2	0	1	1	1	3	4	2
1633:	0	2	0	1	0	2	2	4
1641:	1	3	0	1	2	2	1	3
1649:	1	0	2	1	1	0	1	1
1657:	2	2	1	4	3	3	1	1

1665: 2 1 2 0 2 0 1 0

Sample Title: R2 6-12

Channel	1	2	3	4	5	6	7	8
1673:	1	1	2	1	0	1	1	3
1681:	1	3	1	2	3	0	0	0
1689:	1	2	1	0	1	2	2	0
1697:	0	0	1	0	2	1	0	0
1705:	1	2	0	3	3	1	2	1
1713:	0	2	1	1	1	1	0	0
1721:	0	0	0	1	2	2	1	4
1729:	3	1	0	1	0	1	0	1
1737:	1	4	1	1	1	0	1	0
1745:	2	0	0	0	0	1	1	1
1753:	0	1	0	1	0	1	0	2
1761:	4	4	16	23	11	1	2	2
1769:	1	1	4	1	2	2	1	0
1777:	0	0	1	2	0	1	0	2
1785:	3	1	2	0	2	0	0	1
1793:	1	1	0	1	1	0	0	1
1801:	1	2	0	0	1	2	0	0
1809:	0	0	0	1	0	0	2	2
1817:	0	1	0	1	3	1	2	3
1825:	0	1	3	1	1	3	1	0
1833:	0	1	1	3	2	0	0	2
1841:	0	2	0	0	1	1	1	3
1849:	1	0	0	0	0	0	1	1
1857:	2	0	0	1	3	1	0	0
1865:	1	1	1	2	1	1	3	2
1873:	1	1	0	3	0	0	0	2
1881:	0	1	1	0	0	0	1	1
1889:	2	0	1	0	0	2	2	0
1897:	2	0	0	1	3	2	1	1
1905:	2	0	3	0	1	1	0	0
1913:	1	1	1	1	1	1	0	3
1921:	2	1	0	2	0	0	1	1
1929:	0	0	0	1	1	0	1	0
1937:	0	0	1	0	0	0	3	1
1945:	1	3	2	3	1	1	0	1
1953:	0	1	0	0	0	1	0	0
1961:	0	1	3	0	1	0	0	0
1969:	2	1	0	1	1	0	0	1
1977:	1	1	1	1	0	0	0	1
1985:	0	3	2	0	3	0	3	0
1993:	1	0	2	0	3	0	0	1
2001:	2	1	0	0	2	1	0	1
2009:	0	1	2	0	0	0	2	1
2017:	1	0	2	0	2	1	1	1
2025:	0	0	0	1	0	0	1	1
2033:	1	1	3	2	0	1	0	1
2041:	1	2	2	0	2	1	0	0
2049:	3	1	0	0	1	1	0	2
2057:	2	1	0	3	0	1	0	1
2065:	1	1	1	0	0	1	1	2
2073:	2	1	1	2	1	1	0	0
2081:	1	2	1	1	1	0	2	1
2089:	1	0	1	1	1	1	0	2

2097: 0 2 1 4 0 2 4 1

Sample Title: R2 6-12

Channel	-----	-----	-----	-----	-----	-----	-----	-----
2105:	4	2	0	0	3	0	1	1
2113:	4	1	0	0	3	0	1	2
2121:	1	1	0	3	1	0	0	0
2129:	1	0	1	1	0	1	1	1
2137:	0	1	1	1	0	1	1	2
2145:	1	0	0	0	0	0	0	1
2153:	1	0	0	1	0	1	1	0
2161:	1	1	0	0	1	0	3	0
2169:	0	1	0	0	0	0	0	0
2177:	1	0	0	1	0	1	0	0
2185:	1	1	3	2	0	0	0	2
2193:	0	0	0	1	2	0	1	0
2201:	2	3	6	4	4	0	0	1
2209:	0	2	1	2	0	2	0	1
2217:	1	1	0	0	2	0	2	0
2225:	1	1	0	0	1	1	0	1
2233:	2	0	1	0	0	1	0	0
2241:	1	1	1	1	1	1	1	0
2249:	1	1	0	0	0	0	0	1
2257:	2	0	1	2	0	0	0	3
2265:	0	2	0	0	2	0	1	1
2273:	0	3	0	2	1	0	1	0
2281:	1	3	0	1	0	0	1	2
2289:	1	0	1	0	3	1	1	1
2297:	1	0	1	0	2	0	1	1
2305:	0	1	3	0	0	2	1	1
2313:	0	0	0	2	2	0	3	0
2321:	1	0	5	1	1	1	0	1
2329:	1	0	1	2	1	0	1	1
2337:	0	2	2	1	3	0	1	2
2345:	2	1	1	1	1	1	1	0
2353:	0	0	0	0	0	0	3	1
2361:	0	1	2	1	1	0	0	0
2369:	0	2	1	0	0	0	0	0
2377:	0	0	1	0	1	0	1	2
2385:	0	1	1	0	0	1	0	1
2393:	0	1	0	2	1	0	1	0
2401:	2	0	0	0	0	0	1	0
2409:	0	2	0	1	0	2	0	2
2417:	1	1	1	1	1	0	0	0
2425:	1	0	0	0	2	1	0	1
2433:	0	0	1	0	0	1	0	1
2441:	1	1	1	1	1	0	2	0
2449:	0	0	0	0	1	0	0	1
2457:	3	0	1	0	2	0	0	0
2465:	1	0	1	0	0	0	0	1
2473:	1	0	0	1	1	0	0	1
2481:	1	1	1	0	1	1	0	0
2489:	0	0	0	1	0	0	0	1
2497:	0	0	0	1	0	0	0	0
2505:	0	0	0	0	1	1	0	1
2513:	1	1	0	1	0	1	2	0
2521:	0	0	0	0	0	2	0	0

2529: 0 0 0 0 0 0 0 0 0

Sample Title: R2 6-12

Channel	-----	-----	-----	-----	-----	-----	-----	-----
2537:	0	0	0	0	0	0	2	0
2545:	0	0	0	1	1	0	1	0
2553:	1	0	0	2	1	2	0	0
2561:	0	2	0	1	1	1	0	0
2569:	0	2	0	0	0	1	0	0
2577:	0	1	0	0	0	1	1	0
2585:	0	0	1	0	1	0	0	2
2593:	0	0	0	1	1	0	0	0
2601:	0	0	1	1	0	0	0	0
2609:	3	1	4	18	23	26	5	0
2617:	0	1	0	0	1	0	0	0
2625:	0	0	0	0	0	0	0	0
2633:	0	0	0	0	0	0	0	0
2641:	0	0	0	0	0	0	0	0
2649:	0	0	0	0	1	1	0	0
2657:	0	1	0	0	0	0	1	0
2665:	1	0	0	0	0	0	1	0
2673:	0	0	2	0	0	0	1	0
2681:	0	0	1	2	0	0	1	1
2689:	0	2	1	0	0	3	0	2
2697:	1	2	0	0	0	0	0	0
2705:	0	0	0	1	0	0	1	0
2713:	1	0	0	0	0	1	0	0
2721:	0	0	0	0	0	1	0	1
2729:	0	0	0	1	0	0	0	0
2737:	0	0	0	1	0	0	0	1
2745:	0	0	0	0	1	0	0	0
2753:	1	0	0	0	0	0	0	1
2761:	0	1	1	0	0	0	0	1
2769:	0	0	0	0	0	1	0	0
2777:	0	0	1	0	1	0	0	0
2785:	0	0	0	1	0	0	0	0
2793:	0	0	0	0	0	0	0	0
2801:	0	0	0	0	1	0	0	0
2809:	1	0	0	1	1	0	0	0
2817:	0	0	0	1	0	0	0	0
2825:	0	0	0	0	0	0	0	0
2833:	0	0	0	0	1	0	0	0
2841:	0	0	0	0	0	0	0	1
2849:	0	0	0	0	1	0	0	0
2857:	0	0	0	0	0	2	0	0
2865:	1	0	0	0	2	0	0	0
2873:	0	0	0	0	0	1	0	0
2881:	0	1	0	0	0	0	0	0
2889:	0	0	0	0	0	1	0	0
2897:	0	1	0	1	0	0	0	0
2905:	0	1	0	0	0	0	0	0
2913:	0	1	0	0	0	0	1	1
2921:	0	0	0	1	0	0	0	0
2929:	0	0	1	0	0	0	0	1
2937:	0	1	0	0	1	0	1	0
2945:	0	0	0	0	0	0	0	0
2953:	1	0	1	0	1	0	0	0

2961: 0 0 0 0 0 0 0 0 0

Sample Title: R2 6-12

Channel	-----	-----	-----	-----	-----	-----	-----	-----
2969:	0	0	0	0	1	0	0	1
2977:	0	2	0	0	2	0	0	0
2985:	0	0	0	0	0	0	0	0
2993:	0	0	0	0	0	0	0	0
3001:	0	0	0	0	0	0	0	1
3009:	0	0	0	1	1	1	0	0
3017:	0	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	0	1	0	0	0	0	1
3049:	0	1	0	0	0	0	0	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	1	0
3081:	0	0	0	0	0	0	1	0
3089:	0	0	0	1	0	0	0	0
3097:	0	0	0	1	0	1	1	0
3105:	1	0	0	1	0	0	1	0
3113:	1	0	0	0	0	0	0	0
3121:	0	0	0	0	0	0	0	0
3129:	0	0	0	0	0	0	1	1
3137:	1	1	0	1	1	1	0	0
3145:	0	0	0	1	0	0	0	0
3153:	0	0	0	0	0	1	0	0
3161:	0	0	0	0	0	0	0	0
3169:	0	0	0	1	1	1	0	0
3177:	0	0	0	0	0	0	0	0
3185:	0	0	0	0	0	0	0	1
3193:	0	1	0	0	2	0	0	1
3201:	0	0	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:	1	0	0	0	1	0	1	0
3233:	0	0	0	0	0	0	0	0
3241:	0	0	0	0	0	1	0	0
3249:	0	0	0	0	0	1	0	0
3257:	0	0	0	0	1	0	1	0
3265:	0	0	0	0	0	0	0	0
3273:	0	0	0	0	1	0	0	1
3281:	0	0	0	1	0	0	0	0
3289:	0	0	0	0	0	0	0	0
3297:	0	0	0	0	0	0	0	0
3305:	0	1	0	0	0	0	0	0
3313:	0	0	1	0	0	0	0	0
3321:	0	0	0	0	1	0	1	2
3329:	1	0	0	0	0	0	1	0
3337:	1	0	0	0	1	1	1	0
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:	1	1	0	0	0	0	0	0
3377:	1	1	0	0	0	0	0	0
3385:	0	0	0	0	0	0	0	0

3393: 0 1 0 0 0 0 0 0 0

Sample Title: R2 6-12

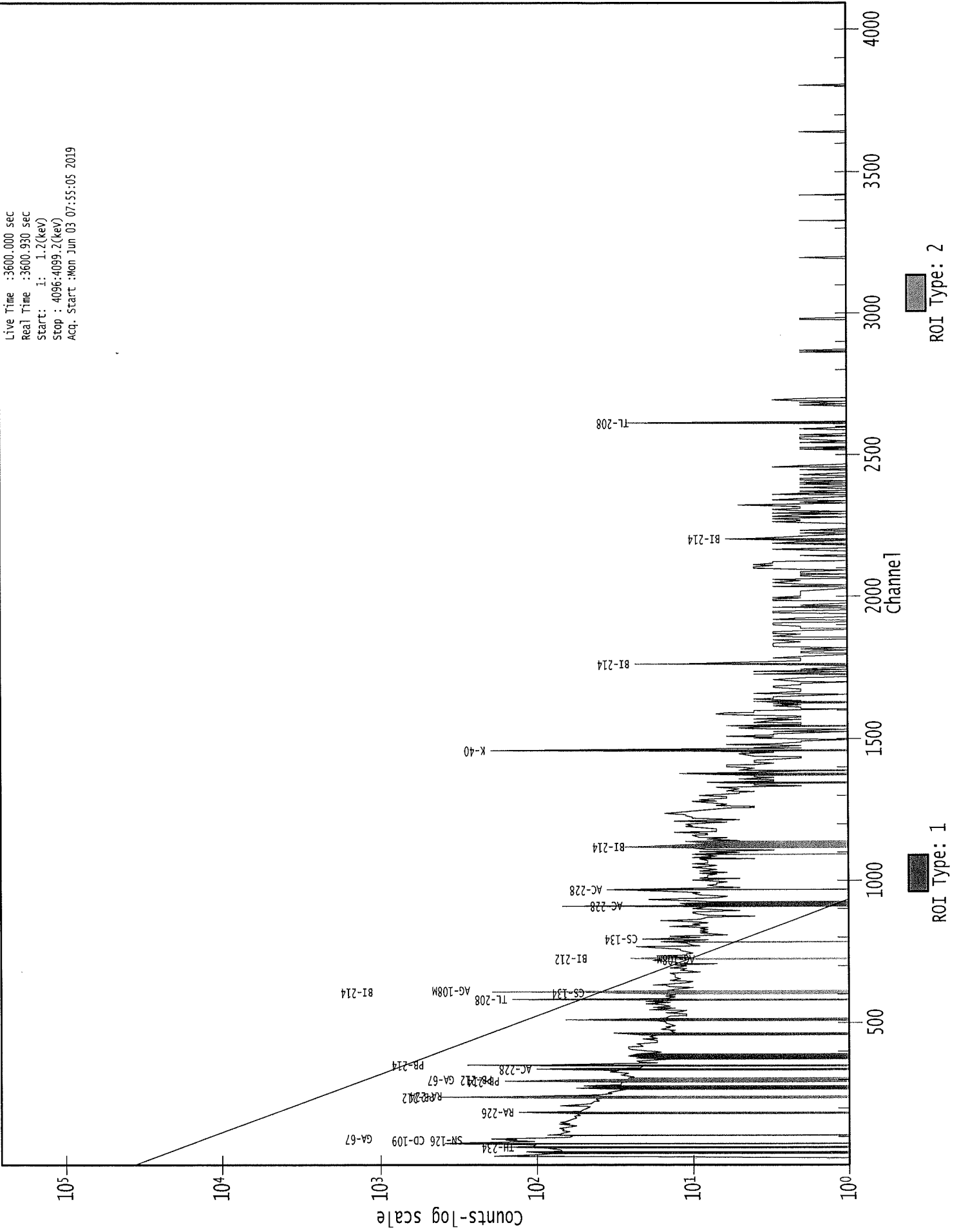
Channel	1	2	3	4	5	6	7	8
3401:	0	0	0	0	0	0	0	0
3409:	1	0	0	0	0	0	0	0
3417:	2	1	0	0	0	0	0	0
3425:	0	0	0	0	0	0	0	0
3433:	0	0	1	0	0	0	0	0
3441:	0	1	0	0	0	0	0	0
3449:	0	0	0	0	0	1	0	1
3457:	0	0	1	0	0	0	0	0
3465:	0	1	1	0	0	0	0	0
3473:	0	1	0	0	0	0	0	0
3481:	0	0	0	0	0	0	0	0
3489:	0	1	0	0	0	0	0	1
3497:	0	0	0	0	0	1	0	0
3505:	0	0	0	0	1	0	1	0
3513:	0	1	0	0	0	0	0	0
3521:	0	0	0	1	1	1	0	0
3529:	0	0	0	0	0	0	0	0
3537:	0	0	0	1	1	0	0	1
3545:	0	0	0	0	0	0	0	0
3553:	1	0	0	0	0	0	0	0
3561:	0	0	0	0	1	1	0	0
3569:	0	0	0	1	0	0	0	0
3577:	0	0	0	0	0	0	0	0
3585:	1	0	0	0	0	0	0	0
3593:	0	0	0	0	0	0	0	0
3601:	1	0	0	0	0	0	0	0
3609:	0	0	0	1	0	1	0	0
3617:	1	0	0	0	0	1	1	0
3625:	0	0	1	0	1	1	0	0
3633:	0	0	0	0	1	0	0	0
3641:	2	0	0	0	0	0	0	0
3649:	0	0	0	0	0	0	0	0
3657:	0	0	0	1	0	0	0	1
3665:	1	0	0	0	0	0	0	0
3673:	0	0	0	0	0	0	0	0
3681:	0	0	0	0	1	0	0	0
3689:	0	0	0	0	0	0	0	0
3697:	1	0	0	1	0	0	0	0
3705:	1	0	0	1	0	0	0	0
3713:	0	1	0	1	0	0	0	0
3721:	0	0	1	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	1	0	0	0	0
3753:	0	0	0	0	0	0	1	0
3761:	0	0	0	0	0	0	0	0
3769:	0	0	0	0	0	1	0	0
3777:	0	0	0	0	0	0	1	1
3785:	0	0	0	0	0	0	0	0
3793:	0	0	0	0	0	0	0	0
3801:	1	0	0	2	1	0	0	1
3809:	0	0	0	0	1	0	0	0
3817:	0	0	0	1	0	0	0	0

3825: 0 1 0 1 0 0 0 0

Sample Title: R2 6-12

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	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	1	0	1
3897:	0	1	0	0	0	0	0	0
3905:	0	0	0	0	0	0	0	0
3913:	0	0	0	0	0	0	0	0
3921:	0	0	0	0	1	0	0	0
3929:	0	0	0	0	0	0	1	0
3937:	1	0	0	0	0	0	0	0
3945:	0	1	0	0	0	0	0	1
3953:	1	1	0	0	0	0	0	0
3961:	0	0	0	1	0	1	0	1
3969:	0	0	0	1	0	0	0	0
3977:	0	0	0	0	0	0	0	1
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	0	0	0	1	0
4017:	0	0	0	0	0	0	1	0
4025:	0	1	0	0	0	0	0	0
4033:	0	0	1	0	0	0	0	0
4041:	0	0	0	0	0	0	0	0
4049:	0	0	1	0	0	0	0	1
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	1
4089:	1	0	0	0	0	0	0	0

Live Time :3600.000 sec
Real Time :3600.930 sec
Start : 1.2(keV)
Stop : 4096.4099.2(keV)
Acq. Start :Mon Jun 03 07:55:05 2019



RBS
6/3/19Analysis Report for 1905060-09
R3 0-6

GAMMA SPECTRUM ANALYSIS

Sample Identification : 1905060-09
Sample Description : R3 0-6
Sample Type : SOIL

Sample Size : 6.712E+02 grams
Facility : Countroom

Sample Taken On : 5/8/2019 3:34:23PM
Acquisition Started : 6/3/2019 7:55:30AM

Procedure : GAS-1802 pCi
Operator : Administrator
Detector Name : GE3
Geometry : GAS-1802
Live Time : 3600.0 seconds
Real Time : 3612.4 seconds

Dead Time : 0.34 %

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

Energy Calibration Used Done On : 7/21/2018
Efficiency Calibration Used Done On : 7/21/2018
Efficiency Calibration Description :

Sample Number : 82497

PEAK-TO-TOTAL CALIBRATION REPORT

Peak-to-Total Efficiency Calibration Equation

AG
6/3/19

Analysis Report for 1905060-09

R3 0-6

PEAK LOCATE REPORT

Peak Locate Performed on : 6/3/2019 8:55:47AM
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	65.07	65.42	0.0000	0.00
2	76.26	76.60	0.0000	0.00
3	87.05	87.39	0.0000	0.00
4	91.99	92.33	0.0000	0.00
5	129.37	129.69	0.0000	0.00
6	155.25	155.55	0.0000	0.00
7	186.18	186.48	0.0000	0.00
8	209.39	209.68	0.0000	0.00
9	238.79	239.06	0.0000	0.00
10	242.01	242.28	0.0000	0.00
11	270.40	270.66	0.0000	0.00
12	280.10	280.36	0.0000	0.00
13	295.33	295.58	0.0000	0.00
14	300.23	300.47	0.0000	0.00
15	321.62	321.86	0.0000	0.00
16	338.35	338.58	0.0000	0.00
17	352.09	352.32	0.0000	0.00
18	408.55	408.75	0.0000	0.00
19	462.93	463.11	0.0000	0.00
20	471.39	471.57	0.0000	0.00
21	510.79	510.96	0.0000	0.00
22	579.87	580.01	0.0000	0.00
23	583.36	583.49	0.0000	0.00
24	590.41	590.54	0.0000	0.00
25	596.11	596.24	0.0000	0.00
26	609.47	609.60	0.0000	0.00
27	665.39	665.50	0.0000	0.00
28	682.73	682.84	0.0000	0.00
29	727.49	727.58	0.0000	0.00
30	768.25	768.32	0.0000	0.00
31	786.05	786.12	0.0000	0.00
32	794.77	794.83	0.0000	0.00
33	861.08	861.13	0.0000	0.00
34	911.51	911.54	0.0000	0.00
35	933.41	933.43	0.0000	0.00
36	964.25	964.26	0.0000	0.00
37	969.20	969.21	0.0000	0.00
38	979.60	979.60	0.0000	0.00
39	1013.37	1013.37	0.0000	0.00
40	1120.25	1120.22	0.0000	0.00
41	1155.00	1154.95	0.0000	0.00
42	1175.07	1175.02	0.0000	0.00

Analysis Report for 1905060-09

R3 0-6

<i>Peak No.</i>	<i>Energy (keV)</i>	<i>Centroid Channel</i>	<i>Centroid Uncertainty</i>	<i>Peak Significance</i>
43	1182.61	1182.56	0.0000	0.00
44	1238.23	1238.17	0.0000	0.00
45	1281.30	1281.22	0.0000	0.00
46	1377.94	1377.84	0.0000	0.00
47	1407.93	1407.82	0.0000	0.00
48	1460.91	1460.79	0.0000	0.00
49	1510.06	1509.92	0.0000	0.00
50	1574.27	1574.13	0.0000	0.00
51	1583.15	1583.00	0.0000	0.00
52	1587.96	1587.81	0.0000	0.00
53	1593.44	1593.29	0.0000	0.00
54	1660.19	1660.03	0.0000	0.00
55	1694.42	1694.25	0.0000	0.00
56	1729.53	1729.35	0.0000	0.00
57	1764.81	1764.63	0.0000	0.00
58	1836.71	1836.52	0.0000	0.00
59	1847.74	1847.55	0.0000	0.00
60	1921.57	1921.36	0.0000	0.00
61	1937.70	1937.48	0.0000	0.00
62	2029.66	2029.43	0.0000	0.00
63	2103.55	2103.31	0.0000	0.00
64	2117.74	2117.51	0.0000	0.00
65	2184.22	2183.98	0.0000	0.00
66	2204.23	2203.99	0.0000	0.00
67	2449.37	2449.10	0.0000	0.00
68	2564.85	2564.57	0.0000	0.00
69	2614.64	2614.35	0.0000	0.00

? = Adjacent peak noted

Errors quoted at 2.000sigma

Analysis Report for 1905060-09

R3 0-6

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 6/3/2019 8:55:47AM

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	65.07	57 -	82	65.42	4.63E+02	210.59	5.21E+03	3.64
m	2	76.26	57 -	82	76.60	4.63E+03	248.54	5.52E+03	3.67
M	3	87.05	83 -	97	87.39	1.49E+03	187.11	4.46E+03	4.47
m	4	91.99	83 -	97	92.33	8.09E+02	202.55	4.69E+03	3.46
	5	129.37	127 -	133	129.69	1.68E+02	132.51	3.07E+03	2.05
	6	155.25	153 -	158	155.55	1.17E+02	114.30	2.50E+03	2.30
	7	186.18	183 -	189	186.48	5.97E+02	126.69	2.47E+03	2.22
	8	209.39	207 -	212	209.68	1.27E+02	96.84	1.76E+03	1.95
M	9	238.79	233 -	247	239.06	2.30E+03	128.58	1.35E+03	1.95
m	10	242.01	233 -	247	242.28	9.79E+02	137.93	1.42E+03	2.19
	11	270.40	267 -	277	270.66	1.71E+02	125.64	2.03E+03	2.13
	12	280.10	277 -	284	280.36	1.36E+02	90.44	1.26E+03	5.77
M	13	295.33	285 -	305	295.58	1.58E+03	101.62	7.78E+02	1.93
m	14	300.23	285 -	305	300.47	2.19E+02	108.98	1.10E+03	2.90
	15	321.62	319 -	325	321.86	8.16E+01	74.16	9.39E+02	1.38
	16	338.35	335 -	343	338.58	3.81E+02	99.35	1.29E+03	2.13
	17	352.09	348 -	357	352.32	2.39E+03	132.55	1.15E+03	2.06
	18	408.55	405 -	414	408.75	8.45E+01	86.59	1.02E+03	1.91
M	19	462.93	459 -	476	463.11	1.42E+02	66.58	6.06E+02	3.51
m	20	471.39	459 -	476	471.57	7.06E+01	75.86	6.95E+02	3.52
	21	510.79	506 -	515	510.96	2.61E+02	73.15	6.16E+02	2.04
M	22	579.87	578 -	594	580.01	6.38E+01	29.73	1.40E+02	1.91
m	23	583.36	578 -	594	583.49	6.78E+02	63.52	2.40E+02	2.09
m	24	590.41	578 -	594	590.54	3.26E+01	45.61	3.84E+02	3.28
	25	596.11	594 -	599	596.24	5.80E+01	34.09	1.86E+02	2.19
	26	609.47	603 -	615	609.60	1.55E+03	115.20	8.32E+02	2.24
	27	665.39	662 -	668	665.50	5.47E+01	43.61	3.03E+02	2.55
	28	682.73	679 -	687	682.84	4.36E+01	49.92	3.59E+02	1.63
	29	727.49	724 -	732	727.58	1.59E+02	53.09	3.32E+02	2.50
	30	768.25	761 -	775	768.32	2.51E+02	68.09	3.82E+02	2.62
	31	786.05	778 -	790	786.12	6.16E+01	61.48	4.15E+02	3.11
	32	794.77	791 -	799	794.83	6.70E+01	44.71	2.68E+02	2.02
	33	861.08	855 -	866	861.13	8.18E+01	55.75	3.46E+02	1.99
	34	911.51	906 -	916	911.54	3.38E+02	62.11	3.31E+02	2.39
	35	933.41	927 -	939	933.43	1.09E+02	52.45	2.70E+02	2.46
M	36	964.25	958 -	974	964.26	6.81E+01	41.20	1.89E+02	2.90
m	37	969.20	958 -	974	969.21	2.12E+02	43.91	1.47E+02	2.76
	38	979.60	975 -	985	979.60	4.84E+01	37.22	1.57E+02	6.58
	39	1013.37	1009 -	1017	1013.37	5.09E+01	30.57	1.12E+02	3.01
	40	1120.25	1113 -	1125	1120.22	3.31E+02	55.61	2.07E+02	2.25

0346

Analysis Report for 1905060-09

R3 0-6

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	FWHM (keV)
41	1155.00	1150 - 1160		1154.95	4.03E+01	41.03	2.01E+02	2.94
42	1175.07	1170 - 1179		1175.02	4.35E+01	28.25	8.70E+01	2.33
43	1182.61	1180 - 1186		1182.56	2.04E+01	21.28	6.92E+01	2.46
44	1238.23	1233 - 1242		1238.17	1.16E+02	36.62	1.25E+02	2.16
45	1281.30	1277 - 1286		1281.22	3.57E+01	31.30	1.19E+02	2.07
46	1377.94	1372 - 1382		1377.84	8.70E+01	36.58	1.32E+02	2.99
47	1407.93	1397 - 1418		1407.82	6.30E+01	60.70	2.64E+02	9.18
48	1460.91	1456 - 1466		1460.79	9.96E+01	36.60	1.23E+02	2.05
49	1510.06	1506 - 1515		1509.92	5.22E+01	29.02	9.15E+01	2.56
M 50	1574.27	1570 - 1596		1574.13	3.05E+01	17.17	2.40E+01	3.14
m 51	1583.15	1570 - 1596		1583.00	1.97E+01	22.60	4.47E+01	2.86
m 52	1587.96	1570 - 1596		1587.81	4.15E+01	21.45	4.74E+01	2.57
m 53	1593.44	1570 - 1596		1593.29	5.25E+01	20.37	5.10E+01	3.15
54	1660.19	1653 - 1664		1660.03	4.26E+01	23.58	4.88E+01	5.08
55	1694.42	1690 - 1697		1694.25	1.74E+01	15.36	2.72E+01	3.68
56	1729.53	1725 - 1735		1729.35	5.16E+01	24.79	5.28E+01	3.19
57	1764.81	1759 - 1771		1764.63	2.72E+02	39.80	5.77E+01	2.56
58	1836.71	1831 - 1842		1836.52	3.28E+01	13.42	6.36E+00	7.90
59	1847.74	1842 - 1852		1847.55	4.10E+01	21.25	3.80E+01	2.61
60	1921.57	1915 - 1927		1921.36	1.64E+01	19.74	3.51E+01	10.85
61	1937.70	1934 - 1942		1937.48	1.23E+01	14.04	2.34E+01	3.02
62	2029.66	2025 - 2034		2029.43	1.29E+01	13.71	1.83E+01	1.08
63	2103.55	2098 - 2106		2103.31	4.15E+01	16.88	1.90E+01	2.19
64	2117.74	2113 - 2122		2117.51	2.58E+01	15.49	1.85E+01	2.49
65	2184.22	2179 - 2190		2183.98	1.57E+01	17.44	3.07E+01	5.13
66	2204.23	2199 - 2209		2203.99	5.90E+01	21.05	2.79E+01	2.18
67	2449.37	2442 - 2459		2449.10	3.60E+01	18.49	1.80E+01	7.99
68	2564.85	2561 - 2567		2564.57	6.38E+00	6.65	3.25E+00	2.61
69	2614.64	2609 - 2620		2614.35	1.99E+02	28.21	0.00E+00	2.73

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 : 6/3/2019 8:55:47AM

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
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Analysis Report for 1905060-09

R3 0-6

	Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
M	1	65.07	57 -	82	4.63E+02	210.59	5.21E+03	1.19E+02
m	2	76.26	57 -	82	4.63E+03	248.54	5.52E+03	1.22E+02
M	3	87.05	83 -	97	1.49E+03	187.11	4.46E+03	1.10E+02
m	4	91.99	83 -	97	8.09E+02	202.55	4.69E+03	1.13E+02
	5	129.37	127 -	133	1.68E+02	132.51	3.07E+03	1.07E+02
	6	155.25	153 -	158	1.17E+02	114.30	2.50E+03	9.23E+01
	7	186.18	183 -	189	5.97E+02	126.69	2.47E+03	9.61E+01
	8	209.39	207 -	212	1.27E+02	96.84	1.76E+03	7.74E+01
M	9	238.79	233 -	247	2.30E+03	128.58	1.35E+03	6.05E+01
m	10	242.01	233 -	247	9.79E+02	137.93	1.42E+03	6.20E+01
	11	270.40	267 -	277	1.71E+02	125.64	2.03E+03	4.86E+01
	12	280.10	277 -	284	1.36E+02	90.44	1.26E+03	7.18E+01
M	13	295.33	285 -	305	1.58E+03	101.62	7.78E+02	4.59E+01
m	14	300.23	285 -	305	2.19E+02	108.98	1.10E+03	5.45E+01
	15	321.62	319 -	325	8.16E+01	74.16	9.39E+02	5.91E+01
	16	338.35	335 -	343	3.81E+02	99.35	1.29E+03	7.51E+01
	17	352.09	348 -	357	2.39E+03	132.55	1.15E+03	7.36E+01
	18	408.55	405 -	414	8.45E+01	86.59	1.02E+03	6.96E+01
M	19	462.93	459 -	476	1.42E+02	66.58	6.06E+02	4.05E+01
m	20	471.39	459 -	476	7.06E+01	75.86	6.95E+02	4.33E+01
	21	510.79	506 -	515	2.61E+02	73.15	6.16E+02	5.39E+01
M	22	579.87	578 -	594	6.38E+01	29.73	1.40E+02	1.95E+01
m	23	583.36	578 -	594	6.78E+02	63.52	2.40E+02	2.55E+01
m	24	590.41	578 -	594	3.26E+01	45.61	3.84E+02	3.22E+01
	25	596.11	594 -	599	5.80E+01	34.09	1.86E+02	2.51E+01
	26	609.47	603 -	615	1.55E+03	115.20	8.32E+02	6.91E+01
	27	665.39	662 -	668	5.47E+01	43.61	3.03E+02	3.37E+01
	28	682.73	679 -	687	4.36E+01	49.92	3.59E+02	3.96E+01
	29	727.49	724 -	732	1.59E+02	53.09	3.32E+02	3.84E+01
	30	768.25	761 -	775	2.51E+02	68.09	3.82E+02	4.95E+01
	31	786.05	778 -	790	6.16E+01	61.48	4.15E+02	4.89E+01
	32	794.77	791 -	799	6.70E+01	44.71	2.68E+02	3.42E+01
	33	861.08	855 -	866	8.18E+01	55.75	3.46E+02	4.33E+01
	34	911.51	906 -	916	3.38E+02	62.11	3.31E+02	4.12E+01
	35	933.41	927 -	939	1.09E+02	52.45	2.70E+02	3.96E+01
M	36	964.25	958 -	974	6.81E+01	41.20	1.89E+02	2.26E+01
m	37	969.20	958 -	974	2.12E+02	43.91	1.47E+02	2.00E+01
	38	979.60	975 -	985	4.84E+01	37.22	1.57E+02	2.84E+01
	39	1013.37	1009 -	1017	5.09E+01	30.57	1.12E+02	2.22E+01
	40	1120.25	1113 -	1125	3.31E+02	55.61	2.07E+02	3.45E+01
	41	1155.00	1150 -	1160	4.03E+01	41.03	2.01E+02	3.21E+01
	42	1175.07	1170 -	1179	4.35E+01	28.25	8.70E+01	2.05E+01
	43	1182.61	1180 -	1186	2.04E+01	21.28	6.92E+01	1.58E+01
	44	1238.23	1233 -	1242	1.16E+02	36.62	1.25E+02	2.43E+01
	45	1281.30	1277 -	1286	3.57E+01	31.30	1.19E+02	2.38E+01
	46	1377.94	1372 -	1382	8.70E+01	36.58	1.32E+02	2.59E+01
	47	1407.93	1397 -	1418	6.30E+01	60.70	2.64E+02	4.82E+01
	48	1460.91	1456 -	1466	9.96E+01	36.60	1.23E+02	2.52E+01
	49	1510.06	1506 -	1515	5.22E+01	29.02	9.15E+01	2.07E+01
M	50	1574.27	1570 -	1596	3.05E+01	17.17	2.40E+01	8.05E+00
m	51	1583.15	1570 -	1596	1.97E+01	22.60	4.47E+01	1.10E+01

0348

Analysis Report for 1905060-09

R3 0-6

	Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
m	52	1587.96	1570 -	1596	4.15E+01	21.45	4.74E+01	1.13E+01
m	53	1593.44	1570 -	1596	5.25E+01	20.37	5.10E+01	1.17E+01
	54	1660.19	1653 -	1664	4.26E+01	23.58	4.88E+01	1.61E+01
	55	1694.42	1690 -	1697	1.74E+01	15.36	2.72E+01	1.06E+01
	56	1729.53	1725 -	1735	5.16E+01	24.79	5.28E+01	1.66E+01
	57	1764.81	1759 -	1771	2.72E+02	39.80	5.77E+01	1.83E+01
	58	1836.71	1831 -	1842	3.28E+01	13.42	6.36E+00	5.74E+00
	59	1847.74	1842 -	1852	4.10E+01	21.25	3.80E+01	1.39E+01
	60	1921.57	1915 -	1927	1.64E+01	19.74	3.51E+01	1.48E+01
	61	1937.70	1934 -	1942	1.23E+01	14.04	2.34E+01	1.00E+01
	62	2029.66	2025 -	2034	1.29E+01	13.71	1.83E+01	9.61E+00
	63	2103.55	2098 -	2106	4.15E+01	16.88	1.90E+01	8.97E+00
	64	2117.74	2113 -	2122	2.58E+01	15.49	1.85E+01	9.62E+00
	65	2184.22	2179 -	2190	1.57E+01	17.44	3.07E+01	1.28E+01
	66	2204.23	2199 -	2209	5.90E+01	21.05	2.79E+01	1.18E+01
	67	2449.37	2442 -	2459	3.60E+01	18.49	1.80E+01	1.16E+01
	68	2564.85	2561 -	2567	6.38E+00	6.65	3.25E+00	3.56E+00
	69	2614.64	2609 -	2620	1.99E+02	28.21	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 : 6/3/2019 8:55:47AM

Peak Analysis From Channel : 1

Peak Analysis To Channel : 4096

Tentative NID Library : \\OR-GAMMA1\ApexRoot\Countroom\Library\TMA2.NLB

Peak Match Tolerance : 1.000FWHM

	Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
M	1	65.07	57 -	82	65.42	4.63E+02	210.59	5.21E+03	TM-171 TH-234
m	2	76.26	57 -	82	76.60	4.63E+03	248.54	5.52E+03	AM-243
M	3	87.05	83 -	97	87.39	1.49E+03	187.11	4.46E+03	SN-126 NP-237 EU-155 CD-109

0349

Analysis Report for 1905060-09

R3 0-6

	Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
m	4	91.99	83 -	97	92.33	8.09E+02	202.55	4.69E+03	LU-176 ND-147 GA-67
	5	129.37	127 -	133	129.69	1.68E+02	132.51	3.07E+03	PA-234
	6	155.25	153 -	158	155.55	1.17E+02	114.30	2.50E+03	CS-136
	7	186.18	183 -	189	186.48	5.97E+02	126.69	2.47E+03	RA-226 HO-166M
	8	209.39	207 -	212	209.68	1.27E+02	96.84	1.76E+03	CM-243 GA-67
M	9	238.79	233 -	247	239.06	2.30E+03	128.58	1.35E+03	PB-212 RA-224
m	10	242.01	233 -	247	242.28	9.79E+02	137.93	1.42E+03	RA-224
	11	270.40	267 -	277	270.66	1.71E+02	125.64	2.03E+03	LU-173 CS-135
	12	280.10	277 -	284	280.36	1.36E+02	90.44	1.26E+03	HO-166M SE-75 HG-203
M	13	295.33	285 -	305	295.58	1.58E+03	101.62	7.78E+02	PB-214 CE-143
m	14	300.23	285 -	305	300.47	2.19E+02	108.98	1.10E+03	GA-67 PB-212 BI-210M
	15	321.62	319 -	325	321.86	8.16E+01	74.16	9.39E+02	CR-51 RA-223
	16	338.35	335 -	343	338.58	3.81E+02	99.35	1.29E+03	AC-228 CS-136
	17	352.09	348 -	357	352.32	2.39E+03	132.55	1.15E+03	PB-214
	18	408.55	405 -	414	408.75	8.45E+01	86.59	1.02E+03	.....
M	19	462.93	459 -	476	463.11	1.42E+02	66.58	6.06E+02	SB-125
m	20	471.39	459 -	476	471.57	7.06E+01	75.86	6.95E+02	SB-127
	21	510.79	506 -	515	510.96	2.61E+02	73.15	6.16E+02	.....
M	22	579.87	578 -	594	580.01	6.38E+01	29.73	1.40E+02	.....
m	23	583.36	578 -	594	583.49	6.78E+02	63.52	2.40E+02	TL-208
m	24	590.41	578 -	594	590.54	3.26E+01	45.61	3.84E+02	.....
	25	596.11	594 -	599	596.24	5.80E+01	34.09	1.86E+02	.....
	26	609.47	603 -	615	609.60	1.55E+03	115.20	8.32E+02	BI-214
	27	665.39	662 -	668	665.50	5.47E+01	43.61	3.03E+02	CE-143 SB-126
	28	682.73	679 -	687	682.84	4.36E+01	49.92	3.59E+02	MO-93 SB-127
	29	727.49	724 -	732	727.58	1.59E+02	53.09	3.32E+02	BI-212
	30	768.25	761 -	775	768.32	2.51E+02	68.09	3.82E+02	NB-95
	31	786.05	778 -	790	786.12	6.16E+01	61.48	4.15E+02	SB-127
	32	794.77	791 -	799	794.83	6.70E+01	44.71	2.68E+02	CS-134
	33	861.08	855 -	866	861.13	8.18E+01	55.75	3.46E+02	TL-208
	34	911.51	906 -	916	911.54	3.38E+02	62.11	3.31E+02	TL-204 AC-228
	35	933.41	927 -	939	933.43	1.09E+02	52.45	2.70E+02	.....
M	36	964.25	958 -	974	964.26	6.81E+01	41.20	1.89E+02	EU-152
m	37	969.20	958 -	974	969.21	2.12E+02	43.91	1.47E+02	AC-228
	38	979.60	975 -	985	979.60	4.84E+01	37.22	1.57E+02	.....
	39	1013.37	1009 -	1017	1013.37	5.09E+01	30.57	1.12E+02	.....
	40	1120.25	1113 -	1125	1120.22	3.31E+02	55.61	2.07E+02	BI-214 SC-46

Analysis Report for 1905060-09

R3 0-6

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide	
								TA-182	
41	1155.00	1150 -	1160	1154.95	4.03E+01	41.03	2.01E+02	EU-156	
42	1175.07	1170 -	1179	1175.02	4.35E+01	28.25	8.70E+01	CO-60	
43	1182.61	1180 -	1186	1182.56	2.04E+01	21.28	6.92E+01	.....
44	1238.23	1233 -	1242	1238.17	1.16E+02	36.62	1.25E+02	CO-56	
45	1281.30	1277 -	1286	1281.22	3.57E+01	31.30	1.19E+02	.....
46	1377.94	1372 -	1382	1377.84	8.70E+01	36.58	1.32E+02	.....
47	1407.93	1397 -	1418	1407.82	6.30E+01	60.70	2.64E+02	EU-152	
48	1460.91	1456 -	1466	1460.79	9.96E+01	36.60	1.23E+02	K-40	
49	1510.06	1506 -	1515	1509.92	5.22E+01	29.02	9.15E+01	.....
M	50	1574.27	1570 -	1596	1574.13	3.05E+01	17.17	2.40E+01	.....
m	51	1583.15	1570 -	1596	1583.00	1.97E+01	22.60	4.47E+01	.....
m	52	1587.96	1570 -	1596	1587.81	4.15E+01	21.45	4.74E+01	.....
m	53	1593.44	1570 -	1596	1593.29	5.25E+01	20.37	5.10E+01	.....
	54	1660.19	1653 -	1664	1660.03	4.26E+01	23.58	4.88E+01	.....
	55	1694.42	1690 -	1697	1694.25	1.74E+01	15.36	2.72E+01	.....
	56	1729.53	1725 -	1735	1729.35	5.16E+01	24.79	5.28E+01	.....
	57	1764.81	1759 -	1771	1764.63	2.72E+02	39.80	5.77E+01	BI-214
	58	1836.71	1831 -	1842	1836.52	3.28E+01	13.42	6.36E+00	Y-88
	59	1847.74	1842 -	1852	1847.55	4.10E+01	21.25	3.80E+01	.....
	60	1921.57	1915 -	1927	1921.36	1.64E+01	19.74	3.51E+01	.....
	61	1937.70	1934 -	1942	1937.48	1.23E+01	14.04	2.34E+01	.....
	62	2029.66	2025 -	2034	2029.43	1.29E+01	13.71	1.83E+01	.....
	63	2103.55	2098 -	2106	2103.31	4.15E+01	16.88	1.90E+01	.....
	64	2117.74	2113 -	2122	2117.51	2.58E+01	15.49	1.85E+01	.....
	65	2184.22	2179 -	2190	2183.98	1.57E+01	17.44	3.07E+01	.....
	66	2204.23	2199 -	2209	2203.99	5.90E+01	21.05	2.79E+01	BI-214
	67	2449.37	2442 -	2459	2449.10	3.60E+01	18.49	1.80E+01	.....
	68	2564.85	2561 -	2567	2564.57	6.38E+00	6.65	3.25E+00	.....
	69	2614.64	2609 -	2620	2614.35	1.99E+02	28.21	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 : 6/3/2019 8:55:47AM

Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
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Analysis Report for 1905060-09

R3 0-6

	Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
M	1	65.07	4.63E+02	210.59	3.52E-02	3.10E-03
m	2	76.26	4.63E+03	248.54	3.63E-02	4.17E-03
M	3	87.05	1.49E+03	187.11	3.57E-02	5.21E-03
m	4	91.99	8.09E+02	202.55	3.51E-02	5.23E-03
	5	129.37	1.68E+02	132.51	2.86E-02	4.27E-03
	6	155.25	1.17E+02	114.30	2.45E-02	2.81E-03
	7	186.18	5.97E+02	126.69	2.06E-02	2.05E-03
	8	209.39	1.27E+02	96.84	1.84E-02	1.85E-03
M	9	238.79	2.30E+03	128.58	1.62E-02	1.61E-03
m	10	242.01	9.79E+02	137.93	1.60E-02	1.58E-03
	11	270.40	1.71E+02	125.64	1.44E-02	1.34E-03
	12	280.10	1.36E+02	90.44	1.39E-02	1.27E-03
M	13	295.33	1.58E+03	101.62	1.32E-02	1.21E-03
m	14	300.23	2.19E+02	108.98	1.30E-02	1.19E-03
	15	321.62	8.16E+01	74.16	1.22E-02	1.11E-03
	16	338.35	3.81E+02	99.35	1.17E-02	1.04E-03
	17	352.09	2.39E+03	132.55	1.13E-02	9.92E-04
	18	408.55	8.45E+01	86.59	9.86E-03	8.25E-04
M	19	462.93	1.42E+02	66.58	8.84E-03	7.75E-04
m	20	471.39	7.06E+01	75.86	8.71E-03	7.67E-04
	21	510.79	2.61E+02	73.15	8.12E-03	7.31E-04
M	22	579.87	6.38E+01	29.73	7.27E-03	6.67E-04
m	23	583.36	6.78E+02	63.52	7.23E-03	6.64E-04
m	24	590.41	3.26E+01	45.61	7.15E-03	6.57E-04
	25	596.11	5.80E+01	34.09	7.09E-03	6.52E-04
	26	609.47	1.55E+03	115.20	6.95E-03	6.40E-04
	27	665.39	5.47E+01	43.61	6.42E-03	5.88E-04
	28	682.73	4.36E+01	49.92	6.27E-03	5.71E-04
	29	727.49	1.59E+02	53.09	5.90E-03	5.29E-04
	30	768.25	2.51E+02	68.09	5.60E-03	4.91E-04
	31	786.05	6.16E+01	61.48	5.47E-03	4.74E-04
	32	794.77	6.70E+01	44.71	5.41E-03	4.66E-04
	33	861.08	8.18E+01	55.75	4.97E-03	4.03E-04
	34	911.51	3.38E+02	62.11	4.67E-03	3.68E-04
	35	933.41	1.09E+02	52.45	4.54E-03	3.68E-04
M	36	964.25	6.81E+01	41.20	4.37E-03	3.68E-04
m	37	969.20	2.12E+02	43.91	4.34E-03	3.68E-04
	38	979.60	4.84E+01	37.22	4.28E-03	3.68E-04
	39	1013.37	5.09E+01	30.57	4.11E-03	3.68E-04
	40	1120.25	3.31E+02	55.61	3.59E-03	3.68E-04
	41	1155.00	4.03E+01	41.03	3.44E-03	3.68E-04
	42	1175.07	4.35E+01	28.25	3.35E-03	3.68E-04
	43	1182.61	2.04E+01	21.28	3.32E-03	3.68E-04
	44	1238.23	1.16E+02	36.62	3.09E-03	3.68E-04
	45	1281.30	3.57E+01	31.30	2.93E-03	3.68E-04
	46	1377.94	8.70E+01	36.58	2.58E-03	3.68E-04
	47	1407.93	6.30E+01	60.70	2.48E-03	3.68E-04
	48	1460.91	9.96E+01	36.60	2.31E-03	3.68E-04
	49	1510.06	5.22E+01	29.02	2.16E-03	3.68E-04
M	50	1574.27	3.05E+01	17.17	1.99E-03	3.68E-04
m	51	1583.15	1.97E+01	22.60	1.96E-03	3.68E-04
m	52	1587.96	4.15E+01	21.45	1.95E-03	3.68E-04
m	53	1593.44	5.25E+01	20.37	1.93E-03	3.68E-04

Analysis Report for 1905060-09

R3 0-6

Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
54	1660.19	4.26E+01	23.58	1.77E-03	3.68E-04
55	1694.42	1.74E+01	15.36	1.68E-03	3.68E-04
56	1729.53	5.16E+01	24.79	1.60E-03	3.68E-04
57	1764.81	2.72E+02	39.80	1.53E-03	3.68E-04
58	1836.71	3.28E+01	13.42	1.38E-03	3.68E-04
59	1847.74	4.10E+01	21.25	1.36E-03	3.68E-04
60	1921.57	1.64E+01	19.74	1.22E-03	3.68E-04
61	1937.70	1.23E+01	14.04	1.19E-03	3.68E-04
62	2029.66	1.29E+01	13.71	1.05E-03	3.68E-04
63	2103.55	4.15E+01	16.88	9.39E-04	3.68E-04
64	2117.74	2.58E+01	15.49	9.19E-04	3.68E-04
65	2184.22	1.57E+01	17.44	8.34E-04	3.68E-04
66	2204.23	5.90E+01	21.05	8.09E-04	3.68E-04
67	2449.37	3.60E+01	18.49	5.60E-04	3.68E-04
68	2564.85	6.38E+00	6.65	4.69E-04	3.68E-04
69	2614.64	1.99E+02	28.21	4.34E-04	3.68E-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 : 6/3/2019 8:55:47AM

Env. Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000082157.CNF

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.	
M	1	65.07	4.63E+02	210.59	6.33E+01	8.10E+00	4.00E+02	2.11E+02
m	2	76.26	4.63E+03	248.54	1.40E+01	3.62E+00	4.61E+03	2.49E+02
M	3	87.05	1.49E+03	187.11			1.49E+03	1.87E+02
m	4	91.99	8.09E+02	202.55	8.61E+01	1.50E+01	7.22E+02	2.03E+02
	5	129.37	1.68E+02	132.51			1.68E+02	1.33E+02
	6	155.25	1.17E+02	114.30			1.17E+02	1.14E+02
	7	186.18	5.97E+02	126.69	3.31E+01	6.61E+00	5.64E+02	1.27E+02
	8	209.39	1.27E+02	96.84			1.27E+02	9.68E+01
M	9	238.79	2.30E+03	128.58	1.58E+01	5.45E+00	2.28E+03	1.29E+02
m	10	242.01	9.79E+02	137.93			9.79E+02	1.38E+02
	11	270.40	1.71E+02	125.64			1.71E+02	1.26E+02
	12	280.10	1.36E+02	90.44			1.36E+02	9.04E+01
M	13	295.33	1.58E+03	101.62	1.24E+01	5.72E+00	1.56E+03	1.02E+02
m	14	300.23	2.19E+02	108.98			2.19E+02	1.09E+02

0353

Analysis Report for 1905060-09

R3 0-6

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
15	321.62	8.16E+01	74.16			8.16E+01	7.42E+01
16	338.35	3.81E+02	99.35	6.77E-01	4.03E+00	3.80E+02	9.94E+01
17	352.09	2.39E+03	132.55	7.92E+00	4.39E+00	2.38E+03	1.33E+02
18	408.55	8.45E+01	86.59			8.45E+01	8.66E+01
M 19	462.93	1.42E+02	66.58			1.42E+02	6.66E+01
m 20	471.39	7.06E+01	75.86			7.06E+01	7.59E+01
21	510.79	2.61E+02	73.15	6.19E+01	5.33E+00	1.99E+02	7.33E+01
M 22	579.87	6.38E+01	29.73			6.38E+01	2.97E+01
m 23	583.36	6.78E+02	63.52	4.68E-01	3.90E+00	6.78E+02	6.36E+01
m 24	590.41	3.26E+01	45.61			3.26E+01	4.56E+01
25	596.11	5.80E+01	34.09			5.80E+01	3.41E+01
26	609.47	1.55E+03	115.20	7.09E+00	4.24E+00	1.54E+03	1.15E+02
27	665.39	5.47E+01	43.61			5.47E+01	4.36E+01
28	682.73	4.36E+01	49.92			4.36E+01	4.99E+01
29	727.49	1.59E+02	53.09			1.59E+02	5.31E+01
30	768.25	2.51E+02	68.09			2.51E+02	6.81E+01
31	786.05	6.16E+01	61.48			6.16E+01	6.15E+01
32	794.77	6.70E+01	44.71	1.96E+00	1.09E+00	6.51E+01	4.47E+01
33	861.08	8.18E+01	55.75			8.18E+01	5.57E+01
34	911.51	3.38E+02	62.11	3.38E+00	2.28E+00	3.34E+02	6.21E+01
35	933.41	1.09E+02	52.45			1.09E+02	5.24E+01
M 36	964.25	6.81E+01	41.20			6.81E+01	4.12E+01
m 37	969.20	2.12E+02	43.91	6.27E-01	2.01E+00	2.11E+02	4.40E+01
38	979.60	4.84E+01	37.22			4.84E+01	3.72E+01
39	1013.37	5.09E+01	30.57			5.09E+01	3.06E+01
40	1120.25	3.31E+02	55.61			3.31E+02	5.56E+01
41	1155.00	4.03E+01	41.03			4.03E+01	4.10E+01
42	1175.07	4.35E+01	28.25			4.35E+01	2.82E+01
43	1182.61	2.04E+01	21.28			2.04E+01	2.13E+01
44	1238.23	1.16E+02	36.62			1.16E+02	3.66E+01
45	1281.30	3.57E+01	31.30			3.57E+01	3.13E+01
46	1377.94	8.70E+01	36.58			8.70E+01	3.66E+01
47	1407.93	6.30E+01	60.70			6.30E+01	6.07E+01
48	1460.91	9.96E+01	36.60	3.34E+00	1.76E+00	9.63E+01	3.66E+01
49	1510.06	5.22E+01	29.02			5.22E+01	2.90E+01
M 50	1574.27	3.05E+01	17.17			3.05E+01	1.72E+01
m 51	1583.15	1.97E+01	22.60			1.97E+01	2.26E+01
m 52	1587.96	4.15E+01	21.45			4.15E+01	2.14E+01
m 53	1593.44	5.25E+01	20.37			5.25E+01	2.04E+01
54	1660.19	4.26E+01	23.58			4.26E+01	2.36E+01
55	1694.42	1.74E+01	15.36			1.74E+01	1.54E+01
56	1729.53	5.16E+01	24.79			5.16E+01	2.48E+01
57	1764.81	2.72E+02	39.80			2.72E+02	3.98E+01
58	1836.71	3.28E+01	13.42			3.28E+01	1.34E+01
59	1847.74	4.10E+01	21.25			4.10E+01	2.13E+01
60	1921.57	1.64E+01	19.74			1.64E+01	1.97E+01
61	1937.70	1.23E+01	14.04			1.23E+01	1.40E+01
62	2029.66	1.29E+01	13.71			1.29E+01	1.37E+01
63	2103.55	4.15E+01	16.88			4.15E+01	1.69E+01
64	2117.74	2.58E+01	15.49			2.58E+01	1.55E+01
65	2184.22	1.57E+01	17.44			1.57E+01	1.74E+01
66	2204.23	5.90E+01	21.05			5.90E+01	2.11E+01
67	2449.37	3.60E+01	18.49			3.60E+01	1.85E+01
68	2564.85	6.38E+00	6.65			6.38E+00	6.65E+00

Analysis Report for 1905060-09

R3 0-6

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
69	2614.64	1.99E+02	28.21	1.89E+00	1.25E+00	1.97E+02	2.82E+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 : 6/3/2019 8:55:47AM

Ref. Peak Energy : 0.00 Reference Date :
Peak Ratio : 0.00 Uncertainty : 0.00
Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000082157.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	65.07	4.63E+02	210.59	6.33E+01	8.10E+00	4.00E+02	2.11E+02
m	2	76.26	4.63E+03	248.54	1.40E+01	3.62E+00	4.61E+03	2.49E+02
M	3	87.05	1.49E+03	187.11			1.49E+03	1.87E+02
m	4	91.99	8.09E+02	202.55	8.61E+01	1.50E+01	7.22E+02	2.03E+02
	5	129.37	1.68E+02	132.51			1.68E+02	1.33E+02
	6	155.25	1.17E+02	114.30			1.17E+02	1.14E+02
	7	186.18	5.97E+02	126.69	3.31E+01	6.61E+00	5.64E+02	1.27E+02
	8	209.39	1.27E+02	96.84			1.27E+02	9.68E+01
M	9	238.79	2.30E+03	128.58	1.58E+01	5.45E+00	2.28E+03	1.29E+02
m	10	242.01	9.79E+02	137.93			9.79E+02	1.38E+02
	11	270.40	1.71E+02	125.64			1.71E+02	1.26E+02
	12	280.10	1.36E+02	90.44			1.36E+02	9.04E+01
M	13	295.33	1.58E+03	101.62	1.24E+01	5.72E+00	1.56E+03	1.02E+02
m	14	300.23	2.19E+02	108.98			2.19E+02	1.09E+02
	15	321.62	8.16E+01	74.16			8.16E+01	7.42E+01
	16	338.35	3.81E+02	99.35	6.77E-01	4.03E+00	3.80E+02	9.94E+01
	17	352.09	2.39E+03	132.55	7.92E+00	4.39E+00	2.38E+03	1.33E+02
	18	408.55	8.45E+01	86.59			8.45E+01	8.66E+01
M	19	462.93	1.42E+02	66.58			1.42E+02	6.66E+01
m	20	471.39	7.06E+01	75.86			7.06E+01	7.59E+01
	21	510.79	2.61E+02	73.15	6.19E+01	5.33E+00	1.99E+02	7.33E+01
M	22	579.87	6.38E+01	29.73			6.38E+01	2.97E+01
m	23	583.36	6.78E+02	63.52	4.68E-01	3.90E+00	6.78E+02	6.36E+01
m	24	590.41	3.26E+01	45.61			3.26E+01	4.56E+01
	25	596.11	5.80E+01	34.09			5.80E+01	3.41E+01
	26	609.47	1.55E+03	115.20	7.09E+00	4.24E+00	1.54E+03	1.15E+02
	27	665.39	5.47E+01	43.61			5.47E+01	4.36E+01

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Analysis Report for 1905060-09

R3 0-6

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
28	682.73	4.36E+01	49.92			4.36E+01	4.99E+01
29	727.49	1.59E+02	53.09			1.59E+02	5.31E+01
30	768.25	2.51E+02	68.09			2.51E+02	6.81E+01
31	786.05	6.16E+01	61.48			6.16E+01	6.15E+01
32	794.77	6.70E+01	44.71	1.96E+00	1.09E+00	6.51E+01	4.47E+01
33	861.08	8.18E+01	55.75			8.18E+01	5.57E+01
34	911.51	3.38E+02	62.11	3.38E+00	2.28E+00	3.34E+02	6.21E+01
35	933.41	1.09E+02	52.45			1.09E+02	5.24E+01
M	36	964.25	6.81E+01			6.81E+01	4.12E+01
m	37	969.20	2.12E+02	6.27E-01	2.01E+00	2.11E+02	4.40E+01
38	979.60	4.84E+01	37.22			4.84E+01	3.72E+01
39	1013.37	5.09E+01	30.57			5.09E+01	3.06E+01
40	1120.25	3.31E+02	55.61			3.31E+02	5.56E+01
41	1155.00	4.03E+01	41.03			4.03E+01	4.10E+01
42	1175.07	4.35E+01	28.25			4.35E+01	2.82E+01
43	1182.61	2.04E+01	21.28			2.04E+01	2.13E+01
44	1238.23	1.16E+02	36.62			1.16E+02	3.66E+01
45	1281.30	3.57E+01	31.30			3.57E+01	3.13E+01
46	1377.94	8.70E+01	36.58			8.70E+01	3.66E+01
47	1407.93	6.30E+01	60.70			6.30E+01	6.07E+01
48	1460.91	9.96E+01	36.60	3.34E+00	1.76E+00	9.63E+01	3.66E+01
49	1510.06	5.22E+01	29.02			5.22E+01	2.90E+01
M	50	1574.27	3.05E+01			3.05E+01	1.72E+01
m	51	1583.15	1.97E+01			1.97E+01	2.26E+01
m	52	1587.96	4.15E+01			4.15E+01	2.14E+01
m	53	1593.44	5.25E+01			5.25E+01	2.04E+01
54	1660.19	4.26E+01	23.58			4.26E+01	2.36E+01
55	1694.42	1.74E+01	15.36			1.74E+01	1.54E+01
56	1729.53	5.16E+01	24.79			5.16E+01	2.48E+01
57	1764.81	2.72E+02	39.80			2.72E+02	3.98E+01
58	1836.71	3.28E+01	13.42			3.28E+01	1.34E+01
59	1847.74	4.10E+01	21.25			4.10E+01	2.13E+01
60	1921.57	1.64E+01	19.74			1.64E+01	1.97E+01
61	1937.70	1.23E+01	14.04			1.23E+01	1.40E+01
62	2029.66	1.29E+01	13.71			1.29E+01	1.37E+01
63	2103.55	4.15E+01	16.88			4.15E+01	1.69E+01
64	2117.74	2.58E+01	15.49			2.58E+01	1.55E+01
65	2184.22	1.57E+01	17.44			1.57E+01	1.74E+01
66	2204.23	5.90E+01	21.05			5.90E+01	2.11E+01
67	2449.37	3.60E+01	18.49			3.60E+01	1.85E+01
68	2564.85	6.38E+00	6.65			6.38E+00	6.65E+00
69	2614.64	1.99E+02	28.21	1.89E+00	1.25E+00	1.97E+02	2.82E+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 1905060-09

R3 0-6

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	4.37E+00	1.80E+00
CR-51	0.954	320.08 *	9.83	1.44E+00	1.32E+00
GA-67	0.718	93.31 *	35.70	1.52E+02	4.84E+01
		208.95 *	2.24	8.12E+02	6.24E+02
		300.22 *	16.00	2.76E+02	1.40E+02
NB-95	0.896	765.79 *	99.81	8.35E-01	2.38E-01
CD-109	0.983	88.03 *	3.72	1.30E+01	2.51E+00
SN-126	0.995	87.57 *	37.00	1.26E+00	2.43E-01
SB-127	0.742	473.00 *	25.00	3.71E+01	4.00E+01
		685.00 *	35.70	2.23E+01	2.56E+01
		783.80 *	14.70	8.76E+01	8.78E+01
CS-135	0.920	268.24 *	16.00	8.29E-01	6.15E-01
EU-155	0.371	86.50 *	30.90	1.53E+00	2.94E-01
		105.30	20.70		
HO-166M	0.535	184.41 *	72.60	4.21E-01	1.03E-01
		280.45 *	29.60	3.68E-01	2.48E-01
		410.94	11.10		
		711.69	54.10		
TM-171	0.953	66.72 *	0.14	9.32E+01	4.98E+01
LU-173	0.519	100.72	5.24		
		272.11 *	21.20	6.48E-01	4.81E-01
TL-208	0.999	583.14 *	30.22	3.47E+00	4.56E-01
		860.37 *	4.48	4.11E+00	2.82E+00
		2614.66 *	35.85	1.42E+01	1.22E+01
BI-212	0.813	727.17 *	11.80	2.55E+00	8.82E-01
		1620.62	2.75		
PB-212	1.000	238.63 *	44.60	3.52E+00	4.02E-01
		300.09 *	3.41	5.50E+00	2.79E+00
BI-214	0.999	609.31 *	46.30	5.36E+00	6.35E-01
		1120.29 *	15.10	6.84E+00	1.34E+00
		1764.49 *	15.80	1.26E+01	3.56E+00
		2204.22 *	4.98	1.64E+01	9.48E+00
PB-214	1.000	295.21 *	19.19	6.89E+00	7.71E-01
		351.92 *	37.19	6.36E+00	6.62E-01
RA-223	0.913	323.87 *	3.88	1.92E+00	1.76E+00
RA-224	0.981	240.98 *	3.95	1.73E+01	2.98E+00
AC-228	0.998	338.32 *	11.40	3.19E+00	8.83E-01
		911.07 *	27.70	2.89E+00	5.84E-01
		969.11 *	16.60	3.28E+00	7.37E-01
PA-234	0.489	131.20 *	20.40	3.22E-01	2.59E-01
		733.99	8.80		

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Analysis Report for 1905060-09

R3 0-6

Nuclide Name	Id Confidence	Energy (keV)	Yield(%)	Activity (pCi/grams)	Activity Uncertainty
PA-234	0.489	946.00	12.00		
TH-234	0.945	63.29 *	3.80	3.35E+00	1.79E+00
NP-237	0.995	86.50 *	12.60	3.71E+00	7.14E-01
AM-243	0.956	74.67 *	66.00	2.15E+00	2.73E-01

* = Energy line found in the spectrum.

- = Manually added nuclide.

? = Manually edited nuclide.

Energy Tolerance : 2.000FWHM

Nuclide confidence index threshold = 0.30

Errors quoted at 2.000sigma

UNIDENTIFIED PEAKS

Peak Locate Performed on : 6/3/2019 8:55:47AM
 Peak Locate From Channel : 1
 Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
6	155.25	3.25440E-02	48.78	Sum	
18	408.55	2.34715E-02	51.24	Sum	
M 19	462.93	3.94682E-02	23.43	Tol.	SB-125
21	510.79	5.52687E-02	18.43	Sum	
M 22	579.87	1.77344E-02	23.29	Sum	
m 24	590.41	9.06801E-03	69.85	Sum	
25	596.11	1.61111E-02	29.39	Sum	
27	665.39	1.51969E-02	39.86	Tol.	SB-126 CE-143
32	794.77	1.80733E-02	34.37	Sum	
35	933.41	3.02470E-02	24.08	Sum	
M 36	964.25	1.89163E-02	30.25	Sum	
38	979.60	1.34350E-02	38.48	Sum	
39	1013.37	1.41472E-02	30.01	Sum	
41	1155.00	1.11879E-02	50.93	Sum	
42	1175.07	1.20881E-02	32.46	Sum	
43	1182.61	5.66162E-03	52.20	D-Esc	
44	1238.23	3.23456E-02	15.72	Sum	
45	1281.30	9.90351E-03	43.90	Sum	
46	1377.94	2.41667E-02	21.02	Sum	
47	1407.93	1.75000E-02	48.17	Tol.	EU-152
49	1510.06	1.45125E-02	27.77	Sum	
M 50	1574.27	8.48448E-03	28.10	Sum	
m 51	1583.15	5.47108E-03	57.37	Sum	
m 52	1587.96	1.15254E-02	25.85	Sum	

Analysis Report for 1905060-09

R3 0-6

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
m 53	1593.44	1.45889E-02	19.39	D-Esc	
54	1660.19	1.18284E-02	27.69		
55	1694.42	4.82975E-03	44.18	S-Esc	
56	1729.53	1.43340E-02	24.02	Sum	
58	1836.71	9.11651E-03	20.44	Tol.	Y-88
59	1847.74	1.13958E-02	25.90	Sum	
60	1921.57	4.56699E-03	60.02		
61	1937.70	3.42014E-03	57.03	Sum	
62	2029.66	3.57323E-03	53.29		
63	2103.55	1.15278E-02	20.34	S-Esc	
64	2117.74	7.15873E-03	30.06	Sum	
65	2184.22	4.35036E-03	55.66		
67	2449.37	1.00000E-02	25.69	Sum	
68	2564.85	1.77083E-03	52.17		

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	4.37E+00	1.80E+00
CR-51	0.95	320.08 *	9.83	1.44E+00	1.32E+00
GA-67	0.71	93.31 *	35.70	1.52E+02	4.84E+01
		208.95 *	2.24	8.12E+02	6.24E+02
		300.22 *	16.00	2.76E+02	1.40E+02
NB-95	0.89	765.79 *	99.81	8.35E-01	2.38E-01
CD-109	0.98	88.03 *	3.72	1.30E+01	2.51E+00
SN-126	0.99	87.57 *	37.00	1.26E+00	2.43E-01
SB-127	0.74	473.00 *	25.00	3.71E+01	4.00E+01
		685.00 *	35.70	2.23E+01	2.56E+01
		783.80 *	14.70	8.76E+01	8.78E+01
CS-135	0.92	268.24 *	16.00	8.29E-01	6.15E-01
EU-155	0.37	86.50 *	30.90	1.53E+00	2.94E-01
		105.30	20.70		

Analysis Report for 1905060-09

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Nuclide Name	Id Confidence	Energy (keV)	Yield(%)	Activity (pCi/grams)	Activity Uncertainty
HO-166M	0.53	184.41 *	72.60	4.21E-01	1.03E-01
		280.45 *	29.60	3.68E-01	2.48E-01
		410.94	11.10		
		711.69	54.10		
TM-171	0.95	66.72 *	0.14	9.32E+01	4.98E+01
LU-173	0.51	100.72	5.24		
		272.11 *	21.20	6.48E-01	4.81E-01
TL-208	0.99	583.14 *	30.22	3.47E+00	4.56E-01
		860.37 *	4.48	4.11E+00	2.82E+00
		2614.66 *	35.85	1.42E+01	1.22E+01
BI-212	0.81	727.17 *	11.80	2.55E+00	8.82E-01
		1620.62	2.75		
PB-212	1.00	238.63 *	44.60	3.52E+00	4.02E-01
		300.09 *	3.41	5.50E+00	2.79E+00
BI-214	0.99	609.31 *	46.30	5.36E+00	6.35E-01
		1120.29 *	15.10	6.84E+00	1.34E+00
		1764.49 *	15.80	1.26E+01	3.56E+00
		2204.22 *	4.98	1.64E+01	9.48E+00
PB-214	1.00	295.21 *	19.19	6.89E+00	7.71E-01
		351.92 *	37.19	6.36E+00	6.62E-01
RA-223	0.91	323.87 *	3.88	1.92E+00	1.76E+00
RA-224	0.98	240.98 *	3.95	1.73E+01	2.98E+00
AC-228	0.99	338.32 *	11.40	3.19E+00	8.83E-01
		911.07 *	27.70	2.89E+00	5.84E-01
		969.11 *	16.60	3.28E+00	7.37E-01
PA-234	0.48	131.20 *	20.40	3.22E-01	2.59E-01
		733.99	8.80		
		946.00	12.00		
TH-234	0.94	63.29 *	3.80	3.35E+00	1.79E+00
NP-237	0.99	86.50 *	12.60	3.71E+00	7.14E-01
AM-243	0.95	74.67 *	66.00	2.15E+00	2.73E-01

* = Energy line found in the spectrum.

- = Manually added nuclide.

? = Manually edited nuclide.

@ = Energy line not used for Weighted Mean Activity

Energy Tolerance : 2.000FWHM

Nuclide confidence index threshold = 0.30

Errors quoted at 2.000sigma

INTERFERENCE CORRECTED REPORT

Analysis Report for 1905060-09

R3 0-6

	Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
	K-40	1.000	4.37E+00	1.80E+00	
?	CR-51	0.954	1.44E+00	1.32E+00	
	GA-67	0.718	1.50E+02	4.57E+01	
	NB-95	0.896	8.35E-01	2.38E-01	
?	CD-109	0.983	1.30E+01	2.51E+00	
?	SN-126	0.995	1.26E+00	2.43E-01	
	SB-127	0.742	3.01E+01	2.09E+01	
?	CS-135	0.920	8.29E-01	6.15E-01	
X	ND-147	0.689			
?	EU-155	0.371	1.53E+00	2.94E-01	
	HO-166M	0.535	4.13E-01	9.55E-02	
?	TM-171	0.953	9.32E+01	4.98E+01	
?	LU-173	0.519	6.48E-01	4.81E-01	
X	HG-203	0.984			
	TL-208	0.999	3.50E+00	4.49E-01	
	BI-212	0.813	2.55E+00	8.82E-01	
	PB-212	1.000	3.50E+00	3.98E-01	
	BI-214	0.999	5.84E+00	5.66E-01	
	PB-214	1.000	6.58E+00	5.02E-01	
?	RA-223	0.913	1.92E+00	1.76E+00	
	RA-224	0.981	1.73E+01	2.98E+00	
X	RA-226	1.000			
	AC-228	0.998	3.08E+00	4.06E-01	
	PA-234	0.489	3.22E-01	2.59E-01	
?	TH-234	0.945	3.35E+00	1.79E+00	
?	NP-237	0.995	3.71E+00	7.14E-01	
	AM-243	0.956	2.15E+00	2.73E-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 1905060-09

R3 0-6

UNIDENTIFIED PEAKS

Peak Locate Performed on : 6/3/2019 8:55:47AM
 Peak Locate From Channel : 1
 Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide	
	6	155.25	3.25440E-02	48.78	Sum	
	18	408.55	2.34715E-02	51.24	Sum	
M	19	462.93	3.94682E-02	23.43	Tol.	SB-125
	21	510.79	5.52687E-02	18.43	Sum	
M	22	579.87	1.77344E-02	23.29	Sum	
m	24	590.41	9.06801E-03	69.85	Sum	
	25	596.11	1.61111E-02	29.39	Sum	
	27	665.39	1.51969E-02	39.86	Tol.	SB-126 CE-143
	32	794.77	1.80733E-02	34.37	Sum	
	35	933.41	3.02470E-02	24.08		
M	36	964.25	1.89163E-02	30.25	Sum	
	38	979.60	1.34350E-02	38.48	Sum	
	39	1013.37	1.41472E-02	30.01		
	41	1155.00	1.11879E-02	50.93	Sum	
	42	1175.07	1.20881E-02	32.46		
	43	1182.61	5.66162E-03	52.20	D-Esc	
	44	1238.23	3.23456E-02	15.72	Sum	
	45	1281.30	9.90351E-03	43.90		
	46	1377.94	2.41667E-02	21.02	Sum	
	47	1407.93	1.75000E-02	48.17	Tol.	EU-152
	49	1510.06	1.45125E-02	27.77		
M	50	1574.27	8.48448E-03	28.10		
m	51	1583.15	5.47108E-03	57.37		
m	52	1587.96	1.15254E-02	25.85	Sum	
m	53	1593.44	1.45889E-02	19.39	D-Esc	
	54	1660.19	1.18284E-02	27.69		
	55	1694.42	4.82975E-03	44.18	S-Esc	
	56	1729.53	1.43340E-02	24.02	Sum	
	58	1836.71	9.11651E-03	20.44	Tol.	Y-88
	59	1847.74	1.13958E-02	25.90	Sum	
	60	1921.57	4.56699E-03	60.02		
	61	1937.70	3.42014E-03	57.03	Sum	
	62	2029.66	3.57323E-03	53.29		
	63	2103.55	1.15278E-02	20.34	S-Esc	

Analysis Report for 1905060-09

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Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
64	2117.74	7.15873E-03	30.06	Sum	
65	2184.22	4.35036E-03	55.66		
67	2449.37	1.00000E-02	25.69	Sum	
68	2564.85	1.77083E-03	52.17		

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

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	-1.47E-01	1.52E+00	1.52E+00
+	NA-22	1274.54	99.94	6.42E-03	1.54E-01	1.54E-01
+	NA-24	1368.53	99.99	4.63E-02	1.58E-01	1.58E-01
		2754.09	99.86	6.41E-02		3.85E-01
+	AL-26	1808.65	99.76	-4.90E-02	1.92E-01	1.92E-01
+	K-40	1460.81	*	10.67	4.37E+00	2.43E+00
+	@ AR-41	1293.64	99.16	1.00E+26	1.00E+26	1.00E+26
+	TI-44	67.88	94.40	-8.21E-02	7.65E-02	7.65E-02
		78.34	96.00	7.18E-01		1.11E-01
+	SC-46	889.25	98.98	7.82E-02	1.72E-01	1.72E-01
		1120.51	99.90	1.20E+00		3.68E-01
+	V-48	983.52	99.98	-2.75E-02	3.69E-01	3.69E-01
		1312.10	97.50	-1.22E-01		4.82E-01
+	CR-51	320.08	*	9.83	2.14E+00	2.14E+00
+	MN-54	834.83	99.97	8.83E-02	1.56E-01	1.56E-01
+	CO-56	846.75	99.96	-5.76E-02	1.60E-01	1.60E-01
		1037.75	14.03	3.85E-02		1.17E+00
		1238.25	67.00	7.12E-01		4.42E-01
		1771.40	15.51	-4.57E-01		1.88E+00
		2587.48	16.90	-9.41E-01		2.65E+00
+	CO-57	122.06	85.51	-7.73E-03	8.77E-02	8.77E-02
		136.48	10.60	-1.79E-01		7.68E-01
+	CO-58	810.76	99.40	-4.50E-02	1.60E-01	1.60E-01
+	FE-59	1099.22	56.50	1.33E-01	3.99E-01	3.99E-01
		1291.56	43.20	3.08E-01		5.71E-01

Analysis Report for 1905060-09

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	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	CO-60	1173.22		100.00	9.20E-02	1.53E-01	1.53E-01
		1332.49		100.00	-5.31E-02		1.53E-01
+	ZN-65	1115.52		50.75	-3.80E-02	3.70E-01	3.70E-01
+	GA-67	93.31	*	35.70	1.52E+02	8.84E+01	8.84E+01
		208.95	*	2.24	8.12E+02		1.01E+03
		300.22	*	16.00	2.76E+02		3.70E+02
+	SE-75	121.11		16.70	-1.46E-02	1.48E-01	4.87E-01
		136.00		59.50	-2.64E-02		1.48E-01
		264.65		59.80	-7.86E-02		1.79E-01
		279.53		25.20	4.61E-01		4.62E-01
		400.65		11.40	-7.04E-02		1.20E+00
+	RB-82	776.52		13.00	1.52E-01	1.89E+00	1.89E+00
+	RB-83	520.41		46.00	-1.08E-01	2.97E-01	2.97E-01
		529.64		30.30	2.31E-02		4.65E-01
		552.65		16.40	-4.09E-01		8.58E-01
+	KR-85	513.99		0.43	5.30E+00	3.50E+01	3.50E+01
+	SR-85	513.99		99.27	3.04E-02	2.01E-01	2.01E-01
+	Y-88	898.02		93.40	-2.98E-02	1.77E-01	1.77E-01
		1836.01		99.38	1.99E-01		2.87E-01
+	MO-93	263.06		56.72	-1.92E-02	1.30E-01	1.68E-01
		684.67		99.68	-6.93E-03		1.30E-01
		1477.11		99.08	2.00E-02		1.93E-01
+	NB-93M	16.57		9.43	-3.28E+00	1.61E+02	1.61E+02
+	NB-94	702.63		100.00	-3.12E-02	1.31E-01	1.31E-01
		871.10		100.00	1.55E-02		1.33E-01
+	NB-95	765.79	*	99.81	8.35E-01	3.39E-01	3.39E-01
+	NB-95M	235.69		25.00	2.76E+02	8.95E+01	8.95E+01
+	ZR-95	724.18		43.70	2.30E-02	3.08E-01	5.00E-01
		756.72		55.30	9.76E-02		3.08E-01
+	MO-99	181.06		6.20	4.70E+01	6.34E+02	9.62E+02
		739.58		12.80	2.71E+01		6.34E+02
		778.00		4.50	1.42E+02		1.79E+03
+	TC-99M	140.51		89.00	4.97E-02	8.95E-02	8.95E-02
+	RU-103	497.08		89.00	-1.82E-01	2.02E-01	2.02E-01
+	RU-106	621.84		9.80	-1.21E+00	1.17E+00	1.17E+00
+	AG-108M	433.93		89.90	-4.66E-03	1.29E-01	1.29E-01
		614.37		90.40	2.19E-02		2.84E-01
		722.95		90.50	-9.67E-04		1.68E-01
+	CD-109	88.03	*	3.72	1.30E+01	3.65E+00	3.65E+00
+	AG-110M	657.75		93.14	1.83E-02	1.40E-01	1.40E-01
		677.61		10.53	-1.71E-01		1.21E+00
		706.67		16.46	1.36E-01		8.77E-01
		763.93		21.98	-2.39E-01		7.33E-01
		884.67		21.98	-1.15E-01		6.29E-01
		1384.27		23.94	9.77E-02		8.27E-01
+	CD-113M	263.70		0.02	-2.74E+02	4.02E+02	4.02E+02
+	SN-113	255.12		1.93	-3.95E+00	2.18E-01	5.65E+00
		391.69		64.90	9.22E-02		2.18E-01

Analysis Report for 1905060-09

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	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	TE-123M	159.00	84.10	1.85E-02	1.17E-01	1.17E-01
+	SB-124	602.71	97.87	-3.12E-03	1.65E-01	1.65E-01
		645.85	7.26	-1.70E-01		2.18E+00
		722.78	11.10	-1.06E-02		1.84E+00
		1691.02	49.00	1.01E-02		5.34E-01
+	I-125	35.49	6.49	1.83E-01	2.95E+00	2.95E+00
+	SB-125	176.33	6.89	5.51E-02	4.31E-01	1.31E+00
		427.89	29.33	1.85E-01		4.31E-01
		463.38	10.35	8.53E-01		1.26E+00
		600.56	17.80	-1.30E-02		6.68E-01
		635.90	11.32	2.05E-01		1.03E+00
+	SB-126	414.70	83.30	-2.76E-02	1.26E-01	1.39E-01
		666.33	99.60	-1.78E-02		1.32E-01
		695.00	99.60	-2.71E-02		1.26E-01
		720.50	53.80	-7.64E-02		2.39E-01
+	SN-126	87.57	* 37.00	1.26E+00	3.53E-01	3.53E-01
+	SB-127	473.00	* 25.00	3.71E+01	4.19E+01	9.62E+01
		685.00	* 35.70	2.23E+01		4.19E+01
		783.80	* 14.70	8.76E+01		1.43E+02
+	I-129	29.78	57.00	2.21E-01	4.67E-01	4.67E-01
		33.60	13.20	1.58E+00		1.31E+00
		39.58	7.52	-2.44E-01		1.35E+00
+	I-131	284.30	6.05	8.90E-01	1.24E+00	1.49E+01
		364.48	81.20	-6.33E-02		1.24E+00
		636.97	7.26	4.47E+00		1.45E+01
		722.89	1.80	-4.45E-01		7.74E+01
+	TE-132	49.72	13.10	8.93E+00	2.54E+01	1.31E+02
		228.16	88.00	-6.97E+00		2.54E+01
+	BA-133	81.00	33.00	-7.16E-01	2.60E-01	2.60E-01
		302.84	17.80	3.63E-01		5.74E-01
		356.01	60.00	-2.71E-02		2.92E-01
+	I-133	529.87	86.30	5.57E+06	1.13E+08	1.13E+08
+	XE-133	81.00	38.00	-1.85E+01	6.71E+00	6.71E+00
+	CS-134	563.23	8.38	6.05E-01	1.71E-01	1.48E+00
		569.32	15.43	-5.37E-01		7.77E-01
		604.70	97.60	2.11E-02		2.51E-01
		795.84	85.40	1.48E-01		1.71E-01
		801.93	8.73	1.07E-01		1.49E+00
+	CS-135	268.24	* 16.00	8.29E-01	9.95E-01	9.95E-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	1.34E-01	4.91E-01	4.49E+00
		163.89	4.61	3.77E+00		7.18E+00
		176.55	13.56	1.07E-01		2.54E+00
		273.65	12.66	-3.89E-01		3.10E+00
		340.57	48.50	2.84E+00		1.08E+00
		818.50	99.70	6.69E-02		4.91E-01
		1048.07	79.60	-3.68E-01		6.38E-01

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Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)	
	CS-136	1235.34	19.70	-4.82E-01	4.91E-01	4.31E+00
+	CS-137	661.65	85.12	-8.01E-03	1.57E-01	1.57E-01
+	LA-138	788.74	34.00	-2.02E-01	2.50E-01	4.20E-01
		1435.80	66.00	-1.31E-01		2.50E-01
+	CE-139	165.85	80.35	-7.37E-02	1.20E-01	1.20E-01
+	BA-140	162.64	6.70	1.45E+00	1.88E+00	5.09E+00
		304.84	4.50	-3.88E+00		8.20E+00
		423.70	3.20	4.96E+00		1.60E+01
		437.55	2.00	8.74E+00		2.30E+01
		537.32	25.00	-1.45E-01		1.88E+00
+	LA-140	328.77	20.50	1.03E+00	1.06E+00	2.11E+00
		487.03	45.50	1.11E-01		1.06E+00
		815.85	23.50	-3.96E-01		2.07E+00
		1596.49	95.49	-1.63E-01		1.09E+00
+	CE-141	145.44	48.40	-6.52E-02	2.89E-01	2.89E-01
+	CE-143	57.36	11.80	-5.29E+04	1.82E+05	2.45E+05
		293.26	42.00	1.23E+06		1.82E+05
		664.55	5.20	6.50E+05		1.09E+06
+	CE-144	133.54	10.80	-7.25E-02	7.38E-01	7.38E-01
+	PM-144	476.78	42.00	4.10E-02	1.25E-01	2.86E-01
		618.01	98.60	2.05E-02		1.25E-01
		696.49	99.49	-1.33E-02		1.33E-01
+	PM-145	36.85	21.70	-5.07E-01	3.03E-01	5.72E-01
		37.36	39.70	-5.50E-02		3.03E-01
		42.30	15.10	-6.93E-01		5.83E-01
		72.40	2.31	-2.04E+01		4.12E+00
+	PM-146	453.90	39.94	1.58E-01	3.01E-01	3.01E-01
		735.90	14.01	-5.72E-02		8.64E-01
		747.13	13.10	-2.74E-01		9.70E-01
+	ND-147	91.11	* 28.90	4.04E+00	2.35E+00	2.35E+00
		531.02	13.10	-4.78E-01		4.42E+00
+	PM-149	285.90	3.10	1.25E+03	1.00E+04	1.00E+04
+	EU-152	121.78	20.50	-3.02E-02	3.43E-01	3.43E-01
		244.69	5.40	1.63E+00		2.37E+00
		344.27	19.13	8.03E-02		5.28E-01
		778.89	9.10	1.09E-01		1.33E+00
		964.01	10.40	-1.87E+00		1.80E+00
		1085.78	7.22	-6.42E-01		1.79E+00
		1112.02	9.60	1.05E-01		1.56E+00
		1407.95	14.94	4.83E-01		1.46E+00
+	GD-153	97.43	31.30	5.07E-02	2.18E-01	2.18E-01
		103.18	22.20	-9.41E-02		3.12E-01
+	EU-154	123.07	40.50	-1.46E-02	1.75E-01	1.75E-01
		723.30	19.70	-4.47E-03		7.76E-01
		873.19	11.50	1.15E-01		1.17E+00
		996.32	10.30	-3.28E-01		1.23E+00
		1004.76	17.90	2.16E-01		7.63E-01
		1274.45	35.50	1.78E-02		4.29E-01
+	EU-155	86.50	* 30.90	1.53E+00	3.23E-01	4.27E-01

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	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	EU-155	105.30	20.70	2.18E-01	3.23E-01	3.23E-01
+	EU-156	811.77	10.40	-2.96E+00	3.73E+00	3.73E+00
		1153.47	7.20	3.47E+00		7.95E+00
		1230.71	8.90	5.34E-01		5.56E+00
+	HO-166M	184.41	* 72.60	4.21E-01	1.46E-01	1.46E-01
		280.45	* 29.60	3.68E-01		3.98E-01
		410.94	11.10	9.77E-01		1.12E+00
		711.69	54.10	1.66E-01		2.50E-01
+	TM-171	66.72	* 0.14	9.32E+01	1.62E+02	1.62E+02
+	HF-172	67.35	5.31	-1.50E+00	6.72E-01	1.40E+00
		125.82	11.30	1.64E-01		6.72E-01
+	LU-172	181.53	20.60	1.87E-02	3.22E+00	6.52E+00
		900.72	29.81	2.12E+00		6.91E+00
		1093.66	62.50	-1.08E+00		3.22E+00
+	LU-173	100.72	5.24	2.14E-01	7.78E-01	1.26E+00
		272.11	* 21.20	6.48E-01		7.78E-01
+	HF-175	343.40	84.00	2.35E-02	1.54E-01	1.54E-01
+	LU-176	88.34	13.30	1.00E+00	9.96E-02	6.28E-01
		201.83	86.00	8.30E-02		1.14E-01
		306.78	94.00	1.86E-02		9.96E-02
+	HF-181	133.02	41.70	4.57E-02	2.11E-01	2.79E-01
		345.85	17.20	1.36E-01		8.75E-01
		482.03	82.80	-6.54E-02		2.11E-01
+	TA-182	67.75	41.20	-2.20E-01	2.05E-01	2.05E-01
		1121.30	34.90	3.17E+00		9.92E-01
		1189.05	16.23	-3.83E-01		9.77E-01
		1221.41	26.98	3.83E-01		6.99E-01
		1231.02	11.44	1.50E-01		1.56E+00
+	IR-192	308.46	29.68	4.38E-02	3.28E-01	4.06E-01
		468.07	48.10	-1.85E-01		3.28E-01
+	HG-203	279.19	* 77.30	2.07E-01	2.23E-01	2.23E-01
+	TL-204	374.74	94.11	1.60E-03	1.23E-01	1.23E-01
		899.15	99.16	-9.40E-02		1.39E-01
		911.74	91.10	8.69E-01		2.76E-01
+	BI-207	569.67	97.72	3.60E-03	1.22E-01	1.22E-01
		1063.62	74.90	1.99E-03		1.70E-01
+	TL-208	583.14	* 30.22	3.47E+00	5.51E-01	6.92E-01
		860.37	* 4.48	4.11E+00		4.49E+00
		2614.66	* 35.85	1.42E+01		5.51E-01
+	BI-210M	262.00	45.00	2.00E-01	2.18E-01	2.18E-01
		300.00	23.00	-4.51E+00		5.11E-01
+	PB-210	46.50	4.25	1.28E+00	1.84E+00	1.84E+00
+	PB-211	404.84	2.90	1.86E-02	4.31E+00	4.31E+00
		831.96	2.90	3.41E-01		4.88E+00
+	BI-212	727.17	* 11.80	2.55E+00	1.28E+00	1.28E+00
		1620.62	2.75	5.15E+00		8.32E+00
+	PB-212	238.63	* 44.60	3.52E+00	4.26E-01	4.26E-01
		300.09	* 3.41	5.50E+00		7.36E+00

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	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	BI-214	609.31	*	46.30	5.36E+00	4.91E-01	4.91E-01
		1120.29	*	15.10	6.84E+00		1.48E+00
		1764.49	*	15.80	1.26E+01		1.82E+00
		2204.22	*	4.98	1.64E+01		7.32E+00
+	PB-214	295.21	*	19.19	6.89E+00	4.02E-01	1.28E+00
		351.92	*	37.19	6.36E+00		4.02E-01
+	RN-219	401.80		6.50	-3.12E-02	1.83E+00	1.83E+00
+	RA-223	323.87	*	3.88	1.92E+00	2.85E+00	2.85E+00
+	RA-224	240.98	*	3.95	1.73E+01	4.88E+00	4.88E+00
+	RA-225	40.00		31.00	-1.92E-01	1.07E+00	1.07E+00
+	RA-226	186.21	*	3.28	9.32E+00	3.24E+00	3.24E+00
+	TH-227	50.10		8.40	5.81E-02	8.56E-01	8.56E-01
		236.00		11.50	4.32E+00		1.40E+00
		256.20		6.30	-7.18E-01		1.50E+00
+	AC-228	338.32	*	11.40	3.19E+00	7.39E-01	1.29E+00
		911.07	*	27.70	2.89E+00		7.39E-01
		969.11	*	16.60	3.28E+00		1.47E+00
+	TH-230	48.43		16.90	-2.70E-01	4.38E-01	4.38E-01
		62.85		4.60	1.16E+00		1.59E+00
		67.67		0.37	-2.09E+01		1.95E+01
+	PA-231	283.67		1.60	-4.65E+00	4.42E+00	6.04E+00
		302.67		2.30	2.80E+00		4.42E+00
+	TH-231	25.64		14.70	7.35E-02	1.22E+00	3.43E+00
		84.21		6.40	1.15E+00		1.22E+00
+	PA-233	311.98		38.60	5.31E-02	4.97E-01	4.97E-01
+	PA-234	131.20	*	20.40	3.22E-01	4.16E-01	4.16E-01
		733.99		8.80	9.41E-02		1.40E+00
		946.00		12.00	-1.29E-03		1.01E+00
+	PA-234M	1001.03		0.92	1.05E+01	1.53E+01	1.53E+01
+	TH-234	63.29	*	3.80	3.35E+00	5.81E+00	5.81E+00
+	U-235	143.76		10.50	1.32E-01	7.68E-01	7.68E-01
		163.35		4.70	9.53E-01		1.81E+00
		205.31		4.70	8.65E-01		2.10E+00
+	NP-237	86.50	*	12.60	3.71E+00	1.04E+00	1.04E+00
+	NP-239	106.10		22.70	3.80E+02	5.64E+02	5.64E+02
		228.18		10.70	-4.66E+02		1.70E+03
		277.60		14.10	-3.59E+02		1.35E+03
+	AM-241	59.54		35.90	-8.88E-02	1.95E-01	1.95E-01
+	AM-243	74.67	*	66.00	2.15E+00	3.24E-01	3.24E-01
+	CM-243	209.75		3.29	7.48E-01	7.09E-01	2.99E+00
		228.14		10.60	-2.44E-01		8.90E-01
		277.60		14.00	-1.88E-01		7.09E-01

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- + = 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	1.52E+00	1.52E+00	-1.47E-01	7.36E-01
NA-22	1274.54	99.94	1.54E-01	1.54E-01	6.42E-03	7.19E-02
NA-24	1368.53	99.99	1.58E-01	1.58E-01	4.63E-02	7.32E-02
	2754.09	99.86	3.85E-01		6.41E-02	1.49E-01
AL-26	1808.65	99.76	1.92E-01	1.92E-01	-4.90E-02	8.52E-02
+ K-40	1460.81	* 10.67	2.43E+00	2.43E+00	4.37E+00	1.15E+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	7.65E-02	7.65E-02	-8.21E-02	3.78E-02
	78.34	96.00	1.11E-01		7.18E-01	5.48E-02
SC-46	889.25	98.98	1.72E-01	1.72E-01	7.82E-02	8.22E-02
	1120.51	99.90	3.68E-01		1.20E+00	1.79E-01
V-48	983.52	99.98	3.69E-01	3.69E-01	-2.75E-02	1.74E-01
	1312.10	97.50	4.82E-01		-1.22E-01	2.24E-01
+ CR-51	320.08	* 9.83	2.14E+00	2.14E+00	1.44E+00	1.05E+00
MN-54	834.83	99.97	1.56E-01	1.56E-01	8.83E-02	7.49E-02
CO-56	846.75	99.96	1.60E-01	1.60E-01	-5.76E-02	7.61E-02
	1037.75	14.03	1.17E+00		3.85E-02	5.50E-01
	1238.25	67.00	4.42E-01		7.12E-01	2.12E-01
	1771.40	15.51	1.88E+00		-4.57E-01	8.57E-01
	2587.48	16.90	2.65E+00		-9.41E-01	1.07E+00
CO-57	122.06	85.51	8.77E-02	8.77E-02	-7.73E-03	4.32E-02
	136.48	10.60	7.68E-01		-1.79E-01	3.79E-01
CO-58	810.76	99.40	1.60E-01	1.60E-01	-4.50E-02	7.62E-02
FE-59	1099.22	56.50	3.99E-01	3.99E-01	1.33E-01	1.89E-01
	1291.56	43.20	5.71E-01		3.08E-01	2.68E-01
CO-60	1173.22	100.00	1.53E-01	1.53E-01	9.20E-02	7.21E-02
	1332.49	100.00	1.53E-01		-5.31E-02	7.12E-02
ZN-65	1115.52	50.75	3.70E-01	3.70E-01	-3.80E-02	1.76E-01
+ GA-67	93.31	* 35.70	8.84E+01	8.84E+01	1.52E+02	4.39E+01

Analysis Report for 1905060-09

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Nuclide Name	Energy (keV)		Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
GA-67	208.95	*	2.24	1.01E+03	8.84E+01	8.12E+02	4.94E+02
	300.22	*	16.00	3.70E+02		2.76E+02	1.83E+02
SE-75	121.11		16.70	4.87E-01	1.48E-01	-1.46E-02	2.40E-01
	136.00		59.50	1.48E-01		-2.64E-02	7.29E-02
	264.65		59.80	1.79E-01		-7.86E-02	8.75E-02
	279.53		25.20	4.62E-01		4.61E-01	2.26E-01
	400.65		11.40	1.20E+00		-7.04E-02	5.85E-01
RB-82	776.52		13.00	1.89E+00	1.89E+00	1.52E-01	9.01E-01
RB-83	520.41		46.00	2.97E-01	2.97E-01	-1.08E-01	1.44E-01
	529.64		30.30	4.65E-01		-2.31E-02	2.25E-01
	552.65		16.40	8.58E-01		-4.09E-01	4.14E-01
KR-85	513.99		0.43	3.50E+01	3.50E+01	5.30E+00	1.71E+01
SR-85	513.99		99.27	2.01E-01	2.01E-01	3.04E-02	9.78E-02
Y-88	898.02		93.40	1.77E-01	1.77E-01	-2.98E-02	8.47E-02
	1836.01		99.38	2.87E-01		1.99E-01	1.31E-01
MO-93	263.06		56.72	1.68E-01	1.30E-01	-1.92E-02	8.24E-02
	684.67		99.68	1.30E-01		-6.93E-03	6.27E-02
	1477.11		99.08	1.93E-01		2.00E-02	8.96E-02
NB-93M	16.57		9.43	1.61E+02	1.61E+02	-3.28E+00	7.95E+01
NB-94	702.63		100.00	1.31E-01	1.31E-01	-3.12E-02	6.29E-02
	871.10		100.00	1.33E-01		1.55E-02	6.34E-02
+ NB-95	765.79	*	99.81	3.39E-01	3.39E-01	8.35E-01	1.65E-01
NB-95M	235.69		25.00	8.95E+01	8.95E+01	2.76E+02	4.42E+01
ZR-95	724.18		43.70	5.00E-01	3.08E-01	2.30E-02	2.42E-01
	756.72		55.30	3.08E-01		9.76E-02	1.48E-01
MO-99	181.06		6.20	9.62E+02	6.34E+02	4.70E+01	4.74E+02
	739.58		12.80	6.34E+02		2.71E+01	3.04E+02
	778.00		4.50	1.79E+03		1.42E+02	8.56E+02
TC-99M	140.51		89.00	8.95E-02	8.95E-02	4.97E-02	4.41E-02
RU-103	497.08		89.00	2.02E-01	2.02E-01	-1.82E-01	9.80E-02
RU-106	621.84		9.80	1.17E+00	1.17E+00	-1.21E+00	5.62E-01
AG-108M	433.93		89.90	1.29E-01	1.29E-01	-4.66E-03	6.26E-02
	614.37		90.40	2.84E-01		2.19E-02	1.40E-01
	722.95		90.50	1.68E-01		-9.67E-04	8.12E-02
+ CD-109	88.03	*	3.72	3.65E+00	3.65E+00	1.30E+01	1.81E+00
AG-110M	657.75		93.14	1.40E-01	1.40E-01	1.83E-02	6.73E-02
	677.61		10.53	1.21E+00		-1.71E-01	5.81E-01
	706.67		16.46	8.77E-01		1.36E-01	4.22E-01
	763.93		21.98	7.33E-01		-2.39E-01	3.54E-01
	884.67		21.98	6.29E-01		-1.15E-01	2.99E-01
	1384.27		23.94	8.27E-01		9.77E-02	3.87E-01
CD-113M	263.70		0.02	4.02E+02	4.02E+02	-2.74E+02	1.96E+02
SN-113	255.12		1.93	5.65E+00	2.18E-01	-3.95E+00	2.76E+00
	391.69		64.90	2.18E-01		9.22E-02	1.06E-01
TE-123M	159.00		84.10	1.17E-01	1.17E-01	1.85E-02	5.79E-02
SB-124	602.71		97.87	1.65E-01	1.65E-01	-3.12E-03	7.93E-02
	645.85		7.26	2.18E+00		-1.70E-01	1.05E+00
	722.78		11.10	1.84E+00		-1.06E-02	8.89E-01
	1691.02		49.00	5.34E-01		1.01E-02	2.42E-01
I-125	35.49		6.49	2.95E+00	2.95E+00	1.83E-01	1.45E+00
SB-125	176.33		6.89	1.31E+00	4.31E-01	5.51E-02	6.45E-01
	427.89		29.33	4.31E-01		1.85E-01	2.10E-01
	463.38		10.35	1.26E+00		8.53E-01	6.14E-01

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Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
SB-125	600.56	17.80	6.68E-01	4.31E-01	-1.30E-02	3.22E-01
	635.90	11.32	1.03E+00		2.05E-01	4.94E-01
SB-126	414.70	83.30	1.39E-01	1.26E-01	-2.76E-02	6.74E-02
	666.33	99.60	1.32E-01		-1.78E-02	6.39E-02
	695.00	99.60	1.26E-01		-2.71E-02	6.05E-02
	720.50	53.80	2.39E-01		-7.64E-02	1.15E-01
+ SN-126	87.57	* 37.00	3.53E-01	3.53E-01	1.26E+00	1.75E-01
+ SB-127	473.00	* 25.00	9.62E+01	4.19E+01	3.71E+01	4.74E+01
	685.00	* 35.70	4.19E+01		2.23E+01	2.02E+01
	783.80	* 14.70	1.43E+02		8.76E+01	6.96E+01
I-129	29.78	57.00	4.67E-01	4.67E-01	2.21E-01	2.30E-01
	33.60	13.20	1.31E+00		1.58E+00	6.46E-01
	39.58	7.52	1.35E+00		-2.44E-01	6.65E-01
I-131	284.30	6.05	1.49E+01	1.24E+00	8.90E-01	7.28E+00
	364.48	81.20	1.24E+00		-6.33E-02	6.03E-01
	636.97	7.26	1.45E+01		4.47E+00	6.99E+00
	722.89	1.80	7.74E+01		-4.45E-01	3.74E+01
TE-132	49.72	13.10	1.31E+02	2.54E+01	8.93E+00	6.47E+01
	228.16	88.00	2.54E+01		-6.97E+00	1.24E+01
BA-133	81.00	33.00	2.60E-01	2.60E-01	-7.16E-01	1.29E-01
	302.84	17.80	5.74E-01		3.63E-01	2.80E-01
	356.01	60.00	2.92E-01		-2.71E-02	1.44E-01
I-133	529.87	86.30	1.13E+08	1.13E+08	5.57E+06	5.44E+07
XE-133	81.00	38.00	6.71E+00	6.71E+00	-1.85E+01	3.32E+00
CS-134	563.23	8.38	1.48E+00	1.71E-01	6.05E-01	7.15E-01
	569.32	15.43	7.77E-01		-5.37E-01	3.75E-01
	604.70	97.60	2.51E-01		2.11E-02	1.23E-01
	795.84	85.40	1.71E-01		1.48E-01	8.21E-02
	801.93	8.73	1.49E+00		1.07E-01	7.11E-01
+ CS-135	268.24	* 16.00	9.95E-01	9.95E-01	8.29E-01	4.91E-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	4.49E+00	4.91E-01	1.34E-01	2.21E+00
	163.89	4.61	7.18E+00		3.77E+00	3.54E+00
	176.55	13.56	2.54E+00		1.07E-01	1.25E+00
	273.65	12.66	3.10E+00		-3.89E-01	1.52E+00
	340.57	48.50	1.08E+00		2.84E+00	5.27E-01
	818.50	99.70	4.91E-01		6.69E-02	2.34E-01
	1048.07	79.60	6.38E-01		-3.68E-01	3.00E-01
	1235.34	19.70	4.31E+00		-4.82E-01	2.06E+00
CS-137	661.65	85.12	1.57E-01	1.57E-01	-8.01E-03	7.56E-02
LA-138	788.74	34.00	4.20E-01	2.50E-01	-2.02E-01	2.02E-01
	1435.80	66.00	2.50E-01		-1.31E-01	1.15E-01
CE-139	165.85	80.35	1.20E-01	1.20E-01	-7.37E-02	5.89E-02
BA-140	162.64	6.70	5.09E+00	1.88E+00	1.45E+00	2.51E+00
	304.84	4.50	8.20E+00		-3.88E+00	3.99E+00
	423.70	3.20	1.60E+01		4.96E+00	7.79E+00
	437.55	2.00	2.30E+01		8.74E+00	1.12E+01
	537.32	25.00	1.88E+00		-1.45E-01	9.11E-01
LA-140	328.77	20.50	2.11E+00	1.06E+00	1.03E+00	1.03E+00
	487.03	45.50	1.06E+00		1.11E-01	5.13E-01
	815.85	23.50	2.07E+00		-3.96E-01	9.88E-01

0371

Analysis Report for 1905060-09

R3 0-6

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
LA-140	1596.49	95.49	1.09E+00	1.06E+00	-1.63E-01	5.13E-01
CE-141	145.44	48.40	2.89E-01	2.89E-01	-6.52E-02	1.42E-01
CE-143	57.36	11.80	2.45E+05	1.82E+05	-5.29E+04	1.21E+05
	293.26	42.00	1.82E+05		1.23E+06	8.96E+04
	664.55	5.20	1.09E+06		6.50E+05	5.26E+05
CE-144	133.54	10.80	7.38E-01	7.38E-01	-7.25E-02	3.64E-01
PM-144	476.78	42.00	2.86E-01	1.25E-01	4.10E-02	1.39E-01
	618.01	98.60	1.25E-01		2.05E-02	6.04E-02
	696.49	99.49	1.33E-01		-1.33E-02	6.41E-02
PM-145	36.85	21.70	5.72E-01	3.03E-01	-5.07E-01	2.82E-01
	37.36	39.70	3.03E-01		-5.50E-02	1.49E-01
	42.30	15.10	5.83E-01		-6.93E-01	2.87E-01
	72.40	2.31	4.12E+00		-2.04E+01	2.04E+00
PM-146	453.90	39.94	3.01E-01	3.01E-01	1.58E-01	1.46E-01
	735.90	14.01	8.64E-01		-5.72E-02	4.13E-01
	747.13	13.10	9.70E-01		-2.74E-01	4.65E-01
ND-147	91.11	*	28.90	2.35E+00	4.04E+00	1.17E+00
	531.02		13.10	4.42E+00	-4.78E-01	2.13E+00
PM-149	285.90	3.10	1.00E+04	1.00E+04	1.25E+03	4.89E+03
EU-152	121.78	20.50	3.43E-01	3.43E-01	-3.02E-02	1.69E-01
	244.69	5.40	2.37E+00		1.63E+00	1.17E+00
	344.27	19.13	5.28E-01		8.03E-02	2.57E-01
	778.89	9.10	1.33E+00		1.09E-01	6.37E-01
	964.01	10.40	1.80E+00		-1.87E+00	8.66E-01
	1085.78	7.22	1.79E+00		-6.42E-01	8.41E-01
	1112.02	9.60	1.56E+00		1.05E-01	7.38E-01
	1407.95	14.94	1.46E+00		4.83E-01	6.91E-01
GD-153	97.43	31.30	2.18E-01	2.18E-01	5.07E-02	1.07E-01
	103.18	22.20	3.12E-01		-9.41E-02	1.54E-01
EU-154	123.07	40.50	1.75E-01	1.75E-01	-1.46E-02	8.65E-02
	723.30	19.70	7.76E-01		-4.47E-03	3.75E-01
	873.19	11.50	1.17E+00		1.15E-01	5.56E-01
	996.32	10.30	1.23E+00		-3.28E-01	5.81E-01
	1004.76	17.90	7.63E-01		2.16E-01	3.61E-01
	1274.45	35.50	4.29E-01		1.78E-02	2.00E-01
+ EU-155	86.50	*	30.90	3.23E-01	1.53E+00	2.12E-01
	105.30		20.70	3.23E-01	2.18E-01	1.59E-01
EU-156	811.77	10.40	3.73E+00	3.73E+00	-2.96E+00	1.78E+00
	1153.47	7.20	7.95E+00		3.47E+00	3.78E+00
	1230.71	8.90	5.56E+00		5.34E-01	2.60E+00
+ HO-166M	184.41	*	72.60	1.46E-01	4.21E-01	7.22E-02
	280.45	*	29.60	3.98E-01	3.68E-01	1.95E-01
	410.94		11.10	1.12E+00	9.77E-01	5.45E-01
	711.69		54.10	2.50E-01	1.66E-01	1.20E-01
+ TM-171	66.72	*	0.14	1.62E+02	9.32E+01	8.06E+01
HF-172	67.35		5.31	1.40E+00	6.72E-01	-1.50E+00
	125.82		11.30	6.72E-01	1.64E-01	3.31E-01
LU-172	181.53	20.60	6.52E+00	3.22E+00	1.87E-02	3.21E+00
	900.72	29.81	6.91E+00		2.12E+00	3.30E+00
	1093.66	62.50	3.22E+00		-1.08E+00	1.52E+00
+ LU-173	100.72		5.24	1.26E+00	7.78E-01	2.14E-01
	272.11	*	21.20	7.78E-01	6.48E-01	3.84E-01
HF-175	343.40	84.00	1.54E-01	1.54E-01	2.35E-02	7.51E-02

0372

Analysis Report for 1905060-09

R3 0-6

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
LU-176	88.34	13.30	6.28E-01	9.96E-02	1.00E+00	3.11E-01
	201.83	86.00	1.14E-01		8.30E-02	5.62E-02
	306.78	94.00	9.96E-02		1.86E-02	4.85E-02
HF-181	133.02	41.70	2.79E-01	2.11E-01	4.57E-02	1.38E-01
	345.85	17.20	8.75E-01		1.36E-01	4.26E-01
	482.03	82.80	2.11E-01		-6.54E-02	1.02E-01
TA-182	67.75	41.20	2.05E-01	2.05E-01	-2.20E-01	1.01E-01
	1121.30	34.90	9.92E-01		3.17E+00	4.82E-01
	1189.05	16.23	9.77E-01		-3.83E-01	4.55E-01
	1221.41	26.98	6.99E-01		3.83E-01	3.29E-01
	1231.02	11.44	1.56E+00		1.50E-01	7.33E-01
IR-192	308.46	29.68	4.06E-01	3.28E-01	4.38E-02	1.98E-01
	468.07	48.10	3.28E-01		-1.85E-01	1.59E-01
HG-203	279.19	*	77.30	2.23E-01	2.07E-01	1.09E-01
TL-204	374.74		1.23E-01	1.23E-01	1.60E-03	6.01E-02
	899.15	99.16	1.39E-01		-9.40E-02	6.61E-02
	911.74	91.10	2.76E-01		8.69E-01	1.34E-01
BI-207	569.67	97.72	1.22E-01	1.22E-01	3.60E-03	5.88E-02
	1063.62	74.90	1.70E-01		1.99E-03	7.97E-02
+ TL-208	583.14	*	30.22	5.51E-01	3.47E+00	3.39E-01
	860.37	*	4.48	4.49E+00	4.11E+00	2.18E+00
	2614.66	*	35.85	5.51E-01	1.42E+01	1.79E-01
BI-210M	262.00		2.18E-01	2.18E-01	2.00E-01	1.07E-01
	300.00	23.00	5.11E-01		-4.51E+00	2.50E-01
PB-210	46.50	4.25	1.84E+00	1.84E+00	1.28E+00	9.05E-01
PB-211	404.84	2.90	4.31E+00	4.31E+00	1.86E-02	2.10E+00
	831.96	2.90	4.88E+00		3.41E-01	2.34E+00
+ BI-212	727.17	*	11.80	1.28E+00	1.28E+00	2.55E+00
	1620.62		2.75	8.32E+00	5.15E+00	3.87E+00
+ PB-212	238.63	*	44.60	4.26E-01	4.26E-01	3.52E+00
	300.09	*	3.41	7.36E+00	5.50E+00	3.65E+00
+ BI-214	609.31	*	46.30	4.91E-01	4.91E-01	5.36E+00
	1120.29	*	15.10	1.48E+00	6.84E+00	7.13E-01
	1764.49	*	15.80	1.82E+00	1.26E+01	8.49E-01
	2204.22	*	4.98	7.32E+00	1.64E+01	3.29E+00
+ PB-214	295.21	*	19.19	1.28E+00	4.02E-01	6.89E+00
	351.92	*	37.19	4.02E-01	6.36E+00	1.97E-01
RN-219	401.80		6.50	1.83E+00	1.83E+00	-3.12E-02
+ RA-223	323.87	*	3.88	2.85E+00	2.85E+00	1.92E+00
+ RA-224	240.98	*	3.95	4.88E+00	4.88E+00	1.73E+01
RA-225	40.00		31.00	1.07E+00	1.07E+00	-1.92E-01
RA-226	186.21	*	3.28	3.24E+00	3.24E+00	9.32E+00
TH-227	50.10		8.40	8.56E-01	8.56E-01	5.81E-02
	236.00	11.50	1.40E+00		4.32E+00	6.92E-01
	256.20	6.30	1.50E+00		-7.18E-01	7.35E-01
+ AC-228	338.32	*	11.40	1.29E+00	7.39E-01	3.19E+00
	911.07	*	27.70	7.39E-01	2.89E+00	3.58E-01
	969.11	*	16.60	1.47E+00	3.28E+00	7.13E-01
TH-230	48.43		16.90	4.38E-01	4.38E-01	-2.70E-01
	62.85	4.60	1.59E+00		1.16E+00	7.84E-01
	67.67	0.37	1.95E+01		-2.09E+01	9.65E+00
PA-231	283.67		6.04E+00	4.42E+00	-4.65E+00	2.95E+00
	302.67	2.30	4.42E+00		2.80E+00	2.16E+00

0373

Analysis Report for 1905060-09

R3 0-6

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
TH-231	25.64	14.70	3.43E+00	1.22E+00	7.35E-02	1.69E+00
	84.21	6.40	1.22E+00		1.15E+00	6.02E-01
PA-233	311.98	38.60	4.97E-01	4.97E-01	5.31E-02	2.43E-01
+ PA-234	131.20 *	20.40	4.16E-01	4.16E-01	3.22E-01	2.05E-01
	733.99	8.80	1.40E+00		9.41E-02	6.68E-01
	946.00	12.00	1.01E+00		-1.29E-03	4.78E-01
PA-234M	1001.03	0.92	1.53E+01	1.53E+01	1.05E+01	7.27E+00
+ TH-234	63.29 *	3.80	5.81E+00	5.81E+00	3.35E+00	2.89E+00
U-235	143.76	10.50	7.68E-01	7.68E-01	1.32E-01	3.78E-01
	163.35	4.70	1.81E+00		9.53E-01	8.93E-01
	205.31	4.70	2.10E+00		8.65E-01	1.03E+00
+ NP-237	86.50 *	12.60	1.04E+00	1.04E+00	3.71E+00	5.15E-01
NP-239	106.10	22.70	5.64E+02	5.64E+02	3.80E+02	2.78E+02
	228.18	10.70	1.70E+03		-4.66E+02	8.32E+02
	277.60	14.10	1.35E+03		-3.59E+02	6.62E+02
AM-241	59.54	35.90	1.95E-01	1.95E-01	-8.88E-02	9.65E-02
+ AM-243	74.67 *	66.00	3.24E-01	3.24E-01	2.15E+00	1.61E-01
CM-243	209.75	3.29	2.99E+00	7.09E-01	7.48E-01	1.47E+00
	228.14	10.60	8.90E-01		-2.44E-01	4.37E-01
	277.60	14.00	7.09E-01		-1.88E-01	3.47E-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

0374

Analysis Report for 1905060-09

R3 0-6

No Data Review Comments Entered.

369: 58 61 61 52 58 64 56 52

Sample Title: R3 0-6

Channel	-----	-----	-----	-----	-----	-----	-----	-----
377:	55	63	61	55	58	61	59	46
385:	70	68	60	70	54	71	73	63
393:	59	53	55	43	53	44	57	49
401:	56	60	65	48	60	59	60	64
409:	71	84	54	43	48	50	47	37
417:	41	61	60	47	66	58	49	63
425:	61	59	66	47	48	48	50	42
433:	48	43	34	49	38	57	45	44
441:	40	44	31	40	50	45	47	42
449:	39	51	43	47	36	50	58	38
457:	40	39	31	45	37	67	74	66
465:	42	39	44	35	44	51	40	50
473:	36	39	43	27	34	41	34	41
481:	42	29	44	37	27	37	52	42
489:	32	35	50	43	39	31	36	39
497:	29	39	29	39	33	48	34	36
505:	35	24	33	36	51	80	140	90
513:	58	30	27	37	27	35	29	25
521:	42	35	35	25	19	40	29	40
529:	26	32	34	24	28	28	36	38
537:	29	43	27	28	28	29	41	33
545:	32	19	29	41	39	31	30	38
553:	25	25	24	26	21	29	34	26
561:	38	33	37	27	27	25	34	25
569:	34	23	34	32	23	35	38	24
577:	16	18	28	51	41	87	279	286
585:	78	34	26	25	22	24	37	23
593:	18	13	36	35	25	23	19	12
601:	31	34	33	27	28	27	32	170
609:	616	674	238	37	30	26	28	33
617:	28	26	18	30	22	13	21	19
625:	19	22	26	29	23	20	15	22
633:	16	23	22	23	22	25	17	30
641:	24	23	20	27	21	26	18	27
649:	20	23	21	20	21	22	25	24
657:	23	25	24	19	29	21	28	29
665:	37	42	31	18	20	20	25	26
673:	19	19	18	27	25	11	25	18
681:	20	28	37	24	25	27	19	24
689:	20	19	24	29	15	23	18	25
697:	22	21	27	22	33	26	24	20
705:	17	22	27	31	30	25	32	19
713:	22	23	24	21	17	19	19	23
721:	35	22	23	18	24	43	74	72
729:	36	20	24	14	20	13	19	25
737:	14	26	15	20	20	18	21	20
745:	25	16	23	18	19	16	20	23
753:	27	21	26	29	11	19	23	14
761:	12	17	25	23	18	24	41	71
769:	75	37	31	19	16	23	10	15
777:	23	14	17	19	17	21	14	16
785:	34	32	29	22	21	13	14	18
793:	24	20	40	38	16	14	17	15

801: 15 16 16 14 26 23 25 15

Sample Title: R3 0-6

Channel	-----	-----	-----	-----	-----	-----	-----	-----
809:	16	16	18	13	11	12	18	16
817:	16	15	18	17	14	20	14	17
825:	19	19	15	17	16	17	23	22
833:	25	15	22	24	20	18	26	26
841:	15	13	11	11	22	10	17	16
849:	17	17	11	8	21	19	13	11
857:	19	12	22	36	49	25	19	15
865:	18	16	10	17	11	16	18	17
873:	16	19	19	14	13	15	17	16
881:	15	10	14	10	20	18	13	11
889:	18	14	17	14	22	17	16	12
897:	22	17	8	23	16	18	7	25
905:	21	18	16	13	23	66	143	127
913:	50	14	23	10	12	19	12	8
921:	10	11	13	17	6	7	17	19
929:	17	9	17	12	21	40	37	21
937:	10	14	10	8	11	13	12	11
945:	10	4	11	11	16	9	15	8
953:	12	11	13	18	10	13	16	11
961:	18	12	16	35	42	26	18	49
969:	86	64	25	16	11	9	7	12
977:	14	15	19	10	11	8	15	9
985:	7	6	7	14	6	13	11	7
993:	12	8	14	6	16	8	10	11
1001:	19	11	9	18	13	11	11	3
1009:	10	10	11	11	11	16	18	14
1017:	6	6	14	8	11	6	9	12
1025:	12	10	16	9	9	12	10	7
1033:	5	6	14	8	5	13	13	6
1041:	10	9	10	13	9	11	7	13
1049:	12	7	6	9	14	18	12	14
1057:	8	7	7	10	5	6	8	15
1065:	10	9	7	8	10	10	9	15
1073:	8	8	10	9	4	6	14	9
1081:	8	3	10	4	9	10	12	11
1089:	8	9	7	6	17	10	8	11
1097:	10	12	13	9	17	9	14	8
1105:	10	7	16	16	13	11	10	6
1113:	9	9	13	10	10	20	46	120
1121:	131	38	11	11	7	10	9	10
1129:	10	8	5	11	18	12	12	13
1137:	10	20	10	8	12	9	10	12
1145:	11	14	12	14	10	10	12	11
1153:	11	23	17	19	11	7	12	8
1161:	9	9	5	7	6	10	4	12
1169:	7	5	9	10	11	5	10	12
1177:	16	6	3	3	7	11	13	8
1185:	7	6	7	9	7	5	10	7
1193:	6	7	16	11	9	9	10	5
1201:	2	6	8	7	9	10	6	14
1209:	10	7	7	11	6	5	5	10
1217:	10	10	12	9	9	8	9	8
1225:	10	3	10	7	15	8	6	4

1233: 8 9 7 9 24 53 36 19

Sample Title: R3 0-6

Channel	-----	-----	-----	-----	-----	-----	-----	-----
1241:	11	3	10	7	10	9	7	10
1249:	11	7	8	8	13	12	6	7
1257:	11	6	5	6	6	11	6	7
1265:	11	10	4	9	8	8	7	9
1273:	5	9	5	9	4	8	10	12
1281:	17	20	4	8	7	5	6	8
1289:	7	5	5	11	13	11	8	5
1297:	5	4	10	11	6	6	6	8
1305:	11	6	8	11	4	6	5	8
1313:	7	4	12	3	7	5	10	10
1321:	7	3	5	8	7	6	9	8
1329:	9	4	11	7	3	3	6	4
1337:	6	8	9	7	11	8	8	11
1345:	9	6	7	4	6	7	7	9
1353:	1	2	5	8	9	5	7	2
1361:	5	5	7	6	10	6	3	7
1369:	5	5	8	4	5	4	7	21
1377:	26	38	26	5	8	9	3	5
1385:	14	9	8	11	4	9	10	7
1393:	5	7	5	6	6	5	5	5
1401:	15	10	12	2	9	10	14	20
1409:	17	13	7	4	4	11	3	8
1417:	12	3	9	7	6	10	2	8
1425:	4	8	6	7	6	9	7	6
1433:	2	5	6	4	5	6	9	6
1441:	8	6	9	4	6	6	7	2
1449:	4	4	1	6	4	9	9	5
1457:	3	8	18	33	51	22	7	4
1465:	7	3	6	9	9	6	5	4
1473:	7	8	7	3	6	5	10	8
1481:	5	10	8	3	8	5	3	5
1489:	5	3	9	7	4	8	8	8
1497:	3	4	2	3	6	6	7	6
1505:	4	4	6	5	22	23	15	7
1513:	7	5	4	6	4	4	8	6
1521:	7	10	8	3	6	10	2	11
1529:	5	3	9	2	7	3	5	5
1537:	7	6	3	13	2	7	10	9
1545:	4	5	7	4	3	9	9	3
1553:	3	10	4	9	6	4	4	4
1561:	6	6	7	4	5	2	2	3
1569:	2	1	5	3	5	12	9	5
1577:	4	3	7	8	7	9	9	12
1585:	3	6	11	20	11	5	3	15
1593:	18	16	11	2	6	6	4	3
1601:	3	7	5	5	5	6	2	3
1609:	3	5	6	8	4	1	3	6
1617:	8	6	5	9	10	6	1	7
1625:	7	3	4	3	6	8	14	4
1633:	2	2	4	1	4	4	4	2
1641:	4	5	6	4	2	2	3	3
1649:	2	6	5	4	1	2	4	3
1657:	3	12	5	11	8	13	4	1

1665: 2 4 2 2 4 3 3 4

Sample Title: R3 0-6

Channel	1	2	3	4	5	6	7	8
1673:	2	4	3	0	5	3	0	5
1681:	5	8	2	2	5	5	1	5
1689:	3	2	4	0	7	6	5	7
1697:	0	2	2	2	2	4	4	3
1705:	3	2	3	1	1	6	3	1
1713:	3	2	1	2	3	2	4	5
1721:	4	2	0	3	3	6	1	17
1729:	16	15	9	2	5	3	1	3
1737:	4	3	3	4	4	1	2	1
1745:	3	3	4	6	4	4	5	3
1753:	3	4	3	3	3	4	1	2
1761:	3	6	47	98	79	35	11	6
1769:	6	3	4	0	3	2	1	1
1777:	3	4	3	1	1	3	3	0
1785:	0	1	1	1	3	4	1	5
1793:	3	1	3	7	3	2	1	1
1801:	3	3	2	2	2	1	2	3
1809:	2	4	0	6	3	6	2	3
1817:	4	3	4	2	4	2	4	2
1825:	0	2	0	0	6	0	0	3
1833:	4	1	4	4	4	6	5	3
1841:	2	0	1	5	4	2	16	11
1849:	10	6	4	1	4	0	2	1
1857:	1	1	1	4	5	4	1	5
1865:	3	2	3	3	2	3	3	2
1873:	3	2	4	3	4	3	1	3
1881:	3	0	1	3	3	4	2	2
1889:	3	4	4	4	7	1	6	3
1897:	2	4	3	3	5	2	2	3
1905:	2	2	2	0	0	5	3	2
1913:	2	3	2	6	1	1	2	5
1921:	5	2	1	3	1	5	0	1
1929:	4	3	4	0	1	1	2	4
1937:	4	6	3	2	2	0	3	4
1945:	3	1	1	3	3	2	5	5
1953:	3	6	4	3	2	5	6	2
1961:	4	2	2	3	3	2	2	4
1969:	3	1	2	5	2	0	0	0
1977:	2	2	0	1	1	4	4	2
1985:	0	1	2	3	1	0	5	4
1993:	2	1	3	4	2	4	2	1
2001:	1	3	3	1	4	1	2	5
2009:	2	5	6	2	3	3	3	2
2017:	2	2	2	5	4	2	1	2
2025:	1	2	2	7	1	3	1	2
2033:	2	1	0	5	0	3	1	2
2041:	1	2	2	3	3	0	3	1
2049:	1	2	2	2	1	2	2	2
2057:	2	2	5	0	1	1	4	2
2065:	1	2	3	5	3	4	3	1
2073:	3	3	1	2	2	1	1	0
2081:	2	2	3	1	1	4	1	1
2089:	2	5	3	1	4	0	3	0

2097: 1 2 1 0 4 6 15 18

Sample Title: R3 0-6

Channel	1	2	3	4	5	6	7	8
2105:	5	0	1	5	2	4	4	0
2113:	3	3	1	0	10	9	6	2
2121:	1	0	1	2	3	2	3	5
2129:	2	3	0	4	0	2	2	2
2137:	1	3	2	0	2	2	5	2
2145:	1	2	1	0	3	6	4	1
2153:	3	2	0	2	1	2	2	3
2161:	0	1	3	0	3	3	0	3
2169:	1	3	0	2	0	1	3	3
2177:	1	1	1	1	3	6	4	2
2185:	2	5	1	2	3	1	2	4
2193:	0	2	5	1	2	0	2	1
2201:	1	3	19	24	10	7	2	2
2209:	2	1	1	0	4	1	0	0
2217:	1	4	3	0	2	0	1	2
2225:	3	3	1	1	3	1	4	0
2233:	5	2	7	0	4	1	3	2
2241:	0	4	0	1	4	2	1	2
2249:	2	1	1	2	4	0	0	1
2257:	3	1	2	2	2	2	3	2
2265:	2	5	2	5	0	3	1	1
2273:	1	3	0	0	3	2	1	2
2281:	0	3	1	2	2	0	2	1
2289:	1	1	3	1	3	3	1	1
2297:	2	1	2	0	4	1	1	1
2305:	5	2	3	3	3	5	4	0
2313:	1	1	2	2	3	2	1	4
2321:	4	2	5	2	4	3	2	3
2329:	0	1	3	2	3	1	3	1
2337:	2	2	4	2	6	0	2	1
2345:	3	2	1	1	2	1	4	4
2353:	1	4	3	3	2	0	4	1
2361:	0	1	1	2	1	1	4	4
2369:	0	3	0	5	2	2	2	1
2377:	1	3	2	5	3	3	1	2
2385:	1	3	2	2	1	2	2	2
2393:	1	4	2	2	0	2	1	1
2401:	1	2	3	1	3	3	0	3
2409:	2	1	3	1	0	2	1	2
2417:	1	2	2	2	2	1	3	3
2425:	0	2	1	0	1	0	4	3
2433:	2	0	2	1	0	0	4	3
2441:	0	1	4	2	2	3	6	4
2449:	4	4	3	1	2	1	2	2
2457:	2	2	0	1	0	1	3	3
2465:	1	2	5	2	1	2	2	0
2473:	1	2	1	0	0	1	2	1
2481:	1	4	0	2	0	2	1	0
2489:	2	1	1	0	1	1	2	0
2497:	2	0	2	0	2	0	2	1
2505:	1	0	0	0	3	0	2	1
2513:	1	3	0	0	1	2	1	0
2521:	1	1	0	0	0	0	0	3

2529: 0 1 1 0 0 0 1 1

Sample Title: R3 0-6

Channel	1	2	3	4	5	6	7	8
2537:	0	1	0	0	1	0	1	1
2545:	0	0	1	0	1	0	0	1
2553:	0	2	0	0	0	2	0	0
2561:	1	1	0	2	1	3	0	0
2569:	0	0	0	1	0	1	0	0
2577:	1	1	1	1	1	0	0	0
2585:	0	0	0	2	1	2	1	0
2593:	2	0	1	0	3	0	0	0
2601:	0	0	0	0	1	0	0	0
2609:	0	2	2	11	32	66	47	29
2617:	8	1	1	0	0	3	0	0
2625:	1	1	1	1	1	0	0	0
2633:	0	0	1	0	0	1	0	1
2641:	0	2	0	0	0	0	1	1
2649:	0	0	1	2	0	0	0	0
2657:	0	2	1	1	0	0	0	1
2665:	1	1	0	0	1	1	0	0
2673:	0	0	0	0	0	0	1	1
2681:	1	0	0	0	0	0	0	0
2689:	0	1	0	0	1	0	0	0
2697:	0	1	1	0	1	0	1	0
2705:	0	2	1	1	0	0	1	1
2713:	1	0	0	0	0	0	0	0
2721:	2	0	0	0	1	0	0	1
2729:	0	0	0	0	0	0	1	0
2737:	0	1	0	0	0	1	0	0
2745:	0	0	0	0	0	0	1	1
2753:	0	0	1	0	0	1	0	0
2761:	1	0	0	2	0	1	1	0
2769:	0	0	0	0	0	0	0	0
2777:	1	0	1	1	0	0	0	0
2785:	0	0	0	0	0	2	0	1
2793:	1	1	1	0	0	0	2	0
2801:	0	1	0	0	0	0	1	0
2809:	0	0	0	1	1	0	0	0
2817:	1	0	1	0	1	0	0	1
2825:	1	0	0	0	1	0	1	1
2833:	0	0	1	1	0	1	0	1
2841:	0	1	0	0	0	1	1	0
2849:	0	0	0	0	0	0	0	1
2857:	0	0	1	0	0	0	0	0
2865:	0	1	0	0	0	1	0	0
2873:	2	1	0	0	2	0	0	0
2881:	0	0	0	0	0	0	0	0
2889:	0	0	0	1	1	0	1	0
2897:	0	0	0	0	1	0	0	0
2905:	0	0	0	0	0	0	0	0
2913:	1	1	2	1	0	0	1	1
2921:	0	2	0	0	0	0	0	0
2929:	0	2	0	0	0	0	0	0
2937:	0	0	0	0	0	0	1	0
2945:	2	0	0	2	0	0	0	0
2953:	0	0	0	0	0	0	0	0

2961: 1 0 0 0 0 0 0 0 0

Sample Title: R3 0-6

Channel	-----	-----	-----	-----	-----	-----	-----	-----
2969:	0	0	1	0	0	0	0	0
2977:	0	0	0	0	0	0	0	0
2985:	0	0	0	0	0	0	0	0
2993:	1	1	0	0	0	0	0	0
3001:	0	0	0	0	1	0	2	0
3009:	0	1	0	1	0	0	0	1
3017:	0	0	0	0	1	0	0	1
3025:	0	0	0	0	0	0	0	1
3033:	0	0	1	0	0	0	0	1
3041:	0	0	0	1	0	0	0	0
3049:	0	0	1	2	0	0	0	0
3057:	0	0	0	0	1	0	0	0
3065:	0	0	0	0	0	0	0	0
3073:	0	0	0	1	0	0	0	0
3081:	0	1	0	0	0	0	0	0
3089:	0	0	0	0	0	0	1	0
3097:	0	0	1	0	0	0	0	0
3105:	1	0	0	0	0	0	0	0
3113:	0	0	0	0	0	0	1	2
3121:	1	0	2	0	0	0	0	0
3129:	0	0	0	0	0	0	0	0
3137:	0	0	1	0	0	0	0	0
3145:	0	0	0	0	0	0	0	0
3153:	1	0	0	0	0	0	1	0
3161:	1	0	0	0	1	0	0	0
3169:	0	0	0	0	0	0	0	0
3177:	1	0	0	0	0	0	1	0
3185:	0	0	0	0	0	0	0	0
3193:	0	0	1	2	0	0	0	0
3201:	0	0	0	1	0	0	0	0
3209:	0	1	0	0	0	0	0	0
3217:	0	0	0	0	0	0	0	0
3225:	0	0	2	0	0	1	0	0
3233:	0	0	0	0	0	0	1	0
3241:	0	0	0	0	1	0	0	0
3249:	0	0	2	1	0	0	0	0
3257:	2	1	0	0	0	0	0	0
3265:	0	0	0	0	0	0	0	0
3273:	0	0	0	0	0	0	0	0
3281:	0	0	0	0	1	0	0	0
3289:	0	0	0	0	0	0	0	0
3297:	0	2	0	0	0	0	0	0
3305:	2	0	0	0	1	0	1	0
3313:	0	0	0	0	0	1	0	0
3321:	1	0	0	0	0	0	0	0
3329:	0	1	0	0	0	0	1	1
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	0	0	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	0	0	0	0	0	0

3393: 0 0 0 0 1 0 0 0

Sample Title: R3 0-6

Channel	-----	-----	-----	-----	-----	-----	-----	-----
3401:	0	0	0	0	1	1	0	1
3409:	0	0	0	0	0	0	0	0
3417:	1	0	1	0	0	0	0	0
3425:	0	1	0	0	0	0	1	0
3433:	0	0	1	0	1	0	1	0
3441:	0	0	0	0	0	0	0	0
3449:	1	0	0	1	0	0	0	0
3457:	0	0	0	0	0	1	0	0
3465:	0	0	0	0	0	0	0	0
3473:	0	0	0	0	0	0	0	1
3481:	0	0	0	0	1	0	0	0
3489:	0	0	0	0	0	0	0	0
3497:	0	1	1	0	0	0	0	0
3505:	0	0	1	0	0	1	0	0
3513:	0	0	1	0	0	0	0	0
3521:	0	0	0	0	1	0	0	0
3529:	0	1	0	0	1	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	1	0	0	0
3577:	0	0	0	0	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	1	0	0	0	0
3609:	0	0	0	0	0	0	0	0
3617:	1	0	1	0	0	0	0	1
3625:	0	1	0	1	1	0	0	0
3633:	1	0	0	0	0	0	0	0
3641:	0	0	1	0	0	0	0	0
3649:	0	0	0	0	0	0	0	0
3657:	1	0	0	0	1	0	0	0
3665:	0	0	0	0	0	0	0	1
3673:	0	0	1	0	0	0	0	0
3681:	0	1	0	0	1	0	0	0
3689:	0	0	1	0	0	0	0	0
3697:	0	0	0	1	0	0	0	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	0
3729:	0	0	0	0	0	0	0	1
3737:	0	0	0	0	0	0	0	0
3745:	0	0	0	0	0	0	0	0
3753:	0	0	1	0	0	0	0	0
3761:	0	0	1	0	1	0	0	1
3769:	0	1	0	0	0	0	0	0
3777:	0	0	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	2	0	0	0	0	0
3809:	0	0	0	0	0	0	0	0
3817:	0	0	0	0	0	0	0	0

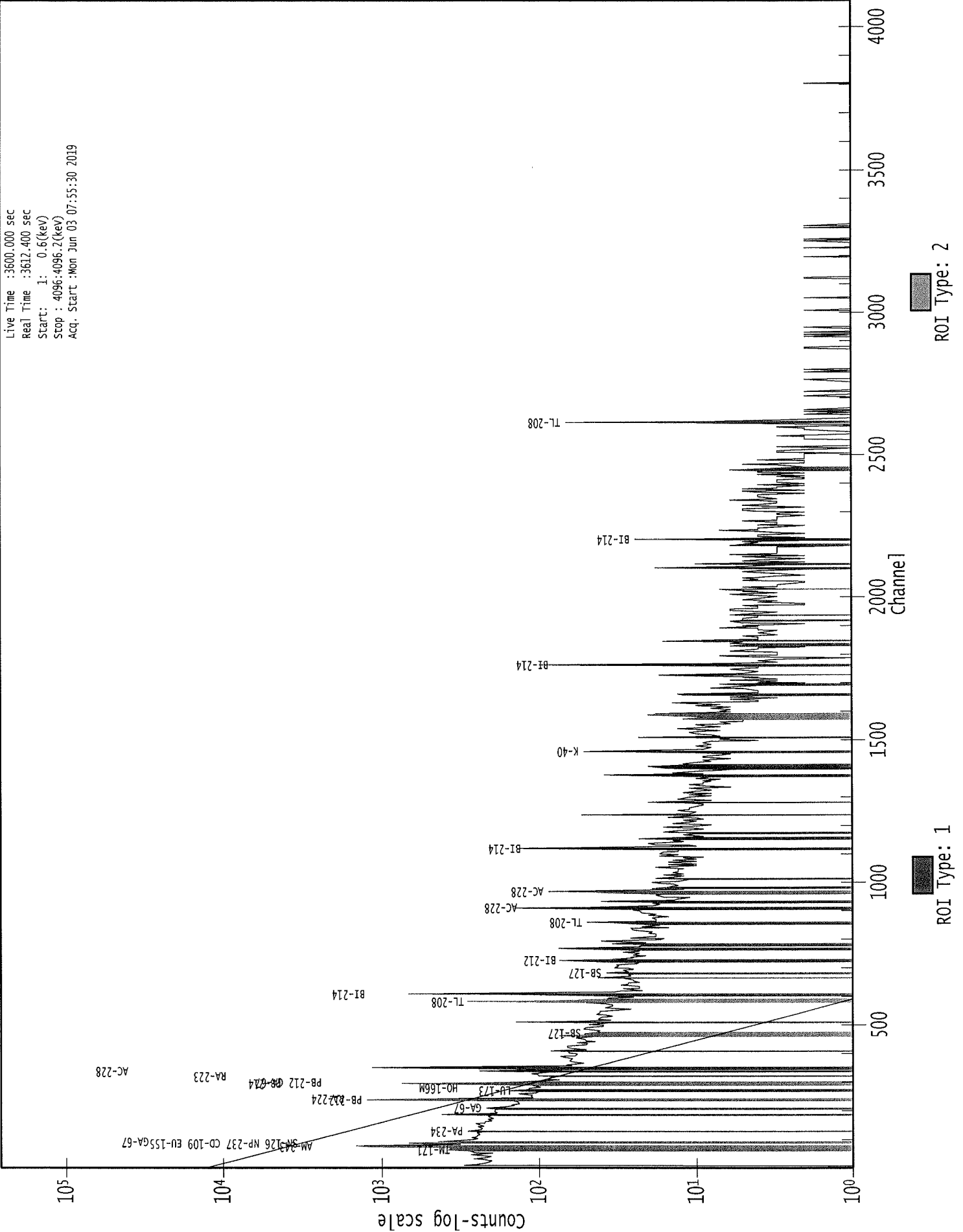
3825: 0 0 0 0 0 0 0 0 1

Sample Title: R3 0-6

Channel	-----	-----	-----	-----	-----	-----	-----	-----
3833:	0	0	1	0	0	0	0	0
3841:	0	0	0	0	0	0	0	0
3849:	0	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:	0	0	0	0	0	0	0	1
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:	1	1	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	1	0	0	0	0	0
3945:	0	0	0	1	0	1	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	1	0	0
3977:	0	0	0	0	0	0	1	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	1	0	0	1	0	1	0
4017:	0	0	0	0	0	1	0	0
4025:	0	0	0	0	0	0	0	0
4033:	0	0	0	0	1	0	0	1
4041:	0	0	0	0	0	0	0	0
4049:	1	0	0	0	0	0	0	1
4057:	0	0	0	0	0	0	0	0
4065:	0	0	0	0	0	1	0	0
4073:	0	0	1	0	0	0	0	1
4081:	0	0	0	0	1	0	0	0
4089:	0	0	0	0	0	0	0	0

0000082497.CNF

Live Time :3600.000 sec
Real Time :3612.400 sec
Start : 1: 0.6(keV)
Stop : 4096:4096.2(keV)
Acq. Start :Mon Jun 03 07:55:30 2019



 ***** G E N I E Q U A L I T Y A S S U R A N C E *****

Last Results Report
 6/3/19 6:05:36 AM

AG
 6/3/19

QA File: \\OR-GAMMA1\ApexRoot\Countroom\QA\D000000001B.QCK

Detector: GE1
 Geometry: <None>
 Certificate: <None>
 Sample ID: QA Background Ch
 Sample Desc: QA Count
 Sample Quantity: 1.0000E+000
 Sample Date: 6/3/19 5:50:22 AM
 Measurement Date: 6/3/19 5:50:23 AM
 Elapsed Live Time: 900.0 seconds
 Elapsed Real Time: 900.1 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
DAILY BKG CT RATE GE1 [SD: 2.2675E+000+/- 1.048]	2.4778E+000	2.0058E-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
 6/3/19 6:06:10 AM

AG
 6/3/19

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: 6/3/19 5:50:50 AM
 Measurement Date: 6/3/19 5:50:58 AM
 Elapsed Live Time: 900.0 seconds
 Elapsed Real Time: 900.1 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
DAILY BKG CT RATE GE2 [SD:-1.1750E+035+/-*****]	2.1667E+000	2.6279E-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)

 ***** G E N I E Q U A L I T Y A S S U R A N C E *****

Last Results Report
 6/3/19 6:06:19 AM

AG
 6/3/19

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: 6/3/19 5:51:07 AM
 Measurement Date: 6/3/19 5:51:09 AM
 Elapsed Live Time: 900.0 seconds
 Elapsed Real Time: 901.8 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
DAILY BKG CT RATE GE3 [SD: 2.5329E+003+/-18425.]	1.6440E+003	-4.8244E-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)

 ***** G E N I E Q U A L I T Y A S S U R A N C E *****

Last Results Report
 6/3/19 6:06:36 AM

AG
 6/3/19

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: 6/3/19 5:51:19 AM
 Measurement Date: 6/3/19 5:51:23 AM
 Elapsed Live Time: 900.0 seconds
 Elapsed Real Time: 904.2 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
DAILY BKG CT RATE GE4 [SD: 6.8355E+000+/-120.73]	1.8100E+000	-4.1624E-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)

 ***** G E N I E Q U A L I T Y A S S U R A N C E *****

Last Results Report
 6/3/19 6:35:20 AM

AG
 6/3/19

QA File: \\OR-GAMMA1\ApexRoot\Countroom\QA\D000000001GAF-18C.QCK

Detector: GE1
 Geometry: <None>
 Certificate: GAF-18
 Sample ID: QA Calibration C
 Sample Desc: QA Count
 Sample Quantity: 1.0000E+000
 Sample Date: 4/1/18 12:00:00 PM
 Measurement Date: 6/3/19 6:19:40 AM
 Elapsed Live Time: 900.0 seconds
 Elapsed Real Time: 925.4 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >			
Peak centroid 59.54 keV	5.9875E+001				
Boundary Limits: [5.800E+001, 6.100E+001]		<	:	:	>
Trend Test: The last 9 samples exhibit a bias trend.					
Peak centroid 661.65 keV	6.6175E+002				
Boundary Limits: [6.600E+002, 6.630E+002]		<	:	:	>
Peak centroid 1332.49 ke	1.3327E+003				
Boundary Limits: [1.331E+003, 1.334E+003]		<	:	:	>
Trend Test: The last 9 samples exhibit a bias trend.					
Peak centroid 1836.01 ke	1.8356E+003				
Boundary Limits: [1.834E+003, 1.838E+003]		<	:	:	>
Trend Test: The last 9 samples exhibit a bias trend.					
Peak FWHM Am-241	4.1405E+000				
Boundary Limits: [5.000E-001, 3.000E+000]		<Ab	:	:	>
Trend Test: The last 9 samples exhibit a bias trend.					
Peak FWHM Cs-137	4.5794E+000				
Boundary Limits: [5.000E-001, 3.000E+000]		<Ab	:	:	>
Trend Test: The last 9 samples exhibit a bias trend.					
Peak FWHM Co-60	4.7057E+000				
Boundary Limits: [5.000E-001, 3.000E+000]		<Ab	:	:	>
Trend Test: The last 9 samples exhibit a bias trend.					
Peak FWHM Y-88	4.1615E+000				
Boundary Limits: [5.000E-001, 3.000E+000]		<Ab	:	:	>
Trend Test: The last 9 samples exhibit a bias trend.					
Decay corrected activity	1.1854E+004				

Boundary Limits: [1.197E-002, 1.796E-002] < Be: : : >
Trend Test: The last 9 samples exhibit a bias trend.

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >				
Decay corrected activity Boundary Limits: [4.915E-003, 7.373E-002]	6.3812E+003	<	:	:	:	>
Decay corrected activity Boundary Limits: [7.671E-003, 1.151E-002]	1.0085E+004	<	:	:	:	>
Decay corrected activity Boundary Limits: [1.626E-002, 2.439E-002]	2.0402E+004	<	:	:	:	>

Flags Key: LU = Lower/Upper Bounds Test (Ab = Above, Be = Below)
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 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
 6/3/19 6:35:31 AM

AG
 6/3/19

QA File: \\OR-GAMMA1\ApexRoot\Countroom\QA\D0000000002GAS-1801C.QC

Detector: GE2
 Geometry: <None>
 Certificate: GAS-1801
 Sample ID: QA Calibration C
 Sample Desc: QA Count
 Sample Quantity: 1.0000E+000
 Sample Date: 4/1/18 12:00:00 PM
 Measurement Date: 6/3/19 6:19:59 AM
 Elapsed Live Time: 900.0 seconds
 Elapsed Real Time: 920.6 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >			
Peak centroid 59.54 keV	6.0000E+001				
Boundary Limits: [5.800E+001, 6.100E+001]		<	:	:	>
Trend Test: The last 9 samples exhibit a bias trend.					
Peak centroid 661.65 keV	6.6146E+002				
Boundary Limits: [6.600E+002, 6.630E+002]		<	:	:	>
Trend Test: The last 9 samples exhibit a bias trend.					
Peak centroid 1332.49 ke	1.3320E+003				
Boundary Limits: [1.331E+003, 1.334E+003]		<	:	:	>
Trend Test: The last 9 samples exhibit a bias trend.					
Peak centroid 1836.01 ke	1.8354E+003				
Boundary Limits: [1.834E+003, 1.838E+003]		<	:	:	>
Trend Test: The last 9 samples exhibit a bias trend.					
Peak FWHM Am-241	1.3066E+000				
Boundary Limits: [5.000E-001, 3.000E+000]		<	:	:	>
Trend Test: The last 9 samples exhibit a bias trend.					
Peak FWHM Cs-137	2.1583E+000				
Boundary Limits: [5.000E-001, 3.000E+000]		<	:	:	>
Trend Test: The last 9 samples exhibit a bias trend.					
Peak FWHM Co-60	2.3066E+000				
Boundary Limits: [5.000E-001, 3.000E+000]		<	:	:	>
Trend Test: The last 9 samples exhibit a bias trend.					
Peak FWHM Y-88	2.6522E+000				
Boundary Limits: [5.000E-001, 3.000E+000]		<	:	:	>
Decay corrected activity	1.5372E+005				

Boundary Limits: [1.188E-001, 1.782E-001] < : : : >

Decay corrected activity 6.3059E+004
Boundary Limits: [4.877E-002, 7.316E-002] < : : : >

Parameter Description Value Deviation/Flags
[Mean +/- Std. Dev.] < LU : SD : UD : BS >

Decay corrected activity 9.9539E+004
Boundary Limits: [7.611E-002, 1.142E-001] < : : : >

Decay corrected activity 2.0628E+005
Boundary Limits: [1.613E-001, 2.420E-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
 6/3/19 6:35:49 AM

AG
 6/3/19

QA File: \\OR-GAMMA1\ApexRoot\Countroom\QA\D000000003GAS-1802C.QC

Detector: GE3
 Geometry: <None>
 Certificate: GAS-1802
 Sample ID: QA Calibration C
 Sample Desc: QA Count
 Sample Quantity: 1.0000E+000
 Sample Date: 4/1/18 12:00:00 PM
 Measurement Date: 6/3/19 6:20:09 AM
 Elapsed Live Time: 900.0 seconds
 Elapsed Real Time: 929.1 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]	5.9770E+001	<	:	:	>
Peak centroid 661.65 keV Boundary Limits: [6.600E+002, 6.630E+002]	6.6177E+002	<	:	:	>
Peak centroid 1332.49 ke Boundary Limits: [1.331E+003, 1.334E+003]	1.3324E+003	<	:	:	>
Peak centroid 1836.01 ke Boundary Limits: [1.834E+003, 1.838E+003]	1.8359E+003	<	:	:	>
Peak FWHM Am-241 Boundary Limits: [5.000E-001, 3.000E+000] Trend Test: The last 9 samples exhibit a bias trend.	1.8797E+000	<	:	:	>
Peak FWHM Cs-137 Boundary Limits: [5.000E-001, 3.000E+000] Trend Test: The last 9 samples exhibit a bias trend.	2.1701E+000	<	:	:	>
Peak FWHM Co-60 Boundary Limits: [5.000E-001, 3.000E+000] Trend Test: The last 9 samples exhibit a bias trend.	2.3576E+000	<	:	:	>
Peak FWHM Y-88 Boundary Limits: [5.000E-001, 3.000E+000]	2.8622E+000	<	:	:	>
Decay corrected activity Boundary Limits: [1.116E-001, 1.860E-001]	1.1674E+005	<	:	:	>
Decay corrected activity Boundary Limits: [4.579E-002, 7.632E-002]	6.2180E+004	<	:	:	>

Decay corrected activity 1.1937E+005
Boundary Limits: [7.149E-002, 1.192E-001] <Ab : : : >

Parameter Description Value Deviation/Flags
[Mean +/- Std. Dev.] < LU : SD : UD : BS >

Decay corrected activity 3.8304E+005
Boundary Limits: [1.516E-001, 2.526E-001] <Ab : : : >

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
 6/3/19 6:36:42 AM

AG
 6/3/19

QA File: \\OR-GAMMA1\ApexRoot\Countroom\QA\D0000000004GAW-18C.QCK

Detector: GE4
 Geometry: <None>
 Certificate: GAW-18
 Sample ID: QA Calibration C
 Sample Desc: QA Count
 Sample Quantity: 1.0000E+000
 Sample Date: 4/1/18 12:00:00 PM
 Measurement Date: 6/3/19 6:20:27 AM
 Elapsed Live Time: 900.0 seconds
 Elapsed Real Time: 961.6 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
Peak centroid 59.54 keV	5.8543E+001	
Boundary Limits: [5.800E+001, 6.100E+001]		< : : : >
Trend Test: The last 9 samples exhibit a bias trend.		
Peak centroid 661.65 keV	6.6102E+002	
Boundary Limits: [6.600E+002, 6.630E+002]		< : : : >
Trend Test: The last 9 samples exhibit a bias trend.		
Peak centroid 1332.49 ke	1.3322E+003	
Boundary Limits: [1.331E+003, 1.334E+003]		< : : : >
Trend Test: The last 9 samples exhibit a bias trend.		
Peak centroid 1836.01 ke	1.8361E+003	
Boundary Limits: [1.834E+003, 1.838E+003]		< : : : >
Trend Test: The last 9 samples exhibit a bias trend.		
Peak FWHM Am-241	2.0078E+000	
Boundary Limits: [5.000E-001, 3.000E+000]		< : : : >
Trend Test: The last 9 samples exhibit a bias trend.		
Peak FWHM Cs-137	2.4737E+000	
Boundary Limits: [5.000E-001, 3.000E+000]		< : : : >
Peak FWHM Co-60	2.8166E+000	
Boundary Limits: [5.000E-001, 3.000E+000]		< : : : >
Peak FWHM Y-88	3.0558E+000	
Boundary Limits: [5.000E-001, 3.000E+000]		<Ab : : : >
Decay corrected activity	1.7472E+005	
Boundary Limits: [1.185E-001, 1.777E-001]		< : : : >

Decay corrected activity 6.3469E+004
Boundary Limits: [4.864E-002, 7.297E-002] < : : : >

Parameter Description	Value	Deviation/Flags			
[Mean +/- Std. Dev.]		< LU	: SD	: UD	: BS >

Decay corrected activity	9.4914E+004	<	:	:	:	>
Boundary Limits: [7.591E-002, 1.139E-001]		<	:	:	:	>

Decay corrected activity	2.0647E+005	<	:	:	:	>
Boundary Limits: [1.609E-001, 2.414E-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)