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LLNL-TR-420996

NDA BATCH 2008-08

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NDA BATCH REPORT COVER SHEET

NDA Batch Number: 2008-8	Status: VALIDATED
Testing Facility: **LLNL Plutonium Facility Segmented Gamma Scanner (SGS)**	

Waste Containers

LL85001754, LL85234380, LL85234284, LL85234255, LL85234265, LL85234374, LL85234327

REPLICATE: LL85234255R

100% of the radioassay data in the Batch Data Report must be reviewed.

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INDEPENDENT TECHNICAL REVIEWER CHECKLIST

RADIOASSAY BATCH NUMBER: 2008-8 **includes the following containers:**

LL85001754	LL85234255	LL85234327		
LL85234380	LL85234265			
LL85234284	LL85234374		LL85234255R replicate PCT	~~LL85234284R replicate~~ PCT

100% of the radioassay data in the Batch Data Report must be reviewed.

Yes/No (Y/N)	**Independent Technical Reviewer Checklist** Initial & date: PCT 2/3/09
Y	The assay measurements are within the system calibration range for the factors of waste matrix, radionuclide identity, and activity.
Y	The data are technically reasonable based on the gamma spectroscopy technique used by the SGS.
Y	The Expert Reviewer has evaluated the Batch Data, the review is complete and is documented on the SGS Expert Reviewer Checklists or data reports, as appropriate.
Y	Data are reported in the proper units and correct number of significant figures or more.
Y	☑ Calculations have been verified by a valid calculation program (GWAS and/or MGA), and/or ☐ I have conducted a spot check of verified calculation programs, and/or ☐ I have made a 100% check of all hand calculations. (Mark all that apply.)
Y	I have reviewed the data, including manually input text, for transcription errors or no transcriptions were done. (Check, especially, container identification number, batch number, and gross and tare weights.)
Y	Source transmission for each segment of every measurement is either within the acceptable range or has been accepted by the expert reviewer and an explanation was provided.
Y	The testing batch QA documentation is complete and includes raw data (including data on electronic storage media and copies of SGS logbook entries for the batch), calculation records (including the printed SGS measurement report, Radioassay Data Sheet, and, the Expert Reviewer's report), references to calibration records (a Count Type of *55 Gallon Galv. Drum, Daily 20 g Drum Check*, or *Daily 100 g Drum Check* indicates an acceptable calibration), and QC sample results, namely, a Radioassay Data Sheet for a replicate of an unknown.
Y	QC measurements, namely background and performance checks, were made at the beginning of each counting session in the batch and their records are present.
Y	QC measurement results (background checks and performance checks by measurement of standards) are within established control limits per procedure for SGS operations (OP-B332-005). QC criteria that were not met have been documented with a closed and satisfactorily resolved WCP NCAR or Plutonium Facility CAR.
Y	A replicate count of an unknown has been made once for every batch (which has a maximum of 20 waste containers) or once per week, whichever is more frequent.
Y	Replicate assay QC measurements were properly performed and pass/fail criteria are within established control limits, as calculated below, per procedure WIC 134, and if not, the data have been appropriately qualified.

Let *A1* be the Pu-239 activity from the first replicate count, as recorded on the Radioassay Data Sheet, and *A2* the value from the second replicate count.

Calculate: $D = |A1 - A2| =$ 0.76 ~~0.57~~ PCT 0.021 → from LL85234255

Calculate: $s = SQRT[(1.96\ s1)^2 + (1.96\ s2)^2] =$ 0.118 + 0.1077 = 0.20

where *1.96 s1* and *1.96 s2* are the 1.96 σ total measurement uncertainties associated with *A1* and *A2*. If $D < s$, the measurement results are the same at the 95% confidence level and the QC measurement passes.

Y	I have marked the Passed item on the Radioassay Data Sheet(s) for QC replicates as either Yes or No.
Y	The results fall within the ranges for which the Quality Assurance Objectives were verified for the SGS.

INDEPENDENT TECHNICAL REVIEWER CHECKLIST

Y The MDC has been correctly determined for the waste matrix of this container. (Note that the MDA values for the radionuclides reported on Radioassay Data Sheets have not been corrected for transmission attenuation, unless the expert reviewer has done so and so stated.)

Y The value reported for TRU alpha activity concentration > MDC if the reported value > 100 nCi/g.
(LLW, where the reported concentration ≤ 100 nCi/g, may be reported as ≤ MDC.)
(In determining TRU alpha activity concentration, any radionuclides measured at ≤ MDC are counted as zero activity)

Y Testing batch data correctly lists the testing facility name, testing batch number, drum numbers included in the batch, and signature releases of radioassay testing personnel.

Y Background and performance check data and/or control charts for the relevant time period are present.

Y Separate Radioassay Data Sheets are attached for each waste container. The sheets include information on the method used, Item Description Code (LLNL TRUW Form number or waste stream number), date of examination, total Pu-239 FGEs (g) and associated uncertainty, total alpha activity and associated uncertainty (Ci), TRU activity (nCi/g) and associated uncertainty, listing of individual radioisotopes present (Ci) and associated uncertainties (Ci), thermal power (total decay heat) and associated uncertainty (W), QC replicate (yes/no), and Operator signature / date, expert reviewer signature / date.

N Actions necessary for release of data: _____

Actions completed: N/A
Signature _____ Date _____

Printed Name _____

Philip Torretto 2/3/09
Independent Technical Reviewer Signature Date

Phil Torretto
Printed Name

SGS Daily Log Book

Date: 12-17-08	Page 1 of 5	Primary Operator's Name/Initials William A. Pellegrini / [initials]
		Secondary Operator's Name/Initials Jim Lawson / [initials]

Daily Checks/Initials: (Fill in on Page 1 only)	Daily Room Check complete [initials], Daily Scales Check complete [initials], Date/Dewars last filled) 12-16-08

Start Time	End Time	Drum ID*	Primary Operator	Secondary Operator	Seq. #	Batch #	Drum Gross wt. in kg	Drum Tare wt. in kg	Comments
0754	0759	BKG	[initials]	[initials]	189	2008-8	23.8	23.8	OK
0813	0920	SGS100	[initials]	[initials]	190		54.0	37.2	OK
0940	0945	BKG	[initials]	[initials]	191		23.8	23.8	Moved drum into room @ 0935 OK
0953	11:02	LL85001754	[initials]	[initials]	192		69.2	23.8	Requires ER MW
11:18	12:24	LL85234380	[initials]	[initials]	193		66.6	23.8	" " MW
13:10	14:18	LL85234374	[initials]	[initials]	194		102.2	23.8	" " MW Rerun
14:52	16:00	LL85234333	[initials]	[initials]	195		85.4	23.8	Rejected by Expert Reviewer Reject Kg 2-4-08
		[initials]							

NOTES: * Options are: BCK (backgroud), SGS100 or Waste Drum ID No., ** Secondary Operator's initials are required for all etries to verify that both the gross and tare wts. are accurate and all other information has been enterered correctly.

NMTP Waste Manager Review Name/Date: _____

SGS Daily Log Book

Date:	Page 2 of 5	Primary Operator's Name/Initials	William A. Pellegrini / WAP
12-18-08		Secondary Operator's Name/Initials	Jim Lanier / JL

Daily Checks/Initials: (Fill in on Page 1 only)

Daily Room Check complete WAP. Daily Scales Check complete N/A. Date/Dewars last filled) 12-16-08

Start Time	End Time	Drum ID*	Primary Operator	Secondary Operator	Seq. #	Batch #	Drum Gross wt. in kg	Drum Tare wt. in kg	Comments
0747	0752	BKG	WAP	JL	196	2008-B	23.8	23.8	OK
0806	0914	SGS100	WAP	JL	197		54.0	37.2	OK
0946	1055	LL85234284	WAP	JL	198		48.6	23.8	NQ Fit 1.01 No Rad's will run as replicate
1101	1209	~~LL85234284R~~	WAP	JL	199		48.6	23.8	NQ Fit 1.00 No Rad's ← Rejected
~~WAP~~	~~BKG~~	~~LL85234284R~~							
1338	1343	BKG	WAP	JL	200		23.8	23.8	OK Material removed from room
1350	1459	LL85234255	WAP	JL	201		75.0	23.8	OK Replicate
1508	1617	LL85234255R	WAP	JL	202		75.0	23.8	OK Replicate

NOTES: * Options are: BCK (backgroud), SGS100 or Waste Drum ID No., ** Secondary Operator's initials are required for all etries to verify that both the gross and tare wts. are accurate and all other information has been enterered correctly.

NMTP Waste Manager Review Name/Date: _____

SGS Daily Log Book

Date: 12-22-08	Page 3 of 5	Primary Operator's Name/Initials William A. Pellegrini / WAP
		Secondary Operator's Name/Initials Jim Lawson / [illegible]

Daily Checks/Initials: (Fill in on Page 1 only)	Daily Room Check complete WAP, Daily Scales Check complete N/A, Date/Dewars last filled) 12-21-08

Start Time	End Time	Drum ID*	Primary Operator	Secondary Operator	Seq. #	Batch #	Drum Gross wt. in kg	Drum Tare wt. in kg	Comments
10:00	10:05	BKG	WAP	[illegible]	203	2008-8	23.8	23.8	OK
10:18	11:25	SGS100	WAP	[illegible]	204 ✓		54.0	37.2	UDi INi PU Mass
									Run 2 more times
									per Bob Hastett
11:33	12:40	SGS100	WAP	[illegible]	205 ✓		54.0	37.2	OK
13:31	1438	SGS100	WAP	[illegible]	206 ✓		54.0	37.2	OK
15:34	16:41	LL85234265	WAP	[illegible]	207 ✓		95.4	23.8	Requires ER

NOTES: * Options are: BCK (backgroud), SGS100 or Waste Drum ID No., ** Secondary Operator's initials are required for all etries to verify that both the gross and tare wts. are accurate and all other information has been enterered correctly.

NMTP Waste Manager Review Name/Date: _____

SGS Daily Log Book

Date:	Page 4 of 5	Primary Operator's Name/Initials	William A. Pellegrini /
12-23-08		Secondary Operator's Name/Initials	John Wolf JW / Jim Lawrence

Daily Checks/Initials: (Fill in on Page 1 only)

Daily Room Check complete , Daily Scales Check complete , Date/Dewars last filled) 12-21-08

Start Time	End Time	Drum ID*	Primary Operator	Secondary Operator	Seq. #	Batch #	Drum Gross wt. in kg	Drum Tare wt. in kg	Comments
10:56	11:01	BKG		JW	208	208-8	23.8	23.8	ok
11:14	12:22	SGS100		JW	209 ✓		54.0	37.2	ok
13:18	13:23	BKG		Jim L	210		23.8	23.8	ok
13:33	14:42	LL85234374		Jim L	211 ✓		91.8	23.8	Requires ER MW
14:52	16:01	LL85234327		Jim L	212 ✓	↓	71.8	23.8	" " MW

NOTES: * Options are: BCK (backgroud), SGS100 or Waste Drum ID No., ** Secondary Operator's initials are required for all etries to verify that both the gross and tare wts. are accurate and all other information has been enterered correctly.

NMTP Waste Manager Review Name/Date: _____

SGS Daily Log Book

Date: 12-24-08	Page 5 of 5	Primary Operator's Name/Initials William A. Pellegrini /
		Secondary Operator's Name/Initials

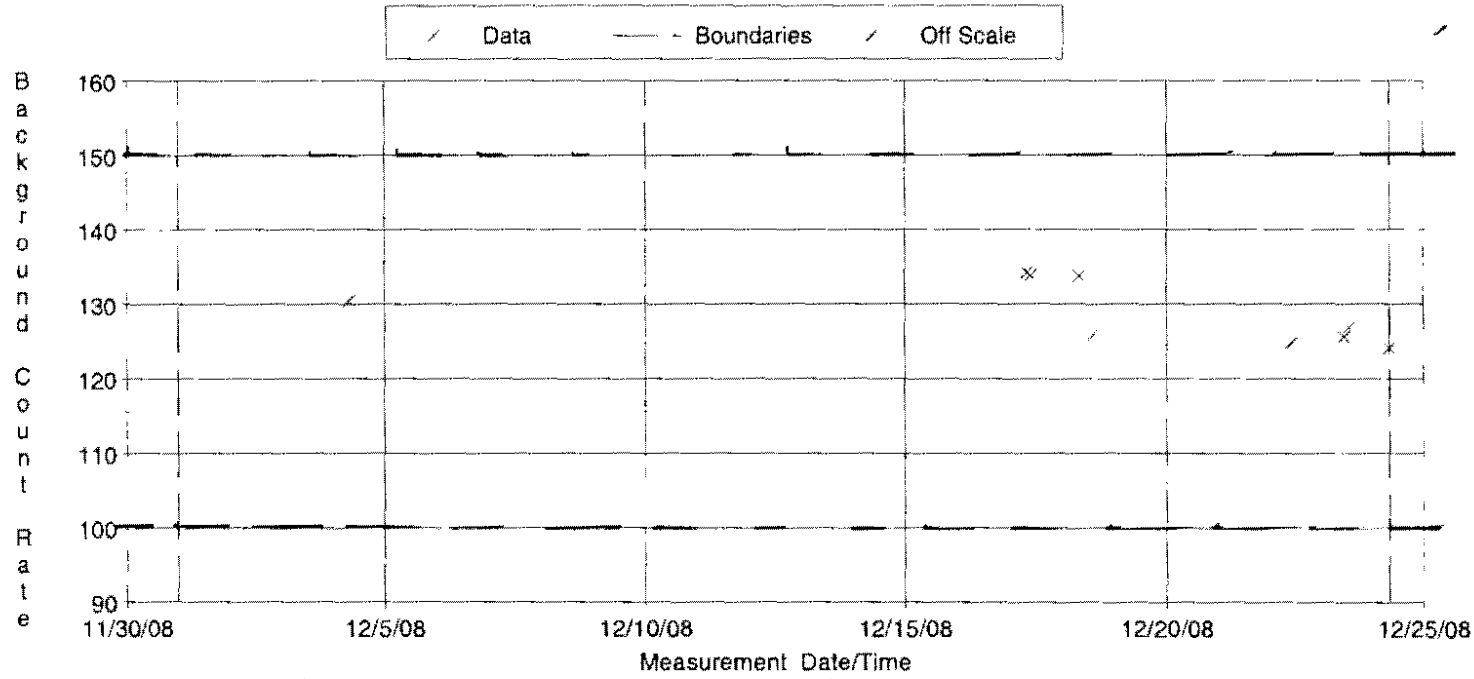
Daily Checks/Initials: (Fill in on Page 1 only)

Daily Room Check complete [initials]. Daily Scales Check complete N/A. Date/Dewars last filled) 12-23-08

Start Time	End Time	Drum ID*	Primary Operator	Secondary Operator	Seq. #	Batch #	Drum Gross wt. in kg	Drum Tare wt. in kg	Comments
0800	08:05	BKG	[initials]		213	2008-8	23.8	23.9	OK
08:13	09:20	SGS100	[initials]		214 ✓	↓	54.0	37.2	OK Close batch

NOTES: * Options are: BCK (backgroud), SGS100 or Waste Drum ID No., ** Secondary Operator's initials are required for all etries to verify that both the gross and tare wts. are accurate and all other information has been enterered correctly.

NMTP Waste Manager Review Name/Date: _____



QA Filename : C:\Canberra\NDA2k\QA\CNTR0001_DCAT0002_PROC00AG_ANLZ0003_IQAS0001.QAF
Parameter Description : Background Count Rate (cps)
Selection Dates : 12/01/08 12:00:00 AM - 12/24/08 7:59:59 AM
Lower/Upper Boundaries : 100.000 - 150.000

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

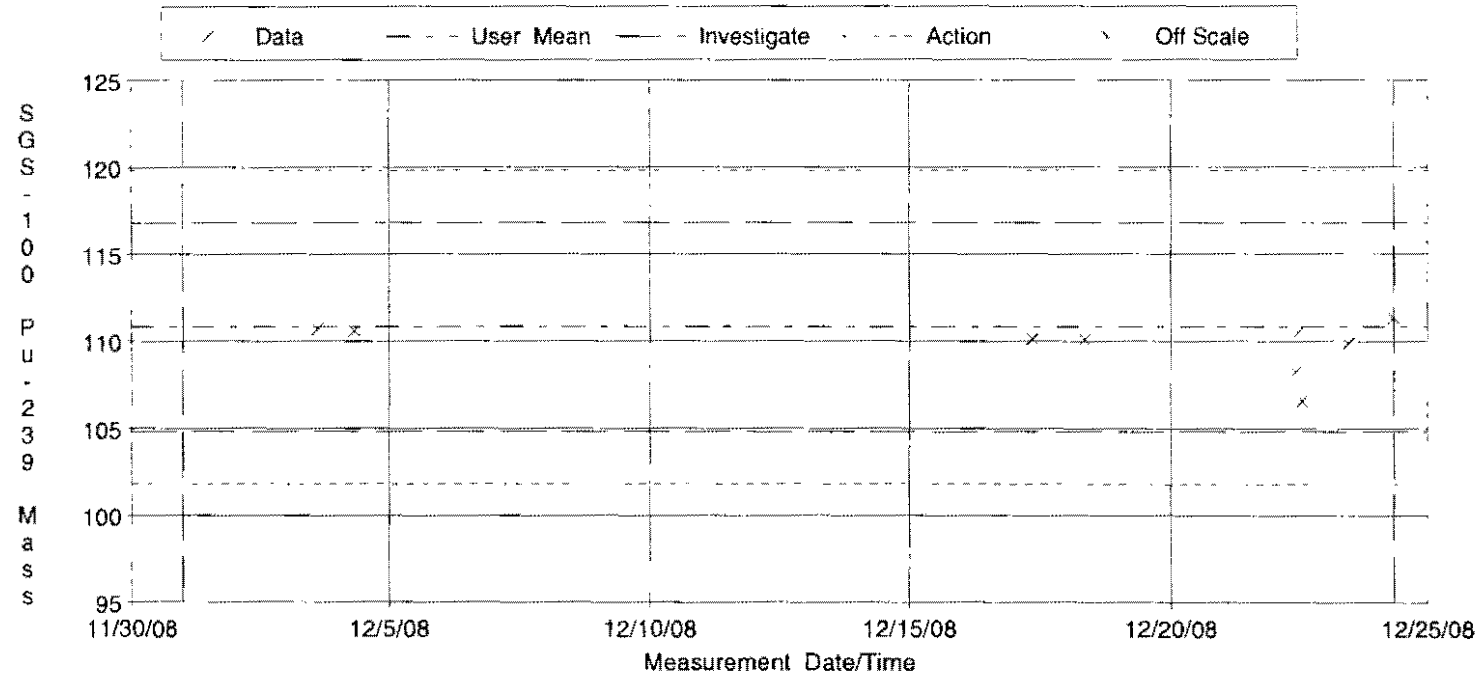
Full Parameter Results Report
1/14/09 3:34:05 PM

QA File: C:\Canberra\NDA2k\QA\CNTR0001_DC
Description: Background Count Rate
Parameter Units: cps
Parameter Type: Background

Lower Boundary: 1.0000E+002
Upper Boundary: 1.5000E+002

Measurement Time	Sample ID	Analyst	Value (cps)	Flags LU	SD	UD	BS
12/4/08 7:47:43 AM	Background	RHWM2\RHW	1.3037E+002				
12/17/08 7:53:52 AM	Background	RHWM2\RHW	1.3419E+002				
12/17/08 9:39:32 AM	Background	RHWM2\RHW	1.3387E+002				
12/18/08 7:46:33 AM	Background	RHWM2\RHW	1.3375E+002				
12/18/08 1:37:41 PM	Background	RHWM2\RHW	1.2568E+002				
12/22/08 9:59:38 AM	Background	RHWM2\RHW	1.2472E+002				
12/23/08 10:55:43 AM	Background	RHWM2\RHW	1.2558E+002				
12/23/08 1:18:09 PM	Background	RHWM2\RHW	1.2684E+002				
12/24/08 7:59:59 AM	Background	RHWM2\RHW	1.2408E+002				

Flags Key: LU = Lower/Upper Bounds Test (Ab = Above, Be = Below)
SD = Sample Driven N-Sigma Test (In = Investigate, Ac = Action)
UD = User Driven N-Sigma Test (In = Investigate, Ac = Action)
BS = Measurement Bias Test (In = Investigate, Ac = Action)



QA Filename : C:\Canberra\NDA2k\QA\CNTR0001_DCAT0002_PROC00A!_OQAS0004.QAF
Parameter Description : SGS-100 Pu-239 Mass (grams)
Selection Dates : 12/01/08 12:00:00 AM - 12/24/08 8:14:45 AM
User Mean +/- Std Dev : 110.819 +/- 3.00e+000

****
***** GENIE QUALITY ASSURANCE *****
****

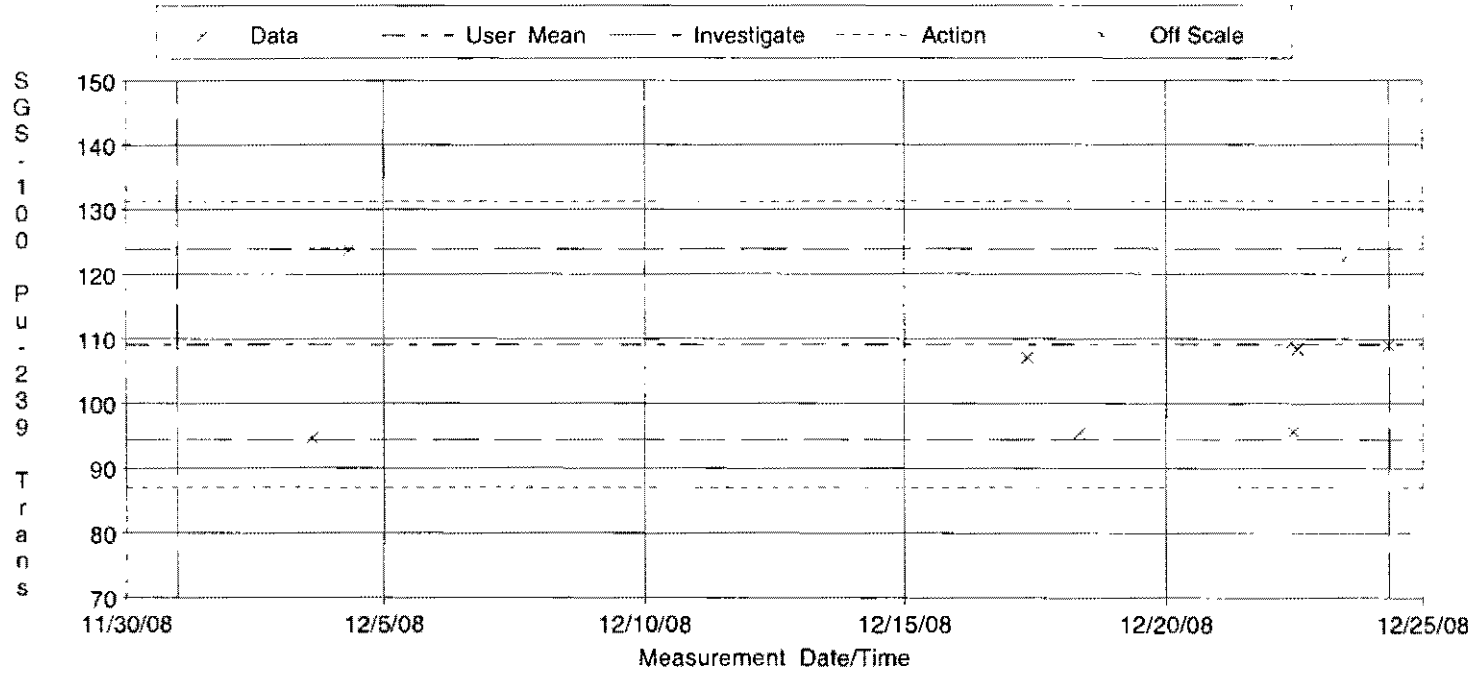
Full Parameter Results Report
1/14/09 3:35:47 PM

QA File: C:\Canberra\NDA2k\QA\CNTR0001_DC
Description: SGS-100 Pu-239 Mass
Parameter Units: grams
Parameter Type: Nuclide

User Mean: 1.1082E+002
User Std. Deviation: 3.0000E+000

Measurement Time	Sample ID	Analyst	Value (grams)	Flags LU	SD	UD	BS
12/3/08 3:08:15 PM	SGS100	RHWM2\RHW	1.1067E+002				
12/4/08 8:05:19 AM	SGS100	RHWM2\RHW	1.1059E+002				
12/17/08 8:14:37 AM	SGS100	RHWM2\RHW	1.1012E+002				
12/18/08 8:08:00 AM	SGS100	RHWM2\RHW	1.1009E+002				
12/22/08 10:19:46 AM	SGS100	RHWM2\RHW	1.0824E+002				
12/22/08 11:34:36 AM	SGS100	RHWM2\RHW	1.1052E+002				
12/22/08 1:32:39 PM	SGS100	RHWM2\RHW	1.0654E+002				
12/23/08 11:16:39 AM	SGS100	RHWM2\RHW	1.0988E+002				
12/24/08 8:14:45 AM	SGS100	RHWM2\RHW	1.1133E+002				

Flags Key: LU = Lower/Upper Bounds Test (Ab = Above, Be = Below)
SD = Sample Driven N-Sigma Test (In = Investigate, Ac = Action)
UD = User Driven N-Sigma Test (In = Investigate, Ac = Action)
BS = Measurement Bias Test (In = Investigate, Ac = Action)



QA Filename : C:\Canberra\NDA2k\QA\CNTR0001_DCAT0002_PROC00AK_OQAS0006.QAF
Parameter Description : SGS-100 Pu-239 Trans Mass (grams)
Selection Dates : 12/01/08 12:00:00 AM - 12/24/08 8:10:28 AM
User Mean +/- Std Dev : 109.130 +/- 7.37e+000

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

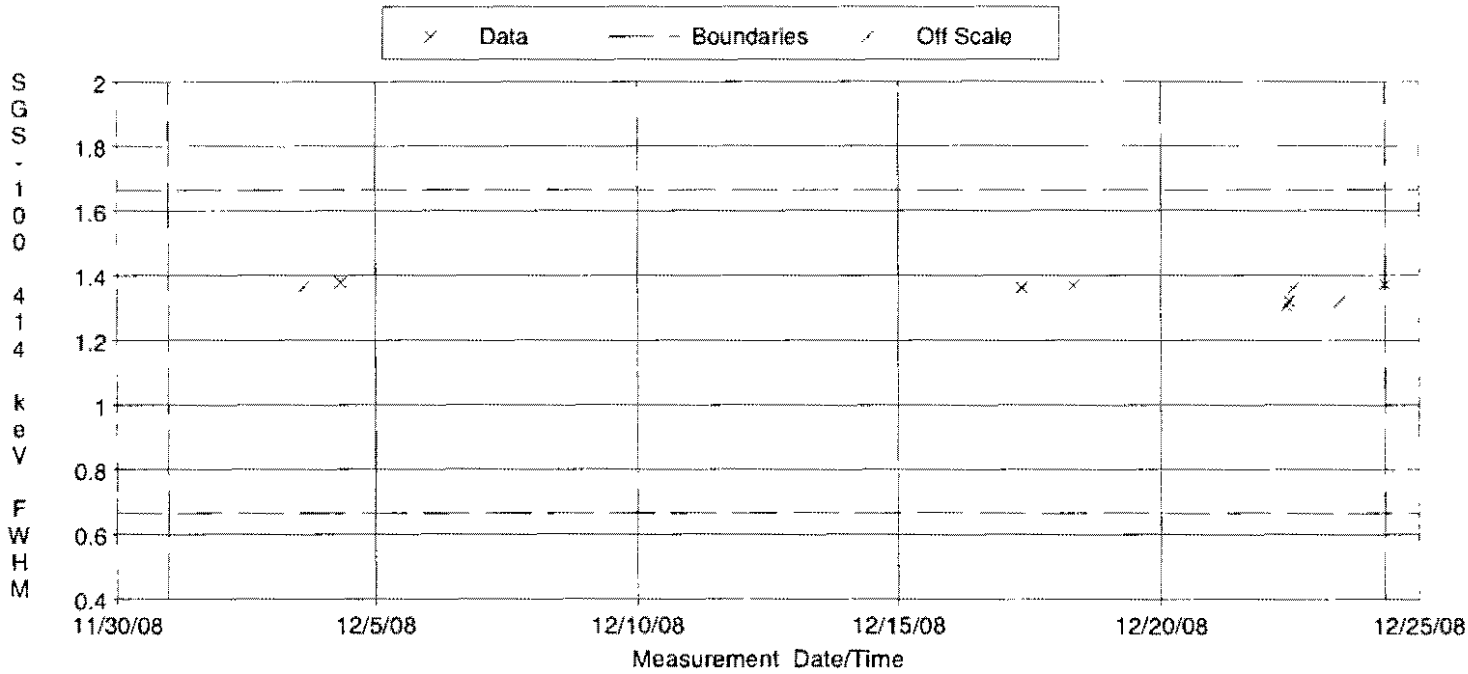
Full Parameter Results Report
1/14/09 3:32:33 PM

QA File: C:\Canberra\NDA2k\QA\CNTR0001_DC
Description: SGS-100 Pu-239 Trans Mass
Parameter Units: grams
Parameter Type: Nuclide

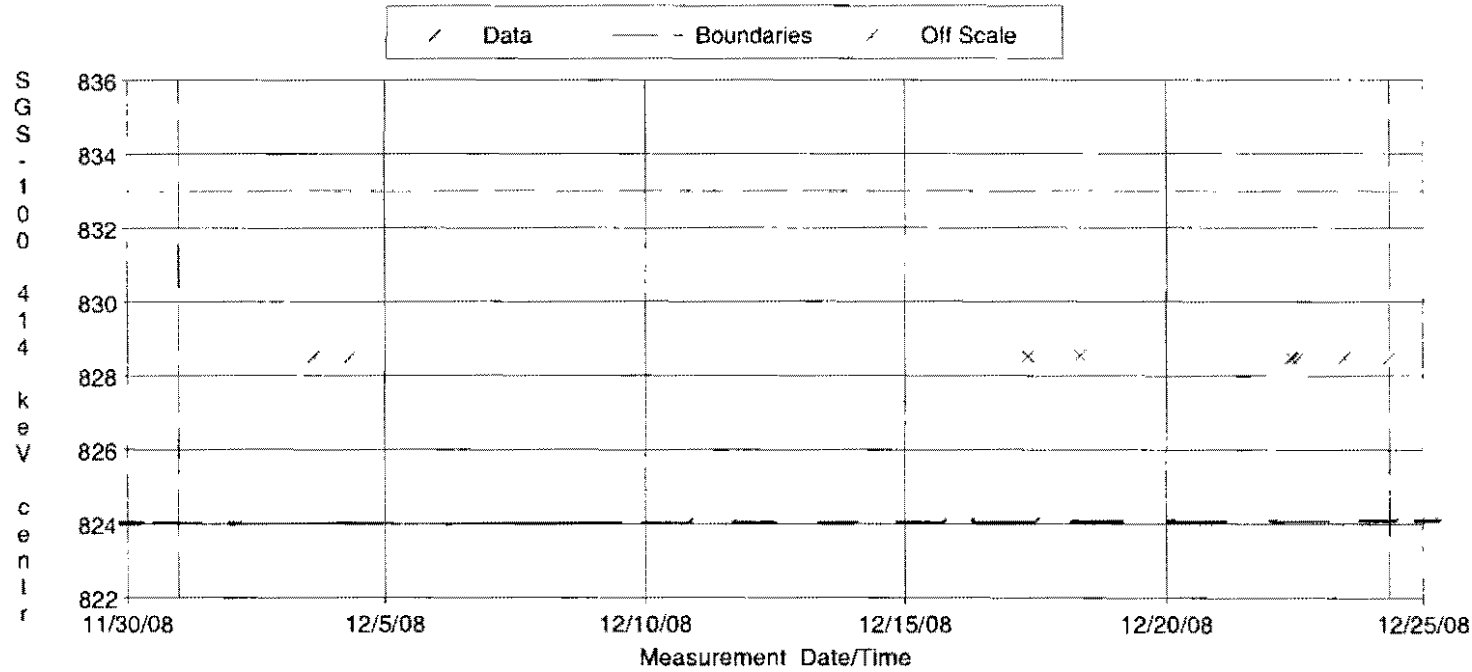
User Mean: 1.0913E+002
User Std. Deviation: 7.3700E+000

Measurement Time	Sample ID	Analyst	Value (grams)	Flags LU	SD	UD	BS
12/3/08 3:03:57 PM	SGS100	RHWM2\RHW	9.4664E+001				
12/4/08 8:01:01 AM	SGS100	RHWM2\RHW	1.2364E+002				
12/17/08 8:10:17 AM	SGS100	RHWM2\RHW	1.0703E+002				
12/18/08 8:03:41 AM	SGS100	RHWM2\RHW	9.5338E+001				
12/22/08 10:15:29 AM	SGS100	RHWM2\RHW	1.0928E+002				
12/22/08 11:30:18 AM	SGS100	RHWM2\RHW	9.5630E+001				
12/22/08 1:28:21 PM	SGS100	RHWM2\RHW	1.0838E+002				
12/23/08 11:12:01 AM	SGS100	RHWM2\RHW	1.2215E+002				
12/24/08 8:10:28 AM	SGS100	RHWM2\RHW	1.0898E+002				

Flags Key: LU = Lower/Upper Bounds Test (Ab = Above, Be = Below)
SD = Sample Driven N-Sigma Test (In = Investigate, Ac = Action)
UD = User Driven N-Sigma Test (In = Investigate, Ac = Action)
BS = Measurement Bias Test (In = Investigate, Ac = Action)



QA Filename : C:\Canberra\NDA2k\QA\CNTR0001_DCAT0002_PROC00AI_OQAS0004.QAF
Parameter Description : SGS-100 414 keV FWHM (keV)
Selection Dates : 12/01/08 12:00:00 AM - 12/24/08 8:14:45 AM
Lower/Upper Boundaries : 0.665 - 1.664



QA Filename : C:\Canberra\NDA2k\QA\CNTR0001_DCAT0002_PROC00AI_OQAS0004.QAF
Parameter Description : SGS-100 414 keV centroid (ch)
Selection Dates : 12/01/08 12:00:00 AM - 12/24/08 8:14:45 AM
Lower/Upper Boundaries : 824.000 - 833.000

********** Radioassay Data Sheet **********

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Engine Version: TMU Gamma 1.5

Assay Instrument: SGS with Trans. Location:LLNL
Analysis Method: LLNL SGS Operating Procedure Software Version: NDA 2000 V.4.0
Item ID: SGS100 Analysis Date: 12/17/2008

NID identified fiducial nuclide Pu-239
Source of isotopics: MEASURED

Net Weight	16800.0 g		
Pu mass	1.14E+002	+-	1.68E+001 g
TRU Alpha Activity	9.78E+000	+-	1.10E+000 Ci
TRU Activity Concentration	5.82E+005	+-	6.56E+004 nCi/g
Pu-239 Equivalent Activity	1.02E+001	+-	1.10E+000 Ci
Pu-239 FGE	1.08E+002	+-	1.68E+001 g
Decay heat	3.08E-001	+-	3.43E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	1.55E-009	2.14E-007	1.02E-007	0.00E+000
CS137	2.44E-009	2.14E-007	1.02E-007	9.06E-008
U233	<LLD	<LLD	0.00E+000	4.01E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.43E-007
NP237	1.06E-002	7.59E-006	1.24E-006	7.15E-007
PU238	1.04E-002	1.80E-001	3.09E-002	2.71E-004
U238	<LLD	<LLD	0.00E+000	4.72E-006
PU239	1.07E+002	6.73E+000	1.05E+000	1.01E-002
PU240	6.25E+000	1.44E+000	2.25E-001	2.16E-003
AM241	4.11E-001	1.43E+000	2.25E-001	2.29E-004
PU241	1.96E-001	2.04E+001	3.19E+000	3.07E-002
PU242	3.44E-002	1.37E-004	2.54E-005	0.00E+000

Errors quoted at 1.000 sigma

Operator:_____ Date:_____

ITR:_____ Date:_____

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********** Radioassay Data Sheet **********

Engine Version: TMU Gamma 1.5

Assay Instrument: SGS with Trans. Location:LLNL
Analysis Method: LLNL SGS Operating Procedure Software Version: NDA 2000 V.4.0
Item ID: SGS100 Analysis Date: 12/17/2008

NID identified fiducial nuclide Pu-239
Source of isotopics: MEASURED

Net Weight	16800.0 g		
Pu mass	1.17E+002	+- 1.73E+001	g
TRU Alpha Activity	9.83E+000	+- 1.13E+000	Ci
TRU Activity Concentration	5.85E+005	+- 6.72E+004	nCi/g
Pu-239 Equivalent Activity	1.02E+001	+- 1.13E+000	Ci
Pu-239 FGE	1.11E+002	+- 1.73E+001	g
Decay heat	3.09E-001	+- 3.51E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.43E-007
U233	<LLD	<LLD	0.00E+000	9.23E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	7.84E-007
NP237	9.10E-003	6.50E-006	1.03E-006	1.08E-006
PU238	1.07E-002	1.85E-001	3.18E-002	3.32E-004
U238	<LLD	<LLD	0.00E+000	1.02E-005
PU239	1.10E+002	6.93E+000	1.09E+000	1.24E-002
PU240	6.43E+000	1.48E+000	2.32E-001	2.65E-003
AM241	3.56E-001	1.24E+000	1.96E-001	1.11E-004
PU241	2.01E-001	2.09E+001	3.29E+000	3.76E-002
PU242	3.54E-002	1.41E-004	2.62E-005	0.00E+000

Errors quoted at 1.000 sigma

Operator: _____ Date: _____

ITR: _____ Date: _____

********** MGA Results **********

MGA version: MGA V9.63H CI

Measurement date = 12/17/08 Declared date = 12/17/08
Low energy spectrum sensitivity = 30.0% Total counts = 7.508E+006
High energy spectrum sensitivity : 10.0%

Pu g/cm2 = 0.7833 Cd g/cm2 = 2.0697 FWHM at 122 keV = 622 eV
QFIT = 1.10 FWHM at 208 keV = 795 eV
NQFIT = 1.01

Isotope	Relative to Pu-239	%* Err	% Err	Relative to Pu-241	%* Err	Isotope analysis at Meas. date % weight	Meas. date %Err	Decl. date % weight	Decl. date %Err
Pu-238	0.000097	7.1	7.0	0.0531	7.4	0.00915	7.01	0.00943	7.22
Pu-239	1.000000	0.0	0.4	546.7120	0.8	94.28404	0.05	94.24979	0.05
Pu-240	0.058377	1.0	0.9	31.9153	1.2	5.50400	0.93	5.50359	0.93
Pu-241	0.001829	0.8	0.7	1.0000	0.0	0.17246	0.75	0.20687	0.90
Pu-242	(New alg.)			0.1759(10)		0.03033 (10)		0.03032 (9)	
Am-241	0.005314	0.5	0.4	2.9050	0.8	0.50099	0.51	0.50368	0.51

Pu-240 effective (meas. date) = 5.578 +/- 1.00%
Am-241 separated about 28.192 +/- 0.165 years ago
Am/Pu-241 weight ratio = 2.90500 +/- 0.76%

Messages:

Lead x-rays detected.

Notes : * = Error in ratio
Errors quoted at 1.000 sigma
MGA sigma defaulted to 1

Reviewed by: _____ Date: _____

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

Last Results Report
12/17/08 9:19:56 AM

QA File: C:\CANBERRA\NDA2K\QA\CNTR0001_DC
Sample ID: SGS100
Sample Quantity: 1.0000E+000
Sample Date: 7/17/08 10:49:07 AM
Measurement Date: 12/17/08 8:10:17 AM
Elapsed Live Time: 0.0 seconds
Elapsed Real Time: 0.0 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
SGS-100 Pu-239 Trans Mas [UD: 1.0913E+002+/- 7.370]	1.0703E+002	-2.8510E-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)

****
***** GENIE QUALITY ASSURANCE *****
****

Last Results Report
12/17/08 9:19:57 AM

QA File: C:\CANBERRA\NDA2K\QA\CNTR0001_DC
Sample ID: SGS100
Sample Quantity: 1.0000E+000
Sample Date: 7/17/08 10:49:07 AM
Measurement Date: 12/17/08 8:14:37 AM
Elapsed Live Time: 97.6 seconds
Elapsed Real Time: 120.0 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
SGS-100 414 keV centroid [0.00+/-0.00]	8.2852E+002	0.00 < : : : >
SGS-100 414 keV FWHM [0.00+/-0.00]	1.3612E+000	0.00 < : : : >
SGS-100 Pu-239 Mass [UD: 1.1082E+002+/- 1.081]	1.1012E+002	-6.4352E-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)

NDA 2000 Assay Report

Item Information

Item ID:	SGS100	Count Sequence Number:	190
Operator:	RHWM2\RHWM		
Assay Start:	12/17/2008 8:12:35 AM		
Description 1:	SGS100		
Description 2:			
Location:	LLNL		
Comment:			
Matrix Type:	Lucite		
Container Type:	55 TRU Galv 81.5		
Weight:	Gross: 54.0 kg	Net:	16.8 kg
Container:	Volume: 208.0 l	Full:	100.0 %
Density:	0.080 kg /l		

System Configuration

Counter:	SGS with Trans.		
Segments:	Number: 16	Offset:	0
Scanning Platform:	Start: 934 mm	Delta:	-51 mm
Count Type:	QC - SGS 100		
Collimator/Geometry Setting:	Default - 0		
Transmission Mode:	Two Pass		
Transmission Correction Type:	Standard		
Transmission Source:	Se-75 Trans. - 0		

Errors quoted at 1.000 sigma

Segment 1 Results

Segment: 1 Detector: DET01 Position: 1
C:\Canberra\NDA2k\Data\00000190_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P001_S001

Acquisition Start: 12/17/2008 8:14:37 AM
Elapsed Live Time: 118.14 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.419 +/- 0.0068
SE-75	264.66	0.502 +/- 0.0075
SE-75	279.54	0.500 +/- 0.0085
SE-75	400.66	0.542 +/- 0.0114

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/17/2008 8:16:39 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.43	Y	686	776	1.21	120.70	6.707E-006	7.52	
2235.84		11980	7	1.00	4469.80	4.602E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 3.153E-002 +/-	2.1%	< 3.003E-005	< 1.453E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 3.713E-002 +/-	2.2%	< 3.536E-005	< 5.867E-012
Al-26	< 9.764E-003 +/-	16.2%	< 9.299E-006	< 5.136E-007
K-40	< 4.813E-001 +/-	5.3%	< 4.584E-004	< 7.508E-002
Co-57	< 1.232E-001 +/-	3.4%	< 1.173E-004	< 1.441E-011
Co-60	< 4.281E-002 +/-	1.9%	< 4.077E-005	< 3.754E-011
Se-75	< 1.001E-001 +/-	1.9%	< 9.531E-005	< 6.885E-012
Kr-85	< 8.761E+000 +/-	3.2%	< 8.344E-003	< 2.208E-008
Sr-90	< 3.808E-002 +/-	2.1%	< 3.627E-005	< 2.761E-010
Sb-125	< 8.110E-002 +/-	2.3%	< 7.723E-005	< 7.801E-011
Ba-133	< 5.977E-002 +/-	1.8%	< 5.692E-005	< 2.361E-010
Cs-134	< 2.670E-002 +/-	2.1%	< 2.543E-005	< 2.037E-011
Cs-137	< 3.808E-002 +/-	2.1%	< 3.627E-005	< 4.342E-010
Eu-152	< 1.164E-001 +/-	2.3%	< 1.108E-004	< 6.541E-010
Eu-154	< 1.060E-001 +/-	2.4%	< 1.010E-004	< 3.976E-010
Ho-166m	< 4.368E-002 +/-	2.4%	< 4.160E-005	< 2.428E-008
Bi-207	< 2.514E-002 +/-	2.1%	< 2.394E-005	< 4.575E-010
Pb-210	< 9.380E+002 +/-	47.8%	< 8.933E-001	< 1.219E-005
Ra-226	< 5.982E-002 +/-	2.4%	< 5.697E-005	< 5.982E-008
Ac-227	< 3.059E-001 +/-	8.3%	< 2.914E-004	< 4.191E-009
Th-230	< 1.566E+002 +/-	8.6%	< 1.491E-001	< 7.672E-003
Pa-231	< 2.073E+000 +/-	11.2%	< 1.974E-003	< 4.333E-005
Th-232	< 6.844E-002 +/-	2.3%	< 6.518E-005	< 6.167E-001
U-232	< 6.844E-002 +/-	2.3%	< 6.518E-005	< 3.169E-009
U-233	< 1.121E+003 +/-	2.7%	< 1.067E+000	< 1.143E-001
Pa-234	< 1.489E-001 +/-	12.3%	< 1.418E-004	
Pa-234m	< 1.968E+002 +/-	2.3%	< 1.874E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 1.049E-001 +/-	2.5%	< 9.989E-005	< 4.793E-002
Np-237	< 1.513E-001 +/-	2.0%	< 1.441E-004	< 2.118E-004
Pu-238	< 7.493E+003 +/-	2.7%	< 7.136E+000	< 4.331E-004
U-238	< 3.149E+000 +/-	2.4%	< 2.999E-003	< 9.257E+000
Pu-239	< 1.420E+003 +/-	3.1%	< 1.353E+000	< 2.258E-002
Pu-239B	< 4.345E+003 +/-	5.2%	< 4.138E+000	< 6.907E-002
U-239	< 1.995E+003 +/-	59.1%	< 1.900E+000	
Pu-240	< 2.566E+003 +/-	4.6%	< 2.443E+000	< 1.116E-002
Am-241	6.412E+001 +/-	21.8%	6.107E-002	1.847E-005
Am-241B	< 9.811E+002 +/-	4.9%	< 9.344E-001	< 2.826E-004
Pu-241	< 3.887E+004 +/-	2.8%	< 3.701E+001	< 3.739E-004
Pu-241B	< 1.099E+004 +/-	2.5%	< 1.047E+001	< 1.057E-004
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 4.330E-001 +/-	1.9%	< 4.124E-004	< 2.144E-006
Cm-243	< 4.467E-001 +/-	3.4%	< 4.254E-004	< 8.576E-009
Cm-244	< 3.026E+004 +/-	14.1%	< 2.882E+001	< 3.692E-004
Cm-245	< 6.998E-001 +/-	7.7%	< 6.665E-004	< 4.024E-006
Cm-247	< 4.135E-002 +/-	8.6%	< 3.938E-005	< 4.424E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 4.192E-002 +/-	3.6%	< 3.993E-005	< 1.015E-008
Cf-251	< 3.924E-001 +/-	5.6%	< 3.737E-004	< 2.453E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 2 Results

Segment: 2 Detector: DET01 Position: 2
C:\Canberra\NDA2k\Data\00000190_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P002_S002

Acquisition Start: 12/17/2008 8:18:48 AM
Elapsed Live Time: 117.69 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.458 +/- 0.0074
SE-75	264.66	0.549 +/- 0.0082
SE-75	279.54	0.564 +/- 0.0094
SE-75	400.66	0.594 +/- 0.0122

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/17/2008 8:20:50 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.35	Y	1561	959	1.55	120.55	1.229E-004	4.05	
98.77		233	2400	1.25	199.32	2.686E-004	30.75	
2235.84		11980	11	0.97	4469.81	1.072E-004	1.43	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.02 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 1.411E-002 +/-	1.8%	< 1.344E-005	< 6.506E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.565E-002 +/-	2.0%	< 2.443E-005	< 4.053E-012
Al-26	< 1.556E-002 +/-	15.5%	< 1.482E-005	< 8.186E-007
K-40	< 2.540E-001 +/-	4.9%	< 2.419E-004	< 3.962E-002
Co-57	< 1.051E-001 +/-	3.5%	< 1.001E-004	< 1.229E-011
Co-60	< 2.999E-002 +/-	2.5%	< 2.856E-005	< 2.630E-011
Se-75	< 8.727E-002 +/-	1.9%	< 8.311E-005	< 6.004E-012
Kr-85	< 5.196E+000 +/-	3.1%	< 4.949E-003	< 1.309E-008
Sr-90	< 2.152E-002 +/-	2.0%	< 2.050E-005	< 1.560E-010
Sb-125	< 5.717E-002 +/-	2.1%	< 5.445E-005	< 5.500E-011
Ba-133	< 6.670E-002 +/-	1.7%	< 6.353E-005	< 2.635E-010
Cs-134	< 1.496E-002 +/-	1.8%	< 1.425E-005	< 1.142E-011
Cs-137	< 2.152E-002 +/-	2.0%	< 2.050E-005	< 2.454E-010
Eu-152	< 7.127E-002 +/-	3.7%	< 6.787E-005	< 4.005E-010
Eu-154	< 6.899E-002 +/-	1.9%	< 6.570E-005	< 2.587E-010
Ho-166m	< 2.412E-002 +/-	2.3%	< 2.297E-005	< 1.341E-008
Bi-207	< 1.727E-002 +/-	1.9%	< 1.645E-005	< 3.144E-010
Pb-210	< 7.262E+000 +/-	81.7%	< 6.917E-003	< 9.441E-008
Ra-226	< 5.055E-002 +/-	2.3%	< 4.815E-005	< 5.055E-008
Ac-227	< 2.932E-001 +/-	8.3%	< 2.792E-004	< 4.017E-009
Th-230	< 3.676E+001 +/-	25.1%	< 3.501E-002	< 1.801E-003
Pa-231	< 1.824E+000 +/-	11.2%	< 1.737E-003	< 3.813E-005
Th-232	< 6.541E-002 +/-	2.2%	< 6.230E-005	< 5.894E-001
U-232	< 6.541E-002 +/-	2.2%	< 6.230E-005	< 3.029E-009
U-233	< 1.100E+003 +/-	2.7%	< 1.047E+000	< 1.122E-001
Pa-234	< 1.125E-001 +/-	12.2%	< 1.071E-004	
Pa-234m	< 1.331E+002 +/-	2.1%	< 1.268E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 1.081E-001 +/-	2.5%	< 1.030E-004	< 4.941E-002
Np-237	< 1.399E-001 +/-	2.0%	< 1.332E-004	< 1.959E-004
Pu-238	< 7.327E+003 +/-	2.7%	< 6.978E+000	< 4.235E-004
U-238	< 1.860E+000 +/-	2.1%	< 1.771E-003	< 5.468E+000
Pu-239	< 1.313E+003 +/-	3.2%	< 1.251E+000	< 2.088E-002
Pu-239B	< 2.635E+003 +/-	6.4%	< 2.509E+000	< 4.189E-002
U-239	< 9.869E+000 +/-	98.9%	< 9.399E-003	
Pu-240	< 1.709E+003 +/-	5.4%	< 1.628E+000	< 7.435E-003
Am-241	7.969E+000 +/-	38.2%	7.590E-003	2.295E-006
Am-241B	< 6.388E+002 +/-	5.7%	< 6.083E-001	< 1.840E-004
Pu-241	< 3.800E+004 +/-	2.9%	< 3.619E+001	< 3.656E-004
Pu-241B	< 1.104E+004 +/-	2.5%	< 1.051E+001	< 1.062E-004
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 2.003E-001 +/-	16.6%	< 1.907E-004	< 9.913E-007
Cm-243	< 3.677E-001 +/-	3.4%	< 3.502E-004	< 7.060E-009
Cm-244	< 2.649E+004 +/-	14.2%	< 2.523E+001	< 3.232E-004
Cm-245	< 6.737E-001 +/-	7.7%	< 6.416E-004	< 3.874E-006
Cm-247	< 3.058E-002 +/-	8.5%	< 2.912E-005	< 3.272E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 4.217E-002 +/-	3.5%	< 4.016E-005	< 1.020E-008
Cf-251	< 3.818E-001 +/-	5.6%	< 3.636E-004	< 2.386E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 3 Results

Segment: 3 Detector: DET01 Position: 3
C:\Canberra\NDA2k\Data\00000190_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P003_S003

Acquisition Start: 12/17/2008 8:23:00 AM
Elapsed Live Time: 114.66 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.389 +/- 0.0066
SE-75	264.66	0.480 +/- 0.0073
SE-75	279.54	0.485 +/- 0.0085
SE-75	400.66	0.524 +/- 0.0114

Errors quoted at 1.000 sigma

Peak Analysis Results

Peak Analysis Performed on: 12/17/2008 8:25:01 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.33	Y	8520	2244	1.24	120.51	9.279E-005	1.76	
M	94.62	Y	2268	5722	1.53	191.03	2.328E-004	5.50	10.84
m	98.60	Y	7731	9481	1.53	198.97	2.465E-004	3.89	
m	100.72		1178	8885	1.54	203.22	2.536E-004	7.09	
m	103.26	Y	5326	7655	1.54	208.29	2.617E-004	3.86	
	111.02	Y	685	5353	1.28	223.80	2.847E-004	17.09	
M	125.16	Y	656	2790	1.07	252.05	3.188E-004	6.60	1.58
m	129.23	Y	3528	2514	1.07	260.18	3.269E-004	2.27	
	148.57	Y	311	2444	1.20	298.84	3.568E-004	25.12	
M	203.46	Y	772	1136	1.11	408.51	3.792E-004	4.92	1.44
m	207.95	Y	2904	1290	1.12	417.49	3.783E-004	2.33	
	311.79	Y	147	757	1.28	624.99	3.183E-004	30.67	
M	332.76	Y	935	653	1.25	666.89	3.039E-004	3.89	1.29
m	335.76	Y	382	599	1.26	672.90	3.018E-004	6.63	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	341.68	Y	91	546	1.26	684.73	2.979E-004	19.47	
m	344.99	Y	877	505	1.27	691.33	2.957E-004	3.95	
M	367.05	Y	123	350	1.27	735.41	2.814E-004	15.83	1.54
m	368.58	Y	192	382	1.27	738.47	2.805E-004	10.97	
m	375.03	Y	2268	319	1.28	751.35	2.765E-004	2.40	
m	380.14	Y	460	254	1.28	761.57	2.733E-004	5.42	
m	382.69	Y	329	236	1.28	766.68	2.718E-004	6.44	
	392.91	Y	850	207	1.42	787.09	2.658E-004	4.60	
	413.72	Y	2129	107	1.35	828.68	2.543E-004	2.60	
	422.44	Y	105	119	1.24	846.10	2.497E-004	19.63	
	451.46	Y	256	52	1.60	904.09	2.356E-004	7.94	
	662.57	Y	108	20	1.37	1325.96	1.662E-004	12.04	
	721.96	Y	47	10	1.53	1444.64	1.542E-004	18.36	
	2235.81		11980	18	1.01	4469.75	8.739E-005	1.45	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.05 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 2.039E-002 +/-	1.8%	< 1.942E-005	< 9.400E-016
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 1.837E-002 +/-	2.0%	< 1.750E-005	< 2.903E-012
	Al-26	< 2.481E-002 +/-	18.9%	< 2.363E-005	< 1.305E-006
	K-40	< 2.610E-001 +/-	5.3%	< 2.486E-004	< 4.071E-002
	Co-57	< 1.500E-001 +/-	4.4%	< 1.429E-004	< 1.755E-011
	Co-60	< 2.987E-002 +/-	1.7%	< 2.845E-005	< 2.620E-011
	Se-75	< 1.182E-001 +/-	1.8%	< 1.125E-004	< 8.130E-012
	Kr-85	< 7.553E+000 +/-	3.1%	< 7.193E-003	< 1.903E-008
	Sr-90	< 4.262E-002 +/-	2.2%	< 4.059E-005	< 3.090E-010
	Sb-125	< 1.165E-001 +/-	1.9%	< 1.110E-004	< 1.121E-010
	Ba-133	< 1.007E-001 +/-	1.6%	< 9.591E-005	< 3.978E-010
	Cs-134	< 2.122E-002 +/-	1.9%	< 2.021E-005	< 1.619E-011
X	Cs-137				
	Eu-152	< 1.065E-001 +/-	3.8%	< 1.015E-004	< 5.987E-010
	Eu-154	< 5.246E-002 +/-	2.1%	< 4.996E-005	< 1.967E-010
	Ho-166m	< 2.907E-002 +/-	2.3%	< 2.769E-005	< 1.616E-008
	Bi-207	< 2.188E-002 +/-	1.9%	< 2.084E-005	< 3.982E-010
	Pb-210	< 1.354E+001 +/-	259.0%	< 1.290E-002	< 1.760E-007
	Ra-226	< 4.195E-002 +/-	2.4%	< 3.996E-005	< 4.195E-008
	Ac-227	< 4.049E-001 +/-	8.3%	< 3.857E-004	< 5.548E-009
	Th-230	< 6.051E+001 +/-	83.2%	< 5.763E-002	< 2.965E-003
	Pa-231	< 2.424E+000 +/-	11.2%	< 2.308E-003	< 5.066E-005

	Th-232	< 7.253E-002	+/-	2.4%	< 6.908E-005	< 6.535E-001
	U-232	< 8.563E-002	+/-	2.3%	< 8.155E-005	< 3.965E-009
	U-233	< 1.505E+003	+/-	3.0%	< 1.434E+000	< 1.535E-001
	Pa-234	< 1.113E-001	+/-	12.1%	< 1.060E-004	
	Pa-234m	< 1.336E+002	+/-	2.1%	< 1.273E-001	
	U-234	< 0.000E+000	+/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 1.421E-001	+/-	2.9%	< 1.353E-004	< 6.494E-002
	Np-237	1.869E-001	+/-	44.4%	1.780E-004	2.616E-004
	Pu-238	< 9.745E+003	+/-	3.1%	< 9.281E+000	< 5.633E-004
	U-238	< 1.867E+000	+/-	2.2%	< 1.778E-003	< 5.488E+000
	Pu-239	2.188E+005	+/-	3.8%	2.084E+002	3.480E+000
	Pu-239B	1.241E+005	+/-	2.6%	1.182E+002	1.974E+000
	U-239	< 2.220E+001	+/-	308.4%	< 2.114E-002	
	Pu-240	6.095E+004	+/-	13.9%	5.805E+001	2.651E-001
	Am-241	3.817E+004	+/-	10.4%	3.635E+001	1.099E-002
X	Am-241B					
	Pu-241	1.059E+005	+/-	25.3%	1.009E+002	1.019E-003
	Pu-241B	3.329E+005	+/-	3.5%	3.170E+002	3.202E-003
	Pu-242	< 0.000E+000	+/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 3.257E-001	+/-	57.7%	< 3.102E-004	< 1.612E-006
	Cm-243	< 4.772E-001	+/-	3.3%	< 4.545E-004	< 9.162E-009
	Cm-244	< 2.135E+004	+/-	14.1%	< 2.034E+001	< 2.605E-004
	Cm-245	< 8.763E-001	+/-	7.8%	< 8.346E-004	< 5.039E-006
	Cm-247	< 5.236E-002	+/-	8.5%	< 4.987E-005	< 5.602E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 7.064E-002 +/-	3.4%	< 6.728E-005	< 1.710E-008
Cf-251	< 4.948E-001 +/-	5.8%	< 4.712E-004	< 3.092E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	3.48E+000 +- 1.33E-001	9.89E-001 +- 2.09E-002

Beta: 2.22E+002 +- 8.80E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	6.13E-001 +- 2.55E-002
203.55	1.28E+000 +- 6.96E-002
375.05	1.89E+000 +- 5.66E-002
413.71	2.05E+000 +- 6.67E-002

Segment 4 Results

Segment: 4 Detector: DET01 Position: 4
C:\Canberra\NDA2k\Data\00000190_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P004_S004

Acquisition Start: 12/17/2008 8:27:11 AM
Elapsed Live Time: 102.17 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.347 +/- 0.0065
SE-75	264.66	0.479 +/- 0.0090
SE-75	279.54	0.477 +/- 0.0091
SE-75	400.66	0.547 +/- 0.0129

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

*** Spectrum Validity Test warnings ***
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 12/17/2008 8:29:13 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.34	Y	53441	5731	1.20	120.53	4.972E-006	1.26	
M	94.56	Y	11291	12371	1.54	190.91	1.281E-004	2.27	62.45
m	98.58	Y	43617	16358	1.55	198.93	1.515E-004	1.88	
m	100.79	Y	6729	14444	1.55	203.34	1.645E-004	2.87	
m	103.23	Y	31572	12528	1.55	208.22	1.790E-004	1.85	
M	110.97	Y	11675	7815	1.37	223.70	2.243E-004	2.24	82.93
m	114.48	Y	9431	7867	1.37	230.71	2.440E-004	2.38	
m	116.56	Y	8946	7352	1.38	234.87	2.553E-004	2.29	
m	120.50	Y	2300	6635	1.38	242.74	2.757E-004	3.96	
m	125.14	Y	4270	6733	1.39	252.01	2.982E-004	2.87	
m	129.18	Y	20307	5890	1.40	260.09	3.162E-004	2.03	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
M	144.08	Y	1432	4373	1.13	289.86	3.711E-004	11.35	1.98
m	146.16	Y	1149	4940	1.13	294.02	3.774E-004	11.73	
m	148.45	Y	2778	5074	1.14	298.60	3.838E-004	10.16	
M	161.03	Y	1085	4754	1.28	323.72	4.112E-004	17.49	5.11
m	164.54	Y	1043	7409	1.29	330.74	4.165E-004	15.07	
	171.37	Y	728	4638	1.37	344.39	4.245E-004	16.67	
	179.06	Y	386	4841	1.15	359.76	4.302E-004	32.35	
	189.05	Y	1014	4429	1.47	379.72	4.330E-004	12.15	
	195.61	Y	879	4427	1.17	392.82	4.325E-004	13.92	
M	203.45	Y	4825	3724	1.17	408.50	4.300E-004	2.71	1.49
m	207.92	Y	16218	2922	1.17	417.42	4.278E-004	2.14	
	255.28	Y	791	1737	1.14	512.06	3.861E-004	9.68	
M	263.76	Y	352	1697	1.20	529.01	3.771E-004	10.67	2.06
m	267.37	Y	590	1641	1.20	536.23	3.725E-004	7.28	
	297.39	Y	242	1221	0.76	596.22	3.385E-004	24.38	
	311.78	Y	755	1580	1.30	624.98	3.244E-004	10.17	
M	320.80	Y	576	1798	1.80	642.99	3.160E-004	7.46	1.87
m	323.43	Y	797	2297	1.80	648.26	3.136E-004	5.63	
M	332.68	Y	5673	1308	1.30	666.74	3.053E-004	1.85	3.09
m	335.67	Y	2124	1222	1.31	672.71	3.027E-004	2.78	
m	341.41	Y	549	1281	1.31	684.18	2.979E-004	6.52	
m	344.92	Y	4877	1217	1.32	691.19	2.949E-004	1.94	
M	366.93	Y	725	838	1.35	735.17	2.777E-004	6.59	5.41
m	368.51	Y	1320	821	1.35	738.33	2.765E-004	4.36	
m	375.00	Y	13286	670	1.35	751.31	2.718E-004	1.91	
m	380.09	Y	2513	527	1.36	761.48	2.682E-004	2.89	
m	382.69	Y	2245	485	1.36	766.66	2.665E-004	2.98	
	392.86	Y	4419	575	1.52	787.00	2.597E-004	2.24	
	413.66	Y	12182	319	1.46	828.55	2.466E-004	1.54	
M	422.52	Y	918	281	1.27	846.27	2.414E-004	10.22	1.61
m	426.56	Y	186	295	1.27	854.33	2.391E-004	14.05	
M	445.73	Y	81	117	1.31	892.64	2.288E-004	17.13	1.84
m	451.43	Y	1444	165	1.32	904.03	2.260E-004	3.07	
	481.17	Y	47	87	1.27	963.47	2.124E-004	39.59	
	619.06	Y	147	46	1.41	1239.01	1.701E-004	12.51	
M	645.86	Y	60	57	1.44	1292.57	1.646E-004	17.84	1.55
m	652.75	Y	91	48	1.44	1306.32	1.632E-004	12.99	
	662.50	Y	546	76	1.46	1325.80	1.614E-004	5.59	
	722.02	Y	282	25	1.57	1444.74	1.516E-004	7.38	
	769.24	Y	78	9	1.21	1539.11	1.452E-004	14.33	
	2235.78		11980	35	1.05	4469.68	6.834E-005	1.52	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.18 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 1.914E-002 +/-	1.8%	< 1.823E-005	< 8.825E-016
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 2.789E-002 +/-	2.0%	< 2.656E-005	< 4.406E-012
	Al-26	< 4.146E-002 +/-	14.5%	< 3.949E-005	< 2.181E-006
	K-40	< 2.620E-001 +/-	4.8%	< 2.495E-004	< 4.087E-002
	Co-57	< 2.735E-001 +/-	3.3%	< 2.605E-004	< 3.200E-011
	Co-60	< 2.853E-002 +/-	1.7%	< 2.717E-005	< 2.502E-011
	Se-75	< 1.944E-001 +/-	1.7%	< 1.852E-004	< 1.338E-011
	Kr-85	< 1.197E+001 +/-	3.0%	< 1.140E-002	< 3.016E-008
	Sr-90	< 9.061E-002 +/-	2.0%	< 8.630E-005	< 6.569E-010
	Sb-125	< 2.563E-001 +/-	2.2%	< 2.441E-004	< 2.466E-010
	Ba-133	< 1.587E-001 +/-	1.7%	< 1.512E-004	< 6.269E-010
	Cs-134	< 2.409E-002 +/-	1.8%	< 2.294E-005	< 1.838E-011
X	Cs-137				
	Eu-152	< 9.992E-002 +/-	3.6%	< 9.517E-005	< 5.616E-010
	Eu-154	< 7.963E-002 +/-	2.2%	< 7.584E-005	< 2.986E-010
	Ho-166m	< 3.861E-002 +/-	2.3%	< 3.677E-005	< 2.147E-008
	Bi-207	< 3.064E-002 +/-	1.9%	< 2.918E-005	< 5.576E-010
	Pb-210	< 4.317E+003 +/-	37.2%	< 4.111E+000	< 5.612E-005
	Ra-226	< 8.486E-002 +/-	2.2%	< 8.082E-005	< 8.486E-008
	Ac-227	< 6.416E-001 +/-	8.3%	< 6.111E-004	< 8.790E-009
	Th-230	< 3.165E+002 +/-	8.5%	< 3.014E-001	< 1.551E-002
	Pa-231	< 3.705E+000 +/-	11.2%	< 3.529E-003	< 7.744E-005
	Th-232	< 1.004E-001 +/-	2.4%	< 9.562E-005	< 9.046E-001
	U-232	< 1.339E-001 +/-	2.1%	< 1.275E-004	< 6.200E-009
	U-233	< 2.423E+003 +/-	2.6%	< 2.308E+000	< 2.472E-001
	Pa-234	< 9.635E-002 +/-	12.2%	< 9.176E-005	
	Pa-234m	< 1.009E+002 +/-	2.1%	< 9.613E-002	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 2.006E-001 +/-	2.4%	< 1.910E-004	< 9.167E-002
	Np-237	8.879E-001 +/-	15.8%	8.456E-004	1.243E-003
	Pu-238	< 1.378E+004 +/-	2.5%	< 1.313E+001	< 7.968E-004
	U-238	< 2.633E+000 +/-	2.2%	< 2.508E-003	< 7.742E+000
	Pu-239	1.296E+006 +/-	3.3%	1.234E+003	2.061E+001
	Pu-239B	7.043E+005 +/-	1.4%	6.707E+002	1.120E+001
	U-239	< 1.804E+004 +/-	46.3%	< 1.718E+001	
X	Pu-240				
	Am-241	2.110E+005 +/-	5.0%	2.009E+002	6.076E-002
	Am-241B	1.822E+005 +/-	4.2%	1.735E+002	5.247E-002
	Pu-241	8.787E+005 +/-	10.5%	8.369E+002	8.453E-003
	Pu-241B	1.656E+006 +/-	2.9%	1.577E+003	1.593E-002
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 7.180E-001 +/-	1.8%	< 6.838E-004	< 3.554E-006
	Cm-243	< 7.406E-001 +/-	3.3%	< 7.053E-004	< 1.422E-008
	Cm-244	< 3.757E+004 +/-	14.2%	< 3.578E+001	< 4.584E-004
	Cm-245	< 1.269E+000 +/-	7.6%	< 1.208E-003	< 7.295E-006
	Cm-247	< 1.056E-001 +/-	8.5%	< 1.006E-004	< 1.130E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.251E-001 +/-	3.5%	< 1.192E-004	< 3.028E-008
Cf-251	< 7.148E-001 +/-	5.6%	< 6.808E-004	< 4.468E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	2.06E+001 +- 6.87E-001	6.06E+000 +- 1.04E-001

Beta: 2.23E+002 +- 7.68E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	3.64E+000 +- 1.35E-001
203.55	7.06E+000 +- 2.40E-001
375.05	1.13E+001 +- 3.07E-001
413.71	1.21E+001 +- 3.19E-001

Segment 5 Results

Segment: 5 Detector: DET01 Position: 5
C:\Canberra\NDA2k\Data\00000190_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P005_S005

Acquisition Start: 12/17/2008 8:31:22 AM
Elapsed Live Time: 87.66 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.001 +/- 0.0005
SE-75	264.66	0.224 +/- 0.0064
SE-75	279.54	0.245 +/- 0.0068
SE-75	400.66	0.394 +/- 0.0124

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

*** Spectrum Validity Test warnings ***
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 12/17/2008 8:33:24 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.32	Y	128268	9472	1.21	120.49	2.782E-005	1.27	
M	94.51	Y	22953	18453	1.53	190.81	5.973E-005	1.89	110.95
m	98.54	Y	89244	24470	1.54	198.86	6.283E-005	1.65	
m	100.71	Y	13709	21663	1.54	203.20	6.442E-005	2.26	
m	103.20	Y	64744	18843	1.55	208.16	6.618E-005	1.63	
M	110.93	Y	23608	11724	1.37	223.61	7.121E-005	1.90	152.09
m	114.39	Y	18954	11768	1.38	230.54	7.324E-005	1.98	
m	116.46	Y	18627	10969	1.38	234.66	7.438E-005	1.92	
m	120.42	Y	4603	9883	1.39	242.58	7.645E-005	3.00	
m	122.70	Y	1951	10501	1.39	247.14	7.755E-005	5.42	
m	125.11	Y	8746	10041	1.39	251.96	7.866E-005	2.27	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	129.15	Y	41600	8028	1.40	260.02	8.038E-005	1.75	
M	144.06	Y	2632	6624	1.12	289.83	1.455E-004	8.51	1.46
m	146.14	Y	2335	6623	1.13	293.97	1.536E-004	8.76	
m	148.42	Y	5971	6622	1.13	298.52	1.614E-004	7.45	
M	160.80	Y	2285	7530	1.46	323.26	1.939E-004	12.41	6.28
m	164.43	Y	2133	8188	1.46	330.52	2.013E-004	12.00	
m	169.34	Y	730	8800	1.47	340.33	2.102E-004	18.52	
m	171.28	Y	1619	8744	1.47	344.22	2.134E-004	12.29	
	178.97	Y	777	6373	1.11	359.57	2.248E-004	20.84	
	189.17	Y	1254	11504	1.01	379.96	2.369E-004	20.85	
	195.55	Y	1685	6510	1.13	392.71	2.429E-004	10.26	
M	203.39	Y	9554	4970	1.19	408.39	2.491E-004	2.51	2.14
m	207.87	Y	31815	4351	1.20	417.32	2.520E-004	2.17	
	243.11	Y	539	3686	1.10	487.75	2.641E-004	23.57	
	255.22	Y	1253	2927	1.30	511.96	2.648E-004	9.27	
M	263.76	Y	486	2543	1.15	529.00	2.646E-004	10.44	0.67
m	267.37	Y	1228	2435	1.16	536.24	2.646E-004	5.24	
M	297.35	Y	773	2062	1.10	596.13	2.621E-004	7.11	1.26
m	299.73	Y	263	2006	1.10	600.89	2.617E-004	16.29	
	311.74	Y	1554	2157	1.32	624.89	2.595E-004	6.89	
M	321.03	Y	1213	2604	1.81	643.45	2.575E-004	5.53	4.87
m	323.37	Y	1437	3342	1.82	648.14	2.569E-004	4.66	
M	332.63	Y	10933	1888	1.30	666.65	2.546E-004	1.65	4.97
m	335.58	Y	4376	1761	1.30	672.53	2.538E-004	2.22	
m	341.38	Y	1154	1847	1.31	684.13	2.522E-004	4.65	
m	344.90	Y	9800	1750	1.31	691.16	2.513E-004	1.69	
M	366.98	Y	1441	1283	1.34	735.27	2.447E-004	5.38	11.17
m	368.48	Y	2524	1260	1.34	738.28	2.442E-004	3.81	
m	374.95	Y	25983	1175	1.35	751.21	2.422E-004	2.17	
m	380.03	Y	4972	836	1.35	761.36	2.406E-004	2.75	
m	382.67	Y	4455	775	1.36	766.63	2.398E-004	2.77	
	392.82	Y	9008	934	1.58	786.90	2.365E-004	1.88	
M	413.62	Y	22860	532	1.35	828.48	2.282E-004	1.77	5.50
m	419.01	Y	95	537	1.35	839.25	2.259E-004	25.86	
m	422.49	Y	1706	531	1.36	846.20	2.244E-004	3.53	
m	426.57	Y	359	525	1.36	854.35	2.226E-004	9.09	
M	445.71	Y	100	321	1.33	892.61	2.148E-004	20.66	1.50
m	451.40	Y	2693	281	1.34	903.97	2.125E-004	5.19	
	481.61	Y	77	154	1.00	964.33	2.012E-004	35.36	
	618.97	Y	296	47	1.36	1238.82	1.622E-004	8.58	
M	640.07	Y	83	45	1.58	1281.00	1.577E-004	15.55	1.57
m	645.87	Y	204	44	1.59	1292.58	1.565E-004	10.61	
m	652.54	Y	196	43	1.59	1305.91	1.551E-004	10.63	
m	658.67	Y	109	43	1.59	1318.15	1.539E-004	14.42	
m	662.38	Y	1208	41	1.60	1325.57	1.532E-004	7.33	
	688.50	Y	123	27	1.75	1377.77	1.483E-004	14.16	
	709.25		19	21	0.98	1419.23	1.448E-004	53.09	
	722.01	Y	583	53	1.76	1444.74	1.427E-004	5.61	
	756.09	Y	60	16	0.86	1512.83	1.375E-004	20.86	
	769.43	Y	142	15	2.06	1539.49	1.357E-004	11.68	
	2235.75		11980	64	1.10	4469.62	8.910E-005	1.63	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.36 +/- 0.02

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 3.954E-002 +/-	1.8%	< 3.766E-005	< 1.823E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 4.033E-002 +/-	2.0%	< 3.841E-005	< 6.372E-012
	Al-26	< 4.584E-002 +/-	14.7%	< 4.366E-005	< 2.411E-006
	K-40	< 3.812E-001 +/-	4.9%	< 3.630E-004	< 5.947E-002
X	Co-57				
	Co-60	< 3.122E-002 +/-	2.5%	< 2.973E-005	< 2.738E-011
	Se-75	< 2.958E-001 +/-	1.9%	< 2.817E-004	< 2.035E-011
	Kr-85	< 1.665E+001 +/-	3.1%	< 1.585E-002	< 4.195E-008
	Sr-90	< 7.679E-002 +/-	2.1%	< 7.313E-005	< 5.567E-010
	Sb-125	< 3.344E-001 +/-	2.3%	< 3.185E-004	< 3.217E-010
	Ba-133	< 2.227E-001 +/-	1.7%	< 2.121E-004	< 8.798E-010
	Cs-134	< 3.344E-002 +/-	1.8%	< 3.185E-005	< 2.552E-011
X	Cs-137				
	Eu-152	< 1.519E-001 +/-	3.6%	< 1.447E-004	< 8.538E-010
	Eu-154	< 1.152E-001 +/-	2.2%	< 1.097E-004	< 4.319E-010
	Ho-166m	< 3.391E-002 +/-	2.2%	< 3.230E-005	< 1.885E-008
	Bi-207	< 4.300E-002 +/-	1.8%	< 4.095E-005	< 7.825E-010
	Pb-210	< 2.825E+001 +/-	36.7%	< 2.690E-002	< 3.673E-007
	Ra-226	< 1.171E-001 +/-	2.3%	< 1.115E-004	< 1.171E-007
	Ac-227	< 1.037E+000 +/-	8.3%	< 9.880E-004	< 1.421E-008
	Th-230	< 1.345E+002 +/-	13.1%	< 1.281E-001	< 6.591E-003
	Pa-231	< 5.284E+000 +/-	11.2%	< 5.032E-003	< 1.104E-004
	Th-232	< 1.106E-001 +/-	2.4%	< 1.054E-004	< 9.967E-001
	U-232	< 2.013E-001 +/-	2.2%	< 1.917E-004	< 9.321E-009
	U-233	< 4.008E+003 +/-	2.7%	< 3.817E+000	< 4.088E-001
	Pa-234	< 1.832E-001 +/-	12.2%	< 1.745E-004	
	Pa-234m	< 1.735E+002 +/-	2.1%	< 1.653E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 3.430E-001 +/-	2.5%	< 3.267E-004	< 1.568E-001
	Np-237	2.589E+000 +/-	8.8%	2.465E-003	3.624E-003
	Pu-238	< 2.271E+004 +/-	2.6%	< 2.163E+001	< 1.313E-003
	U-238	< 4.725E+000 +/-	2.1%	< 4.500E-003	< 1.389E+001
	Pu-239	1.549E+006 +/-	1.7%	1.475E+003	2.463E+001
	Pu-239B	1.600E+006 +/-	1.4%	1.523E+003	2.543E+001
	U-239	< 5.706E+001 +/-	45.9%	< 5.435E-002	
	Pu-240	2.921E+005 +/-	27.4%	2.782E+002	1.271E+000
	Am-241	4.765E+005 +/-	5.0%	4.538E+002	1.372E-001
	Am-241B	5.357E+005 +/-	4.4%	5.102E+002	1.543E-001
	Pu-241	4.491E+006 +/-	8.0%	4.277E+003	4.320E-002
	Pu-241B	5.570E+006 +/-	2.9%	5.305E+003	5.358E-002
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 7.418E-001 +/-	8.4%	< 7.065E-004	< 3.672E-006
	Cm-243	< 1.105E+000 +/-	3.3%	< 1.052E-003	< 2.122E-008

Cm-244	< 4.330E+004	+/-	14.2%	< 4.124E+001	< 5.282E-004
Cm-245	< 2.099E+000	+/-	7.7%	< 1.999E-003	< 1.207E-005
Cm-247	< 1.568E-001	+/-	8.5%	< 1.494E-004	< 1.678E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.751E-001 +/-	3.5%	< 1.667E-004	< 4.236E-008
Cf-251	< 1.202E+000 +/-	5.6%	< 1.145E-003	< 7.512E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 16:
Beta is too small (negative or less than lower limit)

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	- correction not done -	2.46E+001 +- 4.25E-001

Beta: -1.21E+001 +- 1.27E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in attempted correction: 4

Energy	Mass (g)

Segment 6 Results

Segment: 6 Detector: DET01 Position: 6
C:\Canberra\NDA2k\Data\00000190_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P006_S006

Acquisition Start: 12/17/2008 8:35:34 AM
Elapsed Live Time: 88.35 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.000 +/- 0.0000
SE-75	264.66	0.202 +/- 0.0059
SE-75	279.54	0.223 +/- 0.0064
SE-75	400.66	0.357 +/- 0.0117

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

*** Spectrum Validity Test warnings ***
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 12/17/2008 8:37:36 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	49.37		1607	8177	2.01	100.60	9.386E-008	11.07	
	59.32	Y	115552	9242	1.21	120.49	1.627E-006	1.27	
M	94.50	Y	22173	18233	1.54	190.79	8.731E-005	1.90	106.12
m	98.54	Y	85288	24106	1.54	198.86	1.058E-004	1.65	
m	100.70	Y	13320	21283	1.55	203.18	1.160E-004	2.27	
m	103.19	Y	61463	18453	1.55	208.16	1.278E-004	1.63	
M	110.93	Y	22345	11556	1.35	223.62	1.641E-004	1.98	144.88
m	114.42	Y	18317	11700	1.36	230.60	1.799E-004	2.06	
m	116.47	Y	17713	10970	1.36	234.68	1.888E-004	2.00	
m	120.43	Y	4309	11022	1.37	242.60	2.054E-004	3.12	
m	122.67	Y	1914	10636	1.37	247.07	2.143E-004	5.41	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	125.11	Y	7938	10219	1.38	251.95	2.235E-004	2.38	
m	129.15	Y	40280	8285	1.38	260.03	2.379E-004	1.84	
M	144.03	Y	2681	6523	1.15	289.76	2.794E-004	8.49	2.09
m	146.19	Y	2337	6534	1.15	294.08	2.840E-004	8.91	
m	148.42	Y	5854	6548	1.15	298.53	2.883E-004	7.42	
m	152.58	Y	313	7301	1.16	306.85	2.956E-004	24.18	
M	161.01	Y	2145	6907	1.21	323.68	3.068E-004	11.04	7.77
m	164.50	Y	2340	10542	1.22	330.67	3.103E-004	9.50	
	171.25	Y	2081	7171	1.47	344.15	3.153E-004	8.65	
	179.03	Y	1184	5985	1.22	359.70	3.186E-004	13.24	
	189.20	Y	1247	6608	1.38	380.02	3.199E-004	13.55	
	195.46	Y	1810	5777	1.42	392.52	3.192E-004	8.71	
M	203.42	Y	9315	5135	1.12	408.44	3.173E-004	1.79	7.12
m	207.88	Y	30783	5097	1.13	417.35	3.156E-004	1.38	
	255.27	Y	1602	3065	1.45	512.05	2.887E-004	7.60	
M	263.79	Y	490	2471	1.12	529.08	2.831E-004	19.16	1.11
m	267.45	Y	1090	2651	1.12	536.39	2.821E-004	17.21	
	297.35	Y	743	2341	1.09	596.14	2.742E-004	13.81	
M	311.79	Y	1716	2119	1.57	624.98	2.693E-004	3.75	2.89
m	316.18	Y	305	2675	1.57	633.76	2.678E-004	14.46	
m	320.82	Y	1082	2592	1.58	643.03	2.662E-004	5.16	
m	323.28	Y	1341	2533	1.58	647.94	2.653E-004	4.40	
M	332.64	Y	10581	1717	1.31	666.66	2.620E-004	1.64	6.34
m	335.58	Y	4319	1633	1.31	672.52	2.610E-004	2.19	
m	341.28	Y	1166	1580	1.32	683.91	2.590E-004	4.49	
m	344.90	Y	9316	1674	1.32	691.16	2.578E-004	1.69	
	368.44	Y	4116	1694	2.33	738.19	2.497E-004	3.00	
M	374.97	Y	25011	1560	1.28	751.24	2.475E-004	1.40	20.93
m	380.05	Y	4644	1070	1.28	761.39	2.459E-004	2.12	
m	382.64	Y	4070	940	1.29	766.58	2.451E-004	2.21	
	392.85	Y	8686	960	1.57	786.97	2.418E-004	1.89	
M	413.62	Y	22402	511	1.35	828.48	2.339E-004	1.73	2.85
m	419.31	Y	127	437	1.36	839.85	2.316E-004	19.09	
m	422.48	Y	1721	477	1.36	846.19	2.304E-004	3.44	
m	426.54	Y	423	466	1.37	854.30	2.288E-004	7.78	
	451.38	Y	2706	350	1.41	903.93	2.198E-004	2.92	
	481.39	Y	38	132	1.20	963.91	2.103E-004	59.82	
	618.91	Y	230	66	1.31	1238.71	1.781E-004	10.73	
M	640.22	Y	98	47	1.52	1281.29	1.742E-004	12.96	1.73
m	645.93	Y	163	49	1.52	1292.70	1.732E-004	9.54	
m	652.52	Y	148	50	1.53	1305.87	1.721E-004	10.09	
m	658.82	Y	98	56	1.53	1318.46	1.711E-004	13.40	
m	662.37	Y	1138	59	1.53	1325.54	1.705E-004	3.62	
	688.66	Y	98	42	0.82	1378.10	1.663E-004	18.69	
	722.03	Y	603	55	1.54	1444.77	1.612E-004	5.54	
	756.11	Y	83	8	1.84	1512.88	1.563E-004	14.77	
	769.30	Y	167	15	1.86	1539.23	1.545E-004	10.38	
	2235.75		11980	37	1.09	4469.61	5.266E-005	1.61	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.33 +/- 0.02

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region

F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 3.006E-002 +/-	1.9%	< 2.863E-005	< 1.386E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 2.543E-002 +/-	1.9%	< 2.422E-005	< 4.018E-012
	Al-26	< 6.041E-002 +/-	19.8%	< 5.754E-005	< 3.178E-006
	K-40	< 2.784E-001 +/-	5.3%	< 2.651E-004	< 4.343E-002
X	Co-57				
	Co-60	< 2.843E-002 +/-	1.7%	< 2.707E-005	< 2.493E-011
	Se-75	< 2.638E-001 +/-	2.3%	< 2.513E-004	< 1.815E-011
	Kr-85	< 1.601E+001 +/-	3.2%	< 1.525E-002	< 4.035E-008
	Sr-90	< 8.118E-002 +/-	2.6%	< 7.731E-005	< 5.886E-010
	Sb-125	< 2.783E-001 +/-	2.7%	< 2.651E-004	< 2.677E-010
	Ba-133	< 2.156E-001 +/-	1.8%	< 2.054E-004	< 8.517E-010
	Cs-134	< 2.513E-002 +/-	2.0%	< 2.394E-005	< 1.918E-011
X	Cs-137				
	Eu-152	< 1.472E-001 +/-	1.8%	< 1.401E-004	< 8.270E-010
	Eu-154	< 7.263E-002 +/-	2.1%	< 6.917E-005	< 2.724E-010
	Ho-166m	< 3.754E-002 +/-	2.4%	< 3.575E-005	< 2.087E-008
	Bi-207	< 3.165E-002 +/-	1.9%	< 3.014E-005	< 5.760E-010
	Pb-210	< 3.413E+004 +/-	309.7%	< 3.250E+001	< 4.436E-004
	Ra-226	< 1.123E-001 +/-	2.7%	< 1.069E-004	< 1.123E-007
	Ac-227	< 9.047E-001 +/-	8.5%	< 8.616E-004	< 1.239E-008
	Th-230	< 4.538E+002 +/-	9.0%	< 4.322E-001	< 2.224E-002
	Pa-231	< 4.972E+000 +/-	11.3%	< 4.735E-003	< 1.039E-004
	Th-232	< 1.201E-001 +/-	2.4%	< 1.143E-004	< 1.082E+000
	U-232	< 1.901E-001 +/-	2.6%	< 1.811E-004	< 8.802E-009
	U-233	< 3.471E+003 +/-	4.0%	< 3.306E+000	< 3.541E-001
	Pa-234	< 1.454E-001 +/-	12.2%	< 1.385E-004	
	Pa-234m	< 1.636E+002 +/-	2.1%	< 1.558E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 2.828E-001 +/-	4.0%	< 2.694E-004	< 1.292E-001
	Np-237	2.718E+000 +/-	5.9%	2.588E-003	3.805E-003
	Pu-238	2.545E+004 +/-	24.6%	2.424E+001	1.471E-003
	U-238	< 3.133E+000 +/-	2.1%	< 2.984E-003	< 9.212E+000
	Pu-239	2.254E+006 +/-	3.4%	2.146E+003	3.583E+001
	Pu-239B	1.498E+006 +/-	1.3%	1.427E+003	2.381E+001
	U-239	< 2.714E+005 +/-	368.5%	< 2.584E+002	
X	Pu-240				
	Am-241	4.192E+005 +/-	4.0%	3.992E+002	1.207E-001
	Am-241B	2.227E+005 +/-	5.5%	2.121E+002	6.413E-002
	Pu-241	2.465E+006 +/-	8.6%	2.348E+003	2.372E-002
	Pu-241B	4.180E+006 +/-	3.5%	3.981E+003	4.021E-002
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 9.456E-001 +/-	2.2%	< 9.006E-004	< 4.681E-006
	Cm-243	< 9.753E-001 +/-	3.5%	< 9.289E-004	< 1.873E-008
	Cm-244	< 3.191E+004 +/-	14.2%	< 3.039E+001	< 3.893E-004
	Cm-245	< 1.732E+000 +/-	8.4%	< 1.650E-003	< 9.960E-006
	Cm-247	< 1.476E-001 +/-	8.5%	< 1.406E-004	< 1.579E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.653E-001 +/-	3.5%	< 1.574E-004	< 4.000E-008
Cf-251	< 1.000E+000 +/-	6.5%	< 9.528E-004	< 6.252E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	3.58E+001 +- 1.24E+000	1.63E+001 +- 2.80E-001

Beta: 1.63E+002 +- 8.36E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	9.61E+000 +- 4.15E-001
203.55	1.85E+001 +- 7.18E-001
375.05	2.33E+001 +- 5.94E-001
413.71	2.34E+001 +- 6.76E-001

Segment 7 Results

Segment: 7 Detector: DET01 Position: 7
C:\Canberra\NDA2k\Data\00000190_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P007_S007

Acquisition Start: 12/17/2008 8:39:46 AM
Elapsed Live Time: 100.46 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.057 +/- 0.0032
SE-75	264.66	0.299 +/- 0.0066
SE-75	279.54	0.307 +/- 0.0069
SE-75	400.66	0.425 +/- 0.0110

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

*** Spectrum Validity Test warnings ***
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 12/17/2008 8:41:47 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	49.44		1167	6221	2.13	100.75	2.381E-007	12.01	
	59.34	Y	74911	7085	1.21	120.51	2.237E-006	1.24	
M	94.56	Y	12970	13675	1.51	190.89	6.875E-005	2.17	77.64
m	98.57	Y	49240	17941	1.51	198.91	8.220E-005	1.82	
m	100.75	Y	7539	15736	1.52	203.27	8.971E-005	2.69	
m	103.21	Y	34594	13537	1.52	208.19	9.826E-005	1.80	
M	110.96	Y	12659	8504	1.36	223.68	1.251E-004	2.26	86.55
m	114.48	Y	10560	8471	1.37	230.71	1.370E-004	2.36	
m	116.54	Y	9506	7859	1.37	234.82	1.437E-004	2.30	
m	120.45	Y	2506	7020	1.38	242.63	1.561E-004	3.82	
m	122.81	Y	1383	7417	1.38	247.36	1.633E-004	5.79	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	125.16	Y	4945	7037	1.38	252.06	1.702E-004	2.74	
m	129.17	Y	23588	5990	1.39	260.07	1.812E-004	2.05	
M	144.06	Y	1447	4723	1.09	289.82	2.308E-004	4.59	1.69
m	146.13	Y	1191	5283	1.10	293.96	2.383E-004	5.29	
m	148.44	Y	3167	4803	1.10	298.58	2.463E-004	2.85	
M	161.13	Y	1359	4246	1.20	323.94	2.827E-004	7.07	4.08
m	164.65	Y	1199	7873	1.20	330.96	2.907E-004	6.46	
m	169.62	Y	285	7641	1.21	340.89	3.006E-004	16.55	
m	171.28	Y	1085	7574	1.21	344.21	3.035E-004	6.74	
	178.98	Y	482	4327	1.10	359.60	3.151E-004	24.44	
	189.26	Y	709	4772	1.11	380.14	3.257E-004	18.10	
	195.48	Y	857	4103	1.19	392.57	3.299E-004	13.67	
M	203.46	Y	5152	3779	1.18	408.51	3.331E-004	2.69	1.14
m	207.90	Y	17242	2966	1.18	417.40	3.339E-004	2.17	
M	237.78	Y	186	1782	0.95	477.11	3.282E-004	25.78	0.83
m	243.04	Y	201	2168	0.96	487.62	3.258E-004	24.20	
	255.26	Y	767	2159	1.24	512.02	3.192E-004	11.68	
	267.41	Y	498	1857	1.33	536.30	3.109E-004	16.05	
	297.34	Y	446	1354	1.58	596.12	2.873E-004	15.06	
	311.76	Y	845	1427	1.06	624.94	2.775E-004	8.78	
	323.95	Y	296	1410	1.07	649.28	2.694E-004	23.68	
M	332.66	Y	5852	1272	1.31	666.70	2.638E-004	1.84	4.26
m	335.60	Y	2462	1172	1.32	672.57	2.619E-004	2.60	
m	341.38	Y	719	1214	1.32	684.11	2.583E-004	5.36	
m	344.94	Y	5172	1139	1.33	691.24	2.562E-004	1.91	
M	361.85	Y	145	868	1.25	725.03	2.463E-004	18.63	0.79
m	366.89	Y	762	948	1.25	735.10	2.435E-004	5.89	
m	368.45	Y	1372	997	1.25	738.22	2.427E-004	3.97	
M	375.00	Y	13420	1048	1.28	751.30	2.392E-004	1.48	9.83
m	380.09	Y	2617	702	1.28	761.48	2.365E-004	2.49	
m	382.71	Y	2297	607	1.29	766.70	2.352E-004	2.61	
	392.87	Y	4657	605	1.54	787.01	2.301E-004	2.22	
	413.64	Y	12397	441	1.42	828.51	2.196E-004	1.56	
M	422.51	Y	868	274	1.19	846.23	2.152E-004	4.27	2.18
m	426.55	Y	200	250	1.19	854.31	2.133E-004	9.77	
	451.42	Y	1461	198	1.31	904.02	2.024E-004	3.57	
	618.92	Y	138	32	1.36	1238.73	1.575E-004	12.12	
M	639.93	Y	53	28	1.46	1280.71	1.541E-004	16.64	1.43
m	645.83	Y	92	25	1.46	1292.50	1.532E-004	11.91	
m	652.63	Y	110	28	1.47	1306.09	1.522E-004	10.73	
m	658.65	Y	68	29	1.47	1318.13	1.513E-004	14.58	
m	662.41	Y	665	29	1.47	1325.63	1.508E-004	4.45	
	688.97	Y	37	32	1.37	1378.71	1.472E-004	33.12	
	721.92	Y	278	40	1.39	1444.56	1.433E-004	7.95	
	756.23	Y	32	13	1.02	1513.11	1.396E-004	28.06	
	769.40	Y	87	16	1.44	1539.42	1.383E-004	14.99	
	2235.79		11980	57	1.05	4469.71	4.245E-005	1.54	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.20 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 2.439E-002 +/-	1.8%	< 2.323E-005	< 1.124E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 3.574E-002 +/-	2.0%	< 3.404E-005	< 5.647E-012
	Al-26	< 4.385E-002 +/-	15.5%	< 4.176E-005	< 2.306E-006
	K-40	< 3.013E-001 +/-	5.0%	< 2.870E-004	< 4.701E-002
X	Co-57				
	Co-60	< 3.349E-002 +/-	2.6%	< 3.190E-005	< 2.937E-011
	Se-75	< 1.992E-001 +/-	1.9%	< 1.897E-004	< 1.370E-011
	Kr-85	< 1.235E+001 +/-	3.1%	< 1.176E-002	< 3.112E-008
	Sr-90	2.139E-001 +/-	45.2%	2.037E-004	1.550E-009
	Sb-125	< 2.448E-001 +/-	2.3%	< 2.331E-004	< 2.355E-010
	Ba-133	< 1.664E-001 +/-	1.7%	< 1.585E-004	< 6.574E-010
	Cs-134	< 2.574E-002 +/-	1.8%	< 2.452E-005	< 1.964E-011
	Cs-137	2.139E-001 +/-	45.2%	2.037E-004	2.438E-009
	Eu-152	< 8.222E-002 +/-	3.7%	< 7.831E-005	< 4.621E-010
	Eu-154	< 1.021E-001 +/-	2.2%	< 9.719E-005	< 3.827E-010
	Ho-166m	< 2.522E-002 +/-	2.2%	< 2.402E-005	< 1.402E-008
	Bi-207	< 2.703E-002 +/-	1.9%	< 2.575E-005	< 4.920E-010
	Pb-210	< 5.790E+003 +/-	70.4%	< 5.514E+000	< 7.527E-005
	Ra-226	< 9.736E-002 +/-	2.3%	< 9.272E-005	< 9.736E-008
	Ac-227	< 6.603E-001 +/-	8.3%	< 6.288E-004	< 9.046E-009
	Th-230	< 3.290E+002 +/-	8.6%	< 3.133E-001	< 1.612E-002
	Pa-231	< 3.841E+000 +/-	11.2%	< 3.658E-003	< 8.028E-005
	Th-232	< 8.632E-002 +/-	2.4%	< 8.221E-005	< 7.778E-001
	U-232	2.943E-001 +/-	25.9%	2.803E-004	1.363E-008
	U-233	< 2.495E+003 +/-	2.9%	< 2.376E+000	< 2.545E-001
	Pa-234	< 1.440E-001 +/-	12.2%	< 1.372E-004	
	Pa-234m	< 2.142E+002 +/-	2.1%	< 2.040E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 2.113E-001 +/-	2.6%	< 2.012E-004	< 9.655E-002
	Np-237	1.208E+000 +/-	13.2%	1.150E-003	1.691E-003
	Pu-238	< 1.420E+004 +/-	2.8%	< 1.352E+001	< 8.207E-004
	U-238	< 2.589E+000 +/-	2.2%	< 2.465E-003	< 7.610E+000
	Pu-239	1.125E+006 +/-	3.5%	1.071E+003	1.789E+001
	Pu-239B	8.509E+005 +/-	1.4%	8.104E+002	1.353E+001
	U-239	< 3.504E+004 +/-	85.6%	< 3.337E+001	
	Pu-240	5.711E+004 +/-	34.4%	5.439E+001	2.484E-001
	Am-241	2.228E+005 +/-	8.2%	2.122E+002	6.416E-002
	Am-241B	2.114E+005 +/-	4.2%	2.014E+002	6.089E-002
	Pu-241	1.561E+006 +/-	4.2%	1.487E+003	1.502E-002
	Pu-241B	2.191E+006 +/-	3.0%	2.087E+003	2.108E-002
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 7.395E-001 +/-	1.9%	< 7.043E-004	< 3.660E-006
	Cm-243	< 7.627E-001 +/-	3.4%	< 7.264E-004	< 1.464E-008
	Cm-244	< 2.670E+004 +/-	14.2%	< 2.543E+001	< 3.257E-004
	Cm-245	< 1.269E+000 +/-	7.7%	< 1.208E-003	< 7.294E-006
	Cm-247	< 1.119E-001 +/-	8.5%	< 1.065E-004	< 1.197E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.319E-001 +/-	3.5%	< 1.256E-004	< 3.191E-008
Cf-251	< 7.254E-001 +/-	5.7%	< 6.908E-004	< 4.534E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.79E+001 +- 6.19E-001	1.07E+001 +- 1.68E-001

Beta: 1.17E+002 +- 8.49E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	7.39E+000 +- 3.11E-001
203.55	9.74E+000 +- 3.42E-001
375.05	1.29E+001 +- 3.23E-001
413.71	1.38E+001 +- 3.73E-001

Segment 8 Results

Segment: 8 Detector: DET01 Position: 8
C:\Canberra\NDA2k\Data\00000190_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P008_S008

Acquisition Start: 12/17/2008 8:43:57 AM
Elapsed Live Time: 113.12 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.375 +/- 0.0064
SE-75	264.66	0.526 +/- 0.0080
SE-75	279.54	0.529 +/- 0.0092
SE-75	400.66	0.585 +/- 0.0125

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

*** Spectrum Validity Test warnings ***
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 12/17/2008 8:45:59 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.35	Y	21412	3109	1.20	120.55	9.284E-005	1.37	
	66.98	Y	207	1857	1.05	135.80	1.243E-004	32.56	
M	94.60	Y	3715	6649	1.57	190.98	2.311E-004	4.09	23.01
m	98.59	Y	13304	9383	1.57	198.95	2.440E-004	3.13	
m	100.76	Y	2091	9194	1.58	203.30	2.507E-004	5.16	
m	103.23	Y	8983	7223	1.58	208.23	2.580E-004	3.07	
M	110.96	Y	3543	4871	1.54	223.67	2.789E-004	2.30	9.17
m	114.53	Y	2552	7731	1.55	230.80	2.875E-004	3.15	
m	116.44	Y	2260	6721	1.55	234.63	2.919E-004	3.40	
M	125.19	Y	1019	2910	1.03	252.11	3.097E-004	5.01	8.45
m	129.23	Y	6422	2938	1.04	260.18	3.167E-004	1.79	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
M	146.29	Y	254	2274	1.01	294.27	3.423E-004	23.83	6.11
m	148.47	Y	875	2484	1.02	298.63	3.451E-004	17.54	
	195.48	Y	203	1979	1.11	392.57	3.721E-004	34.95	
M	203.51	Y	1333	1590	1.11	408.62	3.721E-004	3.60	2.13
m	207.96	Y	4717	1541	1.12	417.51	3.718E-004	1.93	
	255.24	Y	237	775	1.27	511.99	3.560E-004	19.03	
	267.35	Y	118	674	1.52	536.18	3.494E-004	33.73	
	311.91	Y	132	664	1.20	625.22	3.205E-004	30.81	
M	332.69	Y	1506	613	1.28	666.75	3.074E-004	3.00	1.99
m	335.69	Y	576	571	1.28	672.75	3.056E-004	5.06	
m	341.40	Y	194	590	1.29	684.16	3.021E-004	10.79	
m	344.97	Y	1303	556	1.29	691.30	2.999E-004	3.21	
	368.45	Y	480	494	1.26	738.21	2.859E-004	9.04	
M	375.04	Y	3495	391	1.28	751.38	2.821E-004	2.04	2.31
m	380.09	Y	674	271	1.29	761.48	2.792E-004	4.32	
m	382.81	Y	578	238	1.29	766.90	2.777E-004	4.67	
	392.89	Y	1303	196	1.44	787.05	2.721E-004	3.56	
M	413.67	Y	3057	100	1.36	828.58	2.609E-004	3.79	1.32
m	419.06	Y	26	83	1.36	839.35	2.582E-004	33.58	
m	422.49	Y	259	80	1.37	846.20	2.564E-004	7.57	
m	426.62	Y	47	68	1.37	854.46	2.543E-004	20.76	
	451.44	Y	359	70	1.56	904.06	2.423E-004	6.81	
	619.07	Y	41	20	0.90	1239.03	1.827E-004	24.21	
	639.97	Y	37	12	1.19	1280.78	1.774E-004	22.85	
	662.42	Y	161	17	1.32	1325.64	1.720E-004	9.17	
	722.02	Y	87	8	1.59	1444.76	1.596E-004	12.46	
	2235.80		11980	21	1.03	4469.73	1.082E-004	1.46	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.07 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 2.429E-002 +/-	1.8%	< 2.313E-005	< 1.120E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 1.817E-002 +/-	1.9%	< 1.730E-005	< 2.870E-012
	Al-26	< 2.783E-002 +/-	18.8%	< 2.650E-005	< 1.464E-006
	K-40	< 2.903E-001 +/-	5.3%	< 2.765E-004	< 4.528E-002
	Co-57	< 1.663E-001 +/-	4.5%	< 1.584E-004	< 1.946E-011
	Co-60	< 2.813E-002 +/-	2.5%	< 2.679E-005	< 2.467E-011
	Se-75	< 1.289E-001 +/-	1.8%	< 1.227E-004	< 8.865E-012
	Kr-85	< 7.640E+000 +/-	3.0%	< 7.276E-003	< 1.925E-008
	Sr-90	< 3.785E-002 +/-	2.2%	< 3.604E-005	< 2.744E-010
	Sb-125	< 1.324E-001 +/-	1.9%	< 1.261E-004	< 1.274E-010
	Ba-133	< 1.071E-001 +/-	1.6%	< 1.020E-004	< 4.229E-010
	Cs-134	< 2.453E-002 +/-	1.8%	< 2.336E-005	< 1.872E-011
X	Cs-137				
	Eu-152	< 1.041E-001 +/-	3.8%	< 9.910E-005	< 5.848E-010
	Eu-154	< 5.187E-002 +/-	2.1%	< 4.940E-005	< 1.945E-010
	Ho-166m	< 2.933E-002 +/-	2.3%	< 2.793E-005	< 1.631E-008
	Bi-207	< 2.325E-002 +/-	2.1%	< 2.214E-005	< 4.232E-010
	Pb-210	< 1.574E+001 +/-	259.0%	< 1.499E-002	< 2.046E-007
	Ra-226	< 5.641E-002 +/-	2.4%	< 5.373E-005	< 5.641E-008
	Ac-227	< 4.502E-001 +/-	8.3%	< 4.287E-004	< 6.167E-009
	Th-230	9.846E+001 +/-	92.2%	9.377E-002	4.825E-003
	Pa-231	< 2.624E+000 +/-	11.2%	< 2.499E-003	< 5.485E-005
	Th-232	< 8.571E-002 +/-	2.3%	< 8.163E-005	< 7.722E-001
	U-232	< 8.702E-002 +/-	2.3%	< 8.288E-005	< 4.029E-009
	U-233	< 1.704E+003 +/-	3.0%	< 1.622E+000	< 1.738E-001
	Pa-234	< 1.018E-001 +/-	12.2%	< 9.692E-005	
	Pa-234m	< 1.500E+002 +/-	2.1%	< 1.429E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 1.575E-001 +/-	2.9%	< 1.500E-004	< 7.198E-002
X	Np-237				
	Pu-238	< 1.057E+004 +/-	3.1%	< 1.007E+001	< 6.110E-004
	U-238	< 2.172E+000 +/-	2.1%	< 2.068E-003	< 6.385E+000
	Pu-239	2.854E+005 +/-	3.9%	2.718E+002	4.538E+000
	Pu-239B	1.888E+005 +/-	2.1%	1.798E+002	3.001E+000
	U-239	< 4.769E+001 +/-	308.3%	< 4.542E-002	
X	Pu-240				
	Am-241	5.956E+004 +/-	7.8%	5.672E+001	1.715E-002
	Am-241B	3.763E+004 +/-	11.9%	3.584E+001	1.084E-002
	Pu-241	3.078E+005 +/-	17.8%	2.932E+002	2.961E-003
	Pu-241B	5.485E+005 +/-	3.2%	5.224E+002	5.277E-003
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 3.447E-001 +/-	57.8%	< 3.283E-004	< 1.706E-006
	Cm-243	< 5.190E-001 +/-	3.3%	< 4.943E-004	< 9.965E-009
	Cm-244	< 2.930E+004 +/-	14.2%	< 2.790E+001	< 3.575E-004
	Cm-245	< 9.651E-001 +/-	7.8%	< 9.191E-004	< 5.549E-006
	Cm-247	< 5.887E-002 +/-	8.5%	< 5.607E-005	< 6.299E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 6.863E-002 +/-	3.4%	< 6.536E-005	< 1.661E-008
Cf-251	< 5.371E-001 +/-	5.8%	< 5.115E-004	< 3.357E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	4.54E+000 +- 1.76E-001	1.78E+000 +- 3.48E-002

Beta: 1.72E+002 +- 8.45E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.15E+000 +- 4.55E-002
203.55	2.25E+000 +- 9.65E-002
375.05	2.85E+000 +- 7.75E-002
413.71	2.86E+000 +- 1.22E-001

Segment 9 Results

Segment: 9 Detector: DET01 Position: 9
C:\Canberra\NDA2k\Data\00000190_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P009_S009

Acquisition Start: 12/17/2008 8:48:09 AM
Elapsed Live Time: 117.60 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.375 +/- 0.0062
SE-75	264.66	0.526 +/- 0.0079
SE-75	279.54	0.534 +/- 0.0090
SE-75	400.66	0.593 +/- 0.0122

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/17/2008 8:50:10 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.34	Y	2793	1058	1.32	120.53	1.304E-005	2.78	
M	98.60	Y	438	3329	1.09	198.98	1.872E-004	10.65	0.54
m	103.19	Y	272	3015	1.09	208.15	2.105E-004	13.71	
	129.22	Y	182	1032	1.04	260.16	3.115E-004	26.12	
	375.08	Y	46	101	1.33	751.46	2.878E-004	35.18	
	413.58	Y	60	24	1.50	828.40	2.697E-004	18.32	
	2235.86		11980	4	1.02	4469.84	5.269E-005	1.43	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.02 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 1.805E-002 +/-	1.9%	< 1.719E-005	< 8.322E-016
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 1.797E-002 +/-	1.9%	< 1.712E-005	< 2.840E-012
	Al-26	< 2.211E-002 +/-	19.6%	< 2.106E-005	< 1.163E-006
	K-40	< 2.300E-001 +/-	5.3%	< 2.191E-004	< 3.588E-002
	Co-57	< 1.130E-001 +/-	4.5%	< 1.077E-004	< 1.323E-011
	Co-60	< 3.199E-002 +/-	1.7%	< 3.047E-005	< 2.806E-011
	Se-75	< 8.095E-002 +/-	2.3%	< 7.710E-005	< 5.569E-012
	Kr-85	< 4.363E+000 +/-	3.2%	< 4.155E-003	< 1.100E-008
	Sr-90	< 2.321E-002 +/-	2.3%	< 2.211E-005	< 1.683E-010
	Sb-125	< 5.625E-002 +/-	2.1%	< 5.357E-005	< 5.411E-011
	Ba-133	< 6.522E-002 +/-	1.8%	< 6.211E-005	< 2.576E-010
	Cs-134	< 1.502E-002 +/-	1.9%	< 1.431E-005	< 1.146E-011
	Cs-137	< 2.321E-002 +/-	2.3%	< 2.211E-005	< 2.646E-010
	Eu-152	< 7.605E-002 +/-	3.8%	< 7.243E-005	< 4.274E-010
	Eu-154	< 5.132E-002 +/-	2.1%	< 4.888E-005	< 1.924E-010
	Ho-166m	< 2.559E-002 +/-	2.5%	< 2.438E-005	< 1.423E-008
	Bi-207	< 1.784E-002 +/-	2.4%	< 1.699E-005	< 3.246E-010
	Pb-210	< 4.234E+002 +/-	311.1%	< 4.033E-001	< 5.505E-006
	Ra-226	< 3.722E-002 +/-	2.6%	< 3.545E-005	< 3.722E-008
	Ac-227	< 2.850E-001 +/-	8.5%	< 2.715E-004	< 3.905E-009
	Th-230	< 1.383E+002 +/-	9.1%	< 1.317E-001	< 6.776E-003
	Pa-231	< 1.742E+000 +/-	11.3%	< 1.659E-003	< 3.641E-005
	Th-232	< 5.449E-002 +/-	2.5%	< 5.190E-005	< 4.910E-001
	U-232	< 5.449E-002 +/-	2.5%	< 5.190E-005	< 2.523E-009
	U-233	< 1.001E+003 +/-	4.1%	< 9.530E-001	< 1.021E-001
	Pa-234	< 1.073E-001 +/-	12.2%	< 1.022E-004	
	Pa-234m	< 1.525E+002 +/-	2.1%	< 1.452E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 9.927E-002 +/-	4.1%	< 9.455E-005	< 4.537E-002
	Np-237	< 1.286E-001 +/-	2.2%	< 1.225E-004	< 1.801E-004
	Pu-238	< 6.890E+003 +/-	4.3%	< 6.562E+000	< 3.983E-004
	U-238	< 1.915E+000 +/-	2.1%	< 1.824E-003	< 5.631E+000
	Pu-239	3.633E+003 +/-	27.5%	3.460E+000	5.776E-002
	Pu-239B	< 3.839E+003 +/-	18.9%	< 3.656E+000	< 6.103E-002
	U-239	< 2.800E+003 +/-	370.1%	< 2.667E+000	
X	Pu-240				
	Am-241	1.344E+002 +/-	154.2%	1.280E-001	3.871E-005
	Am-241B	1.735E+003 +/-	15.1%	1.653E+000	4.998E-004
	Pu-241	< 3.574E+004 +/-	4.3%	< 3.404E+001	< 3.438E-004
	Pu-241B	< 1.083E+004 +/-	3.5%	< 1.031E+001	< 1.042E-004
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 3.444E-001 +/-	2.2%	< 3.280E-004	< 1.705E-006
	Cm-243	< 3.552E-001 +/-	3.6%	< 3.383E-004	< 6.819E-009
	Cm-244	< 2.488E+004 +/-	14.1%	< 2.370E+001	< 3.036E-004
	Cm-245	< 6.224E-001 +/-	8.4%	< 5.928E-004	< 3.579E-006
	Cm-247	< 3.103E-002 +/-	8.5%	< 2.955E-005	< 3.320E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 3.792E-002 +/-	3.5%	< 3.611E-005	< 9.176E-009
Cf-251	< 3.430E-001 +/-	6.6%	< 3.267E-004	< 2.144E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	5.78E-002 +- 1.59E-002	4.12E-002 +- 5.87E-003

Beta: 7.32E+001 +- 5.99E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 3

Energy	Mass (g)
129.30	3.31E-002 +- 8.74E-003
375.05	3.70E-002 +- 1.30E-002
413.71	5.42E-002 +- 1.00E-002

Segment 10 Results

Segment: 10 Detector: DET01 Position: 10
C:\Canberra\NDA2k\Data\00000190_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P010_S010

Acquisition Start: 12/17/2008 8:52:20 AM
Elapsed Live Time: 118.17 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.324 +/- 0.0055
SE-75	264.66	0.483 +/- 0.0072
SE-75	279.54	0.485 +/- 0.0083
SE-75	400.66	0.535 +/- 0.0112

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/17/2008 8:54:22 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.37	Y	1127	739	1.25	120.57	5.649E-006	4.73	
2235.85		11980	2	1.01	4469.82	5.116E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 1.633E-002 +/-	1.9%	< 1.555E-005	< 7.528E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 1.983E-002 +/-	1.9%	< 1.889E-005	< 3.134E-012
Al-26	< 2.429E-002 +/-	19.8%	< 2.313E-005	< 1.278E-006
K-40	< 2.698E-001 +/-	5.3%	< 2.570E-004	< 4.209E-002
Co-57	< 9.577E-002 +/-	4.6%	< 9.121E-005	< 1.120E-011
Co-60	< 2.043E-002 +/-	2.5%	< 1.946E-005	< 1.792E-011
Se-75	< 6.587E-002 +/-	2.2%	< 6.273E-005	< 4.532E-012
Kr-85	< 5.098E+000 +/-	3.3%	< 4.855E-003	< 1.285E-008
Sr-90	< 2.001E-002 +/-	2.4%	< 1.906E-005	< 1.451E-010
Sb-125	< 4.796E-002 +/-	2.2%	< 4.568E-005	< 4.614E-011
Ba-133	< 4.541E-002 +/-	1.8%	< 4.324E-005	< 1.794E-010
Cs-134	< 1.712E-002 +/-	2.5%	< 1.630E-005	< 1.306E-011
Cs-137	< 2.001E-002 +/-	2.4%	< 1.906E-005	< 2.281E-010
Eu-152	< 1.011E-001 +/-	3.8%	< 9.625E-005	< 5.680E-010
Eu-154	< 5.663E-002 +/-	2.1%	< 5.393E-005	< 2.124E-010
Ho-166m	< 3.420E-002 +/-	2.4%	< 3.258E-005	< 1.902E-008
Bi-207	< 2.020E-002 +/-	2.4%	< 1.924E-005	< 3.677E-010
Pb-210	< 8.174E+002 +/-	308.2%	< 7.785E-001	< 1.063E-005
Ra-226	< 4.235E-002 +/-	2.7%	< 4.033E-005	< 4.235E-008
Ac-227	< 2.023E-001 +/-	8.5%	< 1.926E-004	< 2.771E-009
Th-230	< 1.053E+002 +/-	9.0%	< 1.003E-001	< 5.160E-003
Pa-231	< 1.348E+000 +/-	11.3%	< 1.284E-003	< 2.817E-005
Th-232	< 3.808E-002 +/-	2.6%	< 3.626E-005	< 3.431E-001
U-232	< 3.808E-002 +/-	2.6%	< 3.626E-005	< 1.763E-009
U-233	< 7.606E+002 +/-	4.0%	< 7.244E-001	< 7.758E-002
Pa-234	< 8.463E-002 +/-	12.2%	< 8.060E-005	
Pa-234m	< 8.869E+001 +/-	2.1%	< 8.446E-002	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 7.012E-002 +/-	3.9%	< 6.678E-005	< 3.204E-002
Np-237	< 1.007E-001 +/-	2.2%	< 9.593E-005	< 1.410E-004
Pu-238	< 5.131E+003 +/-	4.2%	< 4.887E+000	< 2.966E-004
U-238	< 2.061E+000 +/-	2.2%	< 1.963E-003	< 6.060E+000
Pu-239	< 1.013E+003 +/-	3.7%	< 9.649E-001	< 1.611E-002
Pu-239B	< 3.489E+003 +/-	18.8%	< 3.322E+000	< 5.546E-002
U-239	< 6.089E+003 +/-	366.8%	< 5.799E+000	
Pu-240	< 2.064E+003 +/-	13.3%	< 1.965E+000	< 8.976E-003
Am-241	1.252E+002 +/-	152.5%	1.192E-001	3.605E-005
Am-241B	< 7.968E+002 +/-	14.4%	< 7.589E-001	< 2.295E-004
Pu-241	< 2.672E+004 +/-	4.2%	< 2.545E+001	< 2.571E-004
Pu-241B	< 7.137E+003 +/-	3.4%	< 6.797E+000	< 6.865E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 2.504E-001 +/-	2.2%	< 2.385E-004	< 1.240E-006
Cm-243	< 2.583E-001 +/-	3.5%	< 2.460E-004	< 4.959E-009
Cm-244	< 2.517E+004 +/-	14.1%	< 2.397E+001	< 3.071E-004
Cm-245	< 4.636E-001 +/-	8.3%	< 4.415E-004	< 2.666E-006
Cm-247	< 2.446E-002 +/-	8.5%	< 2.330E-005	< 2.618E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.787E-002 +/-	3.5%	< 2.655E-005	< 6.745E-009
Cf-251	< 2.427E-001 +/-	6.5%	< 2.312E-004	< 1.517E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 11 Results

Segment: 11 Detector: DET01 Position: 11
C:\Canberra\NDA2k\Data\00000190_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P011_S011

Acquisition Start: 12/17/2008 8:56:32 AM
Elapsed Live Time: 118.51 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.183 +/- 0.0035
SE-75	264.66	0.275 +/- 0.0044
SE-75	279.54	0.289 +/- 0.0054
SE-75	400.66	0.315 +/- 0.0077

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/17/2008 8:58:33 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.41	Y	362	590	1.26	120.67	4.606E-006	11.45	
2235.89		11980	6	1.01	4469.90	2.561E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 2.270E-002 +/-	1.8%	< 2.162E-005	< 1.046E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 5.282E-003 +/-	2.0%	< 5.031E-006	< 8.346E-013
Al-26	< 2.764E-002 +/-	15.1%	< 2.632E-005	< 1.454E-006
K-40	< 3.165E-001 +/-	5.0%	< 3.014E-004	< 4.937E-002
Co-57	< 7.866E-002 +/-	3.4%	< 7.491E-005	< 9.203E-012
Co-60	< 2.490E-002 +/-	1.7%	< 2.371E-005	< 2.184E-011
Se-75	< 6.466E-002 +/-	1.8%	< 6.158E-005	< 4.449E-012
Kr-85	< 4.384E+000 +/-	3.0%	< 4.175E-003	< 1.105E-008
Sr-90	< 1.780E-002 +/-	1.9%	< 1.695E-005	< 1.290E-010
Sb-125	< 5.778E-002 +/-	2.1%	< 5.503E-005	< 5.559E-011
Ba-133	< 3.565E-002 +/-	1.7%	< 3.396E-005	< 1.408E-010
Cs-134	< 1.623E-002 +/-	1.9%	< 1.546E-005	< 1.239E-011
Cs-137	< 1.780E-002 +/-	1.9%	< 1.695E-005	< 2.029E-010
Eu-152	< 6.925E-002 +/-	2.1%	< 6.595E-005	< 3.892E-010
Eu-154	< 1.508E-002 +/-	2.2%	< 1.436E-005	< 5.656E-011
Ho-166m	< 5.565E-003 +/-	2.2%	< 5.300E-006	< 3.094E-009
Bi-207	< 1.460E-002 +/-	2.0%	< 1.390E-005	< 2.657E-010
Pb-210	< 1.010E+003 +/-	53.0%	< 9.617E-001	< 1.313E-005
Ra-226	< 3.633E-002 +/-	2.2%	< 3.460E-005	< 3.633E-008
Ac-227	< 2.097E-001 +/-	8.3%	< 1.997E-004	< 2.872E-009
Th-230	< 9.738E+001 +/-	8.6%	< 9.274E-002	< 4.772E-003
Pa-231	< 1.248E+000 +/-	11.2%	< 1.188E-003	< 2.607E-005
Th-232	< 4.501E-002 +/-	2.1%	< 4.287E-005	< 4.056E-001
U-232	< 4.501E-002 +/-	2.1%	< 4.287E-005	< 2.084E-009
U-233	< 7.179E+002 +/-	2.7%	< 6.837E-001	< 7.322E-002
Pa-234	< 1.093E-001 +/-	12.2%	< 1.041E-004	
Pa-234m	< 1.554E+002 +/-	2.1%	< 1.480E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 6.794E-002 +/-	2.5%	< 6.471E-005	< 3.105E-002
Np-237	< 8.714E-002 +/-	1.9%	< 8.300E-005	< 1.220E-004
Pu-238	< 4.599E+003 +/-	2.6%	< 4.380E+000	< 2.658E-004
U-238	< 2.156E+000 +/-	2.2%	< 2.054E-003	< 6.339E+000
Pu-239	< 9.331E+002 +/-	3.1%	< 8.886E-001	< 1.484E-002
Pu-239B	< 2.715E+003 +/-	5.3%	< 2.586E+000	< 4.317E-002
U-239	< 9.737E+003 +/-	65.1%	< 9.274E+000	
Pu-240	< 1.680E+003 +/-	4.7%	< 1.600E+000	< 7.309E-003
Am-241	4.931E+001 +/-	26.0%	4.696E-002	1.420E-005
Am-241B	< 6.269E+002 +/-	4.9%	< 5.971E-001	< 1.806E-004
Pu-241	< 2.514E+004 +/-	2.8%	< 2.395E+001	< 2.419E-004
Pu-241B	< 6.704E+003 +/-	2.4%	< 6.384E+000	< 6.449E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 2.531E-001 +/-	1.8%	< 2.410E-004	< 1.253E-006
Cm-243	< 2.610E-001 +/-	3.3%	< 2.486E-004	< 5.012E-009
Cm-244	< 5.357E+003 +/-	14.2%	< 5.102E+000	< 6.536E-005
Cm-245	< 4.237E-001 +/-	7.7%	< 4.036E-004	< 2.437E-006
Cm-247	< 1.926E-002 +/-	8.5%	< 1.835E-005	< 2.061E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.317E-002 +/-	3.5%	< 2.207E-005	< 5.608E-009
Cf-251	< 2.332E-001 +/-	5.6%	< 2.221E-004	< 1.458E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 12 Results

Segment: 12 Detector: DET01 Position: 12
C:\Canberra\NDA2k\Data\00000190_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P012_S012

Acquisition Start: 12/17/2008 9:00:43 AM
Elapsed Live Time: 118.70 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.092 +/- 0.0022
SE-75	264.66	0.153 +/- 0.0027
SE-75	279.54	0.158 +/- 0.0035
SE-75	400.66	0.193 +/- 0.0056

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/17/2008 9:02:45 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.46	Y	198	399	1.09	120.76	1.248E-004	16.81	
2235.86		11980	9	0.98	4469.84	2.434E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 1.849E-002 +/-	1.9%	< 1.761E-005	< 8.523E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 1.696E-002 +/-	2.0%	< 1.615E-005	< 2.679E-012
Al-26	< 9.439E-003 +/-	16.0%	< 8.990E-006	< 4.965E-007
K-40	< 1.936E-001 +/-	5.1%	< 1.844E-004	< 3.021E-002
Co-57	< 6.535E-002 +/-	4.0%	< 6.224E-005	< 7.646E-012
Co-60	< 1.990E-002 +/-	1.7%	< 1.895E-005	< 1.745E-011
Se-75	< 6.179E-002 +/-	2.5%	< 5.884E-005	< 4.251E-012
Kr-85	< 3.851E+000 +/-	3.3%	< 3.668E-003	< 9.706E-009
Sr-90	< 1.761E-002 +/-	2.2%	< 1.677E-005	< 1.277E-010
Sb-125	< 4.033E-002 +/-	2.4%	< 3.841E-005	< 3.880E-011
Ba-133	< 2.577E-002 +/-	2.0%	< 2.454E-005	< 1.018E-010
Cs-134	< 1.424E-002 +/-	2.3%	< 1.356E-005	< 1.086E-011
Cs-137	< 1.761E-002 +/-	2.2%	< 1.677E-005	< 2.008E-010
Eu-152	< 7.087E-002 +/-	2.7%	< 6.750E-005	< 3.983E-010
Eu-154	< 4.839E-002 +/-	2.2%	< 4.609E-005	< 1.815E-010
Ho-166m	< 5.489E-003 +/-	2.3%	< 5.228E-006	< 3.052E-009
Bi-207	< 1.353E-002 +/-	2.3%	< 1.288E-005	< 2.462E-010
Pb-210	< 1.087E+000 +/-	39.2%	< 1.035E-003	< 1.413E-008
Ra-226	< 3.035E-002 +/-	2.5%	< 2.890E-005	< 3.035E-008
Ac-227	< 1.960E-001 +/-	6.5%	< 1.867E-004	< 2.685E-009
Th-230	< 1.635E+001 +/-	13.8%	< 1.557E-002	< 8.012E-004
Pa-231	< 1.027E+000 +/-	11.3%	< 9.783E-004	< 2.147E-005
Th-232	< 2.175E-002 +/-	2.5%	< 2.072E-005	< 1.960E-001
U-232	< 2.175E-002 +/-	2.5%	< 2.072E-005	< 1.007E-009
U-233	< 7.488E+002 +/-	3.2%	< 7.131E-001	< 7.637E-002
Pa-234	< 1.028E-001 +/-	12.2%	< 9.792E-005	
Pa-234m	< 1.359E+002 +/-	2.1%	< 1.294E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 6.474E-002 +/-	3.2%	< 6.166E-005	< 2.959E-002
Np-237	< 7.096E-002 +/-	2.3%	< 6.758E-005	< 9.934E-005
Pu-238	< 5.130E+003 +/-	3.1%	< 4.886E+000	< 2.965E-004
U-238	< 1.568E+000 +/-	2.1%	< 1.494E-003	< 4.611E+000
Pu-239	< 8.221E+002 +/-	3.7%	< 7.829E-001	< 1.307E-002
Pu-239B	< 1.418E+003 +/-	6.3%	< 1.351E+000	< 2.255E-002
U-239	< 3.474E+000 +/-	49.2%	< 3.309E-003	
Pu-240	< 1.027E+003 +/-	5.6%	< 9.777E-001	< 4.466E-003
Am-241	9.968E-001 +/-	23.7%	9.493E-004	2.871E-007
Am-241B	< 3.762E+002 +/-	5.8%	< 3.583E-001	< 1.084E-004
Pu-241	< 2.565E+004 +/-	3.3%	< 2.443E+001	< 2.467E-004
Pu-241B	< 7.326E+003 +/-	3.2%	< 6.977E+000	< 7.048E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.015E-001 +/-	9.3%	< 9.669E-005	< 5.025E-007
Cm-243	< 2.381E-001 +/-	3.7%	< 2.267E-004	< 4.571E-009
Cm-244	< 1.635E+004 +/-	14.1%	< 1.557E+001	< 1.995E-004
Cm-245	< 4.470E-001 +/-	7.9%	< 4.257E-004	< 2.570E-006
Cm-247	< 1.714E-002 +/-	8.6%	< 1.633E-005	< 1.834E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.816E-002 +/-	3.6%	< 1.729E-005	< 4.395E-009
Cf-251	< 2.439E-001 +/-	5.9%	< 2.323E-004	< 1.525E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 13 Results

Segment: 13 Detector: DET01 Position: 13
C:\Canberra\NDA2k\Data\00000190_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P013_S013

Acquisition Start: 12/17/2008 9:04:55 AM
Elapsed Live Time: 118.96 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.412 +/- 0.0066
SE-75	264.66	0.481 +/- 0.0072
SE-75	279.54	0.494 +/- 0.0083
SE-75	400.66	0.544 +/- 0.0113

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/17/2008 9:06:56 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
2235.88		11980	2	1.01	4469.87	7.078E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 2.284E-002 +/-	1.8%	< 2.175E-005	< 1.053E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 1.734E-002 +/-	2.0%	< 1.652E-005	< 2.740E-012
Al-26	< 2.587E-002 +/-	14.9%	< 2.464E-005	< 1.361E-006
K-40	< 3.057E-001 +/-	4.9%	< 2.911E-004	< 4.768E-002
Co-57	< 5.324E-002 +/-	3.5%	< 5.070E-005	< 6.229E-012
Co-60	< 2.644E-002 +/-	1.7%	< 2.518E-005	< 2.319E-011
Se-75	< 4.915E-002 +/-	1.9%	< 4.681E-005	< 3.381E-012
Kr-85	< 4.305E+000 +/-	3.1%	< 4.100E-003	< 1.085E-008
Sr-90	< 1.917E-002 +/-	1.9%	< 1.826E-005	< 1.390E-010
Sb-125	< 2.897E-002 +/-	2.1%	< 2.759E-005	< 2.787E-011
Ba-133	< 2.376E-002 +/-	1.7%	< 2.263E-005	< 9.386E-011
Cs-134	< 1.108E-002 +/-	1.8%	< 1.055E-005	< 8.452E-012
Cs-137	< 1.917E-002 +/-	1.9%	< 1.826E-005	< 2.185E-010
Eu-152	< 5.397E-002 +/-	2.5%	< 5.140E-005	< 3.033E-010
Eu-154	< 4.951E-002 +/-	2.2%	< 4.715E-005	< 1.857E-010
Ho-166m	< 2.702E-002 +/-	2.3%	< 2.573E-005	< 1.502E-008
Bi-207	< 1.263E-002 +/-	2.0%	< 1.203E-005	< 2.299E-010
Pb-210	< 1.601E+000 +/-	36.7%	< 1.524E-003	< 2.081E-008
Ra-226	< 3.272E-002 +/-	2.2%	< 3.116E-005	< 3.272E-008
Ac-227	< 1.748E-001 +/-	8.3%	< 1.665E-004	< 2.395E-009
Th-230	< 1.548E+001 +/-	13.0%	< 1.474E-002	< 7.585E-004
Pa-231	< 7.658E-001 +/-	11.2%	< 7.293E-004	< 1.600E-005
Th-232	< 5.286E-002 +/-	2.2%	< 5.034E-005	< 4.763E-001
U-232	< 5.286E-002 +/-	2.2%	< 5.034E-005	< 2.447E-009
U-233	< 5.648E+002 +/-	2.7%	< 5.379E-001	< 5.761E-002
Pa-234	< 8.093E-002 +/-	12.2%	< 7.707E-005	
Pa-234m	< 1.069E+002 +/-	2.1%	< 1.018E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 5.506E-002 +/-	2.5%	< 5.243E-005	< 2.516E-002
Np-237	< 5.493E-002 +/-	1.9%	< 5.232E-005	< 7.690E-005
Pu-238	< 4.318E+003 +/-	2.6%	< 4.113E+000	< 2.496E-004
U-238	< 2.008E+000 +/-	2.1%	< 1.912E-003	< 5.903E+000
Pu-239	< 7.203E+002 +/-	3.2%	< 6.860E-001	< 1.145E-002
Pu-239B	< 1.125E+003 +/-	5.7%	< 1.071E+000	< 1.789E-002
U-239	< 6.675E+000 +/-	45.8%	< 6.357E-003	
Pu-240	< 8.264E+002 +/-	5.0%	< 7.870E-001	< 3.595E-003
Am-241	< 1.987E-001 +/-	15.6%	< 1.892E-004	< 5.722E-008
Am-241B	< 3.004E+002 +/-	5.3%	< 2.861E-001	< 8.651E-005
Pu-241	< 2.102E+004 +/-	2.8%	< 2.001E+001	< 2.022E-004
Pu-241B	< 6.420E+003 +/-	2.5%	< 6.114E+000	< 6.176E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 9.414E-002 +/-	8.4%	< 8.965E-005	< 4.660E-007
Cm-243	< 1.849E-001 +/-	3.3%	< 1.761E-004	< 3.549E-009
Cm-244	< 1.523E+004 +/-	14.1%	< 1.450E+001	< 1.858E-004
Cm-245	< 3.768E-001 +/-	7.7%	< 3.588E-004	< 2.166E-006
Cm-247	< 1.714E-002 +/-	8.5%	< 1.632E-005	< 1.833E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.070E-002 +/-	3.5%	< 1.972E-005	< 5.010E-009
Cf-251	< 2.061E-001 +/-	5.6%	< 1.963E-004	< 1.288E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 14 Results

Segment: 14 Detector: DET01 Position: 14
C:\Canberra\NDA2k\Data\00000190_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P014_S014

Acquisition Start: 12/17/2008 9:09:06 AM
Elapsed Live Time: 119.07 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.870 +/- 0.0130
SE-75	264.66	0.892 +/- 0.0129
SE-75	279.54	0.900 +/- 0.0141
SE-75	400.66	0.909 +/- 0.0170

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/17/2008 9:11:08 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
2235.89		11980	2	0.97	4469.90	5.399E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 1.706E-002 +/-	1.9%	< 1.625E-005	< 7.864E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 1.378E-002 +/-	2.0%	< 1.312E-005	< 2.177E-012
Al-26	< 2.043E-002 +/-	15.2%	< 1.946E-005	< 1.075E-006
K-40	< 2.987E-001 +/-	5.0%	< 2.845E-004	< 4.660E-002
Co-57	< 4.869E-002 +/-	3.4%	< 4.637E-005	< 5.697E-012
Co-60	< 3.534E-002 +/-	1.7%	< 3.366E-005	< 3.099E-011
Se-75	< 3.891E-002 +/-	1.8%	< 3.705E-005	< 2.677E-012
Kr-85	< 3.633E+000 +/-	3.1%	< 3.460E-003	< 9.156E-009
Sr-90	< 1.950E-002 +/-	1.9%	< 1.857E-005	< 1.414E-010
Sb-125	< 5.320E-002 +/-	2.1%	< 5.067E-005	< 5.118E-011
Ba-133	< 2.162E-002 +/-	1.7%	< 2.059E-005	< 8.541E-011
Cs-134	< 1.346E-002 +/-	2.0%	< 1.282E-005	< 1.027E-011
Cs-137	< 1.950E-002 +/-	1.9%	< 1.857E-005	< 2.223E-010
Eu-152	< 5.268E-002 +/-	2.5%	< 5.017E-005	< 2.961E-010
Eu-154	< 3.935E-002 +/-	2.2%	< 3.748E-005	< 1.476E-010
Ho-166m	< 1.727E-002 +/-	2.3%	< 1.645E-005	< 9.604E-009
Bi-207	< 7.825E-003 +/-	2.0%	< 7.452E-006	< 1.424E-010
Pb-210	< 8.447E+002 +/-	56.7%	< 8.045E-001	< 1.098E-005
Ra-226	< 3.790E-002 +/-	2.2%	< 3.609E-005	< 3.790E-008
Ac-227	< 1.377E-001 +/-	8.3%	< 1.311E-004	< 1.886E-009
Th-230	< 6.174E+001 +/-	8.6%	< 5.880E-002	< 3.025E-003
Pa-231	< 6.791E-001 +/-	11.2%	< 6.468E-004	< 1.419E-005
Th-232	< 4.196E-002 +/-	2.2%	< 3.996E-005	< 3.780E-001
U-232	< 4.196E-002 +/-	2.2%	< 3.996E-005	< 1.943E-009
U-233	< 4.459E+002 +/-	2.7%	< 4.247E-001	< 4.548E-002
Pa-234	< 8.174E-002 +/-	11.5%	< 7.785E-005	
Pa-234m	< 1.654E+002 +/-	2.2%	< 1.576E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 3.970E-002 +/-	2.5%	< 3.781E-005	< 1.814E-002
Np-237	< 4.838E-002 +/-	1.9%	< 4.608E-005	< 6.773E-005
Pu-238	< 3.247E+003 +/-	2.6%	< 3.093E+000	< 1.877E-004
U-238	< 2.820E+000 +/-	2.2%	< 2.686E-003	< 8.291E+000
Pu-239	< 6.071E+002 +/-	3.1%	< 5.782E-001	< 9.653E-003
Pu-239B	< 1.480E+003 +/-	5.4%	< 1.410E+000	< 2.353E-002
U-239	< 1.099E+004 +/-	69.5%	< 1.047E+001	
Pu-240	< 9.515E+002 +/-	4.7%	< 9.062E-001	< 4.139E-003
Am-241	< 5.070E+000 +/-	25.0%	< 4.828E-003	< 1.460E-006
Am-241B	< 3.694E+002 +/-	5.0%	< 3.518E-001	< 1.064E-004
Pu-241	< 1.588E+004 +/-	2.8%	< 1.513E+001	< 1.528E-004
Pu-241B	< 4.409E+003 +/-	2.4%	< 4.199E+000	< 4.241E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.584E-001 +/-	1.8%	< 1.509E-004	< 7.841E-007
Cm-243	< 1.634E-001 +/-	3.3%	< 1.556E-004	< 3.137E-009
Cm-244	< 9.453E+003 +/-	14.1%	< 9.003E+000	< 1.153E-004
Cm-245	< 2.785E-001 +/-	7.7%	< 2.652E-004	< 1.601E-006
Cm-247	< 2.064E-002 +/-	8.5%	< 1.966E-005	< 2.208E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.876E-002 +/-	3.5%	< 1.787E-005	< 4.540E-009
Cf-251	< 1.515E-001 +/-	5.6%	< 1.442E-004	< 9.466E-008

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 15 Results

Segment: 15 Detector: DET01 Position: 15
C:\Canberra\NDA2k\Data\00000190_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P015_S015

Acquisition Start: 12/17/2008 9:13:18 AM
Elapsed Live Time: 119.13 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.901 +/- 0.0134
SE-75	264.66	0.922 +/- 0.0133
SE-75	279.54	0.923 +/- 0.0145
SE-75	400.66	0.932 +/- 0.0174

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/17/2008 9:15:20 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
558.39		11	4	0.95	1117.77	2.128E-004	39.68	
2235.92		11980	10	0.99	4469.96	2.744E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 2.213E-002 +/-	1.8%	< 2.107E-005	< 1.020E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 1.450E-002 +/-	2.1%	< 1.381E-005	< 2.291E-012
Al-26	< 2.844E-002 +/-	15.4%	< 2.709E-005	< 1.496E-006
K-40	< 3.387E-001 +/-	5.0%	< 3.226E-004	< 5.284E-002
Co-57	< 4.571E-002 +/-	3.5%	< 4.353E-005	< 5.348E-012
Co-60	< 1.537E-002 +/-	2.6%	< 1.463E-005	< 1.348E-011
Se-75	< 3.615E-002 +/-	1.8%	< 3.443E-005	< 2.487E-012
Kr-85	< 5.493E+000 +/-	3.0%	< 5.231E-003	< 1.384E-008
Sr-90	< 1.489E-002 +/-	1.9%	< 1.418E-005	< 1.080E-010
Sb-125	< 3.890E-002 +/-	2.1%	< 3.704E-005	< 3.742E-011
Ba-133	< 2.208E-002 +/-	1.7%	< 2.103E-005	< 8.723E-011
Cs-134	< 1.444E-002 +/-	1.8%	< 1.375E-005	< 1.101E-011
Cs-137	< 1.489E-002 +/-	1.9%	< 1.418E-005	< 1.698E-010
Eu-152	< 2.908E-002 +/-	3.8%	< 2.769E-005	< 1.634E-010
Eu-154	< 4.140E-002 +/-	2.2%	< 3.943E-005	< 1.552E-010
Ho-166m	< 2.930E-002 +/-	2.2%	< 2.791E-005	< 1.629E-008
Bi-207	< 1.800E-002 +/-	2.0%	< 1.715E-005	< 3.277E-010
Pb-210	< 1.053E+003 +/-	57.4%	< 1.003E+000	< 1.369E-005
Ra-226	< 3.398E-002 +/-	2.2%	< 3.236E-005	< 3.398E-008
Ac-227	< 1.121E-001 +/-	8.3%	< 1.068E-004	< 1.536E-009
Th-230	< 6.228E+001 +/-	8.6%	< 5.931E-002	< 3.052E-003
Pa-231	< 5.173E-001 +/-	11.2%	< 4.927E-004	< 1.081E-005
Th-232	< 3.811E-002 +/-	2.1%	< 3.630E-005	< 3.434E-001
U-232	< 3.811E-002 +/-	2.1%	< 3.630E-005	< 1.765E-009
U-233	< 4.568E+002 +/-	2.8%	< 4.351E-001	< 4.660E-002
Pa-234	< 6.433E-002 +/-	12.2%	< 6.127E-005	
Pa-234m	< 1.388E+002 +/-	2.1%	< 1.322E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 3.672E-002 +/-	2.5%	< 3.497E-005	< 1.678E-002
Np-237	< 4.933E-002 +/-	1.9%	< 4.699E-005	< 6.907E-005
Pu-238	< 2.997E+003 +/-	2.7%	< 2.854E+000	< 1.732E-004
U-238	< 1.728E+000 +/-	2.2%	< 1.646E-003	< 5.080E+000
Pu-239	< 5.354E+002 +/-	3.2%	< 5.099E-001	< 8.513E-003
Pu-239B	< 1.372E+003 +/-	5.6%	< 1.307E+000	< 2.181E-002
U-239	< 1.557E+004 +/-	70.2%	< 1.483E+001	
Pu-240	< 9.218E+002 +/-	4.9%	< 8.779E-001	< 4.010E-003
Am-241	< 4.916E+000 +/-	25.4%	< 4.682E-003	< 1.416E-006
Am-241B	< 3.464E+002 +/-	5.1%	< 3.299E-001	< 9.975E-005
Pu-241	< 1.492E+004 +/-	2.9%	< 1.421E+001	< 1.436E-004
Pu-241B	< 4.227E+003 +/-	2.4%	< 4.025E+000	< 4.066E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.420E-001 +/-	1.8%	< 1.353E-004	< 7.030E-007
Cm-243	< 1.465E-001 +/-	3.3%	< 1.395E-004	< 2.812E-009
Cm-244	< 1.716E+004 +/-	14.1%	< 1.634E+001	< 2.094E-004
Cm-245	< 2.686E-001 +/-	7.7%	< 2.558E-004	< 1.544E-006
Cm-247	< 1.871E-002 +/-	8.5%	< 1.782E-005	< 2.002E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.126E-002 +/-	3.5%	< 2.025E-005	< 5.145E-009
Cf-251	< 1.389E-001 +/-	5.6%	< 1.323E-004	< 8.682E-008

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 16 Results

Segment: 16 Detector: DET01 Position: 16
C:\Canberra\NDA2k\Data\00000190_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P016_S016

Acquisition Start: 12/17/2008 9:17:30 AM
Elapsed Live Time: 119.12 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.847 +/- 0.0127
SE-75	264.66	0.883 +/- 0.0128
SE-75	279.54	0.891 +/- 0.0140
SE-75	400.66	0.879 +/- 0.0166

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/17/2008 9:19:33 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
2235.91		11980	3	0.98	4469.94	2.480E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 4.746E-002 +/-	2.3%	< 4.520E-005	< 2.188E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.371E-002 +/-	2.3%	< 2.258E-005	< 3.746E-012
Al-26	< 4.042E-002 +/-	18.0%	< 3.849E-005	< 2.126E-006
K-40	< 4.337E-001 +/-	5.6%	< 4.131E-004	< 6.766E-002
Co-57	< 7.766E-002 +/-	4.4%	< 7.396E-005	< 9.087E-012
Co-60	< 3.838E-002 +/-	2.0%	< 3.656E-005	< 3.366E-011
Se-75	< 5.867E-002 +/-	2.8%	< 5.588E-005	< 4.037E-012
Kr-85	< 6.025E+000 +/-	3.6%	< 5.738E-003	< 1.518E-008
Sr-90	< 2.117E-002 +/-	2.6%	< 2.016E-005	< 1.535E-010
Sb-125	< 7.041E-002 +/-	2.7%	< 6.706E-005	< 6.773E-011
Ba-133	< 3.385E-002 +/-	2.3%	< 3.224E-005	< 1.337E-010
Cs-134	< 1.705E-002 +/-	2.3%	< 1.624E-005	< 1.301E-011
Cs-137	< 2.117E-002 +/-	2.6%	< 2.016E-005	< 2.413E-010
Eu-152	< 1.019E-001 +/-	2.9%	< 9.702E-005	< 5.725E-010
Eu-154	< 6.769E-002 +/-	2.4%	< 6.447E-005	< 2.538E-010
Ho-166m	< 4.162E-002 +/-	2.6%	< 3.964E-005	< 2.314E-008
Bi-207	< 2.114E-002 +/-	2.8%	< 2.014E-005	< 3.848E-010
Pb-210	< 2.342E+000 +/-	46.8%	< 2.230E-003	< 3.044E-008
Ra-226	< 5.703E-002 +/-	2.5%	< 5.431E-005	< 5.703E-008
Ac-227	< 2.287E-001 +/-	8.7%	< 2.178E-004	< 3.133E-009
Th-230	< 2.275E+001 +/-	15.5%	< 2.167E-002	< 1.115E-003
Pa-231	< 8.868E-001 +/-	11.4%	< 8.446E-004	< 1.853E-005
Th-232	< 6.459E-002 +/-	2.9%	< 6.151E-005	< 5.820E-001
U-232	< 6.459E-002 +/-	2.9%	< 6.151E-005	< 2.991E-009
U-233	< 7.168E+002 +/-	2.5%	< 6.827E-001	< 7.312E-002
Pa-234	< 4.714E-002 +/-	12.1%	< 4.490E-005	
Pa-234m	< 1.668E+002 +/-	2.4%	< 1.589E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 7.904E-002 +/-	3.6%	< 7.527E-005	< 3.612E-002
Np-237	< 5.945E-002 +/-	2.6%	< 5.662E-005	< 8.323E-005
Pu-238	< 6.051E+003 +/-	3.6%	< 5.763E+000	< 3.497E-004
U-238	< 2.745E+000 +/-	2.4%	< 2.614E-003	< 8.070E+000
Pu-239	< 1.052E+003 +/-	4.1%	< 1.002E+000	< 1.673E-002
Pu-239B	< 1.489E+003 +/-	7.0%	< 1.418E+000	< 2.368E-002
U-239	< 1.314E+001 +/-	58.6%	< 1.252E-002	
Pu-240	< 1.126E+003 +/-	6.2%	< 1.072E+000	< 4.898E-003
Am-241	< 2.484E-001 +/-	19.9%	< 2.366E-004	< 7.155E-008
Am-241B	< 4.238E+002 +/-	6.4%	< 4.036E-001	< 1.221E-004
Pu-241	< 3.205E+004 +/-	3.7%	< 3.052E+001	< 3.083E-004
Pu-241B	< 8.725E+003 +/-	3.6%	< 8.309E+000	< 8.393E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.448E-001 +/-	10.7%	< 1.379E-004	< 7.167E-007
Cm-243	< 2.160E-001 +/-	3.9%	< 2.057E-004	< 4.147E-009
Cm-244	< 1.951E+004 +/-	14.2%	< 1.858E+001	< 2.380E-004
Cm-245	< 5.159E-001 +/-	8.1%	< 4.913E-004	< 2.966E-006
Cm-247	< 2.303E-002 +/-	8.7%	< 2.193E-005	< 2.464E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 3.068E-002 +/-	3.8%	< 2.922E-005	< 7.425E-009
Cf-251	< 2.792E-001 +/-	6.2%	< 2.659E-004	< 1.745E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Summed Segment Spectra Results
Category: Segmented

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Elapsed Live Time: 97.55 sec Elapsed Real Time: 120.00 sec

********** Peak Analysis Results **********

*** Spectrum Validity Test warnings ***
Reference peak/MCA Test failed: reference peak data does not match MCA time
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 12/17/2008 9:19:41 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	49.35		6856	37974	2.16	100.55	7.504E-007	4.47	
	59.33	Y	346365	42328	1.22	120.51	6.495E-006	0.37	
	66.95	Y	514	23418	0.90	135.72	1.949E-005	44.33	
	74.73		1034	37571	0.81	151.28	4.396E-005	28.94	
M	94.54	Y	66067	94973	1.53	190.86	1.513E-004	0.88	351.56
m	98.56	Y	245869	124156	1.54	198.89	1.772E-004	0.70	
m	100.73	Y	37505	108600	1.55	203.23	1.913E-004	1.14	
m	103.21	Y	175342	101666	1.55	208.18	2.073E-004	0.69	
M	110.95	Y	64119	58865	1.35	223.65	2.555E-004	1.06	441.32
m	114.45	Y	51811	65869	1.36	230.64	2.759E-004	1.11	
m	116.48	Y	49800	61868	1.36	234.70	2.873E-004	1.07	
m	120.44	Y	12551	55767	1.37	242.62	3.084E-004	1.75	
m	122.71	Y	6243	53492	1.38	247.16	3.198E-004	2.88	
m	125.13	Y	24479	51062	1.38	252.00	3.313E-004	1.26	
m	129.17	Y	117411	44798	1.39	260.06	3.491E-004	0.96	
M	144.07	Y	7501	33566	1.16	289.83	3.992E-004	4.79	2.68
m	146.18	Y	6520	33544	1.16	294.06	4.045E-004	5.07	
m	148.43	Y	16382	37240	1.16	298.56	4.096E-004	4.09	
m	152.61	Y	1028	33472	1.17	306.91	4.178E-004	13.40	
M	160.87	Y	6811	38197	1.56	323.41	4.299E-004	1.83	21.68
m	164.49	Y	6641	52741	1.56	330.65	4.335E-004	1.98	
	171.36	Y	5441	32718	1.23	344.37	4.380E-004	5.41	
	178.98	Y	2667	30938	1.15	359.61	4.400E-004	10.52	
	189.20	Y	3936	32294	1.24	380.03	4.384E-004	7.54	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	195.51	Y	4420	31007	1.24	392.64	4.357E-004	6.61	
M	203.43	Y	26018	23037	1.18	408.45	4.306E-004	1.26	5.07
m	207.89	Y	87589	20182	1.18	417.37	4.273E-004	1.03	
M	221.49		676	14653	0.89	444.56	4.148E-004	34.89	0.44
m	225.36		920	17942	0.89	452.28	4.109E-004	30.90	
M	237.69		634	12502	1.19	476.93	3.978E-004	14.44	1.26
m	243.17	Y	1250	17135	1.19	487.87	3.918E-004	8.16	
	255.25	Y	4174	15304	1.32	512.02	3.783E-004	5.04	
M	263.82	Y	1360	11161	1.17	529.13	3.688E-004	11.17	0.92
m	267.39	Y	3133	12219	1.18	536.27	3.650E-004	9.46	
	297.34	Y	2031	9484	1.13	596.11	3.336E-004	7.66	
M	311.80	Y	4906	10531	1.59	625.01	3.196E-004	2.08	9.20
m	316.13	Y	809	14248	1.60	633.66	3.156E-004	9.38	
m	320.89	Y	3322	12679	1.60	643.18	3.113E-004	2.78	
m	323.33	Y	3805	12325	1.60	648.05	3.091E-004	2.48	
M	332.66	Y	30017	8700	1.31	666.69	3.011E-004	0.68	16.78
m	335.61	Y	12112	8082	1.31	672.59	2.986E-004	1.06	
m	341.36	Y	3289	8406	1.31	684.09	2.939E-004	2.51	
m	344.92	Y	26606	7931	1.32	691.19	2.911E-004	0.71	
M	361.83	Y	601	6162	1.34	724.99	2.784E-004	10.78	17.41
m	366.93	Y	3973	5959	1.35	735.17	2.747E-004	2.76	
m	368.47	Y	7310	5248	1.35	738.26	2.737E-004	1.80	
m	370.89	Y	1000	5693	1.35	743.08	2.720E-004	6.60	
m	374.97	Y	71218	4330	1.35	751.25	2.692E-004	0.79	
m	380.06	Y	13640	3486	1.36	761.42	2.659E-004	1.19	
m	382.68	Y	11920	3233	1.36	766.65	2.641E-004	1.24	
M	392.83	Y	24472	3072	1.50	786.93	2.577E-004	1.60	2.13
m	399.23	Y	388	3018	1.51	799.73	2.539E-004	12.05	
M	413.64	Y	63351	1999	1.36	828.52	2.458E-004	0.74	10.45
m	419.13	Y	296	1695	1.37	839.49	2.428E-004	12.68	
m	422.49	Y	4834	1847	1.37	846.21	2.410E-004	1.77	
m	426.55	Y	1077	1803	1.37	854.32	2.389E-004	4.51	
M	445.75	Y	333	1209	1.33	892.68	2.297E-004	9.36	2.60
m	451.41	Y	7645	1165	1.33	903.99	2.271E-004	1.23	
	481.37	Y	171	741	1.30	963.86	2.147E-004	27.43	
	558.53		153	415	1.21	1118.05	1.898E-004	24.09	
	597.46	Y	143	281	1.75	1195.85	1.801E-004	20.78	
	618.99	Y	785	306	1.39	1238.86	1.754E-004	5.35	
M	633.12	Y	131	206	1.52	1267.11	1.725E-004	12.48	3.53
m	640.09	Y	282	206	1.52	1281.04	1.712E-004	7.88	
m	645.90	Y	498	225	1.53	1292.64	1.700E-004	6.23	
m	652.58	Y	517	206	1.53	1305.99	1.688E-004	6.07	
m	658.75	Y	310	206	1.54	1318.33	1.676E-004	7.92	
m	662.40	Y	3323	225	1.54	1325.62	1.670E-004	3.92	
	688.67	Y	254	235	1.62	1378.12	1.625E-004	12.36	
M	703.89	Y	80	130	1.04	1408.51	1.600E-004	17.09	1.30
m	709.35		43	111	1.04	1419.44	1.592E-004	25.45	
M	717.71	Y	82	103	1.60	1436.14	1.579E-004	15.74	1.32
m	722.01	Y	1697	147	1.60	1444.72	1.573E-004	2.52	
	756.15	Y	208	98	1.48	1512.96	1.524E-004	11.09	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	769.33	Y	439	118	1.74	1539.28	1.507E-004	6.61	
	1173.56	Y	53	61	1.29	2347.07	1.132E-004	28.10	
	1332.99	Y	88	33	1.71	2665.64	1.019E-004	15.69	
	1461.17	Y	68	34	1.99	2921.79	9.339E-005	20.02	
M	2224.97		37	4	1.00	4448.08	5.039E-005	17.19	4.02
m	2235.87		191681	102	1.00	4469.87	4.988E-005	0.42	
	2334.33		19	28	0.57	4666.61	4.551E-005	48.18	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.07 +/- 0.00

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	@ 1.000E+020 +/-	100.0%	@ 5.952E+015	
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 1.051E-001 +/-	1.2%	< 6.256E-006	< 1.661E-011
	Al-26	< 1.347E-001 +/-	8.2%	< 8.015E-006	< 7.083E-006
	K-40	1.532E+000 +/-	20.3%	9.118E-005	2.390E-001
X	Co-57				
	Co-60	1.574E-001 +/-	14.3%	9.370E-006	1.380E-010
	Se-75	< 1.740E+000 +/-	1.1%	< 1.036E-004	< 1.197E-010
	Kr-85	< 4.396E+001 +/-	2.5%	< 2.616E-003	< 1.108E-007
	Sr-90	< 1.427E-001 +/-	1.0%	< 8.495E-006	< 1.035E-009
	Sb-125	< 8.853E-001 +/-	1.5%	< 5.270E-005	< 8.517E-010
	Ba-133	< 5.800E-001 +/-	1.0%	< 3.452E-005	< 2.291E-009
	Cs-134	< 1.054E-001 +/-	1.0%	< 6.275E-006	< 8.043E-011
X	Cs-137				
	Eu-152	< 4.191E-001 +/-	2.1%	< 2.495E-005	< 2.356E-009
	Eu-154	< 2.777E-001 +/-	1.5%	< 1.653E-005	< 1.041E-009
	Ho-166m	< 1.308E-001 +/-	1.7%	< 7.785E-006	< 7.272E-008
	Bi-207	< 1.176E-001 +/-	1.2%	< 6.998E-006	< 2.140E-009
	Pb-210	< 1.625E+004 +/-	12.2%	< 9.671E-001	< 2.112E-004
	Ra-226	< 3.010E-001 +/-	1.5%	< 1.792E-005	< 3.010E-007
	Ac-227	< 2.456E+000 +/-	8.2%	< 1.462E-004	< 3.365E-008
	Th-230	1.564E+003 +/-	45.1%	9.311E-002	7.665E-002
	Pa-231	< 1.375E+001 +/-	11.2%	< 8.183E-004	< 2.873E-004
	Th-232	< 3.691E-001 +/-	1.9%	< 2.197E-005	< 3.325E+000
	U-232	< 4.826E-001 +/-	1.3%	< 2.873E-005	< 2.235E-008
	U-233	< 9.226E+003 +/-	1.6%	< 5.492E-001	< 9.411E-001
	Pa-234	< 5.005E-001 +/-	12.1%	< 2.979E-005	
	Pa-234m	< 6.377E+002 +/-	1.5%	< 3.796E-002	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 7.843E-001 +/-	1.8%	< 4.668E-005	< 3.584E-001

	Np-237		6.497E+000	+/-	3.2%		3.867E-004	9.096E-003
	Pu-238		5.932E+004	+/-	13.5%		3.531E+000	3.429E-003
	U-238	<	1.021E+001	+/-	1.6%	<	6.077E-004	< 3.002E+001
	Pu-239		6.926E+006	+/-	1.8%		4.123E+002	1.101E+002
	Pu-239B		3.679E+006	+/-	0.6%		2.190E+002	5.849E+001
	U-239	@	1.000E+020	+/-	100.0%	@	5.952E+015	
X	Pu-240							
	Am-241		1.238E+006	+/-	2.8%		7.367E+001	3.565E-001
	Am-241B		5.674E+005	+/-	2.1%		3.377E+001	1.634E-001
	Pu-241		4.955E+006	+/-	4.5%		2.950E+002	4.767E-002
	Pu-241B		8.548E+006	+/-	1.6%		5.088E+002	8.223E-002
	Pu-242	<	0.000E+000	+/-	0.0%	<	0.000E+000	< 0.000E+000
	Am-243	<	2.690E+000	+/-	1.2%	<	1.601E-004	< 1.332E-005
	Cm-243	<	2.802E+000	+/-	3.0%	<	1.668E-004	< 5.381E-008
	Cm-244	<	1.257E+005	+/-	14.1%	<	7.483E+000	< 1.534E-003
	Cm-245	<	4.870E+000	+/-	7.5%	<	2.899E-004	< 2.800E-005
	Cm-247	<	3.626E-001	+/-	8.4%	<	2.158E-005	< 3.880E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 4.216E-001 +/-	3.2%	< 2.510E-005	< 1.020E-007
Cf-251	< 2.758E+000 +/-	5.3%	< 1.642E-004	< 1.724E-006

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.10E+002 +- 1.97E+000	3.24E+001 +- 2.96E-001

Beta: 2.24E+002 +- 4.15E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.91E+001 +- 3.90E-001
203.55	3.80E+001 +- 6.60E-001
375.05	6.10E+001 +- 8.50E-001
413.71	6.30E+001 +- 9.31E-001

Sum of Segment NID Results
Category: Segmented

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********** Peak Analysis Results **********

No peak analysis results available for reporting purposes

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 4.746E-002 +/-	2.3%	< 2.825E-006	< 2.188E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 4.033E-002 +/-	2.0%	< 2.401E-006	< 6.372E-012
Al-26	< 6.041E-002 +/-	19.8%	< 3.596E-006	< 3.178E-006
K-40	< 4.813E-001 +/-	5.3%	< 2.865E-005	< 7.508E-002
Co-57	< 1.997E+000 +/-	2.9%	< 1.188E-004	< 2.336E-010
Co-60	< 4.281E-002 +/-	1.9%	< 2.548E-006	< 3.754E-011
Se-75	< 2.958E-001 +/-	1.9%	< 1.761E-005	< 2.035E-011
Kr-85	< 1.665E+001 +/-	3.1%	< 9.909E-004	< 4.195E-008
Sr-90	2.139E-001 +/-	45.2%	1.273E-005	1.550E-009
Sb-125	< 3.344E-001 +/-	2.3%	< 1.991E-005	< 3.217E-010
Ba-133	< 2.227E-001 +/-	1.7%	< 1.326E-005	< 8.798E-010
Cs-134	< 3.344E-002 +/-	1.8%	< 1.991E-006	< 2.552E-011
Cs-137	2.139E-001 +/-	45.2%	1.273E-005	2.438E-009
Eu-152	< 1.519E-001 +/-	3.6%	< 9.043E-006	< 8.538E-010
Eu-154	< 1.152E-001 +/-	2.2%	< 6.855E-006	< 4.319E-010
Ho-166m	< 4.368E-002 +/-	2.4%	< 2.600E-006	< 2.428E-008
Bi-207	< 4.300E-002 +/-	1.8%	< 2.559E-006	< 7.825E-010
Pb-210	< 3.413E+004 +/-	309.7%	< 2.031E+000	< 4.436E-004
Ra-226	< 1.171E-001 +/-	2.3%	< 6.971E-006	< 1.171E-007
Ac-227	< 1.037E+000 +/-	8.3%	< 6.175E-005	< 1.421E-008
Th-230	9.846E+001 +/-	92.2%	5.861E-003	4.825E-003
Pa-231	< 5.284E+000 +/-	11.2%	< 3.145E-004	< 1.104E-004
Th-232	< 1.201E-001 +/-	2.4%	< 7.147E-006	< 1.082E+000
U-232	2.943E-001 +/-	25.9%	1.752E-005	1.363E-008
U-233	< 4.008E+003 +/-	2.7%	< 2.385E-001	< 4.088E-001
Pa-234	< 1.832E-001 +/-	12.2%	< 1.091E-005	
Pa-234m	< 2.142E+002 +/-	2.1%	< 1.275E-002	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 3.430E-001 +/-	2.5%	< 2.042E-005	< 1.568E-001
Np-237	7.589E+000 +/-	4.7%	4.517E-004	1.062E-002
Pu-238	2.545E+004 +/-	24.6%	1.515E+000	1.471E-003
U-238	< 4.725E+000 +/-	2.1%	< 2.812E-004	< 1.389E+001
Pu-239	6.731E+006 +/-	1.5%	4.007E+002	1.070E+002
Pu-239B	4.966E+006 +/-	0.7%	2.956E+002	7.894E+001
U-239	< 2.714E+005 +/-	368.5%	< 1.615E+001	
Pu-240	4.102E+005 +/-	20.2%	2.442E+001	1.784E+000

[redacted]-241	1.428E+006	+/-	2.5%	8.497E+001	4.111E-001
Am-241B	1.191E+006	+/-	2.5%	7.091E+001	3.431E-001
Pu-241	9.809E+006	+/-	4.5%	5.839E+002	9.437E-002
Pu-241B	1.448E+007	+/-	1.6%	8.618E+002	1.393E-001
Pu-242	< 0.000E+000	+/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 9.456E-001	+/-	2.2%	< 5.629E-005	< 4.681E-006
Cm-243	< 1.105E+000	+/-	3.3%	< 6.578E-005	< 2.122E-008
Cm-244	< 4.330E+004	+/-	14.2%	< 2.577E+000	< 5.282E-004
Cm-245	< 2.099E+000	+/-	7.7%	< 1.249E-004	< 1.207E-005
Cm-247	< 1.568E-001	+/-	8.5%	< 9.336E-006	< 1.678E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.751E-001 +/-	3.5%	< 1.042E-005	< 4.236E-008
Cf-251	< 1.202E+000 +/-	5.6%	< 7.154E-005	< 7.512E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model:

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.07E+002 +- 1.62E+000	0.00E+000 +- 0.00E+000

Beta: 0.00E+000 +- 0.00E+000 Alpha: 0.00E+000 +- 0.00E+000
Number of energy lines used in correction: 0

Energy	Mass (g)

********** Radioassay Data Sheet **********

Engine Version: TMU Gamma 1.5

Assay Instrument: SGS with Trans. Location:LLNL
Analysis Method: LLNL SGS Operating Procedure Software Version: NDA 2000 V.4.0
Item ID: LL85001754 Analysis Date: 12/17/2008

192

NID identified fiducial nuclide Pu-239
Source of isotopics: MEASURED

Net Weight	45400.0 g		
Pu mass	6.71E+000	+- 1.25E+000	g
TRU Alpha Activity	1.90E+000	+- 2.88E-001	Ci
TRU Activity Concentration	4.19E+004	+- 6.34E+003	nCi/g
Pu-239 Equivalent Activity	1.80E+000	+- 2.64E-001	Ci
Pu-239 FGE	6.31E+000	+- 1.25E+000	g
Decay heat	6.20E-002	+- 9.49E-003	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.14E-007
U233	<LLD	<LLD	0.00E+000	2.92E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.45E-007
NP237	1.25E-003	8.94E-007	2.07E-007	3.49E-007
PU238	7.58E-002	1.31E+000	2.75E-001	1.18E-002
U238	<LLD	<LLD	0.00E+000	1.01E-005
PU239	6.27E+000	3.95E-001	7.84E-002	3.56E-003
PU240	3.49E-001	8.02E-002	2.01E-002	7.23E-004
AM241	3.31E-002	1.15E-001	2.41E-002	3.69E-005
PU241	6.97E-003	7.24E-001	1.99E-001	6.53E-003
PU242	2.78E-003	1.10E-005	2.89E-006	0.00E+000

Errors quoted at 1.000 sigma

Operator:_____ Date:_____

Expert Analysis ITR: Robert J Haschitz Date: 2-3-09

NDA 2000 Assay Report

Item Information

Item ID:	LL85001754	Count Sequence Number:	192
Operator:	RHWM2\RHWM		
Assay Start:	12/17/2008 9:53:09 AM		
Description 1:	LL85001754		
Description 2:			
Location:	LLNL		
Comment:			
Matrix Type:	Lucite		
Container Type:	55 Gal Galv 23.8		
Weight:	Gross: 69.2 kg	Net:	45.4 kg
Container:	Volume: 208.0 l	Full:	100.0 %
Density:	0.220 kg /l		

System Configuration

Counter:	SGS with Trans.		
Segments:	Number: 16	Offset:	0
Scanning Platform:	Start: 934 mm	Delta:	-51 mm
Count Type:	Assay - 55 Gal Galv 23.8		
Collimator/Geometry Setting:	Default - 0		
Transmission Mode:	Two Pass		
Transmission Correction Type:	Standard		
Transmission Source:	Se-75 Trans. - 0		

Errors quoted at 1.000 sigma

Segment 1 Results

Segment: 1 Detector: DET01 Position: 1
C:\Canberra\NDA2k\Data\00000192_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P001_S001

Acquisition Start: 12/17/2008 9:55:11 AM
Elapsed Live Time: 119.33 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.403 +/- 0.0063
SE-75	264.66	0.509 +/- 0.0075
SE-75	279.54	0.523 +/- 0.0085
SE-75	400.66	0.570 +/- 0.0114

Errors quoted at 1.000 sigma

Peak Analysis Results

Peak Analysis Performed on: 2/2/2009 4:42:42 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

One or more peaks were dropped due to multiplet de-convolution.
Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 2 Results

Segment: 2 Detector: DET01 Position: 2
C:\Canberra\NDA2k\Data\00000192_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P002_S002

Acquisition Start: 12/17/2008 9:59:23 AM
Elapsed Live Time: 119.30 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.080 +/- 0.0017
SE-75	264.66	0.148 +/- 0.0025
SE-75	279.54	0.149 +/- 0.0031
SE-75	400.66	0.193 +/- 0.0053

Errors quoted at 1.000 sigma

Peak Analysis Results

Peak Analysis Performed on: 2/2/2009 4:42:45 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.56	Y	27	68	0.74	120.96	6.345E-005	46.96	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 3 Results

Segment: 3 Detector: DET01 Position: 3
C:\Canberra\NDA2k\Data\00000192_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P003_S003

Acquisition Start: 12/17/2008 10:03:34 AM
Elapsed Live Time: 119.32 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio	
SE-75	136.00	0.115	+/- 0.0022
SE-75	264.66	0.192	+/- 0.0031
SE-75	279.54	0.201	+/- 0.0039
SE-75	400.66	0.247	+/- 0.0062

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 4:42:48 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
99.87		125	119	1.14	201.51	1.649E-004	15.63	
152.71	Y	31	99	0.64	307.11	2.475E-004	52.03	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 4 Results

Segment: 4 Detector: DET01 Position: 4
C:\Canberra\NDA2k\Data\00000192_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P004_S004

Acquisition Start: 12/17/2008 10:07:46 AM
Elapsed Live Time: 119.31 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.169 +/- 0.0030
SE-75	264.66	0.247 +/- 0.0039
SE-75	279.54	0.257 +/- 0.0047
SE-75	400.66	0.302 +/- 0.0071

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 4:42:52 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
99.83		201	130	1.08	201.43	1.233E-004	10.94	
152.49	Y	38	87	0.93	306.66	3.107E-004	39.69	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 5 Results

Segment: 5 Detector: DET01 Position: 5
C:\Canberra\NDA2k\Data\00000192_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P005_S005

Acquisition Start: 12/17/2008 10:11:57 AM
Elapsed Live Time: 119.29 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.160 +/- 0.0029
SE-75	264.66	0.236 +/- 0.0037
SE-75	279.54	0.241 +/- 0.0045
SE-75	400.66	0.292 +/- 0.0070

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 4:42:55 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.44	Y	197	97	1.05	120.72	7.071E-005	10.48	
99.83		406	155	1.19	201.44	1.800E-004	6.78	
152.75	Y	83	109	1.23	307.19	2.634E-004	21.52	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 6 Results

Segment: 6 Detector: DET01 Position: 6
C:\Canberra\NDA2k\Data\00000192_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P006_S006

Acquisition Start: 12/17/2008 10:16:09 AM
Elapsed Live Time: 119.23 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.216 +/- 0.0037
SE-75	264.66	0.292 +/- 0.0045
SE-75	279.54	0.307 +/- 0.0054
SE-75	400.66	0.358 +/- 0.0080

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 4:42:58 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.30	Y	242	160	1.29	120.45	1.866E-006	10.10	
99.81		587	216	1.15	201.39	1.269E-004	5.62	
152.78	Y	145	118	1.40	307.24	3.351E-004	13.83	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 7 Results

Segment: 7 Detector: DET01 Position: 7
C:\Canberra\NDA2k\Data\00000192_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P007_S007

Acquisition Start: 12/17/2008 10:20:20 AM
Elapsed Live Time: 119.08 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Ga1 Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.211 +/- 0.0036
SE-75	264.66	0.296 +/- 0.0046
SE-75	279.54	0.301 +/- 0.0054
SE-75	400.66	0.355 +/- 0.0080

Errors quoted at 1.000 sigma

Peak Analysis Results

Peak Analysis Performed on: 2/2/2009 4:43:01 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.37	Y	1233	297	1.22	120.58	3.502E-006	3.66	
99.85		795	586	1.37	201.48	1.292E-004	5.85	
129.37	Y	133	227	1.34	260.46	2.671E-004	18.82	
152.71	Y	276	195	1.28	307.10	3.348E-004	9.78	
207.95	Y	31	117	1.09	417.50	3.601E-004	54.75	
332.77		72	88	1.43	666.91	2.540E-004	25.56	
345.06		42	44	1.06	691.48	2.453E-004	28.44	
374.97	Y	118	38	1.07	751.24	2.263E-004	12.26	
382.95		51	29	0.50	767.20	2.218E-004	22.39	
413.73	Y	123	23	1.17	828.70	2.061E-004	11.51	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	2.82E-001 +- 4.46E-002	4.78E-002 +- 4.98E-003

Beta: 2.98E+002 +- 4.06E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 3

Energy	Mass (g)
129.30	2.83E-002 +- 5.42E-003
375.05	1.20E-001 +- 1.49E-002
413.71	1.46E-001 +- 1.71E-002

Segment 8 Results

Segment: 8 Detector: DET01 Position: 8
C:\Canberra\NDA2k\Data\00000192_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P008_S008

Acquisition Start: 12/17/2008 10:24:31 AM
Elapsed Live Time: 118.76 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.179 +/- 0.0032
SE-75	264.66	0.268 +/- 0.0042
SE-75	279.54	0.279 +/- 0.0051
SE-75	400.66	0.319 +/- 0.0074

Errors quoted at 1.000 sigma

Peak Analysis Results

Peak Analysis Performed on: 2/2/2009 4:43:04 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.41		4015	547	1.10	120.67	6.898E-005	2.09	
M	99.68	Y	2400	694	1.37	201.13	1.900E-004	6.61	5.95
m	103.18	Y	641	796	1.37	208.13	1.984E-004	6.54	
M	125.22		150	245	0.97	252.17	2.405E-004	11.25	1.52
m	129.30	Y	326	282	0.97	260.32	2.463E-004	6.96	
	152.72	Y	524	324	0.99	307.12	2.734E-004	6.88	
M	203.44	Y	104	158	1.15	408.48	2.919E-004	12.29	2.28
m	208.01	Y	178	198	1.16	417.61	2.916E-004	8.86	
	311.79	Y	76	65	0.85	624.99	2.556E-004	19.14	
	332.77	Y	77	113	1.21	666.92	2.455E-004	23.35	
	345.08		111	72	1.22	691.51	2.396E-004	15.02	
M	375.04	Y	399	46	1.29	751.39	2.258E-004	10.23	0.94
m	380.05		75	39	1.29	761.39	2.236E-004	15.71	
m	382.77		73	37	1.30	766.84	2.224E-004	15.71	

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
393.06		131	31	1.85	787.39	2.179E-004	11.01	
413.77	Y	344	26	1.32	828.78	2.097E-004	6.13	
422.49		27	10	0.96	846.20	2.064E-004	25.37	
451.85		37	12	1.17	904.87	1.960E-004	21.60	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	8.95E-001 +- 7.78E-002	1.02E-001 +- 5.54E-003

Beta: 3.17E+002 +- 1.77E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	7.50E-002 +- 5.85E-003
203.55	2.24E-001 +- 2.80E-002
375.05	4.07E-001 +- 4.23E-002
413.71	4.01E-001 +- 2.58E-002

Segment 9 Results

Segment: 9 Detector: DET01 Position: 9
C:\Canberra\NDA2k\Data\00000192_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P009_S009

Acquisition Start: 12/17/2008 10:28:42 AM
Elapsed Live Time: 118.51 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.021 +/- 0.0009
SE-75	264.66	0.051 +/- 0.0012
SE-75	279.54	0.054 +/- 0.0018
SE-75	400.66	0.076 +/- 0.0032

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 4:43:07 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.38	Y	7359	868	1.16	120.59	5.062E-006	1.70	
M	99.36	Y	2189	968	1.68	200.50	8.053E-005	7.31	7.54
m	103.13	Y	1106	913	1.69	208.03	8.900E-005	7.14	
M	125.29	Y	243	337	0.98	252.30	1.301E-004	8.54	2.74
m	129.28	Y	424	335	0.98	260.27	1.356E-004	5.93	
	152.63	Y	416	393	1.11	306.94	1.624E-004	8.81	
M	203.53	Y	118	249	1.27	408.65	1.799E-004	12.13	0.92
m	207.97	Y	217	264	1.27	417.52	1.798E-004	7.95	
	311.82	Y	97	116	0.88	625.06	1.592E-004	19.41	
M	332.75	Y	181	101	1.35	666.88	1.546E-004	7.94	1.15
m	335.66	Y	133	98	1.36	672.69	1.539E-004	9.22	
	344.99		172	81	1.33	691.33	1.519E-004	10.94	
M	375.02	Y	472	90	1.23	751.35	1.456E-004	4.92	1.28
m	380.26		82	61	1.23	761.82	1.445E-004	12.28	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	382.60		76	62	1.23	766.49	1.441E-004	12.77	
	392.96		156	51	1.59	787.19	1.420E-004	10.97	
	413.76	Y	463	28	1.33	828.76	1.385E-004	5.22	
	422.53		23	27	0.74	846.28	1.371E-004	39.66	
	451.62		59	17	1.57	904.41	1.330E-004	16.68	
	662.38	Y	62	8	1.30	1325.57	1.104E-004	14.48	
	721.95	Y	25	2	1.33	1444.62	1.055E-004	21.98	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.61E+000 +- 1.09E-001	2.72E-001 +- 1.13E-002

Beta: 2.85E+002 +- 1.54E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.77E-001 +- 1.26E-002
203.55	4.13E-001 +- 5.20E-002
375.05	7.47E-001 +- 4.00E-002
413.71	8.17E-001 +- 4.67E-002

Segment 10 Results

Segment: 10 Detector: DET01 Position: 10
C:\Canberra\NDA2k\Data\00000192_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P010_S010

Acquisition Start: 12/17/2008 10:32:54 AM
Elapsed Live Time: 118.39 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio	
SE-75	136.00	0.008	+/- 0.0007
SE-75	264.66	0.032	+/- 0.0009
SE-75	279.54	0.035	+/- 0.0015
SE-75	400.66	0.051	+/- 0.0026

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 4:43:11 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.40	Y	10242	1062	1.15	120.64	1.901E-006	1.54	
M	99.00	Y	1909	1193	1.61	199.78	5.293E-005	6.66	6.48
m	103.10	Y	1607	865	1.62	207.96	6.184E-005	6.40	
	110.95		124	598	1.32	223.66	7.924E-005	30.30	
M	122.90	Y	101	463	0.99	247.54	1.047E-004	16.41	1.40
m	125.20	Y	378	479	1.00	252.13	1.092E-004	6.36	
m	129.21	Y	450	404	1.01	260.14	1.168E-004	5.66	
M	203.63	Y	137	252	0.98	408.85	1.948E-004	16.60	1.51
m	208.00	Y	329	310	0.98	417.60	1.947E-004	14.03	
M	332.75	Y	212	126	1.21	666.87	1.467E-004	7.50	1.44
m	335.59	Y	146	119	1.21	672.55	1.456E-004	9.19	
	344.97		173	107	1.29	691.30	1.417E-004	11.76	
M	368.54	Y	106	89	1.26	738.40	1.327E-004	10.77	2.02
m	375.03	Y	593	74	1.26	751.36	1.304E-004	4.27	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	380.12		121	60	1.27	761.53	1.286E-004	9.64	
m	382.68		113	56	1.27	766.66	1.278E-004	9.90	
	392.86		229	42	1.34	786.99	1.244E-004	8.11	
	413.74	Y	563	23	1.53	828.73	1.185E-004	4.65	
	422.64		35	33	1.02	846.51	1.162E-004	30.55	
	451.39		70	17	0.73	903.95	1.098E-004	14.91	
	662.56	Y	69	6	1.07	1325.92	8.435E-005	13.50	
	722.08	Y	37	5	1.56	1444.86	8.108E-005	19.01	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	2.43E+000 +- 1.55E-001	3.39E-001 +- 1.40E-002

Beta: 3.14E+002 +- 1.52E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	2.19E-001 +- 1.53E-002
203.55	4.42E-001 +- 7.48E-002
375.05	1.05E+000 +- 5.03E-002
413.71	1.16E+000 +- 6.09E-002

Segment 11 Results

Segment: 11 Detector: DET01 Position: 11
C:\Canberra\NDA2k\Data\00000192_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P011_S011

Acquisition Start: 12/17/2008 10:37:05 AM
Elapsed Live Time: 118.61 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio	
SE-75	136.00	0.049	+/- 0.0013
SE-75	264.66	0.109	+/- 0.0020
SE-75	279.54	0.114	+/- 0.0027
SE-75	400.66	0.152	+/- 0.0046

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 4:43:14 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.41	Y	7588	787	1.12	120.66	2.979E-006	1.67	
M	94.65		273	785	1.70	191.08	7.331E-005	11.76	3.76
m	99.04	Y	1887	1046	1.71	199.86	8.765E-005	6.98	
m	103.05	Y	1304	834	1.71	207.87	1.009E-004	6.89	
M	125.33	Y	263	378	0.98	252.38	1.680E-004	16.08	1.43
m	129.34	Y	428	376	0.99	260.41	1.778E-004	14.44	
	152.73	Y	78	355	0.94	307.15	2.248E-004	37.61	
M	203.55	Y	91	179	1.09	408.69	2.530E-004	14.90	0.69
m	207.99	Y	211	231	1.10	417.58	2.523E-004	8.58	
	311.72	Y	84	77	1.27	624.85	2.046E-004	19.02	
M	332.74	Y	151	82	1.34	666.85	1.949E-004	8.56	1.76
m	335.48	Y	109	78	1.34	672.33	1.936E-004	10.21	
	345.01		160	86	1.39	691.38	1.895E-004	11.75	
M	375.03	Y	473	43	1.43	751.37	1.776E-004	10.15	0.75

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	380.05		69	37	1.43	761.39	1.758E-004	16.38	
m	382.64		63	36	1.43	766.58	1.748E-004	16.74	
	392.97		182	32	1.16	787.21	1.712E-004	9.00	
	413.77	Y	470	25	1.29	828.78	1.647E-004	5.14	
	451.38		35	25	0.91	903.93	1.549E-004	28.34	
	662.57	Y	40	9	1.61	1325.94	1.229E-004	19.89	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.55E+000 +- 1.67E-001	2.70E-001 +- 1.54E-002

Beta: 3.42E+002 +- 3.13E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.37E-001 +- 2.02E-002
203.55	2.26E-001 +- 3.40E-002
375.05	6.14E-001 +- 6.34E-002
413.71	6.97E-001 +- 3.90E-002

Segment 12 Results

Segment: 12 Detector: DET01 Position: 12
C:\Canberra\NDA2k\Data\00000192_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P012_S012

Acquisition Start: 12/17/2008 10:41:17 AM
Elapsed Live Time: 119.08 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.226 +/- 0.0038
SE-75	264.66	0.314 +/- 0.0048
SE-75	279.54	0.322 +/- 0.0057
SE-75	400.66	0.364 +/- 0.0081

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 4:43:17 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.40	Y	2516	398	1.20	120.64	1.722E-004	2.54	
M	99.56	Y	630	384	1.42	200.89	2.184E-004	13.36	3.46
m	102.92	Y	296	540	1.42	207.61	2.242E-004	11.95	
	129.27	Y	55	191	0.99	260.26	2.644E-004	38.65	
	152.81	Y	104	183	1.25	307.30	2.909E-004	21.48	
	345.15		24	32	1.11	691.66	2.614E-004	41.07	
	375.12	Y	86	33	1.35	751.54	2.476E-004	14.95	
	413.68	Y	73	11	1.39	828.61	2.315E-004	14.80	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.94E-001 +- 4.69E-002	2.75E-002 +- 4.05E-003

Beta: 3.58E+002 +- 7.56E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 3

Energy	Mass (g)
129.30	1.19E-002 +- 4.62E-003
375.05	8.03E-002 +- 1.21E-002
413.71	7.69E-002 +- 1.15E-002

Segment 13 Results

Segment: 13 Detector: DET01 Position: 13
C:\Canberra\NDA2k\Data\00000192_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P013_S013

Acquisition Start: 12/17/2008 10:45:28 AM
Elapsed Live Time: 119.24 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.227 +/- 0.0038
SE-75	264.66	0.307 +/- 0.0047
SE-75	279.54	0.319 +/- 0.0056
SE-75	400.66	0.365 +/- 0.0081

Errors quoted at 1.000 sigma

Peak Analysis Results

Peak Analysis Performed on: 2/2/2009 4:43:20 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.28	Y	363	185	1.32	120.41	1.445E-004	7.71	
99.86		555	229	1.28	201.50	2.233E-004	5.93	
152.67	Y	184	114	1.32	307.03	2.901E-004	11.49	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 14 Results

Segment: 14 Detector: DET01 Position: 14
C:\Canberra\NDA2k\Data\00000192_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P014_S014

Acquisition Start: 12/17/2008 10:49:40 AM
Elapsed Live Time: 119.30 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.195 +/- 0.0034
SE-75	264.66	0.273 +/- 0.0042
SE-75	279.54	0.277 +/- 0.0050
SE-75	400.66	0.319 +/- 0.0074

Errors quoted at 1.000 sigma

Peak Analysis Results

Peak Analysis Performed on: 2/2/2009 4:43:24 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.39	Y	165	120	1.18	120.61	4.448E-006	12.98	
99.84		439	188	1.20	201.45	1.344E-004	6.70	
152.76	Y	106	98	0.90	307.21	3.198E-004	16.81	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 15 Results

Segment: 15 Detector: DET01 Position: 15
C:\Canberra\NDA2k\Data\00000192_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P015_S015

Acquisition Start: 12/17/2008 10:53:52 AM
Elapsed Live Time: 119.29 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio	
SE-75	136.00	0.335	+/- 0.0053
SE-75	264.66	0.426	+/- 0.0064
SE-75	279.54	0.433	+/- 0.0072
SE-75	400.66	0.481	+/- 0.0100

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 4:43:27 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
99.89		347	120	1.12	201.55	1.563E-004	7.09	
152.56	Y	87	87	1.53	306.81	3.706E-004	18.88	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 16 Results

Segment: 16 Detector: DET01 Position: 16
C:\Canberra\NDA2k\Data\00000192_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P016_S016

Acquisition Start: 12/17/2008 10:58:03 AM
Elapsed Live Time: 119.31 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.372 +/- 0.0058
SE-75	264.66	0.459 +/- 0.0068
SE-75	279.54	0.464 +/- 0.0077
SE-75	400.66	0.512 +/- 0.0105

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 4:43:31 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.46	Y	57	57	0.91	120.76	9.646E-005	23.93	
99.87		263	93	1.23	201.51	1.422E-004	8.26	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Sum of Segment NID Results
Category: Segmented

C:\Canberra\NDA2k\Data\00000192_CNTR0001_DCAT0002_PROC00AK.CNF

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model:

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	6.96E+000 +- 2.72E-001	0.00E+000 +- 0.00E+000

Beta: 0.00E+000 +- 0.00E+000 Alpha: 0.00E+000 +- 0.00E+000
Number of energy lines used in correction: 0

Energy	Mass (g)

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 2.475E-002 +/-	1.9%	< 5.452E-007	< 1.141E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 3.246E-002 +/-	1.9%	< 7.149E-007	< 5.128E-012
	Al-26	< 4.177E-002 +/-	16.0%	< 9.199E-007	< 2.197E-006
	K-40	< 4.294E-001 +/-	5.3%	< 9.457E-006	< 6.698E-002
	Co-57	< 2.620E-001 +/-	4.7%	< 5.772E-006	< 3.066E-011
	Co-60	< 5.222E-002 +/-	2.8%	< 1.150E-006	< 4.580E-011
	Se-75	< 5.162E-002 +/-	2.3%	< 1.137E-006	< 3.551E-012
	Kr-85	< 6.766E+000 +/-	3.2%	< 1.490E-004	< 1.705E-008
	Sr-90	8.597E-002 +/-	20.0%	1.894E-006	6.233E-010
	Sb-125	< 7.982E-002 +/-	2.2%	< 1.758E-006	< 7.679E-011
	Ba-133	< 4.154E-002 +/-	1.8%	< 9.149E-007	< 1.641E-010
	Cs-134	< 2.502E-002 +/-	2.1%	< 5.510E-007	< 1.909E-011
?	Cs-137	8.597E-002 +/-	20.0%	1.894E-006	9.801E-010
	Eu-152	< 9.335E-002 +/-	2.0%	< 2.056E-006	< 5.246E-010
	Eu-154	< 9.268E-002 +/-	2.1%	< 2.041E-006	< 3.475E-010
	Ho-166m	< 3.049E-002 +/-	2.3%	< 6.716E-007	< 1.695E-008
	Bi-207	< 2.056E-002 +/-	2.1%	< 4.530E-007	< 3.743E-010
	Pb-210	< 4.094E+003 +/-	309.7%	< 9.018E-002	< 5.322E-005
	Ra-226	< 5.372E-002 +/-	2.5%	< 1.183E-006	< 5.372E-008
	Ac-227	< 1.844E-001 +/-	8.5%	< 4.062E-006	< 2.527E-009
	Th-230	< 7.669E+001 +/-	9.1%	< 1.689E-003	< 3.758E-003
	Pa-231	< 1.028E+000 +/-	11.3%	< 2.264E-005	< 2.148E-005

Th-232	< 6.401E-002	+/-	2.0%	< 1.410E-006	< 5.768E-001
U-232	< 6.853E-002	+/-	2.5%	< 1.510E-006	< 3.173E-009
U-233	< 6.303E+002	+/-	4.1%	< 1.388E-002	< 6.429E-002
Pa-234	< 1.560E-001	+/-	11.6%	< 3.435E-006	
Pa-234m	< 2.174E+002	+/-	2.3%	< 4.789E-003	
U-234	< 0.000E+000	+/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 5.767E-002	+/-	4.1%	< 1.270E-006	< 2.635E-002
Np-237	7.664E-001	+/-	11.7%	1.688E-005	1.073E-003
Pu-238	1.971E+005	+/-	4.6%	4.341E+000	1.139E-002
U-238	< 3.869E+000	+/-	2.4%	< 8.522E-005	< 1.138E+001
Pu-239	4.380E+005	+/-	3.9%	9.647E+000	6.964E+000
Pu-239B	< 4.306E+003	+/-	18.8%	< 9.485E-002	< 6.846E-002
U-239	< 2.735E+004	+/-	368.5%	< 6.023E-001	
Pu-240	< 7.275E+003	+/-	14.3%	< 1.602E-001	< 3.165E-002
Am-241	1.036E+005	+/-	7.8%	2.282E+000	2.984E-002
Am-241B	6.672E+004	+/-	5.5%	1.470E+000	1.922E-002
Pu-241	< 1.980E+004	+/-	4.3%	< 4.362E-001	< 1.905E-004
Pu-241B	1.921E+005	+/-	6.4%	4.232E+000	1.848E-003
Pu-242	< 0.000E+000	+/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.943E-001	+/-	2.2%	< 4.279E-006	< 9.616E-007
Cm-243	< 2.004E-001	+/-	3.6%	< 4.413E-006	< 3.847E-009
Cm-244	< 2.552E+004	+/-	14.2%	< 5.621E-001	< 3.113E-004
Cm-245	< 3.447E-001	+/-	8.4%	< 7.592E-006	< 1.982E-006
Cm-247	< 3.026E-002	+/-	8.5%	< 6.666E-007	< 3.238E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 3.382E-002 +/-	3.5%	< 7.449E-007	< 8.184E-009
Cf-251	< 1.889E-001 +/-	6.6%	< 4.161E-006	< 1.181E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

Summed Segment Spectra Results
Category: Segmented

C:\Canberra\NDA2k\Data\00000192_CNTR0001_DCAT0002_PROC00A1.CNF

Elapsed Live Time: 118.92 sec Elapsed Real Time: 120.00 sec

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 8.087E-002 +/-	1.0%	< 1.781E-006	< 3.728E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 1.014E-001 +/-	1.1%	< 2.233E-006	< 1.602E-011
	Al-26	< 1.054E-001 +/-	7.0%	< 2.321E-006	< 5.543E-006
	K-40	1.152E+000 +/-	23.2%	2.538E-005	1.798E-001
X	Co-57				
	Co-60	1.942E-001 +/-	13.0%	4.277E-006	1.703E-010
	Se-75	< 2.138E-001 +/-	1.0%	< 4.709E-006	< 1.471E-011
	Kr-85	< 2.854E+001 +/-	2.4%	< 6.287E-004	< 7.193E-008
	Sr-90	< 1.139E-001 +/-	0.8%	< 2.509E-006	< 8.258E-010
	Sb-125	< 2.892E-001 +/-	1.3%	< 6.370E-006	< 2.782E-010
	Ba-133	< 1.740E-001 +/-	0.8%	< 3.833E-006	< 6.873E-010
	Cs-134	< 7.958E-002 +/-	0.8%	< 1.753E-006	< 6.072E-011
X	Cs-137				
	Eu-152	< 3.592E-001 +/-	1.9%	< 7.912E-006	< 2.019E-009
	Eu-154	< 2.895E-001 +/-	1.4%	< 6.377E-006	< 1.086E-009
	Ho-166m	< 1.225E-001 +/-	1.6%	< 2.697E-006	< 6.809E-008
	Bi-207	< 8.481E-002 +/-	0.8%	< 1.868E-006	< 1.544E-009
	Pb-210	< 3.880E+003 +/-	11.4%	< 8.546E-002	< 5.044E-005
	Ra-226	< 1.998E-001 +/-	1.3%	< 4.401E-006	< 1.998E-007
	Ac-227	< 7.594E-001 +/-	8.2%	< 1.673E-005	< 1.040E-008
	Th-230	< 3.872E+002 +/-	8.2%	< 8.529E-003	< 1.897E-002
	Pa-231	< 4.184E+000 +/-	11.1%	< 9.216E-005	< 8.745E-005
	Th-232	< 3.088E-001 +/-	1.1%	< 6.802E-006	< 2.782E+000
	U-232	< 3.088E-001 +/-	1.1%	< 6.802E-006	< 1.430E-008
	U-233	< 2.917E+003 +/-	1.4%	< 6.424E-002	< 2.975E-001
	Pa-234	< 4.691E-001 +/-	12.1%	< 1.033E-005	
	Pa-234m	< 6.204E+002 +/-	1.5%	< 1.366E-002	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 2.454E-001 +/-	1.7%	< 5.405E-006	< 1.121E-001
	Np-237	8.944E-001 +/-	12.8%	1.970E-005	1.252E-003
	Pu-238	1.874E+005 +/-	4.4%	4.127E+000	1.083E-002
	U-238	< 1.011E+001 +/-	1.6%	< 2.226E-004	< 2.971E+001
	Pu-239	3.945E+005 +/-	4.6%	8.690E+000	6.273E+000
	Pu-239B	< 1.973E+004 +/-	3.2%	< 4.346E-001	< 3.137E-001
	U-239	< 9.331E+003 +/-	15.1%	< 2.055E-001	
X	Pu-240				
	Am-241	1.150E+005 +/-	8.2%	2.532E+000	3.311E-002
	Am-241B	4.932E+004 +/-	3.0%	1.086E+000	1.420E-002
	Pu-241	< 9.857E+004 +/-	1.7%	< 2.171E+000	< 9.483E-004
	Pu-241B	1.577E+005 +/-	4.3%	3.473E+000	1.517E-003

Pu-242	< 0.000E+000	+/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 8.505E-001	+/-	1.1%	< 1.873E-005	< 4.210E-006
Cm-243	< 8.772E-001	+/-	3.0%	< 1.932E-005	< 1.684E-008
Cm-244	< 9.796E+004	+/-	13.9%	< 2.158E+000	< 1.195E-003
Cm-245	< 1.543E+000	+/-	7.4%	< 3.398E-005	< 8.871E-006
Cm-247	< 1.278E-001	+/-	8.4%	< 2.816E-006	< 1.368E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.354E-001 +/-	3.1%	< 2.983E-006	< 3.278E-008
Cf-251	< 8.436E-001 +/-	5.3%	< 1.858E-005	< 5.273E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	6.27E+000 +- 2.90E-001	1.31E+000 +- 2.74E-002

Beta: 3.41E+002 +- 1.46E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	4.99E-001 +- 3.84E-002
203.55	1.04E+000 +- 7.16E-002
375.05	2.52E+000 +- 5.94E-002
413.71	2.80E+000 +- 7.62E-002

Automated Independent Technical Review

Counter ID: SGS with Trans. Count Type: Assay - 55 Gal Galv 23.8
Container ID: LL85001754 Assay Date: 12/17/2008
Waste Matrix Code:
Sequence Number: 192

Data Combiner Analysis:
Input combination 2: only Isotopics input data are valid.

Source of results is undefined.

DISPOSITION:

MGA Analysis:
Expert review is recommended; the following validity tests failed:
Normalized fit value (1.23) is greater than allowed (1.15).
Fit value (3.32) is greater than allowed (2.50).

Note: The measured and declared isotopics are inconsistent.

OK

DISPOSITION:

Gamma Analysis:
Analysis Status: No errors.
Ratio of Pu-239 414 to 129 keV line activities is above the limit of 2.50

OK

DISPOSITION:

Segment Data Review:
Segment: 1 OK
Segment: 2 OK
Segment: 3 OK
Segment: 4 OK
Segment: 5 OK
Segment: 6 OK
Segment: 7 OK
Segment: 8 OK
Segment: 9 OK
Segment: 10 OK
Segment: 11 OK
Segment: 12 OK
Segment: 13 OK
Segment: 14 OK
Segment: 15 OK
Segment: 16 OK

DISPOSITION:

Miscellaneous:

DISPOSITION:

Expert Review by: Robert J. Hamlett Date: 2-3-09

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Assay Instrument:	SGS with Trans.	Location:	LLNL
Analysis Method:	CCP-TP-019 Rev 4	Software Version:	NDA 2000 V.4.0
Item ID:	LL85001754	Analysis Date:	12/17/2008

Used Multi Curve.
RH 2-3-09

********** MGA Results **********

MGA version: MGA V9.63H CI

Measurement date = 12/17/08 Declared date = 12/17/08
Low energy spectrum sensitivity = 30.0% Total counts = 3.864E+005
High energy spectrum sensitivity : 10.0%

Pu g/cm2 = 0.9514 Cd g/cm2 = 1.8122 FWHM at 122 keV = 537 eV
QFIT = 3.32 FWHM at 208 keV = 665 eV
NQFIT = 1.23

Isotope	Relative to Pu-239	%* Err	% Err	Relative to Pu-241	%* Err	Isotope analysis at Meas. date % weight	%Err	Decl. date % weight	%Err
Pu-238	0.012082	7.1	3.0	10.8813	32.0	1.12998	6.68	1.22508	7.24
Pu-239	1.000000	0.0	6.5	900.6229	33.7	93.52655	0.88	93.36803	0.88
Pu-240	0.055579	16.2	14.7	50.0561	41.4	5.19815	15.21	5.19352	15.20
Pu-241	0.001110	19.4	17.3	1.0000	0.0	0.10385	18.95	0.17196	31.39
Pu-242	(New alg.)			0.3994(17)		0.04148 (17)		0.04140 (16)	
Am-241	0.011816	7.2	2.6	10.6416	31.9	1.10509	6.75	1.12310	6.86

Pu-240 effective (meas. date) = 8.115 +/- 11.74%
Am-241 separated about 53.760 +/- 1.211 years ago
Am/Pu-241 weight ratio =10.64160 +/- 17.51%

Messages:

Lead x-rays detected.
Calculations in MGAABS didn't converge: results may be suspect.
Efficiency curvature boundary reached.
Pu-241/Pu-239 efficiency changed in MGACAL by 69%.
Poor quality-of-fit: results may be suspect.

Notes : * = Error in ratio
Errors quoted at 1.000 sigma
MGA sigma defaulted to 1

Reviewed by: Robert J. Hartlett Jr Date: 2-3-09

********** Radioassay Data Sheet **********

Engine Version: TMU Gamma 1.5

Assay Instrument: SGS with Trans. Location:LLNL
Analysis Method: LLNL SGS Operating Procedure Software Version: NDA 2000 V.4.0
Item ID: LL85234380 Analysis Date: 12/17/2008

193

NID identified fiducial nuclide Pu-239
Source of isotopics: MEASURED

Net Weight	42800.0 g		
Pu mass	1.72E+000	+-	3.07E-001 g
TRU Alpha Activity	2.73E-001	+-	3.59E-002 Ci
TRU Activity Concentration	6.38E+003	+-	8.39E+002 nCi/g
Pu-239 Equivalent Activity	2.66E-001	+-	3.39E-002 Ci
Pu-239 FGE	1.58E+000	+-	3.06E-001 g
Decay heat	8.78E-003	+-	1.16E-003 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.10E-007
U233	<LLD	<LLD	0.00E+000	2.10E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.70E-007
NP237	2.11E-003	1.51E-006	3.52E-007	2.07E-007
PU238	7.94E-003	1.37E-001	2.93E-002	4.00E-003
U238	<LLD	<LLD	0.00E+000	9.31E-006
PU239	1.56E+000	9.84E-002	1.92E-002	2.87E-003
PU240	1.46E-001	3.36E-002	7.61E-003	9.80E-004
AM241	1.17E-003	3.72E-003	7.27E-004	3.60E-005
PU241	2.83E-003	2.94E-001	1.35E-001	8.57E-003
PU242	9.15E-004	3.63E-006	9.65E-007	0.00E+000

Errors quoted at 1.000 sigma

Operator:_____ Date:_____

Expert Analysis
ETR: Robert J Hartlett Date: 2-3-09

NDA 2000 Assay Report

Item Information

Item ID:	LL85234380		Count Sequence Number:	193	
Operator:	RHWM2\RHWM				
Assay Start:	12/17/2008 11:17:38 AM				
Description 1:	LL85234380				
Description 2:					
Location:	LLNL				
Comment:					
Matrix Type:	Lucite				
Container Type:	55 Gal Galv 23.8				
Weight:	Gross:	66.6 kg	Net:	42.8 kg	
Container:	Volume:	208.0 l	Full:	100.0 %	
Density:		0.210 kg /l			

System Configuration

Counter:	SGS with Trans.		
Segments:	Number: 16	Offset:	0
Scanning Platform:	Start: 934 mm	Delta:	-51 mm
Count Type:	Assay - 55 Gal Galv 23.8		
Collimator/Geometry Setting:	Default - 0		
Transmission Mode:	Two Pass		
Transmission Correction Type:	Standard		
Transmission Source:	Se-75 Trans. - 0		

Errors quoted at 1.000 sigma

Segment 1 Results

Segment: 1 Detector: DET01 Position: 1
C:\Canberra\NDA2k\Data\00000193_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P001_S001

Acquisition Start: 12/17/2008 11:19:41 AM
Elapsed Live Time: 119.31 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.518 +/- 0.0079
SE-75	264.66	0.606 +/- 0.0088
SE-75	279.54	0.615 +/- 0.0098
SE-75	400.66	0.658 +/- 0.0127

Errors quoted at 1.000 sigma

Peak Analysis Results

Peak Analysis Performed on: 2/2/2009 4:46:46 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.40	Y	683	143	1.15	120.65	7.360E-006	4.71	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 2 Results

Segment: 2 Detector: DET01 Position: 2
C:\Canberra\NDA2k\Data\00000193_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P002_S002

Acquisition Start: 12/17/2008 11:23:53 AM
Elapsed Live Time: 119.29 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.404 +/- 0.0063
SE-75	264.66	0.500 +/- 0.0074
SE-75	279.54	0.514 +/- 0.0084
SE-75	400.66	0.552 +/- 0.0111

Errors quoted at 1.000 sigma

Peak Analysis Results

Peak Analysis Performed on: 2/2/2009 4:46:49 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.45	Y	1318	215	1.16	120.74	1.165E-004	3.37	
98.60		113	132	1.17	198.97	2.552E-004	17.24	
129.17	Y	82	81	0.72	260.06	3.156E-004	19.15	
413.72	Y	11	9	0.99	828.67	2.473E-004	61.89	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 16:
Beta is too small (negative or less than lower limit)

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	- correction not done -	1.42E-002 +- 2.64E-003

Beta: -5.57E+001 +- 1.22E+002 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in attempted correction: 2

Energy	Mass (g)

Segment 3 Results

Segment: 3 Detector: DET01 Position: 3
C:\Canberra\NDA2k\Data\00000193_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P003_S003

Acquisition Start: 12/17/2008 11:28:04 AM
Elapsed Live Time: 119.15 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.375 +/- 0.0059
SE-75	264.66	0.474 +/- 0.0070
SE-75	279.54	0.488 +/- 0.0080
SE-75	400.66	0.526 +/- 0.0107

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 4:46:52 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.42	Y	3395	448	1.10	120.68	9.156E-005	2.22	
M	94.86		86	138	1.33	191.50	2.302E-004	19.04	1.48
m	98.68	Y	288	194	1.33	199.13	2.432E-004	14.07	
m	103.12	Y	216	191	1.34	208.02	2.575E-004	14.55	
	129.34	Y	162	105	1.27	260.41	3.226E-004	12.09	
	375.00	Y	71	9	1.11	751.30	2.769E-004	13.72	
	413.77	Y	35	9	1.40	828.77	2.546E-004	24.40	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	5.74E-002 +- 1.13E-002	3.34E-002 +- 3.04E-003

Beta: 8.96E+001 +- 3.42E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 3

Energy	Mass (g)
129.30	2.85E-002 +- 3.58E-003
375.05	5.88E-002 +- 8.14E-003
413.71	3.34E-002 +- 8.17E-003

Segment 4 Results

Segment: 4 Detector: DET01 Position: 4
C:\Canberra\NDA2k\Data\00000193_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P004_S004

Acquisition Start: 12/17/2008 11:32:16 AM
Elapsed Live Time: 119.09 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.268 +/- 0.0044
SE-75	264.66	0.367 +/- 0.0055
SE-75	279.54	0.376 +/- 0.0064
SE-75	400.66	0.420 +/- 0.0091

Errors quoted at 1.000 sigma

Peak Analysis Results

Peak Analysis Performed on: 2/2/2009 4:46:55 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.42	Y	6290	697	1.13	120.68	4.516E-006	1.77	
M	98.83	Y	339	248	1.19	199.44	1.390E-004	15.55	1.09
m	102.99	Y	250	255	1.19	207.75	1.616E-004	15.94	
	129.33	Y	122	129	1.00	260.38	2.894E-004	16.35	
	228.20	Y	48	45	1.31	457.95	3.754E-004	25.66	
	277.56	Y	46	29	1.03	556.58	3.292E-004	23.58	
	311.96	Y	17	26	1.09	625.33	2.964E-004	50.00	
	374.94	Y	65	13	1.31	751.18	2.471E-004	14.96	
	413.79	Y	48	9	1.54	828.82	2.239E-004	19.57	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	8.71E-002 +- 1.72E-002	3.22E-002 +- 3.43E-003

Beta: 1.67E+002 +- 3.95E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 3

Energy	Mass (g)
129.30	2.38E-002 +- 3.97E-003
375.05	6.04E-002 +- 9.11E-003
413.71	5.27E-002 +- 1.04E-002

Segment 5 Results

Segment: 5 Detector: DET01 Position: 5
C:\Canberra\NDA2k\Data\00000193_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P005_S005

Acquisition Start: 12/17/2008 11:36:27 AM
Elapsed Live Time: 119.11 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.232 +/- 0.0039
SE-75	264.66	0.324 +/- 0.0050
SE-75	279.54	0.337 +/- 0.0059
SE-75	400.66	0.406 +/- 0.0088

Errors quoted at 1.000 sigma

Peak Analysis Results

Peak Analysis Performed on: 2/2/2009 4:46:59 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.41	Y	5932	702	1.13	120.66	8.129E-005	1.81	
M	98.87	Y	253	168	1.07	199.51	2.014E-004	15.42	0.92
m	102.97	Y	249	213	1.08	207.71	2.120E-004	14.52	
	125.28	Y	75	105	0.96	252.30	2.588E-004	22.75	
	311.99	Y	21	37	0.78	625.39	2.791E-004	51.11	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 6 Results

Segment: 6 Detector: DET01 Position: 6
C:\Canberra\NDA2k\Data\00000193_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P006_S006

Acquisition Start: 12/17/2008 11:40:38 AM
Elapsed Live Time: 119.20 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio	
SE-75	136.00	0.212	+/- 0.0036
SE-75	264.66	0.305	+/- 0.0047
SE-75	279.54	0.320	+/- 0.0056
SE-75	400.66	0.386	+/- 0.0085

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 4:47:02 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.40	Y	3354	446	1.11	120.65	1.893E-006	2.23	
M	98.97	Y	171	127	1.20	199.72	1.216E-004	19.90	1.20
m	102.93	Y	154	186	1.21	207.62	1.426E-004	18.07	
	125.24	Y	75	85	0.91	252.22	2.514E-004	21.70	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 7 Results

Segment: 7 Detector: DET01 Position: 7
C:\Canberra\NDA2k\Data\00000193_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P007_S007

Acquisition Start: 12/17/2008 11:44:50 AM
Elapsed Live Time: 119.30 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.217 +/- 0.0037
SE-75	264.66	0.324 +/- 0.0049
SE-75	279.54	0.333 +/- 0.0058
SE-75	400.66	0.401 +/- 0.0087

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 4:47:05 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.42	Y	1261	201	1.09	120.68	3.570E-006	3.43	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 8 Results

Segment: 8 Detector: DET01 Position: 8
C:\Canberra\NDA2k\Data\00000193_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P008_S008

Acquisition Start: 12/17/2008 11:49:02 AM
Elapsed Live Time: 119.30 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.309 +/- 0.0050
SE-75	264.66	0.408 +/- 0.0061
SE-75	279.54	0.426 +/- 0.0071
SE-75	400.66	0.477 +/- 0.0099

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 4:47:08 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.40	Y	397	138	1.12	120.63	8.558E-005	6.69	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 9 Results

Segment: 9 Detector: DET01 Position: 9
C:\Canberra\NDA2k\Data\00000193_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P009_S009

Acquisition Start: 12/17/2008 11:53:13 AM
Elapsed Live Time: 119.30 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.137 +/- 0.0026
SE-75	264.66	0.221 +/- 0.0035
SE-75	279.54	0.228 +/- 0.0043
SE-75	400.66	0.286 +/- 0.0069

Errors quoted at 1.000 sigma

Peak Analysis Results

Peak Analysis Performed on: 2/2/2009 4:47:11 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.46	Y	331	144	1.03	120.76	8.896E-006	7.79	
99.85		243	182	1.25	201.47	1.362E-004	10.43	
228.21		57	27	1.21	457.97	2.741E-004	19.23	
277.73		59	19	0.98	556.93	2.551E-004	17.00	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 10 Results

Segment: 10 Detector: DET01 Position: 10
C:\Canberra\NDA2k\Data\00000193_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P010_S010

Acquisition Start: 12/17/2008 11:57:25 AM
Elapsed Live Time: 119.22 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.164 +/- 0.0029
SE-75	264.66	0.244 +/- 0.0038
SE-75	279.54	0.256 +/- 0.0047
SE-75	400.66	0.294 +/- 0.0070

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 4:47:14 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.39	Y	641	177	1.14	120.62	4.332E-006	5.09	
M	99.72	Y	504	180	1.13	201.21	1.176E-004	14.35	0.79
m	103.64	Y	133	229	1.14	209.05	1.356E-004	15.12	
m	106.04		150	227	1.15	213.84	1.467E-004	13.94	
	152.91	Y	84	101	1.20	307.51	3.184E-004	20.78	
	209.74	Y	75	54	0.96	421.07	3.562E-004	18.82	
	228.00	Y	181	49	1.21	457.56	3.454E-004	9.51	
	277.56	Y	192	34	1.31	556.59	3.031E-004	8.69	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 11 Results

Segment: 11 Detector: DET01 Position: 11
C:\Canberra\NDA2k\Data\00000193_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P011_S011

Acquisition Start: 12/17/2008 12:01:36 PM
Elapsed Live Time: 119.18 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.125 +/- 0.0024
SE-75	264.66	0.200 +/- 0.0032
SE-75	279.54	0.208 +/- 0.0040
SE-75	400.66	0.246 +/- 0.0062

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 4:47:18 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.45	Y	963	197	1.05	120.75	4.031E-006	4.00	
	74.68	Y	107	114	1.12	151.17	2.695E-005	17.16	
M	99.79	Y	560	214	1.01	201.36	1.182E-004	14.87	1.88
m	103.73	Y	246	394	1.02	209.23	1.350E-004	10.57	
m	106.23		261	351	1.02	214.22	1.457E-004	10.33	
	117.45	Y	95	156	1.02	236.65	1.908E-004	21.25	
	129.13	Y	79	114	1.37	259.99	2.302E-004	21.64	
	152.72	Y	103	116	1.06	307.12	2.854E-004	18.27	
	209.82	Y	108	61	1.42	421.23	3.083E-004	14.33	
	228.18	Y	250	46	1.36	457.92	2.992E-004	7.60	
	277.51	Y	299	39	1.22	556.49	2.667E-004	6.67	
	311.98	Y	40	26	1.15	625.38	2.434E-004	25.10	
	334.27	Y	49	22	1.40	669.90	2.299E-004	20.67	
	375.31	Y	33	12	0.57	751.93	2.082E-004	23.41	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	5.04E-002 +- 1.90E-002	2.29E-002 +- 3.83E-003

Beta: 1.22E+002 +- 6.33E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 2

Energy	Mass (g)
129.30	1.96E-002 +- 4.28E-003
375.05	3.64E-002 +- 8.55E-003

Segment 12 Results

Segment: 12 Detector: DET01 Position: 12
C:\Canberra\NDA2k\Data\00000193_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P012_S012

Acquisition Start: 12/17/2008 12:05:48 PM
Elapsed Live Time: 119.15 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio	
SE-75	136.00	0.149	+/- 0.0028
SE-75	264.66	0.258	+/- 0.0040
SE-75	279.54	0.283	+/- 0.0051
SE-75	400.66	0.327	+/- 0.0075

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 4:47:21 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.42	Y	1541	258	1.11	120.68	1.471E-004	3.15	
	74.68	Y	81	131	0.81	151.19	1.540E-004	22.93	
M	99.27	Y	434	254	1.52	200.31	1.894E-004	15.32	3.93
m	103.52	Y	272	339	1.53	208.81	1.959E-004	15.23	
m	106.11		210	284	1.54	213.97	1.998E-004	14.86	
M	125.31	Y	29	117	1.17	252.35	2.264E-004	13.65	2.83
m	129.30	Y	209	154	1.18	260.31	2.312E-004	3.55	
	228.14	Y	202	49	1.50	457.83	2.870E-004	8.84	
	277.53	Y	222	40	1.27	556.53	2.801E-004	8.09	
	311.70	Y	37	45	1.24	624.81	2.661E-004	32.90	
	375.10	Y	61	18	1.06	751.51	2.382E-004	16.69	
	413.59	Y	42	17	1.44	828.42	2.231E-004	23.84	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	5.35E-002 +- 1.12E-002	5.15E-002 +- 2.48E-003

Beta: 5.28E+000 +- 2.86E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 3

Energy	Mass (g)
129.30	5.13E-002 +- 2.63E-003
375.05	5.87E-002 +- 9.89E-003
413.71	4.57E-002 +- 1.10E-002

Segment 13 Results

Segment: 13 Detector: DET01 Position: 13
C:\Canberra\NDA2k\Data\00000193_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P013_S013

Acquisition Start: 12/17/2008 12:09:59 PM
Elapsed Live Time: 119.15 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.118 +/- 0.0023
SE-75	264.66	0.233 +/- 0.0037
SE-75	279.54	0.245 +/- 0.0046
SE-75	400.66	0.322 +/- 0.0074

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 4:47:24 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.43	Y	2258	313	1.11	120.69	1.137E-004	2.62	
M	98.72	Y	294	310	1.32	199.22	1.782E-004	8.28	1.83
m	103.21	Y	181	335	1.33	208.20	1.851E-004	9.16	
m	106.03		50	267	1.33	213.82	1.892E-004	19.25	
	129.30	Y	310	180	1.25	260.33	2.175E-004	8.61	
	207.93	Y	59	94	0.99	417.45	2.698E-004	27.49	
	277.49	Y	74	48	1.29	556.45	2.603E-004	18.57	
	311.81	Y	99	30	1.11	625.03	2.497E-004	12.93	
	332.51	Y	67	31	1.02	666.39	2.425E-004	17.87	
	344.91		31	31	0.97	691.18	2.381E-004	31.06	
	374.95	Y	122	25	1.56	751.20	2.271E-004	11.09	
	392.83		47	13	1.06	786.93	2.207E-004	18.47	
	413.72	Y	122	14	1.09	828.68	2.130E-004	10.83	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.68E-001 +- 2.11E-002	9.81E-002 +- 6.05E-003

Beta: 9.44E+001 +- 2.34E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 3

Energy	Mass (g)
129.30	8.09E-002 +- 7.45E-003
375.05	1.24E-001 +- 1.40E-002
413.71	1.40E-001 +- 1.55E-002

Segment 14 Results

Segment: 14 Detector: DET01 Position: 14
C:\Canberra\NDA2k\Data\00000193_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P014_S014

Acquisition Start: 12/17/2008 12:14:11 PM
Elapsed Live Time: 119.13 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.048 +/- 0.0012
SE-75	264.66	0.080 +/- 0.0016
SE-75	279.54	0.085 +/- 0.0022
SE-75	400.66	0.120 +/- 0.0040

Errors quoted at 1.000 sigma

Peak Analysis Results

Peak Analysis Performed on: 2/2/2009 4:47:27 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.40	Y	2572	330	1.10	120.65	2.802E-006	2.47	
M	94.61		103	180	1.12	191.01	7.126E-005	19.06	0.90
m	98.59		291	293	1.12	198.96	8.400E-005	15.27	
	129.33	Y	340	180	1.12	260.39	1.740E-004	8.04	
M	203.69	Y	63	63	1.00	408.97	2.303E-004	15.16	1.49
m	207.84	Y	111	69	1.01	417.26	2.290E-004	10.74	
	311.86	Y	128	59	0.95	625.13	1.788E-004	12.90	
	332.86		57	62	1.46	667.09	1.699E-004	24.77	
	345.16		47	43	1.32	691.68	1.650E-004	26.20	
	375.00	Y	170	123	1.37	751.31	1.541E-004	15.00	
	392.86		59	14	1.59	787.00	1.483E-004	16.02	
	413.83	Y	210	13	1.30	828.89	1.423E-004	7.77	
	451.76		26	9	0.73	904.70	1.331E-004	26.66	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	5.34E-001 +- 6.12E-002	1.45E-001 +- 8.42E-003

Beta: 2.06E+002 +- 2.19E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.11E-001 +- 9.61E-003
203.55	1.73E-001 +- 2.65E-002
375.05	2.54E-001 +- 3.85E-002
413.71	3.60E-001 +- 2.91E-002

Segment 15 Results

Segment: 15 Detector: DET01 Position: 15
C:\Canberra\NDA2k\Data\00000193_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P015_S015

Acquisition Start: 12/17/2008 12:18:22 PM
Elapsed Live Time: 119.17 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.025 +/- 0.0009
SE-75	264.66	0.079 +/- 0.0015
SE-75	279.54	0.089 +/- 0.0022
SE-75	400.66	0.146 +/- 0.0045

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 4:47:31 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.41	Y	2098	260	1.18	120.66	1.989E-006	2.68	
	98.80		114	221	1.04	199.38	6.893E-005	20.94	
	129.30	Y	252	120	0.95	260.32	1.446E-004	8.93	
M	203.37	Y	60	46	0.85	408.33	2.129E-004	16.24	2.30
m	207.93	Y	76	61	0.85	417.46	2.122E-004	14.28	
	311.80	Y	157	39	0.90	625.02	1.749E-004	9.96	
	332.54		27	56	1.06	666.46	1.678E-004	47.11	
	344.97		50	36	1.11	691.30	1.638E-004	23.16	
	375.08	Y	184	28	1.42	751.47	1.548E-004	8.68	
	393.01		70	8	1.51	787.30	1.499E-004	13.55	
	413.80	Y	134	16	1.33	828.83	1.445E-004	10.40	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	3.90E-001 +- 4.34E-002	1.37E-001 +- 7.94E-003

Beta: 1.76E+002 +- 2.23E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	9.88E-002 +- 9.42E-003
203.55	1.78E-001 +- 2.91E-002
375.05	2.74E-001 +- 2.44E-002
413.71	2.26E-001 +- 2.40E-002

Segment 16 Results

Segment: 16 Detector: DET01 Position: 16
C:\Canberra\NDA2k\Data\00000193_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P016_S016

Acquisition Start: 12/17/2008 12:22:34 PM
Elapsed Live Time: 119.26 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.276 +/- 0.0044
SE-75	264.66	0.510 +/- 0.0075
SE-75	279.54	0.527 +/- 0.0086
SE-75	400.66	0.622 +/- 0.0122

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 4:47:35 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.41	Y	1363	181	1.09	120.67	8.499E-005	3.24	
129.35	Y	150	112	1.05	260.42	1.539E-004	13.20	
208.09	Y	66	35	0.94	417.76	1.997E-004	17.81	
311.79	Y	81	21	0.83	625.00	1.924E-004	13.99	
332.66		22	27	0.90	666.69	1.875E-004	41.78	
375.04	Y	69	22	1.23	751.38	1.769E-004	16.00	
413.84	Y	82	11	1.36	828.92	1.670E-004	13.75	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.41E-001 +- 2.45E-002	7.08E-002 +- 6.28E-003

Beta: 1.22E+002 +- 3.38E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 3

Energy	Mass (g)
129.30	5.53E-002 +- 7.65E-003
375.05	8.99E-002 +- 1.45E-002
413.71	1.20E-001 +- 1.69E-002

Sum of Segment NID Results
Category: Segmented

C:\Canberra\NDA2k\Data\00000193_CNTR0001_DCAT0002_PROC00AK.CNF

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model:

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 4.012E-002 +/-	2.3%	< 9.373E-007	< 1.849E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 3.019E-002 +/-	2.2%	< 7.054E-007	< 4.770E-012
Al-26	< 4.896E-002 +/-	15.1%	< 1.144E-006	< 2.575E-006
K-40	< 5.416E-001 +/-	5.6%	< 1.265E-005	< 8.449E-002
Co-57	< 5.206E-002 +/-	4.4%	< 1.216E-006	< 6.091E-012
Co-60	< 5.394E-002 +/-	2.9%	< 1.260E-006	< 4.730E-011
Se-75	< 4.200E-002 +/-	2.8%	< 9.812E-007	< 2.889E-012
Kr-85	< 8.022E+000 +/-	3.6%	< 1.874E-004	< 2.022E-008
Sr-90	< 2.949E-002 +/-	2.6%	< 6.891E-007	< 2.138E-010
Sb-125	< 7.033E-002 +/-	2.7%	< 1.643E-006	< 6.765E-011
Ba-133	< 3.381E-002 +/-	2.3%	< 7.900E-007	< 1.336E-010
Cs-134	< 2.373E-002 +/-	2.8%	< 5.544E-007	< 1.811E-011
Cs-137	< 2.949E-002 +/-	2.6%	< 6.891E-007	< 3.362E-010
Eu-152	< 1.276E-001 +/-	4.2%	< 2.981E-006	< 7.171E-010
Eu-154	< 8.532E-002 +/-	2.4%	< 1.993E-006	< 3.199E-010
Ho-166m	< 4.026E-002 +/-	3.7%	< 9.405E-007	< 2.238E-008
Bi-207	< 2.112E-002 +/-	2.8%	< 4.935E-007	< 3.844E-010
Pb-210	< 5.460E+003 +/-	309.7%	< 1.276E-001	< 7.098E-005
Ra-226	< 4.786E-002 +/-	2.1%	< 1.118E-006	< 4.786E-008
Ac-227	< 1.686E-001 +/-	8.7%	< 3.940E-006	< 2.310E-009
Th-230	< 4.391E+001 +/-	8.6%	< 1.026E-003	< 2.152E-003
Pa-231	< 3.858E-001 +/-	11.4%	< 2.070E-005	< 1.851E-005
Th-232	< 4.415E-002 +/-	2.1%	< 1.031E-006	< 3.978E-001
U-232	< 6.200E-002 +/-	3.2%	< 1.449E-006	< 2.871E-009
U-233	< 5.198E+002 +/-	3.6%	< 1.214E-002	< 5.302E-002
Pa-234	< 1.262E-001 +/-	12.3%	< 2.949E-006	
Pa-234m	< 1.936E+002 +/-	2.1%	< 4.523E-003	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 5.243E-002 +/-	3.6%	< 1.225E-006	< 2.396E-002
Np-237	1.672E+000 +/-	6.0%	3.907E-005	2.341E-003
Pu-238	1.495E+004 +/-	13.9%	3.493E-001	8.640E-004
U-238	< 3.178E+000 +/-	2.4%	< 7.426E-005	< 9.344E+000

Pu-239	9.410E+004	+/-	5.8%	2.199E+000	1.496E+000
Pu-239B	< 2.106E+003	+/-	23.3%	< 4.920E-002	< 3.348E-002
U-239	< 3.709E+004	+/-	368.5%	< 8.665E-001	
Pu-240	< 2.255E+003	+/-	4.8%	< 5.269E-002	< 9.811E-003
Am-241	4.360E+003	+/-	13.9%	1.019E-001	1.256E-003
Am-241B	8.374E+003	+/-	7.0%	1.957E-001	2.412E-003
Pu-241	< 2.068E+004	+/-	3.7%	< 4.831E-001	< 1.989E-004
Pu-241B	6.044E+004	+/-	8.1%	1.412E+000	5.814E-004
Pu-242	< 0.000E+000	+/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	7.313E-001	+/-	27.4%	1.709E-005	3.620E-006
Cm-243	4.184E+000	+/-	6.1%	9.776E-005	8.033E-008
Cm-244	< 2.553E+004	+/-	14.2%	< 5.965E-001	< 3.115E-004
Cm-245	< 2.889E-001	+/-	8.1%	< 6.749E-006	< 1.661E-006
Cm-247	< 2.411E-002	+/-	8.5%	< 5.634E-007	< 2.580E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.586E-002 +/-	3.5%	< 6.043E-007	< 6.259E-009
Cf-251	< 1.842E-001 +/-	6.2%	< 4.304E-006	< 1.151E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

Summed Segment Spectra Results
Category: Segmented

C:\Canberra\NDA2k\Data\00000193_CNTR0001_DCAT0002_PROC00AI.CNF

Elapsed Live Time: 119.20 sec Elapsed Real Time: 120.00 sec

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 7.597E-002 +/-	1.0%	< 1.775E-006	< 3.502E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 7.520E-002 +/-	1.1%	< 1.757E-006	< 1.188E-011
	Al-26	< 8.972E-002 +/-	7.1%	< 2.096E-006	< 4.719E-006
	K-40	1.843E+000 +/-	17.5%	4.307E-005	2.876E-001
X	Co-57				
	Co-60	1.617E-001 +/-	15.0%	3.779E-006	1.419E-010
	Se-75	< 1.564E-001 +/-	1.0%	< 3.653E-006	< 1.076E-011
	Kr-85	< 2.577E+001 +/-	2.5%	< 6.020E-004	< 6.493E-008
	Sr-90	< 1.102E-001 +/-	0.8%	< 2.574E-006	< 7.988E-010
	Sb-125	< 2.242E-001 +/-	1.3%	< 5.238E-006	< 2.157E-010
	Ba-133	< 1.289E-001 +/-	0.8%	< 3.012E-006	< 5.093E-010
	Cs-134	< 7.928E-002 +/-	0.8%	< 1.852E-006	< 6.049E-011
	Cs-137	< 1.102E-001 +/-	0.8%	< 2.574E-006	< 1.256E-009
	Eu-152	< 4.018E-001 +/-	1.9%	< 9.389E-006	< 2.258E-009
	Eu-154	< 2.147E-001 +/-	1.4%	< 5.017E-006	< 8.052E-010
	Ho-166m	< 1.129E-001 +/-	1.6%	< 2.637E-006	< 6.276E-008
	Bi-207	< 6.710E-002 +/-	0.8%	< 1.568E-006	< 1.221E-009
	Pb-210	< 3.823E+003 +/-	11.4%	< 8.932E-002	< 4.970E-005
	Ra-226	< 1.758E-001 +/-	1.3%	< 4.108E-006	< 1.758E-007
	Ac-227	< 5.581E-001 +/-	8.2%	< 1.304E-005	< 7.647E-009
	Th-230	< 2.837E+002 +/-	8.2%	< 6.628E-003	< 1.390E-002
	Pa-231	< 2.877E+000 +/-	11.1%	< 6.722E-005	< 6.013E-005
	Th-232	< 2.186E-001 +/-	1.1%	< 5.108E-006	< 1.970E+000
	U-232	< 2.186E-001 +/-	1.1%	< 5.108E-006	< 1.012E-008
	U-233	< 2.104E+003 +/-	1.4%	< 4.915E-002	< 2.146E-001
	Pa-234	< 4.091E-001 +/-	12.1%	< 9.565E-006	
	Pa-234m	< 5.638E+002 +/-	1.5%	< 1.317E-002	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 1.701E-001 +/-	1.7%	< 3.973E-006	< 7.772E-002
	Np-237	1.507E+000 +/-	13.5%	3.522E-005	2.110E-003
	Pu-238	1.757E+004 +/-	27.7%	4.105E-001	1.016E-003
	U-238	< 9.307E+000 +/-	1.6%	< 2.175E-004	< 2.736E+001
	Pu-239	9.843E+004 +/-	4.3%	2.299E+000	1.565E+000
	Pu-239B	< 1.181E+004 +/-	3.2%	< 2.760E-001	< 1.878E-001
	U-239	< 8.871E+003 +/-	15.1%	< 2.073E-001	
X	Pu-240				
	Am-241	3.721E+003 +/-	4.4%	8.694E-002	1.072E-003
	Am-241B	2.097E+004 +/-	5.0%	4.899E-001	6.039E-003
	Pu-241	< 7.369E+004 +/-	1.7%	< 1.722E+000	< 7.089E-004
	Pu-241B	9.816E+004 +/-	5.0%	2.293E+000	9.443E-004

Pu-242	< 0.000E+000 +/- 0.0%	< 0.000E+000	< 0.000E+000
Am-243	2.509E+000 +/- 16.6%	5.862E-005	1.242E-005
Cm-243	4.425E+000 +/- 9.6%	1.034E-004	8.496E-008
Cm-244	< 8.538E+004 +/- 13.9%	< 1.995E+000	< 1.042E-003
Cm-245	< 1.389E+000 +/- 7.4%	< 2.544E-005	< 6.262E-006
Cm-247	< 9.223E-002 +/- 8.4%	< 2.155E-006	< 9.869E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.101E-001 +/-	3.1%	< 2.580E-006	< 2.672E-008
Cf-251	< 6.048E-001 +/-	5.3%	< 1.413E-005	< 3.780E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.56E+000 +- 6.69E-002	6.34E-001 +- 1.29E-002

Beta: 1.46E+002 +- 7.75E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	5.09E-001 +- 1.49E-002
203.55	7.33E-001 +- 5.36E-002
375.05	1.05E+000 +- 3.66E-002
413.71	1.13E+000 +- 4.82E-002

Automated Independent Technical Review

Counter ID: SGS with Trans. Count Type: Assay - 55 Gal Galv 23.8
Container ID: LL85234380 Assay Date: 12/17/2008
Waste Matrix Code:
Sequence Number: 193

Data Combiner Analysis:
Input combination 2: only Isotopics input data are valid.

Source of results is undefined.

DISPOSITION:

MGA Analysis:

Note: The measured and declared isotopics are inconsistent.

DISPOSITION:

Gamma Analysis:
Analysis Status: No errors.
Ratio of Pu-239 414 to 129 keV line activities is above the limit of 2.50
Pu-239/Am-241 ratio is less than the lower limit of 100.00

DISPOSITION:

Segment Data Review:
Segment: 1 OK
Segment: 2 OK
Segment: 3 OK
Segment: 4 OK
Segment: 5 OK
Segment: 6 OK
Segment: 7 OK
Segment: 8 OK
Segment: 9 OK
Segment: 10 OK
Segment: 11 OK
Segment: 12 OK
Segment: 13 OK
Segment: 14 OK
Segment: 15 OK
Segment: 16 OK

DISPOSITION:

Miscellaneous:

DISPOSITION:

Expert Review by: Robert J Hazlitt Jr Date: 2-3-09

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Assay Instrument:	SGS with Trans.	Location:	LLNL
Analysis Method:	CCP-TP-019 Rev 4	Software Version:	NDA 2000 V.4.0
Item ID:	LL85234380	Analysis Date:	12/17/2008

Used Multi Curve - [illegible] 2-3-09

********** MGA Results **********

MGA version: MGA V9.63H CI

Measurement date = 12/17/08 Declared date = 12/17/08
Low energy spectrum sensitivity = 30.0% Total counts = 1.804E+005
High energy spectrum sensitivity : 10.0%

Pu g/cm2 = 1.2153 Cd g/cm2 = 1.5976 FWHM at 122 keV = 537 eV
QFIT = 1.36 FWHM at 208 keV = 665 eV
NQFIT = 1.04

Isotope	Relative to Pu-239	%* Err	% Err	Relative to Pu-241	%* Err	Isotope analysis at Meas. date % weight	%Err	Decl. date % weight	%Err
Pu-238	0.005074	10.4	4.0	2.8067	45.8	0.46091	8.59	0.49977	9.32
Pu-239	1.000000	0.0	9.1	553.1015	46.7	90.82958	1.14	90.68933	1.14
Pu-240	0.093496	14.0	10.1	51.7128	47.0	8.49221	11.39	8.48593	11.38
Pu-241	0.001808	47.0	39.0	1.0000	0.0	0.16422	41.46	0.27198	68.66
Pu-242	(New alg.	)		0.3233(	18)	0.05309	(18)	0.05299	(17)
Am-241	0.009952	10.1	2.6	5.5044	45.6	0.90393	8.30	0.91813	8.43
Am-243						0.00019	4.72		

Pu-240 effective (meas. date) = 9.743 +/- 12.97%
U-237 separated more than 10 days ago
Am-241 separated about 38.766 +/- 2.667 years ago
Am/Pu-241 weight ratio = 5.50440 +/- 39.12%

Messages:

Lead x-rays detected.
Error in GFIT routine: probable weak peak in location 12.
Calculations in MGAABS didn't converge; results may be suspect.
Efficiency curvature boundary reached.

Notes : * = Error in ratio
Errors quoted at 1.000 sigma
MGA sigma defaulted to 1

Reviewed by: Robert J Hamlett Date: 2-3-09

********** Radioassay Data Sheet **********

197

Engine Version: TMU Gamma 1.5

Assay Instrument: SGS with Trans. Location:LLNL
Analysis Method: LLNL SGS Operating Procedure Software Version: NDA 2000 V.4.0
Item ID: SGS100 Analysis Date: 12/18/2008

NID identified fiducial nuclide Pu-239
Source of isotopics: MEASURED

Net Weight	16800.0 g		
Pu mass	1.01E+002 +-	1.50E+001	g
TRU Alpha Activity	8.98E+000 +-	9.92E-001	Ci
TRU Activity Concentration	5.34E+005 +-	5.91E+004	nCi/g
Pu-239 Equivalent Activity	9.31E+000 +-	9.94E-001	Ci
Pu-239 FGE	9.59E+001 +-	1.50E+001	g
Decay heat	2.83E-001 +-	3.09E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	7.22E-008
U233	<LLD	<LLD	0.00E+000	3.97E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.43E-007
NP237	9.83E-003	7.02E-006	1.17E-006	6.80E-007
PU238	1.05E-002	1.82E-001	3.05E-002	3.65E-004
U238	<LLD	<LLD	0.00E+000	3.91E-006
PU239	9.53E+001	6.00E+000	9.41E-001	1.20E-002
PU240	5.60E+000	1.29E+000	2.03E-001	2.58E-003
AM241	4.36E-001	1.51E+000	2.38E-001	5.63E-004
PU241	1.73E-001	1.80E+001	2.83E+000	3.60E-002
PU242	3.07E-002	1.22E-004	2.27E-005	0.00E+000

Errors quoted at 1.000 sigma

Operator:_____ Date:_____

ITR:_____ Date:_____

********** Radioassay Data Sheet **********

Engine Version: TMU Gamma 1.5

Assay Instrument: SGS with Trans. Location:LLNL
Analysis Method: LLNL SGS Operating Procedure Software Version: NDA 2000 V.4.0
Item ID: SGS100 Analysis Date: 12/18/2008

NID identified fiducial nuclide Pu-239
Source of isotopics: MEASURED

Net Weight	16800.0 g		
Pu mass	1.17E+002	+- 1.73E+001	g
TRU Alpha Activity	9.86E+000	+- 1.13E+000	Ci
TRU Activity Concentration	5.87E+005	+- 6.72E+004	nCi/g
Pu-239 Equivalent Activity	1.02E+001	+- 1.13E+000	Ci
Pu-239 FGE	1.11E+002	+- 1.73E+001	g
Decay heat	3.10E-001	+- 3.51E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.42E-007
U233	<LLD	<LLD	0.00E+000	9.18E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	7.86E-007
NP237	7.64E-003	5.45E-006	8.73E-007	1.09E-006
PU238	1.21E-002	2.10E-001	3.51E-002	3.75E-004
U238	<LLD	<LLD	0.00E+000	1.08E-005
PU239	1.10E+002	6.92E+000	1.09E+000	1.24E-002
PU240	6.47E+000	1.49E+000	2.34E-001	2.66E-003
AM241	3.56E-001	1.23E+000	1.95E-001	1.17E-004
PU241	2.00E-001	2.08E+001	3.26E+000	3.71E-002
PU242	3.55E-002	1.41E-004	2.62E-005	0.00E+000

Errors quoted at 1.000 sigma

Operator:_____ Date:_____

ITR:_____ Date:_____

********** MGA Results **********

MGA version: MGA V9.63H CI

Measurement date = 12/18/08 Declared date = 12/18/08
Low energy spectrum sensitivity = 30.0% Total counts = 7.604E+006
High energy spectrum sensitivity : 10.0%

Pu g/cm2 = 0.7607 Cd g/cm2 = 2.0779 FWHM at 122 keV = 621 eV
QFIT = 1.00 FWHM at 208 keV = 793 eV
NQFIT = 1.00

Isotope	Relative to Pu-239	%* Err	% Err	Relative to Pu-241	%* Err	Isotope analysis at Meas. date % weight	%Err	Decl. date % weight	%Err
Pu-238	0.000110	5.8	5.8	0.0608	5.9	0.01039	5.84	0.01070	6.01
Pu-239	1.000000	0.0	0.4	551.2355	0.8	94.24851	0.05	94.21446	0.05
Pu-240	0.058778	0.9	0.9	32.4005	1.1	5.53974	0.88	5.53935	0.88
Pu-241	0.001814	0.7	0.6	1.0000	0.0	0.17098	0.72	0.20513	0.87
Pu-242	(New alg.)			0.1776(10)		0.03037 (10)		0.03035 (9)	
Am-241	0.005273	0.5	0.3	2.9067	0.7	0.49698	0.48	0.49965	0.48

Pu-240 effective (meas. date) = 5.617 +/- 0.95%
Am-241 separated about 28.243 +/- 0.159 years ago
Am/Pu-241 weight ratio = 2.90670 +/- 0.73%

Messages:

Lead x-rays detected.

Notes : * = Error in ratio
Errors quoted at 1.000 sigma
MGA sigma defaulted to 1

Reviewed by: _____ Date: _____

****
***** GENIE QUALITY ASSURANCE *****
****

Last Results Report
12/18/08 9:13:36 AM

QA File: C:\CANBERRA\NDA2K\QA\CNTR0001_DC
Sample ID: SGS100
Sample Quantity: 1.0000E+000
Sample Date: 7/17/08 10:49:07 AM
Measurement Date: 12/18/08 8:03:41 AM
Elapsed Live Time: 0.0 seconds
Elapsed Real Time: 0.0 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
SGS-100 Pu-239 Trans Mas [UD: 1.0913E+002+/- 7.370]	9.5338E+001	-1.8714E+000 < : : : >

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
12/18/08 9:13:38 AM

QA File: C:\CANBERRA\NDA2K\QA\CNTR0001_DC
Sample ID: SGS100
Sample Quantity: 1.0000E+000
Sample Date: 7/17/08 10:49:07 AM
Measurement Date: 12/18/08 8:08:00 AM
Elapsed Live Time: 97.7 seconds
Elapsed Real Time: 120.0 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
SGS-100 414 keV centroid [0.00+/-0.00]	8.2854E+002	0.00 < : : : >
SGS-100 414 keV FWHM [0.00+/-0.00]	1.3687E+000	0.00 < : : : >
SGS-100 Pu-239 Mass [UD: 1.1082E+002+/- 1.081]	1.1009E+002	-6.7652E-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)

NDA 2000 Assay Report

Item Information

Item ID:	SGS100	Count Sequence Number:	197
Operator:	RHWM2\RHWM		
Assay Start:	12/18/2008 8:05:58 AM		
Description 1:	SGS100		
Description 2:			
Location:	LLNL		
Comment:			
Matrix Type:	Lucite		
Container Type:	55 TRU Galv 81.5		
Weight:	Gross: 54.0 kg	Net:	16.8 kg
Container:	Volume: 208.0 l	Full:	100.0 %
Density:	0.080 kg /l		

System Configuration

Counter:	SGS with Trans.		
Segments:	Number: 16	Offset:	0
Scanning Platform:	Start: 934 mm	Delta:	-51 mm
Count Type:	QC - SGS 100		
Collimator/Geometry Setting:	Default - 0		
Transmission Mode:	Two Pass		
Transmission Correction Type:	Standard		
Transmission Source:	Se-75 Trans. - 0		

Errors quoted at 1.000 sigma

Segment 1 Results

Segment: 1 Detector: DET01 Position: 1
C:\Canberra\NDA2k\Data\00000197_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P001_S001

Acquisition Start: 12/18/2008 8:08:00 AM
Elapsed Live Time: 118.14 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.415 +/- 0.0067
SE-75	264.66	0.500 +/- 0.0075
SE-75	279.54	0.506 +/- 0.0086
SE-75	400.66	0.536 +/- 0.0113

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/18/2008 8:10:01 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.36	Y	609	748	1.46	120.56	6.612E-006	7.96	
2235.45		11980	10	0.98	4469.03	4.593E-005	1.43	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.02 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 2.685E-002 +/-	2.1%	< 2.557E-005	< 1.238E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.630E-002 +/-	2.2%	< 2.505E-005	< 4.156E-012
Al-26	< 2.655E-002 +/-	16.2%	< 2.529E-005	< 1.397E-006
K-40	< 4.582E-001 +/-	5.3%	< 4.364E-004	< 7.148E-002
Co-57	< 1.240E-001 +/-	3.4%	< 1.181E-004	< 1.451E-011
Co-60	< 4.101E-002 +/-	2.8%	< 3.906E-005	< 3.597E-011
Se-75	< 1.008E-001 +/-	1.9%	< 9.599E-005	< 6.934E-012
Kr-85	< 8.175E+000 +/-	3.2%	< 7.786E-003	< 2.060E-008
Sr-90	< 2.522E-002 +/-	2.1%	< 2.402E-005	< 1.829E-010
Sb-125	< 6.627E-002 +/-	2.3%	< 6.311E-005	< 6.375E-011
Ba-133	< 6.265E-002 +/-	1.8%	< 5.967E-005	< 2.475E-010
Cs-134	< 2.264E-002 +/-	2.0%	< 2.157E-005	< 1.728E-011
Cs-137	< 2.522E-002 +/-	2.1%	< 2.402E-005	< 2.875E-010
Eu-152	< 4.280E-002 +/-	2.3%	< 4.076E-005	< 2.405E-010
Eu-154	< 7.510E-002 +/-	2.4%	< 7.152E-005	< 2.816E-010
Ho-166m	< 4.368E-002 +/-	2.4%	< 4.160E-005	< 2.428E-008
Bi-207	< 9.211E-003 +/-	2.1%	< 8.773E-006	< 1.676E-010
Pb-210	< 9.140E+002 +/-	47.8%	< 8.705E-001	< 1.188E-005
Ra-226	< 5.982E-002 +/-	2.4%	< 5.697E-005	< 5.982E-008
Ac-227	< 3.245E-001 +/-	8.3%	< 3.091E-004	< 4.446E-009
Th-230	< 1.590E+002 +/-	8.6%	< 1.514E-001	< 7.791E-003
Pa-231	< 2.073E+000 +/-	11.2%	< 1.974E-003	< 4.333E-005
Th-232	< 9.590E-002 +/-	2.6%	< 9.133E-005	< 8.640E-001
U-232	< 9.827E-002 +/-	2.3%	< 9.359E-005	< 4.550E-009
U-233	< 1.131E+003 +/-	2.7%	< 1.077E+000	< 1.154E-001
Pa-234	< 1.489E-001 +/-	12.3%	< 1.418E-004	
Pa-234m	< 2.397E+002 +/-	2.3%	< 2.283E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 1.066E-001 +/-	2.5%	< 1.016E-004	< 4.873E-002
Np-237	< 1.516E-001 +/-	2.0%	< 1.444E-004	< 2.122E-004
Pu-238	< 7.616E+003 +/-	2.7%	< 7.254E+000	< 4.402E-004
U-238	< 3.513E+000 +/-	2.4%	< 3.346E-003	< 1.033E+001
Pu-239	< 1.414E+003 +/-	3.1%	< 1.346E+000	< 2.247E-002
Pu-239B	< 4.243E+003 +/-	5.2%	< 4.041E+000	< 6.746E-002
U-239	< 2.023E+003 +/-	59.1%	< 1.927E+000	
Pu-240	< 2.571E+003 +/-	4.6%	< 2.448E+000	< 1.118E-002
Am-241	5.783E+001 +/-	22.1%	5.507E-002	1.665E-005
Am-241B	< 9.858E+002 +/-	4.9%	< 9.389E-001	< 2.839E-004
Pu-241	< 3.894E+004 +/-	2.8%	< 3.709E+001	< 3.746E-004
Pu-241B	< 1.096E+004 +/-	2.5%	< 1.043E+001	< 1.054E-004
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 4.077E-001 +/-	1.9%	< 3.883E-004	< 2.018E-006
Cm-243	< 4.205E-001 +/-	3.4%	< 4.005E-004	< 8.073E-009
Cm-244	< 3.590E+004 +/-	14.1%	< 3.419E+001	< 4.380E-004
Cm-245	< 6.968E-001 +/-	7.7%	< 6.637E-004	< 4.007E-006
Cm-247	< 3.670E-002 +/-	8.6%	< 3.495E-005	< 3.926E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 4.698E-002 +/-	3.6%	< 4.474E-005	< 1.137E-008
Cf-251	< 3.826E-001 +/-	5.6%	< 3.644E-004	< 2.391E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 2 Results

Segment: 2 Detector: DET01 Position: 2
C:\Canberra\NDA2k\Data\00000197_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P002_S002

Acquisition Start: 12/18/2008 8:12:31 AM
Elapsed Live Time: 117.69 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.461 +/- 0.0074
SE-75	264.66	0.552 +/- 0.0082
SE-75	279.54	0.555 +/- 0.0093
SE-75	400.66	0.596 +/- 0.0123

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/18/2008 8:14:33 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.41	Y	1456	1024	1.27	120.67	1.235E-004	4.42	
99.07		258	2466	0.96	199.92	2.701E-004	28.04	
318.22		81	232	1.04	637.84	3.077E-004	29.41	
2235.47		11980	9	0.98	4469.06	1.073E-004	1.43	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.02 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 2.147E-002 +/-	1.8%	< 2.044E-005	< 9.896E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.565E-002 +/-	2.0%	< 2.443E-005	< 4.053E-012
Al-26	< 2.276E-002 +/-	15.5%	< 2.168E-005	< 1.197E-006
K-40	< 2.327E-001 +/-	4.9%	< 2.216E-004	< 3.630E-002
Co-57	< 1.101E-001 +/-	3.5%	< 1.048E-004	< 1.288E-011
Co-60	< 3.393E-002 +/-	1.7%	< 3.232E-005	< 2.976E-011
Se-75	< 8.862E-002 +/-	1.9%	< 8.440E-005	< 6.097E-012
Kr-85	< 5.583E+000 +/-	3.1%	< 5.317E-003	< 1.407E-008
Sr-90	< 2.152E-002 +/-	2.0%	< 2.050E-005	< 1.560E-010
Sb-125	< 5.279E-002 +/-	2.1%	< 5.027E-005	< 5.078E-011
Ba-133	< 6.853E-002 +/-	1.7%	< 6.527E-005	< 2.707E-010
Cs-134	< 1.626E-002 +/-	2.0%	< 1.548E-005	< 1.240E-011
Cs-137	< 2.152E-002 +/-	2.0%	< 2.050E-005	< 2.454E-010
Eu-152	< 1.043E-001 +/-	3.7%	< 9.929E-005	< 5.859E-010
Eu-154	< 7.325E-002 +/-	2.2%	< 6.976E-005	< 2.747E-010
Ho-166m	< 2.081E-002 +/-	2.3%	< 1.982E-005	< 1.157E-008
Bi-207	< 1.727E-002 +/-	1.9%	< 1.645E-005	< 3.144E-010
Pb-210	< 7.434E+000 +/-	81.7%	< 7.080E-003	< 9.664E-008
Ra-226	< 4.347E-002 +/-	2.3%	< 4.140E-005	< 4.347E-008
Ac-227	< 2.859E-001 +/-	8.3%	< 2.723E-004	< 3.917E-009
Th-230	< 3.610E+001 +/-	25.1%	< 3.438E-002	< 1.769E-003
Pa-231	< 1.767E+000 +/-	11.2%	< 1.683E-003	< 3.693E-005
Th-232	< 5.586E-002 +/-	2.4%	< 5.320E-005	< 5.033E-001
U-232	< 6.754E-002 +/-	2.2%	< 6.432E-005	< 3.127E-009
U-233	< 1.060E+003 +/-	2.7%	< 1.010E+000	< 1.081E-001
Pa-234	< 8.694E-002 +/-	12.2%	< 8.280E-005	
Pa-234m	< 9.101E+001 +/-	2.1%	< 8.668E-002	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 1.088E-001 +/-	2.5%	< 1.036E-004	< 4.974E-002
Np-237	< 1.299E-001 +/-	2.0%	< 1.237E-004	< 1.818E-004
Pu-238	< 7.335E+003 +/-	2.7%	< 6.986E+000	< 4.240E-004
U-238	< 2.626E+000 +/-	2.1%	< 2.501E-003	< 7.720E+000
Pu-239	< 1.277E+003 +/-	3.2%	< 1.216E+000	< 2.030E-002
Pu-239B	< 2.692E+003 +/-	6.4%	< 2.564E+000	< 4.280E-002
U-239	< 1.002E+001 +/-	98.9%	< 9.539E-003	
Pu-240	< 1.732E+003 +/-	5.4%	< 1.650E+000	< 7.534E-003
Am-241	7.393E+000 +/-	38.1%	7.041E-003	2.129E-006
Am-241B	< 6.464E+002 +/-	5.7%	< 6.156E-001	< 1.862E-004
Pu-241	< 3.818E+004 +/-	2.9%	< 3.636E+001	< 3.673E-004
Pu-241B	< 1.100E+004 +/-	2.5%	< 1.048E+001	< 1.059E-004
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 2.067E-001 +/-	16.6%	< 1.969E-004	< 1.023E-006
Cm-243	< 3.737E-001 +/-	3.4%	< 3.559E-004	< 7.175E-009
Cm-244	< 2.140E+004 +/-	14.1%	< 2.038E+001	< 2.610E-004
Cm-245	< 7.110E-001 +/-	7.7%	< 6.771E-004	< 4.088E-006
Cm-247	< 2.979E-002 +/-	8.5%	< 2.837E-005	< 3.188E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 3.432E-002 +/-	3.5%	< 3.269E-005	< 8.306E-009
Cf-251	< 3.794E-001 +/-	5.6%	< 3.613E-004	< 2.371E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 3 Results

Segment: 3 Detector: DET01 Position: 3
C:\Canberra\NDA2k\Data\00000197_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P003_S003

Acquisition Start: 12/18/2008 8:16:43 AM
Elapsed Live Time: 114.70 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.386 +/- 0.0065
SE-75	264.66	0.473 +/- 0.0072
SE-75	279.54	0.494 +/- 0.0087
SE-75	400.66	0.534 +/- 0.0116

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/18/2008 8:18:45 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.38	Y	8810	2315	1.18	120.61	9.260E-005	1.75	
	66.96	Y	297	1503	1.04	135.75	1.229E-004	20.59	
M	94.67		2332	6085	1.52	191.12	2.321E-004	5.07	10.15
m	98.67	Y	8120	9072	1.53	199.12	2.459E-004	3.73	
m	100.80	Y	1097	8540	1.53	203.37	2.529E-004	7.27	
m	103.37	Y	5525	7830	1.54	208.50	2.611E-004	3.73	
M	110.97		1502	4024	1.36	223.70	2.835E-004	4.06	9.74
m	114.62	Y	905	6568	1.37	230.99	2.933E-004	6.42	
M	125.25	Y	630	2416	1.03	252.23	3.179E-004	6.80	2.03
m	129.27	Y	3588	2581	1.04	260.26	3.258E-004	2.26	
	148.47	Y	483	2379	0.99	298.63	3.553E-004	16.21	
M	203.58	Y	828	1471	1.12	408.75	3.775E-004	4.83	3.70
m	208.00	Y	2779	1362	1.13	417.58	3.766E-004	2.38	
	255.36		110	844	1.37	512.22	3.551E-004	41.60	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	311.81	Y	121	545	1.61	625.03	3.205E-004	29.38	
M	332.69	Y	961	669	1.24	666.76	3.060E-004	3.84	1.57
m	335.64	Y	361	642	1.25	672.64	3.040E-004	7.05	
m	341.60	Y	69	618	1.25	684.57	3.000E-004	26.05	
m	344.99		886	596	1.26	691.34	2.977E-004	4.01	
	368.29	Y	347	451	2.33	737.89	2.826E-004	11.59	
M	375.04	Y	2299	360	1.25	751.37	2.784E-004	2.40	2.21
m	380.16		425	235	1.26	761.61	2.753E-004	5.54	
m	382.74		410	200	1.26	766.76	2.737E-004	5.57	
	392.88		764	239	1.48	787.04	2.677E-004	5.12	
	413.74	Y	2006	103	1.43	828.72	2.561E-004	2.67	
	422.53		86	125	1.15	846.27	2.515E-004	24.63	
	451.43		243	58	1.41	904.04	2.372E-004	8.46	
	652.65	Y	25	14	0.81	1306.13	1.695E-004	31.43	
	662.28	Y	114	16	1.48	1325.38	1.672E-004	11.07	
	721.86	Y	53	11	1.85	1444.44	1.550E-004	17.30	
	2235.43		11980	11	0.98	4468.99	8.767E-005	1.44	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.05 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 2.196E-002 +/-	1.8%	< 2.091E-005	< 1.012E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 1.455E-002 +/-	2.0%	< 1.386E-005	< 2.300E-012
	Al-26	< 2.139E-002 +/-	18.9%	< 2.037E-005	< 1.125E-006
	K-40	< 2.609E-001 +/-	5.3%	< 2.485E-004	< 4.070E-002
	Co-57	< 1.471E-001 +/-	4.4%	< 1.401E-004	< 1.721E-011
	Co-60	< 3.279E-002 +/-	1.7%	< 3.123E-005	< 2.875E-011
	Se-75	< 1.198E-001 +/-	1.8%	< 1.141E-004	< 8.239E-012
	Kr-85	< 6.856E+000 +/-	3.1%	< 6.529E-003	< 1.728E-008
	Sr-90	< 3.691E-002 +/-	2.2%	< 3.515E-005	< 2.676E-010
	Sb-125	< 1.237E-001 +/-	1.9%	< 1.178E-004	< 1.190E-010
	Ba-133	< 1.006E-001 +/-	1.6%	< 9.577E-005	< 3.972E-010
	Cs-134	< 2.567E-002 +/-	1.9%	< 2.445E-005	< 1.959E-011
X	Cs-137				
	Eu-152	< 7.697E-002 +/-	2.2%	< 7.330E-005	< 4.326E-010
	Eu-154	< 4.156E-002 +/-	2.1%	< 3.958E-005	< 1.559E-010
	Ho-166m	< 3.412E-002 +/-	2.3%	< 3.250E-005	< 1.897E-008
	Bi-207	< 2.536E-002 +/-	1.9%	< 2.415E-005	< 4.615E-010
	Pb-210	< 1.323E+001 +/-	259.0%	< 1.260E-002	< 1.720E-007
	Ra-226	< 4.793E-002 +/-	2.4%	< 4.564E-005	< 4.793E-008

	Ac-227'	< 4.097E-001 +/-	8.3%	< 3.902E-004	< 5.613E-009
	Th-230	1.431E+002 +/-	88.7%	1.363E-001	7.010E-003
	Pa-231	< 2.376E+000 +/-	11.2%	< 2.263E-003	< 4.965E-005
	Th-232	< 7.914E-002 +/-	2.4%	< 7.537E-005	< 7.130E-001
	U-232	< 8.234E-002 +/-	2.3%	< 7.842E-005	< 3.812E-009
	U-233	< 1.510E+003 +/-	3.0%	< 1.438E+000	< 1.540E-001
	Pa-234	< 1.128E-001 +/-	12.2%	< 1.075E-004	
	Pa-234m	< 2.162E+002 +/-	2.1%	< 2.059E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 1.443E-001 +/-	2.9%	< 1.374E-004	< 6.595E-002
	Np-237	2.206E-001 +/-	29.4%	2.101E-004	3.089E-004
	Pu-238	< 9.472E+003 +/-	3.1%	< 9.021E+000	< 5.475E-004
	U-238	< 2.834E+000 +/-	2.2%	< 2.699E-003	< 8.331E+000
	Pu-239	2.076E+005 +/-	3.8%	1.977E+002	3.301E+000
	Pu-239B	< 5.596E+003 +/-	16.5%	< 5.330E+000	< 8.897E-002
	U-239	< 2.127E+001 +/-	308.4%	< 2.026E-002	
X	Pu-240				
	Am-241	4.144E+004 +/-	9.7%	3.946E+001	1.193E-002
	Am-241B	2.771E+004 +/-	10.2%	2.639E+001	7.980E-003
	Pu-241	1.651E+005 +/-	16.5%	1.573E+002	1.589E-003
	Pu-241B	3.200E+005 +/-	3.5%	3.047E+002	3.078E-003
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 3.193E-001 +/-	57.7%	< 3.041E-004	< 1.580E-006
	Cm-243	< 4.697E-001 +/-	3.3%	< 4.473E-004	< 9.018E-009
	Cm-244	< 2.057E+004 +/-	14.2%	< 1.959E+001	< 2.509E-004
	Cm-245	< 8.981E-001 +/-	7.8%	< 8.553E-004	< 5.164E-006
	Cm-247	< 5.296E-002 +/-	8.5%	< 5.044E-005	< 5.667E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 6.680E-002 +/-	3.4%	< 6.362E-005	< 1.616E-008
Cf-251	< 4.883E-001 +/-	5.8%	< 4.650E-004	< 3.052E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	3.30E+000 +- 1.26E-001	1.01E+000 +- 2.12E-002

Beta: 2.11E+002 +- 8.70E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	6.25E-001 +- 2.60E-002
203.55	1.38E+000 +- 7.39E-002
375.05	1.90E+000 +- 5.69E-002
413.71	1.91E+000 +- 6.34E-002

Segment 4 Results

Segment: 4 Detector: DET01 Position: 4
C:\Canberra\NDA2k\Data\00000197_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P004_S004

Acquisition Start: 12/18/2008 8:20:55 AM
Elapsed Live Time: 102.20 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.351 +/- 0.0066
SE-75	264.66	0.473 +/- 0.0089
SE-75	279.54	0.472 +/- 0.0091
SE-75	400.66	0.533 +/- 0.0127

Errors quoted at 1.000 sigma

Peak Analysis Results

*** Spectrum Validity Test warnings ***
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 12/18/2008 8:22:56 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.38	Y	54561	6061	1.15	120.60	5.027E-006	1.26	
M	94.61	Y	10852	11543	1.53	191.01	1.289E-004	2.35	62.69
m	98.63	Y	42941	15687	1.54	199.05	1.524E-004	1.91	
m	100.81	Y	6499	16017	1.54	203.40	1.654E-004	2.92	
m	103.28	Y	30898	12954	1.54	208.34	1.801E-004	1.88	
M	111.01	Y	12056	6891	1.39	223.78	2.255E-004	2.30	83.52
m	114.52	Y	9616	7818	1.39	230.80	2.452E-004	2.43	
m	116.60	Y	8952	7949	1.40	234.96	2.565E-004	2.34	
m	120.57	Y	2163	7153	1.40	242.89	2.772E-004	4.23	
m	122.75	Y	1196	6918	1.41	247.23	2.880E-004	6.52	
m	125.20	Y	4458	6588	1.41	252.14	2.997E-004	2.87	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	129.23	Y	20376	5706	1.42	260.18	3.176E-004	2.08	
M	144.10	Y	1434	4475	1.04	289.90	3.723E-004	8.44	1.44
m	146.23	Y	1295	4982	1.04	294.16	3.786E-004	8.74	
m	148.53	Y	2798	4497	1.04	298.75	3.850E-004	7.39	
M	160.91	Y	1454	5103	1.70	323.48	4.115E-004	19.01	5.80
m	164.58	Y	1177	6602	1.71	330.83	4.170E-004	17.41	
	171.36	Y	1050	4519	1.07	344.37	4.247E-004	11.58	
	179.05	Y	246	3955	1.35	359.73	4.301E-004	43.37	
	189.40	Y	540	4275	1.03	380.42	4.325E-004	21.39	
	195.57	Y	710	3668	1.27	392.75	4.319E-004	14.81	
M	203.50	Y	4973	3754	1.17	408.59	4.292E-004	2.68	0.74
m	207.96	Y	15867	3389	1.17	417.51	4.269E-004	2.15	
	255.36	Y	722	2184	1.02	512.24	3.843E-004	12.17	
M	263.87	Y	258	1759	1.24	529.24	3.752E-004	14.02	1.28
m	267.43	Y	668	2036	1.25	536.35	3.707E-004	6.68	
	297.49	Y	407	1701	1.06	596.41	3.367E-004	18.75	
	311.76	Y	666	1460	1.34	624.94	3.226E-004	10.79	
M	320.90	Y	520	1524	1.69	643.20	3.139E-004	7.87	1.35
m	323.36	Y	824	2035	1.69	648.10	3.116E-004	5.41	
M	332.70	Y	5899	1186	1.32	666.77	3.033E-004	3.06	2.53
m	335.62	Y	2184	1132	1.33	672.61	3.007E-004	3.69	
m	341.40	Y	660	1095	1.33	684.16	2.957E-004	6.38	
m	344.96	Y	5014	1056	1.34	691.28	2.927E-004	3.07	
	368.37	Y	2100	1173	2.21	738.06	2.743E-004	4.02	
M	375.01	Y	12870	988	1.27	751.33	2.695E-004	1.48	9.81
m	380.11	Y	2560	703	1.28	761.51	2.659E-004	2.49	
m	382.69	Y	2167	624	1.28	766.66	2.641E-004	2.66	
	392.87	Y	4547	571	1.53	787.02	2.573E-004	2.21	
	413.67	Y	12090	376	1.43	828.57	2.443E-004	1.54	
M	422.57	Y	832	249	1.20	846.35	2.392E-004	4.29	1.68
m	426.52	Y	179	240	1.21	854.25	2.369E-004	10.36	
	451.41	Y	1378	210	1.40	904.00	2.240E-004	3.70	
	618.87	Y	117	42	1.24	1238.63	1.689E-004	14.30	
M	646.00	Y	83	52	1.45	1292.84	1.633E-004	13.98	1.15
m	652.52	Y	65	59	1.46	1305.87	1.620E-004	16.13	
m	658.77	Y	41	50	1.46	1318.36	1.609E-004	22.38	
m	662.46	Y	662	43	1.46	1325.73	1.602E-004	4.42	
	688.62	Y	38	22	1.43	1378.02	1.557E-004	28.40	
	721.94	Y	306	19	1.73	1444.59	1.506E-004	6.83	
	756.22	Y	22	9	0.62	1513.09	1.459E-004	35.13	
	769.24	Y	72	13	0.99	1539.11	1.442E-004	16.22	
	2235.40		11980	37	0.97	4468.93	6.806E-005	1.52	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.18 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 3.469E-002 +/-	1.8%	< 3.303E-005	< 1.599E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 1.565E-002 +/-	2.0%	< 1.490E-005	< 2.472E-012
	Al-26	< 5.552E-002 +/-	14.5%	< 5.288E-005	< 2.920E-006
	K-40	< 3.075E-001 +/-	4.8%	< 2.929E-004	< 4.797E-002
X	Co-57				
	Co-60	< 2.652E-002 +/-	1.7%	< 2.525E-005	< 2.326E-011
	Se-75	< 1.920E-001 +/-	1.7%	< 1.829E-004	< 1.321E-011
	Kr-85	< 1.191E+001 +/-	3.0%	< 1.134E-002	< 3.000E-008
	Sr-90	< 6.418E-002 +/-	2.0%	< 6.112E-005	< 4.653E-010
	Sb-125	< 2.693E-001 +/-	2.2%	< 2.565E-004	< 2.591E-010
	Ba-133	< 1.648E-001 +/-	1.7%	< 1.569E-004	< 6.509E-010
	Cs-134	< 2.590E-002 +/-	1.8%	< 2.467E-005	< 1.977E-011
X	Cs-137				
	Eu-152	< 1.134E-001 +/-	1.9%	< 1.080E-004	< 6.372E-010
	Eu-154	< 4.468E-002 +/-	2.2%	< 4.256E-005	< 1.676E-010
	Ho-166m	< 5.152E-002 +/-	2.3%	< 4.907E-005	< 2.864E-008
	Bi-207	< 1.877E-002 +/-	1.9%	< 1.787E-005	< 3.415E-010
	Pb-210	< 4.251E+003 +/-	37.2%	< 4.049E+000	< 5.527E-005
	Ra-226	< 9.279E-002 +/-	2.2%	< 8.837E-005	< 9.279E-008
	Ac-227	< 6.429E-001 +/-	8.3%	< 6.123E-004	< 8.808E-009
	Th-230	< 3.185E+002 +/-	8.5%	< 3.034E-001	< 1.561E-002
	Pa-231	< 3.737E+000 +/-	11.2%	< 3.559E-003	< 7.809E-005
	Th-232	< 9.426E-002 +/-	2.4%	< 8.978E-005	< 8.493E-001
	U-232	< 1.496E-001 +/-	2.1%	< 1.425E-004	< 6.928E-009
	U-233	< 2.434E+003 +/-	2.6%	< 2.318E+000	< 2.483E-001
	Pa-234	< 1.225E-001 +/-	12.1%	< 1.166E-004	
	Pa-234m	< 2.059E+002 +/-	2.1%	< 1.961E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 2.046E-001 +/-	2.4%	< 1.949E-004	< 9.352E-002
	Np-237	7.103E-001 +/-	18.5%	6.765E-004	9.945E-004
	Pu-238	< 1.380E+004 +/-	2.5%	< 1.314E+001	< 7.975E-004
	U-238	< 2.359E+000 +/-	2.2%	< 2.247E-003	< 6.936E+000
	Pu-239	1.271E+006 +/-	3.2%	1.211E+003	2.022E+001
	Pu-239B	7.384E+005 +/-	1.4%	7.033E+002	1.174E+001
	U-239	< 1.816E+004 +/-	46.3%	< 1.730E+001	
X	Pu-240				
	Am-241	2.470E+005 +/-	4.4%	2.353E+002	7.115E-002
	Am-241B	1.370E+005 +/-	3.6%	1.304E+002	3.944E-002
	Pu-241	8.823E+005 +/-	7.9%	8.403E+002	8.487E-003
	Pu-241B	1.666E+006 +/-	2.9%	1.587E+003	1.603E-002
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 7.344E-001 +/-	1.8%	< 6.994E-004	< 3.635E-006
	Cm-243	< 7.574E-001 +/-	3.3%	< 7.214E-004	< 1.454E-008
	Cm-244	< 3.756E+004 +/-	14.2%	< 3.577E+001	< 4.583E-004
	Cm-245	< 1.261E+000 +/-	7.6%	< 1.201E-003	< 7.254E-006
	Cm-247	< 1.008E-001 +/-	8.5%	< 9.598E-005	< 1.078E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.272E-001 +/-	3.5%	< 1.212E-004	< 3.079E-008
Cf-251	< 7.044E-001 +/-	5.6%	< 6.709E-004	< 4.403E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	2.02E+001 +- 6.49E-001	6.25E+000 +- 1.03E-001

Beta: 2.18E+002 +- 7.56E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	3.64E+000 +- 1.36E-001
203.55	7.29E+000 +- 2.46E-001
375.05	1.10E+001 +- 2.69E-001
413.71	1.21E+001 +- 3.20E-001

Segment 5 Results

Segment: 5 Detector: DET01 Position: 5
C:\Canberra\NDA2k\Data\00000197_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P005_S005

Acquisition Start: 12/18/2008 8:25:06 AM
Elapsed Live Time: 87.73 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.001 +/- 0.0005
SE-75	264.66	0.231 +/- 0.0069
SE-75	279.54	0.235 +/- 0.0066
SE-75	400.66	0.377 +/- 0.0123

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

*** Spectrum Validity Test warnings ***
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 12/18/2008 8:27:07 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.36	Y	130103	9566	1.17	120.57	2.786E-005	1.28	
M	94.59	Y	21837	17272	1.52	190.96	5.979E-005	1.94	113.34
m	98.60	Y	89257	23469	1.53	198.98	6.287E-005	1.66	
m	100.79	Y	14205	22383	1.54	203.35	6.448E-005	2.25	
m	103.25	Y	64208	19339	1.54	208.27	6.622E-005	1.64	
M	110.98	Y	24283	11550	1.38	223.72	7.124E-005	2.01	151.69
m	114.47	Y	19520	12853	1.39	230.69	7.328E-005	2.09	
m	116.54	Y	19077	10810	1.39	234.82	7.443E-005	2.02	
m	120.56	Y	4791	10665	1.40	242.85	7.652E-005	2.99	
m	125.15	Y	8897	9896	1.41	252.03	7.868E-005	2.35	
m	129.19	Y	41392	8622	1.41	260.11	8.039E-005	1.88	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
M	144.11	Y	2687	6591	1.15	289.92	1.467E-004	8.61	3.21
m	146.19	Y	2278	6627	1.15	294.07	1.548E-004	9.03	
m	148.48	Y	5706	6680	1.16	298.65	1.628E-004	7.46	
M	160.78	Y	2664	7610	1.49	323.22	1.954E-004	11.35	5.18
m	164.46	Y	2180	10531	1.50	330.59	2.030E-004	10.94	
m	169.39	Y	691	9619	1.50	340.43	2.121E-004	17.83	
m	171.35	Y	1634	9554	1.51	344.35	2.154E-004	11.25	
	179.07	Y	1109	6827	1.27	359.77	2.269E-004	15.80	
	189.32	Y	1412	6948	1.24	380.26	2.392E-004	12.63	
	195.58	Y	1388	5389	1.18	392.77	2.452E-004	10.84	
M	203.44	Y	9603	5678	1.19	408.48	2.515E-004	1.52	0.76
m	207.91	Y	32205	4521	1.19	417.40	2.545E-004	1.44	
	243.20	Y	608	3580	0.83	487.94	2.667E-004	20.85	
	255.28	Y	1280	3300	1.15	512.06	2.675E-004	9.87	
M	263.76	Y	499	2546	1.13	529.02	2.673E-004	18.92	1.01
m	267.44	Y	1181	2438	1.13	536.36	2.660E-004	16.72	
M	297.37	Y	827	2041	1.07	596.18	2.583E-004	18.21	0.43
m	300.11	Y	210	2008	1.08	601.66	2.579E-004	25.71	
	311.76	Y	1494	1982	1.17	624.92	2.557E-004	6.81	
M	320.80	Y	1134	2059	1.71	643.00	2.537E-004	5.38	3.53
m	323.37	Y	1521	3004	1.71	648.13	2.531E-004	4.24	
M	332.65	Y	11054	1573	1.36	666.68	2.508E-004	2.91	4.33
m	335.61	Y	4539	1463	1.36	672.60	2.500E-004	3.27	
m	341.29	Y	1304	1550	1.37	683.94	2.485E-004	5.16	
m	344.93	Y	9748	1462	1.37	691.21	2.474E-004	2.89	
	368.48	Y	4039	1980	2.33	738.27	2.404E-004	3.30	
M	374.98	Y	25561	1588	1.28	751.26	2.384E-004	1.42	20.84
m	380.06	Y	4920	1131	1.29	761.42	2.368E-004	2.11	
m	382.67	Y	4393	1006	1.29	766.64	2.360E-004	2.18	
	392.84	Y	8911	936	1.55	786.95	2.328E-004	1.90	
	413.60	Y	23660	598	1.43	828.44	2.246E-004	1.46	
M	422.48	Y	1758	471	1.23	846.19	2.209E-004	3.23	1.88
m	426.61	Y	410	468	1.23	854.43	2.192E-004	7.53	
	451.36	Y	2766	279	1.50	903.90	2.093E-004	2.83	
	618.88	Y	269	57	1.47	1238.64	1.601E-004	9.55	
M	640.16	Y	157	35	1.57	1281.16	1.556E-004	9.61	2.74
m	645.92	Y	181	38	1.57	1292.68	1.544E-004	8.91	
m	652.66	Y	229	34	1.58	1306.15	1.531E-004	7.77	
m	658.68	Y	93	33	1.58	1318.19	1.519E-004	13.27	
m	662.39	Y	1164	35	1.58	1325.59	1.512E-004	3.60	
	688.69	Y	110	36	1.60	1378.14	1.465E-004	16.13	
	703.49	Y	34	26	1.87	1407.73	1.439E-004	35.71	
	721.95	Y	560	44	1.54	1444.60	1.410E-004	5.67	
	769.39	Y	150	25	1.62	1539.42	1.341E-004	12.21	
	2235.30		11980	84	1.02	4468.72	8.845E-005	1.64	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.37 +/- 0.02

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 3.957E-002 +/-	1.8%	< 3.768E-005	< 1.824E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 4.030E-002 +/-	2.0%	< 3.838E-005	< 6.367E-012
Al-26	< 5.434E-002 +/-	14.7%	< 5.176E-005	< 2.859E-006
K-40	< 3.809E-001 +/-	4.9%	< 3.627E-004	< 5.942E-002
Co-57	< 3.873E-001 +/-	3.6%	< 3.689E-004	< 4.531E-011
Co-60	< 4.226E-002 +/-	1.6%	< 4.025E-005	< 3.706E-011
Se-75	< 2.958E-001 +/-	1.9%	< 2.818E-004	< 2.035E-011
Kr-85	< 1.797E+001 +/-	3.1%	< 1.711E-002	< 4.528E-008
Sr-90	< 7.219E-002 +/-	2.1%	< 6.875E-005	< 5.234E-010
Sb-125	< 3.215E-001 +/-	2.3%	< 3.062E-004	< 3.093E-010
Ba-133	< 2.281E-001 +/-	1.7%	< 2.172E-004	< 9.010E-010
Cs-134	< 3.669E-002 +/-	1.8%	< 3.494E-005	< 2.799E-011
Cs-137				
Eu-152				
Eu-154	< 1.151E-001 +/-	2.2%	< 1.096E-004	< 4.315E-010
Ho-166m	< 6.132E-002 +/-	2.2%	< 5.840E-005	< 3.410E-008
Bi-207	< 3.994E-002 +/-	1.8%	< 3.804E-005	< 7.269E-010
Pb-210	< 2.778E+001 +/-	36.7%	< 2.645E-002	< 3.611E-007
Ra-226	< 1.095E-001 +/-	2.3%	< 1.043E-004	< 1.095E-007
Ac-227	< 1.020E+000 +/-	8.3%	< 9.713E-004	< 1.397E-008
Th-230	< 1.346E+002 +/-	13.1%	< 1.282E-001	< 6.597E-003
Pa-231	< 5.312E+000 +/-	11.2%	< 5.059E-003	< 1.110E-004
Th-232	< 1.177E-001 +/-	2.4%	< 1.121E-004	< 1.060E+000
U-232	< 2.098E-001 +/-	2.2%	< 1.998E-004	< 9.713E-009
U-233	< 3.974E+003 +/-	2.7%	< 3.785E+000	< 4.054E-001
Pa-234	< 1.464E-001 +/-	12.2%	< 1.395E-004	
Pa-234m	< 1.185E+002 +/-	2.1%	< 1.129E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 3.429E-001 +/-	2.5%	< 3.266E-004	< 1.567E-001
Np-237	2.356E+000 +/-	9.7%	2.244E-003	3.299E-003
Pu-238	< 2.237E+004 +/-	2.6%	< 2.130E+001	< 1.293E-003
U-238	< 3.909E+000 +/-	2.1%	< 3.722E-003	< 1.149E+001
Pu-239	1.583E+006 +/-	4.3%	1.507E+003	2.516E+001
Pu-239B	1.644E+006 +/-	1.4%	1.566E+003	2.614E+001
U-239	< 5.811E+001 +/-	45.9%	< 5.534E-002	
Pu-240	3.820E+005 +/-	22.2%	3.638E+002	1.662E+000
Am-241	4.687E+005 +/-	3.9%	4.463E+002	1.350E-001
Am-241B	5.544E+005 +/-	4.6%	5.280E+002	1.597E-001
Pu-241	4.256E+006 +/-	8.0%	4.053E+003	4.094E-002
Pu-241B	5.482E+006 +/-	2.9%	5.221E+003	5.274E-002
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 7.495E-001 +/-	8.4%	< 7.138E-004	< 3.710E-006
Cm-243	< 1.077E+000 +/-	3.3%	< 1.025E-003	< 2.067E-008
Cm-244	< 5.613E+004 +/-	14.2%	< 5.346E+001	< 6.848E-004
Cm-245	< 2.101E+000 +/-	7.7%	< 2.001E-003	< 1.208E-005
Cm-247	< 1.503E-001 +/-	8.5%	< 1.432E-004	< 1.608E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.753E-001 +/-	3.5%	< 1.669E-004	< 4.241E-008
Cf-251	< 1.202E+000 +/-	5.6%	< 1.145E-003	< 7.513E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	2.52E+001 +- 1.07E+000	2.49E+001 +- 3.74E-001

Beta: 3.05E+000 +- 1.16E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	2.92E+001 +- 2.34E+000
203.55	2.40E+001 +- 6.65E-001
375.05	2.47E+001 +- 6.16E-001
413.71	2.57E+001 +- 6.96E-001

Segment 6 Results

Segment: 6 Detector: DET01 Position: 6
C:\Canberra\NDA2k\Data\00000197_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P006_S006

Acquisition Start: 12/18/2008 8:29:17 AM
Elapsed Live Time: 88.62 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.001 +/- 0.0005
SE-75	264.66	0.205 +/- 0.0042
SE-75	279.54	0.220 +/- 0.0066
SE-75	400.66	0.351 +/- 0.0118

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

*** Spectrum Validity Test warnings ***
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 12/18/2008 8:31:19 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.37	Y	115421	9426	1.17	120.57	6.680E-007	1.27	
M	94.59	Y	21663	16904	1.54	190.97	3.219E-005	1.94	113.18
m	98.60	Y	85496	22913	1.55	198.98	3.869E-005	1.66	
m	100.79	Y	13456	21816	1.55	203.35	4.229E-005	2.29	
m	103.25	Y	61483	18806	1.55	208.27	4.636E-005	1.64	
M	111.00	Y	22365	10421	1.36	223.75	5.888E-005	1.33	152.14
m	114.52	Y	18575	11810	1.37	230.78	6.426E-005	1.34	
m	116.58	Y	17261	11982	1.37	234.91	6.729E-005	1.34	
m	120.48	Y	4146	9834	1.38	242.70	7.275E-005	1.70	
m	122.72	Y	2080	10431	1.38	247.17	7.570E-005	2.37	
m	125.15	Y	8099	9953	1.39	252.03	7.875E-005	1.44	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	129.20	Y	39702	8597	1.39	260.12	8.342E-005	1.30	
M	144.05	Y	2645	6502	1.20	289.80	1.615E-004	8.12	0.76
m	146.18	Y	2313	6572	1.21	294.06	1.719E-004	8.71	
m	148.45	Y	5654	6677	1.21	298.59	1.818E-004	6.88	
M	161.06	Y	2576	6769	1.27	323.79	2.241E-004	11.69	8.77
m	164.56	Y	2096	11151	1.27	330.79	2.330E-004	9.64	
	171.34	Y	1855	6510	1.23	344.33	2.477E-004	9.02	
	178.97	Y	811	6139	1.13	359.58	2.607E-004	19.37	
	189.11	Y	1306	6653	1.35	379.83	2.735E-004	13.03	
	195.48	Y	1648	5854	1.16	392.56	2.792E-004	9.59	
M	203.44	Y	9387	5546	1.18	408.48	2.844E-004	2.70	1.36
m	207.91	Y	30768	4457	1.19	417.41	2.865E-004	2.38	
M	237.63		217	3045	1.17	476.81	2.900E-004	24.72	0.91
m	243.28	Y	417	3226	1.18	488.08	2.891E-004	13.77	
m	249.00		222	3351	1.18	499.51	2.880E-004	23.22	
	255.28	Y	1331	3229	1.21	512.07	2.865E-004	9.23	
M	263.80	Y	559	2446	1.29	529.09	2.842E-004	18.46	0.53
m	267.46	Y	1207	2868	1.30	536.42	2.829E-004	16.19	
	297.32	Y	748	1870	0.98	596.08	2.730E-004	11.86	
	311.77	Y	1645	2128	1.31	624.95	2.680E-004	6.44	
M	320.88	Y	884	2130	1.29	643.15	2.648E-004	6.00	6.42
m	323.36	Y	1073	2091	1.30	648.12	2.640E-004	5.05	
m	332.65	Y	10537	1885	1.30	666.68	2.608E-004	1.66	
m	335.60	Y	4295	1707	1.31	672.58	2.597E-004	2.21	
m	341.39	Y	1175	1750	1.31	684.15	2.575E-004	4.50	
m	344.91	Y	9212	1618	1.32	691.18	2.564E-004	1.71	
M	361.88	Y	242	1278	1.34	725.08	2.506E-004	16.14	10.49
m	366.95	Y	1401	1253	1.34	735.22	2.488E-004	5.03	
m	368.49	Y	2808	1111	1.35	738.29	2.482E-004	3.21	
m	374.96	Y	25121	1098	1.35	751.22	2.461E-004	1.62	
m	380.06	Y	4818	854	1.36	761.41	2.444E-004	2.31	
m	382.69	Y	4354	817	1.36	766.67	2.436E-004	2.38	
	392.87	Y	8538	939	1.58	787.01	2.403E-004	1.90	
	413.63	Y	22124	674	1.40	828.49	2.325E-004	1.46	
M	422.49	Y	1601	496	1.30	846.20	2.291E-004	3.31	1.97
m	426.54	Y	361	525	1.31	854.29	2.275E-004	8.42	
M	445.78	Y	145	268	1.30	892.75	2.205E-004	13.94	1.53
m	451.40	Y	2631	288	1.31	903.98	2.186E-004	2.57	
	618.90	Y	257	67	1.32	1238.69	1.772E-004	10.10	
M	640.02	Y	132	38	1.53	1280.89	1.734E-004	10.58	1.77
m	645.84	Y	149	40	1.54	1292.52	1.724E-004	9.83	
m	652.52	Y	213	35	1.54	1305.87	1.713E-004	8.00	
m	658.76	Y	98	34	1.55	1318.34	1.702E-004	12.80	
m	662.33	Y	1247	34	1.55	1325.47	1.696E-004	3.45	
	688.68	Y	111	46	1.04	1378.12	1.655E-004	18.00	
	721.84	Y	577	34	1.31	1444.39	1.605E-004	5.40	
	756.05	Y	42	18	1.23	1512.76	1.557E-004	27.43	
	769.28	Y	130	26	1.66	1539.20	1.539E-004	13.48	
	2235.33		11980	63	1.04	4468.79	5.249E-005	1.62	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.34 +/- 0.02

Y = Peak Identified by NID
M = First peak in a multiplet region

m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 3.001E-002 +/-	1.9%	< 2.858E-005	< 1.383E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.829E-002 +/-	1.9%	< 2.694E-005	< 4.469E-012
Al-26	< 7.704E-002 +/-	19.8%	< 7.338E-005	< 4.053E-006
K-40	< 5.186E-001 +/-	5.3%	< 4.939E-004	< 8.090E-002
Co-57	3.047E+000 +/-	22.6%	2.902E-003	3.565E-010
Co-60	< 3.240E-002 +/-	2.5%	< 3.086E-005	< 2.842E-011
Se-75	< 2.628E-001 +/-	2.3%	< 2.503E-004	< 1.808E-011
Kr-85	< 1.545E+001 +/-	3.2%	< 1.471E-002	< 3.892E-008
Sr-90	< 6.290E-002 +/-	2.6%	< 5.990E-005	< 4.560E-010
Sb-125	< 2.943E-001 +/-	2.7%	< 2.803E-004	< 2.831E-010
Ba-133	< 2.127E-001 +/-	1.8%	< 2.026E-004	< 8.403E-010
Cs-134	< 3.095E-002 +/-	2.0%	< 2.948E-005	< 2.362E-011
Cs-137				
Eu-152	< 3.378E-002 +/-	3.8%	< 3.217E-005	< 1.899E-010
Eu-154	< 8.079E-002 +/-	2.1%	< 7.695E-005	< 3.030E-010
Ho-166m	< 3.984E-002 +/-	2.4%	< 3.795E-005	< 2.215E-008
Bi-207	< 3.705E-002 +/-	1.9%	< 3.528E-005	< 6.743E-010
Pb-210	< 3.351E+004 +/-	309.7%	< 3.192E+001	< 4.357E-004
Ra-226	< 1.075E-001 +/-	2.7%	< 1.023E-004	< 1.075E-007
Ac-227	< 8.996E-001 +/-	8.5%	< 8.568E-004	< 1.232E-008
Th-230	< 4.483E+002 +/-	9.0%	< 4.269E-001	< 2.197E-002
Pa-231	< 4.925E+000 +/-	11.3%	< 4.691E-003	< 1.029E-004
Th-232	< 1.047E-001 +/-	2.4%	< 9.972E-005	< 9.434E-001
U-232	< 1.743E-001 +/-	2.6%	< 1.660E-004	< 8.068E-009
U-233	< 3.460E+003 +/-	4.0%	< 3.296E+000	< 3.530E-001
Pa-234	< 1.450E-001 +/-	12.2%	< 1.381E-004	
Pa-234m	< 1.915E+002 +/-	2.1%	< 1.824E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 2.836E-001 +/-	4.0%	< 2.701E-004	< 1.296E-001
Np-237	2.589E+000 +/-	9.4%	2.466E-003	3.625E-003
Pu-238	< 1.934E+004 +/-	4.2%	< 1.842E+001	< 1.118E-003
U-238	< 2.661E+000 +/-	2.1%	< 2.534E-003	< 7.822E+000
Pu-239	1.493E+006 +/-	4.7%	1.422E+003	2.374E+001
Pu-239B	1.483E+006 +/-	1.4%	1.412E+003	2.357E+001
U-239	< 2.733E+005 +/-	368.5%	< 2.603E+002	
Pu-240	2.342E+005 +/-	34.0%	2.230E+002	1.019E+000
Am-241	4.369E+005 +/-	3.9%	4.161E+002	1.258E-001
Am-241B	3.228E+005 +/-	7.6%	3.075E+002	9.298E-002
Pu-241	3.776E+006 +/-	8.1%	3.596E+003	3.632E-002
Pu-241B	4.660E+006 +/-	3.8%	4.438E+003	4.483E-002
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 9.558E-001 +/-	2.2%	< 9.103E-004	< 4.731E-006
Cm-243	< 9.859E-001 +/-	3.5%	< 9.389E-004	< 1.893E-008
Cm-244	< 3.422E+004 +/-	14.2%	< 3.259E+001	< 4.175E-004
Cm-245	< 1.736E+000 +/-	8.4%	< 1.654E-003	< 9.984E-006

Cm-247	< 1.444E-001	+/- 8.5%	< 1.376E-004	< 1.545E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.648E-001 +/-	3.5%	< 1.569E-004	< 3.988E-008
Cf-251	< 9.883E-001 +/-	6.5%	< 9.413E-004	< 6.177E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	2.37E+001 +- 1.12E+000	2.30E+001 +- 3.95E-001

Beta: 1.02E+001 +- 1.40E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	2.70E+001 +- 2.19E+000
203.55	2.08E+001 +- 8.92E-001
375.05	2.35E+001 +- 6.32E-001
413.71	2.32E+001 +- 6.39E-001

Segment 7 Results

Segment: 7 Detector: DET01 Position: 7
C:\Canberra\NDA2k\Data\00000197_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P007_S007

Acquisition Start: 12/18/2008 8:33:29 AM
Elapsed Live Time: 100.59 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.078 +/- 0.0034
SE-75	264.66	0.310 +/- 0.0074
SE-75	279.54	0.336 +/- 0.0073
SE-75	400.66	0.423 +/- 0.0112

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

*** Spectrum Validity Test warnings ***
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 12/18/2008 8:35:30 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.38	Y	75610	7537	1.16	120.60	2.475E-006	1.25	
M	94.61	Y	12811	12633	1.52	191.01	7.517E-005	2.22	77.94
m	98.62	Y	48871	17024	1.53	199.02	8.979E-005	1.83	
m	100.81	Y	7841	16140	1.53	203.40	9.798E-005	2.68	
m	103.26	Y	34114	13839	1.54	208.29	1.072E-004	1.81	
M	111.01	Y	12527	7507	1.36	223.78	1.364E-004	1.89	84.79
m	114.50	Y	10518	8527	1.36	230.75	1.491E-004	2.00	
m	116.57	Y	9551	7947	1.37	234.88	1.565E-004	1.96	
m	120.60	Y	2331	7823	1.37	242.93	1.703E-004	3.82	
m	125.15	Y	4867	7209	1.38	252.04	1.850E-004	2.50	
m	129.22	Y	23190	6236	1.39	260.17	1.971E-004	1.66	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
M	144.09	Y	1457	4651	1.12	289.87	2.460E-004	10.50	1.37
m	146.25	Y	1135	5192	1.13	294.19	2.534E-004	11.29	
m	148.49	Y	3226	5233	1.13	298.68	2.607E-004	9.28	
M	160.94	Y	1685	4587	1.43	323.55	2.946E-004	16.70	3.54
m	164.54	Y	1395	8149	1.44	330.74	3.023E-004	13.19	
	171.43	Y	1066	4636	1.70	344.51	3.148E-004	11.82	
	179.25	Y	402	4925	1.52	360.14	3.255E-004	32.09	
	189.27	Y	677	4731	1.14	380.16	3.347E-004	18.88	
	195.62	Y	616	4742	1.23	392.85	3.384E-004	20.73	
M	203.48	Y	5176	3486	1.18	408.56	3.408E-004	3.28	1.54
m	207.95	Y	17246	3331	1.19	417.48	3.413E-004	2.82	
	255.25	Y	842	2183	1.36	512.01	3.236E-004	10.79	
M	263.84	Y	325	1585	1.18	529.17	3.180E-004	11.86	1.14
m	267.38	Y	640	1672	1.19	536.24	3.160E-004	7.02	
	297.48	Y	390	1817	1.12	596.40	2.945E-004	21.06	
	311.75	Y	708	1626	1.30	624.91	2.831E-004	11.15	
M	320.93	Y	615	1512	1.87	643.27	2.761E-004	7.70	1.72
m	323.37	Y	799	2203	1.87	648.12	2.743E-004	6.05	
M	332.69	Y	5811	1360	1.27	666.76	2.674E-004	1.86	3.19
m	335.66	Y	2315	1270	1.27	672.69	2.653E-004	2.71	
m	341.40	Y	620	1210	1.28	684.17	2.614E-004	6.12	
m	344.96	Y	5116	1142	1.28	691.28	2.589E-004	1.94	
	368.31	Y	2307	1271	2.27	737.93	2.440E-004	3.92	
M	375.02	Y	13421	915	1.29	751.35	2.401E-004	1.48	10.72
m	380.13	Y	2636	683	1.29	761.56	2.371E-004	2.48	
m	382.71	Y	2291	584	1.29	766.71	2.357E-004	2.61	
	392.85	Y	4647	604	1.47	786.97	2.302E-004	2.23	
	413.66	Y	12275	424	1.42	828.56	2.193E-004	1.56	
M	422.50	Y	872	264	1.25	846.23	2.150E-004	4.21	3.34
m	426.67	Y	176	267	1.25	854.55	2.130E-004	10.72	
	451.39	Y	1486	191	1.43	903.96	2.022E-004	3.53	
	619.01	Y	117	38	1.18	1238.90	1.574E-004	14.42	
M	639.73	Y	61	27	1.33	1280.30	1.540E-004	25.18	1.71
m	645.75	Y	96	35	1.33	1292.34	1.531E-004	23.54	
M	658.80	Y	42	41	1.48	1318.42	1.511E-004	22.02	1.33
m	662.37	Y	655	31	1.48	1325.55	1.506E-004	4.46	
	688.74	Y	43	24	1.08	1378.25	1.471E-004	27.90	
	722.04	Y	299	26	1.53	1444.80	1.431E-004	7.22	
	769.11	Y	69	19	1.56	1538.85	1.382E-004	17.93	
	2235.40		11980	51	1.01	4468.93	4.245E-005	1.54	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.20 +/- 0.01

' = Peak Identified by NID
! = First peak in a multiplet region
= Other peak in a multiplet region
= Fitted singlet
= Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 3.101E-002 +/-	1.8%	< 2.953E-005	< 1.429E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 2.808E-002 +/-	2.0%	< 2.674E-005	< 4.436E-012
	Al-26	< 5.566E-002 +/-	15.5%	< 5.301E-005	< 2.928E-006
	K-40	< 3.009E-001 +/-	5.0%	< 2.866E-004	< 4.695E-002
	Co-57	3.287E+000 +/-	6.0%	3.131E-003	3.846E-010
	Co-60	< 3.184E-002 +/-	1.7%	< 3.033E-005	< 2.793E-011
	Se-75	< 2.003E-001 +/-	1.9%	< 1.907E-004	< 1.378E-011
	Kr-85	< 1.286E+001 +/-	3.1%	< 1.225E-002	< 3.241E-008
	Sr-90	< 6.032E-002 +/-	2.1%	< 5.744E-005	< 4.373E-010
	Sb-125	< 2.610E-001 +/-	2.3%	< 2.486E-004	< 2.511E-010
	Ba-133	< 1.702E-001 +/-	1.7%	< 1.621E-004	< 6.723E-010
	Cs-134	< 3.176E-002 +/-	1.8%	< 3.024E-005	< 2.423E-011
X	Cs-137				
	Eu-152	< 3.812E-002 +/-	1.8%	< 3.630E-005	< 2.142E-010
	Eu-154	< 8.018E-002 +/-	2.2%	< 7.636E-005	< 3.007E-010
	Ho-166m	< 4.073E-002 +/-	2.2%	< 3.879E-005	< 2.265E-008
	Bi-207	< 3.979E-002 +/-	1.9%	< 3.790E-005	< 7.242E-010
	Pb-210	< 5.634E+003 +/-	70.4%	< 5.366E+000	< 7.325E-005
	Ra-226	< 7.962E-002 +/-	2.3%	< 7.583E-005	< 7.962E-008
	Ac-227	< 6.746E-001 +/-	8.3%	< 6.425E-004	< 9.242E-009
	Th-230	< 3.271E+002 +/-	8.6%	< 3.116E-001	< 1.603E-002
	Pa-231	< 3.876E+000 +/-	11.2%	< 3.692E-003	< 8.101E-005
	Th-232	< 9.874E-002 +/-	2.4%	< 9.404E-005	< 8.897E-001
	U-232	< 1.381E-001 +/-	2.2%	< 1.315E-004	< 6.395E-009
	U-233	< 2.479E+003 +/-	2.9%	< 2.361E+000	< 2.529E-001
	Pa-234	< 1.532E-001 +/-	12.2%	< 1.459E-004	
	Pa-234m	< 1.902E+002 +/-	2.1%	< 1.811E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 2.080E-001 +/-	2.6%	< 1.981E-004	< 9.505E-002
	Np-237	8.911E-001 +/-	18.5%	8.487E-004	1.248E-003
	Pu-238	< 1.422E+004 +/-	2.8%	< 1.354E+001	< 8.218E-004
	U-238	< 2.317E+000 +/-	2.2%	< 2.207E-003	< 6.812E+000
	Pu-239	1.168E+006 +/-	3.4%	1.112E+003	1.857E+001
	Pu-239B	8.485E+005 +/-	1.4%	8.081E+002	1.349E+001
	U-239	< 3.577E+004 +/-	85.6%	< 3.407E+001	
	Pu-240	9.069E+004 +/-	48.2%	8.637E+001	3.945E-001
	Am-241	2.579E+005 +/-	4.5%	2.456E+002	7.427E-002
	Am-241B	3.137E+005 +/-	4.8%	2.988E+002	9.036E-002
	Pu-241	1.502E+006 +/-	9.7%	1.431E+003	1.445E-002
	Pu-241B	2.260E+006 +/-	3.3%	2.152E+003	2.174E-002
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 7.520E-001 +/-	1.9%	< 7.162E-004	< 3.723E-006
	Cm-243	< 7.757E-001 +/-	3.4%	< 7.387E-004	< 1.489E-008
	Cm-244	< 4.315E+004 +/-	14.2%	< 4.110E+001	< 5.264E-004
	Cm-245	< 1.279E+000 +/-	7.7%	< 1.218E-003	< 7.355E-006
	Cm-247	< 1.103E-001 +/-	8.5%	< 1.050E-004	< 1.180E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.331E-001 +/-	3.5%	< 1.268E-004	< 3.221E-008
Cf-251	< 7.259E-001 +/-	5.7%	< 6.913E-004	< 4.537E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.86E+001 +- 6.25E-001	1.01E+001 +- 1.62E-001

Beta: 1.33E+002 +- 8.12E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	6.68E+000 +- 2.64E-001
203.55	9.56E+000 +- 3.82E-001
375.05	1.29E+001 +- 3.22E-001
413.71	1.37E+001 +- 3.71E-001

Segment 8 Results

Segment: 8 Detector: DET01 Position: 8
C:\Canberra\NDA2k\Data\00000197_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P008_S008

Acquisition Start: 12/18/2008 8:37:40 AM
Elapsed Live Time: 113.16 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.374 +/- 0.0064
SE-75	264.66	0.526 +/- 0.0080
SE-75	279.54	0.539 +/- 0.0094
SE-75	400.66	0.586 +/- 0.0126

Errors quoted at 1.000 sigma

Peak Analysis Results

*** Spectrum Validity Test warnings ***
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 12/18/2008 8:39:41 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.40	Y	21467	3274	1.14	120.64	9.286E-005	1.37	
M	94.69	Y	3592	6595	1.52	191.17	2.310E-004	3.84	22.43
m	98.66	Y	13605	10107	1.52	199.09	2.438E-004	2.83	
m	100.78	Y	2180	8679	1.53	203.33	2.504E-004	4.72	
m	103.29	Y	9242	7260	1.53	208.34	2.578E-004	2.81	
M	110.99	Y	3660	4910	1.55	223.74	2.785E-004	2.26	7.29
m	114.48	Y	2431	7820	1.56	230.71	2.870E-004	3.23	
m	116.46	Y	2402	7783	1.56	234.66	2.915E-004	3.23	
M	125.23	Y	1043	3758	1.07	252.19	3.093E-004	4.88	3.09
m	129.28	Y	6522	2873	1.07	260.28	3.163E-004	1.77	
M	144.27	Y	462	2143	0.89	290.23	3.391E-004	21.91	4.67

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	148.65	Y	1001	3969	0.90	299.00	3.449E-004	13.98	
	171.30	Y	275	2318	0.73	344.25	3.647E-004	28.05	
	195.52	Y	291	2208	1.11	392.65	3.718E-004	26.64	
M	203.54	Y	1263	1391	1.10	408.67	3.719E-004	3.73	2.61
m	207.98	Y	4401	1549	1.11	417.55	3.715E-004	1.99	
	255.28	Y	249	999	0.94	512.06	3.559E-004	21.39	
	267.53	Y	108	848	1.03	536.55	3.497E-004	43.41	
	311.87	Y	210	657	1.67	625.15	3.221E-004	19.83	
M	332.74	Y	1566	681	1.32	666.85	3.086E-004	2.96	1.97
m	335.76	Y	613	576	1.32	672.89	3.066E-004	4.90	
	344.91	Y	1207	563	1.36	691.19	3.008E-004	4.42	
	368.33	Y	540	502	2.38	737.98	2.865E-004	8.36	
M	375.04	Y	3373	418	1.27	751.39	2.825E-004	2.07	2.28
m	380.11	Y	677	270	1.28	761.52	2.795E-004	4.31	
m	382.77	Y	563	229	1.28	766.82	2.780E-004	4.74	
	392.91	Y	1157	277	1.59	787.08	2.722E-004	4.04	
	413.74	Y	3017	160	1.41	828.71	2.610E-004	2.29	
	422.59	Y	167	144	1.31	846.39	2.564E-004	14.19	
	451.36	Y	396	59	1.23	903.89	2.424E-004	6.15	
	662.62	Y	154	24	1.61	1326.05	1.720E-004	9.91	
	721.78	Y	97	8	1.29	1444.28	1.596E-004	11.56	
	2235.42		11980	25	0.98	4468.96	1.082E-004	1.46	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.07 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 2.589E-002 +/-	1.8%	< 2.466E-005	< 1.193E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 1.816E-002 +/-	1.9%	< 1.729E-005	< 2.869E-012
	Al-26	< 2.284E-002 +/-	18.8%	< 2.176E-005	< 1.202E-006
	K-40	< 2.080E-001 +/-	5.3%	< 1.981E-004	< 3.245E-002
	Co-57	< 1.690E-001 +/-	4.5%	< 1.609E-004	< 1.977E-011
	Co-60	< 3.123E-002 +/-	1.7%	< 2.974E-005	< 2.739E-011
	Se-75	< 1.269E-001 +/-	1.8%	< 1.208E-004	< 8.728E-012
	Kr-85	< 8.033E+000 +/-	3.0%	< 7.651E-003	< 2.024E-008
	Sr-90	< 4.538E-002 +/-	2.2%	< 4.322E-005	< 3.290E-010
	Sb-125	< 1.352E-001 +/-	1.9%	< 1.288E-004	< 1.301E-010
	Ba-133	< 1.018E-001 +/-	1.6%	< 9.691E-005	< 4.020E-010
	Cs-134	< 4.419E-003 +/-	1.8%	< 4.209E-006	< 3.372E-012
X	Cs-137				
	Eu-152	< 1.039E-001 +/-	1.8%	< 9.893E-005	< 5.838E-010

	Eu-154	<	5.185E-002	+/-	2.1%	<	4.938E-005	< 1.944E-010
	Ho-166m	<	3.200E-002	+/-	2.3%	<	3.048E-005	< 1.779E-008
	Bi-207	<	2.435E-002	+/-	2.1%	<	2.319E-005	< 4.431E-010
	Pb-210	<	1.560E+001	+/-	259.0%	<	1.485E-002	< 2.028E-007
	Ra-226	<	6.414E-002	+/-	2.4%	<	6.108E-005	< 6.414E-008
	Ac-227	<	4.593E-001	+/-	8.3%	<	4.375E-004	< 6.293E-009
	Th-230	<	6.280E+001	+/-	83.3%	<	5.981E-002	< 3.077E-003
	Pa-231	<	2.642E+000	+/-	11.2%	<	2.516E-003	< 5.521E-005
	Th-232	<	9.123E-002	+/-	2.3%	<	8.688E-005	< 8.219E-001
	U-232	<	9.902E-002	+/-	2.3%	<	9.431E-005	< 4.585E-009
	U-233	<	1.677E+003	+/-	3.0%	<	1.597E+000	< 1.711E-001
	Pa-234	<	1.119E-001	+/-	12.1%	<	1.066E-004	
	Pa-234m	<	1.761E+002	+/-	2.1%	<	1.677E-001	
	U-234	<	0.000E+000	+/-	0.0%	<	0.000E+000	< 0.000E+000
	U-235	<	1.589E-001	+/-	2.9%	<	1.513E-004	< 7.260E-002
	Np-237		2.537E-001	+/-	29.8%		2.416E-004	3.551E-004
	Pu-238	<	1.034E+004	+/-	3.1%	<	9.849E+000	< 5.977E-004
	U-238	<	3.200E+000	+/-	2.1%	<	3.047E-003	< 9.407E+000
	Pu-239		2.682E+005	+/-	3.5%		2.554E+002	4.265E+000
	Pu-239B		1.884E+005	+/-	2.2%		1.794E+002	2.995E+000
	U-239	<	4.736E+001	+/-	308.3%	<	4.510E-002	
X	Pu-240							
	Am-241		6.016E+004	+/-	7.9%		5.729E+001	1.733E-002
	Am-241B		4.292E+004	+/-	11.0%		4.087E+001	1.236E-002
	Pu-241		3.525E+005	+/-	14.3%		3.357E+002	3.391E-003
	Pu-241B		5.126E+005	+/-	3.3%		4.882E+002	4.931E-003
	Pu-242	<	0.000E+000	+/-	0.0%	<	0.000E+000	< 0.000E+000
	Am-243	<	3.398E-001	+/-	57.8%	<	3.236E-004	< 1.682E-006
	Cm-243	<	5.293E-001	+/-	3.3%	<	5.041E-004	< 1.016E-008
	Cm-244	<	2.405E+004	+/-	14.2%	<	2.290E+001	< 2.934E-004
	Cm-245	<	9.786E-001	+/-	7.8%	<	9.320E-004	< 5.627E-006
	Cm-247	<	5.924E-002	+/-	8.5%	<	5.642E-005	< 6.339E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 7.222E-002 +/-	3.4%	< 6.878E-005	< 1.748E-008
Cf-251	< 5.417E-001 +/-	5.8%	< 5.159E-004	< 3.386E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	4.26E+000 +- 1.50E-001	1.86E+000 +- 3.34E-002

Beta: 1.63E+002 +- 8.14E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.17E+000 +- 4.61E-002
203.55	2.14E+000 +- 9.39E-002
375.05	2.75E+000 +- 7.53E-002
413.71	2.82E+000 +- 8.51E-002

Segment 9 Results

Segment: 9 Detector: DET01 Position: 9
C:\Canberra\NDA2k\Data\00000197_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P009_S009

Acquisition Start: 12/18/2008 8:41:51 AM
Elapsed Live Time: 117.58 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.380 +/- 0.0063
SE-75	264.66	0.518 +/- 0.0078
SE-75	279.54	0.533 +/- 0.0090
SE-75	400.66	0.568 +/- 0.0118

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/18/2008 8:43:53 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.41	Y	2710	1255	1.30	120.67	1.325E-005	2.98	
M	98.63	Y	608	3443	1.59	199.04	1.883E-004	30.06	2.09
m	103.22	Y	459	3986	1.60	208.20	2.118E-004	26.81	
	129.37	Y	209	1392	1.15	260.47	3.135E-004	27.64	
	393.16		30	48	0.66	787.60	2.748E-004	38.86	
	413.48	Y	68	28	1.07	828.20	2.654E-004	17.32	
	2235.47		11980	14	0.98	4469.06	5.233E-005	1.43	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.02 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 1.398E-002 +/-	1.9%	< 1.331E-005	< 6.444E-016
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 5.238E-003 +/-	1.9%	< 4.989E-006	< 8.277E-013
	Al-26	< 2.791E-002 +/-	19.6%	< 2.658E-005	< 1.468E-006
	K-40	< 2.802E-001 +/-	5.3%	< 2.668E-004	< 4.371E-002
	Co-57	< 1.112E-001 +/-	4.5%	< 1.059E-004	< 1.301E-011
	Co-60	< 3.200E-002 +/-	1.7%	< 3.048E-005	< 2.806E-011
	Se-75	< 8.395E-002 +/-	2.3%	< 7.995E-005	< 5.776E-012
	Kr-85	< 4.562E+000 +/-	3.2%	< 4.344E-003	< 1.150E-008
	Sr-90	< 1.681E-002 +/-	2.3%	< 1.601E-005	< 1.218E-010
	Sb-125	< 4.813E-002 +/-	2.1%	< 4.583E-005	< 4.630E-011
	Ba-133	< 6.609E-002 +/-	1.8%	< 6.294E-005	< 2.611E-010
	Cs-134	< 1.830E-002 +/-	1.9%	< 1.743E-005	< 1.396E-011
	Cs-137	< 1.681E-002 +/-	2.3%	< 1.601E-005	< 1.916E-010
	Eu-152	< 7.194E-002 +/-	1.8%	< 6.852E-005	< 4.043E-010
	Eu-154	< 1.496E-002 +/-	2.1%	< 1.425E-005	< 5.609E-011
	Ho-166m	< 2.506E-002 +/-	2.3%	< 2.387E-005	< 1.394E-008
	Bi-207	< 1.661E-002 +/-	2.4%	< 1.582E-005	< 3.023E-010
	Pb-210	< 4.370E+002 +/-	311.1%	< 4.162E-001	< 5.682E-006
	Ra-226	< 3.864E-002 +/-	2.6%	< 3.680E-005	< 3.864E-008
	Ac-227	< 2.860E-001 +/-	8.5%	< 2.723E-004	< 3.918E-009
	Th-230	< 1.366E+002 +/-	9.1%	< 1.301E-001	< 6.694E-003
	Pa-231	< 1.742E+000 +/-	11.3%	< 1.659E-003	< 3.641E-005
	Th-232	< 5.234E-002 +/-	2.5%	< 4.985E-005	< 4.716E-001
	U-232	< 5.234E-002 +/-	2.5%	< 4.985E-005	< 2.423E-009
	U-233	< 1.005E+003 +/-	4.1%	< 9.572E-001	< 1.025E-001
	Pa-234	< 4.348E-002 +/-	11.8%	< 4.141E-005	
	Pa-234m	< 1.299E+002 +/-	2.1%	< 1.237E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 1.023E-001 +/-	4.1%	< 9.743E-005	< 4.675E-002
	Np-237	< 1.262E-001 +/-	2.2%	< 1.202E-004	< 1.767E-004
	Pu-238	< 6.747E+003 +/-	4.3%	< 6.426E+000	< 3.900E-004
	U-238	< 1.916E+000 +/-	2.1%	< 1.825E-003	< 5.632E+000
	Pu-239	4.995E+003 +/-	28.4%	4.758E+000	7.943E-002
	Pu-239B	< 3.829E+003 +/-	18.9%	< 3.647E+000	< 6.087E-002
	U-239	< 2.867E+003 +/-	370.1%	< 2.730E+000	
X	Pu-240				
	Am-241	1.283E+002 +/-	153.6%	1.222E-001	3.696E-005
	Am-241B	2.790E+003 +/-	23.4%	2.657E+000	8.035E-004
	Pu-241	< 3.549E+004 +/-	4.3%	< 3.380E+001	< 3.414E-004
	Pu-241B	< 1.065E+004 +/-	3.5%	< 1.015E+001	< 1.025E-004
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 3.507E-001 +/-	2.2%	< 3.340E-004	< 1.736E-006
	Cm-243	< 3.617E-001 +/-	3.6%	< 3.445E-004	< 6.944E-009
	Cm-244	< 2.295E+004 +/-	14.2%	< 2.186E+001	< 2.800E-004
	Cm-245	< 6.278E-001 +/-	8.4%	< 5.979E-004	< 3.610E-006
	Cm-247	< 3.236E-002 +/-	8.5%	< 3.082E-005	< 3.463E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 4.117E-002 +/-	3.5%	< 3.921E-005	< 9.963E-009
Cf-251	< 3.386E-001 +/-	6.6%	< 3.224E-004	< 2.116E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	7.94E-002 +- 2.25E-002	4.98E-002 +- 7.61E-003

Beta: 9.61E+001 +- 6.19E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 2

Energy	Mass (g)
129.30	3.78E-002 +- 1.05E-002
413.71	6.30E-002 +- 1.10E-002

Segment 10 Results

Segment: 10 Detector: DET01 Position: 10
C:\Canberra\NDA2k\Data\00000197_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P010_S010

Acquisition Start: 12/18/2008 8:46:03 AM
Elapsed Live Time: 118.16 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.337 +/- 0.0057
SE-75	264.66	0.487 +/- 0.0073
SE-75	279.54	0.492 +/- 0.0084
SE-75	400.66	0.548 +/- 0.0115

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/18/2008 8:48:05 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.42	Y	1238	766	1.15	120.67	5.788E-006	4.59	
2235.42		11980	10	0.98	4468.97	5.140E-005	1.43	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.02 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 1.635E-002 +/-	1.9%	< 1.558E-005	< 7.539E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 1.356E-002 +/-	1.9%	< 1.291E-005	< 2.143E-012
Al-26	< 2.429E-002 +/-	19.8%	< 2.314E-005	< 1.278E-006
K-40	< 3.333E-001 +/-	5.3%	< 3.174E-004	< 5.199E-002
Co-57	< 9.367E-002 +/-	4.6%	< 8.921E-005	< 1.096E-011
Co-60	< 2.677E-002 +/-	2.5%	< 2.550E-005	< 2.348E-011
Se-75	< 6.134E-002 +/-	2.2%	< 5.842E-005	< 4.220E-012
Kr-85	< 5.529E+000 +/-	3.3%	< 5.265E-003	< 1.393E-008
Sr-90	< 1.860E-002 +/-	2.4%	< 1.772E-005	< 1.349E-010
Sb-125	< 4.796E-002 +/-	2.2%	< 4.568E-005	< 4.614E-011
Ba-133	< 4.683E-002 +/-	1.8%	< 4.460E-005	< 1.850E-010
Cs-134	< 1.199E-002 +/-	2.0%	< 1.142E-005	< 9.146E-012
Cs-137	< 1.860E-002 +/-	2.4%	< 1.772E-005	< 2.121E-010
Eu-152	< 9.123E-002 +/-	1.8%	< 8.689E-005	< 5.127E-010
Eu-154	< 3.872E-002 +/-	2.1%	< 3.687E-005	< 1.452E-010
Ho-166m	< 2.252E-002 +/-	2.4%	< 2.145E-005	< 1.252E-008
Bi-207	< 2.061E-002 +/-	1.9%	< 1.963E-005	< 3.750E-010
Pb-210	< 8.168E+002 +/-	308.2%	< 7.779E-001	< 1.062E-005
Ra-226	< 4.577E-002 +/-	2.7%	< 4.359E-005	< 4.577E-008
Ac-227	< 2.028E-001 +/-	8.5%	< 1.932E-004	< 2.779E-009
Th-230	< 1.034E+002 +/-	9.0%	< 9.847E-002	< 5.066E-003
Pa-231	< 1.346E+000 +/-	11.3%	< 1.282E-003	< 2.812E-005
Th-232	< 4.638E-002 +/-	2.6%	< 4.417E-005	< 4.178E-001
U-232	< 4.638E-002 +/-	2.6%	< 4.417E-005	< 2.147E-009
U-233	< 7.520E+002 +/-	4.0%	< 7.162E-001	< 7.670E-002
Pa-234	< 1.195E-001 +/-	12.2%	< 1.138E-004	
Pa-234m	< 2.009E+002 +/-	2.1%	< 1.913E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 6.982E-002 +/-	3.9%	< 6.649E-005	< 3.191E-002
Np-237	< 9.625E-002 +/-	2.2%	< 9.167E-005	< 1.348E-004
Pu-238	< 5.264E+003 +/-	4.2%	< 5.013E+000	< 3.042E-004
U-238	< 5.182E-001 +/-	2.2%	< 4.935E-004	< 1.524E+000
Pu-239	< 1.043E+003 +/-	3.7%	< 9.933E-001	< 1.658E-002
Pu-239B	< 3.651E+003 +/-	18.8%	< 3.477E+000	< 5.804E-002
U-239	< 5.860E+003 +/-	366.8%	< 5.581E+000	
Pu-240	< 2.079E+003 +/-	13.3%	< 1.980E+000	< 9.044E-003
Am-241	1.342E+002 +/-	152.1%	1.278E-001	3.865E-005
Am-241B	< 7.953E+002 +/-	14.4%	< 7.574E-001	< 2.290E-004
Pu-241	< 2.673E+004 +/-	4.2%	< 2.545E+001	< 2.571E-004
Pu-241B	< 7.421E+003 +/-	3.4%	< 7.068E+000	< 7.139E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 2.604E-001 +/-	2.2%	< 2.480E-004	< 1.289E-006
Cm-243	< 2.685E-001 +/-	3.5%	< 2.557E-004	< 5.156E-009
Cm-244	< 2.599E+004 +/-	14.1%	< 2.475E+001	< 3.171E-004
Cm-245	< 4.531E-001 +/-	8.3%	< 4.315E-004	< 2.605E-006
Cm-247	< 1.841E-002 +/-	8.5%	< 1.753E-005	< 1.970E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.649E-002 +/-	3.5%	< 2.523E-005	< 6.411E-009
Cf-251	< 2.439E-001 +/-	6.5%	< 2.323E-004	< 1.524E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 11 Results

Segment: 11 Detector: DET01 Position: 11
C:\Canberra\NDA2k\Data\00000197_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P011_S011

Acquisition Start: 12/18/2008 8:50:14 AM
Elapsed Live Time: 118.48 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.181 +/- 0.0035
SE-75	264.66	0.275 +/- 0.0044
SE-75	279.54	0.287 +/- 0.0054
SE-75	400.66	0.330 +/- 0.0079

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/18/2008 8:52:16 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.41	Y	514	507	1.28	120.66	4.579E-006	8.05	
2235.47		11980	2	1.00	4469.06	2.582E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 1.735E-002 +/-	1.8%	< 1.653E-005	< 8.000E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 1.813E-002 +/-	2.0%	< 1.727E-005	< 2.865E-012
Al-26	< 4.044E-002 +/-	15.1%	< 3.851E-005	< 2.127E-006
K-40	< 3.166E-001 +/-	5.0%	< 3.015E-004	< 4.938E-002
Co-57	< 7.842E-002 +/-	3.4%	< 7.469E-005	< 9.175E-012
Co-60	< 2.491E-002 +/-	2.6%	< 2.373E-005	< 2.185E-011
Se-75	< 6.253E-002 +/-	1.8%	< 5.956E-005	< 4.302E-012
Kr-85	< 5.385E+000 +/-	3.0%	< 5.129E-003	< 1.357E-008
Sr-90	< 1.896E-002 +/-	1.9%	< 1.805E-005	< 1.374E-010
Sb-125	< 3.900E-002 +/-	2.1%	< 3.714E-005	< 3.752E-011
Ba-133	< 3.336E-002 +/-	1.7%	< 3.177E-005	< 1.318E-010
Cs-134	< 1.342E-002 +/-	1.9%	< 1.278E-005	< 1.024E-011
Cs-137	< 1.896E-002 +/-	1.9%	< 1.805E-005	< 2.161E-010
Eu-152	< 1.013E-001 +/-	2.1%	< 9.650E-005	< 5.695E-010
Eu-154	< 5.177E-002 +/-	2.2%	< 4.930E-005	< 1.941E-010
Ho-166m	< 1.910E-002 +/-	2.2%	< 1.819E-005	< 1.062E-008
Bi-207	< 1.168E-002 +/-	2.0%	< 1.112E-005	< 2.126E-010
Pb-210	< 1.006E+003 +/-	53.0%	< 9.580E-001	< 1.308E-005
Ra-226	< 3.634E-002 +/-	2.2%	< 3.461E-005	< 3.634E-008
Ac-227	< 2.062E-001 +/-	6.4%	< 1.964E-004	< 2.825E-009
Th-230	< 9.684E+001 +/-	8.6%	< 9.223E-002	< 4.745E-003
Pa-231	< 1.188E+000 +/-	11.2%	< 1.131E-003	< 2.482E-005
Th-232	< 4.502E-002 +/-	2.1%	< 4.288E-005	< 4.057E-001
U-232	< 4.502E-002 +/-	2.1%	< 4.288E-005	< 2.085E-009
U-233	< 6.898E+002 +/-	2.7%	< 6.569E-001	< 7.035E-002
Pa-234	< 7.839E-002 +/-	12.1%	< 7.466E-005	
Pa-234m	< 1.023E+002 +/-	2.1%	< 9.746E-002	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 6.385E-002 +/-	2.5%	< 6.081E-005	< 2.918E-002
Np-237	< 8.385E-002 +/-	1.9%	< 7.986E-005	< 1.174E-004
Pu-238	< 4.664E+003 +/-	2.6%	< 4.442E+000	< 2.696E-004
U-238	< 2.532E+000 +/-	2.2%	< 2.412E-003	< 7.445E+000
Pu-239	< 9.187E+002 +/-	3.1%	< 8.750E-001	< 1.461E-002
Pu-239B	< 2.643E+003 +/-	5.3%	< 2.518E+000	< 4.203E-002
U-239	< 9.840E+003 +/-	65.1%	< 9.372E+000	
Pu-240	< 1.691E+003 +/-	4.7%	< 1.611E+000	< 7.357E-003
Am-241	7.045E+001 +/-	24.7%	6.709E-002	2.029E-005
Am-241B	< 6.332E+002 +/-	4.9%	< 6.030E-001	< 1.824E-004
Pu-241	< 2.373E+004 +/-	2.8%	< 2.260E+001	< 2.282E-004
Pu-241B	< 6.981E+003 +/-	2.4%	< 6.649E+000	< 6.716E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 2.492E-001 +/-	1.8%	< 2.373E-004	< 1.234E-006
Cm-243	< 2.570E-001 +/-	3.3%	< 2.448E-004	< 4.935E-009
Cm-244	< 1.658E+004 +/-	14.1%	< 1.579E+001	< 2.023E-004
Cm-245	< 4.205E-001 +/-	7.7%	< 4.005E-004	< 2.418E-006
Cm-247	< 1.986E-002 +/-	8.5%	< 1.891E-005	< 2.125E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.829E-002 +/-	3.5%	< 1.742E-005	< 4.426E-009
Cf-251	< 2.259E-001 +/-	5.6%	< 2.152E-004	< 1.412E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 12 Results

Segment: 12 Detector: DET01 Position: 12
C:\Canberra\NDA2k\Data\00000197_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P012_S012

Acquisition Start: 12/18/2008 8:54:26 AM
Elapsed Live Time: 118.74 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.090 +/- 0.0022
SE-75	264.66	0.152 +/- 0.0027
SE-75	279.54	0.151 +/- 0.0035
SE-75	400.66	0.199 +/- 0.0057

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/18/2008 8:56:28 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.31	Y	225	355	1.25	120.46	1.237E-004	14.12	
2235.44		11980	6	0.99	4469.00	2.449E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 1.431E-002 +/-	1.9%	< 1.363E-005	< 6.596E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.193E-002 +/-	2.0%	< 2.088E-005	< 3.464E-012
Al-26	< 3.238E-002 +/-	16.0%	< 3.084E-005	< 1.703E-006
K-40	< 2.940E-001 +/-	5.1%	< 2.800E-004	< 4.586E-002
Co-57	< 6.740E-002 +/-	4.0%	< 6.419E-005	< 7.886E-012
Co-60	< 1.989E-002 +/-	1.7%	< 1.894E-005	< 1.745E-011
Se-75	< 5.784E-002 +/-	2.5%	< 5.508E-005	< 3.979E-012
Kr-85	< 4.464E+000 +/-	3.3%	< 4.251E-003	< 1.125E-008
Sr-90	< 1.954E-002 +/-	2.2%	< 1.861E-005	< 1.417E-010
Sb-125	< 4.934E-002 +/-	2.4%	< 4.699E-005	< 4.747E-011
Ba-133	< 2.897E-002 +/-	2.0%	< 2.759E-005	< 1.144E-010
Cs-134	< 1.504E-002 +/-	2.3%	< 1.432E-005	< 1.147E-011
Cs-137	< 1.954E-002 +/-	2.2%	< 1.861E-005	< 2.228E-010
Eu-152	< 7.241E-002 +/-	2.7%	< 6.896E-005	< 4.070E-010
Eu-154	< 2.780E-002 +/-	1.9%	< 2.647E-005	< 1.042E-010
Ho-166m	< 2.183E-002 +/-	2.3%	< 2.079E-005	< 1.214E-008
Bi-207	< 9.695E-003 +/-	2.3%	< 9.233E-006	< 1.764E-010
Pb-210	< 1.081E+000 +/-	39.2%	< 1.030E-003	< 1.406E-008
Ra-226	< 3.803E-002 +/-	2.5%	< 3.622E-005	< 3.803E-008
Ac-227	< 1.893E-001 +/-	6.5%	< 1.803E-004	< 2.593E-009
Th-230	< 1.614E+001 +/-	13.8%	< 1.537E-002	< 7.909E-004
Pa-231	< 1.000E+000 +/-	11.3%	< 9.525E-004	< 2.090E-005
Th-232	< 4.168E-002 +/-	2.5%	< 3.969E-005	< 3.755E-001
U-232	< 4.168E-002 +/-	2.5%	< 3.969E-005	< 1.930E-009
U-233	< 7.002E+002 +/-	3.2%	< 6.669E-001	< 7.142E-002
Pa-234	< 8.024E-002 +/-	11.6%	< 7.642E-005	
Pa-234m	< 1.244E+002 +/-	2.1%	< 1.185E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 6.619E-002 +/-	3.2%	< 6.303E-005	< 3.025E-002
Np-237	< 6.702E-002 +/-	2.3%	< 6.383E-005	< 9.383E-005
Pu-238	< 4.913E+003 +/-	3.1%	< 4.679E+000	< 2.840E-004
U-238	< 1.242E+000 +/-	2.1%	< 1.183E-003	< 3.653E+000
Pu-239	< 8.551E+002 +/-	3.7%	< 8.144E-001	< 1.360E-002
Pu-239B	< 1.413E+003 +/-	6.3%	< 1.346E+000	< 2.247E-002
U-239	< 3.532E+000 +/-	49.2%	< 3.364E-003	
Pu-240	< 1.065E+003 +/-	5.6%	< 1.014E+000	< 4.632E-003
Am-241	1.142E+000 +/-	22.0%	1.088E-003	3.290E-007
Am-241B	< 3.905E+002 +/-	5.8%	< 3.719E-001	< 1.125E-004
Pu-241	< 2.542E+004 +/-	3.3%	< 2.421E+001	< 2.445E-004
Pu-241B	< 7.641E+003 +/-	3.2%	< 7.277E+000	< 7.351E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.012E-001 +/-	9.3%	< 9.633E-005	< 5.007E-007
Cm-243	< 2.476E-001 +/-	3.7%	< 2.358E-004	< 4.754E-009
Cm-244	< 1.172E+004 +/-	14.1%	< 1.116E+001	< 1.430E-004
Cm-245	< 4.280E-001 +/-	7.9%	< 4.076E-004	< 2.461E-006
Cm-247	< 1.651E-002 +/-	8.6%	< 1.573E-005	< 1.767E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.448E-002 +/-	3.6%	< 1.379E-005	< 3.505E-009
Cf-251	< 2.411E-001 +/-	5.9%	< 2.296E-004	< 1.507E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 13 Results

Segment: 13 Detector: DET01 Position: 13
C:\Canberra\NDA2k\Data\00000197_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P013_S013

Acquisition Start: 12/18/2008 8:58:38 AM
Elapsed Live Time: 118.94 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.412 +/- 0.0066
SE-75	264.66	0.483 +/- 0.0072
SE-75	279.54	0.483 +/- 0.0082
SE-75	400.66	0.525 +/- 0.0111

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/18/2008 9:00:39 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
558.53		17	4	1.06	1118.05	1.977E-004	30.93	
2235.44		11980	1	0.97	4469.00	7.037E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 2.461E-002 +/-	1.8%	< 2.344E-005	< 1.135E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 1.735E-002 +/-	2.0%	< 1.652E-005	< 2.741E-012
Al-26	< 6.505E-003 +/-	14.9%	< 6.195E-006	< 3.422E-007
K-40	< 2.717E-001 +/-	4.9%	< 2.588E-004	< 4.239E-002
Co-57	< 5.578E-002 +/-	3.5%	< 5.312E-005	< 6.526E-012
Co-60	< 2.645E-002 +/-	1.7%	< 2.519E-005	< 2.319E-011
Se-75	< 4.865E-002 +/-	1.9%	< 4.633E-005	< 3.347E-012
Kr-85	< 3.278E+000 +/-	3.1%	< 3.121E-003	< 8.259E-009
Sr-90	< 1.186E-002 +/-	1.9%	< 1.129E-005	< 8.596E-011
Sb-125	< 3.827E-002 +/-	2.1%	< 3.645E-005	< 3.681E-011
Ba-133	< 2.274E-002 +/-	1.7%	< 2.165E-005	< 8.981E-011
Cs-134	< 9.490E-003 +/-	2.0%	< 9.038E-006	< 7.241E-012
Cs-137	< 1.186E-002 +/-	1.9%	< 1.129E-005	< 1.352E-010
Eu-152	< 6.703E-002 +/-	2.5%	< 6.384E-005	< 3.767E-010
Eu-154	< 4.952E-002 +/-	2.2%	< 4.716E-005	< 1.857E-010
Ho-166m	< 2.757E-002 +/-	2.2%	< 2.625E-005	< 1.533E-008
Bi-207	< 1.263E-002 +/-	2.0%	< 1.203E-005	< 2.299E-010
Pb-210	< 1.583E+000 +/-	36.7%	< 1.508E-003	< 2.058E-008
Ra-226	< 2.618E-002 +/-	2.2%	< 2.493E-005	< 2.618E-008
Ac-227	< 1.738E-001 +/-	8.3%	< 1.656E-004	< 2.381E-009
Th-230	< 1.520E+001 +/-	13.0%	< 1.448E-002	< 7.449E-004
Pa-231	< 8.282E-001 +/-	11.2%	< 7.887E-004	< 1.731E-005
Th-232	< 4.159E-002 +/-	2.2%	< 3.961E-005	< 3.747E-001
U-232	< 4.159E-002 +/-	2.2%	< 3.961E-005	< 1.926E-009
U-233	< 5.931E+002 +/-	2.7%	< 5.649E-001	< 6.050E-002
Pa-234	< 6.414E-002 +/-	12.2%	< 6.109E-005	
Pa-234m	< 1.239E+002 +/-	2.1%	< 1.180E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 5.429E-002 +/-	2.5%	< 5.170E-005	< 2.481E-002
Np-237	< 5.223E-002 +/-	1.9%	< 4.974E-005	< 7.312E-005
Pu-238	< 4.054E+003 +/-	2.6%	< 3.861E+000	< 2.343E-004
U-238	< 2.445E+000 +/-	2.1%	< 2.329E-003	< 7.190E+000
Pu-239	< 7.378E+002 +/-	3.2%	< 7.027E-001	< 1.173E-002
Pu-239B	< 1.098E+003 +/-	5.7%	< 1.046E+000	< 1.745E-002
U-239	< 6.604E+000 +/-	45.8%	< 6.289E-003	
Pu-240	< 8.622E+002 +/-	5.0%	< 8.212E-001	< 3.751E-003
Am-241	< 1.965E-001 +/-	15.6%	< 1.871E-004	< 5.659E-008
Am-241B	< 3.103E+002 +/-	5.5%	< 2.955E-001	< 8.937E-005
Pu-241	< 2.068E+004 +/-	2.8%	< 1.970E+001	< 1.990E-004
Pu-241B	< 6.296E+003 +/-	2.5%	< 5.996E+000	< 6.057E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 9.580E-002 +/-	8.4%	< 9.124E-005	< 4.742E-007
Cm-243	< 2.048E-001 +/-	3.3%	< 1.950E-004	< 3.932E-009
Cm-244	< 1.396E+004 +/-	14.1%	< 1.329E+001	< 1.703E-004
Cm-245	< 3.734E-001 +/-	7.7%	< 3.557E-004	< 2.147E-006
Cm-247	< 2.014E-002 +/-	8.5%	< 1.918E-005	< 2.155E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.010E-002 +/-	3.5%	< 1.914E-005	< 4.863E-009
Cf-251	< 1.894E-001 +/-	5.6%	< 1.804E-004	< 1.184E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 14 Results

Segment: 14 Detector: DET01 Position: 14
C:\Canberra\NDA2k\Data\00000197_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P014_S014

Acquisition Start: 12/18/2008 9:02:49 AM
Elapsed Live Time: 119.09 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.859 +/- 0.0128
SE-75	264.66	0.896 +/- 0.0130
SE-75	279.54	0.898 +/- 0.0141
SE-75	400.66	0.901 +/- 0.0169

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/18/2008 9:04:51 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
2235.42		11980	2	1.03	4468.97	5.392E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 2.594E-002 +/-	1.9%	< 2.470E-005	< 1.196E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.015E-002 +/-	2.0%	< 1.919E-005	< 3.184E-012
Al-26	< 2.043E-002 +/-	15.2%	< 1.946E-005	< 1.075E-006
K-40	< 2.389E-001 +/-	5.0%	< 2.275E-004	< 3.727E-002
Co-57	< 4.979E-002 +/-	3.4%	< 4.742E-005	< 5.825E-012
Co-60	< 1.891E-002 +/-	1.7%	< 1.801E-005	< 1.658E-011
Se-75	< 3.832E-002 +/-	1.8%	< 3.649E-005	< 2.636E-012
Kr-85	< 3.633E+000 +/-	3.1%	< 3.460E-003	< 9.155E-009
Sr-90	< 1.488E-002 +/-	1.9%	< 1.418E-005	< 1.079E-010
Sb-125	< 5.319E-002 +/-	2.1%	< 5.066E-005	< 5.117E-011
Ba-133	< 2.098E-002 +/-	1.7%	< 1.998E-005	< 8.288E-011
Cs-134	< 1.778E-002 +/-	2.0%	< 1.693E-005	< 1.357E-011
Cs-137	< 1.488E-002 +/-	1.9%	< 1.418E-005	< 1.697E-010
Eu-152	< 2.625E-002 +/-	3.7%	< 2.500E-005	< 1.475E-010
Eu-154	< 5.755E-002 +/-	2.2%	< 5.481E-005	< 2.158E-010
Ho-166m	< 3.124E-002 +/-	2.6%	< 2.975E-005	< 1.737E-008
Bi-207	< 1.394E-002 +/-	2.0%	< 1.327E-005	< 2.537E-010
Pb-210	< 7.487E+002 +/-	56.7%	< 7.131E-001	< 9.734E-006
Ra-226	< 3.368E-002 +/-	2.2%	< 3.208E-005	< 3.368E-008
Ac-227	< 1.180E-001 +/-	8.3%	< 1.124E-004	< 1.617E-009
Th-230	< 6.368E+001 +/-	8.6%	< 6.065E-002	< 3.120E-003
Pa-231	< 6.474E-001 +/-	11.2%	< 6.166E-004	< 1.353E-005
Th-232	< 5.053E-002 +/-	2.0%	< 4.813E-005	< 4.553E-001
U-232	< 5.053E-002 +/-	2.0%	< 4.813E-005	< 2.340E-009
U-233	< 4.717E+002 +/-	2.7%	< 4.493E-001	< 4.812E-002
Pa-234	< 1.057E-001 +/-	11.5%	< 1.007E-004	
Pa-234m	< 1.861E+002 +/-	2.2%	< 1.772E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 3.812E-002 +/-	2.5%	< 3.630E-005	< 1.742E-002
Np-237	< 5.137E-002 +/-	1.9%	< 4.892E-005	< 7.192E-005
Pu-238	< 3.315E+003 +/-	2.6%	< 3.157E+000	< 1.916E-004
U-238	< 2.820E+000 +/-	2.2%	< 2.685E-003	< 8.290E+000
Pu-239	< 6.395E+002 +/-	3.1%	< 6.090E-001	< 1.017E-002
Pu-239B	< 1.458E+003 +/-	5.4%	< 1.388E+000	< 2.318E-002
U-239	< 1.093E+004 +/-	69.5%	< 1.041E+001	
Pu-240	< 9.953E+002 +/-	4.7%	< 9.479E-001	< 4.330E-003
Am-241	< 4.738E+000 +/-	25.0%	< 4.512E-003	< 1.364E-006
Am-241B	< 3.779E+002 +/-	5.0%	< 3.600E-001	< 1.088E-004
Pu-241	< 1.645E+004 +/-	2.8%	< 1.566E+001	< 1.582E-004
Pu-241B	< 4.300E+003 +/-	2.4%	< 4.096E+000	< 4.137E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.549E-001 +/-	1.8%	< 1.475E-004	< 7.666E-007
Cm-243	< 1.597E-001 +/-	3.3%	< 1.521E-004	< 3.067E-009
Cm-244	< 1.929E+004 +/-	14.1%	< 1.837E+001	< 2.353E-004
Cm-245	< 2.559E-001 +/-	7.7%	< 2.437E-004	< 1.471E-006
Cm-247	< 1.628E-002 +/-	8.5%	< 1.550E-005	< 1.742E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.098E-002 +/-	3.5%	< 1.998E-005	< 5.076E-009
Cf-251	< 1.428E-001 +/-	5.6%	< 1.360E-004	< 8.926E-008

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 15 Results

Segment: 15 Detector: DET01 Position: 15
C:\Canberra\NDA2k\Data\00000197_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P015_S015

Acquisition Start: 12/18/2008 9:07:01 AM
Elapsed Live Time: 119.11 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.888 +/- 0.0133
SE-75	264.66	0.921 +/- 0.0133
SE-75	279.54	0.918 +/- 0.0144
SE-75	400.66	0.913 +/- 0.0171

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/18/2008 9:09:02 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
2235.45		11980	9	1.00	4469.02	2.737E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 1.358E-002 +/-	1.8%	< 1.293E-005	< 6.260E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 1.450E-002 +/-	2.1%	< 1.381E-005	< 2.291E-012
Al-26	< 2.845E-002 +/-	15.4%	< 2.709E-005	< 1.496E-006
K-40	< 3.388E-001 +/-	5.0%	< 3.227E-004	< 5.285E-002
Co-57	< 4.473E-002 +/-	3.5%	< 4.260E-005	< 5.233E-012
Co-60	< 2.945E-002 +/-	2.6%	< 2.805E-005	< 2.583E-011
Se-75	< 3.639E-002 +/-	1.8%	< 3.465E-005	< 2.503E-012
Kr-85	< 6.408E+000 +/-	3.0%	< 6.103E-003	< 1.615E-008
Sr-90	< 2.078E-002 +/-	1.9%	< 1.979E-005	< 1.506E-010
Sb-125	< 4.142E-002 +/-	2.1%	< 3.945E-005	< 3.985E-011
Ba-133	< 2.139E-002 +/-	1.7%	< 2.037E-005	< 8.449E-011
Cs-134	< 1.144E-002 +/-	1.8%	< 1.090E-005	< 8.730E-012
Cs-137	< 2.078E-002 +/-	1.9%	< 1.979E-005	< 2.369E-010
Eu-152	< 4.653E-002 +/-	2.5%	< 4.432E-005	< 2.615E-010
Eu-154	< 4.141E-002 +/-	2.2%	< 3.944E-005	< 1.553E-010
Ho-166m	< 2.148E-002 +/-	2.2%	< 2.046E-005	< 1.194E-008
Bi-207	< 1.417E-002 +/-	2.0%	< 1.349E-005	< 2.578E-010
Pb-210	< 9.687E+002 +/-	57.4%	< 9.226E-001	< 1.259E-005
Ra-226	< 2.688E-002 +/-	2.0%	< 2.560E-005	< 2.688E-008
Ac-227	< 1.274E-001 +/-	8.3%	< 1.213E-004	< 1.745E-009
Th-230	< 6.061E+001 +/-	8.6%	< 5.772E-002	< 2.970E-003
Pa-231	< 6.547E-001 +/-	11.2%	< 6.235E-004	< 1.368E-005
Th-232	< 4.642E-002 +/-	2.1%	< 4.421E-005	< 4.183E-001
U-232	< 4.642E-002 +/-	2.1%	< 4.421E-005	< 2.149E-009
U-233	< 4.600E+002 +/-	2.8%	< 4.381E-001	< 4.692E-002
Pa-234	< 9.412E-002 +/-	12.2%	< 8.964E-005	
Pa-234m	< 1.388E+002 +/-	2.1%	< 1.322E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 3.877E-002 +/-	2.5%	< 3.692E-005	< 1.772E-002
Np-237	< 3.842E-002 +/-	1.9%	< 3.659E-005	< 5.379E-005
Pu-238	< 3.055E+003 +/-	2.7%	< 2.909E+000	< 1.766E-004
U-238	< 1.728E+000 +/-	2.2%	< 1.646E-003	< 5.081E+000
Pu-239	< 5.823E+002 +/-	3.2%	< 5.546E-001	< 9.259E-003
Pu-239B	< 1.443E+003 +/-	5.6%	< 1.375E+000	< 2.295E-002
U-239	< 1.472E+004 +/-	70.2%	< 1.402E+001	
Pu-240	< 9.574E+002 +/-	4.9%	< 9.118E-001	< 4.165E-003
Am-241	< 5.259E+000 +/-	25.4%	< 5.009E-003	< 1.515E-006
Am-241B	< 3.717E+002 +/-	5.1%	< 3.540E-001	< 1.070E-004
Pu-241	< 1.585E+004 +/-	2.9%	< 1.510E+001	< 1.525E-004
Pu-241B	< 4.346E+003 +/-	2.4%	< 4.139E+000	< 4.181E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.463E-001 +/-	1.8%	< 1.393E-004	< 7.242E-007
Cm-243	< 1.509E-001 +/-	3.3%	< 1.437E-004	< 2.897E-009
Cm-244	< 1.846E+004 +/-	14.1%	< 1.758E+001	< 2.253E-004
Cm-245	< 2.744E-001 +/-	7.7%	< 2.613E-004	< 1.578E-006
Cm-247	< 1.408E-002 +/-	8.5%	< 1.341E-005	< 1.507E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.535E-002 +/-	3.5%	< 2.415E-005	< 6.136E-009
Cf-251	< 1.372E-001 +/-	5.6%	< 1.307E-004	< 8.577E-008

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 16 Results

Segment: 16 Detector: DET01 Position: 16
C:\Canberra\NDA2k\Data\00000197_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P016_S016

Acquisition Start: 12/18/2008 9:11:12 AM
Elapsed Live Time: 119.16 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.845 +/- 0.0126
SE-75	264.66	0.884 +/- 0.0128
SE-75	279.54	0.886 +/- 0.0139
SE-75	400.66	0.884 +/- 0.0167

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/18/2008 9:13:16 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
2235.41		11980	9	1.00	4468.94	2.485E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 3.738E-002 +/-	2.3%	< 3.560E-005	< 1.723E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 3.467E-002 +/-	2.3%	< 3.302E-005	< 5.478E-012
Al-26	< 5.098E-002 +/-	18.0%	< 4.856E-005	< 2.682E-006
K-40	< 3.352E-001 +/-	5.6%	< 3.192E-004	< 5.229E-002
Co-57	< 7.247E-002 +/-	4.4%	< 6.902E-005	< 8.479E-012
Co-60	< 4.644E-002 +/-	2.0%	< 4.423E-005	< 4.073E-011
Se-75	< 5.866E-002 +/-	2.8%	< 5.586E-005	< 4.035E-012
Kr-85	< 7.428E+000 +/-	3.6%	< 7.075E-003	< 1.872E-008
Sr-90	< 3.119E-002 +/-	2.6%	< 2.970E-005	< 2.261E-010
Sb-125	< 6.467E-002 +/-	2.7%	< 6.159E-005	< 6.221E-011
Ba-133	< 3.181E-002 +/-	2.3%	< 3.029E-005	< 1.256E-010
Cs-134	< 1.705E-002 +/-	2.3%	< 1.623E-005	< 1.301E-011
Cs-137	< 3.119E-002 +/-	2.6%	< 2.970E-005	< 3.555E-010
Eu-152	< 8.365E-002 +/-	2.9%	< 7.967E-005	< 4.701E-010
Eu-154	< 9.898E-002 +/-	2.4%	< 9.427E-005	< 3.712E-010
Ho-166m	< 3.478E-002 +/-	2.8%	< 3.312E-005	< 1.934E-008
Bi-207	< 1.613E-002 +/-	2.8%	< 1.537E-005	< 2.936E-010
Pb-210	< 2.414E+000 +/-	46.8%	< 2.299E-003	< 3.138E-008
Ra-226	< 4.419E-002 +/-	3.0%	< 4.209E-005	< 4.419E-008
Ac-227	< 2.190E-001 +/-	8.7%	< 2.086E-004	< 3.001E-009
Th-230	< 2.390E+001 +/-	15.5%	< 2.277E-002	< 1.171E-003
Pa-231	< 7.673E-001 +/-	11.4%	< 7.308E-004	< 1.604E-005
Th-232	< 6.457E-002 +/-	2.9%	< 6.149E-005	< 5.818E-001
U-232	< 6.457E-002 +/-	2.9%	< 6.149E-005	< 2.990E-009
U-233	< 9.282E+002 +/-	3.6%	< 8.840E-001	< 9.468E-002
Pa-234	< 1.490E-001 +/-	11.7%	< 1.420E-004	
Pa-234m	< 2.533E+002 +/-	2.4%	< 2.412E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 7.543E-002 +/-	3.6%	< 7.184E-005	< 3.447E-002
Np-237	< 6.404E-002 +/-	2.6%	< 6.099E-005	< 8.965E-005
Pu-238	< 5.609E+003 +/-	3.6%	< 5.342E+000	< 3.242E-004
U-238	< 3.874E+000 +/-	2.4%	< 3.689E-003	< 1.139E+001
Pu-239	< 1.039E+003 +/-	4.1%	< 9.892E-001	< 1.651E-002
Pu-239B	< 1.378E+003 +/-	7.0%	< 1.312E+000	< 2.190E-002
U-239	< 1.326E+001 +/-	58.6%	< 1.263E-002	
Pu-240	< 1.128E+003 +/-	6.2%	< 1.074E+000	< 4.906E-003
Am-241	< 2.438E-001 +/-	19.9%	< 2.322E-004	< 7.021E-008
Am-241B	< 3.932E+002 +/-	6.8%	< 3.745E-001	< 1.133E-004
Pu-241	< 3.144E+004 +/-	3.7%	< 2.994E+001	< 3.024E-004
Pu-241B	< 9.221E+003 +/-	3.6%	< 8.782E+000	< 8.871E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.465E-001 +/-	10.7%	< 1.395E-004	< 7.252E-007
Cm-243	< 2.325E-001 +/-	3.9%	< 2.214E-004	< 4.464E-009
Cm-244	< 2.375E+004 +/-	14.2%	< 2.262E+001	< 2.898E-004
Cm-245	< 5.042E-001 +/-	8.1%	< 4.802E-004	< 2.899E-006
Cm-247	< 2.555E-002 +/-	8.7%	< 2.433E-005	< 2.734E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.838E-002 +/-	3.8%	< 2.703E-005	< 6.869E-009
Cf-251	< 2.755E-001 +/-	6.2%	< 2.623E-004	< 1.722E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Summed Segment Spectra Results
Category: Segmented

C:\Canberra\NDA2k\Data\00000197_CNTR0001_DCAT0002_PROC00AI.CNF

Elapsed Live Time: 97.68 sec Elapsed Real Time: 120.00 sec

********** Peak Analysis Results **********

*** Spectrum Validity Test warnings ***
Reference peak/MCA Test failed: reference peak data does not match MCA time
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 12/18/2008 9:13:23 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	49.27		7214	37339	2.09	100.40	7.354E-007	4.22	
	59.37	Y	349441	44799	1.16	120.59	6.541E-006	0.34	
M	94.61	Y	63106	87703	1.53	191.00	1.518E-004	0.89	366.81
m	98.62	Y	244242	117593	1.54	199.01	1.776E-004	0.69	
m	100.80	Y	37991	118675	1.54	203.37	1.918E-004	1.13	
m	103.26	Y	173586	94804	1.55	208.29	2.076E-004	0.67	
M	111.00	Y	63966	52382	1.36	223.76	2.558E-004	0.87	447.10
m	114.51	Y	51942	59809	1.37	230.76	2.763E-004	0.94	
m	116.55	Y	48914	55991	1.37	234.84	2.877E-004	0.89	
m	120.52	Y	11888	50519	1.38	242.77	3.088E-004	1.78	
m	122.75	Y	6480	48428	1.38	247.24	3.200E-004	2.87	
m	125.17	Y	24321	51007	1.39	252.08	3.315E-004	1.15	
m	129.21	Y	115435	44646	1.40	260.15	3.492E-004	0.76	
M	144.08	Y	7329	33685	1.13	289.87	3.993E-004	5.41	3.14
m	146.21	Y	6266	33889	1.13	294.12	4.045E-004	5.61	
m	148.49	Y	15589	37947	1.13	298.66	4.097E-004	4.84	
M	160.96	Y	7216	34249	1.37	323.58	4.300E-004	7.16	13.43
m	164.53	Y	6292	52725	1.38	330.73	4.336E-004	6.19	
m	169.40	Y	1391	51603	1.38	340.45	4.370E-004	12.35	
m	171.29	Y	4790	54887	1.39	344.22	4.380E-004	6.41	
	179.09	Y	2187	27577	1.16	359.82	4.399E-004	11.75	
	189.30	Y	3347	33051	1.19	380.22	4.384E-004	8.92	
	195.55	Y	4175	31545	1.24	392.71	4.356E-004	7.03	
M	203.47	Y	26334	25967	1.18	408.53	4.306E-004	1.34	1.54

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	207.93	Y	87055	22787	1.19	417.45	4.272E-004	1.13	
	225.21		644	15937	1.41	451.97	4.111E-004	30.05	
M	237.74	Y	812	17880	1.55	477.02	3.978E-004	12.00	1.25
m	243.26	Y	1530	24011	1.55	488.04	3.917E-004	7.06	
	255.29	Y	3802	15572	1.15	512.09	3.784E-004	5.54	
M	263.83	Y	1573	10983	1.24	529.15	3.689E-004	9.90	0.74
m	267.43	Y	3379	13212	1.24	536.36	3.649E-004	8.35	
M	297.38	Y	2315	10330	1.07	596.19	3.335E-004	12.29	0.76
m	300.04	Y	558	10120	1.07	601.52	3.308E-004	16.80	
M	307.67		278	9765	1.21	616.76	3.235E-004	25.14	0.97
m	311.77	Y	4384	10711	1.22	624.95	3.196E-004	2.35	
M	320.84	Y	2974	9921	1.75	643.07	3.113E-004	3.26	5.60
m	323.35	Y	4216	14570	1.75	648.10	3.091E-004	2.41	
M	332.68	Y	30380	8595	1.30	666.73	3.011E-004	0.66	14.75
m	335.63	Y	12158	7995	1.30	672.63	2.986E-004	1.05	
m	341.37	Y	3385	8327	1.31	684.09	2.939E-004	2.44	
m	344.94	Y	26492	7871	1.31	691.24	2.911E-004	0.70	
M	361.93	Y	580	6226	1.36	725.18	2.783E-004	11.24	52.81
m	368.29	Y	8430	5343	1.36	737.89	2.737E-004	1.45	
m	370.71	Y	1133	5191	1.36	742.73	2.721E-004	5.95	
m	374.98	Y	70492	4971	1.37	751.27	2.692E-004	0.68	
m	380.08	Y	13799	3563	1.37	761.46	2.658E-004	1.12	
m	382.70	Y	12013	3308	1.38	766.68	2.641E-004	1.17	
M	392.84	Y	24163	3390	1.51	786.96	2.578E-004	1.53	2.16
m	399.08	Y	423	2645	1.51	799.42	2.540E-004	10.82	
M	413.65	Y	63181	1862	1.37	828.54	2.458E-004	0.69	7.02
m	419.18	Y	346	1365	1.37	839.60	2.427E-004	10.16	
m	422.51	Y	4920	1459	1.38	846.24	2.410E-004	1.70	
m	426.56	Y	1245	1389	1.38	854.34	2.389E-004	3.83	
m	430.12	Y	208	1223	1.38	861.44	2.372E-004	15.57	
M	445.81	Y	258	993	1.33	892.80	2.296E-004	11.63	3.53
m	451.40	Y	7518	1158	1.33	903.98	2.270E-004	1.23	
	473.09		78	607	0.86	947.31	2.179E-004	49.43	
	511.43		452	684	2.14	1023.94	2.039E-004	10.93	
	558.50		201	434	1.49	1117.99	1.898E-004	19.04	
	583.01	Y	76	336	1.64	1166.98	1.835E-004	41.67	
	597.65	Y	172	369	1.63	1196.23	1.801E-004	20.92	
	618.90	Y	703	324	1.34	1238.69	1.754E-004	5.92	
M	632.83	Y	102	251	1.54	1266.53	1.726E-004	14.84	3.81
m	640.07	Y	355	227	1.54	1280.98	1.712E-004	6.22	
m	645.88	Y	492	243	1.55	1292.61	1.700E-004	5.11	
m	652.52	Y	595	217	1.55	1305.87	1.688E-004	4.49	
m	658.75	Y	272	213	1.56	1318.33	1.676E-004	7.44	
m	662.38	Y	3415	222	1.56	1325.58	1.670E-004	1.76	
	688.67	Y	294	210	1.13	1378.11	1.625E-004	10.51	
	703.62	Y	111	208	1.84	1407.98	1.601E-004	24.63	
	721.92	Y	1638	168	1.55	1444.55	1.573E-004	2.88	
	756.02	Y	136	124	1.34	1512.69	1.524E-004	16.61	
	769.29	Y	401	149	1.64	1539.21	1.507E-004	7.49	
	1173.53	Y	82	46	1.24	2346.99	1.132E-004	17.89	

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
1332.91	Y	106	29	2.17	2665.49	1.019E-004	13.67	
1461.44	Y	75	30	1.37	2922.32	9.338E-005	17.55	
2235.42		191681	351	0.99	4468.97	4.991E-005	0.36	
2294.48		69	61	1.48	4586.98	4.726E-005	25.47	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.07 +/- 0.00

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	@ 1.000E+020 +/-	100.0%	@ 5.952E+015	
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 9.813E-002 +/-	1.2%	< 5.841E-006	< 1.550E-011
	Al-26	< 1.634E-001 +/-	8.2%	< 9.727E-006	< 8.595E-006
	K-40	1.701E+000 +/-	17.8%	1.013E-004	2.654E-001
X	Co-57				
	Co-60	2.062E-001 +/-	11.1%	1.227E-005	1.808E-010
	Se-75	< 1.743E+000 +/-	1.1%	< 1.037E-004	< 1.199E-010
	Kr-85	< 4.522E+001 +/-	2.5%	< 2.692E-003	< 1.140E-007
	Sr-90	< 1.416E-001 +/-	1.0%	< 8.428E-006	< 1.027E-009
	Sb-125	< 9.136E-001 +/-	1.5%	< 5.438E-005	< 8.789E-010
	Ba-133	< 5.853E-001 +/-	1.0%	< 3.484E-005	< 2.312E-009
	Cs-134	< 1.095E-001 +/-	1.0%	< 6.519E-006	< 8.356E-011
X	Cs-137				
	Eu-152	< 4.792E-001 +/-	2.1%	< 2.852E-005	< 2.693E-009
	Eu-154	< 2.591E-001 +/-	1.5%	< 1.542E-005	< 9.716E-010
	Ho-166m	< 1.533E-001 +/-	1.7%	< 9.122E-006	< 8.521E-008
	Bi-207	< 1.174E-001 +/-	1.2%	< 6.989E-006	< 2.137E-009
	Pb-210	< 1.598E+004 +/-	12.2%	< 9.514E-001	< 2.078E-004
	Ra-226	< 2.929E-001 +/-	1.5%	< 1.743E-005	< 2.929E-007
	Ac-227	< 2.461E+000 +/-	8.2%	< 1.465E-004	< 3.371E-008
	Th-230	< 1.210E+003 +/-	8.3%	< 7.205E-002	< 5.931E-002
	Pa-231	< 1.373E+001 +/-	11.2%	< 8.172E-004	< 2.869E-004
	Th-232	6.841E-001 +/-	13.2%	4.072E-005	6.164E+000
X	U-232				
	U-233	< 9.177E+003 +/-	1.6%	< 5.463E-001	< 9.361E-001
	Pa-234	< 5.240E-001 +/-	12.1%	< 3.119E-005	
	Pa-234m	< 7.314E+002 +/-	1.5%	< 4.354E-002	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 7.864E-001 +/-	1.8%	< 4.681E-005	< 3.594E-001
	Np-237	5.454E+000 +/-	3.7%	3.247E-004	7.636E-003
	Pu-238	< 5.396E+004 +/-	1.6%	< 3.212E+000	< 3.119E-003
	U-238	< 1.080E+001 +/-	1.6%	< 6.429E-004	< 3.175E+001

*	Pu-239	6.924E+006	+/- 1.7%	4.121E+002	1.101E+002	
	Pu-239B	3.809E+006	+/- 0.6%	2.267E+002	6.056E+001	
	U-239	@ 1.000E+020	+/- 100.0%	@ 5.952E+015		
X	Pu-240					
	Am-241	1.235E+006	+/- 2.4%	7.349E+001	3.556E-001	
	Am-241B	6.485E+005	+/- 1.8%	3.860E+001	1.868E-001	
	Pu-241	4.715E+006	+/- 5.2%	2.806E+002	4.536E-002	
	Pu-241B	8.927E+006	+/- 1.5%	5.313E+002	8.587E-002	
	Pu-242	< 0.000E+000	+/- 0.0%	< 0.000E+000	< 0.000E+000	
	Am-243	< 2.704E+000	+/- 1.2%	< 1.609E-004	< 1.338E-005	
	Cm-243	< 2.816E+000	+/- 3.0%	< 1.676E-004	< 5.408E-008	
	Cm-244	< 1.407E+005	+/- 14.1%	< 8.377E+000	< 1.717E-003	
	Cm-245	< 4.886E+000	+/- 7.5%	< 2.908E-004	< 2.809E-005	
	Cm-247	< 3.523E-001	+/- 8.4%	< 2.097E-005	< 3.770E-003	

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 4.221E-001 +/-	3.2%	< 2.512E-005	< 1.021E-007
Cf-251	< 2.735E+000 +/-	5.3%	< 1.628E-004	< 1.709E-006

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.10E+002 +- 1.90E+000	3.17E+001 +- 2.86E-001

Beta: 2.25E+002 +- 4.00E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.88E+001 +- 3.67E-001
203.55	3.85E+001 +- 6.90E-001
375.05	6.04E+001 +- 8.08E-001
413.71	6.28E+001 +- 9.13E-001

Sum of Segment NID Results
Category: Segmented

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********** Peak Analysis Results **********

No peak analysis results available for reporting purposes

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 3.957E-002 +/-	1.8%	< 2.355E-006	< 1.824E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 4.030E-002 +/-	2.0%	< 2.399E-006	< 6.367E-012
Al-26	< 7.704E-002 +/-	19.8%	< 4.586E-006	< 4.053E-006
K-40	< 5.186E-001 +/-	5.3%	< 3.087E-005	< 8.090E-002
Co-57	6.334E+000 +/-	11.3%	3.770E-004	7.411E-010
Co-60	< 4.644E-002 +/-	2.0%	< 2.764E-006	< 4.073E-011
Se-75	< 2.958E-001 +/-	1.9%	< 1.761E-005	< 2.035E-011
Kr-85	< 1.797E+001 +/-	3.1%	< 1.070E-003	< 4.528E-008
Sr-90	< 7.219E-002 +/-	2.1%	< 4.297E-006	< 5.234E-010
Sb-125	< 3.215E-001 +/-	2.3%	< 1.914E-005	< 3.093E-010
Ba-133	< 2.281E-001 +/-	1.7%	< 1.358E-005	< 9.010E-010
Cs-134	< 3.669E-002 +/-	1.8%	< 2.184E-006	< 2.799E-011
Cs-137	< 7.219E-002 +/-	2.1%	< 4.297E-006	< 8.230E-010
Eu-152	< 1.782E-001 +/-	3.6%	< 1.061E-005	< 1.002E-009
Eu-154	< 1.151E-001 +/-	2.2%	< 6.850E-006	< 4.315E-010
Ho-166m	< 6.132E-002 +/-	2.2%	< 3.650E-006	< 3.410E-008
Bi-207	< 3.994E-002 +/-	1.8%	< 2.377E-006	< 7.269E-010
Pb-210	< 3.351E+004 +/-	309.7%	< 1.995E+000	< 4.357E-004
Ra-226	< 1.095E-001 +/-	2.3%	< 6.518E-006	< 1.095E-007
Ac-227	< 1.020E+000 +/-	8.3%	< 6.071E-005	< 1.397E-008
Th-230	1.431E+002 +/-	88.7%	8.516E-003	7.010E-003
Pa-231	< 5.312E+000 +/-	11.2%	< 3.162E-004	< 1.110E-004
Th-232	< 1.177E-001 +/-	2.4%	< 7.005E-006	< 1.060E+000
U-232	< 2.098E-001 +/-	2.2%	< 1.249E-005	< 9.713E-009
U-233	< 3.974E+003 +/-	2.7%	< 2.366E-001	< 4.054E-001
Pa-234	< 1.532E-001 +/-	12.2%	< 9.116E-006	
Pa-234m	< 2.533E+002 +/-	2.4%	< 1.508E-002	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 3.429E-001 +/-	2.5%	< 2.041E-005	< 1.567E-001
Np-237	7.021E+000 +/-	5.8%	4.179E-004	9.830E-003
Pu-238	< 2.237E+004 +/-	2.6%	< 1.331E+000	< 1.293E-003
U-238	< 3.909E+000 +/-	2.1%	< 2.326E-004	< 1.149E+001
Pu-239	5.996E+006 +/-	1.9%	3.569E+002	9.534E+001
Pu-239B	4.902E+006 +/-	0.7%	2.918E+002	7.793E+001
U-239	< 2.733E+005 +/-	368.5%	< 1.627E+001	
Pu-240	7.069E+005 +/-	17.6%	4.208E+001	3.075E+000

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.753E-001 +/-	3.5%	< 1.043E-005	< 4.241E-008
Cf-251	< 1.202E+000 +/-	5.6%	< 7.155E-005	< 7.513E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model:

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	9.53E+001 +- 1.80E+000	0.00E+000 +- 0.00E+000

Beta: 0.00E+000 +- 0.00E+000 Alpha: 0.00E+000 +- 0.00E+000
Number of energy lines used in correction: 0

Energy	Mass (g)

Am-241	1.512E+006	+/-	2.0%	9.003E+001	4.356E-001
Am-241B	1.401E+006	+/-	2.8%	8.341E+001	4.036E-001
Pu-241	1.093E+007	+/-	4.5%	6.508E+002	1.052E-001
Pu-241B	1.490E+007	+/-	1.7%	8.869E+002	1.433E-001
Pu-242	< 0.000E+000	+/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 9.558E-001	+/-	2.2%	< 5.689E-005	< 4.731E-006
Cm-243	< 1.077E+000	+/-	3.3%	< 6.409E-005	< 2.067E-008
Cm-244	< 5.613E+004	+/-	14.2%	< 3.341E+000	< 6.848E-004
Cm-245	< 2.101E+000	+/-	7.7%	< 1.251E-004	< 1.208E-005
Cm-247	< 1.503E-001	+/-	8.5%	< 8.947E-006	< 1.608E-003

********** Radioassay Data Sheet **********

Engine Version: TMU Gamma 1.5

Assay Instrument: SGS with Trans. Location:LLNL
Analysis Method: LLNL SGS Operating Procedure Software Version: NDA 2000 V.4.0
Item ID: LL85234284 Analysis Date: 12/18/2008

198

NID identified fiducial nuclide Pu-239
Source of isotopics: MEASURED

Net Weight	24800.0 g		
Pu mass	1.79E+001 +-	2.82E+000	g
TRU Alpha Activity	1.46E+000 +-	1.84E-001	Ci
TRU Activity Concentration	5.88E+004 +-	7.40E+003	nCi/g
Pu-239 Equivalent Activity	1.49E+000 +-	1.84E-001	Ci
Pu-239 FGE	1.69E+001 +-	2.81E+000	g
Decay heat	4.57E-002 +-	5.70E-003	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	9.37E-010	1.29E-007	7.72E-008	0.00E+000
CS137	1.47E-009	1.29E-007	7.72E-008	8.64E-008
U233	<LLD	<LLD	0.00E+000	3.57E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.18E-007
NP237	1.14E-003	8.14E-007	1.96E-007	4.43E-007
PU238	2.37E-003	4.10E-002	8.11E-003	1.83E-004
U238	<LLD	<LLD	0.00E+000	9.55E-006
PU239	1.68E+001	1.06E+000	1.77E-001	4.71E-003
PU240	1.07E+000	2.47E-001	4.15E-002	1.10E-003
AM241	3.26E-002	1.13E-001	2.42E-002	6.69E-005
PU241	1.88E-002	1.96E+000	3.31E-001	8.70E-003
PU242	4.51E-003	1.79E-005	3.58E-006	0.00E+000

Errors quoted at 1.000 sigma

Operator: _____ Date: _____

Expert Analysis
ITR: Robert J Hurlbut Jr Date: 2-3-09

NDA 2000 Assay Report

Item Information

Item ID: LL85234284 Count Sequence Number: 198
Operator: RHWM2\RHWM
Assay Start: 12/18/2008 9:46:16 AM
Description 1: LL85234284
Description 2:
Location:LLNL
Comment:
Matrix Type: Lucite
Container Type: 55 Gal Galv 23.8
Weight: Gross: 48.6 kg Net: 24.8 kg
Container: Volume: 208.0 l Full: 100.0 %
Density: 0.120 kg /l

System Configuration

Counter:	SGS with Trans.		
Segments:	Number: 16	Offset:	0
Scanning Platform:	Start: 934 mm	Delta:	-51 mm
Count Type:	Assay - 55 Gal Galv 23.8		
Collimator/Geometry Setting:	Default - 0		
Transmission Mode:	Two Pass		
Transmission Correction Type:	Standard		
Transmission Source:	Se-75 Trans. - 0		

Errors quoted at 1.000 sigma

Segment 1 Results

Segment: 1 Detector: DET01 Position: 1
C:\Canberra\NDA2k\Data\00000198_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P001_S001

Acquisition Start: 12/18/2008 9:48:19 AM
Elapsed Live Time: 118.28 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.320 +/- 0.0050
SE-75	264.66	0.423 +/- 0.0063
SE-75	279.54	0.426 +/- 0.0072
SE-75	400.66	0.487 +/- 0.0102

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 4:54:57 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.43	Y	11966	1432	1.10	120.69	5.963E-006	1.50	
M	94.62	Y	841	990	1.50	191.02	1.020E-004	7.82	10.21
m	98.60	Y	2352	1403	1.51	198.97	1.181E-004	5.94	
m	103.30	Y	875	1113	1.52	208.36	1.371E-004	6.62	
	111.06	Y	435	954	1.62	223.88	1.673E-004	11.76	
M	125.38	Y	171	563	1.04	252.49	2.153E-004	11.48	2.38
m	129.28	Y	2193	503	1.05	260.28	2.261E-004	2.46	
	144.02	Y	127	444	1.15	289.74	2.590E-004	26.29	
	196.95	Y	162	245	1.20	395.50	2.893E-004	16.41	
M	203.56	Y	234	234	1.11	408.72	2.870E-004	14.71	0.67
m	207.97	Y	428	212	1.11	417.53	2.850E-004	13.50	
M	332.77	Y	196	55	1.33	666.92	1.988E-004	22.80	0.96
m	335.73	Y	71	68	1.33	672.84	1.971E-004	24.31	
	345.07	Y	134	78	1.22	691.51	1.917E-004	12.97	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
M	375.04	Y	460	32	1.25	751.38	1.760E-004	9.71	1.36
m	380.21	Y	133	25	1.26	761.71	1.735E-004	12.21	
m	382.78	Y	99	22	1.26	766.84	1.723E-004	13.04	
	392.89	Y	182	52	1.45	787.05	1.677E-004	9.89	
	413.72	Y	476	23	1.44	828.69	1.590E-004	5.02	
	451.41	Y	54	17	0.86	904.00	1.453E-004	18.40	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	7.60E-001 +- 5.59E-002	5.89E-001 +- 1.79E-002

Beta: 4.29E+001 +- 1.21E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	5.50E-001 +- 2.21E-002
203.55	5.13E-001 +- 7.63E-002
375.05	6.02E-001 +- 5.97E-002
413.71	7.31E-001 +- 4.02E-002

Segment 2 Results

Segment: 2 Detector: DET01 Position: 2
C:\Canberra\NDA2k\Data\00000198_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P002_S002

Acquisition Start: 12/18/2008 9:52:30 AM
Elapsed Live Time: 117.38 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.200 +/- 0.0035
SE-75	264.66	0.308 +/- 0.0048
SE-75	279.54	0.311 +/- 0.0056
SE-75	400.66	0.370 +/- 0.0084

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 4:55:00 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.42	Y	22605	2478	1.11	120.68	8.710E-005	1.32	
M	94.69	Y	1729	1551	1.44	191.16	1.890E-004	5.45	11.00
m	98.54	Y	4501	2037	1.45	198.86	1.976E-004	4.59	
m	100.98	Y	559	1873	1.46	203.74	2.028E-004	7.96	
m	103.33	Y	1625	1606	1.46	208.44	2.076E-004	5.01	
M	111.03	Y	1403	1269	1.40	223.81	2.219E-004	3.11	2.30
m	114.46	Y	669	1651	1.41	230.66	2.276E-004	6.10	
m	116.00	Y	645	1652	1.41	233.75	2.301E-004	6.25	
M	125.29	Y	363	890	1.10	252.31	2.431E-004	8.59	1.88
m	129.27	Y	4185	664	1.11	260.25	2.478E-004	3.62	
M	144.20	Y	272	538	1.09	290.11	2.639E-004	27.94	7.20
m	148.65	Y	352	905	1.10	299.00	2.681E-004	19.88	
	171.25	Y	123	484	1.39	344.16	2.826E-004	28.34	
M	203.58	Y	561	334	1.16	408.75	2.887E-004	5.91	0.76

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	207.99	Y	973	352	1.17	417.58	2.886E-004	4.71	
	255.49	Y	98	216	1.28	512.49	2.786E-004	25.28	
M	332.77	Y	409	121	1.21	666.91	2.467E-004	5.44	0.70
m	335.71	Y	124	139	1.21	672.78	2.454E-004	10.47	
	344.97	Y	326	167	1.35	691.29	2.416E-004	8.36	
M	375.03	Y	1006	102	1.27	751.37	2.292E-004	3.33	1.72
m	380.11	Y	163	87	1.28	761.52	2.272E-004	8.35	
m	382.66	Y	170	83	1.28	766.62	2.261E-004	8.12	
	392.95	Y	313	70	1.33	787.17	2.221E-004	7.25	
	413.75	Y	868	43	1.39	828.73	2.141E-004	3.81	
	422.46	Y	47	45	1.15	846.14	2.108E-004	27.22	
	451.41	Y	85	18	1.64	903.99	2.005E-004	13.53	
	583.10		58	9	1.54	1167.15	1.632E-004	15.93	
	1274.83	Y	34	8	1.54	2549.43	9.479E-005	22.24	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.02 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.03E+000 +- 4.96E-002	1.01E+000 +- 2.34E-002

Beta: 4.30E+000 +- 1.05E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	9.58E-001 +- 4.68E-002
203.55	1.22E+000 +- 7.69E-002
375.05	1.01E+000 +- 3.89E-002
413.71	9.91E-001 +- 4.32E-002

Segment 3 Results

Segment: 3 Detector: DET01 Position: 3
C:\Canberra\NDA2k\Data\00000198_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P003_S003

Acquisition Start: 12/18/2008 9:56:41 AM
Elapsed Live Time: 117.16 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.134 +/- 0.0026
SE-75	264.66	0.231 +/- 0.0037
SE-75	279.54	0.238 +/- 0.0046
SE-75	400.66	0.298 +/- 0.0072

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 4:55:03 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.41	Y	24218	2772	1.13	120.67	6.099E-005	1.31	
M	94.67	Y	1750	1882	1.44	191.13	1.597E-004	5.47	11.95
m	98.55	Y	4975	2415	1.45	198.89	1.694E-004	4.56	
m	100.89	Y	698	2020	1.45	203.55	1.750E-004	7.11	
m	103.43	Y	1911	1813	1.46	208.63	1.809E-004	4.88	
	111.06	Y	238	3196	1.39	223.87	1.974E-004	40.24	
M	125.26	Y	361	1051	1.10	252.26	2.229E-004	9.31	2.15
m	129.27	Y	4488	783	1.10	260.27	2.288E-004	4.18	
M	144.23	Y	207	600	1.07	290.16	2.495E-004	42.09	0.55
m	146.16	Y	157	669	1.07	294.02	2.520E-004	42.27	
m	148.50	Y	316	587	1.07	298.69	2.548E-004	39.65	
	160.31	Y	212	634	1.25	322.30	2.667E-004	19.21	
	197.19		265	521	2.32	396.00	2.839E-004	14.78	
M	203.50	Y	558	409	1.19	408.60	2.845E-004	8.26	1.19

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	207.99	Y	1074	413	1.20	417.56	2.847E-004	7.36	
	255.36	Y	52	221	1.07	512.23	2.751E-004	43.98	
	311.83	Y	79	137	1.55	625.07	2.518E-004	23.99	
M	332.75	Y	468	163	1.25	666.87	2.425E-004	14.33	0.84
m	335.89	Y	103	179	1.26	673.14	2.411E-004	18.22	
	344.91	Y	404	159	1.46	691.18	2.371E-004	6.98	
M	375.06	Y	1126	117	1.26	751.42	2.239E-004	3.19	1.83
m	380.09	Y	249	89	1.27	761.48	2.218E-004	6.53	
m	382.63	Y	162	76	1.27	766.55	2.207E-004	8.30	
	392.84	Y	351	79	1.66	786.96	2.165E-004	6.89	
	413.72	Y	1074	28	1.34	828.68	2.080E-004	3.37	
	422.59	Y	75	49	1.74	846.41	2.046E-004	19.06	
	451.45	Y	136	21	1.50	904.07	1.940E-004	10.28	
	558.41		19	15	1.41	1117.81	1.626E-004	39.76	
	583.52		43	14	1.63	1167.99	1.567E-004	21.37	
	662.25	Y	25	14	1.60	1325.31	1.412E-004	31.68	
	1274.87	Y	50	2	1.07	2549.52	9.199E-005	14.99	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.03 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.25E+000 +- 6.01E-002	1.19E+000 +- 2.74E-002

Beta: 1.47E+001 +- 1.15E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.11E+000 +- 6.06E-002
203.55	1.23E+000 +- 1.06E-001
375.05	1.16E+000 +- 4.24E-002
413.71	1.26E+000 +- 4.93E-002

Segment 4 Results

Segment: 4 Detector: DET01 Position: 4
C:\Canberra\NDA2k\Data\00000198_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P004_S004

Acquisition Start: 12/18/2008 10:00:53 AM
Elapsed Live Time: 117.59 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.156 +/- 0.0029
SE-75	264.66	0.233 +/- 0.0037
SE-75	279.54	0.237 +/- 0.0045
SE-75	400.66	0.290 +/- 0.0071

Errors quoted at 1.000 sigma

Peak Analysis Results

Peak Analysis Performed on: 2/2/2009 4:55:07 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.41	Y	16045	2164	1.13	120.67	3.670E-006	1.41	
M	94.61	Y	1164	1667	1.20	191.01	9.683E-005	6.49	2.33
m	98.56	Y	2874	2682	1.21	198.89	1.144E-004	5.51	
	103.34	Y	1085	1750	2.01	208.46	1.362E-004	6.63	
	111.14	Y	595	1512	1.45	224.03	1.713E-004	10.55	
M	125.21	Y	226	846	1.12	252.14	2.284E-004	12.40	0.64
m	129.26	Y	2939	694	1.13	260.25	2.425E-004	5.13	
M	144.29	Y	228	534	1.06	290.28	2.860E-004	35.96	2.90
m	148.54	Y	261	1052	1.06	298.77	2.957E-004	21.71	
	179.18	Y	65	399	0.50	360.00	3.325E-004	45.16	
M	203.50	Y	403	283	1.10	408.59	3.329E-004	11.67	0.54
m	207.97	Y	746	330	1.11	417.54	3.313E-004	10.14	
M	332.88	Y	405	174	1.29	667.13	2.410E-004	16.16	0.42
m	335.69	Y	105	157	1.29	672.74	2.391E-004	19.78	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	345.04	Y	337	151	1.40	691.43	2.332E-004	7.85	
M	375.03	Y	956	105	1.19	751.37	2.157E-004	7.06	1.23
m	380.21	Y	189	90	1.19	761.72	2.129E-004	10.12	
m	382.72	Y	172	82	1.19	766.72	2.116E-004	10.25	
	392.92	Y	353	72	1.65	787.12	2.064E-004	6.72	
	413.72	Y	982	39	1.36	828.68	1.967E-004	3.54	
	422.60	Y	64	36	1.03	846.43	1.929E-004	18.99	
	451.48	Y	141	27	1.36	904.13	1.817E-004	10.44	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.02 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.49E+000 +- 9.09E-002	9.04E-001 +- 2.79E-002

Beta: 1.03E+002 +- 1.35E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	6.88E-001 +- 4.12E-002
203.55	7.62E-001 +- 9.03E-002
375.05	1.02E+000 +- 7.47E-002
413.71	1.22E+000 +- 5.05E-002

Segment 5 Results

Segment: 5 Detector: DET01 Position: 5
C:\Canberra\NDA2k\Data\00000198_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P005_S005

Acquisition Start: 12/18/2008 10:05:04 AM
Elapsed Live Time: 116.95 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.358 +/- 0.0057
SE-75	264.66	0.454 +/- 0.0068
SE-75	279.54	0.458 +/- 0.0078
SE-75	400.66	0.514 +/- 0.0107

Errors quoted at 1.000 sigma

Peak Analysis Results

*** Spectrum Validity Test warnings ***
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 2/2/2009 4:55:10 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.42	Y	14117	2133	1.12	120.68	9.742E-005	1.47	
M	94.64		1279	2208	1.33	191.06	2.230E-004	6.31	4.18
m	98.64	Y	4386	3220	1.34	199.05	2.354E-004	5.10	
	103.43	Y	2460	2412	1.86	208.63	2.495E-004	3.80	
M	111.02		1662	1292	1.40	223.80	2.697E-004	7.29	10.73
m	114.70	Y	1165	1472	1.41	231.14	2.787E-004	7.73	
m	116.69	Y	1405	1401	1.41	235.13	2.833E-004	7.10	
m	120.67	Y	282	1295	1.42	243.09	2.920E-004	11.72	
m	125.21	Y	346	1227	1.43	252.15	3.010E-004	10.51	
m	129.27	Y	2746	1121	1.43	260.27	3.085E-004	6.65	
	148.48	Y	135	940	0.97	298.65	3.367E-004	35.37	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	195.47		195	644	1.04	392.55	3.617E-004	20.78	
M	203.55	Y	568	593	1.13	408.70	3.614E-004	5.18	1.82
m	208.00	Y	1081	666	1.14	417.60	3.609E-004	3.56	
	255.06		132	454	0.98	511.64	3.434E-004	27.09	
	311.88	Y	165	294	1.59	625.18	3.093E-004	18.27	
M	332.76	Y	915	191	1.33	666.90	2.966E-004	6.64	1.16
m	335.82	Y	331	204	1.33	673.02	2.947E-004	8.46	
m	341.52	Y	132	180	1.34	684.40	2.913E-004	12.78	
m	344.96		921	174	1.34	691.28	2.892E-004	6.47	
	368.43	Y	360	233	1.81	738.18	2.756E-004	8.66	
M	375.03	Y	2571	165	1.24	751.36	2.718E-004	2.23	2.19
m	380.20		500	125	1.25	761.69	2.690E-004	4.80	
m	382.73		445	107	1.25	766.75	2.676E-004	5.04	
	392.96		864	134	1.43	787.18	2.620E-004	4.21	
	413.72	Y	2480	69	1.38	828.67	2.512E-004	2.37	
	422.53		170	56	1.38	846.28	2.468E-004	10.20	
	451.39		300	40	1.44	903.95	2.331E-004	6.87	
	662.24	Y	84	17	1.55	1325.29	1.656E-004	13.50	
	722.19	Y	35	11	1.39	1445.09	1.537E-004	22.73	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.02 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	4.99E+000 +- 2.44E-001	1.12E+000 +- 2.62E-002

Beta: 3.10E+002 +- 1.41E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	5.05E-001 +- 3.75E-002
203.55	9.89E-001 +- 5.54E-002
375.05	2.18E+000 +- 6.39E-002
413.71	2.41E+000 +- 7.65E-002

Segment 6 Results

Segment: 6 Detector: DET01 Position: 6
C:\Canberra\NDA2k\Data\00000198_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P006_S006

Acquisition Start: 12/18/2008 10:09:16 AM
Elapsed Live Time: 116.85 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.342 +/- 0.0055
SE-75	264.66	0.441 +/- 0.0066
SE-75	279.54	0.449 +/- 0.0076
SE-75	400.66	0.493 +/- 0.0104

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

*** Spectrum Validity Test warnings ***
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 2/2/2009 4:55:13 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	49.07		394	2194	1.08	100.00	1.196E-007	18.77	
	59.41	Y	11851	1972	1.10	120.67	2.309E-006	1.54	
M	94.68	Y	1552	1770	1.56	191.14	1.184E-004	5.21	7.59
m	98.68	Y	5529	2183	1.57	199.13	1.427E-004	4.10	
m	100.83	Y	684	2220	1.58	203.43	1.562E-004	7.98	
m	103.51	Y	4007	1904	1.58	208.79	1.729E-004	4.01	
M	111.12	Y	1657	1287	1.40	224.00	2.198E-004	3.13	11.45
m	114.75	Y	1194	1581	1.40	231.24	2.411E-004	3.62	
m	116.70	Y	1510	1484	1.41	235.14	2.522E-004	3.12	
m	120.48	Y	435	1223	1.41	242.70	2.727E-004	5.84	
m	125.21	Y	307	1236	1.42	252.14	2.964E-004	7.46	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	129.28	Y	2517	1108	1.43	260.29	3.150E-004	2.65	
M	144.27	Y	120	824	0.95	290.24	3.694E-004	19.38	1.49
m	148.68	Y	125	710	0.96	299.05	3.813E-004	18.88	
M	203.58	Y	640	699	1.15	408.76	4.186E-004	9.56	1.11
m	207.99	Y	1133	606	1.15	417.56	4.164E-004	8.67	
	255.38	Y	112	437	1.17	512.27	3.784E-004	29.83	
	311.75	Y	149	281	1.16	624.91	3.282E-004	18.92	
M	332.76	Y	984	212	1.32	666.89	3.120E-004	6.57	1.47
m	335.75	Y	345	209	1.33	672.88	3.098E-004	8.31	
m	341.25	Y	142	207	1.33	683.87	3.058E-004	12.31	
m	344.94	Y	1025	227	1.34	691.24	3.031E-004	6.42	
M	366.93	Y	150	149	1.25	735.17	2.887E-004	11.07	1.40
m	368.59	Y	252	210	1.25	738.50	2.876E-004	7.77	
m	375.04	Y	2895	185	1.26	751.39	2.836E-004	2.13	
m	380.10	Y	577	156	1.26	761.49	2.806E-004	4.53	
m	382.70	Y	521	148	1.27	766.68	2.791E-004	4.75	
	392.86	Y	1022	132	1.46	786.99	2.734E-004	3.82	
M	413.68	Y	2778	109	1.26	828.59	2.627E-004	2.17	3.64
m	422.51	Y	208	108	1.27	846.25	2.584E-004	7.53	
	451.40	Y	334	51	1.27	903.98	2.459E-004	6.60	
	558.50		20	13	0.81	1117.99	2.108E-004	35.81	
	662.17	Y	78	29	1.59	1325.15	1.873E-004	16.22	
	721.99	Y	50	8	2.05	1444.70	1.764E-004	16.69	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.03 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	5.66E+000 +- 2.21E-001	7.43E-001 +- 1.90E-002

Beta: 3.29E+002 +- 9.80E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	4.53E-001 +- 2.09E-002
203.55	9.62E-001 +- 9.73E-002
375.05	2.35E+000 +- 6.86E-002
413.71	2.58E+000 +- 7.89E-002

Segment 7 Results

Segment: 7 Detector: DET01 Position: 7
C:\Canberra\NDA2k\Data\00000198_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P007_S007

Acquisition Start: 12/18/2008 10:13:27 AM
Elapsed Live Time: 118.09 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.404 +/- 0.0063
SE-75	264.66	0.493 +/- 0.0073
SE-75	279.54	0.489 +/- 0.0081
SE-75	400.66	0.543 +/- 0.0111

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 4:55:16 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.40	Y	6305	1299	1.14	120.65	4.614E-006	1.87	
M	94.66		532	1253	1.26	191.11	1.314E-004	9.86	0.85
m	98.63	Y	1899	1712	1.26	199.04	1.560E-004	7.77	
	103.54	Y	1178	1232	1.62	208.85	1.871E-004	5.39	
	111.09		386	1099	1.49	223.93	2.347E-004	13.58	
	129.35	Y	1042	641	1.14	260.42	3.344E-004	4.91	
M	203.50	Y	294	358	1.21	408.61	4.407E-004	14.52	0.68
m	208.01	Y	544	387	1.21	417.61	4.374E-004	13.35	
	311.89	Y	76	175	1.15	625.20	3.193E-004	28.47	
M	332.71	Y	365	198	1.29	666.80	2.994E-004	5.81	1.74
m	335.78	Y	162	188	1.29	672.92	2.966E-004	9.26	
	345.06		344	193	1.23	691.47	2.885E-004	8.33	
	368.49	Y	162	137	0.90	738.30	2.698E-004	13.91	
M	375.01	Y	1185	113	1.32	751.33	2.651E-004	7.45	1.18

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	380.19		242	74	1.33	761.67	2.614E-004	9.81	
m	382.69		232	66	1.33	766.67	2.597E-004	9.67	
	392.85		406	69	1.60	786.98	2.529E-004	6.09	
	413.73	Y	1194	44	1.35	828.69	2.401E-004	3.24	
	422.49		83	59	1.14	846.20	2.353E-004	20.67	
	451.36		135	30	1.15	903.89	2.207E-004	10.84	
	662.02	Y	51	12	1.57	1324.86	1.622E-004	17.79	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.02 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	2.85E+000 +- 1.67E-001	2.44E-001 +- 1.01E-002

Beta: 3.61E+002 +- 1.32E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.77E-001 +- 1.06E-002
203.55	4.20E-001 +- 6.18E-002
375.05	1.03E+000 +- 7.93E-002
413.71	1.21E+000 +- 4.72E-002

Segment 8 Results

Segment: 8 Detector: DET01 Position: 8
C:\Canberra\NDA2k\Data\00000198_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P008_S008

Acquisition Start: 12/18/2008 10:17:39 AM
Elapsed Live Time: 118.82 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.337 +/- 0.0054
SE-75	264.66	0.422 +/- 0.0063
SE-75	279.54	0.425 +/- 0.0072
SE-75	400.66	0.474 +/- 0.0099

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 4:55:20 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.41	Y	3609	729	1.14	120.66	8.886E-005	2.27	
M	94.54		150	669	1.04	190.86	2.217E-004	14.07	0.98
m	98.62		479	839	1.05	199.02	2.344E-004	6.38	
	129.35	Y	489	660	1.17	260.43	3.050E-004	10.42	
M	203.56	Y	72	142	1.09	408.72	3.482E-004	20.56	1.12
m	207.86	Y	128	130	1.10	417.31	3.474E-004	15.92	
	332.97		54	96	1.06	667.31	2.836E-004	31.71	
	344.77		56	57	1.02	690.90	2.769E-004	23.59	
	374.96	Y	140	125	1.34	751.22	2.605E-004	18.10	
	392.97		65	26	1.42	787.21	2.513E-004	17.19	
	413.74	Y	160	23	1.20	828.72	2.412E-004	9.29	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.92E-001 +- 2.56E-002	1.15E-001 +- 7.54E-003

Beta: 9.58E+001 +- 2.62E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	9.09E-002 +- 1.00E-002
203.55	1.31E-001 +- 2.70E-002
375.05	1.23E-001 +- 2.25E-002
413.71	1.62E-001 +- 1.53E-002

Segment 9 Results

Segment: 9 Detector: DET01 Position: 9
C:\Canberra\NDA2k\Data\00000198_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P009_S009

Acquisition Start: 12/18/2008 10:21:50 AM
Elapsed Live Time: 118.93 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.309 +/- 0.0050
SE-75	264.66	0.402 +/- 0.0060
SE-75	279.54	0.405 +/- 0.0069
SE-75	400.66	0.461 +/- 0.0097

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 4:55:23 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.43	Y	4228	710	1.11	120.70	1.214E-005	2.09	
M	94.70		191	589	1.47	191.18	1.546E-004	19.54	2.00
m	98.63	Y	631	715	1.48	199.04	1.741E-004	15.42	
m	103.26	Y	222	575	1.49	208.28	1.961E-004	17.33	
	111.17		75	421	0.92	224.10	2.306E-004	41.47	
	129.32	Y	562	296	1.08	260.37	2.909E-004	6.28	
M	203.43	Y	71	135	1.17	408.46	3.501E-004	15.60	0.57
m	207.97	Y	122	155	1.18	417.53	3.487E-004	10.89	
	345.08		25	50	1.08	691.51	2.754E-004	45.96	
	374.89	Y	119	34	1.20	751.08	2.617E-004	11.89	
	392.88		35	22	0.96	787.02	2.540E-004	25.89	
	413.67	Y	84	16	1.25	828.58	2.458E-004	13.12	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 16:
Beta is too small (negative or less than lower limit)

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	- correction not done -	1.04E-001 +- 5.57E-003

Beta: -3.05E+001 +- 2.17E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in attempted correction: 4

Energy	Mass (g)

Segment 10 Results

Segment: 10 Detector: DET01 Position: 10
C:\Canberra\NDA2k\Data\00000198_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P010_S010

Acquisition Start: 12/18/2008 10:26:01 AM
Elapsed Live Time: 118.83 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.321 +/- 0.0051
SE-75	264.66	0.416 +/- 0.0062
SE-75	279.54	0.429 +/- 0.0072
SE-75	400.66	0.464 +/- 0.0097

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 4:55:26 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.42	Y	6577	753	1.11	120.68	5.673E-006	1.75	
M	94.65		298	530	1.51	191.08	1.204E-004	13.53	6.00
m	98.61	Y	975	748	1.51	199.00	1.423E-004	10.08	
m	103.12	Y	412	582	1.52	208.00	1.681E-004	10.99	
M	111.07		280	336	1.31	223.90	2.139E-004	7.21	2.20
m	114.81	Y	178	477	1.32	231.38	2.350E-004	10.26	
	129.32	Y	847	246	1.15	260.37	3.091E-004	4.48	
	148.52	Y	67	254	0.82	298.72	3.820E-004	37.09	
M	203.63	Y	73	128	1.03	408.85	4.366E-004	15.22	1.66
m	208.02	Y	226	112	1.04	417.63	4.344E-004	7.39	
	332.49	Y	39	63	1.18	666.36	3.005E-004	34.47	
	344.94		72	33	1.62	691.24	2.881E-004	16.81	
	374.97	Y	174	40	1.39	751.24	2.615E-004	9.51	
	393.06		63	18	1.10	787.39	2.475E-004	16.43	
	413.62	Y	145	15	1.48	828.48	2.336E-004	9.32	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 16:
Beta is too small (negative or less than lower limit)

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	- correction not done -	1.47E-001 +- 6.32E-003

Beta: -8.64E+000 +- 1.81E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in attempted correction: 4

Energy	Mass (g)

Segment 11 Results

Segment: 11 Detector: DET01 Position: 11
C:\Canberra\NDA2k\Data\00000198_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P011_S011

Acquisition Start: 12/18/2008 10:30:13 AM
Elapsed Live Time: 118.85 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.382 +/- 0.0060
SE-75	264.66	0.476 +/- 0.0071
SE-75	279.54	0.484 +/- 0.0080
SE-75	400.66	0.541 +/- 0.0110

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 4:55:29 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.43	Y	6941	708	1.11	120.71	6.227E-006	1.71	
M	94.63	Y	372	449	1.38	191.04	1.424E-004	10.19	7.85
m	98.60	Y	1104	647	1.39	198.98	1.668E-004	7.51	
m	103.21	Y	419	526	1.40	208.18	1.952E-004	8.57	
M	111.03	Y	224	356	1.33	223.82	2.423E-004	28.17	1.56
m	114.68	Y	154	561	1.33	231.11	2.630E-004	26.44	
	129.36	Y	831	336	1.21	260.45	3.344E-004	4.89	
M	203.55	Y	119	94	1.07	408.70	4.285E-004	16.58	0.41
m	208.01	Y	282	116	1.08	417.61	4.257E-004	14.46	
	332.85	Y	77	70	1.46	667.07	3.074E-004	20.50	
	345.07	Y	50	45	1.15	691.49	2.977E-004	24.65	
	375.10	Y	201	26	1.26	751.51	2.764E-004	8.18	
	393.04	Y	65	27	1.26	787.35	2.652E-004	17.63	
	413.81	Y	130	30	1.40	828.86	2.534E-004	11.11	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.50E-001 +- 1.56E-002	1.45E-001 +- 6.20E-003

Beta: 6.88E+000 +- 1.71E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.41E-001 +- 8.22E-003
203.55	1.75E-001 +- 2.93E-002
375.05	1.67E-001 +- 1.41E-002
413.71	1.25E-001 +- 1.41E-002

Segment 12 Results

Segment: 12 Detector: DET01 Position: 12
C:\Canberra\NDA2k\Data\00000198_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P012_S012

Acquisition Start: 12/18/2008 10:34:24 AM
Elapsed Live Time: 118.92 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.387 +/- 0.0061
SE-75	264.66	0.479 +/- 0.0071
SE-75	279.54	0.487 +/- 0.0080
SE-75	400.66	0.521 +/- 0.0107

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 4:55:32 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.44	Y	6056	706	1.10	120.71	2.151E-004	1.80	
M	94.69		322	396	1.30	191.16	2.558E-004	12.10	3.25
m	98.66	Y	866	635	1.31	199.10	2.637E-004	8.94	
m	103.12	Y	356	555	1.32	208.01	2.726E-004	9.88	
	129.33	Y	628	278	1.09	260.39	3.184E-004	5.72	
	144.17		41	187	0.60	290.05	3.380E-004	51.45	
M	203.57	Y	87	71	1.02	408.73	3.677E-004	21.66	0.66
m	207.96	Y	211	81	1.03	417.50	3.674E-004	19.19	
	332.70	Y	36	57	1.26	666.77	3.075E-004	36.18	
	344.95		60	33	1.24	691.26	3.001E-004	19.21	
	375.03	Y	163	31	1.34	751.35	2.831E-004	9.47	
	392.73		45	20	1.34	786.73	2.736E-004	21.27	
	413.78	Y	108	15	1.14	828.80	2.635E-004	11.22	
	451.80		29	9	1.23	904.77	2.470E-004	24.06	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.16E-001 +- 1.33E-002	1.14E-001 +- 5.61E-003

Beta: 3.64E+000 +- 1.92E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.12E-001 +- 7.63E-003
203.55	1.49E-001 +- 3.25E-002
375.05	1.33E-001 +- 1.29E-002
413.71	9.99E-002 +- 1.15E-002

Segment 13 Results

Segment: 13 Detector: DET01 Position: 13
C:\Canberra\NDA2k\Data\00000198_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P013_S013

Acquisition Start: 12/18/2008 10:38:36 AM
Elapsed Live Time: 118.95 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.303 +/- 0.0049
SE-75	264.66	0.392 +/- 0.0059
SE-75	279.54	0.401 +/- 0.0068
SE-75	400.66	0.446 +/- 0.0095

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 4:55:36 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.43	Y	5775	662	1.09	120.71	1.628E-004	1.82	
M	94.69		222	370	1.50	191.15	2.372E-004	14.30	4.23
m	98.61	Y	830	535	1.50	199.00	2.452E-004	10.37	
m	103.21	Y	350	435	1.51	208.18	2.541E-004	11.30	
M	125.22	Y	72	187	1.00	252.17	2.899E-004	16.40	2.03
m	129.32	Y	653	183	1.01	260.36	2.951E-004	4.36	
M	203.33	Y	68	92	1.16	408.26	3.346E-004	24.99	0.46
m	207.97	Y	179	88	1.17	417.53	3.341E-004	21.13	
	332.73	Y	40	43	1.40	666.83	2.796E-004	29.29	
	345.17		37	30	0.63	691.70	2.730E-004	26.89	
	375.06	Y	129	23	1.39	751.43	2.575E-004	10.53	
	392.98		64	8	1.31	787.24	2.486E-004	14.20	
	413.77	Y	124	14	1.48	828.79	2.391E-004	10.18	
	451.53		19	7	1.35	904.24	2.233E-004	30.38	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 16:
Beta is too small (negative or less than lower limit)

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	- correction not done -	1.24E-001 +- 5.37E-003

Beta: -7.13E+000 +- 1.77E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in attempted correction: 4

Energy	Mass (g)

Segment 14 Results

Segment: 14 Detector: DET01 Position: 14
C:\Canberra\NDA2k\Data\00000198_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P014_S014

Acquisition Start: 12/18/2008 10:42:47 AM
Elapsed Live Time: 118.98 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.375 +/- 0.0059
SE-75	264.66	0.464 +/- 0.0069
SE-75	279.54	0.474 +/- 0.0078
SE-75	400.66	0.510 +/- 0.0105

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 4:55:39 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.45	Y	5943	580	1.05	120.74	5.870E-006	1.79	
M	94.58	Y	254	313	1.41	190.94	1.382E-004	13.50	3.28
m	98.57	Y	785	375	1.41	198.92	1.623E-004	11.09	
m	101.00	Y	137	339	1.42	203.77	1.770E-004	16.41	
m	103.31	Y	314	262	1.42	208.39	1.911E-004	11.95	
	110.95	Y	97	354	1.26	223.65	2.362E-004	31.24	
M	125.15	Y	103	198	1.02	252.04	3.092E-004	12.27	1.11
m	129.25	Y	606	184	1.03	260.22	3.267E-004	4.50	
	148.62	Y	39	141	0.92	298.94	3.877E-004	46.61	
M	203.54	Y	71	82	0.94	408.68	4.137E-004	20.83	0.69
m	208.03	Y	154	92	0.95	417.66	4.105E-004	18.13	
	332.65	Y	31	33	1.16	666.67	2.857E-004	32.77	
	345.00	Y	43	28	0.98	691.36	2.754E-004	23.98	
	375.10	Y	111	26	1.43	751.51	2.532E-004	11.80	

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
393.21	Y	41	20	0.91	787.69	2.415E-004	22.49	
413.72	Y	131	15	1.29	828.69	2.299E-004	10.03	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.24E-001 +- 1.47E-002	1.09E-001 +- 4.81E-003

Beta: 2.15E+001 +- 1.85E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.05E-001 +- 5.82E-003
203.55	1.09E-001 +- 2.28E-002
375.05	1.01E-001 +- 1.21E-002
413.71	1.39E-001 +- 1.42E-002

Segment 15 Results

Segment: 15 Detector: DET01 Position: 15
C:\Canberra\NDA2k\Data\00000198_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P015_S015

Acquisition Start: 12/18/2008 10:46:59 AM
Elapsed Live Time: 119.12 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.615 +/- 0.0092
SE-75	264.66	0.688 +/- 0.0100
SE-75	279.54	0.682 +/- 0.0108
SE-75	400.66	0.714 +/- 0.0136

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 4:55:42 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.41	Y	3545	387	1.14	120.67	6.173E-006	2.15	
M	98.63	Y	309	319	1.11	199.04	1.893E-004	6.90	3.67
m	103.09	Y	165	267	1.12	207.95	2.215E-004	9.17	
M	125.20	Y	46	128	1.03	252.14	3.627E-004	21.13	0.51
m	129.33	Y	337	122	1.04	260.38	3.831E-004	6.06	
	208.00	Y	89	67	1.07	417.59	4.628E-004	16.81	
	413.70	Y	81	4	1.23	828.65	2.496E-004	11.65	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	9.87E-002 +- 1.73E-002	5.34E-002 +- 3.23E-003

Beta: 8.83E+001 +- 2.58E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 2

Energy	Mass (g)
129.30	4.99E-002 +- 3.43E-003
413.71	7.97E-002 +- 9.44E-003

Segment 16 Results

Segment: 16 Detector: DET01 Position: 16
C:\Canberra\NDA2k\Data\00000198_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P016_S016

Acquisition Start: 12/18/2008 10:51:10 AM
Elapsed Live Time: 119.26 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.758 +/- 0.0112
SE-75	264.66	0.807 +/- 0.0117
SE-75	279.54	0.802 +/- 0.0125
SE-75	400.66	0.813 +/- 0.0152

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 4:55:47 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.47	Y	992	186	1.07	120.79	1.346E-004	3.90	
98.72		117	150	0.86	199.21	1.877E-004	17.61	
129.31	Y	79	118	1.14	260.35	2.241E-004	23.27	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Sum of Segment NID Results
Category: Segmented

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********** Self Absorption Correction Results **********

Absorption correction model:

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.91E+001 +- 3.94E-001	5.89E-001 +- 1.79E-002

Beta: 4.29E+001 +- 1.21E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 3.729E-002 +/-	2.3%	< 1.504E-006	< 1.719E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	2.022E-001 +/-	12.7%	8.154E-006	3.195E-011
	Al-26	< 2.991E-002 +/-	15.2%	< 1.206E-006	< 1.573E-006
	K-40	< 4.728E-001 +/-	5.6%	< 1.907E-005	< 7.376E-002
	Co-57	2.536E-001 +/-	12.3%	1.023E-005	2.967E-011
	Co-60	< 5.304E-002 +/-	2.0%	< 2.139E-006	< 4.652E-011
	Se-75	< 7.936E-002 +/-	1.9%	< 3.200E-006	< 5.460E-012
	Kr-85	< 1.017E+001 +/-	3.2%	< 4.101E-004	< 2.563E-008
	Sr-90	1.288E-001 +/-	16.2%	5.195E-006	9.341E-010
	Sb-125	< 1.110E-001 +/-	2.1%	< 4.478E-006	< 1.068E-010
	Ba-133	< 6.585E-002 +/-	1.7%	< 2.655E-006	< 2.601E-010
	Cs-134	< 2.801E-002 +/-	2.1%	< 1.129E-006	< 2.137E-011
?	Cs-137	1.288E-001 +/-	16.2%	5.195E-006	1.469E-009
	Eu-152	< 1.270E-001 +/-	3.8%	< 5.120E-006	< 7.136E-010
	Eu-154	< 1.440E-001 +/-	2.1%	< 5.806E-006	< 5.400E-010
	Ho-166m	< 3.989E-002 +/-	3.7%	< 1.608E-006	< 2.218E-008
	Bi-207	< 2.757E-002 +/-	2.1%	< 1.112E-006	< 5.017E-010
	Pb-210	< 1.213E+004 +/-	309.7%	< 4.892E-001	< 1.577E-004
	Ra-226	< 5.867E-002 +/-	3.0%	< 2.366E-006	< 5.867E-008
	Ac-227	< 2.809E-001 +/-	8.3%	< 1.133E-005	< 3.848E-009
	Th-230	< 1.210E+002 +/-	8.6%	< 4.878E-003	< 5.928E-003
	Pa-231	< 1.500E+000 +/-	11.3%	< 6.050E-005	< 3.136E-005
	Th-232	< 9.066E-002 +/-	2.0%	< 3.655E-006	< 8.168E-001
	U-232	< 9.168E-002 +/-	2.0%	< 3.697E-006	< 4.245E-009
	U-233	< 9.782E+002 +/-	2.7%	< 3.944E-002	< 9.977E-002

Pa-234	<	2.183E-001	+/-	11.6%	<	8.802E-006	
Pa-234m	<	1.968E+002	+/-	2.1%	<	7.933E-003	
U-234	<	0.000E+000	+/-	0.0%	<	0.000E+000	< 0.000E+000
U-235	<	9.272E-002	+/-	2.5%	<	3.739E-006	< 4.237E-002
Np-237		7.342E-001	+/-	13.1%		2.960E-005	1.028E-003
Pu-238	<	6.038E+003	+/-	2.6%	<	2.435E-001	< 3.490E-004
U-238	<	4.387E+000	+/-	2.4%	<	1.769E-004	< 1.290E+001
Pu-239		1.202E+006	+/-	2.1%		4.846E+001	1.911E+001
Pu-239B		4.426E+005	+/-	1.5%		1.785E+001	7.036E+000
U-239	<	8.945E+004	+/-	368.5%	<	3.607E+000	
Pu-240		1.659E+004	+/-	45.8%		6.688E-001	7.215E-002
Am-241		9.612E+004	+/-	7.3%		3.876E+000	2.768E-002
Am-241B		9.190E+004	+/-	5.3%		3.706E+000	2.647E-002
Pu-241		5.386E+005	+/-	13.9%		2.172E+001	5.181E-003
Pu-241B		9.297E+005	+/-	2.9%		3.749E+001	8.944E-003
Pu-242	<	0.000E+000	+/-	0.0%	<	0.000E+000	< 0.000E+000
Am-243	<	2.791E-001	+/-	2.2%	<	1.126E-005	< 1.382E-006
Cm-243	<	3.068E-001	+/-	3.3%	<	1.237E-005	< 5.890E-009
Cm-244	<	3.283E+004	+/-	14.2%	<	1.324E+000	< 4.006E-004
Cm-245	<	5.583E-001	+/-	7.7%	<	2.251E-005	< 3.210E-006
Cm-247	<	4.299E-002	+/-	8.5%	<	1.734E-006	< 4.600E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 4.986E-002 +/-	3.5%	< 2.010E-006	< 1.207E-008
Cf-251	< 3.176E-001 +/-	5.6%	< 1.281E-005	< 1.985E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

Summed Segment Spectra Results
Category: Segmented

C:\Canberra\NDA2k\Data\00000198_CNTR0001_DCAT0002_PROC00AI.CNF

Elapsed Live Time: 117.84 sec Elapsed Real Time: 120.00 sec

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 7.641E-002 +/-	1.1%	< 3.081E-006	< 3.523E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	3.415E-001 +/-	11.0%	1.377E-005	5.395E-011
	Al-26	< 8.152E-002 +/-	7.8%	< 3.287E-006	< 4.288E-006
	K-40	1.304E+000 +/-	19.2%	5.259E-005	2.034E-001
	Co-57	< 3.996E-001 +/-	1.8%	< 1.611E-005	< 4.676E-011
	Co-60	2.163E-001 +/-	11.5%	8.722E-006	1.897E-010
	Se-75	< 2.719E-001 +/-	1.1%	< 1.096E-005	< 1.871E-011
	Kr-85	< 2.768E+001 +/-	2.5%	< 1.116E-003	< 6.975E-008
	Sr-90	1.293E-001 +/-	57.3%	5.214E-006	9.374E-010
	Sb-125	< 3.636E-001 +/-	1.4%	< 1.466E-005	< 3.498E-010
	Ba-133	< 2.227E-001 +/-	1.0%	< 8.981E-006	< 8.798E-010
	Cs-134	< 7.867E-002 +/-	0.9%	< 3.172E-006	< 6.003E-011
	Cs-137	1.293E-001 +/-	57.3%	5.214E-006	1.474E-009
	Eu-152	< 3.567E-001 +/-	2.1%	< 1.438E-005	< 2.005E-009
	Eu-154	< 4.418E-001 +/-	1.5%	< 1.782E-005	< 1.657E-009
	Ho-166m	< 1.279E-001 +/-	1.7%	< 5.159E-006	< 7.113E-008
	Bi-207	< 7.707E-002 +/-	1.0%	< 3.108E-006	< 1.403E-009
	Pb-210	< 8.390E+003 +/-	11.9%	< 3.383E-001	< 1.091E-004
	Ra-226	< 1.871E-001 +/-	1.4%	< 7.546E-006	< 1.871E-007
	Ac-227	< 9.493E-001 +/-	8.2%	< 3.828E-005	< 1.301E-008
	Th-230	< 4.892E+002 +/-	8.3%	< 1.973E-002	< 2.397E-002
	Pa-231	< 5.288E+000 +/-	11.1%	< 2.132E-004	< 1.105E-004
	Th-232	< 3.494E-001 +/-	1.9%	< 1.409E-005	< 3.148E+000
	U-232	< 3.685E-001 +/-	1.3%	< 1.486E-005	< 1.706E-008
	U-233	< 3.573E+003 +/-	1.5%	< 1.441E-001	< 3.645E-001
	Pa-234	< 4.868E-001 +/-	12.1%	< 1.963E-005	
	Pa-234m	< 5.561E+002 +/-	1.5%	< 2.243E-002	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
X	U-235				
	Np-237	8.139E-001 +/-	17.5%	3.282E-005	1.139E-003
	Pu-238	< 2.131E+004 +/-	1.5%	< 8.595E-001	< 1.232E-003
	U-238	< 9.550E+000 +/-	1.6%	< 3.851E-004	< 2.808E+001
	Pu-239	1.058E+006 +/-	2.0%	4.267E+001	1.683E+001
	Pu-239B	6.713E+005 +/-	1.0%	2.707E+001	1.067E+001
	U-239	< 2.130E+004 +/-	15.9%	< 8.589E-001	
X	Pu-240				
	Am-241	1.132E+005 +/-	13.4%	4.563E+000	3.259E-002
	Am-241B	9.239E+004 +/-	3.1%	3.725E+000	2.661E-002
	Pu-241	6.100E+005 +/-	6.0%	2.460E+001	5.868E-003
	Pu-241B	8.426E+005 +/-	3.1%	3.397E+001	8.106E-003

Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.032E+000 +/-	1.2%	< 4.161E-005	< 5.108E-006
Cm-243	< 1.064E+000 +/-	3.0%	< 4.292E-005	< 2.044E-008
Cm-244	< 1.018E+005 +/-	14.0%	< 4.105E+000	< 1.242E-003
Cm-245	< 1.889E+000 +/-	7.4%	< 7.615E-005	< 1.086E-005
Cm-247	< 1.455E-001 +/-	8.4%	< 5.865E-006	< 1.556E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.732E-001 +/-	3.2%	< 6.985E-006	< 4.192E-008
Cf-251	< 1.055E+000 +/-	5.3%	< 4.254E-005	< 6.593E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.68E+001 +- 3.39E-001	7.46E+000 +- 7.54E-002

Beta: 1.69E+002 +- 4.97E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	4.76E+000 +- 1.10E-001
203.55	6.27E+000 +- 2.13E-001
375.05	1.06E+001 +- 1.54E-001
413.71	1.16E+001 +- 1.87E-001

Automated Independent Technical Review

Counter ID: SGS with Trans. Count Type: Assay - 55 Gal Galv 23.8
Container ID: LL85234284 Assay Date: 12/18/2008
Waste Matrix Code:
Sequence Number: 198

Data Combiner Analysis:
Input combination 2: only Isotopics input data are valid.

Source of results is undefined.

DISPOSITION:

MGA Analysis:

Note: The measured and declared isotopics are inconsistent.

DISPOSITION:

Gamma Analysis:
Analysis Status: No errors.
Ratio of Pu-239 414 to 129 keV line activities is above the limit of 2.50
Spectrum Validity Check engine has suggested data review.

DISPOSITION:

Segment Data Review:
Segment: 1 OK
Segment: 2 OK
Segment: 3 OK
Segment: 4 OK
Segment: 5 OK
Segment: 6 OK
Segment: 7 OK
Segment: 8 OK
Segment: 9 OK
Segment: 10 OK
Segment: 11 OK
Segment: 12 OK
Segment: 13 OK
Segment: 14 OK
Segment: 15 OK
Segment: 16 OK

DISPOSITION:

Miscellaneous:

DISPOSITION:

Expert Review by: Robert J Haslett Jr Date: 2-3-09

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Assay Instrument:	SGS with Trans.	Location:	LLNL
Analysis Method:	CCP-TP-019 Rev 4	Software Version:	NDA 2000 V.4.0
Item ID:	LL85234284	Analysis Date:	12/18/2008

********** MGA Results **********

MGA version: MGA V9.63H CI

Measurement date = 12/18/08 Declared date = 12/18/08
Low energy spectrum sensitivity = 30.0% Total counts = 1.162E+006
High energy spectrum sensitivity : 10.0%

Pu g/cm2 = 0.3893 Cd g/cm2 = 1.8075 FWHM at 122 keV = 612 eV
QFIT = 1.12 FWHM at 208 keV = 782 eV
NQFIT = 1.01

Isotope	Relative to Pu-239	%* Err	% Err	Relative to Pu-241	%* Err	Isotope analysis at Meas. date % weight	%Err	Decl. date % weight	%Err
Pu-238	0.000141	10.6	10.6	0.1261	11.5	0.01323	10.55	0.01436	11.45
Pu-239	1.000000	0.0	1.0	894.4987	2.7	93.86970	0.13	93.79925	0.13
Pu-240	0.063780	2.1	2.0	57.0508	3.2	5.98698	1.97	5.98731	1.97
Pu-241	0.001118	2.6	2.3	1.0000	0.0	0.10494	2.52	0.17396	4.17
Pu-242	(New alg.)			0.2396(11)		0.02515 (11)		0.02512 (10)	
Am-241	0.002707	1.5	1.2	2.4217	2.8	0.25414	1.46	0.25774	1.48

Pu-240 effective (meas. date) = 6.063 +/- 2.16%
Am-241 separated about 25.529 +/- 0.485 years ago
Am/Pu-241 weight ratio = 2.42173 +/- 2.62%

Messages:

Lead x-rays detected.
Calculations in MGAABS didn't converge: results may be suspect.

Notes : * = Error in ratio
Errors quoted at 1.000 sigma
MGA sigma defaulted to 1

Reviewed by: Robert J. Hurlbutt Jr. Date: 2-3-09

********** Radioassay Data Sheet **********

Engine Version: TMU Gamma 1.5

Assay Instrument: SGS with Trans. Location:LLNL
Analysis Method: LLNL SGS Operating Procedure Software Version: NDA 2000 V.4.0
Item ID: LL85234255 Analysis Date: 12/18/2008

201

NID identified fiducial nuclide Pu-239
Source of isotopics: MEASURED

Net Weight	51200.0 g	
Pu mass	5.53E+000 +-	1.06E+000 g
TRU Alpha Activity	5.08E-001 +-	7.10E-002 Ci
TRU Activity Concentration	9.92E+003 +-	1.39E+003 nCi/g
Pu-239 Equivalent Activity	5.12E-001 +-	7.07E-002 Ci
Pu-239 FGE	5.20E+000 +-	1.06E+000 g
Decay heat	1.60E-002 +-	2.21E-003 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.30E-007
U233	<LLD	<LLD	0.00E+000	3.82E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.11E-007
NP237	0.00E+000	0.00E+000	0.00E+000	3.85E-007
PU238	4.99E-003	8.63E-002	1.78E-002	1.41E-003
U238	<LLD	<LLD	0.00E+000	1.07E-005
PU239	5.18E+000	3.26E-001	6.65E-002	5.33E-003
PU240	3.32E-001	7.64E-002	1.57E-002	1.25E-003
AM241	5.55E-003	1.93E-002	8.03E-003	5.42E-005
PU241	6.07E-003	6.31E-001	1.30E-001	1.03E-002
PU242	1.25E-003	4.97E-006	1.15E-006	0.00E+000

Errors quoted at 1.000 sigma

Operator: _____ Date: _____

Expert Analysis ~~ITR~~: [signature] Date: 2-3-09

YES QC REPLICATE
FEO 2/3/09

Automated Independent Technical Review

Counter ID: SGS with Trans. Count Type: Assay - 55 Gal Galv 23.8
Container ID: LL85234255 Assay Date: 12/18/2008
Waste Matrix Code:
Sequence Number: 201

Data Combiner Analysis:
Input combination 7: only Isotop., Gamma U, and Gamma Pu input data are valid.

Results taken from Quantitative Gamma data.

Results comparison test passed.

DISPOSITION:

MGA Analysis:

Note: The measured and declared isotopics are inconsistent.

DISPOSITION:

Gamma Analysis:
Analysis Status: No errors.
Spectrum Validity Check engine has suggested data review. OK pdt

DISPOSITION:

Segment Data Review:
Segment: 1 OK
Segment: 2 OK
Segment: 3 OK
Segment: 4 OK
Segment: 5 OK
Segment: 6 OK
Segment: 7 OK
Segment: 8 OK
Segment: 9 OK
Segment: 10 OK
Segment: 11 OK
Segment: 12 OK
Segment: 13 OK
Segment: 14 OK
Segment: 15 OK
Segment: 16 OK

DISPOSITION:

Miscellaneous:

DISPOSITION:

Expert Review by: Robert J Hazlett Jr Date: 2-3-09

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Assay Instrument: SGS with Trans. Location:LLNL
Analysis Method: CCP-TP-019 Rev 4 Software Version: NDA 2000 V.4.0
Item ID: LL85234255 Analysis Date: 12/18/2008

Net Weight	51200.0 g		
Pu mass	6.86E+000	+- 1.32E+000	g
TRU Alpha Activity	6.13E-001	+- 8.77E-002	Ci
TRU Activity Concentration	1.20E+004	+- 1.71E+003	nCi/g
Pu-239 Equivalent Activity	6.18E-001	+- 8.72E-002	Ci
Pu-239 FGE	6.46E+000	+- 1.31E+000	g
Decay heat	1.93E-002	+- 2.73E-003	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	5.88E-008
U233	<LLD	<LLD	0.00E+000	1.22E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	9.68E-008
NP237	0.00E+000	0.00E+000	0.00E+000	2.65E-007
PU238	6.19E-003	1.07E-001	2.21E-002	8.77E-004
U238	<LLD	<LLD	0.00E+000	3.18E-006
PU239	6.44E+000	4.05E-001	8.25E-002	3.31E-003
PU240	4.13E-001	9.49E-002	1.95E-002	7.77E-004
AM241	1.72E-003	5.96E-003	1.93E-003	4.54E-005
PU241	7.54E-003	7.84E-001	1.62E-001	6.42E-003
PU242	1.56E-003	6.18E-006	1.43E-006	0.00E+000

Errors quoted at 1.000 sigma

Operator: _____ Date: _____

Expert Analysis
LPR: Robert J Hartlett Date: 2-3-09

********** MGA Results **********

MGA version: MGA V9.63H CI

Measurement date = 12/18/08 Declared date = 12/18/08
Low energy spectrum sensitivity = 30.0% Total counts = 5.645E+005
High energy spectrum sensitivity : 10.0%

Pu g/cm2 = 0.1421 Cd g/cm2 = 1.8533 FWHM at 122 keV = 605 eV
QFIT = 1.04 FWHM at 208 keV = 721 eV
NQFIT = 1.00

Isotope	Relative to Pu-239	%* Err	% Err	Relative to Pu-241	%* Err	Isotope analysis at Meas. date % weight	%Err	Decl. date % weight	%Err
Pu-238	0.000963	2.9	2.7	0.8216	3.9	0.09025	2.84	0.09793	3.08
Pu-239	1.000000	0.0	1.3	853.5556	3.1	93.76012	0.17	93.68049	0.17
Pu-240	0.064176	2.8	2.6	54.7774	3.9	6.01711	2.59	6.01685	2.59
Pu-241	0.001172	3.1	2.8	1.0000	0.0	0.10985	3.05	0.18208	5.05
Pu-242	(New alg.)			0.2065(11)		0.02268 (11)		0.02266 (10)	
Am-241	0.001473	2.8	2.5	1.2574	3.8	0.13812	2.73	0.13973	2.76

Pu-240 effective (meas. date) = 6.283 +/- 2.78%
Am-241 separated about 17.031 +/- 0.793 years ago
Am/Pu-241 weight ratio = 1.25737 +/- 3.72%

Messages:

Lead x-rays detected.
Calculations in MGAABS didn't converge: results may be suspect.
Efficiency curvature boundary reached.

Notes : * = Error in ratio
Errors quoted at 1.000 sigma
MGA sigma defaulted to 1

Reviewed by: Robert J Hazlett Jr Date: 2-3-09

NDA 2000 Assay Report

Item Information

Item ID:	LL85234255		Count Sequence Number:	201	
Operator:	RHWM2\RHWM				
Assay Start:	12/18/2008 1:50:01 PM				
Description 1:	LL85234255				
Description 2:					
Location:	LLNL				
Comment:					
Matrix Type:	Lucite				
Container Type:	55 Gal Galv 23.8				
Weight:	Gross:	75.0 kg	Net:	51.2 kg	
Container:	Volume:	208.0 l	Full:	100.0 %	
Density:		0.250 kg /l			

System Configuration

Counter:	SGS with Trans.			
Segments:	Number:	16	Offset:	0
Scanning Platform:	Start:	934 mm	Delta:	-51 mm
Count Type:	Assay - 55 Gal Galv 23.8			
Collimator/Geometry Setting:	Default	- 0		
Transmission Mode:	Two Pass			
Transmission Correction Type:	Standard			
Transmission Source:	Se-75 Trans.	- 0		

Errors quoted at 1.000 sigma

Segment 1 Results

Segment: 1 Detector: DET01 Position: 1
C:\Canberra\NDA2k\Data\00000201_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P001_S001

Acquisition Start: 12/18/2008 1:52:04 PM
Elapsed Live Time: 117.06 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.119 +/- 0.0024
SE-75	264.66	0.164 +/- 0.0028
SE-75	279.54	0.163 +/- 0.0035
SE-75	400.66	0.194 +/- 0.0055

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

*** Spectrum Validity Test warnings ***
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 2/2/2009 5:03:04 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.42	Y	15109	2273	1.12	120.68	4.082E-006	1.45	
M	94.65	Y	2081	2295	1.45	191.08	7.278E-005	5.33	9.47
m	98.58	Y	5266	3044	1.46	198.93	8.434E-005	4.45	
m	100.68	Y	892	2870	1.46	203.13	9.054E-005	6.24	
m	103.77	Y	1556	2642	1.47	209.30	9.962E-005	5.02	
	111.15	Y	965	2146	1.50	224.05	1.206E-004	7.97	
M	125.23	Y	289	1264	1.11	252.19	1.556E-004	10.91	0.73
m	129.29	Y	5386	964	1.12	260.30	1.641E-004	3.05	
M	144.22	Y	326	736	1.10	290.15	1.888E-004	16.05	4.19
m	148.57	Y	408	782	1.10	298.83	1.941E-004	15.36	
m	152.72	Y	196	754	1.11	307.13	1.984E-004	17.42	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
M	203.56	Y	595	517	1.16	408.72	2.087E-004	8.94	1.50
m	207.98	Y	1136	463	1.16	417.54	2.073E-004	8.11	
	311.67	Y	50	184	1.16	624.74	1.536E-004	43.38	
M	332.76	Y	504	159	1.22	666.89	1.442E-004	9.97	0.76
m	336.02	Y	120	166	1.23	673.42	1.428E-004	14.09	
m	341.43	Y	51	144	1.23	684.21	1.405E-004	22.79	
m	344.98	Y	473	151	1.24	691.32	1.391E-004	9.87	
M	375.03	Y	1375	98	1.29	751.36	1.278E-004	2.89	1.19
m	380.17	Y	245	93	1.30	761.64	1.260E-004	7.03	
m	382.70	Y	207	88	1.30	766.69	1.252E-004	7.30	
	392.88	Y	429	75	1.45	787.03	1.218E-004	6.00	
	413.67	Y	1197	48	1.28	828.58	1.159E-004	3.26	
	422.69	Y	68	31	1.26	846.60	1.136E-004	17.30	
	451.28	Y	106	26	1.47	903.73	1.070E-004	12.57	
	1274.64	Y	34	0	1.25	2549.06	5.723E-005	17.44	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.03 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	2.88E+000 +- 1.32E-001	2.21E+000 +- 4.94E-002

Beta: 5.96E+001 +- 1.01E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.86E+000 +- 8.24E-002
203.55	1.79E+000 +- 1.65E-001
375.05	2.48E+000 +- 8.83E-002
413.71	2.52E+000 +- 1.01E-001

Segment 2 Results

Segment: 2 Detector: DET01 Position: 2
C:\Canberra\NDA2k\Data\00000201_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P002_S002

Acquisition Start: 12/18/2008 1:56:15 PM
Elapsed Live Time: 116.66 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.064 +/- 0.0017
SE-75	264.66	0.107 +/- 0.0020
SE-75	279.54	0.115 +/- 0.0028
SE-75	400.66	0.149 +/- 0.0047

Errors quoted at 1.000 sigma

Peak Analysis Results

*** Spectrum Validity Test warnings ***
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 2/2/2009 5:03:08 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.43	Y	18695	2832	1.10	120.71	5.899E-005	1.39	
M	94.62	Y	2218	2667	1.32	191.01	1.322E-004	5.00	5.72
m	98.56	Y	5528	4244	1.33	198.91	1.387E-004	4.26	
	103.85	Y	1240	2554	1.83	209.46	1.469E-004	6.96	
M	111.08	Y	2053	1947	1.54	223.92	1.568E-004	2.65	13.97
m	115.18	Y	1496	2980	1.55	232.11	1.619E-004	3.27	
M	125.23	Y	416	1336	1.12	252.20	1.727E-004	8.17	3.80
m	129.30	Y	6440	1131	1.13	260.33	1.764E-004	2.79	
M	144.18	Y	388	806	1.20	290.07	1.884E-004	15.19	3.28
m	148.58	Y	395	976	1.21	298.86	1.915E-004	14.90	
m	152.75	Y	283	880	1.22	307.19	1.940E-004	15.56	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	161.31	Y	193	889	2.01	324.29	1.984E-004	24.68	
	171.41	Y	155	739	1.19	344.47	2.021E-004	27.54	
	195.55	Y	144	672	0.82	392.71	2.063E-004	29.16	
M	203.54	Y	694	581	1.12	408.68	2.065E-004	7.26	1.51
m	207.98	Y	1457	438	1.12	417.55	2.065E-004	6.22	
	255.46	Y	117	355	1.13	512.43	1.993E-004	27.13	
	297.55	Y	48	205	1.20	596.53	1.904E-004	46.02	
	311.88	Y	62	214	1.31	625.17	1.866E-004	37.95	
M	332.78	Y	559	174	1.29	666.95	1.808E-004	4.60	1.14
m	336.04	Y	187	169	1.29	673.44	1.799E-004	8.29	
	344.96	Y	526	250	1.35	691.28	1.773E-004	6.61	
M	375.01	Y	1530	121	1.30	751.31	1.688E-004	5.25	0.94
m	380.07	Y	283	86	1.30	761.43	1.674E-004	7.95	
m	382.65	Y	226	76	1.31	766.59	1.667E-004	8.24	
	392.93	Y	523	105	1.49	787.12	1.639E-004	5.56	
	413.71	Y	1367	48	1.42	828.66	1.586E-004	3.06	
	422.48	Y	85	43	1.26	846.19	1.565E-004	16.08	
	451.43	Y	157	23	0.97	904.03	1.499E-004	9.54	
	510.52		82	34	0.79	1022.12	1.379E-004	15.90	
	1275.07	Y	33	0	1.33	2549.91	7.897E-005	17.71	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.03 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	2.11E+000 +- 1.06E-001	2.09E+000 +- 5.04E-002

Beta: 2.45E+000 +- 1.02E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	2.07E+000 +- 8.98E-002
203.55	2.11E+000 +- 1.60E-001
375.05	2.09E+000 +- 1.17E-001
413.71	2.10E+000 +- 7.95E-002

Segment 3 Results

Segment: 3 Detector: DET01 Position: 3
C:\Canberra\NDA2k\Data\00000201_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P003_S003

Acquisition Start: 12/18/2008 2:00:27 PM
Elapsed Live Time: 117.98 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.301 +/- 0.0049
SE-75	264.66	0.375 +/- 0.0057
SE-75	279.54	0.385 +/- 0.0066
SE-75	400.66	0.426 +/- 0.0092

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:03:11 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.43	Y	9535	1509	1.11	120.70	8.340E-005	1.62	
M	94.67		1228	1646	1.71	191.12	2.113E-004	7.49	15.47
m	98.62	Y	3294	2206	1.71	199.02	2.239E-004	5.91	
m	103.74	Y	1065	1795	1.72	209.25	2.392E-004	6.70	
	111.12		587	1327	1.53	224.00	2.593E-004	10.15	
	129.34	Y	3007	770	1.16	260.40	2.984E-004	2.54	
M	144.08		163	445	1.07	289.85	3.206E-004	25.90	2.11
m	148.63	Y	199	436	1.07	298.96	3.260E-004	24.93	
m	152.62	Y	145	428	1.08	306.92	3.301E-004	26.26	
M	203.50	Y	406	276	1.19	408.61	3.467E-004	10.05	1.09
m	207.95	Y	686	283	1.20	417.49	3.459E-004	9.12	
	332.73	Y	259	179	1.42	666.83	2.803E-004	10.19	
M	341.53		48	72	1.11	684.42	2.750E-004	18.99	0.81
m	345.00		259	70	1.11	691.36	2.730E-004	6.75	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
M	375.03	Y	714	81	1.26	751.36	2.557E-004	8.03	1.38
m	380.18		133	55	1.26	761.65	2.529E-004	11.48	
m	382.73		139	48	1.27	766.76	2.515E-004	10.96	
	393.06		253	35	1.36	787.39	2.460E-004	7.42	
	413.68	Y	676	28	1.27	828.60	2.358E-004	4.20	
	422.33		43	24	1.40	845.88	2.318E-004	23.22	
	451.44		88	11	1.14	904.06	2.190E-004	12.15	
	1274.66	Y	24	0	1.80	2549.08	9.906E-005	20.44	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.02 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	7.54E-001 +- 4.66E-002	6.28E-001 +- 1.79E-002

Beta: 3.47E+001 +- 1.11E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	5.72E-001 +- 2.46E-002
203.55	7.36E-001 +- 7.59E-002
375.05	6.44E-001 +- 5.29E-002
413.71	7.00E-001 +- 3.24E-002

Segment 4 Results

Segment: 4 Detector: DET01 Position: 4
C:\Canberra\NDA2k\Data\00000201_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P004_S004

Acquisition Start: 12/18/2008 2:04:38 PM
Elapsed Live Time: 118.92 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.118 +/- 0.0023
SE-75	264.66	0.173 +/- 0.0029
SE-75	279.54	0.174 +/- 0.0036
SE-75	400.66	0.212 +/- 0.0057

Errors quoted at 1.000 sigma

Peak Analysis Results

Peak Analysis Performed on: 2/2/2009 5:03:14 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.48	Y	2309	626	1.05	120.81	3.362E-006	2.87	
M	94.70		211	692	1.18	191.18	8.880E-005	18.98	1.65
m	98.62		458	914	1.19	199.01	1.048E-004	15.54	
	129.31	Y	439	354	1.17	260.35	2.227E-004	8.03	
	207.92	Y	84	160	1.00	417.44	3.022E-004	25.15	
	344.98		30	56	1.08	691.32	2.104E-004	41.10	
	375.05	Y	131	40	1.41	751.40	1.945E-004	11.61	
	413.76	Y	109	21	1.48	828.76	1.775E-004	11.79	
	511.23		116	16	1.59	1023.53	1.483E-004	10.96	
	1274.85	Y	40	0	2.27	2549.47	8.971E-005	15.85	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.77E-001 +- 2.34E-002	1.27E-001 +- 7.71E-003

Beta: 5.94E+001 +- 2.31E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 3

Energy	Mass (g)
129.30	1.12E-001 +- 9.64E-003
375.05	1.56E-001 +- 1.83E-002
413.71	1.50E-001 +- 1.79E-002

Segment 5 Results

Segment: 5 Detector: DET01 Position: 5
C:\Canberra\NDA2k\Data\00000201_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P005_S005

Acquisition Start: 12/18/2008 2:08:50 PM
Elapsed Live Time: 119.08 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.027 +/- 0.0009
SE-75	264.66	0.057 +/- 0.0012
SE-75	279.54	0.060 +/- 0.0018
SE-75	400.66	0.084 +/- 0.0033

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:03:18 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.51	Y	1561	447	1.00	120.86	4.119E-005	3.44	
98.60		203	466	1.29	198.97	1.073E-004	16.70	
129.33	Y	146	186	1.05	260.38	1.452E-004	15.42	
374.90	Y	31	22	0.83	751.11	1.496E-004	28.56	
1275.06	Y	48	4	1.07	2549.88	7.333E-005	16.02	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 16:
Beta is too small (negative or less than lower limit)

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	- correction not done -	5.39E-002 +- 7.48E-003

Beta: -3.83E+001 +- 6.45E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in attempted correction: 2

Energy	Mass (g)

Segment 6 Results

Segment: 6 Detector: DET01 Position: 6
C:\Canberra\NDA2k\Data\00000201_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P006_S006

Acquisition Start: 12/18/2008 2:13:01 PM
Elapsed Live Time: 119.10 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.085 +/- 0.0018
SE-75	264.66	0.146 +/- 0.0025
SE-75	279.54	0.145 +/- 0.0031
SE-75	400.66	0.190 +/- 0.0053

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:03:21 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.48	Y	1981	391	1.01	120.80	1.394E-006	2.92	
98.77		167	482	1.29	199.32	9.011E-005	20.82	
129.33	Y	85	227	1.00	260.38	2.023E-004	28.36	
207.70	Y	28	90	0.66	416.99	2.817E-004	52.56	
375.05	Y	34	26	0.99	751.40	2.024E-004	29.11	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	4.99E-002 +- 2.34E-002	2.77E-002 +- 5.82E-003

Beta: 9.58E+001 +- 8.06E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 2

Energy	Mass (g)
129.30	2.38E-002 +- 6.80E-003
375.05	3.86E-002 +- 1.13E-002

Segment 7 Results

Segment: 7 Detector: DET01 Position: 7
C:\Canberra\NDA2k\Data\00000201_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P007_S007

Acquisition Start: 12/18/2008 2:17:12 PM
Elapsed Live Time: 119.17 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.138 +/- 0.0026
SE-75	264.66	0.201 +/- 0.0033
SE-75	279.54	0.206 +/- 0.0040
SE-75	400.66	0.244 +/- 0.0062

Errors quoted at 1.000 sigma

Peak Analysis Results

Peak Analysis Performed on: 2/2/2009 5:03:24 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.42	Y	2008	368	1.08	120.69	3.019E-006	2.87	
129.36	Y	156	160	1.28	260.45	2.334E-004	14.43	
374.77	Y	35	24	0.84	750.84	1.991E-004	27.25	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	4.11E-002 +- 1.74E-002	3.83E-002 +- 5.00E-003

Beta: 1.06E+001 +- 6.13E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 2

Energy	Mass (g)
129.30	3.79E-002 +- 5.62E-003
375.05	4.00E-002 +- 1.09E-002

Segment 8 Results

Segment: 8 Detector: DET01 Position: 8
C:\Canberra\NDA2k\Data\00000201_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P008_S008

Acquisition Start: 12/18/2008 2:21:24 PM
Elapsed Live Time: 119.20 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.082 +/- 0.0018
SE-75	264.66	0.136 +/- 0.0023
SE-75	279.54	0.143 +/- 0.0030
SE-75	400.66	0.186 +/- 0.0052

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:03:27 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.48	Y	1649	337	1.13	120.81	5.280E-005	3.18	
129.39	Y	100	183	1.13	260.50	1.949E-004	22.45	
374.90	Y	50	19	1.25	751.11	1.876E-004	19.68	
413.65	Y	32	7	0.79	828.55	1.756E-004	21.67	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	6.53E-002 +- 1.60E-002	3.84E-002 +- 4.95E-003

Beta: 1.04E+002 +- 5.16E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 3

Energy	Mass (g)
129.30	2.90E-002 +- 6.59E-003
375.05	6.12E-002 +- 1.21E-002
413.71	4.40E-002 +- 9.57E-003

Segment 9 Results

Segment: 9 Detector: DET01 Position: 9
C:\Canberra\NDA2k\Data\00000201_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P009_S009

Acquisition Start: 12/18/2008 2:25:35 PM
Elapsed Live Time: 119.21 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.089 +/- 0.0019
SE-75	264.66	0.138 +/- 0.0024
SE-75	279.54	0.144 +/- 0.0031
SE-75	400.66	0.177 +/- 0.0050

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:03:30 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.48	Y	1574	278	1.04	120.79	7.703E-006	3.19	
129.39	Y	154	99	1.20	260.50	1.961E-004	12.30	
374.92	Y	40	22	1.24	751.15	1.881E-004	23.26	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	5.24E-002 +- 1.90E-002	4.54E-002 +- 5.13E-003

Beta: 2.14E+001 +- 5.26E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 2

Energy	Mass (g)
129.30	4.44E-002 +- 5.72E-003
375.05	4.95E-002 +- 1.16E-002

Segment 10 Results

Segment: 10 Detector: DET01 Position: 10
C:\Canberra\NDA2k\Data\00000201_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P010_S010

Acquisition Start: 12/18/2008 2:29:46 PM
Elapsed Live Time: 119.23 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.063 +/- 0.0015
SE-75	264.66	0.107 +/- 0.0019
SE-75	279.54	0.114 +/- 0.0026
SE-75	400.66	0.146 +/- 0.0044

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:03:34 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.42	Y	1348	236	1.18	120.69	3.163E-006	3.41	
M	98.98	Y	175	259	1.35	199.73	8.538E-005	9.12	2.86
m	103.16	Y	94	228	1.36	208.08	9.987E-005	12.69	
	129.39	Y	150	133	1.21	260.50	1.870E-004	14.03	
	345.12		19	16	0.80	691.59	1.916E-004	35.39	
	375.14	Y	54	13	1.45	751.58	1.756E-004	17.10	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	8.86E-002 +- 2.43E-002	5.11E-002 +- 5.80E-003

Beta: 8.65E+001 +- 4.45E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 2

Energy	Mass (g)
129.30	4.54E-002 +- 6.60E-003
375.05	7.04E-002 +- 1.21E-002

Segment 11 Results

Segment: 11 Detector: DET01 Position: 11
C:\Canberra\NDA2k\Data\00000201_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P011_S011

Acquisition Start: 12/18/2008 2:33:57 PM
Elapsed Live Time: 119.25 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.065 +/- 0.0015
SE-75	264.66	0.113 +/- 0.0020
SE-75	279.54	0.113 +/- 0.0026
SE-75	400.66	0.150 +/- 0.0046

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:03:37 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.48	Y	1211	234	1.01	120.81	3.279E-006	3.64	
129.31	Y	174	105	1.17	260.34	1.915E-004	11.38	
374.84	Y	48	11	1.19	750.98	1.772E-004	17.79	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	7.00E-002 +- 1.96E-002	5.41E-002 +- 5.36E-003

Beta: 3.96E+001 +- 4.23E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 2

Energy	Mass (g)
129.30	5.15E-002 +- 6.09E-003
375.05	6.30E-002 +- 1.13E-002

Segment 12 Results

Segment: 12 Detector: DET01 Position: 12
C:\Canberra\NDA2k\Data\00000201_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P012_S012

Acquisition Start: 12/18/2008 2:38:09 PM
Elapsed Live Time: 119.24 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.135 +/- 0.0025
SE-75	264.66	0.204 +/- 0.0033
SE-75	279.54	0.205 +/- 0.0040
SE-75	400.66	0.255 +/- 0.0063

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:03:40 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.48	Y	1048	198	1.03	120.81	1.420E-004	3.88	
98.48		157	141	1.16	198.74	1.824E-004	13.19	
129.37	Y	119	103	1.11	260.46	2.245E-004	15.55	
332.95		12	14	0.74	667.27	2.331E-004	52.95	
413.70	Y	30	5	1.21	828.63	2.050E-004	21.41	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	3.77E-002 +- 1.21E-002	3.16E-002 +- 4.07E-003

Beta: 2.86E+001 +- 5.05E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 2

Energy	Mass (g)
129.30	3.02E-002 +- 4.83E-003
413.71	3.52E-002 +- 7.58E-003

Segment 13 Results

Segment: 13 Detector: DET01 Position: 13
C:\Canberra\NDA2k\Data\00000201_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P013_S013

Acquisition Start: 12/18/2008 2:42:20 PM
Elapsed Live Time: 119.31 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.068 +/- 0.0016
SE-75	264.66	0.122 +/- 0.0021
SE-75	279.54	0.125 +/- 0.0028
SE-75	400.66	0.165 +/- 0.0048

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:03:44 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.53	Y	961	151	1.09	120.90	9.516E-005	3.95	
129.17	Y	95	74	0.98	260.07	1.856E-004	16.68	
375.10	Y	26	8	1.10	751.51	1.823E-004	25.80	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	3.50E-002 +- 1.42E-002	2.99E-002 +- 4.25E-003

Beta: 2.46E+001 +- 6.11E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 2

Energy	Mass (g)
129.30	2.89E-002 +- 4.92E-003
375.05	3.28E-002 +- 8.48E-003

Segment 14 Results

Segment: 14 Detector: DET01 Position: 14
C:\Canberra\NDA2k\Data\00000201_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P014_S014

Acquisition Start: 12/18/2008 2:46:32 PM
Elapsed Live Time: 119.30 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.146 +/- 0.0027
SE-75	264.66	0.216 +/- 0.0035
SE-75	279.54	0.226 +/- 0.0043
SE-75	400.66	0.274 +/- 0.0067

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:03:47 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.51	Y	659	113	1.17	120.86	4.082E-006	4.81	
129.35	Y	74	75	1.05	260.43	2.387E-004	20.90	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 15 Results

Segment: 15 Detector: DET01 Position: 15
C:\Canberra\NDA2k\Data\00000201_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P015_S015

Acquisition Start: 12/18/2008 2:50:43 PM
Elapsed Live Time: 119.34 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.463 +/- 0.0071
SE-75	264.66	0.537 +/- 0.0079
SE-75	279.54	0.545 +/- 0.0089
SE-75	400.66	0.575 +/- 0.0115

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:03:50 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.55	Y	376	73	1.15	120.93	5.525E-006	6.51	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 16 Results

Segment: 16 Detector: DET01 Position: 16
C:\Canberra\NDA2k\Data\00000201_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P016_S016

Acquisition Start: 12/18/2008 2:54:55 PM
Elapsed Live Time: 119.35 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.874 +/- 0.0128
SE-75	264.66	0.907 +/- 0.0130
SE-75	279.54	0.912 +/- 0.0141
SE-75	400.66	0.924 +/- 0.0169

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:03:55 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.40	Y	121	38	1.08	120.64	1.446E-004	13.26	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Sum of Segment NID Results
Category: Segmented

C:\Canberra\NDA2k\Data\00000201_CNTR0001_DCAT0002_PROC00AK.CNF

********** Self Absorption Correction Results **********

Absorption correction model:

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	6.44E+000 +- 1.85E-001	2.21E+000 +- 4.94E-002

Beta: 5.96E+001 +- 1.01E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 2.710E-002 +/-	2.1%	< 5.293E-007	< 1.249E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	5.315E-001 +/-	8.0%	1.038E-005	8.397E-011
Al-26	< 4.034E-002 +/-	18.0%	< 7.879E-007	< 2.122E-006
K-40	< 4.377E-001 +/-	5.3%	< 8.548E-006	< 6.828E-002
Co-57	< 1.361E-001 +/-	3.4%	< 2.657E-006	< 1.592E-011
Co-60	< 5.693E-002 +/-	2.0%	< 1.112E-006	< 4.993E-011
Se-75	< 9.005E-002 +/-	1.9%	< 1.759E-006	< 6.196E-012
Kr-85	< 1.273E+001 +/-	3.2%	< 2.486E-004	< 3.208E-008
Sr-90	< 5.883E-002 +/-	2.1%	< 1.149E-006	< 4.265E-010
Sb-125	< 1.307E-001 +/-	2.4%	< 2.553E-006	< 1.258E-010
Ba-133	< 7.769E-002 +/-	1.8%	< 1.517E-006	< 3.069E-010
Cs-134	< 2.631E-002 +/-	2.8%	< 5.140E-007	< 2.008E-011
Cs-137	< 5.883E-002 +/-	2.1%	< 1.149E-006	< 6.707E-010
Eu-152	< 1.338E-001 +/-	4.0%	< 2.613E-006	< 7.519E-010
Eu-154	< 1.688E-001 +/-	2.1%	< 3.296E-006	< 6.329E-010
Ho-166m	< 3.366E-002 +/-	2.7%	< 6.573E-007	< 1.871E-008
Bi-207	< 3.500E-002 +/-	2.1%	< 6.836E-007	< 6.370E-010
Pb-210	< 5.327E+003 +/-	309.7%	< 1.041E-001	< 6.926E-005
Ra-226	< 4.739E-002 +/-	2.3%	< 9.256E-007	< 4.739E-008
Ac-227	< 2.912E-001 +/-	8.3%	< 5.687E-006	< 3.989E-009
Th-230	< 1.707E+002 +/-	8.6%	< 3.334E-003	< 8.365E-003
Pa-231	< 1.777E+000 +/-	11.2%	< 3.470E-005	< 3.714E-005
Th-232	< 1.026E-001 +/-	2.3%	< 2.005E-006	< 9.248E-001
U-232	< 1.026E-001 +/-	2.3%	< 2.005E-006	< 4.752E-009
U-233	< 1.225E+003 +/-	2.7%	< 2.392E-002	< 1.249E-001

Pa-234	< 1.296E-001 +/- 12.3%	< 2.531E-006		
Pa-234m	< 1.930E+002 +/- 2.4%	< 3.770E-003		
U-234	< 0.000E+000 +/- 0.0%	< 0.000E+000	< 0.000E+000	
U-235	< 9.675E-002 +/- 2.5%	< 1.890E-006	< 4.422E-002	
Np-237	< 2.647E-001 +/- 2.1%	< 5.170E-006	< 3.706E-004	
Pu-238	6.926E+004 +/- 10.8%	1.353E+000	4.003E-003	
U-238	< 3.178E+000 +/- 2.4%	< 6.206E-005	< 9.342E+000	
Pu-239	4.047E+005 +/- 2.9%	7.905E+000	6.435E+000	
Pu-239B	3.001E+005 +/- 2.3%	5.861E+000	4.771E+000	
U-239	< 3.791E+004 +/- 368.5%	< 7.405E-001		
Pu-240	< 7.917E+003 +/- 4.7%	< 1.546E-001	< 3.444E-002	
Am-241	5.960E+003 +/- 25.3%	1.164E-001	1.717E-003	
Am-241B	3.218E+004 +/- 5.0%	6.284E-001	9.267E-003	
Pu-241	5.801E+005 +/- 10.0%	1.133E+001	5.581E-003	
Pu-241B	6.458E+005 +/- 4.7%	1.261E+001	6.213E-003	
Pu-242	< 0.000E+000 +/- 0.0%	< 0.000E+000	< 0.000E+000	
Am-243	< 3.112E-001 +/- 1.9%	< 6.078E-006	< 1.540E-006	
Cm-243	< 3.210E-001 +/- 3.4%	< 6.269E-006	< 6.162E-009	
Cm-244	< 3.990E+004 +/- 14.1%	< 7.792E-001	< 4.867E-004	
Cm-245	< 5.862E-001 +/- 7.7%	< 1.145E-005	< 3.371E-006	
Cm-247	< 5.910E-002 +/- 8.6%	< 1.154E-006	< 6.324E-004	

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 6.489E-002 +/-	3.6%	< 1.267E-006	< 1.570E-008
Cf-251	< 3.321E-001 +/-	5.6%	< 6.486E-006	< 2.076E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

Summed Segment Spectra Results
Category: Segmented

C:\Canberra\NDA2k\Data\00000201_CNTR0001_DCAT0002_PROC00AI.CNF

Elapsed Live Time: 118.09 sec Elapsed Real Time: 120.00 sec

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 7.638E-002 +/-	1.0%	< 1.492E-006	< 3.521E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	6.881E-001 +/-	7.6%	1.344E-005	1.087E-010
	Al-26	< 9.397E-002 +/-	6.9%	< 1.835E-006	< 4.943E-006
	K-40	1.475E+000 +/-	22.5%	2.880E-005	2.300E-001
	Co-57	< 4.450E-001 +/-	1.5%	< 8.692E-006	< 5.207E-011
	Co-60	< 1.205E-001 +/-	1.0%	< 2.354E-006	< 1.057E-010
	Se-75	< 2.555E-001 +/-	1.0%	< 4.990E-006	< 1.758E-011
	Kr-85	< 3.971E+001 +/-	2.4%	< 7.757E-004	< 1.001E-007
	Sr-90	< 1.303E-001 +/-	0.8%	< 2.545E-006	< 9.447E-010
	Sb-125	< 3.284E-001 +/-	1.3%	< 6.415E-006	< 3.160E-010
	Ba-133	< 2.054E-001 +/-	0.8%	< 4.012E-006	< 8.114E-010
	Cs-134	< 9.104E-002 +/-	0.8%	< 1.778E-006	< 6.946E-011
X	Cs-137				
	Eu-152	< 3.799E-001 +/-	1.8%	< 7.419E-006	< 2.135E-009
	Eu-154	< 4.980E-001 +/-	1.0%	< 9.726E-006	< 1.867E-009
	Ho-166m	< 1.346E-001 +/-	1.5%	< 2.629E-006	< 7.483E-008
	Bi-207	< 8.627E-002 +/-	0.8%	< 1.685E-006	< 1.570E-009
	Pb-210	< 5.425E+003 +/-	11.3%	< 1.060E-001	< 7.052E-005
	Ra-226	< 1.872E-001 +/-	1.3%	< 3.655E-006	< 1.872E-007
	Ac-227	< 8.919E-001 +/-	8.2%	< 1.742E-005	< 1.222E-008
	Th-230	< 5.425E+002 +/-	8.2%	< 1.060E-002	< 2.658E-002
	Pa-231	< 4.977E+000 +/-	11.1%	< 9.721E-005	< 1.040E-004
	Th-232	< 2.881E-001 +/-	1.1%	< 5.626E-006	< 2.595E+000
	U-232	< 2.881E-001 +/-	1.1%	< 5.626E-006	< 1.334E-008
	U-233	< 3.824E+003 +/-	1.4%	< 7.469E-002	< 3.901E-001
	Pa-234	< 4.711E-001 +/-	12.1%	< 9.201E-006	
	Pa-234m	< 6.230E+002 +/-	1.5%	< 1.217E-002	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 3.110E-001 +/-	1.7%	< 6.074E-006	< 1.421E-001
	Np-237	2.962E-001 +/-	40.4%	5.785E-006	4.147E-004
	Pu-238	7.658E+004 +/-	10.4%	1.496E+000	4.426E-003
	U-238	< 1.066E+001 +/-	1.6%	< 2.083E-004	< 3.135E+001
	Pu-239	3.258E+005 +/-	2.9%	6.364E+000	5.181E+000
	Pu-239B	3.420E+005 +/-	1.7%	6.680E+000	5.437E+000
	U-239	< 1.266E+004 +/-	15.0%	< 2.473E-001	
X	Pu-240				
	Am-241	1.926E+004 +/-	36.5%	3.763E-001	5.548E-003
	Am-241B	4.917E+004 +/-	3.5%	9.604E-001	1.416E-002
	Pu-241	5.243E+005 +/-	10.0%	1.024E+001	5.044E-003
	Pu-241B	5.759E+005 +/-	2.5%	1.125E+001	5.540E-003

Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 9.678E-001 +/-	1.1%	< 1.890E-005	< 4.791E-006
Cm-243	< 9.982E-001 +/-	3.0%	< 1.950E-005	< 1.917E-008
Cm-244	< 9.927E+004 +/-	13.9%	< 1.939E+000	< 1.211E-003
Cm-245	< 1.899E+000 +/-	7.4%	< 3.708E-005	< 1.092E-005
Cm-247	< 1.373E-001 +/-	8.4%	< 2.682E-006	< 1.469E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.595E-001 +/-	3.1%	< 3.115E-006	< 3.860E-008
Cf-251	< 1.052E+000 +/-	5.3%	< 2.054E-005	< 6.574E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	5.18E+000 +- 1.52E-001	4.60E+000 +- 5.94E-002

Beta: 2.44E+001 +- 5.66E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	4.37E+000 +- 9.92E-002
203.55	4.32E+000 +- 1.26E-001
375.05	4.96E+000 +- 1.79E-001
413.71	4.94E+000 +- 1.07E-001

********** Radioassay Data Sheet **********

Engine Version: TMU Gamma 1.5

Assay Instrument: SGS with Trans. Location:LLNL
Analysis Method: LLNL SGS Operating Procedure Software Version: NDA 2000 V.4.0
Item ID: LL85234255R Analysis Date: 12/18/2008

NID identified fiducial nuclide Pu-239
Source of isotopics: MEASURED

202

Net Weight	51200.0 g		
Pu mass	5.76E+000 +-	1.10E+000	g
TRU Alpha Activity	5.29E-001 +-	7.36E-002	Ci
TRU Activity Concentration	1.03E+004 +-	1.44E+003	nCi/g
Pu-239 Equivalent Activity	5.33E-001 +-	7.33E-002	Ci
Pu-239 FGE	5.43E+000 +-	1.10E+000	g
Decay heat	1.67E-002 +-	2.29E-003	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.25E-007
U233	<LLD	<LLD	0.00E+000	3.80E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.08E-007
NP237	0.00E+000	0.00E+000	0.00E+000	4.50E-007
PU238	4.92E-003	8.51E-002	1.75E-002	1.25E-003
U238	<LLD	<LLD	0.00E+000	1.17E-005
PU239	5.41E+000	3.40E-001	6.92E-002	5.01E-003
PU240	3.33E-001	7.66E-002	1.57E-002	1.13E-003
AM241	7.80E-003	2.71E-002	9.07E-003	5.45E-005
PU241	5.77E-003	5.99E-001	1.23E-001	8.82E-003
PU242	1.25E-003	4.94E-006	1.14E-006	0.00E+000

Errors quoted at 1.000 sigma

Operator: _____ Date: _____

Expert Analysis
ITR: Robert Haslett Date: 2-3-09

YES QC REPLICATE
TC 2/3/09

Automated Independent Technical Review

Counter ID: SGS with Trans. Count Type: Assay - 55 Gal Galv 23.8
Container ID: LL85234255R Assay Date: 12/18/2008
Waste Matrix Code:
Sequence Number: 202

Data Combiner Analysis:
Input combination 7: only Isotop., Gamma U, and Gamma Pu input data are valid.

Results taken from Quantitative Gamma data.

Results comparison test passed.

DISPOSITION:

MGA Analysis:

Note: The measured and declared isotopics are inconsistent.

DISPOSITION:

Gamma Analysis:
Analysis Status: No errors.
Spectrum Validity Check engine has suggested data review. OK

DISPOSITION:

Segment Data Review:
Segment: 1 OK
Segment: 2 OK
Segment: 3 OK
Segment: 4 OK
Segment: 5 OK
Segment: 6 OK
Segment: 7 OK
Segment: 8 OK
Segment: 9 OK
Segment: 10 OK
Segment: 11 OK
Segment: 12 OK
Segment: 13 OK
Segment: 14 OK
Segment: 15 OK
Segment: 16 OK

DISPOSITION:

Miscellaneous:

DISPOSITION:

Expert Review by: Robert J Haslett Jr Date: 2-3-09

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Assay Instrument:	SGS with Trans.	Location:	LLNL
Analysis Method:	CCP-TP-019 Rev 4	Software Version:	NDA 2000 V.4.0
Item ID:	LL85234255R	Analysis Date:	12/18/2008

Net Weight	51200.0 g			
Pu mass	6.96E+000	+-	1.34E+000	g
TRU Alpha Activity	6.12E-001	+-	8.86E-002	Ci
TRU Activity Concentration	1.20E+004	+-	1.73E+003	nCi/g
Pu-239 Equivalent Activity	6.17E-001	+-	8.82E-002	Ci
Pu-239 FGE	6.56E+000	+-	1.33E+000	g
Decay heat	1.92E-002	+-	2.76E-003	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	6.06E-008
U233	<LLD	<LLD	0.00E+000	1.20E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	9.54E-008
NP237	0.00E+000	0.00E+000	0.00E+000	2.32E-007
PU238	5.95E-003	1.03E-001	2.12E-002	9.73E-004
U238	<LLD	<LLD	0.00E+000	3.87E-006
PU239	6.54E+000	4.11E-001	8.38E-002	3.89E-003
PU240	4.03E-001	9.26E-002	1.91E-002	8.76E-004
AM241	1.54E-003	5.36E-003	1.86E-003	4.51E-005
PU241	6.97E-003	7.24E-001	1.49E-001	6.85E-003
PU242	1.51E-003	5.97E-006	1.38E-006	0.00E+000

Errors quoted at 1.000 sigma

Operator: _____ Date: _____

Expert Analysis
IPR: Robert J Haskett Jr Date: 2-3-09

********** MGA Results **********

MGA version: MGA V9.63H CI

Measurement date = 12/18/08 Declared date = 12/18/08
Low energy spectrum sensitivity = 30.0% Total counts = 5.638E+005
High energy spectrum sensitivity : 10.0%

Pu g/cm2 = 0.0020 Cd g/cm2 = 1.8947 FWHM at 122 keV = 611 eV
QFIT = 1.05 FWHM at 208 keV = 726 eV
NQFIT = 1.00

Isotope	Relative to Pu-239	%* Err	% Err	Relative to Pu-241	%* Err	Isotope analysis at Meas. date % weight	Meas. date %Err	Decl. date % weight	Decl. date %Err
Pu-238	0.000910	3.0	2.8	0.8537	4.1	0.08551	2.97	0.09279	3.22
Pu-239	1.000000	0.0	1.4	938.4744	3.3	94.00035	0.17	93.92708	0.17
Pu-240	0.061620	3.0	2.8	57.8290	4.1	5.79232	2.80	5.79247	2.80
Pu-241	0.001066	3.1	2.9	1.0000	0.0	0.10016	3.08	0.16604	5.10
Pu-242	(New alg.)			0.2161(11)		0.02165 (11)		0.02162 (10)	
Am-241	0.001569	2.7	2.4	1.4726	3.9	0.14750	2.68	0.14933	2.71

Pu-240 effective (meas. date) = 6.044 +/- 2.98%
Am-241 separated about 18.924 +/- 0.803 years ago
Am/Pu-241 weight ratio = 1.47257 +/- 3.78%

Messages:

Lead x-rays detected.
Calculations in MGAABS didn't converge: results may be suspect.
Efficiency curvature boundary reached.

Notes : * = Error in ratio
Errors quoted at 1.000 sigma
MGA sigma defaulted to 1

Reviewed by: Robert J. Hamlett Jr. Date: 2-3-09

NDA 2000 Assay Report

********** Item Information **********

Item ID:	LL85234255R	Count Sequence Number:	202
Operator:	RHWM2\RHWM		
Assay Start:	12/18/2008 3:07:47 PM		
Description 1:	LL85234255R		
Description 2:			
Location:	LLNL		
Comment:			
Matrix Type:	Lucite		
Container Type:	55 Gal Galv 23.8		
Weight:	Gross: 75.0 kg	Net:	51.2 kg
Container:	Volume: 208.0 l	Full:	100.0 %
Density:	0.250 kg /l		

********** System Configuration **********

Counter:	SGS with Trans.		
Segments:	Number: 16	Offset:	0
Scanning Platform:	Start: 934 mm	Delta:	-51 mm
Count Type:	Assay - 55 Gal Galv 23.8		
Collimator/Geometry Setting:	Default - 0		
Transmission Mode:	Two Pass		
Transmission Correction Type:	Standard		
Transmission Source:	Se-75 Trans. - 0		

Errors quoted at 1.000 sigma

Segment 1 Results

Segment: 1 Detector: DET01 Position: 1
C:\Canberra\NDA2k\Data\00000202_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P001_S001

Acquisition Start: 12/18/2008 3:09:49 PM
Elapsed Live Time: 117.11 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.118 +/- 0.0024
SE-75	264.66	0.165 +/- 0.0028
SE-75	279.54	0.170 +/- 0.0036
SE-75	400.66	0.194 +/- 0.0055

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:07:12 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.42	Y	14791	2233	1.12	120.69	4.075E-006	1.46	
	77.59		100	1134	0.64	157.00	2.844E-005	50.47	
M	94.66	Y	1755	2613	1.31	191.10	7.262E-005	5.93	5.39
m	98.58	Y	4307	3618	1.32	198.93	8.411E-005	5.12	
	103.93	Y	974	2241	1.66	209.62	9.983E-005	8.14	
M	111.06	Y	1649	1715	1.57	223.88	1.201E-004	2.94	9.52
m	115.13	Y	1267	2811	1.57	232.01	1.310E-004	3.57	
	129.35	Y	4994	1262	1.16	260.42	1.638E-004	2.10	
M	144.25	Y	251	719	1.06	290.19	1.884E-004	19.16	2.67
m	148.60	Y	317	840	1.06	298.88	1.937E-004	17.50	
m	152.68	Y	196	789	1.07	307.05	1.980E-004	18.98	
	195.68	Y	141	585	1.18	392.97	2.106E-004	27.86	
M	203.51	Y	625	500	1.15	408.62	2.087E-004	4.64	0.54
m	208.01	Y	1204	492	1.15	417.62	2.072E-004	3.25	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	255.43	Y	101	204	1.17	512.37	1.843E-004	23.03	
M	332.73	Y	508	174	1.13	666.84	1.451E-004	5.02	1.16
m	335.85	Y	103	162	1.14	673.08	1.437E-004	12.50	
	344.92	Y	482	176	1.29	691.19	1.398E-004	6.38	
M	375.03	Y	1294	107	1.36	751.36	1.282E-004	6.29	0.70
m	380.21	Y	235	75	1.36	761.71	1.263E-004	9.19	
m	382.74	Y	219	69	1.37	766.77	1.254E-004	9.19	
	392.81	Y	483	79	1.38	786.90	1.221E-004	5.60	
	413.66	Y	1139	42	1.38	828.56	1.160E-004	3.31	
	422.37	Y	57	58	1.01	845.96	1.138E-004	26.77	
	451.50	Y	131	24	1.13	904.18	1.071E-004	10.84	
	510.68		117	15	1.81	1022.44	9.621E-005	10.92	
	1275.15	Y	37	3	0.95	2550.06	5.726E-005	18.22	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.03 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	2.72E+000 +- 1.46E-001	1.96E+000 +- 4.54E-002

Beta: 6.09E+001 +- 1.00E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.73E+000 +- 6.62E-002
203.55	1.89E+000 +- 9.65E-002
375.05	2.33E+000 +- 1.54E-001
413.71	2.40E+000 +- 9.70E-002

Segment 2 Results

Segment: 2 Detector: DET01 Position: 2
C:\Canberra\NDA2k\Data\00000202_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P002_S002

Acquisition Start: 12/18/2008 3:14:00 PM
Elapsed Live Time: 116.64 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.065 +/- 0.0017
SE-75	264.66	0.109 +/- 0.0020
SE-75	279.54	0.111 +/- 0.0027
SE-75	400.66	0.140 +/- 0.0046

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

*** Spectrum Validity Test warnings ***
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 2/2/2009 5:07:15 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.44	Y	18529	2819	1.09	120.72	5.930E-005	1.39	
M	94.69	Y	2538	2630	1.46	191.17	1.330E-004	4.81	12.35
m	98.56	Y	6401	3419	1.47	198.91	1.394E-004	4.04	
m	100.67	Y	1189	3175	1.47	203.11	1.427E-004	5.37	
m	103.74	Y	2058	2856	1.48	209.25	1.474E-004	4.43	
M	111.06	Y	2060	1854	1.63	223.87	1.575E-004	2.63	13.98
m	115.20	Y	1652	3087	1.64	232.15	1.627E-004	3.10	
M	125.14	Y	335	1379	1.09	252.02	1.734E-004	10.23	3.05
m	129.30	Y	6638	1050	1.09	260.32	1.772E-004	3.34	
M	144.21	Y	369	792	1.17	290.11	1.893E-004	15.05	2.46
m	148.61	Y	483	1027	1.17	298.92	1.923E-004	13.44	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	152.78	Y	286	998	1.18	307.24	1.949E-004	14.61	
	171.42	Y	140	701	1.06	344.50	2.030E-004	29.89	
	189.28	Y	121	721	0.85	380.18	2.067E-004	35.59	
M	203.56	Y	863	527	1.28	408.71	2.074E-004	6.98	0.54
m	207.99	Y	1437	415	1.28	417.58	2.073E-004	6.40	
	255.31	Y	91	335	0.77	512.14	2.001E-004	32.95	
	311.89	Y	54	204	1.26	625.20	1.842E-004	42.43	
M	332.80	Y	600	179	1.21	666.97	1.782E-004	4.52	1.06
m	335.95	Y	121	189	1.22	673.27	1.773E-004	11.45	
m	341.46	Y	66	181	1.22	684.28	1.757E-004	17.84	
m	345.02	Y	552	189	1.23	691.40	1.747E-004	4.67	
	368.10	Y	161	173	2.04	737.51	1.680E-004	15.38	
M	375.05	Y	1565	119	1.23	751.40	1.660E-004	2.75	1.41
m	380.07	Y	294	84	1.23	761.43	1.646E-004	6.18	
m	382.73	Y	280	75	1.23	766.74	1.639E-004	6.24	
	392.90	Y	534	75	1.45	787.08	1.610E-004	5.25	
	413.68	Y	1377	69	1.42	828.61	1.558E-004	3.10	
	422.63	Y	73	42	1.34	846.48	1.537E-004	17.93	
	451.43	Y	139	23	1.38	904.03	1.473E-004	10.20	
	1274.61	Y	32	4	1.07	2548.98	7.809E-005	20.38	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.03 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	2.19E+000 +- 9.58E-002	2.18E+000 +- 4.67E-002

Beta: 4.54E-001 +- 1.00E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	2.13E+000 +- 1.00E-001
203.55	2.62E+000 +- 1.91E-001
375.05	2.17E+000 +- 7.36E-002
413.71	2.16E+000 +- 8.24E-002

Segment 3 Results

Segment: 3 Detector: DET01 Position: 3
C:\Canberra\NDA2k\Data\00000202_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P003_S003

Acquisition Start: 12/18/2008 3:18:12 PM
Elapsed Live Time: 117.99 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.303 +/- 0.0049
SE-75	264.66	0.373 +/- 0.0057
SE-75	279.54	0.383 +/- 0.0066
SE-75	400.66	0.428 +/- 0.0093

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:07:18 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.43	Y	9722	1632	1.12	120.71	8.372E-005	1.62	
	76.09		110	809	0.57	158.00	1.533E-004	38.85	
M	94.68	Y	1032	1705	1.31	191.14	2.120E-004	7.34	4.83
m	98.57	Y	2755	2249	1.32	198.93	2.244E-004	6.23	
	103.76	Y	720	1329	1.99	209.29	2.400E-004	8.51	
M	111.07	Y	1049	1026	1.69	223.90	2.599E-004	3.53	5.37
m	115.20	Y	909	1998	1.70	232.14	2.701E-004	4.01	
M	125.22	Y	251	754	1.06	252.17	2.917E-004	9.98	0.73
m	129.30	Y	3202	573	1.07	260.33	2.993E-004	3.51	
M	144.31	Y	174	485	1.01	290.31	3.217E-004	12.05	2.99
m	148.71	Y	150	617	1.01	299.12	3.267E-004	13.84	
	171.81	Y	102	402	0.89	345.27	3.435E-004	30.94	
M	203.58	Y	363	347	1.10	408.76	3.465E-004	6.23	1.00
m	207.99	Y	655	303	1.10	417.58	3.457E-004	4.39	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
M	332.73	Y	288	118	1.06	666.84	2.805E-004	16.52	0.90
m	335.80	Y	73	98	1.07	672.97	2.786E-004	20.32	
	344.91	Y	296	108	1.37	691.18	2.732E-004	8.02	
M	375.04	Y	774	63	1.29	751.38	2.561E-004	3.70	0.87
m	380.19	Y	150	46	1.29	761.67	2.533E-004	8.25	
m	382.77	Y	134	41	1.30	766.82	2.519E-004	8.70	
	392.80	Y	259	48	1.43	786.87	2.466E-004	7.67	
	413.75	Y	729	30	1.41	828.75	2.362E-004	4.07	
	422.39	Y	38	33	1.48	845.99	2.322E-004	27.41	
	451.57	Y	94	13	1.38	904.31	2.194E-004	12.06	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.02 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	7.86E-001 +- 4.05E-002	6.78E-001 +- 1.64E-002

Beta: 3.39E+001 +- 1.11E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	6.07E-001 +- 3.00E-002
203.55	6.60E-001 +- 4.38E-002
375.05	6.96E-001 +- 2.86E-002
413.71	7.54E-001 +- 3.40E-002

Segment 4 Results

Segment: 4 Detector: DET01 Position: 4
C:\Canberra\NDA2k\Data\00000202_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P004_S004

Acquisition Start: 12/18/2008 3:22:23 PM
Elapsed Live Time: 118.92 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.124 +/- 0.0024
SE-75	264.66	0.172 +/- 0.0029
SE-75	279.54	0.181 +/- 0.0037
SE-75	400.66	0.205 +/- 0.0055

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:07:21 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.43	Y	2452	618	1.08	120.71	3.385E-006	2.76	
M	94.65		209	734	1.57	191.08	8.987E-005	24.67	1.63
m	98.59		582	1028	1.58	198.95	1.062E-004	19.85	
	111.29		149	514	1.01	224.34	1.597E-004	24.03	
	129.34	Y	494	269	1.18	260.40	2.258E-004	6.66	
	207.99	Y	79	173	1.19	417.56	3.030E-004	27.11	
	344.80		36	46	1.02	690.95	2.100E-004	33.14	
	375.09	Y	138	28	1.61	751.48	1.930E-004	10.44	
	413.79	Y	131	15	1.48	828.81	1.755E-004	9.97	
	1275.12	Y	34	3	1.64	2550.01	8.908E-005	18.84	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	2.04E-001 +- 2.36E-002	1.41E-001 +- 7.42E-003

Beta: 6.47E+001 +- 2.00E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 3

Energy	Mass (g)
129.30	1.24E-001 +- 9.12E-003
375.05	1.65E-001 +- 1.75E-002
413.71	1.82E-001 +- 1.86E-002

Segment 5 Results

Segment: 5 Detector: DET01 Position: 5
C:\Canberra\NDA2k\Data\00000202_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P005_S005

Acquisition Start: 12/18/2008 3:26:34 PM
Elapsed Live Time: 119.06 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.027 +/- 0.0009
SE-75	264.66	0.057 +/- 0.0012
SE-75	279.54	0.058 +/- 0.0017
SE-75	400.66	0.083 +/- 0.0033

Errors quoted at 1.000 sigma

Peak Analysis Results

Peak Analysis Performed on: 2/2/2009 5:07:24 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.53	Y	1610	453	1.10	120.90	4.102E-005	3.38	
98.89		165	494	1.18	199.55	1.073E-004	20.79	
129.29	Y	112	252	1.00	260.30	1.445E-004	22.97	
413.92	Y	28	12	1.16	829.07	1.396E-004	26.11	
1274.65	Y	55	0	1.60	2549.06	7.316E-005	13.53	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	5.12E-002 +- 2.02E-002	4.60E-002 +- 8.01E-003

Beta: 1.90E+001 +- 6.58E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 2

Energy	Mass (g)
129.30	4.42E-002 +- 1.03E-002
413.71	4.89E-002 +- 1.28E-002

Segment 6 Results

Segment: 6 Detector: DET01 Position: 6
C:\Canberra\NDA2k\Data\00000202_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P006_S006

Acquisition Start: 12/18/2008 3:30:46 PM
Elapsed Live Time: 119.12 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.085 +/- 0.0018
SE-75	264.66	0.144 +/- 0.0025
SE-75	279.54	0.148 +/- 0.0031
SE-75	400.66	0.184 +/- 0.0052

Errors quoted at 1.000 sigma

Peak Analysis Results

Peak Analysis Performed on: 2/2/2009 5:07:27 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.52	Y	1987	392	1.10	120.87	1.406E-006	2.91	
129.30	Y	135	193	1.17	260.33	2.023E-004	17.38	
375.14	Y	49	23	1.31	751.59	2.006E-004	20.83	
413.70	Y	48	12	1.22	828.63	1.875E-004	18.45	
1274.49	Y	33	4	1.53	2548.74	9.077E-005	20.13	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	7.41E-002 +- 1.66E-002	4.66E-002 +- 5.23E-003

Beta: 8.66E+001 +- 4.34E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 3

Energy	Mass (g)
129.30	3.80E-002 +- 6.76E-003
375.05	5.65E-002 +- 1.18E-002
413.71	6.22E-002 +- 1.16E-002

Segment 7 Results

Segment: 7 Detector: DET01 Position: 7
C:\Canberra\NDA2k\Data\00000202_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P007_S007

Acquisition Start: 12/18/2008 3:34:57 PM
Elapsed Live Time: 119.17 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.139 +/- 0.0026
SE-75	264.66	0.202 +/- 0.0033
SE-75	279.54	0.207 +/- 0.0040
SE-75	400.66	0.250 +/- 0.0063

Errors quoted at 1.000 sigma

Peak Analysis Results

Peak Analysis Performed on: 2/2/2009 5:07:31 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.48	Y	2215	361	1.12	120.80	3.058E-006	2.72	
M	99.09	Y	222	380	1.71	199.96	1.091E-004	15.04	1.54
m	103.12	Y	141	329	1.71	208.00	1.271E-004	15.36	
	129.30	Y	147	177	1.27	260.33	2.337E-004	15.73	
	345.08		21	13	0.80	691.51	2.170E-004	33.41	
	375.05	Y	56	19	1.00	751.41	2.003E-004	18.10	
	413.88	Y	57	13	0.76	828.99	1.827E-004	16.81	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	9.66E-002 +- 1.95E-002	4.60E-002 +- 4.78E-003

Beta: 1.29E+002 +- 3.93E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 3

Energy	Mass (g)
129.30	3.57E-002 +- 5.75E-003
375.05	6.38E-002 +- 1.16E-002
413.71	7.59E-002 +- 1.29E-002

Segment 8 Results

Segment: 8 Detector: DET01 Position: 8
C:\Canberra\NDA2k\Data\00000202_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P008_S008

Acquisition Start: 12/18/2008 3:39:08 PM
Elapsed Live Time: 119.22 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.081 +/- 0.0018
SE-75	264.66	0.138 +/- 0.0024
SE-75	279.54	0.144 +/- 0.0031
SE-75	400.66	0.177 +/- 0.0050

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:07:34 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.47	Y	1650	311	1.08	120.79	5.257E-005	3.14	
129.29	Y	160	109	1.07	260.31	1.941E-004	12.30	
345.04		26	15	0.99	691.43	1.956E-004	29.78	
413.88	Y	50	5	1.19	829.01	1.727E-004	15.81	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	8.41E-002 +- 2.01E-002	5.21E-002 +- 5.29E-003

Beta: 7.56E+001 +- 3.84E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 2

Energy	Mass (g)
129.30	4.69E-002 +- 6.00E-003
413.71	7.01E-002 +- 1.12E-002

Segment 9 Results

Segment: 9 Detector: DET01 Position: 9
C:\Canberra\NDA2k\Data\00000202_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P009_S009

Acquisition Start: 12/18/2008 3:43:19 PM
Elapsed Live Time: 119.21 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.086 +/- 0.0018
SE-75	264.66	0.139 +/- 0.0024
SE-75	279.54	0.148 +/- 0.0031
SE-75	400.66	0.178 +/- 0.0050

Errors quoted at 1.000 sigma

Peak Analysis Results

Peak Analysis Performed on: 2/2/2009 5:07:37 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.54	Y	1624	315	1.15	120.92	7.699E-006	3.18	
129.33	Y	130	152	1.22	260.39	1.944E-004	16.50	
208.19	Y	65	52	1.20	417.96	2.419E-004	20.52	
413.81	Y	55	9	1.29	828.87	1.779E-004	15.71	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.04E-001 +- 2.52E-002	4.64E-002 +- 5.67E-003

Beta: 1.30E+002 +- 4.36E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 2

Energy	Mass (g)
129.30	3.80E-002 +- 6.43E-003
413.71	7.57E-002 +- 1.20E-002

Segment 10 Results

Segment: 10 Detector: DET01 Position: 10
C:\Canberra\NDA2k\Data\00000202_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P010_S010

Acquisition Start: 12/18/2008 3:47:31 PM
Elapsed Live Time: 119.23 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.061 +/- 0.0015
SE-75	264.66	0.106 +/- 0.0019
SE-75	279.54	0.109 +/- 0.0025
SE-75	400.66	0.149 +/- 0.0045

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:07:40 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.49	Y	1357	253	1.00	120.82	3.171E-006	3.44	
103.12	Y	35	182	0.56	208.00	9.896E-005	60.02	
129.33	Y	184	119	1.03	260.38	1.855E-004	11.45	
374.86	Y	33	23	1.29	751.02	1.765E-004	27.54	
413.74	Y	35	8	1.28	828.73	1.599E-004	21.25	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 16:
Beta is too small (negative or less than lower limit)

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	- correction not done -	5.31E-002 +- 5.24E-003

Beta: -2.82E+001 +- 4.00E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in attempted correction: 3

Energy	Mass (g)

Segment 11 Results

Segment: 11 Detector: DET01 Position: 11
C:\Canberra\NDA2k\Data\00000202_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P011_S011

Acquisition Start: 12/18/2008 3:51:42 PM
Elapsed Live Time: 119.25 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.064 +/- 0.0015
SE-75	264.66	0.110 +/- 0.0020
SE-75	279.54	0.110 +/- 0.0025
SE-75	400.66	0.148 +/- 0.0045

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:07:43 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.43	Y	1229	210	1.13	120.71	3.231E-006	3.55	
	98.67		144	206	0.99	199.12	9.285E-005	16.43	
M	125.19	Y	25	73	0.89	252.11	1.797E-004	31.26	2.25
m	129.29	Y	136	85	0.89	260.30	1.904E-004	10.39	
	374.94	Y	40	14	1.41	751.19	1.761E-004	21.29	
	413.86	Y	48	14	1.57	828.96	1.634E-004	18.86	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	7.44E-002 +- 1.64E-002	4.48E-002 +- 3.94E-003

Beta: 7.83E+001 +- 3.48E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 3

Energy	Mass (g)
129.30	4.07E-002 +- 4.42E-003
375.05	5.26E-002 +- 1.12E-002
413.71	7.24E-002 +- 1.38E-002

Segment 12 Results

Segment: 12 Detector: DET01 Position: 12
C:\Canberra\NDA2k\Data\00000202_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P012_S012

Acquisition Start: 12/18/2008 3:55:53 PM
Elapsed Live Time: 119.27 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.137 +/- 0.0026
SE-75	264.66	0.204 +/- 0.0033
SE-75	279.54	0.208 +/- 0.0040
SE-75	400.66	0.257 +/- 0.0064

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:07:46 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.46	Y	1094	193	1.05	120.75	1.426E-004	3.77	
98.72		168	165	1.20	199.21	1.834E-004	13.33	
129.39	Y	162	108	1.10	260.51	2.253E-004	12.09	
374.95	Y	47	16	0.82	751.21	2.186E-004	19.59	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	5.45E-002 +- 1.68E-002	4.28E-002 +- 4.57E-003

Beta: 3.71E+001 +- 4.62E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 2

Energy	Mass (g)
129.30	4.09E-002 +- 5.17E-003
375.05	4.94E-002 +- 9.73E-003

Segment 13 Results

Segment: 13 Detector: DET01 Position: 13
C:\Canberra\NDA2k\Data\00000202_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P013_S013

Acquisition Start: 12/18/2008 4:00:05 PM
Elapsed Live Time: 119.31 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.068 +/- 0.0016
SE-75	264.66	0.120 +/- 0.0021
SE-75	279.54	0.126 +/- 0.0028
SE-75	400.66	0.167 +/- 0.0048

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:07:49 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.60	Y	902	155	0.95	121.04	9.553E-005	4.12	
129.35	Y	98	89	1.27	260.43	1.862E-004	17.30	
413.79	Y	21	9	0.83	828.81	1.718E-004	30.64	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 16:
Beta is too small (negative or less than lower limit)

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	- correction not done -	2.99E-002 +- 4.57E-003

Beta: -1.16E+000 +- 6.66E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in attempted correction: 2

Energy	Mass (g)

Segment 14 Results

Segment: 14 Detector: DET01 Position: 14
C:\Canberra\NDA2k\Data\00000202_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P014_S014

Acquisition Start: 12/18/2008 4:04:16 PM
Elapsed Live Time: 119.30 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.145 +/- 0.0027
SE-75	264.66	0.215 +/- 0.0034
SE-75	279.54	0.226 +/- 0.0043
SE-75	400.66	0.269 +/- 0.0066

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:07:52 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.46	Y	674	135	1.21	120.77	4.033E-006	4.85	
129.26	Y	86	70	0.96	260.25	2.375E-004	17.67	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 15 Results

Segment: 15 Detector: DET01 Position: 15
C:\Canberra\NDA2k\Data\00000202_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P015_S015

Acquisition Start: 12/18/2008 4:08:28 PM
Elapsed Live Time: 119.34 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.461 +/- 0.0071
SE-75	264.66	0.533 +/- 0.0078
SE-75	279.54	0.550 +/- 0.0089
SE-75	400.66	0.575 +/- 0.0115

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:07:56 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.39	Y	392	92	1.33	120.62	5.368E-006	6.55	
102.99	Y	51	53	0.81	207.75	1.968E-004	24.14	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 16 Results

Segment: 16 Detector: DET01 Position: 16
C:\Canberra\NDA2k\Data\00000202_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P016_S016

Acquisition Start: 12/18/2008 4:12:39 PM
Elapsed Live Time: 119.36 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.870 +/- 0.0128
SE-75	264.66	0.900 +/- 0.0129
SE-75	279.54	0.912 +/- 0.0141
SE-75	400.66	0.906 +/- 0.0166

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:08:00 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.58	Y	114	53	1.12	121.01	1.444E-004	14.73	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Sum of Segment NID Results
Category: Segmented

C:\Canberra\NDA2k\Data\00000202_CNTR0001_DCAT0002_PROC00AK.CNF

********** Self Absorption Correction Results **********

Absorption correction model:

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	6.54E+000 +- 1.88E-001	1.96E+000 +- 4.54E-002

Beta: 6.09E+001 +- 1.00E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 2.639E-002 +/-	2.3%	< 5.153E-007	< 1.216E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	5.757E-001 +/-	8.1%	1.124E-005	9.096E-011
Al-26	< 5.901E-002 +/-	18.0%	< 1.152E-006	< 3.104E-006
K-40	< 3.879E-001 +/-	5.6%	< 7.577E-006	< 6.052E-002
Co-57	< 1.377E-001 +/-	3.4%	< 2.689E-006	< 1.611E-011
Co-60	< 5.660E-002 +/-	2.9%	< 1.106E-006	< 4.964E-011
Se-75	< 8.399E-002 +/-	1.9%	< 1.640E-006	< 5.778E-012
Kr-85	< 1.152E+001 +/-	3.2%	< 2.249E-004	< 2.902E-008
Sr-90	< 6.061E-002 +/-	2.1%	< 1.184E-006	< 4.394E-010
Sb-125	< 1.247E-001 +/-	2.3%	< 2.436E-006	< 1.200E-010
Ba-133	< 8.269E-002 +/-	1.8%	< 1.615E-006	< 3.266E-010
Cs-134	< 2.957E-002 +/-	2.1%	< 5.776E-007	< 2.256E-011
Cs-137	< 6.061E-002 +/-	2.1%	< 1.184E-006	< 6.909E-010
Eu-152	< 1.060E-001 +/-	4.0%	< 2.070E-006	< 5.956E-010
Eu-154	< 1.658E-001 +/-	2.1%	< 3.238E-006	< 6.217E-010
Ho-166m	< 4.406E-002 +/-	2.4%	< 8.606E-007	< 2.450E-008
Bi-207	< 2.714E-002 +/-	2.8%	< 5.301E-007	< 4.939E-010
Pb-210	< 5.444E+003 +/-	309.7%	< 1.063E-001	< 7.078E-005
Ra-226	< 6.035E-002 +/-	2.4%	< 1.179E-006	< 6.035E-008
Ac-227	< 2.915E-001 +/-	8.3%	< 5.694E-006	< 3.994E-009
Th-230	< 1.663E+002 +/-	8.6%	< 3.247E-003	< 8.147E-003
Pa-231	< 1.882E+000 +/-	11.2%	< 3.675E-005	< 3.933E-005
Th-232	< 9.174E-002 +/-	2.3%	< 1.792E-006	< 8.266E-001
U-232	< 9.174E-002 +/-	2.3%	< 1.792E-006	< 4.247E-009
U-233	< 1.199E+003 +/-	2.7%	< 2.342E-002	< 1.223E-001

Pa-234	< 1.829E-001	+/- 12.3%	< 3.572E-006		
Pa-234m	< 2.601E+002	+/- 2.3%	< 5.080E-003		
U-234	< 0.000E+000	+/- 0.0%	< 0.000E+000	< 0.000E+000	
U-235	< 9.537E-002	+/- 2.5%	< 1.863E-006	< 4.358E-002	
Np-237	< 2.324E-001	+/- 2.0%	< 4.538E-006	< 3.253E-004	
Pu-238	5.901E+004	+/- 11.8%	1.152E+000	3.411E-003	
U-238	< 3.868E+000	+/- 2.4%	< 7.555E-005	< 1.137E+001	
Pu-239	4.112E+005	+/- 2.9%	8.031E+000	6.538E+000	
Pu-239B	3.656E+005	+/- 1.9%	7.141E+000	5.812E+000	
U-239	< 3.778E+004	+/- 368.5%	< 7.378E-001		
Pu-240	1.945E+003	+/- 36.9%	3.799E-002	8.462E-003	
Am-241	5.361E+003	+/- 28.2%	1.047E-001	1.544E-003	
Am-241B	2.891E+004	+/- 5.4%	5.646E-001	8.326E-003	
Pu-241	5.596E+005	+/- 9.9%	1.093E+001	5.384E-003	
Pu-241B	6.577E+005	+/- 3.6%	1.285E+001	6.327E-003	
Pu-242	< 0.000E+000	+/- 0.0%	< 0.000E+000	< 0.000E+000	
Am-243	< 3.220E-001	+/- 1.9%	< 6.290E-006	< 1.594E-006	
Cm-243	< 3.322E-001	+/- 3.4%	< 6.487E-006	< 6.377E-009	
Cm-244	< 2.468E+004	+/- 14.2%	< 4.820E-001	< 3.011E-004	
Cm-245	< 6.022E-001	+/- 7.7%	< 1.176E-005	< 3.463E-006	
Cm-247	< 4.915E-002	+/- 8.6%	< 9.599E-007	< 5.259E-004	

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 6.357E-002 +/-	3.6%	< 1.242E-006	< 1.538E-008
Cf-251	< 3.493E-001 +/-	5.6%	< 6.822E-006	< 2.183E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

Summed Segment Spectra Results
Category: Segmented

C:\Canberra\NDA2k\Data\00000202_CNTR0001_DCAT0002_PROC00AI.CNF

Elapsed Live Time: 118.10 sec Elapsed Real Time: 120.00 sec

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 8.234E-002 +/-	1.0%	< 1.608E-006	< 3.796E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	6.779E-001 +/-	7.6%	1.324E-005	1.071E-010
	Al-26	< 9.926E-002 +/-	6.9%	< 1.939E-006	< 5.221E-006
	K-40	1.743E+000 +/-	19.2%	3.404E-005	2.719E-001
	Co-57	< 4.513E-001 +/-	1.5%	< 8.815E-006	< 5.280E-011
	Co-60	1.750E-001 +/-	13.3%	3.418E-006	1.535E-010
	Se-75	< 2.531E-001 +/-	1.0%	< 4.944E-006	< 1.742E-011
	Kr-85	< 3.950E+001 +/-	2.4%	< 7.716E-004	< 9.955E-008
	Sr-90	< 1.246E-001 +/-	0.8%	< 2.433E-006	< 9.033E-010
	Sb-125	< 3.324E-001 +/-	1.3%	< 6.493E-006	< 3.198E-010
	Ba-133	< 2.015E-001 +/-	0.8%	< 3.936E-006	< 7.960E-010
	Cs-134	< 8.351E-002 +/-	0.8%	< 1.631E-006	< 6.372E-011
X	Cs-137				
	Eu-152	< 3.423E-001 +/-	1.8%	< 6.686E-006	< 1.924E-009
	Eu-154	< 4.814E-001 +/-	1.0%	< 9.402E-006	< 1.805E-009
	Ho-166m	< 1.366E-001 +/-	1.5%	< 2.667E-006	< 7.592E-008
	Bi-207	< 8.288E-002 +/-	0.8%	< 1.619E-006	< 1.508E-009
	Pb-210	< 5.372E+003 +/-	11.3%	< 1.049E-001	< 6.984E-005
	Ra-226	< 2.039E-001 +/-	1.3%	< 3.982E-006	< 2.039E-007
	Ac-227	< 9.001E-001 +/-	8.2%	< 1.758E-005	< 1.233E-008
	Th-230	< 5.364E+002 +/-	8.2%	< 1.048E-002	< 2.629E-002
	Pa-231	< 5.034E+000 +/-	11.1%	< 9.831E-005	< 1.052E-004
	Th-232	< 2.939E-001 +/-	1.1%	< 5.739E-006	< 2.648E+000
	U-232	< 2.939E-001 +/-	1.1%	< 5.739E-006	< 1.361E-008
	U-233	< 3.804E+003 +/-	1.4%	< 7.429E-002	< 3.880E-001
	Pa-234	< 4.875E-001 +/-	12.1%	< 9.522E-006	
	Pa-234m	< 6.810E+002 +/-	1.5%	< 1.330E-002	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 3.082E-001 +/-	1.7%	< 6.019E-006	< 1.408E-001
	Np-237	3.130E-001 +/-	44.4%	6.113E-006	4.382E-004
	Pu-238	6.813E+004 +/-	12.0%	1.331E+000	3.938E-003
	U-238	< 1.174E+001 +/-	1.6%	< 2.293E-004	< 3.452E+001
	Pu-239	3.403E+005 +/-	2.4%	6.646E+000	5.410E+000
	Pu-239B	3.746E+005 +/-	1.7%	7.317E+000	5.956E+000
	U-239	< 1.272E+004 +/-	15.0%	< 2.485E-001	
X	Pu-240				
	Am-241	2.708E+004 +/-	26.7%	5.289E-001	7.799E-003
	Am-241B	3.177E+004 +/-	4.4%	6.206E-001	9.151E-003
	Pu-241	4.760E+005 +/-	11.6%	9.298E+000	4.580E-003
	Pu-241B	5.889E+005 +/-	2.4%	1.150E+001	5.666E-003

Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 9.940E-001 +/-	1.1%	< 1.941E-005	< 4.920E-006
Cm-243	< 1.025E+000 +/-	3.0%	< 2.002E-005	< 1.968E-008
Cm-244	< 9.879E+004 +/-	13.9%	< 1.929E+000	< 1.205E-003
Cm-245	< 1.930E+000 +/-	7.4%	< 3.770E-005	< 1.110E-005
Cm-247	< 1.375E-001 +/-	8.4%	< 2.686E-006	< 1.472E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.602E-001 +/-	3.1%	< 3.129E-006	< 3.877E-008
Cf-251	< 1.077E+000 +/-	5.3%	< 2.103E-005	< 6.728E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	5.41E+000 +- 1.27E-001	4.82E+000 +- 5.25E-002

Beta: 2.68E+001 +- 5.11E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	4.42E+000 +- 1.01E-001
203.55	4.68E+000 +- 1.30E-001
375.05	5.00E+000 +- 9.09E-002
413.71	5.14E+000 +- 1.08E-001

********** Radioassay Data Sheet **********

204

Engine Version: TMU Gamma 1.5

Assay Instrument: SGS with Trans. Location:LLNL
Analysis Method: LLNL SGS Operating Procedure Software Version: NDA 2000 V.4.0
Item ID: SGS100 Analysis Date: 12/22/2008

NID identified fiducial nuclide Pu-239
Source of isotopics: MEASURED

Net Weight	16800.0 g		
Pu mass	1.16E+002	+- 1.71E+001	g
TRU Alpha Activity	1.00E+001	+- 1.13E+000	Ci
TRU Activity Concentration	5.98E+005	+- 6.70E+004	nCi/g
Pu-239 Equivalent Activity	1.04E+001	+- 1.13E+000	Ci
Pu-239 FGE	1.10E+002	+- 1.71E+001	g
Decay heat	3.16E-001	+- 3.50E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	8.38E-008
U233	<LLD	<LLD	0.00E+000	3.98E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.42E-007
NP237	1.02E-002	7.27E-006	1.20E-006	6.92E-007
PU238	1.19E-002	2.06E-001	3.49E-002	3.66E-004
U238	<LLD	<LLD	0.00E+000	3.91E-006
PU239	1.09E+002	6.87E+000	1.08E+000	1.22E-002
PU240	6.52E+000	1.50E+000	2.35E-001	2.66E-003
AM241	4.22E-001	1.47E+000	2.31E-001	2.38E-004
PU241	2.02E-001	2.10E+001	3.29E+000	3.72E-002
PU242	3.60E-002	1.43E-004	2.65E-005	0.00E+000

Errors quoted at 1.000 sigma

Operator:_____ Date:_____

ITR:_____ Date:_____

********** Radioassay Data Sheet **********

Engine Version: TMU Gamma 1.5

Assay Instrument: SGS with Trans. Location:LLNL
Analysis Method: LLNL SGS Operating Procedure Software Version: NDA 2000 V.4.0
Item ID: SGS100 Analysis Date: 12/22/2008

NID identified fiducial nuclide Pu-239
Source of isotopics: MEASURED

Net Weight	16800.0 g		
Pu mass	1.15E+002 +-	1.70E+001	g
TRU Alpha Activity	9.69E+000 +-	1.11E+000	Ci
TRU Activity Concentration	5.77E+005 +-	6.61E+004	nCi/g
Pu-239 Equivalent Activity	1.01E+001 +-	1.11E+000	Ci
Pu-239 FGE	1.09E+002 +-	1.70E+001	g
Decay heat	3.05E-001 +-	3.45E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.33E-007
U233	<LLD	<LLD	0.00E+000	9.15E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	7.90E-007
NP237	8.17E-003	5.83E-006	9.31E-007	1.09E-006
PU238	1.18E-002	2.04E-001	3.47E-002	3.73E-004
U238	<LLD	<LLD	0.00E+000	1.14E-005
PU239	1.08E+002	6.81E+000	1.07E+000	1.24E-002
PU240	6.46E+000	1.48E+000	2.33E-001	2.71E-003
AM241	3.45E-001	1.20E+000	1.90E-001	1.17E-004
PU241	2.00E-001	2.08E+001	3.27E+000	3.79E-002
PU242	3.56E-002	1.41E-004	2.63E-005	0.00E+000

Errors quoted at 1.000 sigma

Operator:_____ Date:_____

ITR:_____ Date:_____

********** MGA Results **********

MGA version: MGA V9.63H CI

Measurement date = 12/22/08 Declared date = 12/22/08
Low energy spectrum sensitivity = 30.0% Total counts = 7.491E+006
High energy spectrum sensitivity : 10.0%

Pu g/cm2 = 0.7552 Cd g/cm2 = 2.0761 FWHM at 122 keV = 615 eV
QFIT = 1.12 FWHM at 208 keV = 785 eV
NQFIT = 1.01

Isotope	Relative to Pu-239	%* Err	% Err	Relative to Pu-241	%* Err	Isotope analysis at Meas. date % weight	%Err	Decl. date % weight	%Err
Pu-238	0.000109	6.5	6.5	0.0591	6.9	0.01028	6.44	0.01059	6.63
Pu-239	1.000000	0.0	0.4	540.9946	0.8	94.16859	0.06	94.13386	0.06
Pu-240	0.059639	1.0	0.9	32.2642	1.2	5.61608	0.93	5.61565	0.93
Pu-241	0.001848	0.8	0.7	1.0000	0.0	0.17407	0.76	0.20894	0.91
Pu-242	(New alg.)			0.1780(10)		0.03098 (10)		0.03097 (9)	
Am-241	0.005365	0.5	0.4	2.9025	0.8	0.50523	0.51	0.50795	0.52

Pu-240 effective (meas. date) = 5.694 +/- 1.01%
Am-241 separated about 28.171 +/- 0.167 years ago
Am/Pu-241 weight ratio = 2.90252 +/- 0.77%

Messages:

Lead x-rays detected.
Calculations in MGAABS didn't converge: results may be suspect.

Notes : * = Error in ratio
Errors quoted at 1.000 sigma
MGA sigma defaulted to 1

Reviewed by: _____ Date: _____

****
***** GENIE QUALITY ASSURANCE *****
****

Last Results Report
12/22/08 11:25:01 AM

QA File: C:\CANBERRA\NDA2K\QA\CNTR0001_DC
Sample ID: SGS100
Sample Quantity: 1.0000E+000
Sample Date: 7/17/08 10:49:07 AM
Measurement Date: 12/22/08 10:15:29 AM
Elapsed Live Time: 0.0 seconds
Elapsed Real Time: 0.0 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
SGS-100 Pu-239 Trans Mas [UD: 1.0913E+002+/- 7.370]	1.0928E+002	2.0014E-002 < : : : >

Flags Key: LU = Lower/Upper Bounds Test (Ab = Above, Be = Below)
SD = Sample Driven N-Sigma Test (In = Investigate, Ac = Action)
UD = User Driven N-Sigma Test (In = Investigate, Ac = Action)
BS = Measurement Bias Test (In = Investigate, Ac = Action)

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

Last Results Report
12/22/08 11:25:02 AM

QA File: C:\CANBERRA\NDA2K\QA\CNTR0001_DC
Sample ID: SGS100
Sample Quantity: 1.0000E+000
Sample Date: 7/17/08 10:49:07 AM
Measurement Date: 12/22/08 10:19:46 AM
Elapsed Live Time: 97.6 seconds
Elapsed Real Time: 120.0 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
SGS-100 414 keV centroid [0.00+/-0.00]	8.2848E+002	0.00 < : : : >
SGS-100 414 keV FWHM [0.00+/-0.00]	1.3059E+000	0.00 < : : : >
SGS-100 Pu-239 Mass [UD: 1.1082E+002+/- 1.081]	1.0824E+002	-2.3861E+000 < : :In : >

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)

NDA 2000 Assay Report

Item Information

Item ID:	SGS100	Count Sequence Number:	204
Operator:	RHWM2\RHWM		
Assay Start:	12/22/2008 10:17:44 AM		
Description 1:	SGS100		
Description 2:			
Location:	LLNL		
Comment:			
Matrix Type:	Lucite		
Container Type:	55 TRU Galv 81.5		
Weight:	Gross: 54.0 kg	Net:	16.8 kg
Container:	Volume: 208.0 l	Full:	100.0 %
Density:	0.080 kg /l		

System Configuration

Counter:	SGS with Trans.		
Segments:	Number: 16	Offset:	0
Scanning Platform:	Start: 934 mm	Delta:	-51 mm
Count Type:	QC - SGS 100		
Collimator/Geometry Setting:	Default - 0		
Transmission Mode:	Two Pass		
Transmission Correction Type:	Standard		
Transmission Source:	Se-75 Trans. - 0		

Errors quoted at 1.000 sigma

Segment 1 Results

Segment: 1 Detector: DET01 Position: 1
C:\Canberra\NDA2k\Data\00000204_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P001_S001

Acquisition Start: 12/22/2008 10:19:46 AM
Elapsed Live Time: 118.16 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.416 +/- 0.0068
SE-75	264.66	0.493 +/- 0.0074
SE-75	279.54	0.508 +/- 0.0087
SE-75	400.66	0.545 +/- 0.0115

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/22/2008 10:21:47 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
49.06		332	770	1.21	99.99	9.389E-007	13.30	
59.41	Y	676	817	1.19	120.67	6.671E-006	7.62	
2234.71		11980	13	1.14	4467.55	4.608E-005	1.43	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 3.546E-002 +/-	2.1%	< 3.377E-005	< 1.635E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.630E-002 +/-	2.2%	< 2.504E-005	< 4.155E-012
Al-26	< 3.350E-002 +/-	16.2%	< 3.190E-005	< 1.762E-006
K-40	< 4.072E-001 +/-	5.3%	< 3.878E-004	< 6.353E-002
Co-57	< 1.284E-001 +/-	3.4%	< 1.223E-004	< 1.502E-011
Co-60	< 4.496E-002 +/-	1.9%	< 4.282E-005	< 3.943E-011
Se-75	< 9.747E-002 +/-	1.9%	< 9.283E-005	< 6.706E-012
Kr-85	< 6.644E+000 +/-	3.2%	< 6.327E-003	< 1.674E-008
Sr-90	< 2.752E-002 +/-	2.1%	< 2.621E-005	< 1.995E-010
Sb-125	< 8.538E-002 +/-	2.3%	< 8.131E-005	< 8.213E-011
Ba-133	< 6.344E-002 +/-	1.8%	< 6.042E-005	< 2.506E-010
Cs-134	< 2.373E-002 +/-	2.1%	< 2.260E-005	< 1.810E-011
Cs-137	< 2.752E-002 +/-	2.1%	< 2.621E-005	< 3.138E-010
Eu-152	< 1.325E-001 +/-	4.0%	< 1.262E-004	< 7.449E-010
Eu-154	< 7.509E-002 +/-	2.4%	< 7.151E-005	< 2.816E-010
Ho-166m	< 3.376E-002 +/-	2.4%	< 3.215E-005	< 1.877E-008
Bi-207	< 2.505E-002 +/-	2.1%	< 2.385E-005	< 4.558E-010
Pb-210	< 8.853E+002 +/-	47.8%	< 8.432E-001	< 1.151E-005
Ra-226	< 5.694E-002 +/-	2.4%	< 5.423E-005	< 5.694E-008
Ac-227	< 3.198E-001 +/-	8.3%	< 3.046E-004	< 4.381E-009
Th-230	< 1.522E+002 +/-	8.6%	< 1.450E-001	< 7.460E-003
Pa-231	< 2.140E+000 +/-	11.2%	< 2.038E-003	< 4.472E-005
Th-232	< 9.467E-002 +/-	2.3%	< 9.016E-005	< 8.530E-001
U-232	< 9.467E-002 +/-	2.3%	< 9.016E-005	< 4.383E-009
U-233	< 1.109E+003 +/-	2.7%	< 1.056E+000	< 1.131E-001
Pa-234	< 1.661E-001 +/-	12.3%	< 1.582E-004	
Pa-234m	< 1.968E+002 +/-	2.3%	< 1.874E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 1.056E-001 +/-	2.5%	< 1.006E-004	< 4.826E-002
Np-237	< 1.555E-001 +/-	2.0%	< 1.481E-004	< 2.177E-004
Pu-238	< 7.476E+003 +/-	2.7%	< 7.120E+000	< 4.321E-004
U-238	< 3.148E+000 +/-	2.4%	< 2.998E-003	< 9.255E+000
Pu-239	< 1.427E+003 +/-	3.1%	< 1.359E+000	< 2.268E-002
Pu-239B	< 4.211E+003 +/-	5.2%	< 4.011E+000	< 6.695E-002
U-239	< 1.998E+003 +/-	59.1%	< 1.903E+000	
Pu-240	< 2.601E+003 +/-	4.6%	< 2.477E+000	< 1.131E-002
Am-241	6.355E+001 +/-	21.9%	6.052E-002	1.830E-005
Am-241B	< 9.702E+002 +/-	4.9%	< 9.240E-001	< 2.794E-004
Pu-241	< 3.980E+004 +/-	2.8%	< 3.790E+001	< 3.828E-004
Pu-241B	< 1.071E+004 +/-	2.5%	< 1.020E+001	< 1.030E-004
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 4.306E-001 +/-	1.9%	< 4.101E-004	< 2.131E-006
Cm-243	< 4.441E-001 +/-	3.4%	< 4.229E-004	< 8.527E-009
Cm-244	< 2.863E+004 +/-	14.1%	< 2.727E+001	< 3.493E-004
Cm-245	< 6.937E-001 +/-	7.7%	< 6.607E-004	< 3.989E-006
Cm-247	< 3.210E-002 +/-	8.6%	< 3.057E-005	< 3.435E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 4.054E-002 +/-	3.6%	< 3.861E-005	< 9.811E-009
Cf-251	< 3.823E-001 +/-	5.6%	< 3.641E-004	< 2.389E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 2 Results

Segment: 2 Detector: DET01 Position: 2
C:\Canberra\NDA2k\Data\00000204_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P002_S002

Acquisition Start: 12/22/2008 10:23:57 AM
Elapsed Live Time: 117.71 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.462 +/- 0.0074
SE-75	264.66	0.555 +/- 0.0083
SE-75	279.54	0.558 +/- 0.0094
SE-75	400.66	0.592 +/- 0.0123

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/22/2008 10:25:59 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.40	Y	1472	1053	1.45	120.64	1.236E-004	4.42	
110.62		103	1608	0.57	223.00	2.989E-004	55.75	
2234.73		11980	12	1.10	4467.59	1.071E-004	1.43	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.02 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 1.411E-002 +/-	1.8%	< 1.344E-005	< 6.504E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 1.817E-002 +/-	2.0%	< 1.730E-005	< 2.870E-012
Al-26	< 2.276E-002 +/-	15.5%	< 2.168E-005	< 1.197E-006
K-40	< 2.326E-001 +/-	4.9%	< 2.216E-004	< 3.629E-002
Co-57	< 1.080E-001 +/-	3.5%	< 1.028E-004	< 1.263E-011
Co-60	< 3.621E-002 +/-	2.5%	< 3.449E-005	< 3.176E-011
Se-75	< 8.588E-002 +/-	1.9%	< 8.179E-005	< 5.909E-012
Kr-85	< 4.661E+000 +/-	3.1%	< 4.439E-003	< 1.174E-008
Sr-90	< 2.553E-002 +/-	2.0%	< 2.432E-005	< 1.851E-010
Sb-125	< 5.122E-002 +/-	2.1%	< 4.878E-005	< 4.928E-011
Ba-133	< 6.576E-002 +/-	1.7%	< 6.262E-005	< 2.597E-010
Cs-134	< 1.300E-002 +/-	2.0%	< 1.238E-005	< 9.920E-012
Cs-137	< 2.553E-002 +/-	2.0%	< 2.432E-005	< 2.911E-010
Eu-152	< 8.992E-002 +/-	3.7%	< 8.564E-005	< 5.053E-010
Eu-154	< 5.187E-002 +/-	2.2%	< 4.940E-005	< 1.945E-010
Ho-166m	< 2.593E-002 +/-	2.3%	< 2.470E-005	< 1.442E-008
Bi-207	< 1.727E-002 +/-	1.9%	< 1.645E-005	< 3.144E-010
Pb-210	< 7.554E+000 +/-	81.7%	< 7.195E-003	< 9.821E-008
Ra-226	< 3.257E-002 +/-	2.3%	< 3.101E-005	< 3.257E-008
Ac-227	< 2.872E-001 +/-	8.3%	< 2.735E-004	< 3.935E-009
Th-230	< 3.709E+001 +/-	25.1%	< 3.533E-002	< 1.818E-003
Pa-231	< 1.824E+000 +/-	11.2%	< 1.737E-003	< 3.812E-005
Th-232	< 5.041E-002 +/-	2.2%	< 4.801E-005	< 4.542E-001
U-232	< 5.041E-002 +/-	2.2%	< 4.801E-005	< 2.334E-009
U-233	< 1.099E+003 +/-	2.7%	< 1.047E+000	< 1.121E-001
Pa-234	< 6.888E-002 +/-	12.2%	< 6.560E-005	
Pa-234m	< 1.621E+002 +/-	2.1%	< 1.544E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 1.120E-001 +/-	2.5%	< 1.067E-004	< 5.119E-002
Np-237	< 1.389E-001 +/-	2.0%	< 1.323E-004	< 1.945E-004
Pu-238	< 7.523E+003 +/-	2.7%	< 7.165E+000	< 4.348E-004
U-238	< 3.007E+000 +/-	2.1%	< 2.864E-003	< 8.841E+000
Pu-239	< 1.277E+003 +/-	3.2%	< 1.216E+000	< 2.030E-002
Pu-239B	< 2.659E+003 +/-	6.4%	< 2.532E+000	< 4.227E-002
U-239	< 9.688E+000 +/-	98.9%	< 9.227E-003	
Pu-240	< 1.707E+003 +/-	5.4%	< 1.626E+000	< 7.426E-003
Am-241	7.470E+000 +/-	38.1%	7.114E-003	2.151E-006
Am-241B	< 6.372E+002 +/-	5.7%	< 6.069E-001	< 1.835E-004
Pu-241	< 3.744E+004 +/-	2.9%	< 3.565E+001	< 3.601E-004
Pu-241B	< 1.096E+004 +/-	2.5%	< 1.044E+001	< 1.054E-004
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 2.036E-001 +/-	16.6%	< 1.939E-004	< 1.008E-006
Cm-243	< 3.510E-001 +/-	3.4%	< 3.343E-004	< 6.740E-009
Cm-244	< 2.312E+004 +/-	14.1%	< 2.202E+001	< 2.820E-004
Cm-245	< 7.054E-001 +/-	7.7%	< 6.718E-004	< 4.056E-006
Cm-247	< 3.244E-002 +/-	8.5%	< 3.090E-005	< 3.471E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 4.091E-002 +/-	3.5%	< 3.897E-005	< 9.901E-009
Cf-251	< 3.789E-001 +/-	5.6%	< 3.608E-004	< 2.368E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 3 Results

Segment: 3 Detector: DET01 Position: 3
C:\Canberra\NDA2k\Data\00000204_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P003_S003

Acquisition Start: 12/22/2008 10:28:09 AM
Elapsed Live Time: 114.71 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.389 +/- 0.0066
SE-75	264.66	0.473 +/- 0.0072
SE-75	279.54	0.490 +/- 0.0087
SE-75	400.66	0.516 +/- 0.0114

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

*** Spectrum Validity Test warnings ***
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 12/22/2008 10:30:10 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.45	Y	9050	2425	1.11	120.75	9.320E-005	1.74	
M	94.75		2179	5792	1.49	191.28	2.331E-004	5.78	7.72
m	98.73	Y	7564	8968	1.50	199.25	2.469E-004	4.20	
m	100.91	Y	1168	8903	1.50	203.60	2.541E-004	7.24	
m	103.38	Y	5312	7678	1.51	208.54	2.620E-004	4.16	
M	110.98		1580	4477	1.44	223.72	2.844E-004	3.86	7.49
m	114.85	Y	1062	7060	1.44	231.44	2.947E-004	5.76	
M	125.35	Y	591	2904	1.04	252.42	3.190E-004	7.24	3.19
m	129.33	Y	3437	2640	1.04	260.39	3.269E-004	2.32	
M	144.35		311	1726	0.74	290.40	3.510E-004	29.32	1.38
m	148.64	Y	500	2680	0.74	298.97	3.564E-004	22.13	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	164.69	Y	130	2334	0.84	331.04	3.708E-004	57.97	
	195.77		195	1536	1.00	393.14	3.787E-004	30.88	
M	203.56	Y	794	1510	1.10	408.72	3.778E-004	4.84	1.89
m	208.03	Y	2805	1327	1.10	417.65	3.768E-004	2.38	
	255.44		121	743	0.93	512.39	3.548E-004	34.72	
	312.01	Y	119	821	1.39	625.43	3.184E-004	40.11	
M	332.73	Y	968	538	1.33	666.83	3.036E-004	3.76	1.28
m	335.69	Y	438	585	1.33	672.74	3.015E-004	6.09	
	344.98		747	638	1.25	691.31	2.951E-004	6.62	
	368.21	Y	309	474	2.46	737.74	2.797E-004	12.86	
M	375.03	Y	2186	363	1.27	751.35	2.754E-004	2.44	2.69
m	380.14		406	264	1.28	761.58	2.722E-004	5.82	
m	382.67		403	235	1.28	766.64	2.706E-004	5.74	
	392.86		785	237	1.52	786.99	2.645E-004	5.02	
	413.67	Y	2057	110	1.38	828.58	2.529E-004	2.65	
	422.54		114	92	1.40	846.31	2.483E-004	16.23	
	451.56		203	43	1.29	904.29	2.343E-004	8.78	
	662.31	Y	91	15	1.94	1325.43	1.655E-004	12.90	
	721.82	Y	73	10	1.51	1444.35	1.535E-004	14.02	
	2234.72		11980	15	1.13	4467.56	8.717E-005	1.45	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.05 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 2.038E-002 +/-	1.8%	< 1.941E-005	< 9.394E-016
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 1.836E-002 +/-	2.0%	< 1.749E-005	< 2.902E-012
	Al-26	< 2.139E-002 +/-	18.9%	< 2.037E-005	< 1.125E-006
	K-40	< 1.848E-001 +/-	5.3%	< 1.760E-004	< 2.883E-002
	Co-57	< 1.519E-001 +/-	4.4%	< 1.446E-004	< 1.777E-011
	Co-60	< 2.986E-002 +/-	1.7%	< 2.844E-005	< 2.619E-011
	Se-75	< 1.190E-001 +/-	1.8%	< 1.133E-004	< 8.187E-012
	Kr-85	< 7.615E+000 +/-	3.1%	< 7.252E-003	< 1.919E-008
	Sr-90	< 3.795E-002 +/-	2.2%	< 3.614E-005	< 2.751E-010
	Sb-125	< 1.034E-001 +/-	1.9%	< 9.845E-005	< 9.944E-011
	Ba-133	< 9.579E-002 +/-	1.6%	< 9.123E-005	< 3.784E-010
	Cs-134	< 1.502E-002 +/-	1.9%	< 1.431E-005	< 1.146E-011
X	Cs-137				
	Eu-152	< 8.191E-002 +/-	1.8%	< 7.801E-005	< 4.603E-010
	Eu-154	< 4.300E-002 +/-	1.9%	< 4.095E-005	< 1.612E-010
	Ho-166m	< 2.604E-002 +/-	2.3%	< 2.480E-005	< 1.448E-008

‹	Bi-207	<	1.733E-002	+/-	1.9%	<	1.651E-005	< 3.155E-010
	Pb-210	<	1.340E+001	+/-	259.0%	<	1.276E-002	< 1.742E-007
	Ra-226	<	3.853E-002	+/-	2.4%	<	3.670E-005	< 3.853E-008
	Ac-227	<	4.180E-001	+/-	8.3%	<	3.981E-004	< 5.726E-009
	Th-230	<	5.982E+001	+/-	83.2%	<	5.697E-002	< 2.931E-003
	Pa-231	<	2.431E+000	+/-	11.2%	<	2.315E-003	< 5.081E-005
	Th-232	<	6.498E-002	+/-	2.4%	<	6.188E-005	< 5.854E-001
	U-232	<	7.155E-002	+/-	2.3%	<	6.815E-005	< 3.313E-009
	U-233	<	1.468E+003	+/-	3.0%	<	1.398E+000	< 1.498E-001
	Pa-234	<	1.128E-001	+/-	12.2%	<	1.075E-004	
	Pa-234m	<	1.152E+002	+/-	2.1%	<	1.097E-001	
	U-234	<	0.000E+000	+/-	0.0%	<	0.000E+000	< 0.000E+000
	U-235	<	1.437E-001	+/-	2.9%	<	1.368E-004	< 6.567E-002
	Np-237		2.183E-001	+/-	40.2%		2.079E-004	3.057E-004
	Pu-238	<	9.684E+003	+/-	3.1%	<	9.223E+000	< 5.597E-004
	U-238	<	2.413E+000	+/-	2.2%	<	2.298E-003	< 7.095E+000
	Pu-239		2.117E+005	+/-	3.9%		2.016E+002	3.366E+000
	Pu-239B	<	5.533E+003	+/-	16.5%	<	5.269E+000	< 8.796E-002
	U-239	<	2.157E+001	+/-	308.4%	<	2.055E-002	
X	Pu-240							
	Am-241		3.912E+004	+/-	10.0%		3.726E+001	1.127E-002
	Am-241B		2.584E+004	+/-	10.6%		2.461E+001	7.443E-003
	Pu-241		1.705E+005	+/-	22.4%		1.624E+002	1.640E-003
	Pu-241B		3.209E+005	+/-	3.5%		3.056E+002	3.087E-003
	Pu-242	<	0.000E+000	+/-	0.0%	<	0.000E+000	< 0.000E+000
	Am-243	<	3.236E-001	+/-	57.7%	<	3.082E-004	< 1.602E-006
	Cm-243	<	4.792E-001	+/-	3.3%	<	4.564E-004	< 9.201E-009
	Cm-244	<	2.384E+004	+/-	14.2%	<	2.271E+001	< 2.909E-004
	Cm-245	<	8.933E-001	+/-	7.8%	<	8.508E-004	< 5.137E-006
	Cm-247	<	5.254E-002	+/-	8.5%	<	5.004E-005	< 5.622E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 6.349E-002 +/-	3.4%	< 6.046E-005	< 1.536E-008
Cf-251	< 4.953E-001 +/-	5.8%	< 4.717E-004	< 3.096E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	3.37E+000 +- 1.30E-001	9.65E-001 +- 2.06E-002

Beta: 2.20E+002 +- 8.80E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	5.97E-001 +- 2.50E-002
203.55	1.32E+000 +- 7.10E-002
375.05	1.83E+000 +- 5.54E-002
413.71	1.99E+000 +- 6.55E-002

Segment 4 Results

Segment: 4 Detector: DET01 Position: 4
C:\Canberra\NDA2k\Data\00000204_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P004_S004

Acquisition Start: 12/22/2008 10:32:20 AM
Elapsed Live Time: 102.15 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.355 +/- 0.0067
SE-75	264.66	0.464 +/- 0.0097
SE-75	279.54	0.475 +/- 0.0092
SE-75	400.66	0.526 +/- 0.0127

Errors quoted at 1.000 sigma

Peak Analysis Results

*** Spectrum Validity Test warnings ***
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 12/22/2008 10:34:22 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.44	Y	54767	6121	1.10	120.72	5.105E-006	1.27	
M	94.71	Y	11586	11297	1.55	191.21	1.301E-004	2.22	62.79
m	98.70	Y	44649	15139	1.56	199.17	1.535E-004	1.82	
m	100.90	Y	6937	15250	1.56	203.57	1.666E-004	2.80	
m	103.35	Y	31928	13051	1.57	208.48	1.813E-004	1.79	
M	111.06	Y	11691	7857	1.38	223.87	2.267E-004	1.67	80.78
m	114.58	Y	9859	8696	1.38	230.92	2.466E-004	1.75	
m	116.64	Y	9352	8102	1.39	235.03	2.579E-004	1.72	
m	120.54	Y	2311	6635	1.40	242.81	2.783E-004	3.19	
m	122.78	Y	1015	7028	1.40	247.30	2.895E-004	5.95	
m	125.25	Y	4270	6699	1.40	252.24	3.013E-004	2.25	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	129.29	Y	20618	5813	1.41	260.30	3.193E-004	1.50	
M	144.21	Y	1261	4099	1.12	290.12	3.738E-004	5.02	0.93
m	146.35	Y	1045	4617	1.12	294.39	3.801E-004	5.81	
m	148.51	Y	2799	5139	1.12	298.72	3.860E-004	3.03	
M	161.01	Y	1257	5158	1.67	323.69	4.121E-004	13.09	4.35
m	164.64	Y	1253	7103	1.68	330.95	4.174E-004	10.98	
	171.43	Y	727	4566	1.25	344.51	4.248E-004	16.65	
	179.16	Y	356	3830	1.03	359.95	4.298E-004	29.81	
	189.26	Y	663	4609	1.59	380.13	4.318E-004	18.75	
	195.69	Y	974	4418	1.12	392.99	4.309E-004	12.69	
M	203.52	Y	5006	3606	1.19	408.64	4.280E-004	2.67	2.90
m	207.97	Y	16598	3074	1.20	417.53	4.256E-004	2.13	
	243.43	Y	392	2615	1.21	488.40	3.947E-004	24.49	
	255.41	Y	687	2202	1.03	512.32	3.820E-004	12.89	
	267.50	Y	551	1729	1.33	536.50	3.690E-004	13.97	
	297.40	Y	395	1642	1.07	596.24	3.372E-004	19.11	
	311.81	Y	859	1541	1.30	625.04	3.226E-004	9.01	
M	320.90	Y	536	1480	1.77	643.19	3.137E-004	8.09	3.28
m	323.36	Y	723	2194	1.78	648.11	3.114E-004	6.23	
M	332.68	Y	5668	1081	1.35	666.74	3.028E-004	4.08	1.62
m	335.61	Y	2364	1023	1.35	672.60	3.002E-004	4.51	
m	341.43	Y	611	1096	1.35	684.22	2.951E-004	7.41	
m	344.94	Y	4930	1049	1.36	691.23	2.921E-004	4.06	
	368.43	Y	2010	1080	2.34	738.18	2.733E-004	4.04	
M	374.99	Y	13102	844	1.26	751.29	2.684E-004	1.48	14.27
m	380.08	Y	2556	677	1.27	761.45	2.648E-004	2.50	
m	382.66	Y	2240	599	1.27	766.62	2.630E-004	2.63	
	392.85	Y	4653	546	1.54	786.98	2.561E-004	2.18	
	413.62	Y	12095	346	1.44	828.49	2.431E-004	1.54	
M	422.49	Y	946	239	1.26	846.20	2.379E-004	3.92	2.17
m	426.55	Y	185	267	1.27	854.31	2.357E-004	10.27	
	451.38	Y	1460	152	1.46	903.93	2.229E-004	3.44	
	618.91	Y	118	32	1.72	1238.70	1.681E-004	13.20	
M	645.87	Y	74	51	1.42	1292.58	1.626E-004	15.56	2.10
m	652.69	Y	77	58	1.43	1306.20	1.613E-004	14.55	
m	658.98	Y	33	57	1.43	1318.78	1.602E-004	26.14	
m	662.30	Y	573	37	1.43	1325.41	1.596E-004	4.76	
	688.67	Y	40	33	1.09	1378.11	1.550E-004	32.45	
	721.93	Y	305	19	1.40	1444.57	1.499E-004	6.85	
	769.23	Y	81	9	0.85	1539.09	1.437E-004	14.06	
	2234.70		11980	27	1.16	4467.52	6.794E-005	1.53	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.18 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 1.914E-002 +/-	1.8%	< 1.823E-005	< 8.825E-016
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 2.789E-002 +/-	2.0%	< 2.656E-005	< 4.407E-012
	Al-26	< 4.147E-002 +/-	14.5%	< 3.949E-005	< 2.181E-006
	K-40	< 3.461E-001 +/-	4.8%	< 3.296E-004	< 5.400E-002
X	Co-57				
	Co-60	< 3.284E-002 +/-	2.5%	< 3.128E-005	< 2.880E-011
	Se-75	< 1.913E-001 +/-	1.7%	< 1.822E-004	< 1.316E-011
	Kr-85	< 1.243E+001 +/-	3.0%	< 1.184E-002	< 3.132E-008
	Sr-90	< 6.007E-002 +/-	2.0%	< 5.721E-005	< 4.355E-010
	Sb-125	< 2.353E-001 +/-	2.2%	< 2.240E-004	< 2.263E-010
	Ba-133	< 1.621E-001 +/-	1.7%	< 1.544E-004	< 6.405E-010
	Cs-134	< 2.409E-002 +/-	1.8%	< 2.295E-005	< 1.838E-011
X	Cs-137				
X	Eu-152				
	Eu-154	< 7.964E-002 +/-	2.2%	< 7.585E-005	< 2.987E-010
	Ho-166m	< 4.563E-002 +/-	2.3%	< 4.346E-005	< 2.537E-008
	Bi-207	< 3.345E-002 +/-	1.9%	< 3.186E-005	< 6.088E-010
	Pb-210	< 4.240E+003 +/-	37.2%	< 4.038E+000	< 5.512E-005
	Ra-226	< 8.275E-002 +/-	2.2%	< 7.881E-005	< 8.275E-008
	Ac-227	< 6.293E-001 +/-	8.3%	< 5.994E-004	< 8.622E-009
	Th-230	< 3.149E+002 +/-	8.5%	< 2.999E-001	< 1.543E-002
	Pa-231	< 3.745E+000 +/-	11.2%	< 3.566E-003	< 7.827E-005
	Th-232	< 9.431E-002 +/-	2.4%	< 8.982E-005	< 8.497E-001
	U-232	< 1.485E-001 +/-	2.1%	< 1.414E-004	< 6.874E-009
	U-233	< 2.422E+003 +/-	2.6%	< 2.307E+000	< 2.471E-001
	Pa-234	< 9.637E-002 +/-	12.2%	< 9.178E-005	
	Pa-234m	< 1.477E+002 +/-	2.1%	< 1.407E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 2.055E-001 +/-	2.4%	< 1.957E-004	< 9.390E-002
	Np-237	1.050E+000 +/-	13.6%	9.999E-004	1.470E-003
	Pu-238	< 1.372E+004 +/-	2.5%	< 1.306E+001	< 7.929E-004
	U-238	< 2.360E+000 +/-	2.2%	< 2.248E-003	< 6.940E+000
	Pu-239	1.297E+006 +/-	3.1%	1.235E+003	2.062E+001
	Pu-239B	7.530E+005 +/-	1.5%	7.172E+002	1.197E+001
	U-239	< 1.826E+004 +/-	46.3%	< 1.739E+001	
X	Pu-240				
	Am-241	2.263E+005 +/-	4.5%	2.155E+002	6.517E-002
	Am-241B	1.117E+005 +/-	3.9%	1.063E+002	3.216E-002
	Pu-241	8.804E+005 +/-	4.1%	8.385E+002	8.469E-003
	Pu-241B	1.680E+006 +/-	3.0%	1.600E+003	1.616E-002
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 7.126E-001 +/-	1.8%	< 6.786E-004	< 3.527E-006
	Cm-243	< 7.350E-001 +/-	3.3%	< 7.000E-004	< 1.411E-008
	Cm-244	< 3.530E+004 +/-	14.2%	< 3.361E+001	< 4.306E-004
	Cm-245	< 1.276E+000 +/-	7.6%	< 1.215E-003	< 7.339E-006
	Cm-247	< 1.044E-001 +/-	8.5%	< 9.941E-005	< 1.117E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.222E-001 +/-	3.5%	< 1.164E-004	< 2.957E-008
Cf-251	< 7.043E-001 +/-	5.6%	< 6.707E-004	< 4.402E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	2.06E+001 +- 6.47E-001	6.05E+000 +- 9.92E-002

Beta: 2.21E+002 +- 7.17E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	3.66E+000 +- 1.27E-001
203.55	7.36E+000 +- 2.48E-001
375.05	1.12E+001 +- 2.74E-001
413.71	1.22E+001 +- 3.22E-001

Segment 5 Results

Segment: 5 Detector: DET01 Position: 5
C:\Canberra\NDA2k\Data\00000204_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P005_S005

Acquisition Start: 12/22/2008 10:36:31 AM
Elapsed Live Time: 87.78 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.001 +/- 0.0005
SE-75	264.66	0.223 +/- 0.0067
SE-75	279.54	0.245 +/- 0.0068
SE-75	400.66	0.390 +/- 0.0126

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

*** Spectrum Validity Test warnings ***
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 12/22/2008 10:38:33 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.41	Y	129059	10215	1.13	120.67	2.791E-005	1.27	
M	94.64	Y	22525	16921	1.52	191.05	5.983E-005	1.90	119.71
m	98.67	Y	89015	23118	1.53	199.11	6.292E-005	1.64	
m	100.86	Y	13983	23700	1.54	203.49	6.453E-005	2.25	
m	103.31	Y	64000	19240	1.54	208.39	6.626E-005	1.62	
M	111.04	Y	23891	11736	1.40	223.84	7.128E-005	1.60	153.64
m	114.55	Y	19491	11738	1.40	230.86	7.333E-005	1.70	
m	116.61	Y	18705	10916	1.41	234.96	7.447E-005	1.66	
m	120.50	Y	4680	9969	1.41	242.75	7.649E-005	2.91	
m	122.88	Y	2124	9584	1.42	247.49	7.764E-005	5.19	
m	125.23	Y	8347	9160	1.42	252.19	7.872E-005	2.14	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	129.24	Y	41186	7921	1.43	260.20	8.041E-005	1.47	
M	144.20	Y	2677	6618	1.14	290.09	1.459E-004	9.84	2.84
m	146.29	Y	2265	6697	1.14	294.27	1.540E-004	10.22	
m	148.54	Y	5493	6813	1.14	298.76	1.617E-004	8.94	
M	160.79	Y	2524	6871	1.45	323.25	1.937E-004	13.10	6.76
m	164.54	Y	2100	9008	1.45	330.75	2.013E-004	12.68	
m	169.07	Y	512	8826	1.46	339.80	2.095E-004	22.44	
m	171.29	Y	1548	8008	1.46	344.23	2.132E-004	13.10	
	179.07	Y	746	6257	1.03	359.78	2.247E-004	21.61	
	189.28	Y	1409	6780	1.01	380.19	2.367E-004	12.45	
	195.59	Y	1633	6605	1.22	392.80	2.427E-004	10.68	
M	203.50	Y	9692	5530	1.14	408.59	2.489E-004	1.78	11.16
m	207.95	Y	32311	5045	1.15	417.49	2.518E-004	1.39	
	255.31	Y	1392	3228	1.33	512.14	2.645E-004	9.02	
M	263.96	Y	440	2039	1.18	529.42	2.643E-004	11.67	2.07
m	267.45	Y	1150	2492	1.18	536.39	2.643E-004	5.55	
	297.34	Y	758	1840	1.29	596.12	2.619E-004	11.84	
M	311.75	Y	1599	2280	1.47	624.92	2.592E-004	4.09	3.79
m	320.77	Y	1042	2796	1.48	642.93	2.572E-004	5.43	
m	323.18	Y	1415	2730	1.49	647.76	2.566E-004	4.36	
M	332.65	Y	11032	1777	1.31	666.67	2.542E-004	1.65	6.06
m	335.58	Y	4444	1651	1.31	672.54	2.533E-004	2.19	
m	341.36	Y	1260	1726	1.32	684.08	2.517E-004	4.32	
m	344.91	Y	9968	1630	1.32	691.17	2.507E-004	1.68	
M	368.31	Y	2880	1475	1.30	737.94	2.437E-004	2.67	26.50
m	374.96	Y	26133	1364	1.30	751.23	2.415E-004	1.41	
m	380.04	Y	5133	965	1.31	761.37	2.399E-004	2.06	
m	382.63	Y	4329	894	1.31	766.56	2.391E-004	2.18	
	392.84	Y	8573	993	1.55	786.95	2.358E-004	1.93	
	413.54	Y	22885	651	1.41	828.32	2.275E-004	1.47	
M	422.48	Y	1636	410	1.18	846.18	2.237E-004	3.39	2.95
m	426.58	Y	341	419	1.18	854.38	2.219E-004	8.73	
M	445.54	Y	120	239	1.30	892.26	2.142E-004	16.52	1.49
m	451.34	Y	2796	293	1.31	903.86	2.119E-004	2.53	
	597.50	Y	56	48	0.58	1195.92	1.668E-004	29.98	
	618.85	Y	290	68	1.73	1238.59	1.618E-004	9.39	
M	640.12	Y	121	44	1.57	1281.09	1.573E-004	14.10	1.92
m	645.78	Y	169	47	1.57	1292.41	1.561E-004	12.24	
m	652.54	Y	219	45	1.58	1305.90	1.547E-004	11.05	
m	658.73	Y	115	43	1.58	1318.28	1.535E-004	15.41	
m	662.24	Y	1237	38	1.58	1325.30	1.528E-004	7.88	
	688.57	Y	96	36	1.61	1377.90	1.480E-004	17.49	
	703.64	Y	41	16	0.68	1408.03	1.454E-004	28.22	
	721.82	Y	591	28	1.65	1444.36	1.424E-004	5.30	
	755.90	Y	33	18	1.35	1512.45	1.372E-004	33.48	
	769.16	Y	165	18	1.77	1538.95	1.354E-004	10.84	
	2234.67		11980	57	1.15	4467.46	8.897E-005	1.63	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.36 +/- 0.02

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 3.327E-002 +/-	1.8%	< 3.169E-005	< 1.534E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 3.328E-002 +/-	2.0%	< 3.170E-005	< 5.258E-012
	Al-26	< 5.431E-002 +/-	14.7%	< 5.173E-005	< 2.857E-006
	K-40	< 3.575E-001 +/-	4.9%	< 3.405E-004	< 5.577E-002
X	Co-57				
	Co-60	< 4.118E-002 +/-	2.5%	< 3.922E-005	< 3.611E-011
	Se-75	< 2.946E-001 +/-	1.9%	< 2.805E-004	< 2.027E-011
	Kr-85	< 1.707E+001 +/-	3.1%	< 1.625E-002	< 4.300E-008
	Sr-90	< 7.392E-002 +/-	2.1%	< 7.040E-005	< 5.359E-010
	Sb-125	< 3.082E-001 +/-	2.3%	< 2.935E-004	< 2.965E-010
	Ba-133	< 2.271E-001 +/-	1.7%	< 2.163E-004	< 8.971E-010
	Cs-134	< 3.667E-002 +/-	1.8%	< 3.492E-005	< 2.798E-011
X	Cs-137				
	Eu-152	< 1.173E-001 +/-	3.6%	< 1.117E-004	< 6.592E-010
	Eu-154	< 9.503E-002 +/-	2.2%	< 9.051E-005	< 3.564E-010
	Ho-166m	< 4.724E-002 +/-	2.2%	< 4.499E-005	< 2.626E-008
	Bi-207	< 4.572E-002 +/-	1.8%	< 4.354E-005	< 8.321E-010
	Pb-210	< 2.769E+001 +/-	36.7%	< 2.637E-002	< 3.600E-007
	Ra-226	< 1.094E-001 +/-	2.3%	< 1.042E-004	< 1.094E-007
	Ac-227	< 1.022E+000 +/-	8.3%	< 9.735E-004	< 1.400E-008
	Th-230	< 1.349E+002 +/-	13.1%	< 1.285E-001	< 6.609E-003
	Pa-231	< 5.340E+000 +/-	11.2%	< 5.086E-003	< 1.116E-004
	Th-232	< 1.243E-001 +/-	2.4%	< 1.184E-004	< 1.120E+000
	U-232	< 1.920E-001 +/-	2.2%	< 1.829E-004	< 8.891E-009
	U-233	< 3.980E+003 +/-	2.7%	< 3.791E+000	< 4.060E-001
	Pa-234	< 1.867E-001 +/-	12.1%	< 1.778E-004	
	Pa-234m	< 2.111E+002 +/-	2.1%	< 2.010E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 3.425E-001 +/-	2.5%	< 3.262E-004	< 1.565E-001
	Np-237	2.520E+000 +/-	6.4%	2.400E-003	3.529E-003
	Pu-238	< 2.262E+004 +/-	2.6%	< 2.155E+001	< 1.308E-003
	U-238	< 3.906E+000 +/-	2.1%	< 3.720E-003	< 1.148E+001
	Pu-239	1.560E+006 +/-	1.5%	1.486E+003	2.481E+001
	Pu-239B	1.615E+006 +/-	1.3%	1.538E+003	2.567E+001
	U-239	< 5.678E+001 +/-	45.9%	< 5.407E-002	
	Pu-240	3.974E+005 +/-	23.1%	3.785E+002	1.729E+000
	Am-241	4.846E+005 +/-	4.9%	4.615E+002	1.396E-001
	Am-241B	5.046E+005 +/-	4.6%	4.806E+002	1.453E-001
	Pu-241	4.125E+006 +/-	9.4%	3.929E+003	3.969E-002
	Pu-241B	5.555E+006 +/-	2.6%	5.291E+003	5.344E-002
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 7.405E-001 +/-	8.4%	< 7.053E-004	< 3.666E-006
	Cm-243	< 1.098E+000 +/-	3.3%	< 1.046E-003	< 2.109E-008
	Cm-244	< 4.324E+004 +/-	14.2%	< 4.118E+001	< 5.275E-004
	Cm-245	< 2.092E+000 +/-	7.7%	< 1.993E-003	< 1.203E-005
	Cm-247	< 1.588E-001 +/-	8.5%	< 1.513E-004	< 1.699E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.802E-001 +/-	3.5%	< 1.716E-004	< 4.360E-008
Cf-251	< 1.185E+000 +/-	5.6%	< 1.129E-003	< 7.408E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 16:
Beta is too small (negative or less than lower limit)

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	- correction not done -	2.48E+001 +- 3.78E-001

Beta: -1.02E+001 +- 1.16E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in attempted correction: 4

Energy	Mass (g)

Segment 6 Results

Segment: 6 Detector: DET01 Position: 6
C:\Canberra\NDA2k\Data\00000204_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P006_S006

Acquisition Start: 12/22/2008 10:40:43 AM
Elapsed Live Time: 88.52 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.000 +/- 0.0000
SE-75	264.66	0.204 +/- 0.0059
SE-75	279.54	0.230 +/- 0.0066
SE-75	400.66	0.360 +/- 0.0119

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

*** Spectrum Validity Test warnings ***
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 12/22/2008 10:42:44 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	49.53		1857	9184	1.73	100.91	9.975E-008	10.49	
	59.41	Y	116385	9897	1.13	120.67	1.664E-006	1.27	
M	94.65	Y	21833	16883	1.53	191.08	8.823E-005	1.91	120.45
m	98.66	Y	84690	23158	1.54	199.10	1.067E-004	1.64	
m	100.84	Y	13302	23834	1.54	203.45	1.170E-004	2.27	
m	103.31	Y	60569	19441	1.55	208.38	1.287E-004	1.62	
M	111.06	Y	22482	11677	1.38	223.87	1.652E-004	1.74	150.89
m	114.56	Y	18655	12970	1.38	230.87	1.810E-004	1.82	
m	116.65	Y	17088	10914	1.39	235.04	1.901E-004	1.79	
m	120.55	Y	4182	10961	1.40	242.85	2.065E-004	3.12	
m	122.82	Y	1957	9625	1.40	247.38	2.155E-004	5.43	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	125.21	Y	8163	9203	1.40	252.15	2.246E-004	2.22	
m	129.24	Y	40745	7962	1.41	260.21	2.389E-004	1.60	
M	144.15	Y	2562	6421	1.12	289.99	2.804E-004	9.65	2.04
m	146.28	Y	2263	6474	1.12	294.25	2.849E-004	10.05	
m	148.52	Y	5366	6553	1.13	298.72	2.893E-004	8.68	
M	160.88	Y	2360	6778	1.52	323.42	3.075E-004	7.39	9.30
m	164.58	Y	2133	8048	1.52	330.83	3.112E-004	7.28	
	171.40	Y	1951	6398	1.22	344.45	3.163E-004	8.54	
	179.01	Y	1019	6149	1.38	359.65	3.196E-004	15.54	
	189.25	Y	1064	6799	1.34	380.12	3.207E-004	16.05	
	195.56	Y	1428	5958	1.09	392.72	3.201E-004	11.09	
M	203.48	Y	9344	4935	1.12	408.57	3.181E-004	1.79	12.25
m	207.94	Y	30860	4946	1.13	417.48	3.165E-004	1.38	
M	237.75		293	3068	1.23	477.05	3.006E-004	18.93	1.36
m	243.12	Y	490	3671	1.24	487.76	2.973E-004	12.42	
	255.26	Y	1428	3192	1.32	512.03	2.895E-004	8.62	
M	263.94	Y	461	2230	1.21	529.37	2.839E-004	10.83	1.24
m	267.42	Y	1188	2426	1.22	536.32	2.832E-004	5.28	
	297.31	Y	592	2347	1.12	596.07	2.766E-004	17.22	
	311.71	Y	1490	2180	1.17	624.83	2.714E-004	7.09	
M	320.77	Y	957	2280	1.75	642.94	2.680E-004	6.26	4.11
m	323.32	Y	1609	3180	1.75	648.04	2.671E-004	4.07	
M	332.65	Y	10450	1770	1.28	666.68	2.636E-004	1.65	7.70
m	335.59	Y	4245	1682	1.29	672.55	2.626E-004	2.22	
m	341.32	Y	1143	1626	1.29	684.00	2.605E-004	4.59	
m	344.92	Y	9482	1720	1.30	691.19	2.592E-004	1.69	
	368.45	Y	3688	2341	2.41	738.21	2.507E-004	3.74	
M	374.96	Y	24891	1554	1.27	751.23	2.485E-004	1.41	23.12
m	380.05	Y	4697	1031	1.28	761.40	2.468E-004	2.10	
m	382.63	Y	4094	891	1.28	766.55	2.459E-004	2.20	
M	392.80	Y	8603	823	1.52	786.86	2.425E-004	3.26	1.53
m	398.83	Y	164	718	1.53	798.92	2.406E-004	18.25	
M	413.60	Y	22372	522	1.37	828.44	2.346E-004	1.80	2.76
m	419.16	Y	116	450	1.37	839.54	2.323E-004	21.15	
m	422.45	Y	1683	491	1.38	846.12	2.310E-004	3.55	
m	426.54	Y	379	433	1.38	854.29	2.295E-004	8.65	
	451.34	Y	2685	660	1.47	903.85	2.204E-004	3.56	
	619.05	Y	267	54	1.76	1238.98	1.785E-004	9.32	
M	645.68	Y	124	93	1.43	1292.20	1.737E-004	10.61	3.08
m	652.78	Y	113	94	1.44	1306.40	1.725E-004	10.95	
m	659.11	Y	67	95	1.44	1319.05	1.714E-004	16.14	
m	662.26	Y	1155	64	1.45	1325.33	1.709E-004	3.13	
	688.75	Y	86	38	1.36	1378.26	1.665E-004	19.67	
M	717.28	Y	42	16	1.62	1435.29	1.622E-004	360.82	7.68
m	721.81	Y	665	35	1.62	1444.34	1.616E-004	317.59	
	756.12	Y	38	14	1.48	1512.90	1.567E-004	27.28	
	769.22	Y	193	23	2.23	1539.08	1.549E-004	10.03	
	2234.66		11980	38	1.13	4467.45	5.272E-005	1.61	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.34 +/- 0.02

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region

F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 2.856E-002 +/-	1.9%	< 2.720E-005	< 1.317E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 2.832E-002 +/-	1.9%	< 2.697E-005	< 4.474E-012
	Al-26	< 6.563E-002 +/-	19.8%	< 6.250E-005	< 3.452E-006
	K-40	< 3.640E-001 +/-	5.3%	< 3.467E-004	< 5.678E-002
X	Co-57				
	Co-60	< 2.664E-002 +/-	2.5%	< 2.537E-005	< 2.336E-011
	Se-75	< 2.647E-001 +/-	2.3%	< 2.521E-004	< 1.821E-011
	Kr-85	< 1.585E+001 +/-	3.2%	< 1.510E-002	< 3.995E-008
	Sr-90	< 8.375E-002 +/-	2.6%	< 7.977E-005	< 6.072E-010
	Sb-125	< 2.597E-001 +/-	2.7%	< 2.474E-004	< 2.499E-010
	Ba-133	< 2.084E-001 +/-	1.8%	< 1.985E-004	< 8.232E-010
	Cs-134	< 1.915E-002 +/-	2.0%	< 1.824E-005	< 1.461E-011
X	Cs-137				
	Eu-152	< 1.316E-001 +/-	1.8%	< 1.254E-004	< 7.397E-010
	Eu-154	< 8.088E-002 +/-	2.1%	< 7.703E-005	< 3.033E-010
	Ho-166m	< 5.000E-002 +/-	2.4%	< 4.762E-005	< 2.780E-008
	Bi-207	< 3.159E-002 +/-	1.9%	< 3.008E-005	< 5.749E-010
	Pb-210	< 3.332E+004 +/-	309.7%	< 3.173E+001	< 4.331E-004
	Ra-226	< 1.013E-001 +/-	2.7%	< 9.647E-005	< 1.013E-007
	Ac-227	< 9.097E-001 +/-	8.5%	< 8.664E-004	< 1.246E-008
	Th-230	< 4.434E+002 +/-	9.0%	< 4.223E-001	< 2.173E-002
	Pa-231	< 4.922E+000 +/-	11.3%	< 4.688E-003	< 1.029E-004
	Th-232	< 8.662E-002 +/-	2.4%	< 8.249E-005	< 7.804E-001
	U-232	< 1.764E-001 +/-	2.6%	< 1.680E-004	< 8.170E-009
	U-233	< 3.413E+003 +/-	4.0%	< 3.250E+000	< 3.481E-001
	Pa-234	< 1.451E-001 +/-	12.2%	< 1.382E-004	
	Pa-234m	< 1.633E+002 +/-	2.1%	< 1.555E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 2.845E-001 +/-	4.0%	< 2.709E-004	< 1.300E-001
	Np-237	2.231E+000 +/-	10.6%	2.125E-003	3.124E-003
	Pu-238	< 1.918E+004 +/-	4.2%	< 1.827E+001	< 1.109E-003
	U-238	< 3.330E+000 +/-	2.1%	< 3.171E-003	< 9.790E+000
	Pu-239	2.228E+006 +/-	3.4%	2.122E+003	3.543E+001
	Pu-239B	1.454E+006 +/-	1.3%	1.385E+003	2.312E+001
	U-239	< 2.626E+005 +/-	368.5%	< 2.501E+002	
X	Pu-240				
	Am-241	4.183E+005 +/-	4.7%	3.984E+002	1.205E-001
	Am-241B	2.373E+005 +/-	5.2%	2.260E+002	6.834E-002
	Pu-241	2.252E+006 +/-	9.7%	2.145E+003	2.166E-002
	Pu-241B	4.254E+006 +/-	3.0%	4.051E+003	4.092E-002
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 9.699E-001 +/-	2.2%	< 9.237E-004	< 4.801E-006
	Cm-243	< 1.000E+000 +/-	3.5%	< 9.527E-004	< 1.921E-008
	Cm-244	< 4.887E+004 +/-	14.2%	< 4.654E+001	< 5.962E-004
	Cm-245	< 1.729E+000 +/-	8.4%	< 1.647E-003	< 9.943E-006
	Cm-247	< 1.371E-001 +/-	8.5%	< 1.306E-004	< 1.467E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.604E-001 +/-	3.5%	< 1.528E-004	< 3.882E-008
Cf-251	< 1.001E+000 +/-	6.5%	< 9.534E-004	< 6.256E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	3.54E+001 +- 1.22E+000	1.62E+001 +- 2.78E-001

Beta: 1.60E+002 +- 8.25E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	9.68E+000 +- 4.07E-001
203.55	1.85E+001 +- 7.17E-001
375.05	2.31E+001 +- 5.91E-001
413.71	2.33E+001 +- 6.84E-001

Segment 7 Results

Segment: 7 Detector: DET01 Position: 7
C:\Canberra\NDA2k\Data\00000204_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P007_S007

Acquisition Start: 12/22/2008 10:44:54 AM
Elapsed Live Time: 100.60 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.071 +/- 0.0034
SE-75	264.66	0.306 +/- 0.0050
SE-75	279.54	0.321 +/- 0.0072
SE-75	400.66	0.419 +/- 0.0112

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

*** Spectrum Validity Test warnings ***
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 12/22/2008 10:46:56 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	49.40		1368	5925	1.67	100.65	2.506E-007	10.16	
	59.44	Y	76103	7533	1.10	120.73	2.427E-006	1.25	
M	94.68	Y	12612	12791	1.53	191.15	7.330E-005	2.19	72.97
m	98.69	Y	49330	17234	1.53	199.16	8.753E-005	1.79	
m	100.89	Y	7529	17455	1.54	203.54	9.551E-005	2.72	
m	103.33	Y	33550	13988	1.54	208.42	1.045E-004	1.78	
M	111.08	Y	12992	7508	1.35	223.91	1.329E-004	1.32	94.61
m	114.58	Y	10348	8502	1.35	230.90	1.453E-004	1.34	
m	116.58	Y	9447	7915	1.36	234.91	1.523E-004	1.35	
m	120.59	Y	2210	7768	1.36	242.93	1.656E-004	1.97	
m	122.97	Y	1322	6796	1.37	247.68	1.732E-004	2.67	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	125.27	Y	5093	7141	1.37	252.28	1.803E-004	1.48	
m	129.28	Y	23718	6143	1.38	260.29	1.919E-004	1.27	
M	144.17	Y	1346	4703	1.10	290.03	2.411E-004	10.00	2.34
m	146.30	Y	1224	5223	1.11	294.30	2.485E-004	10.56	
m	148.53	Y	3238	5220	1.11	298.75	2.559E-004	8.70	
M	161.05	Y	1643	5055	1.67	323.77	2.905E-004	19.07	3.56
m	164.70	Y	1346	8443	1.67	331.06	2.985E-004	15.71	
	171.39	Y	1285	4420	1.23	344.43	3.108E-004	9.75	
	179.01	Y	385	4449	1.63	359.66	3.217E-004	31.14	
	189.42	Y	662	4254	1.18	380.47	3.317E-004	18.03	
	195.62	Y	762	4174	0.81	392.85	3.354E-004	15.58	
M	203.53	Y	5302	3882	1.19	408.65	3.380E-004	3.51	1.32
m	207.97	Y	17159	3277	1.20	417.52	3.387E-004	3.11	
	255.37	Y	807	2105	1.27	512.25	3.220E-004	11.12	
	267.49	Y	434	1810	1.23	536.46	3.138E-004	18.25	
	297.45	Y	435	1739	1.23	596.34	2.904E-004	18.72	
	311.75	Y	731	1636	1.39	624.92	2.797E-004	10.93	
M	320.86	Y	592	1354	1.73	643.12	2.731E-004	7.56	3.35
m	323.38	Y	857	2011	1.73	648.15	2.713E-004	5.42	
M	332.66	Y	5793	1095	1.35	666.69	2.649E-004	4.02	2.24
m	335.62	Y	2382	1048	1.35	672.61	2.629E-004	4.48	
m	341.36	Y	638	1131	1.36	684.08	2.591E-004	7.33	
m	344.94	Y	5155	1093	1.36	691.23	2.567E-004	3.99	
	368.20	Y	2008	1271	2.39	737.72	2.426E-004	4.30	
M	374.99	Y	13800	916	1.27	751.29	2.387E-004	1.48	12.36
m	380.09	Y	2470	712	1.27	761.47	2.359E-004	2.57	
m	382.67	Y	2261	624	1.27	766.64	2.345E-004	2.65	
	392.85	Y	4592	618	1.50	786.98	2.292E-004	2.25	
	413.59	Y	12570	380	1.37	828.41	2.186E-004	1.55	
M	422.49	Y	871	270	1.25	846.19	2.142E-004	4.23	3.51
m	426.54	Y	201	270	1.26	854.30	2.123E-004	9.83	
M	445.88	Y	71	141	1.26	892.93	2.037E-004	20.32	1.21
m	451.35	Y	1489	179	1.26	903.88	2.015E-004	3.13	
	618.70	Y	142	49	1.85	1238.29	1.569E-004	13.50	
M	645.77	Y	56	53	1.32	1292.37	1.526E-004	19.18	1.95
m	652.43	Y	73	54	1.32	1305.68	1.516E-004	15.24	
m	659.01	Y	26	47	1.33	1318.84	1.506E-004	31.56	
m	662.35	Y	646	34	1.33	1325.51	1.502E-004	4.59	
	688.42	Y	41	26	1.21	1377.61	1.467E-004	28.49	
	721.92	Y	290	16	1.44	1444.55	1.427E-004	7.03	
	2234.68		11980	38	1.16	4467.48	4.242E-005	1.54	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.21 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 2.947E-002 +/-	1.8%	< 2.806E-005	< 1.358E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 2.305E-002 +/-	2.0%	< 2.196E-005	< 3.643E-012
	Al-26	< 4.710E-002 +/-	15.5%	< 4.486E-005	< 2.478E-006
	K-40	< 3.237E-001 +/-	5.0%	< 3.083E-004	< 5.050E-002
X	Co-57				
	Co-60	< 3.344E-002 +/-	2.6%	< 3.185E-005	< 2.933E-011
	Se-75	< 1.952E-001 +/-	1.9%	< 1.859E-004	< 1.343E-011
	Kr-85	< 1.297E+001 +/-	3.1%	< 1.236E-002	< 3.269E-008
	Sr-90	< 6.274E-002 +/-	2.1%	< 5.975E-005	< 4.549E-010
	Sb-125	< 2.743E-001 +/-	2.3%	< 2.612E-004	< 2.638E-010
	Ba-133	< 1.721E-001 +/-	1.7%	< 1.639E-004	< 6.796E-010
	Cs-134	< 2.892E-002 +/-	1.8%	< 2.754E-005	< 2.207E-011
X	Cs-137				
	Eu-152	< 3.019E-002 +/-	3.7%	< 2.876E-005	< 1.697E-010
	Eu-154	< 6.583E-002 +/-	2.2%	< 6.270E-005	< 2.469E-010
	Ho-166m	< 5.456E-002 +/-	2.2%	< 5.196E-005	< 3.033E-008
	Bi-207	< 3.012E-002 +/-	1.9%	< 2.869E-005	< 5.482E-010
	Pb-210	< 5.611E+003 +/-	70.4%	< 5.344E+000	< 7.294E-005
	Ra-226	< 8.412E-002 +/-	2.3%	< 8.012E-005	< 8.412E-008
	Ac-227	< 6.528E-001 +/-	8.3%	< 6.218E-004	< 8.944E-009
	Th-230	< 3.293E+002 +/-	8.6%	< 3.137E-001	< 1.614E-002
	Pa-231	< 3.855E+000 +/-	11.2%	< 3.671E-003	< 8.056E-005
	Th-232	< 9.273E-002 +/-	2.4%	< 8.831E-005	< 8.355E-001
	U-232	< 1.502E-001 +/-	2.2%	< 1.431E-004	< 6.956E-009
	U-233	< 2.496E+003 +/-	2.9%	< 2.378E+000	< 2.546E-001
	Pa-234	< 1.337E-001 +/-	12.2%	< 1.273E-004	
	Pa-234m	< 1.452E+002 +/-	2.1%	< 1.382E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 2.095E-001 +/-	2.6%	< 1.995E-004	< 9.574E-002
	Np-237	9.436E-001 +/-	17.9%	8.987E-004	1.321E-003
	Pu-238	< 1.425E+004 +/-	2.8%	< 1.357E+001	< 8.236E-004
	U-238	< 3.586E+000 +/-	2.2%	< 3.416E-003	< 1.054E+001
	Pu-239	1.193E+006 +/-	3.3%	1.136E+003	1.897E+001
	Pu-239B	8.692E+005 +/-	1.5%	8.278E+002	1.382E+001
	U-239	< 3.519E+004 +/-	85.6%	< 3.352E+001	
	Pu-240	2.819E+005 +/-	15.1%	2.684E+002	1.226E+000
	Am-241	2.526E+005 +/-	4.5%	2.406E+002	7.276E-002
	Am-241B	1.879E+005 +/-	3.8%	1.790E+002	5.413E-002
	Pu-241	1.536E+006 +/-	9.2%	1.463E+003	1.478E-002
	Pu-241B	2.172E+006 +/-	3.8%	2.069E+003	2.090E-002
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 7.204E-001 +/-	1.9%	< 6.861E-004	< 3.566E-006
	Cm-243	< 7.431E-001 +/-	3.4%	< 7.077E-004	< 1.427E-008
	Cm-244	< 3.247E+004 +/-	14.2%	< 3.093E+001	< 3.962E-004
	Cm-245	< 1.272E+000 +/-	7.7%	< 1.211E-003	< 7.313E-006
	Cm-247	< 1.124E-001 +/-	8.5%	< 1.071E-004	< 1.203E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.343E-001 +/-	3.5%	< 1.279E-004	< 3.249E-008
Cf-251	< 7.217E-001 +/-	5.7%	< 6.873E-004	< 4.510E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.90E+001 +- 6.34E-001	1.04E+001 +- 1.68E-001

Beta: 1.30E+002 +- 7.99E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	7.01E+000 +- 2.69E-001
203.55	9.87E+000 +- 4.10E-001
375.05	1.33E+001 +- 3.33E-001
413.71	1.40E+001 +- 3.81E-001

Segment 8 Results

Segment: 8 Detector: DET01 Position: 8
C:\Canberra\NDA2k\Data\00000204_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P008_S008

Acquisition Start: 12/22/2008 10:49:06 AM
Elapsed Live Time: 113.14 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.377 +/- 0.0065
SE-75	264.66	0.524 +/- 0.0080
SE-75	279.54	0.543 +/- 0.0095
SE-75	400.66	0.574 +/- 0.0124

Errors quoted at 1.000 sigma

Peak Analysis Results

*** Spectrum Validity Test warnings ***
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 12/22/2008 10:51:07 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.47	Y	21517	3322	1.12	120.79	9.349E-005	1.38	
M	94.74		3673	6553	1.51	191.26	2.319E-004	3.77	19.84
m	98.71	Y	13525	9345	1.52	199.19	2.447E-004	2.82	
m	100.87	Y	2243	9239	1.52	203.51	2.514E-004	4.61	
m	103.37	Y	9145	7823	1.52	208.51	2.588E-004	2.82	
M	111.03		2919	5314	1.45	223.82	2.795E-004	2.69	10.69
m	114.91	Y	1466	8616	1.46	231.58	2.888E-004	4.76	
M	125.31	Y	242	5249	1.00	252.36	3.103E-004	10.51	70.53
m	129.35	Y	2957	3085	1.01	260.43	3.173E-004	8.96	
M	144.25		386	2054	1.15	290.20	3.399E-004	9.77	0.76
m	146.21	Y	391	2561	1.15	294.12	3.426E-004	9.59	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	148.58	Y	893	2550	1.15	298.85	3.455E-004	5.30	
M	161.51		327	2435	0.92	324.70	3.585E-004	29.10	2.25
m	164.57	Y	389	3468	0.93	330.80	3.608E-004	25.55	
M	203.58	Y	1358	1557	1.09	408.75	3.719E-004	3.57	2.42
m	208.02	Y	4550	1504	1.10	417.64	3.715E-004	1.97	
	243.15		126	824	0.65	487.83	3.611E-004	35.87	
	255.15		160	993	1.03	511.80	3.556E-004	32.80	
	267.62	Y	112	675	1.17	536.73	3.495E-004	35.82	
	297.55		114	927	1.18	596.54	3.318E-004	45.45	
	311.80	Y	171	743	1.32	625.01	3.219E-004	26.37	
	323.76	Y	102	692	1.03	648.91	3.138E-004	41.40	
M	332.70	Y	1536	622	1.30	666.78	3.078E-004	6.01	1.63
m	335.61	Y	617	584	1.30	672.60	3.058E-004	7.18	
m	341.48	Y	198	554	1.31	684.33	3.019E-004	12.32	
m	344.99		1364	525	1.31	691.33	2.997E-004	6.01	
	368.20	Y	441	502	2.48	737.71	2.849E-004	9.82	
M	375.01	Y	3500	376	1.27	751.32	2.808E-004	2.04	3.40
m	380.15		674	249	1.28	761.59	2.777E-004	4.33	
m	382.78		576	215	1.28	766.84	2.761E-004	4.67	
	392.86		1229	238	1.49	786.99	2.703E-004	3.81	
	413.62	Y	3165	125	1.40	828.49	2.590E-004	2.23	
M	422.47		222	78	1.13	846.16	2.545E-004	7.62	1.22
m	426.39	Y	30	98	1.14	854.00	2.525E-004	30.00	
	451.47		385	70	1.52	904.12	2.405E-004	6.54	
	618.87	Y	54	11	1.23	1238.63	1.816E-004	17.75	
	662.17	Y	126	30	1.24	1325.15	1.710E-004	11.75	
	721.89	Y	62	7	1.50	1444.49	1.587E-004	15.05	
	2234.69		11980	19	1.14	4467.51	1.078E-004	1.46	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.07 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 2.257E-002 +/-	1.8%	< 2.149E-005	< 1.040E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 2.349E-002 +/-	1.9%	< 2.237E-005	< 3.712E-012
	Al-26	< 1.971E-002 +/-	18.8%	< 1.877E-005	< 1.037E-006
	K-40	< 1.795E-001 +/-	5.3%	< 1.709E-004	< 2.800E-002
	Co-57	< 1.668E-001 +/-	4.5%	< 1.589E-004	< 1.952E-011
	Co-60	< 3.399E-002 +/-	1.7%	< 3.238E-005	< 2.981E-011
	Se-75	< 1.308E-001 +/-	1.8%	< 1.246E-004	< 9.000E-012
	Kr-85	< 7.145E+000 +/-	3.0%	< 6.805E-003	< 1.801E-008
	Sr-90	< 5.001E-002 +/-	2.2%	< 4.763E-005	< 3.626E-010
	Sb-125	< 1.396E-001 +/-	1.9%	< 1.330E-004	< 1.343E-010
	Ba-133	< 1.038E-001 +/-	1.6%	< 9.886E-005	< 4.100E-010
	Cs-134	< 1.758E-002 +/-	1.8%	< 1.675E-005	< 1.342E-011
X	Cs-137				
	Eu-152	< 8.975E-002 +/-	3.8%	< 8.547E-005	< 5.044E-010
	Eu-154	< 6.708E-002 +/-	2.1%	< 6.389E-005	< 2.516E-010
	Ho-166m	< 3.873E-002 +/-	2.3%	< 3.689E-005	< 2.154E-008
	Bi-207	< 1.736E-002 +/-	1.9%	< 1.653E-005	< 3.160E-010
	Pb-210	< 1.520E+001 +/-	259.0%	< 1.448E-002	< 1.976E-007
	Ra-226	< 5.139E-002 +/-	2.4%	< 4.894E-005	< 5.139E-008
	Ac-227	< 4.441E-001 +/-	8.3%	< 4.229E-004	< 6.084E-009
	Th-230	< 6.324E+001 +/-	83.3%	< 6.023E-002	< 3.099E-003
	Pa-231	< 2.511E+000 +/-	11.2%	< 2.391E-003	< 5.247E-005
	Th-232	< 7.299E-002 +/-	2.3%	< 6.951E-005	< 6.576E-001
	U-232	< 8.370E-002 +/-	2.3%	< 7.971E-005	< 3.875E-009
	U-233	< 1.697E+003 +/-	3.0%	< 1.616E+000	< 1.731E-001
	Pa-234	< 1.333E-001 +/-	12.2%	< 1.270E-004	
	Pa-234m	< 1.500E+002 +/-	2.1%	< 1.429E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 1.579E-001 +/-	2.9%	< 1.503E-004	< 7.214E-002
	Np-237	3.093E-001 +/-	26.4%	2.945E-004	4.330E-004
	Pu-238	< 1.038E+004 +/-	3.1%	< 9.888E+000	< 6.001E-004
	U-238	< 2.644E+000 +/-	2.1%	< 2.518E-003	< 7.774E+000
	Pu-239	3.787E+005 +/-	4.4%	3.606E+002	6.021E+000
	Pu-239B	< 6.935E+003 +/-	16.6%	< 6.605E+000	< 1.103E-001
	U-239	< 4.717E+001 +/-	308.3%	< 4.493E-002	
X	Pu-240				
	Am-241	4.542E+004 +/-	9.5%	4.326E+001	1.308E-002
	Am-241B	4.972E+004 +/-	8.9%	4.735E+001	1.432E-002
	Pu-241	3.138E+005 +/-	6.2%	2.989E+002	3.019E-003
	Pu-241B	5.295E+005 +/-	3.2%	5.043E+002	5.094E-003
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 3.372E-001 +/-	57.8%	< 3.212E-004	< 1.669E-006
	Cm-243	< 5.202E-001 +/-	3.3%	< 4.954E-004	< 9.987E-009
	Cm-244	< 3.151E+004 +/-	14.2%	< 3.001E+001	< 3.845E-004
	Cm-245	< 9.666E-001 +/-	7.8%	< 9.206E-004	< 5.558E-006
	Cm-247	< 6.134E-002 +/-	8.5%	< 5.842E-005	< 6.564E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 7.081E-002 +/-	3.4%	< 6.744E-005	< 1.714E-008
Cf-251	< 5.349E-001 +/-	5.8%	< 5.094E-004	< 3.343E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	6.02E+000 +- 2.63E-001	1.66E+000 +- 3.58E-002

Beta: 2.73E+002 +- 1.29E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	5.29E-001 +- 5.09E-002
203.55	2.30E+000 +- 9.79E-002
375.05	2.87E+000 +- 7.81E-002
413.71	2.98E+000 +- 8.86E-002

Segment 9 Results

Segment: 9 Detector: DET01 Position: 9
C:\Canberra\NDA2k\Data\00000204_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P009_S009

Acquisition Start: 12/22/2008 10:53:17 AM
Elapsed Live Time: 117.63 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.377 +/- 0.0063
SE-75	264.66	0.527 +/- 0.0079
SE-75	279.54	0.537 +/- 0.0091
SE-75	400.66	0.561 +/- 0.0118

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/22/2008 10:55:18 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.46	Y	2844	1211	1.20	120.77	1.330E-005	2.85	
67.16	Y	88	751	0.83	136.16	3.308E-005	46.54	
98.76		474	3485	1.01	199.30	1.884E-004	19.24	
129.35	Y	237	1378	1.06	260.43	3.124E-004	24.32	
207.88	Y	112	471	0.99	417.36	3.818E-004	28.87	
413.68	Y	62	38	1.18	828.59	2.641E-004	20.39	
2234.71		11980	9	1.12	4467.54	5.224E-005	1.43	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.02 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 1.617E-002 +/-	1.9%	< 1.540E-005	< 7.454E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 1.424E-002 +/-	1.9%	< 1.356E-005	< 2.250E-012
Al-26	< 3.234E-002 +/-	19.6%	< 3.080E-005	< 1.701E-006
K-40	< 1.572E-001 +/-	5.3%	< 1.497E-004	< 2.452E-002
Co-57	< 1.092E-001 +/-	4.5%	< 1.040E-004	< 1.277E-011
Co-60	< 2.648E-002 +/-	1.7%	< 2.522E-005	< 2.322E-011
Se-75	< 8.575E-002 +/-	2.3%	< 8.166E-005	< 5.899E-012
Kr-85	< 4.928E+000 +/-	3.2%	< 4.694E-003	< 1.242E-008
Sr-90	< 1.562E-002 +/-	2.3%	< 1.487E-005	< 1.132E-010
Sb-125	< 5.623E-002 +/-	2.1%	< 5.356E-005	< 5.410E-011
Ba-133	< 6.538E-002 +/-	1.8%	< 6.226E-005	< 2.582E-010
Cs-134	< 1.813E-002 +/-	2.4%	< 1.726E-005	< 1.383E-011
Cs-137	< 1.562E-002 +/-	2.3%	< 1.487E-005	< 1.780E-010
Eu-152	< 9.075E-002 +/-	1.8%	< 8.642E-005	< 5.100E-010
Eu-154	< 4.066E-002 +/-	2.1%	< 3.872E-005	< 1.525E-010
Ho-166m	< 2.245E-002 +/-	2.3%	< 2.138E-005	< 1.248E-008
Bi-207	< 1.374E-002 +/-	2.4%	< 1.309E-005	< 2.502E-010
Pb-210	< 4.271E+002 +/-	311.1%	< 4.068E-001	< 5.553E-006
Ra-226	< 3.255E-002 +/-	2.6%	< 3.100E-005	< 3.255E-008
Ac-227	< 2.861E-001 +/-	8.5%	< 2.725E-004	< 3.920E-009
Th-230	1.585E+002 +/-	112.5%	1.509E-001	7.765E-003
Pa-231	< 1.790E+000 +/-	11.3%	< 1.705E-003	< 3.741E-005
Th-232	< 5.650E-002 +/-	2.3%	< 5.381E-005	< 5.090E-001
U-232	< 5.654E-002 +/-	2.5%	< 5.385E-005	< 2.618E-009
U-233	< 1.004E+003 +/-	4.1%	< 9.563E-001	< 1.024E-001
Pa-234	< 1.170E-001 +/-	43.9%	< 1.114E-004	
Pa-234m	< 1.163E+002 +/-	2.1%	< 1.108E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 9.990E-002 +/-	4.1%	< 9.514E-005	< 4.565E-002
Np-237	< 1.267E-001 +/-	2.2%	< 1.207E-004	< 1.774E-004
Pu-238	< 6.976E+003 +/-	4.3%	< 6.643E+000	< 4.032E-004
U-238	< 2.509E+000 +/-	2.1%	< 2.389E-003	< 7.376E+000
Pu-239	4.078E+003 +/-	31.9%	3.883E+000	6.483E-002
Pu-239B	< 3.796E+003 +/-	18.9%	< 3.615E+000	< 6.034E-002
U-239	< 2.820E+003 +/-	370.1%	< 2.686E+000	
Pu-240	< 2.181E+003 +/-	13.4%	< 2.078E+000	< 9.489E-003
Am-241	1.342E+002 +/-	153.2%	1.278E-001	3.865E-005
Am-241B	< 8.409E+002 +/-	14.5%	< 8.009E-001	< 2.422E-004
Pu-241	< 3.510E+004 +/-	4.3%	< 3.343E+001	< 3.376E-004
Pu-241B	1.277E+004 +/-	29.1%	1.216E+001	1.228E-004
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 3.591E-001 +/-	2.2%	< 3.420E-004	< 1.777E-006
Cm-243	< 3.704E-001 +/-	3.6%	< 3.527E-004	< 7.111E-009
Cm-244	< 1.847E+004 +/-	14.1%	< 1.759E+001	< 2.253E-004
Cm-245	< 6.268E-001 +/-	8.4%	< 5.969E-004	< 3.604E-006
Cm-247	< 3.034E-002 +/-	8.5%	< 2.889E-005	< 3.246E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 3.912E-002 +/-	3.5%	< 3.726E-005	< 9.467E-009
Cf-251	< 3.520E-001 +/-	6.6%	< 3.353E-004	< 2.200E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	6.48E-002 +- 2.07E-002	4.94E-002 +- 7.86E-003

Beta: 5.29E+001 +- 6.03E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 2

Energy	Mass (g)
129.30	4.31E-002 +- 1.06E-002
413.71	5.71E-002 +- 1.17E-002

Segment 10 Results

Segment: 10 Detector: DET01 Position: 10
C:\Canberra\NDA2k\Data\00000204_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P010_S010

Acquisition Start: 12/22/2008 10:57:28 AM
Elapsed Live Time: 118.20 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.325 +/- 0.0055
SE-75	264.66	0.488 +/- 0.0073
SE-75	279.54	0.498 +/- 0.0085
SE-75	400.66	0.541 +/- 0.0114

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/22/2008 10:59:30 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.45	Y	1161	803	1.21	120.74	5.731E-006	4.86	
67.15		76	552	0.71	136.12	1.595E-005	46.95	
2234.74		11980	7	1.09	4467.60	5.132E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 1.293E-002 +/-	1.9%	< 1.232E-005	< 5.962E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 1.356E-002 +/-	1.9%	< 1.291E-005	< 2.142E-012
Al-26	< 2.815E-002 +/-	19.8%	< 2.681E-005	< 1.481E-006
K-40	< 2.507E-001 +/-	5.3%	< 2.388E-004	< 3.912E-002
Co-57	< 9.401E-002 +/-	4.6%	< 8.953E-005	< 1.100E-011
Co-60	< 2.104E-002 +/-	1.7%	< 2.004E-005	< 1.846E-011
Se-75	< 6.132E-002 +/-	2.2%	< 5.840E-005	< 4.219E-012
Kr-85	< 4.865E+000 +/-	3.3%	< 4.633E-003	< 1.226E-008
Sr-90	< 2.130E-002 +/-	2.4%	< 2.028E-005	< 1.544E-010
Sb-125	< 4.437E-002 +/-	2.2%	< 4.226E-005	< 4.268E-011
Ba-133	< 4.491E-002 +/-	1.8%	< 4.277E-005	< 1.774E-010
Cs-134	< 1.058E-002 +/-	2.5%	< 1.008E-005	< 8.074E-012
Cs-137	< 2.130E-002 +/-	2.4%	< 2.028E-005	< 2.428E-010
Eu-152	< 6.907E-002 +/-	3.8%	< 6.578E-005	< 3.882E-010
Eu-154	< 3.870E-002 +/-	2.1%	< 3.686E-005	< 1.451E-010
Ho-166m	< 2.610E-002 +/-	2.4%	< 2.486E-005	< 1.451E-008
Bi-207	< 1.407E-002 +/-	2.4%	< 1.340E-005	< 2.560E-010
Pb-210	< 8.048E+002 +/-	308.2%	< 7.664E-001	< 1.046E-005
Ra-226	< 4.050E-002 +/-	2.7%	< 3.857E-005	< 4.050E-008
Ac-227	< 2.019E-001 +/-	8.5%	< 1.923E-004	< 2.766E-009
Th-230	< 1.044E+002 +/-	9.0%	< 9.943E-002	< 5.115E-003
Pa-231	< 1.325E+000 +/-	11.3%	< 1.262E-003	< 2.770E-005
Th-232	< 5.458E-002 +/-	2.4%	< 5.198E-005	< 4.917E-001
U-232	< 5.611E-002 +/-	2.6%	< 5.343E-005	< 2.598E-009
U-233	< 7.577E+002 +/-	4.0%	< 7.217E-001	< 7.729E-002
Pa-234	< 1.094E-001 +/-	12.2%	< 1.042E-004	
Pa-234m	< 1.119E+002 +/-	2.1%	< 1.066E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 7.225E-002 +/-	3.9%	< 6.881E-005	< 3.302E-002
Np-237	< 8.465E-002 +/-	2.2%	< 8.062E-005	< 1.185E-004
Pu-238	< 5.005E+003 +/-	4.2%	< 4.767E+000	< 2.893E-004
U-238	< 2.700E+000 +/-	2.2%	< 2.571E-003	< 7.937E+000
Pu-239	< 1.039E+003 +/-	3.7%	< 9.894E-001	< 1.652E-002
Pu-239B	< 3.603E+003 +/-	18.8%	< 3.432E+000	< 5.729E-002
U-239	< 5.980E+003 +/-	366.8%	< 5.696E+000	
Pu-240	< 2.064E+003 +/-	13.3%	< 1.966E+000	< 8.980E-003
Am-241	1.271E+002 +/-	151.8%	1.211E-001	3.662E-005
Am-241B	< 7.868E+002 +/-	14.4%	< 7.493E-001	< 2.266E-004
Pu-241	< 2.619E+004 +/-	4.2%	< 2.494E+001	< 2.519E-004
Pu-241B	< 7.043E+003 +/-	3.4%	< 6.707E+000	< 6.775E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 2.504E-001 +/-	2.2%	< 2.384E-004	< 1.239E-006
Cm-243	< 2.582E-001 +/-	3.5%	< 2.459E-004	< 4.958E-009
Cm-244	< 2.049E+004 +/-	14.1%	< 1.952E+001	< 2.500E-004
Cm-245	< 4.529E-001 +/-	8.3%	< 4.314E-004	< 2.604E-006
Cm-247	< 2.026E-002 +/-	8.5%	< 1.930E-005	< 2.168E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 3.043E-002 +/-	3.5%	< 2.898E-005	< 7.363E-009
Cf-251	< 2.407E-001 +/-	6.5%	< 2.292E-004	< 1.504E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 11 Results

Segment: 11 Detector: DET01 Position: 11
C:\Canberra\NDA2k\Data\00000204_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P011_S011

Acquisition Start: 12/22/2008 11:01:39 AM
Elapsed Live Time: 118.50 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.189 +/- 0.0036
SE-75	264.66	0.284 +/- 0.0045
SE-75	279.54	0.284 +/- 0.0054
SE-75	400.66	0.329 +/- 0.0080

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/22/2008 11:03:41 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.50	Y	397	559	1.04	120.84	4.727E-006	10.40	
2234.74		11980	13	1.08	4467.60	2.584E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 1.732E-002 +/-	1.8%	< 1.650E-005	< 7.985E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 1.437E-002 +/-	2.0%	< 1.368E-005	< 2.270E-012
Al-26	< 2.764E-002 +/-	15.1%	< 2.632E-005	< 1.454E-006
K-40	< 2.084E-001 +/-	5.0%	< 1.985E-004	< 3.251E-002
Co-57	< 7.830E-002 +/-	3.4%	< 7.458E-005	< 9.162E-012
Co-60	< 2.651E-002 +/-	1.7%	< 2.525E-005	< 2.325E-011
Se-75	< 6.176E-002 +/-	1.8%	< 5.881E-005	< 4.249E-012
Kr-85	< 3.489E+000 +/-	3.0%	< 3.323E-003	< 8.792E-009
Sr-90	< 2.103E-002 +/-	1.9%	< 2.003E-005	< 1.525E-010
Sb-125	< 4.788E-002 +/-	2.1%	< 4.560E-005	< 4.606E-011
Ba-133	< 3.502E-002 +/-	1.7%	< 3.335E-005	< 1.383E-010
Cs-134	< 1.342E-002 +/-	1.9%	< 1.278E-005	< 1.024E-011
Cs-137	< 2.103E-002 +/-	1.9%	< 2.003E-005	< 2.398E-010
Eu-152	< 7.867E-002 +/-	3.7%	< 7.493E-005	< 4.421E-010
Eu-154	< 4.102E-002 +/-	2.2%	< 3.906E-005	< 1.538E-010
Ho-166m	< 2.331E-002 +/-	2.2%	< 2.220E-005	< 1.296E-008
Bi-207	< 1.694E-002 +/-	2.0%	< 1.613E-005	< 3.082E-010
Pb-210	< 9.890E+002 +/-	53.0%	< 9.419E-001	< 1.286E-005
Ra-226	< 3.798E-002 +/-	2.2%	< 3.617E-005	< 3.798E-008
Ac-227	< 2.059E-001 +/-	8.3%	< 1.961E-004	< 2.820E-009
Th-230	< 9.062E+001 +/-	8.6%	< 8.630E-002	< 4.440E-003
Pa-231	< 1.175E+000 +/-	11.2%	< 1.119E-003	< 2.456E-005
Th-232	< 4.502E-002 +/-	2.1%	< 4.287E-005	< 4.056E-001
U-232	< 4.502E-002 +/-	2.1%	< 4.287E-005	< 2.084E-009
U-233	< 6.778E+002 +/-	2.7%	< 6.456E-001	< 6.914E-002
Pa-234	< 1.002E-001 +/-	12.2%	< 9.541E-005	
Pa-234m	< 1.324E+002 +/-	2.1%	< 1.260E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 6.766E-002 +/-	2.5%	< 6.444E-005	< 3.092E-002
Np-237	< 8.436E-002 +/-	1.9%	< 8.034E-005	< 1.181E-004
Pu-238	< 4.836E+003 +/-	2.6%	< 4.606E+000	< 2.795E-004
U-238	< 1.933E+000 +/-	2.2%	< 1.841E-003	< 5.682E+000
Pu-239	< 8.805E+002 +/-	3.1%	< 8.385E-001	< 1.400E-002
Pu-239B	< 2.732E+003 +/-	5.3%	< 2.602E+000	< 4.344E-002
U-239	< 9.550E+003 +/-	65.1%	< 9.095E+000	
Pu-240	< 1.665E+003 +/-	4.7%	< 1.586E+000	< 7.243E-003
Am-241	5.272E+001 +/-	25.4%	5.021E-002	1.518E-005
Am-241B	< 6.311E+002 +/-	4.9%	< 6.010E-001	< 1.817E-004
Pu-241	< 2.411E+004 +/-	2.8%	< 2.296E+001	< 2.320E-004
Pu-241B	< 7.149E+003 +/-	2.4%	< 6.809E+000	< 6.878E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 2.550E-001 +/-	1.8%	< 2.429E-004	< 1.262E-006
Cm-243	< 2.631E-001 +/-	3.3%	< 2.505E-004	< 5.051E-009
Cm-244	< 2.048E+004 +/-	14.1%	< 1.951E+001	< 2.499E-004
Cm-245	< 4.246E-001 +/-	7.7%	< 4.044E-004	< 2.441E-006
Cm-247	< 1.985E-002 +/-	8.5%	< 1.891E-005	< 2.124E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.263E-002 +/-	3.5%	< 2.155E-005	< 5.477E-009
Cf-251	< 2.314E-001 +/-	5.6%	< 2.204E-004	< 1.446E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 12 Results

Segment: 12 Detector: DET01 Position: 12
C:\Canberra\NDA2k\Data\00000204_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P012_S012

Acquisition Start: 12/22/2008 11:05:51 AM
Elapsed Live Time: 118.73 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.087 +/- 0.0022
SE-75	264.66	0.148 +/- 0.0026
SE-75	279.54	0.152 +/- 0.0035
SE-75	400.66	0.193 +/- 0.0056

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/22/2008 11:07:53 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.72	Y	190	409	1.16	121.29	1.224E-004	17.54	
2234.73		11980	4	1.11	4467.59	2.439E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 2.169E-002 +/-	1.9%	< 2.066E-005	< 1.000E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 4.940E-003 +/-	2.0%	< 4.705E-006	< 7.805E-013
Al-26	< 3.754E-002 +/-	16.0%	< 3.575E-005	< 1.975E-006
K-40	< 2.733E-001 +/-	5.1%	< 2.603E-004	< 4.263E-002
Co-57	< 6.491E-002 +/-	4.0%	< 6.182E-005	< 7.595E-012
Co-60	< 1.783E-002 +/-	1.7%	< 1.698E-005	< 1.564E-011
Se-75	< 5.971E-002 +/-	2.5%	< 5.686E-005	< 4.108E-012
Kr-85	< 4.271E+000 +/-	3.3%	< 4.067E-003	< 1.076E-008
Sr-90	< 1.089E-002 +/-	2.2%	< 1.037E-005	< 7.895E-011
Sb-125	< 3.858E-002 +/-	2.4%	< 3.674E-005	< 3.711E-011
Ba-133	< 2.533E-002 +/-	2.0%	< 2.413E-005	< 1.001E-010
Cs-134	< 1.139E-002 +/-	2.3%	< 1.084E-005	< 8.687E-012
Cs-137	< 1.089E-002 +/-	2.2%	< 1.037E-005	< 1.241E-010
Eu-152	< 7.470E-002 +/-	2.7%	< 7.114E-005	< 4.198E-010
Eu-154	< 1.410E-002 +/-	2.2%	< 1.343E-005	< 5.287E-011
Ho-166m	< 1.410E-002 +/-	2.4%	< 1.343E-005	< 7.839E-009
Bi-207	< 1.082E-002 +/-	2.3%	< 1.030E-005	< 1.969E-010
Pb-210	< 1.049E+000 +/-	39.2%	< 9.993E-004	< 1.364E-008
Ra-226	< 3.206E-002 +/-	2.5%	< 3.053E-005	< 3.206E-008
Ac-227	< 1.319E-001 +/-	6.5%	< 1.256E-004	< 1.806E-009
Th-230	< 1.664E+001 +/-	13.8%	< 1.584E-002	< 8.152E-004
Pa-231	< 9.964E-001 +/-	11.3%	< 9.489E-004	< 2.082E-005
Th-232	< 3.550E-002 +/-	2.5%	< 3.381E-005	< 3.199E-001
U-232	< 3.550E-002 +/-	2.5%	< 3.381E-005	< 1.644E-009
U-233	< 7.146E+002 +/-	3.2%	< 6.806E-001	< 7.289E-002
Pa-234	< 7.281E-002 +/-	12.2%	< 6.934E-005	
Pa-234m	< 7.625E+001 +/-	2.1%	< 7.262E-002	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 6.813E-002 +/-	3.2%	< 6.489E-005	< 3.114E-002
Np-237	< 7.030E-002 +/-	2.3%	< 6.695E-005	< 9.842E-005
Pu-238	< 4.584E+003 +/-	3.1%	< 4.365E+000	< 2.649E-004
U-238	< 1.568E+000 +/-	2.1%	< 1.493E-003	< 4.610E+000
Pu-239	< 8.383E+002 +/-	3.7%	< 7.984E-001	< 1.333E-002
Pu-239B	< 1.410E+003 +/-	6.3%	< 1.343E+000	< 2.242E-002
U-239	< 3.526E+000 +/-	49.2%	< 3.358E-003	
Pu-240	< 1.066E+003 +/-	5.6%	< 1.016E+000	< 4.638E-003
Am-241	9.753E-001 +/-	24.0%	9.289E-004	2.809E-007
Am-241B	< 3.881E+002 +/-	5.8%	< 3.696E-001	< 1.118E-004
Pu-241	< 2.464E+004 +/-	3.3%	< 2.347E+001	< 2.370E-004
Pu-241B	< 7.041E+003 +/-	3.2%	< 6.705E+000	< 6.773E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.056E-001 +/-	9.3%	< 1.006E-004	< 5.229E-007
Cm-243	< 2.324E-001 +/-	3.7%	< 2.213E-004	< 4.462E-009
Cm-244	< 1.896E+004 +/-	14.1%	< 1.806E+001	< 2.314E-004
Cm-245	< 4.600E-001 +/-	7.9%	< 4.381E-004	< 2.645E-006
Cm-247	< 1.367E-002 +/-	8.6%	< 1.302E-005	< 1.463E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.680E-002 +/-	3.6%	< 1.600E-005	< 4.066E-009
Cf-251	< 2.370E-001 +/-	5.9%	< 2.257E-004	< 1.481E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 13 Results

Segment: 13 Detector: DET01 Position: 13
C:\Canberra\NDA2k\Data\00000204_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P013_S013

Acquisition Start: 12/22/2008 11:10:02 AM
Elapsed Live Time: 118.96 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.399 +/- 0.0065
SE-75	264.66	0.476 +/- 0.0071
SE-75	279.54	0.480 +/- 0.0082
SE-75	400.66	0.509 +/- 0.0109

Errors quoted at 1.000 sigma

Peak Analysis Results

Peak Analysis Performed on: 12/22/2008 11:12:04 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
2234.76		11980	3	1.07	4467.65	7.001E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 4.713E-003 +/-	1.8%	< 4.488E-006	< 2.173E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.010E-002 +/-	2.0%	< 1.915E-005	< 3.176E-012
Al-26	< 1.769E-002 +/-	14.9%	< 1.684E-005	< 9.303E-007
K-40	< 2.526E-001 +/-	4.9%	< 2.405E-004	< 3.940E-002
Co-57	< 5.431E-002 +/-	3.5%	< 5.172E-005	< 6.354E-012
Co-60	< 3.210E-002 +/-	2.6%	< 3.057E-005	< 2.815E-011
Se-75	< 5.048E-002 +/-	1.9%	< 4.807E-005	< 3.473E-012
Kr-85	< 3.702E+000 +/-	3.1%	< 3.525E-003	< 9.328E-009
Sr-90	< 1.674E-002 +/-	1.9%	< 1.594E-005	< 1.213E-010
Sb-125	< 4.201E-002 +/-	2.1%	< 4.001E-005	< 4.041E-011
Ba-133	< 2.220E-002 +/-	1.7%	< 2.114E-005	< 8.768E-011
Cs-134	< 1.534E-002 +/-	2.0%	< 1.461E-005	< 1.171E-011
Cs-137	< 1.674E-002 +/-	1.9%	< 1.594E-005	< 1.908E-010
Eu-152	< 4.656E-002 +/-	2.5%	< 4.434E-005	< 2.617E-010
Eu-154	< 5.740E-002 +/-	2.2%	< 5.466E-005	< 2.152E-010
Ho-166m	< 2.421E-002 +/-	2.3%	< 2.306E-005	< 1.346E-008
Bi-207	< 1.359E-002 +/-	2.0%	< 1.294E-005	< 2.473E-010
Pb-210	< 1.472E+000 +/-	36.7%	< 1.402E-003	< 1.914E-008
Ra-226	< 2.857E-002 +/-	2.2%	< 2.721E-005	< 2.857E-008
Ac-227	< 1.656E-001 +/-	6.4%	< 1.577E-004	< 2.269E-009
Th-230	< 1.494E+001 +/-	13.0%	< 1.423E-002	< 7.322E-004
Pa-231	< 7.765E-001 +/-	11.2%	< 7.395E-004	< 1.623E-005
Th-232	< 3.810E-002 +/-	2.2%	< 3.629E-005	< 3.433E-001
U-232	< 3.810E-002 +/-	2.2%	< 3.629E-005	< 1.764E-009
U-233	< 6.071E+002 +/-	2.7%	< 5.782E-001	< 6.193E-002
Pa-234	< 3.968E-002 +/-	16.8%	< 3.779E-005	
Pa-234m	< 1.069E+002 +/-	2.1%	< 1.018E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 5.645E-002 +/-	2.5%	< 5.376E-005	< 2.580E-002
Np-237	< 5.080E-002 +/-	1.9%	< 4.839E-005	< 7.113E-005
Pu-238	< 4.293E+003 +/-	2.6%	< 4.089E+000	< 2.482E-004
U-238	< 2.445E+000 +/-	2.1%	< 2.329E-003	< 7.188E+000
Pu-239	< 7.268E+002 +/-	3.2%	< 6.922E-001	< 1.156E-002
Pu-239B	< 1.109E+003 +/-	5.7%	< 1.057E+000	< 1.764E-002
U-239	< 6.405E+000 +/-	45.8%	< 6.100E-003	
Pu-240	< 8.629E+002 +/-	5.0%	< 8.218E-001	< 3.754E-003
Am-241	< 1.902E-001 +/-	15.6%	< 1.812E-004	< 5.478E-008
Am-241B	< 3.128E+002 +/-	5.5%	< 2.979E-001	< 9.008E-005
Pu-241	< 2.112E+004 +/-	2.8%	< 2.011E+001	< 2.031E-004
Pu-241B	< 6.095E+003 +/-	2.5%	< 5.805E+000	< 5.864E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 9.128E-002 +/-	8.4%	< 8.693E-005	< 4.518E-007
Cm-243	< 1.939E-001 +/-	3.3%	< 1.847E-004	< 3.723E-009
Cm-244	< 1.744E+004 +/-	14.1%	< 1.661E+001	< 2.128E-004
Cm-245	< 4.004E-001 +/-	7.7%	< 3.813E-004	< 2.302E-006
Cm-247	< 1.574E-002 +/-	8.5%	< 1.499E-005	< 1.685E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.740E-002 +/-	3.5%	< 1.657E-005	< 4.211E-009
Cf-251	< 2.076E-001 +/-	5.6%	< 1.977E-004	< 1.297E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 14 Results

Segment: 14 Detector: DET01 Position: 14
C:\Canberra\NDA2k\Data\00000204_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P014_S014

Acquisition Start: 12/22/2008 11:14:14 AM
Elapsed Live Time: 119.10 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio	
SE-75	136.00	0.874	+/- 0.0131
SE-75	264.66	0.895	+/- 0.0130
SE-75	279.54	0.905	+/- 0.0142
SE-75	400.66	0.904	+/- 0.0170

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/22/2008 11:16:15 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
2234.72		11980	2	1.10	4467.57	5.400E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 1.705E-002 +/-	1.9%	< 1.624E-005	< 7.860E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.249E-002 +/-	2.0%	< 2.142E-005	< 3.553E-012
Al-26	< 2.043E-002 +/-	15.2%	< 1.945E-005	< 1.074E-006
K-40	< 2.389E-001 +/-	5.0%	< 2.275E-004	< 3.726E-002
Co-57	< 4.902E-002 +/-	3.4%	< 4.669E-005	< 5.736E-012
Co-60	< 3.525E-002 +/-	2.6%	< 3.357E-005	< 3.092E-011
Se-75	< 4.115E-002 +/-	1.8%	< 3.919E-005	< 2.831E-012
Kr-85	< 4.385E+000 +/-	3.1%	< 4.176E-003	< 1.105E-008
Sr-90	< 1.661E-002 +/-	1.9%	< 1.582E-005	< 1.204E-010
Sb-125	< 4.977E-002 +/-	2.1%	< 4.740E-005	< 4.788E-011
Ba-133	< 2.032E-002 +/-	1.7%	< 1.935E-005	< 8.026E-011
Cs-134	< 1.346E-002 +/-	2.0%	< 1.282E-005	< 1.027E-011
Cs-137	< 1.661E-002 +/-	1.9%	< 1.582E-005	< 1.893E-010
Eu-152	< 4.384E-002 +/-	1.8%	< 4.175E-005	< 2.464E-010
Eu-154	< 6.421E-002 +/-	2.2%	< 6.116E-005	< 2.408E-010
Ho-166m	< 2.421E-002 +/-	2.2%	< 2.305E-005	< 1.346E-008
Bi-207	< 1.144E-002 +/-	2.0%	< 1.090E-005	< 2.083E-010
Pb-210	< 7.718E+002 +/-	56.7%	< 7.350E-001	< 1.003E-005
Ra-226	< 3.523E-002 +/-	2.0%	< 3.356E-005	< 3.523E-008
Ac-227	< 1.355E-001 +/-	8.3%	< 1.291E-004	< 1.857E-009
Th-230	< 6.026E+001 +/-	8.6%	< 5.739E-002	< 2.953E-003
Pa-231	< 6.071E-001 +/-	11.2%	< 5.782E-004	< 1.269E-005
Th-232	< 5.211E-002 +/-	2.0%	< 4.963E-005	< 4.695E-001
U-232	< 5.211E-002 +/-	2.0%	< 4.963E-005	< 2.413E-009
U-233	< 4.297E+002 +/-	2.7%	< 4.092E-001	< 4.383E-002
Pa-234	< 2.401E-002 +/-	12.2%	< 2.286E-005	
Pa-234m	< 8.631E+001 +/-	2.2%	< 8.220E-002	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 4.146E-002 +/-	2.5%	< 3.948E-005	< 1.895E-002
Np-237	< 4.732E-002 +/-	1.9%	< 4.507E-005	< 6.625E-005
Pu-238	< 3.221E+003 +/-	2.6%	< 3.068E+000	< 1.862E-004
U-238	< 1.744E+000 +/-	2.2%	< 1.661E-003	< 5.126E+000
Pu-239	< 5.591E+002 +/-	3.1%	< 5.324E-001	< 8.889E-003
Pu-239B	< 1.437E+003 +/-	5.4%	< 1.369E+000	< 2.285E-002
U-239	< 1.035E+004 +/-	69.5%	< 9.861E+000	
Pu-240	< 1.014E+003 +/-	4.7%	< 9.655E-001	< 4.410E-003
Am-241	< 4.578E+000 +/-	25.0%	< 4.360E-003	< 1.319E-006
Am-241B	< 3.824E+002 +/-	5.0%	< 3.642E-001	< 1.101E-004
Pu-241	< 1.574E+004 +/-	2.8%	< 1.499E+001	< 1.515E-004
Pu-241B	< 4.528E+003 +/-	2.4%	< 4.312E+000	< 4.356E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.504E-001 +/-	1.8%	< 1.432E-004	< 7.442E-007
Cm-243	< 1.551E-001 +/-	3.3%	< 1.477E-004	< 2.977E-009
Cm-244	< 1.383E+004 +/-	14.1%	< 1.317E+001	< 1.687E-004
Cm-245	< 2.745E-001 +/-	7.7%	< 2.614E-004	< 1.578E-006
Cm-247	< 1.447E-002 +/-	8.5%	< 1.378E-005	< 1.548E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.875E-002 +/-	3.5%	< 1.786E-005	< 4.539E-009
Cf-251	< 1.500E-001 +/-	5.6%	< 1.428E-004	< 9.372E-008

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 15 Results

Segment: 15 Detector: DET01 Position: 15
C:\Canberra\NDA2k\Data\00000204_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P015_S015

Acquisition Start: 12/22/2008 11:18:25 AM
Elapsed Live Time: 119.15 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.899 +/- 0.0134
SE-75	264.66	0.919 +/- 0.0133
SE-75	279.54	0.928 +/- 0.0146
SE-75	400.66	0.916 +/- 0.0172

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/22/2008 11:20:27 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
2234.70		11980	5	1.12	4467.53	2.742E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 1.982E-002 +/-	1.8%	< 1.888E-005	< 9.137E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.958E-002 +/-	2.1%	< 2.817E-005	< 4.674E-012
Al-26	< 3.589E-002 +/-	15.4%	< 3.418E-005	< 1.888E-006
K-40	< 2.709E-001 +/-	5.0%	< 2.580E-004	< 4.226E-002
Co-57	< 4.309E-002 +/-	3.5%	< 4.104E-005	< 5.042E-012
Co-60	< 3.496E-002 +/-	1.7%	< 3.330E-005	< 3.066E-011
Se-75	< 3.795E-002 +/-	1.8%	< 3.614E-005	< 2.611E-012
Kr-85	< 3.731E+000 +/-	3.0%	< 3.553E-003	< 9.402E-009
Sr-90	< 2.077E-002 +/-	1.9%	< 1.978E-005	< 1.506E-010
Sb-125	< 2.969E-002 +/-	2.1%	< 2.827E-005	< 2.856E-011
Ba-133	< 1.829E-002 +/-	1.7%	< 1.742E-005	< 7.225E-011
Cs-134	< 1.051E-002 +/-	1.9%	< 1.001E-005	< 8.017E-012
Cs-137	< 2.077E-002 +/-	1.9%	< 1.978E-005	< 2.368E-010
Eu-152	< 2.907E-002 +/-	3.8%	< 2.769E-005	< 1.634E-010
Eu-154	< 5.767E-002 +/-	1.9%	< 5.492E-005	< 2.163E-010
Ho-166m	< 2.778E-002 +/-	2.2%	< 2.646E-005	< 1.544E-008
Bi-207	< 1.416E-002 +/-	2.0%	< 1.349E-005	< 2.577E-010
Pb-210	< 9.313E+002 +/-	57.4%	< 8.870E-001	< 1.211E-005
Ra-226	< 2.894E-002 +/-	2.2%	< 2.756E-005	< 2.894E-008
Ac-227	< 1.255E-001 +/-	8.3%	< 1.195E-004	< 1.719E-009
Th-230	< 5.631E+001 +/-	8.6%	< 5.363E-002	< 2.759E-003
Pa-231	< 5.615E-001 +/-	11.2%	< 5.347E-004	< 1.173E-005
Th-232	< 4.252E-002 +/-	2.1%	< 4.049E-005	< 3.831E-001
U-232	< 4.252E-002 +/-	2.1%	< 4.049E-005	< 1.969E-009
U-233	< 4.227E+002 +/-	1.9%	< 4.025E-001	< 4.311E-002
Pa-234	< 6.432E-002 +/-	12.2%	< 6.126E-005	
Pa-234m	< 1.388E+002 +/-	2.1%	< 1.322E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 3.775E-002 +/-	2.5%	< 3.595E-005	< 1.725E-002
Np-237	< 4.818E-002 +/-	1.9%	< 4.589E-005	< 6.746E-005
Pu-238	< 2.887E+003 +/-	2.7%	< 2.749E+000	< 1.668E-004
U-238	< 1.195E+000 +/-	4.5%	< 1.138E-003	< 3.513E+000
Pu-239	< 5.538E+002 +/-	3.2%	< 5.274E-001	< 8.805E-003
Pu-239B	< 1.304E+003 +/-	5.6%	< 1.242E+000	< 2.073E-002
U-239	< 1.482E+004 +/-	70.2%	< 1.411E+001	
Pu-240	< 9.011E+002 +/-	4.9%	< 8.581E-001	< 3.920E-003
Am-241	< 4.901E+000 +/-	25.4%	< 4.668E-003	< 1.412E-006
Am-241B	< 3.433E+002 +/-	5.1%	< 3.270E-001	< 9.887E-005
Pu-241	< 1.515E+004 +/-	2.9%	< 1.443E+001	< 1.457E-004
Pu-241B	< 4.067E+003 +/-	2.4%	< 3.873E+000	< 3.913E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.420E-001 +/-	1.8%	< 1.352E-004	< 7.029E-007
Cm-243	< 1.465E-001 +/-	3.3%	< 1.395E-004	< 2.812E-009
Cm-244	< 2.280E+004 +/-	14.1%	< 2.171E+001	< 2.781E-004
Cm-245	< 2.649E-001 +/-	7.7%	< 2.523E-004	< 1.523E-006
Cm-247	< 2.021E-002 +/-	8.5%	< 1.925E-005	< 2.163E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.592E-002 +/-	3.5%	< 1.517E-005	< 3.854E-009
Cf-251	< 1.427E-001 +/-	5.6%	< 1.359E-004	< 8.917E-008

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 16 Results

Segment: 16 Detector: DET01 Position: 16
C:\Canberra\NDA2k\Data\00000204_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P016_S016

Acquisition Start: 12/22/2008 11:22:37 AM
Elapsed Live Time: 119.19 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.839 +/- 0.0126
SE-75	264.66	0.886 +/- 0.0128
SE-75	279.54	0.887 +/- 0.0140
SE-75	400.66	0.873 +/- 0.0165

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/22/2008 11:24:40 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
2234.72		11980	2	1.12	4467.56	2.480E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 3.063E-002 +/-	2.3%	< 2.917E-005	< 1.412E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.990E-002 +/-	2.3%	< 2.848E-005	< 4.724E-012
Al-26	< 5.909E-002 +/-	18.0%	< 5.628E-005	< 3.108E-006
K-40	< 5.419E-001 +/-	5.6%	< 5.161E-004	< 8.454E-002
Co-57	< 7.517E-002 +/-	4.4%	< 7.159E-005	< 8.795E-012
Co-60	< 5.097E-002 +/-	2.0%	< 4.854E-005	< 4.470E-011
Se-75	< 5.690E-002 +/-	2.8%	< 5.419E-005	< 3.915E-012
Kr-85	< 4.641E+000 +/-	3.6%	< 4.420E-003	< 1.170E-008
Sr-90	< 2.576E-002 +/-	2.6%	< 2.454E-005	< 1.868E-010
Sb-125	< 6.156E-002 +/-	2.7%	< 5.862E-005	< 5.922E-011
Ba-133	< 2.961E-002 +/-	2.3%	< 2.820E-005	< 1.169E-010
Cs-134	< 1.899E-002 +/-	2.8%	< 1.809E-005	< 1.449E-011
Cs-137	< 2.576E-002 +/-	2.6%	< 2.454E-005	< 2.937E-010
Eu-152	< 7.942E-002 +/-	2.9%	< 7.564E-005	< 4.464E-010
Eu-154	< 8.537E-002 +/-	2.4%	< 8.130E-005	< 3.201E-010
Ho-166m	< 3.477E-002 +/-	2.8%	< 3.311E-005	< 1.933E-008
Bi-207	< 1.613E-002 +/-	2.8%	< 1.536E-005	< 2.936E-010
Pb-210	< 2.152E+000 +/-	46.8%	< 2.050E-003	< 2.798E-008
Ra-226	< 3.628E-002 +/-	3.0%	< 3.455E-005	< 3.628E-008
Ac-227	< 2.238E-001 +/-	8.7%	< 2.132E-004	< 3.067E-009
Th-230	< 2.122E+001 +/-	15.5%	< 2.021E-002	< 1.040E-003
Pa-231	< 8.291E-001 +/-	11.4%	< 7.896E-004	< 1.733E-005
Th-232	< 6.944E-002 +/-	2.9%	< 6.614E-005	< 6.257E-001
U-232	< 6.944E-002 +/-	2.9%	< 6.614E-005	< 3.215E-009
U-233	< 7.695E+002 +/-	2.5%	< 7.329E-001	< 7.849E-002
Pa-234	< 1.263E-001 +/-	12.3%	< 1.203E-004	
Pa-234m	< 1.933E+002 +/-	2.4%	< 1.841E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 7.602E-002 +/-	3.6%	< 7.240E-005	< 3.474E-002
Np-237	< 6.619E-002 +/-	2.6%	< 6.304E-005	< 9.267E-005
Pu-238	< 5.705E+003 +/-	3.6%	< 5.433E+000	< 3.297E-004
U-238	< 3.548E+000 +/-	2.4%	< 3.380E-003	< 1.043E+001
Pu-239	< 9.765E+002 +/-	4.1%	< 9.300E-001	< 1.553E-002
Pu-239B	< 1.366E+003 +/-	7.0%	< 1.301E+000	< 2.172E-002
U-239	< 1.357E+001 +/-	58.6%	< 1.292E-002	
Pu-240	< 1.049E+003 +/-	6.2%	< 9.988E-001	< 4.562E-003
Am-241	< 2.375E-001 +/-	19.9%	< 2.262E-004	< 6.839E-008
Am-241B	< 3.907E+002 +/-	6.8%	< 3.721E-001	< 1.125E-004
Pu-241	< 3.136E+004 +/-	3.7%	< 2.986E+001	< 3.016E-004
Pu-241B	< 8.557E+003 +/-	3.6%	< 8.150E+000	< 8.232E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.223E-001 +/-	10.7%	< 1.165E-004	< 6.055E-007
Cm-243	< 2.516E-001 +/-	3.9%	< 2.396E-004	< 4.830E-009
Cm-244	< 2.334E+004 +/-	14.2%	< 2.223E+001	< 2.847E-004
Cm-245	< 5.057E-001 +/-	8.1%	< 4.816E-004	< 2.908E-006
Cm-247	< 2.986E-002 +/-	8.7%	< 2.844E-005	< 3.195E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.715E-002 +/-	3.8%	< 2.585E-005	< 6.569E-009
Cf-251	< 2.612E-001 +/-	6.2%	< 2.488E-004	< 1.633E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Summed Segment Spectra Results
Category: Segmented

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Elapsed Live Time: 97.63 sec Elapsed Real Time: 120.00 sec

********** Peak Analysis Results **********

*** Spectrum Validity Test warnings ***
Reference peak/MCA Test failed: reference peak data does not match MCA time
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 12/22/2008 11:24:48 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	49.42		7767	42594	2.28	100.69	7.650E-007	4.30	
	59.43	Y	348707	45464	1.12	120.70	6.601E-006	0.34	
	67.00	Y	781	26490	1.04	135.82	1.961E-005	32.05	
M	94.67	Y	64301	87342	1.53	191.12	1.522E-004	0.87	366.47
m	98.68	Y	243961	117849	1.54	199.14	1.780E-004	0.68	
m	100.87	Y	37644	119600	1.54	203.51	1.922E-004	1.13	
m	103.32	Y	171518	96103	1.55	208.41	2.080E-004	0.66	
M	111.06	Y	64860	52384	1.37	223.87	2.561E-004	1.78	464.43
m	114.57	Y	53418	71777	1.38	230.89	2.767E-004	1.74	
m	116.61	Y	50201	67436	1.38	234.96	2.880E-004	1.72	
m	120.56	Y	12446	60806	1.39	242.85	3.090E-004	2.07	
m	122.86	Y	6314	53657	1.40	247.46	3.205E-004	2.79	
m	125.24	Y	24524	51197	1.40	252.21	3.318E-004	1.79	
m	129.27	Y	118531	44937	1.41	260.26	3.495E-004	1.65	
M	141.81	Y	1099	28743	1.14	285.32	3.931E-004	13.01	2.19
m	144.18	Y	7566	32557	1.14	290.07	3.995E-004	5.42	
m	146.30	Y	6514	32781	1.15	294.29	4.048E-004	5.69	
m	148.53	Y	15772	36744	1.15	298.74	4.098E-004	4.89	
m	152.52	Y	781	37220	1.16	306.72	4.177E-004	17.16	
M	161.04	Y	6721	34189	1.33	323.75	4.301E-004	6.66	14.91
m	164.60	Y	6164	48786	1.33	330.87	4.336E-004	6.04	
m	169.30	Y	1102	51425	1.34	340.25	4.370E-004	14.02	
m	171.34	Y	4769	50976	1.34	344.33	4.380E-004	6.24	
	179.07	Y	2413	31015	1.32	359.79	4.400E-004	11.63	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	189.29	Y	3362	32927	1.33	380.21	4.384E-004	8.88	
	195.62	Y	4667	27982	1.10	392.86	4.356E-004	5.82	
M	203.50	Y	26491	25365	1.18	408.60	4.306E-004	1.18	6.26
m	207.95	Y	87482	22168	1.19	417.50	4.272E-004	0.95	
	225.36		393	16081	0.92	452.27	4.109E-004	49.43	
M	237.97	Y	566	16284	1.36	477.47	3.975E-004	16.56	2.23
m	243.34	Y	1400	20763	1.37	488.22	3.916E-004	7.56	
	255.32	Y	3800	15381	1.21	512.15	3.783E-004	5.52	
M	263.90	Y	1389	13939	1.26	529.30	3.688E-004	6.22	1.84
m	267.47	Y	3320	14701	1.26	536.43	3.649E-004	3.09	
M	297.39	Y	2244	7885	1.17	596.21	3.335E-004	15.88	1.73
m	300.04	Y	346	9023	1.17	601.52	3.309E-004	26.08	
M	311.79	Y	4656	10790	1.49	624.99	3.196E-004	2.18	9.35
m	316.33	Y	443	12432	1.49	634.06	3.155E-004	16.53	
m	320.79	Y	3109	12930	1.50	642.98	3.114E-004	2.89	
m	323.31	Y	3957	12539	1.50	648.01	3.091E-004	2.39	
M	332.66	Y	29949	8326	1.30	666.70	3.011E-004	0.66	15.52
m	335.60	Y	12267	7834	1.30	672.58	2.987E-004	1.04	
m	341.36	Y	3337	8233	1.31	684.08	2.940E-004	2.46	
m	344.93	Y	26841	7853	1.31	691.21	2.911E-004	0.69	
M	368.28	Y	7864	6091	1.30	737.87	2.738E-004	1.33	85.93
m	370.76	Y	1012	5909	1.30	742.83	2.721E-004	6.15	
m	374.98	Y	71199	5584	1.31	751.26	2.692E-004	0.47	
m	380.06	Y	13654	3902	1.31	761.42	2.658E-004	0.95	
m	382.66	Y	11852	3602	1.31	766.60	2.641E-004	1.02	
M	392.82	Y	23996	3069	1.51	786.91	2.578E-004	1.41	2.81
m	399.02	Y	382	2700	1.51	799.30	2.541E-004	12.22	
M	413.62	Y	62870	2302	1.31	828.48	2.458E-004	0.48	18.09
m	419.11	Y	232	1890	1.31	839.45	2.428E-004	14.88	
m	422.48	Y	4772	1849	1.31	846.18	2.410E-004	1.61	
m	426.54	Y	1006	1800	1.32	854.30	2.389E-004	4.44	
M	445.73	Y	287	1077	1.32	892.65	2.296E-004	10.51	2.87
m	451.36	Y	7632	1161	1.33	903.90	2.271E-004	1.22	
	481.48	Y	175	677	1.83	964.08	2.146E-004	25.14	
	558.32		206	462	1.15	1117.64	1.899E-004	19.52	
	597.63	Y	153	341	0.94	1196.17	1.801E-004	22.54	
	618.90	Y	757	299	1.89	1238.69	1.754E-004	5.47	
M	633.08	Y	113	175	1.53	1267.03	1.725E-004	14.63	3.30
m	640.09	Y	307	235	1.54	1281.04	1.711E-004	7.76	
m	645.76	Y	472	208	1.54	1292.37	1.701E-004	6.32	
m	652.55	Y	505	221	1.55	1305.92	1.688E-004	6.05	
m	658.87	Y	267	213	1.55	1318.56	1.676E-004	8.90	
m	662.28	Y	3323	195	1.55	1325.36	1.670E-004	3.58	
	688.62	Y	312	189	1.67	1378.01	1.625E-004	9.67	
	703.66	Y	111	201	1.18	1408.06	1.600E-004	24.90	
M	717.39	Y	61	118	1.56	1435.50	1.579E-004	19.98	0.72
m	721.87	Y	1614	147	1.56	1444.45	1.572E-004	2.60	
	756.01	Y	117	116	1.39	1512.68	1.524E-004	17.92	
	769.21	Y	468	126	1.83	1539.04	1.507E-004	6.41	
	1173.30	Y	114	58	2.17	2346.53	1.132E-004	15.32	

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
1332.46	Y	114	37	1.51	2664.60	1.020E-004	13.40	
2234.71		191681	277	1.13	4467.55	4.995E-005	0.36	
2293.77		29	35	1.25	4585.56	4.728E-005	37.46	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.07 +/- 0.00

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	@ 1.000E+020 +/-	100.0%	@ 5.952E+015	
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 1.005E-001 +/-	1.2%	< 5.983E-006	< 1.588E-011
	Al-26	< 1.515E-001 +/-	8.2%	< 9.017E-006	< 7.968E-006
	K-40	< 1.180E+000 +/-	3.1%	< 7.024E-005	< 1.841E-001
X	Co-57				
	Co-60	2.548E-001 +/-	10.1%	1.517E-005	2.235E-010
	Se-75	< 1.782E+000 +/-	1.1%	< 1.060E-004	< 1.226E-010
	Kr-85	< 4.351E+001 +/-	2.5%	< 2.590E-003	< 1.097E-007
	Sr-90	< 1.332E-001 +/-	1.0%	< 7.929E-006	< 9.658E-010
	Sb-125	< 8.480E-001 +/-	1.5%	< 5.047E-005	< 8.157E-010
	Ba-133	< 5.793E-001 +/-	1.0%	< 3.448E-005	< 2.288E-009
	Cs-134	< 1.079E-001 +/-	1.0%	< 6.424E-006	< 8.235E-011
X	Cs-137				
	Eu-152	< 3.600E-001 +/-	2.1%	< 2.143E-005	< 2.023E-009
	Eu-154	< 2.648E-001 +/-	1.5%	< 1.576E-005	< 9.931E-010
	Ho-166m	< 1.509E-001 +/-	1.7%	< 8.982E-006	< 8.390E-008
	Bi-207	< 1.175E-001 +/-	1.2%	< 6.994E-006	< 2.138E-009
	Pb-210	< 1.587E+004 +/-	12.2%	< 9.449E-001	< 2.064E-004
	Ra-226	< 2.698E-001 +/-	1.5%	< 1.606E-005	< 2.698E-007
	Ac-227	< 2.447E+000 +/-	8.2%	< 1.457E-004	< 3.352E-008
	Th-230	2.361E+003 +/-	33.2%	1.405E-001	1.157E-001
	Pa-231	< 1.373E+001 +/-	11.2%	< 8.171E-004	< 2.869E-004
	Th-232	< 3.312E-001 +/-	1.9%	< 1.972E-005	< 2.984E+000
	U-232	7.210E-001 +/-	17.1%	4.292E-005	3.338E-008
	U-233	< 9.148E+003 +/-	1.6%	< 5.445E-001	< 9.331E-001
	Pa-234	< 4.821E-001 +/-	12.1%	< 2.870E-005	
	Pa-234m	< 5.757E+002 +/-	1.5%	< 3.427E-002	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 7.901E-001 +/-	1.8%	< 4.703E-005	< 3.611E-001
	Np-237	5.833E+000 +/-	3.4%	3.472E-004	8.167E-003
	Pu-238	4.511E+004 +/-	17.2%	2.685E+000	2.607E-003
	U-238	< 1.144E+001 +/-	1.6%	< 6.812E-004	< 3.365E+001
	Pu-239	6.808E+006 +/-	1.8%	4.052E+002	1.082E+002

*	Pu-239B	3.804E+006	+/- 0.6%	2.265E+002	6.048E+001	
	U-239	@ 1.000E+020	+/- 100.0%	@ 5.952E+015		
X	Pu-240					
	Am-241	1.199E+006	+/- 2.7%	7.135E+001	3.452E-001	
	Am-241B	6.025E+005	+/- 1.9%	3.586E+001	1.735E-001	
	Pu-241	4.771E+006	+/- 5.2%	2.840E+002	4.590E-002	
	Pu-241B	9.248E+006	+/- 1.7%	5.505E+002	8.896E-002	
	Pu-242	< 0.000E+000	+/- 0.0%	< 0.000E+000	< 0.000E+000	
	Am-243	< 2.690E+000	+/- 1.2%	< 1.601E-004	< 1.332E-005	
	Cm-243	< 2.804E+000	+/- 3.0%	< 1.669E-004	< 5.383E-008	
	Cm-244	< 1.339E+005	+/- 14.1%	< 7.971E+000	< 1.634E-003	
	Cm-245	< 4.887E+000	+/- 7.5%	< 2.909E-004	< 2.810E-005	
	Cm-247	< 3.562E-001	+/- 8.4%	< 2.120E-005	< 3.812E-003	

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 4.186E-001 +/-	3.2%	< 2.492E-005	< 1.013E-007
Cf-251	< 2.739E+000 +/-	5.3%	< 1.631E-004	< 1.712E-006

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.08E+002 +- 1.91E+000	3.70E+001 +- 3.16E-001

Beta: 2.18E+002 +- 4.48E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.92E+001 +- 4.71E-001
203.55	3.87E+001 +- 6.50E-001
375.05	6.09E+001 +- 7.57E-001
413.71	6.25E+001 +- 8.56E-001

Sum of Segment NID Results
Category: Segmented

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********** Peak Analysis Results **********

No peak analysis results available for reporting purposes

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 3.546E-002 +/-	2.1%	< 2.111E-006	< 1.635E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 3.328E-002 +/-	2.0%	< 1.981E-006	< 5.258E-012
Al-26	< 6.563E-002 +/-	19.8%	< 3.906E-006	< 3.452E-006
K-40	< 5.419E-001 +/-	5.6%	< 3.226E-005	< 8.454E-002
Co-57	< 1.984E+000 +/-	2.9%	< 1.181E-004	< 2.321E-010
Co-60	< 5.097E-002 +/-	2.0%	< 3.034E-006	< 4.470E-011
Se-75	< 2.946E-001 +/-	1.9%	< 1.753E-005	< 2.027E-011
Kr-85	< 1.707E+001 +/-	3.1%	< 1.016E-003	< 4.300E-008
Sr-90	< 8.375E-002 +/-	2.6%	< 4.985E-006	< 6.072E-010
Sb-125	< 3.082E-001 +/-	2.3%	< 1.834E-005	< 2.965E-010
Ba-133	< 2.271E-001 +/-	1.7%	< 1.352E-005	< 8.971E-010
Cs-134	< 3.667E-002 +/-	1.8%	< 2.182E-006	< 2.798E-011
Cs-137	< 8.375E-002 +/-	2.6%	< 4.985E-006	< 9.548E-010
Eu-152	< 1.325E-001 +/-	4.0%	< 7.889E-006	< 7.449E-010
Eu-154	< 9.503E-002 +/-	2.2%	< 5.657E-006	< 3.564E-010
Ho-166m	< 5.456E-002 +/-	2.2%	< 3.248E-006	< 3.033E-008
Bi-207	< 4.572E-002 +/-	1.8%	< 2.721E-006	< 8.321E-010
Pb-210	< 3.332E+004 +/-	309.7%	< 1.983E+000	< 4.331E-004
Ra-226	< 1.094E-001 +/-	2.3%	< 6.515E-006	< 1.094E-007
Ac-227	< 1.022E+000 +/-	8.3%	< 6.084E-005	< 1.400E-008
Th-230	1.585E+002 +/-	112.5%	9.432E-003	7.765E-003
Pa-231	< 5.340E+000 +/-	11.2%	< 3.179E-004	< 1.116E-004
Th-232	< 1.243E-001 +/-	2.4%	< 7.398E-006	< 1.120E+000
U-232	< 1.920E-001 +/-	2.2%	< 1.143E-005	< 8.891E-009
U-233	< 3.980E+003 +/-	2.7%	< 2.369E-001	< 4.060E-001
Pa-234	< 1.867E-001 +/-	12.1%	< 1.111E-005	
Pa-234m	< 2.111E+002 +/-	2.1%	< 1.256E-002	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 3.425E-001 +/-	2.5%	< 2.039E-005	< 1.565E-001
Np-237	7.273E+000 +/-	5.2%	4.329E-004	1.018E-002
Pu-238	< 2.262E+004 +/-	2.6%	< 1.347E+000	< 1.308E-003
U-238	< 3.906E+000 +/-	2.1%	< 2.325E-004	< 1.148E+001
Pu-239	6.873E+006 +/-	1.5%	4.091E+002	1.093E+002
Pu-239B	4.692E+006 +/-	0.7%	2.793E+002	7.459E+001
U-239	< 2.626E+005 +/-	368.5%	< 1.563E+001	
Pu-240	6.793E+005 +/-	14.9%	4.044E+001	2.955E+000

• Am-241	1.467E+006	+/-	2.4%	8.731E+001	4.224E-001
Am-241B	1.117E+006	+/-	2.5%	6.649E+001	3.217E-001
Pu-241	9.278E+006	+/-	5.1%	5.523E+002	8.925E-002
Pu-241B	1.453E+007	+/-	1.5%	8.646E+002	1.397E-001
Pu-242	< 0.000E+000	+/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 9.699E-001	+/-	2.2%	< 5.773E-005	< 4.801E-006
Cm-243	< 1.098E+000	+/-	3.3%	< 6.537E-005	< 2.109E-008
Cm-244	< 4.887E+004	+/-	14.2%	< 2.909E+000	< 5.962E-004
Cm-245	< 2.092E+000	+/-	7.7%	< 1.245E-004	< 1.203E-005
Cm-247	< 1.588E-001	+/-	8.5%	< 9.454E-006	< 1.699E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.802E-001 +/-	3.5%	< 1.072E-005	< 4.360E-008
Cf-251	< 1.185E+000 +/-	5.6%	< 7.055E-005	< 7.408E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model:

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.09E+002 +- 1.59E+000	0.00E+000 +- 0.00E+000

Beta: 0.00E+000 +- 0.00E+000 Alpha: 0.00E+000 +- 0.00E+000
Number of energy lines used in correction: 0

Energy	Mass (g)

205

********** Radioassay Data Sheet **********

Engine Version: TMU Gamma 1.5

Assay Instrument: SGS with Trans. Location:LLNL
Analysis Method: LLNL SGS Operating Procedure Software Version: NDA 2000 V.4.0
Item ID: SGS100 Analysis Date: 12/22/2008

NID identified fiducial nuclide Pu-239
Source of isotopics: MEASURED

Net Weight	16800.0 g		
Pu mass	1.02E+002	+- 1.50E+001	g
TRU Alpha Activity	8.95E+000	+- 9.92E-001	Ci
TRU Activity Concentration	5.32E+005	+- 5.91E+004	nCi/g
Pu-239 Equivalent Activity	9.29E+000	+- 9.94E-001	Ci
Pu-239 FGE	9.62E+001	+- 1.50E+001	g
Decay heat	2.82E-001	+- 3.09E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	9.36E-008
U233	<LLD	<LLD	0.00E+000	3.98E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.40E-007
NP237	1.01E-002	7.18E-006	1.17E-006	6.90E-007
PU238	8.38E-003	1.45E-001	2.55E-002	2.83E-004
U238	<LLD	<LLD	0.00E+000	4.13E-006
PU239	9.56E+001	6.01E+000	9.42E-001	1.17E-002
PU240	5.75E+000	1.32E+000	2.08E-001	2.58E-003
AM241	4.21E-001	1.46E+000	2.30E-001	5.89E-004
PU241	1.75E-001	1.82E+001	2.85E+000	3.54E-002
PU242	3.16E-002	1.25E-004	2.33E-005	0.00E+000

Errors quoted at 1.000 sigma

Operator:_____ Date:_____

ITR:_____ Date:_____

********** Radioassay Data Sheet **********

Engine Version: TMU Gamma 1.5

Assay Instrument: SGS with Trans. Location:LLNL
Analysis Method: LLNL SGS Operating Procedure Software Version: NDA 2000 V.4.0
Item ID: SGS100 Analysis Date: 12/22/2008

NID identified fiducial nuclide Pu-239
Source of isotopics: MEASURED

Net Weight	16800.0 g		
Pu mass	1.17E+002	+- 1.74E+001	g
TRU Alpha Activity	9.87E+000	+- 1.13E+000	Ci
TRU Activity Concentration	5.88E+005	+- 6.74E+004	nCi/g
Pu-239 Equivalent Activity	1.03E+001	+- 1.13E+000	Ci
Pu-239 FGE	1.11E+002	+- 1.73E+001	g
Decay heat	3.10E-001	+- 3.52E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.39E-007
U233	<LLD	<LLD	0.00E+000	9.15E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	7.88E-007
NP237	7.98E-003	5.70E-006	9.11E-007	1.09E-006
PU238	9.68E-003	1.68E-001	2.95E-002	2.83E-004
U238	<LLD	<LLD	0.00E+000	1.14E-005
PU239	1.11E+002	6.95E+000	1.09E+000	1.17E-002
PU240	6.65E+000	1.53E+000	2.40E-001	2.58E-003
AM241	3.53E-001	1.23E+000	1.94E-001	1.17E-004
PU241	2.02E-001	2.10E+001	3.29E+000	3.55E-002
PU242	3.65E-002	1.45E-004	2.69E-005	0.00E+000

Errors quoted at 1.000 sigma

Operator:_____ Date:_____

ITR:_____ Date:_____

********** MGA Results **********

MGA version: MGA V9.63H CI

Measurement date = 12/22/08 Declared date = 12/22/08
Low energy spectrum sensitivity = 30.0% Total counts = 7.502E+006
High energy spectrum sensitivity : 10.0%

Pu g/cm2 = 0.7140 Cd g/cm2 = 2.0917 FWHM at 122 keV = 617 eV
QFIT = 1.12 FWHM at 208 keV = 789 eV
NQFIT = 1.01

Isotope	Relative to Pu-239	%* Err	% Err	Relative to Pu-241	%* Err	Isotope analysis at Meas. date % weight	%Err	Decl. date % weight	%Err
Pu-238	0.000088	8.0	8.0	0.0480	8.5	0.00825	8.00	0.00849	8.24
Pu-239	1.000000	0.0	0.4	547.4986	0.8	94.12685	0.06	94.09257	0.06
Pu-240	0.060152	1.0	0.9	32.9329	1.2	5.66188	0.93	5.66147	0.93
Pu-241	0.001826	0.8	0.7	1.0000	0.0	0.17192	0.76	0.20637	0.91
Pu-242	(New alg.)			0.1810(10)		0.03111 (10)		0.03110 (9)	
Am-241	0.005355	0.5	0.4	2.9319	0.8	0.50406	0.51	0.50678	0.52

Pu-240 effective (meas. date) = 5.735 +/- 1.01%
Am-241 separated about 28.349 +/- 0.166 years ago
Am/Pu-241 weight ratio = 2.93193 +/- 0.77%

Messages:

Lead x-rays detected.
Calculations in MGAABS didn't converge: results may be suspect.

Notes : * = Error in ratio
Errors quoted at 1.000 sigma
MGA sigma defaulted to 1

Reviewed by: _____ Date: _____

****
***** GENIE QUALITY ASSURANCE *****
****

Last Results Report
12/22/08 12:39:52 PM

QA File: C:\CANBERRA\NDA2K\QA\CNTR0001_DC
Sample ID: SGS100
Sample Quantity: 1.0000E+000
Sample Date: 7/17/08 10:49:07 AM
Measurement Date: 12/22/08 11:30:18 AM
Elapsed Live Time: 0.0 seconds
Elapsed Real Time: 0.0 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
SGS-100 Pu-239 Trans Mas [UD: 1.0913E+002+/- 7.370]	9.5630E+001	-1.8317E+000 < : : : >

Flags Key: LU = Lower/Upper Bounds Test (Ab = Above, Be = Below)
SD = Sample Driven N-Sigma Test (In = Investigate, Ac = Action)
UD = User Driven N-Sigma Test (In = Investigate, Ac = Action)
BS = Measurement Bias Test (In = Investigate, Ac = Action)

****
***** GENIE QUALITY ASSURANCE *****
****

Last Results Report
12/22/08 12:39:54 PM

QA File: C:\CANBERRA\NDA2K\QA\CNTR0001_DC
Sample ID: SGS100
Sample Quantity: 1.0000E+000
Sample Date: 7/17/08 10:49:07 AM
Measurement Date: 12/22/08 11:34:36 AM
Elapsed Live Time: 97.6 seconds
Elapsed Real Time: 120.0 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
SGS-100 414 keV centroid [0.00+/-0.00]	8.2848E+002	0.00 < : : : >
SGS-100 414 keV FWHM [0.00+/-0.00]	1.3201E+000	0.00 < : : : >
SGS-100 Pu-239 Mass [UD: 1.1082E+002+/- 1.081]	1.1052E+002	-2.7874E-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)

NDA 2000 Assay Report

********** Item Information **********

Item ID:	SGS100		Count Sequence Number:	205	
Operator:	RHWM2\RHWM				
Assay Start:	12/22/2008 11:32:34 AM				
Description 1:	SGS100				
Description 2:					
Location:	LLNL				
Comment:					
Matrix Type:	Lucite				
Container Type:	55 TRU Galv 81.5				
Weight:	Gross:	54.0 kg	Net:	16.8 kg	
Container:	Volume:	208.0 l	Full:	100.0 %	
Density:		0.080 kg /l			

********** System Configuration **********

Counter:	SGS with Trans.			
Segments:	Number:	16	Offset:	0
Scanning Platform:	Start:	934 mm	Delta:	-51 mm
Count Type:	QC - SGS 100			
Collimator/Geometry Setting:	Default	- 0		
Transmission Mode:	Two Pass			
Transmission Correction Type:	Standard			
Transmission Source:	Se-75 Trans.	- 0		

Errors quoted at 1.000 sigma

Segment 1 Results

Segment: 1 Detector: DET01 Position: 1
C:\Canberra\NDA2k\Data\00000205_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P001_S001

Acquisition Start: 12/22/2008 11:34:36 AM
Elapsed Live Time: 118.17 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.412 +/- 0.0067
SE-75	264.66	0.493 +/- 0.0074
SE-75	279.54	0.499 +/- 0.0085
SE-75	400.66	0.561 +/- 0.0117

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/22/2008 11:36:37 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.36	Y	693	683	1.34	120.57	6.592E-006	6.80	
2234.71		11980	6	1.13	4467.54	4.631E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 2.684E-002 +/-	2.1%	< 2.556E-005	< 1.237E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.629E-002 +/-	2.2%	< 2.504E-005	< 4.155E-012
Al-26	< 2.654E-002 +/-	16.2%	< 2.528E-005	< 1.396E-006
K-40	< 3.468E-001 +/-	5.3%	< 3.303E-004	< 5.410E-002
Co-57	< 1.254E-001 +/-	3.4%	< 1.194E-004	< 1.467E-011
Co-60	< 3.804E-002 +/-	1.9%	< 3.623E-005	< 3.336E-011
Se-75	< 1.012E-001 +/-	1.9%	< 9.637E-005	< 6.962E-012
Kr-85	< 6.833E+000 +/-	3.2%	< 6.507E-003	< 1.722E-008
Sr-90	< 3.498E-002 +/-	2.1%	< 3.332E-005	< 2.536E-010
Sb-125	< 7.159E-002 +/-	2.3%	< 6.818E-005	< 6.887E-011
Ba-133	< 5.890E-002 +/-	1.8%	< 5.610E-005	< 2.327E-010
Cs-134	< 2.669E-002 +/-	2.1%	< 2.542E-005	< 2.037E-011
Cs-137	< 3.498E-002 +/-	2.1%	< 3.332E-005	< 3.988E-010
Eu-152	< 3.862E-002 +/-	4.0%	< 3.678E-005	< 2.170E-010
Eu-154	< 7.508E-002 +/-	2.4%	< 7.151E-005	< 2.816E-010
Ho-166m	< 3.706E-002 +/-	2.4%	< 3.530E-005	< 2.061E-008
Bi-207	< 9.209E-003 +/-	2.1%	< 8.771E-006	< 1.676E-010
Pb-210	< 9.204E+002 +/-	47.8%	< 8.766E-001	< 1.196E-005
Ra-226	< 6.992E-002 +/-	2.4%	< 6.659E-005	< 6.992E-008
Ac-227	< 3.302E-001 +/-	8.3%	< 3.145E-004	< 4.524E-009
Th-230	< 1.546E+002 +/-	8.6%	< 1.473E-001	< 7.577E-003
Pa-231	< 2.180E+000 +/-	11.2%	< 2.076E-003	< 4.555E-005
Th-232	< 4.100E-002 +/-	2.8%	< 3.905E-005	< 3.694E-001
U-232	< 6.842E-002 +/-	2.3%	< 6.517E-005	< 3.168E-009
U-233	< 1.152E+003 +/-	2.7%	< 1.097E+000	< 1.175E-001
Pa-234	< 1.812E-001 +/-	12.3%	< 1.726E-004	
Pa-234m	< 1.345E+002 +/-	2.3%	< 1.281E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 1.080E-001 +/-	2.5%	< 1.028E-004	< 4.934E-002
Np-237	< 1.576E-001 +/-	2.0%	< 1.501E-004	< 2.206E-004
Pu-238	< 7.584E+003 +/-	2.7%	< 7.223E+000	< 4.383E-004
U-238	< 4.124E+000 +/-	2.4%	< 3.927E-003	< 1.212E+001
Pu-239	< 1.450E+003 +/-	3.1%	< 1.381E+000	< 2.306E-002
Pu-239B	< 4.127E+003 +/-	5.2%	< 3.930E+000	< 6.561E-002
U-239	< 2.043E+003 +/-	59.1%	< 1.945E+000	
Pu-240	< 2.569E+003 +/-	4.6%	< 2.447E+000	< 1.118E-002
Am-241	6.593E+001 +/-	21.7%	6.279E-002	1.899E-005
Am-241B	< 9.859E+002 +/-	4.9%	< 9.389E-001	< 2.839E-004
Pu-241	< 4.101E+004 +/-	2.8%	< 3.906E+001	< 3.945E-004
Pu-241B	< 1.061E+004 +/-	2.5%	< 1.011E+001	< 1.021E-004
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 4.183E-001 +/-	1.9%	< 3.984E-004	< 2.070E-006
Cm-243	< 4.314E-001 +/-	3.4%	< 4.109E-004	< 8.283E-009
Cm-244	< 2.500E+004 +/-	14.1%	< 2.381E+001	< 3.050E-004
Cm-245	< 7.011E-001 +/-	7.7%	< 6.678E-004	< 4.032E-006
Cm-247	< 3.291E-002 +/-	8.6%	< 3.134E-005	< 3.522E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 3.983E-002 +/-	3.6%	< 3.794E-005	< 9.640E-009
Cf-251	< 3.691E-001 +/-	5.6%	< 3.515E-004	< 2.307E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 2 Results

Segment: 2 Detector: DET01 Position: 2
C:\Canberra\NDA2k\Data\00000205_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P002_S002

Acquisition Start: 12/22/2008 11:38:47 AM
Elapsed Live Time: 117.69 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.461 +/- 0.0074
SE-75	264.66	0.557 +/- 0.0083
SE-75	279.54	0.564 +/- 0.0095
SE-75	400.66	0.602 +/- 0.0124

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/22/2008 11:40:49 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.50	Y	1440	1099	1.12	120.84	1.238E-004	4.56	
67.08	Y	91	810	0.74	136.00	1.563E-004	47.24	
2234.72		11980	7	1.11	4467.57	1.074E-004	1.43	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.02 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 1.636E-002 +/-	1.8%	< 1.558E-005	< 7.542E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 1.817E-002 +/-	2.0%	< 1.730E-005	< 2.871E-012
Al-26	< 1.556E-002 +/-	15.5%	< 1.482E-005	< 8.186E-007
K-40	< 1.799E-001 +/-	4.9%	< 1.713E-004	< 2.806E-002
Co-57	< 1.065E-001 +/-	3.5%	< 1.014E-004	< 1.246E-011
Co-60	< 3.328E-002 +/-	2.5%	< 3.169E-005	< 2.919E-011
Se-75	< 8.883E-002 +/-	1.9%	< 8.460E-005	< 6.111E-012
Kr-85	< 4.304E+000 +/-	3.1%	< 4.099E-003	< 1.085E-008
Sr-90	< 2.261E-002 +/-	2.0%	< 2.153E-005	< 1.639E-010
Sb-125	< 4.437E-002 +/-	2.1%	< 4.225E-005	< 4.268E-011
Ba-133	< 6.501E-002 +/-	1.7%	< 6.191E-005	< 2.568E-010
Cs-134	< 1.186E-002 +/-	1.8%	< 1.129E-005	< 9.047E-012
Cs-137	< 2.261E-002 +/-	2.0%	< 2.153E-005	< 2.577E-010
Eu-152	< 7.127E-002 +/-	3.7%	< 6.787E-005	< 4.005E-010
Eu-154	< 5.188E-002 +/-	2.2%	< 4.941E-005	< 1.946E-010
Ho-166m	< 2.412E-002 +/-	2.3%	< 2.297E-005	< 1.341E-008
Bi-207	< 1.438E-002 +/-	2.1%	< 1.369E-005	< 2.616E-010
Pb-210	< 7.278E+000 +/-	81.7%	< 6.932E-003	< 9.462E-008
Ra-226	< 3.468E-002 +/-	2.3%	< 3.303E-005	< 3.468E-008
Ac-227	< 2.932E-001 +/-	8.3%	< 2.792E-004	< 4.017E-009
Th-230	3.465E+001 +/-	53.9%	3.300E-002	1.698E-003
Pa-231	< 1.812E+000 +/-	11.2%	< 1.726E-003	< 3.787E-005
Th-232	< 3.615E-002 +/-	2.2%	< 3.442E-005	< 3.257E-001
U-232	< 3.615E-002 +/-	2.2%	< 3.442E-005	< 1.674E-009
U-233	< 1.066E+003 +/-	2.7%	< 1.016E+000	< 1.088E-001
Pa-234	< 8.544E-002 +/-	32.2%	< 8.137E-005	
Pa-234m	< 1.486E+002 +/-	2.1%	< 1.415E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 1.107E-001 +/-	2.5%	< 1.054E-004	< 5.057E-002
Np-237	< 1.352E-001 +/-	2.0%	< 1.287E-004	< 1.892E-004
Pu-238	< 7.422E+003 +/-	2.7%	< 7.069E+000	< 4.290E-004
U-238	< 2.156E+000 +/-	2.1%	< 2.054E-003	< 6.339E+000
Pu-239	< 1.281E+003 +/-	3.2%	< 1.220E+000	< 2.037E-002
Pu-239B	< 2.627E+003 +/-	6.4%	< 2.502E+000	< 4.177E-002
U-239	< 9.083E+000 +/-	98.9%	< 8.651E-003	
Pu-240	< 1.720E+003 +/-	5.4%	< 1.638E+000	< 7.483E-003
Am-241	7.295E+000 +/-	37.9%	6.948E-003	2.101E-006
Am-241B	< 6.391E+002 +/-	5.7%	< 6.086E-001	< 1.841E-004
Pu-241	< 3.780E+004 +/-	2.9%	< 3.600E+001	< 3.637E-004
Pu-241B	< 1.115E+004 +/-	2.5%	< 1.062E+001	< 1.073E-004
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 2.103E-001 +/-	16.6%	< 2.003E-004	< 1.041E-006
Cm-243	< 3.569E-001 +/-	3.4%	< 3.399E-004	< 6.852E-009
Cm-244	< 2.228E+004 +/-	14.1%	< 2.122E+001	< 2.718E-004
Cm-245	< 6.807E-001 +/-	7.7%	< 6.482E-004	< 3.914E-006
Cm-247	< 3.019E-002 +/-	8.5%	< 2.875E-005	< 3.230E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 4.060E-002 +/-	3.5%	< 3.867E-005	< 9.826E-009
Cf-251	< 3.661E-001 +/-	5.6%	< 3.487E-004	< 2.288E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 3 Results

Segment: 3 Detector: DET01 Position: 3
C:\Canberra\NDA2k\Data\00000205_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P003_S003

Acquisition Start: 12/22/2008 11:42:59 AM
Elapsed Live Time: 114.71 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.395 +/- 0.0067
SE-75	264.66	0.477 +/- 0.0073
SE-75	279.54	0.495 +/- 0.0087
SE-75	400.66	0.523 +/- 0.0116

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/22/2008 11:45:01 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.45	Y	8993	2346	1.16	120.74	9.382E-005	1.75	
M	94.70		2287	5549	1.53	191.18	2.343E-004	5.41	8.82
m	98.73	Y	7824	8658	1.54	199.23	2.483E-004	4.00	
m	100.78	Y	1316	8181	1.54	203.34	2.551E-004	6.69	
m	103.34	Y	5357	7084	1.55	208.44	2.634E-004	3.95	
M	111.06		1661	4404	1.44	223.87	2.863E-004	3.74	8.82
m	114.86	Y	1089	6855	1.45	231.47	2.965E-004	5.58	
M	125.29	Y	592	2784	1.04	252.30	3.207E-004	7.13	2.14
m	129.34	Y	3494	2598	1.05	260.39	3.287E-004	2.31	
M	146.57	Y	194	1915	1.02	294.84	3.557E-004	34.90	4.57
m	148.53	Y	465	2151	1.03	298.75	3.581E-004	27.93	
	164.59	Y	110	1745	1.05	330.85	3.725E-004	56.35	
	171.33		188	2132	0.66	344.31	3.762E-004	38.74	
M	203.62	Y	771	1627	1.09	408.83	3.793E-004	5.08	2.58

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	208.00	Y	2719	1372	1.10	417.59	3.783E-004	2.43	
	255.42		223	991	1.10	512.35	3.561E-004	24.12	
	267.81	Y	68	739	1.11	537.11	3.488E-004	61.56	
	311.69	Y	157	753	1.36	624.79	3.199E-004	29.00	
	323.57	Y	66	624	1.07	648.53	3.114E-004	59.29	
M	332.72	Y	1062	557	1.30	666.81	3.049E-004	3.62	2.59
m	335.57	Y	361	607	1.30	672.52	3.029E-004	7.06	
	344.94		783	513	1.23	691.24	2.965E-004	5.91	
	368.48	Y	414	399	2.11	738.28	2.809E-004	9.43	
M	375.01	Y	2268	367	1.27	751.33	2.767E-004	2.42	3.02
m	380.08		385	269	1.28	761.45	2.736E-004	6.02	
m	382.67		354	243	1.28	766.64	2.720E-004	6.30	
	392.82		752	216	1.53	786.91	2.658E-004	5.09	
	413.69	Y	2067	122	1.40	828.61	2.542E-004	2.66	
M	422.52		139	49	0.74	846.26	2.496E-004	27.27	1.68
m	426.46	Y	51	40	0.74	854.14	2.476E-004	32.99	
	451.39		213	58	1.23	903.95	2.355E-004	9.11	
	662.32	Y	95	14	1.39	1325.45	1.662E-004	12.23	
	721.81	Y	57	12	1.56	1444.32	1.542E-004	16.88	
	2234.72		11980	15	1.12	4467.56	8.738E-005	1.45	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.06 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 2.590E-002 +/-	1.8%	< 2.467E-005	< 1.194E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 2.129E-002 +/-	2.0%	< 2.028E-005	< 3.364E-012
	Al-26	< 2.480E-002 +/-	18.9%	< 2.362E-005	< 1.304E-006
	K-40	< 2.988E-001 +/-	5.3%	< 2.846E-004	< 4.661E-002
	Co-57	< 1.472E-001 +/-	4.4%	< 1.402E-004	< 1.723E-011
	Co-60	< 3.136E-002 +/-	1.7%	< 2.987E-005	< 2.751E-011
	Se-75	< 1.195E-001 +/-	1.8%	< 1.139E-004	< 8.225E-012
	Kr-85	< 7.000E+000 +/-	3.1%	< 6.667E-003	< 1.764E-008
	Sr-90	< 3.493E-002 +/-	2.2%	< 3.327E-005	< 2.533E-010
	Sb-125	< 1.189E-001 +/-	2.4%	< 1.132E-004	< 1.144E-010
	Ba-133	< 1.033E-001 +/-	1.6%	< 9.842E-005	< 4.082E-010
	Cs-134	< 2.179E-002 +/-	2.2%	< 2.076E-005	< 1.663E-011
X	Cs-137				
	Eu-152	< 1.188E-001 +/-	3.8%	< 1.132E-004	< 6.678E-010
	Eu-154	< 6.079E-002 +/-	2.1%	< 5.790E-005	< 2.280E-010
	Ho-166m	< 2.906E-002 +/-	2.3%	< 2.767E-005	< 1.616E-008

	Bi-207	< 6.374E-003 +/-	1.9%	< 6.070E-006	< 1.160E-010
	Pb-210	< 1.330E+001 +/-	259.0%	< 1.267E-002	< 1.729E-007
	Ra-226	< 5.555E-002 +/-	2.4%	< 5.291E-005	< 5.555E-008
	Ac-227	< 4.035E-001 +/-	8.3%	< 3.843E-004	< 5.528E-009
	Th-230	< 5.939E+001 +/-	83.2%	< 5.656E-002	< 2.910E-003
	Pa-231	< 2.369E+000 +/-	11.2%	< 2.256E-003	< 4.951E-005
	Th-232	< 6.498E-002 +/-	2.4%	< 6.188E-005	< 5.854E-001
	U-232	< 6.957E-002 +/-	2.3%	< 6.626E-005	< 3.221E-009
	U-233	< 1.484E+003 +/-	3.0%	< 1.413E+000	< 1.514E-001
	Pa-234	< 1.113E-001 +/-	12.1%	< 1.060E-004	
	Pa-234m	< 1.490E+002 +/-	2.1%	< 1.419E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 1.467E-001 +/-	2.9%	< 1.397E-004	< 6.704E-002
	Np-237	2.859E-001 +/-	29.1%	2.723E-004	4.003E-004
	Pu-238	< 9.607E+003 +/-	3.1%	< 9.150E+000	< 5.553E-004
	U-238	< 2.413E+000 +/-	2.2%	< 2.298E-003	< 7.095E+000
	Pu-239	2.158E+005 +/-	3.9%	2.055E+002	3.431E+000
	Pu-239B	< 5.589E+003 +/-	16.5%	< 5.323E+000	< 8.885E-002
	U-239	< 2.102E+001 +/-	308.4%	< 2.002E-002	
X	Pu-240				
	Am-241	3.750E+004 +/-	10.2%	3.571E+001	1.080E-002
	Am-241B	2.644E+004 +/-	10.3%	2.518E+001	7.615E-003
	Pu-241	1.576E+005 +/-	28.1%	1.501E+002	1.516E-003
	Pu-241B	3.083E+005 +/-	3.6%	2.936E+002	2.966E-003
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 3.241E-001 +/-	57.7%	< 3.086E-004	< 1.604E-006
	Cm-243	< 4.687E-001 +/-	3.3%	< 4.463E-004	< 8.998E-009
	Cm-244	< 2.903E+004 +/-	14.2%	< 2.765E+001	< 3.542E-004
	Cm-245	< 8.906E-001 +/-	7.8%	< 8.482E-004	< 5.121E-006
	Cm-247	< 5.574E-002 +/-	8.5%	< 5.309E-005	< 5.964E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 6.750E-002 +/-	3.4%	< 6.429E-005	< 1.634E-008
Cf-251	< 4.784E-001 +/-	5.8%	< 4.556E-004	< 2.990E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	3.43E+000 +- 1.32E-001	9.70E-001 +- 2.08E-002

Beta: 2.22E+002 +- 8.83E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	6.03E-001 +- 2.52E-002
203.55	1.28E+000 +- 7.14E-002
375.05	1.89E+000 +- 5.69E-002
413.71	1.99E+000 +- 6.57E-002

Segment 4 Results

Segment: 4 Detector: DET01 Position: 4
C:\Canberra\NDA2k\Data\00000205_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P004_S004

Acquisition Start: 12/22/2008 11:47:10 AM
Elapsed Live Time: 102.17 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.366 +/- 0.0068
SE-75	264.66	0.474 +/- 0.0092
SE-75	279.54	0.472 +/- 0.0092
SE-75	400.66	0.514 +/- 0.0128

Errors quoted at 1.000 sigma

Peak Analysis Results

*** Spectrum Validity Test warnings ***
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 12/22/2008 11:49:12 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.44	Y	54407	6067	1.10	120.73	5.175E-006	1.26	
M	94.72	Y	11064	11479	1.55	191.21	1.315E-004	2.28	62.12
m	98.70	Y	43325	15307	1.56	199.18	1.552E-004	1.86	
m	100.92	Y	7072	15340	1.57	203.61	1.686E-004	2.82	
m	103.36	Y	31554	13038	1.57	208.48	1.833E-004	1.82	
M	111.10	Y	12159	7634	1.38	223.95	2.294E-004	4.27	96.38
m	114.60	Y	9898	9342	1.38	230.95	2.494E-004	4.15	
m	116.66	Y	9238	8764	1.39	235.07	2.607E-004	4.09	
m	120.59	Y	2337	7899	1.40	242.92	2.815E-004	4.78	
m	122.87	Y	1107	7652	1.40	247.48	2.930E-004	6.44	
m	125.27	Y	4284	7324	1.40	252.27	3.045E-004	4.26	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	129.28	Y	21079	6459	1.41	260.28	3.226E-004	3.94	
M	144.16	Y	1541	4290	1.16	290.03	3.774E-004	9.47	2.21
m	146.27	Y	1161	4789	1.16	294.24	3.836E-004	10.30	
m	148.54	Y	3077	5303	1.16	298.77	3.898E-004	8.37	
M	160.72	Y	1499	5436	1.76	323.11	4.155E-004	19.73	4.10
m	164.57	Y	1241	7390	1.77	330.81	4.212E-004	17.23	
	171.48	Y	950	4477	1.45	344.62	4.288E-004	12.66	
	179.16	Y	381	4246	1.06	359.95	4.337E-004	29.89	
	189.35	Y	740	4556	1.14	380.32	4.356E-004	16.61	
	195.71	Y	682	4560	1.14	393.04	4.346E-004	17.98	
M	203.51	Y	4812	3384	1.13	408.62	4.316E-004	2.10	9.17
m	207.99	Y	16172	3324	1.13	417.57	4.291E-004	1.44	
	255.35	Y	789	2141	1.08	512.21	3.849E-004	11.09	
M	264.07	Y	262	1656	1.31	529.64	3.754E-004	13.64	1.57
m	267.51	Y	616	2033	1.31	536.51	3.710E-004	7.09	
	297.51	Y	205	2247	1.15	596.46	3.359E-004	44.82	
M	311.78	Y	864	1514	1.49	624.97	3.212E-004	5.11	3.40
m	320.93	Y	506	1741	1.50	643.26	3.122E-004	7.61	
m	323.28	Y	686	1860	1.50	647.95	3.100E-004	6.01	
M	332.68	Y	5713	1121	1.34	666.74	3.012E-004	2.94	2.81
m	335.64	Y	2275	1059	1.34	672.65	2.985E-004	3.56	
m	341.39	Y	634	1133	1.35	684.14	2.935E-004	6.58	
m	344.95	Y	4996	1083	1.35	691.25	2.904E-004	2.90	
M	366.96	Y	697	987	1.28	735.23	2.725E-004	6.15	8.00
m	368.51	Y	1398	967	1.28	738.34	2.713E-004	3.75	
m	374.99	Y	13375	784	1.29	751.28	2.665E-004	1.46	
m	380.10	Y	2500	592	1.29	761.49	2.628E-004	2.49	
m	382.64	Y	2278	540	1.30	766.57	2.610E-004	2.58	
	392.86	Y	4373	577	1.55	787.00	2.540E-004	2.23	
	413.61	Y	12088	326	1.43	828.46	2.411E-004	1.54	
M	422.53	Y	872	262	1.33	846.29	2.360E-004	4.07	3.04
m	426.60	Y	215	203	1.33	854.42	2.337E-004	8.65	
m	429.74	Y	60	170	1.33	860.69	2.321E-004	21.42	
	451.38	Y	1430	209	1.25	903.94	2.211E-004	3.61	
	618.85	Y	151	35	1.23	1238.58	1.670E-004	11.64	
M	645.90	Y	62	63	1.38	1292.64	1.615E-004	14.82	2.20
m	652.56	Y	59	70	1.39	1305.94	1.603E-004	14.75	
m	658.58	Y	32	63	1.39	1317.97	1.592E-004	22.93	
m	662.31	Y	582	44	1.39	1325.43	1.585E-004	4.03	
	688.58	Y	42	25	1.66	1377.93	1.540E-004	27.38	
	721.87	Y	293	27	1.86	1444.45	1.490E-004	7.18	
	755.91	Y	46	2	1.48	1512.48	1.444E-004	16.87	
	769.10	Y	22	28	0.90	1538.84	1.428E-004	44.79	
	2234.69		11980	16	1.17	4467.51	6.769E-005	1.52	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.17 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 2.331E-002 +/-	1.8%	< 2.220E-005	< 1.075E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 2.555E-002 +/-	2.0%	< 2.433E-005	< 4.037E-012
	Al-26	< 4.601E-002 +/-	14.5%	< 4.382E-005	< 2.420E-006
	K-40	< 2.859E-001 +/-	4.8%	< 2.723E-004	< 4.461E-002
X	Co-57				
	Co-60	< 3.284E-002 +/-	2.5%	< 3.127E-005	< 2.880E-011
	Se-75	< 1.870E-001 +/-	1.7%	< 1.781E-004	< 1.286E-011
	Kr-85	< 1.214E+001 +/-	3.0%	< 1.156E-002	< 3.060E-008
	Sr-90	< 6.559E-002 +/-	2.0%	< 6.247E-005	< 4.756E-010
	Sb-125	< 2.448E-001 +/-	2.2%	< 2.332E-004	< 2.355E-010
	Ba-133	< 1.636E-001 +/-	1.7%	< 1.558E-004	< 6.461E-010
	Cs-134	< 2.759E-002 +/-	1.8%	< 2.628E-005	< 2.105E-011
X	Cs-137				
	Eu-152	< 7.919E-002 +/-	3.6%	< 7.542E-005	< 4.450E-010
	Eu-154	< 7.296E-002 +/-	2.2%	< 6.948E-005	< 2.736E-010
	Ho-166m	< 3.589E-002 +/-	2.3%	< 3.418E-005	< 1.996E-008
	Bi-207	< 3.064E-002 +/-	1.9%	< 2.918E-005	< 5.576E-010
	Pb-210	< 4.172E+003 +/-	37.2%	< 3.973E+000	< 5.423E-005
	Ra-226	< 8.380E-002 +/-	2.2%	< 7.981E-005	< 8.380E-008
	Ac-227	< 6.370E-001 +/-	8.3%	< 6.066E-004	< 8.727E-009
	Th-230	< 3.197E+002 +/-	8.5%	< 3.045E-001	< 1.567E-002
	Pa-231	< 3.775E+000 +/-	11.2%	< 3.595E-003	< 7.889E-005
	Th-232	< 7.197E-002 +/-	2.4%	< 6.855E-005	< 6.485E-001
	U-232	< 1.509E-001 +/-	2.1%	< 1.437E-004	< 6.988E-009
	U-233	< 2.408E+003 +/-	2.6%	< 2.294E+000	< 2.456E-001
	Pa-234	< 1.646E-001 +/-	12.2%	< 1.568E-004	
	Pa-234m	< 2.389E+002 +/-	2.1%	< 2.276E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 2.021E-001 +/-	2.4%	< 1.925E-004	< 9.235E-002
	Np-237	1.080E+000 +/-	7.9%	1.029E-003	1.512E-003
	Pu-238	< 1.359E+004 +/-	2.5%	< 1.294E+001	< 7.854E-004
	U-238	< 2.360E+000 +/-	2.2%	< 2.248E-003	< 6.938E+000
	Pu-239	1.324E+006 +/-	3.5%	1.261E+003	2.105E+001
	Pu-239B	7.335E+005 +/-	1.5%	6.986E+002	1.166E+001
	U-239	< 1.789E+004 +/-	46.3%	< 1.704E+001	
X	Pu-240				
	Am-241	2.269E+005 +/-	4.3%	2.161E+002	6.534E-002
	Am-241B	1.228E+005 +/-	3.8%	1.169E+002	3.537E-002
	Pu-241	9.583E+005 +/-	8.8%	9.127E+002	9.219E-003
	Pu-241B	1.667E+006 +/-	2.6%	1.588E+003	1.604E-002
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 7.129E-001 +/-	1.8%	< 6.789E-004	< 3.529E-006
	Cm-243	< 7.353E-001 +/-	3.3%	< 7.003E-004	< 1.412E-008
	Cm-244	< 3.280E+004 +/-	14.2%	< 3.124E+001	< 4.002E-004
	Cm-245	< 1.239E+000 +/-	7.6%	< 1.180E-003	< 7.124E-006
	Cm-247	< 1.031E-001 +/-	8.5%	< 9.818E-005	< 1.103E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.250E-001 +/-	3.5%	< 1.190E-004	< 3.025E-008
Cf-251	< 6.984E-001 +/-	5.6%	< 6.651E-004	< 4.365E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	2.10E+001 +- 7.47E-001	7.17E+000 +- 1.16E-001

Beta: 2.24E+002 +- 9.02E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	3.71E+000 +- 1.86E-001
203.55	7.02E+000 +- 2.06E-001
375.05	1.16E+001 +- 2.82E-001
413.71	1.22E+001 +- 3.25E-001

Segment 5 Results

Segment: 5 Detector: DET01 Position: 5
C:\Canberra\NDA2k\Data\00000205_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P005_S005

Acquisition Start: 12/22/2008 11:51:21 AM
Elapsed Live Time: 87.69 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.001 +/- 0.0005
SE-75	264.66	0.220 +/- 0.0066
SE-75	279.54	0.238 +/- 0.0068
SE-75	400.66	0.361 +/- 0.0120

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

*** Spectrum Validity Test warnings ***
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 12/22/2008 11:53:23 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.41	Y	128062	10210	1.13	120.67	2.791E-005	1.27	
M	94.65	Y	21659	17145	1.53	191.09	5.984E-005	1.92	116.47
m	98.67	Y	88495	23365	1.54	199.11	6.292E-005	1.64	
m	100.84	Y	13558	23894	1.54	203.46	6.452E-005	2.28	
m	103.30	Y	63651	19341	1.55	208.38	6.626E-005	1.62	
M	111.03	Y	23383	10500	1.40	223.81	7.127E-005	1.62	155.97
m	114.52	Y	19554	12976	1.40	230.80	7.332E-005	1.71	
m	116.61	Y	18646	10867	1.41	234.97	7.447E-005	1.67	
m	120.55	Y	4546	10851	1.41	242.84	7.651E-005	2.95	
m	122.83	Y	1842	9516	1.42	247.39	7.761E-005	5.77	
m	125.22	Y	8400	9086	1.42	252.17	7.871E-005	2.14	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	129.24	Y	40600	7824	1.43	260.20	8.041E-005	1.49	
M	144.13	Y	2833	6551	1.15	289.96	1.452E-004	8.65	2.09
m	146.25	Y	2170	6623	1.16	294.19	1.534E-004	9.23	
m	148.50	Y	5783	7467	1.16	298.68	1.610E-004	7.79	
M	161.04	Y	2399	6819	1.28	323.75	1.935E-004	5.59	6.67
m	164.61	Y	2223	11255	1.28	330.89	2.007E-004	5.23	
m	169.44	Y	428	11001	1.29	340.53	2.093E-004	14.70	
m	171.31	Y	1620	10905	1.29	344.27	2.124E-004	5.84	
	179.16	Y	1161	6804	1.27	359.95	2.239E-004	14.92	
	189.36	Y	1513	6032	1.33	380.34	2.358E-004	10.67	
	195.62	Y	1522	6663	1.21	392.86	2.417E-004	11.38	
M	203.50	Y	9598	5446	1.18	408.59	2.478E-004	2.19	2.79
m	207.93	Y	31935	4943	1.19	417.46	2.507E-004	1.82	
M	237.98		354	2567	0.55	477.50	2.618E-004	14.02	1.86
m	243.47	Y	661	4256	0.56	488.46	2.626E-004	9.59	
m	248.80		198	3733	0.57	499.12	2.630E-004	17.85	
	255.24	Y	1650	2363	1.35	511.99	2.633E-004	6.47	
M	263.84	Y	487	2272	1.14	529.17	2.630E-004	19.54	1.10
m	267.43	Y	1043	2154	1.15	536.35	2.628E-004	17.04	
	297.40	Y	742	2561	1.24	596.24	2.583E-004	14.94	
M	311.75	Y	1594	2187	1.49	624.91	2.549E-004	4.03	4.29
m	316.13	Y	241	2726	1.49	633.67	2.538E-004	18.08	
m	320.84	Y	1153	2398	1.50	643.08	2.525E-004	4.90	
m	323.39	Y	1390	2313	1.50	648.17	2.518E-004	4.28	
M	332.65	Y	10669	1838	1.31	666.67	2.491E-004	1.65	5.32
m	335.59	Y	4459	1889	1.32	672.55	2.482E-004	2.19	
m	341.35	Y	1278	1780	1.32	684.05	2.464E-004	4.29	
m	344.90	Y	9703	1678	1.33	691.16	2.453E-004	1.69	
M	368.31	Y	2988	1322	1.36	737.94	2.377E-004	2.86	24.39
m	374.95	Y	25713	1158	1.37	751.20	2.355E-004	1.65	
m	380.05	Y	4847	986	1.37	761.40	2.338E-004	2.35	
m	382.64	Y	4306	840	1.38	766.58	2.329E-004	2.42	
	392.81	Y	8697	965	1.52	786.89	2.295E-004	1.91	
M	413.58	Y	22912	534	1.36	828.40	2.213E-004	1.72	2.98
m	419.09	Y	87	445	1.36	839.41	2.190E-004	27.27	
m	422.43	Y	1683	484	1.37	846.09	2.177E-004	3.51	
m	426.43	Y	381	472	1.37	854.08	2.160E-004	8.56	
M	445.61	Y	97	310	1.32	892.41	2.085E-004	21.00	0.79
m	451.34	Y	2861	297	1.32	903.85	2.063E-004	4.99	
	618.89	Y	245	56	1.34	1238.66	1.581E-004	10.10	
M	640.06	Y	103	68	1.49	1280.97	1.537E-004	14.45	1.90
m	645.77	Y	146	60	1.50	1292.38	1.526E-004	12.03	
m	652.49	Y	184	65	1.50	1305.81	1.513E-004	10.62	
m	658.54	Y	86	63	1.51	1317.90	1.501E-004	16.40	
m	662.25	Y	1229	60	1.51	1325.31	1.494E-004	6.08	
	688.59	Y	116	32	1.30	1377.96	1.447E-004	15.05	
	703.26	Y	67	23	0.71	1407.26	1.423E-004	21.30	
	721.75	Y	562	42	1.55	1444.20	1.394E-004	5.63	
	769.02	Y	198	11	1.81	1538.68	1.326E-004	9.12	
	2234.65		11980	57	1.13	4467.44	8.782E-005	1.63	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.35 +/- 0.02

Y = Peak Identified by NID

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 3.153E-002 +/-	1.8%	< 3.003E-005	< 1.453E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 3.816E-002 +/-	2.0%	< 3.634E-005	< 6.029E-012
	Al-26	< 4.813E-002 +/-	14.7%	< 4.584E-005	< 2.532E-006
	K-40	< 2.732E-001 +/-	4.9%	< 2.602E-004	< 4.262E-002
X	Co-57				
	Co-60	< 3.423E-002 +/-	1.6%	< 3.260E-005	< 3.002E-011
	Se-75	< 2.953E-001 +/-	1.9%	< 2.812E-004	< 2.032E-011
	Kr-85	< 1.669E+001 +/-	3.1%	< 1.590E-002	< 4.206E-008
	Sr-90	< 9.362E-002 +/-	2.2%	< 8.916E-005	< 6.787E-010
	Sb-125	< 3.130E-001 +/-	2.3%	< 2.981E-004	< 3.011E-010
	Ba-133	< 2.243E-001 +/-	1.7%	< 2.136E-004	< 8.861E-010
	Cs-134	< 3.670E-002 +/-	1.8%	< 3.496E-005	< 2.800E-011
X	Cs-137				
X	Eu-152				
	Eu-154	< 1.090E-001 +/-	2.2%	< 1.038E-004	< 4.086E-010
	Ho-166m	< 5.248E-002 +/-	2.2%	< 4.998E-005	< 2.918E-008
	Bi-207	< 3.996E-002 +/-	1.8%	< 3.805E-005	< 7.272E-010
	Pb-210	< 2.786E+001 +/-	36.7%	< 2.654E-002	< 3.622E-007
	Ra-226	< 1.115E-001 +/-	2.3%	< 1.062E-004	< 1.115E-007
	Ac-227	< 1.018E+000 +/-	8.3%	< 9.697E-004	< 1.395E-008
	Th-230	< 1.356E+002 +/-	13.1%	< 1.292E-001	< 6.646E-003
	Pa-231	< 5.306E+000 +/-	11.2%	< 5.054E-003	< 1.109E-004
	Th-232	< 1.244E-001 +/-	2.4%	< 1.185E-004	< 1.121E+000
	U-232	< 1.957E-001 +/-	2.2%	< 1.864E-004	< 9.060E-009
	U-233	< 3.976E+003 +/-	2.7%	< 3.786E+000	< 4.055E-001
	Pa-234	< 1.832E-001 +/-	12.2%	< 1.744E-004	
	Pa-234m	< 2.273E+002 +/-	2.1%	< 2.164E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 3.404E-001 +/-	2.5%	< 3.242E-004	< 1.556E-001
	Np-237	2.551E+000 +/-	6.3%	2.429E-003	3.571E-003
	Pu-238	< 2.259E+004 +/-	2.6%	< 2.151E+001	< 1.306E-003
	U-238	< 4.132E+000 +/-	2.1%	< 3.935E-003	< 1.215E+001
	Pu-239	1.578E+006 +/-	1.6%	1.503E+003	2.510E+001
	Pu-239B	1.643E+006 +/-	1.3%	1.564E+003	2.611E+001
	U-239	< 5.776E+001 +/-	45.9%	< 5.501E-002	
	Pu-240	2.312E+005 +/-	18.3%	2.202E+002	1.006E+000
	Am-241	4.819E+005 +/-	4.7%	4.590E+002	1.388E-001
	Am-241B	4.384E+005 +/-	4.6%	4.175E+002	1.262E-001
	Pu-241	4.360E+006 +/-	8.3%	4.153E+003	4.194E-002
	Pu-241B	5.501E+006 +/-	2.8%	5.239E+003	5.292E-002
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 7.433E-001 +/-	8.4%	< 7.079E-004	< 3.679E-006
	Cm-243	< 1.085E+000 +/-	3.3%	< 1.033E-003	< 2.083E-008
	Cm-244	< 3.779E+004 +/-	14.2%	< 3.599E+001	< 4.610E-004

Cm-245	< 2.090E+000	+/- 7.7%	< 1.990E-003	< 1.202E-005
Cm-247	< 1.511E-001	+/- 8.5%	< 1.439E-004	< 1.617E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.831E-001 +/-	3.5%	< 1.744E-004	< 4.432E-008
Cf-251	< 1.200E+000 +/-	5.6%	< 1.143E-003	< 7.500E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 16:
Beta is too small (negative or less than lower limit)

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	- correction not done -	2.51E+001 +- 4.07E-001

Beta: -2.71E+000 +- 1.22E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in attempted correction: 4

Energy	Mass (g)

Segment 6 Results

Segment: 6 Detector: DET01 Position: 6
C:\Canberra\NDA2k\Data\00000205_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P006_S006

Acquisition Start: 12/22/2008 11:55:33 AM
Elapsed Live Time: 88.50 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.001 +/- 0.0005
SE-75	264.66	0.203 +/- 0.0063
SE-75	279.54	0.222 +/- 0.0063
SE-75	400.66	0.384 +/- 0.0122

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

*** Spectrum Validity Test warnings ***
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 12/22/2008 11:57:34 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	49.45		2174	9215	2.02	100.77	4.202E-008	9.12	
	59.42	Y	116348	9984	1.12	120.68	6.760E-007	1.28	
M	94.65	Y	21282	17000	1.53	191.09	3.229E-005	1.93	105.10
m	98.67	Y	86194	23120	1.54	199.12	3.879E-005	1.65	
m	100.87	Y	13482	23602	1.54	203.51	4.242E-005	2.28	
m	103.32	Y	61128	19070	1.54	208.40	4.647E-005	1.63	
M	111.05	Y	23682	10145	1.36	223.85	5.896E-005	3.10	151.28
m	114.54	Y	19099	12828	1.37	230.83	6.430E-005	3.07	
m	116.64	Y	17842	13025	1.37	235.02	6.739E-005	3.01	
m	120.56	Y	4312	10829	1.38	242.86	7.286E-005	3.82	
m	122.79	Y	2245	10431	1.38	247.31	7.579E-005	5.25	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	125.23	Y	8609	10946	1.38	252.19	7.883E-005	3.21	
m	129.26	Y	41026	8765	1.39	260.24	8.349E-005	2.88	
M	144.11	Y	2935	6231	1.18	289.91	1.615E-004	8.79	2.66
m	146.26	Y	2461	6270	1.19	294.22	1.719E-004	9.16	
m	148.52	Y	5822	7025	1.19	298.73	1.817E-004	7.86	
M	160.88	Y	2309	6800	1.52	323.42	2.230E-004	9.91	7.34
m	164.57	Y	2011	8915	1.52	330.81	2.324E-004	9.62	
	171.38	Y	1899	6488	1.22	344.42	2.472E-004	8.89	
	179.17	Y	693	5602	1.29	359.98	2.604E-004	21.22	
	189.21	Y	1154	6914	1.16	380.05	2.728E-004	15.08	
	195.58	Y	1347	6062	1.21	392.77	2.785E-004	11.92	
M	203.48	Y	9506	5692	1.18	408.55	2.836E-004	2.18	1.11
m	207.94	Y	31072	5087	1.18	417.47	2.857E-004	1.80	
	243.41	Y	693	3525	1.22	488.35	2.882E-004	17.99	
	255.32	Y	1397	3144	1.14	512.15	2.856E-004	8.80	
M	263.95	Y	456	2507	1.17	529.40	2.832E-004	10.94	0.35
m	267.50	Y	1120	2665	1.18	536.49	2.822E-004	5.56	
	297.35	Y	652	1867	1.23	596.13	2.756E-004	13.58	
	311.78	Y	1392	1984	1.28	624.97	2.720E-004	7.16	
M	320.91	Y	1073	2056	1.80	643.22	2.694E-004	5.86	3.52
m	323.40	Y	1570	3009	1.81	648.19	2.687E-004	4.25	
M	332.64	Y	10754	1570	1.33	666.66	2.660E-004	2.55	4.61
m	335.59	Y	4434	1484	1.34	672.55	2.652E-004	2.96	
m	341.38	Y	1277	1590	1.34	684.13	2.635E-004	4.99	
m	344.89	Y	9455	1520	1.35	691.13	2.624E-004	2.55	
M	361.79	Y	280	1335	1.28	724.90	2.572E-004	13.38	11.52
m	366.90	Y	1489	1306	1.29	735.12	2.558E-004	4.40	
m	368.43	Y	2662	1413	1.29	738.18	2.552E-004	3.02	
m	370.78	Y	469	1258	1.29	742.86	2.545E-004	8.52	
m	374.96	Y	25382	1110	1.30	751.23	2.533E-004	1.41	
m	380.05	Y	4875	930	1.30	761.39	2.517E-004	2.08	
m	382.66	Y	4312	881	1.30	766.62	2.510E-004	2.18	
	392.81	Y	8632	990	1.55	786.90	2.480E-004	1.91	
	413.54	Y	22644	684	1.43	828.32	2.402E-004	1.46	
M	422.46	Y	1635	500	1.25	846.15	2.364E-004	3.34	2.70
m	426.52	Y	352	479	1.26	854.26	2.349E-004	8.34	
M	445.77	Y	154	259	1.36	892.72	2.275E-004	14.57	0.43
m	451.33	Y	2801	248	1.36	903.83	2.256E-004	4.34	
	618.80	Y	216	60	2.00	1238.48	1.821E-004	11.07	
	632.94	Y	37	35	1.10	1266.74	1.794E-004	35.38	
M	645.68	Y	128	80	1.40	1292.21	1.771E-004	12.39	2.16
m	652.65	Y	141	81	1.41	1306.13	1.758E-004	11.28	
m	658.78	Y	83	74	1.41	1318.38	1.748E-004	16.20	
m	662.29	Y	1140	55	1.41	1325.38	1.742E-004	3.66	
	688.58	Y	139	35	1.64	1377.94	1.698E-004	13.90	
	721.76	Y	564	43	1.72	1444.23	1.646E-004	5.61	
	737.07	Y	29	9	1.52	1474.83	1.623E-004	30.00	
	755.88	Y	68	16	1.72	1512.41	1.596E-004	19.01	
	769.01	Y	125	18	0.86	1538.64	1.578E-004	12.88	
	2234.66		11980	69	1.13	4467.45	5.337E-005	1.63	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.35 +/- 0.02

Y = Peak Identified by NID

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 2.857E-002 +/-	1.9%	< 2.721E-005	< 1.317E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 3.091E-002 +/-	1.9%	< 2.944E-005	< 4.884E-012
	Al-26	< 6.304E-002 +/-	19.8%	< 6.004E-005	< 3.316E-006
	K-40	< 2.397E-001 +/-	5.3%	< 2.283E-004	< 3.740E-002
	Co-57	1.869E+000 +/-	43.8%	1.780E-003	2.187E-010
	Co-60	< 3.053E-002 +/-	1.7%	< 2.907E-005	< 2.677E-011
	Se-75	< 2.603E-001 +/-	2.3%	< 2.479E-004	< 1.791E-011
	Kr-85	< 1.533E+001 +/-	3.2%	< 1.460E-002	< 3.864E-008
	Sr-90	< 7.681E-002 +/-	2.6%	< 7.316E-005	< 5.569E-010
	Sb-125	< 3.019E-001 +/-	2.7%	< 2.875E-004	< 2.904E-010
	Ba-133	< 2.113E-001 +/-	1.8%	< 2.013E-004	< 8.347E-010
	Cs-134	< 2.823E-002 +/-	2.0%	< 2.688E-005	< 2.154E-011
X	Cs-137				
	Eu-152	< 1.317E-001 +/-	1.8%	< 1.254E-004	< 7.399E-010
	Eu-154	< 8.830E-002 +/-	2.1%	< 8.410E-005	< 3.311E-010
	Ho-166m	< 4.216E-002 +/-	2.4%	< 4.015E-005	< 2.344E-008
	Bi-207	< 1.936E-002 +/-	1.9%	< 1.844E-005	< 3.523E-010
	Pb-210	< 3.332E+004 +/-	309.7%	< 3.173E+001	< 4.331E-004
	Ra-226	< 1.021E-001 +/-	2.7%	< 9.726E-005	< 1.021E-007
	Ac-227	< 9.069E-001 +/-	8.5%	< 8.637E-004	< 1.242E-008
	Th-230	< 4.500E+002 +/-	9.0%	< 4.286E-001	< 2.205E-002
	Pa-231	< 4.991E+000 +/-	11.3%	< 4.753E-003	< 1.043E-004
	Th-232	< 1.049E-001 +/-	2.4%	< 9.986E-005	< 9.447E-001
	U-232	< 1.861E-001 +/-	2.6%	< 1.772E-004	< 8.616E-009
	U-233	< 3.431E+003 +/-	4.0%	< 3.267E+000	< 3.499E-001
	Pa-234	< 1.715E-001 +/-	12.2%	< 1.634E-004	
	Pa-234m	< 1.000E+002 +/-	2.1%	< 9.528E-002	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 2.838E-001 +/-	4.0%	< 2.703E-004	< 1.297E-001
	Np-237	1.989E+000 +/-	11.2%	1.894E-003	2.785E-003
	Pu-238	< 1.914E+004 +/-	4.2%	< 1.823E+001	< 1.107E-003
	U-238	< 3.864E+000 +/-	2.1%	< 3.680E-003	< 1.136E+001
	Pu-239	1.451E+006 +/-	4.7%	1.382E+003	2.307E+001
	Pu-239B	1.491E+006 +/-	1.4%	1.420E+003	2.371E+001
	U-239	< 2.653E+005 +/-	368.5%	< 2.527E+002	
	Pu-240	1.479E+005 +/-	42.3%	1.409E+002	6.435E-001
	Am-241	4.005E+005 +/-	4.0%	3.815E+002	1.154E-001
	Am-241B	4.718E+005 +/-	5.1%	4.493E+002	1.359E-001
	Pu-241	3.890E+006 +/-	9.0%	3.705E+003	3.742E-002
	Pu-241B	4.761E+006 +/-	3.2%	4.534E+003	4.580E-002
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 9.403E-001 +/-	2.2%	< 8.955E-004	< 4.654E-006
	Cm-243	< 9.698E-001 +/-	3.5%	< 9.237E-004	< 1.862E-008
	Cm-244	< 4.734E+004 +/-	14.2%	< 4.509E+001	< 5.776E-004

Cm-245	< 1.749E+000	+/- 8.4%	< 1.665E-003	< 1.005E-005
Cm-247	< 1.420E-001	+/- 8.5%	< 1.352E-004	< 1.519E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.711E-001 +/-	3.5%	< 1.630E-004	< 4.142E-008
Cf-251	< 9.894E-001 +/-	6.5%	< 9.423E-004	< 6.184E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	2.31E+001 +- 1.08E+000	2.28E+001 +- 3.79E-001

Beta: 3.77E+000 +- 1.40E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	2.79E+001 +- 2.38E+000
203.55	2.11E+001 +- 8.55E-001
375.05	2.31E+001 +- 5.89E-001
413.71	2.30E+001 +- 6.27E-001

Segment 7 Results

Segment: 7 Detector: DET01 Position: 7
C:\Canberra\NDA2k\Data\00000205_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P007_S007

Acquisition Start: 12/22/2008 11:59:44 AM
Elapsed Live Time: 100.58 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.066 +/- 0.0033
SE-75	264.66	0.299 +/- 0.0072
SE-75	279.54	0.313 +/- 0.0070
SE-75	400.66	0.429 +/- 0.0115

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

*** Spectrum Validity Test warnings ***
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 12/22/2008 12:01:46 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.44	Y	76475	7594	1.10	120.72	2.371E-006	1.24	
M	94.71	Y	12473	12668	1.52	191.19	7.185E-005	2.18	71.87
m	98.70	Y	48758	17169	1.52	199.17	8.573E-005	1.80	
m	100.88	Y	7545	17481	1.53	203.54	9.354E-005	2.71	
m	103.32	Y	33771	14090	1.53	208.41	1.023E-004	1.78	
M	111.07	Y	12710	8307	1.39	223.90	1.301E-004	1.35	85.38
m	114.59	Y	10822	9181	1.39	230.93	1.424E-004	1.37	
m	116.66	Y	9805	8550	1.40	235.06	1.494E-004	1.37	
m	120.61	Y	2473	7667	1.40	242.96	1.623E-004	1.90	
m	122.87	Y	1525	6698	1.41	247.48	1.694E-004	2.47	
m	125.25	Y	4972	7034	1.41	252.23	1.766E-004	1.51	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	129.29	Y	23528	5433	1.42	260.30	1.881E-004	1.30	
M	144.17	Y	1450	4587	1.09	290.03	2.370E-004	10.21	1.23
m	146.34	Y	1302	4624	1.09	294.38	2.447E-004	10.70	
m	148.55	Y	3156	4680	1.09	298.78	2.520E-004	9.14	
M	161.35	Y	1372	4213	0.85	324.37	2.873E-004	19.23	3.29
m	164.68	Y	1232	7860	0.85	331.02	2.946E-004	10.96	
m	171.49	Y	902	9276	0.86	344.62	3.072E-004	10.34	
	179.09	Y	292	3953	1.06	359.82	3.181E-004	37.34	
	189.24	Y	942	4659	1.42	380.09	3.279E-004	13.62	
	195.74	Y	1138	4412	1.40	393.09	3.319E-004	11.08	
M	203.53	Y	5400	3726	1.13	408.65	3.346E-004	2.02	7.20
m	207.98	Y	17159	3398	1.13	417.54	3.352E-004	1.44	
	243.24	Y	411	2407	1.17	488.01	3.259E-004	22.25	
	255.43	Y	772	1934	1.25	512.37	3.190E-004	10.80	
M	263.92	Y	258	1753	1.25	529.33	3.137E-004	14.43	1.53
m	267.43	Y	609	2018	1.25	536.35	3.111E-004	7.28	
	297.35	Y	266	1702	1.55	596.14	2.891E-004	28.84	
	311.77	Y	788	1546	1.25	624.95	2.790E-004	9.89	
M	320.88	Y	568	1290	1.66	643.16	2.728E-004	7.44	3.09
m	323.39	Y	864	1952	1.66	648.17	2.712E-004	5.26	
M	332.67	Y	5883	1315	1.28	666.73	2.651E-004	1.85	3.39
m	335.61	Y	2345	1222	1.28	672.59	2.632E-004	2.68	
m	341.27	Y	581	1161	1.29	683.89	2.597E-004	6.31	
m	344.93	Y	5146	1206	1.29	691.22	2.574E-004	1.93	
M	366.92	Y	771	904	1.29	735.16	2.446E-004	5.79	7.61
m	368.51	Y	1284	988	1.29	738.33	2.437E-004	4.02	
m	374.98	Y	13975	805	1.30	751.27	2.402E-004	1.46	
m	380.09	Y	2737	612	1.30	761.48	2.375E-004	2.42	
m	382.67	Y	2291	560	1.31	766.64	2.361E-004	2.60	
	392.84	Y	4582	625	1.50	786.96	2.311E-004	2.25	
	413.62	Y	12398	398	1.42	828.47	2.204E-004	1.55	
M	422.48	Y	792	246	1.22	846.19	2.160E-004	4.50	1.83
m	426.55	Y	200	271	1.22	854.31	2.141E-004	10.00	
	451.39	Y	1502	187	1.33	903.96	2.032E-004	3.51	
	618.72	Y	104	39	1.79	1238.32	1.581E-004	15.76	
M	640.16	Y	43	49	1.45	1281.17	1.546E-004	22.88	1.31
m	645.73	Y	77	57	1.45	1292.30	1.537E-004	14.80	
m	652.48	Y	77	58	1.46	1305.80	1.527E-004	14.47	
m	658.72	Y	58	54	1.46	1318.26	1.518E-004	17.63	
m	662.29	Y	634	38	1.47	1325.39	1.512E-004	4.54	
	688.44	Y	83	16	1.32	1377.65	1.477E-004	15.50	
M	717.49	Y	23	8	1.47	1435.69	1.442E-004	25.22	1.05
m	721.85	Y	330	9	1.47	1444.41	1.437E-004	5.99	
	769.22	Y	96	12	1.63	1539.08	1.387E-004	13.32	
	2234.69		11980	39	1.17	4467.51	4.258E-005	1.54	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.20 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

.Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 3.236E-002 +/-	1.8%	< 3.082E-005	< 1.492E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 3.216E-002 +/-	2.0%	< 3.063E-005	< 5.082E-012
	Al-26	< 5.300E-002 +/-	15.5%	< 5.048E-005	< 2.788E-006
	K-40	< 2.132E-001 +/-	5.0%	< 2.030E-004	< 3.326E-002
X	Co-57				
	Co-60	< 3.496E-002 +/-	1.7%	< 3.330E-005	< 3.066E-011
	Se-75	< 1.947E-001 +/-	1.9%	< 1.855E-004	< 1.340E-011
	Kr-85	< 1.178E+001 +/-	3.1%	< 1.122E-002	< 2.969E-008
	Sr-90	< 6.562E-002 +/-	2.1%	< 6.249E-005	< 4.757E-010
	Sb-125	< 2.587E-001 +/-	2.3%	< 2.464E-004	< 2.489E-010
	Ba-133	< 1.680E-001 +/-	1.7%	< 1.600E-004	< 6.634E-010
	Cs-134	< 3.176E-002 +/-	1.8%	< 3.025E-005	< 2.423E-011
X	Cs-137				
X	Eu-152				
	Eu-154	< 9.185E-002 +/-	2.2%	< 8.747E-005	< 3.444E-010
	Ho-166m	< 3.557E-002 +/-	2.2%	< 3.387E-005	< 1.977E-008
	Bi-207	< 2.329E-002 +/-	1.9%	< 2.218E-005	< 4.239E-010
	Pb-210	< 5.643E+003 +/-	70.4%	< 5.374E+000	< 7.335E-005
	Ra-226	< 1.036E-001 +/-	2.3%	< 9.863E-005	< 1.036E-007
	Ac-227	< 6.607E-001 +/-	8.3%	< 6.292E-004	< 9.052E-009
	Th-230	< 3.268E+002 +/-	8.6%	< 3.113E-001	< 1.602E-002
	Pa-231	< 3.877E+000 +/-	11.2%	< 3.692E-003	< 8.102E-005
	Th-232	< 9.875E-002 +/-	2.4%	< 9.405E-005	< 8.898E-001
	U-232	< 1.590E-001 +/-	2.2%	< 1.514E-004	< 7.362E-009
	U-233	< 2.489E+003 +/-	2.9%	< 2.371E+000	< 2.539E-001
	Pa-234	< 1.225E-001 +/-	12.2%	< 1.167E-004	
	Pa-234m	< 1.620E+002 +/-	2.1%	< 1.543E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 2.102E-001 +/-	2.6%	< 2.002E-004	< 9.608E-002
	Np-237	1.075E+000 +/-	15.4%	1.024E-003	1.505E-003
	Pu-238	< 1.402E+004 +/-	2.8%	< 1.335E+001	< 8.105E-004
	U-238	< 2.822E+000 +/-	2.2%	< 2.688E-003	< 8.296E+000
	Pu-239	1.172E+006 +/-	3.3%	1.116E+003	1.864E+001
	Pu-239B	8.560E+005 +/-	1.4%	8.153E+002	1.361E+001
	U-239	< 3.508E+004 +/-	85.6%	< 3.341E+001	
	Pu-240	1.842E+005 +/-	21.6%	1.754E+002	8.012E-001
	Am-241	2.612E+005 +/-	4.3%	2.488E+002	7.523E-002
	Am-241B	2.243E+005 +/-	3.5%	2.137E+002	6.461E-002
	Pu-241	1.521E+006 +/-	9.7%	1.448E+003	1.463E-002
	Pu-241B	2.239E+006 +/-	2.7%	2.133E+003	2.154E-002
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 7.251E-001 +/-	1.9%	< 6.905E-004	< 3.589E-006
	Cm-243	< 7.478E-001 +/-	3.4%	< 7.122E-004	< 1.436E-008
	Cm-244	< 3.720E+004 +/-	14.2%	< 3.543E+001	< 4.539E-004
	Cm-245	< 1.282E+000 +/-	7.7%	< 1.221E-003	< 7.374E-006
	Cm-247	< 1.097E-001 +/-	8.5%	< 1.045E-004	< 1.174E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.331E-001 +/-	3.5%	< 1.268E-004	< 3.222E-008
Cf-251	< 7.147E-001 +/-	5.7%	< 6.807E-004	< 4.467E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.86E+001 +- 6.19E-001	1.05E+001 +- 1.58E-001

Beta: 1.24E+002 +- 7.81E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	7.10E+000 +- 2.75E-001
203.55	1.02E+001 +- 3.09E-001
375.05	1.34E+001 +- 3.34E-001
413.71	1.37E+001 +- 3.73E-001

Segment 8 Results

Segment: 8 Detector: DET01 Position: 8
C:\Canberra\NDA2k\Data\00000205_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P008_S008

Acquisition Start: 12/22/2008 12:03:55 PM
Elapsed Live Time: 113.15 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.376 +/- 0.0065
SE-75	264.66	0.518 +/- 0.0079
SE-75	279.54	0.540 +/- 0.0094
SE-75	400.66	0.589 +/- 0.0126

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

*** Spectrum Validity Test warnings ***
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 12/22/2008 12:05:57 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.49	Y	21789	3328	1.11	120.81	9.344E-005	1.37	
M	94.74	Y	3968	6339	1.52	191.26	2.317E-004	3.65	21.51
m	98.71	Y	13739	9149	1.53	199.20	2.445E-004	2.78	
m	100.90	Y	2114	9154	1.53	203.57	2.512E-004	4.79	
m	103.34	Y	8901	7367	1.54	208.44	2.585E-004	2.79	
M	111.15	Y	3300	3776	1.29	224.06	2.795E-004	3.55	22.37
m	114.64	Y	2836	4781	1.30	231.04	2.880E-004	3.68	
m	116.73	Y	2267	4423	1.30	235.21	2.927E-004	3.76	
m	120.60	Y	596	4045	1.31	242.94	3.009E-004	8.00	
m	125.24	Y	1641	3662	1.31	252.22	3.099E-004	4.24	
m	129.32	Y	6883	3183	1.32	260.36	3.170E-004	2.90	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
M	144.34	Y	531	2113	1.15	290.37	3.396E-004	15.24	8.12
m	148.56	Y	986	2870	1.16	298.82	3.450E-004	13.05	
M	161.00	Y	375	2489	1.20	323.68	3.573E-004	11.10	0.76
m	164.68	Y	254	2735	1.21	331.03	3.601E-004	15.19	
	179.19	Y	155	2178	0.97	360.01	3.676E-004	47.76	
	189.17	Y	224	2047	0.99	379.96	3.701E-004	32.32	
	195.61	Y	179	1665	0.95	392.83	3.707E-004	35.41	
M	203.62	Y	1451	1642	1.23	408.84	3.706E-004	3.93	1.86
m	208.00	Y	4685	1425	1.23	417.60	3.701E-004	2.48	
	255.27	Y	136	866	1.09	512.05	3.538E-004	34.04	
	267.71	Y	113	855	1.31	536.91	3.480E-004	41.64	
	311.84	Y	181	773	1.35	625.09	3.225E-004	25.81	
M	332.69	Y	1481	686	1.26	666.75	3.090E-004	3.06	0.93
m	335.72	Y	621	636	1.26	672.81	3.071E-004	4.93	
m	341.36	Y	212	596	1.27	684.08	3.035E-004	10.40	
m	344.94	Y	1300	555	1.27	691.24	3.013E-004	3.22	
	368.11	Y	466	530	2.55	737.54	2.871E-004	9.52	
M	375.01	Y	3402	371	1.28	751.33	2.830E-004	2.07	4.84
m	380.12	Y	673	296	1.28	761.53	2.801E-004	4.39	
m	382.69	Y	568	261	1.28	766.67	2.786E-004	4.76	
	392.87	Y	1144	243	1.46	787.01	2.728E-004	3.98	
	413.70	Y	3236	134	1.39	828.64	2.615E-004	2.21	
	422.58	Y	187	117	1.31	846.38	2.569E-004	11.91	
	451.43	Y	363	61	1.36	904.02	2.429E-004	6.60	
	618.56	Y	36	9	0.88	1238.01	1.832E-004	21.75	
M	658.61	Y	16	15	1.24	1318.05	1.732E-004	33.00	1.55
m	662.24	Y	146	13	1.24	1325.28	1.724E-004	8.70	
	721.95	Y	84	8	1.91	1444.60	1.599E-004	12.67	
	2234.71		11980	17	1.13	4467.54	1.083E-004	1.46	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.07 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 2.428E-002 +/-	1.8%	< 2.312E-005	< 1.119E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 1.439E-002 +/-	1.9%	< 1.371E-005	< 2.274E-012
	Al-26	< 2.285E-002 +/-	18.8%	< 2.176E-005	< 1.202E-006
	K-40	< 1.795E-001 +/-	5.3%	< 1.709E-004	< 2.800E-002
	Co-57	4.520E-001 +/-	10.8%	4.305E-004	5.288E-011
	Co-60	< 3.265E-002 +/-	1.7%	< 3.109E-005	< 2.863E-011
	Se-75	< 1.258E-001 +/-	1.8%	< 1.198E-004	< 8.652E-012
	Kr-85	< 7.772E+000 +/-	3.0%	< 7.402E-003	< 1.959E-008
	Sr-90	< 3.172E-002 +/-	2.2%	< 3.021E-005	< 2.300E-010
	Sb-125	< 1.295E-001 +/-	1.9%	< 1.233E-004	< 1.246E-010
	Ba-133	< 1.024E-001 +/-	1.6%	< 9.749E-005	< 4.044E-010
	Cs-134	< 2.408E-002 +/-	2.1%	< 2.294E-005	< 1.838E-011
X	Cs-137				
	Eu-152	< 1.040E-001 +/-	3.8%	< 9.908E-005	< 5.846E-010
	Eu-154	< 4.109E-002 +/-	2.1%	< 3.914E-005	< 1.541E-010
	Ho-166m	< 3.443E-002 +/-	2.3%	< 3.279E-005	< 1.914E-008
	Bi-207	< 2.737E-002 +/-	2.1%	< 2.607E-005	< 4.981E-010
	Pb-210	< 1.554E+001 +/-	259.0%	< 1.480E-002	< 2.020E-007
	Ra-226	< 6.310E-002 +/-	2.4%	< 6.010E-005	< 6.310E-008
	Ac-227	< 4.531E-001 +/-	8.3%	< 4.315E-004	< 6.208E-009
	Th-230	< 6.317E+001 +/-	83.3%	< 6.016E-002	< 3.095E-003
	Pa-231	< 2.607E+000 +/-	11.2%	< 2.483E-003	< 5.448E-005
	Th-232	< 7.298E-002 +/-	2.3%	< 6.950E-005	< 6.575E-001
	U-232	< 9.472E-002 +/-	2.3%	< 9.021E-005	< 4.385E-009
	U-233	< 1.717E+003 +/-	3.0%	< 1.636E+000	< 1.752E-001
	Pa-234	< 2.557E-002 +/-	12.2%	< 2.436E-005	
	Pa-234m	< 9.189E+001 +/-	2.1%	< 8.751E-002	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 1.592E-001 +/-	2.9%	< 1.516E-004	< 7.274E-002
	Np-237	2.039E-001 +/-	41.7%	1.941E-004	2.854E-004
	Pu-238	< 1.025E+004 +/-	3.1%	< 9.765E+000	< 5.926E-004
	U-238	< 3.029E+000 +/-	2.1%	< 2.884E-003	< 8.904E+000
	Pu-239	2.738E+005 +/-	3.6%	2.608E+002	4.354E+000
	Pu-239B	1.862E+005 +/-	2.0%	1.773E+002	2.960E+000
	U-239	< 4.737E+001 +/-	308.3%	< 4.512E-002	
X	Pu-240				
	Am-241	5.463E+004 +/-	7.6%	5.203E+001	1.573E-002
	Am-241B	4.379E+004 +/-	10.0%	4.170E+001	1.261E-002
	Pu-241	3.471E+005 +/-	13.4%	3.306E+002	3.339E-003
	Pu-241B	5.241E+005 +/-	3.5%	4.991E+002	5.042E-003
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 3.409E-001 +/-	57.8%	< 3.247E-004	< 1.688E-006
	Cm-243	< 5.156E-001 +/-	3.3%	< 4.911E-004	< 9.900E-009
	Cm-244	< 2.800E+004 +/-	14.1%	< 2.667E+001	< 3.416E-004
	Cm-245	< 9.488E-001 +/-	7.8%	< 9.036E-004	< 5.456E-006
	Cm-247	< 6.058E-002 +/-	8.5%	< 5.770E-005	< 6.483E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 7.240E-002 +/-	3.4%	< 6.896E-005	< 1.752E-008
Cf-251	< 5.422E-001 +/-	5.8%	< 5.164E-004	< 3.389E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	4.35E+000 +- 1.58E-001	2.08E+000 +- 3.79E-002

Beta: 1.56E+002 +- 8.89E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.23E+000 +- 5.61E-002
203.55	2.46E+000 +- 1.12E-001
375.05	2.77E+000 +- 7.58E-002
413.71	3.02E+000 +- 8.92E-002

Segment 9 Results

Segment: 9 Detector: DET01 Position: 9
C:\Canberra\NDA2k\Data\00000205_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P009_S009

Acquisition Start: 12/22/2008 12:08:06 PM
Elapsed Live Time: 117.64 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.373 +/- 0.0062
SE-75	264.66	0.529 +/- 0.0079
SE-75	279.54	0.541 +/- 0.0092
SE-75	400.66	0.575 +/- 0.0120

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/22/2008 12:10:08 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.40	Y	2918	1227	1.30	120.65	1.311E-005	2.82	
M	98.81	Y	473	3251	1.15	199.40	1.878E-004	31.28	2.02
m	103.14	Y	276	2594	1.16	208.05	2.098E-004	32.49	
	111.21		151	2179	0.72	224.17	2.473E-004	46.92	
	375.24		43	121	1.00	751.79	2.852E-004	43.30	
	413.88		54	25	0.66	829.00	2.665E-004	19.86	
	2234.72		11980	6	1.11	4467.57	5.245E-005	1.43	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.02 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 4.064E-003 +/-	1.9%	< 3.871E-006	< 1.874E-016
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 2.729E-002 +/-	1.9%	< 2.599E-005	< 4.311E-012
	Al-26	< 2.789E-002 +/-	19.6%	< 2.656E-005	< 1.467E-006
	K-40	< 3.389E-001 +/-	5.3%	< 3.228E-004	< 5.287E-002
	Co-57	< 1.086E-001 +/-	4.5%	< 1.034E-004	< 1.270E-011
	Co-60	< 2.487E-002 +/-	1.7%	< 2.368E-005	< 2.181E-011
	Se-75	< 8.253E-002 +/-	2.3%	< 7.860E-005	< 5.678E-012
	Kr-85	< 4.559E+000 +/-	3.2%	< 4.342E-003	< 1.149E-008
	Sr-90	< 2.242E-002 +/-	2.3%	< 2.135E-005	< 1.626E-010
	Sb-125	< 5.235E-002 +/-	2.1%	< 4.985E-005	< 5.036E-011
	Ba-133	< 6.291E-002 +/-	1.8%	< 5.992E-005	< 2.485E-010
	Cs-134	< 1.446E-002 +/-	2.4%	< 1.377E-005	< 1.103E-011
	Cs-137	< 2.242E-002 +/-	2.3%	< 2.135E-005	< 2.556E-010
	Eu-152	< 2.795E-002 +/-	3.8%	< 2.662E-005	< 1.571E-010
	Eu-154	< 7.675E-002 +/-	2.3%	< 7.309E-005	< 2.878E-010
	Ho-166m	< 1.812E-002 +/-	2.5%	< 1.726E-005	< 1.008E-008
	Bi-207	< 1.594E-002 +/-	2.4%	< 1.518E-005	< 2.902E-010
	Pb-210	< 4.228E+002 +/-	311.1%	< 4.027E-001	< 5.496E-006
	Ra-226	< 4.252E-002 +/-	2.6%	< 4.050E-005	< 4.252E-008
	Ac-227	< 2.778E-001 +/-	8.5%	< 2.646E-004	< 3.806E-009
	Th-230	< 1.378E+002 +/-	9.1%	< 1.313E-001	< 6.753E-003
	Pa-231	< 1.772E+000 +/-	11.3%	< 1.687E-003	< 3.703E-005
	Th-232	< 5.447E-002 +/-	2.5%	< 5.188E-005	< 4.908E-001
	U-232	< 5.447E-002 +/-	2.5%	< 5.188E-005	< 2.522E-009
	U-233	< 9.944E+002 +/-	4.1%	< 9.471E-001	< 1.014E-001
	Pa-234	< 2.215E-002 +/-	12.2%	< 2.109E-005	
	Pa-234m	< 1.298E+002 +/-	2.1%	< 1.236E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 1.010E-001 +/-	4.1%	< 9.623E-005	< 4.618E-002
	Np-237	< 1.300E-001 +/-	2.2%	< 1.239E-004	< 1.821E-004
	Pu-238	< 6.807E+003 +/-	4.3%	< 6.483E+000	< 3.934E-004
	U-238	< 2.671E+000 +/-	2.1%	< 2.544E-003	< 7.853E+000
	Pu-239	< 1.341E+003 +/-	3.7%	< 1.277E+000	< 2.132E-002
	Pu-239B	< 3.812E+003 +/-	18.9%	< 3.630E+000	< 6.060E-002
	U-239	< 2.715E+003 +/-	370.1%	< 2.585E+000	
X	Pu-240				
	Am-241	1.396E+002 +/-	153.7%	1.330E-001	4.020E-005
	Am-241B	1.802E+003 +/-	26.5%	1.716E+000	5.188E-004
	Pu-241	< 3.536E+004 +/-	4.3%	< 3.367E+001	< 3.401E-004
	Pu-241B	< 1.089E+004 +/-	3.5%	< 1.037E+001	< 1.047E-004
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 3.292E-001 +/-	2.2%	< 3.135E-004	< 1.629E-006
	Cm-243	< 3.395E-001 +/-	3.6%	< 3.234E-004	< 6.519E-009
	Cm-244	< 2.010E+004 +/-	14.1%	< 1.914E+001	< 2.452E-004
	Cm-245	< 6.388E-001 +/-	8.4%	< 6.084E-004	< 3.673E-006
	Cm-247	< 3.034E-002 +/-	8.5%	< 2.889E-005	< 3.246E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 4.199E-002 +/-	3.5%	< 3.999E-005	< 1.016E-008
Cf-251	< 3.423E-001 +/-	6.6%	< 3.260E-004	< 2.139E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 10 Results

Segment: 10 Detector: DET01 Position: 10
C:\Canberra\NDA2k\Data\00000205_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P010_S010

Acquisition Start: 12/22/2008 12:12:18 PM
Elapsed Live Time: 118.23 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.330 +/- 0.0056
SE-75	264.66	0.483 +/- 0.0073
SE-75	279.54	0.500 +/- 0.0085
SE-75	400.66	0.551 +/- 0.0116

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/22/2008 12:14:19 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.48	Y	1118	762	1.24	120.80	5.791E-006	4.88	
2234.72		11980	9	1.13	4467.56	5.148E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 2.639E-002 +/-	1.9%	< 2.513E-005	< 1.216E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 1.982E-002 +/-	1.9%	< 1.888E-005	< 3.132E-012
Al-26	< 1.924E-002 +/-	19.8%	< 1.832E-005	< 1.012E-006
K-40	< 2.871E-001 +/-	5.3%	< 2.735E-004	< 4.479E-002
Co-57	< 9.384E-002 +/-	4.6%	< 8.937E-005	< 1.098E-011
Co-60	< 2.042E-002 +/-	2.5%	< 1.945E-005	< 1.791E-011
Se-75	< 6.417E-002 +/-	2.2%	< 6.112E-005	< 4.415E-012
Kr-85	< 5.206E+000 +/-	3.3%	< 4.958E-003	< 1.312E-008
Sr-90	< 2.000E-002 +/-	2.4%	< 1.905E-005	< 1.450E-010
Sb-125	< 4.961E-002 +/-	2.2%	< 4.725E-005	< 4.773E-011
Ba-133	< 4.392E-002 +/-	1.8%	< 4.182E-005	< 1.735E-010
Cs-134	< 2.066E-002 +/-	2.5%	< 1.968E-005	< 1.577E-011
Cs-137	< 2.000E-002 +/-	2.4%	< 1.905E-005	< 2.280E-010
Eu-152	< 6.905E-002 +/-	3.8%	< 6.576E-005	< 3.881E-010
Eu-154	< 5.660E-002 +/-	2.1%	< 5.391E-005	< 2.123E-010
Ho-166m	< 2.610E-002 +/-	2.4%	< 2.485E-005	< 1.451E-008
Bi-207	< 1.869E-002 +/-	2.4%	< 1.780E-005	< 3.401E-010
Pb-210	< 7.919E+002 +/-	308.2%	< 7.542E-001	< 1.030E-005
Ra-226	< 4.049E-002 +/-	2.7%	< 3.856E-005	< 4.049E-008
Ac-227	< 2.121E-001 +/-	8.5%	< 2.020E-004	< 2.906E-009
Th-230	< 1.043E+002 +/-	9.0%	< 9.933E-002	< 5.111E-003
Pa-231	< 1.398E+000 +/-	11.3%	< 1.332E-003	< 2.923E-005
Th-232	< 6.158E-002 +/-	2.6%	< 5.865E-005	< 5.549E-001
U-232	< 6.158E-002 +/-	2.6%	< 5.865E-005	< 2.851E-009
U-233	< 7.455E+002 +/-	4.0%	< 7.100E-001	< 7.604E-002
Pa-234	< 5.144E-002 +/-	11.8%	< 4.899E-005	
Pa-234m	< 8.864E+001 +/-	2.1%	< 8.442E-002	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 7.069E-002 +/-	3.9%	< 6.732E-005	< 3.230E-002
Np-237	< 9.557E-002 +/-	2.2%	< 9.102E-005	< 1.338E-004
Pu-238	< 5.063E+003 +/-	4.2%	< 4.822E+000	< 2.926E-004
U-238	< 2.509E+000 +/-	2.2%	< 2.390E-003	< 7.377E+000
Pu-239	< 1.037E+003 +/-	3.7%	< 9.874E-001	< 1.649E-002
Pu-239B	< 3.588E+003 +/-	18.8%	< 3.417E+000	< 5.705E-002
U-239	< 5.664E+003 +/-	366.8%	< 5.394E+000	
Pu-240	< 2.010E+003 +/-	13.3%	< 1.914E+000	< 8.743E-003
Am-241	1.211E+002 +/-	151.6%	1.154E-001	3.488E-005
Am-241B	< 7.789E+002 +/-	14.4%	< 7.418E-001	< 2.243E-004
Pu-241	< 2.677E+004 +/-	4.2%	< 2.549E+001	< 2.575E-004
Pu-241B	< 7.048E+003 +/-	3.4%	< 6.713E+000	< 6.781E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 2.512E-001 +/-	2.2%	< 2.392E-004	< 1.243E-006
Cm-243	< 2.591E-001 +/-	3.5%	< 2.467E-004	< 4.974E-009
Cm-244	< 1.821E+004 +/-	14.1%	< 1.734E+001	< 2.222E-004
Cm-245	< 4.504E-001 +/-	8.3%	< 4.289E-004	< 2.590E-006
Cm-247	< 2.247E-002 +/-	8.5%	< 2.140E-005	< 2.404E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.741E-002 +/-	3.5%	< 2.610E-005	< 6.632E-009
Cf-251	< 2.426E-001 +/-	6.5%	< 2.310E-004	< 1.516E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 11 Results

Segment: 11 Detector: DET01 Position: 11
C:\Canberra\NDA2k\Data\00000205_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P011_S011

Acquisition Start: 12/22/2008 12:16:29 PM
Elapsed Live Time: 118.50 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.191 +/- 0.0036
SE-75	264.66	0.285 +/- 0.0045
SE-75	279.54	0.294 +/- 0.0056
SE-75	400.66	0.341 +/- 0.0082

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/22/2008 12:18:31 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
M	57.72		138	505	0.62	117.28	3.481E-006	130.59	2.30
m	59.74	Y	535	714	0.63	121.32	4.944E-006	58.74	
	2234.72		11980	5	1.12	4467.56	2.600E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 1.184E-002 +/-	1.8%	< 1.128E-005	< 5.459E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.101E-002 +/-	2.0%	< 2.001E-005	< 3.320E-012
Al-26	< 3.488E-002 +/-	15.1%	< 3.322E-005	< 1.835E-006
K-40	< 3.909E-001 +/-	5.0%	< 3.723E-004	< 6.098E-002
Co-57	< 7.836E-002 +/-	3.4%	< 7.462E-005	< 9.168E-012
Co-60	< 2.315E-002 +/-	1.7%	< 2.205E-005	< 2.030E-011
Se-75	< 6.230E-002 +/-	1.8%	< 5.934E-005	< 4.287E-012
Kr-85	< 4.384E+000 +/-	3.0%	< 4.176E-003	< 1.105E-008
Sr-90	< 1.655E-002 +/-	1.9%	< 1.576E-005	< 1.200E-010
Sb-125	< 4.458E-002 +/-	2.1%	< 4.245E-005	< 4.288E-011
Ba-133	< 3.301E-002 +/-	1.7%	< 3.144E-005	< 1.304E-010
Cs-134	< 1.443E-002 +/-	1.9%	< 1.374E-005	< 1.101E-011
Cs-137	< 1.655E-002 +/-	1.9%	< 1.576E-005	< 1.886E-010
Eu-152	< 2.893E-002 +/-	3.7%	< 2.755E-005	< 1.626E-010
Eu-154	< 6.000E-002 +/-	2.2%	< 5.714E-005	< 2.250E-010
Ho-166m	< 2.331E-002 +/-	2.2%	< 2.220E-005	< 1.296E-008
Bi-207	< 1.275E-002 +/-	2.0%	< 1.214E-005	< 2.320E-010
Pb-210	< 9.623E+002 +/-	53.0%	< 9.165E-001	< 1.251E-005
Ra-226	< 2.859E-002 +/-	2.2%	< 2.722E-005	< 2.859E-008
Ac-227	< 2.033E-001 +/-	8.3%	< 1.936E-004	< 2.785E-009
Th-230	< 9.461E+001 +/-	8.6%	< 9.010E-002	< 4.636E-003
Pa-231	< 1.156E+000 +/-	11.2%	< 1.101E-003	< 2.416E-005
Th-232	< 4.502E-002 +/-	2.1%	< 4.287E-005	< 4.056E-001
U-232	< 4.502E-002 +/-	2.1%	< 4.287E-005	< 2.084E-009
U-233	< 6.797E+002 +/-	2.7%	< 6.474E-001	< 6.933E-002
Pa-234	< 1.093E-001 +/-	12.2%	< 1.041E-004	
Pa-234m	< 1.445E+002 +/-	2.1%	< 1.376E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 6.578E-002 +/-	2.5%	< 6.264E-005	< 3.006E-002
Np-237	< 8.358E-002 +/-	1.9%	< 7.960E-005	< 1.170E-004
Pu-238	< 4.759E+003 +/-	2.6%	< 4.532E+000	< 2.751E-004
U-238	< 1.933E+000 +/-	2.2%	< 1.841E-003	< 5.682E+000
Pu-239	< 9.031E+002 +/-	3.1%	< 8.601E-001	< 1.436E-002
Pu-239B	< 2.680E+003 +/-	5.3%	< 2.553E+000	< 4.261E-002
U-239	< 8.823E+003 +/-	65.1%	< 8.403E+000	
Pu-240	< 1.636E+003 +/-	4.7%	< 1.558E+000	< 7.118E-003
Am-241	6.787E+001 +/-	63.0%	6.464E-002	1.955E-005
Am-241B	< 6.305E+002 +/-	4.9%	< 6.004E-001	< 1.816E-004
Pu-241	< 2.359E+004 +/-	2.8%	< 2.247E+001	< 2.269E-004
Pu-241B	< 7.043E+003 +/-	2.4%	< 6.707E+000	< 6.775E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 2.598E-001 +/-	1.8%	< 2.475E-004	< 1.286E-006
Cm-243	< 2.680E-001 +/-	3.3%	< 2.552E-004	< 5.146E-009
Cm-244	< 1.266E+004 +/-	14.1%	< 1.205E+001	< 1.544E-004
Cm-245	< 4.323E-001 +/-	7.7%	< 4.117E-004	< 2.486E-006
Cm-247	< 2.097E-002 +/-	8.5%	< 1.997E-005	< 2.243E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.423E-002 +/-	3.5%	< 2.307E-005	< 5.863E-009
Cf-251	< 2.330E-001 +/-	5.6%	< 2.219E-004	< 1.456E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 12 Results

Segment: 12 Detector: DET01 Position: 12
C:\Canberra\NDA2k\Data\00000205_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P012_S012

Acquisition Start: 12/22/2008 12:20:40 PM
Elapsed Live Time: 118.73 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.087 +/- 0.0022
SE-75	264.66	0.150 +/- 0.0027
SE-75	279.54	0.156 +/- 0.0035
SE-75	400.66	0.194 +/- 0.0056

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/22/2008 12:22:42 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.57	Y	248	395	0.91	120.98	1.222E-004	13.44	
2234.72		11980	3	1.12	4467.56	2.441E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 1.656E-002 +/-	1.9%	< 1.577E-005	< 7.634E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 4.940E-003 +/-	2.0%	< 4.705E-006	< 7.805E-013
Al-26	< 2.566E-002 +/-	16.0%	< 2.444E-005	< 1.350E-006
K-40	< 3.307E-001 +/-	5.1%	< 3.150E-004	< 5.160E-002
Co-57	< 6.369E-002 +/-	4.0%	< 6.065E-005	< 7.451E-012
Co-60	< 1.538E-002 +/-	1.7%	< 1.465E-005	< 1.349E-011
Se-75	< 5.477E-002 +/-	2.5%	< 5.217E-005	< 3.768E-012
Kr-85	< 3.619E+000 +/-	3.3%	< 3.447E-003	< 9.121E-009
Sr-90	< 1.409E-002 +/-	2.2%	< 1.341E-005	< 1.021E-010
Sb-125	< 4.357E-002 +/-	2.4%	< 4.150E-005	< 4.192E-011
Ba-133	< 2.619E-002 +/-	2.0%	< 2.494E-005	< 1.035E-010
Cs-134	< 1.423E-002 +/-	2.3%	< 1.356E-005	< 1.086E-011
Cs-137	< 1.409E-002 +/-	2.2%	< 1.341E-005	< 1.606E-010
Eu-152	< 2.692E-002 +/-	3.8%	< 2.564E-005	< 1.513E-010
Eu-154	< 1.410E-002 +/-	2.2%	< 1.343E-005	< 5.287E-011
Ho-166m	< 5.184E-003 +/-	2.4%	< 4.938E-006	< 2.883E-009
Bi-207	< 1.181E-002 +/-	2.3%	< 1.125E-005	< 2.149E-010
Pb-210	< 1.028E+000 +/-	39.2%	< 9.795E-004	< 1.337E-008
Ra-226	< 3.034E-002 +/-	2.5%	< 2.890E-005	< 3.034E-008
Ac-227	< 1.893E-001 +/-	6.5%	< 1.803E-004	< 2.594E-009
Th-230	< 1.673E+001 +/-	13.8%	< 1.593E-002	< 8.195E-004
Pa-231	< 9.608E-001 +/-	11.3%	< 9.150E-004	< 2.008E-005
Th-232	< 3.707E-002 +/-	2.4%	< 3.530E-005	< 3.340E-001
U-232	< 4.168E-002 +/-	2.5%	< 3.970E-005	< 1.930E-009
U-233	< 7.011E+002 +/-	3.2%	< 6.677E-001	< 7.151E-002
Pa-234	< 7.281E-002 +/-	12.2%	< 6.934E-005	
Pa-234m	< 1.115E+002 +/-	2.1%	< 1.062E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 6.525E-002 +/-	3.2%	< 6.214E-005	< 2.982E-002
Np-237	< 6.966E-002 +/-	2.3%	< 6.634E-005	< 9.752E-005
Pu-238	< 4.881E+003 +/-	3.1%	< 4.648E+000	< 2.821E-004
U-238	< 1.818E+000 +/-	2.1%	< 1.731E-003	< 5.344E+000
Pu-239	< 8.407E+002 +/-	3.7%	< 8.007E-001	< 1.337E-002
Pu-239B	< 1.407E+003 +/-	6.3%	< 1.340E+000	< 2.237E-002
U-239	< 3.473E+000 +/-	49.2%	< 3.308E-003	
Pu-240	< 1.051E+003 +/-	5.6%	< 1.001E+000	< 4.570E-003
Am-241	1.273E+000 +/-	21.3%	1.212E-003	3.666E-007
Am-241B	< 3.734E+002 +/-	5.8%	< 3.556E-001	< 1.075E-004
Pu-241	< 2.495E+004 +/-	3.3%	< 2.376E+001	< 2.400E-004
Pu-241B	< 7.255E+003 +/-	3.2%	< 6.909E+000	< 6.979E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.021E-001 +/-	9.3%	< 9.719E-005	< 5.051E-007
Cm-243	< 2.361E-001 +/-	3.7%	< 2.249E-004	< 4.534E-009
Cm-244	< 1.308E+004 +/-	14.1%	< 1.245E+001	< 1.595E-004
Cm-245	< 4.524E-001 +/-	7.9%	< 4.309E-004	< 2.601E-006
Cm-247	< 1.774E-002 +/-	8.6%	< 1.689E-005	< 1.898E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.879E-002 +/-	3.6%	< 1.790E-005	< 4.547E-009
Cf-251	< 2.497E-001 +/-	5.9%	< 2.378E-004	< 1.560E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 13 Results

Segment: 13 Detector: DET01 Position: 13
C:\Canberra\NDA2k\Data\00000205_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P013_S013

Acquisition Start: 12/22/2008 12:24:52 PM
Elapsed Live Time: 118.97 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.395 +/- 0.0064
SE-75	264.66	0.470 +/- 0.0071
SE-75	279.54	0.484 +/- 0.0082
SE-75	400.66	0.525 +/- 0.0111

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/22/2008 12:26:53 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
2234.72		11980	5	1.11	4467.56	7.038E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 1.617E-002 +/-	1.8%	< 1.540E-005	< 7.455E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.243E-002 +/-	2.0%	< 2.136E-005	< 3.544E-012
Al-26	< 1.769E-002 +/-	14.9%	< 1.684E-005	< 9.302E-007
K-40	< 2.717E-001 +/-	4.9%	< 2.587E-004	< 4.238E-002
Co-57	< 5.324E-002 +/-	3.5%	< 5.070E-005	< 6.229E-012
Co-60	< 2.115E-002 +/-	1.7%	< 2.014E-005	< 1.855E-011
Se-75	< 5.031E-002 +/-	1.9%	< 4.791E-005	< 3.461E-012
Kr-85	< 3.566E+000 +/-	3.1%	< 3.397E-003	< 8.987E-009
Sr-90	< 1.185E-002 +/-	1.9%	< 1.129E-005	< 8.594E-011
Sb-125	< 4.998E-002 +/-	2.1%	< 4.760E-005	< 4.808E-011
Ba-133	< 2.050E-002 +/-	1.7%	< 1.952E-005	< 8.096E-011
Cs-134	< 9.487E-003 +/-	2.0%	< 9.036E-006	< 7.239E-012
Cs-137	< 1.185E-002 +/-	1.9%	< 1.129E-005	< 1.351E-010
Eu-152	< 5.833E-002 +/-	2.5%	< 5.555E-005	< 3.278E-010
Eu-154	< 6.404E-002 +/-	2.2%	< 6.099E-005	< 2.401E-010
Ho-166m	< 1.655E-002 +/-	2.3%	< 1.576E-005	< 9.202E-009
Bi-207	< 1.263E-002 +/-	2.0%	< 1.203E-005	< 2.299E-010
Pb-210	< 1.567E+000 +/-	36.7%	< 1.493E-003	< 2.038E-008
Ra-226	< 3.073E-002 +/-	2.2%	< 2.927E-005	< 3.073E-008
Ac-227	< 1.816E-001 +/-	8.3%	< 1.729E-004	< 2.488E-009
Th-230	< 1.414E+001 +/-	13.0%	< 1.347E-002	< 6.929E-004
Pa-231	< 8.280E-001 +/-	11.2%	< 7.885E-004	< 1.730E-005
Th-232	< 2.334E-002 +/-	2.2%	< 2.223E-005	< 2.103E-001
U-232	< 2.334E-002 +/-	2.2%	< 2.223E-005	< 1.081E-009
U-233	< 5.756E+002 +/-	2.7%	< 5.482E-001	< 5.871E-002
Pa-234	< 1.046E-001 +/-	11.5%	< 9.958E-005	
Pa-234m	< 8.470E+001 +/-	2.1%	< 8.067E-002	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 5.731E-002 +/-	2.5%	< 5.459E-005	< 2.619E-002
Np-237	< 5.268E-002 +/-	1.9%	< 5.017E-005	< 7.375E-005
Pu-238	< 4.099E+003 +/-	2.6%	< 3.904E+000	< 2.369E-004
U-238	< 1.372E+000 +/-	2.1%	< 1.307E-003	< 4.035E+000
Pu-239	< 6.948E+002 +/-	3.2%	< 6.617E-001	< 1.105E-002
Pu-239B	< 1.097E+003 +/-	5.7%	< 1.044E+000	< 1.743E-002
U-239	< 6.528E+000 +/-	45.8%	< 6.217E-003	
Pu-240	< 8.432E+002 +/-	5.0%	< 8.030E-001	< 3.668E-003
Am-241	< 1.850E-001 +/-	15.6%	< 1.761E-004	< 5.327E-008
Am-241B	< 3.060E+002 +/-	5.5%	< 2.914E-001	< 8.812E-005
Pu-241	< 2.108E+004 +/-	2.8%	< 2.008E+001	< 2.028E-004
Pu-241B	< 6.051E+003 +/-	2.5%	< 5.763E+000	< 5.821E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 9.451E-002 +/-	8.4%	< 9.001E-005	< 4.678E-007
Cm-243	< 1.962E-001 +/-	3.3%	< 1.869E-004	< 3.768E-009
Cm-244	< 1.638E+004 +/-	14.1%	< 1.560E+001	< 1.998E-004
Cm-245	< 3.685E-001 +/-	7.7%	< 3.510E-004	< 2.119E-006
Cm-247	< 1.646E-002 +/-	8.5%	< 1.567E-005	< 1.761E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.740E-002 +/-	3.5%	< 1.657E-005	< 4.210E-009
Cf-251	< 1.977E-001 +/-	5.6%	< 1.883E-004	< 1.235E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 14 Results

Segment: 14 Detector: DET01 Position: 14
C:\Canberra\NDA2k\Data\00000205_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P014_S014

Acquisition Start: 12/22/2008 12:29:04 PM
Elapsed Live Time: 119.09 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.876 +/- 0.0131
SE-75	264.66	0.894 +/- 0.0129
SE-75	279.54	0.905 +/- 0.0142
SE-75	400.66	0.903 +/- 0.0170

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/22/2008 12:31:06 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.58	Y	66	183	0.70	121.00	8.967E-006	32.37	
2234.74		11980	6	1.10	4467.61	5.398E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 2.590E-002 +/-	1.9%	< 2.466E-005	< 1.194E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 1.378E-002 +/-	2.0%	< 1.312E-005	< 2.177E-012
Al-26	< 2.578E-002 +/-	15.2%	< 2.455E-005	< 1.356E-006
K-40	< 2.805E-001 +/-	5.0%	< 2.671E-004	< 4.376E-002
Co-57	< 4.728E-002 +/-	3.4%	< 4.503E-005	< 5.532E-012
Co-60	< 3.306E-002 +/-	1.7%	< 3.149E-005	< 2.900E-011
Se-75	< 3.567E-002 +/-	1.8%	< 3.397E-005	< 2.454E-012
Kr-85	< 4.647E+000 +/-	3.1%	< 4.426E-003	< 1.171E-008
Sr-90	< 1.950E-002 +/-	1.9%	< 1.857E-005	< 1.414E-010
Sb-125	< 3.467E-002 +/-	2.1%	< 3.302E-005	< 3.335E-011
Ba-133	< 1.963E-002 +/-	1.7%	< 1.870E-005	< 7.756E-011
Cs-134	< 1.346E-002 +/-	2.0%	< 1.282E-005	< 1.027E-011
Cs-137	< 1.950E-002 +/-	1.9%	< 1.857E-005	< 2.223E-010
Eu-152	< 6.202E-002 +/-	2.5%	< 5.907E-005	< 3.485E-010
Eu-154	< 3.934E-002 +/-	2.2%	< 3.747E-005	< 1.475E-010
Ho-166m	< 2.179E-002 +/-	2.3%	< 2.076E-005	< 1.212E-008
Bi-207	< 1.144E-002 +/-	2.0%	< 1.090E-005	< 2.083E-010
Pb-210	< 7.653E+002 +/-	56.7%	< 7.289E-001	< 9.949E-006
Ra-226	< 2.868E-002 +/-	2.2%	< 2.732E-005	< 2.868E-008
Ac-227	< 1.168E-001 +/-	8.3%	< 1.112E-004	< 1.600E-009
Th-230	< 6.419E+001 +/-	8.6%	< 6.113E-002	< 3.145E-003
Pa-231	< 6.474E-001 +/-	11.2%	< 6.166E-004	< 1.353E-005
Th-232	< 1.547E-002 +/-	2.4%	< 1.473E-005	< 1.394E-001
U-232	< 4.925E-002 +/-	2.2%	< 4.691E-005	< 2.280E-009
U-233	< 4.575E+002 +/-	2.7%	< 4.358E-001	< 4.667E-002
Pa-234	< 9.474E-002 +/-	11.5%	< 9.023E-005	
Pa-234m	< 1.538E+002 +/-	2.2%	< 1.465E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 4.096E-002 +/-	2.5%	< 3.901E-005	< 1.872E-002
Np-237	< 4.403E-002 +/-	1.9%	< 4.193E-005	< 6.164E-005
Pu-238	< 3.013E+003 +/-	2.6%	< 2.869E+000	< 1.741E-004
U-238	< 5.081E-001 +/-	2.2%	< 4.839E-004	< 1.494E+000
Pu-239	< 5.602E+002 +/-	3.1%	< 5.336E-001	< 8.908E-003
Pu-239B	< 1.517E+003 +/-	5.4%	< 1.445E+000	< 2.412E-002
U-239	< 9.456E+003 +/-	69.5%	< 9.006E+000	
Pu-240	< 8.993E+002 +/-	4.7%	< 8.565E-001	< 3.912E-003
Am-241	4.595E+000 +/-	40.9%	4.376E-003	1.323E-006
Am-241B	< 3.442E+002 +/-	5.0%	< 3.279E-001	< 9.914E-005
Pu-241	< 1.602E+004 +/-	2.8%	< 1.525E+001	< 1.541E-004
Pu-241B	< 4.513E+003 +/-	2.4%	< 4.299E+000	< 4.342E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.513E-001 +/-	1.8%	< 1.441E-004	< 7.488E-007
Cm-243	< 1.560E-001 +/-	3.3%	< 1.486E-004	< 2.996E-009
Cm-244	< 1.578E+004 +/-	14.2%	< 1.503E+001	< 1.925E-004
Cm-245	< 2.705E-001 +/-	7.7%	< 2.576E-004	< 1.555E-006
Cm-247	< 1.861E-002 +/-	8.5%	< 1.772E-005	< 1.991E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.166E-002 +/-	3.5%	< 2.063E-005	< 5.241E-009
Cf-251	< 1.500E-001 +/-	5.6%	< 1.428E-004	< 9.373E-008

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 15 Results

Segment: 15 Detector: DET01 Position: 15
C:\Canberra\NDA2k\Data\00000205_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P015_S015

Acquisition Start: 12/22/2008 12:33:15 PM
Elapsed Live Time: 119.15 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.908 +/- 0.0136
SE-75	264.66	0.918 +/- 0.0133
SE-75	279.54	0.924 +/- 0.0145
SE-75	400.66	0.919 +/- 0.0173

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/22/2008 12:35:17 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
2234.74		11980	6	1.10	4467.60	2.744E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 1.355E-002 +/-	1.8%	< 1.291E-005	< 6.247E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 5.331E-003 +/-	2.1%	< 5.077E-006	< 8.423E-013
Al-26	< 3.589E-002 +/-	15.4%	< 3.418E-005	< 1.888E-006
K-40	< 2.709E-001 +/-	5.0%	< 2.580E-004	< 4.226E-002
Co-57	< 4.299E-002 +/-	3.5%	< 4.094E-005	< 5.029E-012
Co-60	< 2.991E-002 +/-	1.7%	< 2.848E-005	< 2.623E-011
Se-75	< 3.568E-002 +/-	1.8%	< 3.398E-005	< 2.455E-012
Kr-85	< 2.689E+000 +/-	3.0%	< 2.561E-003	< 6.777E-009
Sr-90	< 2.077E-002 +/-	1.9%	< 1.978E-005	< 1.506E-010
Sb-125	< 3.889E-002 +/-	2.1%	< 3.704E-005	< 3.741E-011
Ba-133	< 2.138E-002 +/-	1.7%	< 2.037E-005	< 8.447E-011
Cs-134	< 1.359E-002 +/-	1.9%	< 1.294E-005	< 1.037E-011
Cs-137	< 2.077E-002 +/-	1.9%	< 1.978E-005	< 2.368E-010
Eu-152	< 5.680E-002 +/-	2.5%	< 5.410E-005	< 3.192E-010
Eu-154	< 1.522E-002 +/-	2.2%	< 1.450E-005	< 5.708E-011
Ho-166m	< 2.148E-002 +/-	2.2%	< 2.045E-005	< 1.194E-008
Bi-207	< 1.297E-002 +/-	2.0%	< 1.236E-005	< 2.361E-010
Pb-210	< 9.707E+002 +/-	57.4%	< 9.244E-001	< 1.262E-005
Ra-226	< 3.368E-002 +/-	2.0%	< 3.208E-005	< 3.368E-008
Ac-227	< 1.177E-001 +/-	8.3%	< 1.121E-004	< 1.612E-009
Th-230	< 5.842E+001 +/-	8.6%	< 5.564E-002	< 2.862E-003
Pa-231	< 5.442E-001 +/-	11.2%	< 5.183E-004	< 1.137E-005
Th-232	< 3.287E-002 +/-	2.1%	< 3.131E-005	< 2.962E-001
U-232	< 3.287E-002 +/-	2.1%	< 3.131E-005	< 1.522E-009
U-233	< 4.295E+002 +/-	2.8%	< 4.090E-001	< 4.381E-002
Pa-234	< 6.432E-002 +/-	12.2%	< 6.126E-005	
Pa-234m	< 1.073E+002 +/-	2.1%	< 1.022E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 3.534E-002 +/-	2.5%	< 3.365E-005	< 1.615E-002
Np-237	< 3.688E-002 +/-	1.9%	< 3.513E-005	< 5.164E-005
Pu-238	< 2.725E+003 +/-	2.7%	< 2.595E+000	< 1.575E-004
U-238	< 2.952E+000 +/-	2.2%	< 2.811E-003	< 8.678E+000
Pu-239	< 5.610E+002 +/-	3.2%	< 5.343E-001	< 8.920E-003
Pu-239B	< 1.289E+003 +/-	5.6%	< 1.228E+000	< 2.049E-002
U-239	< 1.548E+004 +/-	70.2%	< 1.475E+001	
Pu-240	< 8.832E+002 +/-	4.9%	< 8.411E-001	< 3.842E-003
Am-241	< 5.055E+000 +/-	25.4%	< 4.815E-003	< 1.456E-006
Am-241B	< 3.403E+002 +/-	5.1%	< 3.241E-001	< 9.801E-005
Pu-241	< 1.461E+004 +/-	2.9%	< 1.392E+001	< 1.406E-004
Pu-241B	< 4.191E+003 +/-	2.4%	< 3.992E+000	< 4.032E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.441E-001 +/-	1.8%	< 1.373E-004	< 7.135E-007
Cm-243	< 1.487E-001 +/-	3.3%	< 1.416E-004	< 2.855E-009
Cm-244	< 1.409E+004 +/-	14.1%	< 1.342E+001	< 1.719E-004
Cm-245	< 2.536E-001 +/-	7.7%	< 2.415E-004	< 1.458E-006
Cm-247	< 1.870E-002 +/-	8.5%	< 1.781E-005	< 2.001E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.592E-002 +/-	3.5%	< 1.517E-005	< 3.854E-009
Cf-251	< 1.389E-001 +/-	5.6%	< 1.323E-004	< 8.681E-008

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 16 Results

Segment: 16 Detector: DET01 Position: 16
C:\Canberra\NDA2k\Data\00000205_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P016_S016

Acquisition Start: 12/22/2008 12:37:27 PM
Elapsed Live Time: 119.17 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.852 +/- 0.0128
SE-75	264.66	0.880 +/- 0.0127
SE-75	279.54	0.886 +/- 0.0140
SE-75	400.66	0.885 +/- 0.0167

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/22/2008 12:39:30 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
413.87		18	5	0.58	828.97	1.916E-004	29.26	
2234.73		11980	3	1.09	4467.58	2.486E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 2.094E-002 +/-	2.3%	< 1.995E-005	< 9.655E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.370E-002 +/-	2.3%	< 2.257E-005	< 3.745E-012
Al-26	< 4.040E-002 +/-	18.0%	< 3.848E-005	< 2.125E-006
K-40	< 4.335E-001 +/-	5.6%	< 4.129E-004	< 6.763E-002
Co-57	< 7.500E-002 +/-	4.4%	< 7.143E-005	< 8.775E-012
Co-60	< 5.509E-002 +/-	2.0%	< 5.247E-005	< 4.831E-011
Se-75	< 6.156E-002 +/-	2.8%	< 5.863E-005	< 4.236E-012
Kr-85	< 6.022E+000 +/-	3.6%	< 5.736E-003	< 1.518E-008
Sr-90	< 2.577E-002 +/-	2.6%	< 2.454E-005	< 1.868E-010
Sb-125	< 7.038E-002 +/-	2.7%	< 6.703E-005	< 6.771E-011
Ba-133	< 3.574E-002 +/-	2.3%	< 3.403E-005	< 1.412E-010
Cs-134	< 1.702E-002 +/-	2.8%	< 1.621E-005	< 1.299E-011
Cs-137	< 2.577E-002 +/-	2.6%	< 2.454E-005	< 2.938E-010
Eu-152	< 8.157E-002 +/-	2.9%	< 7.769E-005	< 4.584E-010
Eu-154	< 6.766E-002 +/-	2.4%	< 6.444E-005	< 2.537E-010
Ho-166m	< 2.377E-002 +/-	2.8%	< 2.264E-005	< 1.322E-008
Bi-207	< 2.114E-002 +/-	2.8%	< 2.013E-005	< 3.847E-010
Pb-210	< 2.303E+000 +/-	46.8%	< 2.194E-003	< 2.994E-008
Ra-226	< 5.061E-002 +/-	3.0%	< 4.820E-005	< 5.061E-008
Ac-227	< 2.345E-001 +/-	3.5%	< 2.233E-004	< 3.212E-009
Th-230	< 2.220E+001 +/-	15.5%	< 2.114E-002	< 1.088E-003
Pa-231	< 7.989E-001 +/-	11.4%	< 7.609E-004	< 1.670E-005
Th-232	< 7.395E-002 +/-	2.9%	< 7.043E-005	< 6.663E-001
U-232	< 7.395E-002 +/-	2.9%	< 7.043E-005	< 3.424E-009
U-233	< 7.865E+002 +/-	2.5%	< 7.490E-001	< 8.022E-002
Pa-234	< 1.001E-001 +/-	12.3%	< 9.533E-005	
Pa-234m	< 1.933E+002 +/-	2.4%	< 1.841E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 7.724E-002 +/-	3.6%	< 7.356E-005	< 3.530E-002
Np-237	< 6.062E-002 +/-	2.6%	< 5.773E-005	< 8.486E-005
Pu-238	< 6.048E+003 +/-	3.6%	< 5.760E+000	< 3.496E-004
U-238	< 3.549E+000 +/-	2.4%	< 3.380E-003	< 1.043E+001
Pu-239	< 1.041E+003 +/-	4.1%	< 9.912E-001	< 1.655E-002
Pu-239B	< 1.465E+003 +/-	7.0%	< 1.395E+000	< 2.329E-002
U-239	< 1.290E+001 +/-	58.6%	< 1.229E-002	
Pu-240	< 1.201E+003 +/-	6.2%	< 1.144E+000	< 5.225E-003
Am-241	< 2.335E-001 +/-	19.9%	< 2.224E-004	< 6.725E-008
Am-241B	< 4.193E+002 +/-	6.8%	< 3.993E-001	< 1.207E-004
Pu-241	< 3.113E+004 +/-	3.7%	< 2.965E+001	< 2.995E-004
Pu-241B	< 8.086E+003 +/-	3.6%	< 7.701E+000	< 7.779E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.390E-001 +/-	10.7%	< 1.324E-004	< 6.882E-007
Cm-243	< 2.159E-001 +/-	3.9%	< 2.056E-004	< 4.145E-009
Cm-244	< 2.555E+004 +/-	14.2%	< 2.433E+001	< 3.117E-004
Cm-245	< 5.124E-001 +/-	8.1%	< 4.880E-004	< 2.946E-006
Cm-247	< 3.177E-002 +/-	8.7%	< 3.026E-005	< 3.400E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.957E-002 +/-	3.8%	< 1.864E-005	< 4.736E-009
Cf-251	< 2.670E-001 +/-	6.2%	< 2.543E-004	< 1.669E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Summed Segment Spectra Results
Category: Segmented

C:\Canberra\NDA2k\Data\00000205_CNTR0001_DCAT0002_PROC00AI.CNF

Elapsed Live Time: 97.60 sec Elapsed Real Time: 120.00 sec

********** Peak Analysis Results **********

*** Spectrum Validity Test warnings ***
Reference peak/MCA Test failed: reference peak data does not match MCA time
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 12/22/2008 12:39:38 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	49.47		8797	42294	2.42	100.80	7.758E-007	3.81	
	59.43	Y	349443	45401	1.12	120.70	6.602E-006	0.37	
	67.09	Y	1201	26341	1.14	136.02	1.984E-005	20.88	
M	94.68	Y	63587	87107	1.53	191.14	1.522E-004	0.88	350.39
m	98.68	Y	244514	117368	1.54	199.15	1.781E-004	0.69	
m	100.87	Y	37827	118934	1.54	203.52	1.922E-004	1.14	
m	103.32	Y	172196	95396	1.55	208.40	2.080E-004	0.68	
M	111.06	Y	64841	58004	1.39	223.88	2.562E-004	0.70	457.54
m	114.57	Y	53915	64722	1.40	230.89	2.766E-004	0.76	
m	116.64	Y	49210	54703	1.40	235.03	2.882E-004	0.75	
m	120.57	Y	12524	55020	1.41	242.88	3.091E-004	1.64	
m	122.84	Y	6299	48190	1.41	247.42	3.204E-004	2.89	
m	125.24	Y	24572	45976	1.41	252.21	3.318E-004	1.04	
m	129.26	Y	116200	40182	1.42	260.24	3.494E-004	0.59	
M	141.69	Y	843	32240	1.17	285.08	3.928E-004	16.56	1.56
m	144.14	Y	8259	32448	1.17	289.98	3.994E-004	5.88	
m	146.30	Y	6555	32641	1.17	294.29	4.048E-004	6.29	
m	148.52	Y	16425	36544	1.18	298.72	4.098E-004	5.39	
m	152.86	Y	610	33276	1.18	307.40	4.183E-004	21.75	
M	160.99	Y	6806	33995	1.33	323.64	4.300E-004	6.85	12.52
m	164.57	Y	6153	56138	1.34	330.81	4.336E-004	5.81	
m	169.45	Y	1431	54927	1.34	340.57	4.371E-004	11.47	
m	171.33	Y	4607	54466	1.35	344.31	4.380E-004	6.11	
	179.13	Y	2655	27209	1.29	359.90	4.400E-004	9.67	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	189.29	Y	4050	32571	1.29	380.19	4.385E-004	7.36	
	195.65	Y	4212	31142	1.20	392.91	4.356E-004	6.94	
M	203.51	Y	26597	25630	1.13	408.62	4.306E-004	0.79	36.07
m	207.97	Y	87968	23075	1.14	417.52	4.271E-004	0.48	
	225.46		619	15813	1.08	452.49	4.109E-004	31.16	
M	237.78	Y	475	12660	1.08	477.09	3.977E-004	33.12	4.03
m	243.33	Y	1407	17200	1.08	488.18	3.916E-004	25.97	
	255.32	Y	3975	15198	1.18	512.15	3.783E-004	5.26	
M	263.95	Y	1439	12322	1.27	529.40	3.687E-004	8.01	1.31
m	267.49	Y	3128	11930	1.27	536.46	3.648E-004	5.77	
	297.40	Y	1906	11659	1.33	596.23	3.335E-004	9.44	
M	311.76	Y	4544	10717	1.50	624.94	3.196E-004	2.22	9.17
m	316.18	Y	506	13405	1.51	633.76	3.156E-004	14.55	
m	320.86	Y	3177	12840	1.51	643.11	3.114E-004	2.84	
m	323.36	Y	4056	12447	1.52	648.12	3.091E-004	2.35	
M	332.67	Y	30128	8690	1.30	666.71	3.011E-004	0.68	15.68
m	335.61	Y	12315	8080	1.30	672.59	2.986E-004	1.05	
m	341.36	Y	3433	7661	1.31	684.07	2.940E-004	2.43	
m	344.92	Y	26702	7943	1.31	691.19	2.911E-004	0.71	
M	361.88	Y	379	5877	1.28	725.08	2.783E-004	15.80	31.22
m	366.92	Y	3748	6946	1.28	735.16	2.747E-004	2.54	
m	368.47	Y	7105	6185	1.29	738.26	2.737E-004	1.58	
m	370.82	Y	882	6041	1.29	742.96	2.720E-004	6.97	
m	374.97	Y	70907	5140	1.29	751.25	2.692E-004	0.49	
m	380.07	Y	13465	4052	1.30	761.44	2.658E-004	0.97	
m	382.66	Y	11915	3754	1.30	766.61	2.641E-004	1.03	
	392.83	Y	23795	3953	1.53	786.93	2.577E-004	0.87	
	399.48	Y	236	3217	1.07	800.23	2.538E-004	40.37	
M	413.62	Y	63484	2142	1.32	828.48	2.458E-004	0.51	16.48
m	419.07	Y	348	1604	1.33	839.37	2.428E-004	9.76	
m	422.48	Y	4818	1711	1.33	846.18	2.410E-004	1.58	
m	426.50	Y	1194	1639	1.33	854.21	2.390E-004	3.76	
m	429.92	Y	136	1611	1.34	861.05	2.373E-004	22.29	
M	445.68	Y	316	1036	1.32	892.55	2.297E-004	10.03	0.91
m	451.35	Y	7773	1031	1.32	903.88	2.271E-004	2.31	
	481.44	Y	213	689	1.47	964.01	2.146E-004	21.09	
	558.50		90	316	0.84	1117.99	1.898E-004	32.84	
	582.81	Y	47	222	1.01	1166.57	1.836E-004	49.07	
	597.60	Y	191	310	1.41	1196.12	1.801E-004	17.72	
	618.79	Y	666	274	1.50	1238.47	1.755E-004	5.83	
M	633.09	Y	88	183	1.52	1267.04	1.725E-004	17.35	3.14
m	640.03	Y	307	247	1.52	1280.91	1.712E-004	6.75	
m	645.77	Y	473	241	1.53	1292.38	1.700E-004	5.31	
m	652.52	Y	501	233	1.53	1305.86	1.688E-004	5.00	
m	658.65	Y	299	227	1.53	1318.11	1.676E-004	7.26	
m	662.28	Y	3325	213	1.54	1325.36	1.670E-004	1.80	
	688.57	Y	340	225	1.61	1377.91	1.625E-004	9.75	
M	717.50	Y	76	125	1.57	1435.71	1.579E-004	14.64	0.63
m	721.84	Y	1651	133	1.58	1444.39	1.573E-004	4.90	
	737.20	Y	66	88	1.63	1475.09	1.550E-004	26.20	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	755.95	Y	199	99	1.79	1512.55	1.524E-004	11.22	
	769.09	Y	437	123	1.80	1538.80	1.507E-004	6.73	
	1173.46	Y	90	34	1.84	2346.85	1.132E-004	14.81	
	1332.50	Y	120	49	2.40	2664.66	1.020E-004	14.20	
M	2223.99		31	9	0.99	4446.12	5.042E-005	19.39	2.08
m	2234.72		191681	128	1.00	4467.57	4.994E-005	0.42	
	2293.64		44	49	1.70	4585.31	4.728E-005	33.67	
	2382.53		14	7	1.82	4762.93	4.345E-005	41.02	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.07 +/- 0.00

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	@ 1.000E+020 +/-	100.0%	@ 5.952E+015	
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 1.035E-001 +/-	1.2%	< 6.162E-006	< 1.636E-011
	Al-26	< 1.445E-001 +/-	8.2%	< 8.604E-006	< 7.603E-006
	K-40	< 1.232E+000 +/-	3.1%	< 7.335E-005	< 1.922E-001
X	Co-57				
	Co-60	2.206E-001 +/-	10.5%	1.313E-005	1.935E-010
	Se-75	< 1.766E+000 +/-	1.1%	< 1.051E-004	< 1.215E-010
	Kr-85	< 4.232E+001 +/-	2.5%	< 2.519E-003	< 1.066E-007
	Sr-90	< 1.389E-001 +/-	1.0%	< 8.267E-006	< 1.007E-009
	Sb-125	< 8.726E-001 +/-	1.5%	< 5.194E-005	< 8.395E-010
	Ba-133	< 5.793E-001 +/-	1.0%	< 3.448E-005	< 2.288E-009
	Cs-134	< 1.216E-001 +/-	1.0%	< 7.238E-006	< 9.277E-011
X	Cs-137				
	Eu-152	< 3.850E-001 +/-	2.1%	< 2.292E-005	< 2.164E-009
	Eu-154	< 2.728E-001 +/-	1.5%	< 1.624E-005	< 1.023E-009
	Ho-166m	< 1.372E-001 +/-	1.7%	< 8.168E-006	< 7.630E-008
	Bi-207	< 1.147E-001 +/-	1.2%	< 6.826E-006	< 2.087E-009
	Pb-210	< 1.589E+004 +/-	12.2%	< 9.459E-001	< 2.066E-004
	Ra-226	< 2.970E-001 +/-	1.5%	< 1.768E-005	< 2.970E-007
	Ac-227	< 2.452E+000 +/-	8.2%	< 1.459E-004	< 3.359E-008
	Th-230	3.588E+003 +/-	22.5%	2.136E-001	1.758E-001
	Pa-231	< 1.381E+001 +/-	11.2%	< 8.219E-004	< 2.886E-004
	Th-232	< 3.084E-001 +/-	1.9%	< 1.835E-005	< 2.778E+000
	U-232	6.233E-001 +/-	33.1%	3.710E-005	2.886E-008
	U-233	< 9.152E+003 +/-	1.6%	< 5.448E-001	< 9.335E-001
	Pa-234	< 4.895E-001 +/-	12.1%	< 2.914E-005	
	Pa-234m	< 6.075E+002 +/-	1.5%	< 3.616E-002	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000

•	U-235	< 7.878E-001	+/-	1.8%	< 4.689E-005	< 3.600E-001
	Np-237	5.700E+000	+/-	3.5%	3.393E-004	7.981E-003
	Pu-238	3.516E+004	+/-	21.8%	2.093E+000	2.032E-003
	U-238	< 1.138E+001	+/-	1.6%	< 6.773E-004	< 3.345E+001
	Pu-239	6.951E+006	+/-	1.6%	4.137E+002	1.105E+002
	Pu-239B	3.881E+006	+/-	0.6%	2.310E+002	6.170E+001
	U-239	@ 1.000E+020	+/-	100.0%	@ 5.952E+015	
X	Pu-240					
	Am-241	1.226E+006	+/-	2.8%	7.297E+001	3.530E-001
	Am-241B	6.211E+005	+/-	1.8%	3.697E+001	1.789E-001
	Pu-241	4.970E+006	+/-	5.7%	2.958E+002	4.781E-002
	Pu-241B	8.995E+006	+/-	1.7%	5.354E+002	8.653E-002
	Pu-242	< 0.000E+000	+/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 2.656E+000	+/-	1.2%	< 1.581E-004	< 1.315E-005
	Cm-243	< 2.768E+000	+/-	3.0%	< 1.647E-004	< 5.314E-008
	Cm-244	< 1.347E+005	+/-	14.1%	< 8.021E+000	< 1.644E-003
	Cm-245	< 4.868E+000	+/-	7.5%	< 2.898E-004	< 2.799E-005
	Cm-247	< 3.543E-001	+/-	8.4%	< 2.109E-005	< 3.791E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 4.305E-001 +/-	3.2%	< 2.562E-005	< 1.042E-007
Cf-251	< 2.723E+000 +/-	5.3%	< 1.621E-004	< 1.702E-006

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.11E+002 +- 1.81E+000	3.27E+001 +- 2.66E-001

Beta: 2.24E+002 +- 3.77E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.89E+001 +- 3.58E-001
203.55	3.89E+001 +- 5.57E-001
375.05	6.07E+001 +- 7.60E-001
413.71	6.31E+001 +- 8.69E-001

Sum of Segment NID Results
Category: Segmented

C:\Canberra\NDA2k\Data\00000205_CNTR0001_DCAT0002_PROC00AK.CNF

********** Peak Analysis Results **********

No peak analysis results available for reporting purposes

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 3.236E-002 +/-	1.8%	< 1.926E-006	< 1.492E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 3.816E-002 +/-	2.0%	< 2.271E-006	< 6.029E-012
Al-26	< 6.304E-002 +/-	19.8%	< 3.753E-006	< 3.316E-006
K-40	< 4.335E-001 +/-	5.6%	< 2.581E-005	< 6.763E-002
Co-57	2.321E+000 +/-	35.3%	1.382E-004	2.716E-010
Co-60	< 5.509E-002 +/-	2.0%	< 3.279E-006	< 4.831E-011
Se-75	< 2.953E-001 +/-	1.9%	< 1.758E-005	< 2.032E-011
Kr-85	< 1.669E+001 +/-	3.1%	< 9.935E-004	< 4.206E-008
Sr-90	< 9.362E-002 +/-	2.2%	< 5.573E-006	< 6.787E-010
Sb-125	< 3.130E-001 +/-	2.3%	< 1.863E-005	< 3.011E-010
Ba-133	< 2.243E-001 +/-	1.7%	< 1.335E-005	< 8.861E-010
Cs-134	< 3.670E-002 +/-	1.8%	< 2.185E-006	< 2.800E-011
Cs-137	< 9.362E-002 +/-	2.2%	< 5.573E-006	< 1.067E-009
Eu-152	< 1.893E-001 +/-	1.8%	< 1.127E-005	< 1.064E-009
Eu-154	< 1.090E-001 +/-	2.2%	< 6.486E-006	< 4.086E-010
Ho-166m	< 5.248E-002 +/-	2.2%	< 3.124E-006	< 2.918E-008
Bi-207	< 3.996E-002 +/-	1.8%	< 2.378E-006	< 7.272E-010
Pb-210	< 3.332E+004 +/-	309.7%	< 1.983E+000	< 4.331E-004
Ra-226	< 1.115E-001 +/-	2.3%	< 6.636E-006	< 1.115E-007
Ac-227	< 1.018E+000 +/-	8.3%	< 6.060E-005	< 1.395E-008
Th-230	3.465E+001 +/-	53.9%	2.062E-003	1.698E-003
Pa-231	< 5.306E+000 +/-	11.2%	< 3.158E-004	< 1.109E-004
Th-232	< 1.244E-001 +/-	2.4%	< 7.405E-006	< 1.121E+000
U-232	< 1.957E-001 +/-	2.2%	< 1.165E-005	< 9.060E-009
U-233	< 3.976E+003 +/-	2.7%	< 2.366E-001	< 4.055E-001
Pa-234	< 1.832E-001 +/-	12.2%	< 1.090E-005	
Pa-234m	< 2.389E+002 +/-	2.1%	< 1.422E-002	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 3.404E-001 +/-	2.5%	< 2.026E-005	< 1.556E-001
Np-237	7.184E+000 +/-	4.9%	4.276E-004	1.006E-002
Pu-238	< 2.259E+004 +/-	2.6%	< 1.345E+000	< 1.306E-003
U-238	< 4.132E+000 +/-	2.1%	< 2.459E-004	< 1.215E+001
Pu-239	6.014E+006 +/-	1.6%	3.580E+002	9.563E+001
Pu-239B	4.909E+006 +/-	0.7%	2.922E+002	7.805E+001
U-239	< 2.653E+005 +/-	368.5%	< 1.579E+001	
Pu-240	5.633E+005 +/-	15.1%	3.353E+001	2.450E+000

Am-241	1.463E+006	+/-	2.2%	8.709E+001	4.214E-001
Am-241B	1.329E+006	+/-	2.5%	7.913E+001	3.828E-001
Pu-241	1.123E+007	+/-	4.8%	6.687E+002	1.081E-001
Pu-241B	1.500E+007	+/-	1.5%	8.929E+002	1.443E-001
Pu-242	< 0.000E+000	+/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 9.403E-001	+/-	2.2%	< 5.597E-005	< 4.654E-006
Cm-243	< 1.085E+000	+/-	3.3%	< 6.459E-005	< 2.083E-008
Cm-244	< 4.734E+004	+/-	14.2%	< 2.818E+000	< 5.776E-004
Cm-245	< 2.090E+000	+/-	7.7%	< 1.244E-004	< 1.202E-005
Cm-247	< 1.511E-001	+/-	8.5%	< 8.995E-006	< 1.617E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.831E-001 +/-	3.5%	< 1.090E-005	< 4.432E-008
Cf-251	< 1.200E+000 +/-	5.6%	< 7.142E-005	< 7.500E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model:

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	9.56E+001 +- 1.52E+000	0.00E+000 +- 0.00E+000

Beta: 0.00E+000 +- 0.00E+000 Alpha: 0.00E+000 +- 0.00E+000
Number of energy lines used in correction: 0

Energy	Mass (g)

********** Radioassay Data Sheet **********

206

Engine Version: TMU Gamma 1.5

Assay Instrument: SGS with Trans. Location:LLNL
Analysis Method: LLNL SGS Operating Procedure Software Version: NDA 2000 V.4.0
Item ID: SGS100 Analysis Date: 12/22/2008

NID identified fiducial nuclide Pu-239
Source of isotopics: MEASURED

Net Weight	16800.0 g	
Pu mass	1.15E+002 +-	1.70E+001 g
TRU Alpha Activity	9.92E+000 +-	1.12E+000 Ci
TRU Activity Concentration	5.90E+005 +-	6.65E+004 nCi/g
Pu-239 Equivalent Activity	1.03E+001 +-	1.12E+000 Ci
Pu-239 FGE	1.09E+002 +-	1.70E+001 g
Decay heat	3.12E-001 +-	3.48E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	8.67E-008
U233	<LLD	<LLD	0.00E+000	3.95E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.40E-007
NP237	1.01E-002	7.22E-006	1.18E-006	6.71E-007
PU238	1.01E-002	1.74E-001	3.02E-002	2.49E-004
U238	<LLD	<LLD	0.00E+000	3.91E-006
PU239	1.08E+002	6.82E+000	1.07E+000	9.72E-003
PU240	6.26E+000	1.44E+000	2.26E-001	2.05E-003
AM241	4.29E-001	1.49E+000	2.34E-001	5.86E-004
PU241	1.99E-001	2.06E+001	3.24E+000	2.94E-002
PU242	3.46E-002	1.37E-004	2.55E-005	0.00E+000

Errors quoted at 1.000 sigma

Operator:_____ Date:_____

ITR:_____ Date:_____

********** Radioassay Data Sheet **********

Engine Version: TMU Gamma 1.5

Assay Instrument: SGS with Trans. Location:LLNL
Analysis Method: LLNL SGS Operating Procedure Software Version: NDA 2000 V.4.0
Item ID: SGS100 Analysis Date: 12/22/2008

NID identified fiducial nuclide Pu-239
Source of isotopics: MEASURED

Net Weight	16800.0 g		
Pu mass	1.13E+002	+- 1.68E+001	g
TRU Alpha Activity	9.51E+000	+- 1.09E+000	Ci
TRU Activity Concentration	5.66E+005	+- 6.51E+004	nCi/g
Pu-239 Equivalent Activity	9.89E+000	+- 1.10E+000	Ci
Pu-239 FGE	1.07E+002	+- 1.67E+001	g
Decay heat	2.99E-001	+- 3.40E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.41E-007
U233	<LLD	<LLD	0.00E+000	9.11E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	7.86E-007
NP237	6.32E-003	4.51E-006	7.64E-007	1.07E-006
PU238	9.91E-003	1.71E-001	2.97E-002	3.34E-004
U238	<LLD	<LLD	0.00E+000	1.18E-005
PU239	1.07E+002	6.70E+000	1.05E+000	1.30E-002
PU240	6.15E+000	1.41E+000	2.22E-001	2.75E-003
AM241	3.53E-001	1.23E+000	1.93E-001	1.16E-004
PU241	1.95E-001	2.03E+001	3.19E+000	3.95E-002
PU242	3.40E-002	1.35E-004	2.51E-005	0.00E+000

Errors quoted at 1.000 sigma

Operator:_____ Date:_____

ITR:_____ Date:_____

********** MGA Results **********

MGA version: MGA V9.63H CI

Measurement date = 12/22/08 Declared date = 12/22/08
Low energy spectrum sensitivity = 30.0% Total counts = 7.590E+006
High energy spectrum sensitivity : 10.0%

Pu g/cm2 = 0.7238 Cd g/cm2 = 2.0793 FWHM at 122 keV = 612 eV
QFIT = 1.13 FWHM at 208 keV = 782 eV
NQFIT = 1.01

Isotope	Relative to Pu-239	%* Err	% Err	Relative to Pu-241	%* Err	Isotope analysis at Meas. date % weight	%Err	Decl. date % weight	%Err
Pu-238	0.000093	7.4	7.4	0.0508	7.8	0.00878	7.35	0.00904	7.57
Pu-239	1.000000	0.0	0.4	545.6549	0.8	94.34273	0.06	94.30822	0.06
Pu-240	0.057720	1.0	0.9	31.4955	1.2	5.44551	0.95	5.44510	0.95
Pu-241	0.001833	0.8	0.7	1.0000	0.0	0.17290	0.75	0.20755	0.90
Pu-242	(New alg.)			0.1742(10)		0.03011 (10)		0.03010 (9)	
Am-241	0.005326	0.5	0.4	2.9062	0.8	0.50247	0.51	0.50518	0.52

Pu-240 effective (meas. date) = 5.518 +/- 1.02%
Am-241 separated about 28.152 +/- 0.166 years ago
Am/Pu-241 weight ratio = 2.90618 +/- 0.77%

Messages:

Lead x-rays detected.

Notes : * = Error in ratio
Errors quoted at 1.000 sigma
MGA sigma defaulted to 1

Reviewed by: _____ Date: _____

****
***** GENIE QUALITY ASSURANCE *****
****

Last Results Report
12/22/08 2:38:15 PM

QA File: C:\CANBERRA\NDA2K\QA\CNTR0001_DC
Sample ID: SGS100
Sample Quantity: 1.0000E+000
Sample Date: 7/17/08 10:49:07 AM
Measurement Date: 12/22/08 1:28:21 PM
Elapsed Live Time: 0.0 seconds
Elapsed Real Time: 0.0 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
SGS-100 Pu-239 Trans Mas	1.0838E+002	-1.0186E-001
[UD: 1.0913E+002+/- 7.370]		< : : : >

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
12/22/08 2:38:17 PM

QA File: C:\CANBERRA\NDA2K\QA\CNTR0001_DC
Sample ID: SGS100
Sample Quantity: 1.0000E+000
Sample Date: 7/17/08 10:49:07 AM
Measurement Date: 12/22/08 1:32:39 PM
Elapsed Live Time: 97.6 seconds
Elapsed Real Time: 120.0 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
SGS-100 414 keV centroid [0.00+/-0.00]	8.2847E+002	0.00 < : : : >
SGS-100 414 keV FWHM [0.00+/-0.00]	1.3596E+000	0.00 < : : : >
SGS-100 Pu-239 Mass [UD: 1.1082E+002+/- 1.081]	1.0654E+002	-3.9548E+000 < : : Ac: >

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)

NDA 2000 Assay Report

Item Information

Item ID:	SGS100	Count Sequence Number:	206
Operator:	RHWM2\RHWM		
Assay Start:	12/22/2008 1:30:37 PM		
Description 1:	SGS100		
Description 2:			
Location:	LLNL		
Comment:			
Matrix Type:	Lucite		
Container Type:	55 TRU Galv 81.5		
Weight:	Gross: 54.0 kg	Net:	16.8 kg
Container:	Volume: 208.0 l	Full:	100.0 %
Density:	0.080 kg /l		

System Configuration

Counter:	SGS with Trans.		
Segments:	Number: 16	Offset:	0
Scanning Platform:	Start: 934 mm	Delta:	-51 mm
Count Type:	QC - SGS 100		
Collimator/Geometry Setting:	Default - 0		
Transmission Mode:	Two Pass		
Transmission Correction Type:	Standard		
Transmission Source:	Se-75 Trans. - 0		

Errors quoted at 1.000 sigma

Segment 1 Results

Segment: 1 Detector: DET01 Position: 1
C:\Canberra\NDA2k\Data\00000206_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P001_S001

Acquisition Start: 12/22/2008 1:32:39 PM
Elapsed Live Time: 118.20 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.413 +/- 0.0067
SE-75	264.66	0.494 +/- 0.0074
SE-75	279.54	0.499 +/- 0.0085
SE-75	400.66	0.558 +/- 0.0117

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/22/2008 1:34:40 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.40	Y	625	779	1.29	120.65	6.640E-006	8.12	
2234.73		11980	7	1.10	4467.58	4.627E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 2.405E-002 +/-	2.1%	< 2.291E-005	< 1.109E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 3.711E-002 +/-	2.2%	< 3.535E-005	< 5.864E-012
Al-26	< 2.654E-002 +/-	16.2%	< 2.527E-005	< 1.396E-006
K-40	< 3.784E-001 +/-	5.3%	< 3.604E-004	< 5.904E-002
Co-57	< 1.242E-001 +/-	3.4%	< 1.182E-004	< 1.453E-011
Co-60	< 4.279E-002 +/-	1.9%	< 4.075E-005	< 3.752E-011
Se-75	< 9.386E-002 +/-	1.9%	< 8.939E-005	< 6.458E-012
Kr-85	< 7.366E+000 +/-	3.2%	< 7.015E-003	< 1.856E-008
Sr-90	< 2.521E-002 +/-	2.1%	< 2.401E-005	< 1.828E-010
Sb-125	< 7.648E-002 +/-	2.3%	< 7.284E-005	< 7.358E-011
Ba-133	< 6.537E-002 +/-	1.8%	< 6.226E-005	< 2.582E-010
Cs-134	< 2.020E-002 +/-	2.1%	< 1.924E-005	< 1.541E-011
Cs-137	< 2.521E-002 +/-	2.1%	< 2.401E-005	< 2.874E-010
Eu-152	< 6.793E-002 +/-	2.0%	< 6.470E-005	< 3.818E-010
Eu-154	< 1.033E-001 +/-	2.1%	< 9.838E-005	< 3.874E-010
Ho-166m	< 4.765E-002 +/-	2.4%	< 4.538E-005	< 2.649E-008
Bi-207	< 9.207E-003 +/-	2.1%	< 8.768E-006	< 1.676E-010
Pb-210	< 8.975E+002 +/-	47.8%	< 8.547E-001	< 1.167E-005
Ra-226	< 4.694E-002 +/-	2.3%	< 4.470E-005	< 4.694E-008
Ac-227	< 3.235E-001 +/-	8.3%	< 3.081E-004	< 4.432E-009
Th-230	< 1.501E+002 +/-	8.6%	< 1.430E-001	< 7.357E-003
Pa-231	< 2.042E+000 +/-	11.2%	< 1.944E-003	< 4.267E-005
Th-232	< 8.279E-002 +/-	2.3%	< 7.884E-005	< 7.459E-001
U-232	< 8.279E-002 +/-	2.3%	< 7.884E-005	< 3.833E-009
U-233	< 1.100E+003 +/-	2.7%	< 1.048E+000	< 1.122E-001
Pa-234	< 1.421E-001 +/-	12.4%	< 1.353E-004	
Pa-234m	< 1.697E+002 +/-	2.3%	< 1.616E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 1.088E-001 +/-	2.5%	< 1.037E-004	< 4.974E-002
Np-237	< 1.540E-001 +/-	2.0%	< 1.466E-004	< 2.155E-004
Pu-238	< 7.633E+003 +/-	2.7%	< 7.269E+000	< 4.412E-004
U-238	< 3.147E+000 +/-	2.4%	< 2.997E-003	< 9.252E+000
Pu-239	< 1.444E+003 +/-	3.1%	< 1.375E+000	< 2.296E-002
Pu-239B	< 4.212E+003 +/-	5.2%	< 4.012E+000	< 6.696E-002
U-239	< 1.983E+003 +/-	59.1%	< 1.889E+000	
Pu-240	< 2.519E+003 +/-	4.6%	< 2.399E+000	< 1.096E-002
Am-241	5.906E+001 +/-	22.1%	5.625E-002	1.701E-005
Am-241B	< 9.512E+002 +/-	4.9%	< 9.059E-001	< 2.739E-004
Pu-241	< 3.895E+004 +/-	2.8%	< 3.710E+001	< 3.747E-004
Pu-241B	< 1.095E+004 +/-	2.5%	< 1.043E+001	< 1.053E-004
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 4.280E-001 +/-	1.9%	< 4.076E-004	< 2.119E-006
Cm-243	< 4.414E-001 +/-	3.4%	< 4.204E-004	< 8.476E-009
Cm-244	< 3.085E+004 +/-	14.2%	< 2.938E+001	< 3.764E-004
Cm-245	< 6.874E-001 +/-	7.7%	< 6.547E-004	< 3.953E-006
Cm-247	< 3.668E-002 +/-	8.6%	< 3.493E-005	< 3.924E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 3.084E-002 +/-	3.6%	< 2.938E-005	< 7.464E-009
Cf-251	< 3.542E-001 +/-	5.6%	< 3.373E-004	< 2.214E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 2 Results

Segment: 2 Detector: DET01 Position: 2
C:\Canberra\NDA2k\Data\00000206_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P002_S002

Acquisition Start: 12/22/2008 1:36:50 PM
Elapsed Live Time: 117.73 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Cal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.456 +/- 0.0074
SE-75	264.66	0.557 +/- 0.0083
SE-75	279.54	0.554 +/- 0.0093
SE-75	400.66	0.593 +/- 0.0123

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/22/2008 1:38:52 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.48	Y	1555	1021	1.31	120.79	1.232E-004	4.19	
2234.72		11980	19	1.12	4467.56	1.072E-004	1.43	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.02 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 1.635E-002 +/-	1.8%	< 1.557E-005	< 7.539E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.106E-002 +/-	2.0%	< 2.005E-005	< 3.327E-012
Al-26	< 1.556E-002 +/-	15.5%	< 1.482E-005	< 8.183E-007
K-40	< 2.326E-001 +/-	4.9%	< 2.215E-004	< 3.629E-002
Co-57	< 1.076E-001 +/-	3.5%	< 1.025E-004	< 1.259E-011
Co-60	< 3.117E-002 +/-	1.7%	< 2.968E-005	< 2.733E-011
Se-75	< 8.640E-002 +/-	1.9%	< 8.228E-005	< 5.944E-012
Kr-85	< 5.487E+000 +/-	3.1%	< 5.226E-003	< 1.383E-008
Sr-90	< 2.036E-002 +/-	2.0%	< 1.939E-005	< 1.476E-010
Sb-125	< 5.715E-002 +/-	2.1%	< 5.443E-005	< 5.498E-011
Ba-133	< 6.480E-002 +/-	1.7%	< 6.171E-005	< 2.559E-010
Cs-134	< 1.885E-002 +/-	2.0%	< 1.795E-005	< 1.438E-011
Cs-137	< 2.036E-002 +/-	2.0%	< 1.939E-005	< 2.321E-010
Eu-152	< 8.163E-002 +/-	1.9%	< 7.774E-005	< 4.588E-010
Eu-154	< 6.012E-002 +/-	2.2%	< 5.726E-005	< 2.255E-010
Ho-166m	< 2.411E-002 +/-	2.3%	< 2.296E-005	< 1.341E-008
Bi-207	< 1.530E-002 +/-	2.1%	< 1.457E-005	< 2.785E-010
Pb-210	< 7.416E+000 +/-	81.7%	< 7.063E-003	< 9.640E-008
Ra-226	< 3.027E-002 +/-	2.3%	< 2.883E-005	< 3.027E-008
Ac-227	< 2.970E-001 +/-	8.3%	< 2.828E-004	< 4.069E-009
Th-230	< 3.615E+001 +/-	25.1%	< 3.443E-002	< 1.772E-003
Pa-231	< 1.806E+000 +/-	11.2%	< 1.720E-003	< 3.775E-005
Th-232	< 6.318E-002 +/-	2.2%	< 6.017E-005	< 5.693E-001
U-232	< 6.318E-002 +/-	2.2%	< 6.017E-005	< 2.925E-009
U-233	< 1.047E+003 +/-	2.7%	< 9.967E-001	< 1.067E-001
Pa-234	< 1.066E-001 +/-	43.9%	< 1.015E-004	
Pa-234m	< 1.485E+002 +/-	2.1%	< 1.414E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 1.110E-001 +/-	2.5%	< 1.057E-004	< 5.074E-002
Np-237	< 1.366E-001 +/-	2.0%	< 1.301E-004	< 1.913E-004
Pu-238	< 7.455E+003 +/-	2.7%	< 7.100E+000	< 4.309E-004
U-238	< 2.156E+000 +/-	2.1%	< 2.053E-003	< 6.337E+000
Pu-239	< 1.245E+003 +/-	3.2%	< 1.185E+000	< 1.979E-002
Pu-239B	< 2.680E+003 +/-	6.4%	< 2.553E+000	< 4.261E-002
U-239	< 9.971E+000 +/-	98.9%	< 9.497E-003	
Pu-240	< 1.677E+003 +/-	5.4%	< 1.597E+000	< 7.296E-003
Am-241	7.916E+000 +/-	37.9%	7.539E-003	2.280E-006
Am-241B	< 6.363E+002 +/-	5.7%	< 6.060E-001	< 1.833E-004
Pu-241	< 3.815E+004 +/-	2.9%	< 3.633E+001	< 3.670E-004
Pu-241B	< 1.057E+004 +/-	2.5%	< 1.006E+001	< 1.017E-004
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 2.059E-001 +/-	16.6%	< 1.961E-004	< 1.019E-006
Cm-243	< 3.699E-001 +/-	3.4%	< 3.523E-004	< 7.102E-009
Cm-244	< 2.139E+004 +/-	14.1%	< 2.037E+001	< 2.610E-004
Cm-245	< 6.905E-001 +/-	7.7%	< 6.577E-004	< 3.971E-006
Cm-247	< 3.207E-002 +/-	8.5%	< 3.055E-005	< 3.432E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 3.895E-002 +/-	3.5%	< 3.710E-005	< 9.427E-009
Cf-251	< 3.742E-001 +/-	5.6%	< 3.563E-004	< 2.338E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 3 Results

Segment: 3 Detector: DET01 Position: 3
C:\Canberra\NDA2k\Data\00000206_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P003_S003

Acquisition Start: 12/22/2008 1:41:02 PM
Elapsed Live Time: 114.74 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.385 +/- 0.0065
SE-75	264.66	0.476 +/- 0.0073
SE-75	279.54	0.491 +/- 0.0087
SE-75	400.66	0.521 +/- 0.0115

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/22/2008 1:43:03 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.47	Y	8816	2450	1.15	120.78	9.284E-005	1.76	
M	94.82		2352	6297	1.53	191.43	2.324E-004	5.36	9.79
m	98.71	Y	7460	8797	1.54	199.19	2.458E-004	4.01	
m	100.93	Y	1232	8090	1.54	203.64	2.531E-004	6.95	
m	103.37	Y	5144	6912	1.55	208.51	2.609E-004	4.01	
M	111.06		1571	3936	1.31	223.87	2.835E-004	3.96	6.47
m	114.68	Y	888	6552	1.32	231.11	2.932E-004	6.48	
M	125.38	Y	547	2871	1.07	252.48	3.179E-004	7.68	1.81
m	129.33	Y	3489	2597	1.08	260.39	3.257E-004	2.29	
M	146.06	Y	197	1959	1.01	293.81	3.522E-004	27.36	4.93
m	148.60	Y	488	2478	1.02	298.88	3.554E-004	22.53	
	195.87		189	1894	1.02	393.35	3.788E-004	37.05	
M	203.53	Y	887	1412	1.15	408.67	3.780E-004	4.42	2.10
m	208.04	Y	2899	1354	1.15	417.66	3.771E-004	2.31	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	255.26		192	886	1.14	512.02	3.559E-004	25.56	
	311.81	Y	170	762	1.39	625.04	3.191E-004	26.88	
M	332.74	Y	963	613	1.26	666.85	3.043E-004	10.59	0.89
m	335.56	Y	345	737	1.26	672.49	3.023E-004	11.75	
	344.96		784	621	1.25	691.28	2.959E-004	6.31	
M	367.00		118	324	1.23	735.31	2.814E-004	16.08	1.84
m	368.54	Y	200	398	1.23	738.39	2.804E-004	10.54	
m	375.01	Y	2252	324	1.24	751.32	2.763E-004	2.41	
m	380.06		419	249	1.24	761.41	2.731E-004	5.64	
m	382.73		395	227	1.25	766.75	2.715E-004	5.81	
	392.86		788	187	1.47	786.99	2.654E-004	4.78	
	413.66	Y	2074	107	1.35	828.56	2.538E-004	2.63	
	422.53		121	95	1.14	846.28	2.492E-004	15.50	
	451.41		226	53	1.12	904.00	2.352E-004	8.57	
	618.60	Y	19	17	0.91	1238.08	1.765E-004	39.88	
	662.18	Y	126	13	1.17	1325.17	1.661E-004	10.23	
	721.88	Y	55	8	1.22	1444.48	1.540E-004	15.98	
	2234.71		11980	11	1.12	4467.55	8.732E-005	1.45	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.05 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 1.443E-002 +/-	1.8%	< 1.374E-005	< 6.653E-016
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 2.375E-002 +/-	2.0%	< 2.262E-005	< 3.752E-012
	Al-26	< 6.232E-003 +/-	18.9%	< 5.935E-006	< 3.278E-007
	K-40	< 2.141E-001 +/-	5.3%	< 2.040E-004	< 3.341E-002
	Co-57	< 1.511E-001 +/-	4.4%	< 1.439E-004	< 1.768E-011
	Co-60	< 3.042E-002 +/-	2.5%	< 2.897E-005	< 2.668E-011
	Se-75	< 1.196E-001 +/-	1.8%	< 1.139E-004	< 8.227E-012
	Kr-85	< 7.140E+000 +/-	3.1%	< 6.800E-003	< 1.799E-008
	Sr-90	< 3.430E-002 +/-	2.2%	< 3.267E-005	< 2.487E-010
	Sb-125	< 1.165E-001 +/-	1.9%	< 1.109E-004	< 1.120E-010
	Ba-133	< 9.421E-002 +/-	1.6%	< 8.972E-005	< 3.721E-010
	Cs-134	< 1.943E-002 +/-	1.9%	< 1.850E-005	< 1.482E-011
X	Cs-137				
	Eu-152	< 7.278E-002 +/-	3.8%	< 6.931E-005	< 4.090E-010
	Eu-154	< 6.781E-002 +/-	2.1%	< 6.458E-005	< 2.543E-010
	Ho-166m	< 1.780E-002 +/-	2.3%	< 1.695E-005	< 9.895E-009
	Bi-207	< 2.497E-002 +/-	2.1%	< 2.378E-005	< 4.544E-010
	Pb-210	< 1.321E+001 +/-	259.0%	< 1.258E-002	< 1.717E-007

*	Ra*226	< 4.351E-002 +/- 2.4%	< 4.144E-005	< 4.351E-008	
	Ac-227	< 4.173E-001 +/- 8.3%	< 3.974E-004	< 5.716E-009	
	Th-230	< 5.982E+001 +/- 83.2%	< 5.697E-002	< 2.931E-003	
	Pa-231	< 2.459E+000 +/- 11.2%	< 2.341E-003	< 5.138E-005	
	Th-232	< 5.603E-002 +/- 2.4%	< 5.337E-005	< 5.049E-001	
	U-232	< 7.346E-002 +/- 2.3%	< 6.996E-005	< 3.401E-009	
	U-233	< 1.495E+003 +/- 3.0%	< 1.424E+000	< 1.525E-001	
	Pa-234	< 1.011E-001 +/- 12.2%	< 9.628E-005		
	Pa-234m	< 1.490E+002 +/- 2.1%	< 1.419E-001		
	U-234	< 0.000E+000 +/- 0.0%	< 0.000E+000	< 0.000E+000	
	U-235	< 1.402E-001 +/- 2.9%	< 1.336E-004	< 6.409E-002	
	Np-237	3.107E-001 +/- 27.0%	2.959E-004	4.349E-004	
	Pu-238	< 9.790E+003 +/- 3.1%	< 9.324E+000	< 5.659E-004	
	U-238	< 3.187E+000 +/- 2.2%	< 3.035E-003	< 9.369E+000	
	Pu-239	2.150E+005 +/- 3.8%	2.048E+002	3.419E+000	
	Pu-239B	< 5.503E+003 +/- 16.5%	< 5.241E+000	< 8.749E-002	
	U-239	< 2.202E+001 +/- 308.4%	< 2.097E-002		
X	Pu-240				
	Am-241	4.473E+004 +/- 9.0%	4.260E+001	1.288E-002	
	Am-241B	2.559E+004 +/- 10.2%	2.437E+001	7.371E-003	
	Pu-241	1.667E+005 +/- 22.8%	1.588E+002	1.604E-003	
	Pu-241B	3.334E+005 +/- 3.5%	3.175E+002	3.207E-003	
	Pu-242	< 0.000E+000 +/- 0.0%	< 0.000E+000	< 0.000E+000	
	Am-243	< 3.229E-001 +/- 57.7%	< 3.075E-004	< 1.598E-006	
	Cm-243	< 4.769E-001 +/- 3.3%	< 4.542E-004	< 9.156E-009	
	Cm-244	< 2.816E+004 +/- 14.1%	< 2.682E+001	< 3.436E-004	
	Cm-245	< 8.904E-001 +/- 7.8%	< 8.480E-004	< 5.120E-006	
	Cm-247	< 5.191E-002 +/- 8.5%	< 4.944E-005	< 5.554E-004	

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 6.271E-002 +/-	3.4%	< 5.973E-005	< 1.518E-008
Cf-251	< 4.877E-001 +/-	5.8%	< 4.645E-004	< 3.048E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	3.42E+000 +- 1.30E-001	9.93E-001 +- 2.09E-002

Beta: 2.17E+002 +- 8.63E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	6.08E-001 +- 2.53E-002
203.55	1.48E+000 +- 7.37E-002
375.05	1.88E+000 +- 5.64E-002
413.71	2.00E+000 +- 6.55E-002

Segment 4 Results

Segment: 4 Detector: DET01 Position: 4
C:\Canberra\NDA2k\Data\00000206_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P004_S004

Acquisition Start: 12/22/2008 1:45:13 PM
Elapsed Live Time: 102.15 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.350 +/- 0.0066
SE-75	264.66	0.472 +/- 0.0091
SE-75	279.54	0.469 +/- 0.0091
SE-75	400.66	0.520 +/- 0.0126

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

*** Spectrum Validity Test warnings ***
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 12/22/2008 1:47:15 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.44	Y	54825	6098	1.12	120.72	5.073E-006	1.26	
M	94.69	Y	11019	11573	1.56	191.17	1.293E-004	2.30	65.82
m	98.70	Y	44089	15355	1.57	199.18	1.527E-004	1.87	
m	100.91	Y	6963	15314	1.57	203.59	1.658E-004	2.85	
m	103.36	Y	31979	12929	1.57	208.49	1.804E-004	1.84	
M	111.10	Y	11931	7878	1.39	223.95	2.257E-004	1.30	84.10
m	114.58	Y	9832	9583	1.39	230.90	2.453E-004	1.32	
m	116.65	Y	9337	8118	1.40	235.06	2.566E-004	1.32	
m	120.67	Y	2405	7279	1.40	243.08	2.775E-004	1.81	
m	125.23	Y	4496	6691	1.41	252.20	2.996E-004	1.47	
m	129.29	Y	20905	5791	1.42	260.30	3.176E-004	1.25	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
M	144.21	Y	1449	3933	1.06	290.11	3.723E-004	9.68	1.44
m	146.30	Y	1122	4506	1.07	294.30	3.785E-004	10.31	
m	148.56	Y	2678	4636	1.07	298.81	3.848E-004	8.70	
M	160.88	Y	1410	5111	1.55	323.44	4.112E-004	15.36	4.03
m	164.62	Y	1208	6047	1.56	330.90	4.168E-004	14.69	
m	169.56	Y	299	5924	1.57	340.78	4.227E-004	28.78	
m	171.35	Y	815	5888	1.57	344.35	4.245E-004	15.79	
	179.09	Y	372	3387	1.17	359.82	4.299E-004	26.07	
	189.26	Y	581	4522	1.08	380.14	4.323E-004	21.01	
	195.62	Y	958	4402	1.30	392.86	4.317E-004	12.82	
M	203.50	Y	4965	3742	1.17	408.61	4.290E-004	2.83	1.00
m	207.98	Y	16209	3240	1.17	417.55	4.267E-004	2.31	
	255.32	Y	619	2210	1.35	512.15	3.842E-004	14.18	
M	263.83	Y	356	1906	1.41	529.15	3.751E-004	24.51	0.91
m	267.50	Y	635	1995	1.41	536.49	3.705E-004	22.04	
	297.30	Y	366	1638	0.94	596.03	3.359E-004	20.47	
	311.78	Y	775	1387	1.36	624.98	3.212E-004	9.23	
M	320.94	Y	554	1441	1.69	643.29	3.124E-004	7.62	2.51
m	323.32	Y	755	2135	1.69	648.04	3.102E-004	5.87	
M	332.69	Y	5688	1157	1.34	666.75	3.016E-004	2.95	2.41
m	335.68	Y	2363	1054	1.34	672.74	2.989E-004	3.55	
m	341.39	Y	663	1097	1.35	684.13	2.940E-004	6.47	
m	344.96	Y	4884	908	1.35	691.28	2.910E-004	2.97	
	368.26	Y	1925	1194	2.41	737.83	2.724E-004	4.26	
M	375.01	Y	12998	1022	1.28	751.33	2.674E-004	1.48	10.82
m	380.08	Y	2490	669	1.28	761.45	2.638E-004	2.52	
m	382.68	Y	2216	573	1.28	766.65	2.620E-004	2.63	
	392.85	Y	4522	572	1.47	786.97	2.551E-004	2.22	
	413.61	Y	12033	372	1.39	828.46	2.421E-004	1.55	
M	422.49	Y	901	254	1.17	846.21	2.370E-004	4.15	3.48
m	426.57	Y	163	224	1.18	854.36	2.348E-004	11.27	
	451.39	Y	1485	162	1.39	903.96	2.221E-004	3.42	
	618.81	Y	130	46	1.69	1238.50	1.676E-004	13.77	
	645.83	Y	81	40	1.30	1292.49	1.621E-004	18.36	
	662.40	Y	650	68	1.38	1325.62	1.590E-004	4.97	
	688.68	Y	24	48	1.31	1378.12	1.546E-004	55.32	
	704.02	Y	26	21	1.26	1408.78	1.522E-004	37.81	
	721.69	Y	284	26	1.40	1444.08	1.496E-004	7.36	
	768.99	Y	67	18	0.83	1538.62	1.433E-004	17.85	
	2234.69		11980	35	1.16	4467.51	6.783E-005	1.52	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.18 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 2.670E-002 +/-	1.8%	< 2.543E-005	< 1.231E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 1.566E-002 +/-	2.0%	< 1.491E-005	< 2.474E-012
	Al-26	< 4.381E-002 +/-	14.5%	< 4.173E-005	< 2.305E-006
	K-40	< 3.077E-001 +/-	4.8%	< 2.930E-004	< 4.800E-002
	Co-57	2.012E+000 +/-	4.4%	1.916E-003	2.354E-010
	Co-60	< 2.854E-002 +/-	1.7%	< 2.718E-005	< 2.503E-011
	Se-75	< 1.936E-001 +/-	1.7%	< 1.844E-004	< 1.332E-011
	Kr-85	< 1.203E+001 +/-	3.0%	< 1.146E-002	< 3.031E-008
	Sr-90	< 8.672E-002 +/-	2.0%	< 8.259E-005	< 6.287E-010
	Sb-125	< 2.277E-001 +/-	2.2%	< 2.169E-004	< 2.191E-010
	Ba-133	< 1.520E-001 +/-	1.7%	< 1.448E-004	< 6.004E-010
	Cs-134	< 2.592E-002 +/-	1.8%	< 2.468E-005	< 1.978E-011
X	Cs-137				
	Eu-152	< 9.994E-002 +/-	3.6%	< 9.518E-005	< 5.617E-010
	Eu-154	< 4.471E-002 +/-	2.2%	< 4.258E-005	< 1.676E-010
	Ho-166m	< 4.563E-002 +/-	2.3%	< 4.346E-005	< 2.537E-008
	Bi-207	< 3.598E-002 +/-	1.9%	< 3.427E-005	< 6.549E-010
	Pb-210	< 4.226E+003 +/-	37.2%	< 4.025E+000	< 5.494E-005
	Ra-226	< 9.092E-002 +/-	2.2%	< 8.659E-005	< 9.092E-008
	Ac-227	< 6.371E-001 +/-	8.3%	< 6.068E-004	< 8.728E-009
	Th-230	< 3.191E+002 +/-	8.5%	< 3.039E-001	< 1.564E-002
	Pa-231	< 3.711E+000 +/-	11.2%	< 3.535E-003	< 7.757E-005
	Th-232	< 9.431E-002 +/-	2.4%	< 8.982E-005	< 8.497E-001
	U-232	< 1.421E-001 +/-	2.1%	< 1.353E-004	< 6.577E-009
	U-233	< 2.403E+003 +/-	2.6%	< 2.289E+000	< 2.452E-001
	Pa-234	< 1.247E-001 +/-	12.2%	< 1.187E-004	
	Pa-234m	< 1.648E+002 +/-	2.1%	< 1.569E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 2.021E-001 +/-	2.4%	< 1.925E-004	< 9.237E-002
	Np-237	9.162E-001 +/-	14.4%	8.726E-004	1.283E-003
	Pu-238	< 1.396E+004 +/-	2.5%	< 1.330E+001	< 8.071E-004
	U-238	< 2.360E+000 +/-	2.2%	< 2.248E-003	< 6.940E+000
	Pu-239	1.280E+006 +/-	3.1%	1.219E+003	2.035E+001
	Pu-239B	7.350E+005 +/-	1.4%	7.000E+002	1.169E+001
	U-239	< 1.814E+004 +/-	46.3%	< 1.727E+001	
X	Pu-240				
	Am-241	2.382E+005 +/-	4.7%	2.269E+002	6.860E-002
	Am-241B	2.018E+005 +/-	3.6%	1.922E+002	5.812E-002
	Pu-241	8.448E+005 +/-	9.0%	8.046E+002	8.127E-003
	Pu-241B	1.641E+006 +/-	3.2%	1.563E+003	1.578E-002
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 7.056E-001 +/-	1.8%	< 6.720E-004	< 3.493E-006
	Cm-243	< 7.278E-001 +/-	3.3%	< 6.931E-004	< 1.397E-008
	Cm-244	< 3.006E+004 +/-	14.2%	< 2.863E+001	< 3.667E-004
	Cm-245	< 1.248E+000 +/-	7.6%	< 1.188E-003	< 7.174E-006
	Cm-247	< 1.007E-001 +/-	8.5%	< 9.589E-005	< 1.077E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.226E-001 +/-	3.5%	< 1.167E-004	< 2.966E-008
Cf-251	< 7.075E-001 +/-	5.6%	< 6.738E-004	< 4.422E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	2.03E+001 +- 6.35E-001	6.04E+000 +- 9.89E-002

Beta: 2.17E+002 +- 7.08E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	3.74E+000 +- 1.25E-001
203.55	7.28E+000 +- 2.54E-001
375.05	1.12E+001 +- 2.73E-001
413.71	1.21E+001 +- 3.22E-001

Segment 5 Results

Segment: 5 Detector: DET01 Position: 5
C:\Canberra\NDA2k\Data\00000206_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P005_S005

Acquisition Start: 12/22/2008 1:49:25 PM
Elapsed Live Time: 87.77 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.000 +/- 0.0000
SE-75	264.66	0.226 +/- 0.0064
SE-75	279.54	0.241 +/- 0.0070
SE-75	400.66	0.391 +/- 0.0125

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

*** Spectrum Validity Test warnings ***
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 12/22/2008 1:51:26 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	49.43		2120	9458	1.88	100.72	4.633E-005	9.47	
	59.42	Y	128814	10098	1.12	120.68	7.201E-005	1.27	
M	94.65	Y	21980	16951	1.53	191.09	1.704E-004	1.90	121.09
m	98.67	Y	88485	23226	1.54	199.11	1.803E-004	1.63	
m	100.90	Y	13711	23874	1.55	203.57	1.856E-004	2.28	
m	103.32	Y	63252	19441	1.55	208.40	1.912E-004	1.61	
M	111.04	Y	23698	11461	1.41	223.83	2.077E-004	1.60	152.41
m	114.53	Y	19497	12769	1.42	230.81	2.146E-004	1.70	
m	116.61	Y	19009	11953	1.42	234.96	2.185E-004	1.65	
m	120.53	Y	4662	10824	1.43	242.79	2.255E-004	2.91	
m	122.80	Y	2097	9517	1.43	247.34	2.293E-004	5.22	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	125.20	Y	8454	9120	1.44	252.12	2.331E-004	2.12	
m	129.24	Y	40877	7964	1.44	260.20	2.392E-004	1.47	
M	144.15	Y	2693	6462	1.13	290.00	2.573E-004	7.59	1.51
m	146.21	Y	2247	7190	1.13	294.12	2.594E-004	7.89	
m	148.53	Y	6093	7207	1.14	298.74	2.615E-004	6.67	
M	160.98	Y	2403	6720	1.34	323.64	2.708E-004	11.36	4.25
m	164.53	Y	2219	9556	1.34	330.73	2.728E-004	10.14	
m	169.33	Y	637	10016	1.35	340.32	2.752E-004	16.65	
m	171.31	Y	1846	9906	1.35	344.27	2.760E-004	10.26	
	179.10	Y	1099	6848	1.06	359.84	2.786E-004	15.78	
	189.34	Y	1572	6582	1.05	380.30	2.806E-004	10.99	
	195.65	Y	1613	6625	1.29	392.90	2.811E-004	10.75	
M	203.49	Y	9192	5689	1.18	408.57	2.811E-004	3.12	0.48
m	207.94	Y	31754	5079	1.18	417.47	2.808E-004	2.82	
	255.33	Y	1599	3172	1.11	512.16	2.688E-004	7.83	
M	263.84	Y	428	2356	1.06	529.17	2.656E-004	20.99	0.52
m	267.49	Y	1080	2486	1.06	536.48	2.648E-004	18.30	
	297.38	Y	932	2455	1.39	596.19	2.607E-004	11.82	
M	311.80	Y	1647	2127	1.51	625.02	2.583E-004	3.91	4.64
m	316.23	Y	219	2687	1.52	633.87	2.574E-004	19.74	
m	320.87	Y	1123	2605	1.52	643.13	2.564E-004	5.04	
m	323.34	Y	1511	2543	1.52	648.08	2.559E-004	4.08	
M	332.64	Y	10926	1621	1.35	666.67	2.536E-004	2.34	3.94
m	335.59	Y	4351	1519	1.35	672.56	2.529E-004	2.80	
m	341.30	Y	1206	1619	1.36	683.97	2.513E-004	5.05	
m	344.89	Y	9306	1538	1.36	691.14	2.504E-004	2.33	
M	361.82	Y	242	1173	1.29	724.96	2.455E-004	15.92	3.24
m	366.92	Y	1345	1351	1.30	735.15	2.440E-004	8.97	
m	368.44	Y	2522	1377	1.30	738.20	2.435E-004	5.05	
M	374.96	Y	25240	1245	1.27	751.22	2.415E-004	1.41	22.91
m	380.03	Y	4809	1070	1.27	761.36	2.399E-004	2.10	
m	382.61	Y	4335	976	1.28	766.51	2.391E-004	2.18	
	392.83	Y	8870	939	1.55	786.93	2.359E-004	1.89	
	413.56	Y	23305	657	1.39	828.37	2.277E-004	1.46	
M	422.48	Y	1673	461	1.27	846.18	2.238E-004	3.31	2.01
m	426.48	Y	334	444	1.27	854.18	2.221E-004	8.76	
M	445.63	Y	119	193	1.30	892.44	2.143E-004	16.43	1.60
m	451.34	Y	2791	252	1.31	903.86	2.120E-004	4.65	
	481.26	Y	34	103	0.75	963.64	2.009E-004	58.21	
	618.93	Y	261	63	1.43	1238.74	1.619E-004	9.90	
M	640.06	Y	129	41	1.53	1280.98	1.574E-004	10.85	1.77
m	645.84	Y	189	46	1.53	1292.53	1.562E-004	8.74	
m	652.48	Y	195	42	1.54	1305.80	1.548E-004	8.53	
m	658.78	Y	95	46	1.54	1318.38	1.536E-004	13.44	
m	662.28	Y	1154	47	1.55	1325.37	1.529E-004	3.62	
	688.44	Y	101	41	1.79	1377.64	1.481E-004	18.26	
	703.42	Y	41	20	1.46	1407.59	1.455E-004	28.40	
	721.77	Y	630	30	1.63	1444.24	1.425E-004	5.12	
	755.74	Y	39	21	1.03	1512.14	1.373E-004	30.58	
	769.13	Y	151	16	1.25	1538.90	1.355E-004	11.23	
	2234.67		11980	49	1.14	4467.47	8.899E-005	1.62	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.35 +/- 0.02

*Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 3.949E-002 +/-	1.8%	< 3.761E-005	< 1.820E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 2.358E-002 +/-	2.0%	< 2.245E-005	< 3.725E-012
	Al-26	< 5.622E-002 +/-	14.7%	< 5.354E-005	< 2.957E-006
	K-40	< 3.807E-001 +/-	4.9%	< 3.626E-004	< 5.939E-002
X	Co-57				
	Co-60	< 3.118E-002 +/-	2.5%	< 2.969E-005	< 2.734E-011
	Se-75	< 2.959E-001 +/-	1.9%	< 2.819E-004	< 2.036E-011
	Kr-85	< 1.673E+001 +/-	3.1%	< 1.593E-002	< 4.215E-008
	Sr-90	< 8.197E-002 +/-	2.1%	< 7.807E-005	< 5.943E-010
	Sb-125	< 3.127E-001 +/-	2.3%	< 2.978E-004	< 3.008E-010
	Ba-133	< 2.239E-001 +/-	1.7%	< 2.133E-004	< 8.846E-010
	Cs-134	< 3.508E-002 +/-	1.8%	< 3.341E-005	< 2.677E-011
X	Cs-137				
	Eu-152	< 1.360E-001 +/-	3.6%	< 1.295E-004	< 7.642E-010
	Eu-154	< 6.732E-002 +/-	2.2%	< 6.411E-005	< 2.525E-010
	Ho-166m	< 5.922E-002 +/-	2.2%	< 5.640E-005	< 3.293E-008
	Bi-207	< 4.572E-002 +/-	1.8%	< 4.355E-005	< 8.322E-010
	Pb-210	< 2.769E+001 +/-	36.7%	< 2.637E-002	< 3.600E-007
	Ra-226	< 1.133E-001 +/-	2.3%	< 1.079E-004	< 1.133E-007
	Ac-227	< 1.043E+000 +/-	8.3%	< 9.931E-004	< 1.429E-008
	Th-230	< 1.326E+002 +/-	13.1%	< 1.263E-001	< 6.497E-003
	Pa-231	< 5.277E+000 +/-	11.2%	< 5.026E-003	< 1.103E-004
	Th-232	< 1.243E-001 +/-	2.4%	< 1.184E-004	< 1.120E+000
	U-232	< 1.966E-001 +/-	2.2%	< 1.873E-004	< 9.104E-009
	U-233	< 3.953E+003 +/-	2.7%	< 3.765E+000	< 4.032E-001
	Pa-234	< 1.719E-001 +/-	12.2%	< 1.637E-004	
	Pa-234m	< 1.934E+002 +/-	2.1%	< 1.842E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 3.399E-001 +/-	2.5%	< 3.237E-004	< 1.553E-001
	Np-237	2.619E+000 +/-	6.1%	2.494E-003	3.666E-003
	Pu-238	< 2.252E+004 +/-	2.6%	< 2.145E+001	< 1.302E-003
	U-238	< 3.907E+000 +/-	2.1%	< 3.721E-003	< 1.149E+001
	Pu-239	2.427E+006 +/-	3.2%	2.311E+003	3.858E+001
	Pu-239B	1.647E+006 +/-	1.3%	1.569E+003	2.619E+001
	U-239	< 5.648E+001 +/-	45.9%	< 5.379E-002	
X	Pu-240				
	Am-241	4.821E+005 +/-	3.8%	4.592E+002	1.389E-001
	Am-241B	2.778E+005 +/-	3.4%	2.646E+002	8.001E-002
	Pu-241	2.829E+006 +/-	7.3%	2.694E+003	2.721E-002
	Pu-241B	4.771E+006 +/-	3.6%	4.544E+003	4.590E-002
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 7.493E-001 +/-	8.4%	< 7.136E-004	< 3.709E-006
	Cm-243	< 1.079E+000 +/-	3.3%	< 1.027E-003	< 2.071E-008

Cm-244	< 5.421E+004	+/-	14.2%	< 5.163E+001	< 6.613E-004
Cm-245	< 2.091E+000	+/-	7.7%	< 1.992E-003	< 1.203E-005
Cm-247	< 1.559E-001	+/-	8.5%	< 1.485E-004	< 1.669E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.820E-001 +/-	3.5%	< 1.733E-004	< 4.404E-008
Cf-251	< 1.207E+000 +/-	5.6%	< 1.149E-003	< 7.541E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	3.86E+001 +- 1.23E+000	1.61E+001 +- 2.65E-001

Beta: 1.71E+002 +- 7.46E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	9.70E+000 +- 3.61E-001
203.55	2.06E+001 +- 8.04E-001
375.05	2.41E+001 +- 5.98E-001
413.71	2.50E+001 +- 6.74E-001

Segment 6 Results

Segment: 6 Detector: DET01 Position: 6
C:\Canberra\NDA2k\Data\00000206_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P006_S006

Acquisition Start: 12/22/2008 1:53:36 PM
Elapsed Live Time: 88.43 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.001 +/- 0.0005
SE-75	264.66	0.199 +/- 0.0064
SE-75	279.54	0.218 +/- 0.0077
SE-75	400.66	0.367 +/- 0.0114

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

*** Spectrum Validity Test warnings ***
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 12/22/2008 1:55:38 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.42	Y	115418	9869	1.13	120.68	6.757E-007	1.27	
M	94.66	Y	20958	16906	1.54	191.11	3.230E-005	1.94	111.33
m	98.68	Y	85190	23128	1.54	199.13	3.881E-005	1.65	
m	100.85	Y	13104	23737	1.55	203.46	4.238E-005	2.31	
m	103.31	Y	61463	19295	1.55	208.40	4.646E-005	1.63	
M	111.03	Y	22512	10464	1.37	223.82	5.893E-005	1.91	147.23
m	114.56	Y	18672	11910	1.38	230.87	6.432E-005	2.00	
m	116.63	Y	17206	12132	1.38	235.00	6.737E-005	1.95	
m	120.49	Y	4175	9997	1.39	242.72	7.276E-005	3.26	
m	122.80	Y	2051	9618	1.39	247.34	7.582E-005	5.37	
m	125.23	Y	8058	9196	1.40	252.18	7.884E-005	2.37	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	129.26	Y	39891	7968	1.40	260.24	8.347E-005	1.76	
M	144.16	Y	2629	5783	1.18	290.02	1.611E-004	10.50	1.03
m	146.29	Y	2276	5826	1.18	294.28	1.714E-004	11.37	
m	148.54	Y	5503	6618	1.19	298.76	1.810E-004	9.59	
M	161.10	Y	2246	6908	1.22	323.87	2.226E-004	10.13	4.65
m	164.59	Y	2132	9044	1.22	330.85	2.314E-004	9.63	
m	169.38	Y	557	8778	1.23	340.43	2.420E-004	16.88	
m	171.31	Y	1587	7963	1.23	344.28	2.458E-004	10.02	
	179.20	Y	932	5564	1.16	360.03	2.591E-004	15.78	
	189.35	Y	1458	6535	1.02	380.32	2.716E-004	11.68	
	195.54	Y	1564	6576	1.19	392.70	2.771E-004	10.95	
M	203.49	Y	9093	5594	1.18	408.58	2.821E-004	3.70	2.11
m	207.94	Y	31562	4890	1.19	417.47	2.842E-004	3.46	
	237.76		244	3412	1.17	477.05	2.874E-004	47.74	
	255.26	Y	1467	3088	1.14	512.02	2.840E-004	8.32	
M	263.84	Y	574	2461	1.26	529.17	2.816E-004	18.79	0.58
m	267.47	Y	1116	3181	1.27	536.44	2.806E-004	16.75	
	297.40	Y	731	2290	1.28	596.23	2.731E-004	13.96	
	311.66	Y	1385	1995	1.15	624.73	2.691E-004	7.18	
M	320.84	Y	844	2484	1.60	643.08	2.664E-004	6.65	4.87
m	323.35	Y	1163	2825	1.61	648.09	2.656E-004	5.12	
M	332.64	Y	10623	1873	1.35	666.66	2.627E-004	2.48	3.56
m	335.60	Y	4358	1730	1.35	672.57	2.618E-004	2.89	
m	341.32	Y	1160	1633	1.36	684.01	2.601E-004	5.16	
m	344.91	Y	9216	1531	1.36	691.17	2.589E-004	2.45	
	368.16	Y	3578	1848	2.42	737.64	2.516E-004	3.39	
M	374.97	Y	25089	1657	1.29	751.25	2.495E-004	1.41	22.23
m	380.05	Y	4725	1122	1.29	761.40	2.480E-004	2.12	
m	382.65	Y	4243	977	1.29	766.58	2.472E-004	2.19	
	392.81	Y	8473	948	1.55	786.89	2.442E-004	1.91	
M	413.60	Y	22639	534	1.35	828.43	2.364E-004	1.64	4.17
m	419.05	Y	123	455	1.36	839.33	2.341E-004	20.17	
m	422.46	Y	1696	497	1.36	846.14	2.327E-004	3.46	
m	426.49	Y	391	437	1.36	854.19	2.312E-004	8.39	
M	445.71	Y	83	254	1.31	892.61	2.240E-004	21.90	2.48
m	451.36	Y	2816	284	1.32	903.89	2.221E-004	2.50	
	618.75	Y	282	56	1.32	1238.40	1.797E-004	9.09	
M	640.04	Y	111	52	1.46	1280.94	1.758E-004	12.14	1.53
m	645.79	Y	136	48	1.46	1292.42	1.747E-004	10.96	
m	652.56	Y	183	53	1.47	1305.96	1.736E-004	9.05	
m	658.77	Y	63	48	1.47	1318.37	1.725E-004	18.01	
m	662.28	Y	1206	49	1.47	1325.37	1.719E-004	3.56	
	688.72	Y	112	34	1.08	1378.20	1.676E-004	15.91	
	721.83	Y	554	47	1.77	1444.38	1.625E-004	5.75	
	755.91	Y	59	19	1.26	1512.48	1.577E-004	21.72	
	768.99	Y	142	26	1.27	1538.61	1.558E-004	12.69	
	2234.68		11980	47	1.15	4467.49	5.292E-005	1.62	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.34 +/- 0.02

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

. ? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 2.362E-002 +/-	1.9%	< 2.250E-005	< 1.089E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 2.540E-002 +/-	1.9%	< 2.419E-005	< 4.014E-012
	Al-26	< 7.928E-002 +/-	19.8%	< 7.551E-005	< 4.170E-006
	K-40	< 2.781E-001 +/-	5.3%	< 2.649E-004	< 4.339E-002
	Co-57	2.605E+000 +/-	28.9%	2.481E-003	3.048E-010
	Co-60	< 3.253E-002 +/-	1.7%	< 3.098E-005	< 2.853E-011
	Se-75	< 2.645E-001 +/-	2.3%	< 2.519E-004	< 1.819E-011
	Kr-85	< 1.544E+001 +/-	3.2%	< 1.470E-002	< 3.890E-008
	Sr-90	< 7.385E-002 +/-	2.6%	< 7.033E-005	< 5.354E-010
	Sb-125	< 2.819E-001 +/-	2.7%	< 2.685E-004	< 2.712E-010
	Ba-133	< 2.110E-001 +/-	1.8%	< 2.010E-004	< 8.334E-010
	Cs-134	< 2.674E-002 +/-	2.0%	< 2.546E-005	< 2.040E-011
X	Cs-137				
	Eu-152	< 3.386E-002 +/-	3.8%	< 3.224E-005	< 1.903E-010
	Eu-154	< 7.256E-002 +/-	2.1%	< 6.911E-005	< 2.721E-010
	Ho-166m	< 3.750E-002 +/-	2.4%	< 3.572E-005	< 2.085E-008
	Bi-207	< 2.445E-002 +/-	1.9%	< 2.328E-005	< 4.449E-010
	Pb-210	< 3.384E+004 +/-	309.7%	< 3.222E+001	< 4.399E-004
	Ra-226	< 1.084E-001 +/-	2.7%	< 1.033E-004	< 1.084E-007
	Ac-227	< 9.023E-001 +/-	8.5%	< 8.593E-004	< 1.236E-008
	Th-230	< 4.475E+002 +/-	9.0%	< 4.262E-001	< 2.193E-002
	Pa-231	< 4.804E+000 +/-	11.3%	< 4.575E-003	< 1.004E-004
	Th-232	< 1.790E-002 +/-	2.4%	< 1.704E-005	< 1.613E-001
	U-232	< 1.746E-001 +/-	2.6%	< 1.663E-004	< 8.086E-009
	U-233	< 3.446E+003 +/-	4.0%	< 3.282E+000	< 3.515E-001
	Pa-234	< 1.109E-001 +/-	12.2%	< 1.056E-004	
	Pa-234m	< 1.784E+002 +/-	2.1%	< 1.699E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 2.838E-001 +/-	4.0%	< 2.703E-004	< 1.297E-001
	Np-237	2.007E+000 +/-	11.2%	1.912E-003	2.810E-003
	Pu-238	< 1.898E+004 +/-	4.2%	< 1.808E+001	< 1.097E-003
	U-238	< 2.910E+000 +/-	2.1%	< 2.772E-003	< 8.556E+000
	Pu-239	1.483E+006 +/-	4.8%	1.412E+003	2.358E+001
	Pu-239B	1.488E+006 +/-	1.4%	1.417E+003	2.366E+001
	U-239	< 2.662E+005 +/-	368.5%	< 2.535E+002	
	Pu-240	1.367E+005 +/-	45.4%	1.302E+002	5.946E-001
	Am-241	4.165E+005 +/-	4.0%	3.967E+002	1.200E-001
	Am-241B	3.511E+005 +/-	6.4%	3.344E+002	1.011E-001
	Pu-241	3.691E+006 +/-	10.5%	3.515E+003	3.551E-002
	Pu-241B	4.786E+006 +/-	4.3%	4.558E+003	4.604E-002
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 9.626E-001 +/-	2.2%	< 9.167E-004	< 4.765E-006
	Cm-243	< 9.928E-001 +/-	3.5%	< 9.456E-004	< 1.906E-008
	Cm-244	< 4.053E+004 +/-	14.2%	< 3.860E+001	< 4.944E-004
	Cm-245	< 1.742E+000 +/-	8.4%	< 1.659E-003	< 1.001E-005
	Cm-247	< 1.446E-001 +/-	8.5%	< 1.377E-004	< 1.548E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.691E-001 +/-	3.5%	< 1.610E-004	< 4.092E-008
Cf-251	< 1.001E+000 +/-	6.5%	< 9.529E-004	< 6.254E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	2.36E+001 +- 1.14E+000	2.29E+001 +- 3.97E-001

Beta: 8.89E+000 +- 1.48E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	2.71E+001 +- 2.23E+000
203.55	2.03E+001 +- 1.02E+000
375.05	2.32E+001 +- 5.89E-001
413.71	2.34E+001 +- 6.58E-001

Segment 7 Results

Segment: 7 Detector: DET01 Position: 7
C:\Canberra\NDA2k\Data\00000206_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P007_S007

Acquisition Start: 12/22/2008 1:57:48 PM
Elapsed Live Time: 100.48 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.066 +/- 0.0033
SE-75	264.66	0.304 +/- 0.0068
SE-75	279.54	0.313 +/- 0.0071
SE-75	400.66	0.436 +/- 0.0115

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

*** Spectrum Validity Test warnings ***
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 12/22/2008 1:59:50 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.44	Y	75585	7635	1.09	120.73	2.379E-006	1.24	
M	94.70	Y	12220	12804	1.51	191.19	7.198E-005	2.18	76.03
m	98.70	Y	48982	17303	1.52	199.18	8.593E-005	1.78	
m	100.91	Y	7419	17569	1.52	203.59	9.382E-005	2.71	
m	103.33	Y	33653	14116	1.53	208.44	1.026E-004	1.77	
M	111.10	Y	12852	8377	1.36	223.95	1.305E-004	1.88	92.46
m	114.55	Y	10251	8512	1.37	230.84	1.425E-004	2.02	
m	116.61	Y	9756	8661	1.37	234.97	1.496E-004	1.96	
m	120.62	Y	2350	7801	1.38	242.98	1.627E-004	3.87	
m	122.91	Y	1258	6832	1.38	247.56	1.699E-004	6.24	
m	125.27	Y	4906	6505	1.39	252.27	1.770E-004	2.50	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	129.27	Y	23117	5595	1.39	260.27	1.884E-004	1.67	
M	144.23	Y	1447	4198	1.07	290.15	2.380E-004	10.13	1.33
m	146.37	Y	1030	4199	1.07	294.43	2.456E-004	11.31	
m	148.56	Y	3014	4724	1.08	298.80	2.529E-004	9.13	
M	160.93	Y	1167	4903	1.40	323.53	2.876E-004	5.71	7.20
m	164.66	Y	1177	6973	1.40	330.98	2.959E-004	5.89	
	171.46	Y	894	4694	1.21	344.58	3.086E-004	13.91	
	179.10	Y	374	4945	1.01	359.83	3.197E-004	34.15	
	189.39	Y	850	4223	1.17	380.40	3.298E-004	13.89	
	195.63	Y	977	3599	1.23	392.86	3.336E-004	11.03	
M	203.49	Y	5250	3733	1.17	408.57	3.365E-004	2.93	0.91
m	207.98	Y	17258	3255	1.18	417.54	3.372E-004	2.46	
	243.39	Y	442	2397	1.13	488.31	3.279E-004	20.52	
	255.35	Y	853	1932	1.41	512.20	3.212E-004	9.79	
M	264.02	Y	220	1588	1.10	529.53	3.157E-004	16.19	1.56
m	267.45	Y	649	1674	1.10	536.38	3.127E-004	6.96	
M	297.43	Y	496	1638	1.25	596.30	2.893E-004	11.43	0.78
m	300.13	Y	146	1289	1.25	601.70	2.875E-004	22.93	
	311.85	Y	700	1299	1.31	625.11	2.795E-004	9.73	
M	321.05	Y	555	1523	1.65	643.49	2.734E-004	7.53	1.68
m	323.51	Y	721	2075	1.65	648.40	2.718E-004	6.06	
M	332.69	Y	5691	1347	1.28	666.75	2.659E-004	1.86	4.54
m	335.62	Y	2205	1227	1.28	672.61	2.641E-004	2.75	
m	341.49	Y	630	1143	1.29	684.34	2.604E-004	5.93	
m	344.95	Y	5106	1168	1.29	691.26	2.583E-004	1.92	
	368.19	Y	1900	1258	2.48	737.69	2.450E-004	4.41	
M	375.01	Y	13323	1097	1.27	751.32	2.413E-004	1.48	12.12
m	380.08	Y	2599	748	1.27	761.45	2.387E-004	2.50	
m	382.64	Y	2297	651	1.28	766.56	2.374E-004	2.62	
	392.85	Y	4720	654	1.45	786.98	2.323E-004	2.21	
	413.62	Y	12220	431	1.39	828.47	2.216E-004	1.55	
M	422.46	Y	944	280	1.25	846.14	2.172E-004	3.99	1.37
m	426.50	Y	185	246	1.25	854.23	2.153E-004	10.31	
	451.40	Y	1468	154	1.45	903.97	2.042E-004	3.43	
	618.99	Y	136	41	1.65	1238.86	1.588E-004	13.05	
M	645.80	Y	59	64	1.50	1292.45	1.544E-004	18.65	2.06
m	652.74	Y	95	69	1.50	1306.31	1.533E-004	12.91	
m	658.80	Y	31	60	1.51	1318.42	1.524E-004	28.67	
m	662.30	Y	655	40	1.51	1325.41	1.519E-004	4.41	
	688.60	Y	37	29	0.89	1377.97	1.483E-004	31.86	
	721.71	Y	308	21	1.42	1444.14	1.443E-004	6.92	
	2234.66		11980	26	1.15	4467.45	4.269E-005	1.53	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.19 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 2.951E-002 +/-	1.8%	< 2.810E-005	< 1.360E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 2.811E-002 +/-	2.0%	< 2.677E-005	< 4.441E-012
	Al-26	< 4.716E-002 +/-	15.5%	< 4.491E-005	< 2.480E-006
	K-40	< 2.760E-001 +/-	5.0%	< 2.629E-004	< 4.306E-002
X	Co-57				
	Co-60	< 2.413E-002 +/-	1.7%	< 2.298E-005	< 2.116E-011
	Se-75	< 1.954E-001 +/-	1.9%	< 1.861E-004	< 1.345E-011
	Kr-85	< 1.241E+001 +/-	3.1%	< 1.181E-002	< 3.126E-008
	Sr-90	< 6.654E-002 +/-	2.1%	< 6.337E-005	< 4.824E-010
	Sb-125	< 2.347E-001 +/-	2.3%	< 2.235E-004	< 2.258E-010
	Ba-133	< 1.722E-001 +/-	1.7%	< 1.640E-004	< 6.801E-010
	Cs-134	< 2.574E-002 +/-	1.8%	< 2.451E-005	< 1.964E-011
X	Cs-137				
X	Eu-152				
	Eu-154	< 8.027E-002 +/-	2.2%	< 7.645E-005	< 3.010E-010
	Ho-166m	< 3.830E-002 +/-	2.2%	< 3.647E-005	< 2.129E-008
	Bi-207	< 4.374E-002 +/-	1.9%	< 4.165E-005	< 7.960E-010
	Pb-210	< 5.663E+003 +/-	70.4%	< 5.393E+000	< 7.362E-005
	Ra-226	< 7.853E-002 +/-	2.3%	< 7.479E-005	< 7.853E-008
	Ac-227	< 6.607E-001 +/-	8.3%	< 6.292E-004	< 9.051E-009
	Th-230	< 3.288E+002 +/-	8.6%	< 3.131E-001	< 1.611E-002
	Pa-231	< 3.888E+000 +/-	11.2%	< 3.703E-003	< 8.127E-005
	Th-232	< 7.087E-002 +/-	2.4%	< 6.749E-005	< 6.385E-001
	U-232	< 1.616E-001 +/-	2.2%	< 1.539E-004	< 7.481E-009
	U-233	< 2.459E+003 +/-	2.9%	< 2.342E+000	< 2.509E-001
	Pa-234	< 9.481E-002 +/-	12.2%	< 9.030E-005	
	Pa-234m	< 2.250E+002 +/-	2.1%	< 2.143E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 2.094E-001 +/-	2.6%	< 1.995E-004	< 9.571E-002
	Np-237	9.998E-001 +/-	13.6%	9.522E-004	1.400E-003
	Pu-238	< 1.424E+004 +/-	2.8%	< 1.357E+001	< 8.233E-004
	U-238	< 3.753E+000 +/-	2.2%	< 3.575E-003	< 1.103E+001
	Pu-239	1.120E+006 +/-	3.4%	1.067E+003	1.781E+001
	Pu-239B	8.341E+005 +/-	1.4%	7.944E+002	1.326E+001
	U-239	< 3.543E+004 +/-	85.6%	< 3.374E+001	
X	Pu-240				
	Am-241	2.585E+005 +/-	4.4%	2.462E+002	7.445E-002
	Am-241B	2.246E+005 +/-	4.0%	2.139E+002	6.470E-002
	Pu-241	1.447E+006 +/-	9.7%	1.378E+003	1.392E-002
	Pu-241B	2.206E+006 +/-	2.9%	2.101E+003	2.123E-002
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 7.288E-001 +/-	1.9%	< 6.941E-004	< 3.608E-006
	Cm-243	< 7.517E-001 +/-	3.4%	< 7.159E-004	< 1.443E-008
	Cm-244	< 3.251E+004 +/-	14.2%	< 3.096E+001	< 3.966E-004
	Cm-245	< 1.288E+000 +/-	7.7%	< 1.227E-003	< 7.405E-006
	Cm-247	< 1.135E-001 +/-	8.5%	< 1.081E-004	< 1.215E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.330E-001 +/-	3.5%	< 1.267E-004	< 3.219E-008
Cf-251	< 7.264E-001 +/-	5.7%	< 6.918E-004	< 4.540E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.78E+001 +- 6.00E-001	1.03E+001 +- 1.63E-001

Beta: 1.22E+002 +- 8.13E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	6.96E+000 +- 2.79E-001
203.55	9.82E+000 +- 3.63E-001
375.05	1.27E+001 +- 3.18E-001
413.71	1.35E+001 +- 3.65E-001

Segment 8 Results

Segment: 8 Detector: DET01 Position: 8
C:\Canberra\NDA2k\Data\00000206_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P008_S008

Acquisition Start: 12/22/2008 2:01:59 PM
Elapsed Live Time: 113.11 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.372 +/- 0.0065
SE-75	264.66	0.531 +/- 0.0081
SE-75	279.54	0.538 +/- 0.0094
SE-75	400.66	0.581 +/- 0.0126

Errors quoted at 1.000 sigma

Peak Analysis Results

Peak Analysis Performed on: 12/22/2008 2:04:01 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.47	Y	21337	3374	1.08	120.79	9.301E-005	1.38	
M	94.77		3960	6461	1.52	191.33	2.310E-004	3.67	22.47
m	98.71	Y	13712	9190	1.53	199.19	2.436E-004	2.84	
m	100.87	Y	2184	9067	1.54	203.51	2.503E-004	4.71	
m	103.37	Y	9128	7659	1.54	208.51	2.577E-004	2.83	
M	111.05		2801	4726	1.33	223.86	2.783E-004	2.79	11.95
m	114.75	Y	1586	8308	1.34	231.24	2.872E-004	4.46	
M	125.29	Y	1075	2908	1.07	252.31	3.089E-004	6.09	1.39
m	129.34	Y	6455	2547	1.08	260.40	3.159E-004	3.57	
M	144.13		491	2335	1.12	289.95	3.387E-004	19.56	0.99
m	146.24	Y	315	2369	1.12	294.18	3.416E-004	21.95	
m	148.55	Y	860	2417	1.13	298.80	3.446E-004	17.75	
	179.20		176	2203	0.80	360.03	3.687E-004	42.30	
	195.63		150	2016	1.09	392.88	3.724E-004	47.46	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
M	203.55	Y	1252	1643	1.09	408.69	3.726E-004	3.77	2.92
m	208.02	Y	4403	1418	1.09	417.63	3.722E-004	2.00	
	255.32		200	1012	1.23	512.14	3.570E-004	26.53	
	267.47	Y	177	744	1.13	536.42	3.506E-004	24.61	
	311.84	Y	204	747	1.32	625.08	3.217E-004	22.11	
M	332.72	Y	1448	702	1.32	666.82	3.080E-004	3.07	1.86
m	335.67	Y	579	643	1.32	672.71	3.060E-004	5.12	
m	341.37	Y	146	653	1.33	684.09	3.024E-004	14.16	
m	344.98		1353	605	1.33	691.31	3.001E-004	3.13	
M	368.44	Y	451	392	1.26	738.20	2.856E-004	5.78	3.54
m	375.01	Y	3555	361	1.27	751.33	2.817E-004	2.03	
m	380.15		681	287	1.27	761.60	2.787E-004	4.34	
m	382.79		588	266	1.27	766.87	2.771E-004	4.71	
	392.89		1222	259	1.54	787.06	2.714E-004	3.85	
	413.66	Y	3157	117	1.43	828.56	2.601E-004	2.22	
M	422.60		220	105	1.25	846.41	2.555E-004	7.50	0.75
m	426.52	Y	45	91	1.26	854.26	2.536E-004	20.69	
	451.35		369	80	1.20	903.87	2.416E-004	6.83	
	645.83		27	8	0.98	1292.51	1.755E-004	25.82	
	662.17	Y	122	19	1.63	1325.15	1.717E-004	11.21	
	721.81	Y	93	7	1.69	1444.33	1.592E-004	11.67	
	2234.72		11980	12	1.13	4467.56	1.080E-004	1.45	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.07 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 2.732E-002 +/-	1.8%	< 2.602E-005	< 1.260E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 2.106E-002 +/-	1.9%	< 2.006E-005	< 3.327E-012
	Al-26	< 1.971E-002 +/-	18.8%	< 1.877E-005	< 1.037E-006
	K-40	< 2.535E-001 +/-	5.3%	< 2.414E-004	< 3.954E-002
	Co-57	< 1.677E-001 +/-	4.5%	< 1.597E-004	< 1.962E-011
	Co-60	< 2.644E-002 +/-	1.7%	< 2.518E-005	< 2.319E-011
	Se-75	< 1.316E-001 +/-	1.8%	< 1.253E-004	< 9.054E-012
	Kr-85	< 8.228E+000 +/-	3.0%	< 7.836E-003	< 2.073E-008
	Sr-90	< 4.183E-002 +/-	2.2%	< 3.984E-005	< 3.033E-010
	Sb-125	< 1.386E-001 +/-	1.9%	< 1.320E-004	< 1.333E-010
	Ba-133	< 1.119E-001 +/-	1.6%	< 1.066E-004	< 4.420E-010
	Cs-134	< 2.700E-002 +/-	2.1%	< 2.571E-005	< 2.060E-011
X	Cs-137				
	Eu-152	< 1.161E-001 +/-	3.8%	< 1.106E-004	< 6.526E-010

Eu-154	< 6.013E-002	+/-	2.1%	< 5.727E-005	< 2.255E-010
Ho-166m	< 2.629E-002	+/-	2.3%	< 2.504E-005	< 1.462E-008
Bi-207	< 1.736E-002	+/-	1.9%	< 1.654E-005	< 3.160E-010
Pb-210	< 1.509E+001	+/-	259.0%	< 1.437E-002	< 1.962E-007
Ra-226	< 5.875E-002	+/-	2.4%	< 5.595E-005	< 5.875E-008
Ac-227	< 4.486E-001	+/-	8.3%	< 4.272E-004	< 6.145E-009
Th-230	< 6.199E+001	+/-	83.3%	< 5.903E-002	< 3.037E-003
Pa-231	< 2.575E+000	+/-	11.2%	< 2.453E-003	< 5.383E-005
Th-232	< 6.543E-002	+/-	2.3%	< 6.231E-005	< 5.895E-001
U-232	< 7.661E-002	+/-	2.3%	< 7.296E-005	< 3.547E-009
U-233	< 1.683E+003	+/-	3.0%	< 1.603E+000	< 1.717E-001
Pa-234	< 1.018E-001	+/-	12.2%	< 9.693E-005	
Pa-234m	< 1.638E+002	+/-	2.1%	< 1.560E-001	
U-234	< 0.000E+000	+/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 1.580E-001	+/-	2.9%	< 1.505E-004	< 7.223E-002
Np-237	3.700E-001	+/-	22.2%	3.524E-004	5.180E-004
Pu-238	< 1.056E+004	+/-	3.1%	< 1.005E+001	< 6.101E-004
U-238	< 2.172E+000	+/-	2.1%	< 2.068E-003	< 6.385E+000
Pu-239	2.890E+005	+/-	3.8%	2.752E+002	4.594E+000
Pu-239B	< 6.977E+003	+/-	16.6%	< 6.645E+000	< 1.109E-001
U-239	< 4.657E+001	+/-	308.3%	< 4.435E-002	
Pu-240					
Am-241	5.062E+004	+/-	8.6%	4.821E+001	1.458E-002
Am-241B	4.762E+004	+/-	9.8%	4.535E+001	1.371E-002
Pu-241	3.030E+005	+/-	18.0%	2.886E+002	2.915E-003
Pu-241B	5.144E+005	+/-	3.3%	4.899E+002	4.948E-003
Pu-242	< 0.000E+000	+/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 3.432E-001	+/-	57.8%	< 3.269E-004	< 1.699E-006
Cm-243	< 5.238E-001	+/-	3.3%	< 4.989E-004	< 1.006E-008
Cm-244	< 2.076E+004	+/-	14.2%	< 1.977E+001	< 2.532E-004
Cm-245	< 9.724E-001	+/-	7.8%	< 9.261E-004	< 5.591E-006
Cm-247	< 6.173E-002	+/-	8.5%	< 5.879E-005	< 6.605E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 7.718E-002 +/-	3.4%	< 7.351E-005	< 1.868E-008
Cf-251	< 5.473E-001 +/-	5.8%	< 5.213E-004	< 3.421E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	4.59E+000 +- 1.73E-001	2.05E+000 +- 3.77E-002

Beta: 1.73E+002 +- 9.56E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.16E+000 +- 5.80E-002
203.55	2.11E+000 +- 9.35E-002
375.05	2.91E+000 +- 7.88E-002
413.71	2.96E+000 +- 8.77E-002

Segment 9 Results

Segment: 9 Detector: DET01 Position: 9
C:\Canberra\NDA2k\Data\00000206_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P009_S009

Acquisition Start: 12/22/2008 2:06:31 PM
Elapsed Live Time: 117.62 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.376 +/- 0.0063
SE-75	264.66	0.523 +/- 0.0078
SE-75	279.54	0.528 +/- 0.0089
SE-75	400.66	0.573 +/- 0.0120

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/22/2008 2:08:32 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.46	Y	2824	1189	1.21	120.76	1.327E-005	2.85	
98.68		642	2234	1.59	199.15	1.877E-004	10.94	
129.30	Y	208	1034	1.20	260.33	3.120E-004	23.02	
208.01	Y	133	548	1.18	417.60	3.809E-004	27.78	
374.85	Y	53	138	1.33	751.00	2.845E-004	37.85	
413.74	Y	50	34	1.17	828.71	2.661E-004	23.44	
2234.71		11980	13	1.13	4467.54	5.242E-005	1.43	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.02 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 1.973E-002 +/-	1.9%	< 1.879E-005	< 9.094E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.324E-002 +/-	1.9%	< 2.214E-005	< 3.673E-012
Al-26	< 2.790E-002 +/-	19.6%	< 2.657E-005	< 1.467E-006
K-40	< 2.566E-001 +/-	5.3%	< 2.444E-004	< 4.003E-002
Co-57	< 1.100E-001 +/-	4.5%	< 1.048E-004	< 1.287E-011
Co-60	< 3.072E-002 +/-	1.7%	< 2.926E-005	< 2.694E-011
Se-75	< 8.508E-002 +/-	2.3%	< 8.103E-005	< 5.854E-012
Kr-85	< 5.016E+000 +/-	3.2%	< 4.777E-003	< 1.264E-008
Sr-90	< 1.562E-002 +/-	2.3%	< 1.487E-005	< 1.132E-010
Sb-125	< 6.211E-002 +/-	2.1%	< 5.915E-005	< 5.975E-011
Ba-133	< 6.036E-002 +/-	1.8%	< 5.748E-005	< 2.384E-010
Cs-134	< 1.027E-002 +/-	1.9%	< 9.780E-006	< 7.835E-012
Cs-137	< 1.562E-002 +/-	2.3%	< 1.487E-005	< 1.780E-010
Eu-152	< 7.192E-002 +/-	1.8%	< 6.849E-005	< 4.042E-010
Eu-154	< 2.883E-002 +/-	1.9%	< 2.746E-005	< 1.081E-010
Ho-166m	< 2.559E-002 +/-	2.5%	< 2.437E-005	< 1.423E-008
Bi-207	< 1.526E-002 +/-	2.4%	< 1.453E-005	< 2.776E-010
Pb-210	< 4.272E+002 +/-	311.1%	< 4.068E-001	< 5.553E-006
Ra-226	< 3.574E-002 +/-	2.6%	< 3.404E-005	< 3.574E-008
Ac-227	< 2.748E-001 +/-	8.5%	< 2.617E-004	< 3.765E-009
Th-230	< 1.365E+002 +/-	9.1%	< 1.300E-001	< 6.688E-003
Pa-231	< 1.842E+000 +/-	11.3%	< 1.754E-003	< 3.850E-005
Th-232	< 4.766E-002 +/-	2.5%	< 4.539E-005	< 4.294E-001
U-232	< 4.766E-002 +/-	2.5%	< 4.539E-005	< 2.207E-009
U-233	< 1.012E+003 +/-	4.1%	< 9.639E-001	< 1.032E-001
Pa-234	< 7.715E-002 +/-	12.1%	< 7.348E-005	
Pa-234m	< 1.004E+002 +/-	2.1%	< 9.559E-002	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 1.025E-001 +/-	4.1%	< 9.764E-005	< 4.685E-002
Np-237	< 1.297E-001 +/-	2.2%	< 1.235E-004	< 1.816E-004
Pu-238	< 6.741E+003 +/-	4.3%	< 6.420E+000	< 3.896E-004
U-238	< 2.671E+000 +/-	2.1%	< 2.544E-003	< 7.854E+000
Pu-239	3.072E+003 +/-	31.5%	2.926E+000	4.884E-002
Pu-239B	< 3.861E+003 +/-	18.9%	< 3.677E+000	< 6.138E-002
U-239	< 2.963E+003 +/-	370.1%	< 2.822E+000	
Pu-240	< 2.201E+003 +/-	13.4%	< 2.096E+000	< 9.574E-003
Am-241	1.335E+002 +/-	153.2%	1.272E-001	3.845E-005
Am-241B	< 8.441E+002 +/-	14.5%	< 8.039E-001	< 2.431E-004
Pu-241	< 3.440E+004 +/-	4.3%	< 3.276E+001	< 3.309E-004
Pu-241B	1.517E+004 +/-	28.0%	1.445E+001	1.459E-004
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 3.489E-001 +/-	2.2%	< 3.323E-004	< 1.727E-006
Cm-243	< 3.599E-001 +/-	3.6%	< 3.427E-004	< 6.909E-009
Cm-244	< 2.056E+004 +/-	14.2%	< 1.958E+001	< 2.509E-004
Cm-245	< 6.238E-001 +/-	8.4%	< 5.941E-004	< 3.587E-006
Cm-247	< 3.267E-002 +/-	8.5%	< 3.112E-005	< 3.496E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 3.942E-002 +/-	3.5%	< 3.754E-005	< 9.540E-009
Cf-251	< 3.509E-001 +/-	6.6%	< 3.342E-004	< 2.193E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	4.88E-002 +- 1.54E-002	4.13E-002 +- 6.29E-003

Beta: 3.33E+001 +- 5.86E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 3

Energy	Mass (g)
129.30	3.78E-002 +- 8.81E-003
375.05	4.27E-002 +- 1.62E-002
413.71	4.59E-002 +- 1.08E-002

Segment 10 Results

Segment: 10 Detector: DET01 Position: 10
C:\Canberra\NDA2k\Data\00000206_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P010_S010

Acquisition Start: 12/22/2008 2:10:42 PM
Elapsed Live Time: 118.19 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.327 +/- 0.0056
SE-75	264.66	0.487 +/- 0.0073
SE-75	279.54	0.504 +/- 0.0086
SE-75	400.66	0.546 +/- 0.0115

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/22/2008 2:12:43 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.43	Y	1259	762	1.35	120.70	5.730E-006	4.48	
99.11		199	2001	0.68	200.00	1.462E-004	33.43	
375.18		16	35	0.94	751.66	2.777E-004	57.47	
2234.72		11980	10	1.11	4467.57	5.140E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 2.793E-002 +/-	1.9%	< 2.660E-005	< 1.288E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 1.983E-002 +/-	1.9%	< 1.889E-005	< 3.133E-012
Al-26	< 2.815E-002 +/-	19.8%	< 2.681E-005	< 1.481E-006
K-40	< 2.872E-001 +/-	5.3%	< 2.735E-004	< 4.481E-002
Co-57	< 9.438E-002 +/-	4.6%	< 8.989E-005	< 1.104E-011
Co-60	< 2.488E-002 +/-	2.5%	< 2.370E-005	< 2.182E-011
Se-75	< 6.239E-002 +/-	2.2%	< 5.942E-005	< 4.293E-012
Kr-85	< 5.097E+000 +/-	3.3%	< 4.854E-003	< 1.284E-008
Sr-90	< 1.704E-002 +/-	2.4%	< 1.623E-005	< 1.235E-010
Sb-125	< 5.430E-002 +/-	2.2%	< 5.172E-005	< 5.224E-011
Ba-133	< 4.189E-002 +/-	1.8%	< 3.990E-005	< 1.655E-010
Cs-134	< 1.494E-002 +/-	2.5%	< 1.423E-005	< 1.140E-011
Cs-137	< 1.704E-002 +/-	2.4%	< 1.623E-005	< 1.942E-010
Eu-152	< 8.716E-002 +/-	3.8%	< 8.301E-005	< 4.899E-010
Eu-154	< 5.662E-002 +/-	2.1%	< 5.393E-005	< 2.123E-010
Ho-166m	< 3.269E-002 +/-	2.6%	< 3.114E-005	< 1.818E-008
Bi-207	< 1.946E-002 +/-	2.4%	< 1.854E-005	< 3.542E-010
Pb-210	< 8.234E+002 +/-	308.2%	< 7.842E-001	< 1.070E-005
Ra-226	< 3.428E-002 +/-	2.7%	< 3.265E-005	< 3.428E-008
Ac-227	< 2.061E-001 +/-	8.5%	< 1.963E-004	< 2.824E-009
Th-230	< 1.046E+002 +/-	9.0%	< 9.957E-002	< 5.123E-003
Pa-231	< 1.363E+000 +/-	11.3%	< 1.298E-003	< 2.848E-005
Th-232	< 6.414E-002 +/-	2.6%	< 6.109E-005	< 5.779E-001
U-232	< 6.414E-002 +/-	2.6%	< 6.109E-005	< 2.970E-009
U-233	< 7.723E+002 +/-	4.0%	< 7.355E-001	< 7.877E-002
Pa-234	< 1.094E-001 +/-	12.2%	< 1.042E-004	
Pa-234m	< 1.119E+002 +/-	2.1%	< 1.066E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 7.095E-002 +/-	3.9%	< 6.757E-005	< 3.242E-002
Np-237	< 9.433E-002 +/-	2.2%	< 8.984E-005	< 1.321E-004
Pu-238	< 4.893E+003 +/-	4.2%	< 4.660E+000	< 2.828E-004
U-238	< 3.038E+000 +/-	2.2%	< 2.893E-003	< 8.930E+000
Pu-239	< 1.013E+003 +/-	3.7%	< 9.647E-001	< 1.611E-002
Pu-239B	< 3.680E+003 +/-	18.8%	< 3.504E+000	< 5.850E-002
U-239	< 6.264E+003 +/-	366.8%	< 5.966E+000	
Pu-240	< 2.070E+003 +/-	13.3%	< 1.972E+000	< 9.007E-003
Am-241	1.379E+002 +/-	152.0%	1.313E-001	3.970E-005
Am-241B	< 7.874E+002 +/-	14.4%	< 7.499E-001	< 2.268E-004
Pu-241	< 2.685E+004 +/-	4.2%	< 2.557E+001	< 2.583E-004
Pu-241B	< 7.226E+003 +/-	3.4%	< 6.882E+000	< 6.952E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 2.649E-001 +/-	2.2%	< 2.523E-004	< 1.311E-006
Cm-243	< 2.732E-001 +/-	3.5%	< 2.602E-004	< 5.246E-009
Cm-244	< 1.630E+004 +/-	14.2%	< 1.552E+001	< 1.988E-004
Cm-245	< 4.439E-001 +/-	8.3%	< 4.228E-004	< 2.552E-006
Cm-247	< 2.628E-002 +/-	8.5%	< 2.503E-005	< 2.812E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.918E-002 +/-	3.5%	< 2.779E-005	< 7.061E-009
Cf-251	< 2.360E-001 +/-	6.5%	< 2.248E-004	< 1.475E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 11 Results

Segment: 11 Detector: DET01 Position: 11
C:\Canberra\NDA2k\Data\00000206_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P011_S011

Acquisition Start: 12/22/2008 2:14:53 PM
Elapsed Live Time: 118.49 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.188 +/- 0.0036
SE-75	264.66	0.281 +/- 0.0045
SE-75	279.54	0.289 +/- 0.0055
SE-75	400.66	0.339 +/- 0.0082

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/22/2008 2:16:55 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.58	Y	440	536	1.16	121.00	4.780E-006	9.34	
2234.73		11980	11	1.11	4467.58	2.597E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 4.361E-003 +/-	1.8%	< 4.154E-006	< 2.011E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 1.437E-002 +/-	2.0%	< 1.368E-005	< 2.270E-012
Al-26	< 4.925E-002 +/-	15.1%	< 4.690E-005	< 2.590E-006
K-40	< 2.416E-001 +/-	5.0%	< 2.301E-004	< 3.769E-002
Co-57	< 7.417E-002 +/-	3.4%	< 7.064E-005	< 8.678E-012
Co-60	< 2.233E-002 +/-	2.6%	< 2.126E-005	< 1.958E-011
Se-75	< 6.414E-002 +/-	1.8%	< 6.109E-005	< 4.413E-012
Kr-85	< 3.902E+000 +/-	3.0%	< 3.717E-003	< 9.834E-009
Sr-90	< 1.895E-002 +/-	1.9%	< 1.805E-005	< 1.374E-010
Sb-125	< 4.458E-002 +/-	2.1%	< 4.246E-005	< 4.289E-011
Ba-133	< 3.403E-002 +/-	1.7%	< 3.241E-005	< 1.344E-010
Cs-134	< 1.342E-002 +/-	1.9%	< 1.278E-005	< 1.024E-011
Cs-137	< 1.895E-002 +/-	1.9%	< 1.805E-005	< 2.161E-010
Eu-152	< 7.289E-002 +/-	1.9%	< 6.942E-005	< 4.097E-010
Eu-154	< 4.102E-002 +/-	2.2%	< 3.907E-005	< 1.538E-010
Ho-166m	< 5.566E-003 +/-	2.2%	< 5.301E-006	< 3.094E-009
Bi-207	< 1.371E-002 +/-	2.0%	< 1.306E-005	< 2.496E-010
Pb-210	< 9.699E+002 +/-	53.0%	< 9.237E-001	< 1.261E-005
Ra-226	< 3.274E-002 +/-	2.2%	< 3.119E-005	< 3.274E-008
Ac-227	< 2.056E-001 +/-	8.3%	< 1.958E-004	< 2.816E-009
Th-230	< 9.756E+001 +/-	8.6%	< 9.291E-002	< 4.780E-003
Pa-231	< 1.206E+000 +/-	11.2%	< 1.148E-003	< 2.520E-005
Th-232	< 4.502E-002 +/-	2.1%	< 4.288E-005	< 4.056E-001
U-232	< 4.502E-002 +/-	2.1%	< 4.288E-005	< 2.084E-009
U-233	< 6.976E+002 +/-	2.7%	< 6.644E-001	< 7.116E-002
Pa-234	< 4.565E-002 +/-	11.7%	< 4.348E-005	
Pa-234m	< 1.748E+002 +/-	2.1%	< 1.665E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 6.880E-002 +/-	2.5%	< 6.552E-005	< 3.144E-002
Np-237	< 8.359E-002 +/-	1.9%	< 7.961E-005	< 1.170E-004
Pu-238	< 4.668E+003 +/-	2.6%	< 4.445E+000	< 2.698E-004
U-238	< 1.667E+000 +/-	2.2%	< 1.588E-003	< 4.902E+000
Pu-239	< 8.854E+002 +/-	3.1%	< 8.432E-001	< 1.408E-002
Pu-239B	< 2.745E+003 +/-	5.3%	< 2.614E+000	< 4.364E-002
U-239	< 9.444E+003 +/-	65.1%	< 8.994E+000	
Pu-240	< 1.681E+003 +/-	4.7%	< 1.601E+000	< 7.310E-003
Am-241	5.775E+001 +/-	24.9%	5.500E-002	1.663E-005
Am-241B	< 6.238E+002 +/-	4.9%	< 5.941E-001	< 1.797E-004
Pu-241	< 2.484E+004 +/-	2.8%	< 2.365E+001	< 2.389E-004
Pu-241B	< 7.123E+003 +/-	2.4%	< 6.784E+000	< 6.853E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 2.452E-001 +/-	1.8%	< 2.335E-004	< 1.214E-006
Cm-243	< 2.529E-001 +/-	3.3%	< 2.408E-004	< 4.855E-009
Cm-244	< 1.960E+004 +/-	14.1%	< 1.866E+001	< 2.391E-004
Cm-245	< 4.172E-001 +/-	7.7%	< 3.973E-004	< 2.399E-006
Cm-247	< 1.803E-002 +/-	8.5%	< 1.717E-005	< 1.929E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.755E-002 +/-	3.5%	< 2.624E-005	< 6.668E-009
Cf-251	< 2.373E-001 +/-	5.6%	< 2.260E-004	< 1.483E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 12 Results

Segment: 12 Detector: DET01 Position: 12
C:\Canberra\NDA2k\Data\00000206_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P012_S012

Acquisition Start: 12/22/2008 2:19:04 PM
Elapsed Live Time: 118.76 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.085 +/- 0.0021
SE-75	264.66	0.148 +/- 0.0026
SE-75	279.54	0.152 +/- 0.0035
SE-75	400.66	0.201 +/- 0.0057

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/22/2008 2:21:06 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.41	Y	148	413	1.22	120.67	1.216E-004	22.18	
2234.72		11980	9	1.13	4467.57	2.455E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 2.444E-002 +/-	1.9%	< 2.328E-005	< 1.127E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 1.343E-002 +/-	2.0%	< 1.279E-005	< 2.122E-012
Al-26	< 9.434E-003 +/-	16.0%	< 8.985E-006	< 4.963E-007
K-40	< 2.243E-001 +/-	5.1%	< 2.137E-004	< 3.500E-002
Co-57	< 6.556E-002 +/-	4.0%	< 6.244E-005	< 7.670E-012
Co-60	< 1.782E-002 +/-	1.7%	< 1.698E-005	< 1.563E-011
Se-75	< 6.009E-002 +/-	2.5%	< 5.722E-005	< 4.134E-012
Kr-85	< 3.496E+000 +/-	3.3%	< 3.330E-003	< 8.810E-009
Sr-90	< 1.653E-002 +/-	2.2%	< 1.575E-005	< 1.199E-010
Sb-125	< 4.356E-002 +/-	2.4%	< 4.149E-005	< 4.191E-011
Ba-133	< 2.576E-002 +/-	2.0%	< 2.453E-005	< 1.017E-010
Cs-134	< 1.242E-002 +/-	2.3%	< 1.183E-005	< 9.479E-012
Cs-137	< 1.653E-002 +/-	2.2%	< 1.575E-005	< 1.885E-010
Eu-152	< 7.393E-002 +/-	2.7%	< 7.041E-005	< 4.155E-010
Eu-154	< 3.833E-002 +/-	2.2%	< 3.650E-005	< 1.437E-010
Ho-166m	< 2.859E-002 +/-	2.3%	< 2.723E-005	< 1.590E-008
Bi-207	< 1.352E-002 +/-	2.3%	< 1.288E-005	< 2.461E-010
Pb-210	< 1.032E+000 +/-	39.2%	< 9.832E-004	< 1.342E-008
Ra-226	< 2.849E-002 +/-	2.5%	< 2.713E-005	< 2.849E-008
Ac-227	< 1.824E-001 +/-	6.5%	< 1.737E-004	< 2.498E-009
Th-230	< 1.692E+001 +/-	13.8%	< 1.611E-002	< 8.290E-004
Pa-231	< 1.049E+000 +/-	11.3%	< 9.990E-004	< 2.192E-005
Th-232	< 4.688E-002 +/-	2.5%	< 4.465E-005	< 4.224E-001
U-232	< 4.688E-002 +/-	2.5%	< 4.465E-005	< 2.171E-009
U-233	< 6.862E+002 +/-	3.2%	< 6.536E-001	< 7.000E-002
Pa-234	< 9.416E-002 +/-	12.2%	< 8.967E-005	
Pa-234m	< 1.244E+002 +/-	2.1%	< 1.185E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 6.690E-002 +/-	3.2%	< 6.371E-005	< 3.057E-002
Np-237	< 7.155E-002 +/-	2.3%	< 6.814E-005	< 1.002E-004
Pu-238	< 4.978E+003 +/-	3.1%	< 4.741E+000	< 2.877E-004
U-238	< 2.213E+000 +/-	2.1%	< 2.108E-003	< 6.506E+000
Pu-239	< 8.175E+002 +/-	3.7%	< 7.786E-001	< 1.300E-002
Pu-239B	< 1.430E+003 +/-	6.3%	< 1.362E+000	< 2.274E-002
U-239	< 3.646E+000 +/-	49.2%	< 3.473E-003	
Pu-240	< 1.038E+003 +/-	5.6%	< 9.888E-001	< 4.516E-003
Am-241	7.619E-001 +/-	27.8%	7.256E-004	2.194E-007
Am-241B	< 3.780E+002 +/-	5.8%	< 3.600E-001	< 1.089E-004
Pu-241	< 2.417E+004 +/-	3.3%	< 2.302E+001	< 2.325E-004
Pu-241B	< 6.966E+003 +/-	3.2%	< 6.634E+000	< 6.702E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.027E-001 +/-	9.3%	< 9.780E-005	< 5.083E-007
Cm-243	< 2.194E-001 +/-	3.7%	< 2.089E-004	< 4.212E-009
Cm-244	< 1.307E+004 +/-	14.1%	< 1.245E+001	< 1.595E-004
Cm-245	< 4.406E-001 +/-	7.9%	< 4.196E-004	< 2.533E-006
Cm-247	< 1.714E-002 +/-	8.6%	< 1.632E-005	< 1.834E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.680E-002 +/-	3.6%	< 1.600E-005	< 4.065E-009
Cf-251	< 2.423E-001 +/-	5.9%	< 2.307E-004	< 1.514E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 13 Results

Segment: 13 Detector: DET01 Position: 13
C:\Canberra\NDA2k\Data\00000206_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P013_S013

Acquisition Start: 12/22/2008 2:23:16 PM
Elapsed Live Time: 118.95 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.405 +/- 0.0065
SE-75	264.66	0.470 +/- 0.0071
SE-75	279.54	0.490 +/- 0.0083
SE-75	400.66	0.501 +/- 0.0108

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/22/2008 2:25:18 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
2234.73		11980	5	1.11	4467.58	6.984E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 1.620E-002 +/-	1.8%	< 1.543E-005	< 7.468E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.243E-002 +/-	2.0%	< 2.137E-005	< 3.545E-012
Al-26	< 6.504E-003 +/-	14.9%	< 6.195E-006	< 3.421E-007
K-40	< 3.057E-001 +/-	4.9%	< 2.911E-004	< 4.769E-002
Co-57	< 5.193E-002 +/-	3.5%	< 4.946E-005	< 6.076E-012
Co-60	< 2.645E-002 +/-	1.7%	< 2.519E-005	< 2.319E-011
Se-75	< 4.302E-002 +/-	1.9%	< 4.097E-005	< 2.960E-012
Kr-85	< 3.567E+000 +/-	3.1%	< 3.397E-003	< 8.989E-009
Sr-90	< 2.128E-002 +/-	1.9%	< 2.026E-005	< 1.543E-010
Sb-125	< 4.201E-002 +/-	2.1%	< 4.001E-005	< 4.041E-011
Ba-133	< 2.165E-002 +/-	1.7%	< 2.062E-005	< 8.552E-011
Cs-134	< 1.703E-002 +/-	2.0%	< 1.622E-005	< 1.299E-011
Cs-137	< 2.128E-002 +/-	1.9%	< 2.026E-005	< 2.426E-010
Eu-152	< 5.511E-002 +/-	2.5%	< 5.248E-005	< 3.097E-010
Eu-154	< 4.320E-002 +/-	2.0%	< 4.114E-005	< 1.620E-010
Ho-166m	< 1.952E-002 +/-	2.2%	< 1.859E-005	< 1.086E-008
Bi-207	< 1.157E-002 +/-	2.0%	< 1.102E-005	< 2.106E-010
Pb-210	< 1.570E+000 +/-	36.7%	< 1.495E-003	< 2.041E-008
Ra-226	< 3.273E-002 +/-	2.2%	< 3.117E-005	< 3.273E-008
Ac-227	< 1.713E-001 +/-	8.3%	< 1.631E-004	< 2.347E-009
Th-230	< 1.523E+001 +/-	13.0%	< 1.450E-002	< 7.462E-004
Pa-231	< 8.331E-001 +/-	11.2%	< 7.934E-004	< 1.741E-005
Th-232	< 5.033E-002 +/-	2.2%	< 4.794E-005	< 4.535E-001
U-232	< 5.033E-002 +/-	2.2%	< 4.794E-005	< 2.330E-009
U-233	< 5.931E+002 +/-	2.7%	< 5.648E-001	< 6.049E-002
Pa-234	< 8.587E-002 +/-	11.5%	< 8.178E-005	
Pa-234m	< 1.239E+002 +/-	2.1%	< 1.180E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 5.480E-002 +/-	2.5%	< 5.219E-005	< 2.505E-002
Np-237	< 4.885E-002 +/-	1.9%	< 4.653E-005	< 6.839E-005
Pu-238	< 3.972E+003 +/-	2.6%	< 3.783E+000	< 2.296E-004
U-238	< 2.801E+000 +/-	2.1%	< 2.667E-003	< 8.234E+000
Pu-239	< 6.911E+002 +/-	3.2%	< 6.582E-001	< 1.099E-002
Pu-239B	< 1.085E+003 +/-	5.7%	< 1.033E+000	< 1.724E-002
U-239	< 6.881E+000 +/-	45.8%	< 6.553E-003	
Pu-240	< 8.345E+002 +/-	5.0%	< 7.948E-001	< 3.630E-003
Am-241	< 1.900E-001 +/-	15.6%	< 1.809E-004	< 5.471E-008
Am-241B	< 3.029E+002 +/-	5.5%	< 2.884E-001	< 8.722E-005
Pu-241	< 2.041E+004 +/-	2.8%	< 1.944E+001	< 1.963E-004
Pu-241B	< 6.379E+003 +/-	2.5%	< 6.075E+000	< 6.137E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 9.247E-002 +/-	8.4%	< 8.806E-005	< 4.577E-007
Cm-243	< 1.939E-001 +/-	3.3%	< 1.847E-004	< 3.723E-009
Cm-244	< 1.523E+004 +/-	14.1%	< 1.450E+001	< 1.858E-004
Cm-245	< 3.828E-001 +/-	7.7%	< 3.646E-004	< 2.201E-006
Cm-247	< 1.779E-002 +/-	8.5%	< 1.694E-005	< 1.903E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.585E-002 +/-	3.5%	< 1.510E-005	< 3.836E-009
Cf-251	< 2.000E-001 +/-	5.6%	< 1.905E-004	< 1.250E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 14 Results

Segment: 14 Detector: DET01 Position: 14
C:\Canberra\NDA2k\Data\00000206_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P014_S014

Acquisition Start: 12/22/2008 2:27:28 PM
Elapsed Live Time: 119.09 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.872 +/- 0.0130
SE-75	264.66	0.892 +/- 0.0129
SE-75	279.54	0.894 +/- 0.0141
SE-75	400.66	0.913 +/- 0.0172

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/22/2008 2:29:29 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.49	Y	66	173	0.77	120.82	8.820E-006	31.26	
2234.72		11980	4	1.11	4467.57	5.408E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 3.065E-002 +/-	1.9%	< 2.919E-005	< 1.413E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.249E-002 +/-	2.0%	< 2.142E-005	< 3.553E-012
Al-26	< 7.512E-003 +/-	15.2%	< 7.154E-006	< 3.951E-007
K-40	< 2.389E-001 +/-	5.0%	< 2.275E-004	< 3.727E-002
Co-57	< 4.928E-002 +/-	3.4%	< 4.694E-005	< 5.766E-012
Co-60	< 2.787E-002 +/-	1.7%	< 2.654E-005	< 2.444E-011
Se-75	< 3.752E-002 +/-	1.8%	< 3.573E-005	< 2.581E-012
Kr-85	< 4.104E+000 +/-	3.1%	< 3.908E-003	< 1.034E-008
Sr-90	< 1.661E-002 +/-	1.9%	< 1.582E-005	< 1.204E-010
Sb-125	< 3.971E-002 +/-	2.1%	< 3.782E-005	< 3.820E-011
Ba-133	< 1.963E-002 +/-	1.7%	< 1.870E-005	< 7.756E-011
Cs-134	< 1.346E-002 +/-	2.0%	< 1.282E-005	< 1.027E-011
Cs-137	< 1.661E-002 +/-	1.9%	< 1.582E-005	< 1.893E-010
Eu-152	< 5.394E-002 +/-	2.5%	< 5.137E-005	< 3.031E-010
Eu-154	< 6.422E-002 +/-	2.2%	< 6.116E-005	< 2.408E-010
Ho-166m	< 2.527E-002 +/-	2.3%	< 2.406E-005	< 1.405E-008
Bi-207	< 1.277E-002 +/-	2.0%	< 1.216E-005	< 2.324E-010
Pb-210	< 8.144E+002 +/-	56.7%	< 7.756E-001	< 1.059E-005
Ra-226	< 2.868E-002 +/-	2.2%	< 2.732E-005	< 2.868E-008
Ac-227	< 1.345E-001 +/-	8.3%	< 1.281E-004	< 1.843E-009
Th-230	< 6.213E+001 +/-	8.6%	< 5.917E-002	< 3.044E-003
Pa-231	< 6.912E-001 +/-	11.2%	< 6.583E-004	< 1.445E-005
Th-232	< 5.541E-002 +/-	2.2%	< 5.277E-005	< 4.992E-001
U-232	< 5.541E-002 +/-	2.2%	< 5.277E-005	< 2.565E-009
U-233	< 4.527E+002 +/-	2.7%	< 4.311E-001	< 4.618E-002
Pa-234	< 4.073E-002 +/-	16.8%	< 3.879E-005	
Pa-234m	< 1.089E+002 +/-	2.2%	< 1.037E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 3.852E-002 +/-	2.5%	< 3.668E-005	< 1.760E-002
Np-237	< 4.939E-002 +/-	1.9%	< 4.704E-005	< 6.915E-005
Pu-238	< 3.158E+003 +/-	2.6%	< 3.008E+000	< 1.825E-004
U-238	< 2.256E+000 +/-	2.2%	< 2.148E-003	< 6.631E+000
Pu-239	< 5.986E+002 +/-	3.1%	< 5.701E-001	< 9.517E-003
Pu-239B	< 1.517E+003 +/-	5.4%	< 1.445E+000	< 2.412E-002
U-239	< 1.013E+004 +/-	69.5%	< 9.645E+000	
Pu-240	< 9.639E+002 +/-	4.7%	< 9.180E-001	< 4.193E-003
Am-241	4.695E+000 +/-	40.1%	4.471E-003	1.352E-006
Am-241B	< 3.646E+002 +/-	5.0%	< 3.473E-001	< 1.050E-004
Pu-241	< 1.588E+004 +/-	2.8%	< 1.512E+001	< 1.528E-004
Pu-241B	< 3.992E+003 +/-	2.4%	< 3.802E+000	< 3.840E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.476E-001 +/-	1.8%	< 1.406E-004	< 7.306E-007
Cm-243	< 1.522E-001 +/-	3.3%	< 1.450E-004	< 2.923E-009
Cm-244	< 1.684E+004 +/-	14.1%	< 1.604E+001	< 2.054E-004
Cm-245	< 2.993E-001 +/-	7.7%	< 2.850E-004	< 1.721E-006
Cm-247	< 1.931E-002 +/-	8.5%	< 1.839E-005	< 2.066E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.794E-002 +/-	3.5%	< 1.709E-005	< 4.342E-009
Cf-251	< 1.525E-001 +/-	5.6%	< 1.453E-004	< 9.532E-008

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 15 Results

Segment: 15 Detector: DET01 Position: 15
C:\Canberra\NDA2k\Data\00000206_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P015_S015

Acquisition Start: 12/22/2008 2:31:39 PM
Elapsed Live Time: 119.14 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.905 +/- 0.0135
SE-75	264.66	0.920 +/- 0.0133
SE-75	279.54	0.937 +/- 0.0147
SE-75	400.66	0.910 +/- 0.0172

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/22/2008 2:33:40 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
2234.72		11980	4	1.10	4467.57	2.739E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 1.986E-002 +/-	1.8%	< 1.891E-005	< 9.153E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.121E-002 +/-	2.1%	< 2.020E-005	< 3.351E-012
Al-26	< 1.046E-002 +/-	15.4%	< 9.961E-006	< 5.501E-007
K-40	< 3.387E-001 +/-	5.0%	< 3.226E-004	< 5.284E-002
Co-57	< 4.657E-002 +/-	3.5%	< 4.435E-005	< 5.449E-012
Co-60	< 2.944E-002 +/-	2.6%	< 2.804E-005	< 2.582E-011
Se-75	< 3.615E-002 +/-	1.8%	< 3.443E-005	< 2.487E-012
Kr-85	< 5.147E+000 +/-	3.0%	< 4.902E-003	< 1.297E-008
Sr-90	< 1.285E-002 +/-	1.9%	< 1.223E-005	< 9.313E-011
Sb-125	< 4.376E-002 +/-	2.1%	< 4.167E-005	< 4.209E-011
Ba-133	< 1.912E-002 +/-	1.7%	< 1.821E-005	< 7.553E-011
Cs-134	< 1.218E-002 +/-	1.9%	< 1.160E-005	< 9.294E-012
Cs-137	< 1.285E-002 +/-	1.9%	< 1.223E-005	< 1.464E-010
Eu-152	< 2.736E-002 +/-	2.1%	< 2.605E-005	< 1.537E-010
Eu-154	< 4.570E-002 +/-	1.9%	< 4.353E-005	< 1.714E-010
Ho-166m	< 1.645E-002 +/-	2.2%	< 1.566E-005	< 9.144E-009
Bi-207	< 1.800E-002 +/-	2.0%	< 1.714E-005	< 3.276E-010
Pb-210	< 9.730E+002 +/-	57.4%	< 9.267E-001	< 1.265E-005
Ra-226	< 3.823E-002 +/-	2.2%	< 3.641E-005	< 3.823E-008
Ac-227	< 1.190E-001 +/-	8.3%	< 1.133E-004	< 1.630E-009
Th-230	< 5.647E+001 +/-	8.6%	< 5.378E-002	< 2.767E-003
Pa-231	< 5.079E-001 +/-	11.2%	< 4.837E-004	< 1.062E-005
Th-232	< 4.252E-002 +/-	2.1%	< 4.050E-005	< 3.831E-001
U-232	< 4.252E-002 +/-	2.1%	< 4.050E-005	< 1.969E-009
U-233	< 4.084E+002 +/-	2.8%	< 3.889E-001	< 4.165E-002
Pa-234	< 1.146E-001 +/-	12.2%	< 1.091E-004	
Pa-234m	< 3.127E+001 +/-	2.1%	< 2.978E-002	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 3.746E-002 +/-	2.5%	< 3.568E-005	< 1.712E-002
Np-237	< 4.127E-002 +/-	1.9%	< 3.931E-005	< 5.778E-005
Pu-238	< 2.764E+003 +/-	2.7%	< 2.633E+000	< 1.598E-004
U-238	< 2.439E+000 +/-	2.2%	< 2.323E-003	< 7.172E+000
Pu-239	< 5.611E+002 +/-	3.2%	< 5.343E-001	< 8.921E-003
Pu-239B	< 1.343E+003 +/-	5.6%	< 1.279E+000	< 2.135E-002
U-239	< 1.543E+004 +/-	70.2%	< 1.469E+001	
Pu-240	< 8.566E+002 +/-	4.9%	< 8.158E-001	< 3.726E-003
Am-241	< 5.110E+000 +/-	25.4%	< 4.867E-003	< 1.472E-006
Am-241B	< 3.229E+002 +/-	5.1%	< 3.075E-001	< 9.299E-005
Pu-241	< 1.410E+004 +/-	2.9%	< 1.342E+001	< 1.356E-004
Pu-241B	< 3.995E+003 +/-	2.4%	< 3.805E+000	< 3.843E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.221E-001 +/-	1.8%	< 1.163E-004	< 6.043E-007
Cm-243	< 1.259E-001 +/-	3.3%	< 1.199E-004	< 2.418E-009
Cm-244	< 2.280E+004 +/-	14.1%	< 2.171E+001	< 2.782E-004
Cm-245	< 2.544E-001 +/-	7.7%	< 2.422E-004	< 1.463E-006
Cm-247	< 1.871E-002 +/-	8.5%	< 1.782E-005	< 2.002E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.696E-002 +/-	3.5%	< 1.615E-005	< 4.104E-009
Cf-251	< 1.439E-001 +/-	5.6%	< 1.371E-004	< 8.995E-008

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 16 Results

Segment: 16 Detector: DET01 Position: 16
C:\Canberra\NDA2k\Data\00000206_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P016_S016

Acquisition Start: 12/22/2008 2:35:50 PM
Elapsed Live Time: 119.17 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.839 +/- 0.0126
SE-75	264.66	0.874 +/- 0.0126
SE-75	279.54	0.887 +/- 0.0139
SE-75	400.66	0.898 +/- 0.0169

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/22/2008 2:37:54 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
2234.71		11980	9	1.12	4467.54	2.492E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 3.068E-002 +/-	2.3%	< 2.922E-005	< 1.415E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.370E-002 +/-	2.3%	< 2.257E-005	< 3.745E-012
Al-26	< 4.040E-002 +/-	18.0%	< 3.848E-005	< 2.125E-006
K-40	< 3.352E-001 +/-	5.6%	< 3.192E-004	< 5.229E-002
Co-57	< 7.763E-002 +/-	4.4%	< 7.393E-005	< 9.083E-012
Co-60	< 5.308E-002 +/-	2.0%	< 5.055E-005	< 4.655E-011
Se-75	< 6.624E-002 +/-	2.8%	< 6.309E-005	< 4.557E-012
Kr-85	< 6.767E+000 +/-	3.6%	< 6.445E-003	< 1.705E-008
Sr-90	< 4.074E-002 +/-	2.6%	< 3.880E-005	< 2.953E-010
Sb-125	< 5.472E-002 +/-	2.7%	< 5.212E-005	< 5.265E-011
Ba-133	< 2.302E-002 +/-	2.3%	< 2.193E-005	< 9.094E-011
Cs-134	< 2.782E-002 +/-	2.3%	< 2.650E-005	< 2.123E-011
Cs-137	< 4.074E-002 +/-	2.6%	< 3.880E-005	< 4.644E-010
Eu-152	< 9.323E-002 +/-	2.9%	< 8.879E-005	< 5.240E-010
Eu-154	< 6.766E-002 +/-	2.4%	< 6.444E-005	< 2.537E-010
Ho-166m	< 9.372E-003 +/-	2.6%	< 8.926E-006	< 5.211E-009
Bi-207	< 1.613E-002 +/-	2.8%	< 1.536E-005	< 2.936E-010
Pb-210	< 2.141E+000 +/-	46.8%	< 2.039E-003	< 2.783E-008
Ra-226	< 4.015E-002 +/-	2.5%	< 3.824E-005	< 4.015E-008
Ac-227	< 2.215E-001 +/-	8.7%	< 2.109E-004	< 3.034E-009
Th-230	< 2.294E+001 +/-	15.5%	< 2.184E-002	< 1.124E-003
Pa-231	< 8.439E-001 +/-	11.4%	< 8.038E-004	< 1.764E-005
Th-232	< 6.945E-002 +/-	2.9%	< 6.615E-005	< 6.258E-001
U-232	< 6.945E-002 +/-	2.9%	< 6.615E-005	< 3.216E-009
U-233	< 6.978E+002 +/-	2.5%	< 6.645E-001	< 7.117E-002
Pa-234	< 1.152E-001 +/-	11.7%	< 1.097E-004	
Pa-234m	< 2.157E+002 +/-	2.4%	< 2.054E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 7.959E-002 +/-	3.6%	< 7.580E-005	< 3.637E-002
Np-237	< 5.697E-002 +/-	2.6%	< 5.425E-005	< 7.975E-005
Pu-238	< 5.770E+003 +/-	3.6%	< 5.495E+000	< 3.335E-004
U-238	< 3.181E+000 +/-	2.4%	< 3.029E-003	< 9.351E+000
Pu-239	< 9.931E+002 +/-	4.1%	< 9.458E-001	< 1.579E-002
Pu-239B	< 1.416E+003 +/-	7.0%	< 1.349E+000	< 2.252E-002
U-239	< 1.275E+001 +/-	58.6%	< 1.215E-002	
Pu-240	< 1.080E+003 +/-	6.2%	< 1.029E+000	< 4.699E-003
Am-241	< 2.303E-001 +/-	19.9%	< 2.193E-004	< 6.632E-008
Am-241B	< 4.026E+002 +/-	6.8%	< 3.834E-001	< 1.159E-004
Pu-241	< 3.067E+004 +/-	3.7%	< 2.921E+001	< 2.951E-004
Pu-241B	< 8.326E+003 +/-	3.6%	< 7.929E+000	< 8.009E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.308E-001 +/-	10.7%	< 1.246E-004	< 6.474E-007
Cm-243	< 2.441E-001 +/-	3.9%	< 2.325E-004	< 4.688E-009
Cm-244	< 2.555E+004 +/-	14.2%	< 2.433E+001	< 3.117E-004
Cm-245	< 5.091E-001 +/-	8.1%	< 4.849E-004	< 2.927E-006
Cm-247	< 2.781E-002 +/-	8.7%	< 2.648E-005	< 2.975E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.447E-002 +/-	3.8%	< 2.330E-005	< 5.921E-009
Cf-251	< 2.871E-001 +/-	6.2%	< 2.735E-004	< 1.795E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Summed Segment Spectra Results
Category: Segmented

C:\Canberra\NDA2k\Data\00000206_CNTR0001_DCAT0002_PROC00AI.CNF

Elapsed Live Time: 97.60 sec Elapsed Real Time: 120.00 sec

********** Peak Analysis Results **********

*** Spectrum Validity Test warnings ***
Reference peak/MCA Test failed: reference peak data does not match MCA time
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 12/22/2008 2:38:02 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	49.45		8419	42323	2.41	100.76	7.723E-007	3.97	
	59.43	Y	348752	45310	1.12	120.70	6.605E-006	0.38	
	67.22	Y	753	26517	0.90	136.27	2.014E-005	33.32	
M	94.68	Y	63005	87287	1.53	191.14	1.522E-004	0.88	375.13
m	98.69	Y	244878	117746	1.54	199.15	1.781E-004	0.69	
m	100.88	Y	37251	119450	1.54	203.54	1.923E-004	1.15	
m	103.33	Y	172291	95931	1.55	208.42	2.080E-004	0.67	
M	111.06	Y	66400	52150	1.36	223.88	2.562E-004	2.78	503.25
m	114.56	Y	54637	72690	1.37	230.87	2.766E-004	2.64	
m	116.62	Y	52300	73442	1.37	234.98	2.881E-004	2.60	
m	120.56	Y	12848	61268	1.38	242.86	3.091E-004	2.91	
m	122.82	Y	6445	58680	1.38	247.37	3.203E-004	3.63	
m	125.23	Y	25260	56035	1.39	252.20	3.318E-004	2.64	
m	129.27	Y	120529	49525	1.39	260.27	3.495E-004	2.51	
M	144.17	Y	7597	33049	1.13	290.04	3.995E-004	5.33	2.81
m	146.28	Y	6071	33233	1.13	294.26	4.047E-004	5.63	
m	148.54	Y	15857	33497	1.13	298.78	4.098E-004	4.80	
m	152.54	Y	528	33842	1.14	306.77	4.177E-004	24.70	
M	161.05	Y	6877	34099	1.31	323.76	4.301E-004	6.29	12.38
m	164.60	Y	6502	48567	1.32	330.87	4.336E-004	5.68	
m	169.39	Y	1584	47318	1.33	340.44	4.370E-004	10.45	
m	171.36	Y	4705	50507	1.33	344.38	4.380E-004	5.96	
	179.15	Y	2517	31119	1.11	359.94	4.400E-004	11.17	
	189.35	Y	3879	32249	1.05	380.32	4.384E-004	7.64	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	195.63	Y	4687	30975	1.25	392.87	4.356E-004	6.23	
M	203.50	Y	25907	23019	1.13	408.60	4.306E-004	0.80	34.28
m	207.97	Y	88269	23086	1.13	417.53	4.271E-004	0.48	
M	221.56		794	16514	1.47	444.68	4.148E-004	43.89	0.59
m	225.32		1051	25890	1.47	452.20	4.110E-004	35.16	
M	237.76	Y	730	16144	1.53	477.06	3.978E-004	40.24	1.69
m	243.29	Y	1543	20558	1.54	488.10	3.917E-004	36.58	
	255.31	Y	4311	15177	1.24	512.13	3.783E-004	4.87	
M	263.92	Y	1481	11113	1.21	529.33	3.688E-004	12.32	1.54
m	267.47	Y	3245	13304	1.21	536.43	3.649E-004	10.93	
M	297.37	Y	2335	10180	1.17	596.18	3.335E-004	13.48	1.00
m	300.24	Y	382	10139	1.17	601.90	3.307E-004	22.81	
	311.76	Y	3947	9772	1.27	624.94	3.197E-004	4.26	
M	320.91	Y	2724	11266	1.68	643.22	3.113E-004	3.50	11.39
m	323.38	Y	3971	14942	1.69	648.14	3.091E-004	2.53	
M	332.67	Y	29929	8852	1.30	666.72	3.011E-004	0.68	16.15
m	335.62	Y	12055	8158	1.31	672.61	2.987E-004	1.07	
m	341.35	Y	3292	7676	1.31	684.06	2.939E-004	2.51	
m	344.93	Y	26205	7899	1.32	691.22	2.911E-004	0.72	
M	361.87	Y	491	6877	1.37	725.07	2.783E-004	11.64	24.12
m	368.33	Y	9835	12726	1.37	737.99	2.737E-004	3.10	
M	374.98	Y	69878	5350	1.28	751.27	2.692E-004	0.50	66.45
m	380.06	Y	13393	4380	1.29	761.41	2.658E-004	0.98	
m	382.65	Y	11977	3910	1.29	766.59	2.641E-004	1.03	
	392.84	Y	24188	3824	1.52	786.95	2.578E-004	0.86	
	399.45	Y	288	2639	1.42	800.16	2.538E-004	28.55	
M	413.62	Y	63658	1857	1.36	828.47	2.458E-004	0.69	9.52
m	419.03	Y	444	1520	1.36	839.29	2.429E-004	8.28	
m	422.48	Y	5094	1458	1.37	846.18	2.410E-004	1.67	
m	426.51	Y	1195	1388	1.37	854.24	2.390E-004	3.95	
m	429.76	Y	230	1225	1.37	860.73	2.373E-004	14.20	
M	445.64	Y	313	726	1.30	892.47	2.297E-004	9.42	2.56
m	451.37	Y	7762	1057	1.31	903.91	2.271E-004	1.22	
	481.31	Y	155	619	1.16	963.74	2.147E-004	26.60	
	511.07		377	729	2.53	1023.21	2.040E-004	13.33	
	558.44		79	393	0.81	1117.87	1.898E-004	42.03	
	597.44	Y	99	311	1.78	1195.81	1.801E-004	31.16	
	618.84	Y	763	309	1.44	1238.57	1.755E-004	5.49	
M	632.96	Y	112	246	1.52	1266.79	1.726E-004	14.03	2.95
m	639.99	Y	312	240	1.53	1280.83	1.712E-004	6.78	
m	645.82	Y	469	255	1.53	1292.48	1.701E-004	5.39	
m	652.57	Y	544	226	1.54	1305.97	1.688E-004	4.79	
m	658.73	Y	244	219	1.54	1318.27	1.676E-004	7.82	
m	662.29	Y	3388	220	1.55	1325.40	1.670E-004	1.78	
	688.61	Y	308	205	1.44	1377.98	1.625E-004	10.07	
M	703.81	Y	163	144	1.56	1408.35	1.600E-004	32.98	0.84
m	709.28		71	219	1.56	1419.28	1.592E-004	28.52	
	721.77	Y	1625	200	1.58	1444.26	1.573E-004	2.97	
	737.51	Y	80	112	1.45	1475.70	1.550E-004	25.57	
	755.95	Y	152	125	1.34	1512.55	1.524E-004	15.28	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	769.13	Y	393	139	1.25	1538.89	1.507E-004	7.46	
	1173.51	Y	89	58	1.38	2346.96	1.132E-004	19.31	
	1332.58	Y	119	34	2.42	2664.83	1.020E-004	12.96	
M	2223.94		28	6	0.99	4446.03	5.043E-005	20.30	4.05
m	2234.72		191681	106	1.00	4467.57	4.995E-005	0.43	
	2265.93		35	75	1.73	4529.93	4.852E-005	45.16	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.07 +/- 0.00

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	@ 1.000E+020 +/-	100.0%	@ 5.952E+015	
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 1.016E-001 +/-	1.2%	< 6.045E-006	< 1.605E-011
	Al-26	< 1.481E-001 +/-	8.2%	< 8.815E-006	< 7.790E-006
	K-40	< 1.196E+000 +/-	3.1%	< 7.117E-005	< 1.865E-001
X	Co-57				
	Co-60	2.329E-001 +/-	11.0%	1.387E-005	2.043E-010
	Se-75	< 1.787E+000 +/-	1.1%	< 1.064E-004	< 1.229E-010
	Kr-85	< 4.361E+001 +/-	2.5%	< 2.596E-003	< 1.099E-007
	Sr-90	< 1.413E-001 +/-	1.0%	< 8.411E-006	< 1.024E-009
	Sb-125	< 8.322E-001 +/-	1.5%	< 4.953E-005	< 8.005E-010
	Ba-133	< 5.742E-001 +/-	1.0%	< 3.418E-005	< 2.268E-009
	Cs-134	< 1.140E-001 +/-	1.0%	< 6.788E-006	< 8.701E-011
X	Cs-137				
	Eu-152	< 4.247E-001 +/-	2.1%	< 2.528E-005	< 2.387E-009
	Eu-154	< 2.676E-001 +/-	1.5%	< 1.593E-005	< 1.003E-009
	Ho-166m	< 1.468E-001 +/-	1.7%	< 8.739E-006	< 8.163E-008
	Bi-207	< 1.127E-001 +/-	1.2%	< 6.710E-006	< 2.052E-009
	Pb-210	< 1.594E+004 +/-	12.2%	< 9.486E-001	< 2.072E-004
	Ra-226	< 2.824E-001 +/-	1.5%	< 1.681E-005	< 2.824E-007
	Ac-227	< 2.462E+000 +/-	8.2%	< 1.466E-004	< 3.373E-008
	Th-230	2.215E+003 +/-	34.4%	1.319E-001	1.086E-001
	Pa-231	< 1.370E+001 +/-	11.2%	< 8.154E-004	< 2.863E-004
	Th-232	< 3.224E-001 +/-	1.9%	< 1.919E-005	< 2.904E+000
	U-232	8.667E-001 +/-	43.7%	5.159E-005	4.013E-008
	U-233	< 9.111E+003 +/-	1.6%	< 5.423E-001	< 9.293E-001
	Pa-234	< 4.859E-001 +/-	12.1%	< 2.892E-005	
	Pa-234m	< 6.423E+002 +/-	1.5%	< 3.823E-002	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 7.858E-001 +/-	1.8%	< 4.677E-005	< 3.591E-001
	Np-237	4.513E+000 +/-	6.6%	2.686E-004	6.318E-003

	Pu-238		3.051E+004	+/-	24.8%		1.816E+000	1.764E-003
	U-238	<	1.179E+001	+/-	1.6%	<	7.016E-004	< 3.465E+001
	Pu-239		6.701E+006	+/-	1.9%		3.989E+002	1.065E+002
	Pu-239B		3.843E+006	+/-	0.6%		2.287E+002	6.109E+001
	U-239	@	1.000E+020	+/-	100.0%	@	5.952E+015	
X	Pu-240							
	Am-241		1.225E+006	+/-	2.4%		7.295E+001	3.529E-001
	Am-241B		6.751E+005	+/-	1.9%		4.018E+001	1.944E-001
	Pu-241		4.797E+006	+/-	5.2%		2.856E+002	4.615E-002
	Pu-241B		9.002E+006	+/-	1.7%		5.358E+002	8.660E-002
	Pu-242	<	0.000E+000	+/-	0.0%	<	0.000E+000	< 0.000E+000
	Am-243	<	2.676E+000	+/-	1.2%	<	1.593E-004	< 1.324E-005
	Cm-243	<	2.788E+000	+/-	3.0%	<	1.660E-004	< 5.353E-008
	Cm-244	<	1.291E+005	+/-	14.1%	<	7.684E+000	< 1.575E-003
	Cm-245	<	4.874E+000	+/-	7.5%	<	2.901E-004	< 2.803E-005
	Cm-247	<	3.600E-001	+/-	8.4%	<	2.143E-005	< 3.852E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 4.259E-001 +/-	3.2%	< 2.535E-005	< 1.031E-007
Cf-251	< 2.751E+000 +/-	5.3%	< 1.637E-004	< 1.719E-006

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.07E+002 +- 2.07E+000	4.00E+001 +- 3.32E-001

Beta: 2.14E+002 +- 5.03E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.96E+001 +- 6.04E-001
203.55	3.79E+001 +- 5.45E-001
375.05	5.98E+001 +- 7.50E-001
413.71	6.33E+001 +- 9.19E-001

Sum of Segment NID Results
Category: Segmented

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********** Peak Analysis Results **********

No peak analysis results available for reporting purposes

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 3.949E-002 +/-	1.8%	< 2.350E-006	< 1.820E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 3.711E-002 +/-	2.2%	< 2.209E-006	< 5.864E-012
Al-26	< 7.928E-002 +/-	19.8%	< 4.719E-006	< 4.170E-006
K-40	< 3.807E-001 +/-	4.9%	< 2.266E-005	< 5.939E-002
Co-57	4.618E+000 +/-	16.4%	2.749E-004	5.403E-010
Co-60	< 5.308E-002 +/-	2.0%	< 3.160E-006	< 4.655E-011
Se-75	< 2.959E-001 +/-	1.9%	< 1.762E-005	< 2.036E-011
Kr-85	< 1.673E+001 +/-	3.1%	< 9.955E-004	< 4.215E-008
Sr-90	< 8.672E-002 +/-	2.0%	< 5.162E-006	< 6.287E-010
Sb-125	< 3.127E-001 +/-	2.3%	< 1.861E-005	< 3.008E-010
Ba-133	< 2.239E-001 +/-	1.7%	< 1.333E-005	< 8.846E-010
Cs-134	< 3.508E-002 +/-	1.8%	< 2.088E-006	< 2.677E-011
Cs-137	< 8.672E-002 +/-	2.0%	< 5.162E-006	< 9.886E-010
Eu-152	< 1.465E-001 +/-	3.7%	< 8.717E-006	< 8.231E-010
Eu-154	< 1.033E-001 +/-	2.1%	< 6.149E-006	< 3.874E-010
Ho-166m	< 5.922E-002 +/-	2.2%	< 3.525E-006	< 3.293E-008
Bi-207	< 4.572E-002 +/-	1.8%	< 2.722E-006	< 8.322E-010
Pb-210	< 3.384E+004 +/-	309.7%	< 2.014E+000	< 4.399E-004
Ra-226	< 1.133E-001 +/-	2.3%	< 6.743E-006	< 1.133E-007
Ac-227	< 1.043E+000 +/-	8.3%	< 6.207E-005	< 1.429E-008
Th-230	< 4.475E+002 +/-	9.0%	< 2.664E-002	< 2.193E-002
Pa-231	< 5.277E+000 +/-	11.2%	< 3.141E-004	< 1.103E-004
Th-232	< 1.243E-001 +/-	2.4%	< 7.398E-006	< 1.120E+000
U-232	< 1.966E-001 +/-	2.2%	< 1.170E-005	< 9.104E-009
U-233	< 3.953E+003 +/-	2.7%	< 2.353E-001	< 4.032E-001
Pa-234	< 1.719E-001 +/-	12.2%	< 1.023E-005	
Pa-234m	< 2.250E+002 +/-	2.1%	< 1.339E-002	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 3.399E-001 +/-	2.5%	< 2.023E-005	< 1.553E-001
Np-237	7.223E+000 +/-	4.9%	4.299E-004	1.011E-002
Pu-238	< 2.252E+004 +/-	2.6%	< 1.341E+000	< 1.302E-003
U-238	< 3.907E+000 +/-	2.1%	< 2.325E-004	< 1.149E+001
Pu-239	6.816E+006 +/-	1.8%	4.057E+002	1.084E+002
Pu-239B	4.704E+006 +/-	0.7%	2.800E+002	7.479E+001
U-239	< 2.662E+005 +/-	368.5%	< 1.585E+001	
Pu-240	1.367E+005 +/-	45.4%	8.136E+000	5.946E-001

Am-241	1.491E+006	+/-	2.0%	8.876E+001	4.294E-001
Am-241B	1.129E+006	+/-	2.4%	6.717E+001	3.250E-001
Pu-241	9.281E+006	+/-	5.1%	5.525E+002	8.929E-002
Pu-241B	1.427E+007	+/-	2.0%	8.492E+002	1.373E-001
Pu-242	< 0.000E+000	+/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 9.626E-001	+/-	2.2%	< 5.730E-005	< 4.765E-006
Cm-243	< 1.079E+000	+/-	3.3%	< 6.421E-005	< 2.071E-008
Cm-244	< 5.421E+004	+/-	14.2%	< 3.227E+000	< 6.613E-004
Cm-245	< 2.091E+000	+/-	7.7%	< 1.245E-004	< 1.203E-005
Cm-247	< 1.559E-001	+/-	8.5%	< 9.283E-006	< 1.669E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.820E-001 +/-	3.5%	< 1.083E-005	< 4.404E-008
Cf-251	< 1.207E+000 +/-	5.6%	< 7.182E-005	< 7.541E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model:

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.08E+002 +- 1.90E+000	0.00E+000 +- 0.00E+000

Beta: 0.00E+000 +- 0.00E+000 Alpha: 0.00E+000 +- 0.00E+000
Number of energy lines used in correction: 0

Energy	Mass (g)

********** Radioassay Data Sheet **********

Engine Version: TMU Gamma 1.5

Assay Instrument: SGS with Trans. Location:LLNL
Analysis Method: LLNL SGS Operating Procedure Software Version: NDA 2000 V.4.0
Item ID: LL85234265 Analysis Date: 12/22/2008

NID identified fiducial nuclide Pu-239
Source of isotopics: MEASURED

Net Weight	71600.0 g	
Pu mass	2.41E+001 +-	5.23E+000 g
TRU Alpha Activity	2.59E+000 +-	3.82E-001 Ci
TRU Activity Concentration	3.61E+004 +-	5.33E+003 nCi/g
Pu-239 Equivalent Activity	2.63E+000 +-	3.82E-001 Ci
Pu-239 FGE	2.29E+001 +-	5.22E+000 g
Decay heat	8.24E-002 +-	1.21E-002 W

207

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.75E-007
U233	<LLD	<LLD	0.00E+000	6.89E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	5.03E-007
NP237	1.86E-002	1.33E-005	3.03E-006	6.20E-007
PU238	4.87E-003	8.42E-002	2.93E-002	4.52E-004
U238	<LLD	<LLD	0.00E+000	1.16E-005
PU239	2.28E+001	1.44E+000	3.28E-001	7.70E-003
PU240	1.23E+000	2.83E-001	6.74E-002	1.52E-003
AM241	2.26E-001	7.84E-001	1.80E-001	1.22E-004
PU241	2.62E-002	2.73E+000	6.81E-001	1.46E-002
PU242	2.93E-002	1.16E-004	2.95E-005	0.00E+000

Errors quoted at 1.000 sigma

Operator: _____ Date: _____

Expert Analysis
IPR: Robert J Haskett Jr Date: 2-3-09

NDA 2000 Assay Report

Item Information

Item ID:	LL85234265	Count Sequence Number:	207
Operator:	RHWM2\RHWM		
Assay Start:	12/22/2008 3:32:01 PM		
Description 1:	LL85234265		
Description 2:			
Location:	LLNL		
Comment:			
Matrix Type:	Lucite		
Container Type:	55 Gal Galv 23.8		
Weight:	Gross: 95.4 kg	Net:	71.6 kg
Container:	Volume: 208.0 l	Full:	100.0 %
Density:	0.340 kg /l		

System Configuration

Counter:	SGS with Trans.		
Segments:	Number: 16	Offset:	0
Scanning Platform:	Start: 934 mm	Delta:	-51 mm
Count Type:	Assay - 55 Gal Galv 23.8		
Collimator/Geometry Setting:	Default - 0		
Transmission Mode:	Two Pass		
Transmission Correction Type:	Standard		
Transmission Source:	Se-75 Trans. - 0		

Errors quoted at 1.000 sigma

Segment 1 Results

Segment: 1 Detector: DET01 Position: 1
C:\Canberra\NDA2k\Data\00000207_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P001_S001

Acquisition Start: 12/22/2008 3:34:04 PM
Elapsed Live Time: 119.36 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.021 +/- 0.0008
SE-75	264.66	0.033 +/- 0.0008
SE-75	279.54	0.032 +/- 0.0012
SE-75	400.66	0.041 +/- 0.0022

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:11:14 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

One or more peaks were dropped due to multiplet de-convolution.
Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 2 Results

Segment: 2 Detector: DET01 Position: 2
C:\Canberra\NDA2k\Data\00000207_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P002_S002

Acquisition Start: 12/22/2008 3:38:15 PM
Elapsed Live Time: 119.34 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.060 +/- 0.0014
SE-75	264.66	0.089 +/- 0.0017
SE-75	279.54	0.089 +/- 0.0022
SE-75	400.66	0.105 +/- 0.0037

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:11:17 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

One or more peaks were dropped due to multiplet de-convolution.
Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 3 Results

Segment: 3 Detector: DET01 Position: 3
C:\Canberra\NDA2k\Data\00000207_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P003_S003

Acquisition Start: 12/22/2008 3:42:26 PM
Elapsed Live Time: 119.33 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.537 +/- 0.0081
SE-75	264.66	0.636 +/- 0.0093
SE-75	279.54	0.653 +/- 0.0104
SE-75	400.66	0.685 +/- 0.0132

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:11:20 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

One or more peaks were dropped due to multiplet de-convolution.
Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 4 Results

Segment: 4 Detector: DET01 Position: 4
C:\Canberra\NDA2k\Data\00000207_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P004_S004

Acquisition Start: 12/22/2008 3:46:38 PM
Elapsed Live Time: 119.32 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.555 +/- 0.0084
SE-75	264.66	0.658 +/- 0.0096
SE-75	279.54	0.668 +/- 0.0106
SE-75	400.66	0.704 +/- 0.0135

Errors quoted at 1.000 sigma

Peak Analysis Results

Peak Analysis Performed on: 2/2/2009 5:11:24 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

One or more peaks were dropped due to multiplet de-convolution.
Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 5 Results

Segment: 5 Detector: DET01 Position: 5
C:\Canberra\NDA2k\Data\00000207_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P005_S005

Acquisition Start: 12/22/2008 3:50:49 PM
Elapsed Live Time: 119.31 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.586 +/- 0.0088
SE-75	264.66	0.692 +/- 0.0100
SE-75	279.54	0.698 +/- 0.0110
SE-75	400.66	0.739 +/- 0.0141

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:11:27 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

One or more peaks were dropped due to multiplet de-convolution.
Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 6 Results

Segment: 6 Detector: DET01 Position: 6
C:\Canberra\NDA2k\Data\00000207_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P006_S006

Acquisition Start: 12/22/2008 3:55:00 PM
Elapsed Live Time: 119.30 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.618 +/- 0.0093
SE-75	264.66	0.723 +/- 0.0105
SE-75	279.54	0.729 +/- 0.0115
SE-75	400.66	0.767 +/- 0.0145

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:11:30 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.58	Y	75	111	0.75	121.00	3.131E-006	28.03	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 7 Results

Segment: 7 Detector: DET01 Position: 7
C:\Canberra\NDA2k\Data\00000207_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P007_S007

Acquisition Start: 12/22/2008 3:59:11 PM
Elapsed Live Time: 119.26 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.046 +/- 0.0012
SE-75	264.66	0.066 +/- 0.0014
SE-75	279.54	0.067 +/- 0.0019
SE-75	400.66	0.078 +/- 0.0031

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:11:34 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.38	Y	172	199	1.27	120.61	2.120E-006	16.14	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 8 Results

Segment: 8 Detector: DET01 Position: 8
C:\Canberra\NDA2k\Data\00000207_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P008_S008

Acquisition Start: 12/22/2008 4:03:23 PM
Elapsed Live Time: 119.20 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.036 +/- 0.0011
SE-75	264.66	0.057 +/- 0.0012
SE-75	279.54	0.058 +/- 0.0017
SE-75	400.66	0.067 +/- 0.0029

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:11:37 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.71	Y	278	224	1.00	121.26	4.203E-005	11.95	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 9 Results

Segment: 9 Detector: DET01 Position: 9
C:\Canberra\NDA2k\Data\00000207_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P009_S009

Acquisition Start: 12/22/2008 4:07:34 PM
Elapsed Live Time: 119.16 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.561 +/- 0.0085
SE-75	264.66	0.667 +/- 0.0097
SE-75	279.54	0.666 +/- 0.0106
SE-75	400.66	0.712 +/- 0.0137

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:11:40 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.55	Y	475	417	1.02	120.94	1.611E-005	9.23	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 10 Results

Segment: 10 Detector: DET01 Position: 10
C:\Canberra\NDA2k\Data\00000207_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P010_S010

Acquisition Start: 12/22/2008 4:11:46 PM
Elapsed Live Time: 119.11 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.612 +/- 0.0092
SE-75	264.66	0.717 +/- 0.0104
SE-75	279.54	0.721 +/- 0.0114
SE-75	400.66	0.745 +/- 0.0142

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:11:43 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.48	Y	1106	642	1.16	120.81	7.671E-006	4.96	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 11 Results

Segment: 11 Detector: DET01 Position: 11
C:\Canberra\NDA2k\Data\00000207_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P011_S011

Acquisition Start: 12/22/2008 4:15:57 PM
Elapsed Live Time: 119.02 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.626 +/- 0.0094
SE-75	264.66	0.737 +/- 0.0107
SE-75	279.54	0.746 +/- 0.0118
SE-75	400.66	0.763 +/- 0.0145

Errors quoted at 1.000 sigma

Peak Analysis Results

Peak Analysis Performed on: 2/2/2009 5:11:47 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.55	Y	1947	688	1.21	120.93	7.967E-006	3.28	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 12 Results

Segment: 12 Detector: DET01 Position: 12
C:\Canberra\NDA2k\Data\00000207_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P012_S012

Acquisition Start: 12/22/2008 4:20:09 PM
Elapsed Live Time: 118.14 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.712 +/- 0.0107
SE-75	264.66	0.809 +/- 0.0118
SE-75	279.54	0.824 +/- 0.0129
SE-75	400.66	0.852 +/- 0.0160

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:11:50 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.52	Y	8150	1418	1.13	120.88	2.858E-004	1.70	
M	94.77		303	1210	1.28	191.33	3.280E-004	9.50	8.99
m	99.00	Y	2760	1563	1.29	199.78	3.379E-004	3.91	
m	103.06	Y	2807	1220	1.29	207.88	3.475E-004	3.82	
M	125.33	Y	846	675	1.01	252.39	3.942E-004	4.18	2.47
m	129.42	Y	406	455	1.02	260.55	4.014E-004	5.99	
	146.46	Y	117	570	1.17	294.61	4.268E-004	31.80	
M	203.54	Y	109	369	1.13	408.68	4.544E-004	14.08	1.34
m	208.04	Y	484	358	1.14	417.68	4.536E-004	5.33	
	311.87	Y	379	182	1.29	625.14	3.906E-004	7.45	
M	332.72	Y	248	155	1.32	666.82	3.743E-004	7.04	1.23
m	335.40	Y	196	163	1.33	672.16	3.725E-004	7.87	
	345.05		164	168	1.13	691.45	3.651E-004	14.45	
	368.60	Y	158	114	1.34	738.52	3.480E-004	13.40	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
M	375.13	Y	577	108	1.34	751.57	3.434E-004	4.39	1.44
m	380.22		96	87	1.34	761.74	3.399E-004	11.53	
m	382.79		98	78	1.34	766.87	3.382E-004	11.28	
	392.92		223	55	1.23	787.11	3.315E-004	8.66	
	413.69	Y	595	47	1.31	828.62	3.183E-004	4.64	
	422.63		18	49	1.05	846.49	3.128E-004	62.76	
	451.40		71	28	1.35	903.97	2.965E-004	16.70	
	662.28	Y	124	8	1.51	1325.38	2.167E-004	9.84	
	721.78	Y	75	3	1.24	1444.28	2.023E-004	12.16	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.11E+000 +- 7.10E-002	8.44E-002 +- 3.84E-003

Beta: 3.85E+002 +- 1.52E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	5.74E-002 +- 4.04E-003
203.55	1.51E-001 +- 2.18E-002
375.05	3.87E-001 +- 1.89E-002
413.71	4.56E-001 +- 2.37E-002

Segment 13 Results

Segment: 13 Detector: DET01 Position: 13
C:\Canberra\NDA2k\Data\00000207_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P013_S013

Acquisition Start: 12/22/2008 4:24:20 PM
Elapsed Live Time: 111.33 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.311 +/- 0.0066
SE-75	264.66	0.445 +/- 0.0069
SE-75	279.54	0.461 +/- 0.0081
SE-75	400.66	0.504 +/- 0.0110

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

*** Spectrum Validity Test warnings ***
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 2/2/2009 5:11:53 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	49.49		4055	12633	2.33	100.85	1.527E-004	4.99	
	59.47	Y	127723	11646	1.09	120.79	1.647E-004	1.17	
M	94.90		1406	4366	1.21	191.58	2.399E-004	4.25	69.91
m	98.95	Y	20248	5256	1.22	199.68	2.482E-004	1.78	
m	103.02	Y	20702	4138	1.23	207.80	2.562E-004	1.76	
M	111.02		1313	2574	1.66	223.79	2.708E-004	4.00	2.85
m	114.38	Y	1791	4687	1.66	230.52	2.764E-004	3.49	
m	116.94	Y	1311	5127	1.67	235.63	2.805E-004	4.32	
M	123.04	Y	1338	1776	1.03	247.81	2.896E-004	3.90	4.35
m	125.31	Y	6623	2262	1.03	252.36	2.927E-004	1.75	
m	129.28	Y	2075	1620	1.04	260.28	2.979E-004	2.75	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	146.47	Y	820	1768	1.13	294.63	3.184E-004	9.07	
	169.52	Y	351	1468	0.92	340.70	3.371E-004	18.34	
M	203.60	Y	626	1084	1.15	408.80	3.459E-004	5.49	1.68
m	208.00	Y	3076	1080	1.15	417.59	3.458E-004	2.27	
	300.08	Y	361	636	1.46	601.58	3.124E-004	13.06	
	311.80	Y	1964	531	1.24	625.00	3.055E-004	3.25	
	322.64	Y	519	482	1.52	646.68	2.991E-004	8.56	
M	332.64	Y	1196	475	1.28	666.66	2.933E-004	3.37	1.69
m	335.43	Y	1273	471	1.28	672.23	2.917E-004	3.20	
m	340.72	Y	261	382	1.28	682.80	2.887E-004	8.03	
m	344.94		963	386	1.29	691.23	2.863E-004	3.68	
	368.52	Y	817	405	1.48	738.35	2.731E-004	5.67	
M	375.06	Y	2835	378	1.31	751.43	2.696E-004	2.24	9.60
m	380.12		451	290	1.31	761.53	2.669E-004	5.71	
m	382.79		448	257	1.32	766.87	2.655E-004	5.54	
M	392.85		964	209	1.39	786.98	2.602E-004	9.69	1.09
m	398.31		85	186	1.40	797.89	2.574E-004	17.74	
	413.69	Y	2742	176	1.39	828.62	2.500E-004	2.43	
M	422.53		148	94	1.11	846.28	2.459E-004	10.46	1.90
m	426.49	Y	68	111	1.11	854.20	2.441E-004	17.14	
	451.42		310	143	1.12	904.01	2.332E-004	9.03	
	618.74	Y	105	30	1.58	1238.37	1.789E-004	13.86	
M	653.02	Y	67	18	1.41	1306.87	1.710E-004	13.21	1.45
m	658.56		26	17	1.41	1317.94	1.698E-004	23.62	
m	662.30	Y	549	12	1.41	1325.41	1.690E-004	4.61	
	688.58	Y	29	21	1.54	1377.93	1.637E-004	32.35	
	721.84	Y	294	14	1.52	1444.40	1.575E-004	6.58	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.09 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	6.34E+000 +- 2.44E-001	6.11E-001 +- 1.57E-002

Beta: 3.58E+002 +- 9.04E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	3.95E-001 +- 1.69E-002
203.55	1.14E+000 +- 6.72E-002
375.05	2.42E+000 +- 7.13E-002
413.71	2.68E+000 +- 8.64E-002

Segment 14 Results

Segment: 14 Detector: DET01 Position: 14
C:\Canberra\NDA2k\Data\00000207_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P014_S014

Acquisition Start: 12/22/2008 4:28:32 PM
Elapsed Live Time: 109.93 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.499 +/- 0.0080
SE-75	264.66	0.612 +/- 0.0093
SE-75	279.54	0.616 +/- 0.0104
SE-75	400.66	0.652 +/- 0.0135

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

*** Spectrum Validity Test warnings ***
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 2/2/2009 5:11:57 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	49.59		6382	17700	2.42	101.04	8.252E-007	3.89	
	59.44	Y	162141	15534	1.09	120.73	6.666E-006	1.17	
M	94.81		1522	4637	1.17	191.40	1.561E-004	4.19	68.39
m	98.95	Y	22733	6297	1.17	199.67	1.838E-004	1.70	
m	103.00	Y	23340	5043	1.18	207.77	2.111E-004	1.69	
M	111.04		1307	3273	1.73	223.84	2.637E-004	4.33	3.20
m	114.36	Y	2036	5280	1.73	230.47	2.842E-004	3.35	
m	117.10	Y	1588	6003	1.74	235.94	3.004E-004	3.96	
M	122.98	Y	1660	1898	1.03	247.69	3.326E-004	3.47	8.84
m	125.29	Y	7571	2363	1.03	252.31	3.442E-004	1.69	
m	129.28	Y	2194	1615	1.04	260.29	3.629E-004	2.69	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	146.46	Y	1111	1835	1.09	294.61	4.244E-004	7.13	
M	164.76	Y	206	1589	0.95	331.18	4.584E-004	15.79	3.64
m	169.54	Y	410	1378	0.95	340.74	4.628E-004	9.32	
M	203.58	Y	614	1133	1.11	408.75	4.590E-004	5.67	1.99
m	208.00	Y	3287	1035	1.12	417.59	4.555E-004	2.25	
	267.41	Y	82	675	0.65	536.30	3.881E-004	54.59	
	300.07	Y	205	588	1.00	601.57	3.485E-004	20.63	
	311.83	Y	1839	514	1.27	625.07	3.356E-004	3.37	
	322.55	Y	548	468	1.56	646.49	3.245E-004	8.21	
M	332.59	Y	1202	350	1.30	666.56	3.146E-004	3.36	3.12
m	335.45	Y	1460	442	1.31	672.27	3.119E-004	3.02	
m	340.75	Y	317	358	1.31	682.86	3.069E-004	7.00	
m	344.93		981	365	1.32	691.22	3.031E-004	3.67	
M	368.44	Y	664	383	1.36	738.19	2.834E-004	4.64	7.66
m	370.86	Y	119	406	1.36	743.04	2.815E-004	15.19	
m	375.06	Y	2853	355	1.36	751.43	2.783E-004	2.23	
m	380.13		531	282	1.37	761.56	2.745E-004	5.09	
m	382.78		461	239	1.37	766.85	2.725E-004	5.44	
M	392.80		915	210	1.39	786.87	2.655E-004	3.71	1.96
m	398.19		46	226	1.40	797.65	2.619E-004	27.56	
	413.66	Y	2596	176	1.47	828.55	2.521E-004	2.52	
M	422.67		156	156	0.99	846.56	2.469E-004	11.03	3.17
m	426.72	Y	72	107	0.99	854.66	2.446E-004	16.91	
	451.41		326	123	1.33	904.00	2.318E-004	8.34	
	618.87	Y	126	31	1.27	1238.62	1.771E-004	12.24	
	652.59	Y	63	27	1.87	1306.00	1.703E-004	19.39	
	662.33	Y	648	34	1.70	1325.48	1.685E-004	4.59	
	688.84	Y	60	16	1.24	1378.45	1.639E-004	18.32	
	721.97	Y	309	13	1.67	1444.65	1.588E-004	6.46	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.11 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	6.38E+000 +- 2.52E-001	5.08E-001 +- 1.33E-002

Beta: 3.83E+002 +- 9.20E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	3.43E-001 +- 1.43E-002
203.55	8.41E-001 +- 5.08E-002
375.05	2.36E+000 +- 6.96E-002
413.71	2.52E+000 +- 8.29E-002

Segment 15 Results

Segment: 15 Detector: DET01 Position: 15
C:\Canberra\NDA2k\Data\00000207_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P015_S015

Acquisition Start: 12/22/2008 4:32:43 PM
Elapsed Live Time: 116.13 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.674 +/- 0.0102
SE-75	264.66	0.772 +/- 0.0113
SE-75	279.54	0.777 +/- 0.0124
SE-75	400.66	0.804 +/- 0.0153

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:12:00 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	49.50		2325	7753	2.17	100.86	7.325E-007	6.37	
	59.49	Y	56844	7286	1.09	120.83	6.540E-006	1.20	
M	98.98	Y	6000	2599	1.15	199.74	1.992E-004	3.02	24.81
m	103.01	Y	6574	2099	1.15	207.80	2.293E-004	2.90	
M	123.06	Y	585	1017	1.09	247.86	3.641E-004	8.36	0.75
m	125.31	Y	2310	759	1.09	252.35	3.765E-004	5.64	
m	129.32	Y	513	583	1.10	260.37	3.969E-004	7.61	
	146.53	Y	280	681	1.19	294.76	4.622E-004	15.44	
	169.74	Y	97	596	0.89	341.14	4.989E-004	39.69	
M	203.49	Y	158	385	1.18	408.58	4.873E-004	14.54	0.78
m	208.08	Y	846	437	1.19	417.75	4.826E-004	9.98	
	300.01	Y	72	181	1.27	601.44	3.614E-004	30.07	
	311.85	Y	453	309	1.32	625.11	3.475E-004	8.58	
	322.30	Y	154	175	1.64	646.00	3.360E-004	15.75	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
M	332.62	Y	267	146	1.24	666.62	3.254E-004	20.17	0.80
m	335.33	Y	344	160	1.24	672.04	3.227E-004	18.97	
	345.05		196	164	1.59	691.45	3.134E-004	12.69	
	368.40	Y	203	134	0.90	738.12	2.932E-004	11.84	
M	375.05	Y	600	118	1.26	751.40	2.879E-004	4.43	5.00
m	380.04		93	87	1.26	761.37	2.841E-004	11.94	
m	382.69		129	74	1.26	766.66	2.822E-004	9.53	
	392.90		212	71	1.79	787.07	2.749E-004	9.62	
	413.71	Y	596	56	1.30	828.67	2.615E-004	4.74	
	451.43		47	43	1.52	904.04	2.411E-004	26.68	
	662.41	Y	175	10	1.52	1325.63	1.796E-004	8.35	
	721.85	Y	75	8	1.47	1444.41	1.702E-004	13.22	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.04 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.34E+000 +- 8.97E-002	1.21E-001 +- 5.66E-003

Beta: 3.77E+002 +- 1.72E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	7.34E-002 +- 6.08E-003
203.55	2.04E-001 +- 3.00E-002
375.05	4.80E-001 +- 2.32E-002
413.71	5.57E-001 +- 2.89E-002

Segment 16 Results

Segment: 16 Detector: DET01 Position: 16
C:\Canberra\NDA2k\Data\00000207_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P016_S016

Acquisition Start: 12/22/2008 4:36:55 PM
Elapsed Live Time: 118.75 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.787 +/- 0.0117
SE-75	264.66	0.857 +/- 0.0124
SE-75	279.54	0.855 +/- 0.0134
SE-75	400.66	0.892 +/- 0.0165

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:12:05 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.48	Y	7651	1855	1.12	120.81	1.371E-004	1.79	
M	99.00	Y	421	845	1.09	199.77	1.910E-004	13.78	1.70
m	103.01	Y	454	653	1.10	207.79	1.967E-004	13.02	
	125.28	Y	132	347	0.91	252.29	2.235E-004	22.65	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Sum of Segment NID Results
Category: Segmented

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********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model:

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.52E+001 +- 3.69E-001	0.00E+000 +- 0.00E+000

Beta: 0.00E+000 +- 0.00E+000 Alpha: 0.00E+000 +- 0.00E+000
Number of energy lines used in correction: 0

Energy	Mass (g)

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 3.431E-002 +/-	2.3%	< 4.792E-007	< 1.582E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 3.882E-002 +/-	2.3%	< 5.422E-007	< 6.134E-012
Al-26	< 4.269E-002 +/-	15.4%	< 5.962E-007	< 2.245E-006
K-40	< 4.031E-001 +/-	5.3%	< 5.630E-006	< 6.289E-002
Co-57	< 1.947E-001 +/-	3.6%	< 2.720E-006	< 2.278E-011
Co-60	< 5.327E-002 +/-	2.0%	< 7.440E-007	< 4.672E-011
Se-75	< 1.085E-001 +/-	1.8%	< 1.516E-006	< 7.467E-012
Kr-85	< 1.016E+001 +/-	3.1%	< 1.418E-004	< 2.559E-008
Sr-90	< 5.768E-002 +/-	2.0%	< 8.056E-007	< 4.182E-010
Sb-125	< 1.876E-001 +/-	2.1%	< 2.620E-006	< 1.804E-010
Ba-133	< 9.072E-002 +/-	1.7%	< 1.267E-006	< 3.583E-010
Cs-134	< 2.239E-002 +/-	1.8%	< 3.127E-007	< 1.708E-011
Cs-137	< 5.768E-002 +/-	2.0%	< 8.056E-007	< 6.575E-010
Eu-152	< 1.281E-001 +/-	4.2%	< 1.790E-006	< 7.202E-010
Eu-154	< 1.108E-001 +/-	2.4%	< 1.548E-006	< 4.156E-010
Ho-166m	< 3.742E-002 +/-	2.6%	< 5.226E-007	< 2.080E-008
Bi-207	< 2.853E-002 +/-	1.9%	< 3.984E-007	< 5.192E-010
Pb-210	< 6.229E+003 +/-	309.7%	< 8.699E-002	< 8.097E-005
Ra-226	< 7.220E-002 +/-	2.2%	< 1.008E-006	< 7.220E-008
Ac-227	< 3.634E-001 +/-	8.3%	< 5.076E-006	< 4.979E-009
Th-230	< 1.600E+002 +/-	8.6%	< 2.235E-003	< 7.841E-003
Pa-231	< 2.295E+000 +/-	11.2%	< 3.206E-005	< 4.797E-005

Th-232	< 7.844E-002 +/-	2.4%	< 1.096E-006	< 7.068E-001
U-232	< 1.034E-001 +/-	2.2%	< 1.444E-006	< 4.787E-009
U-233	< 1.635E+003 +/-	2.7%	< 2.283E-002	< 1.667E-001
Pa-234	< 1.470E-001 +/-	12.3%	< 2.052E-006	
Pa-234m	< 1.780E+002 +/-	2.1%	< 2.486E-003	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 1.223E-001 +/-	2.5%	< 1.708E-006	< 5.589E-002
Np-237	8.181E+000 +/-	2.4%	1.143E-004	1.145E-002
Pu-238	< 8.502E+003 +/-	2.6%	< 1.187E-001	< 4.914E-004
U-238	< 3.192E+000 +/-	2.4%	< 4.458E-005	< 9.384E+000
Pu-239	9.541E+005 +/-	2.4%	1.332E+001	1.517E+001
Pu-239B	< 1.173E+004 +/-	5.8%	< 1.638E-001	< 1.864E-001
U-239	< 5.715E+004 +/-	69.5%	< 7.982E-001	
Pu-240	< 5.479E+003 +/-	4.9%	< 7.652E-002	< 2.383E-002
Am-241	5.325E+005 +/-	2.7%	7.438E+000	1.534E-001
Am-241B	2.795E+005 +/-	1.8%	3.904E+000	8.051E-002
Pu-241	< 5.126E+004 +/-	2.8%	< 7.159E-001	< 4.931E-004
Pu-241B	8.136E+005 +/-	2.3%	1.136E+001	7.827E-003
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 4.158E-001 +/-	1.8%	< 5.807E-006	< 2.058E-006
Cm-243	< 4.289E-001 +/-	3.3%	< 5.990E-006	< 8.234E-009
Cm-244	< 3.488E+004 +/-	14.2%	< 4.871E-001	< 4.255E-004
Cm-245	< 7.983E-001 +/-	7.7%	< 1.115E-005	< 4.590E-006
Cm-247	< 6.943E-002 +/-	8.5%	< 9.696E-007	< 7.428E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 7.577E-002 +/-	3.5%	< 1.058E-006	< 1.834E-008
Cf-251	< 4.201E-001 +/-	5.6%	< 5.867E-006	< 2.626E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

Summed Segment Spectra Results
Category: Segmented

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Elapsed Live Time: 113.38 sec Elapsed Real Time: 120.00 sec

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 9.210E-002 +/-	1.0%	< 1.286E-006	< 4.246E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 9.663E-002 +/-	1.1%	< 1.350E-006	< 1.527E-011
	Al-26	< 8.775E-002 +/-	6.5%	< 1.226E-006	< 4.616E-006
	K-40	2.108E+000 +/-	15.9%	2.944E-005	3.288E-001
X	Co-57				
	Co-60	2.633E-001 +/-	10.6%	3.677E-006	2.309E-010
	Se-75	< 4.316E-001 +/-	1.0%	< 6.027E-006	< 2.969E-011
	Kr-85	< 3.846E+001 +/-	2.4%	< 5.372E-004	< 9.693E-008
	Sr-90	< 1.753E-001 +/-	0.7%	< 2.448E-006	< 1.271E-009
	Sb-125	< 5.906E-001 +/-	1.3%	< 8.249E-006	< 5.682E-010
	Ba-133	< 3.347E-001 +/-	0.8%	< 4.674E-006	< 1.322E-009
	Cs-134	< 1.044E-001 +/-	0.8%	< 1.458E-006	< 7.966E-011
X	Cs-137				
	Eu-152	< 4.077E-001 +/-	1.7%	< 5.695E-006	< 2.292E-009
	Eu-154	< 2.759E-001 +/-	1.4%	< 3.853E-006	< 1.035E-009
	Ho-166m	< 1.600E-001 +/-	1.6%	< 2.235E-006	< 8.899E-008
	Bi-207	< 1.195E-001 +/-	0.7%	< 1.668E-006	< 2.174E-009
	Pb-210	< 1.027E+004 +/-	11.3%	< 1.435E-001	< 1.335E-004
	Ra-226	< 2.591E-001 +/-	1.3%	< 3.619E-006	< 2.591E-007
	Ac-227	< 1.463E+000 +/-	8.2%	< 2.043E-005	< 2.004E-008
	Th-230	< 7.692E+002 +/-	8.2%	< 1.074E-002	< 3.769E-002
	Pa-231	< 8.768E+000 +/-	11.1%	< 1.225E-004	< 1.832E-004
	Th-232	< 3.863E-001 +/-	1.8%	< 5.395E-006	< 3.481E+000
	U-232	< 3.940E-001 +/-	1.1%	< 5.502E-006	< 1.824E-008
	U-233	< 6.893E+003 +/-	1.4%	< 9.627E-002	< 7.031E-001
	Pa-234	< 5.563E-001 +/-	12.1%	< 7.770E-006	
	Pa-234m	< 6.893E+002 +/-	1.5%	< 9.627E-003	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 5.034E-001 +/-	1.7%	< 7.031E-006	< 2.301E-001
	Np-237	1.327E+001 +/-	1.8%	1.853E-004	1.858E-002
	Pu-238	< 3.747E+004 +/-	1.4%	< 5.234E-001	< 2.166E-003
	U-238	< 1.155E+001 +/-	1.6%	< 1.614E-004	< 3.397E+001
	Pu-239	1.436E+006 +/-	2.0%	2.005E+001	2.283E+001
	Pu-239B	6.459E+005 +/-	1.5%	9.022E+000	1.027E+001
	U-239	< 2.068E+004 +/-	15.0%	< 2.888E-001	
X	Pu-240				
	Am-241	7.843E+005 +/-	3.0%	1.095E+001	2.259E-001
	Am-241B	5.352E+005 +/-	1.4%	7.474E+000	1.541E-001
	Pu-241	< 2.174E+005 +/-	1.7%	< 3.037E+000	< 2.092E-003
	Pu-241B	1.336E+006 +/-	2.1%	1.866E+001	1.285E-002

Pu-242	< 0.000E+000 +/- 0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.706E+000 +/- 1.1%	< 2.382E-005	< 8.443E-006
Cm-243	< 1.759E+000 +/- 3.0%	< 2.457E-005	< 3.378E-008
Cm-244	< 1.426E+005 +/- 14.1%	< 1.992E+000	< 1.740E-003
Cm-245	< 3.214E+000 +/- 7.4%	< 4.488E-005	< 1.848E-005
Cm-247	< 2.352E-001 +/- 8.4%	< 3.285E-006	< 2.517E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.644E-001 +/-	3.1%	< 3.693E-006	< 6.398E-008
Cf-251	< 1.735E+000 +/-	5.3%	< 2.423E-005	< 1.084E-006

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	2.28E+001 +- 4.61E-001	2.46E+000 +- 3.31E-002

Beta: 3.44E+002 +- 4.75E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.62E+000 +- 3.56E-002
203.55	3.89E+000 +- 1.53E-001
375.05	9.42E+000 +- 1.46E-001
413.71	9.72E+000 +- 1.63E-001

Automated Independent Technical Review

Counter ID: SGS with Trans. Count Type: Assay - 55 Gal Galv 23.8
Container ID: LL85234265 Assay Date: 12/22/2008
Waste Matrix Code:
Sequence Number: 207

Data Combiner Analysis:
Input combination 2: only Isotopics input data are valid.

Source of results is undefined.

DISPOSITION:

MGA Analysis:

Note: The measured and declared isotopics are inconsistent.

DISPOSITION:

Gamma Analysis:
Analysis Status: No errors.
Ratio of Pu-239 414 to 129 keV line activities is above the limit of 2.50
Spectrum Validity Check engine has suggested data review.
Pu-239/Am-241 ratio is less than the lower limit of 100.00

OK RSH

DISPOSITION:

Segment Data Review:
Segment: 1 Analysis Warnings:
Reference Peak Error 5: The reference peak correction was less than 1.

OK RSH

Segment: 2 OK
Segment: 3 OK
Segment: 4 OK
Segment: 5 OK
Segment: 6 OK
Segment: 7 OK
Segment: 8 OK
Segment: 9 OK
Segment: 10 OK
Segment: 11 OK
Segment: 12 OK
Segment: 13 OK
Segment: 14 OK
Segment: 15 OK
Segment: 16 OK

DISPOSITION:

Miscellaneous:

DISPOSITION:

Expert Review by: Robert J Hoslett Jr Date: 2-3-09

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Assay Instrument:	SGS with Trans.	Location:	LLNL
Analysis Method:	CCP-TP-019 Rev 4	Software Version:	NDA 2000 V.4.0
Item ID:	LL85234265	Analysis Date:	12/22/2008

Used Multi Curve
KJH 2-3-09

********** MGA Results **********

MGA version: MGA V9.63H CI

Measurement date = 12/22/08 Declared date = 12/22/08
Low energy spectrum sensitivity = 30.0% Total counts = 1.150E+006
High energy spectrum sensitivity : 10.0%

Pu g/cm2 = 1.0583 Cd g/cm2 = 1.8357 FWHM at 122 keV = 675 eV
QFIT = 1.27 FWHM at 208 keV = 866 eV
NQFIT = 1.02

Isotope	Relative to Pu-239	%* Err	% Err	Relative to Pu-241	%* Err	Isotope analysis at Meas. date % weight	%Err	Decl. date % weight	%Err
Pu-238	0.000213	27.0	26.8	0.1855	32.0	0.02018	26.15	0.02190	28.38
Pu-239	1.000000	0.0	2.7	869.9385	11.1	94.64301	0.36	94.56962	0.36
Pu-240	0.053957	7.1	6.4	46.9389	12.9	5.10661	6.55	5.10677	6.55
Pu-241	0.001150	10.3	9.4	1.0000	0.0	0.10879	9.96	0.18044	16.52
Pu-242	(New alg.)			1.1158(11)		0.12139	(11)	0.12126	(10)
Am-241	0.049666	2.8	0.5	43.2064	10.6	4.70055	2.58	4.77947	2.62

Pu-240 effective (meas. date) = 5.361 +/- 6.78%
Am-241 separated about 78.172 +/- 0.251 years ago
Am/Pu-241 weight ratio =43.20642 +/- 9.45%

Messages:

Lead x-rays detected.
Calculations in MGAABS didn't converge: results may be suspect.
Pu-241/Pu-239 efficiency changed in MGACAL by 52%.

Notes : * = Error in ratio
Errors quoted at 1.000 sigma
MGA sigma defaulted to 1

Reviewed by: Robert J. Haskett Jr Date: 2-3-09

********** Radioassay Data Sheet **********

209

Engine Version: TMU Gamma 1.5

Assay Instrument: SGS with Trans. Location:LLNL
Analysis Method: LLNL SGS Operating Procedure Software Version: NDA 2000 V.4.0
Item ID: SGS100 Analysis Date: 12/23/2008

NID identified fiducial nuclide Pu-239
Source of isotopics: MEASURED

Net Weight	16800.0 g		
Pu mass	1.30E+002	+- 1.92E+001	g
TRU Alpha Activity	1.09E+001	+- 1.25E+000	Ci
TRU Activity Concentration	6.49E+005	+- 7.45E+004	nCi/g
Pu-239 Equivalent Activity	1.13E+001	+- 1.25E+000	Ci
Pu-239 FGE	1.23E+002	+- 1.91E+001	g
Decay heat	3.43E-001	+- 3.89E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	1.95E-009	2.68E-007	1.26E-007	0.00E+000
CS137	3.06E-009	2.68E-007	1.26E-007	9.66E-008
U233	<LLD	<LLD	0.00E+000	4.00E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.44E-007
NP237	9.57E-003	6.84E-006	1.12E-006	6.72E-007
PU238	1.03E-002	1.77E-001	3.14E-002	2.07E-004
U238	<LLD	<LLD	0.00E+000	4.64E-006
PU239	1.22E+002	7.68E+000	1.20E+000	8.97E-003
PU240	7.25E+000	1.67E+000	2.62E-001	1.95E-003
AM241	3.98E-001	1.38E+000	2.18E-001	2.34E-004
PU241	2.23E-001	2.32E+001	3.63E+000	2.70E-002
PU242	3.98E-002	1.58E-004	2.93E-005	0.00E+000

Errors quoted at 1.000 sigma

Operator:_____ Date:_____

ITR:_____ Date:_____

********** Radioassay Data Sheet **********

Engine Version: TMU Gamma 1.5

Assay Instrument: SGS with Trans. Location:LLNL
Analysis Method: LLNL SGS Operating Procedure Software Version: NDA 2000 V.4.0
Item ID: SGS100 Analysis Date: 12/23/2008

NID identified fiducial nuclide Pu-239
Source of isotopics: MEASURED

Net Weight	16800.0 g		
Pu mass	1.17E+002	+- 1.73E+001	g
TRU Alpha Activity	9.76E+000	+- 1.12E+000	Ci
TRU Activity Concentration	5.81E+005	+- 6.70E+004	nCi/g
Pu-239 Equivalent Activity	1.02E+001	+- 1.13E+000	Ci
Pu-239 FGE	1.10E+002	+- 1.72E+001	g
Decay heat	3.07E-001	+- 3.50E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.36E-007
U233	<LLD	<LLD	0.00E+000	9.16E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	7.87E-007
NP237	7.87E-003	5.62E-006	8.98E-007	1.09E-006
PU238	9.22E-003	1.60E-001	2.83E-002	2.87E-004
U238	<LLD	<LLD	0.00E+000	1.00E-005
PU239	1.10E+002	6.91E+000	1.08E+000	1.24E-002
PU240	6.52E+000	1.50E+000	2.35E-001	2.70E-003
AM241	3.42E-001	1.19E+000	1.87E-001	1.17E-004
PU241	2.00E-001	2.08E+001	3.27E+000	3.75E-002
PU242	3.58E-002	1.42E-004	2.64E-005	0.00E+000

Errors quoted at 1.000 sigma

Operator:_____ Date:_____

ITR:_____ Date:_____

********** MGA Results **********

MGA version: MGA V9.63H CI

Measurement date = 12/23/08 Declared date = 12/23/08
Low energy spectrum sensitivity = 30.0% Total counts = 7.491E+006
High energy spectrum sensitivity : 10.0%

Pu g/cm2 = 0.7648 Cd g/cm2 = 2.0864 FWHM at 122 keV = 619 eV
QFIT = 1.11 FWHM at 208 keV = 791 eV
NQFIT = 1.01

Isotope	Relative to Pu-239	%* Err	% Err	Relative to Pu-241	%* Err	Isotope analysis at Meas. date % weight	%Err	Decl. date % weight	%Err
Pu-238	0.000084	8.3	8.3	0.0460	8.8	0.00791	8.25	0.00814	8.49
Pu-239	1.000000	0.0	0.4	548.2421	0.8	94.19943	0.06	94.16515	0.06
Pu-240	0.059344	1.0	0.9	32.5349	1.2	5.59018	0.93	5.58977	0.93
Pu-241	0.001824	0.8	0.7	1.0000	0.0	0.17182	0.76	0.20628	0.91
Pu-242	(New alg.)			0.1785(10)		0.03067	(10)	0.03065	(9)
Am-241	0.005299	0.5	0.4	2.9052	0.8	0.49917	0.51	0.50186	0.51

Pu-240 effective (meas. date) = 5.662 +/- 1.00%
Am-241 separated about 28.206 +/- 0.166 years ago
Am/Pu-241 weight ratio = 2.90516 +/- 0.77%

Messages:

Lead x-rays detected.
Pu-241/Pu-239 efficiency changed in MGACAL by 1%.

Notes : * = Error in ratio
Errors quoted at 1.000 sigma
MGA sigma defaulted to 1

Reviewed by: _____ Date: _____

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

Last Results Report
12/23/08 12:21:58 PM

QA File: C:\CANBERRA\NDA2K\QA\CNTR0001_DC
Sample ID: SGS100
Sample Quantity: 1.0000E+000
Sample Date: 7/17/08 10:49:07 AM
Measurement Date: 12/23/08 11:12:01 AM
Elapsed Live Time: 0.0 seconds
Elapsed Real Time: 0.0 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
SGS-100 Pu-239 Trans Mas [UD: 1.0913E+002+/- 7.370]	1.2215E+002	1.7671E+000 < : : : >

Flags Key: LU = Lower/Upper Bounds Test (Ab = Above, Be = Below)
SD = Sample Driven N-Sigma Test (In = Investigate, Ac = Action)
UD = User Driven N-Sigma Test (In = Investigate, Ac = Action)
BS = Measurement Bias Test (In = Investigate, Ac = Action)

****
***** GENIE QUALITY ASSURANCE *****
****

Last Results Report
12/23/08 12:21:59 PM

QA File: C:\CANBERRA\NDA2K\QA\CNTR0001_DC
Sample ID: SGS100
Sample Quantity: 1.0000E+000
Sample Date: 7/17/08 10:49:07 AM
Measurement Date: 12/23/08 11:16:39 AM
Elapsed Live Time: 97.7 seconds
Elapsed Real Time: 120.0 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
SGS-100 414 keV centroid [0.00+/-0.00]	8.2849E+002	0.00 < : : : >
SGS-100 414 keV FWHM [0.00+/-0.00]	1.3189E+000	0.00 < : : : >
SGS-100 Pu-239 Mass [UD: 1.1082E+002+/- 3.000]	1.0988E+002	-3.1220E-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)

NDA 2000 Assay Report

Item Information

Item ID:	SGS100		Count Sequence Number:	209	
Operator:	RHWM2\RHWM				
Assay Start:	12/23/2008 11:14:18 AM				
Description 1:	SGS100				
Description 2:					
Location:	LLNL				
Comment:					
Matrix Type:	Lucite				
Container Type:	55 TRU Galv 81.5				
Weight:	Gross:	54.0 kg	Net:	16.8 kg	
Container:	Volume:	208.0 l	Full:	100.0 %	
Density:		0.080 kg /l			

System Configuration

Counter:	SGS with Trans.			
Segments:	Number:	16	Offset:	0
Scanning Platform:	Start:	934 mm	Delta:	-51 mm
Count Type:	QC - SGS 100			
Collimator/Geometry Setting:	Default	- 0		
Transmission Mode:	Two Pass			
Transmission Correction Type:	Standard			
Transmission Source:	Se-75 Trans.	- 0		

Errors quoted at 1.000 sigma

Segment 1 Results

Segment: 1 Detector: DET01 Position: 1
C:\Canberra\NDA2k\Data\00000209_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P001_S001

Acquisition Start: 12/23/2008 11:16:39 AM
Elapsed Live Time: 118.16 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.392 +/- 0.0064
SE-75	264.66	0.467 +/- 0.0071
SE-75	279.54	0.479 +/- 0.0082
SE-75	400.66	0.521 +/- 0.0111

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/23/2008 11:18:41 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.41	Y	793	800	1.42	120.66	6.497E-006	6.63	
2234.76		11980	5	1.08	4467.64	4.574E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 2.409E-002 +/-	2.1%	< 2.295E-005	< 1.111E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 3.048E-002 +/-	2.2%	< 2.903E-005	< 4.817E-012
Al-26	< 3.350E-002 +/-	16.2%	< 3.190E-005	< 1.762E-006
K-40	< 3.786E-001 +/-	5.3%	< 3.605E-004	< 5.906E-002
Co-57	< 1.278E-001 +/-	3.4%	< 1.217E-004	< 1.495E-011
Co-60	< 5.065E-002 +/-	2.8%	< 4.824E-005	< 4.442E-011
Se-75	< 1.044E-001 +/-	1.9%	< 9.941E-005	< 7.181E-012
Kr-85	< 7.368E+000 +/-	3.2%	< 7.018E-003	< 1.857E-008
Sr-90	< 2.522E-002 +/-	2.1%	< 2.402E-005	< 1.828E-010
Sb-125	< 7.651E-002 +/-	2.3%	< 7.287E-005	< 7.360E-011
Ba-133	< 6.142E-002 +/-	1.8%	< 5.850E-005	< 2.426E-010
Cs-134	< 2.669E-002 +/-	2.1%	< 2.542E-005	< 2.037E-011
Cs-137	< 2.522E-002 +/-	2.1%	< 2.402E-005	< 2.875E-010
Eu-152	< 1.325E-001 +/-	4.0%	< 1.262E-004	< 7.449E-010
Eu-154	< 8.704E-002 +/-	2.4%	< 8.290E-005	< 3.264E-010
Ho-166m	< 3.376E-002 +/-	2.4%	< 3.215E-005	< 1.877E-008
Bi-207	< 2.873E-002 +/-	2.1%	< 2.736E-005	< 5.229E-010
Pb-210	< 9.039E+002 +/-	47.8%	< 8.609E-001	< 1.175E-005
Ra-226	< 6.510E-002 +/-	2.4%	< 6.200E-005	< 6.510E-008
Ac-227	< 3.185E-001 +/-	8.3%	< 3.034E-004	< 4.364E-009
Th-230	< 1.485E+002 +/-	8.6%	< 1.415E-001	< 7.279E-003
Pa-231	< 2.011E+000 +/-	11.2%	< 1.915E-003	< 4.203E-005
Th-232	< 1.017E-001 +/-	2.3%	< 9.685E-005	< 9.162E-001
U-232	< 1.017E-001 +/-	2.3%	< 9.685E-005	< 4.708E-009
U-233	< 1.138E+003 +/-	2.7%	< 1.084E+000	< 1.161E-001
Pa-234	< 1.813E-001 +/-	12.3%	< 1.726E-004	
Pa-234m	< 2.745E+002 +/-	2.3%	< 2.614E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 1.095E-001 +/-	2.5%	< 1.043E-004	< 5.004E-002
Np-237	< 1.436E-001 +/-	2.0%	< 1.368E-004	< 2.010E-004
Pu-238	< 7.625E+003 +/-	2.7%	< 7.262E+000	< 4.407E-004
U-238	< 4.640E+000 +/-	2.4%	< 4.419E-003	< 1.364E+001
Pu-239	< 1.386E+003 +/-	3.1%	< 1.320E+000	< 2.204E-002
Pu-239B	< 4.181E+003 +/-	5.2%	< 3.982E+000	< 6.646E-002
U-239	< 2.063E+003 +/-	59.1%	< 1.965E+000	
Pu-240	< 2.580E+003 +/-	4.6%	< 2.457E+000	< 1.122E-002
Am-241	7.661E+001 +/-	21.6%	7.297E-002	2.207E-005
Am-241B	< 9.840E+002 +/-	4.9%	< 9.371E-001	< 2.834E-004
Pu-241	< 3.972E+004 +/-	2.8%	< 3.783E+001	< 3.821E-004
Pu-241B	< 1.081E+004 +/-	2.5%	< 1.030E+001	< 1.040E-004
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 4.114E-001 +/-	1.9%	< 3.918E-004	< 2.037E-006
Cm-243	< 4.244E-001 +/-	3.4%	< 4.041E-004	< 8.148E-009
Cm-244	< 2.863E+004 +/-	14.1%	< 2.727E+001	< 3.493E-004
Cm-245	< 6.922E-001 +/-	7.7%	< 6.592E-004	< 3.980E-006
Cm-247	< 3.876E-002 +/-	8.6%	< 3.691E-005	< 4.147E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 4.192E-002 +/-	3.6%	< 3.992E-005	< 1.014E-008
Cf-251	< 3.651E-001 +/-	5.6%	< 3.477E-004	< 2.282E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 2 Results

Segment: 2 Detector: DET01 Position: 2
C:\Canberra\NDA2k\Data\00000209_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P002_S002

Acquisition Start: 12/23/2008 11:20:50 AM
Elapsed Live Time: 117.73 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.462 +/- 0.0074
SE-75	264.66	0.553 +/- 0.0083
SE-75	279.54	0.563 +/- 0.0095
SE-75	400.66	0.604 +/- 0.0125

Errors quoted at 1.000 sigma

Peak Analysis Results

Peak Analysis Performed on: 12/23/2008 11:22:52 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.47	Y	1535	1068	1.29	120.79	1.238E-004	4.27	
67.25	Y	96	821	0.83	136.33	1.572E-004	44.81	
2234.76		11980	2	1.07	4467.64	1.075E-004	1.43	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.02 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 2.414E-002 +/-	1.8%	< 2.299E-005	< 1.113E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 1.439E-002 +/-	2.0%	< 1.371E-005	< 2.274E-012
Al-26	< 1.963E-002 +/-	15.5%	< 1.870E-005	< 1.033E-006
K-40	< 2.908E-001 +/-	4.9%	< 2.769E-004	< 4.536E-002
Co-57	< 1.086E-001 +/-	3.5%	< 1.035E-004	< 1.271E-011
Co-60	< 2.617E-002 +/-	2.5%	< 2.493E-005	< 2.295E-011
Se-75	< 8.650E-002 +/-	1.9%	< 8.238E-005	< 5.951E-012
Kr-85	< 4.303E+000 +/-	3.1%	< 4.098E-003	< 1.084E-008
Sr-90	< 2.036E-002 +/-	2.0%	< 1.939E-005	< 1.476E-010
Sb-125	< 5.853E-002 +/-	2.1%	< 5.574E-005	< 5.630E-011
Ba-133	< 6.023E-002 +/-	1.7%	< 5.736E-005	< 2.379E-010
Cs-134	< 1.803E-002 +/-	2.0%	< 1.718E-005	< 1.376E-011
Cs-137	< 2.036E-002 +/-	2.0%	< 1.939E-005	< 2.321E-010
Eu-152	< 1.042E-001 +/-	3.7%	< 9.926E-005	< 5.857E-010
Eu-154	< 4.110E-002 +/-	2.2%	< 3.914E-005	< 1.541E-010
Ho-166m	< 2.893E-002 +/-	2.3%	< 2.755E-005	< 1.608E-008
Bi-207	< 1.437E-002 +/-	2.1%	< 1.369E-005	< 2.615E-010
Pb-210	< 7.240E+000 +/-	81.7%	< 6.896E-003	< 9.412E-008
Ra-226	< 5.182E-002 +/-	2.3%	< 4.935E-005	< 5.182E-008
Ac-227	< 2.908E-001 +/-	8.3%	< 2.769E-004	< 3.984E-009
Th-230	3.611E+001 +/-	51.6%	3.439E-002	1.769E-003
Pa-231	< 1.806E+000 +/-	11.2%	< 1.720E-003	< 3.775E-005
Th-232	< 5.847E-002 +/-	2.2%	< 5.569E-005	< 5.268E-001
U-232	< 5.847E-002 +/-	2.2%	< 5.569E-005	< 2.707E-009
U-233	< 1.067E+003 +/-	2.7%	< 1.016E+000	< 1.088E-001
Pa-234	< 1.124E-001 +/-	12.2%	< 1.071E-004	
Pa-234m	< 1.744E+002 +/-	2.1%	< 1.661E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 1.069E-001 +/-	2.5%	< 1.018E-004	< 4.887E-002
Np-237	< 1.334E-001 +/-	2.0%	< 1.270E-004	< 1.867E-004
Pu-238	< 7.412E+003 +/-	2.7%	< 7.059E+000	< 4.284E-004
U-238	< 1.859E+000 +/-	2.1%	< 1.771E-003	< 5.467E+000
Pu-239	< 1.260E+003 +/-	3.2%	< 1.200E+000	< 2.003E-002
Pu-239B	< 2.672E+003 +/-	6.4%	< 2.545E+000	< 4.248E-002
U-239	< 9.288E+000 +/-	98.9%	< 8.846E-003	
Pu-240	< 1.693E+003 +/-	5.4%	< 1.612E+000	< 7.363E-003
Am-241	7.777E+000 +/-	38.0%	7.407E-003	2.240E-006
Am-241B	< 6.292E+002 +/-	5.7%	< 5.993E-001	< 1.812E-004
Pu-241	< 3.715E+004 +/-	2.9%	< 3.538E+001	< 3.573E-004
Pu-241B	< 1.093E+004 +/-	2.5%	< 1.041E+001	< 1.051E-004
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.965E-001 +/-	16.6%	< 1.872E-004	< 9.728E-007
Cm-243	< 3.767E-001 +/-	3.4%	< 3.588E-004	< 7.233E-009
Cm-244	< 2.047E+004 +/-	14.2%	< 1.950E+001	< 2.498E-004
Cm-245	< 6.755E-001 +/-	7.7%	< 6.433E-004	< 3.884E-006
Cm-247	< 3.280E-002 +/-	8.5%	< 3.124E-005	< 3.509E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 4.246E-002 +/-	3.5%	< 4.044E-005	< 1.028E-008
Cf-251	< 3.728E-001 +/-	5.6%	< 3.551E-004	< 2.330E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 3 Results

Segment: 3 Detector: DET01 Position: 3
C:\Canberra\NDA2k\Data\00000209_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P003_S003

Acquisition Start: 12/23/2008 11:25:02 AM
Elapsed Live Time: 114.72 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.386 +/- 0.0065
SE-75	264.66	0.476 +/- 0.0073
SE-75	279.54	0.479 +/- 0.0085
SE-75	400.66	0.526 +/- 0.0116

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/23/2008 11:27:04 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.45	Y	9118	2445	1.12	120.75	9.287E-005	1.74	
M	94.73	Y	2204	5657	1.55	191.24	2.323E-004	5.53	10.87
m	98.72	Y	7883	8642	1.56	199.21	2.460E-004	3.97	
m	100.83	Y	1252	8459	1.57	203.43	2.530E-004	6.91	
m	103.38	Y	5456	7170	1.57	208.52	2.612E-004	3.94	
M	111.09	Y	1900	4026	1.55	223.93	2.839E-004	3.29	4.88
m	114.60	Y	1330	7090	1.56	230.95	2.932E-004	4.67	
m	116.67	Y	1276	6566	1.56	235.09	2.985E-004	4.79	
M	125.37	Y	619	2504	1.03	252.47	3.182E-004	6.96	1.46
m	129.31	Y	3399	2654	1.04	260.35	3.259E-004	2.34	
M	144.23	Y	214	1975	0.85	290.15	3.500E-004	28.52	1.39
m	148.62	Y	447	1987	0.85	298.93	3.556E-004	25.64	
	195.66	Y	275	1928	1.11	392.92	3.789E-004	25.99	
M	203.55	Y	900	1483	1.16	408.70	3.781E-004	4.44	2.95

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	208.02	Y	2876	1419	1.16	417.63	3.772E-004	2.32	
	255.32	Y	99	668	0.97	512.15	3.558E-004	39.26	
	311.98	Y	89	848	1.25	625.37	3.173E-004	54.51	
M	332.65	Y	976	547	1.39	666.67	3.035E-004	9.13	1.23
m	335.60	Y	417	561	1.39	672.56	3.015E-004	10.32	
m	341.47	Y	146	512	1.40	684.29	2.977E-004	16.10	
m	344.99	Y	930	471	1.40	691.34	2.954E-004	8.74	
	368.45	Y	341	447	2.15	738.22	2.806E-004	11.61	
M	375.02	Y	2288	265	1.27	751.34	2.766E-004	2.41	2.35
m	380.11	Y	437	241	1.27	761.52	2.736E-004	5.47	
m	382.74	Y	379	210	1.28	766.78	2.720E-004	5.83	
	392.90	Y	791	210	1.60	787.08	2.661E-004	4.87	
	413.67	Y	2075	95	1.34	828.58	2.547E-004	2.61	
	422.39	Y	147	122	1.22	846.00	2.501E-004	15.39	
	451.43	Y	243	63	1.44	904.04	2.359E-004	8.61	
	662.51	Y	99	17	1.02	1325.84	1.664E-004	12.48	
	721.62	Y	45	11	1.64	1443.95	1.544E-004	19.46	
	2234.76		11980	14	1.07	4467.64	8.745E-005	1.45	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.05 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 2.195E-002 +/-	1.8%	< 2.091E-005	< 1.012E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 1.455E-002 +/-	2.0%	< 1.386E-005	< 2.299E-012
	Al-26	< 3.020E-002 +/-	18.9%	< 2.876E-005	< 1.588E-006
	K-40	< 3.157E-001 +/-	5.3%	< 3.007E-004	< 4.925E-002
	Co-57	< 1.508E-001 +/-	4.4%	< 1.436E-004	< 1.764E-011
	Co-60	< 3.278E-002 +/-	1.7%	< 3.122E-005	< 2.875E-011
	Se-75	< 1.172E-001 +/-	1.8%	< 1.116E-004	< 8.064E-012
	Kr-85	< 7.348E+000 +/-	3.1%	< 6.998E-003	< 1.852E-008
	Sr-90	< 4.027E-002 +/-	2.2%	< 3.835E-005	< 2.920E-010
	Sb-125	< 1.195E-001 +/-	1.9%	< 1.138E-004	< 1.150E-010
	Ba-133	< 9.507E-002 +/-	1.6%	< 9.054E-005	< 3.755E-010
	Cs-134	< 1.742E-002 +/-	1.9%	< 1.659E-005	< 1.329E-011
X	Cs-137				
	Eu-152	< 9.185E-002 +/-	3.8%	< 8.748E-005	< 5.162E-010
	Eu-154	< 4.155E-002 +/-	2.1%	< 3.957E-005	< 1.558E-010
	Ho-166m	< 2.604E-002 +/-	2.3%	< 2.480E-005	< 1.448E-008
	Bi-207	< 2.547E-002 +/-	2.1%	< 2.426E-005	< 4.636E-010
	Pb-210	< 1.306E+001 +/-	259.0%	< 1.244E-002	< 1.698E-007

	Ra-226	< 4.650E-002	+/- 2.4%	< 4.429E-005	< 4.650E-008	
	Ac-227	< 3.997E-001	+/- 8.3%	< 3.807E-004	< 5.476E-009	
	Th-230	< 5.927E+001	+/- 83.2%	< 5.645E-002	< 2.904E-003	
	Pa-231	< 2.389E+000	+/- 11.2%	< 2.275E-003	< 4.993E-005	
	Th-232	< 7.912E-002	+/- 2.4%	< 7.536E-005	< 7.129E-001	
	U-232	< 8.871E-002	+/- 2.3%	< 8.448E-005	< 4.107E-009	
	U-233	< 1.474E+003	+/- 3.0%	< 1.404E+000	< 1.504E-001	
	Pa-234	< 1.128E-001	+/- 12.2%	< 1.074E-004		
	Pa-234m	< 9.130E+001	+/- 2.1%	< 8.695E-002		
	U-234	< 0.000E+000	+/- 0.0%	< 0.000E+000	< 0.000E+000	
	U-235	< 1.409E-001	+/- 2.9%	< 1.342E-004	< 6.440E-002	
X	Np-237					
	Pu-238	< 9.691E+003	+/- 3.1%	< 9.230E+000	< 5.602E-004	
	U-238	< 3.500E+000	+/- 2.2%	< 3.333E-003	< 1.029E+001	
	Pu-239	2.199E+005	+/- 3.8%	2.094E+002	3.496E+000	
	Pu-239B	1.339E+005	+/- 2.9%	1.275E+002	2.129E+000	
	U-239	< 2.173E+001	+/- 308.4%	< 2.069E-002		
X	Pu-240					
	Am-241	3.556E+004	+/- 10.8%	3.387E+001	1.024E-002	
	Am-241B	2.375E+004	+/- 11.7%	2.262E+001	6.841E-003	
	Pu-241	1.525E+005	+/- 25.8%	1.452E+002	1.467E-003	
	Pu-241B	3.306E+005	+/- 3.5%	3.149E+002	3.181E-003	
	Pu-242	< 0.000E+000	+/- 0.0%	< 0.000E+000	< 0.000E+000	
	Am-243	< 3.166E-001	+/- 57.7%	< 3.015E-004	< 1.567E-006	
	Cm-243	< 5.057E-001	+/- 3.3%	< 4.816E-004	< 9.709E-009	
	Cm-244	< 2.056E+004	+/- 14.2%	< 1.958E+001	< 2.509E-004	
	Cm-245	< 9.001E-001	+/- 7.8%	< 8.572E-004	< 5.175E-006	
	Cm-247	< 5.212E-002	+/- 8.5%	< 4.964E-005	< 5.577E-004	

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 6.589E-002 +/-	3.4%	< 6.275E-005	< 1.594E-008
Cf-251	< 4.970E-001 +/-	5.8%	< 4.734E-004	< 3.106E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	3.50E+000 +- 1.32E-001	9.73E-001 +- 2.07E-002

Beta: 2.23E+002 +- 8.64E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	5.92E-001 +- 2.48E-002
203.55	1.50E+000 +- 7.49E-002
375.05	1.91E+000 +- 5.72E-002
413.71	1.99E+000 +- 6.50E-002

Segment 4 Results

Segment: 4 Detector: DET01 Position: 4
C:\Canberra\NDA2k\Data\00000209_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P004_S004

Acquisition Start: 12/23/2008 11:29:13 AM
Elapsed Live Time: 102.29 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.346 +/- 0.0066
SE-75	264.66	0.470 +/- 0.0074
SE-75	279.54	0.479 +/- 0.0092
SE-75	400.66	0.518 +/- 0.0126

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

*** Spectrum Validity Test warnings ***
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 12/23/2008 11:31:15 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.43	Y	53923	6217	1.13	120.70	5.039E-006	1.26	
M	94.68	Y	10901	11599	1.53	191.15	1.286E-004	2.28	63.87
m	98.69	Y	43017	15789	1.54	199.16	1.519E-004	1.85	
m	100.86	Y	6400	16140	1.54	203.50	1.648E-004	2.91	
m	103.33	Y	30996	13066	1.55	208.42	1.794E-004	1.82	
M	111.08	Y	11320	7911	1.37	223.92	2.247E-004	2.22	72.62
m	114.61	Y	9438	7920	1.37	230.98	2.444E-004	2.37	
m	116.64	Y	8814	7371	1.38	235.03	2.554E-004	2.28	
m	120.60	Y	2189	7367	1.38	242.94	2.759E-004	4.19	
m	122.90	Y	1098	6449	1.39	247.53	2.872E-004	7.05	
m	125.26	Y	4207	6144	1.39	252.24	2.984E-004	2.90	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	129.28	Y	20523	5304	1.40	260.28	3.162E-004	1.99	
M	144.16	Y	1329	4377	1.17	290.02	3.707E-004	16.34	2.20
m	146.39	Y	1188	4424	1.18	294.48	3.774E-004	17.68	
m	148.56	Y	2820	4468	1.18	298.81	3.834E-004	15.03	
M	161.15	Y	1151	4786	1.21	323.96	4.102E-004	20.96	4.79
m	164.66	Y	1020	7969	1.21	330.99	4.155E-004	16.90	
	171.45	Y	959	4483	1.33	344.55	4.232E-004	12.54	
	179.09	Y	345	4807	1.18	359.82	4.286E-004	35.99	
	189.24	Y	724	4620	1.05	380.09	4.312E-004	17.08	
	195.69	Y	859	3953	1.32	392.99	4.306E-004	13.14	
M	203.52	Y	4957	3657	1.17	408.63	4.280E-004	2.75	1.79
m	207.98	Y	16320	3148	1.17	417.56	4.257E-004	2.21	
	255.24	Y	698	2207	1.20	511.98	3.838E-004	12.59	
	267.48	Y	474	1772	1.23	536.44	3.706E-004	16.16	
	297.29	Y	224	1734	1.05	596.01	3.378E-004	33.60	
	311.72	Y	772	1445	1.24	624.85	3.227E-004	9.38	
M	320.92	Y	490	1602	1.82	643.25	3.135E-004	9.26	2.22
m	323.32	Y	887	2289	1.83	648.04	3.112E-004	5.50	
M	332.68	Y	5533	1338	1.30	666.73	3.024E-004	1.86	4.12
m	335.64	Y	2173	1231	1.30	672.65	2.997E-004	2.74	
m	341.39	Y	615	1274	1.31	684.14	2.946E-004	5.96	
m	344.94	Y	4894	1193	1.31	691.24	2.915E-004	1.93	
	368.49	Y	2094	1120	1.78	738.29	2.722E-004	3.92	
M	375.00	Y	13263	1005	1.27	751.30	2.673E-004	1.47	11.24
m	380.08	Y	2605	646	1.28	761.45	2.636E-004	2.45	
m	382.67	Y	2165	550	1.28	766.63	2.617E-004	2.64	
	392.84	Y	4460	600	1.47	786.94	2.547E-004	2.23	
	413.62	Y	11792	383	1.42	828.47	2.417E-004	1.55	
M	422.51	Y	850	241	1.24	846.25	2.366E-004	4.16	3.08
m	426.57	Y	158	258	1.25	854.36	2.344E-004	11.31	
	451.38	Y	1444	171	1.42	903.93	2.217E-004	3.48	
	619.01	Y	120	49	1.31	1238.90	1.673E-004	14.30	
M	639.74	Y	64	15	1.42	1280.33	1.631E-004	14.77	1.98
m	645.62	Y	91	15	1.42	1292.09	1.619E-004	12.29	
m	652.69	Y	91	15	1.43	1306.22	1.606E-004	12.25	
m	658.87	Y	62	15	1.43	1318.55	1.594E-004	15.65	
m	662.26	Y	618	15	1.43	1325.33	1.588E-004	5.75	
	688.46	Y	29	23	1.05	1377.69	1.544E-004	36.29	
	721.79	Y	288	28	1.57	1444.29	1.493E-004	7.32	
	755.83	Y	32	9	1.45	1512.32	1.447E-004	25.97	
	769.26	Y	78	11	1.07	1539.16	1.431E-004	14.84	
	2234.73		11980	35	1.11	4467.59	6.777E-005	1.52	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.17 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 1.915E-002 +/-	1.8%	< 1.823E-005	< 8.827E-016
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 2.287E-002 +/-	2.0%	< 2.178E-005	< 3.614E-012
	Al-26	< 3.313E-002 +/-	14.5%	< 3.155E-005	< 1.742E-006
	K-40	< 3.457E-001 +/-	4.8%	< 3.292E-004	< 5.392E-002
X	Co-57				
	Co-60	< 2.850E-002 +/-	1.7%	< 2.714E-005	< 2.499E-011
	Se-75	< 1.902E-001 +/-	1.7%	< 1.811E-004	< 1.308E-011
	Kr-85	< 1.290E+001 +/-	3.0%	< 1.229E-002	< 3.252E-008
	Sr-90	< 4.051E-002 +/-	2.0%	< 3.858E-005	< 2.937E-010
	Sb-125	< 2.469E-001 +/-	2.2%	< 2.351E-004	< 2.375E-010
	Ba-133	< 1.601E-001 +/-	1.7%	< 1.525E-004	< 6.324E-010
	Cs-134	< 2.912E-002 +/-	1.8%	< 2.773E-005	< 2.222E-011
X	Cs-137				
	Eu-152	< 1.050E-001 +/-	1.8%	< 1.000E-004	< 5.901E-010
	Eu-154	< 6.531E-002 +/-	2.2%	< 6.220E-005	< 2.449E-010
	Ho-166m	< 4.106E-002 +/-	2.3%	< 3.911E-005	< 2.283E-008
	Bi-207	< 1.875E-002 +/-	1.9%	< 1.786E-005	< 3.412E-010
	Pb-210	< 4.179E+003 +/-	37.2%	< 3.980E+000	< 5.433E-005
	Ra-226	< 7.589E-002 +/-	2.2%	< 7.227E-005	< 7.589E-008
	Ac-227	< 6.466E-001 +/-	8.3%	< 6.159E-004	< 8.859E-009
	Th-230	< 3.138E+002 +/-	8.5%	< 2.988E-001	< 1.538E-002
	Pa-231	< 3.773E+000 +/-	11.2%	< 3.593E-003	< 7.885E-005
	Th-232	< 6.201E-002 +/-	2.4%	< 5.906E-005	< 5.587E-001
	U-232	< 1.483E-001 +/-	2.1%	< 1.412E-004	< 6.865E-009
	U-233	< 2.395E+003 +/-	2.6%	< 2.281E+000	< 2.443E-001
	Pa-234	< 1.224E-001 +/-	12.1%	< 1.165E-004	
	Pa-234m	< 2.485E+002 +/-	2.1%	< 2.367E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 2.042E-001 +/-	2.4%	< 1.944E-004	< 9.330E-002
	Np-237	9.063E-001 +/-	14.7%	8.631E-004	1.269E-003
	Pu-238	< 1.370E+004 +/-	2.5%	< 1.305E+001	< 7.918E-004
	U-238	< 2.871E+000 +/-	2.2%	< 2.734E-003	< 8.440E+000
	Pu-239	1.290E+006 +/-	3.2%	1.228E+003	2.051E+001
	Pu-239B	7.336E+005 +/-	1.3%	6.987E+002	1.166E+001
	U-239	< 1.837E+004 +/-	46.3%	< 1.749E+001	
X	Pu-240				
	Am-241	2.319E+005 +/-	5.0%	2.209E+002	6.680E-002
	Am-241B	1.344E+005 +/-	3.7%	1.280E+002	3.870E-002
	Pu-241	8.932E+005 +/-	15.3%	8.507E+002	8.593E-003
	Pu-241B	1.634E+006 +/-	3.2%	1.556E+003	1.572E-002
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 7.181E-001 +/-	1.8%	< 6.839E-004	< 3.555E-006
	Cm-243	< 7.407E-001 +/-	3.3%	< 7.054E-004	< 1.422E-008
	Cm-244	< 3.525E+004 +/-	14.2%	< 3.357E+001	< 4.300E-004
	Cm-245	< 1.226E+000 +/-	7.6%	< 1.167E-003	< 7.047E-006
	Cm-247	< 1.077E-001 +/-	8.5%	< 1.025E-004	< 1.152E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.253E-001 +/-	3.5%	< 1.194E-004	< 3.033E-008
Cf-251	< 7.029E-001 +/-	5.6%	< 6.695E-004	< 4.393E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	2.05E+001 +- 6.56E-001	6.27E+000 +- 1.04E-001

Beta: 2.19E+002 +- 7.50E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	3.68E+000 +- 1.36E-001
203.55	7.29E+000 +- 2.49E-001
375.05	1.14E+001 +- 2.78E-001
413.71	1.19E+001 +- 3.17E-001

Segment 5 Results

Segment: 5 Detector: DET01 Position: 5
C:\Canberra\NDA2k\Data\00000209_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P005_S005

Acquisition Start: 12/23/2008 11:33:25 AM
Elapsed Live Time: 87.73 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.000 +/- 0.0000
SE-75	264.66	0.228 +/- 0.0072
SE-75	279.54	0.246 +/- 0.0066
SE-75	400.66	0.389 +/- 0.0125

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

*** Spectrum Validity Test warnings ***
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 12/23/2008 11:35:26 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	49.41		2242	9605	1.95	100.68	4.648E-005	9.07	
	59.41	Y	127090	10397	1.12	120.67	7.229E-005	1.27	
M	94.64	Y	22047	17252	1.53	191.07	1.710E-004	1.93	114.34
m	98.65	Y	88731	23408	1.54	199.09	1.809E-004	1.66	
m	100.86	Y	14278	23842	1.54	203.50	1.862E-004	2.25	
m	103.31	Y	63332	19213	1.54	208.38	1.918E-004	1.64	
M	111.03	Y	23061	10548	1.36	223.82	2.085E-004	1.31	146.73
m	114.54	Y	19090	11991	1.37	230.83	2.154E-004	1.32	
m	116.58	Y	18155	12197	1.37	234.90	2.192E-004	1.32	
m	120.49	Y	4275	10043	1.38	242.72	2.262E-004	1.66	
m	122.80	Y	2005	10671	1.38	247.33	2.301E-004	2.41	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	125.21	Y	8462	10201	1.39	252.15	2.339E-004	1.42	
m	129.23	Y	40953	8867	1.39	260.19	2.400E-004	1.28	
M	144.14	Y	2782	6532	1.16	289.98	2.582E-004	8.88	1.89
m	146.27	Y	2445	6582	1.16	294.24	2.603E-004	9.13	
m	148.53	Y	5665	7387	1.17	298.76	2.624E-004	7.93	
M	161.08	Y	2843	8902	1.40	323.84	2.718E-004	11.23	8.72
m	164.60	Y	2494	12525	1.40	330.87	2.738E-004	9.63	
	171.36	Y	1794	6635	1.21	344.38	2.769E-004	9.53	
	179.28	Y	1092	6869	1.43	360.20	2.796E-004	15.93	
	189.27	Y	1436	6713	1.23	380.15	2.815E-004	12.11	
	195.60	Y	1904	6298	1.19	392.81	2.820E-004	9.00	
M	203.46	Y	9650	5501	1.17	408.52	2.820E-004	2.17	1.61
m	207.93	Y	31178	4486	1.18	417.45	2.817E-004	1.80	
	243.02	Y	705	3225	1.27	487.57	2.739E-004	16.62	
	255.22	Y	1265	2946	1.40	511.95	2.696E-004	9.21	
M	263.96	Y	438	2583	1.24	529.41	2.663E-004	11.57	0.98
m	267.51	Y	1244	2672	1.25	536.51	2.658E-004	5.15	
	297.41	Y	887	1705	1.34	596.25	2.620E-004	9.89	
	311.77	Y	1409	2003	1.16	624.95	2.592E-004	7.14	
M	320.88	Y	1044	2315	1.70	643.16	2.571E-004	5.93	7.24
m	323.23	Y	1517	2873	1.70	647.85	2.565E-004	4.34	
M	332.64	Y	10810	1709	1.31	666.66	2.540E-004	1.65	6.95
m	335.58	Y	4433	1629	1.31	672.53	2.532E-004	2.19	
m	341.33	Y	1214	1578	1.32	684.01	2.516E-004	4.42	
m	344.90	Y	9683	1672	1.32	691.16	2.506E-004	1.69	
M	368.25	Y	2839	1198	1.38	737.82	2.434E-004	3.15	23.85
m	370.74	Y	442	1167	1.38	742.80	2.426E-004	9.94	
m	374.94	Y	26108	1112	1.39	751.19	2.413E-004	1.99	
m	380.02	Y	5064	884	1.39	761.33	2.397E-004	2.59	
m	382.64	Y	4501	734	1.39	766.58	2.388E-004	2.62	
	392.82	Y	9070	969	1.54	786.91	2.355E-004	1.88	
M	413.60	Y	22789	569	1.36	828.43	2.272E-004	1.70	3.24
m	422.46	Y	1744	531	1.37	846.14	2.234E-004	3.50	
m	426.49	Y	388	519	1.37	854.20	2.216E-004	8.60	
M	445.85	Y	136	230	1.33	892.89	2.137E-004	13.83	1.23
m	451.33	Y	2754	262	1.33	903.84	2.116E-004	2.53	
	618.81	Y	276	49	1.73	1238.51	1.616E-004	9.06	
M	639.89	Y	109	42	1.31	1280.63	1.571E-004	12.65	3.04
m	645.75	Y	134	64	1.31	1292.35	1.559E-004	11.56	
M	658.75	Y	76	82	1.50	1318.32	1.533E-004	17.64	1.60
m	662.27	Y	1081	67	1.51	1325.36	1.526E-004	3.73	
	688.44	Y	100	45	1.77	1377.65	1.478E-004	18.32	
	721.82	Y	590	49	1.74	1444.36	1.422E-004	5.57	
	755.90	Y	39	23	1.56	1512.45	1.371E-004	31.92	
	769.20	Y	169	23	1.76	1539.04	1.352E-004	11.12	
	2234.69		11980	77	1.16	4467.51	8.890E-005	1.63	
	2294.00		23	7	1.37	4586.02	8.894E-005	35.56	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.36 +/- 0.02

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

,? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 4.481E-002 +/-	1.8%	< 4.267E-005	< 2.066E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 2.359E-002 +/-	2.0%	< 2.246E-005	< 3.727E-012
	Al-26	< 4.581E-002 +/-	14.7%	< 4.362E-005	< 2.409E-006
	K-40	< 3.047E-001 +/-	4.9%	< 2.902E-004	< 4.753E-002
X	Co-57				
	Co-60	< 3.662E-002 +/-	2.5%	< 3.488E-005	< 3.212E-011
	Se-75	< 2.940E-001 +/-	1.9%	< 2.800E-004	< 2.023E-011
	Kr-85	< 1.566E+001 +/-	3.1%	< 1.491E-002	< 3.946E-008
	Sr-90	< 9.664E-002 +/-	2.1%	< 9.204E-005	< 7.006E-010
	Sb-125	< 3.541E-001 +/-	2.3%	< 3.373E-004	< 3.407E-010
	Ba-133	< 2.215E-001 +/-	1.7%	< 2.109E-004	< 8.749E-010
	Cs-134	< 3.341E-002 +/-	1.8%	< 3.182E-005	< 2.550E-011
X	Cs-137				
	Eu-152	< 1.657E-001 +/-	3.6%	< 1.578E-004	< 9.312E-010
	Eu-154	< 6.735E-002 +/-	2.2%	< 6.414E-005	< 2.526E-010
	Ho-166m	< 6.524E-002 +/-	2.2%	< 6.213E-005	< 3.627E-008
	Bi-207	< 3.994E-002 +/-	1.8%	< 3.804E-005	< 7.269E-010
	Pb-210	< 2.754E+001 +/-	36.7%	< 2.623E-002	< 3.580E-007
	Ra-226	< 1.133E-001 +/-	2.3%	< 1.079E-004	< 1.133E-007
	Ac-227	< 1.030E+000 +/-	8.3%	< 9.814E-004	< 1.412E-008
	Th-230	< 1.348E+002 +/-	13.1%	< 1.284E-001	< 6.607E-003
	Pa-231	< 5.268E+000 +/-	11.2%	< 5.017E-003	< 1.101E-004
	Th-232	< 1.306E-001 +/-	2.4%	< 1.244E-004	< 1.177E+000
	U-232	< 1.921E-001 +/-	2.2%	< 1.830E-004	< 8.896E-009
	U-233	< 4.000E+003 +/-	2.7%	< 3.810E+000	< 4.080E-001
	Pa-234	< 1.719E-001 +/-	12.2%	< 1.638E-004	
	Pa-234m	< 2.419E+002 +/-	2.1%	< 2.304E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 3.444E-001 +/-	2.5%	< 3.280E-004	< 1.574E-001
	Np-237	2.066E+000 +/-	11.3%	1.967E-003	2.892E-003
	Pu-238	< 2.237E+004 +/-	2.6%	< 2.131E+001	< 1.293E-003
	U-238	< 3.909E+000 +/-	2.1%	< 3.722E-003	< 1.149E+001
	Pu-239	2.466E+006 +/-	3.3%	2.348E+003	3.921E+001
	Pu-239B	1.656E+006 +/-	1.3%	1.577E+003	2.633E+001
	U-239	< 5.751E+001 +/-	45.9%	< 5.477E-002	
X	Pu-240				
	Am-241	4.515E+005 +/-	3.9%	4.300E+002	1.300E-001
	Am-241B	2.264E+005 +/-	3.3%	2.156E+002	6.519E-002
	Pu-241	2.621E+006 +/-	8.5%	2.496E+003	2.522E-002
	Pu-241B	4.968E+006 +/-	2.7%	4.732E+003	4.780E-002
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 7.363E-001 +/-	8.4%	< 7.012E-004	< 3.644E-006
	Cm-243	< 1.084E+000 +/-	3.3%	< 1.032E-003	< 2.080E-008
	Cm-244	< 5.019E+004 +/-	14.2%	< 4.780E+001	< 6.123E-004
	Cm-245	< 2.098E+000 +/-	7.7%	< 1.998E-003	< 1.206E-005
	Cm-247	< 1.516E-001 +/-	8.5%	< 1.444E-004	< 1.623E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.781E-001 +/-	3.5%	< 1.696E-004	< 4.311E-008
Cf-251	< 1.197E+000 +/-	5.6%	< 1.140E-003	< 7.480E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	3.92E+001 +- 1.31E+000	1.58E+001 +- 2.68E-001

Beta: 1.69E+002 +- 7.37E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	9.68E+000 +- 3.57E-001
203.55	2.15E+001 +- 6.98E-001
375.05	2.49E+001 +- 7.12E-001
413.71	2.45E+001 +- 6.95E-001

Segment 6 Results

Segment: 6 Detector: DET01 Position: 6
C:\Canberra\NDA2k\Data\00000209_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P006_S006

Acquisition Start: 12/23/2008 11:37:36 AM
Elapsed Live Time: 88.62 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.000 +/- 0.0000
SE-75	264.66	0.211 +/- 0.0064
SE-75	279.54	0.235 +/- 0.0069
SE-75	400.66	0.369 +/- 0.0121

Errors quoted at 1.000 sigma

Peak Analysis Results

*** Spectrum Validity Test warnings ***
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 12/23/2008 11:39:38 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.41	Y	116887	9873	1.13	120.66	1.689E-006	1.28	
M	94.64	Y	21391	17134	1.53	191.07	8.946E-005	1.94	110.91
m	98.65	Y	85501	23418	1.54	199.08	1.082E-004	1.66	
m	100.84	Y	13593	24018	1.54	203.45	1.186E-004	2.29	
m	103.29	Y	60982	19512	1.55	208.35	1.305E-004	1.64	
M	111.04	Y	23128	10329	1.37	223.84	1.674E-004	2.48	149.57
m	114.54	Y	18527	11712	1.38	230.83	1.834E-004	2.51	
m	116.61	Y	17442	11902	1.38	234.97	1.926E-004	2.45	
m	120.55	Y	4494	10807	1.39	242.83	2.092E-004	3.36	
m	122.81	Y	2184	10366	1.39	247.36	2.184E-004	5.12	
m	125.20	Y	8439	9887	1.40	252.13	2.275E-004	2.72	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	129.24	Y	40949	8547	1.40	260.21	2.420E-004	2.30	
M	144.15	Y	2375	5249	1.12	290.00	2.840E-004	9.81	1.54
m	146.26	Y	2129	6743	1.12	294.21	2.886E-004	9.99	
m	148.50	Y	5761	6730	1.13	298.68	2.930E-004	8.52	
M	161.06	Y	2492	6568	1.31	323.79	3.118E-004	10.52	5.81
m	164.53	Y	2454	10840	1.32	330.73	3.152E-004	8.62	
m	169.51	Y	428	10597	1.32	340.67	3.192E-004	22.25	
m	171.26	Y	1969	11217	1.33	344.17	3.202E-004	9.02	
	179.23	Y	888	6726	1.04	360.09	3.236E-004	19.27	
	189.30	Y	1349	6619	1.21	380.23	3.248E-004	12.75	
	195.64	Y	1501	6465	1.08	392.90	3.241E-004	11.39	
M	203.48	Y	9343	5060	1.13	408.55	3.220E-004	1.81	13.34
m	207.94	Y	31115	5119	1.13	417.47	3.204E-004	1.40	
	243.14	Y	574	3560	1.30	487.81	3.008E-004	21.74	
	255.28	Y	1559	3155	1.05	512.06	2.928E-004	8.01	
M	263.88	Y	456	2512	1.32	529.25	2.871E-004	11.15	1.10
m	267.44	Y	1230	2910	1.32	536.36	2.863E-004	5.16	
	297.39	Y	986	2343	1.12	596.21	2.783E-004	10.98	
M	311.73	Y	1474	2276	1.46	624.86	2.733E-004	4.31	5.58
m	320.83	Y	979	2490	1.47	643.06	2.701E-004	5.60	
m	323.34	Y	1322	2398	1.47	648.07	2.691E-004	4.47	
M	332.64	Y	10846	1729	1.36	666.65	2.656E-004	2.49	4.87
m	335.59	Y	4283	1631	1.37	672.55	2.646E-004	2.92	
m	341.33	Y	1164	1565	1.37	684.03	2.624E-004	5.16	
m	344.91	Y	9432	1494	1.38	691.18	2.612E-004	2.46	
M	361.95	Y	252	1354	1.35	725.22	2.551E-004	16.09	6.13
m	366.93	Y	1470	1325	1.35	735.18	2.533E-004	5.02	
m	368.46	Y	2531	1308	1.36	738.24	2.528E-004	3.49	
m	370.88	Y	495	1284	1.36	743.07	2.520E-004	8.88	
m	374.95	Y	25287	1152	1.36	751.20	2.507E-004	1.65	
m	380.05	Y	4835	888	1.37	761.39	2.489E-004	2.35	
m	382.63	Y	4261	846	1.37	766.56	2.480E-004	2.43	
	392.83	Y	8547	899	1.51	786.93	2.446E-004	1.90	
M	413.60	Y	22475	623	1.31	828.44	2.366E-004	1.44	7.18
m	419.08	Y	79	536	1.32	839.39	2.344E-004	29.09	
m	422.46	Y	1704	581	1.32	846.14	2.330E-004	3.23	
m	426.56	Y	300	466	1.33	854.34	2.314E-004	9.92	
M	445.73	Y	131	224	1.32	892.63	2.243E-004	15.07	1.26
m	451.36	Y	2707	263	1.33	903.89	2.223E-004	2.55	
	618.77	Y	269	62	1.41	1238.43	1.798E-004	9.64	
M	639.71	Y	85	52	1.40	1280.27	1.760E-004	14.65	1.82
m	645.81	Y	156	52	1.40	1292.47	1.749E-004	10.09	
m	652.45	Y	151	52	1.41	1305.74	1.738E-004	10.23	
m	658.63	Y	82	52	1.41	1318.07	1.727E-004	14.90	
m	662.23	Y	1142	51	1.42	1325.27	1.720E-004	3.67	
	688.70	Y	81	40	1.52	1378.17	1.678E-004	20.82	
M	717.39	Y	21	31	1.47	1435.50	1.633E-004	37.74	1.34
m	721.87	Y	493	24	1.47	1444.44	1.627E-004	5.50	
	769.14	Y	149	15	2.05	1538.92	1.560E-004	11.26	
	2234.70		11980	96	1.16	4467.54	5.299E-005	1.63	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.36 +/- 0.02

Y = Peak Identified by NID

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 3.390E-002 +/-	1.9%	< 3.228E-005	< 1.563E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 3.087E-002 +/-	1.9%	< 2.940E-005	< 4.878E-012
	Al-26	< 7.270E-002 +/-	19.8%	< 6.924E-005	< 3.824E-006
	K-40	< 6.976E-002 +/-	5.3%	< 6.644E-005	< 1.088E-002
X	Co-57				
	Co-60	< 2.661E-002 +/-	2.5%	< 2.534E-005	< 2.333E-011
	Se-75	< 2.637E-001 +/-	2.3%	< 2.512E-004	< 1.814E-011
	Kr-85	< 1.509E+001 +/-	3.2%	< 1.437E-002	< 3.803E-008
	Sr-90	2.684E-001 +/-	44.4%	2.556E-004	1.946E-009
	Sb-125	< 2.531E-001 +/-	2.7%	< 2.411E-004	< 2.435E-010
	Ba-133	< 2.092E-001 +/-	1.8%	< 1.992E-004	< 8.262E-010
	Cs-134	< 2.668E-002 +/-	2.0%	< 2.541E-005	< 2.036E-011
	Cs-137	2.684E-001 +/-	44.4%	2.556E-004	3.059E-009
	Eu-152	< 1.159E-001 +/-	3.8%	< 1.104E-004	< 6.515E-010
	Eu-154	< 8.818E-002 +/-	2.1%	< 8.398E-005	< 3.307E-010
	Ho-166m	< 4.422E-002 +/-	2.4%	< 4.211E-005	< 2.458E-008
	Bi-207	< 3.705E-002 +/-	1.9%	< 3.528E-005	< 6.743E-010
	Pb-210	< 3.349E+004 +/-	309.7%	< 3.189E+001	< 4.354E-004
	Ra-226	< 1.028E-001 +/-	2.7%	< 9.789E-005	< 1.028E-007
	Ac-227	< 8.985E-001 +/-	8.5%	< 8.557E-004	< 1.231E-008
	Th-230	< 4.453E+002 +/-	9.0%	< 4.241E-001	< 2.182E-002
	Pa-231	< 4.854E+000 +/-	11.3%	< 4.623E-003	< 1.014E-004
	Th-232	< 1.286E-001 +/-	2.4%	< 1.225E-004	< 1.158E+000
	U-232	< 1.712E-001 +/-	2.6%	< 1.631E-004	< 7.928E-009
	U-233	< 3.431E+003 +/-	4.0%	< 3.267E+000	< 3.499E-001
	Pa-234	< 1.450E-001 +/-	12.2%	< 1.381E-004	
	Pa-234m	< 1.261E+002 +/-	2.1%	< 1.201E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 2.844E-001 +/-	4.0%	< 2.709E-004	< 1.300E-001
	Np-237	2.133E+000 +/-	7.1%	2.032E-003	2.987E-003
	Pu-238	< 1.936E+004 +/-	4.2%	< 1.844E+001	< 1.119E-003
	U-238	< 2.057E+000 +/-	2.1%	< 1.959E-003	< 6.047E+000
	Pu-239	2.225E+006 +/-	3.5%	2.119E+003	3.538E+001
	Pu-239B	1.519E+006 +/-	1.3%	1.446E+003	2.414E+001
	U-239	< 2.720E+005 +/-	368.5%	< 2.590E+002	
X	Pu-240				
	Am-241	3.482E+005 +/-	6.0%	3.316E+002	1.003E-001
	Am-241B	2.514E+005 +/-	4.8%	2.394E+002	7.240E-002
	Pu-241	2.387E+006 +/-	9.6%	2.273E+003	2.296E-002
	Pu-241B	4.398E+006 +/-	3.1%	4.189E+003	4.231E-002
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 9.736E-001 +/-	2.2%	< 9.272E-004	< 4.819E-006
	Cm-243	< 1.004E+000 +/-	3.5%	< 9.564E-004	< 1.928E-008
	Cm-244	< 3.850E+004 +/-	14.2%	< 3.667E+001	< 4.697E-004

Cm-245	< 1.720E+000 +/-	8.4%	< 1.638E-003	< 9.891E-006
Cm-247	< 1.431E-001 +/-	8.5%	< 1.363E-004	< 1.531E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.723E-001 +/-	3.5%	< 1.640E-004	< 4.168E-008
Cf-251	< 9.778E-001 +/-	6.5%	< 9.312E-004	< 6.111E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	3.54E+001 +- 1.24E+000	1.66E+001 +- 2.85E-001

Beta: 1.61E+002 +- 8.62E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	9.60E+000 +- 4.36E-001
203.55	1.83E+001 +- 7.12E-001
375.05	2.32E+001 +- 6.28E-001
413.71	2.32E+001 +- 6.32E-001

Segment 7 Results

Segment: 7 Detector: DET01 Position: 7
C:\Canberra\NDA2k\Data\00000209_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P007_S007

Acquisition Start: 12/23/2008 11:41:48 AM
Elapsed Live Time: 100.58 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.095 +/- 0.0036
SE-75	264.66	0.323 +/- 0.0066
SE-75	279.54	0.348 +/- 0.0075
SE-75	400.66	0.437 +/- 0.0115

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

*** Spectrum Validity Test warnings ***
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 12/23/2008 11:43:50 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.43	Y	76327	7500	1.12	120.69	2.660E-006	1.25	
M	94.67	Y	12861	12701	1.53	191.12	7.993E-005	2.21	78.98
m	98.68	Y	49568	17107	1.54	199.14	9.542E-005	1.82	
m	100.88	Y	7716	17320	1.54	203.53	1.041E-004	2.72	
m	103.32	Y	34397	13873	1.55	208.41	1.139E-004	1.80	
M	111.05	Y	12421	7626	1.34	223.86	1.446E-004	1.30	88.64
m	114.54	Y	10191	8684	1.34	230.82	1.580E-004	1.32	
m	116.61	Y	9249	8115	1.35	234.96	1.658E-004	1.33	
m	120.57	Y	2318	7306	1.35	242.88	1.801E-004	1.89	
m	122.85	Y	1034	7751	1.36	247.44	1.880E-004	3.12	
m	125.24	Y	4682	7398	1.36	252.20	1.960E-004	1.48	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	129.26	Y	24289	6413	1.37	260.25	2.086E-004	1.25	
M	144.22	Y	1426	4211	1.12	290.15	2.580E-004	13.93	1.51
m	146.28	Y	1185	4725	1.12	294.26	2.649E-004	14.40	
m	148.56	Y	3160	4704	1.12	298.81	2.721E-004	12.62	
M	161.07	Y	1465	5153	1.43	323.80	3.050E-004	15.85	2.43
m	164.59	Y	1371	7637	1.43	330.84	3.123E-004	13.18	
	171.38	Y	1063	4535	1.09	344.42	3.241E-004	11.76	
	179.20	Y	604	4795	1.31	360.03	3.343E-004	21.32	
	189.26	Y	786	4725	1.34	380.15	3.429E-004	16.37	
	195.58	Y	742	4154	1.11	392.77	3.461E-004	15.88	
M	203.52	Y	5093	3835	1.13	408.63	3.480E-004	2.08	7.43
m	207.98	Y	17081	3376	1.14	417.56	3.483E-004	1.45	
	243.34	Y	509	2311	0.93	488.21	3.359E-004	17.85	
	255.40	Y	832	2094	1.18	512.31	3.283E-004	10.74	
M	263.90	Y	380	1749	1.22	529.29	3.224E-004	19.17	0.59
m	267.39	Y	722	1808	1.23	536.27	3.203E-004	16.88	
	297.43	Y	239	3000	1.09	596.29	2.980E-004	50.31	
M	311.71	Y	948	1485	1.51	624.84	2.865E-004	4.87	3.12
m	316.13	Y	161	1886	1.51	633.67	2.830E-004	20.29	
m	321.00	Y	632	1693	1.52	643.40	2.793E-004	6.43	
m	323.41	Y	687	1803	1.52	648.22	2.774E-004	6.04	
M	332.68	Y	6015	1254	1.31	666.73	2.706E-004	1.84	3.70
m	335.62	Y	2348	1192	1.31	672.61	2.685E-004	2.68	
m	341.35	Y	623	1265	1.32	684.06	2.644E-004	6.04	
m	344.93	Y	5077	1219	1.32	691.21	2.620E-004	1.94	
	368.21	Y	2103	1190	2.45	737.73	2.469E-004	4.06	
M	374.99	Y	13598	1049	1.28	751.28	2.429E-004	1.48	11.95
m	380.09	Y	2473	702	1.28	761.47	2.399E-004	2.56	
m	382.65	Y	2291	609	1.29	766.60	2.385E-004	2.63	
	392.83	Y	4696	577	1.56	786.92	2.329E-004	2.21	
	413.62	Y	12297	371	1.43	828.47	2.219E-004	1.56	
M	422.47	Y	855	216	1.18	846.16	2.175E-004	4.30	2.28
m	426.50	Y	214	246	1.19	854.21	2.155E-004	9.38	
	451.37	Y	1442	203	1.31	903.92	2.044E-004	3.62	
	618.78	Y	122	59	1.19	1238.45	1.589E-004	15.89	
M	640.13	Y	63	26	1.26	1281.11	1.554E-004	24.16	1.39
m	645.87	Y	71	46	1.27	1292.57	1.545E-004	22.26	
m	652.56	Y	101	57	1.27	1305.96	1.535E-004	21.09	
	662.24	Y	635	60	1.39	1325.29	1.521E-004	5.04	
	721.94	Y	315	37	1.69	1444.59	1.444E-004	7.28	
	769.07	Y	81	15	1.60	1538.78	1.394E-004	15.29	
	2234.72		11980	63	1.12	4467.56	4.271E-005	1.55	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.21 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 3.503E-002 +/-	1.8%	< 3.336E-005	< 1.615E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 2.573E-002 +/-	2.0%	< 2.450E-005	< 4.065E-012
	Al-26	< 4.012E-002 +/-	15.5%	< 3.821E-005	< 2.111E-006
	K-40	< 2.132E-001 +/-	5.0%	< 2.030E-004	< 3.326E-002
X	Co-57				
	Co-60	< 3.185E-002 +/-	1.7%	< 3.033E-005	< 2.793E-011
	Se-75	< 2.009E-001 +/-	1.9%	< 1.913E-004	< 1.382E-011
	Kr-85	< 1.292E+001 +/-	3.1%	< 1.230E-002	< 3.256E-008
	Sr-90	< 8.647E-002 +/-	2.1%	< 8.235E-005	< 6.269E-010
	Sb-125	< 2.266E-001 +/-	2.3%	< 2.159E-004	< 2.180E-010
	Ba-133	< 1.693E-001 +/-	1.7%	< 1.612E-004	< 6.687E-010
	Cs-134	< 3.432E-002 +/-	1.8%	< 3.268E-005	< 2.619E-011
X	Cs-137				
X	Eu-152				
	Eu-154	< 7.347E-002 +/-	2.2%	< 6.997E-005	< 2.755E-010
	Ho-166m	< 3.557E-002 +/-	2.2%	< 3.387E-005	< 1.977E-008
	Bi-207	< 2.329E-002 +/-	1.9%	< 2.218E-005	< 4.239E-010
	Pb-210	< 5.680E+003 +/-	70.4%	< 5.409E+000	< 7.383E-005
	Ra-226	< 8.630E-002 +/-	2.3%	< 8.219E-005	< 8.630E-008
	Ac-227	< 6.531E-001 +/-	8.3%	< 6.220E-004	< 8.948E-009
	Th-230	< 3.280E+002 +/-	8.6%	< 3.124E-001	< 1.607E-002
	Pa-231	< 3.935E+000 +/-	11.2%	< 3.747E-003	< 8.223E-005
	Th-232	< 9.875E-002 +/-	2.4%	< 9.405E-005	< 8.898E-001
	U-232	< 1.614E-001 +/-	2.2%	< 1.537E-004	< 7.474E-009
	U-233	< 2.487E+003 +/-	2.9%	< 2.368E+000	< 2.536E-001
	Pa-234	< 9.472E-002 +/-	12.2%	< 9.021E-005	
	Pa-234m	< 1.452E+002 +/-	2.1%	< 1.383E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 2.070E-001 +/-	2.6%	< 1.972E-004	< 9.461E-002
	Np-237	1.378E+000 +/-	7.3%	1.312E-003	1.929E-003
	Pu-238	< 1.413E+004 +/-	2.8%	< 1.346E+001	< 8.166E-004
	U-238	< 1.999E+000 +/-	2.2%	< 1.904E-003	< 5.877E+000
	Pu-239	1.168E+006 +/-	3.3%	1.113E+003	1.858E+001
	Pu-239B	8.289E+005 +/-	1.4%	7.894E+002	1.318E+001
	U-239	< 3.500E+004 +/-	85.6%	< 3.334E+001	
	Pu-240	2.401E+005 +/-	14.1%	2.287E+002	1.045E+000
	Am-241	2.555E+005 +/-	4.8%	2.433E+002	7.357E-002
	Am-241B	1.327E+005 +/-	4.2%	1.264E+002	3.821E-002
	Pu-241	1.410E+006 +/-	13.0%	1.343E+003	1.356E-002
	Pu-241B	2.140E+006 +/-	2.9%	2.038E+003	2.059E-002
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 7.208E-001 +/-	1.9%	< 6.865E-004	< 3.568E-006
	Cm-243	< 7.435E-001 +/-	3.4%	< 7.081E-004	< 1.427E-008
	Cm-244	< 2.667E+004 +/-	14.2%	< 2.540E+001	< 3.254E-004
	Cm-245	< 1.288E+000 +/-	7.7%	< 1.227E-003	< 7.407E-006
	Cm-247	< 1.103E-001 +/-	8.5%	< 1.051E-004	< 1.180E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.301E-001 +/-	3.5%	< 1.239E-004	< 3.149E-008
Cf-251	< 7.295E-001 +/-	5.7%	< 6.948E-004	< 4.560E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.86E+001 +- 6.21E-001	9.77E+000 +- 1.48E-001

Beta: 1.37E+002 +- 7.80E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	6.61E+000 +- 2.48E-001
203.55	9.21E+000 +- 2.82E-001
375.05	1.29E+001 +- 3.22E-001
413.71	1.35E+001 +- 3.67E-001

Segment 8 Results

Segment: 8 Detector: DET01 Position: 8
C:\Canberra\NDA2k\Data\00000209_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P008_S008

Acquisition Start: 12/23/2008 11:45:59 AM
Elapsed Live Time: 113.12 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.380 +/- 0.0065
SE-75	264.66	0.527 +/- 0.0080
SE-75	279.54	0.541 +/- 0.0095
SE-75	400.66	0.585 +/- 0.0126

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

*** Spectrum Validity Test warnings ***
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 12/23/2008 11:48:01 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.45	Y	22105	3276	1.11	120.74	9.378E-005	1.37	
M	94.72	Y	3756	6609	1.52	191.23	2.327E-004	3.72	19.00
m	98.70	Y	13947	9567	1.52	199.18	2.456E-004	2.77	
m	100.85	Y	2171	9596	1.53	203.48	2.523E-004	4.73	
m	103.32	Y	9008	7746	1.53	208.40	2.596E-004	2.78	
M	111.13	Y	3444	4510	1.54	224.01	2.807E-004	2.34	5.06
m	114.51	Y	2573	7851	1.55	230.76	2.889E-004	3.08	
m	116.53	Y	2492	7202	1.55	234.80	2.935E-004	3.11	
M	125.30	Y	1005	2951	1.03	252.33	3.114E-004	5.08	6.04
m	129.32	Y	6399	2973	1.04	260.37	3.184E-004	1.80	
M	144.32	Y	473	2018	1.07	290.33	3.411E-004	17.70	1.35

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	146.34	Y	404	2772	1.07	294.37	3.438E-004	17.62	
m	148.60	Y	950	2768	1.08	298.89	3.467E-004	14.68	
	171.32	Y	319	2269	1.04	344.29	3.661E-004	24.11	
M	203.54	Y	1303	1582	1.12	408.68	3.728E-004	3.67	3.86
m	208.00	Y	4742	1498	1.12	417.60	3.724E-004	1.92	
	255.37	Y	183	908	1.16	512.25	3.562E-004	26.86	
	267.51	Y	81	768	1.32	536.52	3.500E-004	53.13	
	297.54	Y	97	840	0.93	596.51	3.318E-004	49.06	
	311.62	Y	272	847	1.16	624.66	3.224E-004	18.78	
M	332.71	Y	1493	632	1.29	666.80	3.086E-004	6.73	2.89
m	335.72	Y	609	610	1.30	672.80	3.067E-004	7.80	
m	341.46	Y	135	592	1.30	684.29	3.030E-004	17.08	
m	344.96	Y	1379	575	1.31	691.27	3.008E-004	6.68	
M	368.39	Y	408	434	1.30	738.10	2.863E-004	6.28	4.20
m	375.02	Y	3640	344	1.31	751.34	2.824E-004	2.00	
m	380.12	Y	726	250	1.31	761.53	2.794E-004	4.17	
m	382.63	Y	601	224	1.32	766.55	2.779E-004	4.58	
	392.91	Y	1170	265	1.43	787.10	2.721E-004	3.99	
	413.63	Y	3230	106	1.37	828.50	2.608E-004	2.20	
	422.51	Y	200	123	1.47	846.25	2.562E-004	11.61	
	451.36	Y	387	66	1.37	903.89	2.422E-004	6.44	
	662.30	Y	177	14	1.28	1325.40	1.720E-004	8.57	
	722.00	Y	73	8	1.68	1444.71	1.595E-004	13.77	
	2234.74		11980	23	1.09	4467.62	1.081E-004	1.46	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.07 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 2.736E-002 +/-	1.8%	< 2.606E-005	< 1.261E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 1.817E-002 +/-	1.9%	< 1.730E-005	< 2.870E-012
	Al-26	< 2.550E-002 +/-	18.8%	< 2.428E-005	< 1.341E-006
	K-40	< 2.081E-001 +/-	5.3%	< 1.982E-004	< 3.246E-002
	Co-57	< 1.667E-001 +/-	4.5%	< 1.587E-004	< 1.950E-011
	Co-60	< 3.265E-002 +/-	1.7%	< 3.110E-005	< 2.864E-011
	Se-75	< 1.244E-001 +/-	1.8%	< 1.184E-004	< 8.556E-012
	Kr-85	< 6.533E+000 +/-	3.0%	< 6.222E-003	< 1.646E-008
	Sr-90	< 3.474E-002 +/-	2.2%	< 3.309E-005	< 2.519E-010
	Sb-125	< 1.336E-001 +/-	1.9%	< 1.272E-004	< 1.285E-010
	Ba-133	< 1.060E-001 +/-	1.6%	< 1.010E-004	< 4.189E-010
	Cs-134	< 2.142E-002 +/-	1.8%	< 2.040E-005	< 1.634E-011
X	Cs-137				
	Eu-152	< 1.161E-001 +/-	3.8%	< 1.106E-004	< 6.525E-010
	Eu-154	< 5.187E-002 +/-	2.1%	< 4.940E-005	< 1.945E-010
	Ho-166m	< 3.210E-002 +/-	2.4%	< 3.057E-005	< 1.785E-008
	Bi-207	< 2.489E-002 +/-	2.1%	< 2.370E-005	< 4.530E-010
	Pb-210	< 1.545E+001 +/-	259.0%	< 1.472E-002	< 2.009E-007
	Ra-226	< 5.270E-002 +/-	2.4%	< 5.019E-005	< 5.270E-008
	Ac-227	< 4.442E-001 +/-	8.3%	< 4.230E-004	< 6.085E-009
	Th-230	< 6.408E+001 +/-	83.3%	< 6.103E-002	< 3.140E-003
	Pa-231	< 2.577E+000 +/-	11.2%	< 2.454E-003	< 5.386E-005
	Th-232	< 6.542E-002 +/-	2.3%	< 6.231E-005	< 5.894E-001
	U-232	< 8.702E-002 +/-	2.3%	< 8.288E-005	< 4.029E-009
	U-233	< 1.719E+003 +/-	3.0%	< 1.637E+000	< 1.753E-001
	Pa-234	< 1.239E-001 +/-	12.2%	< 1.180E-004	
	Pa-234m	< 1.500E+002 +/-	2.1%	< 1.429E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 1.593E-001 +/-	2.9%	< 1.517E-004	< 7.278E-002
	Np-237	3.529E-001 +/-	26.3%	3.361E-004	4.941E-004
	Pu-238	< 1.028E+004 +/-	3.1%	< 9.794E+000	< 5.944E-004
	U-238	< 2.172E+000 +/-	2.1%	< 2.068E-003	< 6.385E+000
	Pu-239	3.024E+005 +/-	3.5%	2.880E+002	4.808E+000
	Pu-239B	2.080E+005 +/-	2.3%	1.981E+002	3.307E+000
	U-239	< 4.865E+001 +/-	308.3%	< 4.634E-002	
X	Pu-240				
	Am-241	5.955E+004 +/-	7.7%	5.671E+001	1.715E-002
	Am-241B	4.122E+004 +/-	11.2%	3.926E+001	1.187E-002
	Pu-241	3.327E+005 +/-	15.0%	3.169E+002	3.201E-003
	Pu-241B	5.490E+005 +/-	3.2%	5.229E+002	5.281E-003
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 3.376E-001 +/-	57.8%	< 3.216E-004	< 1.671E-006
	Cm-243	< 5.225E-001 +/-	3.3%	< 4.976E-004	< 1.003E-008
	Cm-244	< 2.685E+004 +/-	14.2%	< 2.557E+001	< 3.275E-004
	Cm-245	< 9.668E-001 +/-	7.8%	< 9.207E-004	< 5.559E-006
	Cm-247	< 5.965E-002 +/-	8.5%	< 5.681E-005	< 6.382E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 7.467E-002 +/-	3.4%	< 7.111E-005	< 1.807E-008
Cf-251	< 5.326E-001 +/-	5.8%	< 5.072E-004	< 3.329E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	4.81E+000 +- 1.67E-001	1.86E+000 +- 3.36E-002

Beta: 1.82E+002 +- 8.09E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.14E+000 +- 4.50E-002
203.55	2.20E+000 +- 9.54E-002
375.05	2.97E+000 +- 7.99E-002
413.71	3.02E+000 +- 8.90E-002

Segment 9 Results

Segment: 9 Detector: DET01 Position: 9
C:\Canberra\NDA2k\Data\00000209_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P009_S009

Acquisition Start: 12/23/2008 11:50:11 AM
Elapsed Live Time: 117.61 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.384 +/- 0.0064
SE-75	264.66	0.528 +/- 0.0079
SE-75	279.54	0.536 +/- 0.0091
SE-75	400.66	0.568 +/- 0.0119

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/23/2008 11:52:12 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.41	Y	2908	1257	1.30	120.67	1.331E-005	2.83	
M	98.82	Y	577	3559	1.29	199.42	1.901E-004	8.23	1.85
m	103.19	Y	377	3736	1.30	208.16	2.125E-004	10.62	
	129.35	Y	129	1102	1.04	260.42	3.147E-004	37.48	
	208.09	Y	106	595	1.22	417.76	3.828E-004	35.87	
	374.86	Y	73	133	1.09	751.02	2.842E-004	28.32	
	413.60	Y	112	17	1.48	828.44	2.655E-004	11.22	
	2234.75		11980	6	1.08	4467.62	5.235E-005	1.43	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.02 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 2.260E-002 +/-	1.9%	< 2.152E-005	< 1.042E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 2.083E-002 +/-	1.9%	< 1.984E-005	< 3.292E-012
	Al-26	< 3.234E-002 +/-	19.6%	< 3.080E-005	< 1.701E-006
	K-40	< 3.208E-001 +/-	5.3%	< 3.055E-004	< 5.005E-002
	Co-57	< 1.130E-001 +/-	4.5%	< 1.076E-004	< 1.322E-011
	Co-60	< 1.899E-002 +/-	1.7%	< 1.808E-005	< 1.665E-011
	Se-75	< 8.135E-002 +/-	2.3%	< 7.747E-005	< 5.597E-012
	Kr-85	< 4.463E+000 +/-	3.2%	< 4.250E-003	< 1.125E-008
	Sr-90	< 2.608E-002 +/-	2.3%	< 2.484E-005	< 1.891E-010
	Sb-125	< 6.319E-002 +/-	2.6%	< 6.018E-005	< 6.079E-011
	Ba-133	< 6.907E-002 +/-	1.8%	< 6.578E-005	< 2.728E-010
	Cs-134	< 1.027E-002 +/-	1.9%	< 9.781E-006	< 7.836E-012
	Cs-137	< 2.608E-002 +/-	2.3%	< 2.484E-005	< 2.973E-010
	Eu-152	< 1.052E-001 +/-	1.8%	< 1.002E-004	< 5.913E-010
	Eu-154	< 5.949E-002 +/-	2.1%	< 5.665E-005	< 2.231E-010
	Ho-166m	< 2.735E-002 +/-	2.3%	< 2.605E-005	< 1.521E-008
	Bi-207	< 1.784E-002 +/-	2.4%	< 1.699E-005	< 3.246E-010
	Pb-210	< 4.180E+002 +/-	311.1%	< 3.981E-001	< 5.434E-006
	Ra-226	< 4.374E-002 +/-	2.6%	< 4.166E-005	< 4.374E-008
	Ac-227	< 2.680E-001 +/-	8.5%	< 2.553E-004	< 3.672E-009
	Th-230	< 1.400E+002 +/-	9.1%	< 1.334E-001	< 6.862E-003
	Pa-231	< 1.809E+000 +/-	11.3%	< 1.722E-003	< 3.780E-005
	Th-232	< 5.449E-002 +/-	2.5%	< 5.189E-005	< 4.909E-001
	U-232	< 5.449E-002 +/-	2.5%	< 5.189E-005	< 2.523E-009
	U-233	< 1.010E+003 +/-	4.1%	< 9.620E-001	< 1.030E-001
	Pa-234	< 7.601E-002 +/-	12.2%	< 7.240E-005	
	Pa-234m	< 1.525E+002 +/-	2.1%	< 1.452E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 1.009E-001 +/-	4.1%	< 9.608E-005	< 4.610E-002
	Np-237	< 1.299E-001 +/-	2.2%	< 1.237E-004	< 1.819E-004
	Pu-238	< 7.130E+003 +/-	4.3%	< 6.791E+000	< 4.121E-004
	U-238	< 2.333E+000 +/-	2.1%	< 2.221E-003	< 6.858E+000
	Pu-239	1.097E+004 +/-	24.7%	1.045E+001	1.744E-001
	Pu-239B	< 3.875E+003 +/-	18.9%	< 3.691E+000	< 6.161E-002
	U-239	< 2.924E+003 +/-	370.1%	< 2.784E+000	
X	Pu-240				
	Am-241	1.371E+002 +/-	153.6%	1.306E-001	3.948E-005
	Am-241B	2.342E+003 +/-	13.7%	2.230E+000	6.744E-004
	Pu-241	< 3.522E+004 +/-	4.3%	< 3.354E+001	< 3.388E-004
	Pu-241B	1.199E+004 +/-	36.0%	1.142E+001	1.153E-004
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 3.497E-001 +/-	2.2%	< 3.331E-004	< 1.731E-006
	Cm-243	< 3.607E-001 +/-	3.6%	< 3.436E-004	< 6.926E-009
	Cm-244	< 1.774E+004 +/-	14.2%	< 1.689E+001	< 2.164E-004
	Cm-245	< 6.287E-001 +/-	8.4%	< 5.988E-004	< 3.615E-006
	Cm-247	< 2.780E-002 +/-	8.5%	< 2.647E-005	< 2.974E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 4.030E-002 +/-	3.5%	< 3.838E-005	< 9.753E-009
Cf-251	< 3.408E-001 +/-	6.6%	< 3.245E-004	< 2.130E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.74E-001 +- 4.30E-002	5.28E-002 +- 6.48E-003

Beta: 2.68E+002 +- 7.86E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 3

Energy	Mass (g)
129.30	2.33E-002 +- 8.77E-003
375.05	5.90E-002 +- 1.68E-002
413.71	1.03E-001 +- 1.17E-002

Segment 10 Results

Segment: 10 Detector: DET01 Position: 10
C:\Canberra\NDA2k\Data\00000209_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P010_S010

Acquisition Start: 12/23/2008 11:54:22 AM
Elapsed Live Time: 118.20 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.329 +/- 0.0056
SE-75	264.66	0.494 +/- 0.0074
SE-75	279.54	0.499 +/- 0.0085
SE-75	400.66	0.548 +/- 0.0115

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/23/2008 11:56:24 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.50	Y	1157	754	1.22	120.84	5.801E-006	4.75	
2234.74		11980	13	1.08	4467.61	5.144E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 2.308E-002 +/-	1.9%	< 2.198E-005	< 1.064E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 1.356E-002 +/-	1.9%	< 1.291E-005	< 2.142E-012
Al-26	< 1.924E-002 +/-	19.8%	< 1.833E-005	< 1.012E-006
K-40	< 5.176E-002 +/-	5.3%	< 4.929E-005	< 8.074E-003
Co-57	< 9.298E-002 +/-	4.6%	< 8.856E-005	< 1.088E-011
Co-60	< 1.627E-002 +/-	1.7%	< 1.549E-005	< 1.427E-011
Se-75	< 6.220E-002 +/-	2.2%	< 5.923E-005	< 4.279E-012
Kr-85	< 4.222E+000 +/-	3.3%	< 4.021E-003	< 1.064E-008
Sr-90	< 1.704E-002 +/-	2.4%	< 1.623E-005	< 1.235E-010
Sb-125	< 5.279E-002 +/-	2.2%	< 5.028E-005	< 5.079E-011
Ba-133	< 4.189E-002 +/-	1.8%	< 3.989E-005	< 1.655E-010
Cs-134	< 1.369E-002 +/-	2.5%	< 1.304E-005	< 1.044E-011
Cs-137	< 1.704E-002 +/-	2.4%	< 1.623E-005	< 1.942E-010
Eu-152	< 9.931E-002 +/-	1.9%	< 9.458E-005	< 5.581E-010
Eu-154	< 3.278E-002 +/-	2.0%	< 3.122E-005	< 1.229E-010
Ho-166m	< 2.252E-002 +/-	2.4%	< 2.144E-005	< 1.252E-008
Bi-207	< 1.513E-002 +/-	2.4%	< 1.441E-005	< 2.754E-010
Pb-210	< 8.206E+002 +/-	308.2%	< 7.815E-001	< 1.067E-005
Ra-226	< 2.257E-002 +/-	2.7%	< 2.150E-005	< 2.257E-008
Ac-227	< 1.988E-001 +/-	8.5%	< 1.893E-004	< 2.723E-009
Th-230	< 1.060E+002 +/-	9.0%	< 1.010E-001	< 5.194E-003
Pa-231	< 1.260E+000 +/-	11.3%	< 1.200E-003	< 2.634E-005
Th-232	< 6.160E-002 +/-	2.6%	< 5.867E-005	< 5.550E-001
U-232	< 6.160E-002 +/-	2.6%	< 5.867E-005	< 2.852E-009
U-233	< 7.567E+002 +/-	4.0%	< 7.206E-001	< 7.718E-002
Pa-234	< 9.808E-002 +/-	12.2%	< 9.341E-005	
Pa-234m	< 1.119E+002 +/-	2.1%	< 1.066E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 7.022E-002 +/-	3.9%	< 6.688E-005	< 3.209E-002
Np-237	< 9.643E-002 +/-	2.2%	< 9.184E-005	< 1.350E-004
Pu-238	< 5.180E+003 +/-	4.2%	< 4.933E+000	< 2.994E-004
U-238	< 1.409E+000 +/-	2.2%	< 1.342E-003	< 4.142E+000
Pu-239	< 9.920E+002 +/-	3.7%	< 9.447E-001	< 1.577E-002
Pu-239B	< 3.600E+003 +/-	18.8%	< 3.428E+000	< 5.723E-002
U-239	< 6.018E+003 +/-	366.8%	< 5.731E+000	
Pu-240	< 2.058E+003 +/-	13.3%	< 1.960E+000	< 8.952E-003
Am-241	1.251E+002 +/-	151.4%	1.192E-001	3.604E-005
Am-241B	< 7.738E+002 +/-	14.4%	< 7.369E-001	< 2.228E-004
Pu-241	< 2.630E+004 +/-	4.2%	< 2.505E+001	< 2.530E-004
Pu-241B	< 7.263E+003 +/-	3.4%	< 6.917E+000	< 6.987E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 2.560E-001 +/-	2.2%	< 2.438E-004	< 1.267E-006
Cm-243	< 2.641E-001 +/-	3.5%	< 2.515E-004	< 5.070E-009
Cm-244	< 2.343E+004 +/-	14.1%	< 2.231E+001	< 2.858E-004
Cm-245	< 4.442E-001 +/-	8.3%	< 4.231E-004	< 2.554E-006
Cm-247	< 2.299E-002 +/-	8.5%	< 2.189E-005	< 2.459E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 3.083E-002 +/-	3.5%	< 2.936E-005	< 7.461E-009
Cf-251	< 2.442E-001 +/-	6.5%	< 2.326E-004	< 1.526E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 11 Results

Segment: 11 Detector: DET01 Position: 11
C:\Canberra\NDA2k\Data\00000209_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P011_S011

Acquisition Start: 12/23/2008 11:58:34 AM
Elapsed Live Time: 118.51 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.246 +/- 0.0044
SE-75	264.66	0.339 +/- 0.0053
SE-75	279.54	0.348 +/- 0.0064
SE-75	400.66	0.377 +/- 0.0088

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/23/2008 12:00:36 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.49	Y	497	532	1.21	120.83	5.232E-006	8.29	
2234.76		11980	0	1.07	4467.64	2.642E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 2.273E-002 +/-	1.8%	< 2.165E-005	< 1.048E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 1.436E-002 +/-	2.0%	< 1.368E-005	< 2.270E-012
Al-26	< 4.043E-002 +/-	15.1%	< 3.850E-005	< 2.127E-006
K-40	< 2.695E-001 +/-	5.0%	< 2.567E-004	< 4.205E-002
Co-57	< 7.835E-002 +/-	3.4%	< 7.462E-005	< 9.167E-012
Co-60	< 2.651E-002 +/-	1.7%	< 2.525E-005	< 2.325E-011
Se-75	< 6.263E-002 +/-	1.8%	< 5.964E-005	< 4.309E-012
Kr-85	< 4.495E+000 +/-	3.0%	< 4.281E-003	< 1.133E-008
Sr-90	< 2.289E-002 +/-	1.9%	< 2.180E-005	< 1.660E-010
Sb-125	< 4.457E-002 +/-	2.1%	< 4.245E-005	< 4.288E-011
Ba-133	< 3.501E-002 +/-	1.7%	< 3.335E-005	< 1.383E-010
Cs-134	< 9.502E-003 +/-	1.9%	< 9.049E-006	< 7.250E-012
Cs-137	< 2.289E-002 +/-	1.9%	< 2.180E-005	< 2.609E-010
Eu-152	< 2.893E-002 +/-	3.7%	< 2.755E-005	< 1.626E-010
Eu-154	< 4.101E-002 +/-	2.2%	< 3.906E-005	< 1.538E-010
Ho-166m	< 2.010E-002 +/-	2.2%	< 1.915E-005	< 1.118E-008
Bi-207	< 1.168E-002 +/-	2.0%	< 1.112E-005	< 2.125E-010
Pb-210	< 9.436E+002 +/-	53.0%	< 8.987E-001	< 1.227E-005
Ra-226	< 2.858E-002 +/-	2.2%	< 2.722E-005	< 2.858E-008
Ac-227	< 1.986E-001 +/-	8.3%	< 1.892E-004	< 2.721E-009
Th-230	< 9.451E+001 +/-	8.6%	< 9.001E-002	< 4.631E-003
Pa-231	< 1.137E+000 +/-	11.2%	< 1.083E-003	< 2.376E-005
Th-232	< 5.560E-002 +/-	2.1%	< 5.295E-005	< 5.009E-001
U-232	< 5.560E-002 +/-	2.1%	< 5.295E-005	< 2.574E-009
U-233	< 6.981E+002 +/-	2.7%	< 6.649E-001	< 7.121E-002
Pa-234	< 1.055E-001 +/-	11.5%	< 1.005E-004	
Pa-234m	< 1.444E+002 +/-	2.1%	< 1.376E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 6.636E-002 +/-	2.5%	< 6.320E-005	< 3.033E-002
Np-237	< 8.689E-002 +/-	1.9%	< 8.276E-005	< 1.217E-004
Pu-238	< 4.654E+003 +/-	2.6%	< 4.433E+000	< 2.690E-004
U-238	< 1.932E+000 +/-	2.2%	< 1.840E-003	< 5.681E+000
Pu-239	< 9.138E+002 +/-	3.1%	< 8.703E-001	< 1.453E-002
Pu-239B	< 2.697E+003 +/-	5.3%	< 2.568E+000	< 4.287E-002
U-239	< 9.231E+003 +/-	65.1%	< 8.791E+000	
Pu-240	< 1.656E+003 +/-	4.7%	< 1.577E+000	< 7.202E-003
Am-241	5.961E+001 +/-	24.7%	5.677E-002	1.717E-005
Am-241B	< 6.362E+002 +/-	4.9%	< 6.059E-001	< 1.832E-004
Pu-241	< 2.496E+004 +/-	2.8%	< 2.377E+001	< 2.401E-004
Pu-241B	< 6.870E+003 +/-	2.4%	< 6.543E+000	< 6.609E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 2.461E-001 +/-	1.8%	< 2.344E-004	< 1.218E-006
Cm-243	< 2.539E-001 +/-	3.3%	< 2.418E-004	< 4.874E-009
Cm-244	< 1.541E+004 +/-	14.1%	< 1.468E+001	< 1.880E-004
Cm-245	< 4.270E-001 +/-	7.7%	< 4.067E-004	< 2.455E-006
Cm-247	< 2.150E-002 +/-	8.5%	< 2.047E-005	< 2.300E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.207E-002 +/-	3.5%	< 2.102E-005	< 5.341E-009
Cf-251	< 2.381E-001 +/-	5.6%	< 2.268E-004	< 1.488E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 12 Results

Segment: 12 Detector: DET01 Position: 12
C:\Canberra\NDA2k\Data\00000209_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P012_S012

Acquisition Start: 12/23/2008 12:02:45 PM
Elapsed Live Time: 118.75 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.101 +/- 0.0023
SE-75	264.66	0.159 +/- 0.0028
SE-75	279.54	0.165 +/- 0.0036
SE-75	400.66	0.222 +/- 0.0061

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/23/2008 12:04:47 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.58	Y	208	380	0.95	121.00	1.283E-004	15.47	
2234.75		11980	5	1.07	4467.63	2.494E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 1.658E-002 +/-	1.9%	< 1.579E-005	< 7.645E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 1.695E-002 +/-	2.0%	< 1.614E-005	< 2.678E-012
Al-26	< 2.566E-002 +/-	16.0%	< 2.444E-005	< 1.350E-006
K-40	< 2.503E-001 +/-	5.1%	< 2.384E-004	< 3.905E-002
Co-57	< 6.368E-002 +/-	4.0%	< 6.064E-005	< 7.450E-012
Co-60	< 2.335E-002 +/-	1.7%	< 2.224E-005	< 2.048E-011
Se-75	< 5.904E-002 +/-	2.5%	< 5.623E-005	< 4.062E-012
Kr-85	< 4.556E+000 +/-	3.3%	< 4.339E-003	< 1.148E-008
Sr-90	< 1.537E-002 +/-	2.2%	< 1.464E-005	< 1.114E-010
Sb-125	< 4.198E-002 +/-	2.4%	< 3.998E-005	< 4.038E-011
Ba-133	< 2.660E-002 +/-	2.0%	< 2.534E-005	< 1.051E-010
Cs-134	< 1.262E-002 +/-	1.9%	< 1.202E-005	< 9.626E-012
Cs-137	< 1.537E-002 +/-	2.2%	< 1.464E-005	< 1.752E-010
Eu-152	< 7.543E-002 +/-	2.7%	< 7.184E-005	< 4.239E-010
Eu-154	< 4.837E-002 +/-	2.2%	< 4.607E-005	< 1.814E-010
Ho-166m	< 2.511E-002 +/-	2.4%	< 2.392E-005	< 1.396E-008
Bi-207	< 1.270E-002 +/-	2.3%	< 1.210E-005	< 2.311E-010
Pb-210	< 1.092E+000 +/-	39.2%	< 1.040E-003	< 1.420E-008
Ra-226	< 2.648E-002 +/-	2.5%	< 2.522E-005	< 2.648E-008
Ac-227	< 1.676E-001 +/-	6.5%	< 1.596E-004	< 2.296E-009
Th-230	< 1.527E+001 +/-	13.8%	< 1.454E-002	< 7.483E-004
Pa-231	< 9.686E-001 +/-	11.3%	< 9.225E-004	< 2.024E-005
Th-232	< 2.175E-002 +/-	2.5%	< 2.071E-005	< 1.959E-001
U-232	< 2.175E-002 +/-	2.5%	< 2.071E-005	< 1.007E-009
U-233	< 7.186E+002 +/-	2.2%	< 6.843E-001	< 7.329E-002
Pa-234	< 9.771E-002 +/-	11.6%	< 9.306E-005	
Pa-234m	< 9.620E+001 +/-	2.1%	< 9.162E-002	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 6.680E-002 +/-	3.2%	< 6.362E-005	< 3.053E-002
Np-237	< 6.801E-002 +/-	2.3%	< 6.478E-005	< 9.522E-005
Pu-238	< 4.824E+003 +/-	3.1%	< 4.594E+000	< 2.788E-004
U-238	< 1.817E+000 +/-	2.1%	< 1.731E-003	< 5.343E+000
Pu-239	< 8.184E+002 +/-	3.7%	< 7.794E-001	< 1.301E-002
Pu-239B	< 1.392E+003 +/-	6.3%	< 1.326E+000	< 2.213E-002
U-239	< 3.544E+000 +/-	49.2%	< 3.375E-003	
Pu-240	< 1.040E+003 +/-	5.6%	< 9.902E-001	< 4.523E-003
Am-241	1.017E+000 +/-	22.7%	9.689E-004	2.930E-007
Am-241B	< 3.825E+002 +/-	5.8%	< 3.643E-001	< 1.102E-004
Pu-241	< 2.469E+004 +/-	3.3%	< 2.352E+001	< 2.375E-004
Pu-241B	< 7.206E+003 +/-	3.2%	< 6.863E+000	< 6.933E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 9.911E-002 +/-	9.3%	< 9.439E-005	< 4.906E-007
Cm-243	< 2.084E-001 +/-	3.7%	< 1.985E-004	< 4.002E-009
Cm-244	< 1.535E+004 +/-	14.1%	< 1.462E+001	< 1.873E-004
Cm-245	< 4.389E-001 +/-	7.9%	< 4.180E-004	< 2.524E-006
Cm-247	< 1.517E-002 +/-	8.6%	< 1.445E-005	< 1.623E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.749E-002 +/-	3.6%	< 1.666E-005	< 4.233E-009
Cf-251	< 2.367E-001 +/-	5.9%	< 2.254E-004	< 1.479E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 13 Results

Segment: 13 Detector: DET01 Position: 13
C:\Canberra\NDA2k\Data\00000209_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P013_S013

Acquisition Start: 12/23/2008 12:06:57 PM
Elapsed Live Time: 118.95 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.398 +/- 0.0064
SE-75	264.66	0.471 +/- 0.0071
SE-75	279.54	0.471 +/- 0.0080
SE-75	400.66	0.516 +/- 0.0110

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/23/2008 12:08:59 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.44	Y	70	238	0.90	120.73	1.830E-004	33.46	
2234.79		11980	8	1.08	4467.71	7.017E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 2.287E-002 +/-	1.8%	< 2.178E-005	< 1.054E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.011E-002 +/-	2.0%	< 1.915E-005	< 3.177E-012
Al-26	< 2.232E-002 +/-	14.9%	< 2.126E-005	< 1.174E-006
K-40	< 2.074E-001 +/-	4.9%	< 1.975E-004	< 3.235E-002
Co-57	< 5.445E-002 +/-	3.5%	< 5.186E-005	< 6.371E-012
Co-60	< 2.935E-002 +/-	1.7%	< 2.795E-005	< 2.574E-011
Se-75	< 4.982E-002 +/-	1.9%	< 4.745E-005	< 3.428E-012
Kr-85	< 4.624E+000 +/-	3.1%	< 4.404E-003	< 1.165E-008
Sr-90	< 1.186E-002 +/-	1.9%	< 1.129E-005	< 8.596E-011
Sb-125	< 3.162E-002 +/-	2.1%	< 3.011E-005	< 3.042E-011
Ba-133	< 2.108E-002 +/-	1.7%	< 2.008E-005	< 8.328E-011
Cs-134	< 9.489E-003 +/-	2.0%	< 9.037E-006	< 7.240E-012
Cs-137	< 1.186E-002 +/-	1.9%	< 1.129E-005	< 1.352E-010
Eu-152	< 5.729E-002 +/-	2.5%	< 5.456E-005	< 3.219E-010
Eu-154	< 5.740E-002 +/-	2.2%	< 5.467E-005	< 2.153E-010
Ho-166m	< 2.422E-002 +/-	2.3%	< 2.306E-005	< 1.346E-008
Bi-207	< 1.359E-002 +/-	2.0%	< 1.294E-005	< 2.473E-010
Pb-210	< 1.560E+000 +/-	36.7%	< 1.486E-003	< 2.028E-008
Ra-226	< 3.273E-002 +/-	2.2%	< 3.117E-005	< 3.273E-008
Ac-227	< 1.738E-001 +/-	8.3%	< 1.655E-004	< 2.381E-009
Th-230	< 1.456E+001 +/-	13.0%	< 1.387E-002	< 7.136E-004
Pa-231	< 7.658E-001 +/-	11.2%	< 7.294E-004	< 1.601E-005
Th-232	< 4.764E-002 +/-	2.2%	< 4.537E-005	< 4.292E-001
U-232	< 4.764E-002 +/-	2.2%	< 4.537E-005	< 2.206E-009
U-233	< 5.902E+002 +/-	2.7%	< 5.621E-001	< 6.020E-002
Pa-234	< 6.414E-002 +/-	12.2%	< 6.108E-005	
Pa-234m	< 1.918E+002 +/-	2.1%	< 1.827E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 5.350E-002 +/-	2.5%	< 5.095E-005	< 2.445E-002
Np-237	< 5.033E-002 +/-	1.9%	< 4.793E-005	< 7.046E-005
Pu-238	< 4.139E+003 +/-	2.6%	< 3.942E+000	< 2.393E-004
U-238	< 1.373E+000 +/-	2.1%	< 1.307E-003	< 4.035E+000
Pu-239	< 6.901E+002 +/-	3.2%	< 6.573E-001	< 1.097E-002
Pu-239B	< 1.120E+003 +/-	5.7%	< 1.067E+000	< 1.781E-002
U-239	< 6.479E+000 +/-	45.8%	< 6.170E-003	
Pu-240	< 8.305E+002 +/-	5.0%	< 7.909E-001	< 3.613E-003
Am-241	2.387E-001 +/-	36.9%	2.273E-004	6.873E-008
Am-241B	< 3.118E+002 +/-	5.3%	< 2.970E-001	< 8.981E-005
Pu-241	< 2.088E+004 +/-	2.8%	< 1.989E+001	< 2.009E-004
Pu-241B	< 6.110E+003 +/-	2.5%	< 5.819E+000	< 5.878E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 9.233E-002 +/-	8.4%	< 8.794E-005	< 4.571E-007
Cm-243	< 2.048E-001 +/-	3.3%	< 1.950E-004	< 3.932E-009
Cm-244	< 1.395E+004 +/-	14.1%	< 1.329E+001	< 1.702E-004
Cm-245	< 3.588E-001 +/-	7.7%	< 3.417E-004	< 2.063E-006
Cm-247	< 2.014E-002 +/-	8.5%	< 1.918E-005	< 2.155E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.130E-002 +/-	3.5%	< 2.028E-005	< 5.153E-009
Cf-251	< 1.965E-001 +/-	5.6%	< 1.872E-004	< 1.228E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 14 Results

Segment: 14 Detector: DET01 Position: 14
C:\Canberra\NDA2k\Data\00000209_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P014_S014

Acquisition Start: 12/23/2008 12:11:09 PM
Elapsed Live Time: 119.11 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.869 +/- 0.0130
SE-75	264.66	0.896 +/- 0.0130
SE-75	279.54	0.909 +/- 0.0143
SE-75	400.66	0.900 +/- 0.0170

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/23/2008 12:13:10 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.58	Y	105	165	0.72	121.00	8.935E-006	20.48	
2234.75		11980	7	1.08	4467.63	5.396E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 2.761E-002 +/-	1.9%	< 2.630E-005	< 1.273E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.015E-002 +/-	2.0%	< 1.919E-005	< 3.184E-012
Al-26	< 7.511E-003 +/-	15.2%	< 7.153E-006	< 3.951E-007
K-40	< 2.141E-001 +/-	5.0%	< 2.039E-004	< 3.339E-002
Co-57	< 4.893E-002 +/-	3.4%	< 4.660E-005	< 5.725E-012
Co-60	< 2.637E-002 +/-	1.7%	< 2.512E-005	< 2.313E-011
Se-75	< 3.850E-002 +/-	1.8%	< 3.667E-005	< 2.649E-012
Kr-85	< 4.103E+000 +/-	3.1%	< 3.907E-003	< 1.034E-008
Sr-90	< 1.950E-002 +/-	1.9%	< 1.857E-005	< 1.413E-010
Sb-125	< 4.406E-002 +/-	2.1%	< 4.196E-005	< 4.239E-011
Ba-133	< 2.098E-002 +/-	1.7%	< 1.998E-005	< 8.286E-011
Cs-134	< 1.346E-002 +/-	2.0%	< 1.282E-005	< 1.027E-011
Cs-137	< 1.950E-002 +/-	1.9%	< 1.857E-005	< 2.223E-010
Eu-152	< 2.625E-002 +/-	3.7%	< 2.500E-005	< 1.475E-010
Eu-154	< 4.021E-002 +/-	2.0%	< 3.829E-005	< 1.508E-010
Ho-166m	< 2.819E-002 +/-	2.3%	< 2.684E-005	< 1.567E-008
Bi-207	< 1.277E-002 +/-	2.0%	< 1.216E-005	< 2.324E-010
Pb-210	< 7.988E+002 +/-	56.7%	< 7.607E-001	< 1.038E-005
Ra-226	< 3.039E-002 +/-	2.2%	< 2.894E-005	< 3.039E-008
Ac-227	< 1.296E-001 +/-	8.3%	< 1.234E-004	< 1.775E-009
Th-230	< 6.092E+001 +/-	8.6%	< 5.802E-002	< 2.985E-003
Pa-231	< 6.473E-001 +/-	11.2%	< 6.165E-004	< 1.353E-005
Th-232	< 3.242E-002 +/-	2.2%	< 3.088E-005	< 2.921E-001
U-232	< 3.242E-002 +/-	2.2%	< 3.088E-005	< 1.501E-009
U-233	< 4.487E+002 +/-	2.7%	< 4.274E-001	< 4.577E-002
Pa-234	< 9.549E-002 +/-	12.2%	< 9.095E-005	
Pa-234m	< 1.089E+002 +/-	2.2%	< 1.037E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 4.058E-002 +/-	2.5%	< 3.865E-005	< 1.855E-002
Np-237	< 4.570E-002 +/-	1.9%	< 4.352E-005	< 6.398E-005
Pu-238	< 3.271E+003 +/-	2.6%	< 3.115E+000	< 1.891E-004
U-238	< 1.382E+000 +/-	2.2%	< 1.316E-003	< 4.062E+000
Pu-239	< 6.027E+002 +/-	3.1%	< 5.740E-001	< 9.583E-003
Pu-239B	< 1.455E+003 +/-	5.4%	< 1.386E+000	< 2.314E-002
U-239	< 1.090E+004 +/-	69.5%	< 1.038E+001	
Pu-240	< 9.789E+002 +/-	4.7%	< 9.323E-001	< 4.258E-003
Am-241	7.348E+000 +/-	32.3%	6.998E-003	2.116E-006
Am-241B	< 3.630E+002 +/-	5.0%	< 3.457E-001	< 1.045E-004
Pu-241	< 1.631E+004 +/-	2.8%	< 1.554E+001	< 1.569E-004
Pu-241B	< 4.687E+003 +/-	2.4%	< 4.464E+000	< 4.509E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.643E-001 +/-	1.8%	< 1.565E-004	< 8.133E-007
Cm-243	< 1.695E-001 +/-	3.3%	< 1.614E-004	< 3.254E-009
Cm-244	< 1.811E+004 +/-	14.1%	< 1.725E+001	< 2.210E-004
Cm-245	< 2.691E-001 +/-	7.7%	< 2.562E-004	< 1.547E-006
Cm-247	< 1.345E-002 +/-	8.5%	< 1.281E-005	< 1.439E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.617E-002 +/-	3.5%	< 1.540E-005	< 3.912E-009
Cf-251	< 1.432E-001 +/-	5.6%	< 1.364E-004	< 8.949E-008

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 15 Results

Segment: 15 Detector: DET01 Position: 15
C:\Canberra\NDA2k\Data\00000209_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P015_S015

Acquisition Start: 12/23/2008 12:15:20 PM
Elapsed Live Time: 119.16 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.894 +/- 0.0134
SE-75	264.66	0.907 +/- 0.0131
SE-75	279.54	0.910 +/- 0.0143
SE-75	400.66	0.912 +/- 0.0172

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/23/2008 12:17:22 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
2234.75		11980	6	1.08	4467.63	2.741E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 2.215E-002 +/-	1.8%	< 2.110E-005	< 1.021E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.366E-002 +/-	2.1%	< 2.254E-005	< 3.739E-012
Al-26	< 4.160E-002 +/-	15.4%	< 3.962E-005	< 2.188E-006
K-40	< 2.709E-001 +/-	5.0%	< 2.580E-004	< 4.226E-002
Co-57	< 4.461E-002 +/-	3.5%	< 4.249E-005	< 5.219E-012
Co-60	< 3.636E-002 +/-	2.6%	< 3.463E-005	< 3.189E-011
Se-75	< 3.838E-002 +/-	1.8%	< 3.656E-005	< 2.641E-012
Kr-85	< 4.060E+000 +/-	3.0%	< 3.867E-003	< 1.023E-008
Sr-90	< 1.489E-002 +/-	1.9%	< 1.418E-005	< 1.079E-010
Sb-125	< 3.615E-002 +/-	2.1%	< 3.443E-005	< 3.478E-011
Ba-133	< 1.829E-002 +/-	1.7%	< 1.742E-005	< 7.224E-011
Cs-134	< 1.144E-002 +/-	1.8%	< 1.089E-005	< 8.727E-012
Cs-137	< 1.489E-002 +/-	1.9%	< 1.418E-005	< 1.697E-010
Eu-152	< 3.360E-002 +/-	1.8%	< 3.200E-005	< 1.888E-010
Eu-154	< 6.756E-002 +/-	2.2%	< 6.434E-005	< 2.533E-010
Ho-166m	< 2.778E-002 +/-	2.2%	< 2.645E-005	< 1.544E-008
Bi-207	< 1.523E-002 +/-	2.0%	< 1.451E-005	< 2.772E-010
Pb-210	< 9.638E+002 +/-	57.4%	< 9.179E-001	< 1.253E-005
Ra-226	< 3.397E-002 +/-	2.2%	< 3.236E-005	< 3.397E-008
Ac-227	< 1.100E-001 +/-	8.3%	< 1.047E-004	< 1.507E-009
Th-230	< 6.157E+001 +/-	8.6%	< 5.864E-002	< 3.017E-003
Pa-231	< 5.529E-001 +/-	11.2%	< 5.265E-004	< 1.156E-005
Th-232	< 4.121E-002 +/-	2.0%	< 3.925E-005	< 3.713E-001
U-232	< 4.121E-002 +/-	2.0%	< 3.925E-005	< 1.908E-009
U-233	< 4.273E+002 +/-	2.8%	< 4.069E-001	< 4.358E-002
Pa-234	< 2.365E-002 +/-	12.2%	< 2.252E-005	
Pa-234m	< 1.244E+002 +/-	2.1%	< 1.184E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 3.789E-002 +/-	2.5%	< 3.609E-005	< 1.732E-002
Np-237	< 3.528E-002 +/-	1.9%	< 3.360E-005	< 4.940E-005
Pu-238	< 2.826E+003 +/-	2.7%	< 2.691E+000	< 1.633E-004
U-238	< 1.369E+000 +/-	2.2%	< 1.304E-003	< 4.025E+000
Pu-239	< 5.489E+002 +/-	3.2%	< 5.227E-001	< 8.727E-003
Pu-239B	< 1.388E+003 +/-	5.6%	< 1.322E+000	< 2.207E-002
U-239	< 1.592E+004 +/-	70.2%	< 1.516E+001	
Pu-240	< 8.272E+002 +/-	4.9%	< 7.878E-001	< 3.598E-003
Am-241	< 4.944E+000 +/-	25.4%	< 4.708E-003	< 1.424E-006
Am-241B	< 3.177E+002 +/-	5.1%	< 3.025E-001	< 9.149E-005
Pu-241	< 1.389E+004 +/-	2.9%	< 1.323E+001	< 1.336E-004
Pu-241B	< 3.994E+003 +/-	2.4%	< 3.804E+000	< 3.842E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.342E-001 +/-	1.8%	< 1.278E-004	< 6.641E-007
Cm-243	< 1.384E-001 +/-	3.3%	< 1.318E-004	< 2.657E-009
Cm-244	< 1.554E+004 +/-	14.2%	< 1.480E+001	< 1.896E-004
Cm-245	< 2.497E-001 +/-	7.7%	< 2.378E-004	< 1.435E-006
Cm-247	< 1.408E-002 +/-	8.5%	< 1.341E-005	< 1.506E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.967E-002 +/-	3.5%	< 1.873E-005	< 4.760E-009
Cf-251	< 1.459E-001 +/-	5.6%	< 1.390E-004	< 9.120E-008

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 16 Results

Segment: 16 Detector: DET01 Position: 16
C:\Canberra\NDA2k\Data\00000209_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P016_S016

Acquisition Start: 12/23/2008 12:19:32 PM
Elapsed Live Time: 119.16 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.840 +/- 0.0126
SE-75	264.66	0.879 +/- 0.0127
SE-75	279.54	0.891 +/- 0.0140
SE-75	400.66	0.887 +/- 0.0168

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/23/2008 12:21:35 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
2234.75		11980	9	1.07	4467.63	2.487E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 2.098E-002 +/-	2.3%	< 1.998E-005	< 9.672E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 3.869E-002 +/-	2.3%	< 3.685E-005	< 6.113E-012
Al-26	< 4.040E-002 +/-	18.0%	< 3.848E-005	< 2.125E-006
K-40	< 4.336E-001 +/-	5.6%	< 4.129E-004	< 6.764E-002
Co-57	< 7.483E-002 +/-	4.4%	< 7.127E-005	< 8.755E-012
Co-60	< 6.066E-002 +/-	2.0%	< 5.777E-005	< 5.320E-011
Se-75	< 6.237E-002 +/-	2.8%	< 5.940E-005	< 4.291E-012
Kr-85	< 5.819E+000 +/-	3.6%	< 5.542E-003	< 1.466E-008
Sr-90	< 1.825E-002 +/-	2.6%	< 1.738E-005	< 1.323E-010
Sb-125	< 3.156E-002 +/-	2.9%	< 3.006E-005	< 3.036E-011
Ba-133	< 3.073E-002 +/-	2.3%	< 2.927E-005	< 1.214E-010
Cs-134	< 2.375E-002 +/-	2.8%	< 2.262E-005	< 1.812E-011
Cs-137	< 1.825E-002 +/-	2.6%	< 1.738E-005	< 2.081E-010
Eu-152	< 4.696E-002 +/-	4.2%	< 4.473E-005	< 2.639E-010
Eu-154	< 9.704E-002 +/-	2.5%	< 9.242E-005	< 3.639E-010
Ho-166m	< 3.729E-002 +/-	2.6%	< 3.551E-005	< 2.073E-008
Bi-207	< 2.251E-002 +/-	2.8%	< 2.143E-005	< 4.096E-010
Pb-210	< 2.254E+000 +/-	46.8%	< 2.147E-003	< 2.931E-008
Ra-226	< 5.543E-002 +/-	2.5%	< 5.279E-005	< 5.543E-008
Ac-227	< 2.284E-001 +/-	3.5%	< 2.175E-004	< 3.129E-009
Th-230	< 2.220E+001 +/-	15.5%	< 2.115E-002	< 1.088E-003
Pa-231	< 7.168E-001 +/-	11.4%	< 6.826E-004	< 1.498E-005
Th-232	< 4.574E-002 +/-	2.9%	< 4.356E-005	< 4.121E-001
U-232	< 4.574E-002 +/-	2.9%	< 4.356E-005	< 2.118E-009
U-233	< 6.978E+002 +/-	2.5%	< 6.646E-001	< 7.118E-002
Pa-234	< 1.634E-001 +/-	12.3%	< 1.556E-004	
Pa-234m	< 1.933E+002 +/-	2.4%	< 1.841E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 7.901E-002 +/-	3.6%	< 7.525E-005	< 3.611E-002
Np-237	< 4.874E-002 +/-	2.6%	< 4.642E-005	< 6.823E-005
Pu-238	< 5.770E+003 +/-	3.6%	< 5.495E+000	< 3.335E-004
U-238	< 3.874E+000 +/-	2.4%	< 3.689E-003	< 1.139E+001
Pu-239	< 9.955E+002 +/-	4.1%	< 9.481E-001	< 1.583E-002
Pu-239B	< 1.460E+003 +/-	7.0%	< 1.390E+000	< 2.321E-002
U-239	< 1.336E+001 +/-	58.6%	< 1.273E-002	
Pu-240	< 1.065E+003 +/-	6.2%	< 1.014E+000	< 4.632E-003
Am-241	< 2.202E-001 +/-	19.9%	< 2.098E-004	< 6.343E-008
Am-241B	< 4.067E+002 +/-	6.4%	< 3.874E-001	< 1.171E-004
Pu-241	< 2.941E+004 +/-	3.7%	< 2.801E+001	< 2.829E-004
Pu-241B	< 8.086E+003 +/-	3.6%	< 7.701E+000	< 7.779E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.328E-001 +/-	10.7%	< 1.264E-004	< 6.571E-007
Cm-243	< 2.181E-001 +/-	3.9%	< 2.077E-004	< 4.187E-009
Cm-244	< 1.950E+004 +/-	14.2%	< 1.858E+001	< 2.379E-004
Cm-245	< 5.488E-001 +/-	8.1%	< 5.227E-004	< 3.156E-006
Cm-247	< 2.302E-002 +/-	8.7%	< 2.193E-005	< 2.463E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.585E-002 +/-	3.8%	< 2.462E-005	< 6.256E-009
Cf-251	< 2.791E-001 +/-	6.2%	< 2.658E-004	< 1.744E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Summed Segment Spectra Results
Category: Segmented

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Elapsed Live Time: 97.68 sec Elapsed Real Time: 120.00 sec

********** Peak Analysis Results **********

*** Spectrum Validity Test warnings ***
Reference peak/MCA Test failed: reference peak data does not match MCA time
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 12/23/2008 12:21:44 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	49.25		7243	37123	2.24	100.36	7.306E-007	4.20	
	59.42	Y	348157	45586	1.12	120.68	6.593E-006	0.36	
M	94.66	Y	63560	88005	1.53	191.11	1.521E-004	0.89	362.90
m	98.67	Y	244535	118369	1.54	199.12	1.780E-004	0.70	
m	100.86	Y	37942	119771	1.55	203.49	1.921E-004	1.14	
m	103.31	Y	172122	95920	1.55	208.39	2.079E-004	0.68	
M	111.06	Y	63503	52455	1.36	223.87	2.561E-004	0.40	440.43
m	114.56	Y	51894	60001	1.37	230.87	2.766E-004	0.41	
m	116.60	Y	48389	61454	1.37	234.94	2.880E-004	0.42	
m	120.54	Y	12241	50844	1.38	242.82	3.089E-004	0.72	
m	122.83	Y	6273	53885	1.38	247.39	3.203E-004	1.17	
m	125.23	Y	24066	51420	1.39	252.19	3.318E-004	0.50	
m	129.26	Y	116757	45154	1.39	260.23	3.494E-004	0.37	
M	144.17	Y	7375	33455	1.14	290.04	3.995E-004	5.24	2.72
m	146.30	Y	6293	33566	1.14	294.29	4.047E-004	5.48	
m	148.54	Y	15823	33726	1.14	298.77	4.098E-004	4.67	
M	161.10	Y	6869	33933	1.26	323.87	4.301E-004	6.93	12.41
m	164.58	Y	6645	55957	1.26	330.82	4.336E-004	5.65	
m	169.39	Y	1223	58280	1.27	340.43	4.371E-004	12.66	
m	171.30	Y	5243	57709	1.27	344.24	4.380E-004	5.79	
	179.25	Y	2736	34145	1.21	360.14	4.400E-004	11.05	
	189.24	Y	3785	32544	1.25	380.11	4.384E-004	7.86	
	195.65	Y	4545	27547	1.18	392.90	4.356E-004	5.93	
M	203.50	Y	26399	22697	1.13	408.59	4.306E-004	0.79	33.98

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	207.96	Y	87484	22817	1.14	417.52	4.272E-004	0.47	
M	221.52		1031	20286	1.61	444.60	4.148E-004	36.78	0.66
m	225.36		1150	27329	1.62	452.27	4.109E-004	32.42	
M	237.94	Y	736	15893	1.61	477.41	3.976E-004	28.59	1.58
m	243.25	Y	1624	20442	1.62	488.02	3.918E-004	23.79	
m	248.93		479	19501	1.62	499.37	3.854E-004	30.98	
	255.28	Y	3743	15458	1.19	512.07	3.783E-004	5.61	
M	263.96	Y	1402	12471	1.31	529.42	3.687E-004	6.19	0.89
m	267.47	Y	3395	14627	1.31	536.43	3.649E-004	3.02	
	297.42	Y	2128	20427	1.19	596.27	3.335E-004	13.16	
M	311.75	Y	4530	10789	1.49	624.92	3.197E-004	2.23	11.91
m	316.14	Y	531	13450	1.50	633.69	3.156E-004	13.90	
m	320.89	Y	2976	11816	1.50	643.18	3.113E-004	2.99	
m	323.32	Y	3899	12411	1.51	648.04	3.092E-004	2.42	
M	332.66	Y	30106	8452	1.31	666.69	3.011E-004	0.68	18.23
m	335.61	Y	12083	7911	1.32	672.59	2.987E-004	1.06	
m	341.36	Y	3287	8280	1.32	684.09	2.939E-004	2.50	
m	344.93	Y	26598	7865	1.32	691.21	2.911E-004	0.71	
M	361.86	Y	577	6137	1.35	725.04	2.783E-004	11.26	16.60
m	366.93	Y	3985	5936	1.35	735.18	2.747E-004	2.83	
m	368.46	Y	7024	5229	1.35	738.24	2.737E-004	1.94	
m	370.82	Y	1127	5674	1.35	742.95	2.720E-004	6.02	
m	374.96	Y	71293	4312	1.36	751.23	2.692E-004	0.95	
m	380.05	Y	13744	3472	1.36	761.40	2.659E-004	1.32	
m	382.65	Y	11935	3218	1.37	766.59	2.641E-004	1.35	
M	392.83	Y	24224	3546	1.44	786.93	2.577E-004	0.72	8.29
m	399.34	Y	355	3296	1.45	799.94	2.538E-004	11.94	
M	413.63	Y	62859	2133	1.32	828.49	2.457E-004	0.50	18.42
m	419.10	Y	358	1502	1.32	839.43	2.428E-004	9.32	
m	422.48	Y	5028	1587	1.33	846.17	2.410E-004	1.53	
m	426.54	Y	1212	1363	1.33	854.30	2.389E-004	3.65	
m	430.00	Y	218	1468	1.33	861.22	2.372E-004	13.93	
M	445.72	Y	360	1062	1.32	892.61	2.297E-004	8.38	2.32
m	451.36	Y	7580	1072	1.32	903.89	2.271E-004	1.23	
	481.38	Y	146	671	1.10	963.89	2.147E-004	29.78	
	558.59		61	340	1.28	1118.17	1.898E-004	50.54	
	583.17	Y	65	319	1.12	1167.29	1.835E-004	46.12	
	597.58	Y	151	356	1.13	1196.09	1.801E-004	23.20	
	618.84	Y	715	317	1.49	1238.58	1.755E-004	5.81	
M	632.97	Y	106	173	1.51	1266.81	1.726E-004	13.76	4.41
m	639.79	Y	323	192	1.51	1280.43	1.712E-004	6.46	
m	645.80	Y	446	194	1.51	1292.45	1.701E-004	5.40	
m	652.48	Y	505	196	1.52	1305.79	1.688E-004	4.93	
m	658.70	Y	267	198	1.52	1318.22	1.677E-004	7.24	
m	662.27	Y	3239	203	1.53	1325.35	1.670E-004	1.83	
M	688.58	Y	310	179	1.73	1377.93	1.625E-004	17.52	1.21
m	696.18	Y	67	201	1.73	1393.11	1.612E-004	23.29	
m	703.56	Y	122	197	1.74	1407.86	1.600E-004	19.02	
M	717.54	Y	64	132	1.52	1435.80	1.579E-004	19.90	2.78
m	721.87	Y	1602	133	1.52	1444.44	1.573E-004	2.63	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	729.09		37	101	1.53	1458.89	1.562E-004	26.98	
	755.87	Y	139	82	1.86	1512.40	1.525E-004	13.52	
	769.17	Y	433	142	1.79	1538.98	1.507E-004	6.99	
	1173.41	Y	95	50	2.08	2346.76	1.132E-004	16.58	
	1332.73	Y	125	23	1.77	2665.13	1.020E-004	11.35	
M	2223.89		27	7	1.00	4445.93	5.044E-005	20.76	2.13
m	2234.78		191681	153	1.00	4467.68	4.994E-005	0.41	
	2293.69		57	36	1.72	4585.41	4.728E-005	22.80	
	2615.80		36	9	0.80	5229.08	3.451E-005	22.92	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.07 +/- 0.00

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	@ 1.000E+020 +/-	100.0%	@ 5.952E+015	
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 9.642E-002 +/-	1.2%	< 5.739E-006	< 1.523E-011
	Al-26	< 1.456E-001 +/-	8.2%	< 8.668E-006	< 7.659E-006
	K-40	< 1.125E+000 +/-	3.1%	< 6.698E-005	< 1.755E-001
X	Co-57				
	Co-60	2.458E-001 +/-	9.6%	1.463E-005	2.156E-010
	Se-75	< 1.790E+000 +/-	1.1%	< 1.065E-004	< 1.231E-010
	Kr-85	< 4.259E+001 +/-	2.5%	< 2.535E-003	< 1.073E-007
	Sr-90	< 1.357E-001 +/-	1.0%	< 8.078E-006	< 9.840E-010
	Sb-125	< 8.494E-001 +/-	1.5%	< 5.056E-005	< 8.171E-010
	Ba-133	< 5.736E-001 +/-	1.0%	< 3.414E-005	< 2.266E-009
	Cs-134	< 1.121E-001 +/-	1.0%	< 6.670E-006	< 8.550E-011
X	Cs-137				
	Eu-152	< 4.504E-001 +/-	2.1%	< 2.681E-005	< 2.531E-009
	Eu-154	< 2.539E-001 +/-	1.5%	< 1.511E-005	< 9.522E-010
	Ho-166m	< 1.441E-001 +/-	1.7%	< 8.580E-006	< 8.015E-008
	Bi-207	< 1.156E-001 +/-	1.2%	< 6.878E-006	< 2.103E-009
	Pb-210	< 1.587E+004 +/-	12.2%	< 9.445E-001	< 2.063E-004
	Ra-226	< 2.827E-001 +/-	1.5%	< 1.682E-005	< 2.827E-007
	Ac-227	< 2.438E+000 +/-	8.2%	< 1.451E-004	< 3.341E-008
	Th-230	< 1.209E+003 +/-	8.3%	< 7.195E-002	< 5.923E-002
	Pa-231	< 1.366E+001 +/-	11.2%	< 8.131E-004	< 2.855E-004
X	Th-232				
	U-232	9.678E-001 +/-	28.6%	5.760E-005	4.481E-008
	U-233	< 9.157E+003 +/-	1.6%	< 5.451E-001	< 9.340E-001
	Pa-234	< 4.928E-001 +/-	12.1%	< 2.933E-005	
	Pa-234m	< 6.926E+002 +/-	1.5%	< 4.123E-002	

	U-234	< 0.000E+000	+/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 7.867E-001	+/-	1.8%	< 4.683E-005	< 3.595E-001
	Np-237	5.618E+000	+/-	3.6%	3.344E-004	7.865E-003
	Pu-238	< 5.402E+004	+/-	1.6%	< 3.216E+000	< 3.123E-003
	U-238	< 1.004E+001	+/-	1.6%	< 5.976E-004	< 2.952E+001
	Pu-239	6.911E+006	+/-	1.7%	4.114E+002	1.099E+002
	Pu-239B	3.966E+006	+/-	0.6%	2.361E+002	6.306E+001
	U-239	@ 1.000E+020	+/-	100.0%	@ 5.952E+015	
X	Pu-240					
	Am-241	1.187E+006	+/-	2.4%	7.064E+001	3.418E-001
	Am-241B	4.907E+005	+/-	1.7%	2.921E+001	1.413E-001
	Pu-241	4.787E+006	+/-	5.0%	2.850E+002	4.605E-002
	Pu-241B	9.316E+006	+/-	1.6%	5.545E+002	8.962E-002
	Pu-242	< 0.000E+000	+/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 2.695E+000	+/-	1.2%	< 1.604E-004	< 1.334E-005
	Cm-243	< 2.809E+000	+/-	3.0%	< 1.672E-004	< 5.393E-008
	Cm-244	< 1.213E+005	+/-	14.1%	< 7.220E+000	< 1.480E-003
	Cm-245	< 4.849E+000	+/-	7.5%	< 2.886E-004	< 2.788E-005
	Cm-247	< 3.559E-001	+/-	8.4%	< 2.118E-005	< 3.808E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 4.279E-001 +/-	3.2%	< 2.547E-005	< 1.036E-007
Cf-251	< 2.728E+000 +/-	5.3%	< 1.624E-004	< 1.705E-006

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.10E+002 +- 1.89E+000	3.13E+001 +- 2.67E-001

Beta: 2.23E+002 +- 3.79E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.90E+001 +- 3.49E-001
203.55	3.86E+001 +- 5.53E-001
375.05	6.10E+001 +- 9.12E-001
413.71	6.25E+001 +- 8.59E-001

Sum of Segment NID Results
Category: Segmented

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********** Peak Analysis Results **********

No peak analysis results available for reporting purposes

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 4.481E-002 +/-	1.8%	< 2.667E-006	< 2.066E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 3.869E-002 +/-	2.3%	< 2.303E-006	< 6.113E-012
Al-26	< 7.270E-002 +/-	19.8%	< 4.327E-006	< 3.824E-006
K-40	< 4.336E-001 +/-	5.6%	< 2.581E-005	< 6.764E-002
Co-57	< 7.773E-001 +/-	4.6%	< 4.627E-005	< 9.095E-011
Co-60	< 6.066E-002 +/-	2.0%	< 3.611E-006	< 5.320E-011
Se-75	< 2.940E-001 +/-	1.9%	< 1.750E-005	< 2.023E-011
Kr-85	< 1.566E+001 +/-	3.1%	< 9.321E-004	< 3.946E-008
Sr-90	2.684E-001 +/-	44.4%	1.597E-005	1.946E-009
Sb-125	< 3.541E-001 +/-	2.3%	< 2.108E-005	< 3.407E-010
Ba-133	< 2.215E-001 +/-	1.7%	< 1.318E-005	< 8.749E-010
Cs-134	< 3.432E-002 +/-	1.8%	< 2.043E-006	< 2.619E-011
Cs-137	2.684E-001 +/-	44.4%	1.597E-005	3.059E-009
Eu-152	< 1.676E-001 +/-	3.7%	< 9.975E-006	< 9.418E-010
Eu-154	< 9.704E-002 +/-	2.5%	< 5.776E-006	< 3.639E-010
Ho-166m	< 6.524E-002 +/-	2.2%	< 3.883E-006	< 3.627E-008
Bi-207	< 3.994E-002 +/-	1.8%	< 2.377E-006	< 7.269E-010
Pb-210	< 3.349E+004 +/-	309.7%	< 1.993E+000	< 4.354E-004
Ra-226	< 1.133E-001 +/-	2.3%	< 6.746E-006	< 1.133E-007
Ac-227	< 1.030E+000 +/-	8.3%	< 6.134E-005	< 1.412E-008
Th-230	3.611E+001 +/-	51.6%	2.149E-003	1.769E-003
Pa-231	< 5.268E+000 +/-	11.2%	< 3.136E-004	< 1.101E-004
Th-232	< 1.306E-001 +/-	2.4%	< 7.774E-006	< 1.177E+000
U-232	< 1.921E-001 +/-	2.2%	< 1.144E-005	< 8.896E-009
U-233	< 4.000E+003 +/-	2.7%	< 2.381E-001	< 4.080E-001
Pa-234	< 1.813E-001 +/-	12.3%	< 1.079E-005	
Pa-234m	< 2.745E+002 +/-	2.3%	< 1.634E-002	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 3.444E-001 +/-	2.5%	< 2.050E-005	< 1.574E-001
Np-237	6.836E+000 +/-	4.9%	4.069E-004	9.570E-003
Pu-238	< 2.237E+004 +/-	2.6%	< 1.332E+000	< 1.293E-003
U-238	< 4.640E+000 +/-	2.4%	< 2.762E-004	< 1.364E+001
Pu-239	7.683E+006 +/-	1.7%	4.573E+002	1.222E+002
Pu-239B	5.079E+006 +/-	0.7%	3.023E+002	8.075E+001
U-239	< 2.720E+005 +/-	368.5%	< 1.619E+001	
Pu-240	2.401E+005 +/-	14.1%	1.429E+001	1.045E+000

Am-241	1.383E+006	+/-	2.4%	8.230E+001	3.982E-001
Am-241B	8.121E+005	+/-	2.1%	4.834E+001	2.339E-001
Pu-241	7.797E+006	+/-	5.1%	4.641E+002	7.501E-002
Pu-241B	1.403E+007	+/-	1.5%	8.353E+002	1.350E-001
Pu-242	< 0.000E+000	+/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 9.736E-001	+/-	2.2%	< 5.795E-005	< 4.819E-006
Cm-243	< 1.084E+000	+/-	3.3%	< 6.450E-005	< 2.080E-008
Cm-244	< 5.019E+004	+/-	14.2%	< 2.987E+000	< 6.123E-004
Cm-245	< 2.098E+000	+/-	7.7%	< 1.249E-004	< 1.206E-005
Cm-247	< 1.516E-001	+/-	8.5%	< 9.026E-006	< 1.623E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.781E-001 +/-	3.5%	< 1.060E-005	< 4.311E-008
Cf-251	< 1.197E+000 +/-	5.6%	< 7.124E-005	< 7.480E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model:

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.22E+002 +- 2.02E+000	0.00E+000 +- 0.00E+000

Beta: 0.00E+000 +- 0.00E+000 Alpha: 0.00E+000 +- 0.00E+000
Number of energy lines used in correction: 0

Energy	Mass (g)

********** Radioassay Data Sheet **********

Engine Version: TMU Gamma 1.5

Assay Instrument:	SGS with Trans.	Location:	LLNL
Analysis Method:	LLNL SGS Operating Procedure	Software Version:	NDA 2000 V.4.0
Item ID:	LL85234374	Analysis Date:	12/23/2008

NID identified fiducial nuclide Pu-239
Source of isotopics: MEASURED

211

Net Weight	68000.0 g		
Pu mass	2.73E+001 +-	5.70E+000	g
TRU Alpha Activity	4.52E+000 +-	5.67E-001	Ci
TRU Activity Concentration	6.64E+004 +-	8.34E+003	nCi/g
Pu-239 Equivalent Activity	4.43E+000 +-	5.43E-001	Ci
Pu-239 FGE	2.53E+001 +-	5.68E+000	g
Decay heat	1.46E-001 +-	1.83E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	2.19E-007
U233	<LLD	<LLD	0.00E+000	8.95E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	6.90E-007
NP237	4.88E-003	3.48E-006	8.33E-007	9.76E-007
PU238	1.00E-001	1.74E+000	3.94E-001	1.25E-002
U238	5.51E+001	1.87E-005	6.19E-006	1.46E-005
PU239	2.52E+001	1.58E+000	3.57E-001	1.14E-002
PU240	2.00E+000	4.60E-001	1.05E-001	3.32E-003
AM241	2.12E-001	7.36E-001	1.67E-001	1.77E-004
PU241	3.43E-002	3.56E+000	8.25E-001	2.57E-002
PU242	1.67E-002	6.61E-005	1.66E-005	0.00E+000

Errors quoted at 1.000 sigma

Operator: _____ Date: _____

Expert Analysis
ITR: Robert J Haslitt Jr Date: 2-3-09

NDA 2000 Assay Report

Item Information

Item ID:	LL85234374	Count Sequence Number:	211
Operator:	RHWM2\RHWM		
Assay Start:	12/23/2008 1:33:04 PM		
Description 1:	LL85234374		
Description 2:			
Location:	LLNL		
Comment:			
Matrix Type:	Lucite		
Container Type:	55 Gal Galv 23.8		
Weight:	Gross: 91.8 kg	Net:	68.0 kg
Container:	Volume: 208.0 l	Full:	100.0 %
Density:	0.330 kg /l		

System Configuration

Counter:	SGS with Trans.		
Segments:	Number: 16	Offset:	0
Scanning Platform:	Start: 934 mm	Delta:	-51 mm
Count Type:	Assay - 55 Gal Galv 23.8		
Collimator/Geometry Setting:	Default - 0		
Transmission Mode:	Two Pass		
Transmission Correction Type:	Standard		
Transmission Source:	Se-75 Trans. - 0		

Errors quoted at 1.000 sigma

Segment 1 Results

Segment: 1 Detector: DET01 Position: 1
C:\Canberra\NDA2k\Data\00000211_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P001_S001

Acquisition Start: 12/23/2008 1:35:06 PM
Elapsed Live Time: 109.17 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.041 +/- 0.0018
SE-75	264.66	0.102 +/- 0.0021
SE-75	279.54	0.108 +/- 0.0032
SE-75	400.66	0.143 +/- 0.0053

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:15:21 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	49.44		5200	19683	2.20	100.75	4.310E-007	4.90	
	59.42	Y	149651	17994	1.13	120.67	2.927E-006	1.18	
M	94.69		2460	6923	1.54	191.17	5.359E-005	4.12	49.78
m	98.99	Y	20530	10607	1.55	199.75	6.298E-005	2.34	
m	102.99	Y	15303	8528	1.56	207.74	7.177E-005	2.33	
M	110.98		1951	5069	1.58	223.72	8.888E-005	3.54	4.89
m	114.34	Y	1592	8056	1.59	230.42	9.569E-005	4.63	
m	116.37	Y	1520	7013	1.59	234.49	9.968E-005	4.79	
M	122.93	Y	850	2471	1.05	247.59	1.117E-004	6.04	2.80
m	125.24	Y	3899	3379	1.05	252.21	1.156E-004	2.24	
m	129.24	Y	4348	2703	1.06	260.21	1.220E-004	2.10	
M	146.52	Y	647	2168	1.02	294.74	1.468E-004	13.25	2.03
m	148.65	Y	342	2643	1.02	298.98	1.494E-004	15.06	
m	152.70	Y	1100	2515	1.03	307.09	1.539E-004	12.03	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
M	203.50	Y	780	1459	1.15	408.59	1.733E-004	5.12	2.18
m	207.96	Y	2848	1299	1.16	417.52	1.728E-004	2.43	
	311.82	Y	230	597	1.33	625.05	1.369E-004	19.25	
	322.35	Y	441	593	2.26	646.10	1.330E-004	10.86	
M	332.65	Y	1058	506	1.38	666.68	1.293E-004	8.16	0.73
m	335.44	Y	932	471	1.38	672.26	1.283E-004	7.96	
m	341.10	Y	169	441	1.39	683.56	1.264E-004	14.37	
m	344.95		902	416	1.39	691.25	1.251E-004	7.93	
M	368.42	Y	528	335	1.35	738.15	1.176E-004	7.20	7.06
m	374.98	Y	2631	309	1.36	751.26	1.156E-004	5.37	
m	379.99		501	285	1.36	761.29	1.142E-004	7.34	
m	382.65		440	278	1.37	766.59	1.134E-004	7.58	
	392.83		860	243	1.44	786.94	1.106E-004	4.88	
	413.64	Y	2430	188	1.40	828.51	1.055E-004	2.62	
M	422.39		130	147	1.03	846.00	1.035E-004	12.18	1.60
m	426.70	Y	49	112	1.04	854.61	1.026E-004	22.97	
	451.44		301	122	1.32	904.05	9.761E-005	8.75	
	618.73	Y	43	41	1.26	1238.36	7.629E-005	31.22	
	662.31	Y	346	28	1.48	1325.43	7.296E-005	6.43	
	721.70	Y	164	22	1.68	1444.11	6.929E-005	9.72	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.12 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	8.65E+000 +- 4.31E-001	2.70E+000 +- 6.56E-002

Beta: 1.95E+002 +- 9.89E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	2.02E+000 +- 8.00E-002
203.55	2.83E+000 +- 1.58E-001
375.05	5.24E+000 +- 3.04E-001
413.71	5.63E+000 +- 2.01E-001

Segment 2 Results

Segment: 2 Detector: DET01 Position: 2
C:\Canberra\NDA2k\Data\00000211_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P002_S002

Acquisition Start: 12/23/2008 1:39:17 PM
Elapsed Live Time: 107.50 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.030 +/- 0.0018
SE-75	264.66	0.059 +/- 0.0016
SE-75	279.54	0.056 +/- 0.0026
SE-75	400.66	0.075 +/- 0.0045

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

*** Spectrum Validity Test warnings ***
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 2/2/2009 5:15:24 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	49.35		4839	19727	2.17	100.56	2.950E-005	5.19	
	59.42	Y	169178	21401	1.13	120.68	4.757E-005	1.18	
M	94.71		2944	8329	1.56	191.21	1.082E-004	3.89	54.74
m	99.00	Y	24227	12642	1.57	199.77	1.141E-004	2.24	
m	102.97	Y	18049	9989	1.58	207.71	1.192E-004	2.23	
M	110.96		1720	5249	1.44	223.68	1.285E-004	4.21	5.30
m	114.70	Y	1208	9173	1.44	231.15	1.325E-004	6.09	
M	122.95	Y	883	3506	1.05	247.63	1.401E-004	6.29	4.51
m	125.25	Y	4619	4013	1.06	252.22	1.421E-004	2.12	
m	129.27	Y	4768	3100	1.06	260.27	1.452E-004	2.06	
M	146.40	Y	676	2651	1.15	294.50	1.573E-004	12.72	2.06

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	148.68	Y	295	2869	1.15	299.06	1.588E-004	17.64	
m	152.72	Y	1345	2673	1.16	307.12	1.610E-004	11.03	
	169.43	Y	141	2304	0.95	340.52	1.681E-004	57.50	
M	203.53	Y	885	1613	1.16	408.66	1.735E-004	6.83	1.35
m	207.95	Y	3289	1516	1.17	417.49	1.735E-004	5.10	
	311.75	Y	242	729	1.35	624.91	1.531E-004	20.84	
	322.31	Y	502	680	2.34	646.02	1.507E-004	10.15	
M	332.62	Y	1316	619	1.33	666.62	1.483E-004	8.35	1.45
m	335.40	Y	1060	650	1.33	672.17	1.477E-004	8.23	
	344.91		912	567	1.35	691.17	1.455E-004	5.83	
	368.44	Y	703	512	1.53	738.19	1.400E-004	7.08	
M	375.00	Y	2911	532	1.31	751.31	1.385E-004	2.29	8.68
m	380.08		568	368	1.32	761.45	1.373E-004	5.19	
m	382.71		476	323	1.32	766.71	1.367E-004	5.66	
	392.87		974	334	1.37	787.01	1.344E-004	4.89	
	413.64	Y	2635	230	1.48	828.53	1.303E-004	2.58	
M	422.43		201	203	1.04	846.07	1.287E-004	10.11	2.20
m	426.36	Y	56	157	1.04	853.94	1.280E-004	22.22	
	451.37		303	151	1.40	903.90	1.238E-004	9.50	
	583.02		45	46	1.60	1166.98	1.052E-004	30.14	
	618.56	Y	85	53	1.89	1238.01	1.012E-004	19.11	
	652.74	Y	63	40	1.82	1306.32	9.771E-005	22.24	
	662.13	Y	448	55	1.43	1325.08	9.681E-005	6.01	
	688.64	Y	60	15	1.98	1378.05	9.439E-005	17.38	
	721.76	Y	232	27	1.71	1444.23	9.160E-005	8.17	
	766.17	Y	37	25	0.85	1532.97	8.824E-005	29.11	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.14 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	7.86E+000 +- 3.25E-001	2.79E+000 +- 6.20E-002

Beta: 1.86E+002 +- 9.11E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.86E+000 +- 7.67E-002
203.55	3.21E+000 +- 2.30E-001
375.05	4.84E+000 +- 1.56E-001
413.71	4.94E+000 +- 1.81E-001

Segment 3 Results

Segment: 3 Detector: DET01 Position: 3
C:\Canberra\NDA2k\Data\00000211_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P003_S003

Acquisition Start: 12/23/2008 1:43:29 PM
Elapsed Live Time: 111.26 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.072 +/- 0.0021
SE-75	264.66	0.137 +/- 0.0025
SE-75	279.54	0.147 +/- 0.0036
SE-75	400.66	0.183 +/- 0.0059

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

*** Spectrum Validity Test warnings ***
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 2/2/2009 5:15:27 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	49.33		3285	15056	1.91	100.51	2.922E-005	6.33	
	59.43	Y	117852	16042	1.12	120.71	4.987E-005	1.18	
M	94.80		2129	6263	1.48	191.39	1.329E-004	4.31	50.32
m	99.01	Y	16070	8656	1.49	199.79	1.418E-004	2.48	
m	102.98	Y	12518	7166	1.50	207.73	1.498E-004	2.46	
M	111.02		1214	3398	1.38	223.79	1.646E-004	4.69	3.83
m	114.52	Y	921	5994	1.38	230.79	1.705E-004	6.29	
M	122.94	Y	632	2016	1.05	247.61	1.833E-004	7.08	3.13
m	125.27	Y	3443	2726	1.06	252.28	1.865E-004	2.29	
m	129.32	Y	3297	2127	1.06	260.37	1.917E-004	2.29	
	146.49	Y	445	2133	1.04	294.67	2.121E-004	17.46	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	152.71	Y	744	1590	1.11	307.11	2.183E-004	9.28	
	171.67		142	1518	0.51	345.00	2.319E-004	45.15	
M	203.54	Y	552	1033	1.14	408.67	2.406E-004	8.76	1.17
m	207.98	Y	2210	922	1.15	417.55	2.407E-004	6.31	
	311.99	Y	237	533	1.23	625.39	2.153E-004	17.91	
M	332.63	Y	863	431	1.39	666.64	2.071E-004	9.95	0.94
m	335.42	Y	764	464	1.39	672.20	2.061E-004	9.62	
	344.97		584	411	1.19	691.29	2.023E-004	7.31	
M	368.47	Y	400	311	1.32	738.25	1.933E-004	6.15	4.72
m	375.02	Y	1881	288	1.33	751.35	1.908E-004	2.63	
m	380.08		384	208	1.33	761.45	1.890E-004	5.98	
m	382.72		312	194	1.33	766.74	1.880E-004	6.70	
	392.85		587	216	1.49	786.98	1.843E-004	6.16	
	413.67	Y	1725	153	1.46	828.57	1.774E-004	3.02	
M	422.60		104	101	1.09	846.42	1.747E-004	13.05	0.69
m	426.64	Y	61	87	1.10	854.51	1.735E-004	17.50	
	451.35		227	92	1.15	903.88	1.663E-004	9.91	
	618.78	Y	60	29	1.21	1238.45	1.303E-004	20.90	
	652.41	Y	42	25	1.39	1305.66	1.251E-004	25.95	
	662.27	Y	335	29	1.37	1325.35	1.237E-004	6.50	
	721.90	Y	162	24	1.38	1444.51	1.160E-004	9.75	
	766.43	Y	23	18	0.90	1533.49	1.112E-004	36.80	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.10 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	3.55E+000 +- 1.48E-001	1.44E+000 +- 3.21E-002

Beta: 1.68E+002 +- 9.37E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	9.76E-001 +- 4.11E-002
203.55	1.44E+000 +- 1.31E-001
375.05	2.27E+000 +- 7.32E-002
413.71	2.37E+000 +- 8.69E-002

Segment 4 Results

Segment: 4 Detector: DET01 Position: 4
C:\Canberra\NDA2k\Data\00000211_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P004_S004

Acquisition Start: 12/23/2008 1:47:41 PM
Elapsed Live Time: 114.80 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.030 +/- 0.0014
SE-75	264.66	0.100 +/- 0.0019
SE-75	279.54	0.107 +/- 0.0028
SE-75	400.66	0.168 +/- 0.0052

Errors quoted at 1.000 sigma

Peak Analysis Results

*** Spectrum Validity Test warnings ***
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 2/2/2009 5:15:30 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.48	Y	65342	9582	1.10	120.80	2.238E-006	1.20	
M	94.73		1637	3818	1.70	191.25	6.097E-005	5.19	27.37
m	98.97	Y	9079	5078	1.71	199.72	7.303E-005	3.32	
m	103.10	Y	5521	3467	1.72	207.96	8.504E-005	3.37	
	111.23		377	2844	1.40	224.21	1.086E-004	23.19	
M	123.01	Y	265	1386	1.03	247.75	1.401E-004	11.60	5.53
m	125.30	Y	1347	1643	1.03	252.32	1.457E-004	3.44	
m	129.33	Y	3143	1314	1.04	260.39	1.549E-004	2.24	
M	146.49	Y	226	1179	1.12	294.67	1.936E-004	11.78	1.74
m	148.64	Y	194	1276	1.12	298.97	1.980E-004	13.18	
m	152.77	Y	595	1075	1.13	307.22	2.058E-004	5.87	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	171.29		178	923	0.64	344.24	2.308E-004	27.37	
M	203.50	Y	517	507	1.09	408.61	2.448E-004	5.71	1.20
m	207.97	Y	1293	661	1.10	417.53	2.447E-004	3.34	
	311.81	Y	203	315	1.18	625.03	2.043E-004	15.64	
M	332.76	Y	558	252	1.26	666.89	1.954E-004	9.23	0.94
m	335.67	Y	299	229	1.27	672.72	1.942E-004	10.39	
m	341.41	Y	74	212	1.27	684.18	1.918E-004	19.70	
m	344.92		537	216	1.28	691.19	1.904E-004	9.10	
M	368.50	Y	255	159	1.37	738.31	1.811E-004	8.91	2.72
m	375.02	Y	1404	146	1.38	751.34	1.786E-004	5.84	
m	380.09		242	134	1.38	761.47	1.768E-004	9.09	
m	382.72		219	130	1.39	766.73	1.758E-004	9.33	
	392.87		443	100	1.36	787.00	1.722E-004	6.25	
	413.67	Y	1263	81	1.42	828.57	1.649E-004	3.30	
	422.76		36	115	1.31	846.74	1.618E-004	51.97	
	451.36		124	73	1.35	903.89	1.531E-004	14.48	
	619.19	Y	33	20	1.25	1239.27	1.209E-004	28.75	
	662.32	Y	133	17	1.40	1325.46	1.159E-004	10.34	
	722.09	Y	64	14	1.34	1444.89	1.103E-004	15.94	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.05 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	2.29E+000 +- 1.21E-001	1.39E+000 +- 3.33E-002

Beta: 9.15E+001 +- 1.00E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.15E+000 +- 4.54E-002
203.55	1.33E+000 +- 8.06E-002
375.05	1.81E+000 +- 1.12E-001
413.71	1.87E+000 +- 7.43E-002

Segment 5 Results

Segment: 5 Detector: DET01 Position: 5
C:\Canberra\NDA2k\Data\00000211_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P005_S005

Acquisition Start: 12/23/2008 1:51:52 PM
Elapsed Live Time: 115.81 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.001 +/- 0.0003
SE-75	264.66	0.039 +/- 0.0011
SE-75	279.54	0.046 +/- 0.0019
SE-75	400.66	0.097 +/- 0.0039

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

*** Spectrum Validity Test warnings ***
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 2/2/2009 5:15:33 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	49.75		1664	6886	0.50	101.36	1.764E-005	7.97	
	59.49	Y	52095	6734	1.08	120.82	2.546E-005	1.21	
	74.95	Y	140	1266	0.94	151.72	3.878E-005	38.77	
M	94.77		1665	2965	2.07	191.31	5.455E-005	6.18	18.63
m	99.08	Y	8731	3837	2.06	199.94	5.755E-005	4.26	
m	103.26	Y	3434	2700	2.07	208.30	6.028E-005	4.42	
	111.24		698	1957	1.33	224.23	6.499E-005	10.47	
M	125.32	Y	781	1154	1.03	252.38	7.168E-005	4.59	3.15
m	129.33	Y	3782	1050	1.04	260.39	7.322E-005	2.04	
M	144.14		177	863	1.08	289.99	1.051E-004	12.86	0.94
m	146.37	Y	186	851	1.09	294.44	1.097E-004	12.17	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	148.61	Y	252	931	1.09	298.92	1.137E-004	9.45	
m	152.75	Y	916	808	1.10	307.19	1.202E-004	4.13	
	171.38		137	742	1.07	344.41	1.403E-004	31.54	
M	203.53	Y	526	464	1.09	408.66	1.569E-004	5.36	0.90
m	208.01	Y	1169	472	1.09	417.61	1.581E-004	3.42	
	311.92	Y	156	277	1.49	625.26	1.620E-004	18.59	
M	332.76	Y	555	205	1.29	666.89	1.600E-004	4.66	1.05
m	335.65	Y	227	186	1.29	672.67	1.597E-004	7.48	
	344.97		525	225	1.39	691.29	1.584E-004	6.40	
M	375.00	Y	1427	113	1.34	751.31	1.536E-004	5.66	1.29
m	380.06		252	94	1.34	761.41	1.527E-004	8.59	
m	382.65		222	89	1.34	766.60	1.522E-004	8.91	
	392.84		517	99	1.36	786.95	1.503E-004	5.60	
	413.68	Y	1249	72	1.48	828.60	1.458E-004	3.27	
	422.62		98	54	1.20	846.46	1.438E-004	15.64	
	451.45		150	39	1.28	904.07	1.376E-004	10.61	
	662.20	Y	66	14	1.60	1325.22	1.054E-004	15.61	
	722.08	Y	25	9	1.31	1444.86	9.954E-005	27.64	
	766.44	Y	13	13	0.92	1533.51	9.583E-005	50.55	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.04 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 16:
Beta is too small (negative or less than lower limit)

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	- correction not done -	2.17E+000 +- 5.87E-002

Beta: -4.80E+001 +- 1.55E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in attempted correction: 4

Energy	Mass (g)

Segment 6 Results

Segment: 6 Detector: DET01 Position: 6
C:\Canberra\NDA2k\Data\00000211_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P006_S006

Acquisition Start: 12/23/2008 1:56:03 PM
Elapsed Live Time: 116.87 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.009 +/- 0.0009
SE-75	264.66	0.067 +/- 0.0015
SE-75	279.54	0.073 +/- 0.0022
SE-75	400.66	0.119 +/- 0.0042

Errors quoted at 1.000 sigma

Peak Analysis Results

*** Spectrum Validity Test warnings ***
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 2/2/2009 5:15:37 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.49	Y	38445	4611	1.08	120.81	7.827E-007	1.24	
	74.95		153	883	0.97	151.72	9.255E-006	29.79	
M	94.74		1145	1834	2.05	191.27	4.300E-005	6.72	14.79
m	99.20	Y	6139	2393	2.05	200.18	5.319E-005	4.66	
m	103.10	Y	2399	1695	2.04	207.98	6.240E-005	4.77	
M	111.03		976	1120	1.86	223.82	8.108E-005	4.01	12.92
m	114.97	Y	835	1833	1.87	231.69	9.006E-005	5.29	
M	125.30	Y	540	822	1.09	252.34	1.115E-004	7.45	1.96
m	129.32	Y	2572	651	1.10	260.36	1.188E-004	5.05	
M	144.21		144	577	1.06	290.12	1.522E-004	15.68	3.28
m	148.63	Y	193	542	1.06	298.95	1.622E-004	12.14	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	152.75	Y	739	505	1.07	307.18	1.705E-004	6.21	
M	203.54	Y	381	383	1.14	408.68	2.138E-004	6.23	1.50
m	208.02	Y	859	440	1.14	417.63	2.143E-004	3.90	
	311.73	Y	127	168	1.15	624.87	1.910E-004	18.16	
M	332.78	Y	400	147	1.42	666.94	1.850E-004	5.32	1.58
m	335.75	Y	183	165	1.42	672.87	1.843E-004	8.17	
	344.93		306	158	1.10	691.21	1.817E-004	8.73	
	368.42	Y	142	117	1.10	738.15	1.754E-004	14.82	
M	375.02	Y	799	97	1.28	751.35	1.737E-004	3.76	1.38
m	380.09		154	79	1.28	761.48	1.725E-004	8.53	
m	382.70		145	70	1.29	766.70	1.718E-004	8.79	
	392.86		294	91	1.56	786.98	1.693E-004	8.01	
	413.72	Y	819	47	1.39	828.68	1.642E-004	3.94	
	451.49		93	23	1.21	904.15	1.560E-004	13.19	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.03 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 16:
Beta is too small (negative or less than lower limit)

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	- correction not done -	1.14E+000 +- 2.99E-002

Beta: -1.35E+001 +- 1.38E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in attempted correction: 4

Energy	Mass (g)

Segment 7 Results

Segment: 7 Detector: DET01 Position: 7
C:\Canberra\NDA2k\Data\00000211_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P007_S007

Acquisition Start: 12/23/2008 2:00:15 PM
Elapsed Live Time: 117.87 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.003 +/- 0.0007
SE-75	264.66	0.039 +/- 0.0010
SE-75	279.54	0.046 +/- 0.0017
SE-75	400.66	0.100 +/- 0.0037

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:15:40 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.51	Y	23658	3093	1.07	120.87	1.170E-006	1.32	
M	94.69		612	1116	1.96	191.17	3.597E-005	8.97	8.13
m	99.08	Y	2960	1496	1.97	199.93	4.372E-005	6.04	
m	103.16	Y	1304	1160	1.97	208.10	5.119E-005	6.22	
	111.25		255	808	1.66	224.26	6.606E-005	17.61	
M	125.31	Y	320	501	1.03	252.36	8.986E-005	7.08	2.00
m	129.33	Y	1447	474	1.04	260.39	9.582E-005	3.02	
M	148.53	Y	61	365	1.05	298.75	1.386E-004	26.16	2.50
m	152.84	Y	233	443	1.05	307.37	1.470E-004	9.51	
M	203.52	Y	210	252	1.29	408.64	1.871E-004	13.11	1.35
m	208.05	Y	617	204	1.29	417.69	1.873E-004	10.43	
	311.99	Y	70	100	1.00	625.40	1.641E-004	24.38	
M	332.72	Y	229	104	1.38	666.82	1.589E-004	18.64	0.40
m	335.69	Y	123	92	1.38	672.76	1.581E-004	19.61	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	344.85		214	90	1.37	691.06	1.557E-004	9.65	
M	375.01	Y	504	66	1.27	751.32	1.477E-004	4.65	1.13
m	380.17		88	57	1.27	761.64	1.464E-004	11.48	
m	382.93		74	49	1.27	767.15	1.457E-004	12.90	
	392.86		210	51	1.66	786.98	1.433E-004	8.92	
	413.73	Y	487	33	1.49	828.71	1.378E-004	5.05	
	422.63		42	21	1.42	846.47	1.355E-004	22.82	
	451.51		56	10	1.24	904.19	1.288E-004	15.77	
	662.63	Y	25	11	1.22	1326.07	1.022E-004	28.73	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.02 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 16:
Beta is too small (negative or less than lower limit)

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	- correction not done -	8.19E-001 +- 2.55E-002

Beta: -6.18E+000 +- 1.40E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in attempted correction: 4

Energy	Mass (g)

Segment 8 Results

Segment: 8 Detector: DET01 Position: 8
C:\Canberra\NDA2k\Data\00000211_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P008_S008

Acquisition Start: 12/23/2008 2:04:26 PM
Elapsed Live Time: 118.46 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.145 +/- 0.0027
SE-75	264.66	0.243 +/- 0.0039
SE-75	279.54	0.254 +/- 0.0048
SE-75	400.66	0.320 +/- 0.0076

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:15:42 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.50	Y	12114	1781	1.07	120.85	6.404E-005	1.51	
M	94.69		278	739	1.80	191.17	1.652E-004	13.76	4.36
m	98.91	Y	1487	1104	1.81	199.60	1.754E-004	8.85	
m	103.12	Y	671	880	1.82	208.01	1.849E-004	9.36	
	111.25		179	517	1.63	224.26	2.016E-004	19.92	
M	125.29	Y	208	369	1.05	252.30	2.249E-004	8.91	2.31
m	129.34	Y	775	380	1.05	260.41	2.304E-004	4.11	
	152.85	Y	52	340	0.95	307.39	2.580E-004	54.11	
M	203.62	Y	132	192	1.05	408.83	2.795E-004	11.07	1.23
m	208.07	Y	307	213	1.06	417.73	2.795E-004	6.92	
	311.91	Y	62	100	1.06	625.23	2.502E-004	28.59	
	332.61	Y	73	128	1.21	666.60	2.419E-004	26.22	
	345.07		108	74	1.13	691.49	2.369E-004	15.94	
M	375.03	Y	367	52	1.21	751.36	2.249E-004	5.52	1.28

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	380.28		79	38	1.22	761.85	2.228E-004	11.85	
m	382.71		51	33	1.22	766.71	2.219E-004	15.39	
	392.83		115	33	1.40	786.92	2.180E-004	12.35	
	413.73	Y	316	20	1.49	828.70	2.100E-004	6.17	
	451.45		36	18	1.65	904.07	1.964E-004	24.90	
	662.02	Y	21	8	1.26	1324.85	1.443E-004	30.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	5.18E-001 +- 3.58E-002	2.47E-001 +- 8.42E-003

Beta: 1.28E+002 +- 1.32E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.91E-001 +- 1.03E-002
203.55	2.97E-001 +- 3.36E-002
375.05	3.77E-001 +- 2.19E-002
413.71	3.67E-001 +- 2.38E-002

Segment 9 Results

Segment: 9 Detector: DET01 Position: 9
C:\Canberra\NDA2k\Data\00000211_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P009_S009

Acquisition Start: 12/23/2008 2:08:37 PM
Elapsed Live Time: 118.73 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.049 +/- 0.0014
SE-75	264.66	0.130 +/- 0.0023
SE-75	279.54	0.145 +/- 0.0032
SE-75	400.66	0.203 +/- 0.0056

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:15:45 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.52	Y	7648	1105	1.10	120.89	6.496E-006	1.70	
M	94.57		243	475	1.51	190.92	8.608E-005	13.80	2.52
m	98.74	Y	805	727	1.52	199.25	9.806E-005	9.69	
m	103.22	Y	425	657	1.53	208.22	1.105E-004	10.45	
	111.25		142	399	1.74	224.26	1.311E-004	22.05	
M	125.31	Y	125	296	1.05	252.35	1.605E-004	12.28	1.21
m	129.35	Y	611	301	1.06	260.43	1.673E-004	4.64	
M	203.52	Y	108	147	1.11	408.65	2.297E-004	11.68	1.79
m	207.99	Y	268	178	1.12	417.58	2.298E-004	7.16	
	332.77	Y	78	111	1.40	666.92	2.062E-004	24.07	
	344.89		102	53	1.20	691.13	2.030E-004	14.56	
M	375.09	Y	257	37	1.07	751.48	1.952E-004	14.45	0.78
m	380.07		46	25	1.08	761.44	1.939E-004	20.57	
m	382.69		56	21	1.08	766.68	1.932E-004	18.87	

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
392.80		104	25	1.02	786.87	1.907E-004	12.53	
413.63	Y	285	21	1.59	828.49	1.856E-004	6.50	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	4.68E-001 +- 4.38E-002	2.48E-001 +- 1.04E-002

Beta: 1.05E+002 +- 1.63E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	2.07E-001 +- 1.25E-002
203.55	2.95E-001 +- 3.59E-002
375.05	3.04E-001 +- 4.43E-002
413.71	3.75E-001 +- 2.57E-002

Segment 10 Results

Segment: 10 Detector: DET01 Position: 10
C:\Canberra\NDA2k\Data\00000211_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P010_S010

Acquisition Start: 12/23/2008 2:12:49 PM
Elapsed Live Time: 118.90 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.083 +/- 0.0018
SE-75	264.66	0.159 +/- 0.0027
SE-75	279.54	0.165 +/- 0.0034
SE-75	400.66	0.220 +/- 0.0059

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:15:48 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.49	Y	4721	778	1.04	120.83	3.481E-006	2.01	
M	98.80	Y	365	504	1.26	199.38	9.163E-005	6.54	1.80
m	103.11	Y	194	562	1.27	207.99	1.077E-004	9.82	
	129.34	Y	429	262	1.14	260.41	2.015E-004	7.34	
M	203.34	Y	94	133	1.21	408.28	3.063E-004	12.63	1.53
m	208.07	Y	187	162	1.22	417.74	3.056E-004	8.25	
	332.76	Y	83	44	1.37	666.89	2.247E-004	15.52	
	345.01		70	54	1.18	691.38	2.169E-004	20.02	
M	375.05	Y	189	35	1.15	751.40	1.996E-004	7.41	1.30
m	380.24		33	30	1.16	761.77	1.968E-004	19.98	
m	382.73		41	27	1.16	766.74	1.955E-004	17.13	
	392.83		78	18	1.17	786.93	1.904E-004	13.77	
	413.69	Y	227	19	1.77	828.61	1.807E-004	7.38	
	422.54		27	12	1.01	846.31	1.768E-004	27.65	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	3.61E-001 +- 3.30E-002	1.68E-001 +- 7.68E-003

Beta: 1.41E+002 +- 1.90E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.21E-001 +- 9.98E-003
203.55	1.94E-001 +- 2.53E-002
375.05	2.18E-001 +- 1.68E-002
413.71	3.07E-001 +- 2.37E-002

Segment 11 Results

Segment: 11 Detector: DET01 Position: 11
C:\Canberra\NDA2k\Data\00000211_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P011_S011

Acquisition Start: 12/23/2008 2:17:00 PM
Elapsed Live Time: 119.04 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.110 +/- 0.0022
SE-75	264.66	0.188 +/- 0.0031
SE-75	279.54	0.193 +/- 0.0039
SE-75	400.66	0.246 +/- 0.0063

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:15:51 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.57	Y	3208	511	1.08	120.98	3.941E-006	2.31	
	98.86		230	456	1.26	199.50	1.098E-004	15.17	
M	125.31	Y	75	185	0.99	252.34	2.103E-004	15.36	0.98
m	129.36	Y	337	178	0.99	260.44	2.225E-004	6.49	
	208.14	Y	129	124	1.22	417.86	3.017E-004	15.09	
	332.74		48	63	0.75	666.85	2.282E-004	29.66	
	374.96	Y	169	28	1.60	751.22	2.076E-004	9.18	
	413.73	Y	140	16	1.60	828.70	1.921E-004	9.64	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	2.63E-001 +- 2.83E-002	1.05E-001 +- 5.56E-003

Beta: 1.44E+002 +- 1.91E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 3

Energy	Mass (g)
129.30	8.60E-002 +- 6.22E-003
375.05	1.87E-001 +- 1.76E-002
413.71	1.78E-001 +- 1.76E-002

Segment 12 Results

Segment: 12 Detector: DET01 Position: 12
C:\Canberra\NDA2k\Data\00000211_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P012_S012

Acquisition Start: 12/23/2008 2:21:11 PM
Elapsed Live Time: 119.19 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.223 +/- 0.0038
SE-75	264.66	0.310 +/- 0.0048
SE-75	279.54	0.320 +/- 0.0057
SE-75	400.66	0.362 +/- 0.0082

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:15:55 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.54	Y	1305	341	1.03	120.91	1.711E-004	3.63	
99.00		93	235	1.11	199.77	2.163E-004	25.77	
129.41	Y	123	175	1.18	260.54	2.632E-004	18.32	
208.06	Y	20	75	0.68	417.71	3.112E-004	64.51	
375.09	Y	65	17	1.16	751.48	2.472E-004	15.75	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	9.33E-002 +- 2.44E-002	3.37E-002 +- 4.41E-003

Beta: 1.62E+002 +- 4.84E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 2

Energy	Mass (g)
129.30	2.66E-002 +- 4.96E-003
375.05	6.05E-002 +- 9.62E-003

Segment 13 Results

Segment: 13 Detector: DET01 Position: 13
C:\Canberra\NDA2k\Data\00000211_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P013_S013

Acquisition Start: 12/23/2008 2:25:23 PM
Elapsed Live Time: 119.22 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.156 +/- 0.0029
SE-75	264.66	0.247 +/- 0.0039
SE-75	279.54	0.259 +/- 0.0048
SE-75	400.66	0.288 +/- 0.0070

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:15:58 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.43	Y	404	211	1.20	120.70	1.256E-004	7.42	
129.27	Y	37	117	0.74	260.27	2.369E-004	44.82	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 14 Results

Segment: 14 Detector: DET01 Position: 14
C:\Canberra\NDA2k\Data\00000211_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P014_S014

Acquisition Start: 12/23/2008 2:29:35 PM
Elapsed Live Time: 119.23 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.143 +/- 0.0027
SE-75	264.66	0.235 +/- 0.0037
SE-75	279.54	0.239 +/- 0.0045
SE-75	400.66	0.282 +/- 0.0069

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:16:01 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.59	Y	379	179	1.17	121.02	4.099E-006	7.39	
98.76		57	166	0.83	199.29	1.164E-004	34.90	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 15 Results

Segment: 15 Detector: DET01 Position: 15
C:\Canberra\NDA2k\Data\00000211_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P015_S015

Acquisition Start: 12/23/2008 2:33:46 PM
Elapsed Live Time: 119.26 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.239 +/- 0.0040
SE-75	264.66	0.339 +/- 0.0052
SE-75	279.54	0.339 +/- 0.0060
SE-75	400.66	0.378 +/- 0.0085

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:16:04 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.52	Y	375	116	1.00	120.88	4.152E-006	6.72	
129.64	Y	69	95	0.70	261.00	2.733E-004	23.56	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 16 Results

Segment: 16 Detector: DET01 Position: 16
C:\Canberra\NDA2k\Data\00000211_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P016_S016

Acquisition Start: 12/23/2008 2:37:57 PM
Elapsed Live Time: 119.29 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.305 +/- 0.0049
SE-75	264.66	0.399 +/- 0.0060
SE-75	279.54	0.414 +/- 0.0070
SE-75	400.66	0.441 +/- 0.0094

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:16:08 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.61	Y	186	85	1.14	121.06	8.873E-005	10.38	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Sum of Segment NID Results
Category: Segmented

C:\Canberra\NDA2k\Data\00000211_CNTR0001_DCAT0002_PROC00AK.CNF

********** Self Absorption Correction Results **********

Absorption correction model:

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	2.82E+001 +- 5.82E-001	2.70E+000 +- 6.56E-002

Beta: 1.95E+002 +- 9.89E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 3.632E-002 +/-	2.1%	< 5.341E-007	< 1.674E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 4.863E-002 +/-	2.2%	< 7.151E-007	< 7.684E-012
	Al-26	< 4.203E-002 +/-	16.2%	< 6.181E-007	< 2.211E-006
	K-40	< 5.085E-001 +/-	5.6%	< 7.478E-006	< 7.933E-002
	Co-57	< 6.057E-001 +/-	3.5%	< 8.908E-006	< 7.087E-011
	Co-60	< 4.456E-002 +/-	2.9%	< 6.552E-007	< 3.908E-011
	Se-75	< 1.557E-001 +/-	1.9%	< 2.289E-006	< 1.071E-011
	Kr-85	< 1.425E+001 +/-	3.2%	< 2.096E-004	< 3.591E-008
	Sr-90	1.038E-001 +/-	21.4%	1.527E-006	7.528E-010
	Sb-125	< 2.645E-001 +/-	2.3%	< 3.890E-006	< 2.545E-010
	Ba-133	< 1.525E-001 +/-	1.8%	< 2.243E-006	< 6.026E-010
	Cs-134	< 3.962E-002 +/-	2.0%	< 5.827E-007	< 3.023E-011
?	Cs-137	1.038E-001 +/-	21.4%	1.527E-006	1.184E-009
	Eu-152	< 1.438E-001 +/-	3.8%	< 2.115E-006	< 8.083E-010
	Eu-154	< 1.389E-001 +/-	2.4%	< 2.042E-006	< 5.207E-010
	Ho-166m	< 7.137E-002 +/-	2.4%	< 1.050E-006	< 3.968E-008
	Bi-207	< 5.317E-002 +/-	2.1%	< 7.818E-007	< 9.676E-010
	Pb-210	< 1.686E+004 +/-	309.7%	< 2.479E-001	< 2.192E-004
	Ra-226	< 1.174E-001 +/-	2.4%	< 1.727E-006	< 1.174E-007
	Ac-227	< 5.464E-001 +/-	8.3%	< 8.036E-006	< 7.486E-009
	Th-230	< 2.762E+002 +/-	8.6%	< 4.062E-003	< 1.353E-002
	Pa-231	< 3.243E+000 +/-	11.2%	< 4.770E-005	< 6.779E-005
	Th-232	< 1.360E-001 +/-	2.6%	< 1.999E-006	< 1.225E+000
	U-232	< 2.067E-001 +/-	2.3%	< 3.039E-006	< 9.568E-009
	U-233	< 2.239E+003 +/-	2.7%	< 3.292E-002	< 2.283E-001

Pa-234	< 1.687E-001 +/-	12.2%	< 2.481E-006		
Pa-234m	< 2.376E+002 +/-	2.3%	< 3.495E-003		
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000	
U-235	< 1.723E-001 +/-	2.5%	< 2.533E-006	< 7.873E-002	
Np-237	4.465E+000 +/-	7.6%	6.567E-005	6.251E-003	
Pu-238	8.605E+005 +/-	4.0%	1.265E+001	4.973E-002	
U-238	< 4.957E+000 +/-	2.2%	< 7.290E-005	< 1.457E+001	
Pu-239	1.773E+006 +/-	2.1%	2.608E+001	2.819E+001	
Pu-239B	< 1.613E+004 +/-	5.2%	< 2.372E-001	< 2.565E-001	
U-239	< 1.121E+005 +/-	368.5%	< 1.649E+000		
Pu-240	< 2.107E+004 +/-	4.9%	< 3.098E-001	< 9.163E-002	
Am-241	8.979E+005 +/-	3.1%	1.320E+001	2.586E-001	
Am-241B	7.638E+005 +/-	2.0%	1.123E+001	2.200E-001	
Pu-241	1.089E+006 +/-	6.5%	1.601E+001	1.047E-002	
Pu-241B	2.948E+006 +/-	2.2%	4.335E+001	2.836E-002	
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000	
Am-243	1.206E+000 +/-	40.2%	1.773E-005	5.969E-006	
Cm-243	< 6.309E-001 +/-	3.4%	< 9.278E-006	< 1.211E-008	
Cm-244	< 4.380E+004 +/-	14.2%	< 6.441E-001	< 5.343E-004	
Cm-245	< 1.074E+000 +/-	7.7%	< 1.579E-005	< 6.174E-006	
Cm-247	< 1.053E-001 +/-	8.6%	< 1.548E-006	< 1.126E-003	

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.229E-001 +/-	3.6%	< 1.808E-006	< 2.974E-008
Cf-251	< 5.873E-001 +/-	5.6%	< 8.637E-006	< 3.671E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

Summed Segment Spectra Results
Category: Segmented

C:\Canberra\NDA2k\Data\00000211_CNTR0001_DCAT0002_PROC00AI.CNF

Elapsed Live Time: 112.10 sec Elapsed Real Time: 120.00 sec

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 1.124E-001 +/-	1.0%	< 1.653E-006	< 5.181E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	2.106E-001 +/-	19.4%	3.096E-006	3.327E-011
	Al-26	< 1.123E-001 +/-	6.5%	< 1.651E-006	< 5.904E-006
	K-40	1.953E+000 +/-	20.1%	2.872E-005	3.046E-001
X	Co-57				
	Co-60	1.220E-001 +/-	24.2%	1.794E-006	1.070E-010
	Se-75	< 5.668E-001 +/-	1.0%	< 8.336E-006	< 3.900E-011
	Kr-85	< 4.700E+001 +/-	2.4%	< 6.912E-004	< 1.184E-007
	Sr-90	< 2.188E-001 +/-	0.7%	< 3.217E-006	< 1.586E-009
	Sb-125	< 7.332E-001 +/-	1.3%	< 1.078E-005	< 7.053E-010
	Ba-133	< 4.496E-001 +/-	0.8%	< 6.611E-006	< 1.776E-009
	Cs-134	< 1.298E-001 +/-	0.8%	< 1.908E-006	< 9.901E-011
X	Cs-137				
	Eu-152	< 5.165E-001 +/-	1.7%	< 7.595E-006	< 2.903E-009
X	Eu-154				
	Ho-166m	< 1.947E-001 +/-	1.6%	< 2.863E-006	< 1.082E-007
	Bi-207	< 1.498E-001 +/-	0.7%	< 2.203E-006	< 2.726E-009
	Pb-210	< 1.460E+004 +/-	11.3%	< 2.147E-001	< 1.898E-004
	Ra-226	< 3.472E-001 +/-	1.3%	< 5.106E-006	< 3.472E-007
	Ac-227	< 2.023E+000 +/-	8.2%	< 2.975E-005	< 2.772E-008
	Th-230	3.767E+003 +/-	20.5%	5.539E-002	1.846E-001
	Pa-231	< 1.072E+001 +/-	11.1%	< 1.577E-004	< 2.241E-004
X	Th-232				
	U-232	4.397E-001 +/-	54.4%	6.467E-006	2.036E-008
	U-233	< 8.953E+003 +/-	1.4%	< 1.317E-001	< 9.132E-001
	Pa-234	< 6.772E-001 +/-	12.1%	< 9.959E-006	
	Pa-234m	< 8.367E+002 +/-	1.5%	< 1.230E-002	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 6.896E-001 +/-	1.7%	< 1.014E-005	< 3.151E-001
	Np-237	3.484E+000 +/-	8.1%	5.124E-005	4.878E-003
	Pu-238	6.589E+005 +/-	5.7%	9.690E+000	3.809E-002
	U-238	1.874E+001 +/-	24.2%	2.756E-004	5.509E+001
	Pu-239	1.584E+006 +/-	1.7%	2.330E+001	2.519E+001
	Pu-239B	1.093E+006 +/-	1.3%	1.608E+001	1.738E+001
	U-239	< 3.026E+004 +/-	15.0%	< 4.450E-001	
X	Pu-240				
	Am-241	7.359E+005 +/-	3.3%	1.082E+001	2.119E-001
	Am-241B	5.422E+005 +/-	1.6%	7.974E+000	1.562E-001
	Pu-241	1.223E+006 +/-	6.9%	1.798E+001	1.176E-002
	Pu-241B	2.361E+006 +/-	2.0%	3.472E+001	2.271E-002

Pu-242	< 0.000E+000 +/- 0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 2.194E+000 +/- 1.1%	< 3.227E-005	< 1.086E-005
Cm-243	< 2.263E+000 +/- 3.0%	< 3.328E-005	< 4.345E-008
Cm-244	< 1.544E+005 +/- 14.1%	< 2.270E+000	< 1.883E-003
Cm-245	< 4.245E+000 +/- 7.4%	< 6.243E-005	< 2.441E-005
Cm-247	< 3.011E-001 +/- 8.4%	< 4.428E-006	< 3.222E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 3.570E-001 +/-	3.1%	< 5.251E-006	< 8.640E-008
Cf-251	< 2.355E+000 +/-	5.3%	< 3.464E-005	< 1.472E-006

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	2.52E+001 +- 4.24E-001	1.13E+001 +- 9.48E-002

Beta: 1.53E+002 +- 3.68E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	7.86E+000 +- 1.28E-001
203.55	1.11E+001 +- 2.56E-001
375.05	1.69E+001 +- 2.26E-001
413.71	1.75E+001 +- 2.53E-001

Automated Independent Technical Review

Counter ID: SGS with Trans. Count Type: Assay - 55 Gal Galv 23.8
Container ID: LL85234374 Assay Date: 12/23/2008
Waste Matrix Code:
Sequence Number: 211

Data Combiner Analysis:
Input combination 2: only Isotopics input data are valid.

Source of results is undefined.

DISPOSITION:

MGA Analysis:

Note: The measured and declared isotopics are inconsistent.

DISPOSITION:

Gamma Analysis:
Analysis Status: No errors.
Ratio of Pu-239 414 to 129 keV line activities is above the limit of 2.50
Spectrum Validity Check engine has suggested data review.
Pu-239/Am-241 ratio is less than the lower limit of 100.00

DISPOSITION:

Segment Data Review:
Segment: 1 OK
Segment: 2 OK
Segment: 3 OK
Segment: 4 OK
Segment: 5 Analysis Warnings:
Minimum transmission used.
Segment: 6 OK
Segment: 7 OK
Segment: 8 OK
Segment: 9 OK
Segment: 10 OK
Segment: 11 OK
Segment: 12 OK
Segment: 13 OK
Segment: 14 OK
Segment: 15 OK
Segment: 16 OK

DISPOSITION:

Miscellaneous:

DISPOSITION:

Expert Review by: Robert J Haslett Jr Date: 2-3-09

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Assay Instrument:	SGS with Trans.	Location:	LLNL
Analysis Method:	CCP-TP-019 Rev 4	Software Version:	NDA 2000 V.4.0
Item ID:	LL85234374	Analysis Date:	12/23/2008

Used Multi Curve
KH 2-3-09

********** MGA Results **********

MGA version: MGA V9.63H CI

Measurement date = 12/23/08 Declared date = 12/23/08
Low energy spectrum sensitivity = 30.0% Total counts = 1.818E+006
High energy spectrum sensitivity : 10.0%

Pu g/cm2 = 3.2494 Cd g/cm2 = 1.6099 FWHM at 122 keV = 607 eV
QFIT = 1.89 FWHM at 208 keV = 774 eV
NQFIT = 1.08

Isotope	Relative to Pu-239	%* Err	% Err	Relative to Pu-241	%* Err	Isotope analysis at Meas. date % weight	Meas. date %Err	Decl. date % weight	Decl. date %Err
Pu-238	0.003987	2.4	1.4	2.9308	6.6	0.36727	2.20	0.39843	2.39
Pu-239	1.000000	0.0	1.9	735.1229	6.9	92.12099	0.28	92.01033	0.28
Pu-240	0.079521	3.8	3.2	58.4576	7.7	7.32553	3.44	7.32264	3.44
Pu-241	0.001360	5.4	4.6	1.0000	0.0	0.12531	5.18	0.20778	8.58
Pu-242	(New alg.)			0.4860(11)		0.06090	(11)	0.06081	(10)
Am-241	0.016439	1.9	0.7	12.0847	6.4	1.51438	1.76	1.53921	1.79
U-235	0.014487	62.3	62.3			1.33452	62.32	1.33424	62.30

Pu-240 effective (meas. date) = 8.353 +/- 3.50%
Am-241 separated about 53.932 +/- 0.348 years ago
Am/Pu-241 weight ratio =12.08473 +/- 4.68%

Messages:

Lead x-rays detected.
Calculations in MGAABS didn't converge: results may be suspect.
Efficiency curvature boundary reached.
Pu-241/Pu-239 efficiency changed in MGACAL by 11%.

Notes : * = Error in ratio
Errors quoted at 1.000 sigma
MGA sigma defaulted to 1

Reviewed by: Robert J. Hoskett Jr. Date: 2-3-09

********** Radioassay Data Sheet **********

Engine Version: TMU Gamma 1.5

Assay Instrument: SGS with Trans. Location:LLNL
Analysis Method: LLNL SGS Operating Procedure Software Version: NDA 2000 V.4.0
Item ID: LL85234327 Analysis Date: 12/23/2008

NID identified fiducial nuclide Pu-239
Source of isotopics: MEASURED

Net Weight	48000.0 g	
Pu mass	2.05E+001 +-	3.81E+000 g
TRU Alpha Activity	2.81E+000 +-	3.09E-001 Ci
TRU Activity Concentration	5.86E+004 +-	6.44E+003 nCi/g
Pu-239 Equivalent Activity	2.78E+000 +-	3.03E-001 Ci
Pu-239 FGE	1.93E+001 +-	3.80E+000 g
Decay heat	9.03E-002 +-	9.85E-003 W

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Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.74E-007
U233	<LLD	<LLD	0.00E+000	6.74E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	5.57E-007
NP237	7.59E-003	5.42E-006	1.10E-006	8.39E-007
PU238	4.41E-002	7.62E-001	1.51E-001	5.22E-003
U238	<LLD	<LLD	0.00E+000	1.17E-005
PU239	1.93E+001	1.21E+000	2.39E-001	8.30E-003
PU240	1.21E+000	2.77E-001	5.52E-002	1.90E-003
AM241	1.62E-001	5.62E-001	1.12E-001	1.07E-004
PU241	1.95E-002	2.02E+000	4.16E-001	1.39E-002
PU242	8.43E-003	3.34E-005	7.40E-006	0.00E+000

Errors quoted at 1.000 sigma

Operator: _____ Date: _____

Expert Analysis
ITR: Robert J Haskett Jr Date: 2-3-09

NDA 2000 Assay Report

Item Information

Item ID:	LL85234327		Count Sequence Number:	212	
Operator:	RHWM2\RHWM				
Assay Start:	12/23/2008 2:52:01 PM				
Description 1:	LL85234327				
Description 2:					
Location:	LLNL				
Comment:					
Matrix Type:	Lucite				
Container Type:	55 Gal Galv 23.8				
Weight:	Gross:	71.8 kg	Net:	48.0 kg	
Container:	Volume:	208.0 l	Full:	100.0 %	
Density:		0.230 kg /l			

System Configuration

Counter:	SGS with Trans.			
Segments:	Number:	16	Offset:	0
Scanning Platform:	Start:	934 mm	Delta:	-51 mm
Count Type:	Assay - 55 Gal Galv 23.8			
Collimator/Geometry Setting:	Default	- 0		
Transmission Mode:	Two Pass			
Transmission Correction Type:	Standard			
Transmission Source:	Se-75 Trans.	- 0		

Errors quoted at 1.000 sigma

Segment 1 Results

Segment: 1 Detector: DET01 Position: 1
C:\Canberra\NDA2k\Data\00000212_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P001_S001

Acquisition Start: 12/23/2008 2:54:04 PM
Elapsed Live Time: 119.10 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.238 +/- 0.0040
SE-75	264.66	0.354 +/- 0.0054
SE-75	279.54	0.360 +/- 0.0063
SE-75	400.66	0.427 +/- 0.0092

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:19:23 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.49	Y	1508	312	1.05	120.81	5.332E-006	3.27	
99.95		399	439	1.32	201.68	1.112E-004	9.29	
129.36	Y	217	202	1.17	260.44	2.046E-004	11.62	
152.85	Y	80	183	1.06	307.38	2.488E-004	27.09	
208.12	Y	53	91	1.34	417.82	2.645E-004	29.26	
374.99	Y	44	21	1.28	751.29	1.674E-004	22.21	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	6.10E-002 +- 2.11E-002	6.04E-002 +- 6.40E-003

Beta: 1.50E+000 +- 5.00E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 2

Energy	Mass (g)
129.30	6.03E-002 +- 7.27E-003
375.05	6.08E-002 +- 1.36E-002

Segment 2 Results

Segment: 2 Detector: DET01 Position: 2
C:\Canberra\NDA2k\Data\00000212_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P002_S002

Acquisition Start: 12/23/2008 2:58:15 PM
Elapsed Live Time: 118.95 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.246 +/- 0.0041
SE-75	264.66	0.359 +/- 0.0054
SE-75	279.54	0.368 +/- 0.0064
SE-75	400.66	0.419 +/- 0.0091

Errors quoted at 1.000 sigma

Peak Analysis Results

Peak Analysis Performed on: 2/2/2009 5:19:26 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.51	Y	3163	646	1.04	120.86	9.473E-005	2.39	
M	94.70		141	537	1.67	191.18	2.031E-004	20.78	5.76
m	99.62	Y	1031	991	1.68	201.01	2.148E-004	9.82	
m	103.40	Y	296	803	1.69	208.57	2.231E-004	11.07	
M	125.21	Y	88	286	1.06	252.16	2.602E-004	19.42	1.83
m	129.31	Y	485	224	1.07	260.35	2.654E-004	11.73	
	152.67	Y	163	185	0.91	307.03	2.895E-004	14.38	
	208.07	Y	68	194	1.18	417.73	3.058E-004	34.02	
	332.80	Y	21	41	0.91	666.97	2.596E-004	49.26	
	375.09	Y	118	28	1.60	751.49	2.401E-004	11.56	
	413.78	Y	108	11	1.41	828.79	2.236E-004	10.78	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.22E-001 +- 1.63E-002	1.12E-001 +- 7.48E-003

Beta: 2.12E+001 +- 2.80E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 3

Energy	Mass (g)
129.30	1.04E-001 +- 1.26E-002
375.05	1.13E-001 +- 1.33E-002
413.71	1.18E-001 +- 1.30E-002

Segment 3 Results

Segment: 3 Detector: DET01 Position: 3
C:\Canberra\NDA2k\Data\00000212_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P003_S003

Acquisition Start: 12/23/2008 3:02:26 PM
Elapsed Live Time: 118.73 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.173 +/- 0.0031
SE-75	264.66	0.262 +/- 0.0041
SE-75	279.54	0.276 +/- 0.0051
SE-75	400.66	0.321 +/- 0.0075

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:19:30 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.51	Y	6318	1025	1.11	120.86	6.729E-005	1.82	
M	94.74		349	919	2.42	191.26	1.741E-004	4.78	7.54
m	99.19	Y	1275	908	1.72	200.16	1.860E-004	2.82	
m	103.28	Y	381	744	1.73	208.32	1.964E-004	3.52	
	129.38	Y	738	421	1.24	260.49	2.484E-004	5.64	
	152.73	Y	174	311	0.92	307.15	2.787E-004	16.79	
M	203.52	Y	126	172	1.31	408.63	3.003E-004	26.37	1.24
m	208.12	Y	158	159	1.31	417.83	3.001E-004	25.49	
	332.71	Y	24	83	1.24	666.79	2.517E-004	59.60	
	345.11		69	38	1.20	691.57	2.453E-004	18.37	
	374.99	Y	188	37	1.24	751.28	2.307E-004	8.96	
	392.90		64	26	1.41	787.08	2.223E-004	17.59	
	413.66	Y	157	15	1.24	828.56	2.134E-004	8.95	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.92E-001 +- 1.94E-002	1.77E-001 +- 8.08E-003

Beta: 1.62E+001 +- 1.77E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.69E-001 +- 1.12E-002
203.55	2.64E-001 +- 6.98E-002
375.05	1.88E-001 +- 1.71E-002
413.71	1.80E-001 +- 1.65E-002

Segment 4 Results

Segment: 4 Detector: DET01 Position: 4
C:\Canberra\NDA2k\Data\00000212_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P004_S004

Acquisition Start: 12/23/2008 3:06:38 PM
Elapsed Live Time: 118.58 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.231 +/- 0.0040
SE-75	264.66	0.357 +/- 0.0054
SE-75	279.54	0.358 +/- 0.0062
SE-75	400.66	0.414 +/- 0.0091

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:19:33 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.52	Y	7655	1295	1.06	120.88	4.335E-006	1.72	
M	94.72		319	1032	1.76	191.22	1.112E-004	8.45	6.40
m	99.32	Y	1438	1820	1.77	200.42	1.345E-004	3.00	
m	103.22	Y	501	1444	1.78	208.22	1.547E-004	5.56	
	111.35		127	646	1.01	224.46	1.961E-004	30.26	
	129.36	Y	704	492	1.20	260.45	2.756E-004	6.10	
	152.68	Y	136	277	1.20	307.04	3.460E-004	19.10	
M	203.54	Y	98	166	1.05	408.68	3.827E-004	12.89	1.02
m	207.99	Y	196	156	1.05	417.57	3.811E-004	8.42	
	311.89	Y	100	82	1.16	625.19	2.924E-004	16.74	
	332.91	Y	51	76	0.92	667.20	2.752E-004	29.17	
	344.92		63	59	1.73	691.20	2.660E-004	22.32	
	374.89	Y	169	112	1.52	751.07	2.453E-004	14.75	
	393.09		65	18	1.67	787.46	2.342E-004	16.11	
	413.64	Y	151	19	1.28	828.52	2.229E-004	9.29	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.75E-001 +- 2.08E-002	1.53E-001 +- 7.41E-003

Beta: 2.37E+001 +- 1.99E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.45E-001 +- 9.92E-003
203.55	1.62E-001 +- 2.11E-002
375.05	1.59E-001 +- 2.36E-002
413.71	1.66E-001 +- 1.58E-002

Segment 5 Results

Segment: 5 Detector: DET01 Position: 5
C:\Canberra\NDA2k\Data\00000212_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P005_S005

Acquisition Start: 12/23/2008 3:10:49 PM
Elapsed Live Time: 118.62 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.197 +/- 0.0035
SE-75	264.66	0.292 +/- 0.0045
SE-75	279.54	0.304 +/- 0.0055
SE-75	400.66	0.347 +/- 0.0080

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:19:36 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.52	Y	6012	1380	1.13	120.88	7.664E-005	1.92	
M	99.34	Y	951	1094	1.77	200.46	1.917E-004	3.68	5.04
m	103.30	Y	417	1561	1.78	208.36	2.013E-004	6.46	
	129.37	Y	456	452	1.28	260.46	2.516E-004	8.26	
	152.57	Y	105	425	1.23	306.82	2.815E-004	30.62	
M	203.55	Y	75	208	1.01	408.70	3.044E-004	174.07	0.40
m	208.08	Y	151	180	1.01	417.75	3.044E-004	171.47	
	311.90	Y	144	103	1.38	625.22	2.675E-004	13.85	
	345.20		52	53	1.07	691.75	2.503E-004	24.73	
	375.03	Y	107	50	1.44	751.37	2.355E-004	14.35	
	413.82	Y	124	20	1.33	828.88	2.181E-004	10.73	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.33E-001 +- 1.83E-002	1.11E-001 +- 6.95E-003

Beta: 3.33E+001 +- 2.41E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.03E-001 +- 9.14E-003
203.55	1.55E-001 +- 2.71E-001
375.05	1.04E-001 +- 1.51E-002
413.71	1.38E-001 +- 1.51E-002

Segment 6 Results

Segment: 6 Detector: DET01 Position: 6
C:\Canberra\NDA2k\Data\00000212_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P006_S006

Acquisition Start: 12/23/2008 3:15:01 PM
Elapsed Live Time: 117.80 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.191 +/- 0.0034
SE-75	264.66	0.298 +/- 0.0047
SE-75	279.54	0.304 +/- 0.0056
SE-75	400.66	0.364 +/- 0.0083

Errors quoted at 1.000 sigma

Peak Analysis Results

Peak Analysis Performed on: 2/2/2009 5:19:39 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.48	Y	14221	2376	1.08	120.80	1.851E-006	1.47	
M	94.64		524	1828	1.93	191.05	9.577E-005	11.54	4.63
m	99.07	Y	2786	2813	1.87	199.92	1.179E-004	7.34	
m	103.15	Y	1534	1966	1.88	208.07	1.388E-004	7.38	
	111.09		250	1095	0.93	223.94	1.792E-004	20.26	
M	125.38	Y	403	879	1.09	252.49	2.436E-004	11.00	0.74
m	129.31	Y	1079	792	1.10	260.35	2.585E-004	8.95	
	152.87	Y	162	731	1.22	307.42	3.256E-004	26.20	
M	203.51	Y	145	430	1.17	408.61	3.577E-004	12.67	1.37
m	208.00	Y	422	456	1.17	417.58	3.564E-004	6.06	
	311.81	Y	166	188	1.57	625.03	2.883E-004	14.62	
M	332.75	Y	156	141	1.24	666.88	2.754E-004	9.35	0.87
m	335.44	Y	92	149	1.24	672.25	2.739E-004	13.54	
	345.00		117	120	1.26	691.35	2.684E-004	16.83	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
M	375.02	Y	427	102	1.22	751.35	2.527E-004	5.25	1.30
m	380.09		71	73	1.23	761.47	2.503E-004	13.59	
m	382.54		74	64	1.23	766.37	2.491E-004	13.13	
	392.90		154	52	1.60	787.08	2.444E-004	11.17	
	413.63	Y	383	44	1.51	828.49	2.355E-004	5.93	
	451.43		50	29	1.64	904.02	2.213E-004	21.65	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.02 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	5.10E-001 +- 4.12E-002	3.28E-001 +- 1.24E-002

Beta: 1.07E+002 +- 2.06E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	2.37E-001 +- 2.30E-002
203.55	2.55E-001 +- 3.33E-002
375.05	3.90E-001 +- 2.19E-002
413.71	3.97E-001 +- 2.51E-002

Segment 7 Results

Segment: 7 Detector: DET01 Position: 7
C:\Canberra\NDA2k\Data\00000212_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P007_S007

Acquisition Start: 12/23/2008 3:19:12 PM
Elapsed Live Time: 114.85 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.114 +/- 0.0025
SE-75	264.66	0.219 +/- 0.0036
SE-75	279.54	0.235 +/- 0.0047
SE-75	400.66	0.292 +/- 0.0074

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:19:43 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	49.46		1363	5843	2.19	100.78	3.001E-007	9.25	
	59.45	Y	40561	5433	1.10	120.75	2.840E-006	1.24	
	74.96		243	1529	1.00	151.73	2.198E-005	24.42	
M	94.76		1502	4288	1.72	191.30	8.483E-005	5.74	19.04
m	98.99	Y	8632	5804	1.73	199.75	1.021E-004	3.62	
m	103.08	Y	5483	4518	1.74	207.94	1.193E-004	3.65	
M	111.07		945	2477	1.28	223.90	1.527E-004	5.13	5.71
m	114.85	Y	560	3777	1.28	231.45	1.680E-004	8.10	
M	125.29	Y	1319	1987	1.06	252.32	2.069E-004	5.71	2.72
m	129.29	Y	3379	1583	1.07	260.31	2.200E-004	4.72	
	146.37	Y	259	1785	0.98	294.44	2.686E-004	25.92	
	152.74	Y	334	1655	1.06	307.15	2.827E-004	19.56	
	171.17		83	902	0.57	344.00	3.093E-004	52.09	
	195.82		160	1305	0.80	393.24	3.195E-004	36.63	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
M	203.60	Y	560	1054	1.11	408.80	3.186E-004	5.76	1.28
m	207.97	Y	1490	968	1.12	417.53	3.174E-004	3.20	
	255.46		108	673	1.07	512.44	2.891E-004	39.31	
	297.45		74	425	0.83	596.33	2.602E-004	43.23	
	311.89	Y	492	520	1.20	625.18	2.497E-004	8.89	
M	332.72	Y	695	368	1.37	666.82	2.355E-004	203.43	0.81
m	335.57	Y	407	479	1.38	672.50	2.337E-004	198.22	
	344.91		552	327	1.35	691.18	2.279E-004	6.77	
M	368.42	Y	220	292	1.28	738.16	2.143E-004	8.58	3.27
m	375.01	Y	1782	237	1.29	751.32	2.108E-004	2.64	
m	380.07		377	181	1.29	761.43	2.082E-004	5.95	
m	382.58		300	164	1.30	766.45	2.069E-004	6.63	
	392.85		624	151	1.48	786.98	2.019E-004	5.36	
	413.72	Y	1589	128	1.36	828.68	1.926E-004	3.02	
M	422.47		114	77	1.16	846.17	1.890E-004	11.38	1.52
m	426.44	Y	38	69	1.17	854.09	1.874E-004	21.75	
	451.45		168	81	1.39	904.07	1.783E-004	12.00	
	662.36	Y	188	20	1.88	1325.53	1.354E-004	8.43	
	721.86	Y	115	10	1.59	1444.44	1.292E-004	10.67	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.05 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	3.02E+000 +- 1.47E-001	1.37E+000 +- 3.13E-002

Beta: 1.73E+002 +- 1.24E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	8.72E-001 +- 5.09E-002
203.55	1.11E+000 +- 6.82E-002
375.05	1.95E+000 +- 6.42E-002
413.71	2.02E+000 +- 7.53E-002

Segment 8 Results

Segment: 8 Detector: DET01 Position: 8
C:\Canberra\NDA2k\Data\00000212_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P008_S008

Acquisition Start: 12/23/2008 3:23:24 PM
Elapsed Live Time: 111.34 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.060 +/- 0.0021
SE-75	264.66	0.121 +/- 0.0024
SE-75	279.54	0.131 +/- 0.0036
SE-75	400.66	0.183 +/- 0.0061

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

*** Spectrum Validity Test warnings ***
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 2/2/2009 5:19:46 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	49.41		1613	8290	1.94	100.69	2.719E-005	9.52	
	59.43	Y	58149	7831	1.11	120.71	4.780E-005	1.22	
M	94.71		3005	6783	1.71	191.20	1.266E-004	4.22	26.77
m	98.92	Y	14745	10034	1.72	199.62	1.347E-004	2.85	
m	103.07	Y	10268	7517	1.73	207.90	1.421E-004	2.85	
M	110.94		1932	5068	1.48	223.64	1.550E-004	3.52	6.02
m	114.65	Y	1073	7743	1.48	231.05	1.605E-004	5.87	
M	123.08	Y	298	2705	1.04	247.89	1.716E-004	14.96	3.23
m	125.26	Y	2114	3779	1.04	252.26	1.741E-004	3.07	
m	129.28	Y	5425	3058	1.05	260.29	1.786E-004	1.93	
M	144.16		320	2295	1.13	290.01	1.943E-004	12.08	1.07

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	146.38	Y	439	2554	1.13	294.45	1.965E-004	9.15	
m	148.62	Y	330	2799	1.14	298.93	1.986E-004	11.47	
m	152.71	Y	663	2735	1.14	307.10	2.022E-004	6.79	
M	203.53	Y	1143	1789	1.18	408.66	2.224E-004	4.03	0.92
m	207.98	Y	2706	1725	1.19	417.55	2.226E-004	2.48	
M	297.36		104	661	0.95	596.16	2.085E-004	22.83	1.44
m	300.13	Y	118	653	0.95	601.70	2.078E-004	21.09	
	311.85	Y	601	998	1.12	625.10	2.046E-004	9.85	
	322.48	Y	462	897	1.23	646.35	2.016E-004	11.94	
M	332.70	Y	1368	651	1.35	666.78	1.986E-004	6.95	1.21
m	335.51	Y	901	740	1.36	672.38	1.978E-004	7.12	
m	341.17	Y	189	615	1.36	683.71	1.961E-004	13.29	
m	344.93		1169	631	1.37	691.21	1.949E-004	6.80	
	368.44	Y	604	720	1.63	738.19	1.879E-004	8.66	
M	374.99	Y	3264	537	1.26	751.29	1.859E-004	2.14	3.77
m	380.13		602	441	1.27	761.57	1.843E-004	4.93	
m	382.69		519	393	1.27	766.66	1.836E-004	5.36	
	392.85		1223	336	1.55	786.98	1.806E-004	4.09	
	413.65	Y	3137	229	1.46	828.54	1.745E-004	2.32	
M	422.55		188	169	1.14	846.32	1.720E-004	9.41	1.43
m	426.54	Y	77	155	1.14	854.29	1.708E-004	16.87	
	451.33		359	146	1.49	903.84	1.642E-004	8.06	
	618.84	Y	73	39	1.27	1238.56	1.300E-004	19.11	
M	646.01		19	53	1.19	1292.87	1.259E-004	37.00	2.48
m	652.71	Y	47	29	1.20	1306.26	1.250E-004	17.93	
	662.20	Y	427	35	1.78	1325.22	1.237E-004	5.72	
	721.85	Y	219	18	1.65	1444.42	1.162E-004	7.83	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.09 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	6.52E+000 +- 2.39E-001	2.75E+000 +- 5.17E-002

Beta: 1.68E+002 +- 8.47E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.72E+000 +- 7.04E-002
203.55	3.24E+000 +- 1.51E-001
375.05	4.05E+000 +- 1.16E-001
413.71	4.39E+000 +- 1.37E-001

Segment 9 Results

Segment: 9 Detector: DET01 Position: 9
C:\Canberra\NDA2k\Data\00000212_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P009_S009

Acquisition Start: 12/23/2008 3:27:35 PM
Elapsed Live Time: 112.00 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.059 +/- 0.0020
SE-75	264.66	0.148 +/- 0.0027
SE-75	279.54	0.156 +/- 0.0039
SE-75	400.66	0.239 +/- 0.0069

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:19:49 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.43	Y	54386	7946	1.12	120.71	6.768E-006	1.23	
M	94.72		2288	7009	1.65	191.23	9.101E-005	4.79	25.21
m	98.91	Y	13057	10262	1.65	199.59	1.036E-004	3.02	
m	103.05	Y	9447	8167	1.66	207.87	1.157E-004	3.01	
M	110.95		1552	3960	1.37	223.66	1.370E-004	4.06	3.57
m	114.65	Y	743	6596	1.37	231.05	1.461E-004	7.80	
M	122.93	Y	450	2924	1.10	247.59	1.640E-004	11.76	1.18
m	125.29	Y	2125	3029	1.11	252.31	1.685E-004	4.93	
m	129.28	Y	4551	2410	1.11	260.29	1.756E-004	4.30	
M	146.31	Y	430	2152	1.15	294.32	2.034E-004	24.87	1.90
m	148.53	Y	358	2918	1.15	298.74	2.066E-004	23.12	
m	152.72	Y	482	2830	1.16	307.12	2.121E-004	22.27	
M	203.56	Y	959	1527	1.15	408.71	2.392E-004	4.49	1.99
m	207.97	Y	2400	1477	1.16	417.52	2.394E-004	2.62	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	255.39		223	928	1.16	512.30	2.317E-004	22.72	
	311.78	Y	432	727	0.99	624.98	2.193E-004	11.11	
M	332.68	Y	1160	588	1.28	666.74	2.148E-004	3.55	2.52
m	335.56	Y	807	667	1.29	672.49	2.141E-004	4.31	
	344.95		877	700	1.13	691.25	2.120E-004	6.15	
M	368.43	Y	507	491	1.40	738.17	2.067E-004	7.05	3.34
m	371.02	Y	80	475	1.40	743.36	2.060E-004	23.92	
m	375.00	Y	2930	420	1.41	751.30	2.052E-004	4.43	
m	380.13		512	352	1.41	761.56	2.040E-004	6.90	
m	382.71		471	333	1.41	766.72	2.034E-004	6.99	
	392.86		1034	306	1.57	786.99	2.011E-004	4.48	
	413.61	Y	2672	215	1.35	828.45	1.959E-004	2.48	
	422.33		104	204	1.27	845.88	1.936E-004	24.18	
	451.37		334	118	1.58	903.91	1.864E-004	7.87	
	618.70	Y	75	38	1.91	1238.28	1.546E-004	18.40	
	652.96	Y	60	41	1.74	1306.74	1.495E-004	22.81	
	662.30	Y	388	51	1.77	1325.42	1.481E-004	6.26	
	721.96	Y	163	41	1.60	1444.63	1.400E-004	10.40	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.08 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	4.87E+000 +- 2.35E-001	2.36E+000 +- 5.70E-002

Beta: 1.50E+002 +- 1.15E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.47E+000 +- 8.52E-002
203.55	2.52E+000 +- 1.42E-001
375.05	3.29E+000 +- 1.61E-001
413.71	3.33E+000 +- 1.11E-001

Segment 10 Results

Segment: 10 Detector: DET01 Position: 10
C:\Canberra\NDA2k\Data\00000212_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P010_S010

Acquisition Start: 12/23/2008 3:31:46 PM
Elapsed Live Time: 116.10 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.148 +/- 0.0029
SE-75	264.66	0.259 +/- 0.0041
SE-75	279.54	0.270 +/- 0.0052
SE-75	400.66	0.329 +/- 0.0079

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:19:52 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.48	Y	26820	4516	1.10	120.81	4.238E-006	1.32	
M	94.78		1117	3766	1.67	191.33	9.245E-005	7.12	11.97
m	98.92	Y	5492	5065	1.68	199.61	1.102E-004	4.63	
m	103.09	Y	3669	3927	1.69	207.95	1.288E-004	4.66	
	111.10		240	2405	1.33	223.95	1.647E-004	31.29	
M	125.27	Y	785	1758	1.11	252.27	2.243E-004	8.22	1.79
m	129.36	Y	1969	1333	1.12	260.44	2.396E-004	6.74	
M	146.51	Y	170	1033	0.70	294.72	2.958E-004	31.36	1.39
m	148.82	Y	131	1153	0.71	299.32	3.021E-004	29.96	
m	152.89	Y	211	1110	0.71	307.46	3.124E-004	27.08	
	169.67	Y	173	1013	0.59	341.00	3.431E-004	28.18	
M	203.54	Y	401	878	1.20	408.67	3.600E-004	13.75	0.46
m	208.05	Y	895	848	1.21	417.69	3.591E-004	12.18	
	311.93	Y	150	401	1.22	625.27	2.778E-004	22.96	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
M	332.68	Y	454	245	1.32	666.74	2.605E-004	16.52	1.01
m	335.60	Y	266	316	1.32	672.56	2.581E-004	16.20	
	344.90		333	320	1.18	691.15	2.509E-004	10.16	
	368.48	Y	242	215	1.12	738.28	2.340E-004	11.82	
M	375.05	Y	1026	203	1.27	751.40	2.297E-004	3.40	3.31
m	380.20		175	147	1.27	761.69	2.263E-004	8.64	
m	382.74		193	131	1.27	766.76	2.247E-004	7.98	
	392.96		375	128	1.53	787.19	2.185E-004	7.33	
	413.72	Y	1013	83	1.44	828.67	2.068E-004	3.68	
	422.60		53	77	1.19	846.43	2.022E-004	29.64	
	451.30		133	52	1.51	903.77	1.889E-004	12.66	
	618.56	Y	28	27	1.32	1238.00	1.421E-004	35.73	
	662.29	Y	134	15	1.53	1325.39	1.352E-004	10.02	
	722.01	Y	66	19	1.34	1444.73	1.279E-004	16.60	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.04 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.69E+000 +- 9.81E-002	8.12E-001 +- 2.32E-002

Beta: 1.69E+002 +- 1.58E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	4.66E-001 +- 3.60E-002
203.55	7.01E-001 +- 9.91E-002
375.05	1.03E+000 +- 4.07E-002
413.71	1.20E+000 +- 5.12E-002

Segment 11 Results

Segment: 11 Detector: DET01 Position: 11
C:\Canberra\NDA2k\Data\00000212_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P011_S011

Acquisition Start: 12/23/2008 3:35:58 PM
Elapsed Live Time: 118.02 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.069 +/- 0.0017
SE-75	264.66	0.167 +/- 0.0028
SE-75	279.54	0.177 +/- 0.0037
SE-75	400.66	0.225 +/- 0.0060

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:19:55 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.51	Y	14288	2116	1.07	120.87	3.353E-006	1.46	
M	94.76		499	1422	1.80	191.30	8.088E-005	11.65	5.42
m	98.95	Y	2227	2197	1.80	199.68	9.589E-005	7.88	
m	103.07	Y	1363	1681	1.81	207.91	1.108E-004	7.86	
	111.17		261	930	1.40	224.10	1.395E-004	18.11	
M	125.31	Y	278	722	1.06	252.36	1.838E-004	8.53	2.65
m	129.37	Y	919	705	1.07	260.46	1.946E-004	4.01	
	152.79	Y	101	613	0.75	307.26	2.486E-004	37.76	
M	203.73	Y	143	298	1.05	409.05	2.845E-004	11.64	2.01
m	208.10	Y	416	301	1.06	417.80	2.841E-004	6.02	
M	332.70	Y	143	116	1.27	666.78	2.217E-004	9.71	0.84
m	335.54	Y	83	131	1.27	672.46	2.202E-004	13.65	
	344.90		96	82	1.62	691.15	2.155E-004	17.15	
M	375.01	Y	362	60	1.41	751.32	2.015E-004	13.10	1.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	380.17		66	57	1.42	761.63	1.993E-004	18.87	
m	382.82		65	61	1.42	766.93	1.982E-004	18.18	
	392.77		128	40	1.49	786.81	1.942E-004	12.00	
	413.72	Y	327	26	1.36	828.68	1.865E-004	6.15	
	451.53		35	18	1.34	904.23	1.746E-004	25.06	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.02 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	5.22E-001 +- 4.61E-002	3.06E-001 +- 1.15E-002

Beta: 8.72E+001 +- 1.49E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	2.68E-001 +- 1.38E-002
203.55	3.16E-001 +- 3.74E-002
375.05	4.14E-001 +- 5.48E-002
413.71	4.29E-001 +- 2.80E-002

Segment 12 Results

Segment: 12 Detector: DET01 Position: 12
C:\Canberra\NDA2k\Data\00000212_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P012_S012

Acquisition Start: 12/23/2008 3:40:09 PM
Elapsed Live Time: 118.35 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.021 +/- 0.0010
SE-75	264.66	0.066 +/- 0.0014
SE-75	279.54	0.066 +/- 0.0020
SE-75	400.66	0.101 +/- 0.0037

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:19:59 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.54	Y	13724	1750	1.06	120.92	8.220E-005	1.46	
M	94.74		302	988	1.65	191.27	1.061E-004	13.29	5.51
m	98.88	Y	1566	1479	1.66	199.54	1.102E-004	8.48	
m	103.12	Y	872	1142	1.67	208.00	1.143E-004	8.69	
M	125.36	Y	277	482	1.14	252.46	1.342E-004	12.15	1.33
m	129.33	Y	839	419	1.15	260.38	1.373E-004	9.51	
M	203.66	Y	84	226	0.98	408.92	1.853E-004	15.97	1.77
m	208.06	Y	284	213	0.98	417.70	1.861E-004	7.50	
	311.98	Y	83	103	1.06	625.38	1.750E-004	21.20	
M	332.73	Y	83	62	1.20	666.83	1.711E-004	12.83	1.27
m	335.59	Y	61	76	1.20	672.55	1.706E-004	15.27	
	345.00		69	85	0.99	691.36	1.687E-004	23.64	
	375.10	Y	210	56	1.31	751.51	1.623E-004	8.87	
	413.68	Y	186	32	1.51	828.59	1.542E-004	8.85	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 16:
Beta is too small (negative or less than lower limit)

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	- correction not done -	3.05E-001 +- 1.59E-002

Beta: -2.81E+001 +- 2.35E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in attempted correction: 4

Energy	Mass (g)

Segment 13 Results

Segment: 13 Detector: DET01 Position: 13
C:\Canberra\NDA2k\Data\00000212_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P013_S013

Acquisition Start: 12/23/2008 3:44:21 PM
Elapsed Live Time: 118.67 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.027 +/- 0.0010
SE-75	264.66	0.068 +/- 0.0014
SE-75	279.54	0.075 +/- 0.0021
SE-75	400.66	0.100 +/- 0.0037

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:20:02 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.50	Y	9095	1267	1.08	120.84	7.375E-005	1.61	
M	94.87		193	694	1.66	191.52	1.149E-004	17.36	6.16
m	98.97	Y	1134	1054	1.67	199.71	1.195E-004	10.34	
m	103.00	Y	745	828	1.68	207.77	1.238E-004	10.30	
M	125.34	Y	164	397	1.05	252.42	1.444E-004	17.91	1.22
m	129.39	Y	578	368	1.06	260.50	1.474E-004	14.69	
	208.05	Y	160	263	1.13	417.68	1.861E-004	17.46	
	311.87	Y	53	60	1.41	625.16	1.737E-004	26.63	
	345.06		69	41	1.19	691.48	1.650E-004	18.78	
	374.88	Y	145	50	1.10	751.06	1.571E-004	11.29	
	413.79	Y	126	32	1.16	828.81	1.475E-004	11.50	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 16:
Beta is too small (negative or less than lower limit)

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	- correction not done -	2.14E-001 +- 1.54E-002

Beta: -1.04E+001 +- 3.30E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in attempted correction: 3

Energy	Mass (g)

Segment 14 Results

Segment: 14 Detector: DET01 Position: 14
C:\Canberra\NDA2k\Data\00000212_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P014_S014

Acquisition Start: 12/23/2008 3:48:32 PM
Elapsed Live Time: 118.96 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.137 +/- 0.0026
SE-75	264.66	0.224 +/- 0.0036
SE-75	279.54	0.220 +/- 0.0042
SE-75	400.66	0.278 +/- 0.0068

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:20:05 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.54	Y	4221	671	1.12	120.92	4.003E-006	2.09	
M	98.90	Y	456	536	1.29	199.57	1.155E-004	16.55	2.67
m	103.07	Y	298	454	1.30	207.91	1.336E-004	17.08	
M	125.40	Y	109	274	1.01	252.54	2.214E-004	13.04	1.29
m	129.29	Y	282	275	1.02	260.31	2.336E-004	7.47	
	207.98	Y	112	149	1.15	417.54	3.111E-004	18.64	
	374.92	Y	78	26	1.51	751.14	2.023E-004	15.27	
	413.78	Y	91	9	1.22	828.80	1.856E-004	11.77	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.27E-001 +- 1.87E-002	7.68E-002 +- 4.84E-003

Beta: 8.06E+001 +- 2.41E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 3

Energy	Mass (g)
129.30	6.84E-002 +- 5.56E-003
375.05	8.85E-002 +- 1.36E-002
413.71	1.19E-001 +- 1.43E-002

Segment 15 Results

Segment: 15 Detector: DET01 Position: 15
C:\Canberra\NDA2k\Data\00000212_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P015_S015

Acquisition Start: 12/23/2008 3:52:44 PM
Elapsed Live Time: 119.19 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.159 +/- 0.0029
SE-75	264.66	0.241 +/- 0.0038
SE-75	279.54	0.250 +/- 0.0047
SE-75	400.66	0.291 +/- 0.0070

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:20:08 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
50.07		185	421	2.02	102.00	4.429E-007	17.80	
59.45	Y	1321	308	1.11	120.73	3.504E-006	3.54	
98.91		52	371	1.01	199.60	1.160E-004	56.23	
129.27	Y	46	227	0.79	260.27	2.381E-004	50.64	
208.08	Y	37	80	0.67	417.75	3.079E-004	38.62	
413.76	Y	36	7	1.07	828.76	1.803E-004	20.04	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	9.66E-002 +- 3.60E-002	2.00E-002 +- 4.83E-003

Beta: 2.82E+002 +- 1.03E+002 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 2

Energy	Mass (g)
129.30	1.09E-002 +- 5.54E-003
413.71	4.88E-002 +- 9.85E-003

Segment 16 Results

Segment: 16 Detector: DET01 Position: 16
C:\Canberra\NDA2k\Data\00000212_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P016_S016

Acquisition Start: 12/23/2008 3:56:55 PM
Elapsed Live Time: 119.25 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 23.8 zero atten.
Calibration Date: 11/18/2008 9:40:51 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.425 +/- 0.0066
SE-75	264.66	0.515 +/- 0.0076
SE-75	279.54	0.516 +/- 0.0085
SE-75	400.66	0.552 +/- 0.0112

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 2/2/2009 5:20:13 PM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.55	Y	412	170	1.27	120.95	1.024E-004	6.86	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Sum of Segment NID Results
Category: Segmented

C:\Canberra\NDA2k\Data\00000212_CNTR0001_DCAT0002_PROC00AK.CNF

********** Self Absorption Correction Results **********

Absorption correction model:

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.86E+001 +- 3.89E-001	6.04E-002 +- 6.40E-003

Beta: 1.50E+000 +- 5.00E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 2

Energy	Mass (g)

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 4.011E-002 +/-	2.3%	< 8.357E-007	< 1.849E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 3.888E-002 +/-	2.0%	< 8.100E-007	< 6.143E-012
Al-26	< 5.258E-002 +/-	19.6%	< 1.095E-006	< 2.765E-006
K-40	< 5.087E-001 +/-	5.6%	< 1.060E-005	< 7.936E-002
Co-57	< 4.371E-001 +/-	4.5%	< 9.107E-006	< 5.115E-011
Co-60	< 5.666E-002 +/-	2.9%	< 1.180E-006	< 4.969E-011
Se-75	< 1.387E-001 +/-	1.8%	< 2.889E-006	< 9.540E-012
Kr-85	< 1.018E+001 +/-	3.0%	< 2.122E-004	< 2.567E-008
Sr-90	< 7.905E-002 +/-	2.3%	< 1.647E-006	< 5.731E-010
Sb-125	< 1.882E-001 +/-	1.9%	< 3.920E-006	< 1.810E-010
Ba-133	< 1.138E-001 +/-	1.6%	< 2.370E-006	< 4.494E-010
Cs-134	< 2.888E-002 +/-	2.0%	< 6.017E-007	< 2.204E-011
Cs-137	< 7.905E-002 +/-	2.3%	< 1.647E-006	< 9.012E-010
Eu-152	< 1.530E-001 +/-	3.8%	< 3.188E-006	< 8.600E-010
Eu-154	< 1.059E-001 +/-	1.9%	< 2.207E-006	< 3.972E-010
Ho-166m	< 4.670E-002 +/-	2.3%	< 9.729E-007	< 2.596E-008
Bi-207	< 3.949E-002 +/-	2.1%	< 8.227E-007	< 7.187E-010
Pb-210	< 1.265E+004 +/-	309.7%	< 2.636E-001	< 1.645E-004
Ra-226	< 8.649E-002 +/-	2.4%	< 1.802E-006	< 8.649E-008
Ac-227	< 4.917E-001 +/-	8.3%	< 1.024E-005	< 6.736E-009
Th-230	< 2.104E+002 +/-	9.1%	< 4.384E-003	< 1.031E-002
Pa-231	< 2.773E+000 +/-	11.2%	< 5.777E-005	< 5.796E-005
Th-232	< 1.045E-001 +/-	2.4%	< 2.176E-006	< 9.412E-001
U-232	< 1.394E-001 +/-	2.3%	< 2.905E-006	< 6.456E-009
U-233	< 1.771E+003 +/-	3.0%	< 3.691E-002	< 1.807E-001

Pa-234	< 1.477E-001	+/-	12.3%	< 3.076E-006	
Pa-234m	< 2.178E+002	+/-	2.3%	< 4.538E-003	
U-234	< 0.000E+000	+/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 1.556E-001	+/-	2.9%	< 3.241E-006	< 7.109E-002
Np-237	5.667E+000	+/-	4.7%	1.181E-004	7.934E-003
Pu-238	2.545E+005	+/-	6.7%	5.303E+000	1.471E-002
U-238	< 4.092E+000	+/-	2.4%	< 8.524E-005	< 1.203E+001
Pu-239	1.167E+006	+/-	2.1%	2.432E+001	1.856E+001
Pu-239B	< 8.808E+003	+/-	18.9%	< 1.835E-001	< 1.400E-001
U-239	< 8.506E+004	+/-	368.5%	< 1.772E+000	
Pu-240	< 1.247E+004	+/-	14.4%	< 2.598E-001	< 5.424E-002
Am-241	5.316E+005	+/-	3.2%	1.108E+001	1.531E-001
Am-241B	3.163E+005	+/-	3.2%	6.590E+000	9.110E-002
Pu-241	4.645E+005	+/-	12.3%	9.677E+000	4.469E-003
Pu-241B	1.597E+006	+/-	3.1%	3.328E+001	1.537E-002
Pu-242	< 0.000E+000	+/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 5.209E-001	+/-	2.2%	< 1.085E-005	< 2.579E-006
Cm-243	< 5.610E-001	+/-	3.3%	< 1.169E-005	< 1.077E-008
Cm-244	< 3.442E+004	+/-	14.2%	< 7.171E-001	< 4.200E-004
Cm-245	< 9.737E-001	+/-	7.8%	< 2.029E-005	< 5.599E-006
Cm-247	< 7.549E-002	+/-	8.5%	< 1.573E-006	< 8.077E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 9.359E-002 +/-	3.4%	< 1.950E-006	< 2.265E-008
Cf-251	< 5.426E-001 +/-	5.8%	< 1.130E-005	< 3.391E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

Summed Segment Spectra Results
Category: Segmented

C:\Canberra\NDA2k\Data\00000212_CNTR0001_DCAT0002_PROC00AI.CNF

Elapsed Live Time: 114.98 sec Elapsed Real Time: 120.00 sec

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 1.020E-001 +/-	1.0%	< 2.126E-006	< 4.704E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 1.129E-001 +/-	1.1%	< 2.351E-006	< 1.783E-011
	Al-26	< 1.271E-001 +/-	7.0%	< 2.649E-006	< 6.687E-006
	K-40	1.534E+000 +/-	22.5%	3.196E-005	2.393E-001
X	Co-57				
	Co-60	1.625E-001 +/-	15.0%	3.384E-006	1.425E-010
	Se-75	< 4.805E-001 +/-	1.0%	< 1.001E-005	< 3.306E-011
	Kr-85	< 3.781E+001 +/-	2.4%	< 7.878E-004	< 9.529E-008
	Sr-90	< 1.744E-001 +/-	0.8%	< 3.633E-006	< 1.264E-009
	Sb-125	< 5.738E-001 +/-	1.3%	< 1.195E-005	< 5.520E-010
	Ba-133	< 3.715E-001 +/-	0.8%	< 7.741E-006	< 1.468E-009
	Cs-134	< 1.103E-001 +/-	0.9%	< 2.297E-006	< 8.413E-011
X	Cs-137				
	Eu-152	< 4.661E-001 +/-	1.8%	< 9.711E-006	< 2.620E-009
	Eu-154	< 3.223E-001 +/-	1.4%	< 6.715E-006	< 1.209E-009
	Ho-166m	< 1.477E-001 +/-	1.6%	< 3.078E-006	< 8.214E-008
	Bi-207	< 1.321E-001 +/-	0.8%	< 2.752E-006	< 2.404E-009
	Pb-210	< 1.042E+004 +/-	11.3%	< 2.171E-001	< 1.354E-004
	Ra-226	< 2.820E-001 +/-	1.3%	< 5.876E-006	< 2.820E-007
	Ac-227	< 1.663E+000 +/-	8.2%	< 3.465E-005	< 2.279E-008
	Th-230	9.527E+002 +/-	56.0%	1.985E-002	4.668E-002
	Pa-231	< 9.364E+000 +/-	11.1%	< 1.951E-004	< 1.957E-004
	Th-232	< 3.605E-001 +/-	1.8%	< 7.510E-006	< 3.248E+000
	U-232	< 4.530E-001 +/-	1.1%	< 9.437E-006	< 2.097E-008
	U-233	< 6.738E+003 +/-	1.4%	< 1.404E-001	< 6.873E-001
	Pa-234	< 5.444E-001 +/-	12.1%	< 1.134E-005	
	Pa-234m	< 7.105E+002 +/-	1.5%	< 1.480E-002	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 5.569E-001 +/-	1.7%	< 1.160E-005	< 2.545E-001
	Np-237	5.424E+000 +/-	5.1%	1.130E-004	7.593E-003
	Pu-238	2.752E+005 +/-	3.3%	5.734E+000	1.591E-002
	U-238	< 1.168E+001 +/-	1.6%	< 2.432E-004	< 3.432E+001
	Pu-239	1.212E+006 +/-	2.2%	2.524E+001	1.927E+001
	Pu-239B	7.792E+005 +/-	1.8%	1.623E+001	1.239E+001
	U-239	< 2.383E+004 +/-	15.0%	< 4.965E-001	
X	Pu-240				
	Am-241	5.623E+005 +/-	3.5%	1.171E+001	1.619E-001
	Am-241B	2.946E+005 +/-	1.9%	6.138E+000	8.486E-002
	Pu-241	6.683E+005 +/-	5.4%	1.392E+001	6.429E-003
	Pu-241B	1.404E+006 +/-	2.1%	2.925E+001	1.351E-002

Pu-242	< 0.000E+000	+/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.875E+000	+/-	1.1%	< 3.906E-005	< 9.281E-006
Cm-243	< 1.934E+000	+/-	3.0%	< 4.029E-005	< 3.713E-008
Cm-244	< 1.349E+005	+/-	14.1%	< 2.809E+000	< 1.645E-003
Cm-245	< 3.450E+000	+/-	7.4%	< 7.188E-005	< 1.984E-005
Cm-247	< 2.353E-001	+/-	8.4%	< 4.901E-006	< 2.517E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.837E-001 +/-	3.1%	< 5.911E-006	< 6.866E-008
Cf-251	< 1.922E+000 +/-	5.3%	< 4.004E-005	< 1.201E-006

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.93E+001 +- 4.32E-001	8.02E+000 +- 8.89E-002

Beta: 1.66E+002 +- 4.96E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	5.38E+000 +- 1.23E-001
203.55	8.29E+000 +- 2.00E-001
375.05	1.24E+001 +- 2.85E-001
413.71	1.29E+001 +- 2.08E-001

Automated Independent Technical Review

Counter ID: SGS with Trans. Count Type: Assay - 55 Gal Galv 23.8
Container ID: LL85234327 Assay Date: 12/23/2008
Waste Matrix Code:
Sequence Number: 212

Data Combiner Analysis:
Input combination 2: only Isotopics input data are valid.

Source of results is undefined.

DISPOSITION:

MGA Analysis:

Note: The measured and declared isotopics are inconsistent.

DISPOSITION:

Gamma Analysis:
Analysis Status: No errors.
Ratio of Pu-239 414 to 129 keV line activities is above the limit of 2.50
Spectrum Validity Check engine has suggested data review.
Pu-239/Am-241 ratio is less than the lower limit of 100.00

DISPOSITION:

Segment Data Review:
Segment: 1 OK
Segment: 2 OK
Segment: 3 OK
Segment: 4 OK
Segment: 5 OK
Segment: 6 OK
Segment: 7 OK
Segment: 8 OK
Segment: 9 OK
Segment: 10 OK
Segment: 11 OK
Segment: 12 OK
Segment: 13 OK
Segment: 14 OK
Segment: 15 OK
Segment: 16 OK

DISPOSITION:

Miscellaneous:

DISPOSITION:

Expert Review by: Robert J. Haslett Jr Date: 2-3-09

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Assay Instrument:	SGS with Trans.	Location:	LLNL
Analysis Method:	CCP-TP-019 Rev 4	Software Version:	NDA 2000 V.4.0
Item ID:	LL85234327	Analysis Date:	12/23/2008

Used Multi Curve
RJH 2-3-09

********** MGA Results **********

MGA version: MGA V9.63H CI

Measurement date = 12/23/08 Declared date = 12/23/08
Low energy spectrum sensitivity = 30.0% Total counts = 2.098E+006
High energy spectrum sensitivity : 10.0%

Pu g/cm2 = 0.3126 Cd g/cm2 = 1.9536 FWHM at 122 keV = 620 eV
QFIT = 1.02 FWHM at 208 keV = 792 eV
NQFIT = 1.00

Isotope	Relative to Pu-239	%* Err	% Err	Relative to Pu-241	%* Err	Isotope analysis at Meas. date % weight	%Err	Decl. date % weight	%Err
Pu-238	0.002287	1.9	1.4	2.2632	5.5	0.21443	1.83	0.23270	1.98
Pu-239	1.000000	0.0	1.3	989.8055	5.5	93.77887	0.17	93.69854	0.17
Pu-240	0.062604	2.9	2.5	61.9658	5.9	5.87093	2.66	5.87064	2.66
Pu-241	0.001010	5.8	5.3	1.0000	0.0	0.09474	5.70	0.15715	9.45
Pu-242	(New alg.)			0.4329(10)		0.04101 (10)		0.04097 (9)	
Am-241	0.010311	1.4	0.6	10.2060	5.3	0.96697	1.35	0.98273	1.37

Pu-240 effective (meas. date) = 6.480 +/- 2.71%
U-237 separated more than 10 days ago
Am-241 separated about 50.071 +/- 0.338 years ago
Am/Pu-241 weight ratio =10.20604 +/- 5.29%

Messages:

Lead x-rays detected.
Calculations in MGAABS didn't converge: results may be suspect.
Pu-241/Pu-239 efficiency changed in MGACAL by 3%.

Notes : * = Error in ratio
Errors quoted at 1.000 sigma
MGA sigma defaulted to 1

Reviewed by: Robert J Hoelett Jr Date: 2-3-09

214

********** Radioassay Data Sheet **********

Engine Version: TMU Gamma 1.5

Assay Instrument: SGS with Trans. Location:LLNL
Analysis Method: LLNL SGS Operating Procedure Software Version: NDA 2000 V.4.0
Item ID: SGS100 Analysis Date: 12/24/2008

NID identified fiducial nuclide Pu-239
Source of isotopics: MEASURED

Net Weight	16800.0 g		
Pu mass	1.16E+002	+- 1.71E+001	g
TRU Alpha Activity	1.00E+001	+- 1.12E+000	Ci
TRU Activity Concentration	5.96E+005	+- 6.69E+004	nCi/g
Pu-239 Equivalent Activity	1.04E+001	+- 1.13E+000	Ci
Pu-239 FGE	1.10E+002	+- 1.71E+001	g
Decay heat	3.15E-001	+- 3.50E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.05E-007
U233	<LLD	<LLD	0.00E+000	3.96E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.38E-007
NP237	1.04E-002	7.42E-006	1.20E-006	6.69E-007
PU238	9.24E-003	1.60E-001	2.79E-002	2.57E-004
U238	<LLD	<LLD	0.00E+000	4.17E-006
PU239	1.09E+002	6.85E+000	1.07E+000	1.10E-002
PU240	6.57E+000	1.51E+000	2.37E-001	2.43E-003
AM241	4.29E-001	1.49E+000	2.35E-001	2.37E-004
PU241	2.00E-001	2.08E+001	3.26E+000	3.34E-002
PU242	3.61E-002	1.43E-004	2.66E-005	0.00E+000

Errors quoted at 1.000 sigma

Operator: _____ Date: _____

Expert Analysis
IPR: Robert J Haskett Date: 2-3-09 N/A

********** Radioassay Data Sheet **********

Engine Version: TMU Gamma 1.5

Assay Instrument: SGS with Trans. Location:LLNL
Analysis Method: LLNL SGS Operating Procedure Software Version: NDA 2000 V.4.0
Item ID: SGS100 Analysis Date: 12/24/2008

NID identified fiducial nuclide Pu-239
Source of isotopics: MEASURED

Net Weight	16800.0 g		
Pu mass	1.18E+002	+- 1.75E+001	g
TRU Alpha Activity	9.91E+000	+- 1.14E+000	Ci
TRU Activity Concentration	5.90E+005	+- 6.79E+004	nCi/g
Pu-239 Equivalent Activity	1.03E+001	+- 1.14E+000	Ci
Pu-239 FGE	1.12E+002	+- 1.75E+001	g
Decay heat	3.11E-001	+- 3.54E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.29E-007
U233	<LLD	<LLD	0.00E+000	9.16E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	7.89E-007
NP237	8.27E-003	5.91E-006	9.43E-007	1.08E-006
PU238	9.44E-003	1.63E-001	2.85E-002	2.89E-004
U238	<LLD	<LLD	0.00E+000	1.18E-005
PU239	1.11E+002	7.00E+000	1.10E+000	1.24E-002
PU240	6.71E+000	1.54E+000	2.42E-001	2.73E-003
AM241	3.46E-001	1.20E+000	1.90E-001	1.16E-004
PU241	2.04E-001	2.12E+001	3.33E+000	3.75E-002
PU242	3.68E-002	1.46E-004	2.72E-005	0.00E+000

Errors quoted at 1.000 sigma

Operator:_____ Date:_____

ITR:_____ Date:_____

********** MGA Results **********

MGA version: MGA V9.63H CI

Measurement date = 12/24/08 Declared date = 12/24/08
Low energy spectrum sensitivity = 30.0% Total counts = 7.493E+006
High energy spectrum sensitivity : 10.0%

Pu g/cm2 = 0.7383 Cd g/cm2 = 2.0754 FWHM at 122 keV = 609 eV
QFIT = 1.00 FWHM at 208 keV = 776 eV
NQFIT = 1.00

Isotope	Relative to Pu-239	%* Err	% Err	Relative to Pu-241	%* Err	Isotope analysis at Meas. date % weight	Meas. date %Err	Decl. date % weight	Decl. date %Err
Pu-238	0.000085	7.7	7.7	0.0462	7.7	0.00798	7.67	0.00822	7.90
Pu-239	1.000000	0.0	0.4	545.0479	0.8	94.11563	0.05	94.08118	0.05
Pu-240	0.060272	0.9	0.9	32.8513	1.1	5.67257	0.87	5.67214	0.87
Pu-241	0.001835	0.7	0.6	1.0000	0.0	0.17267	0.72	0.20733	0.86
Pu-242	(New alg.)			0.1804(10)		0.03115	(10)	0.03113	(9)
Am-241	0.005343	0.5	0.4	2.9120	0.7	0.50282	0.49	0.50554	0.49

Pu-240 effective (meas. date) = 5.745 +/- 0.95%
Am-241 separated about 28.208 +/- 0.159 years ago
Am/Pu-241 weight ratio = 2.91197 +/- 0.73%

Messages:

Lead x-rays detected.

Notes : * = Error in ratio
Errors quoted at 1.000 sigma
MGA sigma defaulted to 1

Reviewed by: _____ Date: _____

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

Last Results Report
12/24/08 9:20:02 AM

QA File: C:\CANBERRA\NDA2K\QA\CNTR0001_DC
Sample ID: SGS100
Sample Quantity: 1.0000E+000
Sample Date: 7/17/08 10:49:07 AM
Measurement Date: 12/24/08 8:10:28 AM
Elapsed Live Time: 0.0 seconds
Elapsed Real Time: 0.0 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
SGS-100 Pu-239 Trans Mas [UD: 1.0913E+002+/- 7.370]	1.0898E+002	-2.0631E-002 < : : : >

Flags Key: LU = Lower/Upper Bounds Test (Ab = Above, Be = Below)
SD = Sample Driven N-Sigma Test (In = Investigate, Ac = Action)
UD = User Driven N-Sigma Test (In = Investigate, Ac = Action)
BS = Measurement Bias Test (In = Investigate, Ac = Action)

****
***** GENIE QUALITY ASSURANCE *****
****

Last Results Report
12/24/08 9:20:04 AM

QA File: C:\CANBERRA\NDA2K\QA\CNTR0001_DC
Sample ID: SGS100
Sample Quantity: 1.0000E+000
Sample Date: 7/17/08 10:49:07 AM
Measurement Date: 12/24/08 8:14:45 AM
Elapsed Live Time: 97.6 seconds
Elapsed Real Time: 120.0 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
SGS-100 414 keV centroid [0.00+/-0.00]	8.2847E+002	0.00 < : : : >
SGS-100 414 keV FWHM [0.00+/-0.00]	1.3717E+000	0.00 < : : : >
SGS-100 Pu-239 Mass [UD: 1.1082E+002+/- 3.000]	1.1133E+002	1.7163E-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)

NDA 2000 Assay Report

Item Information

Item ID:	SGS100	Count Sequence Number:	214
Operator:	RHWM2\RHWM		
Assay Start:	12/24/2008 8:12:44 AM		
Description 1:	SGS100		
Description 2:			
Location:	LLNL		
Comment:			
Matrix Type:	Lucite		
Container Type:	55 TRU Galv 81.5		
Weight:	Gross: 54.0 kg	Net:	16.8 kg
Container:	Volume: 208.0 l	Full:	100.0 %
Density:	0.080 kg /l		

System Configuration

Counter:	SGS with Trans.		
Segments:	Number: 16	Offset:	0
Scanning Platform:	Start: 934 mm	Delta:	-51 mm
Count Type:	QC - SGS 100		
Collimator/Geometry Setting:	Default - 0		
Transmission Mode:	Two Pass		
Transmission Correction Type:	Standard		
Transmission Source:	Se-75 Trans. - 0		

Errors quoted at 1.000 sigma

Segment 1 Results

Segment: 1 Detector: DET01 Position: 1
C:\Canberra\NDA2k\Data\00000214_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P001_S001

Acquisition Start: 12/24/2008 8:14:45 AM
Elapsed Live Time: 118.18 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.413 +/- 0.0067
SE-75	264.66	0.487 +/- 0.0073
SE-75	279.54	0.510 +/- 0.0087
SE-75	400.66	0.511 +/- 0.0110

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/24/2008 8:16:47 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.45	Y	660	763	1.16	120.75	6.690E-006	7.54	
2234.71		11980	7	1.15	4467.54	4.560E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 3.151E-002 +/-	2.1%	< 3.001E-005	< 1.453E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.629E-002 +/-	2.2%	< 2.504E-005	< 4.154E-012
Al-26	< 3.349E-002 +/-	16.2%	< 3.190E-005	< 1.762E-006
K-40	< 4.072E-001 +/-	5.3%	< 3.878E-004	< 6.352E-002
Co-57	< 1.249E-001 +/-	3.4%	< 1.189E-004	< 1.461E-011
Co-60	< 2.505E-002 +/-	1.9%	< 2.385E-005	< 2.197E-011
Se-75	< 1.013E-001 +/-	1.9%	< 9.649E-005	< 6.971E-012
Kr-85	< 7.862E+000 +/-	3.2%	< 7.487E-003	< 1.981E-008
Sr-90	< 2.260E-002 +/-	2.1%	< 2.152E-005	< 1.638E-010
Sb-125	< 7.409E-002 +/-	2.3%	< 7.056E-005	< 7.127E-011
Ba-133	< 6.343E-002 +/-	1.8%	< 6.041E-005	< 2.505E-010
Cs-134	< 2.205E-002 +/-	2.1%	< 2.100E-005	< 1.683E-011
Cs-137	< 2.260E-002 +/-	2.1%	< 2.152E-005	< 2.576E-010
Eu-152	< 1.468E-001 +/-	2.3%	< 1.398E-004	< 8.251E-010
Eu-154	< 7.507E-002 +/-	2.4%	< 7.150E-005	< 2.815E-010
Ho-166m	< 4.765E-002 +/-	2.4%	< 4.538E-005	< 2.650E-008
Bi-207	< 2.759E-002 +/-	2.1%	< 2.628E-005	< 5.021E-010
Pb-210	< 9.209E+002 +/-	47.8%	< 8.770E-001	< 1.197E-005
Ra-226	< 5.061E-002 +/-	2.4%	< 4.820E-005	< 5.061E-008
Ac-227	< 3.236E-001 +/-	8.3%	< 3.081E-004	< 4.433E-009
Th-230	< 1.529E+002 +/-	8.6%	< 1.456E-001	< 7.493E-003
Pa-231	< 2.084E+000 +/-	11.2%	< 1.985E-003	< 4.355E-005
Th-232	< 8.280E-002 +/-	2.3%	< 7.886E-005	< 7.460E-001
U-232	< 8.280E-002 +/-	2.3%	< 7.886E-005	< 3.834E-009
U-233	< 1.134E+003 +/-	2.7%	< 1.080E+000	< 1.157E-001
Pa-234	< 1.660E-001 +/-	12.3%	< 1.581E-004	
Pa-234m	< 2.744E+002 +/-	2.3%	< 2.614E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 1.050E-001 +/-	2.5%	< 1.000E-004	< 4.800E-002
Np-237	< 1.484E-001 +/-	2.0%	< 1.413E-004	< 2.078E-004
Pu-238	< 7.532E+003 +/-	2.7%	< 7.173E+000	< 4.353E-004
U-238	< 3.512E+000 +/-	2.4%	< 3.345E-003	< 1.033E+001
Pu-239	< 1.395E+003 +/-	3.1%	< 1.329E+000	< 2.219E-002
Pu-239B	< 4.211E+003 +/-	5.2%	< 4.010E+000	< 6.694E-002
U-239	< 2.074E+003 +/-	59.1%	< 1.976E+000	
Pu-240	< 2.553E+003 +/-	4.6%	< 2.431E+000	< 1.111E-002
Am-241	6.192E+001 +/-	21.8%	5.897E-002	1.783E-005
Am-241B	< 9.565E+002 +/-	4.9%	< 9.109E-001	< 2.755E-004
Pu-241	< 3.824E+004 +/-	2.8%	< 3.642E+001	< 3.679E-004
Pu-241B	< 1.055E+004 +/-	2.5%	< 1.005E+001	< 1.015E-004
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 4.394E-001 +/-	1.9%	< 4.185E-004	< 2.175E-006
Cm-243	< 4.533E-001 +/-	3.4%	< 4.317E-004	< 8.702E-009
Cm-244	< 2.863E+004 +/-	14.1%	< 2.727E+001	< 3.493E-004
Cm-245	< 6.622E-001 +/-	7.7%	< 6.307E-004	< 3.808E-006
Cm-247	< 3.448E-002 +/-	8.6%	< 3.283E-005	< 3.689E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 4.323E-002 +/-	3.6%	< 4.118E-005	< 1.046E-008
Cf-251	< 3.645E-001 +/-	5.6%	< 3.471E-004	< 2.278E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 2 Results

Segment: 2 Detector: DET01 Position: 2
C:\Canberra\NDA2k\Data\00000214_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P002_S002

Acquisition Start: 12/24/2008 8:18:57 AM
Elapsed Live Time: 117.68 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.457 +/- 0.0074
SE-75	264.66	0.549 +/- 0.0082
SE-75	279.54	0.564 +/- 0.0095
SE-75	400.66	0.605 +/- 0.0125

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/24/2008 8:20:59 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.48	Y	1607	1034	1.24	120.80	1.234E-004	4.10	
2234.71		11980	8	1.12	4467.55	1.075E-004	1.43	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.02 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 1.636E-002 +/-	1.8%	< 1.558E-005	< 7.542E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.107E-002 +/-	2.0%	< 2.006E-005	< 3.328E-012
Al-26	< 1.556E-002 +/-	15.5%	< 1.482E-005	< 8.186E-007
K-40	< 1.426E-001 +/-	4.9%	< 1.358E-004	< 2.224E-002
Co-57	< 1.105E-001 +/-	3.5%	< 1.053E-004	< 1.293E-011
Co-60	< 2.639E-002 +/-	1.7%	< 2.513E-005	< 2.314E-011
Se-75	< 8.601E-002 +/-	1.9%	< 8.191E-005	< 5.918E-012
Kr-85	< 5.489E+000 +/-	3.1%	< 5.228E-003	< 1.383E-008
Sr-90	< 2.153E-002 +/-	2.0%	< 2.050E-005	< 1.561E-010
Sb-125	< 5.717E-002 +/-	2.1%	< 5.445E-005	< 5.500E-011
Ba-133	< 6.463E-002 +/-	1.7%	< 6.155E-005	< 2.553E-010
Cs-134	< 1.718E-002 +/-	2.0%	< 1.636E-005	< 1.311E-011
Cs-137	< 2.153E-002 +/-	2.0%	< 2.050E-005	< 2.454E-010
Eu-152	< 7.127E-002 +/-	3.7%	< 6.788E-005	< 4.006E-010
Eu-154	< 6.015E-002 +/-	2.2%	< 5.729E-005	< 2.256E-010
Ho-166m	< 1.773E-002 +/-	2.3%	< 1.689E-005	< 9.858E-009
Bi-207	< 1.919E-002 +/-	2.1%	< 1.828E-005	< 3.492E-010
Pb-210	< 7.365E+000 +/-	81.7%	< 7.014E-003	< 9.574E-008
Ra-226	< 3.257E-002 +/-	2.3%	< 3.102E-005	< 3.257E-008
Ac-227	< 2.798E-001 +/-	8.3%	< 2.665E-004	< 3.834E-009
Th-230	< 3.698E+001 +/-	25.1%	< 3.522E-002	< 1.812E-003
Pa-231	< 1.844E+000 +/-	11.2%	< 1.756E-003	< 3.854E-005
Th-232	< 4.427E-002 +/-	2.4%	< 4.216E-005	< 3.989E-001
U-232	< 5.849E-002 +/-	2.2%	< 5.571E-005	< 2.708E-009
U-233	< 1.071E+003 +/-	2.7%	< 1.020E+000	< 1.093E-001
Pa-234	< 1.008E-001 +/-	12.2%	< 9.599E-005	
Pa-234m	< 1.332E+002 +/-	2.1%	< 1.268E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 1.123E-001 +/-	2.5%	< 1.070E-004	< 5.133E-002
Np-237	< 1.359E-001 +/-	2.0%	< 1.295E-004	< 1.903E-004
Pu-238	< 7.276E+003 +/-	2.7%	< 6.929E+000	< 4.205E-004
U-238	< 2.825E+000 +/-	2.1%	< 2.691E-003	< 8.306E+000
Pu-239	< 1.272E+003 +/-	3.2%	< 1.212E+000	< 2.023E-002
Pu-239B	< 2.684E+003 +/-	6.4%	< 2.556E+000	< 4.267E-002
U-239	< 9.576E+000 +/-	98.9%	< 9.120E-003	
Pu-240	< 1.717E+003 +/-	5.4%	< 1.635E+000	< 7.470E-003
Am-241	8.171E+000 +/-	37.9%	7.782E-003	2.353E-006
Am-241B	< 6.420E+002 +/-	5.7%	< 6.114E-001	< 1.849E-004
Pu-241	< 3.801E+004 +/-	2.9%	< 3.620E+001	< 3.656E-004
Pu-241B	< 1.099E+004 +/-	2.5%	< 1.046E+001	< 1.057E-004
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 2.028E-001 +/-	16.6%	< 1.932E-004	< 1.004E-006
Cm-243	< 3.705E-001 +/-	3.4%	< 3.529E-004	< 7.114E-009
Cm-244	< 2.546E+004 +/-	14.1%	< 2.425E+001	< 3.106E-004
Cm-245	< 6.892E-001 +/-	7.7%	< 6.564E-004	< 3.963E-006
Cm-247	< 3.421E-002 +/-	8.5%	< 3.258E-005	< 3.661E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 4.061E-002 +/-	3.5%	< 3.867E-005	< 9.827E-009
Cf-251	< 3.827E-001 +/-	5.6%	< 3.645E-004	< 2.392E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 3 Results

Segment: 3 Detector: DET01 Position: 3
C:\Canberra\NDA2k\Data\00000214_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P003_S003

Acquisition Start: 12/24/2008 8:23:08 AM
Elapsed Live Time: 114.76 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.389 +/- 0.0066
SE-75	264.66	0.475 +/- 0.0073
SE-75	279.54	0.482 +/- 0.0086
SE-75	400.66	0.533 +/- 0.0117

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/24/2008 8:25:10 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.44	Y	8788	2345	1.14	120.72	9.317E-005	1.76	
M	94.77		2471	5630	1.56	191.31	2.332E-004	5.37	11.33
m	98.71	Y	7889	8672	1.56	199.20	2.468E-004	4.00	
m	100.83	Y	1169	8569	1.57	203.43	2.539E-004	7.25	
m	103.36	Y	5273	6922	1.57	208.50	2.620E-004	3.97	
M	111.03		1804	4389	1.50	223.82	2.846E-004	13.29	6.35
m	114.79	Y	920	5936	1.51	231.32	2.946E-004	13.96	
M	125.34	Y	591	2780	1.05	252.42	3.191E-004	7.12	2.02
m	129.34	Y	3402	2590	1.06	260.40	3.270E-004	2.32	
M	144.29		196	1990	1.08	290.28	3.511E-004	47.53	3.58
m	148.64	Y	664	4068	1.09	298.98	3.565E-004	23.41	
M	203.55	Y	691	1269	1.09	408.70	3.783E-004	5.47	3.05
m	208.01	Y	2698	1375	1.09	417.61	3.773E-004	2.44	
M	332.72	Y	997	570	1.22	666.81	3.045E-004	3.75	1.69

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	335.65	Y	314	601	1.22	672.68	3.026E-004	7.59	
m	341.70		110	569	1.23	684.75	2.987E-004	16.65	
m	344.96		850	489	1.23	691.28	2.966E-004	4.06	
M	368.51	Y	225	395	1.26	738.33	2.818E-004	9.10	2.72
m	375.01	Y	2250	319	1.27	751.33	2.778E-004	2.42	
m	380.13		384	245	1.27	761.56	2.748E-004	5.97	
m	382.72		346	226	1.27	766.73	2.733E-004	6.29	
	392.83		790	193	1.59	786.94	2.674E-004	4.80	
	413.66	Y	2100	92	1.44	828.56	2.559E-004	2.60	
	422.45		134	109	1.31	846.12	2.513E-004	15.88	
	451.39		236	56	1.52	903.96	2.371E-004	8.56	
	662.20	Y	99	12	1.22	1325.21	1.672E-004	11.77	
	721.66	Y	60	7	1.43	1444.04	1.550E-004	15.12	
	2234.73		11980	9	1.11	4467.59	8.764E-005	1.45	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.05 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 1.866E-002 +/-	1.8%	< 1.777E-005	< 8.603E-016
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 5.349E-003 +/-	2.0%	< 5.095E-006	< 8.452E-013
	Al-26	< 6.231E-003 +/-	18.9%	< 5.934E-006	< 3.278E-007
	K-40	< 5.382E-002 +/-	5.3%	< 5.126E-005	< 8.396E-003
	Co-57	< 1.488E-001 +/-	4.4%	< 1.417E-004	< 1.741E-011
	Co-60	< 3.277E-002 +/-	1.7%	< 3.121E-005	< 2.874E-011
	Se-75	< 1.160E-001 +/-	1.8%	< 1.105E-004	< 7.981E-012
	Kr-85	< 6.852E+000 +/-	3.1%	< 6.526E-003	< 1.727E-008
	Sr-90	< 3.286E-002 +/-	2.2%	< 3.129E-005	< 2.382E-010
	Sb-125	< 1.152E-001 +/-	1.9%	< 1.097E-004	< 1.108E-010
	Ba-133	< 9.681E-002 +/-	1.6%	< 9.220E-005	< 3.824E-010
	Cs-134	< 1.502E-002 +/-	1.9%	< 1.430E-005	< 1.146E-011
X	Cs-137				
	Eu-152	< 1.064E-001 +/-	3.8%	< 1.014E-004	< 5.982E-010
	Eu-154	< 1.527E-002 +/-	2.1%	< 1.455E-005	< 5.728E-011
	Ho-166m	< 3.377E-002 +/-	2.4%	< 3.216E-005	< 1.877E-008
	Bi-207	< 2.228E-002 +/-	2.1%	< 2.122E-005	< 4.054E-010
	Pb-210	< 1.323E+001 +/-	259.0%	< 1.260E-002	< 1.720E-007
	Ra-226	< 4.350E-002 +/-	2.4%	< 4.143E-005	< 4.350E-008
	Ac-227	< 3.981E-001 +/-	8.3%	< 3.792E-004	< 5.454E-009
	Th-230	< 5.996E+001 +/-	83.2%	< 5.710E-002	< 2.938E-003
	Pa-231	< 2.397E+000 +/-	11.2%	< 2.282E-003	< 5.009E-005

	Th-232	< 8.713E-002	+/- 2.3%	< 8.298E-005	< 7.851E-001	
	U-232	< 8.713E-002	+/- 2.3%	< 8.298E-005	< 4.034E-009	
	U-233	< 1.502E+003	+/- 3.0%	< 1.430E+000	< 1.532E-001	
	Pa-234	< 8.566E-002	+/- 32.2%	< 8.158E-005		
	Pa-234m	< 1.335E+002	+/- 2.1%	< 1.272E-001		
	U-234	< 0.000E+000	+/- 0.0%	< 0.000E+000	< 0.000E+000	
	U-235	< 1.404E-001	+/- 2.9%	< 1.337E-004	< 6.414E-002	
	Np-237	< 1.959E-001	+/- 1.9%	< 1.866E-004	< 2.743E-004	
	Pu-238	< 9.361E+003	+/- 3.1%	< 8.915E+000	< 5.410E-004	
	U-238	< 2.162E+000	+/- 2.2%	< 2.059E-003	< 6.356E+000	
	Pu-239	2.173E+005	+/- 3.9%	2.070E+002	3.455E+000	
	Pu-239B	< 5.576E+003	+/- 16.5%	< 5.310E+000	< 8.864E-002	
	U-239	< 2.196E+001	+/- 308.4%	< 2.091E-002		
X	Pu-240					
	Am-241	3.885E+004	+/- 9.6%	3.700E+001	1.119E-002	
	Am-241B	2.583E+004	+/- 10.6%	2.460E+001	7.440E-003	
	Pu-241	2.260E+005	+/- 23.6%	2.153E+002	2.174E-003	
	Pu-241B	3.100E+005	+/- 3.6%	2.952E+002	2.982E-003	
	Pu-242	< 0.000E+000	+/- 0.0%	< 0.000E+000	< 0.000E+000	
	Am-243	< 3.183E-001	+/- 57.7%	< 3.032E-004	< 1.576E-006	
	Cm-243	< 4.707E-001	+/- 3.3%	< 4.483E-004	< 9.038E-009	
	Cm-244	< 2.659E+004	+/- 14.2%	< 2.532E+001	< 3.244E-004	
	Cm-245	< 8.825E-001	+/- 7.8%	< 8.405E-004	< 5.074E-006	
	Cm-247	< 5.273E-002	+/- 8.5%	< 5.022E-005	< 5.642E-004	

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 6.270E-002 +/-	3.4%	< 5.972E-005	< 1.517E-008
Cf-251	< 4.827E-001 +/-	5.8%	< 4.598E-004	< 3.017E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	3.46E+000 +- 1.34E-001	9.46E-001 +- 2.04E-002

Beta: 2.28E+002 +- 8.96E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	5.90E-001 +- 2.47E-002
203.55	1.15E+000 +- 6.83E-002
375.05	1.87E+000 +- 5.61E-002
413.71	2.00E+000 +- 6.53E-002

Segment 4 Results

Segment: 4 Detector: DET01 Position: 4
C:\Canberra\NDA2k\Data\00000214_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P004_S004

Acquisition Start: 12/24/2008 8:27:19 AM
Elapsed Live Time: 102.31 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.357 +/- 0.0067
SE-75	264.66	0.484 +/- 0.0086
SE-75	279.54	0.488 +/- 0.0094
SE-75	400.66	0.535 +/- 0.0130

Errors quoted at 1.000 sigma

Peak Analysis Results

*** Spectrum Validity Test warnings ***
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 12/24/2008 8:29:21 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.45	Y	54590	6050	1.10	120.74	5.124E-006	1.27	
M	94.68	Y	11360	11106	1.56	191.14	1.302E-004	2.29	61.27
m	98.70	Y	43359	14965	1.57	199.17	1.538E-004	1.87	
m	100.89	Y	6668	15155	1.58	203.55	1.670E-004	2.90	
m	103.36	Y	31395	13055	1.58	208.49	1.818E-004	1.84	
M	111.09	Y	11606	6890	1.36	223.93	2.274E-004	1.68	88.10
m	114.59	Y	9525	8529	1.36	230.92	2.472E-004	1.75	
m	116.60	Y	9221	7955	1.37	234.95	2.582E-004	1.72	
m	120.65	Y	2425	7153	1.37	243.03	2.794E-004	2.98	
m	122.96	Y	1158	6917	1.38	247.66	2.910E-004	5.16	
m	125.27	Y	4309	6591	1.38	252.27	3.020E-004	2.19	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	129.29	Y	20279	5730	1.39	260.31	3.200E-004	1.51	
M	144.16	Y	1300	3604	1.10	290.02	3.750E-004	4.88	1.98
m	146.32	Y	1146	4578	1.11	294.33	3.814E-004	5.33	
m	148.58	Y	2858	4982	1.11	298.85	3.878E-004	2.95	
M	160.99	Y	1281	5028	1.62	323.65	4.146E-004	17.64	5.66
m	164.63	Y	1251	5931	1.62	330.93	4.201E-004	16.41	
	171.38	Y	1068	4372	1.20	344.42	4.279E-004	11.27	
	189.31	Y	485	3337	1.17	380.25	4.360E-004	20.04	
	195.61	Y	886	4442	1.07	392.84	4.353E-004	13.88	
M	203.53	Y	4973	3599	1.13	408.66	4.326E-004	2.06	5.98
m	208.00	Y	16277	3202	1.13	417.59	4.304E-004	1.44	
	243.04	Y	322	1882	1.51	487.60	4.006E-004	23.44	
	255.28	Y	702	1475	1.06	512.07	3.878E-004	9.88	
M	264.03	Y	262	1504	1.39	529.56	3.784E-004	13.99	1.29
m	267.50	Y	702	2177	1.40	536.49	3.742E-004	6.37	
	297.42	Y	462	1732	1.40	596.28	3.403E-004	17.21	
	311.70	Y	859	1548	1.29	624.81	3.255E-004	9.00	
M	320.96	Y	486	1501	1.77	643.31	3.164E-004	8.95	4.21
m	323.35	Y	738	2227	1.77	648.10	3.141E-004	6.23	
M	332.70	Y	5787	1157	1.28	666.77	3.053E-004	1.84	4.00
m	335.61	Y	2230	1189	1.28	672.59	3.027E-004	2.71	
m	341.38	Y	700	1122	1.28	684.12	2.975E-004	5.40	
m	344.95	Y	4930	1154	1.29	691.25	2.944E-004	1.93	
M	368.40	Y	1481	802	1.28	738.12	2.753E-004	3.31	18.13
m	370.88	Y	215	872	1.28	743.07	2.734E-004	12.90	
m	374.99	Y	13292	761	1.29	751.29	2.703E-004	1.47	
m	380.06	Y	2544	624	1.29	761.42	2.666E-004	2.49	
m	382.71	Y	2161	588	1.29	766.72	2.648E-004	2.67	
	392.85	Y	4585	573	1.52	786.97	2.577E-004	2.20	
M	413.65	Y	11906	265	1.37	828.53	2.446E-004	2.06	2.29
m	419.17	Y	95	206	1.38	839.57	2.413E-004	17.35	
m	422.49	Y	889	222	1.38	846.21	2.394E-004	4.39	
m	426.52	Y	218	215	1.38	854.25	2.372E-004	9.45	
M	445.52	Y	80	171	1.28	892.23	2.271E-004	17.24	1.62
m	451.38	Y	1502	142	1.28	903.94	2.242E-004	3.07	
	619.00	Y	143	51	1.48	1238.88	1.690E-004	13.19	
M	639.97	Y	53	27	1.46	1280.79	1.646E-004	18.84	1.10
m	645.93	Y	97	31	1.47	1292.71	1.634E-004	14.04	
m	652.56	Y	84	30	1.47	1305.94	1.622E-004	14.73	
m	658.68	Y	45	29	1.48	1318.17	1.610E-004	20.47	
m	662.31	Y	618	23	1.48	1325.42	1.604E-004	8.90	
	688.57	Y	56	28	1.56	1377.90	1.558E-004	22.76	
	721.83	Y	335	24	1.55	1444.36	1.507E-004	6.63	
	769.17	Y	79	6	1.81	1538.98	1.444E-004	13.71	
	2234.68		11980	36	1.17	4467.49	6.814E-005	1.52	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.18 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 2.504E-002 +/-	1.8%	< 2.385E-005	< 1.154E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 1.563E-002 +/-	2.0%	< 1.489E-005	< 2.470E-012
	Al-26	< 3.615E-002 +/-	14.5%	< 3.443E-005	< 1.901E-006
	K-40	< 3.271E-001 +/-	4.8%	< 3.115E-004	< 5.102E-002
X	Co-57				
	Co-60	< 3.206E-002 +/-	1.7%	< 3.053E-005	< 2.811E-011
	Se-75	< 1.891E-001 +/-	1.7%	< 1.801E-004	< 1.301E-011
	Kr-85	< 1.183E+001 +/-	3.0%	< 1.127E-002	< 2.982E-008
	Sr-90	< 4.866E-002 +/-	2.0%	< 4.634E-005	< 3.528E-010
	Sb-125	< 2.196E-001 +/-	2.2%	< 2.092E-004	< 2.113E-010
	Ba-133	< 1.593E-001 +/-	1.7%	< 1.517E-004	< 6.294E-010
	Cs-134	< 2.588E-002 +/-	1.8%	< 2.464E-005	< 1.974E-011
X	Cs-137				
	Eu-152	< 1.282E-001 +/-	2.1%	< 1.221E-004	< 7.205E-010
	Eu-154	< 4.464E-002 +/-	2.2%	< 4.251E-005	< 1.674E-010
	Ho-166m	< 3.584E-002 +/-	2.3%	< 3.414E-005	< 1.993E-008
	Bi-207	< 4.245E-002 +/-	1.9%	< 4.043E-005	< 7.726E-010
	Pb-210	< 4.247E+003 +/-	37.2%	< 4.044E+000	< 5.521E-005
	Ra-226	< 8.781E-002 +/-	2.2%	< 8.363E-005	< 8.781E-008
	Ac-227	< 6.254E-001 +/-	8.3%	< 5.956E-004	< 8.568E-009
	Th-230	< 3.153E+002 +/-	8.5%	< 3.003E-001	< 1.545E-002
	Pa-231	< 3.654E+000 +/-	11.2%	< 3.480E-003	< 7.636E-005
	Th-232	< 1.003E-001 +/-	2.4%	< 9.549E-005	< 9.033E-001
	U-232	< 1.470E-001 +/-	2.1%	< 1.400E-004	< 6.805E-009
	U-233	< 2.403E+003 +/-	2.6%	< 2.288E+000	< 2.451E-001
	Pa-234	< 1.632E-001 +/-	16.8%	< 1.554E-004	
	Pa-234m	< 1.475E+002 +/-	2.1%	< 1.404E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 2.075E-001 +/-	2.4%	< 1.977E-004	< 9.485E-002
	Np-237	1.054E+000 +/-	13.4%	1.004E-003	1.476E-003
	Pu-238	< 1.347E+004 +/-	2.5%	< 1.282E+001	< 7.783E-004
	U-238	< 2.357E+000 +/-	2.2%	< 2.244E-003	< 6.929E+000
	Pu-239	1.298E+006 +/-	3.3%	1.237E+003	2.065E+001
	Pu-239B	7.269E+005 +/-	1.3%	6.923E+002	1.156E+001
	U-239	< 1.804E+004 +/-	46.3%	< 1.719E+001	
X	Pu-240				
	Am-241	2.488E+005 +/-	5.7%	2.369E+002	7.165E-002
	Am-241B	1.234E+005 +/-	3.6%	1.175E+002	3.554E-002
	Pu-241	8.950E+005 +/-	4.1%	8.523E+002	8.610E-003
	Pu-241B	1.690E+006 +/-	2.6%	1.610E+003	1.626E-002
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 7.099E-001 +/-	1.8%	< 6.761E-004	< 3.514E-006
	Cm-243	< 7.322E-001 +/-	3.3%	< 6.973E-004	< 1.406E-008
	Cm-244	< 3.965E+004 +/-	14.2%	< 3.776E+001	< 4.837E-004
	Cm-245	< 1.248E+000 +/-	7.6%	< 1.189E-003	< 7.177E-006
	Cm-247	< 1.021E-001 +/-	8.5%	< 9.724E-005	< 1.092E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.261E-001 +/-	3.5%	< 1.201E-004	< 3.051E-008
Cf-251	< 7.032E-001 +/-	5.6%	< 6.697E-004	< 4.395E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	2.06E+001 +- 6.72E-001	5.90E+000 +- 9.60E-002

Beta: 2.23E+002 +- 7.23E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	3.60E+000 +- 1.24E-001
203.55	7.24E+000 +- 2.10E-001
375.05	1.13E+001 +- 2.76E-001
413.71	1.19E+001 +- 3.55E-001

Segment 5 Results

Segment: 5 Detector: DET01 Position: 5
C:\Canberra\NDA2k\Data\00000214_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P005_S005

Acquisition Start: 12/24/2008 8:31:31 AM
Elapsed Live Time: 87.83 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.001 +/- 0.0005
SE-75	264.66	0.224 +/- 0.0066
SE-75	279.54	0.248 +/- 0.0071
SE-75	400.66	0.386 +/- 0.0125

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

*** Spectrum Validity Test warnings ***
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 12/24/2008 8:33:32 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	49.22		1700	9267	1.72	100.30	1.894E-005	11.65	
	59.41	Y	128272	10121	1.12	120.67	2.791E-005	1.27	
M	94.65	Y	21603	17067	1.53	191.08	5.984E-005	1.91	119.22
m	98.66	Y	89198	23316	1.53	199.10	6.292E-005	1.63	
m	100.83	Y	13653	23901	1.54	203.44	6.451E-005	2.26	
m	103.31	Y	63401	19403	1.54	208.39	6.626E-005	1.61	
M	111.04	Y	23458	10394	1.38	223.84	7.128E-005	2.60	150.67
m	114.56	Y	19542	14188	1.39	230.88	7.334E-005	2.61	
m	116.64	Y	18817	12057	1.39	235.02	7.448E-005	2.54	
m	120.52	Y	4766	10976	1.40	242.78	7.650E-005	3.37	
m	122.91	Y	1951	10556	1.40	247.55	7.765E-005	5.65	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	125.22	Y	8407	10103	1.40	252.18	7.871E-005	2.83	
m	129.25	Y	41095	8829	1.41	260.22	8.042E-005	2.41	
M	144.14	Y	2733	6629	1.15	289.98	1.458E-004	8.79	1.52
m	146.27	Y	2144	6684	1.15	294.23	1.540E-004	9.46	
m	148.50	Y	5618	6765	1.16	298.70	1.616E-004	7.83	
M	161.04	Y	2292	6865	1.32	323.76	1.943E-004	12.20	6.96
m	164.53	Y	2323	11304	1.33	330.72	2.014E-004	10.09	
	171.41	Y	1907	6660	1.36	344.47	2.135E-004	9.01	
	179.12	Y	811	5501	1.22	359.88	2.249E-004	18.17	
	189.26	Y	1324	6698	1.51	380.15	2.368E-004	13.10	
	195.50	Y	1687	5943	1.23	392.62	2.428E-004	9.58	
M	203.49	Y	9507	5012	1.13	408.57	2.490E-004	1.80	14.78
m	207.95	Y	31891	5008	1.14	417.49	2.519E-004	1.39	
	243.30	Y	553	3630	1.12	488.13	2.639E-004	22.83	
	255.30	Y	1518	3187	1.21	512.10	2.646E-004	8.26	
M	263.83	Y	466	1989	1.23	529.14	2.644E-004	11.08	1.59
m	267.45	Y	1316	2347	1.23	536.39	2.646E-004	6.85	
	297.35	Y	576	2422	1.11	596.14	2.624E-004	18.15	
M	311.78	Y	1691	2137	1.43	624.96	2.594E-004	3.87	4.09
m	316.01	Y	183	2516	1.43	633.42	2.584E-004	23.08	
m	320.86	Y	1183	2458	1.44	643.12	2.572E-004	4.86	
m	323.25	Y	1156	2419	1.44	647.89	2.565E-004	4.93	
M	332.66	Y	11024	1856	1.30	666.69	2.540E-004	1.65	4.72
m	335.59	Y	4329	1710	1.30	672.56	2.531E-004	2.22	
m	341.31	Y	1104	1620	1.31	683.97	2.514E-004	4.74	
m	344.91	Y	9584	1671	1.31	691.18	2.504E-004	1.70	
M	361.75	Y	190	1020	1.29	724.82	2.451E-004	19.64	3.08
m	366.92	Y	1301	1652	1.29	735.17	2.435E-004	5.09	
m	368.47	Y	2516	1681	1.30	738.25	2.430E-004	3.22	
M	374.97	Y	25577	1615	1.29	751.24	2.409E-004	1.41	21.28
m	380.05	Y	4713	1147	1.29	761.39	2.392E-004	2.13	
m	382.63	Y	4194	1022	1.29	766.54	2.383E-004	2.22	
	392.84	Y	8849	958	1.51	786.96	2.350E-004	1.90	
M	413.61	Y	22953	623	1.31	828.46	2.266E-004	1.43	5.87
m	422.45	Y	1700	589	1.32	846.13	2.228E-004	3.25	
m	426.50	Y	305	525	1.32	854.21	2.211E-004	9.80	
M	445.56	Y	147	283	1.30	892.29	2.134E-004	15.21	1.17
m	451.37	Y	2789	277	1.31	903.91	2.111E-004	4.90	
	597.65	Y	32	50	1.30	1196.23	1.662E-004	47.67	
	618.95	Y	267	62	1.69	1238.78	1.613E-004	9.72	
M	645.85	Y	89	103	1.37	1292.54	1.556E-004	16.75	2.97
m	652.50	Y	123	96	1.38	1305.84	1.543E-004	12.99	
m	658.74	Y	52	100	1.38	1318.29	1.530E-004	24.11	
m	662.27	Y	1152	79	1.39	1325.35	1.524E-004	3.71	
	688.48	Y	117	33	1.65	1377.74	1.475E-004	15.12	
	703.53	Y	41	16	0.94	1407.81	1.449E-004	26.26	
	721.94	Y	579	43	1.73	1444.58	1.419E-004	5.55	
	769.24	Y	128	22	1.19	1539.11	1.350E-004	13.37	
	2234.67		11980	69	1.14	4467.48	8.881E-005	1.63	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.36 +/- 0.02

Y = Peak Identified by NID
M = First peak in a multiplet region

m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 3.651E-002 +/-	1.8%	< 3.478E-005	< 1.683E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 2.731E-002 +/-	2.0%	< 2.601E-005	< 4.315E-012
	Al-26	< 5.023E-002 +/-	14.7%	< 4.784E-005	< 2.642E-006
	K-40	< 3.573E-001 +/-	4.9%	< 3.403E-004	< 5.574E-002
	Co-57	1.672E+000 +/-	42.1%	1.593E-003	1.956E-010
	Co-60	< 3.417E-002 +/-	1.6%	< 3.255E-005	< 2.997E-011
	Se-75	< 2.945E-001 +/-	1.9%	< 2.805E-004	< 2.026E-011
	Kr-85	< 1.647E+001 +/-	3.1%	< 1.568E-002	< 4.149E-008
	Sr-90	< 1.047E-001 +/-	2.1%	< 9.972E-005	< 7.591E-010
	Sb-125	< 3.498E-001 +/-	2.3%	< 3.332E-004	< 3.365E-010
	Ba-133	< 2.236E-001 +/-	1.7%	< 2.130E-004	< 8.833E-010
	Cs-134	< 2.758E-002 +/-	1.8%	< 2.627E-005	< 2.104E-011
X	Cs-137				
X	Eu-152				
	Eu-154	< 7.799E-002 +/-	2.2%	< 7.427E-005	< 2.925E-010
	Ho-166m	< 5.918E-002 +/-	2.2%	< 5.637E-005	< 3.291E-008
	Bi-207	< 4.569E-002 +/-	1.8%	< 4.352E-005	< 8.316E-010
	Pb-210	< 2.777E+001 +/-	36.7%	< 2.645E-002	< 3.611E-007
	Ra-226	< 1.169E-001 +/-	2.3%	< 1.113E-004	< 1.169E-007
	Ac-227	< 1.029E+000 +/-	8.3%	< 9.798E-004	< 1.409E-008
	Th-230	< 1.350E+002 +/-	13.1%	< 1.285E-001	< 6.614E-003
	Pa-231	< 5.391E+000 +/-	11.2%	< 5.134E-003	< 1.127E-004
	Th-232	< 1.305E-001 +/-	2.4%	< 1.242E-004	< 1.175E+000
	U-232	< 2.064E-001 +/-	2.2%	< 1.965E-004	< 9.554E-009
	U-233	< 3.956E+003 +/-	2.7%	< 3.768E+000	< 4.035E-001
	Pa-234	< 1.131E-001 +/-	12.2%	< 1.077E-004	
	Pa-234m	< 2.416E+002 +/-	2.1%	< 2.301E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 3.376E-001 +/-	2.5%	< 3.216E-004	< 1.543E-001
	Np-237	2.782E+000 +/-	5.8%	2.650E-003	3.895E-003
	Pu-238	< 2.251E+004 +/-	2.6%	< 2.144E+001	< 1.301E-003
	U-238	< 4.125E+000 +/-	2.1%	< 3.929E-003	< 1.213E+001
	Pu-239	1.544E+006 +/-	1.5%	1.470E+003	2.454E+001
	Pu-239B	1.530E+006 +/-	1.4%	1.457E+003	2.433E+001
	U-239	< 5.703E+001 +/-	45.9%	< 5.431E-002	
	Pu-240	3.437E+005 +/-	22.9%	3.273E+002	1.495E+000
	Am-241	4.682E+005 +/-	3.9%	4.459E+002	1.348E-001
	Am-241B	3.865E+005 +/-	6.4%	3.681E+002	1.113E-001
	Pu-241	4.220E+006 +/-	8.4%	4.019E+003	4.059E-002
	Pu-241B	5.598E+006 +/-	2.7%	5.332E+003	5.386E-002
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 7.548E-001 +/-	8.4%	< 7.189E-004	< 3.736E-006
	Cm-243	< 1.093E+000 +/-	3.3%	< 1.041E-003	< 2.099E-008
	Cm-244	< 5.013E+004 +/-	14.2%	< 4.774E+001	< 6.116E-004
	Cm-245	< 2.111E+000 +/-	7.7%	< 2.010E-003	< 1.214E-005

Cm-247	< 1.554E-001	+/- 8.5%	< 1.480E-004	< 1.663E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.838E-001 +/-	3.5%	< 1.751E-004	< 4.449E-008
Cf-251	< 1.186E+000 +/-	5.6%	< 1.130E-003	< 7.414E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 16:
Beta is too small (negative or less than lower limit)

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	- correction not done -	2.45E+001 +- 3.73E-001

Beta: -5.67E+000 +- 1.18E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in attempted correction: 4

Energy	Mass (g)

Segment 6 Results

Segment: 6 Detector: DET01 Position: 6
C:\Canberra\NDA2k\Data\00000214_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P006_S006

Acquisition Start: 12/24/2008 8:35:42 AM
Elapsed Live Time: 88.46 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.000 +/- 0.0000
SE-75	264.66	0.202 +/- 0.0061
SE-75	279.54	0.234 +/- 0.0069
SE-75	400.66	0.349 +/- 0.0121

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

*** Spectrum Validity Test warnings ***
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 12/24/2008 8:37:44 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	49.65		1882	9174	2.23	101.16	1.038E-007	10.40	
	59.41	Y	117079	9688	1.13	120.67	1.658E-006	1.27	
M	94.64	Y	21310	16795	1.53	191.07	8.791E-005	1.94	117.88
m	98.66	Y	85646	22842	1.54	199.10	1.063E-004	1.66	
m	100.86	Y	13117	23320	1.55	203.49	1.167E-004	2.32	
m	103.30	Y	61508	18845	1.55	208.37	1.283E-004	1.64	
M	111.04	Y	22745	10479	1.37	223.84	1.646E-004	1.30	152.32
m	114.54	Y	18701	11892	1.38	230.84	1.803E-004	1.31	
m	116.62	Y	17865	12078	1.38	234.99	1.894E-004	1.31	
m	120.60	Y	4219	10864	1.39	242.94	2.060E-004	1.65	
m	122.82	Y	1874	10524	1.39	247.37	2.147E-004	2.48	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	125.20	Y	8414	10045	1.40	252.13	2.238E-004	1.40	
m	129.25	Y	40648	8693	1.40	260.23	2.381E-004	1.27	
M	144.09	Y	2498	6616	1.09	289.88	2.794E-004	7.82	1.53
m	146.25	Y	2276	6652	1.09	294.20	2.839E-004	7.98	
m	148.53	Y	5528	7445	1.09	298.74	2.884E-004	6.91	
M	160.88	Y	2384	6744	1.46	323.43	3.066E-004	12.50	5.66
m	164.55	Y	1960	9612	1.47	330.76	3.103E-004	12.04	
m	169.29	Y	538	8708	1.47	340.24	3.140E-004	21.71	
m	171.28	Y	1690	8639	1.48	344.21	3.152E-004	12.02	
	179.06	Y	812	6138	0.93	359.77	3.186E-004	19.44	
	189.14	Y	1210	6796	1.17	379.90	3.197E-004	14.22	
	195.64	Y	1860	6415	1.35	392.90	3.190E-004	9.19	
M	203.50	Y	9167	5467	1.19	408.59	3.171E-004	2.94	2.51
m	207.93	Y	30604	4906	1.19	417.45	3.155E-004	2.66	
	237.36		417	3724	1.00	476.26	2.999E-004	30.14	
	243.31	Y	730	3582	1.14	488.15	2.963E-004	17.16	
	255.34	Y	1278	3189	1.19	512.20	2.886E-004	9.58	
M	264.06	Y	483	2575	1.03	529.60	2.829E-004	8.59	3.63
m	267.56	Y	1126	4110	1.03	536.61	2.830E-004	5.99	
	297.32	Y	559	3704	0.99	596.09	2.772E-004	25.87	
M	311.78	Y	1503	2160	1.54	624.97	2.712E-004	4.16	3.47
m	316.69	Y	188	2727	1.55	634.78	2.692E-004	22.83	
m	320.93	Y	1169	2655	1.55	643.25	2.675E-004	4.91	
m	323.36	Y	1388	2596	1.56	648.11	2.666E-004	4.34	
M	332.64	Y	10796	1859	1.31	666.67	2.627E-004	1.65	5.27
m	335.61	Y	4381	1756	1.31	672.59	2.616E-004	2.20	
m	341.36	Y	1214	1856	1.32	684.08	2.594E-004	4.47	
m	344.91	Y	9301	1779	1.32	691.17	2.578E-004	1.71	
	368.25	Y	3662	1726	2.32	737.81	2.490E-004	3.28	
M	374.97	Y	25056	1580	1.29	751.25	2.464E-004	1.41	22.14
m	380.05	Y	4688	1086	1.30	761.39	2.447E-004	2.12	
m	382.65	Y	4175	953	1.30	766.58	2.438E-004	2.20	
	392.82	Y	8567	1023	1.51	786.92	2.402E-004	1.92	
M	413.59	Y	22726	470	1.38	828.42	2.323E-004	1.67	2.61
m	419.33	Y	105	415	1.39	839.89	2.300E-004	21.68	
m	422.47	Y	1776	404	1.39	846.17	2.287E-004	3.35	
m	426.48	Y	447	390	1.39	854.18	2.273E-004	7.31	
m	429.97	Y	69	385	1.40	861.15	2.259E-004	31.16	
M	445.53	Y	115	309	1.30	892.25	2.204E-004	17.02	1.73
m	451.35	Y	2736	301	1.30	903.88	2.183E-004	2.54	
	619.00	Y	237	66	1.43	1238.89	1.770E-004	10.59	
M	640.14	Y	88	51	1.54	1281.13	1.732E-004	15.40	1.39
m	645.79	Y	146	52	1.55	1292.42	1.722E-004	11.82	
m	652.38	Y	169	48	1.55	1305.59	1.712E-004	11.02	
m	658.62	Y	116	41	1.56	1318.07	1.701E-004	13.50	
m	662.25	Y	1211	32	1.56	1325.32	1.695E-004	6.65	
	688.57	Y	75	38	1.52	1377.90	1.653E-004	22.03	
	721.86	Y	575	58	1.71	1444.43	1.603E-004	5.76	
	769.31	Y	147	24	1.67	1539.26	1.537E-004	12.19	
	2234.67		11980	48	1.15	4467.46	5.248E-005	1.62	
	2293.78		28	12	1.35	4585.58	5.065E-005	32.73	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.34 +/- 0.02

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 3.267E-002 +/-	1.9%	< 3.111E-005	< 1.506E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 1.736E-002 +/-	1.9%	< 1.653E-005	< 2.743E-012
	Al-26	< 6.816E-002 +/-	19.8%	< 6.491E-005	< 3.585E-006
	K-40	< 3.102E-001 +/-	5.3%	< 2.955E-004	< 4.840E-002
X	Co-57				
	Co-60	< 3.928E-002 +/-	1.7%	< 3.741E-005	< 3.445E-011
	Se-75	< 2.641E-001 +/-	2.3%	< 2.515E-004	< 1.817E-011
	Kr-85	< 1.552E+001 +/-	3.2%	< 1.478E-002	< 3.911E-008
	Sr-90	< 6.171E-002 +/-	2.6%	< 5.877E-005	< 4.474E-010
	Sb-125	< 2.875E-001 +/-	2.7%	< 2.738E-004	< 2.766E-010
	Ba-133	< 2.083E-001 +/-	1.8%	< 1.984E-004	< 8.228E-010
	Cs-134	< 3.351E-002 +/-	2.0%	< 3.191E-005	< 2.557E-011
X	Cs-137				
	Eu-152	< 1.161E-001 +/-	3.8%	< 1.106E-004	< 6.527E-010
	Eu-154	< 4.959E-002 +/-	2.1%	< 4.723E-005	< 1.860E-010
	Ho-166m	< 4.430E-002 +/-	2.4%	< 4.219E-005	< 2.463E-008
	Bi-207	< 2.833E-002 +/-	1.9%	< 2.698E-005	< 5.156E-010
	Pb-210	< 3.341E+004 +/-	309.7%	< 3.182E+001	< 4.344E-004
	Ra-226	< 1.030E-001 +/-	2.7%	< 9.807E-005	< 1.030E-007
	Ac-227	< 9.136E-001 +/-	8.5%	< 8.701E-004	< 1.252E-008
	Th-230	< 4.469E+002 +/-	9.0%	< 4.256E-001	< 2.190E-002
	Pa-231	< 4.912E+000 +/-	11.3%	< 4.678E-003	< 1.027E-004
	Th-232	< 1.049E-001 +/-	2.4%	< 9.990E-005	< 9.451E-001
	U-232	< 1.716E-001 +/-	2.6%	< 1.634E-004	< 7.943E-009
	U-233	< 3.437E+003 +/-	4.0%	< 3.274E+000	< 3.506E-001
	Pa-234	< 1.237E-001 +/-	12.2%	< 1.178E-004	
	Pa-234m	< 2.369E+002 +/-	2.1%	< 2.257E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 2.873E-001 +/-	4.0%	< 2.737E-004	< 1.313E-001
	Np-237	2.231E+000 +/-	6.8%	2.124E-003	3.123E-003
	Pu-238	< 1.924E+004 +/-	4.2%	< 1.832E+001	< 1.112E-003
	U-238	< 3.129E+000 +/-	2.1%	< 2.980E-003	< 9.201E+000
	Pu-239	2.299E+006 +/-	3.4%	2.189E+003	3.655E+001
	Pu-239B	1.499E+006 +/-	1.3%	1.428E+003	2.384E+001
	U-239	< 2.657E+005 +/-	368.5%	< 2.530E+002	
X	Pu-240				
	Am-241	4.240E+005 +/-	5.0%	4.038E+002	1.221E-001
	Am-241B	1.983E+005 +/-	4.7%	1.888E+002	5.710E-002
	Pu-241	2.327E+006 +/-	8.2%	2.216E+003	2.239E-002
	Pu-241B	4.240E+006 +/-	3.6%	4.038E+003	4.079E-002
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 9.620E-001 +/-	2.2%	< 9.162E-004	< 4.762E-006
	Cm-243	< 9.923E-001 +/-	3.5%	< 9.450E-004	< 1.905E-008

Cm-244	< 4.409E+004 +/-	14.2%	< 4.199E+001	< 5.380E-004
Cm-245	< 1.745E+000 +/-	8.4%	< 1.662E-003	< 1.004E-005
Cm-247	< 1.406E-001 +/-	8.5%	< 1.339E-004	< 1.504E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.743E-001 +/-	3.5%	< 1.660E-004	< 4.218E-008
Cf-251	< 9.839E-001 +/-	6.5%	< 9.370E-004	< 6.149E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	3.66E+001 +- 1.26E+000	1.60E+001 +- 2.81E-001

Beta: 1.67E+002 +- 8.27E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	9.69E+000 +- 3.98E-001
203.55	1.82E+001 +- 8.25E-001
375.05	2.34E+001 +- 6.03E-001
413.71	2.39E+001 +- 6.88E-001

Segment 7 Results

Segment: 7 Detector: DET01 Position: 7
C:\Canberra\NDA2k\Data\00000214_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P007_S007

Acquisition Start: 12/24/2008 8:39:54 AM
Elapsed Live Time: 100.39 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.076 +/- 0.0034
SE-75	264.66	0.310 +/- 0.0068
SE-75	279.54	0.326 +/- 0.0072
SE-75	400.66	0.419 +/- 0.0114

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

*** Spectrum Validity Test warnings ***
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 12/24/2008 8:41:56 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.43	Y	76592	7464	1.13	120.71	2.479E-006	1.24	
M	94.68	Y	12750	12887	1.52	191.15	7.489E-005	2.16	68.01
m	98.69	Y	48937	17272	1.53	199.15	8.940E-005	1.78	
m	100.89	Y	7621	17408	1.53	203.56	9.760E-005	2.68	
m	103.32	Y	34054	13867	1.53	208.42	1.067E-004	1.76	
M	111.09	Y	12873	8277	1.36	223.93	1.357E-004	2.13	89.43
m	114.54	Y	10616	8432	1.37	230.82	1.482E-004	2.27	
m	116.56	Y	9721	7876	1.37	234.87	1.554E-004	2.19	
m	120.60	Y	2407	7778	1.38	242.94	1.692E-004	3.94	
m	125.22	Y	5080	6501	1.39	252.17	1.839E-004	2.67	
m	129.27	Y	23252	5626	1.39	260.27	1.959E-004	1.92	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
M	144.17	Y	1608	4591	1.15	290.04	2.450E-004	10.95	0.61
m	146.31	Y	1327	4585	1.15	294.31	2.524E-004	11.45	
m	148.56	Y	3200	5086	1.16	298.82	2.598E-004	9.81	
M	160.96	Y	1381	5381	1.50	323.58	2.937E-004	4.97	3.63
m	164.55	Y	1280	6813	1.50	330.76	3.015E-004	5.49	
	171.41	Y	1198	4515	1.22	344.48	3.140E-004	10.41	
	179.03	Y	491	4457	0.96	359.69	3.246E-004	24.33	
	189.28	Y	741	4743	1.29	380.18	3.342E-004	17.25	
	195.55	Y	798	3724	1.19	392.71	3.378E-004	13.62	
M	203.52	Y	5110	3930	1.13	408.65	3.404E-004	2.07	7.37
m	207.98	Y	17333	3411	1.13	417.55	3.409E-004	1.43	
	255.26	Y	764	1750	1.49	512.03	3.235E-004	10.20	
M	263.88	Y	243	1186	1.05	529.26	3.179E-004	14.93	1.39
m	267.56	Y	523	1498	1.06	536.62	3.152E-004	8.33	
	297.30	Y	421	1652	1.42	596.05	2.917E-004	18.21	
	311.76	Y	728	1424	1.27	624.94	2.807E-004	10.01	
M	320.82	Y	509	1359	1.87	643.04	2.740E-004	8.98	5.05
m	323.42	Y	800	2107	1.87	648.23	2.721E-004	5.97	
M	332.68	Y	5862	1384	1.29	666.73	2.655E-004	1.85	3.44
m	335.63	Y	2371	1285	1.29	672.64	2.635E-004	2.67	
m	341.41	Y	563	1339	1.30	684.17	2.596E-004	6.55	
m	344.95	Y	5127	1266	1.30	691.26	2.573E-004	1.93	
	368.18	Y	2122	1190	2.44	737.67	2.429E-004	4.01	
M	375.00	Y	13656	1017	1.28	751.30	2.390E-004	1.47	13.41
m	380.07	Y	2599	646	1.29	761.44	2.361E-004	2.48	
m	382.68	Y	2355	545	1.29	766.64	2.347E-004	2.56	
	392.87	Y	4608	631	1.50	787.01	2.293E-004	2.24	
	413.58	Y	12602	409	1.42	828.39	2.186E-004	1.54	
M	422.50	Y	852	307	1.17	846.23	2.142E-004	4.33	1.72
m	426.48	Y	172	247	1.17	854.17	2.124E-004	10.83	
M	445.81	Y	64	135	1.32	892.80	2.038E-004	21.66	1.29
m	451.40	Y	1452	160	1.32	903.98	2.015E-004	3.11	
	619.11	Y	124	35	1.41	1239.10	1.569E-004	13.39	
M	639.84	Y	53	30	0.90	1280.54	1.535E-004	25.51	0.43
m	642.16		38	34	0.90	1285.17	1.532E-004	26.75	
m	645.91	Y	74	44	0.90	1292.66	1.526E-004	23.86	
M	658.93	Y	47	41	1.43	1318.69	1.507E-004	20.36	2.58
m	662.28	Y	611	29	1.43	1325.38	1.502E-004	4.65	
	688.42	Y	53	23	1.19	1377.62	1.467E-004	22.57	
M	717.72	Y	12	8	1.49	1436.16	1.432E-004	41.06	1.13
m	721.85	Y	314	9	1.49	1444.40	1.427E-004	6.10	
	769.03	Y	60	16	1.30	1538.69	1.379E-004	18.86	
	2234.68		11980	36	1.16	4467.49	4.242E-005	1.54	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.20 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 2.625E-002 +/-	1.8%	< 2.500E-005	< 1.210E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 2.813E-002 +/-	2.0%	< 2.680E-005	< 4.445E-012
	Al-26	< 4.720E-002 +/-	15.5%	< 4.495E-005	< 2.483E-006
	K-40	< 2.763E-001 +/-	5.0%	< 2.631E-004	< 4.310E-002
	Co-57	3.428E+000 +/-	6.1%	3.265E-003	4.011E-010
	Co-60	< 2.836E-002 +/-	1.7%	< 2.701E-005	< 2.487E-011
	Se-75	< 1.944E-001 +/-	1.9%	< 1.852E-004	< 1.338E-011
	Kr-85	< 1.259E+001 +/-	3.1%	< 1.200E-002	< 3.174E-008
	Sr-90	< 5.889E-002 +/-	2.1%	< 5.609E-005	< 4.270E-010
	Sb-125	< 2.569E-001 +/-	2.3%	< 2.447E-004	< 2.471E-010
	Ba-133	< 1.711E-001 +/-	1.7%	< 1.630E-004	< 6.759E-010
	Cs-134	< 2.395E-002 +/-	1.8%	< 2.281E-005	< 1.827E-011
X	Cs-137				
	Eu-152	< 3.026E-002 +/-	3.7%	< 2.882E-005	< 1.700E-010
	Eu-154	< 8.034E-002 +/-	2.2%	< 7.651E-005	< 3.013E-010
	Ho-166m	< 4.081E-002 +/-	2.2%	< 3.887E-005	< 2.269E-008
	Bi-207	< 3.544E-002 +/-	1.9%	< 3.375E-005	< 6.450E-010
	Pb-210	< 5.706E+003 +/-	70.4%	< 5.434E+000	< 7.418E-005
	Ra-226	< 8.857E-002 +/-	2.3%	< 8.435E-005	< 8.857E-008
	Ac-227	< 6.588E-001 +/-	8.3%	< 6.275E-004	< 9.026E-009
	Th-230	< 3.300E+002 +/-	8.6%	< 3.143E-001	< 1.617E-002
	Pa-231	< 3.901E+000 +/-	11.2%	< 3.715E-003	< 8.154E-005
	Th-232	< 9.894E-002 +/-	2.4%	< 9.423E-005	< 8.915E-001
	U-232	< 1.505E-001 +/-	2.2%	< 1.434E-004	< 6.970E-009
	U-233	< 2.514E+003 +/-	2.9%	< 2.394E+000	< 2.564E-001
	Pa-234	< 1.228E-001 +/-	12.2%	< 1.169E-004	
	Pa-234m	< 1.906E+002 +/-	2.1%	< 1.815E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 2.100E-001 +/-	2.6%	< 2.000E-004	< 9.599E-002
	Np-237	9.453E-001 +/-	16.3%	9.003E-004	1.323E-003
	Pu-238	< 1.397E+004 +/-	2.8%	< 1.331E+001	< 8.076E-004
	U-238	< 3.041E+000 +/-	2.2%	< 2.897E-003	< 8.942E+000
	Pu-239	1.211E+006 +/-	3.4%	1.154E+003	1.926E+001
	Pu-239B	8.502E+005 +/-	1.3%	8.097E+002	1.352E+001
	U-239	< 3.508E+004 +/-	85.6%	< 3.341E+001	
X	Pu-240				
	Am-241	2.523E+005 +/-	4.3%	2.402E+002	7.265E-002
	Am-241B	3.338E+005 +/-	4.0%	3.179E+002	9.612E-002
	Pu-241	1.496E+006 +/-	10.2%	1.424E+003	1.439E-002
	Pu-241B	2.180E+006 +/-	2.6%	2.076E+003	2.097E-002
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 7.363E-001 +/-	1.9%	< 7.012E-004	< 3.645E-006
	Cm-243	< 7.594E-001 +/-	3.4%	< 7.233E-004	< 1.458E-008
	Cm-244	< 3.254E+004 +/-	14.2%	< 3.099E+001	< 3.970E-004
	Cm-245	< 1.284E+000 +/-	7.7%	< 1.223E-003	< 7.386E-006
	Cm-247	< 1.132E-001 +/-	8.5%	< 1.078E-004	< 1.211E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.306E-001 +/-	3.5%	< 1.244E-004	< 3.161E-008
Cf-251	< 7.328E-001 +/-	5.7%	< 6.979E-004	< 4.580E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.93E+001 +- 6.61E-001	1.02E+001 +- 1.56E-001

Beta: 1.39E+002 +- 8.23E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	6.74E+000 +- 2.75E-001
203.55	9.45E+000 +- 2.90E-001
375.05	1.32E+001 +- 3.29E-001
413.71	1.41E+001 +- 3.82E-001

Segment 8 Results

Segment: 8 Detector: DET01 Position: 8
C:\Canberra\NDA2k\Data\00000214_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P008_S008

Acquisition Start: 12/24/2008 8:44:05 AM
Elapsed Live Time: 113.09 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.366 +/- 0.0064
SE-75	264.66	0.520 +/- 0.0079
SE-75	279.54	0.524 +/- 0.0092
SE-75	400.66	0.585 +/- 0.0126

Errors quoted at 1.000 sigma

Peak Analysis Results

*** Spectrum Validity Test warnings ***
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 12/24/2008 8:46:07 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.49	Y	21585	3336	1.12	120.82	9.240E-005	1.38	
M	94.75		3891	6583	1.47	191.28	2.294E-004	3.67	24.91
m	98.73	Y	13778	9376	1.48	199.23	2.422E-004	2.77	
m	100.87	Y	2243	8727	1.48	203.52	2.487E-004	4.51	
m	103.35	Y	9092	7335	1.49	208.47	2.560E-004	2.78	
M	111.05		2949	4736	1.30	223.85	2.766E-004	2.73	13.41
m	114.66	Y	1477	8243	1.30	231.06	2.852E-004	4.66	
M	125.31	Y	656	4622	1.00	252.35	3.071E-004	7.52	23.69
m	129.33	Y	6403	3326	1.01	260.39	3.141E-004	1.83	
M	144.45		404	2163	1.05	290.60	3.371E-004	22.41	3.90
m	148.63	Y	1029	4252	1.06	298.95	3.425E-004	14.71	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	171.45		386	2229	1.29	344.54	3.626E-004	19.96	
	195.54		279	2210	1.42	392.68	3.699E-004	27.88	
M	203.54	Y	1315	1519	1.13	408.69	3.700E-004	3.62	3.29
m	208.01	Y	4612	1666	1.13	417.61	3.697E-004	1.95	
	255.34		250	1006	1.66	512.18	3.544E-004	21.48	
	311.86	Y	225	720	1.65	625.14	3.197E-004	19.95	
M	332.69	Y	1474	611	1.30	666.75	3.069E-004	6.55	0.97
m	335.57	Y	530	569	1.30	672.52	3.052E-004	8.04	
m	341.37	Y	139	597	1.31	684.10	3.016E-004	16.37	
m	344.95		1335	560	1.31	691.26	2.995E-004	6.39	
	368.28	Y	552	551	2.18	737.87	2.858E-004	8.54	
M	375.02	Y	3413	447	1.24	751.34	2.819E-004	2.08	2.86
m	380.16		611	319	1.24	761.61	2.790E-004	4.73	
m	382.65		548	284	1.25	766.60	2.777E-004	4.97	
	392.90		1175	238	1.46	787.07	2.720E-004	3.91	
	413.66	Y	3123	146	1.38	828.57	2.610E-004	2.25	
M	422.53		223	88	1.30	846.28	2.564E-004	7.31	1.16
m	426.58	Y	55	90	1.31	854.37	2.543E-004	17.92	
	451.43		434	62	1.44	904.04	2.423E-004	5.91	
	662.34	Y	166	22	1.58	1325.50	1.721E-004	9.47	
	721.94	Y	73	11	1.85	1444.59	1.596E-004	14.35	
	2234.68		11980	17	1.15	4467.48	1.082E-004	1.46	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.07 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 1.854E-002 +/-	1.8%	< 1.766E-005	< 8.547E-016
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 1.817E-002 +/-	1.9%	< 1.730E-005	< 2.871E-012
	Al-26	< 1.563E-002 +/-	18.8%	< 1.488E-005	< 8.219E-007
	K-40	< 3.222E-001 +/-	5.3%	< 3.069E-004	< 5.027E-002
	Co-57	< 1.695E-001 +/-	4.5%	< 1.614E-004	< 1.983E-011
	Co-60	< 2.148E-002 +/-	2.5%	< 2.046E-005	< 1.884E-011
	Se-75	< 1.270E-001 +/-	1.8%	< 1.210E-004	< 8.739E-012
	Kr-85	< 6.772E+000 +/-	3.0%	< 6.450E-003	< 1.707E-008
	Sr-90	< 4.482E-002 +/-	2.2%	< 4.269E-005	< 3.250E-010
	Sb-125	< 1.381E-001 +/-	2.4%	< 1.315E-004	< 1.328E-010
	Ba-133	< 1.022E-001 +/-	1.6%	< 9.732E-005	< 4.036E-010
	Cs-134	< 1.759E-002 +/-	1.8%	< 1.675E-005	< 1.342E-011
X	Cs-137				
	Eu-152	< 1.161E-001 +/-	3.8%	< 1.106E-004	< 6.527E-010

	Eu-154	< 5.188E-002	+/-	2.1%	< 4.941E-005	< 1.946E-010
	Ho-166m	< 3.202E-002	+/-	2.3%	< 3.050E-005	< 1.780E-008
	Bi-207	< 2.209E-002	+/-	2.1%	< 2.103E-005	< 4.020E-010
	Pb-210	< 1.528E+001	+/-	259.0%	< 1.455E-002	< 1.987E-007
	Ra-226	< 5.643E-002	+/-	2.4%	< 5.374E-005	< 5.643E-008
	Ac-227	< 4.468E-001	+/-	8.3%	< 4.255E-004	< 6.121E-009
	Th-230	< 6.259E+001	+/-	83.3%	< 5.961E-002	< 3.067E-003
	Pa-231	< 2.596E+000	+/-	11.2%	< 2.473E-003	< 5.426E-005
	Th-232	< 8.865E-002	+/-	2.3%	< 8.443E-005	< 7.987E-001
	U-232	< 8.865E-002	+/-	2.3%	< 8.443E-005	< 4.105E-009
	U-233	< 1.689E+003	+/-	3.0%	< 1.609E+000	< 1.723E-001
	Pa-234	< 1.136E-001	+/-	12.2%	< 1.082E-004	
	Pa-234m	< 1.345E+002	+/-	2.1%	< 1.281E-001	
	U-234	< 0.000E+000	+/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 1.576E-001	+/-	2.9%	< 1.501E-004	< 7.200E-002
	Np-237	4.114E-001	+/-	20.0%	3.918E-004	5.759E-004
	Pu-238	< 1.054E+004	+/-	3.1%	< 1.004E+001	< 6.091E-004
	U-238	< 3.931E+000	+/-	2.1%	< 3.744E-003	< 1.156E+001
	Pu-239	2.794E+005	+/-	3.5%	2.661E+002	4.442E+000
	Pu-239B	< 6.989E+003	+/-	16.6%	< 6.656E+000	< 1.111E-001
	U-239	< 4.703E+001	+/-	308.3%	< 4.479E-002	
X	Pu-240					
	Am-241	5.689E+004	+/-	8.3%	5.418E+001	1.639E-002
	Am-241B	4.817E+004	+/-	9.8%	4.587E+001	1.387E-002
	Pu-241	3.646E+005	+/-	15.1%	3.472E+002	3.507E-003
	Pu-241B	5.410E+005	+/-	3.3%	5.153E+002	5.205E-003
	Pu-242	< 0.000E+000	+/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 3.445E-001	+/-	57.8%	< 3.281E-004	< 1.705E-006
	Cm-243	< 5.097E-001	+/-	3.3%	< 4.855E-004	< 9.787E-009
	Cm-244	< 2.935E+004	+/-	14.1%	< 2.795E+001	< 3.581E-004
	Cm-245	< 9.882E-001	+/-	7.8%	< 9.412E-004	< 5.682E-006
	Cm-247	< 6.081E-002	+/-	8.5%	< 5.791E-005	< 6.506E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 7.366E-002 +/-	3.4%	< 7.015E-005	< 1.783E-008
Cf-251	< 5.483E-001 +/-	5.8%	< 5.222E-004	< 3.427E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	4.44E+000 +- 1.56E-001	1.86E+000 +- 3.36E-002

Beta: 1.69E+002 +- 8.11E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.16E+000 +- 4.58E-002
203.55	2.24E+000 +- 9.60E-002
375.05	2.79E+000 +- 7.66E-002
413.71	2.92E+000 +- 8.73E-002

Segment 9 Results

Segment: 9 Detector: DET01 Position: 9
C:\Canberra\NDA2k\Data\00000214_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P009_S009

Acquisition Start: 12/24/2008 8:48:17 AM
Elapsed Live Time: 117.59 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.374 +/- 0.0063
SE-75	264.66	0.530 +/- 0.0080
SE-75	279.54	0.532 +/- 0.0091
SE-75	400.66	0.573 +/- 0.0120

Errors quoted at 1.000 sigma

Peak Analysis Results

Peak Analysis Performed on: 12/24/2008 8:50:18 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	59.47	Y	2916	1212	1.13	120.78	1.325E-005	2.81	
M	95.09		526	3142	1.54	191.96	1.682E-004	29.22	1.23
m	98.81	Y	1428	5549	1.55	199.40	1.879E-004	17.19	
m	103.14	Y	560	7677	1.56	208.04	2.100E-004	15.70	
	111.12		164	1984	0.75	224.00	2.471E-004	40.19	
	129.30	Y	196	1008	1.03	260.33	3.113E-004	24.08	
	207.96	Y	187	581	1.16	417.51	3.820E-004	20.66	
	375.09	Y	72	96	1.40	751.47	2.847E-004	23.68	
	2234.71		11980	15	1.13	4467.55	5.243E-005	1.43	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.02 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 2.119E-002 +/-	1.9%	< 2.018E-005	< 9.770E-016
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 2.325E-002 +/-	1.9%	< 2.214E-005	< 3.674E-012
	Al-26	< 4.238E-002 +/-	19.6%	< 4.036E-005	< 2.229E-006
	K-40	< 3.014E-001 +/-	5.3%	< 2.870E-004	< 4.701E-002
	Co-57	< 1.123E-001 +/-	4.5%	< 1.070E-004	< 1.314E-011
	Co-60	< 2.649E-002 +/-	1.7%	< 2.523E-005	< 2.323E-011
	Se-75	< 8.296E-002 +/-	2.3%	< 7.901E-005	< 5.708E-012
	Kr-85	< 4.464E+000 +/-	3.2%	< 4.251E-003	< 1.125E-008
	Sr-90	< 2.161E-002 +/-	2.3%	< 2.058E-005	< 1.567E-010
	Sb-125	< 5.499E-002 +/-	2.1%	< 5.237E-005	< 5.290E-011
	Ba-133	< 6.676E-002 +/-	1.8%	< 6.358E-005	< 2.637E-010
	Cs-134	< 1.359E-002 +/-	2.4%	< 1.294E-005	< 1.037E-011
	Cs-137	< 2.161E-002 +/-	2.3%	< 2.058E-005	< 2.464E-010
	Eu-152	< 6.641E-002 +/-	2.3%	< 6.325E-005	< 3.732E-010
	Eu-154	< 6.639E-002 +/-	2.1%	< 6.323E-005	< 2.490E-010
	Ho-166m	< 1.813E-002 +/-	2.5%	< 1.727E-005	< 1.008E-008
	Bi-207	< 1.971E-002 +/-	1.9%	< 1.877E-005	< 3.587E-010
	Pb-210	< 4.242E+002 +/-	311.1%	< 4.040E-001	< 5.515E-006
	Ra-226	< 3.000E-002 +/-	2.2%	< 2.857E-005	< 3.000E-008
	Ac-227	< 2.891E-001 +/-	8.5%	< 2.754E-004	< 3.961E-009
	Th-230	< 1.336E+002 +/-	9.1%	< 1.273E-001	< 6.548E-003
	Pa-231	< 1.718E+000 +/-	11.3%	< 1.637E-003	< 3.592E-005
	Th-232	< 6.044E-002 +/-	2.5%	< 5.756E-005	< 5.446E-001
	U-232	< 6.044E-002 +/-	2.5%	< 5.756E-005	< 2.798E-009
	U-233	< 9.954E+002 +/-	4.1%	< 9.480E-001	< 1.015E-001
	Pa-234	< 9.273E-002 +/-	43.9%	< 8.831E-005	
	Pa-234m	< 7.956E+001 +/-	2.1%	< 7.577E-002	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 1.063E-001 +/-	4.1%	< 1.013E-004	< 4.859E-002
	Np-237	< 1.363E-001 +/-	2.2%	< 1.299E-004	< 1.909E-004
	Pu-238	< 6.865E+003 +/-	4.3%	< 6.538E+000	< 3.968E-004
	U-238	< 2.333E+000 +/-	2.1%	< 2.222E-003	< 6.859E+000
	Pu-239	4.778E+003 +/-	38.5%	4.550E+000	7.597E-002
	Pu-239B	< 3.897E+003 +/-	18.9%	< 3.712E+000	< 6.196E-002
	U-239	< 2.794E+003 +/-	370.1%	< 2.661E+000	
X	Pu-240				
	Am-241	1.380E+002 +/-	153.1%	1.314E-001	3.975E-005
	Am-241B	3.540E+003 +/-	17.7%	3.372E+000	1.020E-003
	Pu-241	< 3.500E+004 +/-	4.3%	< 3.333E+001	< 3.367E-004
	Pu-241B	2.121E+004 +/-	21.0%	2.020E+001	2.041E-004
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 3.490E-001 +/-	2.2%	< 3.324E-004	< 1.727E-006
	Cm-243	< 3.599E-001 +/-	3.6%	< 3.428E-004	< 6.911E-009
	Cm-244	< 2.230E+004 +/-	14.1%	< 2.124E+001	< 2.721E-004
	Cm-245	< 6.424E-001 +/-	8.4%	< 6.118E-004	< 3.694E-006
	Cm-247	< 2.892E-002 +/-	8.5%	< 2.755E-005	< 3.095E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 4.390E-002 +/-	3.5%	< 4.181E-005	< 1.062E-008
Cf-251	< 3.453E-001 +/-	6.6%	< 3.289E-004	< 2.158E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	7.60E-002 +- 2.92E-002	4.21E-002 +- 7.38E-003

Beta: 9.76E+001 +- 6.72E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 2

Energy	Mass (g)
129.30	3.57E-002 +- 8.70E-003
375.05	5.86E-002 +- 1.39E-002

Segment 10 Results

Segment: 10 Detector: DET01 Position: 10
C:\Canberra\NDA2k\Data\00000214_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P010_S010

Acquisition Start: 12/24/2008 8:52:28 AM
Elapsed Live Time: 118.23 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.326 +/- 0.0056
SE-75	264.66	0.486 +/- 0.0073
SE-75	279.54	0.509 +/- 0.0087
SE-75	400.66	0.541 +/- 0.0115

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/24/2008 8:54:30 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.44	Y	1184	833	1.21	120.72	5.732E-006	4.82	
2234.72		11980	10	1.13	4467.57	5.132E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 1.632E-002 +/-	1.9%	< 1.554E-005	< 7.523E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.212E-002 +/-	1.9%	< 2.107E-005	< 3.495E-012
Al-26	< 2.814E-002 +/-	19.8%	< 2.680E-005	< 1.480E-006
K-40	< 2.058E-001 +/-	5.3%	< 1.960E-004	< 3.211E-002
Co-57	< 9.188E-002 +/-	4.6%	< 8.751E-005	< 1.075E-011
Co-60	< 1.886E-002 +/-	1.7%	< 1.796E-005	< 1.654E-011
Se-75	< 6.199E-002 +/-	2.2%	< 5.904E-005	< 4.265E-012
Kr-85	< 6.378E+000 +/-	3.3%	< 6.074E-003	< 1.607E-008
Sr-90	< 2.129E-002 +/-	2.4%	< 2.028E-005	< 1.544E-010
Sb-125	< 6.247E-002 +/-	2.2%	< 5.949E-005	< 6.009E-011
Ba-133	< 4.562E-002 +/-	1.8%	< 4.345E-005	< 1.802E-010
Cs-134	< 1.512E-002 +/-	2.0%	< 1.440E-005	< 1.154E-011
Cs-137	< 2.129E-002 +/-	2.4%	< 2.028E-005	< 2.427E-010
Eu-152	< 2.539E-002 +/-	3.8%	< 2.418E-005	< 1.427E-010
Eu-154	< 6.316E-002 +/-	2.1%	< 6.015E-005	< 2.368E-010
Ho-166m	< 2.912E-002 +/-	2.4%	< 2.773E-005	< 1.619E-008
Bi-207	< 1.513E-002 +/-	2.4%	< 1.441E-005	< 2.754E-010
Pb-210	< 7.726E+002 +/-	308.2%	< 7.358E-001	< 1.004E-005
Ra-226	< 4.734E-002 +/-	2.7%	< 4.508E-005	< 4.734E-008
Ac-227	< 2.118E-001 +/-	8.5%	< 2.017E-004	< 2.902E-009
Th-230	< 1.043E+002 +/-	9.0%	< 9.933E-002	< 5.111E-003
Pa-231	< 1.335E+000 +/-	11.3%	< 1.271E-003	< 2.790E-005
Th-232	< 5.609E-002 +/-	2.6%	< 5.342E-005	< 5.054E-001
U-232	< 5.609E-002 +/-	2.6%	< 5.342E-005	< 2.597E-009
U-233	< 7.505E+002 +/-	4.0%	< 7.147E-001	< 7.655E-002
Pa-234	< 8.458E-002 +/-	12.2%	< 8.056E-005	
Pa-234m	< 1.579E+002 +/-	2.1%	< 1.504E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 6.916E-002 +/-	3.9%	< 6.587E-005	< 3.161E-002
Np-237	< 9.171E-002 +/-	2.2%	< 8.734E-005	< 1.284E-004
Pu-238	< 5.229E+003 +/-	4.2%	< 4.980E+000	< 3.022E-004
U-238	< 2.060E+000 +/-	2.2%	< 1.962E-003	< 6.057E+000
Pu-239	< 1.066E+003 +/-	3.7%	< 1.015E+000	< 1.695E-002
Pu-239B	< 3.609E+003 +/-	18.8%	< 3.437E+000	< 5.738E-002
U-239	< 5.821E+003 +/-	366.8%	< 5.544E+000	
Pu-240	< 2.046E+003 +/-	13.3%	< 1.948E+000	< 8.898E-003
Am-241	1.296E+002 +/-	151.9%	1.234E-001	3.731E-005
Am-241B	< 7.841E+002 +/-	14.4%	< 7.468E-001	< 2.258E-004
Pu-241	< 2.580E+004 +/-	4.2%	< 2.457E+001	< 2.482E-004
Pu-241B	< 7.432E+003 +/-	3.4%	< 7.078E+000	< 7.149E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 2.648E-001 +/-	2.2%	< 2.522E-004	< 1.311E-006
Cm-243	< 2.731E-001 +/-	3.5%	< 2.601E-004	< 5.244E-009
Cm-244	< 2.049E+004 +/-	14.1%	< 1.951E+001	< 2.500E-004
Cm-245	< 4.542E-001 +/-	8.3%	< 4.326E-004	< 2.612E-006
Cm-247	< 2.247E-002 +/-	8.5%	< 2.140E-005	< 2.404E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.648E-002 +/-	3.5%	< 2.522E-005	< 6.407E-009
Cf-251	< 2.494E-001 +/-	6.5%	< 2.376E-004	< 1.559E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 11 Results

Segment: 11 Detector: DET01 Position: 11
C:\Canberra\NDA2k\Data\00000214_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P011_S011

Acquisition Start: 12/24/2008 8:56:40 AM
Elapsed Live Time: 118.52 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.184 +/- 0.0035
SE-75	264.66	0.269 +/- 0.0043
SE-75	279.54	0.273 +/- 0.0053
SE-75	400.66	0.320 +/- 0.0078

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/24/2008 8:58:41 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.42	Y	476	535	1.37	120.69	4.621E-006	8.67	
2234.71		11980	4	1.16	4467.55	2.573E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 1.184E-002 +/-	1.8%	< 1.128E-005	< 5.458E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.344E-002 +/-	2.0%	< 2.233E-005	< 3.704E-012
Al-26	< 3.487E-002 +/-	15.1%	< 3.321E-005	< 1.834E-006
K-40	< 3.164E-001 +/-	5.0%	< 3.014E-004	< 4.937E-002
Co-57	< 7.518E-002 +/-	3.4%	< 7.160E-005	< 8.796E-012
Co-60	< 2.490E-002 +/-	1.7%	< 2.371E-005	< 2.184E-011
Se-75	< 6.327E-002 +/-	1.8%	< 6.026E-005	< 4.353E-012
Kr-85	< 4.151E+000 +/-	3.0%	< 3.953E-003	< 1.046E-008
Sr-90	< 1.516E-002 +/-	1.9%	< 1.444E-005	< 1.099E-010
Sb-125	< 4.787E-002 +/-	2.1%	< 4.559E-005	< 4.605E-011
Ba-133	< 3.436E-002 +/-	1.7%	< 3.272E-005	< 1.357E-010
Cs-134	< 1.443E-002 +/-	1.9%	< 1.374E-005	< 1.101E-011
Cs-137	< 1.516E-002 +/-	1.9%	< 1.444E-005	< 1.728E-010
Eu-152	< 6.924E-002 +/-	2.1%	< 6.595E-005	< 3.892E-010
Eu-154	< 6.694E-002 +/-	2.2%	< 6.375E-005	< 2.510E-010
Ho-166m	< 1.909E-002 +/-	2.2%	< 1.818E-005	< 1.062E-008
Bi-207	< 1.542E-002 +/-	2.0%	< 1.469E-005	< 2.807E-010
Pb-210	< 9.920E+002 +/-	53.0%	< 9.448E-001	< 1.290E-005
Ra-226	< 3.075E-002 +/-	2.2%	< 2.928E-005	< 3.075E-008
Ac-227	< 2.055E-001 +/-	8.3%	< 1.957E-004	< 2.815E-009
Th-230	< 9.591E+001 +/-	8.6%	< 9.134E-002	< 4.700E-003
Pa-231	< 1.172E+000 +/-	11.2%	< 1.116E-003	< 2.449E-005
Th-232	< 5.318E-002 +/-	2.1%	< 5.065E-005	< 4.792E-001
U-232	< 5.318E-002 +/-	2.1%	< 5.065E-005	< 2.462E-009
U-233	< 6.907E+002 +/-	2.7%	< 6.579E-001	< 7.046E-002
Pa-234	< 7.744E-002 +/-	12.2%	< 7.375E-005	
Pa-234m	< 1.323E+002 +/-	2.1%	< 1.260E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 6.708E-002 +/-	2.5%	< 6.388E-005	< 3.065E-002
Np-237	< 8.639E-002 +/-	1.9%	< 8.227E-005	< 1.209E-004
Pu-238	< 4.637E+003 +/-	2.6%	< 4.416E+000	< 2.680E-004
U-238	< 1.932E+000 +/-	2.2%	< 1.840E-003	< 5.681E+000
Pu-239	< 8.796E+002 +/-	3.1%	< 8.377E-001	< 1.399E-002
Pu-239B	< 2.711E+003 +/-	5.3%	< 2.582E+000	< 4.310E-002
U-239	< 8.721E+003 +/-	65.1%	< 8.305E+000	
Pu-240	< 1.657E+003 +/-	4.7%	< 1.578E+000	< 7.208E-003
Am-241	6.460E+001 +/-	24.9%	6.152E-002	1.860E-005
Am-241B	< 6.304E+002 +/-	4.9%	< 6.003E-001	< 1.815E-004
Pu-241	< 2.426E+004 +/-	2.8%	< 2.310E+001	< 2.334E-004
Pu-241B	< 6.988E+003 +/-	2.4%	< 6.655E+000	< 6.722E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 2.564E-001 +/-	1.8%	< 2.442E-004	< 1.269E-006
Cm-243	< 2.645E-001 +/-	3.3%	< 2.519E-004	< 5.078E-009
Cm-244	< 1.265E+004 +/-	14.1%	< 1.205E+001	< 1.544E-004
Cm-245	< 4.363E-001 +/-	7.7%	< 4.155E-004	< 2.509E-006
Cm-247	< 2.201E-002 +/-	8.5%	< 2.097E-005	< 2.355E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.028E-002 +/-	3.5%	< 1.931E-005	< 4.907E-009
Cf-251	< 2.327E-001 +/-	5.6%	< 2.217E-004	< 1.455E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 12 Results

Segment: 12 Detector: DET01 Position: 12
C:\Canberra\NDA2k\Data\00000214_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P012_S012

Acquisition Start: 12/24/2008 9:00:51 AM
Elapsed Live Time: 118.76 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.086 +/- 0.0022
SE-75	264.66	0.142 +/- 0.0026
SE-75	279.54	0.153 +/- 0.0035
SE-75	400.66	0.196 +/- 0.0057

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/24/2008 9:02:53 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
59.46	Y	216	391	1.19	120.77	1.221E-004	15.20	
2234.71		11980	14	1.09	4467.55	2.446E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)		%Error	Concentration (uCi/g)	Mass g
n on Fe	< 1.428E-002	+/-	1.9%	< 1.360E-005	< 6.584E-016
Pulser	< 0.000E+000	+/-	0.0%	< 0.000E+000	
Na-22	< 4.939E-003	+/-	2.0%	< 4.703E-006	< 7.803E-013
Al-26	< 2.566E-002	+/-	16.0%	< 2.443E-005	< 1.350E-006
K-40	< 3.129E-001	+/-	5.1%	< 2.980E-004	< 4.882E-002
Co-57	< 6.514E-002	+/-	4.0%	< 6.204E-005	< 7.621E-012
Co-60	< 2.335E-002	+/-	1.7%	< 2.224E-005	< 2.048E-011
Se-75	< 5.917E-002	+/-	2.5%	< 5.635E-005	< 4.071E-012
Kr-85	< 2.947E+000	+/-	3.3%	< 2.807E-003	< 7.426E-009
Sr-90	< 1.089E-002	+/-	2.2%	< 1.037E-005	< 7.893E-011
Sb-125	< 4.356E-002	+/-	2.4%	< 4.149E-005	< 4.191E-011
Ba-133	< 2.253E-002	+/-	2.0%	< 2.146E-005	< 8.900E-011
Cs-134	< 6.974E-003	+/-	2.3%	< 6.641E-006	< 5.321E-012
Cs-137	< 1.089E-002	+/-	2.2%	< 1.037E-005	< 1.241E-010
Eu-152	< 7.542E-002	+/-	2.7%	< 7.183E-005	< 4.239E-010
Eu-154	< 1.409E-002	+/-	2.2%	< 1.342E-005	< 5.286E-011
Ho-166m	< 2.182E-002	+/-	2.3%	< 2.079E-005	< 1.213E-008
Bi-207	< 1.180E-002	+/-	2.3%	< 1.124E-005	< 2.148E-010
Pb-210	< 1.063E+000	+/-	39.2%	< 1.012E-003	< 1.381E-008
Ra-226	< 2.175E-002	+/-	2.5%	< 2.071E-005	< 2.175E-008
Ac-227	< 1.676E-001	+/-	6.5%	< 1.596E-004	< 2.296E-009
Th-230	< 1.661E+001	+/-	13.8%	< 1.582E-002	< 8.139E-004
Pa-231	< 9.725E-001	+/-	11.3%	< 9.262E-004	< 2.033E-005
Th-232	< 4.167E-002	+/-	2.5%	< 3.969E-005	< 3.755E-001
U-232	< 4.167E-002	+/-	2.5%	< 3.969E-005	< 1.929E-009
U-233	< 7.160E+002	+/-	3.2%	< 6.819E-001	< 7.304E-002
Pa-234	< 7.279E-002	+/-	12.2%	< 6.933E-005	
Pa-234m	< 2.803E+001	+/-	2.1%	< 2.670E-002	
U-234	< 0.000E+000	+/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 6.638E-002	+/-	3.2%	< 6.322E-005	< 3.034E-002
Np-237	< 7.060E-002	+/-	2.3%	< 6.724E-005	< 9.885E-005
Pu-238	< 4.874E+003	+/-	3.1%	< 4.642E+000	< 2.817E-004
U-238	< 2.213E+000	+/-	2.1%	< 2.108E-003	< 6.506E+000
Pu-239	< 7.981E+002	+/-	3.7%	< 7.601E-001	< 1.269E-002
Pu-239B	< 1.448E+003	+/-	6.3%	< 1.379E+000	< 2.303E-002
U-239	< 3.514E+000	+/-	49.2%	< 3.346E-003	
Pu-240	< 1.050E+003	+/-	5.6%	< 1.000E+000	< 4.569E-003
Am-241	1.109E+000	+/-	22.6%	1.056E-003	3.193E-007
Am-241B	< 3.844E+002	+/-	5.8%	< 3.661E-001	< 1.107E-004
Pu-241	< 2.477E+004	+/-	3.3%	< 2.359E+001	< 2.383E-004
Pu-241B	< 7.606E+003	+/-	3.2%	< 7.244E+000	< 7.317E-005
Pu-242	< 0.000E+000	+/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.012E-001	+/-	9.3%	< 9.642E-005	< 5.012E-007
Cm-243	< 2.385E-001	+/-	3.7%	< 2.272E-004	< 4.580E-009
Cm-244	< 1.172E+004	+/-	14.1%	< 1.116E+001	< 1.429E-004
Cm-245	< 4.354E-001	+/-	7.9%	< 4.147E-004	< 2.504E-006
Cm-247	< 1.284E-002	+/-	8.6%	< 1.223E-005	< 1.374E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.530E-002 +/-	3.6%	< 1.457E-005	< 3.702E-009
Cf-251	< 2.366E-001 +/-	5.9%	< 2.254E-004	< 1.479E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 13 Results

Segment: 13 Detector: DET01 Position: 13
C:\Canberra\NDA2k\Data\00000214_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P013_S013

Acquisition Start: 12/24/2008 9:05:02 AM
Elapsed Live Time: 118.97 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.403 +/- 0.0065
SE-75	264.66	0.470 +/- 0.0071
SE-75	279.54	0.475 +/- 0.0081
SE-75	400.66	0.529 +/- 0.0112

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/24/2008 9:07:04 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
2234.69		11980	8	1.16	4467.51	7.049E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.01 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 1.617E-002 +/-	1.8%	< 1.540E-005	< 7.455E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.010E-002 +/-	2.0%	< 1.915E-005	< 3.176E-012
Al-26	< 6.503E-003 +/-	14.9%	< 6.194E-006	< 3.421E-007
K-40	< 2.893E-001 +/-	4.9%	< 2.755E-004	< 4.512E-002
Co-57	< 5.486E-002 +/-	3.5%	< 5.225E-005	< 6.419E-012
Co-60	< 1.296E-002 +/-	1.7%	< 1.234E-005	< 1.136E-011
Se-75	< 5.014E-002 +/-	1.9%	< 4.776E-005	< 3.450E-012
Kr-85	< 3.566E+000 +/-	3.1%	< 3.397E-003	< 8.987E-009
Sr-90	< 1.374E-002 +/-	1.9%	< 1.309E-005	< 9.963E-011
Sb-125	< 3.161E-002 +/-	2.1%	< 3.011E-005	< 3.041E-011
Ba-133	< 2.050E-002 +/-	1.7%	< 1.952E-005	< 8.096E-011
Cs-134	< 1.227E-002 +/-	2.0%	< 1.169E-005	< 9.364E-012
Cs-137	< 1.374E-002 +/-	1.9%	< 1.309E-005	< 1.567E-010
Eu-152	< 2.570E-002 +/-	3.7%	< 2.448E-005	< 1.445E-010
Eu-154	< 5.739E-002 +/-	2.2%	< 5.466E-005	< 2.152E-010
Ho-166m	< 3.377E-002 +/-	2.3%	< 3.216E-005	< 1.878E-008
Bi-207	< 1.529E-002 +/-	2.0%	< 1.456E-005	< 2.782E-010
Pb-210	< 1.544E+000 +/-	36.7%	< 1.471E-003	< 2.007E-008
Ra-226	< 2.617E-002 +/-	2.2%	< 2.493E-005	< 2.617E-008
Ac-227	< 1.713E-001 +/-	8.3%	< 1.631E-004	< 2.347E-009
Th-230	< 1.465E+001 +/-	13.0%	< 1.395E-002	< 7.178E-004
Pa-231	< 7.268E-001 +/-	11.2%	< 6.921E-004	< 1.519E-005
Th-232	< 3.810E-002 +/-	2.2%	< 3.628E-005	< 3.433E-001
U-232	< 3.810E-002 +/-	2.2%	< 3.628E-005	< 1.764E-009
U-233	< 5.958E+002 +/-	2.7%	< 5.675E-001	< 6.077E-002
Pa-234	< 1.142E-001 +/-	12.2%	< 1.088E-004	
Pa-234m	< 1.383E+002 +/-	2.1%	< 1.317E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 5.242E-002 +/-	2.5%	< 4.992E-005	< 2.395E-002
Np-237	< 5.314E-002 +/-	1.9%	< 5.061E-005	< 7.439E-005
Pu-238	< 4.086E+003 +/-	2.6%	< 3.892E+000	< 2.362E-004
U-238	< 2.445E+000 +/-	2.1%	< 2.328E-003	< 7.188E+000
Pu-239	< 7.081E+002 +/-	3.2%	< 6.744E-001	< 1.126E-002
Pu-239B	< 1.135E+003 +/-	5.7%	< 1.081E+000	< 1.804E-002
U-239	< 6.628E+000 +/-	45.8%	< 6.313E-003	
Pu-240	< 8.124E+002 +/-	5.0%	< 7.737E-001	< 3.534E-003
Am-241	< 1.864E-001 +/-	15.6%	< 1.775E-004	< 5.369E-008
Am-241B	< 3.039E+002 +/-	5.3%	< 2.894E-001	< 8.753E-005
Pu-241	< 2.118E+004 +/-	2.8%	< 2.017E+001	< 2.038E-004
Pu-241B	< 6.210E+003 +/-	2.5%	< 5.914E+000	< 5.974E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 9.374E-002 +/-	8.4%	< 8.928E-005	< 4.640E-007
Cm-243	< 1.815E-001 +/-	3.3%	< 1.728E-004	< 3.484E-009
Cm-244	< 1.250E+004 +/-	14.1%	< 1.191E+001	< 1.525E-004
Cm-245	< 3.523E-001 +/-	7.7%	< 3.355E-004	< 2.025E-006
Cm-247	< 1.900E-002 +/-	8.5%	< 1.810E-005	< 2.033E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.309E-002 +/-	3.5%	< 1.247E-005	< 3.169E-009
Cf-251	< 1.941E-001 +/-	5.6%	< 1.849E-004	< 1.213E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 14 Results

Segment: 14 Detector: DET01 Position: 14
C:\Canberra\NDA2k\Data\00000214_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P014_S014

Acquisition Start: 12/24/2008 9:09:14 AM
Elapsed Live Time: 119.11 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.870 +/- 0.0130
SE-75	264.66	0.894 +/- 0.0130
SE-75	279.54	0.886 +/- 0.0140
SE-75	400.66	0.902 +/- 0.0170

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/24/2008 9:11:15 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
2234.71		11980	5	1.12	4467.54	5.397E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 2.407E-002 +/-	1.9%	< 2.292E-005	< 1.110E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 1.738E-002 +/-	2.0%	< 1.656E-005	< 2.746E-012
Al-26	< 2.042E-002 +/-	15.2%	< 1.945E-005	< 1.074E-006
K-40	< 2.388E-001 +/-	5.0%	< 2.275E-004	< 3.726E-002
Co-57	< 4.528E-002 +/-	3.4%	< 4.312E-005	< 5.298E-012
Co-60	< 3.533E-002 +/-	1.7%	< 3.364E-005	< 3.098E-011
Se-75	< 3.502E-002 +/-	1.8%	< 3.335E-005	< 2.409E-012
Kr-85	< 3.074E+000 +/-	3.1%	< 2.928E-003	< 7.746E-009
Sr-90	< 2.076E-002 +/-	1.9%	< 1.977E-005	< 1.505E-010
Sb-125	< 4.796E-002 +/-	2.1%	< 4.567E-005	< 4.613E-011
Ba-133	< 1.655E-002 +/-	1.7%	< 1.576E-005	< 6.536E-011
Cs-134	< 1.952E-002 +/-	2.0%	< 1.859E-005	< 1.489E-011
Cs-137	< 2.076E-002 +/-	1.9%	< 1.977E-005	< 2.366E-010
Eu-152	< 5.517E-002 +/-	2.5%	< 5.254E-005	< 3.100E-010
Eu-154	< 4.964E-002 +/-	2.2%	< 4.727E-005	< 1.861E-010
Ho-166m	< 2.526E-002 +/-	2.3%	< 2.406E-005	< 1.405E-008
Bi-207	< 1.277E-002 +/-	2.0%	< 1.216E-005	< 2.324E-010
Pb-210	< 7.941E+002 +/-	56.7%	< 7.563E-001	< 1.032E-005
Ra-226	< 2.868E-002 +/-	2.2%	< 2.731E-005	< 2.868E-008
Ac-227	< 1.387E-001 +/-	8.3%	< 1.321E-004	< 1.900E-009
Th-230	< 6.052E+001 +/-	8.6%	< 5.764E-002	< 2.966E-003
Pa-231	< 5.405E-001 +/-	11.2%	< 5.148E-004	< 1.130E-005
Th-232	< 3.759E-002 +/-	2.2%	< 3.580E-005	< 3.387E-001
U-232	< 3.759E-002 +/-	2.2%	< 3.580E-005	< 1.740E-009
U-233	< 4.507E+002 +/-	2.7%	< 4.292E-001	< 4.597E-002
Pa-234	< 8.238E-002 +/-	12.2%	< 7.845E-005	
Pa-234m	< 1.761E+002 +/-	2.2%	< 1.677E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 3.982E-002 +/-	2.5%	< 3.792E-005	< 1.820E-002
Np-237	< 4.286E-002 +/-	1.9%	< 4.082E-005	< 6.000E-005
Pu-238	< 3.138E+003 +/-	2.6%	< 2.989E+000	< 1.814E-004
U-238	< 2.648E+000 +/-	2.2%	< 2.522E-003	< 7.785E+000
Pu-239	< 5.780E+002 +/-	3.1%	< 5.505E-001	< 9.190E-003
Pu-239B	< 1.536E+003 +/-	5.4%	< 1.463E+000	< 2.442E-002
U-239	< 1.097E+004 +/-	69.5%	< 1.045E+001	
Pu-240	< 9.568E+002 +/-	4.7%	< 9.113E-001	< 4.162E-003
Am-241	< 4.870E+000 +/-	25.0%	< 4.638E-003	< 1.403E-006
Am-241B	< 3.593E+002 +/-	5.0%	< 3.422E-001	< 1.035E-004
Pu-241	< 1.598E+004 +/-	2.8%	< 1.522E+001	< 1.537E-004
Pu-241B	< 4.601E+003 +/-	2.4%	< 4.382E+000	< 4.426E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.438E-001 +/-	1.8%	< 1.369E-004	< 7.117E-007
Cm-243	< 1.483E-001 +/-	3.3%	< 1.412E-004	< 2.847E-009
Cm-244	< 1.543E+004 +/-	14.1%	< 1.469E+001	< 1.882E-004
Cm-245	< 2.580E-001 +/-	7.7%	< 2.457E-004	< 1.483E-006
Cm-247	< 1.540E-002 +/-	8.5%	< 1.467E-005	< 1.648E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.166E-002 +/-	3.5%	< 2.062E-005	< 5.241E-009
Cf-251	< 1.416E-001 +/-	5.6%	< 1.349E-004	< 8.852E-008

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 15 Results

Segment: 15 Detector: DET01 Position: 15
C:\Canberra\NDA2k\Data\00000214_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P015_S015

Acquisition Start: 12/24/2008 9:13:25 AM
Elapsed Live Time: 119.17 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.901 +/- 0.0135
SE-75	264.66	0.917 +/- 0.0133
SE-75	279.54	0.907 +/- 0.0143
SE-75	400.66	0.909 +/- 0.0172

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/24/2008 9:15:26 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
2234.69		11980	10	1.14	4467.50	2.739E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 2.921E-002 +/-	1.8%	< 2.782E-005	< 1.347E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.366E-002 +/-	2.1%	< 2.253E-005	< 3.738E-012
Al-26	< 1.046E-002 +/-	15.4%	< 9.958E-006	< 5.500E-007
K-40	< 3.386E-001 +/-	5.0%	< 3.225E-004	< 5.283E-002
Co-57	< 4.400E-002 +/-	3.5%	< 4.191E-005	< 5.149E-012
Co-60	< 2.847E-002 +/-	1.7%	< 2.711E-005	< 2.497E-011
Se-75	< 3.447E-002 +/-	1.8%	< 3.283E-005	< 2.372E-012
Kr-85	< 4.214E+000 +/-	3.0%	< 4.013E-003	< 1.062E-008
Sr-90	< 1.813E-002 +/-	1.9%	< 1.727E-005	< 1.315E-010
Sb-125	< 5.546E-002 +/-	2.1%	< 5.282E-005	< 5.335E-011
Ba-133	< 1.648E-002 +/-	1.7%	< 1.569E-005	< 6.509E-011
Cs-134	< 1.795E-002 +/-	1.9%	< 1.709E-005	< 1.370E-011
Cs-137	< 1.813E-002 +/-	1.9%	< 1.727E-005	< 2.067E-010
Eu-152	< 5.408E-002 +/-	2.5%	< 5.151E-005	< 3.040E-010
Eu-154	< 6.755E-002 +/-	2.2%	< 6.434E-005	< 2.533E-010
Ho-166m	< 1.702E-002 +/-	2.2%	< 1.621E-005	< 9.461E-009
Bi-207	< 1.416E-002 +/-	2.0%	< 1.348E-005	< 2.577E-010
Pb-210	< 9.862E+002 +/-	57.4%	< 9.392E-001	< 1.282E-005
Ra-226	< 3.117E-002 +/-	2.0%	< 2.968E-005	< 3.117E-008
Ac-227	< 1.078E-001 +/-	8.3%	< 1.026E-004	< 1.476E-009
Th-230	< 5.721E+001 +/-	8.6%	< 5.449E-002	< 2.804E-003
Pa-231	< 6.685E-001 +/-	11.2%	< 6.366E-004	< 1.397E-005
Th-232	< 3.810E-002 +/-	2.1%	< 3.628E-005	< 3.433E-001
U-232	< 3.810E-002 +/-	2.1%	< 3.628E-005	< 1.764E-009
U-233	< 4.206E+002 +/-	2.8%	< 4.006E-001	< 4.290E-002
Pa-234	< 6.431E-002 +/-	12.2%	< 6.125E-005	
Pa-234m	< 1.244E+002 +/-	2.1%	< 1.184E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 3.595E-002 +/-	2.5%	< 3.424E-005	< 1.643E-002
Np-237	< 3.986E-002 +/-	1.9%	< 3.796E-005	< 5.580E-005
Pu-238	< 2.708E+003 +/-	2.7%	< 2.579E+000	< 1.565E-004
U-238	< 1.369E+000 +/-	2.2%	< 1.304E-003	< 4.024E+000
Pu-239	< 5.212E+002 +/-	3.2%	< 4.964E-001	< 8.288E-003
Pu-239B	< 1.360E+003 +/-	5.6%	< 1.295E+000	< 2.162E-002
U-239	< 1.460E+004 +/-	70.2%	< 1.390E+001	
Pu-240	< 8.598E+002 +/-	4.9%	< 8.189E-001	< 3.740E-003
Am-241	< 4.712E+000 +/-	25.4%	< 4.488E-003	< 1.357E-006
Am-241B	< 3.354E+002 +/-	5.1%	< 3.194E-001	< 9.658E-005
Pu-241	< 1.477E+004 +/-	2.9%	< 1.406E+001	< 1.420E-004
Pu-241B	< 3.648E+003 +/-	2.4%	< 3.474E+000	< 3.509E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.462E-001 +/-	1.8%	< 1.393E-004	< 7.239E-007
Cm-243	< 1.508E-001 +/-	3.3%	< 1.436E-004	< 2.896E-009
Cm-244	< 1.409E+004 +/-	14.1%	< 1.342E+001	< 1.719E-004
Cm-245	< 2.543E-001 +/-	7.7%	< 2.422E-004	< 1.462E-006
Cm-247	< 1.789E-002 +/-	8.5%	< 1.704E-005	< 1.914E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.048E-002 +/-	3.5%	< 1.950E-005	< 4.955E-009
Cf-251	< 1.332E-001 +/-	5.6%	< 1.269E-004	< 8.326E-008

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Segment 16 Results

Segment: 16 Detector: DET01 Position: 16
C:\Canberra\NDA2k\Data\00000214_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P016_S016

Acquisition Start: 12/24/2008 9:17:36 AM
Elapsed Live Time: 119.17 sec Elapsed Real Time: 120.00 sec

********** Transmission Results **********

Calibration Description: 55 Gal Galv 81.5 zero attenuation
Calibration Date: 11/24/2008 8:25:22 AM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.830 +/- 0.0125
SE-75	264.66	0.884 +/- 0.0128
SE-75	279.54	0.868 +/- 0.0137
SE-75	400.66	0.884 +/- 0.0168

Errors quoted at 1.000 sigma

********** Peak Analysis Results **********

Peak Analysis Performed on: 12/24/2008 9:19:40 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
2234.72		11980	7	1.12	4467.56	2.486E-005	1.42	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.00 +/- 0.01

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 2.094E-002 +/-	2.3%	< 1.995E-005	< 9.655E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.991E-002 +/-	2.3%	< 2.848E-005	< 4.725E-012
Al-26	< 4.040E-002 +/-	18.0%	< 3.848E-005	< 2.125E-006
K-40	< 4.335E-001 +/-	5.6%	< 4.129E-004	< 6.763E-002
Co-57	< 7.283E-002 +/-	4.4%	< 6.936E-005	< 8.521E-012
Co-60	< 3.837E-002 +/-	2.0%	< 3.654E-005	< 3.365E-011
Se-75	< 6.395E-002 +/-	2.8%	< 6.090E-005	< 4.400E-012
Kr-85	< 6.218E+000 +/-	3.6%	< 5.922E-003	< 1.567E-008
Sr-90	< 2.577E-002 +/-	2.6%	< 2.454E-005	< 1.868E-010
Sb-125	< 5.087E-002 +/-	2.7%	< 4.845E-005	< 4.894E-011
Ba-133	< 2.721E-002 +/-	2.3%	< 2.591E-005	< 1.075E-010
Cs-134	< 2.073E-002 +/-	2.8%	< 1.975E-005	< 1.582E-011
Cs-137	< 2.577E-002 +/-	2.6%	< 2.454E-005	< 2.938E-010
Eu-152	< 4.696E-002 +/-	4.2%	< 4.472E-005	< 2.639E-010
Eu-154	< 4.791E-002 +/-	2.3%	< 4.563E-005	< 1.797E-010
Ho-166m	< 3.000E-002 +/-	2.8%	< 2.857E-005	< 1.668E-008
Bi-207	< 1.965E-002 +/-	2.8%	< 1.871E-005	< 3.576E-010
Pb-210	< 2.309E+000 +/-	46.8%	< 2.199E-003	< 3.001E-008
Ra-226	< 2.480E-002 +/-	3.0%	< 2.362E-005	< 2.480E-008
Ac-227	< 2.155E-001 +/-	3.5%	< 2.053E-004	< 2.953E-009
Th-230	< 2.247E+001 +/-	15.5%	< 2.140E-002	< 1.101E-003
Pa-231	< 8.439E-001 +/-	11.4%	< 8.038E-004	< 1.764E-005
Th-232	< 6.456E-002 +/-	2.9%	< 6.149E-005	< 5.817E-001
U-232	< 6.456E-002 +/-	2.9%	< 6.149E-005	< 2.989E-009
U-233	< 7.347E+002 +/-	2.5%	< 6.997E-001	< 7.494E-002
Pa-234	< 1.001E-001 +/-	12.3%	< 9.533E-005	
Pa-234m	< 1.668E+002 +/-	2.4%	< 1.588E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 7.573E-002 +/-	3.6%	< 7.212E-005	< 3.461E-002
Np-237	< 6.620E-002 +/-	2.6%	< 6.305E-005	< 9.268E-005
Pu-238	< 5.559E+003 +/-	3.6%	< 5.295E+000	< 3.213E-004
U-238	< 4.167E+000 +/-	2.4%	< 3.969E-003	< 1.225E+001
Pu-239	< 1.009E+003 +/-	4.1%	< 9.612E-001	< 1.605E-002
Pu-239B	< 1.416E+003 +/-	7.0%	< 1.349E+000	< 2.252E-002
U-239	< 1.295E+001 +/-	58.6%	< 1.233E-002	
Pu-240	< 1.100E+003 +/-	6.2%	< 1.048E+000	< 4.785E-003
Am-241	< 2.236E-001 +/-	19.9%	< 2.130E-004	< 6.440E-008
Am-241B	< 4.091E+002 +/-	6.4%	< 3.896E-001	< 1.178E-004
Pu-241	< 3.044E+004 +/-	3.7%	< 2.899E+001	< 2.928E-004
Pu-241B	< 8.426E+003 +/-	3.6%	< 8.025E+000	< 8.106E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.314E-001 +/-	10.7%	< 1.252E-004	< 6.507E-007
Cm-243	< 2.137E-001 +/-	3.9%	< 2.035E-004	< 4.103E-009
Cm-244	< 2.720E+004 +/-	14.2%	< 2.591E+001	< 3.319E-004
Cm-245	< 4.906E-001 +/-	8.1%	< 4.672E-004	< 2.821E-006
Cm-247	< 2.886E-002 +/-	8.7%	< 2.748E-005	< 3.088E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.136E-002 +/-	3.8%	< 2.034E-005	< 5.169E-009
Cf-251	< 2.623E-001 +/-	6.2%	< 2.498E-004	< 1.639E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model: FULL

Summed Segment Spectra Results
Category: Segmented

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Elapsed Live Time: 97.61 sec Elapsed Real Time: 120.00 sec

********** Peak Analysis Results **********

*** Spectrum Validity Test warnings ***
Reference peak/MCA Test failed: reference peak data does not match MCA time
Peak Fit Test failed: some peak's fit chi-square exceeds limit of 3.0

Peak Analysis Performed on: 12/24/2008 9:19:49 AM
Peak Analysis From Channel: 80 to Channel: 8192
Peak Search Sensitivity: 3.00

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	49.38		6847	37177	2.32	100.63	7.584E-007	4.43	
	59.42	Y	349805	44824	1.12	120.69	6.599E-006	0.34	
	67.18	Y	1262	26341	0.92	136.20	2.006E-005	19.89	
	74.70		1423	37252	0.73	151.22	4.385E-005	20.99	
M	94.67	Y	63568	87071	1.53	191.12	1.522E-004	0.88	364.63
m	98.68	Y	245019	117101	1.54	199.13	1.780E-004	0.68	
m	100.86	Y	37154	118480	1.55	203.49	1.922E-004	1.14	
m	103.32	Y	172393	94871	1.55	208.40	2.080E-004	0.66	
M	111.06	Y	64283	58138	1.38	223.88	2.562E-004	0.72	448.92
m	114.57	Y	52900	64866	1.38	230.88	2.766E-004	0.78	
m	116.61	Y	49538	60853	1.39	234.97	2.881E-004	0.75	
m	120.57	Y	12862	55090	1.39	242.87	3.091E-004	1.59	
m	122.91	Y	6296	48228	1.40	247.55	3.208E-004	2.85	
m	125.23	Y	24447	50833	1.40	252.19	3.318E-004	1.03	
m	129.26	Y	115682	44646	1.41	260.24	3.494E-004	0.60	
M	144.15	Y	7331	33759	1.14	289.99	3.994E-004	5.94	1.50
m	146.30	Y	6269	29964	1.15	294.29	4.047E-004	6.30	
m	148.53	Y	15497	33653	1.15	298.76	4.098E-004	5.29	
m	152.87	Y	467	29839	1.16	307.43	4.183E-004	28.88	
M	161.05	Y	6607	33979	1.31	323.76	4.301E-004	6.52	13.13
m	164.55	Y	6237	52295	1.31	330.77	4.336E-004	5.59	
m	169.37	Y	1196	54864	1.32	340.40	4.370E-004	12.94	
m	171.33	Y	5224	54391	1.32	344.32	4.380E-004	5.73	
	179.11	Y	2056	30972	1.05	359.86	4.400E-004	13.59	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	189.23	Y	3594	32751	1.33	380.08	4.384E-004	8.29	
	195.55	Y	4586	31069	1.23	392.72	4.357E-004	6.37	
M	203.51	Y	25800	25610	1.13	408.61	4.306E-004	0.79	37.39
m	207.97	Y	87496	22837	1.14	417.52	4.271E-004	0.45	
M	237.83		652	14342	1.40	477.20	3.977E-004	14.40	1.90
m	243.24	Y	1536	20734	1.41	488.01	3.917E-004	6.94	
	255.30	Y	3935	15330	1.22	512.11	3.783E-004	5.33	
M	263.94	Y	1370	12473	1.29	529.37	3.687E-004	17.06	1.93
m	267.47	Y	3241	11815	1.30	536.44	3.649E-004	15.72	
	297.36	Y	2244	12647	1.36	596.16	3.335E-004	8.57	
M	311.79	Y	4644	10563	1.55	624.99	3.196E-004	2.17	9.51
m	316.32	Y	584	13358	1.55	634.04	3.155E-004	12.72	
m	320.88	Y	3208	12957	1.56	643.15	3.113E-004	2.84	
m	323.35	Y	3604	12684	1.56	648.09	3.091E-004	2.59	
M	332.67	Y	30409	8882	1.30	666.71	3.011E-004	0.66	14.04
m	335.61	Y	11939	8238	1.30	672.59	2.987E-004	1.06	
m	341.38	Y	3206	8562	1.31	684.12	2.940E-004	2.56	
m	344.93	Y	26357	8074	1.31	691.21	2.911E-004	0.70	
M	361.85	Y	517	6203	1.29	725.04	2.784E-004	11.48	27.80
m	366.97	Y	3839	6001	1.29	735.27	2.747E-004	2.53	
m	368.49	Y	7064	5902	1.30	738.29	2.737E-004	1.60	
m	370.83	Y	981	5778	1.30	742.97	2.720E-004	6.26	
m	374.98	Y	71115	4999	1.30	751.26	2.692E-004	0.47	
m	380.06	Y	13323	4056	1.31	761.41	2.658E-004	0.96	
m	382.66	Y	11705	3801	1.31	766.61	2.641E-004	1.02	
	392.84	Y	24042	3930	1.51	786.96	2.577E-004	0.85	
M	413.62	Y	63556	1868	1.37	828.47	2.457E-004	0.71	7.81
m	419.11	Y	328	1414	1.38	839.45	2.428E-004	10.87	
m	422.48	Y	4895	1518	1.38	846.18	2.411E-004	1.72	
m	426.50	Y	1169	1454	1.38	854.22	2.390E-004	4.06	
m	430.14	Y	155	1284	1.39	861.50	2.372E-004	20.80	
M	445.61	Y	376	1175	1.30	892.40	2.297E-004	8.40	1.91
m	451.38	Y	7742	1122	1.31	903.94	2.271E-004	1.21	
	481.36	Y	189	807	0.90	963.83	2.147E-004	26.62	
	510.75		332	733	2.50	1022.57	2.041E-004	14.95	
	558.50		158	355	1.34	1117.98	1.898E-004	21.41	
	597.43	Y	60	249	1.45	1195.78	1.802E-004	42.42	
	619.00	Y	687	343	1.52	1238.90	1.754E-004	6.13	
M	639.88	Y	246	267	1.52	1280.61	1.712E-004	9.64	1.96
m	642.11		123	239	1.52	1285.08	1.707E-004	14.74	
m	645.84	Y	419	255	1.52	1292.53	1.700E-004	7.03	
m	652.50	Y	473	242	1.53	1305.83	1.688E-004	6.56	
m	658.74	Y	278	210	1.53	1318.31	1.676E-004	8.77	
m	662.27	Y	3293	183	1.53	1325.35	1.670E-004	4.02	
	688.54	Y	272	194	1.40	1377.84	1.625E-004	10.74	
	721.86	Y	1625	219	1.73	1444.44	1.573E-004	3.00	
	737.26	Y	62	128	1.60	1475.21	1.551E-004	34.51	
	755.80	Y	147	117	1.97	1512.25	1.525E-004	15.42	
	769.19	Y	418	123	1.65	1539.01	1.507E-004	6.92	
	1173.22	Y	80	30	1.60	2346.38	1.132E-004	16.33	

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
1332.52	Y	116	41	1.41	2664.71	1.019E-004	13.86	
1460.76	Y	55	26	1.85	2920.98	9.339E-005	21.10	
2234.70		191681	297	1.14	4467.53	4.994E-005	0.36	
2293.87		68	51	1.16	4585.77	4.729E-005	22.81	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.07 +/- 0.00

Y = Peak Identified by NID
M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
? = Adjacent peak noted

Errors quoted at 1.000 sigma

********** NID/MDA Results **********

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	@ 1.000E+020 +/-	100.0%	@ 5.952E+015	
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 9.441E-002 +/-	1.2%	< 5.620E-006	< 1.492E-011
	Al-26	< 1.384E-001 +/-	8.2%	< 8.238E-006	< 7.279E-006
	K-40	1.250E+000 +/-	21.3%	7.439E-005	1.950E-001
X	Co-57				
	Co-60	2.047E-001 +/-	10.9%	1.218E-005	1.795E-010
	Se-75	< 1.789E+000 +/-	1.1%	< 1.065E-004	< 1.231E-010
	Kr-85	< 4.265E+001 +/-	2.5%	< 2.539E-003	< 1.075E-007
	Sr-90	< 1.292E-001 +/-	1.0%	< 7.689E-006	< 9.365E-010
	Sb-125	< 8.688E-001 +/-	1.5%	< 5.171E-005	< 8.358E-010
	Ba-133	< 5.744E-001 +/-	1.0%	< 3.419E-005	< 2.269E-009
	Cs-134	< 1.109E-001 +/-	1.0%	< 6.600E-006	< 8.460E-011
X	Cs-137				
	Eu-152	< 3.968E-001 +/-	2.1%	< 2.362E-005	< 2.230E-009
	Eu-154	< 2.485E-001 +/-	1.5%	< 1.479E-005	< 9.319E-010
	Ho-166m	< 1.459E-001 +/-	1.7%	< 8.687E-006	< 8.115E-008
	Bi-207	< 1.230E-001 +/-	1.2%	< 7.324E-006	< 2.239E-009
	Pb-210	< 1.595E+004 +/-	12.2%	< 9.496E-001	< 2.074E-004
	Ra-226	< 2.764E-001 +/-	1.5%	< 1.645E-005	< 2.764E-007
	Ac-227	< 2.448E+000 +/-	8.2%	< 1.457E-004	< 3.353E-008
	Th-230	3.729E+003 +/-	21.6%	2.219E-001	1.827E-001
	Pa-231	< 1.372E+001 +/-	11.2%	< 8.164E-004	< 2.866E-004
	Th-232	< 3.688E-001 +/-	1.9%	< 2.195E-005	< 3.323E+000
	U-232	< 4.767E-001 +/-	1.3%	< 2.837E-005	< 2.207E-008
	U-233	< 9.155E+003 +/-	1.6%	< 5.449E-001	< 9.338E-001
	Pa-234	< 4.595E-001 +/-	12.1%	< 2.735E-005	
	Pa-234m	< 6.704E+002 +/-	1.5%	< 3.991E-002	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 7.891E-001 +/-	1.8%	< 4.697E-005	< 3.606E-001
	Np-237	5.908E+000 +/-	3.4%	3.517E-004	8.272E-003
	Pu-238	2.692E+004 +/-	28.9%	1.602E+000	1.556E-003
	U-238	< 1.178E+001 +/-	1.6%	< 7.015E-004	< 3.465E+001

*	**	Pu-239	7.002E+006	+/-	1.7%	4.168E+002	1.113E+002	
		Pu-239B	3.845E+006	+/-	0.6%	2.288E+002	6.112E+001	
		U-239	@ 1.000E+020	+/-	100.0%	@ 5.952E+015		
	X	Pu-240						
		Am-241	1.200E+006	+/-	3.0%	7.144E+001	3.456E-001	
		Am-241B	5.959E+005	+/-	1.9%	3.547E+001	1.716E-001	
		Pu-241	4.690E+006	+/-	5.6%	2.791E+002	4.511E-002	
		Pu-241B	8.859E+006	+/-	1.7%	5.273E+002	8.522E-002	
		Pu-242	< 0.000E+000	+/-	0.0%	< 0.000E+000	< 0.000E+000	
		Am-243	< 2.688E+000	+/-	1.2%	< 1.600E-004	< 1.331E-005	
		Cm-243	< 2.802E+000	+/-	3.0%	< 1.668E-004	< 5.379E-008	
		Cm-244	< 1.454E+005	+/-	14.1%	< 8.653E+000	< 1.774E-003	
		Cm-245	< 4.882E+000	+/-	7.5%	< 2.906E-004	< 2.807E-005	
		Cm-247	< 3.563E-001	+/-	8.4%	< 2.121E-005	< 3.812E-003	

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 4.309E-001 +/-	3.2%	< 2.565E-005	< 1.043E-007
Cf-251	< 2.730E+000 +/-	5.3%	< 1.625E-004	< 1.707E-006

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.11E+002 +- 1.87E+000	3.22E+001 +- 2.65E-001

Beta: 2.27E+002 +- 3.84E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.88E+001 +- 3.57E-001
203.55	3.77E+001 +- 5.40E-001
375.05	6.09E+001 +- 7.56E-001
413.71	6.32E+001 +- 9.25E-001

Sum of Segment NID Results
Category: Segmented

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********** Peak Analysis Results **********

No peak analysis results available for reporting purposes

********** NID/MDA Results **********

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 3.651E-002 +/-	1.8%	< 2.173E-006	< 1.683E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.991E-002 +/-	2.3%	< 1.780E-006	< 4.725E-012
Al-26	< 6.816E-002 +/-	19.8%	< 4.057E-006	< 3.585E-006
K-40	< 4.335E-001 +/-	5.6%	< 2.581E-005	< 6.763E-002
Co-57	5.101E+000 +/-	14.4%	3.036E-004	5.968E-010
Co-60	< 3.928E-002 +/-	1.7%	< 2.338E-006	< 3.445E-011
Se-75	< 2.945E-001 +/-	1.9%	< 1.753E-005	< 2.026E-011
Kr-85	< 1.647E+001 +/-	3.1%	< 9.801E-004	< 4.149E-008
Sr-90	< 1.047E-001 +/-	2.1%	< 6.232E-006	< 7.591E-010
Sb-125	< 3.498E-001 +/-	2.3%	< 2.082E-005	< 3.365E-010
Ba-133	< 2.236E-001 +/-	1.7%	< 1.331E-005	< 8.833E-010
Cs-134	< 3.351E-002 +/-	2.0%	< 1.994E-006	< 2.557E-011
Cs-137	< 1.047E-001 +/-	2.1%	< 6.232E-006	< 1.194E-009
Eu-152	< 1.516E-001 +/-	3.6%	< 9.026E-006	< 8.522E-010
Eu-154	< 8.034E-002 +/-	2.2%	< 4.782E-006	< 3.013E-010
Ho-166m	< 5.918E-002 +/-	2.2%	< 3.523E-006	< 3.291E-008
Bi-207	< 4.569E-002 +/-	1.8%	< 2.720E-006	< 8.316E-010
Pb-210	< 3.341E+004 +/-	309.7%	< 1.989E+000	< 4.344E-004
Ra-226	< 1.169E-001 +/-	2.3%	< 6.958E-006	< 1.169E-007
Ac-227	< 1.029E+000 +/-	8.3%	< 6.123E-005	< 1.409E-008
Th-230	< 4.469E+002 +/-	9.0%	< 2.660E-002	< 2.190E-002
Pa-231	< 5.391E+000 +/-	11.2%	< 3.209E-004	< 1.127E-004
Th-232	< 1.305E-001 +/-	2.4%	< 7.765E-006	< 1.175E+000
U-232	< 2.064E-001 +/-	2.2%	< 1.228E-005	< 9.554E-009
U-233	< 3.956E+003 +/-	2.7%	< 2.355E-001	< 4.035E-001
Pa-234	< 1.660E-001 +/-	12.3%	< 9.884E-006	
Pa-234m	< 2.744E+002 +/-	2.3%	< 1.633E-002	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 3.376E-001 +/-	2.5%	< 2.010E-005	< 1.543E-001
Np-237	7.424E+000 +/-	4.3%	4.419E-004	1.039E-002
Pu-238	< 2.251E+004 +/-	2.6%	< 1.340E+000	< 1.301E-003
U-238	< 4.167E+000 +/-	2.4%	< 2.480E-004	< 1.225E+001
Pu-239	6.854E+006 +/-	1.5%	4.080E+002	1.090E+002
Pu-239B	4.607E+006 +/-	0.7%	2.742E+002	7.324E+001
U-239	< 2.657E+005 +/-	368.5%	< 1.581E+001	
Pu-240	3.437E+005 +/-	22.9%	2.046E+001	1.495E+000

*	Am-241	1.489E+006 +/-	2.3%	8.865E+001	4.289E-001
	Am-241B	1.119E+006 +/-	2.7%	6.663E+001	3.224E-001
	Pu-241	9.528E+006 +/-	4.6%	5.672E+002	9.166E-002
	Pu-241B	1.458E+007 +/-	1.5%	8.679E+002	1.403E-001
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 9.620E-001 +/-	2.2%	< 5.726E-005	< 4.762E-006
	Cm-243	< 1.093E+000 +/-	3.3%	< 6.506E-005	< 2.099E-008
	Cm-244	< 5.013E+004 +/-	14.2%	< 2.984E+000	< 6.116E-004
	Cm-245	< 2.111E+000 +/-	7.7%	< 1.257E-004	< 1.214E-005
	Cm-247	< 1.554E-001 +/-	8.5%	< 9.249E-006	< 1.663E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.838E-001 +/-	3.5%	< 1.094E-005	< 4.449E-008
Cf-251	< 1.186E+000 +/-	5.6%	< 7.061E-005	< 7.414E-007

? = Nuclide is part of an undetermined solution
X = Nuclide rejected by the interference analysis
* = Nuclide was manually edited
< = MDA
@ = Half life too short for MDA calculation

Errors quoted at 1.000 sigma

********** Self Absorption Correction Results **********

Self Absorption Correction Analysis Error 3:
There are not enough peaks to do the calculation

Absorption correction model:

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.09E+002 +- 1.63E+000	0.00E+000 +- 0.00E+000

Beta: 0.00E+000 +- 0.00E+000 Alpha: 0.00E+000 +- 0.00E+000
Number of energy lines used in correction: 0

Energy	Mass (g)