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LLNL-TR-419395

NDA BATCH 2009-7

R.HOLLISTER

November 3, 2009

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NDA BATCH REPORT COVER SHEET

NDA Batch Number: 2009-7	Status: VALIDATED
Testing Facility: **LLNL Plutonium Facility Segmented Gamma Scanner (SGS)**	

Waste Containers

LL85401489 LL85234274 LL85101660 LL85234331 LL85234314 LL85901401 LL85001778

LL85201616 LL85238300 LL85234274-R

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

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LL85234314, Run 378	5/5/09		
LL85901401, Run 379	5/5/09		
LL85001778, Run 380	5/5/09		

CONTROLLED FORM

10 drums 1 Rep 2009-7 5-4-09 – 5-6-09

369 BKG

370 SGS 100

371 LL85401489 ✓ Removed Tape & Gross on Log Trans ~~1-7, 11-15~~ ~~1-4, 13~~ 14, 15 No Act. OK SUM OK

372 LL85234274 ✓ " Trans ~~1-2, 5-6, 9-11~~ 9 OK SUM OK

373 LL85234274-R ✓ " Trans ~~1-2, 5-6, 9-11~~ 9 OK SUM OK

374 BKG

375 SGS 100 Trans ~~1-2, 6-8,~~ 7, 8 OK SUM OK

376 LL85101660 ✓

377 LL85234331 ✓ Trans ~~4-5, 7-9, 12~~ 4, 8, 9 OK SUM OK

378 LL85234314 ✓ MGA OK Trans ~~1, 5~~ OK SUM OK

379 LL85901401 ✓ Trans ~~1-6, 14~~ 2-5 OK SUM OK

380 LL85001778 ✓ MGA OK Trans ~~3~~ OK SUM OK

381 LL85201616 ✓ Trans ~~6, 7, 16~~ 7, 16 No Act. OK SUM OK

382 BKG

383 BKG

384 SGS 100

385 LL85800992 ✓ MGA OK Trans ~~1-11, 13~~ 1, 4, 6-8 OK

386 LL85238300 ✓ MGA OK Trans ~~3, 6-7, 15-16~~ 3, 6-7, 15-16 No Act. OK SUM OK

387 SGS 100

		Ci	Unc.	
R	372	0.484	0.108	D = 0.026
	373	0.458	0.103	S = 0.293
				DLS Pass

INDEPENDENT TECHNICAL REVIEWER CHECKLIST

RADIOASSAY BATCH NUMBER: 2009-7 **includes the following containers:**

LL85901489	LL85234331	LL85001778	LL85238300	
LL85234274	LL85234314	LL85201616		
LL85101660	LL85901401	~~LL85800992~~ PCT 6/12/09		LL85234274-R replicate

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

Yes/No (Y/N)	**Independent Technical Reviewer Checklist** Initial & date: PCT 6/12/09
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.)
N	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: $D = |A1 - A2| =$ 0.026

Calculate: $s = SQRT[(1.96\ s1)^2 + (1.96\ s2)^2] =$ 0.293

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.

Y Actions necessary for release of data: REMOVE DRUM LLBS800992TRU FROM BATCH; CORRECT DRUM GROSS WT. + RE-ANALYZE

Actions completed: Kellie L. Goodwin 6-16-09
Signature Date

Kellie Goodwin
Printed Name

Independent Technical Reviewer Signature 6/12/09
Date

Phil Tarantino
Printed Name

SGS Daily Log Book

Date:	Page 1 of 3	Primary Operator's Name/Initials	William R. Pellegrini WRP
05/04/09		Secondary Operator's Name/Initials	John Wolf JW

Daily Checks/Initials: (Fill in on Page 1 only) — Daily Room Check complete WRP, Daily Scales Check complete WRP, Date/Dewars last filled) 05/03/09

Start Time	End Time	Drum ID*	Primary Operator	Secondary Operator	Seq. #	Batch #	Drum Gross wt. in kg	Drum Tare wt. in kg	Comments
10:42	10:47	BKG	WRP	JW	369 ✓	2009-7	23.8	23.8	ok
10:56	11:48	SGS100	WRP	JW	370 ✓	↓	54.0	37.2	ok
11:56	13:00	LL85404489TR4	WRP	JW	371 ✓	↓	23.8	91.8	ok
13:25	14:18	LL85234274TR4	WRP	JW	372 ✓	↓	23.8	88.6	ok Run as Replicate
14:27	15:20	LL85234274TR4-R	WRP	JW	373 ✓	↓	23.8	88.6	ok

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.

SGS Daily Log Book

Date:	Page 2 of 3	Primary Operator's Name/Initials	Jim Lowman
5/5/09		Secondary Operator's Name/Initials	John Wolf / J Sway / William A. Pellegrini /

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

Daily Room Check complete JWL, Daily Scales Check complete N/A, Date/Dewars last filled) 5/3/09

Start Time	End Time	Drum ID*	Primary Operator	Secondary Operator	Seq. #	Batch #	Drum Gross wt. in kg	Drum Tare wt. in kg	Comments
0734	0739	BKG	JWL		374	2009-7	23.8	23.8	OK
0745	0837	SGS100	JWL		375		54.0	37.2	OK
0845	0931	LLB510/LLBOTRU	JWL	JSway	376		76.4	23.8	OK
0954	1047	LLB523433/TRU	JWL	JSway	377		92.4	23.8	OK
1129	1219	LLB523431 4TRU	JWL		378		83.6	23.8	OK
1249	1342	LLB590140/TRU	JWL		379		80.4	23.8	OK
1349	1442	LLB500177 8TRU	JWL		380		66.6	23.8	OK
1450	1543	LLB520161 6TRU	JWL		381		54.0	23.8	OK

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: J Sway 5/6/09

SGS Daily Log Book

Date: 5/6/09	Page 3 of 3	Primary Operator's Name/Initials Jim Lawson [illegible]
		Secondary Operator's Name/Initials William A. Pellegrini [illegible]

Daily Checks/Initials: (Fill in on Page 1 only)	Daily Room Check complete [illegible] Daily Scales Check complete [illegible] Date/Dewars last filled) 5/5/09

Start Time	End Time	Drum ID*	Primary Operator	Secondary Operator	Seq. #	Batch #	Drum Gross wt. in kg	Drum Tare wt. in kg	Comments
0744 ~~0:743~~	05-06-09 07:49	BKG	[illegible]	[illegible]	382 ✓	2009-7	23.8	23.8	ok
07:56	08:01	BKG	[illegible]	[illegible]	383 ✓		28.0	28.0	ok
08:11	09:02	SGS100	[illegible]	[illegible]	384 ✓		54.0	37.2	ok
0917	1010	LL85800992TRU	[illegible]	[illegible]	385		31.8	141.6	Adjusted Gross to 133.6 ER required
1028	1122	LL85238300TRU	[illegible]	[illegible]	386 ✓		89.6	28.0	ok
1128	1220	SGS100	[illegible]	[illegible]	387 ✓		54.0	37.2	ok Closed Batch

Removed From Batch

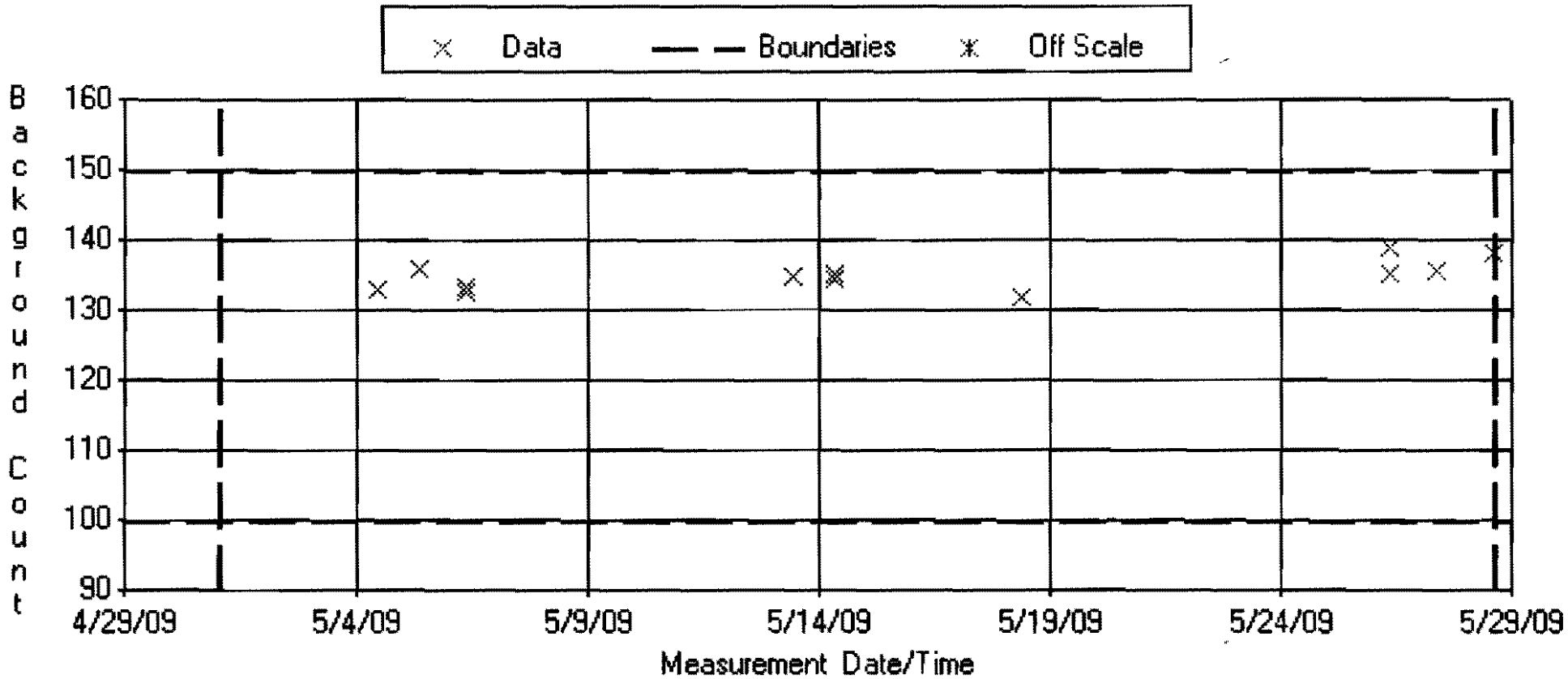
NOTES: * Options are: BCK (backgroud), SGS100 or Waste Drum ID No., ** Secondary Operator's initials are required for all etries to verify that both the gross and tare wts. are accurate and all other information has been enterered correctly.

Rev. 3 - W. Pellegrini - 9/15/08

NMTP Waste Manager Review Name/Date: [illegible] 5.6.09

Per OP-B332-005

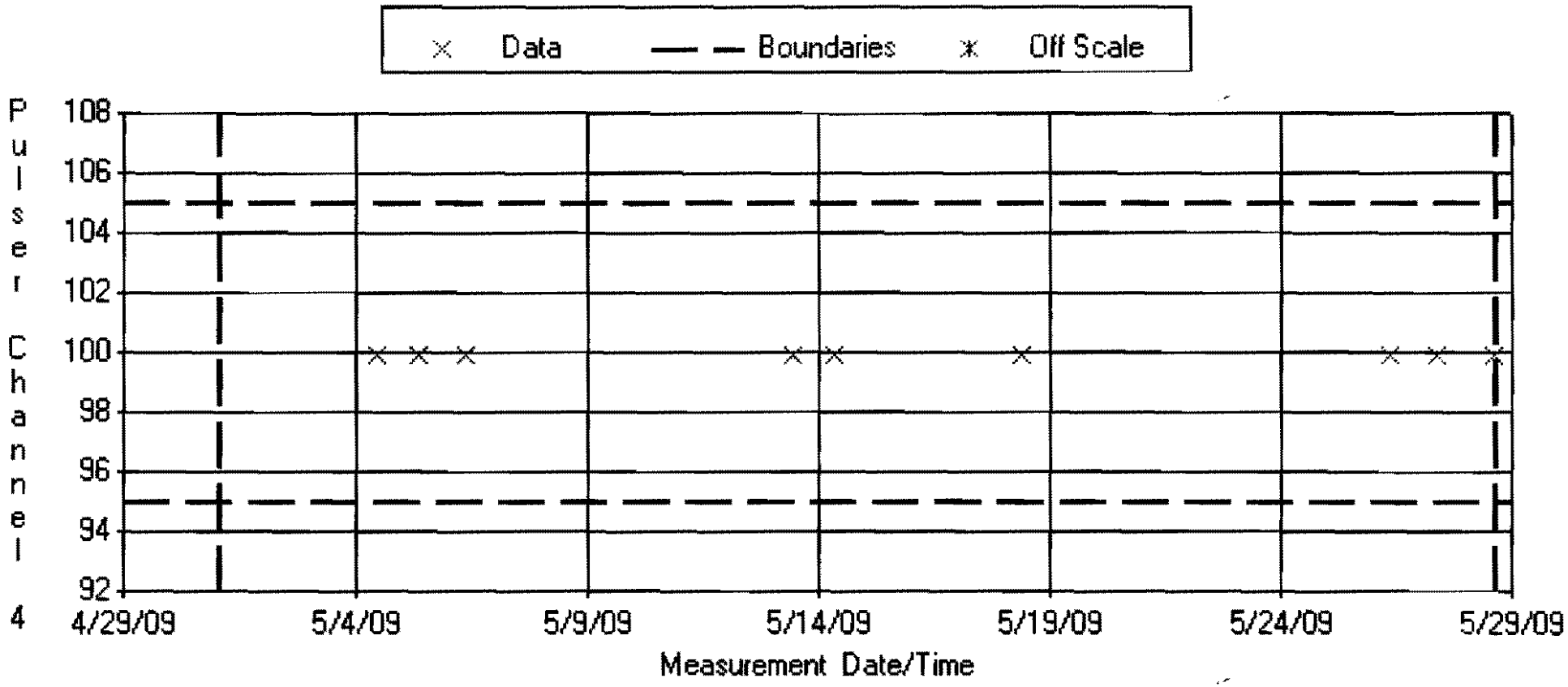
Q/A Plot



QA Filename : C:\Canberra\NDA2k\QA\CNTR0001_DCAT0002_PROC00AG_ANLZ0003_IQAS0001.QAF
Parameter Description : Background Count Rate (cps)
Selection Dates : 5/01/09 12:01:00 AM - 5/28/09 2:08:43 PM
Lower/Upper Boundaries : 100.000 - 150.000

OK Print Help

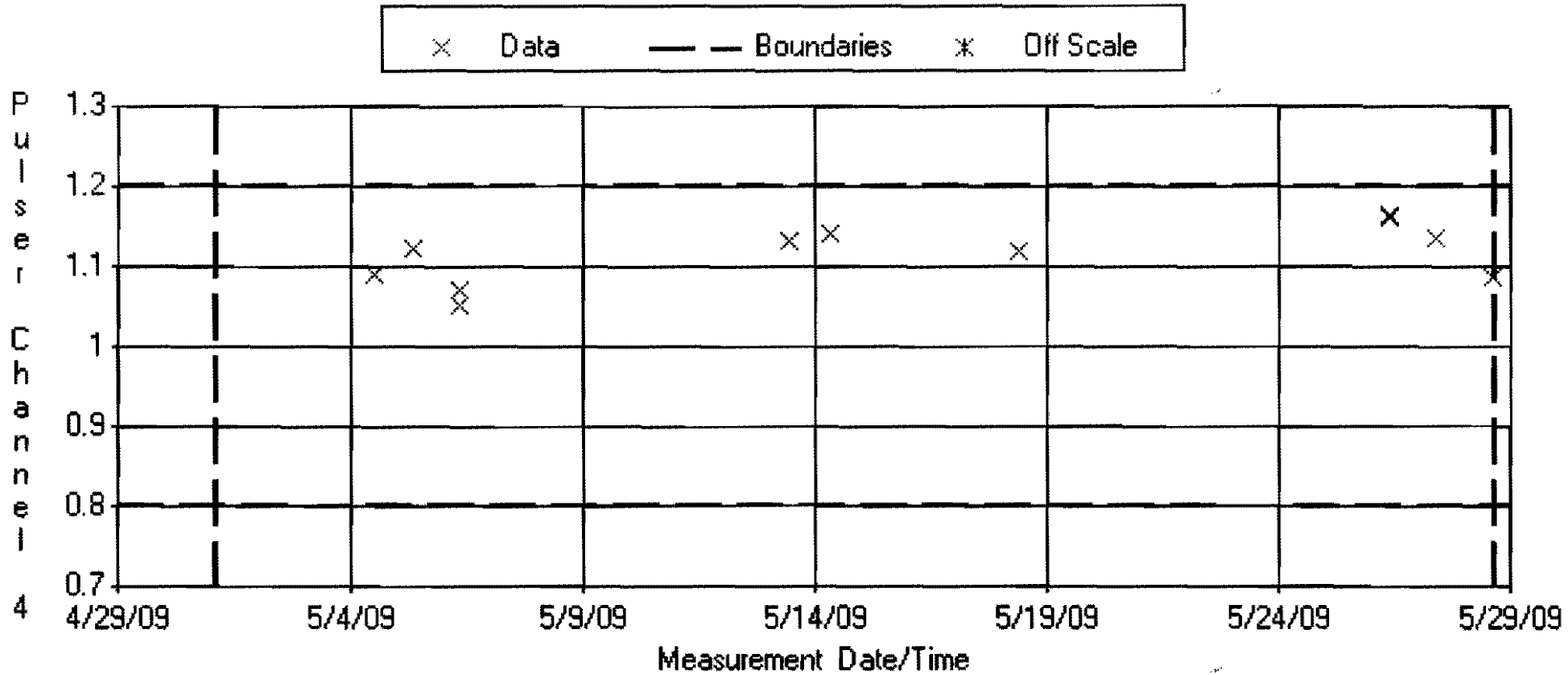
Q/A Plot



QA Filename : C:\Canberra\NDA2k\QA\CNTR0001_DCAT0002_PROC00AG_ANLZ0003_IQAS0001.QAF
Parameter Description : Pulser Channel 4467 cps (cps)
Selection Dates : 5/01/09 12:01:00 AM - 5/28/09 2:08:43 PM
Lower/Upper Boundaries : 95.000 - 105.000

OK Print Help

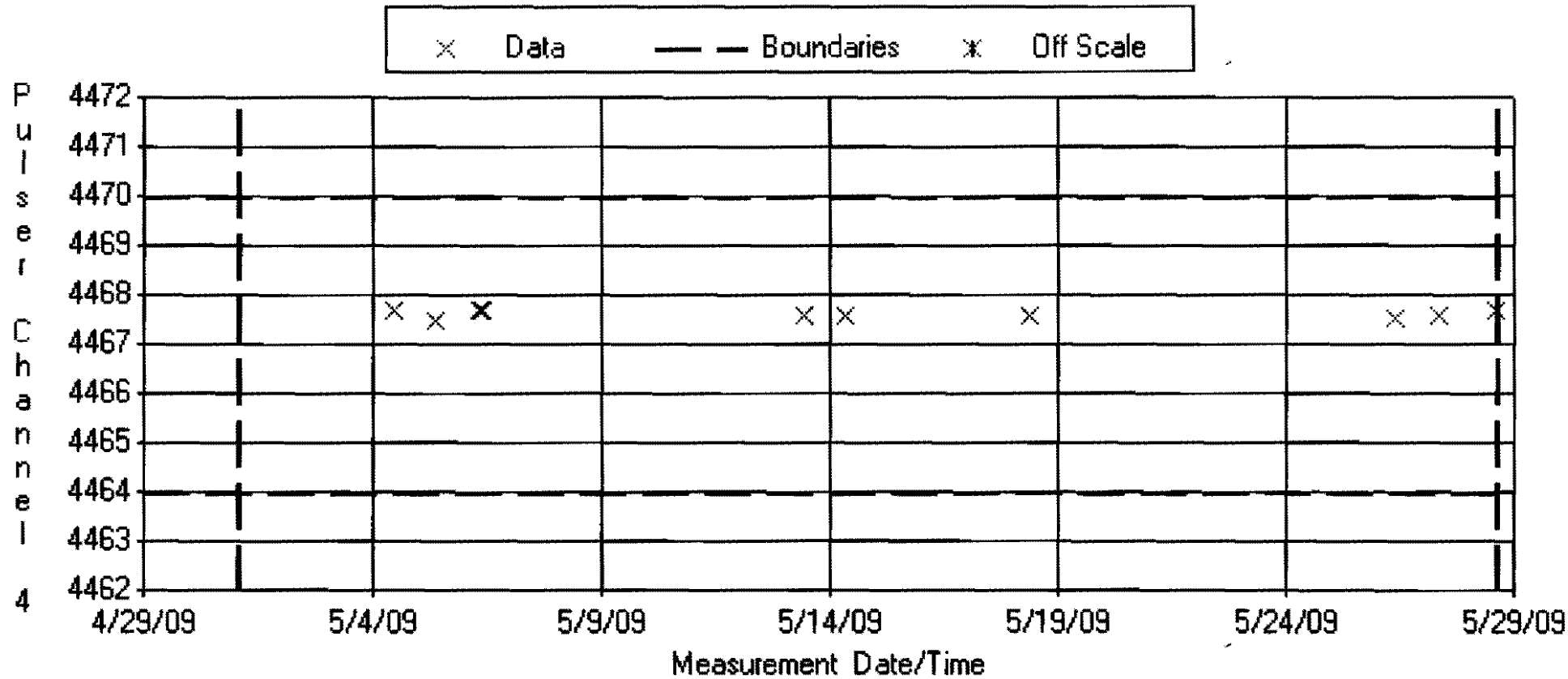
Q/A Plot



QA Filename : C:\Canberra\NDA2k\QA\CNTR0001_DCAT0002_PROC00AG_ANLZ0003_IQAS0001.QAF
Parameter Description : Pulser Channel 4467 FWHM (keV)
Selection Dates : 5/01/09 12:01:00 AM - 5/28/09 2:08:43 PM
Lower/Upper Boundaries : 0.800 - 1.200

OK Print Help

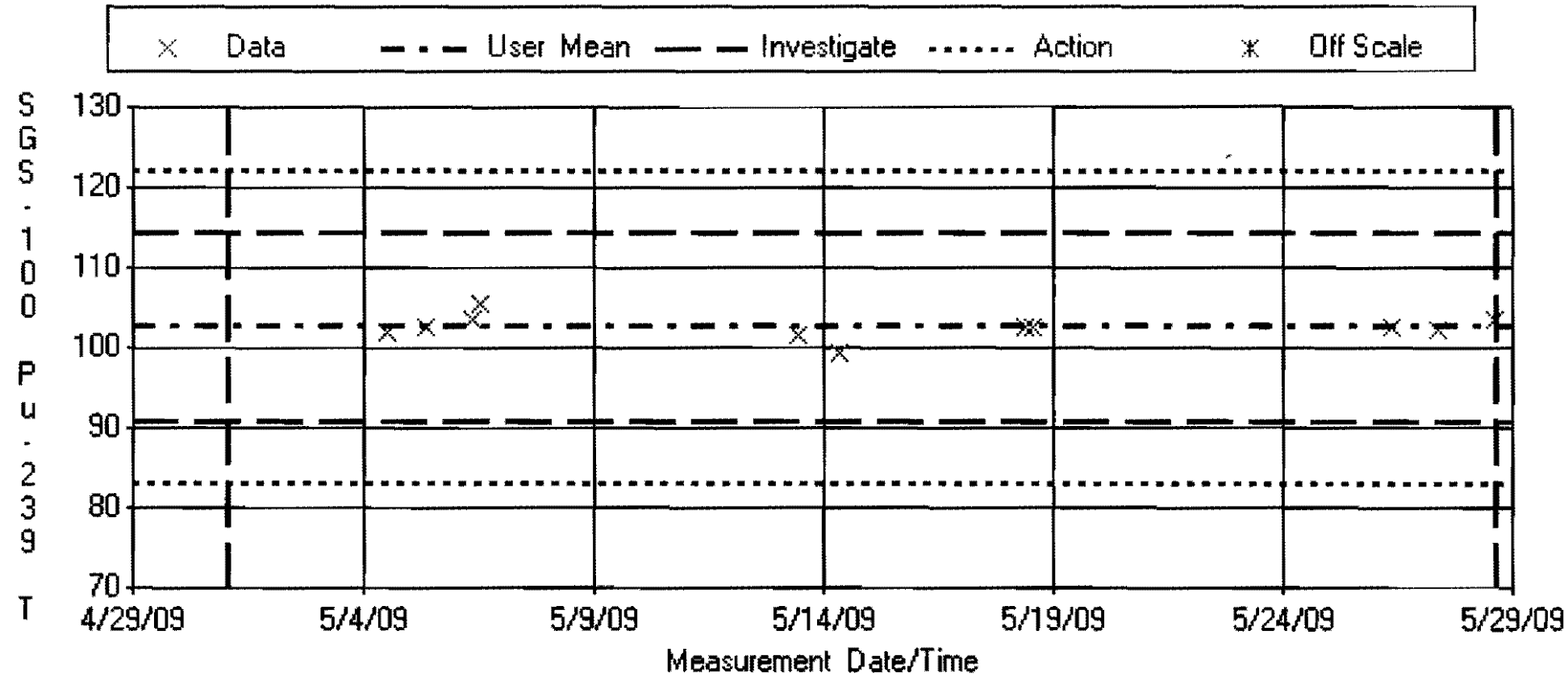
Q/A Plot



QA Filename : C:\Canberra\NDA2k\QA\CNTR0001_DCAT0002_PROC0QAG_ANLZ0003_IQAS0001.QAF
Parameter Description : Pulser Channel 4467 centroid (ch)
Selection Dates : 5/01/09 12:01:00 AM - 5/28/09 2:08:43 PM
Lower/Upper Boundaries : 4464.000 - 4470.000

OK Print Help

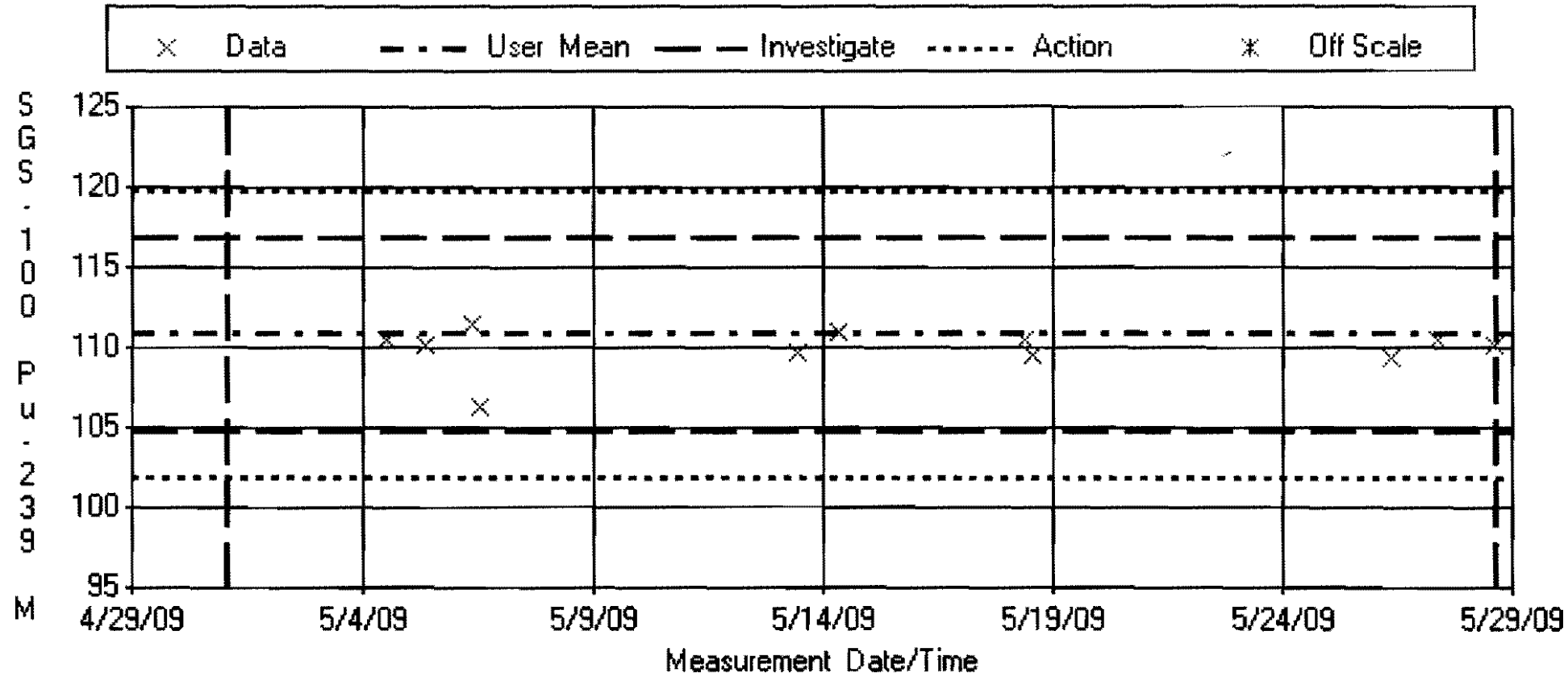
Q/A Plot



QA Filename : C:\Canberra\NDA2k\QA\CNTR0001_DCAT0002_PROC00AK_QQAS0006.QAF
Parameter Description : SGS-100 Pu-239 Trans Mass (grams)
Selection Dates : 5/01/09 12:01:00 AM - 5/28/09 2:30:16 PM
User Mean +/- Std Dev : 102.641 +/- 5.93e+000

OK Print Help

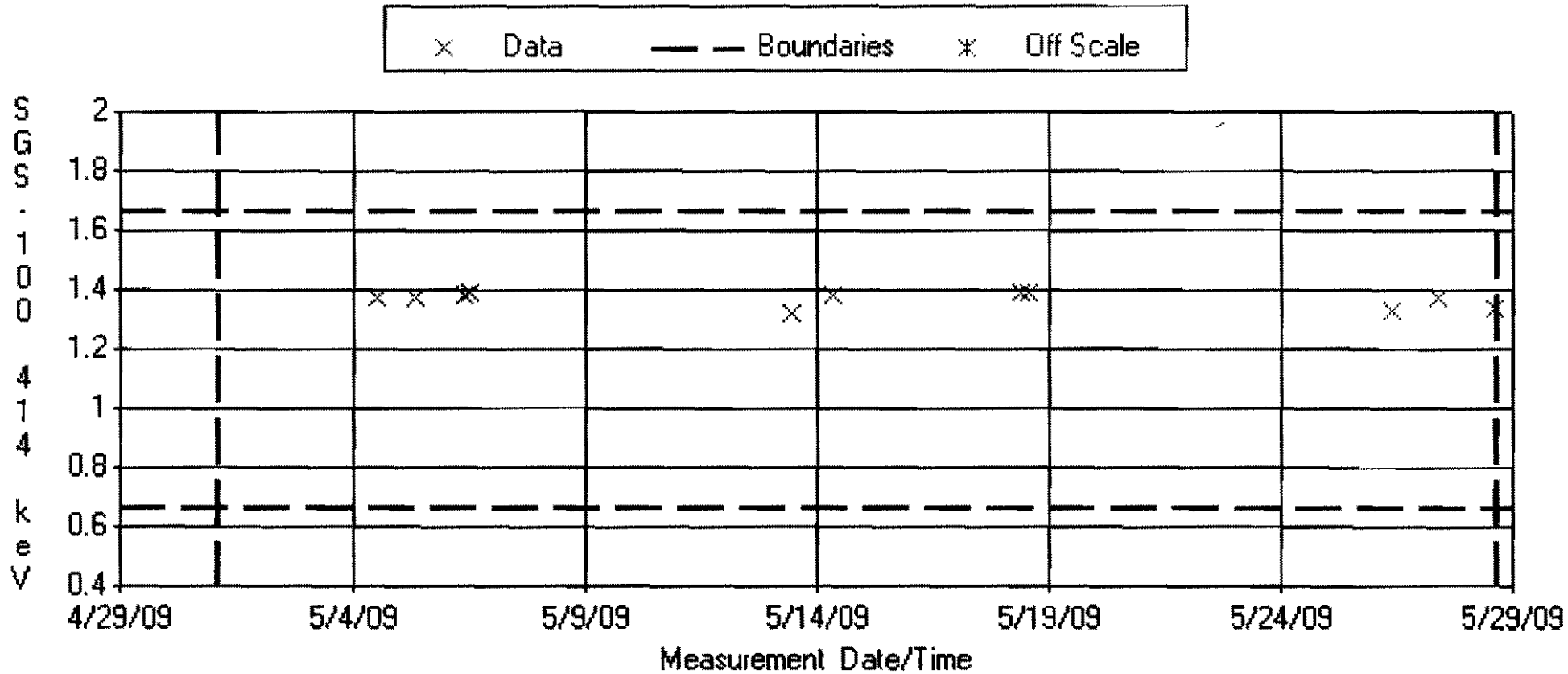
Q/A Plot



QA Filename : C:\Canberra\NDA2k\QA\CNTR0001_DCAT0002_PROC0QAI_0QAS0004.QAF
Parameter Description : SGS-100 Pu-239 Mass (grams)
Selection Dates : 5/01/09 12:01:00 AM - 5/28/09 2:33:23 PM
User Mean +/- Std Dev : 110.819 +/- 3.00e+000

OK Print Help

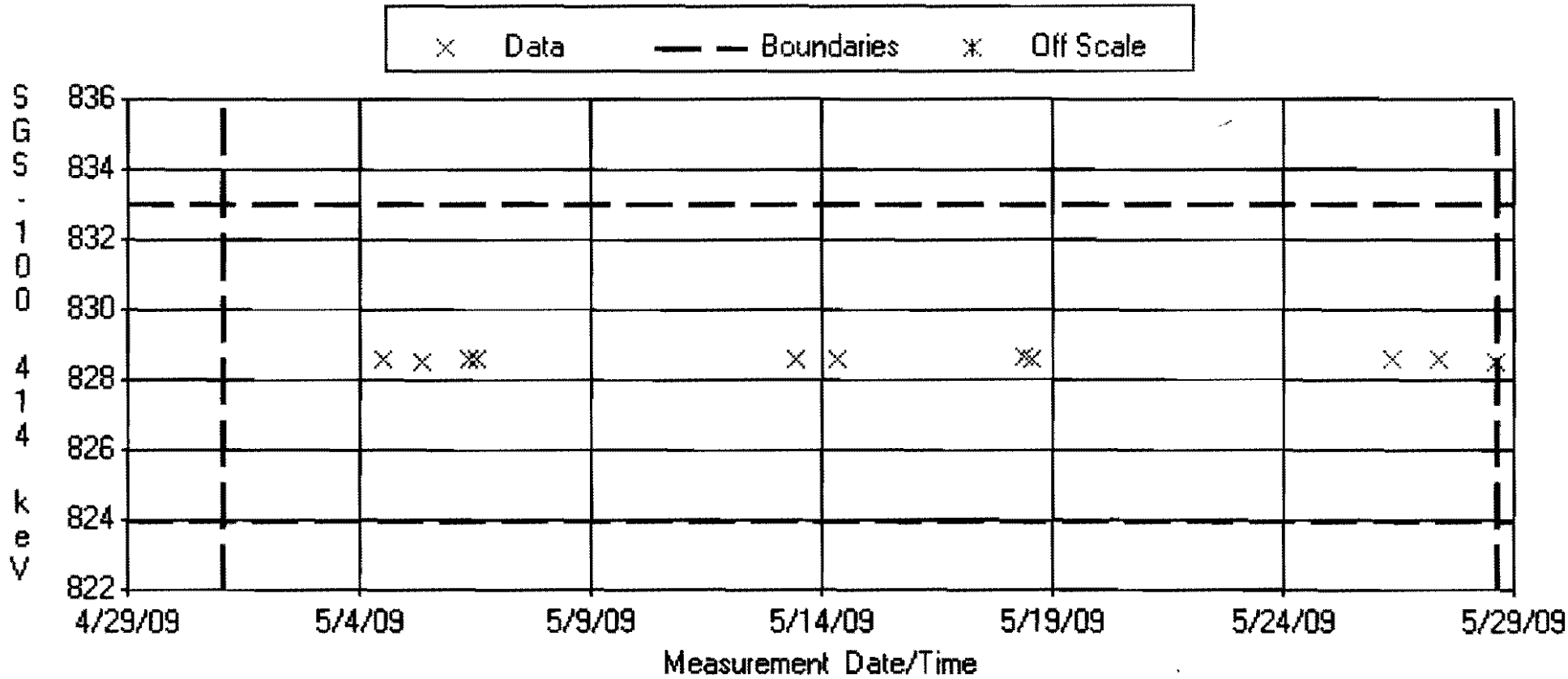
Q/A Plot



QA Filename : C:\Canberra\NDA2k\QA\CNTR0001_DCAT0002_PROC00AI_OQAS0004.QAF
Parameter Description : SGS-100 414 keV FWHM (keV)
Selection Dates : 5/01/09 12:01:00 AM - 5/28/09 2:33:23 PM
Lower/Upper Boundaries : 0.665 - 1.664

OK Print Help

Q/A Plot



QA Filename : C:\Canberra\NDA2k\QA\CNTR0001_DCAT0002_PROC00AI_0QAS0004.QAF
Parameter Description : SGS-100 414 keV centroid (ch)
Selection Dates : 5/01/09 12:01:00 AM - 5/28/09 2:33:23 PM
Lower/Upper Boundaries : 824.000 - 833.000

OK Print Help

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

Full Parameter Results Report
6/2/09 5:50:59 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
5/4/09 10:42:25 AM	Background	RHWM2\RHW	1.3294E+002				
5/5/09 7:34:00 AM	Background	RHWM2\RHW	1.3578E+002				
5/6/09 7:45:27 AM	Background	RHWM2\RHW	1.3230E+002				
5/6/09 7:57:36 AM	Background	RHWM2\RHW	1.3301E+002				
5/13/09 10:03:11 AM	Background	RHWM2\RHW	1.3458E+002				
5/14/09 7:34:27 AM	Background	RHWM2\RHW	1.3509E+002				
5/14/09 7:44:53 AM	Background	RHWM2\RHW	1.3440E+002				
5/18/09 8:04:48 AM	Background	RHWM2\RHW	1.3176E+002				
5/26/09 8:01:20 AM	Background	RHWM2\RHW	1.3489E+002				
5/26/09 8:12:17 AM	Background	RHWM2\RHW	1.3862E+002				
5/27/09 8:12:56 AM	Background	RHWM2\RHW	1.3529E+002				
5/28/09 2:08:43 PM	Background	RHWM2\RHW	1.3788E+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 *****
****

Full Parameter Results Report
6/2/09 5:51:11 PM

QA File: C:\Canberra\NDA2k\QA\CNTR0001_DC
Description: Pulser Channel 4467 centroid
Parameter Units: ch
Parameter Type: Peak Search

Lower Boundary: 4.4640E+003
Upper Boundary: 4.4700E+003

Measurement Time	Sample ID	Analyst	Value (ch)	Flags LU	SD	UD	BS
5/4/09 10:42:25 AM	Background	RHWM2\RHW	4.4676E+003				
5/5/09 7:34:00 AM	Background	RHWM2\RHW	4.4674E+003				
5/6/09 7:45:27 AM	Background	RHWM2\RHW	4.4677E+003				
5/6/09 7:57:36 AM	Background	RHWM2\RHW	4.4677E+003				
5/13/09 10:03:11 AM	Background	RHWM2\RHW	4.4676E+003				
5/14/09 7:34:27 AM	Background	RHWM2\RHW	4.4676E+003				
5/14/09 7:44:53 AM	Background	RHWM2\RHW	4.4675E+003				
5/18/09 8:04:48 AM	Background	RHWM2\RHW	4.4676E+003				
5/26/09 8:01:20 AM	Background	RHWM2\RHW	4.4675E+003				
5/26/09 8:12:17 AM	Background	RHWM2\RHW	4.4675E+003				
5/27/09 8:12:56 AM	Background	RHWM2\RHW	4.4675E+003				
5/28/09 2:08:43 PM	Background	RHWM2\RHW	4.4676E+003				

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 *****
****

Full Parameter Results Report
6/2/09 5:51:19 PM

QA File: C:\Canberra\NDA2k\QA\CNTR0001_DC
Description: Pulser Channel 4467 FWHM
Parameter Units: keV
Parameter Type: Peak Search

Lower Boundary: 8.0000E-001
Upper Boundary: 1.2000E+000

Measurement Time	Sample ID	Analyst	Value (keV)	Flags LU	SD	UD	BS
5/4/09 10:42:25 AM	Background	RHWM2\RHW	1.0886E+000				
5/5/09 7:34:00 AM	Background	RHWM2\RHW	1.1207E+000				
5/6/09 7:45:27 AM	Background	RHWM2\RHW	1.0484E+000				
5/6/09 7:57:36 AM	Background	RHWM2\RHW	1.0697E+000				
5/13/09 10:03:11 AM	Background	RHWM2\RHW	1.1307E+000				
5/14/09 7:34:27 AM	Background	RHWM2\RHW	1.1390E+000				
5/14/09 7:44:53 AM	Background	RHWM2\RHW	1.1390E+000				
5/18/09 8:04:48 AM	Background	RHWM2\RHW	1.1189E+000				
5/26/09 8:01:20 AM	Background	RHWM2\RHW	1.1645E+000				
5/26/09 8:12:17 AM	Background	RHWM2\RHW	1.1606E+000				
5/27/09 8:12:56 AM	Background	RHWM2\RHW	1.1343E+000				
5/28/09 2:08:43 PM	Background	RHWM2\RHW	1.0843E+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 *****
****

Full Parameter Results Report
6/2/09 5:51:26 PM

QA File: C:\Canberra\NDA2k\QA\CNTR0001_DC
Description: Pulser Channel 4467 cps
Parameter Units: cps
Parameter Type: Peak Search

Lower Boundary: 9.5000E+001
Upper Boundary: 1.0500E+002

Measurement Time	Sample ID	Analyst	Value (cps)	Flags LU	SD	UD	BS
5/4/09 10:42:25 AM	Background	RHWM2\RHW	9.9834E+001				
5/5/09 7:34:00 AM	Background	RHWM2\RHW	9.9838E+001				
5/6/09 7:45:27 AM	Background	RHWM2\RHW	9.9834E+001				
5/6/09 7:57:36 AM	Background	RHWM2\RHW	9.9834E+001				
5/13/09 10:03:11 AM	Background	RHWM2\RHW	9.9834E+001				
5/14/09 7:34:27 AM	Background	RHWM2\RHW	9.9834E+001				
5/14/09 7:44:53 AM	Background	RHWM2\RHW	9.9834E+001				
5/18/09 8:04:48 AM	Background	RHWM2\RHW	9.9834E+001				
5/26/09 8:01:20 AM	Background	RHWM2\RHW	9.9834E+001				
5/26/09 8:12:17 AM	Background	RHWM2\RHW	9.9834E+001				
5/27/09 8:12:56 AM	Background	RHWM2\RHW	9.9835E+001				
5/28/09 2:08:43 PM	Background	RHWM2\RHW	9.9834E+001				

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

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

Full Parameter Results Report
6/2/09 5:49:17 PM

QA File: C:\Canberra\NDA2k\QA\CNTR0001_DC
Description: SGS-100 414 keV centroid
Parameter Units: ch
Parameter Type: Peak Search

Lower Boundary: 8.2400E+002
Upper Boundary: 8.3300E+002

Measurement Time	Sample ID	Analyst	Value (ch)	Flags LU	SD	UD	BS
5/4/09 10:56:51 AM	SGS100	RHWM2\RHW	8.2858E+002				
5/5/09 7:46:04 AM	SGS100	RHWM2\RHW	8.2851E+002				
5/6/09 8:11:39 AM	SGS100	RHWM2\RHW	8.2856E+002				
5/6/09 11:29:32 AM	SGS100	RHWM2\RHW	8.2854E+002				
5/13/09 10:21:19 AM	SGS100	RHWM2\RHW	8.2859E+002				
5/14/09 7:58:21 AM	SGS100	RHWM2\RHW	8.2853E+002				
5/18/09 8:18:35 AM	SGS100	RHWM2\RHW	8.2861E+002				
5/18/09 1:04:33 PM	SGS100	RHWM2\RHW	8.2857E+002				
5/26/09 8:32:21 AM	SGS100	RHWM2\RHW	8.2856E+002				
5/27/09 8:29:25 AM	SGS100	RHWM2\RHW	8.2857E+002				
5/28/09 2:33:23 PM	SGS100	RHWM2\RHW	8.2846E+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 *****
****

Full Parameter Results Report
6/2/09 5:49:29 PM

QA File: C:\Canberra\NDA2k\QA\CNTR0001_DC
Description: SGS-100 414 keV FWHM
Parameter Units: keV
Parameter Type: Peak Search

Lower Boundary: 6.6550E-001
Upper Boundary: 1.6637E+000

Measurement Time	Sample ID	Analyst	Value (keV)	Flags LU	SD	UD	BS
5/4/09 10:56:51 AM	SGS100	RHWM2\RHW	1.3713E+000				
5/5/09 7:46:04 AM	SGS100	RHWM2\RHW	1.3681E+000				
5/6/09 8:11:39 AM	SGS100	RHWM2\RHW	1.3818E+000				
5/6/09 11:29:32 AM	SGS100	RHWM2\RHW	1.3868E+000				
5/13/09 10:21:19 AM	SGS100	RHWM2\RHW	1.3148E+000				
5/14/09 7:58:21 AM	SGS100	RHWM2\RHW	1.3765E+000				
5/18/09 8:18:35 AM	SGS100	RHWM2\RHW	1.3884E+000				
5/18/09 1:04:33 PM	SGS100	RHWM2\RHW	1.3849E+000				
5/26/09 8:32:21 AM	SGS100	RHWM2\RHW	1.3250E+000				
5/27/09 8:29:25 AM	SGS100	RHWM2\RHW	1.3688E+000				
5/28/09 2:33:23 PM	SGS100	RHWM2\RHW	1.3329E+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 *****
****

Full Parameter Results Report
6/2/09 5:49:37 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
5/4/09 10:56:51 AM	SGS100	RHWM2\RHW	1.1037E+002				
5/5/09 7:46:04 AM	SGS100	RHWM2\RHW	1.1001E+002				
5/6/09 8:11:39 AM	SGS100	RHWM2\RHW	1.1141E+002				
5/6/09 11:29:32 AM	SGS100	RHWM2\RHW	1.0626E+002				
5/13/09 10:21:19 AM	SGS100	RHWM2\RHW	1.0958E+002				
5/14/09 7:58:21 AM	SGS100	RHWM2\RHW	1.1090E+002				
5/18/09 8:18:35 AM	SGS100	RHWM2\RHW	1.1045E+002				
5/18/09 1:04:33 PM	SGS100	RHWM2\RHW	1.0940E+002				
5/26/09 8:32:21 AM	SGS100	RHWM2\RHW	1.0931E+002				
5/27/09 8:29:25 AM	SGS100	RHWM2\RHW	1.1040E+002				
5/28/09 2:33:23 PM	SGS100	RHWM2\RHW	1.1012E+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 *****
****

Full Parameter Results Report
6/2/09 5:48:29 PM

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

User Mean: 1.0264E+002
User Std. Deviation: 5.9290E+000

Measurement Time	Sample ID	Analyst	Value (grams)	Flags LU	SD	UD	BS
5/4/09 10:53:32 AM	SGS100	RHWM2\RHW	1.0179E+002				
5/5/09 7:42:46 AM	SGS100	RHWM2\RHW	1.0239E+002				
5/6/09 8:08:23 AM	SGS100	RHWM2\RHW	1.0330E+002				
5/6/09 11:26:12 AM	SGS100	RHWM2\RHW	1.0523E+002				
5/13/09 10:18:00 AM	SGS100	RHWM2\RHW	1.0159E+002				
5/14/09 7:55:04 AM	SGS100	RHWM2\RHW	9.9224E+001				
5/18/09 8:15:17 AM	SGS100	RHWM2\RHW	1.0235E+002				
5/18/09 1:01:15 PM	SGS100	RHWM2\RHW	1.0257E+002				
5/26/09 8:28:44 AM	SGS100	RHWM2\RHW	1.0227E+002				
5/27/09 8:25:51 AM	SGS100	RHWM2\RHW	1.0209E+002				
5/28/09 2:30:16 PM	SGS100	RHWM2\RHW	1.0326E+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)

NDA 2000 Assay Report

Item Information

Item ID:	Background		Count Sequence Number:	369	
Operator:	RHWM2\RHWM				
Assay Start:	5/4/2009 10:42:25 AM				
Description 1:	Background				
Description 2:					
Location:	LLNL				
Comment:					
Matrix Type:	Lucite				
Container Type:	55 Gal Galv 23.8				
Weight:	Gross:	0.0 kg	Net:	0.0 kg	
Container:	Volume:	208.0 l	Full:	100.0 %	
Density:		0.000 kg /l			

System Configuration

Counter:	SGS with Trans.			
Efficiency Description:	062308 Carbon Steel Eff.			
Segments:	Number:	16	Offset:	0
Scanning Platform:	Start:	934 mm	Delta:	-51 mm
Count Type:	BKG - 55 Gal Galv 23.8#			
Collimator/Geometry Setting:	Default	- 0		
Transmission Mode:	No Transmission			

Errors quoted at 1.000 sigma

Segment 8 Results

Segment: 8 Detector: DET01 Position: 8
C:\Canberra\NDA2k\Data\00000369_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P008_S008

Acquisition Start: 5/4/2009 10:42:25 AM
Elapsed Live Time: 298.37 sec Elapsed Real Time: 300.00 sec

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

Peak Analysis Performed on: 5/4/2009 10:47:26 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
400.76		114	26	1.35	802.77	3.312E-004	11.82	
1173.23		23	6	1.33	2346.41	1.276E-004	25.77	
1332.92		45	1	2.25	2665.50	1.198E-004	15.44	
2234.76		29950	14	1.09	4467.65	1.187E-004	1.00	

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

Reviewed by: _____ Date: _____

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

Last Results Report
5/4/09 10:47:28 AM

QA File: C:\CANBERRA\NDA2K\QA\CNTR0001_DC
Sample ID: Background
Sample Quantity: 1.0000E+000
Sample Date: 5/4/09 10:40:56 AM
Measurement Date: 5/4/09 10:42:25 AM
Elapsed Live Time: 298.4 seconds
Elapsed Real Time: 300.0 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
Background Count Rate	1.3294E+002	0.00
[0.00+/-0.00]		< : : : >
Pulser Channel 4467 cent	4.4676E+003	0.00
[0.00+/-0.00]		< : : : >
Pulser Channel 4467 FWHM	1.0886E+000	0.00
[0.00+/-0.00]		< : : : >
Pulser Channel 4467 cps	9.9834E+001	0.00
[0.00+/-0.00]		< : : : >

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:	370
Operator:	RHWM2\RHWM		
Assay Start:	5/4/2009 10:55:48 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\00000370_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P001_S001

Acquisition Start: 5/4/2009 10:56:51 AM
Elapsed Live Time: 118.18 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.277 +/- 0.0131
SE-75	264.66	0.410 +/- 0.0073
SE-75	279.54	0.419 +/- 0.0078
SE-75	400.66	0.475 +/- 0.0091

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 5/4/2009 10:58:53 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
59.53	Y	713	810	1.11	120.90	5.698E-006	7.26	
2234.73		11980	4	1.12	4467.59	4.502E-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	< 2.395E-002 +/-	2.1%	< 2.281E-005	< 1.104E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 3.993E-002 +/-	2.2%	< 3.803E-005	< 6.309E-012
Al-26	< 2.654E-002 +/-	16.2%	< 2.528E-005	< 1.396E-006
K-40	< 3.108E-001 +/-	5.3%	< 2.960E-004	< 4.848E-002
Co-57	< 1.272E-001 +/-	3.4%	< 1.211E-004	< 1.488E-011
Co-60	< 5.848E-002 +/-	2.8%	< 5.569E-005	< 5.128E-011
Se-75	< 9.642E-002 +/-	1.9%	< 9.183E-005	< 6.634E-012
Kr-85	< 7.701E+000 +/-	3.2%	< 7.334E-003	< 1.941E-008
Sr-90	< 3.330E-002 +/-	2.1%	< 3.172E-005	< 2.415E-010
Sb-125	< 8.325E-002 +/-	2.3%	< 7.928E-005	< 8.008E-011
Ba-133	< 5.975E-002 +/-	1.8%	< 5.690E-005	< 2.360E-010
Cs-134	< 2.372E-002 +/-	2.1%	< 2.259E-005	< 1.810E-011
Cs-137	< 3.330E-002 +/-	2.1%	< 3.172E-005	< 3.797E-010
Eu-152	< 5.155E-002 +/-	2.0%	< 4.910E-005	< 2.897E-010
Eu-154	< 1.140E-001 +/-	2.4%	< 1.086E-004	< 4.276E-010
Ho-166m	< 4.366E-002 +/-	2.4%	< 4.158E-005	< 2.428E-008
Bi-207	< 3.086E-002 +/-	2.1%	< 2.939E-005	< 5.616E-010
Pb-210	< 8.743E+002 +/-	47.8%	< 8.327E-001	< 1.137E-005
Ra-226	< 5.980E-002 +/-	2.4%	< 5.695E-005	< 5.980E-008
Ac-227	< 3.286E-001 +/-	8.3%	< 3.129E-004	< 4.501E-009
Th-230	< 1.569E+002 +/-	8.6%	< 1.494E-001	< 7.688E-003
Pa-231	< 1.915E+000 +/-	11.2%	< 1.823E-003	< 4.002E-005
Th-232	< 8.697E-002 +/-	2.3%	< 8.283E-005	< 7.836E-001
U-232	< 8.697E-002 +/-	2.3%	< 8.283E-005	< 4.027E-009
U-233	< 1.138E+003 +/-	2.7%	< 1.084E+000	< 1.161E-001
Pa-234	< 2.076E-001 +/-	12.3%	< 1.977E-004	
Pa-234m	< 2.396E+002 +/-	2.3%	< 2.282E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 1.109E-001 +/-	2.5%	< 1.056E-004	< 5.067E-002
Np-237	< 1.439E-001 +/-	2.0%	< 1.371E-004	< 2.015E-004
Pu-238	< 7.619E+003 +/-	2.7%	< 7.256E+000	< 4.404E-004
U-238	< 4.123E+000 +/-	2.4%	< 3.927E-003	< 1.212E+001
Pu-239	< 1.454E+003 +/-	3.1%	< 1.385E+000	< 2.312E-002
Pu-239B	< 4.296E+003 +/-	5.2%	< 4.092E+000	< 6.830E-002
U-239	< 1.881E+003 +/-	59.1%	< 1.791E+000	
Pu-240	< 2.491E+003 +/-	4.6%	< 2.373E+000	< 1.084E-002
Am-241	7.852E+001 +/-	21.7%	7.478E-002	2.261E-005
Am-241B	< 9.538E+002 +/-	4.9%	< 9.083E-001	< 2.747E-004
Pu-241	< 3.938E+004 +/-	2.8%	< 3.750E+001	< 3.788E-004
Pu-241B	< 1.130E+004 +/-	2.5%	< 1.076E+001	< 1.087E-004
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 4.132E-001 +/-	1.9%	< 3.936E-004	< 2.046E-006
Cm-243	< 4.262E-001 +/-	3.4%	< 4.059E-004	< 8.184E-009
Cm-244	< 1.771E+004 +/-	14.1%	< 1.686E+001	< 2.160E-004
Cm-245	< 7.036E-001 +/-	7.7%	< 6.701E-004	< 4.046E-006
Cm-247	< 4.256E-002 +/-	8.6%	< 4.053E-005	< 4.554E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 3.983E-002 +/-	3.6%	< 3.793E-005	< 9.639E-009
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\00000370_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P002_S002

Acquisition Start: 5/4/2009 11:00:02 AM
Elapsed Live Time: 117.69 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.294 +/- 0.0144
SE-75	264.66	0.469 +/- 0.0084
SE-75	279.54	0.475 +/- 0.0089
SE-75	400.66	0.532 +/- 0.0102

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 5/4/2009 11:02:04 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
59.46	Y	1549	1076	1.29	120.76	1.017E-004	4.29	
2234.76		11980	9	1.10	4467.64	1.052E-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	< 1.809E-002 +/-	1.8%	< 1.723E-005	< 8.340E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.350E-002 +/-	2.0%	< 2.238E-005	< 3.713E-012
Al-26	< 2.540E-002 +/-	15.5%	< 2.419E-005	< 1.336E-006
K-40	< 3.228E-001 +/-	4.9%	< 3.074E-004	< 5.036E-002
Co-57	< 1.067E-001 +/-	3.5%	< 1.017E-004	< 1.249E-011
Co-60	< 3.522E-002 +/-	1.7%	< 3.354E-005	< 3.089E-011
Se-75	< 8.706E-002 +/-	1.9%	< 8.291E-005	< 5.990E-012
Kr-85	< 5.942E+000 +/-	3.1%	< 5.659E-003	< 1.497E-008
Sr-90	< 1.460E-002 +/-	2.0%	< 1.391E-005	< 1.059E-010
Sb-125	< 5.717E-002 +/-	2.1%	< 5.445E-005	< 5.500E-011
Ba-133	< 6.168E-002 +/-	1.7%	< 5.874E-005	< 2.436E-010
Cs-134	< 2.112E-002 +/-	1.8%	< 2.012E-005	< 1.612E-011
Cs-137	< 1.460E-002 +/-	2.0%	< 1.391E-005	< 1.665E-010
Eu-152	< 1.043E-001 +/-	3.7%	< 9.929E-005	< 5.859E-010
Eu-154	< 6.711E-002 +/-	2.2%	< 6.391E-005	< 2.517E-010
Ho-166m	< 3.159E-002 +/-	2.3%	< 3.008E-005	< 1.756E-008
Bi-207	< 2.050E-002 +/-	2.1%	< 1.953E-005	< 3.732E-010
Pb-210	< 7.075E+000 +/-	81.7%	< 6.738E-003	< 9.197E-008
Ra-226	< 3.849E-002 +/-	2.3%	< 3.665E-005	< 3.849E-008
Ac-227	< 2.932E-001 +/-	8.3%	< 2.792E-004	< 4.017E-009
Th-230	< 3.640E+001 +/-	25.1%	< 3.467E-002	< 1.784E-003
Pa-231	< 1.887E+000 +/-	11.2%	< 1.797E-003	< 3.944E-005
Th-232	< 6.754E-002 +/-	2.2%	< 6.432E-005	< 6.085E-001
U-232	< 6.754E-002 +/-	2.2%	< 6.432E-005	< 3.127E-009
U-233	< 1.091E+003 +/-	2.7%	< 1.039E+000	< 1.112E-001
Pa-234	< 1.067E-001 +/-	43.9%	< 1.016E-004	
Pa-234m	< 1.857E+002 +/-	2.1%	< 1.769E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 1.078E-001 +/-	2.5%	< 1.027E-004	< 4.928E-002
Np-237	< 1.326E-001 +/-	2.0%	< 1.263E-004	< 1.857E-004
Pu-238	< 7.481E+003 +/-	2.7%	< 7.125E+000	< 4.324E-004
U-238	< 2.406E+000 +/-	2.1%	< 2.291E-003	< 7.074E+000
Pu-239	< 1.251E+003 +/-	3.2%	< 1.192E+000	< 1.990E-002
Pu-239B	< 2.667E+003 +/-	6.4%	< 2.540E+000	< 4.240E-002
U-239	< 8.825E+000 +/-	98.9%	< 8.404E-003	
Pu-240	< 1.718E+003 +/-	5.4%	< 1.636E+000	< 7.471E-003
Am-241	9.558E+000 +/-	38.0%	9.103E-003	2.753E-006
Am-241B	< 6.426E+002 +/-	5.7%	< 6.120E-001	< 1.851E-004
Pu-241	< 3.854E+004 +/-	2.9%	< 3.670E+001	< 3.707E-004
Pu-241B	< 1.119E+004 +/-	2.5%	< 1.066E+001	< 1.076E-004
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.984E-001 +/-	16.6%	< 1.890E-004	< 9.823E-007
Cm-243	< 3.741E-001 +/-	3.4%	< 3.563E-004	< 7.183E-009
Cm-244	< 2.047E+004 +/-	14.1%	< 1.950E+001	< 2.497E-004
Cm-245	< 7.055E-001 +/-	7.7%	< 6.719E-004	< 4.056E-006
Cm-247	< 3.869E-002 +/-	8.5%	< 3.684E-005	< 4.139E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 3.897E-002 +/-	3.5%	< 3.711E-005	< 9.430E-009
Cf-251	< 3.774E-001 +/-	5.6%	< 3.594E-004	< 2.359E-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\00000370_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P003_S003

Acquisition Start: 5/4/2009 11:03:13 AM
Elapsed Live Time: 114.69 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.287 +/- 0.0145
SE-75	264.66	0.405 +/- 0.0074
SE-75	279.54	0.422 +/- 0.0080
SE-75	400.66	0.472 +/- 0.0092

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: 5/4/2009 11:05:15 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
	59.51	Y	9022	2474	1.09	120.87	8.211E-005	1.75	
M	94.78		2312	5729	1.55	191.34	2.081E-004	5.53	8.49
m	98.74	Y	7788	8842	1.55	199.26	2.205E-004	4.09	
m	100.86	Y	1155	8753	1.56	203.49	2.269E-004	7.30	
m	103.40	Y	5241	7527	1.56	208.57	2.343E-004	4.06	
M	110.98		1656	4469	1.49	223.72	2.547E-004	3.71	5.74
m	114.91	Y	928	6969	1.49	231.57	2.643E-004	6.38	
M	125.36	Y	565	2144	1.06	252.44	2.865E-004	7.57	5.37
m	129.38	Y	3428	2574	1.07	260.48	2.938E-004	2.30	
M	144.34		286	2136	0.97	290.37	3.174E-004	60.36	3.88
m	148.71	Y	721	4287	0.98	299.10	3.232E-004	23.91	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	164.76	Y	198	1745	0.81	331.19	3.392E-004	31.35	
	171.64		245	2316	0.73	344.93	3.437E-004	31.73	
M	203.62	Y	796	1500	1.12	408.84	3.511E-004	4.83	2.02
m	208.02	Y	2755	1414	1.13	417.63	3.507E-004	2.38	
	255.41		108	793	1.01	512.33	3.347E-004	40.03	
	311.76	Y	105	602	1.02	624.93	3.036E-004	36.29	
M	332.74	Y	1042	591	1.36	666.85	2.905E-004	8.73	0.86
m	335.70	Y	423	553	1.37	672.77	2.886E-004	10.05	
m	341.57	Y	139	519	1.37	684.50	2.850E-004	16.67	
m	345.01		908	491	1.38	691.38	2.830E-004	8.65	
M	368.41	Y	233	407	1.33	738.14	2.691E-004	8.92	2.77
m	375.09	Y	2440	310	1.33	751.47	2.653E-004	2.31	
m	380.24		471	208	1.34	761.78	2.624E-004	5.14	
m	382.80		441	179	1.34	766.88	2.610E-004	5.26	
	392.92		716	213	1.44	787.11	2.555E-004	5.17	
	413.76	Y	2119	131	1.29	828.75	2.447E-004	2.64	
M	422.55		177	66	1.34	846.33	2.404E-004	7.96	0.73
m	426.87	Y	70	50	1.35	854.96	2.383E-004	13.42	
	451.44		238	57	1.21	904.06	2.270E-004	8.54	
	662.23	Y	97	28	1.40	1325.27	1.612E-004	13.67	
	721.87	Y	51	11	1.84	1444.45	1.497E-004	17.90	
	2234.74		11980	8	1.11	4467.61	8.587E-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	< 2.434E-002 +/-	1.8%	< 2.318E-005	< 1.122E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 1.837E-002 +/-	2.0%	< 1.749E-005	< 2.902E-012
	Al-26	< 1.696E-002 +/-	18.9%	< 1.615E-005	< 8.918E-007
	K-40	< 2.807E-001 +/-	5.3%	< 2.673E-004	< 4.379E-002
	Co-57	< 1.534E-001 +/-	4.4%	< 1.461E-004	< 1.795E-011
	Co-60	< 2.827E-002 +/-	1.7%	< 2.692E-005	< 2.479E-011
	Se-75	< 1.182E-001 +/-	1.8%	< 1.126E-004	< 8.133E-012
	Kr-85	< 7.998E+000 +/-	3.1%	< 7.617E-003	< 2.015E-008
	Sr-90	< 5.072E-002 +/-	2.2%	< 4.830E-005	< 3.677E-010
	Sb-125	< 1.271E-001 +/-	1.9%	< 1.210E-004	< 1.223E-010
	Ba-133	< 9.781E-002 +/-	1.6%	< 9.315E-005	< 3.863E-010
	Cs-134	< 1.742E-002 +/-	1.9%	< 1.659E-005	< 1.329E-011
X	Cs-137				
	Eu-152	< 1.065E-001 +/-	3.8%	< 1.014E-004	< 5.986E-010

	Eu-154	< 5.245E-002	+/- 2.1%	< 4.995E-005	< 1.967E-010	
	Ho-166m	< 3.633E-002	+/- 2.3%	< 3.460E-005	< 2.020E-008	
	Bi-207	< 2.536E-002	+/- 1.9%	< 2.415E-005	< 4.615E-010	
	Pb-210	< 1.298E+001	+/- 259.0%	< 1.236E-002	< 1.687E-007	
	Ra-226	< 4.652E-002	+/- 2.4%	< 4.430E-005	< 4.652E-008	
	Ac-227	< 4.019E-001	+/- 8.3%	< 3.828E-004	< 5.506E-009	
	Th-230	< 5.947E+001	+/- 83.2%	< 5.664E-002	< 2.914E-003	
	Pa-231	< 2.436E+000	+/- 11.2%	< 2.320E-003	< 5.092E-005	
	Th-232	< 8.067E-002	+/- 2.3%	< 7.682E-005	< 7.268E-001	
	U-232	< 8.067E-002	+/- 2.3%	< 7.682E-005	< 3.735E-009	
	U-233	< 1.514E+003	+/- 3.0%	< 1.442E+000	< 1.544E-001	
	Pa-234	< 8.724E-002	+/- 12.2%	< 8.309E-005		
	Pa-234m	< 1.491E+002	+/- 2.1%	< 1.420E-001		
	U-234	< 0.000E+000	+/- 0.0%	< 0.000E+000	< 0.000E+000	
	U-235	< 1.440E-001	+/- 2.9%	< 1.372E-004	< 6.583E-002	
	Np-237	2.015E-001	+/- 36.3%	1.919E-004	2.820E-004	
	Pu-238	< 9.529E+003	+/- 3.1%	< 9.075E+000	< 5.508E-004	
	U-238	< 2.163E+000	+/- 2.2%	< 2.060E-003	< 6.360E+000	
	Pu-239	2.350E+005	+/- 3.9%	2.239E+002	3.737E+000	
	Pu-239B	< 5.591E+003	+/- 16.5%	< 5.325E+000	< 8.888E-002	
	U-239	< 1.974E+001	+/- 308.4%	< 1.880E-002		
X	Pu-240					
	Am-241	3.784E+004	+/- 11.1%	3.604E+001	1.090E-002	
	Am-241B	3.031E+004	+/- 10.0%	2.886E+001	8.728E-003	
	Pu-241	2.709E+005	+/- 24.2%	2.580E+002	2.606E-003	
	Pu-241B	3.397E+005	+/- 3.5%	3.235E+002	3.268E-003	
	Pu-242	< 0.000E+000	+/- 0.0%	< 0.000E+000	< 0.000E+000	
	Am-243	< 3.173E-001	+/- 57.7%	< 3.022E-004	< 1.571E-006	
	Cm-243	< 4.887E-001	+/- 3.3%	< 4.654E-004	< 9.383E-009	
	Cm-244	< 2.661E+004	+/- 14.2%	< 2.534E+001	< 3.246E-004	
	Cm-245	< 8.891E-001	+/- 7.8%	< 8.468E-004	< 5.112E-006	
	Cm-247	< 5.690E-002	+/- 8.5%	< 5.419E-005	< 6.088E-004	

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 6.255E-002 +/-	3.4%	< 5.957E-005	< 1.514E-008
Cf-251	< 4.897E-001 +/-	5.8%	< 4.664E-004	< 3.061E-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	3.74E+000 +- 1.44E-001	1.12E+000 +- 2.37E-002

Beta: 2.20E+002 +- 9.15E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	6.62E-001 +- 2.96E-002
203.55	1.43E+000 +- 7.68E-002
375.05	2.12E+000 +- 6.16E-002
413.71	2.12E+000 +- 6.91E-002

Segment 4 Results

Segment: 4 Detector: DET01 Position: 4
C:\Canberra\NDA2k\Data\00000370_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P004_S004

Acquisition Start: 5/4/2009 11:06:25 AM
Elapsed Live Time: 102.23 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.250 +/- 0.0160
SE-75	264.66	0.396 +/- 0.0075
SE-75	279.54	0.407 +/- 0.0081
SE-75	400.66	0.462 +/- 0.0094

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: 5/4/2009 11:08:27 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
	59.49	Y	55002	6072	1.11	120.83	4.453E-006	1.27	
	67.18	Y	238	3525	0.79	136.19	1.374E-005	42.82	
M	94.72	Y	11389	11452	1.54	191.22	1.143E-004	2.22	60.21
m	98.73	Y	44173	15277	1.55	199.23	1.352E-004	1.80	
m	100.91	Y	6890	15321	1.55	203.60	1.467E-004	2.77	
m	103.38	Y	31079	13034	1.56	208.53	1.598E-004	1.79	
M	111.11	Y	11835	7885	1.42	223.98	2.003E-004	3.68	78.26
m	114.63	Y	9823	9580	1.42	231.01	2.180E-004	3.63	
m	116.71	Y	9331	8104	1.43	235.17	2.281E-004	3.58	
m	120.64	Y	2327	7949	1.44	243.01	2.464E-004	4.44	
m	122.77	Y	1180	6998	1.44	247.27	2.559E-004	6.07	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	125.28	Y	4295	6657	1.44	252.29	2.666E-004	3.82	
m	129.31	Y	21237	5745	1.45	260.34	2.828E-004	3.43	
M	144.22	Y	1413	4051	1.08	290.15	3.338E-004	10.02	1.59
m	146.37	Y	971	4576	1.09	294.43	3.400E-004	11.31	
m	148.57	Y	2747	4606	1.09	298.83	3.460E-004	8.97	
M	161.16	Y	1402	5064	1.50	324.00	3.729E-004	17.31	5.78
m	164.59	Y	1222	8033	1.51	330.85	3.783E-004	14.31	
	171.33	Y	1023	4457	1.50	344.32	3.866E-004	11.85	
	179.22	Y	335	4897	1.01	360.08	3.930E-004	37.63	
	189.25	Y	673	4169	1.17	380.13	3.969E-004	17.12	
	195.73	Y	796	4002	1.21	393.08	3.972E-004	14.31	
M	203.58	Y	4837	3671	1.15	408.75	3.959E-004	2.09	7.53
m	208.04	Y	15981	3561	1.16	417.66	3.944E-004	1.44	
	255.42	Y	628	2173	1.13	512.34	3.597E-004	13.94	
M	264.14	Y	187	1790	1.09	529.77	3.516E-004	15.18	0.73
m	267.53	Y	558	1559	1.09	536.55	3.483E-004	6.76	
	297.55	Y	482	1748	1.26	596.53	3.190E-004	16.64	
	311.79	Y	722	2493	1.36	625.00	3.057E-004	14.78	
M	321.05	Y	648	1473	1.68	643.50	2.974E-004	6.54	2.51
m	323.53	Y	679	2178	1.68	648.45	2.952E-004	6.27	
M	332.71	Y	5549	1108	1.34	666.80	2.874E-004	1.85	3.68
m	335.64	Y	2378	1289	1.35	672.65	2.850E-004	2.61	
m	341.47	Y	710	1226	1.35	684.30	2.803E-004	5.37	
m	345.01	Y	4884	1173	1.35	691.37	2.775E-004	1.93	
	368.27	Y	2062	1237	2.39	737.86	2.602E-004	4.15	
M	375.05	Y	13249	1043	1.29	751.41	2.555E-004	1.47	12.75
m	380.16	Y	2428	682	1.30	761.61	2.521E-004	2.55	
m	382.73	Y	2203	588	1.30	766.76	2.504E-004	2.64	
	392.91	Y	4763	535	1.44	787.09	2.440E-004	2.15	
	413.71	Y	12184	382	1.41	828.66	2.318E-004	1.54	
M	422.62	Y	823	274	1.21	846.46	2.270E-004	4.31	1.59
m	426.46	Y	168	280	1.22	854.14	2.250E-004	11.31	
M	445.87	Y	68	145	1.34	892.93	2.155E-004	20.12	2.51
m	451.45	Y	1420	185	1.34	904.07	2.129E-004	3.13	
	618.98	Y	147	28	1.27	1238.85	1.616E-004	11.38	
M	645.78	Y	73	37	1.25	1292.40	1.565E-004	15.12	1.55
m	652.81	Y	63	32	1.25	1306.45	1.552E-004	15.58	
	662.46	Y	569	64	1.47	1325.72	1.536E-004	5.31	
	722.02	Y	315	23	1.67	1444.75	1.445E-004	6.83	
	769.53	Y	77	19	1.31	1539.69	1.386E-004	16.58	
	2234.73		11980	46	1.12	4467.58	6.649E-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	< 3.511E-002 +/-	1.8%	< 3.344E-005	< 1.619E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 2.787E-002 +/-	2.0%	< 2.654E-005	< 4.404E-012
	Al-26	< 3.314E-002 +/-	14.5%	< 3.157E-005	< 1.743E-006
	K-40	< 3.074E-001 +/-	4.8%	< 2.928E-004	< 4.796E-002
X	Co-57				
	Co-60	< 3.208E-002 +/-	1.7%	< 3.055E-005	< 2.814E-011
	Se-75	< 1.889E-001 +/-	1.7%	< 1.799E-004	< 1.300E-011
	Kr-85	< 1.208E+001 +/-	3.0%	< 1.150E-002	< 3.043E-008
	Sr-90	< 8.480E-002 +/-	2.0%	< 8.076E-005	< 6.148E-010
	Sb-125	< 2.326E-001 +/-	2.2%	< 2.215E-004	< 2.238E-010
	Ba-133	< 1.630E-001 +/-	1.7%	< 1.553E-004	< 6.439E-010
	Cs-134	< 2.913E-002 +/-	1.8%	< 2.775E-005	< 2.223E-011
X	Cs-137				
	Eu-152	< 9.987E-002 +/-	3.6%	< 9.511E-005	< 5.612E-010
	Eu-154	< 7.958E-002 +/-	2.2%	< 7.579E-005	< 2.984E-010
	Ho-166m	< 4.341E-002 +/-	2.3%	< 4.134E-005	< 2.414E-008
	Bi-207	< 3.595E-002 +/-	1.9%	< 3.424E-005	< 6.544E-010
	Pb-210	< 4.202E+003 +/-	37.2%	< 4.002E+000	< 5.462E-005
	Ra-226	< 7.710E-002 +/-	2.2%	< 7.343E-005	< 7.710E-008
	Ac-227	< 6.338E-001 +/-	8.3%	< 6.036E-004	< 8.683E-009
	Th-230	1.025E+003 +/-	44.8%	9.760E-001	5.021E-002
	Pa-231	< 3.689E+000 +/-	11.2%	< 3.513E-003	< 7.710E-005
	Th-232	< 8.026E-002 +/-	2.4%	< 7.644E-005	< 7.232E-001
	U-232	< 1.521E-001 +/-	2.1%	< 1.448E-004	< 7.040E-009
	U-233	< 2.398E+003 +/-	2.6%	< 2.284E+000	< 2.446E-001
	Pa-234	< 1.557E-001 +/-	12.2%	< 1.483E-004	
	Pa-234m	< 1.933E+002 +/-	2.1%	< 1.841E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 2.062E-001 +/-	2.4%	< 1.964E-004	< 9.423E-002
	Np-237	8.764E-001 +/-	23.4%	8.347E-004	1.227E-003
	Pu-238	< 1.383E+004 +/-	2.5%	< 1.317E+001	< 7.993E-004
	U-238	< 3.817E+000 +/-	2.2%	< 3.635E-003	< 1.122E+001
	Pu-239	1.310E+006 +/-	3.5%	1.247E+003	2.082E+001
	Pu-239B	7.493E+005 +/-	1.4%	7.137E+002	1.191E+001
	U-239	< 1.616E+004 +/-	46.3%	< 1.539E+001	
X	Pu-240				
	Am-241	2.372E+005 +/-	4.7%	2.259E+002	6.830E-002
	Am-241B	1.442E+005 +/-	3.9%	1.373E+002	4.152E-002
	Pu-241	9.639E+005 +/-	9.5%	9.180E+002	9.272E-003
	Pu-241B	1.782E+006 +/-	2.6%	1.697E+003	1.714E-002
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 7.012E-001 +/-	1.8%	< 6.678E-004	< 3.471E-006
	Cm-243	< 7.232E-001 +/-	3.3%	< 6.888E-004	< 1.389E-008
	Cm-244	< 4.167E+004 +/-	14.2%	< 3.969E+001	< 5.084E-004
	Cm-245	< 1.258E+000 +/-	7.6%	< 1.198E-003	< 7.231E-006
	Cm-247	< 1.035E-001 +/-	8.5%	< 9.853E-005	< 1.107E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.258E-001 +/-	3.5%	< 1.198E-004	< 3.044E-008
Cf-251	< 7.151E-001 +/-	5.6%	< 6.810E-004	< 4.469E-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	2.08E+001 +- 7.33E-001	8.09E+000 +- 1.28E-001

Beta: 2.04E+002 +- 9.05E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	4.26E+000 +- 2.16E-001
203.55	7.69E+000 +- 2.30E-001
375.05	1.19E+001 +- 2.87E-001
413.71	1.28E+001 +- 3.35E-001

Segment 5 Results

Segment: 5 Detector: DET01 Position: 5
C:\Canberra\NDA2k\Data\00000370_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P005_S005

Acquisition Start: 5/4/2009 11:09:36 AM
Elapsed Live Time: 87.76 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.001 +/- 0.0005
SE-75	264.66	0.191 +/- 0.0052
SE-75	279.54	0.217 +/- 0.0051
SE-75	400.66	0.339 +/- 0.0076

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: 5/4/2009 11:11:38 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
	59.43	Y	130001	10470	1.13	120.70	2.792E-005	1.27	
M	94.68	Y	21926	16980	1.54	191.15	5.986E-005	1.91	109.71
m	98.68	Y	88687	23422	1.54	199.15	6.293E-005	1.63	
m	100.86	Y	13770	24220	1.55	203.50	6.453E-005	2.27	
m	103.33	Y	63494	19857	1.55	208.43	6.628E-005	1.62	
M	111.06	Y	23697	11516	1.39	223.88	7.129E-005	2.23	146.89
m	114.55	Y	19323	12795	1.40	230.85	7.333E-005	2.29	
m	116.63	Y	18971	11956	1.40	235.01	7.448E-005	2.21	
m	120.58	Y	4750	10789	1.41	242.89	7.652E-005	3.17	
m	122.83	Y	2142	10461	1.41	247.39	7.761E-005	5.21	
m	125.24	Y	8548	10009	1.42	252.22	7.872E-005	2.54	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	129.27	Y	41631	8740	1.42	260.26	8.042E-005	2.07	
M	141.64	Y	359	6146	1.14	284.98	1.304E-004	20.90	1.71
m	144.13	Y	2817	6948	1.14	289.96	1.410E-004	7.49	
m	146.24	Y	2505	7075	1.15	294.18	1.487E-004	7.66	
m	148.57	Y	5402	7265	1.15	298.83	1.562E-004	6.67	
M	160.94	Y	2452	6776	1.47	323.55	1.864E-004	12.29	5.70
m	164.56	Y	2215	8947	1.47	330.79	1.933E-004	11.83	
m	169.42	Y	596	8840	1.48	340.49	2.015E-004	21.00	
m	171.31	Y	1708	8793	1.48	344.28	2.045E-004	12.09	
	179.31	Y	763	6343	1.06	360.25	2.154E-004	21.23	
	189.32	Y	1071	6895	1.35	380.27	2.263E-004	16.31	
	195.58	Y	1759	5920	1.35	392.77	2.319E-004	9.22	
M	203.52	Y	9846	5434	1.20	408.63	2.376E-004	2.16	1.44
m	207.97	Y	31404	4992	1.21	417.54	2.403E-004	1.79	
	243.47	Y	630	4066	1.51	488.46	2.511E-004	21.84	
	255.33	Y	1472	3193	1.33	512.18	2.516E-004	8.51	
M	263.99	Y	458	1987	1.12	529.47	2.513E-004	20.26	1.36
m	267.50	Y	1099	2158	1.12	536.50	2.519E-004	17.33	
	297.35	Y	744	2991	1.01	596.13	2.512E-004	16.89	
M	311.81	Y	1642	1683	1.50	625.04	2.482E-004	3.92	4.03
m	316.25	Y	287	2659	1.51	633.91	2.472E-004	15.37	
m	320.88	Y	1188	2562	1.51	643.16	2.460E-004	4.81	
m	323.40	Y	1480	2491	1.52	648.19	2.454E-004	4.12	
M	332.68	Y	10900	1622	1.36	666.74	2.429E-004	2.32	4.10
m	335.63	Y	4512	1488	1.37	672.63	2.421E-004	2.75	
m	341.38	Y	1221	1561	1.37	684.12	2.404E-004	4.97	
m	344.94	Y	9546	1455	1.38	691.24	2.394E-004	2.29	
M	366.95	Y	1273	1569	1.29	735.21	2.327E-004	18.72	3.05
m	368.46	Y	2452	1412	1.29	738.24	2.322E-004	15.48	
M	375.02	Y	25344	1568	1.29	751.34	2.301E-004	1.41	29.66
m	380.10	Y	4932	1020	1.30	761.50	2.285E-004	2.09	
m	382.68	Y	4440	872	1.30	766.66	2.277E-004	2.15	
M	392.86	Y	8729	904	1.46	786.99	2.245E-004	1.71	2.44
m	399.23	Y	106	899	1.46	799.72	2.224E-004	26.91	
	413.63	Y	23580	646	1.42	828.51	2.166E-004	1.46	
M	422.55	Y	1821	537	1.35	846.32	2.130E-004	3.11	1.46
m	426.55	Y	403	507	1.36	854.32	2.114E-004	7.57	
	451.41	Y	2685	374	1.39	904.00	2.020E-004	3.00	
	481.52	Y	104	148	1.55	964.15	1.916E-004	27.10	
	597.69	Y	53	57	1.19	1196.30	1.598E-004	32.91	
	618.99	Y	264	65	1.63	1238.86	1.552E-004	9.93	
M	640.17	Y	147	61	1.83	1281.18	1.510E-004	13.51	1.72
m	645.77	Y	156	87	1.83	1292.39	1.499E-004	13.02	
m	652.59	Y	203	105	1.84	1306.02	1.486E-004	11.86	
	662.28	Y	1144	103	1.26	1325.37	1.468E-004	4.10	
	688.54	Y	86	47	1.06	1377.84	1.422E-004	21.83	
	721.93	Y	535	48	1.42	1444.57	1.370E-004	5.89	
	755.98	Y	73	8	0.71	1512.61	1.322E-004	16.17	
	769.05	Y	150	27	1.23	1538.74	1.304E-004	12.42	
	2234.69		11980	54	1.17	4467.50	8.693E-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	< 4.252E-002 +/-	1.8%	< 4.050E-005	< 1.960E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 3.329E-002 +/-	2.0%	< 3.170E-005	< 5.260E-012
	Al-26	< 5.805E-002 +/-	14.7%	< 5.529E-005	< 3.054E-006
	K-40	< 3.808E-001 +/-	4.9%	< 3.626E-004	< 5.940E-002
X	Co-57				
	Co-60	< 3.848E-002 +/-	1.6%	< 3.664E-005	< 3.374E-011
	Se-75	< 2.939E-001 +/-	1.9%	< 2.799E-004	< 2.022E-011
	Kr-85	< 1.658E+001 +/-	3.1%	< 1.579E-002	< 4.178E-008
	Sr-90	< 1.323E-001 +/-	2.0%	< 1.260E-004	< 9.591E-010
	Sb-125	< 3.521E-001 +/-	2.3%	< 3.353E-004	< 3.387E-010
	Ba-133	< 2.266E-001 +/-	1.7%	< 2.158E-004	< 8.949E-010
	Cs-134	< 3.667E-002 +/-	1.8%	< 3.493E-005	< 2.798E-011
X	Cs-137				
X	Eu-152				
	Eu-154	< 9.505E-002 +/-	2.2%	< 9.053E-005	< 3.564E-010
	Ho-166m	< 4.725E-002 +/-	2.2%	< 4.500E-005	< 2.627E-008
	Bi-207	< 2.241E-002 +/-	1.8%	< 2.134E-005	< 4.079E-010
	Pb-210	< 2.781E+001 +/-	36.7%	< 2.649E-002	< 3.616E-007
	Ra-226	< 1.142E-001 +/-	2.3%	< 1.088E-004	< 1.142E-007
	Ac-227	< 1.040E+000 +/-	8.3%	< 9.902E-004	< 1.424E-008
	Th-230	< 1.328E+002 +/-	13.1%	< 1.265E-001	< 6.509E-003
	Pa-231	< 5.322E+000 +/-	11.2%	< 5.068E-003	< 1.112E-004
	Th-232	< 1.306E-001 +/-	2.4%	< 1.243E-004	< 1.176E+000
	U-232	< 2.086E-001 +/-	2.2%	< 1.987E-004	< 9.660E-009
	U-233	< 3.968E+003 +/-	2.7%	< 3.779E+000	< 4.047E-001
	Pa-234	< 1.934E-001 +/-	12.2%	< 1.842E-004	
	Pa-234m	< 2.683E+002 +/-	2.1%	< 2.556E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 3.373E-001 +/-	2.5%	< 3.212E-004	< 1.541E-001
	Np-237	2.734E+000 +/-	6.1%	2.604E-003	3.827E-003
	Pu-238	< 2.236E+004 +/-	2.6%	< 2.129E+001	< 1.292E-003
	U-238	< 3.670E+000 +/-	2.1%	< 3.495E-003	< 1.079E+001
	Pu-239	1.638E+006 +/-	1.5%	1.560E+003	2.604E+001
	Pu-239B	1.684E+006 +/-	1.3%	1.604E+003	2.678E+001
	U-239	< 4.932E+001 +/-	45.9%	< 4.697E-002	
	Pu-240	3.588E+005 +/-	24.4%	3.417E+002	1.561E+000
	Am-241	4.682E+005 +/-	4.1%	4.459E+002	1.348E-001
	Am-241B	5.407E+005 +/-	4.5%	5.150E+002	1.557E-001
	Pu-241	4.200E+006 +/-	7.3%	4.000E+003	4.040E-002
	Pu-241B	5.666E+006 +/-	3.0%	5.396E+003	5.451E-002
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 7.338E-001 +/-	8.4%	< 6.989E-004	< 3.632E-006
	Cm-243	< 1.084E+000 +/-	3.3%	< 1.033E-003	< 2.082E-008
	Cm-244	< 5.017E+004 +/-	14.2%	< 4.778E+001	< 6.121E-004

Cm-245	< 2.101E+000 +/-	7.7%	< 2.001E-003	< 1.208E-005
Cm-247	< 1.522E-001 +/-	8.5%	< 1.449E-004	< 1.628E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.774E-001 +/-	3.5%	< 1.689E-004	< 4.293E-008
Cf-251	< 1.182E+000 +/-	5.6%	< 1.125E-003	< 7.385E-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 -	2.60E+001 +- 3.90E-001

Beta: -1.09E+001 +- 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\00000370_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P006_S006

Acquisition Start: 5/4/2009 11:12:48 AM
Elapsed Live Time: 88.75 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.001 +/- 0.0005
SE-75	264.66	0.178 +/- 0.0037
SE-75	279.54	0.196 +/- 0.0046
SE-75	400.66	0.316 +/- 0.0071

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: 5/4/2009 11:14:50 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	116403	10012	1.13	120.70	6.772E-007	1.27	
M	94.67	Y	21166	16666	1.55	191.12	3.231E-005	1.91	106.68
m	98.69	Y	85812	22441	1.56	199.16	3.884E-005	1.62	
m	100.91	Y	13189	22691	1.56	203.60	4.249E-005	2.30	
m	103.34	Y	61812	19500	1.57	208.45	4.650E-005	1.61	
M	111.06	Y	22457	11788	1.38	223.88	5.898E-005	1.30	139.81
m	114.56	Y	18177	13082	1.38	230.87	6.433E-005	1.31	
m	116.63	Y	17706	12218	1.39	235.02	6.737E-005	1.31	
m	120.64	Y	4309	11017	1.39	243.01	7.295E-005	1.65	
m	122.87	Y	1939	10677	1.40	247.48	7.589E-005	2.44	
m	125.24	Y	8414	10196	1.40	252.22	7.885E-005	1.40	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	129.28	Y	40206	8860	1.41	260.28	8.352E-005	1.27	
M	144.16	Y	2519	6455	1.12	290.02	1.575E-004	8.34	3.18
m	146.29	Y	2366	6483	1.13	294.27	1.673E-004	8.53	
m	148.55	Y	5532	6526	1.13	298.79	1.767E-004	7.39	
M	160.98	Y	2218	7560	1.57	323.63	2.161E-004	4.18	6.15
m	164.59	Y	2297	10290	1.57	330.85	2.249E-004	4.26	
	171.37	Y	1794	6514	1.08	344.40	2.387E-004	9.34	
	179.13	Y	728	6869	1.09	359.91	2.512E-004	23.38	
	189.30	Y	1396	5976	1.24	380.22	2.631E-004	11.36	
	195.67	Y	1615	6446	1.14	392.95	2.683E-004	10.50	
M	203.51	Y	9158	5491	1.19	408.62	2.730E-004	3.58	2.90
m	207.97	Y	30543	4968	1.19	417.53	2.749E-004	3.34	
M	237.76		263	3365	1.11	477.06	2.776E-004	47.13	0.84
m	243.36	Y	370	3249	1.11	488.24	2.768E-004	44.37	
	255.27	Y	1367	3146	1.12	512.05	2.741E-004	8.93	
M	263.90	Y	626	2633	1.38	529.30	2.718E-004	18.79	1.25
m	267.55	Y	1336	3256	1.39	536.58	2.709E-004	16.20	
M	297.40	Y	869	1985	1.22	596.24	2.627E-004	6.41	1.26
m	302.86		156	1859	1.23	607.14	2.610E-004	26.10	
	311.78	Y	1494	1854	1.38	624.96	2.581E-004	6.52	
M	321.00	Y	1003	2015	1.79	643.40	2.552E-004	6.22	4.38
m	323.40	Y	1547	2919	1.79	648.20	2.543E-004	4.27	
M	332.70	Y	10613	1822	1.31	666.79	2.512E-004	1.65	5.02
m	335.66	Y	4289	1687	1.31	672.69	2.502E-004	2.21	
m	341.39	Y	1176	1757	1.32	684.14	2.483E-004	4.48	
m	344.96	Y	9191	1657	1.32	691.28	2.471E-004	1.70	
	368.25	Y	3688	1786	2.36	737.81	2.395E-004	3.28	
M	375.01	Y	24803	1639	1.29	751.33	2.372E-004	1.41	21.54
m	380.10	Y	4752	1125	1.29	761.49	2.357E-004	2.11	
m	382.69	Y	4223	986	1.30	766.67	2.349E-004	2.19	
	392.86	Y	8699	970	1.55	786.99	2.317E-004	1.90	
M	413.66	Y	22445	526	1.37	828.55	2.242E-004	1.70	3.75
m	419.06	Y	92	452	1.37	839.36	2.223E-004	25.88	
m	422.50	Y	1727	494	1.38	846.22	2.210E-004	3.45	
m	426.51	Y	324	483	1.38	854.24	2.196E-004	9.64	
	451.41	Y	2796	327	1.34	903.99	2.111E-004	2.86	
	618.82	Y	229	72	1.47	1238.53	1.718E-004	11.18	
M	639.83	Y	94	48	1.53	1280.51	1.683E-004	13.24	2.22
m	645.78	Y	156	44	1.54	1292.39	1.674E-004	9.76	
m	652.50	Y	205	43	1.54	1305.84	1.663E-004	8.32	
m	658.76	Y	94	43	1.54	1318.33	1.653E-004	13.44	
m	662.35	Y	1139	46	1.55	1325.51	1.647E-004	3.62	
	688.56	Y	116	41	0.93	1377.90	1.607E-004	16.36	
	721.89	Y	571	48	1.47	1444.49	1.560E-004	5.62	
	756.18	Y	40	16	1.56	1513.02	1.514E-004	28.63	
	769.25	Y	112	44	1.99	1539.14	1.498E-004	17.25	
	2234.67		11980	60	1.17	4467.46	5.167E-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	< 3.516E-002 +/-	1.9%	< 3.349E-005	< 1.621E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 2.531E-002 +/-	1.9%	< 2.411E-005	< 3.999E-012
	Al-26	< 6.546E-002 +/-	19.8%	< 6.234E-005	< 3.443E-006
	K-40	< 2.771E-001 +/-	5.3%	< 2.639E-004	< 4.323E-002
X	Co-57				
	Co-60	< 2.830E-002 +/-	1.7%	< 2.695E-005	< 2.482E-011
	Se-75	< 2.628E-001 +/-	2.3%	< 2.502E-004	< 1.808E-011
	Kr-85	< 1.542E+001 +/-	3.2%	< 1.469E-002	< 3.887E-008
	Sr-90	< 7.438E-002 +/-	2.5%	< 7.084E-005	< 5.393E-010
	Sb-125	< 3.165E-001 +/-	2.7%	< 3.015E-004	< 3.045E-010
	Ba-133	< 2.098E-001 +/-	1.8%	< 1.998E-004	< 8.285E-010
	Cs-134	< 3.340E-002 +/-	2.0%	< 3.181E-005	< 2.548E-011
X	Cs-137				
	Eu-152	< 1.158E-001 +/-	3.8%	< 1.102E-004	< 6.506E-010
	Eu-154	< 7.230E-002 +/-	2.1%	< 6.886E-005	< 2.711E-010
	Ho-166m	< 5.947E-002 +/-	2.4%	< 5.664E-005	< 3.307E-008
	Bi-207	< 4.758E-002 +/-	1.9%	< 4.531E-005	< 8.659E-010
	Pb-210	< 3.373E+004 +/-	309.7%	< 3.212E+001	< 4.385E-004
	Ra-226	< 1.146E-001 +/-	2.7%	< 1.092E-004	< 1.146E-007
	Ac-227	< 8.856E-001 +/-	8.5%	< 8.434E-004	< 1.213E-008
	Th-230	< 4.438E+002 +/-	9.0%	< 4.227E-001	< 2.175E-002
	Pa-231	< 4.844E+000 +/-	11.3%	< 4.613E-003	< 1.012E-004
	Th-232	< 1.098E-001 +/-	2.4%	< 1.046E-004	< 9.895E-001
	U-232	< 1.616E-001 +/-	2.6%	< 1.539E-004	< 7.481E-009
	U-233	< 3.420E+003 +/-	4.0%	< 3.257E+000	< 3.488E-001
	Pa-234	< 1.233E-001 +/-	12.2%	< 1.174E-004	
	Pa-234m	< 1.912E+002 +/-	2.1%	< 1.821E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 2.839E-001 +/-	4.0%	< 2.704E-004	< 1.298E-001
	Np-237	2.334E+000 +/-	9.9%	2.223E-003	3.268E-003
	Pu-238	< 1.910E+004 +/-	4.2%	< 1.819E+001	< 1.104E-003
	U-238	< 4.163E+000 +/-	2.1%	< 3.965E-003	< 1.224E+001
	Pu-239	1.564E+006 +/-	4.7%	1.489E+003	2.486E+001
	Pu-239B	1.561E+006 +/-	1.3%	1.487E+003	2.482E+001
	U-239	< 2.263E+005 +/-	368.5%	< 2.155E+002	
	Pu-240	1.044E+005 +/-	33.0%	9.945E+001	4.542E-001
	Am-241	4.249E+005 +/-	4.0%	4.047E+002	1.224E-001
	Am-241B	4.974E+005 +/-	4.9%	4.737E+002	1.433E-001
	Pu-241	3.802E+006 +/-	8.5%	3.621E+003	3.658E-002
	Pu-241B	4.946E+006 +/-	3.7%	4.710E+003	4.758E-002
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 9.448E-001 +/-	2.2%	< 8.998E-004	< 4.677E-006
	Cm-243	< 9.745E-001 +/-	3.5%	< 9.281E-004	< 1.871E-008
	Cm-244	< 4.721E+004 +/-	14.2%	< 4.496E+001	< 5.759E-004
	Cm-245	< 1.736E+000 +/-	8.4%	< 1.653E-003	< 9.979E-006
	Cm-247	< 1.429E-001 +/-	8.5%	< 1.361E-004	< 1.529E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.677E-001 +/-	3.5%	< 1.598E-004	< 4.059E-008
Cf-251	< 9.889E-001 +/-	6.5%	< 9.418E-004	< 6.181E-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

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

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	2.49E+001 +- 1.17E+000	2.39E+001 +- 4.00E-001

Beta: 1.31E+001 +- 1.45E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	2.73E+001 +- 2.22E+000
203.55	2.11E+001 +- 1.03E+000
375.05	2.41E+001 +- 5.89E-001
413.71	2.44E+001 +- 6.70E-001

Segment 7 Results

Segment: 7 Detector: DET01 Position: 7
C:\Canberra\NDA2k\Data\00000370_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P007_S007

Acquisition Start: 5/4/2009 11:16:00 AM
Elapsed Live Time: 100.66 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.000 +/- 0.0000
SE-75	264.66	0.265 +/- 0.0051
SE-75	279.54	0.288 +/- 0.0060
SE-75	400.66	0.393 +/- 0.0082

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: 5/4/2009 11:18:02 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
	59.47	Y	75415	7648	1.12	120.78	3.517E-006	1.24	
M	94.71	Y	12561	12786	1.54	191.21	1.025E-004	2.17	66.20
m	98.72	Y	48904	16888	1.55	199.21	1.221E-004	1.77	
m	100.93	Y	7695	16777	1.56	203.63	1.331E-004	2.69	
m	103.36	Y	34538	14097	1.56	208.49	1.454E-004	1.75	
M	111.10	Y	12514	8526	1.39	223.96	1.841E-004	1.91	81.90
m	114.59	Y	10067	9434	1.39	230.93	2.010E-004	2.07	
m	116.65	Y	9116	7921	1.40	235.05	2.106E-004	2.04	
m	120.54	Y	2146	7915	1.40	242.82	2.282E-004	4.27	
m	122.85	Y	1222	6925	1.41	247.44	2.382E-004	6.65	
m	125.29	Y	4862	6587	1.41	252.32	2.483E-004	2.59	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	129.30	Y	23478	5631	1.42	260.32	2.639E-004	1.67	
M	144.19	Y	1499	4640	1.11	290.09	3.100E-004	48.78	3.09
m	146.31	Y	1347	5711	1.11	294.31	3.151E-004	47.55	
m	148.56	Y	3065	5787	1.11	298.80	3.200E-004	46.78	
	164.64	Y	537	4705	1.12	330.94	3.449E-004	22.30	
	171.41	Y	1059	4625	1.24	344.48	3.505E-004	11.76	
	179.24	Y	498	5005	1.10	360.11	3.539E-004	25.90	
	189.34	Y	673	4665	1.37	380.30	3.546E-004	18.69	
	195.64	Y	888	4516	1.35	392.90	3.532E-004	14.08	
M	203.57	Y	5025	3839	1.14	408.74	3.500E-004	2.07	7.77
m	208.02	Y	16752	3727	1.14	417.62	3.477E-004	1.44	
	255.32	Y	847	2187	1.42	512.15	3.092E-004	10.64	
M	263.99	Y	281	1876	1.28	529.47	3.012E-004	13.12	1.72
m	267.58	Y	592	2054	1.29	536.66	2.992E-004	7.44	
	297.39	Y	360	1897	1.07	596.21	2.807E-004	22.99	
	311.83	Y	802	1492	1.36	625.08	2.708E-004	9.51	
M	320.92	Y	548	1727	1.78	643.23	2.647E-004	8.44	3.21
m	323.20	Y	706	2439	1.78	647.79	2.632E-004	6.62	
M	332.73	Y	5682	1275	1.32	666.84	2.571E-004	1.85	4.57
m	335.68	Y	2341	1191	1.33	672.73	2.553E-004	2.65	
m	341.39	Y	697	1246	1.33	684.15	2.517E-004	5.50	
m	344.99	Y	5009	1183	1.34	691.34	2.496E-004	1.93	
	368.29	Y	2103	1217	2.39	737.89	2.363E-004	4.10	
M	375.04	Y	13380	912	1.29	751.38	2.327E-004	1.47	11.01
m	380.12	Y	2522	739	1.30	761.53	2.301E-004	2.52	
m	382.72	Y	2293	659	1.30	766.73	2.288E-004	2.61	
	392.89	Y	4543	601	1.61	787.06	2.238E-004	2.24	
	413.71	Y	11963	402	1.41	828.67	2.135E-004	1.56	
M	422.56	Y	849	210	1.17	846.34	2.093E-004	4.22	1.56
m	426.59	Y	199	211	1.17	854.40	2.074E-004	9.65	
	451.43	Y	1373	211	1.43	904.03	1.970E-004	3.71	
	619.06	Y	145	41	1.23	1239.01	1.539E-004	12.49	
M	645.90	Y	77	46	1.47	1292.63	1.497E-004	14.49	1.80
m	652.71	Y	83	52	1.47	1306.24	1.487E-004	13.39	
m	658.72	Y	62	48	1.48	1318.25	1.479E-004	16.34	
m	662.38	Y	604	37	1.48	1325.58	1.474E-004	4.64	
	688.72	Y	41	34	0.91	1378.21	1.440E-004	31.17	
	721.84	Y	344	28	1.36	1444.40	1.402E-004	6.71	
	769.11	Y	53	30	0.80	1538.84	1.354E-004	23.87	
	2234.72		11980	39	1.13	4467.57	4.196E-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	< 2.998E-002 +/-	1.8%	< 2.856E-005	< 1.382E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 3.018E-002 +/-	2.0%	< 2.875E-005	< 4.769E-012
	Al-26	< 6.283E-002 +/-	15.5%	< 5.984E-005	< 3.305E-006
	K-40	< 2.469E-001 +/-	5.0%	< 2.352E-004	< 3.852E-002
X	Co-57				
	Co-60	< 3.182E-002 +/-	1.7%	< 3.031E-005	< 2.791E-011
	Se-75	< 1.947E-001 +/-	1.9%	< 1.854E-004	< 1.340E-011
	Kr-85	< 1.274E+001 +/-	3.1%	< 1.213E-002	< 3.210E-008
	Sr-90	< 6.647E-002 +/-	2.0%	< 6.331E-005	< 4.819E-010
	Sb-125	< 2.291E-001 +/-	2.3%	< 2.182E-004	< 2.204E-010
	Ba-133	< 1.758E-001 +/-	1.7%	< 1.674E-004	< 6.944E-010
	Cs-134	< 3.664E-002 +/-	1.8%	< 3.490E-005	< 2.796E-011
X	Cs-137				
	Eu-152	< 1.036E-001 +/-	3.7%	< 9.862E-005	< 5.820E-010
	Eu-154	< 8.619E-002 +/-	2.2%	< 8.209E-005	< 3.232E-010
	Ho-166m	< 4.070E-002 +/-	2.2%	< 3.877E-005	< 2.263E-008
	Bi-207	< 3.976E-002 +/-	1.9%	< 3.787E-005	< 7.237E-010
	Pb-210	< 5.652E+003 +/-	70.4%	< 5.382E+000	< 7.347E-005
	Ra-226	< 8.936E-002 +/-	2.3%	< 8.510E-005	< 8.936E-008
	Ac-227	< 6.413E-001 +/-	8.3%	< 6.108E-004	< 8.786E-009
	Th-230	< 3.264E+002 +/-	8.6%	< 3.108E-001	< 1.599E-002
	Pa-231	< 3.856E+000 +/-	11.2%	< 3.673E-003	< 8.060E-005
	Th-232	< 3.017E-002 +/-	2.6%	< 2.873E-005	< 2.718E-001
	U-232	< 1.660E-001 +/-	2.2%	< 1.581E-004	< 7.685E-009
	U-233	< 2.502E+003 +/-	2.9%	< 2.383E+000	< 2.552E-001
	Pa-234	< 1.617E-001 +/-	12.2%	< 1.540E-004	
	Pa-234m	< 1.619E+002 +/-	2.1%	< 1.542E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 2.090E-001 +/-	2.6%	< 1.990E-004	< 9.551E-002
	Np-237	1.156E+000 +/-	14.5%	1.101E-003	1.619E-003
	Pu-238	< 1.412E+004 +/-	2.8%	< 1.345E+001	< 8.161E-004
	U-238	< 1.997E+000 +/-	2.2%	< 1.902E-003	< 5.872E+000
	Pu-239	1.366E+006 +/-	3.2%	1.301E+003	2.173E+001
	Pu-239B	8.560E+005 +/-	1.4%	8.152E+002	1.361E+001
	U-239	< 2.839E+004 +/-	85.6%	< 2.703E+001	
X	Pu-240				
	Am-241	2.628E+005 +/-	4.5%	2.503E+002	7.569E-002
	Am-241B	1.660E+005 +/-	4.1%	1.581E+002	4.781E-002
	Pu-241	1.163E+006 +/-	46.9%	1.107E+003	1.118E-002
	Pu-241B	1.987E+006 +/-	2.8%	1.892E+003	1.911E-002
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 7.431E-001 +/-	1.9%	< 7.077E-004	< 3.678E-006
	Cm-243	< 7.664E-001 +/-	3.4%	< 7.299E-004	< 1.472E-008
	Cm-244	< 3.245E+004 +/-	14.2%	< 3.091E+001	< 3.959E-004
	Cm-245	< 1.307E+000 +/-	7.7%	< 1.244E-003	< 7.513E-006
	Cm-247	< 1.105E-001 +/-	8.5%	< 1.052E-004	< 1.182E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.313E-001 +/-	3.5%	< 1.251E-004	< 3.178E-008
Cf-251	< 7.356E-001 +/-	5.7%	< 7.006E-004	< 4.598E-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	2.17E+001 +- 7.02E-001	8.49E+000 +- 1.33E-001

Beta: 1.86E+002 +- 7.62E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	5.05E+000 +- 1.93E-001
203.55	9.04E+000 +- 2.79E-001
375.05	1.33E+001 +- 3.24E-001
413.71	1.37E+001 +- 3.63E-001

Segment 8 Results

Segment: 8 Detector: DET01 Position: 8
C:\Canberra\NDA2k\Data\00000370_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P008_S008

Acquisition Start: 5/4/2009 11:19:11 AM
Elapsed Live Time: 113.14 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.283 +/- 0.0147
SE-75	264.66	0.438 +/- 0.0079
SE-75	279.54	0.444 +/- 0.0084
SE-75	400.66	0.506 +/- 0.0098

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: 5/4/2009 11:21:13 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
	59.53	Y	21588	3259	1.09	120.91	8.306E-005	1.37	
M	94.73		3621	6527	1.52	191.24	2.084E-004	3.95	18.52
m	98.75	Y	14063	10050	1.53	199.27	2.203E-004	2.90	
m	100.87	Y	2118	9904	1.53	203.51	2.262E-004	4.85	
m	103.39	Y	9473	8438	1.54	208.55	2.331E-004	2.88	
M	111.06		3327	5149	1.89	223.88	2.521E-004	2.44	25.66
m	115.41	Y	3393	9012	1.89	232.57	2.617E-004	2.61	
M	125.30	Y	1002	2508	1.05	252.32	2.805E-004	5.12	8.31
m	129.38	Y	6733	2938	1.06	260.48	2.870E-004	1.76	
M	144.09		425	2575	1.11	289.88	3.088E-004	21.24	1.49
m	146.34	Y	348	2585	1.12	294.38	3.118E-004	22.61	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	148.63	Y	814	2598	1.12	298.96	3.147E-004	19.23	
	171.49		192	2354	1.38	344.63	3.354E-004	40.18	
	189.42		221	2014	1.04	380.46	3.427E-004	32.45	
M	203.63	Y	1375	1707	1.12	408.85	3.444E-004	3.50	2.90
m	208.07	Y	4510	1591	1.13	417.72	3.444E-004	1.95	
	255.49		127	1085	1.19	512.49	3.322E-004	43.90	
	267.58	Y	120	775	0.83	536.65	3.266E-004	36.51	
M	332.77	Y	1449	601	1.31	666.91	2.896E-004	3.07	1.41
m	335.69	Y	641	628	1.31	672.74	2.879E-004	4.82	
m	341.30		142	593	1.32	683.97	2.848E-004	14.28	
m	345.04		1322	618	1.32	691.43	2.827E-004	3.20	
	368.46	Y	543	477	2.10	738.23	2.700E-004	8.07	
M	375.09	Y	3559	342	1.29	751.49	2.665E-004	2.02	2.96
m	380.18		614	284	1.30	761.66	2.639E-004	4.63	
m	382.75		576	257	1.30	766.80	2.626E-004	4.73	
	392.91		1198	201	1.53	787.09	2.574E-004	3.76	
	413.74	Y	3033	139	1.36	828.72	2.471E-004	2.28	
M	422.62		187	93	1.24	846.46	2.429E-004	8.34	1.45
m	426.55	Y	37	94	1.24	854.32	2.410E-004	25.56	
	451.40		335	72	1.44	903.97	2.300E-004	7.17	
	619.16	Y	20	15	0.86	1239.20	1.746E-004	36.56	
	645.68		23	12	0.66	1292.21	1.683E-004	31.67	
M	658.51		13	17	1.34	1317.85	1.655E-004	33.87	1.17
m	662.43	Y	170	14	1.34	1325.66	1.647E-004	6.82	
	721.98	Y	91	5	2.22	1444.66	1.530E-004	11.60	
	2234.73		11980	19	1.11	4467.59	1.055E-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	< 2.636E-002 +/-	1.8%	< 2.510E-005	< 1.215E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 5.293E-003 +/-	1.9%	< 5.041E-006	< 8.362E-013
	Al-26	< 1.562E-002 +/-	18.8%	< 1.487E-005	< 8.215E-007
	K-40	< 2.726E-001 +/-	5.3%	< 2.596E-004	< 4.252E-002
	Co-57	< 1.680E-001 +/-	4.5%	< 1.600E-004	< 1.966E-011
	Co-60	< 3.995E-002 +/-	1.7%	< 3.805E-005	< 3.504E-011
	Se-75	< 1.304E-001 +/-	1.8%	< 1.242E-004	< 8.972E-012
	Kr-85	< 6.922E+000 +/-	3.0%	< 6.593E-003	< 1.744E-008
	Sr-90	< 3.418E-002 +/-	2.2%	< 3.255E-005	< 2.478E-010
	Sb-125	< 1.385E-001 +/-	1.9%	< 1.319E-004	< 1.333E-010
	Ba-133	< 1.043E-001 +/-	1.6%	< 9.931E-005	< 4.119E-010
	Cs-134	< 1.517E-002 +/-	1.8%	< 1.445E-005	< 1.157E-011
X	Cs-137				
	Eu-152	< 8.975E-002 +/-	3.8%	< 8.547E-005	< 5.044E-010
	Eu-154	< 1.511E-002 +/-	2.1%	< 1.439E-005	< 5.667E-011
	Ho-166m	< 3.443E-002 +/-	2.3%	< 3.279E-005	< 1.914E-008
	Bi-207	< 2.919E-002 +/-	2.1%	< 2.780E-005	< 5.313E-010
	Pb-210	< 1.550E+001 +/-	259.0%	< 1.476E-002	< 2.015E-007
	Ra-226	< 5.640E-002 +/-	2.4%	< 5.372E-005	< 5.640E-008
	Ac-227	< 4.509E-001 +/-	8.3%	< 4.294E-004	< 6.177E-009
	Th-230	< 6.170E+001 +/-	83.3%	< 5.877E-002	< 3.024E-003
	Pa-231	< 2.593E+000 +/-	11.2%	< 2.470E-003	< 5.420E-005
	Th-232	< 8.569E-002 +/-	2.3%	< 8.161E-005	< 7.721E-001
	U-232	< 9.473E-002 +/-	2.3%	< 9.022E-005	< 4.386E-009
	U-233	< 1.678E+003 +/-	3.0%	< 1.598E+000	< 1.712E-001
	Pa-234	< 8.610E-002 +/-	32.2%	< 8.200E-005	
	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	< 1.565E-001 +/-	2.9%	< 1.490E-004	< 7.152E-002
	Np-237	< 2.172E-001 +/-	1.9%	< 2.068E-004	< 3.040E-004
	Pu-238	< 1.036E+004 +/-	3.1%	< 9.866E+000	< 5.988E-004
	U-238	< 2.845E+000 +/-	2.1%	< 2.709E-003	< 8.363E+000
	Pu-239	2.849E+005 +/-	3.5%	2.713E+002	4.530E+000
	Pu-239B	< 7.024E+003 +/-	16.6%	< 6.690E+000	< 1.117E-001
	U-239	< 3.686E+001 +/-	308.3%	< 3.510E-002	
X	Pu-240				
	Am-241	6.525E+004 +/-	6.4%	6.215E+001	1.879E-002
	Am-241B	5.293E+004 +/-	9.6%	5.041E+001	1.524E-002
	Pu-241	3.139E+005 +/-	19.5%	2.989E+002	3.019E-003
	Pu-241B	5.668E+005 +/-	3.3%	5.398E+002	5.452E-003
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 3.381E-001 +/-	57.8%	< 3.220E-004	< 1.674E-006
	Cm-243	< 5.278E-001 +/-	3.3%	< 5.027E-004	< 1.013E-008
	Cm-244	< 3.122E+004 +/-	14.1%	< 2.973E+001	< 3.808E-004
	Cm-245	< 9.677E-001 +/-	7.8%	< 9.216E-004	< 5.564E-006
	Cm-247	< 6.097E-002 +/-	8.5%	< 5.806E-005	< 6.523E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 7.009E-002 +/-	3.4%	< 6.675E-005	< 1.696E-008
Cf-251	< 5.444E-001 +/-	5.8%	< 5.184E-004	< 3.402E-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	4.53E+000 +- 1.60E-001	2.18E+000 +- 3.86E-002

Beta: 1.51E+002 +- 8.44E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.33E+000 +- 5.68E-002
203.55	2.51E+000 +- 1.06E-001
375.05	3.08E+000 +- 8.26E-002
413.71	3.00E+000 +- 8.94E-002

Segment 9 Results

Segment: 9 Detector: DET01 Position: 9
C:\Canberra\NDA2k\Data\00000370_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P009_S009

Acquisition Start: 5/4/2009 11:22:23 AM
Elapsed Live Time: 117.60 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.260 +/- 0.0137
SE-75	264.66	0.440 +/- 0.0079
SE-75	279.54	0.450 +/- 0.0084
SE-75	400.66	0.513 +/- 0.0098

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 5/4/2009 11:24:24 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
59.51	Y	2875	1210	1.33	120.85	1.143E-005	2.83	
67.14	Y	87	777	0.78	136.11	2.838E-005	48.23	
98.77		469	3472	1.35	199.31	1.642E-004	19.40	
129.39	Y	193	1212	1.02	260.50	2.743E-004	27.24	
208.24	Y	107	448	1.00	418.07	3.508E-004	29.64	
413.55	Y	63	33	1.43	828.33	2.555E-004	19.30	
2234.74		11980	4	1.11	4467.61	5.145E-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	< 2.167E-002 +/-	1.9%	< 2.064E-005	< 9.992E-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	< 8.131E-003 +/-	19.6%	< 7.744E-006	< 4.277E-007
K-40	< 1.984E-001 +/-	5.3%	< 1.890E-004	< 3.095E-002
Co-57	< 1.118E-001 +/-	4.5%	< 1.065E-004	< 1.308E-011
Co-60	< 2.649E-002 +/-	1.7%	< 2.523E-005	< 2.323E-011
Se-75	< 8.344E-002 +/-	2.3%	< 7.947E-005	< 5.741E-012
Kr-85	< 5.187E+000 +/-	3.2%	< 4.940E-003	< 1.307E-008
Sr-90	< 1.789E-002 +/-	2.3%	< 1.704E-005	< 1.297E-010
Sb-125	< 6.100E-002 +/-	2.1%	< 5.809E-005	< 5.868E-011
Ba-133	< 6.522E-002 +/-	1.8%	< 6.211E-005	< 2.576E-010
Cs-134	< 1.813E-002 +/-	2.4%	< 1.727E-005	< 1.383E-011
Cs-137	< 1.789E-002 +/-	2.3%	< 1.704E-005	< 2.040E-010
Eu-152	< 7.605E-002 +/-	3.8%	< 7.243E-005	< 4.274E-010
Eu-154	< 4.067E-002 +/-	2.1%	< 3.873E-005	< 1.525E-010
Ho-166m	< 3.097E-002 +/-	2.5%	< 2.950E-005	< 1.722E-008
Bi-207	< 2.004E-002 +/-	2.4%	< 1.909E-005	< 3.648E-010
Pb-210	< 4.232E+002 +/-	311.1%	< 4.030E-001	< 5.501E-006
Ra-226	< 3.575E-002 +/-	2.6%	< 3.405E-005	< 3.575E-008
Ac-227	< 2.791E-001 +/-	8.5%	< 2.658E-004	< 3.823E-009
Th-230	1.814E+002 +/-	113.3%	1.727E-001	8.887E-003
Pa-231	< 1.758E+000 +/-	11.3%	< 1.675E-003	< 3.675E-005
Th-232	< 5.651E-002 +/-	2.3%	< 5.382E-005	< 5.092E-001
U-232	< 6.404E-002 +/-	2.5%	< 6.099E-005	< 2.965E-009
U-233	< 9.969E+002 +/-	4.1%	< 9.494E-001	< 1.017E-001
Pa-234	< 7.602E-002 +/-	12.2%	< 7.240E-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	< 1.029E-001 +/-	4.1%	< 9.796E-005	< 4.701E-002
Np-237	< 1.335E-001 +/-	2.2%	< 1.272E-004	< 1.869E-004
Pu-238	< 6.999E+003 +/-	4.3%	< 6.666E+000	< 4.045E-004
U-238	< 2.509E+000 +/-	2.1%	< 2.390E-003	< 7.378E+000
Pu-239	4.561E+003 +/-	30.9%	4.344E+000	7.253E-002
Pu-239B	< 3.786E+003 +/-	18.9%	< 3.605E+000	< 6.018E-002
U-239	< 2.191E+003 +/-	370.1%	< 2.087E+000	
Pu-240	< 2.216E+003 +/-	13.4%	< 2.110E+000	< 9.638E-003
Am-241	1.578E+002 +/-	152.9%	1.503E-001	4.544E-005
Am-241B	< 8.478E+002 +/-	14.5%	< 8.074E-001	< 2.442E-004
Pu-241	< 3.486E+004 +/-	4.3%	< 3.320E+001	< 3.354E-004
Pu-241B	1.319E+004 +/-	29.9%	1.257E+001	1.269E-004
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 3.647E-001 +/-	2.2%	< 3.474E-004	< 1.806E-006
Cm-243	< 3.762E-001 +/-	3.6%	< 3.583E-004	< 7.223E-009
Cm-244	< 2.057E+004 +/-	14.2%	< 1.959E+001	< 2.509E-004
Cm-245	< 6.416E-001 +/-	8.4%	< 6.110E-004	< 3.689E-006
Cm-247	< 3.715E-002 +/-	8.5%	< 3.539E-005	< 3.976E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 3.468E-002 +/-	3.5%	< 3.303E-005	< 8.392E-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	7.25E-002 +- 2.24E-002	4.95E-002 +- 8.01E-003

Beta: 7.71E+001 +- 6.34E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 2

Energy	Mass (g)
129.30	4.00E-002 +- 1.10E-002
413.71	6.02E-002 +- 1.17E-002

Segment 10 Results

Segment: 10 Detector: DET01 Position: 10
C:\Canberra\NDA2k\Data\00000370_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P010_S010

Acquisition Start: 5/4/2009 11:25:34 AM
Elapsed Live Time: 118.20 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.195 +/- 0.0124
SE-75	264.66	0.409 +/- 0.0073
SE-75	279.54	0.423 +/- 0.0079
SE-75	400.66	0.484 +/- 0.0093

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 5/4/2009 11:27:36 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
59.47	Y	1158	820	1.22	120.79	4.682E-006	4.88	
2234.72		11980	6	1.12	4467.57	5.038E-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	< 2.204E-002 +/-	1.9%	< 2.099E-005	< 1.016E-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	< 7.077E-003 +/-	19.8%	< 6.740E-006	< 3.722E-007
K-40	< 2.507E-001 +/-	5.3%	< 2.388E-004	< 3.912E-002
Co-57	< 9.561E-002 +/-	4.6%	< 9.105E-005	< 1.119E-011
Co-60	< 2.920E-002 +/-	1.7%	< 2.781E-005	< 2.560E-011
Se-75	< 6.315E-002 +/-	2.2%	< 6.014E-005	< 4.345E-012
Kr-85	< 5.527E+000 +/-	3.3%	< 5.264E-003	< 1.393E-008
Sr-90	< 1.859E-002 +/-	2.4%	< 1.771E-005	< 1.348E-010
Sb-125	< 5.717E-002 +/-	2.2%	< 5.445E-005	< 5.500E-011
Ba-133	< 4.863E-002 +/-	1.8%	< 4.632E-005	< 1.921E-010
Cs-134	< 1.899E-002 +/-	2.5%	< 1.808E-005	< 1.449E-011
Cs-137	< 1.859E-002 +/-	2.4%	< 1.771E-005	< 2.120E-010
Eu-152	< 2.540E-002 +/-	3.8%	< 2.419E-005	< 1.427E-010
Eu-154	< 5.662E-002 +/-	2.1%	< 5.392E-005	< 2.123E-010
Ho-166m	< 1.784E-002 +/-	2.4%	< 1.699E-005	< 9.921E-009
Bi-207	< 1.946E-002 +/-	2.4%	< 1.854E-005	< 3.542E-010
Pb-210	< 8.048E+002 +/-	308.2%	< 7.664E-001	< 1.046E-005
Ra-226	< 5.320E-002 +/-	2.7%	< 5.067E-005	< 5.320E-008
Ac-227	< 2.100E-001 +/-	8.5%	< 2.000E-004	< 2.877E-009
Th-230	< 1.025E+002 +/-	9.0%	< 9.759E-002	< 5.021E-003
Pa-231	< 1.377E+000 +/-	11.3%	< 1.312E-003	< 2.878E-005
Th-232	< 5.893E-002 +/-	2.6%	< 5.612E-005	< 5.309E-001
U-232	< 5.893E-002 +/-	2.6%	< 5.612E-005	< 2.728E-009
U-233	< 7.441E+002 +/-	4.0%	< 7.086E-001	< 7.589E-002
Pa-234	< 1.285E-001 +/-	12.2%	< 1.224E-004	
Pa-234m	< 1.447E+002 +/-	2.1%	< 1.378E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 7.231E-002 +/-	3.9%	< 6.887E-005	< 3.305E-002
Np-237	< 9.151E-002 +/-	2.2%	< 8.715E-005	< 1.281E-004
Pu-238	< 4.979E+003 +/-	4.2%	< 4.742E+000	< 2.878E-004
U-238	< 2.299E+000 +/-	2.2%	< 2.190E-003	< 6.760E+000
Pu-239	< 9.679E+002 +/-	2.0%	< 9.218E-001	< 1.539E-002
Pu-239B	< 3.678E+003 +/-	18.8%	< 3.502E+000	< 5.847E-002
U-239	< 4.305E+003 +/-	366.8%	< 4.100E+000	
Pu-240	< 2.063E+003 +/-	13.3%	< 1.965E+000	< 8.974E-003
Am-241	1.552E+002 +/-	151.6%	1.478E-001	4.469E-005
Am-241B	< 7.914E+002 +/-	14.4%	< 7.538E-001	< 2.279E-004
Pu-241	< 2.681E+004 +/-	4.2%	< 2.553E+001	< 2.579E-004
Pu-241B	< 7.089E+003 +/-	3.4%	< 6.751E+000	< 6.819E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 2.669E-001 +/-	2.2%	< 2.542E-004	< 1.321E-006
Cm-243	< 2.753E-001 +/-	3.5%	< 2.622E-004	< 5.286E-009
Cm-244	< 2.152E+004 +/-	14.1%	< 2.050E+001	< 2.626E-004
Cm-245	< 4.512E-001 +/-	8.3%	< 4.297E-004	< 2.594E-006
Cm-247	< 2.955E-002 +/-	8.5%	< 2.815E-005	< 3.162E-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	< 2.434E-001 +/-	6.5%	< 2.318E-004	< 1.521E-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\00000370_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P011_S011

Acquisition Start: 5/4/2009 11:28:46 AM
Elapsed Live Time: 118.50 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.141 +/- 0.0094
SE-75	264.66	0.231 +/- 0.0042
SE-75	279.54	0.237 +/- 0.0046
SE-75	400.66	0.282 +/- 0.0057

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 5/4/2009 11:30:48 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
59.53	Y	499	494	1.43	120.90	4.272E-006	8.13	
2234.75		11980	6	1.07	4467.63	2.520E-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	< 2.301E-002 +/-	1.8%	< 2.191E-005	< 1.061E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.101E-002 +/-	2.0%	< 2.001E-005	< 3.320E-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	< 7.705E-002 +/-	3.4%	< 7.338E-005	< 9.015E-012
Co-60	< 1.640E-002 +/-	1.7%	< 1.562E-005	< 1.438E-011
Se-75	< 6.581E-002 +/-	1.8%	< 6.268E-005	< 4.528E-012
Kr-85	< 5.107E+000 +/-	3.0%	< 4.864E-003	< 1.287E-008
Sr-90	< 1.172E-002 +/-	1.9%	< 1.116E-005	< 8.497E-011
Sb-125	< 2.952E-002 +/-	2.1%	< 2.811E-005	< 2.840E-011
Ba-133	< 3.267E-002 +/-	1.7%	< 3.111E-005	< 1.290E-010
Cs-134	< 1.562E-002 +/-	1.8%	< 1.488E-005	< 1.192E-011
Cs-137	< 1.172E-002 +/-	1.9%	< 1.116E-005	< 1.336E-010
Eu-152	< 7.867E-002 +/-	3.7%	< 7.493E-005	< 4.421E-010
Eu-154	< 4.214E-002 +/-	1.9%	< 4.013E-005	< 1.580E-010
Ho-166m	< 1.910E-002 +/-	2.2%	< 1.819E-005	< 1.062E-008
Bi-207	< 1.275E-002 +/-	2.0%	< 1.214E-005	< 2.320E-010
Pb-210	< 9.901E+002 +/-	53.0%	< 9.429E-001	< 1.287E-005
Ra-226	< 3.075E-002 +/-	2.2%	< 2.929E-005	< 3.075E-008
Ac-227	< 2.087E-001 +/-	8.3%	< 1.988E-004	< 2.860E-009
Th-230	< 9.217E+001 +/-	8.6%	< 8.778E-002	< 4.516E-003
Pa-231	< 1.172E+000 +/-	11.2%	< 1.116E-003	< 2.449E-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	< 6.734E+002 +/-	2.7%	< 6.414E-001	< 6.869E-002
Pa-234	< 9.668E-002 +/-	11.5%	< 9.208E-005	
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	< 6.709E-002 +/-	2.5%	< 6.389E-005	< 3.066E-002
Np-237	< 7.874E-002 +/-	1.9%	< 7.499E-005	< 1.102E-004
Pu-238	< 4.840E+003 +/-	2.6%	< 4.610E+000	< 2.798E-004
U-238	< 1.933E+000 +/-	2.2%	< 1.841E-003	< 5.682E+000
Pu-239	< 8.949E+002 +/-	3.1%	< 8.523E-001	< 1.423E-002
Pu-239B	< 2.687E+003 +/-	5.3%	< 2.560E+000	< 4.273E-002
U-239	< 6.731E+003 +/-	65.1%	< 6.410E+000	
Pu-240	< 1.624E+003 +/-	4.7%	< 1.547E+000	< 7.066E-003
Am-241	7.336E+001 +/-	24.7%	6.987E-002	2.113E-005
Am-241B	< 6.188E+002 +/-	4.9%	< 5.893E-001	< 1.782E-004
Pu-241	< 2.312E+004 +/-	2.8%	< 2.202E+001	< 2.224E-004
Pu-241B	< 7.096E+003 +/-	2.4%	< 6.758E+000	< 6.827E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 2.526E-001 +/-	1.8%	< 2.406E-004	< 1.250E-006
Cm-243	< 2.605E-001 +/-	3.3%	< 2.481E-004	< 5.002E-009
Cm-244	< 5.358E+003 +/-	14.2%	< 5.103E+000	< 6.536E-005
Cm-245	< 4.359E-001 +/-	7.7%	< 4.152E-004	< 2.507E-006
Cm-247	< 2.617E-002 +/-	8.5%	< 2.493E-005	< 2.801E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.473E-002 +/-	3.5%	< 2.355E-005	< 5.985E-009
Cf-251	< 2.243E-001 +/-	5.6%	< 2.136E-004	< 1.402E-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 **********

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\00000370_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P012_S012

Acquisition Start: 5/4/2009 11:31:57 AM
Elapsed Live Time: 118.72 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.000 +/- 0.0000
SE-75	264.66	0.119 +/- 0.0023
SE-75	279.54	0.124 +/- 0.0027
SE-75	400.66	0.168 +/- 0.0036

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 5/4/2009 11:33:59 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
59.57	Y	139	359	0.88	120.99	1.183E-004	22.07	
2234.78		11980	9	1.09	4467.69	2.387E-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	< 2.057E-002 +/-	1.9%	< 1.959E-005	< 9.481E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 1.965E-002 +/-	2.0%	< 1.872E-005	< 3.105E-012
Al-26	< 2.566E-002 +/-	16.0%	< 2.444E-005	< 1.350E-006
K-40	< 2.504E-001 +/-	5.1%	< 2.385E-004	< 3.906E-002
Co-57	< 6.594E-002 +/-	4.0%	< 6.280E-005	< 7.715E-012
Co-60	< 2.760E-002 +/-	1.7%	< 2.629E-005	< 2.421E-011
Se-75	< 6.062E-002 +/-	2.5%	< 5.773E-005	< 4.171E-012
Kr-85	< 3.851E+000 +/-	3.3%	< 3.667E-003	< 9.704E-009
Sr-90	< 1.761E-002 +/-	2.2%	< 1.677E-005	< 1.277E-010
Sb-125	< 4.657E-002 +/-	2.4%	< 4.435E-005	< 4.480E-011
Ba-133	< 2.303E-002 +/-	2.0%	< 2.193E-005	< 9.097E-011
Cs-134	< 6.976E-003 +/-	2.3%	< 6.644E-006	< 5.323E-012
Cs-137	< 1.761E-002 +/-	2.2%	< 1.677E-005	< 2.008E-010
Eu-152	< 7.395E-002 +/-	2.7%	< 7.043E-005	< 4.156E-010
Eu-154	< 5.609E-002 +/-	2.2%	< 5.342E-005	< 2.103E-010
Ho-166m	< 2.702E-002 +/-	2.4%	< 2.574E-005	< 1.502E-008
Bi-207	< 1.181E-002 +/-	2.3%	< 1.125E-005	< 2.149E-010
Pb-210	< 1.105E+000 +/-	39.2%	< 1.053E-003	< 1.437E-008
Ra-226	< 2.850E-002 +/-	2.5%	< 2.714E-005	< 2.850E-008
Ac-227	< 2.071E-001 +/-	8.5%	< 1.973E-004	< 2.838E-009
Th-230	< 1.612E+001 +/-	13.8%	< 1.535E-002	< 7.899E-004
Pa-231	< 9.808E-001 +/-	11.3%	< 9.341E-004	< 2.050E-005
Th-232	< 4.926E-002 +/-	2.5%	< 4.691E-005	< 4.438E-001
U-232	< 4.926E-002 +/-	2.5%	< 4.691E-005	< 2.281E-009
U-233	< 6.947E+002 +/-	3.2%	< 6.616E-001	< 7.085E-002
Pa-234	< 9.419E-002 +/-	12.2%	< 8.970E-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	< 6.834E-002 +/-	3.2%	< 6.508E-005	< 3.123E-002
Np-237	< 7.063E-002 +/-	2.3%	< 6.726E-005	< 9.888E-005
Pu-238	< 4.735E+003 +/-	3.1%	< 4.509E+000	< 2.737E-004
U-238	< 2.214E+000 +/-	2.1%	< 2.108E-003	< 6.509E+000
Pu-239	< 8.318E+002 +/-	3.7%	< 7.922E-001	< 1.323E-002
Pu-239B	< 1.424E+003 +/-	6.3%	< 1.356E+000	< 2.263E-002
U-239	< 2.426E+000 +/-	49.2%	< 2.310E-003	
Pu-240	< 1.047E+003 +/-	5.6%	< 9.974E-001	< 4.556E-003
Am-241	7.385E-001 +/-	27.6%	7.034E-004	2.127E-007
Am-241B	< 3.869E+002 +/-	5.8%	< 3.685E-001	< 1.114E-004
Pu-241	< 2.484E+004 +/-	3.3%	< 2.366E+001	< 2.390E-004
Pu-241B	< 7.497E+003 +/-	3.2%	< 7.140E+000	< 7.212E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.058E-001 +/-	9.3%	< 1.007E-004	< 5.235E-007
Cm-243	< 2.380E-001 +/-	3.7%	< 2.267E-004	< 4.570E-009
Cm-244	< 1.536E+004 +/-	14.1%	< 1.462E+001	< 1.873E-004
Cm-245	< 4.447E-001 +/-	7.9%	< 4.235E-004	< 2.557E-006
Cm-247	< 1.774E-002 +/-	8.6%	< 1.690E-005	< 1.898E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.816E-002 +/-	3.6%	< 1.729E-005	< 4.394E-009
Cf-251	< 2.383E-001 +/-	5.9%	< 2.269E-004	< 1.489E-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\00000370_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P013_S013

Acquisition Start: 5/4/2009 11:35:09 AM
Elapsed Live Time: 118.95 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.255 +/- 0.0127
SE-75	264.66	0.405 +/- 0.0072
SE-75	279.54	0.416 +/- 0.0078
SE-75	400.66	0.477 +/- 0.0091

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 5/4/2009 11:37:10 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
59.54	Y	104	263	0.93	120.93	1.518E-004	24.86	
2234.74		11980	3	1.10	4467.60	6.925E-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	< 2.155E-002 +/-	1.8%	< 2.052E-005	< 9.934E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 5.054E-003 +/-	2.0%	< 4.813E-006	< 7.985E-013
Al-26	< 2.588E-002 +/-	14.9%	< 2.464E-005	< 1.361E-006
K-40	< 3.494E-001 +/-	4.9%	< 3.328E-004	< 5.451E-002
Co-57	< 5.186E-002 +/-	3.5%	< 4.939E-005	< 6.067E-012
Co-60	< 3.194E-002 +/-	1.7%	< 3.042E-005	< 2.801E-011
Se-75	< 5.225E-002 +/-	1.9%	< 4.976E-005	< 3.595E-012
Kr-85	< 3.831E+000 +/-	3.1%	< 3.649E-003	< 9.655E-009
Sr-90	< 1.534E-002 +/-	1.9%	< 1.461E-005	< 1.112E-010
Sb-125	< 3.621E-002 +/-	2.1%	< 3.449E-005	< 3.484E-011
Ba-133	< 2.475E-002 +/-	1.7%	< 2.357E-005	< 9.775E-011
Cs-134	< 1.441E-002 +/-	2.0%	< 1.372E-005	< 1.100E-011
Cs-137	< 1.534E-002 +/-	1.9%	< 1.461E-005	< 1.748E-010
Eu-152	< 5.834E-002 +/-	2.5%	< 5.556E-005	< 3.279E-010
Eu-154	< 1.443E-002 +/-	2.2%	< 1.374E-005	< 5.411E-011
Ho-166m	< 3.157E-002 +/-	2.2%	< 3.007E-005	< 1.755E-008
Bi-207	< 1.263E-002 +/-	2.0%	< 1.203E-005	< 2.299E-010
Pb-210	< 1.518E+000 +/-	36.7%	< 1.446E-003	< 1.973E-008
Ra-226	< 3.074E-002 +/-	2.2%	< 2.927E-005	< 3.074E-008
Ac-227	< 1.723E-001 +/-	8.3%	< 1.641E-004	< 2.361E-009
Th-230	< 1.512E+001 +/-	13.0%	< 1.440E-002	< 7.406E-004
Pa-231	< 8.130E-001 +/-	11.2%	< 7.743E-004	< 1.699E-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	< 5.921E+002 +/-	2.7%	< 5.639E-001	< 6.040E-002
Pa-234	< 1.047E-001 +/-	12.2%	< 9.971E-005	
Pa-234m	< 1.729E+002 +/-	2.1%	< 1.646E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 5.428E-002 +/-	2.5%	< 5.170E-005	< 2.481E-002
Np-237	< 5.360E-002 +/-	1.9%	< 5.105E-005	< 7.504E-005
Pu-238	< 4.047E+003 +/-	2.6%	< 3.854E+000	< 2.339E-004
U-238	< 2.445E+000 +/-	2.1%	< 2.329E-003	< 7.189E+000
Pu-239	< 6.755E+002 +/-	3.2%	< 6.433E-001	< 1.074E-002
Pu-239B	< 1.096E+003 +/-	5.7%	< 1.044E+000	< 1.742E-002
U-239	< 4.487E+000 +/-	45.8%	< 4.273E-003	
Pu-240	< 8.337E+002 +/-	5.0%	< 7.940E-001	< 3.627E-003
Am-241	4.288E-001 +/-	29.4%	4.084E-004	1.235E-007
Am-241B	< 3.051E+002 +/-	5.3%	< 2.906E-001	< 8.788E-005
Pu-241	< 2.098E+004 +/-	2.8%	< 1.998E+001	< 2.019E-004
Pu-241B	< 6.529E+003 +/-	2.5%	< 6.218E+000	< 6.281E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 9.168E-002 +/-	8.4%	< 8.731E-005	< 4.538E-007
Cm-243	< 1.986E-001 +/-	3.3%	< 1.892E-004	< 3.814E-009
Cm-244	< 1.744E+004 +/-	14.1%	< 1.661E+001	< 2.128E-004
Cm-245	< 3.835E-001 +/-	7.7%	< 3.653E-004	< 2.205E-006
Cm-247	< 2.623E-002 +/-	8.5%	< 2.498E-005	< 2.807E-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	< 2.038E-001 +/-	5.6%	< 1.941E-004	< 1.274E-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\00000370_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P014_S014

Acquisition Start: 5/4/2009 11:38:20 AM
Elapsed Live Time: 119.09 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.603 +/- 0.0204
SE-75	264.66	0.756 +/- 0.0136
SE-75	279.54	0.766 +/- 0.0142
SE-75	400.66	0.814 +/- 0.0154

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 5/4/2009 11:40:22 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
59.58	Y	66	166	0.74	121.00	7.455E-006	30.34	
400.68		43	11	1.27	802.61	2.839E-004	19.38	
2234.77		11980	6	1.08	4467.67	5.301E-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	< 2.072E-002 +/-	1.9%	< 1.973E-005	< 9.551E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 1.739E-002 +/-	2.0%	< 1.656E-005	< 2.747E-012
Al-26	< 2.578E-002 +/-	15.2%	< 2.455E-005	< 1.356E-006
K-40	< 1.847E-001 +/-	5.0%	< 1.759E-004	< 2.881E-002
Co-57	< 4.675E-002 +/-	3.4%	< 4.452E-005	< 5.469E-012
Co-60	< 3.422E-002 +/-	1.7%	< 3.259E-005	< 3.001E-011
Se-75	< 4.023E-002 +/-	1.8%	< 3.831E-005	< 2.768E-012
Kr-85	< 5.238E+000 +/-	3.1%	< 4.989E-003	< 1.320E-008
Sr-90	< 1.488E-002 +/-	1.9%	< 1.418E-005	< 1.079E-010
Sb-125	< 5.152E-002 +/-	2.1%	< 4.907E-005	< 4.956E-011
Ba-133	< 2.162E-002 +/-	1.7%	< 2.059E-005	< 8.540E-011
Cs-134	< 1.867E-002 +/-	2.0%	< 1.778E-005	< 1.425E-011
Cs-137	< 1.488E-002 +/-	1.9%	< 1.418E-005	< 1.697E-010
Eu-152	< 4.417E-002 +/-	2.5%	< 4.207E-005	< 2.482E-010
Eu-154	< 4.965E-002 +/-	2.2%	< 4.728E-005	< 1.862E-010
Ho-166m	< 3.172E-002 +/-	2.2%	< 3.021E-005	< 1.763E-008
Bi-207	< 1.596E-002 +/-	2.0%	< 1.520E-005	< 2.906E-010
Pb-210	< 8.020E+002 +/-	56.7%	< 7.639E-001	< 1.043E-005
Ra-226	< 4.085E-002 +/-	2.0%	< 3.890E-005	< 4.085E-008
Ac-227	< 1.340E-001 +/-	8.3%	< 1.276E-004	< 1.835E-009
Th-230	< 6.406E+001 +/-	8.6%	< 6.101E-002	< 3.139E-003
Pa-231	< 6.141E-001 +/-	11.2%	< 5.848E-004	< 1.283E-005
Th-232	< 5.144E-002 +/-	2.0%	< 4.899E-005	< 4.635E-001
U-232	< 5.144E-002 +/-	2.0%	< 4.899E-005	< 2.382E-009
U-233	< 4.689E+002 +/-	2.7%	< 4.466E-001	< 4.783E-002
Pa-234	< 8.239E-002 +/-	12.2%	< 7.847E-005	
Pa-234m	< 1.263E+002 +/-	2.2%	< 1.203E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 4.315E-002 +/-	2.5%	< 4.109E-005	< 1.972E-002
Np-237	< 3.915E-002 +/-	1.9%	< 3.728E-005	< 5.481E-005
Pu-238	< 3.203E+003 +/-	2.6%	< 3.050E+000	< 1.851E-004
U-238	< 1.382E+000 +/-	2.2%	< 1.316E-003	< 4.063E+000
Pu-239	< 5.933E+002 +/-	3.1%	< 5.650E-001	< 9.433E-003
Pu-239B	< 1.474E+003 +/-	5.4%	< 1.404E+000	< 2.343E-002
U-239	< 6.878E+003 +/-	69.5%	< 6.551E+000	
Pu-240	< 9.443E+002 +/-	4.7%	< 8.994E-001	< 4.108E-003
Am-241	5.520E+000 +/-	39.3%	5.258E-003	1.590E-006
Am-241B	< 3.615E+002 +/-	5.0%	< 3.443E-001	< 1.041E-004
Pu-241	< 1.533E+004 +/-	2.8%	< 1.460E+001	< 1.475E-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	< 1.692E-001 +/-	1.8%	< 1.612E-004	< 8.378E-007
Cm-243	< 1.746E-001 +/-	3.3%	< 1.663E-004	< 3.352E-009
Cm-244	< 1.811E+004 +/-	14.1%	< 1.725E+001	< 2.210E-004
Cm-245	< 2.843E-001 +/-	7.7%	< 2.708E-004	< 1.635E-006
Cm-247	< 3.752E-002 +/-	8.5%	< 3.574E-005	< 4.015E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.027E-002 +/-	3.5%	< 1.930E-005	< 4.905E-009
Cf-251	< 1.536E-001 +/-	5.6%	< 1.463E-004	< 9.600E-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\00000370_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P015_S015

Acquisition Start: 5/4/2009 11:41:32 AM
Elapsed Live Time: 119.13 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.636 +/- 0.0207
SE-75	264.66	0.761 +/- 0.0136
SE-75	279.54	0.771 +/- 0.0142
SE-75	400.66	0.810 +/- 0.0153

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 5/4/2009 11:43:34 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
400.60		40	11	0.95	802.45	2.706E-004	20.04	
2234.76		11980	5	1.06	4467.64	2.684E-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	< 2.429E-002 +/-	1.8%	< 2.313E-005	< 1.120E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.121E-002 +/-	2.1%	< 2.020E-005	< 3.351E-012
Al-26	< 4.643E-002 +/-	15.4%	< 4.422E-005	< 2.442E-006
K-40	< 3.579E-001 +/-	5.0%	< 3.409E-004	< 5.584E-002
Co-57	< 4.561E-002 +/-	3.5%	< 4.344E-005	< 5.336E-012
Co-60	< 3.611E-002 +/-	1.7%	< 3.439E-005	< 3.166E-011
Se-75	< 3.638E-002 +/-	1.8%	< 3.465E-005	< 2.503E-012
Kr-85	< 4.504E+000 +/-	3.0%	< 4.290E-003	< 1.135E-008
Sr-90	< 2.077E-002 +/-	1.9%	< 1.979E-005	< 1.506E-010
Sb-125	< 4.142E-002 +/-	2.1%	< 3.944E-005	< 3.984E-011
Ba-133	< 2.208E-002 +/-	1.7%	< 2.103E-005	< 8.723E-011
Cs-134	< 1.886E-002 +/-	1.9%	< 1.796E-005	< 1.439E-011
Cs-137	< 2.077E-002 +/-	1.9%	< 1.979E-005	< 2.368E-010
Eu-152	< 4.483E-002 +/-	2.5%	< 4.269E-005	< 2.519E-010
Eu-154	< 6.056E-002 +/-	2.2%	< 5.768E-005	< 2.271E-010
Ho-166m	< 3.212E-002 +/-	2.7%	< 3.060E-005	< 1.786E-008
Bi-207	< 1.524E-002 +/-	2.0%	< 1.451E-005	< 2.773E-010
Pb-210	< 9.843E+002 +/-	57.4%	< 9.374E-001	< 1.280E-005
Ra-226	< 3.118E-002 +/-	2.0%	< 2.969E-005	< 3.118E-008
Ac-227	< 1.292E-001 +/-	8.3%	< 1.231E-004	< 1.770E-009
Th-230	< 5.828E+001 +/-	8.6%	< 5.550E-002	< 2.856E-003
Pa-231	< 5.782E-001 +/-	11.2%	< 5.507E-004	< 1.208E-005
Th-232	< 4.993E-002 +/-	2.1%	< 4.755E-005	< 4.499E-001
U-232	< 4.993E-002 +/-	2.1%	< 4.755E-005	< 2.312E-009
U-233	< 4.230E+002 +/-	2.8%	< 4.028E-001	< 4.314E-002
Pa-234	< 1.050E-001 +/-	12.2%	< 1.000E-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	< 4.043E-002 +/-	2.5%	< 3.850E-005	< 1.848E-002
Np-237	< 3.987E-002 +/-	1.9%	< 3.797E-005	< 5.582E-005
Pu-238	< 2.983E+003 +/-	2.7%	< 2.841E+000	< 1.724E-004
U-238	< 2.235E+000 +/-	2.2%	< 2.129E-003	< 6.571E+000
Pu-239	< 5.453E+002 +/-	3.2%	< 5.194E-001	< 8.671E-003
Pu-239B	< 1.338E+003 +/-	5.6%	< 1.275E+000	< 2.128E-002
U-239	< 9.204E+003 +/-	70.2%	< 8.765E+000	
Pu-240	< 8.996E+002 +/-	4.9%	< 8.568E-001	< 3.913E-003
Am-241	< 4.743E+000 +/-	25.4%	< 4.517E-003	< 1.366E-006
Am-241B	< 3.476E+002 +/-	5.1%	< 3.310E-001	< 1.001E-004
Pu-241	< 1.534E+004 +/-	2.9%	< 1.461E+001	< 1.476E-004
Pu-241B	< 4.157E+003 +/-	2.4%	< 3.959E+000	< 3.999E-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	< 2.077E+004 +/-	14.1%	< 1.978E+001	< 2.534E-004
Cm-245	< 2.612E-001 +/-	7.7%	< 2.488E-004	< 1.502E-006
Cm-247	< 3.680E-002 +/-	8.5%	< 3.504E-005	< 3.937E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.048E-002 +/-	3.5%	< 1.951E-005	< 4.957E-009
Cf-251	< 1.410E-001 +/-	5.6%	< 1.343E-004	< 8.814E-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
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Acquisition Start: 5/4/2009 11:44:43 AM
Elapsed Live Time: 119.18 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.573 +/- 0.0196
SE-75	264.66	0.734 +/- 0.0131
SE-75	279.54	0.740 +/- 0.0137
SE-75	400.66	0.787 +/- 0.0149

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 5/4/2009 11:46:47 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
1332.97		15	0	0.75	2665.61	6.329E-005	25.84	
2234.75		11980	7	1.08	4467.62	2.436E-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	< 3.737E-002 +/-	2.3%	< 3.559E-005	< 1.723E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.990E-002 +/-	2.3%	< 2.848E-005	< 4.725E-012
Al-26	< 4.040E-002 +/-	18.0%	< 3.847E-005	< 2.125E-006
K-40	< 5.420E-001 +/-	5.6%	< 5.161E-004	< 8.454E-002
Co-57	< 7.570E-002 +/-	4.4%	< 7.210E-005	< 8.857E-012
Co-60	< 4.877E-002 +/-	2.0%	< 4.644E-005	< 4.277E-011
Se-75	< 6.547E-002 +/-	2.8%	< 6.236E-005	< 4.505E-012
Kr-85	< 7.882E+000 +/-	3.6%	< 7.507E-003	< 1.986E-008
Sr-90	< 2.951E-002 +/-	2.6%	< 2.811E-005	< 2.140E-010
Sb-125	< 5.472E-002 +/-	2.7%	< 5.211E-005	< 5.264E-011
Ba-133	< 3.573E-002 +/-	2.3%	< 3.403E-005	< 1.411E-010
Cs-134	< 2.635E-002 +/-	2.8%	< 2.510E-005	< 2.011E-011
Cs-137	< 2.951E-002 +/-	2.6%	< 2.811E-005	< 3.364E-010
Eu-152	< 7.014E-002 +/-	2.9%	< 6.680E-005	< 3.942E-010
Eu-154	< 8.537E-002 +/-	2.4%	< 8.131E-005	< 3.201E-010
Ho-166m	< 3.880E-002 +/-	2.8%	< 3.695E-005	< 2.157E-008
Bi-207	< 2.821E-002 +/-	2.8%	< 2.686E-005	< 5.134E-010
Pb-210	< 2.033E+000 +/-	46.8%	< 1.936E-003	< 2.643E-008
Ra-226	< 5.347E-002 +/-	3.0%	< 5.093E-005	< 5.347E-008
Ac-227	< 2.309E-001 +/-	8.7%	< 2.199E-004	< 3.164E-009
Th-230	< 2.274E+001 +/-	15.5%	< 2.165E-002	< 1.114E-003
Pa-231	< 8.583E-001 +/-	11.4%	< 8.174E-004	< 1.794E-005
Th-232	< 9.278E-002 +/-	3.2%	< 8.837E-005	< 8.360E-001
U-232	< 9.278E-002 +/-	3.2%	< 8.837E-005	< 4.296E-009
U-233	< 7.696E+002 +/-	2.5%	< 7.330E-001	< 7.850E-002
Pa-234	< 1.464E-001 +/-	12.3%	< 1.394E-004	
Pa-234m	< 1.321E+002 +/-	2.4%	< 1.258E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 7.572E-002 +/-	3.6%	< 7.212E-005	< 3.461E-002
Np-237	< 5.303E-002 +/-	2.6%	< 5.050E-005	< 7.424E-005
Pu-238	< 5.542E+003 +/-	3.6%	< 5.278E+000	< 3.203E-004
U-238	< 2.174E+000 +/-	2.4%	< 2.071E-003	< 6.392E+000
Pu-239	< 1.043E+003 +/-	4.1%	< 9.932E-001	< 1.658E-002
Pu-239B	< 1.386E+003 +/-	7.0%	< 1.320E+000	< 2.203E-002
U-239	< 8.245E+000 +/-	58.6%	< 7.852E-003	
Pu-240	< 1.026E+003 +/-	6.2%	< 9.770E-001	< 4.462E-003
Am-241	< 2.359E-001 +/-	19.9%	< 2.247E-004	< 6.794E-008
Am-241B	< 3.923E+002 +/-	6.4%	< 3.736E-001	< 1.130E-004
Pu-241	< 3.059E+004 +/-	3.7%	< 2.914E+001	< 2.943E-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	< 1.350E-001 +/-	10.7%	< 1.285E-004	< 6.681E-007
Cm-243	< 2.345E-001 +/-	3.9%	< 2.233E-004	< 4.502E-009
Cm-244	< 2.555E+004 +/-	14.2%	< 2.433E+001	< 3.117E-004
Cm-245	< 5.317E-001 +/-	8.1%	< 5.064E-004	< 3.057E-006
Cm-247	< 4.926E-002 +/-	8.7%	< 4.691E-005	< 5.270E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 3.745E-002 +/-	3.8%	< 3.567E-005	< 9.063E-009
Cf-251	< 2.736E-001 +/-	6.2%	< 2.606E-004	< 1.710E-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

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 Pe	< 4.252E-002 +/-	1.8%	< 2.531E-006	< 1.960E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 3.993E-002 +/-	2.2%	< 2.377E-006	< 6.309E-012
Al-26	< 6.546E-002 +/-	19.8%	< 3.896E-006	< 3.443E-006
K-40	< 5.420E-001 +/-	5.6%	< 3.226E-005	< 8.454E-002
Co-57	< 1.975E+000 +/-	2.9%	< 1.175E-004	< 2.310E-010
Co-60	< 5.848E-002 +/-	2.8%	< 3.481E-006	< 5.128E-011
Se-75	< 2.939E-001 +/-	1.9%	< 1.749E-005	< 2.022E-011
Kr-85	< 1.658E+001 +/-	3.1%	< 9.868E-004	< 4.178E-008
Sr-90	< 1.323E-001 +/-	2.0%	< 7.874E-006	< 9.591E-010
Sb-125	< 3.521E-001 +/-	2.3%	< 2.096E-005	< 3.387E-010
Ba-133	< 2.266E-001 +/-	1.7%	< 1.349E-005	< 8.949E-010
Cs-134	< 3.667E-002 +/-	1.8%	< 2.183E-006	< 2.798E-011
Cs-137	< 1.323E-001 +/-	2.0%	< 7.874E-006	< 1.508E-009
Eu-152	< 1.173E-001 +/-	3.6%	< 6.983E-006	< 6.593E-010
Eu-154	< 1.140E-001 +/-	2.4%	< 6.787E-006	< 4.276E-010
Ho-166m	< 5.947E-002 +/-	2.4%	< 3.540E-006	< 3.307E-008
Bi-207	< 4.758E-002 +/-	1.9%	< 2.832E-006	< 8.659E-010
Pb-210	< 3.373E+004 +/-	309.7%	< 2.008E+000	< 4.385E-004
Ra-226	< 1.146E-001 +/-	2.7%	< 6.822E-006	< 1.146E-007
Ac-227	< 1.040E+000 +/-	8.3%	< 6.189E-005	< 1.424E-008
Th-230	1.206E+003 +/-	41.7%	7.179E-002	5.910E-002
Pa-231	< 5.322E+000 +/-	11.2%	< 3.168E-004	< 1.112E-004
Th-232	< 1.306E-001 +/-	2.4%	< 7.771E-006	< 1.176E+000
U-232	< 2.086E-001 +/-	2.2%	< 1.242E-005	< 9.660E-009
U-233	< 3.968E+003 +/-	2.7%	< 2.362E-001	< 4.047E-001
Pa-234	< 2.076E-001 +/-	12.3%	< 1.236E-005	
Pa-234m	< 2.683E+002 +/-	2.1%	< 1.597E-002	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 3.373E-001 +/-	2.5%	< 2.008E-005	< 1.541E-001
Np-237	7.302E+000 +/-	5.4%	4.346E-004	1.022E-002
Pu-238	< 2.236E+004 +/-	2.6%	< 1.331E+000	< 1.292E-003
U-238	< 4.163E+000 +/-	2.1%	< 2.478E-004	< 1.224E+001
Pu-239	6.402E+006 +/-	1.6%	3.811E+002	1.018E+002
Pu-239B	4.851E+006 +/-	0.7%	2.888E+002	7.713E+001
U-239	< 2.263E+005 +/-	368.5%	< 1.347E+001	
Pu-240	4.632E+005 +/-	20.3%	2.757E+001	2.015E+000

Am-241	1.497E+006	+/-	2.1%	8.909E+001	4.310E-001
Am-241B	1.432E+006	+/-	2.5%	8.521E+001	4.123E-001
Pu-241	1.071E+007	+/-	6.7%	6.377E+002	1.031E-001
Pu-241B	1.530E+007	+/-	1.7%	9.107E+002	1.472E-001
Pu-242	< 0.000E+000	+/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 9.448E-001	+/-	2.2%	< 5.624E-005	< 4.677E-006
Cm-243	< 1.084E+000	+/-	3.3%	< 6.454E-005	< 2.082E-008
Cm-244	< 5.017E+004	+/-	14.2%	< 2.986E+000	< 6.121E-004
Cm-245	< 2.101E+000	+/-	7.7%	< 1.250E-004	< 1.208E-005
Cm-247	< 1.522E-001	+/-	8.5%	< 9.059E-006	< 1.628E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.774E-001 +/-	3.5%	< 1.056E-005	< 4.293E-008
Cf-251	< 1.182E+000 +/-	5.6%	< 7.033E-005	< 7.385E-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	1.02E+002 +- 1.61E+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: SGS100 Analysis Date: 5/4/2009

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

Net Weight	16800.0 g		
Pu mass	1.08E+002	+- 1.60E+001	g
TRU Alpha Activity	9.44E+000	+- 1.05E+000	Ci
TRU Activity Concentration	5.62E+005	+- 6.27E+004	nCi/g
Pu-239 Equivalent Activity	9.80E+000	+- 1.05E+000	Ci
Pu-239 FGE	1.02E+002	+- 1.59E+001	g
Decay heat	2.97E-001	+- 3.28E-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	1.32E-007
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	3.37E-007
NP237	1.02E-002	7.30E-006	1.20E-006	6.44E-007
PU238	1.02E-002	1.77E-001	3.05E-002	3.53E-004
U238	<LLD	<LLD	0.00E+000	4.16E-006
PU239	1.02E+002	6.40E+000	1.00E+000	1.28E-002
PU240	5.93E+000	1.36E+000	2.14E-001	2.72E-003
AM241	4.31E-001	1.50E+000	2.35E-001	5.87E-004
PU241	1.84E-001	1.92E+001	3.01E+000	3.82E-002
PU242	3.28E-002	1.30E-004	2.42E-005	0.00E+000

Errors quoted at 1.000 sigma

Operator:_____ Date:_____

ITR:_____ Date:_____

Summed Segment Spectra Results
Category: Segmented

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Elapsed Live Time: 97.74 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: 5/4/2009 11:47:28 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
	49.54		8517	42560	2.57	100.94	7.905E-007	3.93	
	59.45	Y	350481	45925	1.12	120.74	6.624E-006	0.34	
	74.72		762	37193	0.64	151.26	4.392E-005	38.96	
M	94.70	Y	63677	86791	1.55	191.18	1.523E-004	0.86	331.31
m	98.70	Y	246565	115619	1.56	199.18	1.782E-004	0.66	
m	100.90	Y	38164	115908	1.56	203.57	1.924E-004	1.12	
m	103.35	Y	175109	98671	1.57	208.47	2.082E-004	0.64	
M	111.09	Y	63861	58752	1.38	223.93	2.563E-004	0.73	430.32
m	114.59	Y	51911	65439	1.39	230.92	2.768E-004	0.80	
m	116.65	Y	49257	61322	1.39	235.04	2.883E-004	0.76	
m	120.60	Y	12603	55356	1.40	242.94	3.093E-004	1.61	
m	122.84	Y	6471	53486	1.40	247.42	3.204E-004	2.75	
m	125.26	Y	24559	50946	1.41	252.26	3.319E-004	1.03	
m	129.29	Y	117266	44536	1.42	260.30	3.496E-004	0.61	
M	144.17	Y	7332	33416	1.11	290.04	3.995E-004	4.49	3.20
m	146.31	Y	6393	33542	1.11	294.31	4.048E-004	4.68	
m	148.57	Y	14938	37447	1.11	298.82	4.099E-004	3.97	
M	161.11	Y	6736	34274	1.37	323.89	4.301E-004	3.53	10.14
m	164.61	Y	6228	56507	1.37	330.89	4.336E-004	3.31	
m	169.40	Y	1369	55479	1.38	340.46	4.370E-004	8.40	
m	171.36	Y	4783	55040	1.38	344.36	4.381E-004	3.62	
	179.22	Y	2152	27768	1.08	360.08	4.400E-004	11.98	
	189.33	Y	3357	32824	1.24	380.28	4.384E-004	8.87	
	195.64	Y	4437	27816	1.23	392.89	4.356E-004	6.09	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
M	203.54	Y	26170	25221	1.20	408.68	4.306E-004	1.56	3.96
m	207.99	Y	86129	22292	1.20	417.58	4.271E-004	1.40	
	225.35		711	13846	0.86	452.27	4.110E-004	24.67	
M	237.83		831	15951	1.47	477.20	3.977E-004	11.55	0.97
m	243.30	Y	1443	22627	1.47	488.13	3.917E-004	7.39	
	255.34	Y	4114	15274	1.30	512.19	3.783E-004	5.10	
M	263.99	Y	1308	11118	1.26	529.48	3.687E-004	11.92	0.93
m	267.52	Y	3207	13411	1.26	536.54	3.648E-004	9.87	
M	297.38	Y	2329	10296	1.19	596.21	3.335E-004	13.98	2.93
m	302.76		291	9702	1.19	606.94	3.282E-004	27.79	
M	311.81	Y	4571	9382	1.55	625.04	3.196E-004	2.18	9.27
m	316.38	Y	654	13097	1.55	634.17	3.154E-004	11.35	
m	320.95	Y	3410	12562	1.56	643.30	3.112E-004	2.68	
m	323.42	Y	3929	12194	1.56	648.22	3.091E-004	2.39	
M	332.71	Y	29696	8693	1.32	666.80	3.010E-004	0.67	15.20
m	335.65	Y	12320	8042	1.33	672.68	2.986E-004	1.04	
m	341.40	Y	3409	8328	1.33	684.17	2.939E-004	2.43	
m	344.98	Y	26118	7837	1.34	691.31	2.911E-004	0.70	
M	368.33	Y	8168	6120	1.33	737.97	2.738E-004	1.30	83.20
m	370.80	Y	1005	5937	1.33	742.91	2.720E-004	6.24	
m	375.03	Y	71122	5632	1.33	751.36	2.692E-004	0.47	
m	380.11	Y	13576	3936	1.34	761.52	2.658E-004	0.95	
m	382.71	Y	12191	3636	1.34	766.70	2.641E-004	1.00	
	392.88	Y	24199	3831	1.54	787.02	2.577E-004	0.84	
	399.80	Y	508	3161	2.15	800.86	2.536E-004	18.87	
M	413.67	Y	63308	2047	1.37	828.58	2.457E-004	0.71	7.72
m	419.15	Y	216	1696	1.38	839.52	2.428E-004	16.87	
m	422.54	Y	4777	1657	1.38	846.31	2.410E-004	1.77	
m	426.54	Y	1028	1613	1.38	854.29	2.389E-004	4.68	
M	445.80	Y	296	928	1.34	892.79	2.296E-004	10.15	1.51
m	451.43	Y	7524	1236	1.34	904.03	2.271E-004	1.22	
	481.39	Y	97	857	1.56	963.91	2.146E-004	52.47	
	558.50		210	412	1.88	1117.99	1.898E-004	17.84	
	597.78	Y	86	328	1.41	1196.48	1.801E-004	35.98	
	618.98	Y	690	351	1.46	1238.86	1.754E-004	6.15	
M	632.89	Y	91	278	1.49	1266.65	1.725E-004	16.73	3.40
m	639.96	Y	285	275	1.49	1280.77	1.712E-004	7.92	
m	645.80	Y	456	249	1.50	1292.44	1.700E-004	6.52	
m	652.61	Y	532	245	1.50	1306.06	1.688E-004	6.00	
m	658.74	Y	275	242	1.51	1318.29	1.676E-004	8.53	
m	662.36	Y	3243	255	1.51	1325.53	1.670E-004	3.98	
	688.64	Y	255	251	1.11	1378.04	1.625E-004	12.61	
M	703.76	Y	104	148	1.41	1408.25	1.600E-004	13.94	0.58
m	709.31		80	134	1.41	1419.36	1.592E-004	16.00	
	721.92	Y	1633	211	1.60	1444.54	1.572E-004	2.98	
	737.27	Y	81	143	1.35	1475.22	1.550E-004	28.17	
	756.04	Y	154	111	1.56	1512.73	1.524E-004	14.34	
	769.19	Y	361	211	1.65	1539.01	1.507E-004	9.00	
	1099.54		76	43	2.38	2199.15	1.188E-004	17.71	
	1115.87		56	60	1.82	2231.78	1.175E-004	26.63	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	1173.35	Y	105	57	1.84	2346.64	1.132E-004	16.01	
	1292.19		105	35	1.61	2584.12	1.047E-004	13.91	
	1332.84	Y	190	35	2.02	2665.34	1.020E-004	9.33	
	1461.10	Y	58	25	0.88	2921.65	9.339E-005	19.61	
M	2224.45		30	11	1.01	4447.05	5.041E-005	19.93	3.50
m	2234.76		191681	107	1.02	4467.65	4.993E-005	0.36	
	2293.85		35	40	0.82	4585.72	4.726E-005	34.50	

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	< 1.128E-001 +/-	1.2%	< 6.715E-006	< 1.782E-011
	Al-26	< 1.490E-001 +/-	8.2%	< 8.871E-006	< 7.839E-006
	K-40	1.302E+000 +/-	19.9%	7.750E-005	2.031E-001
X	Co-57				
	Co-60	3.306E-001 +/-	8.6%	1.968E-005	2.899E-010
	Se-75	< 3.835E+000 +/-	1.1%	< 2.283E-004	< 2.639E-010
	Kr-85	< 4.562E+001 +/-	2.5%	< 2.715E-003	< 1.150E-007
	Sr-90	< 1.527E-001 +/-	1.0%	< 9.086E-006	< 1.107E-009
	Sb-125	< 1.030E+000 +/-	1.5%	< 6.134E-005	< 9.913E-010
	Ba-133	< 5.968E-001 +/-	1.0%	< 3.552E-005	< 2.357E-009
	Cs-134	< 1.392E-001 +/-	1.0%	< 8.288E-006	< 1.062E-010
X	Cs-137				
	Eu-152	< 4.265E-001 +/-	2.1%	< 2.539E-005	< 2.397E-009
	Eu-154	< 2.778E-001 +/-	1.5%	< 1.654E-005	< 1.042E-009
	Ho-166m	< 1.677E-001 +/-	1.7%	< 9.982E-006	< 9.324E-008
	Bi-207	< 1.460E-001 +/-	1.1%	< 8.688E-006	< 2.657E-009
	Pb-210	< 1.608E+004 +/-	12.2%	< 9.569E-001	< 2.090E-004
	Ra-226	< 2.953E-001 +/-	1.5%	< 1.758E-005	< 2.953E-007
	Ac-227	< 2.465E+000 +/-	8.2%	< 1.467E-004	< 3.377E-008
	Th-230	< 1.206E+003 +/-	8.3%	< 7.179E-002	< 5.910E-002
	Pa-231	< 1.366E+001 +/-	11.2%	< 8.132E-004	< 2.855E-004
	Th-232	< 3.624E-001 +/-	1.9%	< 2.157E-005	< 3.265E+000
	U-232	< 5.000E-001 +/-	1.3%	< 2.976E-005	< 2.315E-008
	U-233	< 9.138E+003 +/-	1.6%	< 5.439E-001	< 9.321E-001
	Pa-234	< 5.203E-001 +/-	12.1%	< 3.097E-005	
	Pa-234m	< 7.310E+002 +/-	1.5%	< 4.351E-002	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 7.877E-001 +/-	1.8%	< 4.689E-005	< 3.600E-001

	Np-237		5.826E+000	+/-	3.4%		3.468E-004	8.157E-003
	Pu-238	<	5.398E+004	+/-	1.6%	<	3.213E+000	< 3.120E-003
	U-238	<	1.143E+001	+/-	1.6%	<	6.804E-004	< 3.361E+001
	Pu-239		6.941E+006	+/-	1.7%		4.132E+002	1.104E+002
	Pu-239B		3.768E+006	+/-	0.6%		2.243E+002	5.990E+001
	U-239	@	1.000E+020	+/-	100.0%	@	5.952E+015	
X	Pu-240							
	Am-241		1.198E+006	+/-	2.9%		7.132E+001	3.451E-001
	Am-241B		6.102E+005	+/-	1.8%		3.632E+001	1.757E-001
	Pu-241		4.599E+006	+/-	4.4%		2.737E+002	4.424E-002
	Pu-241B		8.569E+006	+/-	1.9%		5.100E+002	8.243E-002
	Pu-242	<	0.000E+000	+/-	0.0%	<	0.000E+000	< 0.000E+000
	Am-243	<	2.692E+000	+/-	1.2%	<	1.602E-004	< 1.333E-005
	Cm-243	<	2.830E+000	+/-	3.0%	<	1.684E-004	< 5.433E-008
	Cm-244	<	1.501E+005	+/-	14.1%	<	8.936E+000	< 1.831E-003
	Cm-245	<	4.905E+000	+/-	7.5%	<	2.920E-004	< 2.821E-005
	Cm-247	<	3.713E-001	+/-	8.4%	<	2.210E-005	< 3.973E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 4.215E-001 +/-	3.2%	< 2.509E-005	< 1.020E-007
Cf-251	< 2.741E+000 +/-	5.3%	< 1.632E-004	< 1.713E-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 +- 1.86E+000	3.19E+001 +- 2.85E-001

Beta: 2.25E+002 +- 3.93E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.90E+001 +- 3.62E-001
203.55	3.83E+001 +- 7.52E-001
375.05	6.09E+001 +- 7.56E-001
413.71	6.29E+001 +- 9.21E-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: SGS100 Analysis Date: 5/4/2009

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	9.81E+000	+- 1.13E+000	Ci
TRU Activity Concentration	5.84E+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	3.08E-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	1.53E-007
U233	<LLD	<LLD	0.00E+000	9.14E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	7.88E-007
NP237	8.16E-003	5.83E-006	9.30E-007	1.02E-006
PU238	1.11E-002	1.92E-001	3.31E-002	3.41E-004
U238	<LLD	<LLD	0.00E+000	1.14E-005
PU239	1.10E+002	6.94E+000	1.09E+000	1.23E-002
PU240	6.43E+000	1.48E+000	2.32E-001	2.63E-003
AM241	3.45E-001	1.20E+000	1.90E-001	1.17E-004
PU241	2.00E-001	2.08E+001	3.26E+000	3.70E-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 = 5/4/09 Declared date = 5/4/09
Low energy spectrum sensitivity = 30.0% Total counts = 7.499E+006
High energy spectrum sensitivity : 10.0%

Pu g/cm2 = 0.7415 Cd g/cm2 = 2.0093 FWHM at 122 keV = 614 eV
QFIT = 1.25 FWHM at 208 keV = 776 eV
NQFIT = 1.02

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	0.000101	7.3	7.3	0.0555	8.2	0.00948	7.24	0.00979	7.48
Pu-239	1.000000	0.0	0.5	551.8220	0.9	94.29865	0.06	94.26092	0.06
Pu-240	0.058226	1.1	1.0	32.1304	1.4	5.49064	1.00	5.49019	1.00
Pu-241	0.001812	0.8	0.7	1.0000	0.0	0.17089	0.80	0.20876	0.97
Pu-242	(New alg.)			0.1776(10)		0.03036 (10)		0.03034 (9)	
Am-241	0.005368	0.6	0.4	2.9619	0.9	0.50615	0.54	0.50915	0.55

Pu-240 effective (meas. date) = 5.566 +/- 1.08%
Am-241 separated about 28.511 +/- 0.174 years ago
Am/Pu-241 weight ratio = 2.96191 +/- 0.82%

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
5/4/09 11:47:36 AM

QA File: C:\CANBERRA\NDA2K\QA\CNTR0001_DC
Sample ID: SGS100
Sample Quantity: 1.0000E+000
Sample Date: 4/2/09 3:10:59 PM
Measurement Date: 5/4/09 10:55:48 AM
Elapsed Live Time: 48.1 seconds
Elapsed Real Time: 60.0 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
Trans Peak 400.6 keV cen [0.00+/-0.00]	8.0243E+002	0.00 < : : : >
Trans Peak 400.6 keV FWH [0.00+/-0.00]	1.4099E+000	0.00 < : : : >

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
5/4/09 11:47:43 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: 5/4/09 10:53:32 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: 1.0264E+002+/- 5.929]	1.0179E+002	-1.4296E-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
5/4/09 11:47:44 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: 5/4/09 10:56:51 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]	8.2858E+002	0.00 < : : : >
SGS-100 414 keV FWHM [0.00+/-0.00]	1.3713E+000	0.00 < : : : >
SGS-100 Pu-239 Mass [UD: 1.1082E+002+/- 3.000]	1.1037E+002	-1.5077E-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:	LL85401489TRU	Count Sequence Number:	371
Operator:	RHWM2\RHWM		
Assay Start:	5/4/2009 11:55:56 AM		
Description 1:	LL85401489TRU		
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

Reviewed By: Robert J Hardisty 6-3-09

Segment 1 Results

Segment: 1 Detector: DET01 Position: 1
C:\Canberra\NDA2k\Data\00000371_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P001_S001

Acquisition Start: 5/4/2009 11:56:58 AM
Elapsed Live Time: 117.36 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.031 +/- 0.0026
SE-75	264.66	0.123 +/- 0.0023
SE-75	279.54	0.127 +/- 0.0027
SE-75	400.66	0.177 +/- 0.0037

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:09:55 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
	59.55	Y	28393	3564	1.10	120.95	2.786E-006	1.28	
M	94.72		854	1200	1.51	191.22	5.019E-005	6.11	11.29
m	98.80	Y	3675	1758	1.52	199.37	5.856E-005	4.10	
m	103.27	Y	2521	1448	1.53	208.31	6.778E-005	4.20	
	111.07		394	1160	1.28	223.89	8.341E-005	13.92	
M	122.97	Y	68	558	1.08	247.67	1.048E-004	30.95	0.91
m	125.35	Y	496	791	1.09	252.43	1.086E-004	8.23	
m	129.37	Y	1734	648	1.09	260.46	1.146E-004	6.51	
	148.89	Y	120	632	0.94	299.47	1.454E-004	32.84	
	185.75	Y	265	550	1.32	373.13	1.759E-004	15.01	
M	203.54	Y	362	390	1.23	408.67	1.787E-004	10.18	1.36
m	208.08	Y	871	355	1.24	417.74	1.786E-004	8.51	
	311.88	Y	223	150	1.39	625.17	1.445E-004	10.73	
M	332.73	Y	478	156	1.29	666.84	1.370E-004	4.96	1.73

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	335.71	Y	146	165	1.29	672.79	1.359E-004	9.74	
	345.00		411	141	1.36	691.36	1.327E-004	6.70	
M	375.07	Y	1186	109	1.33	751.45	1.232E-004	3.06	0.95
m	380.13		241	76	1.33	761.56	1.217E-004	6.55	
m	382.79		201	67	1.34	766.86	1.209E-004	7.20	
	393.02		433	52	1.50	787.31	1.181E-004	5.63	
	413.74	Y	1098	46	1.24	828.72	1.126E-004	3.40	
	422.63		44	72	0.98	846.48	1.105E-004	33.37	
	451.57		146	21	1.50	904.32	1.041E-004	9.74	
	662.31	Y	52	8	1.39	1325.43	7.713E-005	16.65	

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	3.75E+000 +- 2.08E-001	1.56E+000 +- 4.24E-002

Beta: 1.96E+002 +- 1.53E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	8.59E-001 +- 6.44E-002
203.55	1.27E+000 +- 1.33E-001
375.05	2.22E+000 +- 8.14E-002
413.71	2.38E+000 +- 9.68E-002

Segment 2 Results

Segment: 2 Detector: DET01 Position: 2
C:\Canberra\NDA2k\Data\00000371_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P002_S002

Acquisition Start: 5/4/2009 12:00:22 PM
Elapsed Live Time: 117.24 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.006 +/- 0.0016
SE-75	264.66	0.035 +/- 0.0008
SE-75	279.54	0.038 +/- 0.0011
SE-75	400.66	0.059 +/- 0.0017

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: 6/3/2009 2:11:04 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
	59.55	Y	31420	4012	1.12	120.95	3.384E-005	1.27	
M	94.75		752	1254	1.48	191.29	7.756E-005	6.33	12.04
m	98.83	Y	3640	1826	1.49	199.43	8.167E-005	4.06	
m	103.19	Y	2755	1477	1.50	208.15	8.579E-005	4.10	
	111.12		405	1144	1.35	224.00	9.256E-005	13.46	
M	125.36	Y	558	748	1.06	252.46	1.025E-004	5.27	3.74
m	129.38	Y	1735	678	1.07	260.47	1.048E-004	2.80	
	185.82	Y	185	462	1.14	373.26	1.429E-004	18.53	
M	203.62	Y	314	380	1.10	408.83	1.468E-004	6.99	2.08
m	208.03	Y	883	388	1.10	417.65	1.474E-004	3.87	
	300.16	Y	35	149	0.66	601.75	1.422E-004	51.83	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	312.01	Y	218	207	1.25	625.44	1.404E-004	12.57	
M	332.79	Y	431	138	1.20	666.97	1.369E-004	5.33	1.70
m	335.69	Y	156	170	1.21	672.75	1.364E-004	9.38	
	344.94		305	150	1.23	691.24	1.348E-004	8.50	
	368.46	Y	169	139	2.19	738.24	1.304E-004	13.56	
M	375.08	Y	1101	103	1.22	751.46	1.292E-004	3.23	1.87
m	380.20		222	79	1.22	761.70	1.282E-004	6.93	
m	382.77		194	60	1.23	766.83	1.277E-004	7.41	
	392.93		403	48	1.56	787.13	1.258E-004	5.87	
	413.78	Y	1079	64	1.34	828.79	1.222E-004	3.48	
	422.54		70	41	1.08	846.29	1.208E-004	18.03	
	451.47		121	35	1.30	904.11	1.162E-004	12.10	
	662.27	Y	55	16	1.23	1325.36	9.156E-005	17.83	
	721.72	Y	33	6	0.79	1444.15	8.679E-005	21.19	

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 **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	3.03E+000 +- 1.58E-001	1.49E+000 +- 3.78E-002

Beta: 1.54E+002 +- 1.31E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	9.39E-001 +- 5.94E-002
203.55	1.34E+000 +- 9.88E-002
375.05	1.97E+000 +- 7.37E-002
413.71	2.16E+000 +- 8.82E-002

Segment 3 Results

Segment: 3 Detector: DET01 Position: 3
C:\Canberra\NDA2k\Data\00000371_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P003_S003

Acquisition Start: 5/4/2009 12:03:53 PM
Elapsed Live Time: 118.07 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.017 +/- 0.0045
SE-75	264.66	0.040 +/- 0.0009
SE-75	279.54	0.043 +/- 0.0012
SE-75	400.66	0.067 +/- 0.0018

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:11:52 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
	59.57	Y	15833	2343	1.08	120.98	3.387E-005	1.42	
M	98.92	Y	1916	1434	1.31	199.62	9.790E-005	6.01	6.70
m	103.12	Y	1724	1064	1.32	208.02	1.039E-004	6.01	
M	123.05	Y	123	664	1.08	247.83	1.279E-004	15.52	1.12
m	125.29	Y	512	614	1.09	252.32	1.301E-004	5.28	
m	129.36	Y	866	505	1.09	260.44	1.339E-004	3.89	
	185.70	Y	155	436	1.30	373.02	1.684E-004	22.13	
M	203.74	Y	159	301	1.10	409.08	1.708E-004	11.07	0.87
m	208.13	Y	466	344	1.10	417.86	1.709E-004	5.55	
	311.85	Y	128	139	1.55	625.11	1.553E-004	16.98	
M	332.72	Y	239	118	1.32	666.81	1.507E-004	6.81	1.17
m	335.63	Y	163	127	1.32	672.64	1.501E-004	8.69	
	344.98		165	156	1.35	691.31	1.479E-004	14.09	
	368.60	Y	107	113	1.17	738.51	1.424E-004	18.31	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
M	375.14	Y	590	98	1.25	751.58	1.408E-004	4.35	1.50
m	380.17		113	71	1.26	761.63	1.397E-004	10.13	
m	382.77		103	59	1.26	766.82	1.390E-004	10.49	
	392.98		217	54	1.43	787.24	1.367E-004	8.60	
	413.78	Y	552	42	1.21	828.79	1.322E-004	4.78	
	422.63		41	26	0.79	846.48	1.304E-004	23.89	
	451.29		60	19	1.40	903.74	1.248E-004	17.31	
	662.31	Y	58	5	0.69	1325.43	9.625E-005	14.63	
	721.96	Y	33	6	1.15	1444.63	9.105E-005	21.43	

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

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

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.62E+000 +- 1.05E-001	6.20E-001 +- 2.10E-002

Beta: 1.94E+002 +- 1.63E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	3.67E-001 +- 2.88E-002
203.55	5.87E-001 +- 6.69E-002
375.05	9.66E-001 +- 4.53E-002
413.71	1.02E+000 +- 5.27E-002

Segment 4 Results

Segment: 4 Detector: DET01 Position: 4
C:\Canberra\NDA2k\Data\00000371_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P004_S004

Acquisition Start: 5/4/2009 12:07:05 PM
Elapsed Live Time: 118.35 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.015 +/- 0.0020
SE-75	264.66	0.074 +/- 0.0015
SE-75	279.54	0.079 +/- 0.0018
SE-75	400.66	0.114 +/- 0.0026

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:12:39 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
	59.56	Y	11757	1550	1.06	120.96	1.929E-006	1.51	
M	99.00	Y	1702	1075	1.21	199.77	6.260E-005	6.12	4.51
m	103.07	Y	1674	825	1.22	207.91	7.280E-005	5.91	
M	123.15	Y	94	566	1.05	248.03	1.206E-004	19.57	1.88
m	125.30	Y	552	572	1.05	252.34	1.252E-004	5.09	
m	129.40	Y	565	438	1.06	260.52	1.333E-004	4.86	
M	203.55	Y	100	306	1.12	408.70	2.229E-004	14.35	0.47
m	208.05	Y	323	291	1.13	417.70	2.231E-004	6.73	
M	332.81	Y	182	107	1.39	666.99	1.761E-004	7.82	1.72
m	335.64	Y	153	89	1.39	672.65	1.749E-004	8.41	
	345.08		98	122	1.17	691.52	1.709E-004	20.42	
M	375.14	Y	373	67	1.34	751.59	1.593E-004	5.33	1.17
m	380.16		74	47	1.34	761.61	1.575E-004	12.57	
m	382.62		59	42	1.34	766.54	1.566E-004	14.23	

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
393.11		136	41	1.46	787.49	1.530E-004	11.25	
413.77	Y	347	37	1.19	828.78	1.465E-004	6.19	
451.53		51	13	1.42	904.24	1.364E-004	18.22	
662.59	Y	68	8	0.94	1326.00	1.049E-004	14.13	

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	8.31E-001 +- 6.05E-002	3.29E-001 +- 1.23E-002

Beta: 1.65E+002 +- 1.53E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	2.41E-001 +- 1.54E-002
203.55	2.81E-001 +- 4.08E-002
375.05	5.39E-001 +- 3.05E-002
413.71	5.78E-001 +- 3.78E-002

Segment 5 Results

Segment: 5 Detector: DET01 Position: 5
C:\Canberra\NDA2k\Data\00000371_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P005_S005

Acquisition Start: 5/4/2009 12:10:16 PM
Elapsed Live Time: 118.54 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.020 +/- 0.0045
SE-75	264.66	0.077 +/- 0.0015
SE-75	279.54	0.081 +/- 0.0018
SE-75	400.66	0.114 +/- 0.0026

Errors quoted at 1.000 sigma

Peak Analysis Results

Peak Analysis Performed on: 6/3/2009 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
	59.60	Y	8561	1190	1.13	121.04	3.849E-005	1.64	
M	98.98	Y	1183	905	1.23	199.73	1.008E-004	7.18	3.00
m	103.11	Y	1196	860	1.24	208.00	1.065E-004	6.70	
M	125.38	Y	435	484	1.10	252.50	1.322E-004	5.89	1.77
m	129.42	Y	383	423	1.11	260.55	1.359E-004	6.19	
M	203.62	Y	75	226	1.14	408.84	1.930E-004	17.92	1.12
m	208.07	Y	260	276	1.15	417.73	1.938E-004	7.66	
	345.02		98	86	1.25	691.39	1.714E-004	17.34	
	368.60	Y	42	77	1.05	738.51	1.647E-004	34.58	
M	375.19	Y	287	75	1.28	751.68	1.629E-004	6.05	1.57
m	380.14		39	65	1.28	761.57	1.615E-004	20.23	
m	382.75		62	60	1.29	766.79	1.608E-004	14.61	
	392.90		81	48	1.64	787.08	1.580E-004	17.67	
	413.86	Y	304	27	1.45	828.96	1.526E-004	6.47	

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
662.28	Y	40	11	1.53	1325.37	1.096E-004	20.66	
722.09	Y	30	3	0.69	1444.90	1.034E-004	20.53	

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	7.23E-001 +- 5.94E-002	2.46E-001 +- 1.10E-002

Beta: 1.98E+002 +- 1.90E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.60E-001 +- 1.37E-002
203.55	2.43E-001 +- 4.39E-002
375.05	4.05E-001 +- 2.57E-002
413.71	4.87E-001 +- 3.31E-002

Segment 6 Results

Segment: 6 Detector: DET01 Position: 6
C:\Canberra\NDA2k\Data\00000371_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P006_S006

Acquisition Start: 5/4/2009 12:13:28 PM
Elapsed Live Time: 118.03 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.024 +/- 0.0047
SE-75	264.66	0.079 +/- 0.0016
SE-75	279.54	0.085 +/- 0.0019
SE-75	400.66	0.120 +/- 0.0027

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:12:48 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
	59.60	Y	6143	1141	1.06	121.04	1.003E-006	1.87	
M	94.66		347	1018	1.52	191.11	5.307E-005	10.00	3.79
m	98.90	Y	1900	1490	1.53	199.57	6.500E-005	5.58	
m	103.29	Y	1707	1154	1.54	208.35	7.776E-005	5.53	
	111.22		222	951	1.60	224.20	1.008E-004	21.48	
M	125.26	Y	292	530	1.10	252.25	1.375E-004	8.23	2.41
m	129.35	Y	745	681	1.11	260.42	1.466E-004	4.50	
M	203.53	Y	226	501	1.20	408.66	2.290E-004	20.24	0.57
m	208.05	Y	423	517	1.21	417.69	2.290E-004	18.63	
M	332.78	Y	425	180	1.31	666.93	1.887E-004	13.45	0.95
m	335.59	Y	229	171	1.31	672.56	1.876E-004	14.32	
	345.05		402	223	1.17	691.46	1.846E-004	7.69	
M	375.13	Y	1241	115	1.14	751.56	1.750E-004	3.15	3.79
m	380.24		269	110	1.15	761.77	1.736E-004	5.15	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	382.72		215	97	1.15	766.73	1.729E-004	5.53	
	392.92		449	102	1.69	787.12	1.700E-004	6.07	
	413.78	Y	1276	56	1.38	828.80	1.646E-004	3.17	
	422.45		66	56	1.01	846.11	1.625E-004	20.87	
	451.42		140	36	1.41	904.00	1.563E-004	10.80	
	662.29	Y	109	21	1.29	1325.39	1.272E-004	11.78	
	721.72	Y	47	6	1.58	1444.14	1.216E-004	16.64	

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	4.29E+000 +- 2.33E-001	5.43E-001 +- 1.92E-002

Beta: 3.52E+002 +- 1.53E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	2.88E-001 +- 2.13E-002
203.55	6.21E-001 +- 1.27E-001
375.05	1.63E+000 +- 6.07E-002
413.71	1.89E+000 +- 7.24E-002

Segment 7 Results

Segment: 7 Detector: DET01 Position: 7
C:\Canberra\NDA2k\Data\00000371_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P007_S007

Acquisition Start: 5/4/2009 12:16:39 PM
Elapsed Live Time: 118.34 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.048 +/- 0.0061
SE-75	264.66	0.142 +/- 0.0026
SE-75	279.54	0.152 +/- 0.0031
SE-75	400.66	0.201 +/- 0.0042

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:12:52 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
	59.52	Y	2216	668	1.12	120.88	2.194E-006	2.94	
M	98.92	Y	1086	1210	1.33	199.62	7.945E-005	3.64	7.29
m	103.38	Y	897	1336	1.34	208.53	9.416E-005	3.90	
	111.16		265	782	2.04	224.08	1.199E-004	16.65	
M	125.21	Y	80	630	0.97	252.16	1.624E-004	29.67	1.09
m	129.36	Y	524	485	0.97	260.45	1.733E-004	18.50	
M	203.57	Y	237	428	1.19	408.73	2.718E-004	19.90	1.40
m	208.09	Y	323	493	1.19	417.78	2.714E-004	18.60	
	311.84	Y	41	222	1.38	625.10	2.184E-004	57.94	
M	332.82	Y	375	133	1.25	667.01	2.066E-004	5.79	3.06
m	335.78	Y	166	171	1.25	672.93	2.050E-004	8.91	
	344.96		349	219	1.28	691.27	2.002E-004	8.52	
M	368.42	Y	117	138	1.33	738.16	1.888E-004	13.54	1.55
m	375.08	Y	1148	103	1.33	751.47	1.858E-004	7.58	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	380.18		241	83	1.34	761.65	1.836E-004	9.96	
m	382.75		219	76	1.34	766.80	1.825E-004	10.03	
	392.87		391	94	1.34	787.02	1.783E-004	6.56	
	413.73	Y	1181	39	1.29	828.70	1.704E-004	3.24	
	422.71		90	61	1.27	846.63	1.673E-004	17.30	
	451.52		162	27	1.21	904.21	1.583E-004	9.50	
	662.57	Y	74	12	1.59	1325.96	1.223E-004	14.14	
	721.85	Y	43	7	1.74	1444.40	1.172E-004	18.11	

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	4.76E+000 +- 4.73E-001	5.37E-001 +- 2.74E-002

Beta: 4.34E+002 +- 3.46E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.72E-001 +- 3.27E-002
203.55	5.48E-001 +- 1.10E-001
375.05	1.42E+000 +- 1.11E-001
413.71	1.69E+000 +- 6.56E-002

Segment 8 Results

Segment: 8 Detector: DET01 Position: 8
C:\Canberra\NDA2k\Data\00000371_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P008_S008

Acquisition Start: 5/4/2009 12:19:51 PM
Elapsed Live Time: 119.09 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.085 +/- 0.0068
SE-75	264.66	0.187 +/- 0.0034
SE-75	279.54	0.194 +/- 0.0038
SE-75	400.66	0.242 +/- 0.0049

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:12:57 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
59.61	Y	294	216	1.10	121.05	5.373E-005	9.52	
129.49	Y	56	278	0.70	260.70	1.971E-004	45.96	
375.11	Y	136	32	1.23	751.51	2.047E-004	10.69	
413.67	Y	155	21	1.45	828.59	1.912E-004	9.34	

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	5.83E-001 +- 1.53E-001	5.67E-002 +- 6.35E-003

Beta: 4.75E+002 +- 9.57E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 3

Energy	Mass (g)
129.30	1.60E-002 +- 7.38E-003
375.05	1.53E-001 +- 1.65E-002
413.71	1.98E-001 +- 1.89E-002

Segment 9 Results

Segment: 9 Detector: DET01 Position: 9
C:\Canberra\NDA2k\Data\00000371_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P009_S009

Acquisition Start: 5/4/2009 12:23:02 PM
Elapsed Live Time: 119.25 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.086 +/- 0.0067
SE-75	264.66	0.181 +/- 0.0033
SE-75	279.54	0.191 +/- 0.0037
SE-75	400.66	0.243 +/- 0.0049

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:13:02 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
59.70	Y	99	128	1.07	121.24	7.886E-006	19.95	

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 10 Results

Segment: 10 Detector: DET01 Position: 10
C:\Canberra\NDA2k\Data\00000371_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P010_S010

Acquisition Start: 5/4/2009 12:26:14 PM
Elapsed Live Time: 119.26 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.093 +/- 0.0071
SE-75	264.66	0.216 +/- 0.0039
SE-75	279.54	0.225 +/- 0.0043
SE-75	400.66	0.274 +/- 0.0054

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:13:07 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
59.67	Y	156	96	1.09	121.18	3.716E-006	12.23	

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 11 Results

Segment: 11 Detector: DET01 Position: 11
C:\Canberra\NDA2k\Data\00000371_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P011_S011

Acquisition Start: 5/4/2009 12:29:26 PM
Elapsed Live Time: 119.28 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.027 +/- 0.0044
SE-75	264.66	0.090 +/- 0.0017
SE-75	279.54	0.096 +/- 0.0021
SE-75	400.66	0.132 +/- 0.0029

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:13:14 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
59.57	Y	354	72	1.02	120.98	2.610E-006	6.42	

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

********** 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\00000371_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P012_S012

Acquisition Start: 5/4/2009 12:32:37 PM
Elapsed Live Time: 119.30 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.029 +/- 0.0047
SE-75	264.66	0.104 +/- 0.0020
SE-75	279.54	0.112 +/- 0.0024
SE-75	400.66	0.153 +/- 0.0033

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:13:21 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
59.59	Y	462	106	1.05	121.02	8.936E-005	5.75	
99.05		68	122	1.18	199.87	1.195E-004	26.63	

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 13 Results

Segment: 13 Detector: DET01 Position: 13
C:\Canberra\NDA2k\Data\00000371_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P013_S013

Acquisition Start: 5/4/2009 12:35:49 PM
Elapsed Live Time: 119.30 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.006 +/- 0.0013
SE-75	264.66	0.044 +/- 0.0010
SE-75	279.54	0.047 +/- 0.0012
SE-75	400.66	0.074 +/- 0.0019

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:14:08 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
59.56	Y	263	78	1.07	120.96	5.336E-005	7.88	
558.45		16	1	0.68	1117.89	1.127E-004	26.24	

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\00000371_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P014_S014

Acquisition Start: 5/4/2009 12:39:01 PM
Elapsed Live Time: 119.34 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.022 +/- 0.0043
SE-75	264.66	0.086 +/- 0.0017
SE-75	279.54	0.090 +/- 0.0020
SE-75	400.66	0.128 +/- 0.0029

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:14:12 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
59.56	Y	87	32	0.98	120.95	2.353E-006	14.09	

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\00000371_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P015_S015

Acquisition Start: 5/4/2009 12:42:12 PM
Elapsed Live Time: 119.35 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.021 +/- 0.0043
SE-75	264.66	0.083 +/- 0.0016
SE-75	279.54	0.090 +/- 0.0020
SE-75	400.66	0.129 +/- 0.0029

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:14:16 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
59.67	Y	97	44	0.93	121.19	1.988E-006	14.08	

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\00000371_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P016_S016

Acquisition Start: 5/4/2009 12:45:24 PM
Elapsed Live Time: 119.35 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.127 +/- 0.0082
SE-75	264.66	0.280 +/- 0.0050
SE-75	279.54	0.290 +/- 0.0055
SE-75	400.66	0.351 +/- 0.0068

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:15:37 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
59.64	Y	81	38	0.87	121.13	6.355E-005	15.42	

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

********** 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\00000371_CNTR0001_DCAT0002_PROC00AK.CNF

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

Absorption correction model:

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.96E+001 +- 6.23E-001	1.56E+000 +- 4.24E-002

Beta: 1.96E+002 +- 1.53E+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	< 3.983E-002 +/-	2.3%	< 5.857E-007	< 1.836E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 2.648E-002 +/-	2.2%	< 3.894E-007	< 4.183E-012
	Al-26	< 5.090E-002 +/-	18.0%	< 7.486E-007	< 2.678E-006
	K-40	< 4.845E-001 +/-	5.3%	< 7.125E-006	< 7.558E-002
	Co-57	< 2.892E-001 +/-	3.9%	< 4.253E-006	< 3.384E-011
	Co-60	< 4.388E-002 +/-	2.0%	< 6.453E-007	< 3.848E-011
	Se-75	< 8.603E-002 +/-	1.9%	< 1.265E-006	< 5.919E-012
	Kr-85	< 8.960E+000 +/-	3.2%	< 1.318E-004	< 2.258E-008
	Sr-90	3.489E-001 +/-	11.1%	5.131E-006	2.529E-009
	Sb-125	< 1.312E-001 +/-	2.3%	< 1.930E-006	< 1.262E-010
	Ba-133	< 7.313E-002 +/-	1.8%	< 1.075E-006	< 2.889E-010
	Cs-134	< 3.611E-002 +/-	2.1%	< 5.310E-007	< 2.755E-011
?	Cs-137	3.489E-001 +/-	11.1%	5.131E-006	3.977E-009
	Eu-152	< 1.172E-001 +/-	2.3%	< 1.723E-006	< 6.584E-010
	Eu-154	< 7.560E-002 +/-	2.4%	< 1.112E-006	< 2.835E-010
	Ho-166m	< 4.889E-002 +/-	2.4%	< 7.190E-007	< 2.718E-008
	Bi-207	< 2.778E-002 +/-	2.1%	< 4.086E-007	< 5.056E-010
	Pb-210	< 8.814E+003 +/-	309.7%	< 1.296E-001	< 1.146E-004
	Ra-226	< 6.554E-002 +/-	2.4%	< 9.638E-007	< 6.554E-008
	Ac-227	< 2.885E-001 +/-	8.3%	< 4.243E-006	< 3.953E-009
	Th-230	< 1.355E+002 +/-	8.6%	< 1.992E-003	< 6.639E-003
	Pa-231	< 1.795E+000 +/-	11.2%	< 2.639E-005	< 3.751E-005
	Th-232	< 7.891E-002 +/-	2.3%	< 1.160E-006	< 7.110E-001
	U-232	< 7.891E-002 +/-	2.3%	< 1.160E-006	< 3.654E-009
	U-233	< 9.880E+002 +/-	2.7%	< 1.453E-002	< 1.008E-001

	Pa-234	<	1.631E-001	+/-	12.3%	<	2.399E-006	
	Pa-234m	<	2.210E+002	+/-	2.3%	<	3.251E-003	
	U-234	<	0.000E+000	+/-	0.0%	<	0.000E+000	< 0.000E+000
	U-235		1.465E+000	+/-	10.5%		2.154E-005	6.695E-001
	Np-237		2.392E+000	+/-	7.6%		3.518E-005	3.349E-003
	Pu-238	<	5.974E+003	+/-	2.7%	<	8.785E-002	< 3.453E-004
	U-238	<	4.681E+000	+/-	2.4%	<	6.884E-005	< 1.376E+001
	Pu-239		1.232E+006	+/-	3.2%		1.812E+001	1.959E+001
	Pu-239B	<	6.583E+003	+/-	5.2%	<	9.681E-002	< 1.047E-001
	U-239	<	5.698E+004	+/-	368.5%	<	8.380E-001	
	Pu-240	<	8.626E+003	+/-	5.1%	<	1.269E-001	< 3.752E-002
?	Am-241		2.737E+005	+/-	5.1%		4.025E+000	7.883E-002
	Am-241B		1.829E+005	+/-	3.0%		2.690E+000	5.268E-002
	Pu-241		1.001E+005	+/-	33.0%		1.473E+000	9.633E-004
	Pu-241B		8.421E+005	+/-	3.6%		1.238E+001	8.101E-003
	Pu-242	<	0.000E+000	+/-	0.0%	<	0.000E+000	< 0.000E+000
	Am-243	<	3.163E-001	+/-	1.9%	<	4.652E-006	< 1.566E-006
	Cm-243	<	3.263E-001	+/-	3.4%	<	4.798E-006	< 6.264E-009
	Cm-244	<	4.387E+004	+/-	14.2%	<	6.452E-001	< 5.352E-004
	Cm-245	<	5.490E-001	+/-	7.7%	<	8.074E-006	< 3.157E-006
	Cm-247	<	5.895E-002	+/-	8.6%	<	8.669E-007	< 6.308E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 5.984E-002 +/-	3.6%	< 8.800E-007	< 1.448E-008
Cf-251	< 2.997E-001 +/-	5.6%	< 4.407E-006	< 1.873E-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

********** 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: LL85401489TRU Analysis Date: 5/4/2009

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

Net Weight	68000.0 g		
Pu mass	2.09E+001	+-	4.46E+000 g
TRU Alpha Activity	1.84E+000	+-	2.95E-001 Ci
TRU Activity Concentration	2.70E+004	+-	4.34E+003 nCi/g
Pu-239 Equivalent Activity	1.88E+000	+-	2.96E-001 Ci
Pu-239 FGE	2.01E+001	+-	4.45E+000 g
Decay heat	5.78E-002	+-	9.20E-003 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	2.53E-009	3.49E-007	8.75E-008	0.00E+000
CS137	3.98E-009	3.49E-007	8.75E-008	6.84E-008
U233	<LLD	<LLD	0.00E+000	9.88E-004
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	6.70E-001	1.47E-006	3.64E-007	2.91E-007
NP237	3.35E-003	2.39E-006	5.68E-007	3.22E-007
PU238	2.02E-003	3.50E-002	1.57E-002	1.23E-004
U238	<LLD	<LLD	0.00E+000	4.68E-006
PU239	1.96E+001	1.23E+000	2.80E-001	4.32E-003
PU240	1.29E+000	2.95E-001	6.84E-002	1.04E-003
AM241	7.88E-002	2.74E-001	6.31E-002	1.03E-004
PU241	2.18E-002	2.26E+000	5.39E-001	7.93E-003
PU242	9.11E-003	3.61E-005	9.12E-006	0.00E+000

Errors quoted at 1.000 sigma

Operator: Robert J. Haslett Date: 6-3-09

ITR: Philip Coutts Date: 6/12/09

Summed Segment Spectra Results
Category: Segmented

C:\Canberra\NDA2k\Data\00000371_CNTR0001_DCAT0002_PROC00AI.CNF

Elapsed Live Time: 118.18 sec Elapsed Real Time: 120.00 sec

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

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 9.190E-002 +/-	1.0%	< 1.351E-006	< 4.237E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 9.599E-002 +/-	1.1%	< 1.412E-006	< 1.517E-011
	Al-26	< 1.008E-001 +/-	6.5%	< 1.482E-006	< 5.302E-006
	K-40	1.968E+000 +/-	17.1%	2.895E-005	3.071E-001
	Co-57	< 5.558E-001 +/-	1.5%	< 8.173E-006	< 6.503E-011
	Co-60	1.839E-001 +/-	14.0%	2.705E-006	1.613E-010
	Se-75	< 3.707E-001 +/-	1.0%	< 5.452E-006	< 2.550E-011
	Kr-85	< 3.345E+001 +/-	2.4%	< 4.919E-004	< 8.430E-008
	Sr-90	< 1.207E-001 +/-	0.7%	< 1.775E-006	< 8.749E-010
	Sb-125	< 4.885E-001 +/-	1.3%	< 7.184E-006	< 4.700E-010
	Ba-133	< 2.951E-001 +/-	0.8%	< 4.339E-006	< 1.165E-009
	Cs-134	< 1.041E-001 +/-	0.7%	< 1.531E-006	< 7.944E-011
X	Cs-137				
	Eu-152	< 4.139E-001 +/-	1.7%	< 6.087E-006	< 2.326E-009
	Eu-154	< 2.741E-001 +/-	1.4%	< 4.031E-006	< 1.028E-009
	Ho-166m	< 1.637E-001 +/-	1.6%	< 2.408E-006	< 9.104E-008
	Bi-207	< 1.133E-001 +/-	0.7%	< 1.667E-006	< 2.063E-009
	Pb-210	< 5.852E+003 +/-	11.3%	< 8.606E-002	< 7.607E-005
	Ra-226	< 2.475E-001 +/-	1.3%	< 3.640E-006	< 2.475E-007
	Ac-227	< 1.345E+000 +/-	8.2%	< 1.978E-005	< 1.842E-008
	Th-230	< 6.768E+002 +/-	8.2%	< 9.952E-003	< 3.316E-002
	Pa-231	< 7.297E+000 +/-	11.1%	< 1.073E-004	< 1.525E-004
	Th-232	< 3.463E-001 +/-	1.1%	< 5.093E-006	< 3.121E+000
	U-232	< 3.463E-001 +/-	1.1%	< 5.093E-006	< 1.604E-008
	U-233	< 5.065E+003 +/-	1.4%	< 7.448E-002	< 5.166E-001
	Pa-234	< 5.178E-001 +/-	12.1%	< 7.614E-006	
	Pa-234m	< 6.465E+002 +/-	1.5%	< 9.508E-003	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	9.727E-001 +/-	15.0%	1.430E-005	4.445E-001
	Np-237	2.572E+000 +/-	7.6%	3.782E-005	3.601E-003
	Pu-238	< 3.113E+004 +/-	1.4%	< 4.578E-001	< 1.799E-003
	U-238	< 1.014E+001 +/-	1.6%	< 1.491E-004	< 2.981E+001
	Pu-239	1.135E+006 +/-	2.0%	1.668E+001	1.804E+001
	Pu-239B	< 2.886E+004 +/-	3.2%	< 4.245E-001	< 4.589E-001
	U-239	< 1.270E+004 +/-	15.0%	< 1.868E-001	
X	Pu-240				
	Am-241	2.538E+005 +/-	4.8%	3.732E+000	7.309E-002
	Am-241B	1.591E+005 +/-	2.5%	2.339E+000	4.581E-002
	Pu-241	2.603E+005 +/-	15.6%	3.828E+000	2.504E-003
	Pu-241B	6.864E+005 +/-	2.6%	1.009E+001	6.603E-003

Pu-242	< 0.000E+000 +/- 0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.431E+000 +/- 1.1%	< 2.104E-005	< 7.082E-006
Cm-243	< 1.476E+000 +/- 3.0%	< 2.170E-005	< 2.833E-008
Cm-244	< 1.289E+005 +/- 13.9%	< 1.896E+000	< 1.573E-003
Cm-245	< 2.769E+000 +/- 7.4%	< 4.071E-005	< 1.592E-005
Cm-247	< 2.191E-001 +/- 8.4%	< 3.221E-006	< 2.344E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.209E-001 +/-	3.1%	< 3.249E-006	< 5.346E-008
Cf-251	< 1.529E+000 +/-	5.3%	< 2.248E-005	< 9.555E-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	1.80E+001 +- 3.69E-001	2.99E+000 +- 3.65E-002

Beta: 2.83E+002 +- 4.46E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	2.05E+000 +- 4.04E-002
203.55	4.15E+000 +- 1.48E-001
375.05	8.30E+000 +- 1.34E-001
413.71	9.47E+000 +- 1.68E-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: LL85401489TRU Analysis Date: 5/4/2009

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

Net Weight	68000.0 g		
Pu mass	1.93E+001	+-	4.08E+000 g
TRU Alpha Activity	1.69E+000	+-	2.71E-001 Ci
TRU Activity Concentration	2.49E+004	+-	3.98E+003 nCi/g
Pu-239 Equivalent Activity	1.73E+000	+-	2.71E-001 Ci
Pu-239 FGE	1.84E+001	+-	4.08E+000 g
Decay heat	5.33E-002	+-	8.43E-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	1.21E-007
U233	<LLD	<LLD	0.00E+000	5.06E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	4.45E-001	9.73E-007	2.63E-007	4.77E-007
NP237	3.60E-003	2.57E-006	6.11E-007	6.30E-007
PU238	1.86E-003	3.22E-002	1.44E-002	1.66E-004
U238	<LLD	<LLD	0.00E+000	1.01E-005
PU239	1.80E+001	1.13E+000	2.56E-001	5.86E-003
PU240	1.18E+000	2.72E-001	6.26E-002	1.40E-003
AM241	7.31E-002	2.54E-001	5.84E-002	7.01E-005
PU241	2.00E-002	2.08E+000	4.94E-001	1.08E-002
PU242	8.39E-003	3.33E-005	8.36E-006	0.00E+000

Errors quoted at 1.000 sigma

Operator: Robert J Haslett Date: 6-3-09

ITR: Philip Coutts Date: 6/12/09

Automated Independent Technical Review

Counter ID: SGS with Trans. Count Type: Assay - 55 Gal Galv 23.8
Container ID: LL85401489TRU Assay Date: 5/4/2009
Waste Matrix Code:
Sequence Number: 371

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

Source of results is undefined.

DISPOSITION:

MGA Analysis:

Note: The measured and declared isotopics are inconsistent. OK

DISPOSITION:

Gamma Analysis:
Analysis Status: No errors. OK
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

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 Analysis Warnings: OK. No Activity.
Reference Peak Error 5: The reference peak correction was less than 1.
Segment: 15 Analysis Warnings:
Reference Peak Error 5: The reference peak correction was less than 1.
Segment: 16 OK OK. No Activity.

DISPOSITION:

Miscellaneous:

DISPOSITION:

Expert Review by: Robert J Haslett Jr Date: 6-3-09

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:	LL85401489TRU	Analysis Date:	5/4/2009

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

MGA version: MGA V9.63H CI

Measurement date = 5/4/09 Declared date = 5/4/09
Low energy spectrum sensitivity = 30.0% Total counts = 7.183E+005
High energy spectrum sensitivity : 10.0%

Pu g/cm2 = 0.3328 Cd g/cm2 = 1.8668 FWHM at 122 keV = 588 eV
QFIT = 1.00 FWHM at 208 keV = 723 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	0.000103	39.1	38.9	0.0929	39.5	0.00967	38.69	0.01052	42.11
Pu-239	1.000000	0.0	2.2	900.0786	7.0	93.69534	0.29	93.62256	0.29
Pu-240	0.065610	4.8	4.2	59.0541	7.8	6.14735	4.44	6.14770	4.44
Pu-241	0.001111	7.3	6.6	1.0000	0.0	0.10410	7.14	0.17571	12.05
Pu-242	(New alg.)			0.4184(11)		0.04356 (11)		0.04351 (10)	
Am-241	0.010827	2.4	1.1	9.7447	6.7	1.01439	2.27	1.03146	2.30
U-235	0.075292	26.9	27.0			7.05448	26.97	7.05419	26.96

Pu-240 effective (meas. date) = 6.245 +/- 4.84%
Am-241 separated about 48.548 +/- 0.524 years ago
Am/Pu-241 weight ratio = 9.74471 +/- 6.69%

Messages:

Lead x-rays detected.
Calculations in MGAABS didn't converge: results may be suspect.
Pu-241/Pu-239 efficiency changed in MGACAL by 6%. OK

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

Reviewed by: Robert J. Hazlett Jr. Date: 6-3-09

NDA 2000 Assay Report

Item Information

Item ID:	LL85234274TRU		Count Sequence Number:	372	
Operator:	RHWM2\RHWM				
Assay Start:	5/4/2009 1:24:46 PM				
Description 1:	LL85234274TRU				
Description 2:					
Location:	LLNL				
Comment:					
Matrix Type:	Lucite				
Container Type:	55 Gal Galv 23.8				
Weight:	Gross:	88.6 kg	Net:	64.8 kg	
Container:	Volume:	208.0 l	Full:	100.0 %	
Density:		0.310 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

Reviewed By: Robert J Hardtke 6-3-09

Segment 1 Results

Segment: 1 Detector: DET01 Position: 1
C:\Canberra\NDA2k\Data\00000372_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P001_S001

Acquisition Start: 5/4/2009 1:25:48 PM
Elapsed Live Time: 119.34 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.040 +/- 0.0044
SE-75	264.66	0.078 +/- 0.0015
SE-75	279.54	0.082 +/- 0.0018
SE-75	400.66	0.111 +/- 0.0026

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:27:40 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	307	69	1.22	120.82	2.957E-006	7.01	

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\00000372_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P002_S002

Acquisition Start: 5/4/2009 1:29:13 PM
Elapsed Live Time: 119.32 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.035 +/- 0.0044
SE-75	264.66	0.083 +/- 0.0016
SE-75	279.54	0.086 +/- 0.0019
SE-75	400.66	0.120 +/- 0.0027

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:27:44 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
59.64	Y	485	90	1.11	121.12	5.017E-005	5.46	

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\00000372_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P003_S003

Acquisition Start: 5/4/2009 1:32:25 PM
Elapsed Live Time: 119.30 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.062 +/- 0.0052
SE-75	264.66	0.117 +/- 0.0022
SE-75	279.54	0.122 +/- 0.0025
SE-75	400.66	0.158 +/- 0.0034

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:27:48 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
59.63	Y	786	130	1.08	121.10	4.794E-005	4.28	

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 4 Results

Segment: 4 Detector: DET01 Position: 4
C:\Canberra\NDA2k\Data\00000372_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P004_S004

Acquisition Start: 5/4/2009 1:35:36 PM
Elapsed Live Time: 119.30 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.096 +/- 0.0064
SE-75	264.66	0.160 +/- 0.0029
SE-75	279.54	0.162 +/- 0.0032
SE-75	400.66	0.206 +/- 0.0042

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:27:53 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
59.59	Y	623	160	0.97	121.03	3.200E-006	5.10	

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 **********

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\00000372_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P005_S005

Acquisition Start: 5/4/2009 1:38:48 PM
Elapsed Live Time: 119.29 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.026 +/- 0.0037
SE-75	264.66	0.056 +/- 0.0012
SE-75	279.54	0.058 +/- 0.0014
SE-75	400.66	0.082 +/- 0.0020

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:27:57 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
59.51	Y	626	152	1.13	120.86	4.074E-005	5.02	

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 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\00000372_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P006_S006

Acquisition Start: 5/4/2009 1:41:59 PM
Elapsed Live Time: 119.24 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.021 +/- 0.0035
SE-75	264.66	0.050 +/- 0.0010
SE-75	279.54	0.050 +/- 0.0013
SE-75	400.66	0.074 +/- 0.0019

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:28:04 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
59.63	Y	664	187	0.99	121.11	9.796E-007	5.04	
129.22	Y	32	122	0.68	260.17	1.421E-004	52.13	

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 **********

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\00000372_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P007_S007

Acquisition Start: 5/4/2009 1:45:10 PM
Elapsed Live Time: 119.19 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.103 +/- 0.0067
SE-75	264.66	0.171 +/- 0.0031
SE-75	279.54	0.176 +/- 0.0035
SE-75	400.66	0.223 +/- 0.0045

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:28:13 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
59.57	Y	1189	255	1.22	120.98	2.805E-006	3.66	
129.27	Y	53	189	1.02	260.26	2.137E-004	41.18	
413.97	Y	25	12	1.11	829.17	1.760E-004	28.32	

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	5.22E-002 +- 2.37E-002	1.94E-002 +- 5.02E-003

Beta: 1.69E+002 +- 9.44E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 2

Energy	Mass (g)
129.30	1.41E-002 +- 5.83E-003
413.71	3.47E-002 +- 9.85E-003

Segment 8 Results

Segment: 8 Detector: DET01 Position: 8
C:\Canberra\NDA2k\Data\00000372_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P008_S008

Acquisition Start: 5/4/2009 1:48:22 PM
Elapsed Live Time: 118.84 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.125 +/- 0.0072
SE-75	264.66	0.191 +/- 0.0035
SE-75	279.54	0.197 +/- 0.0039
SE-75	400.66	0.236 +/- 0.0048

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:28:19 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
	59.62	Y	3055	470	1.17	121.08	6.114E-005	2.35	
M	98.88	Y	477	671	1.34	199.54	1.673E-004	14.91	4.44
m	103.28	Y	473	583	1.35	208.33	1.769E-004	14.78	
	129.42	Y	241	399	1.06	260.56	2.204E-004	14.04	
M	203.63	Y	55	198	0.93	408.86	2.610E-004	21.71	1.13
m	208.06	Y	145	173	0.94	417.70	2.608E-004	11.17	
	332.84	Y	107	144	1.19	667.06	2.202E-004	19.33	
	345.05		94	102	1.07	691.46	2.153E-004	19.33	
M	375.09	Y	417	44	1.48	751.49	2.035E-004	15.83	0.77
m	380.26		98	38	1.49	761.82	2.015E-004	18.64	
m	382.90		87	32	1.49	767.09	2.005E-004	18.64	
	393.12		133	40	1.25	787.52	1.967E-004	11.44	
	413.79	Y	371	24	1.21	828.81	1.896E-004	5.72	
	451.38		51	14	0.74	903.93	1.780E-004	17.90	

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	1.26E+000 +- 1.39E-001	1.06E-001 +- 8.21E-003

Beta: 4.02E+002 +- 3.05E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	6.20E-002 +- 9.03E-003
203.55	1.32E-001 +- 2.87E-002
375.05	4.72E-001 +- 7.52E-002
413.71	4.78E-001 +- 2.88E-002

Segment 9 Results

Segment: 9 Detector: DET01 Position: 9
C:\Canberra\NDA2k\Data\00000372_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P009_S009

Acquisition Start: 5/4/2009 1:51:33 PM
Elapsed Live Time: 118.44 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.007 +/- 0.0014
SE-75	264.66	0.026 +/- 0.0007
SE-75	279.54	0.028 +/- 0.0009
SE-75	400.66	0.047 +/- 0.0014

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: 6/3/2009 2:30:00 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
	59.60	Y	5541	775	1.12	121.04	4.124E-006	1.88	
M	94.87		366	866	1.61	191.53	5.572E-005	10.69	2.73
m	98.94	Y	1512	1232	1.62	199.66	6.329E-005	7.24	
m	103.32	Y	1154	1040	1.62	208.41	7.119E-005	7.26	
	111.26		176	865	1.92	224.27	8.451E-005	26.32	
M	125.44	Y	175	455	0.89	252.62	1.041E-004	11.63	4.17
m	129.39	Y	533	481	0.89	260.50	1.085E-004	5.72	
M	203.62	Y	191	366	1.08	408.84	1.514E-004	9.58	1.10
m	208.08	Y	329	354	1.09	417.74	1.515E-004	6.96	
M	332.82	Y	266	155	1.35	667.02	1.342E-004	6.54	1.01
m	335.66	Y	138	159	1.35	672.69	1.338E-004	9.77	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	345.06		287	152	1.18	691.48	1.323E-004	8.87	
M	368.47	Y	103	90	1.35	738.25	1.286E-004	13.91	1.71
m	375.08	Y	862	77	1.36	751.46	1.275E-004	8.25	
m	380.20		154	57	1.36	761.70	1.267E-004	11.68	
m	382.89		144	60	1.36	767.08	1.263E-004	11.68	
	392.89		282	76	1.55	787.06	1.248E-004	7.85	
	413.77	Y	815	35	1.46	828.78	1.219E-004	3.86	
	422.60		52	31	1.24	846.42	1.208E-004	21.35	
	451.49		110	20	1.52	904.15	1.174E-004	11.44	
	662.45	Y	60	8	1.54	1325.71	9.881E-005	15.10	

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	3.68E+000 +- 2.49E-001	4.43E-001 +- 2.00E-002

Beta: 3.31E+002 +- 1.60E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	2.79E-001 +- 2.18E-002
203.55	7.93E-001 +- 8.08E-002
375.05	1.56E+000 +- 1.32E-001
413.71	1.63E+000 +- 7.23E-002

Segment 10 Results

Segment: 10 Detector: DET01 Position: 10
C:\Canberra\NDA2k\Data\00000372_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P010_S010

Acquisition Start: 5/4/2009 1:54:45 PM
Elapsed Live Time: 118.56 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.027 +/- 0.0041
SE-75	264.66	0.061 +/- 0.0012
SE-75	279.54	0.065 +/- 0.0016
SE-75	400.66	0.091 +/- 0.0022

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:30:05 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
	59.62	Y	5659	778	1.13	121.08	2.571E-006	1.86	
M	94.83		276	689	1.45	191.44	5.713E-005	12.11	2.07
m	98.87	Y	1319	1022	1.46	199.53	6.803E-005	7.86	
m	103.29	Y	969	929	1.47	208.36	8.037E-005	7.95	
	111.34		114	659	1.36	224.43	1.032E-004	34.06	
M	125.35	Y	147	501	0.94	252.42	1.408E-004	12.51	1.16
m	129.43	Y	467	406	0.94	260.58	1.507E-004	6.04	
M	203.68	Y	134	316	1.07	408.96	2.322E-004	11.66	1.29
m	208.05	Y	278	258	1.08	417.70	2.317E-004	7.58	
M	332.91	Y	254	125	1.45	667.20	1.714E-004	6.51	1.47
m	335.85	Y	121	127	1.45	673.07	1.700E-004	10.03	
	345.07		233	142	1.18	691.50	1.656E-004	10.39	
M	375.11	Y	667	75	1.30	751.52	1.523E-004	8.56	1.00
m	380.22		141	41	1.31	761.73	1.502E-004	11.84	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	382.74		151	33	1.31	766.77	1.492E-004	11.10	
	393.04		240	45	1.57	787.35	1.453E-004	7.90	
	413.77	Y	576	46	1.22	828.77	1.382E-004	4.71	
	422.68		48	25	1.44	846.58	1.355E-004	21.16	
	451.45		68	20	1.28	904.07	1.276E-004	15.72	
	662.35	Y	31	8	1.73	1325.51	9.644E-005	22.78	

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	2.31E+000 +- 1.79E-001	2.59E-001 +- 1.28E-002

Beta: 3.40E+002 +- 1.78E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.76E-001 +- 1.40E-002
203.55	3.62E-001 +- 4.40E-002
375.05	1.01E+000 +- 8.87E-002
413.71	1.02E+000 +- 5.27E-002

Segment 11 Results

Segment: 11 Detector: DET01 Position: 11
C:\Canberra\NDA2k\Data\00000372_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P011_S011

Acquisition Start: 5/4/2009 1:57:56 PM
Elapsed Live Time: 118.95 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.020 +/- 0.0035
SE-75	264.66	0.046 +/- 0.0010
SE-75	279.54	0.049 +/- 0.0013
SE-75	400.66	0.072 +/- 0.0019

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:30:10 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
	59.65	Y	4901	662	1.14	121.14	2.462E-006	1.95	
M	99.00	Y	403	475	1.29	199.77	7.034E-005	17.66	2.23
m	103.01	Y	363	397	1.30	207.78	8.107E-005	17.36	
M	125.37	Y	158	275	1.26	252.47	1.358E-004	24.20	0.57
m	129.42	Y	231	287	1.26	260.56	1.439E-004	22.48	
	208.11	Y	76	132	1.29	417.80	2.009E-004	24.58	
	375.08	Y	90	42	1.17	751.47	1.426E-004	15.27	
	382.87		28	24	0.55	767.03	1.404E-004	33.26	
	413.74	Y	110	10	1.17	828.71	1.328E-004	10.69	

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	2.44E-001 +- 4.29E-002	1.44E-001 +- 1.26E-002

Beta: 1.31E+002 +- 4.85E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 3

Energy	Mass (g)
129.30	9.11E-002 +- 2.10E-002
375.05	1.45E-001 +- 2.23E-002
413.71	2.03E-001 +- 2.21E-002

Segment 12 Results

Segment: 12 Detector: DET01 Position: 12
C:\Canberra\NDA2k\Data\00000372_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P012_S012

Acquisition Start: 5/4/2009 2:01:08 PM
Elapsed Live Time: 119.00 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.051 +/- 0.0049
SE-75	264.66	0.100 +/- 0.0019
SE-75	279.54	0.108 +/- 0.0023
SE-75	400.66	0.137 +/- 0.0030

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:30:14 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
	59.58	Y	6563	881	1.15	121.01	1.038E-004	1.77	
M	98.98	Y	386	332	1.39	199.74	1.374E-004	17.15	1.77
m	103.18	Y	345	308	1.40	208.12	1.423E-004	15.89	
	129.48	Y	89	256	0.92	260.68	1.702E-004	29.70	
	208.15	Y	81	69	1.43	417.88	2.135E-004	18.84	
	374.99	Y	40	26	1.20	751.28	1.788E-004	25.24	
	413.80	Y	26	9	0.88	828.85	1.685E-004	25.56	

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 **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	5.03E-002 +- 1.54E-002	3.70E-002 +- 5.85E-003

Beta: 6.76E+001 +- 6.67E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 3

Energy	Mass (g)
129.30	2.95E-002 +- 8.87E-003
375.05	5.15E-002 +- 1.30E-002
413.71	3.78E-002 +- 9.71E-003

Segment 13 Results

Segment: 13 Detector: DET01 Position: 13
C:\Canberra\NDA2k\Data\00000372_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P013_S013

Acquisition Start: 5/4/2009 2:04:20 PM
Elapsed Live Time: 119.03 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.065 +/- 0.0053
SE-75	264.66	0.116 +/- 0.0022
SE-75	279.54	0.119 +/- 0.0025
SE-75	400.66	0.155 +/- 0.0033

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:30:18 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
	59.58	Y	6500	982	1.12	121.01	9.393E-005	1.79	
M	98.86	Y	337	349	1.21	199.51	1.495E-004	16.33	1.12
m	103.07	Y	274	226	1.22	207.91	1.550E-004	16.49	
M	125.27	Y	121	131	1.14	252.27	1.798E-004	23.25	1.28
m	129.44	Y	192	199	1.15	260.61	1.835E-004	20.67	
	207.99	Y	45	94	0.99	417.57	2.197E-004	35.53	
	375.09	Y	47	23	1.16	751.49	1.789E-004	21.35	
	413.66	Y	26	12	0.65	828.57	1.679E-004	28.66	

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 -	5.06E-002 +- 6.90E-003

Beta: -4.79E+001 +- 5.25E+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\00000372_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P014_S014

Acquisition Start: 5/4/2009 2:07:32 PM
Elapsed Live Time: 119.15 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.186 +/- 0.0089
SE-75	264.66	0.272 +/- 0.0049
SE-75	279.54	0.280 +/- 0.0053
SE-75	400.66	0.329 +/- 0.0064

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:30:28 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	3779	598	1.06	121.06	4.529E-006	2.17	
M	125.32	Y	60	116	1.06	252.37	2.434E-004	28.54	1.01
m	129.51	Y	128	130	1.07	260.75	2.578E-004	24.23	
	374.80	Y	32	20	1.37	750.91	2.153E-004	27.29	

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	3.85E-002 +- 1.68E-002	3.04E-002 +- 5.57E-003

Beta: 4.06E+001 +- 7.24E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 2

Energy	Mass (g)
129.30	2.82E-002 +- 6.89E-003
375.05	3.46E-002 +- 9.46E-003

Segment 15 Results

Segment: 15 Detector: DET01 Position: 15
C:\Canberra\NDA2k\Data\00000372_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P015_S015

Acquisition Start: 5/4/2009 2:10:43 PM
Elapsed Live Time: 119.29 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.364 +/- 0.0131
SE-75	264.66	0.476 +/- 0.0085
SE-75	279.54	0.487 +/- 0.0090
SE-75	400.66	0.539 +/- 0.0102

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:30:32 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
59.56	Y	1159	227	1.15	120.97	4.985E-006	3.66	
103.12	Y	29	113	0.65	208.00	1.805E-004	55.63	

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\00000372_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P016_S016

Acquisition Start: 5/4/2009 2:13:55 PM
Elapsed Live Time: 119.34 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.411 +/- 0.0144
SE-75	264.66	0.541 +/- 0.0097
SE-75	279.54	0.549 +/- 0.0101
SE-75	400.66	0.599 +/- 0.0113

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:30:37 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
59.56	Y	236	84	1.11	120.96	1.009E-004	8.79	

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 **********

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\00000372_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	< 3.107E-002 +/-	2.1%	< 4.794E-007	< 1.432E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 3.863E-002 +/-	2.3%	< 5.961E-007	< 6.103E-012
	Al-26	< 4.034E-002 +/-	18.0%	< 6.226E-007	< 2.122E-006
	K-40	< 5.083E-001 +/-	5.6%	< 7.844E-006	< 7.930E-002
	Co-57	< 7.191E-002 +/-	4.5%	< 1.110E-006	< 8.413E-012
	Co-60	< 4.637E-002 +/-	2.0%	< 7.155E-007	< 4.066E-011
	Se-75	< 5.905E-002 +/-	2.3%	< 9.113E-007	< 4.063E-012
	Kr-85	< 7.296E+000 +/-	3.2%	< 1.126E-004	< 1.838E-008
	Sr-90	2.479E-001 +/-	12.8%	3.825E-006	1.797E-009
	Sb-125	< 7.371E-002 +/-	2.2%	< 1.137E-006	< 7.091E-011
	Ba-133	< 4.928E-002 +/-	1.8%	< 7.605E-007	< 1.947E-010
	Cs-134	< 2.751E-002 +/-	2.8%	< 4.245E-007	< 2.099E-011
?	Cs-137	2.479E-001 +/-	12.8%	3.825E-006	2.826E-009
	Eu-152	< 9.092E-002 +/-	1.8%	< 1.403E-006	< 5.110E-010
	Eu-154	< 8.738E-002 +/-	2.1%	< 1.348E-006	< 3.277E-010
	Ho-166m	< 3.597E-002 +/-	3.7%	< 5.551E-007	< 2.000E-008
	Bi-207	< 2.247E-002 +/-	2.8%	< 3.468E-007	< 4.090E-010
	Pb-210	< 4.184E+003 +/-	309.7%	< 6.457E-002	< 5.439E-005
	Ra-226	< 5.692E-002 +/-	2.5%	< 8.784E-007	< 5.692E-008
	Ac-227	< 2.223E-001 +/-	8.5%	< 3.431E-006	< 3.046E-009
	Th-230	< 8.667E+001 +/-	99.7%	< 1.337E-003	< 4.247E-003
	Pa-231	< 1.184E+000 +/-	11.3%	< 1.827E-005	< 2.475E-005
	Th-232	< 6.141E-002 +/-	2.6%	< 9.477E-007	< 5.533E-001
	U-232	< 6.141E-002 +/-	2.6%	< 9.477E-007	< 2.843E-009
	U-233	< 7.031E+002 +/-	4.1%	< 1.085E-002	< 7.172E-002
	Pa-234	< 1.572E-001 +/-	43.9%	< 2.426E-006	
	Pa-234m	< 2.174E+002 +/-	2.3%	< 3.355E-003	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 6.108E-002 +/-	4.1%	< 9.426E-007	< 2.791E-002
	Np-237	< 9.663E-002 +/-	2.2%	< 1.491E-006	< 1.353E-004
	Pu-238	< 4.543E+003 +/-	4.3%	< 7.010E-002	< 2.626E-004
	U-238	< 3.868E+000 +/-	2.4%	< 5.969E-005	< 1.137E+001

Pu-239	4.841E+005	+/-	4.4%	7.470E+000	7.697E+000
Pu-239B	< 3.490E+003	+/-	18.8%	< 5.386E-002	< 5.548E-002
U-239	< 2.495E+004	+/-	368.5%	< 3.851E-001	
Pu-240	5.195E+002	+/-	55.9%	8.017E-003	2.260E-003
Am-241	6.102E+004	+/-	12.3%	9.417E-001	1.757E-002
Am-241B	5.016E+004	+/-	7.0%	7.741E-001	1.445E-002
Pu-241	< 2.315E+004	+/-	4.3%	< 3.572E-001	< 2.227E-004
Pu-241B	2.119E+005	+/-	5.1%	3.270E+000	2.039E-003
Pu-242	< 0.000E+000	+/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 2.294E-001	+/-	2.2%	< 3.539E-006	< 1.135E-006
Cm-243	< 2.366E-001	+/-	3.6%	< 3.651E-006	< 4.542E-009
Cm-244	< 2.717E+004	+/-	14.2%	< 4.192E-001	< 3.314E-004
Cm-245	< 4.010E-001	+/-	8.4%	< 6.188E-006	< 2.306E-006
Cm-247	< 5.030E-002	+/-	8.7%	< 7.763E-007	< 5.382E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 3.915E-002 +/-	3.5%	< 6.041E-007	< 9.474E-009
Cf-251	< 2.234E-001 +/-	6.6%	< 3.447E-006	< 1.396E-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

********** 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: LL85234274TRU Analysis Date: 5/4/2009

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

Net Weight	64800.0 g		
Pu mass	8.19E+000	+- 1.72E+000	g
TRU Alpha Activity	7.06E-001	+- 1.13E-001	Ci
TRU Activity Concentration	1.09E+004	+- 1.75E+003	nCi/g
Pu-239 Equivalent Activity	7.19E-001	+- 1.13E-001	Ci
Pu-239 FGE	7.73E+000	+- 1.72E+000	g
Decay heat	2.22E-002	+- 3.52E-003	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	1.80E-009	2.48E-007	6.29E-008	0.00E+000
CS137	2.83E-009	2.48E-007	6.29E-008	4.87E-008
U233	<LLD	<LLD	0.00E+000	7.03E-004
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	6.11E-008
NP237	0.00E+000	0.00E+000	0.00E+000	9.66E-008
PU238	2.90E-003	5.01E-002	1.37E-002	3.62E-004
U238	<LLD	<LLD	0.00E+000	3.87E-006
PU239	7.70E+000	4.84E-001	1.08E-001	3.49E-003
PU240	4.83E-001	1.11E-001	2.59E-002	8.02E-004
AM241	1.76E-002	6.10E-002	1.53E-002	4.41E-005
PU241	8.46E-003	8.79E-001	2.14E-001	6.34E-003
PU242	3.10E-003	1.23E-005	3.12E-006	0.00E+000

Errors quoted at 1.000 sigma

Operator: Robert J Haught Date: 6-3-09

ITR: [signature] Date: 6/12/09

Summed Segment Spectra Results
Category: Segmented

C:\Canberra\NDA2k\Data\00000372_CNTR0001_DCAT0002_PROC00AI.CNF

Elapsed Live Time: 118.98 sec Elapsed Real Time: 120.00 sec

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

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 9.789E-002 +/-	1.0%	< 1.511E-006	< 4.513E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	1.818E-001 +/-	19.6%	2.805E-006	2.872E-011
	Al-26	< 9.644E-002 +/-	6.6%	< 1.488E-006	< 5.073E-006
	K-40	1.922E+000 +/-	16.6%	2.966E-005	2.998E-001
	Co-57	< 3.908E-001 +/-	1.5%	< 6.031E-006	< 4.572E-011
	Co-60	1.719E-001 +/-	15.0%	2.653E-006	1.508E-010
	Se-75	< 2.588E-001 +/-	1.0%	< 3.994E-006	< 1.780E-011
	Kr-85	< 3.507E+001 +/-	2.4%	< 5.412E-004	< 8.837E-008
	Sr-90	1.696E-001 +/-	47.1%	2.617E-006	1.230E-009
	Sb-125	< 3.328E-001 +/-	1.3%	< 5.136E-006	< 3.201E-010
	Ba-133	< 2.117E-001 +/-	0.8%	< 3.267E-006	< 8.363E-010
	Cs-134	< 1.059E-001 +/-	0.8%	< 1.635E-006	< 8.082E-011
	Cs-137	1.696E-001 +/-	47.1%	2.617E-006	1.933E-009
	Eu-152	< 4.024E-001 +/-	1.7%	< 6.210E-006	< 2.261E-009
	Eu-154	< 4.189E-001 +/-	1.4%	< 6.465E-006	< 1.571E-009
	Ho-166m	< 1.538E-001 +/-	1.5%	< 2.374E-006	< 8.552E-008
	Bi-207	< 9.300E-002 +/-	0.7%	< 1.435E-006	< 1.693E-009
	Pb-210	< 4.202E+003 +/-	11.3%	< 6.484E-002	< 5.462E-005
	Ra-226	< 2.365E-001 +/-	1.3%	< 3.650E-006	< 2.365E-007
	Ac-227	< 9.604E-001 +/-	8.2%	< 1.482E-005	< 1.316E-008
	Th-230	< 4.659E+002 +/-	8.2%	< 7.190E-003	< 2.283E-002
	Pa-231	< 5.226E+000 +/-	11.1%	< 8.064E-005	< 1.092E-004
	Th-232	< 3.280E-001 +/-	1.1%	< 5.061E-006	< 2.955E+000
	U-232	< 3.280E-001 +/-	1.1%	< 5.061E-006	< 1.519E-008
	U-233	< 3.523E+003 +/-	1.4%	< 5.437E-002	< 3.594E-001
	Pa-234	< 5.235E-001 +/-	12.1%	< 8.078E-006	
	Pa-234m	< 6.865E+002 +/-	1.5%	< 1.059E-002	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 2.973E-001 +/-	1.7%	< 4.588E-006	< 1.359E-001
	Np-237	5.532E-001 +/-	23.8%	8.537E-006	7.745E-004
	Pu-238	< 2.250E+004 +/-	1.4%	< 3.472E-001	< 1.300E-003
	U-238	< 1.098E+001 +/-	1.6%	< 1.694E-004	< 3.228E+001
	Pu-239	3.922E+005 +/-	3.0%	6.053E+000	6.236E+000
	Pu-239B	< 1.746E+004 +/-	3.2%	< 2.695E-001	< 2.776E-001
	U-239	< 9.293E+003 +/-	14.9%	< 1.434E-001	
X	Pu-240				
	Am-241	6.416E+004 +/-	23.6%	9.902E-001	1.848E-002
	Am-241B	5.006E+004 +/-	3.5%	7.726E-001	1.442E-002
	Pu-241	< 1.183E+005 +/-	1.7%	< 1.825E+000	< 1.138E-003
	Pu-241B	2.065E+005 +/-	4.2%	3.187E+000	1.987E-003

Pu-242	< 0.000E+000 +/- 0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.049E+000 +/- 1.1%	< 1.618E-005	< 5.190E-006
Cm-243	< 1.081E+000 +/- 3.0%	< 1.669E-005	< 2.076E-008
Cm-244	< 1.238E+005 +/- 13.9%	< 1.911E+000	< 1.511E-003
Cm-245	< 1.905E+000 +/- 7.4%	< 2.940E-005	< 1.095E-005
Cm-247	< 1.824E-001 +/- 8.4%	< 2.814E-006	< 1.951E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.667E-001 +/-	3.1%	< 2.572E-006	< 4.034E-008
Cf-251	< 1.040E+000 +/-	5.3%	< 1.606E-005	< 6.502E-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	6.24E+000 +- 1.86E-001	1.02E+000 +- 1.83E-002

Beta: 2.79E+002 +- 6.30E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	7.27E-001 +- 1.99E-002
203.55	1.47E+000 +- 9.26E-002
375.05	3.00E+000 +- 6.95E-002
413.71	3.16E+000 +- 8.65E-002

********** 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: LL85234274TRU Analysis Date: 5/4/2009

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

Net Weight	64800.0 g		
Pu mass	6.64E+000	+-	1.38E+000 g
TRU Alpha Activity	5.87E-001	+-	9.22E-002 Ci
TRU Activity Concentration	9.06E+003	+-	1.42E+003 nCi/g
Pu-239 Equivalent Activity	5.97E-001	+-	9.22E-002 Ci
Pu-239 FGE	6.26E+000	+-	1.38E+000 g
Decay heat	1.85E-002	+-	2.87E-003 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	1.23E-009	1.70E-007	8.82E-008	0.00E+000
CS137	1.93E-009	1.70E-007	8.82E-008	1.19E-007
U233	<LLD	<LLD	0.00E+000	3.52E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.97E-007
NP237	7.74E-004	5.53E-007	1.79E-007	4.21E-007
PU238	2.35E-003	4.06E-002	1.11E-002	4.33E-004
U238	<LLD	<LLD	0.00E+000	1.10E-005
PU239	6.24E+000	3.92E-001	8.68E-002	4.18E-003
PU240	3.92E-001	9.00E-002	2.07E-002	9.58E-004
AM241	1.85E-002	6.42E-002	2.07E-002	4.45E-005
PU241	6.85E-003	7.12E-001	1.72E-001	7.58E-003
PU242	2.51E-003	9.97E-006	2.51E-006	0.00E+000

Errors quoted at 1.000 sigma

Operator: Robert J Hazlett Date: 6-3-09

ITR: Philip Calvin Date: 6/12/09

Automated Independent Technical Review

Counter ID: SGS with Trans. Count Type: Assay - 55 Gal Galv 23.8
Container ID: LL85234274TRU Assay Date: 5/4/2009
Waste Matrix Code:
Sequence Number: 372

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

Source of results is undefined.

DISPOSITION:

MGA Analysis:

Note: The measured and declared isotopics are inconsistent. OK

DISPOSITION:

Gamma Analysis:
Analysis Status: No errors. OK
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: 6-3-09

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:	LL85234274TRU	Analysis Date:	5/4/2009

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

MGA version: MGA V9.63H CI

Measurement date = 5/4/09 Declared date = 5/4/09
Low energy spectrum sensitivity = 30.0% Total counts = 3.764E+005
High energy spectrum sensitivity : 10.0%

Pu g/cm2 = 0.3509 Cd g/cm2 = 1.7540 FWHM at 122 keV = 573 eV
QFIT = 1.01 FWHM at 208 keV = 711 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	0.000377	16.3	16.0	0.3428	18.3	0.03537	15.85	0.03849	17.25
Pu-239	1.000000	0.0	2.9	910.2362	9.2	93.92558	0.41	93.85126	0.41
Pu-240	0.062795	7.0	6.3	57.1579	10.8	5.89802	6.42	5.89828	6.42
Pu-241	0.001099	10.0	8.7	1.0000	0.0	0.10319	9.61	0.17418	16.23
Pu-242	(New alg.)			0.3667(12)		0.03783	(12)	0.03779	(11)
Am-241	0.008697	3.5	1.5	7.9159	8.9	0.81683	3.24	0.83044	3.29

Pu-240 effective (meas. date) = 6.051 +/- 6.81%
Am-241 separated about 45.295 +/- 0.710 years ago
Am/Pu-241 weight ratio = 7.91594 +/- 8.81%

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 7%. OK

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

Reviewed by: Robert J. Hersloff Date: 6-3-09

NDA 2000 Assay Report

Item Information

Item ID:	LL85234274TRU-R	Count Sequence Number:	373		
Operator:	RHWM2\RHWM				
Assay Start:	5/4/2009 2:26:42 PM				
Description 1:	LL85234274TRU-R				
Description 2:					
Location:	LLNL				
Comment:					
Matrix Type:	Lucite				
Container Type:	55 Gal Galv 23.8				
Weight:	Gross:	88.6	kg	Net:	64.8 kg
Container:	Volume:	208.0	l	Full:	100.0 %
Density:		0.310 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

Reviewed By: Robert J. Hamlett 6-3-09

Segment 1 Results

Segment: 1 Detector: DET01 Position: 1
C:\Canberra\NDA2k\Data\00000373_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P001_S001

Acquisition Start: 5/4/2009 2:27:43 PM
Elapsed Live Time: 119.33 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.042 +/- 0.0042
SE-75	264.66	0.077 +/- 0.0015
SE-75	279.54	0.082 +/- 0.0018
SE-75	400.66	0.111 +/- 0.0026

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:35:55 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	290	90	0.89	121.00	3.023E-006	7.61	

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\00000373_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P002_S002

Acquisition Start: 5/4/2009 2:31:07 PM
Elapsed Live Time: 119.31 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.033 +/- 0.0044
SE-75	264.66	0.083 +/- 0.0016
SE-75	279.54	0.087 +/- 0.0019
SE-75	400.66	0.119 +/- 0.0027

Errors quoted at 1.000 sigma

Peak Analysis Results

Peak Analysis Performed on: 6/3/2009 2:36:01 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
59.63	Y	473	118	0.95	121.10	4.949E-005	5.76	

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\00000373_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P003_S003

Acquisition Start: 5/4/2009 2:34:39 PM
Elapsed Live Time: 119.30 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.057 +/- 0.0052
SE-75	264.66	0.117 +/- 0.0022
SE-75	279.54	0.121 +/- 0.0025
SE-75	400.66	0.158 +/- 0.0034

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:36:05 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
59.58	Y	680	136	1.18	121.01	4.676E-005	4.69	
129.32	Y	60	74	1.10	260.37	1.799E-004	24.26	

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

Segment 4 Results

Segment: 4 Detector: DET01 Position: 4
C:\Canberra\NDA2k\Data\00000373_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P004_S004

Acquisition Start: 5/4/2009 2:37:50 PM
Elapsed Live Time: 119.29 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.097 +/- 0.0064
SE-75	264.66	0.161 +/- 0.0030
SE-75	279.54	0.167 +/- 0.0033
SE-75	400.66	0.210 +/- 0.0043

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:36:10 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
59.72	Y	704	156	1.12	121.29	3.277E-006	4.70	
129.29	Y	55	67	0.82	260.31	2.100E-004	24.38	

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

Segment 5 Results

Segment: 5 Detector: DET01 Position: 5
C:\Canberra\NDA2k\Data\00000373_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P005_S005

Acquisition Start: 5/4/2009 2:41:02 PM
Elapsed Live Time: 119.27 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.034 +/- 0.0036
SE-75	264.66	0.057 +/- 0.0012
SE-75	279.54	0.061 +/- 0.0015
SE-75	400.66	0.086 +/- 0.0021

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:36:14 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
59.55	Y	595	151	1.24	120.94	4.374E-005	5.20	

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\00000373_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P006_S006

Acquisition Start: 5/4/2009 2:44:14 PM
Elapsed Live Time: 119.25 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.020 +/- 0.0034
SE-75	264.66	0.050 +/- 0.0011
SE-75	279.54	0.054 +/- 0.0013
SE-75	400.66	0.074 +/- 0.0019

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:36:18 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
59.58	Y	732	174	1.24	121.00	9.530E-007	4.66	

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 **********

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\00000373_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P007_S007

Acquisition Start: 5/4/2009 2:47:25 PM
Elapsed Live Time: 119.18 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.116 +/- 0.0068
SE-75	264.66	0.175 +/- 0.0032
SE-75	279.54	0.180 +/- 0.0035
SE-75	400.66	0.218 +/- 0.0044

Errors quoted at 1.000 sigma

Peak Analysis Results

Peak Analysis Performed on: 6/3/2009 2:36:22 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
59.55	Y	1237	250	1.17	120.95	2.912E-006	3.56	
99.06		90	283	0.76	199.91	1.031E-004	28.52	

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 8 Results

Segment: 8 Detector: DET01 Position: 8
C:\Canberra\NDA2k\Data\00000373_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P008_S008

Acquisition Start: 5/4/2009 2:50:37 PM
Elapsed Live Time: 118.84 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.135 +/- 0.0074
SE-75	264.66	0.194 +/- 0.0035
SE-75	279.54	0.195 +/- 0.0038
SE-75	400.66	0.240 +/- 0.0048

Errors quoted at 1.000 sigma

Peak Analysis Results

Peak Analysis Performed on: 6/3/2009 2:36:26 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
	59.63		3050	464	1.08	121.11	6.277E-005	2.35	
M	98.86	Y	593	671	1.37	199.50	1.712E-004	16.31	1.73
m	103.21	Y	442	537	1.38	208.20	1.809E-004	16.42	
M	125.30		112	341	0.90	252.34	2.199E-004	22.41	0.72
m	129.36	Y	287	274	0.91	260.45	2.253E-004	19.17	
	208.01	Y	136	249	1.33	417.60	2.633E-004	19.70	
	333.05	Y	77	140	1.29	667.47	2.204E-004	25.82	
	345.05		108	101	1.27	691.45	2.157E-004	17.15	
M	375.14	Y	385	64	1.26	751.58	2.043E-004	5.29	1.34
m	380.24		84	39	1.26	761.78	2.024E-004	11.28	
m	382.81		92	32	1.26	766.91	2.014E-004	10.57	
	393.03		141	40	1.68	787.34	1.977E-004	11.00	
	413.86	Y	407	34	1.51	828.96	1.906E-004	5.58	
	451.43		56	16	1.20	904.04	1.789E-004	17.42	

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	1.21E+000 +- 1.39E-001	2.13E-001 +- 1.13E-002

Beta: 3.67E+002 +- 3.93E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 3

Energy	Mass (g)
129.30	7.22E-002 +- 1.41E-002
375.05	4.35E-001 +- 2.42E-002
413.71	5.22E-001 +- 3.08E-002

Segment 9 Results

Segment: 9 Detector: DET01 Position: 9
C:\Canberra\NDA2k\Data\00000373_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P009_S009

Acquisition Start: 5/4/2009 2:53:48 PM
Elapsed Live Time: 118.42 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.010 +/- 0.0014
SE-75	264.66	0.026 +/- 0.0006
SE-75	279.54	0.029 +/- 0.0009
SE-75	400.66	0.048 +/- 0.0014

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:37:08 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
	59.59	Y	5703	727	1.16	121.02	4.429E-006	1.85	
M	98.96	Y	1019	1156	1.21	199.70	6.800E-005	3.78	6.00
m	103.35	Y	952	1038	1.22	208.46	7.646E-005	3.77	
	111.09		166	767	1.00	223.94	9.040E-005	25.44	
M	125.41	Y	147	548	1.09	252.56	1.116E-004	18.76	0.92
m	129.36	Y	617	454	1.10	260.45	1.163E-004	13.63	
M	203.63	Y	145	334	0.98	408.85	1.528E-004	12.28	1.69
m	208.03	Y	314	328	0.98	417.65	1.527E-004	7.46	
M	332.82	Y	298	169	1.27	667.01	1.354E-004	6.42	1.21
m	335.99	Y	92	163	1.27	673.35	1.349E-004	13.31	
	345.09		276	168	1.34	691.54	1.334E-004	9.60	
M	375.06	Y	718	136	1.23	751.43	1.286E-004	3.99	1.43
m	380.36		131	79	1.23	762.02	1.277E-004	9.42	
m	382.72		142	74	1.23	766.72	1.274E-004	8.83	

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
392.92		299	57	1.53	787.11	1.258E-004	7.11	
413.79	Y	766	44	1.33	828.82	1.229E-004	4.04	
422.69		62	42	1.31	846.60	1.218E-004	20.70	
451.36		82	24	1.31	903.89	1.184E-004	14.57	
662.54	Y	30	16	1.33	1325.89	9.952E-005	28.55	

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	3.09E+000 +- 2.61E-001	7.98E-001 +- 2.87E-002

Beta: 3.14E+002 +- 2.72E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	3.01E-001 +- 4.34E-002
203.55	5.99E-001 +- 7.64E-002
375.05	1.29E+000 +- 5.73E-002
413.71	1.52E+000 +- 6.97E-002

Segment 10 Results

Segment: 10 Detector: DET01 Position: 10
C:\Canberra\NDA2k\Data\00000373_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P010_S010

Acquisition Start: 5/4/2009 2:57:00 PM
Elapsed Live Time: 118.56 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.023 +/- 0.0041
SE-75	264.66	0.059 +/- 0.0012
SE-75	279.54	0.065 +/- 0.0016
SE-75	400.66	0.091 +/- 0.0022

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:37:12 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
	59.61	Y	5549	777	1.11	121.06	2.473E-006	1.88	
M	98.93	Y	1030	812	1.33	199.63	6.581E-005	3.53	6.03
m	103.31	Y	925	939	1.34	208.39	7.765E-005	3.66	
M	125.40	Y	176	480	1.01	252.54	1.362E-004	10.88	0.69
m	129.35	Y	463	478	1.02	260.43	1.454E-004	5.88	
M	203.55	Y	137	300	1.25	408.69	2.289E-004	23.82	0.76
m	208.16	Y	254	330	1.25	417.90	2.286E-004	22.17	
	312.12	Y	50	103	0.98	625.65	1.820E-004	32.42	
M	332.80	Y	256	118	1.26	666.98	1.714E-004	6.67	1.74
m	335.74	Y	84	132	1.27	672.85	1.700E-004	13.50	
	345.11		206	126	0.98	691.57	1.655E-004	11.00	
M	375.09	Y	656	82	1.32	751.48	1.522E-004	4.03	1.45
m	380.06		135	86	1.33	761.42	1.502E-004	9.12	
m	382.86		100	73	1.33	767.01	1.491E-004	10.92	

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
392.96		219	53	1.43	787.20	1.452E-004	8.60	
413.80	Y	620	35	1.22	828.84	1.381E-004	4.42	
423.00		32	37	0.93	847.21	1.353E-004	33.85	
451.59		90	14	1.16	904.35	1.275E-004	12.56	
662.15	Y	35	14	1.54	1325.12	9.639E-005	23.72	

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	2.47E+000 +- 1.58E-001	3.13E-001 +- 1.33E-002

Beta: 3.40E+002 +- 1.69E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.81E-001 +- 1.46E-002
203.55	3.76E-001 +- 9.05E-002
375.05	9.93E-001 +- 4.46E-002
413.71	1.10E+000 +- 5.40E-002

Segment 11 Results

Segment: 11 Detector: DET01 Position: 11
C:\Canberra\NDA2k\Data\00000373_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P011_S011

Acquisition Start: 5/4/2009 3:00:11 PM
Elapsed Live Time: 118.97 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.012 +/- 0.0033
SE-75	264.66	0.046 +/- 0.0010
SE-75	279.54	0.049 +/- 0.0013
SE-75	400.66	0.070 +/- 0.0018

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:37:17 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
	59.61	Y	4831	701	1.12	121.07	2.189E-006	1.97	
M	98.89	Y	490	520	1.24	199.55	6.292E-005	13.25	1.52
m	103.10	Y	396	432	1.25	207.96	7.305E-005	13.56	
M	125.47	Y	106	249	1.04	252.67	1.224E-004	88.30	0.64
m	129.40	Y	210	271	1.05	260.53	1.294E-004	84.92	
	208.26	Y	70	100	0.98	418.12	1.969E-004	23.19	
	333.06	Y	62	64	1.22	667.50	1.549E-004	23.78	
	374.98	Y	136	30	1.45	751.26	1.418E-004	10.47	
	413.75	Y	108	12	1.19	828.73	1.319E-004	10.98	

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	2.90E-001 +- 1.05E-001	2.05E-001 +- 1.59E-002

Beta: 1.28E+002 +- 1.37E+002 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 3

Energy	Mass (g)
129.30	9.20E-002 +- 7.83E-002
375.05	2.21E-001 +- 2.36E-002
413.71	2.00E-001 +- 2.23E-002

Segment 12 Results

Segment: 12 Detector: DET01 Position: 12
C:\Canberra\NDA2k\Data\00000373_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P012_S012

Acquisition Start: 5/4/2009 3:03:23 PM
Elapsed Live Time: 118.99 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.052 +/- 0.0050
SE-75	264.66	0.103 +/- 0.0020
SE-75	279.54	0.108 +/- 0.0023
SE-75	400.66	0.141 +/- 0.0031

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:37:21 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
	59.64	Y	6295	1009	1.06	121.13	1.045E-004	1.82	
M	98.90	Y	422	373	1.34	199.58	1.382E-004	15.53	1.51
m	103.03	Y	359	328	1.34	207.82	1.431E-004	14.85	
	129.34	Y	94	214	1.07	260.40	1.712E-004	24.94	
	208.01	Y	58	90	0.95	417.61	2.150E-004	27.30	
	374.93	Y	46	18	1.04	751.17	1.800E-004	20.33	

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	8.18E-002 +- 2.77E-002	3.94E-002 +- 6.58E-003

Beta: 1.25E+002 +- 6.42E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 2

Energy	Mass (g)
129.30	3.11E-002 +- 7.87E-003
375.05	5.86E-002 +- 1.20E-002

Segment 13 Results

Segment: 13 Detector: DET01 Position: 13
C:\Canberra\NDA2k\Data\00000373_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P013_S013

Acquisition Start: 5/4/2009 3:06:35 PM
Elapsed Live Time: 119.02 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.067 +/- 0.0053
SE-75	264.66	0.116 +/- 0.0022
SE-75	279.54	0.118 +/- 0.0025
SE-75	400.66	0.157 +/- 0.0034

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:37:26 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
	59.61	Y	6500	913	1.10	121.07	9.506E-005	1.78	
M	99.01	Y	377	289	1.27	199.80	1.513E-004	17.16	2.03
m	102.99	Y	300	280	1.28	207.74	1.566E-004	16.33	
M	125.47	Y	75	145	0.93	252.68	1.818E-004	15.88	2.10
m	129.37	Y	147	152	0.93	260.47	1.854E-004	10.34	
	375.18	Y	55	24	0.87	751.67	1.796E-004	19.34	
	413.76	Y	42	9	1.00	828.77	1.687E-004	18.72	

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	7.69E-002 +- 1.60E-002	4.99E-002 +- 4.33E-003

Beta: 6.87E+001 +- 3.35E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 3

Energy	Mass (g)
129.30	4.51E-002 +- 4.98E-003
375.05	7.02E-002 +- 1.36E-002
413.71	6.10E-002 +- 1.15E-002

Segment 14 Results

Segment: 14 Detector: DET01 Position: 14
C:\Canberra\NDA2k\Data\00000373_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P014_S014

Acquisition Start: 5/4/2009 3:09:46 PM
Elapsed Live Time: 119.16 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.177 +/- 0.0087
SE-75	264.66	0.267 +/- 0.0048
SE-75	279.54	0.274 +/- 0.0052
SE-75	400.66	0.325 +/- 0.0063

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:37:31 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
	59.60	Y	3948	600	0.99	121.04	4.437E-006	2.13	
M	99.04	Y	214	199	1.05	199.86	1.262E-004	17.41	1.27
m	103.07	Y	182	204	1.06	207.91	1.452E-004	17.12	
	129.42	Y	80	89	1.05	260.56	2.534E-004	19.90	
	375.05	Y	29	16	0.64	751.41	2.140E-004	27.17	
	511.36		35	6	1.27	1023.80	1.640E-004	19.63	

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	4.28E-002 +- 1.84E-002	1.99E-002 +- 3.33E-003

Beta: 1.13E+002 +- 6.69E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 2

Energy	Mass (g)
129.30	1.78E-002 +- 3.60E-003
375.05	3.16E-002 +- 8.62E-003

Segment 15 Results

Segment: 15 Detector: DET01 Position: 15
C:\Canberra\NDA2k\Data\00000373_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P015_S015

Acquisition Start: 5/4/2009 3:12:58 PM
Elapsed Live Time: 119.27 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.330 +/- 0.0129
SE-75	264.66	0.480 +/- 0.0086
SE-75	279.54	0.486 +/- 0.0090
SE-75	400.66	0.539 +/- 0.0102

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:37:35 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
59.62	Y	1207	253	1.09	121.09	4.828E-006	3.63	
102.95	Y	27	103	0.61	207.67	1.730E-004	57.47	

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\00000373_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P016_S016

Acquisition Start: 5/4/2009 3:16:09 PM
Elapsed Live Time: 119.32 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.394 +/- 0.0143
SE-75	264.66	0.543 +/- 0.0097
SE-75	279.54	0.554 +/- 0.0102
SE-75	400.66	0.609 +/- 0.0115

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:37:40 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
59.75	Y	247	109	1.14	121.35	9.914E-005	9.04	

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 **********

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:

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

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 2.856E-002 +/-	2.3%	< 4.407E-007	< 1.317E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 3.527E-002 +/-	2.0%	< 5.443E-007	< 5.572E-012
	Al-26	< 3.226E-002 +/-	19.8%	< 4.979E-007	< 1.697E-006
	K-40	< 6.259E-001 +/-	5.3%	< 9.659E-006	< 9.764E-002
	Co-57	< 7.039E-002 +/-	4.5%	< 1.086E-006	< 8.236E-012
	Co-60	< 5.502E-002 +/-	2.0%	< 8.491E-007	< 4.825E-011
	Se-75	< 6.190E-002 +/-	2.3%	< 9.552E-007	< 4.259E-012
	Kr-85	< 6.758E+000 +/-	3.6%	< 1.043E-004	< 1.703E-008
	Sr-90	1.755E-001 +/-	18.4%	2.709E-006	1.273E-009
	Sb-125	< 8.066E-002 +/-	2.2%	< 1.245E-006	< 7.759E-011
	Ba-133	< 4.952E-002 +/-	1.8%	< 7.642E-007	< 1.956E-010
	Cs-134	< 2.184E-002 +/-	2.1%	< 3.371E-007	< 1.666E-011
?	Cs-137	1.755E-001 +/-	18.4%	2.709E-006	2.001E-009
	Eu-152	< 1.124E-001 +/-	3.8%	< 1.735E-006	< 6.317E-010
	Eu-154	< 9.049E-002 +/-	1.9%	< 1.396E-006	< 3.393E-010
	Ho-166m	< 4.155E-002 +/-	2.6%	< 6.412E-007	< 2.310E-008
	Bi-207	< 2.044E-002 +/-	2.1%	< 3.154E-007	< 3.719E-010
	Pb-210	< 4.001E+003 +/-	309.7%	< 6.175E-002	< 5.202E-005
	Ra-226	< 4.237E-002 +/-	2.5%	< 6.539E-007	< 4.237E-008
	Ac-227	< 1.998E-001 +/-	8.5%	< 3.084E-006	< 2.738E-009
	Th-230	< 9.307E+001 +/-	99.7%	< 1.436E-003	< 4.560E-003
	Pa-231	< 1.195E+000 +/-	11.3%	< 1.844E-005	< 2.497E-005
	Th-232	< 5.830E-002 +/-	3.2%	< 8.997E-007	< 5.253E-001
	U-232	< 5.830E-002 +/-	3.2%	< 8.997E-007	< 2.699E-009
	U-233	< 7.130E+002 +/-	4.1%	< 1.100E-002	< 7.272E-002
	Pa-234	< 1.474E-001 +/-	12.3%	< 2.274E-006	
	Pa-234m	< 2.154E+002 +/-	2.4%	< 3.325E-003	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 6.751E-002 +/-	4.1%	< 1.042E-006	< 3.085E-002
	Np-237	1.612E-001 +/-	32.5%	2.488E-006	2.257E-004
	Pu-238	< 4.488E+003 +/-	4.3%	< 6.926E-002	< 2.594E-004
	U-238	< 3.545E+000 +/-	2.4%	< 5.470E-005	< 1.042E+001

Pu-239	4.583E+005	+/-	4.9%	7.073E+000	7.287E+000
Pu-239B	< 3.435E+003	+/-	18.8%	< 5.301E-002	< 5.461E-002
U-239	< 2.458E+004	+/-	368.5%	< 3.794E-001	
Pu-240	4.937E+002	+/-	57.7%	7.619E-003	2.148E-003
Am-241	4.421E+004	+/-	17.3%	6.822E-001	1.273E-002
Am-241B	4.722E+004	+/-	5.8%	7.287E-001	1.360E-002
Pu-241	< 2.412E+004	+/-	4.3%	< 3.723E-001	< 2.321E-004
Pu-241B	1.870E+005	+/-	7.8%	2.886E+000	1.799E-003
Pu-242	< 0.000E+000	+/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 2.368E-001	+/-	2.2%	< 3.655E-006	< 1.172E-006
Cm-243	< 2.443E-001	+/-	3.6%	< 3.770E-006	< 4.690E-009
Cm-244	< 3.282E+004	+/-	14.2%	< 5.064E-001	< 4.004E-004
Cm-245	< 4.203E-001	+/-	8.4%	< 6.486E-006	< 2.417E-006
Cm-247	< 4.251E-002	+/-	8.7%	< 6.560E-007	< 4.548E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 3.586E-002 +/-	3.5%	< 5.534E-007	< 8.679E-009
Cf-251	< 2.221E-001 +/-	6.6%	< 3.428E-006	< 1.388E-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

********** 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: LL85234274TRU-R Analysis Date: 5/4/2009

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

Net Weight	64800.0 g		
Pu mass	7.76E+000	+-	1.64E+000 g
TRU Alpha Activity	6.61E-001	+-	1.08E-001 Ci
TRU Activity Concentration	1.02E+004	+-	1.66E+003 nCi/g
Pu-239 Equivalent Activity	6.74E-001	+-	1.07E-001 Ci
Pu-239 FGE	7.32E+000	+-	1.64E+000 g
Decay heat	2.08E-002	+-	3.34E-003 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	1.27E-009	1.76E-007	5.02E-008	0.00E+000
CS137	2.00E-009	1.76E-007	5.02E-008	6.45E-008
U233	<LLD	<LLD	0.00E+000	7.13E-004
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	6.75E-008
NP237	0.00E+000	0.00E+000	0.00E+000	1.64E-007
PU238	3.10E-003	5.37E-002	1.47E-002	3.71E-004
U238	<LLD	<LLD	0.00E+000	3.54E-006
PU239	7.29E+000	4.58E-001	1.03E-001	3.17E-003
PU240	4.56E-001	1.05E-001	2.47E-002	7.24E-004
AM241	1.27E-002	4.42E-002	1.23E-002	4.34E-005
PU241	8.82E-003	9.17E-001	2.25E-001	6.34E-003
PU242	3.07E-003	1.22E-005	3.16E-006	0.00E+000

Errors quoted at 1.000 sigma

Operator: Robert J Haslett Jr Date: 6-3-09

ITR: Philip Coutts Date: 6/12/09

Summed Segment Spectra Results
Category: Segmented

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Elapsed Live Time: 118.98 sec Elapsed Real Time: 120.00 sec

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

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 8.753E-002 +/-	1.0%	< 1.351E-006	< 4.035E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	1.970E-001 +/-	16.8%	3.040E-006	3.113E-011
	Al-26	< 9.448E-002 +/-	6.6%	< 1.458E-006	< 4.969E-006
	K-40	2.200E+000 +/-	17.3%	3.395E-005	3.432E-001
	Co-57	< 3.880E-001 +/-	1.5%	< 5.988E-006	< 4.540E-011
	Co-60	1.939E-001 +/-	13.9%	2.993E-006	1.701E-010
	Se-75	< 2.707E-001 +/-	1.0%	< 4.177E-006	< 1.862E-011
	Kr-85	< 3.456E+001 +/-	2.4%	< 5.333E-004	< 8.708E-008
	Sr-90	1.860E-001 +/-	38.4%	2.871E-006	1.349E-009
	Sb-125	< 3.280E-001 +/-	1.3%	< 5.061E-006	< 3.155E-010
	Ba-133	< 2.120E-001 +/-	0.8%	< 3.271E-006	< 8.372E-010
	Cs-134	< 9.156E-002 +/-	0.7%	< 1.413E-006	< 6.986E-011
	Cs-137	1.860E-001 +/-	38.4%	2.871E-006	2.121E-009
	Eu-152	< 3.961E-001 +/-	1.7%	< 6.113E-006	< 2.226E-009
	Eu-154	< 3.892E-001 +/-	1.4%	< 6.007E-006	< 1.460E-009
	Ho-166m	< 1.531E-001 +/-	1.6%	< 2.363E-006	< 8.513E-008
	Bi-207	< 9.887E-002 +/-	0.7%	< 1.526E-006	< 1.799E-009
	Pb-210	< 4.112E+003 +/-	11.3%	< 6.346E-002	< 5.346E-005
	Ra-226	< 2.197E-001 +/-	1.3%	< 3.390E-006	< 2.197E-007
	Ac-227	< 9.421E-001 +/-	8.2%	< 1.454E-005	< 1.291E-008
	Th-230	< 4.710E+002 +/-	8.2%	< 7.269E-003	< 2.308E-002
	Pa-231	< 5.056E+000 +/-	11.1%	< 7.802E-005	< 1.057E-004
	Th-232	< 3.243E-001 +/-	1.1%	< 5.005E-006	< 2.922E+000
	U-232	< 3.243E-001 +/-	1.1%	< 5.005E-006	< 1.502E-008
	U-233	< 3.544E+003 +/-	1.4%	< 5.469E-002	< 3.615E-001
	Pa-234	< 5.321E-001 +/-	12.1%	< 8.211E-006	
	Pa-234m	< 6.689E+002 +/-	1.5%	< 1.032E-002	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 3.163E-001 +/-	1.7%	< 4.881E-006	< 1.445E-001
	Np-237	6.516E-001 +/-	11.0%	1.006E-005	9.123E-004
	Pu-238	< 2.250E+004 +/-	1.4%	< 3.471E-001	< 1.300E-003
	U-238	< 1.177E+001 +/-	1.6%	< 1.816E-004	< 3.460E+001
	Pu-239	3.691E+005 +/-	3.1%	5.696E+000	5.869E+000
	Pu-239B	< 1.760E+004 +/-	3.2%	< 2.716E-001	< 2.798E-001
	U-239	< 9.037E+003 +/-	14.9%	< 1.395E-001	
X	Pu-240				
	Am-241	4.296E+004 +/-	34.8%	6.630E-001	1.237E-002
	Am-241B	5.148E+004 +/-	3.5%	7.944E-001	1.483E-002
	Pu-241	< 1.210E+005 +/-	1.7%	< 1.868E+000	< 1.164E-003
	Pu-241B	1.879E+005 +/-	4.5%	2.899E+000	1.807E-003

Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.058E+000 +/-	1.1%	< 1.632E-005	< 5.235E-006
Cm-243	< 1.091E+000 +/-	3.0%	< 1.683E-005	< 2.094E-008
Cm-244	< 1.179E+005 +/-	13.9%	< 1.819E+000	< 1.438E-003
Cm-245	< 1.965E+000 +/-	7.4%	< 3.032E-005	< 1.130E-005
Cm-247	< 1.771E-001 +/-	8.4%	< 2.733E-006	< 1.895E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.695E-001 +/-	3.1%	< 2.615E-006	< 4.101E-008
Cf-251	< 1.048E+000 +/-	5.3%	< 1.618E-005	< 6.552E-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	5.87E+000 +- 1.83E-001	9.90E-001 +- 1.82E-002

Beta: 2.75E+002 +- 6.54E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	7.17E-001 +- 1.99E-002
203.55	1.17E+000 +- 8.90E-002
375.05	2.78E+000 +- 6.81E-002
413.71	3.17E+000 +- 8.76E-002

********** 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: LL85234274TRU-R Analysis Date: 5/4/2009

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

Net Weight	64800.0 g		
Pu mass	6.25E+000	+- 1.30E+000	g
TRU Alpha Activity	5.40E-001	+- 8.67E-002	Ci
TRU Activity Concentration	8.33E+003	+- 1.34E+003	nCi/g
Pu-239 Equivalent Activity	5.50E-001	+- 8.66E-002	Ci
Pu-239 FGE	5.89E+000	+- 1.30E+000	g
Decay heat	1.70E-002	+- 2.70E-003	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	1.35E-009	1.86E-007	8.23E-008	0.00E+000
CS137	2.12E-009	1.86E-007	8.23E-008	1.03E-007
U233	<LLD	<LLD	0.00E+000	3.54E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.16E-007
NP237	9.12E-004	6.52E-007	1.60E-007	3.91E-007
PU238	2.50E-003	4.33E-002	1.17E-002	4.96E-004
U238	<LLD	<LLD	0.00E+000	1.18E-005
PU239	5.87E+000	3.69E-001	8.17E-002	4.23E-003
PU240	3.67E-001	8.45E-002	1.96E-002	9.68E-004
AM241	1.24E-002	4.30E-002	1.77E-002	4.48E-005
PU241	7.11E-003	7.39E-001	1.79E-001	8.46E-003
PU242	2.47E-003	9.82E-006	2.52E-006	0.00E+000

Errors quoted at 1.000 sigma

Operator: Robert J Haskett Jr Date: 6-3-09

ITR: Dilip C Date: 6/12/09

Automated Independent Technical Review

Counter ID: SGS with Trans. Count Type: Assay - 55 Gal Galv 23.8
Container ID: LL85234274TRU-R Assay Date: 5/4/2009
Waste Matrix Code:
Sequence Number: 373

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

Source of results is undefined.

DISPOSITION:

MGA Analysis:

Note: The measured and declared isotopics are inconsistent. OK

DISPOSITION:

Gamma Analysis:
Analysis Status: No errors. OK
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 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: 6-3-09

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:	LL85234274TRU-R	Analysis Date:	5/4/2009

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

MGA version: MGA V9.63H CI

Measurement date = 5/4/09 Declared date = 5/4/09
Low energy spectrum sensitivity = 30.0% Total counts = 3.787E+005
High energy spectrum sensitivity : 10.0%

Pu g/cm2 = 0.7361 Cd g/cm2 = 1.6365 FWHM at 122 keV = 595 eV
QFIT = 1.07 FWHM at 208 keV = 729 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	0.000426	16.3	15.9	0.3518	18.9	0.04001	15.54	0.04355	16.91
Pu-239	1.000000	0.0	3.1	825.8669	9.8	93.92722	0.44	93.84570	0.44
Pu-240	0.062596	7.8	7.0	51.6957	11.7	5.87944	6.99	5.87924	6.99
Pu-241	0.001211	10.3	8.9	1.0000	0.0	0.11373	9.80	0.19196	16.55
Pu-242	(New alg.)			0.3481(13)		0.03959 (13)		0.03954 (12)	
Am-241	0.009426	3.7	1.5	7.7846	9.3	0.88536	3.42	0.90009	3.47

Pu-240 effective (meas. date) = 6.047 +/- 7.41%
Am-241 separated about 44.988 +/- 0.730 years ago
Am/Pu-241 weight ratio = 7.78460 +/- 9.02%

Messages:

Calculations in MGAABS didn't converge: results may be suspect.
Pu-241/Pu-239 efficiency changed in MGACAL by 6%. ok

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

Reviewed by: Robert J. Haskett Jr. Date: 6-3-09

NDA 2000 Assay Report

********** Item Information **********

Item ID:	Background		Count Sequence Number:	374	
Operator:	RHWM2\RHWM				
Assay Start:	5/5/2009	7:34:00 AM			
Description 1:	Background				
Description 2:					
Location:	LLNL				
Comment:					
Matrix Type:	Lucite				
Container Type:	55 Gal Galv 23.8				
Weight:	Gross:	0.0 kg	Net:	0.0 kg	
Container:	Volume:	208.0 l	Full:	100.0 %	
Density:		0.000 kg /l			

********** System Configuration **********

Counter:	SGS with Trans.			
Efficiency Description:	062308 Carbon Steel Eff.			
Segments:	Number:	16	Offset:	0
Scanning Platform:	Start:	934 mm	Delta:	-51 mm
Count Type:	BKG - 55 Gal Galv 23.8#			
Collimator/Geometry Setting:	Default - 0			
Transmission Mode:	No Transmission			

Errors quoted at 1.000 sigma

Segment 8 Results

Segment: 8 Detector: DET01 Position: 8
C:\Canberra\NDA2k\Data\00000374_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P008_S008

Acquisition Start: 5/5/2009 7:34:00 AM
Elapsed Live Time: 298.37 sec Elapsed Real Time: 300.00 sec

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

Peak Analysis Performed on: 5/5/2009 7:39:01 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
400.79		106	34	1.35	802.84	3.312E-004	13.08	
1099.47		16	6	1.24	2199.01	1.328E-004	35.25	
1173.30		36	7	1.78	2346.54	1.276E-004	19.78	
1333.00		39	4	1.44	2665.67	1.198E-004	18.13	
2234.65		29951	6	1.12	4467.43	1.187E-004	1.00	

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

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
5/5/09 7:39:04 AM

QA File: C:\CANBERRA\NDA2K\QA\CNTR0001_DC
Sample ID: Background
Sample Quantity: 1.0000E+000
Sample Date: 5/5/09 7:32:32 AM
Measurement Date: 5/5/09 7:34:00 AM
Elapsed Live Time: 298.4 seconds
Elapsed Real Time: 300.0 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
Background Count Rate [0.00+/-0.00]	1.3578E+002	0.00 < : : : >
Pulser Channel 4467 cent [0.00+/-0.00]	4.4674E+003	0.00 < : : : >
Pulser Channel 4467 FWHM [0.00+/-0.00]	1.1207E+000	0.00 < : : : >
Pulser Channel 4467 cps [0.00+/-0.00]	9.9838E+001	0.00 < : : : >

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:	375
Operator:	RHWM2\RHWM		
Assay Start:	5/5/2009 7:45:02 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\00000375_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P001_S001

Acquisition Start: 5/5/2009 7:46:04 AM
Elapsed Live Time: 118.16 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.274 +/- 0.0132
SE-75	264.66	0.401 +/- 0.0072
SE-75	279.54	0.415 +/- 0.0078
SE-75	400.66	0.474 +/- 0.0091

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 5/5/2009 7:48:05 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
59.58	Y	677	824	1.03	121.00	5.720E-006	7.65	
558.50		12	10	1.15	1117.98	1.173E-004	48.46	
2234.62		11980	8	1.09	4467.37	4.502E-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	< 2.395E-002 +/-	2.1%	< 2.281E-005	< 1.104E-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	< 9.762E-003 +/-	16.2%	< 9.297E-006	< 5.135E-007
K-40	< 3.468E-001 +/-	5.3%	< 3.303E-004	< 5.411E-002
Co-57	< 1.253E-001 +/-	3.4%	< 1.193E-004	< 1.466E-011
Co-60	< 5.078E-002 +/-	1.9%	< 4.836E-005	< 4.454E-011
Se-75	< 1.016E-001 +/-	1.9%	< 9.678E-005	< 6.991E-012
Kr-85	< 7.017E+000 +/-	3.2%	< 6.683E-003	< 1.768E-008
Sr-90	< 3.499E-002 +/-	2.1%	< 3.332E-005	< 2.536E-010
Sb-125	< 6.626E-002 +/-	2.3%	< 6.310E-005	< 6.374E-011
Ba-133	< 6.423E-002 +/-	1.8%	< 6.117E-005	< 2.537E-010
Cs-134	< 2.373E-002 +/-	2.1%	< 2.260E-005	< 1.810E-011
Cs-137	< 3.499E-002 +/-	2.1%	< 3.332E-005	< 3.988E-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	< 2.873E-002 +/-	2.1%	< 2.736E-005	< 5.229E-010
Pb-210	< 8.605E+002 +/-	47.8%	< 8.195E-001	< 1.119E-005
Ra-226	< 5.694E-002 +/-	2.4%	< 5.423E-005	< 5.694E-008
Ac-227	< 3.236E-001 +/-	8.3%	< 3.082E-004	< 4.433E-009
Th-230	< 1.536E+002 +/-	8.6%	< 1.462E-001	< 7.524E-003
Pa-231	< 2.144E+000 +/-	11.2%	< 2.041E-003	< 4.480E-005
Th-232	< 6.554E-002 +/-	2.6%	< 6.242E-005	< 5.905E-001
U-232	< 1.050E-001 +/-	2.3%	< 9.999E-005	< 4.861E-009
U-233	< 1.131E+003 +/-	2.7%	< 1.077E+000	< 1.154E-001
Pa-234	< 2.076E-001 +/-	12.3%	< 1.977E-004	
Pa-234m	< 2.196E+002 +/-	2.3%	< 2.091E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 1.108E-001 +/-	2.5%	< 1.055E-004	< 5.064E-002
Np-237	< 1.522E-001 +/-	2.0%	< 1.449E-004	< 2.130E-004
Pu-238	< 7.661E+003 +/-	2.7%	< 7.296E+000	< 4.428E-004
U-238	< 4.124E+000 +/-	2.4%	< 3.928E-003	< 1.212E+001
Pu-239	< 1.427E+003 +/-	3.1%	< 1.359E+000	< 2.270E-002
Pu-239B	< 4.233E+003 +/-	5.2%	< 4.032E+000	< 6.730E-002
U-239	< 1.893E+003 +/-	59.1%	< 1.803E+000	
Pu-240	< 2.605E+003 +/-	4.6%	< 2.481E+000	< 1.133E-002
Am-241	7.423E+001 +/-	21.8%	7.070E-002	2.138E-005
Am-241B	< 9.743E+002 +/-	4.9%	< 9.279E-001	< 2.806E-004
Pu-241	< 3.915E+004 +/-	2.8%	< 3.728E+001	< 3.766E-004
Pu-241B	< 1.056E+004 +/-	2.5%	< 1.006E+001	< 1.016E-004
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 4.102E-001 +/-	1.9%	< 3.906E-004	< 2.030E-006
Cm-243	< 4.230E-001 +/-	3.4%	< 4.029E-004	< 8.122E-009
Cm-244	< 3.459E+004 +/-	14.1%	< 3.294E+001	< 4.220E-004
Cm-245	< 6.942E-001 +/-	7.7%	< 6.612E-004	< 3.992E-006
Cm-247	< 4.071E-002 +/-	8.6%	< 3.877E-005	< 4.356E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 4.637E-002 +/-	3.6%	< 4.417E-005	< 1.122E-008
Cf-251	< 3.768E-001 +/-	5.6%	< 3.588E-004	< 2.355E-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\00000375_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P002_S002

Acquisition Start: 5/5/2009 7:49:15 AM
Elapsed Live Time: 117.70 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.317 +/- 0.0146
SE-75	264.66	0.467 +/- 0.0083
SE-75	279.54	0.474 +/- 0.0088
SE-75	400.66	0.535 +/- 0.0102

Errors quoted at 1.000 sigma

Peak Analysis Results

Peak Analysis Performed on: 5/5/2009 7:51:17 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
59.52	Y	1494	1087	1.56	120.89	1.052E-004	4.37	
98.83		250	2465	0.98	199.44	2.336E-004	28.66	
2234.61		11980	6	1.07	4467.35	1.053E-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	< 1.809E-002 +/-	1.8%	< 1.723E-005	< 8.339E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.106E-002 +/-	2.0%	< 2.006E-005	< 3.328E-012
Al-26	< 5.722E-003 +/-	15.5%	< 5.450E-006	< 3.010E-007
K-40	< 3.374E-001 +/-	4.9%	< 3.213E-004	< 5.264E-002
Co-57	< 1.089E-001 +/-	3.5%	< 1.037E-004	< 1.274E-011
Co-60	< 2.638E-002 +/-	1.7%	< 2.513E-005	< 2.314E-011
Se-75	< 8.589E-002 +/-	1.9%	< 8.180E-005	< 5.909E-012
Kr-85	< 5.195E+000 +/-	3.1%	< 4.948E-003	< 1.309E-008
Sr-90	< 2.729E-002 +/-	2.0%	< 2.599E-005	< 1.978E-010
Sb-125	< 5.575E-002 +/-	2.1%	< 5.309E-005	< 5.363E-011
Ba-133	< 6.267E-002 +/-	1.7%	< 5.969E-005	< 2.476E-010
Cs-134	< 1.717E-002 +/-	2.0%	< 1.636E-005	< 1.310E-011
Cs-137	< 2.729E-002 +/-	2.0%	< 2.599E-005	< 3.111E-010
Eu-152	< 7.126E-002 +/-	3.7%	< 6.787E-005	< 4.005E-010
Eu-154	< 6.014E-002 +/-	2.2%	< 5.728E-005	< 2.255E-010
Ho-166m	< 3.364E-002 +/-	2.3%	< 3.204E-005	< 1.871E-008
Bi-207	< 1.617E-002 +/-	2.1%	< 1.540E-005	< 2.943E-010
Pb-210	< 7.222E+000 +/-	81.7%	< 6.878E-003	< 9.389E-008
Ra-226	< 4.499E-002 +/-	2.3%	< 4.285E-005	< 4.499E-008
Ac-227	< 3.006E-001 +/-	8.3%	< 2.863E-004	< 4.118E-009
Th-230	< 3.672E+001 +/-	25.1%	< 3.497E-002	< 1.799E-003
Pa-231	< 1.885E+000 +/-	11.2%	< 1.795E-003	< 3.939E-005
Th-232	< 6.090E-002 +/-	2.2%	< 5.800E-005	< 5.487E-001
U-232	< 6.090E-002 +/-	2.2%	< 5.800E-005	< 2.819E-009
U-233	< 1.079E+003 +/-	2.7%	< 1.028E+000	< 1.101E-001
Pa-234	< 1.008E-001 +/-	12.2%	< 9.598E-005	
Pa-234m	< 9.101E+001 +/-	2.1%	< 8.667E-002	
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	< 1.436E-001 +/-	2.0%	< 1.367E-004	< 2.010E-004
Pu-238	< 7.322E+003 +/-	2.7%	< 6.974E+000	< 4.232E-004
U-238	< 2.825E+000 +/-	2.1%	< 2.690E-003	< 8.304E+000
Pu-239	< 1.265E+003 +/-	3.2%	< 1.204E+000	< 2.011E-002
Pu-239B	< 2.661E+003 +/-	6.4%	< 2.535E+000	< 4.231E-002
U-239	< 9.123E+000 +/-	98.9%	< 8.688E-003	
Pu-240	< 1.733E+003 +/-	5.4%	< 1.650E+000	< 7.537E-003
Am-241	8.908E+000 +/-	37.9%	8.483E-003	2.565E-006
Am-241B	< 6.537E+002 +/-	5.7%	< 6.225E-001	< 1.883E-004
Pu-241	< 3.722E+004 +/-	2.9%	< 3.544E+001	< 3.580E-004
Pu-241B	< 1.054E+004 +/-	2.5%	< 1.004E+001	< 1.014E-004
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 2.011E-001 +/-	16.6%	< 1.915E-004	< 9.953E-007
Cm-243	< 3.791E-001 +/-	3.4%	< 3.610E-004	< 7.278E-009
Cm-244	< 2.048E+004 +/-	14.2%	< 1.950E+001	< 2.499E-004
Cm-245	< 7.038E-001 +/-	7.7%	< 6.703E-004	< 4.047E-006
Cm-247	< 3.488E-002 +/-	8.5%	< 3.322E-005	< 3.733E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 4.367E-002 +/-	3.5%	< 4.159E-005	< 1.057E-008
Cf-251	< 3.754E-001 +/-	5.6%	< 3.575E-004	< 2.346E-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\00000375_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P003_S003

Acquisition Start: 5/5/2009 7:52:27 AM
Elapsed Live Time: 114.67 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.258 +/- 0.0140
SE-75	264.66	0.402 +/- 0.0073
SE-75	279.54	0.412 +/- 0.0078
SE-75	400.66	0.466 +/- 0.0091

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 5/5/2009 7:54:29 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
	59.57	Y	9298	2418	1.14	120.98	7.880E-005	1.72	
M	94.75		2470	5801	1.56	191.28	2.001E-004	5.19	10.91
m	98.73	Y	7861	8227	1.56	199.24	2.122E-004	3.94	
m	100.82	Y	1366	8106	1.57	203.41	2.183E-004	6.52	
m	103.40	Y	5446	6854	1.57	208.58	2.256E-004	3.90	
	111.21		674	5445	1.54	224.18	2.459E-004	17.69	
M	125.32	Y	620	2827	1.06	252.37	2.761E-004	6.91	2.92
m	129.38	Y	3417	2589	1.07	260.48	2.833E-004	2.32	
	148.62	Y	395	1561	1.12	298.93	3.135E-004	14.94	
M	203.53	Y	806	1505	1.14	408.66	3.464E-004	4.81	2.72
m	208.05	Y	2792	1429	1.14	417.69	3.464E-004	2.37	
	255.60		117	969	1.07	512.70	3.332E-004	43.23	
	311.78	Y	108	784	0.75	624.97	3.015E-004	41.99	
M	332.74	Y	938	559	1.26	666.86	2.887E-004	3.85	1.27

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	335.64	Y	418	582	1.27	672.64	2.869E-004	6.20	
m	341.40	Y	114	545	1.27	684.16	2.835E-004	16.72	
m	344.98		922	509	1.28	691.31	2.813E-004	3.82	
M	368.49	Y	320	429	1.32	738.30	2.677E-004	7.19	1.79
m	375.06	Y	2299	389	1.33	751.43	2.640E-004	2.38	
m	380.15		442	265	1.33	761.59	2.612E-004	5.52	
m	382.73		413	242	1.34	766.75	2.598E-004	5.67	
	392.94		771	192	1.46	787.16	2.543E-004	4.87	
	413.71	Y	2088	91	1.43	828.66	2.437E-004	2.61	
	422.44		96	105	1.29	846.11	2.394E-004	19.77	
	451.36		244	38	1.67	903.89	2.261E-004	7.73	
	662.28	Y	91	14	1.53	1325.38	1.606E-004	12.65	
	722.07	Y	51	9	1.48	1444.86	1.491E-004	17.35	
	2234.60		11980	10	1.06	4467.33	8.570E-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	< 2.304E-002 +/-	1.8%	< 2.194E-005	< 1.062E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 2.376E-002 +/-	2.0%	< 2.263E-005	< 3.755E-012
	Al-26	< 2.768E-002 +/-	18.9%	< 2.636E-005	< 1.456E-006
	K-40	< 2.610E-001 +/-	5.3%	< 2.485E-004	< 4.071E-002
	Co-57	< 1.525E-001 +/-	4.4%	< 1.452E-004	< 1.784E-011
	Co-60	< 3.137E-002 +/-	1.7%	< 2.988E-005	< 2.752E-011
	Se-75	< 1.176E-001 +/-	1.8%	< 1.120E-004	< 8.092E-012
	Kr-85	< 6.634E+000 +/-	3.1%	< 6.318E-003	< 1.672E-008
	Sr-90	< 3.706E-002 +/-	2.2%	< 3.530E-005	< 2.687E-010
	Sb-125	< 1.095E-001 +/-	1.9%	< 1.043E-004	< 1.054E-010
	Ba-133	< 9.402E-002 +/-	1.6%	< 8.954E-005	< 3.714E-010
	Cs-134	< 2.549E-002 +/-	2.2%	< 2.427E-005	< 1.945E-011
X	Cs-137				
	Eu-152	< 2.678E-002 +/-	3.8%	< 2.550E-005	< 1.505E-010
	Eu-154	< 6.786E-002 +/-	2.1%	< 6.462E-005	< 2.545E-010
	Ho-166m	< 2.247E-002 +/-	2.3%	< 2.140E-005	< 1.249E-008
	Bi-207	< 2.111E-002 +/-	2.1%	< 2.010E-005	< 3.842E-010
	Pb-210	< 1.344E+001 +/-	259.0%	< 1.280E-002	< 1.748E-007
	Ra-226	< 4.794E-002 +/-	2.4%	< 4.566E-005	< 4.794E-008
	Ac-227	< 4.076E-001 +/-	8.3%	< 3.882E-004	< 5.584E-009
	Th-230	< 5.944E+001 +/-	83.2%	< 5.661E-002	< 2.913E-003
	Pa-231	< 2.364E+000 +/-	11.2%	< 2.252E-003	< 4.942E-005

	Th-232	<	8.068E-002	+/-	2.3%	<	7.684E-005	< 7.269E-001
	U-232	<	8.068E-002	+/-	2.3%	<	7.684E-005	< 3.735E-009
	U-233	<	1.494E+003	+/-	3.0%	<	1.423E+000	< 1.524E-001
	Pa-234	<	1.440E-001	+/-	12.1%	<	1.372E-004	
	Pa-234m	<	1.491E+002	+/-	2.1%	<	1.420E-001	
	U-234	<	0.000E+000	+/-	0.0%	<	0.000E+000	< 0.000E+000
	U-235	<	1.452E-001	+/-	2.9%	<	1.383E-004	< 6.635E-002
	Np-237		2.098E-001	+/-	42.0%		1.998E-004	2.937E-004
	Pu-238	<	9.550E+003	+/-	3.1%	<	9.095E+000	< 5.520E-004
	U-238	<	3.189E+000	+/-	2.2%	<	3.037E-003	< 9.375E+000
	Pu-239		2.201E+005	+/-	3.9%		2.096E+002	3.499E+000
	Pu-239B	<	5.625E+003	+/-	16.5%	<	5.358E+000	< 8.943E-002
	U-239	<	1.976E+001	+/-	308.4%	<	1.882E-002	
X	Pu-240							
	Am-241		3.633E+004	+/-	10.5%		3.460E+001	1.046E-002
	Am-241B		3.084E+004	+/-	10.6%		2.938E+001	8.883E-003
	Pu-241		1.530E+005	+/-	15.3%		1.458E+002	1.472E-003
	Pu-241B		3.496E+005	+/-	3.6%		3.329E+002	3.363E-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	<	4.847E-001	+/-	3.3%	<	4.617E-004	< 9.307E-009
	Cm-244	<	3.183E+004	+/-	14.1%	<	3.032E+001	< 3.884E-004
	Cm-245	<	8.958E-001	+/-	7.8%	<	8.532E-004	< 5.151E-006
	Cm-247	<	5.729E-002	+/-	8.5%	<	5.456E-005	< 6.130E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 6.500E-002 +/-	3.4%	< 6.191E-005	< 1.573E-008
Cf-251	< 4.899E-001 +/-	5.8%	< 4.666E-004	< 3.062E-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 +- 1.36E-001	1.16E+000 +- 2.42E-002

Beta: 2.06E+002 +- 9.22E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	6.85E-001 +- 3.10E-002
203.55	1.46E+000 +- 7.85E-002
375.05	2.01E+000 +- 5.94E-002
413.71	2.09E+000 +- 6.79E-002

Segment 4 Results

Segment: 4 Detector: DET01 Position: 4
C:\Canberra\NDA2k\Data\00000375_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P004_S004

Acquisition Start: 5/5/2009 7:55:38 AM
Elapsed Live Time: 102.12 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.263 +/- 0.0164
SE-75	264.66	0.388 +/- 0.0073
SE-75	279.54	0.399 +/- 0.0080
SE-75	400.66	0.469 +/- 0.0096

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: 5/5/2009 7:57:40 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
	59.50	Y	55418	6188	1.12	120.85	4.552E-006	1.27	
M	94.73	Y	11156	11608	1.55	191.25	1.165E-004	2.25	58.45
m	98.74	Y	44211	15474	1.56	199.25	1.377E-004	1.83	
m	100.94	Y	7045	15499	1.56	203.65	1.495E-004	2.79	
m	103.39	Y	31987	13153	1.56	208.54	1.627E-004	1.80	
M	111.13	Y	11909	7849	1.37	224.01	2.039E-004	1.29	84.81
m	114.61	Y	9534	9588	1.37	230.96	2.217E-004	1.31	
m	116.65	Y	9072	8983	1.38	235.05	2.318E-004	1.31	
m	120.73	Y	2278	8073	1.39	243.19	2.511E-004	1.83	
m	125.27	Y	4350	7462	1.39	252.28	2.712E-004	1.46	
m	129.32	Y	21097	6554	1.40	260.36	2.876E-004	1.24	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
M	144.21	Y	1298	4501	1.18	290.11	3.384E-004	15.43	0.73
m	146.37	Y	1127	4484	1.18	294.43	3.445E-004	15.87	
m	148.59	Y	2774	4461	1.19	298.86	3.503E-004	14.60	
M	160.85	Y	1504	4919	1.77	323.38	3.757E-004	18.73	7.00
m	164.55	Y	1371	6863	1.78	330.76	3.812E-004	16.46	
	171.44	Y	1169	4374	1.34	344.53	3.890E-004	10.38	
	179.19	Y	406	4251	1.21	360.02	3.947E-004	28.34	
	189.34	Y	737	4643	1.22	380.30	3.978E-004	16.97	
	195.67	Y	715	4484	1.12	392.94	3.977E-004	17.18	
M	203.55	Y	5113	3687	1.19	408.69	3.958E-004	2.64	1.15
m	208.01	Y	16253	3206	1.20	417.61	3.940E-004	2.12	
	255.40	Y	707	2157	1.16	512.30	3.571E-004	12.43	
M	263.90	Y	245	1589	1.12	529.29	3.490E-004	14.72	0.58
m	267.47	Y	570	1716	1.12	536.43	3.457E-004	7.70	
	297.38	Y	451	1480	0.95	596.19	3.177E-004	15.69	
	311.80	Y	763	1528	1.37	625.01	3.048E-004	9.98	
M	320.96	Y	605	1422	1.81	643.31	2.970E-004	7.32	2.59
m	323.51	Y	926	2089	1.81	648.41	2.948E-004	5.11	
M	332.71	Y	5747	1343	1.29	666.79	2.873E-004	1.85	3.52
m	335.68	Y	2242	1226	1.29	672.72	2.849E-004	2.71	
m	341.46	Y	557	1261	1.30	684.29	2.804E-004	6.44	
m	344.97	Y	5084	1174	1.30	691.30	2.777E-004	1.91	
	368.51	Y	2042	1106	2.44	738.35	2.608E-004	4.01	
M	375.03	Y	13053	1052	1.28	751.36	2.564E-004	1.48	13.50
m	380.15	Y	2657	704	1.28	761.59	2.531E-004	2.46	
m	382.73	Y	2279	607	1.28	766.75	2.515E-004	2.61	
	392.87	Y	4633	593	1.55	787.01	2.452E-004	2.20	
	413.67	Y	12067	380	1.40	828.58	2.331E-004	1.55	
M	422.50	Y	855	239	1.26	846.23	2.283E-004	4.15	1.91
m	426.57	Y	168	263	1.26	854.36	2.262E-004	10.94	
M	445.54	Y	46	143	1.25	892.26	2.168E-004	28.60	1.53
m	451.44	Y	1429	174	1.25	904.05	2.141E-004	3.16	
	481.45	Y	44	79	1.32	964.02	2.014E-004	39.58	
	618.99	Y	157	39	0.98	1238.87	1.623E-004	11.35	
	645.61	Y	57	50	0.96	1292.07	1.572E-004	26.01	
M	658.75	Y	51	22	1.57	1318.32	1.549E-004	17.36	1.68
m	662.33	Y	621	22	1.58	1325.48	1.543E-004	4.44	
	688.80	Y	61	21	1.52	1378.36	1.500E-004	19.51	
	721.77	Y	311	21	1.33	1444.25	1.452E-004	6.86	
	769.08	Y	59	16	1.66	1538.79	1.393E-004	19.02	
	2234.57		11980	37	1.04	4467.27	6.667E-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	< 2.099E-002 +/-	1.8%	< 1.999E-005	< 9.675E-016
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 3.001E-002 +/-	2.0%	< 2.858E-005	< 4.742E-012
	Al-26	< 4.603E-002 +/-	14.5%	< 4.384E-005	< 2.421E-006
	K-40	< 3.277E-001 +/-	4.8%	< 3.121E-004	< 5.112E-002
	Co-57	2.098E+000 +/-	5.0%	1.999E-003	2.455E-010
	Co-60	< 3.671E-002 +/-	1.7%	< 3.497E-005	< 3.220E-011
	Se-75	< 1.918E-001 +/-	1.7%	< 1.826E-004	< 1.319E-011
	Kr-85	< 1.174E+001 +/-	3.0%	< 1.118E-002	< 2.958E-008
	Sr-90	< 4.988E-002 +/-	2.0%	< 4.750E-005	< 3.616E-010
	Sb-125	< 2.473E-001 +/-	2.2%	< 2.355E-004	< 2.379E-010
	Ba-133	< 1.618E-001 +/-	1.7%	< 1.541E-004	< 6.392E-010
	Cs-134	< 2.917E-002 +/-	1.8%	< 2.778E-005	< 2.225E-011
X	Cs-137				
	Eu-152	< 1.159E-001 +/-	3.6%	< 1.104E-004	< 6.513E-010
	Eu-154	< 8.570E-002 +/-	2.2%	< 8.162E-005	< 3.214E-010
	Ho-166m	< 5.156E-002 +/-	2.3%	< 4.910E-005	< 2.867E-008
	Bi-207	< 4.277E-002 +/-	2.0%	< 4.074E-005	< 7.785E-010
	Pb-210	< 4.152E+003 +/-	37.2%	< 3.955E+000	< 5.398E-005
	Ra-226	< 9.287E-002 +/-	2.2%	< 8.844E-005	< 9.287E-008
	Ac-227	< 6.532E-001 +/-	8.3%	< 6.221E-004	< 8.949E-009
	Th-230	< 3.135E+002 +/-	8.5%	< 2.986E-001	< 1.536E-002
	Pa-231	< 3.711E+000 +/-	11.2%	< 3.534E-003	< 7.756E-005
	Th-232	< 1.004E-001 +/-	2.4%	< 9.566E-005	< 9.050E-001
	U-232	< 1.522E-001 +/-	2.1%	< 1.450E-004	< 7.048E-009
	U-233	< 2.392E+003 +/-	2.6%	< 2.278E+000	< 2.440E-001
	Pa-234	< 1.361E-001 +/-	12.2%	< 1.296E-004	
	Pa-234m	< 2.061E+002 +/-	2.1%	< 1.963E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 2.046E-001 +/-	2.4%	< 1.949E-004	< 9.351E-002
	Np-237	9.342E-001 +/-	15.8%	8.897E-004	1.308E-003
	Pu-238	< 1.360E+004 +/-	2.5%	< 1.296E+001	< 7.864E-004
	U-238	< 2.635E+000 +/-	2.2%	< 2.509E-003	< 7.746E+000
	Pu-239	1.290E+006 +/-	3.2%	1.228E+003	2.051E+001
	Pu-239B	7.877E+005 +/-	1.3%	7.502E+002	1.252E+001
	U-239	< 1.604E+004 +/-	46.3%	< 1.528E+001	
X	Pu-240				
	Am-241	2.480E+005 +/-	4.4%	2.362E+002	7.142E-002
	Am-241B	2.495E+005 +/-	3.6%	2.376E+002	7.184E-002
	Pu-241	9.615E+005 +/-	14.9%	9.157E+002	9.249E-003
	Pu-241B	1.823E+006 +/-	3.0%	1.736E+003	1.754E-002
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 7.184E-001 +/-	1.8%	< 6.842E-004	< 3.556E-006
	Cm-243	< 7.410E-001 +/-	3.3%	< 7.057E-004	< 1.423E-008
	Cm-244	< 3.007E+004 +/-	14.2%	< 2.864E+001	< 3.669E-004
	Cm-245	< 1.253E+000 +/-	7.6%	< 1.193E-003	< 7.205E-006
	Cm-247	< 1.027E-001 +/-	8.5%	< 9.783E-005	< 1.099E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.252E-001 +/-	3.5%	< 1.192E-004	< 3.029E-008
Cf-251	< 7.049E-001 +/-	5.6%	< 6.713E-004	< 4.405E-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 +- 6.58E-001	7.26E+000 +- 1.17E-001

Beta: 2.02E+002 +- 7.72E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	4.16E+000 +- 1.63E-001
203.55	8.13E+000 +- 2.77E-001
375.05	1.17E+001 +- 2.82E-001
413.71	1.26E+001 +- 3.30E-001

Segment 5 Results

Segment: 5 Detector: DET01 Position: 5
C:\Canberra\NDA2k\Data\00000375_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P005_S005

Acquisition Start: 5/5/2009 7:58:50 AM
Elapsed Live Time: 87.71 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.001 +/- 0.0005
SE-75	264.66	0.185 +/- 0.0051
SE-75	279.54	0.213 +/- 0.0049
SE-75	400.66	0.343 +/- 0.0076

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: 5/5/2009 8:00:51 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
	59.44	Y	128064	10333	1.12	120.72	2.793E-005	1.27	
M	94.68	Y	21721	16911	1.57	191.14	5.986E-005	1.91	108.91
m	98.70	Y	88005	22739	1.57	199.17	6.294E-005	1.63	
m	100.89	Y	14230	22951	1.58	203.56	6.455E-005	2.26	
m	103.35	Y	64696	19667	1.58	208.46	6.628E-005	1.61	
M	111.06	Y	23948	11479	1.42	223.88	7.129E-005	2.25	156.45
m	114.58	Y	19450	12751	1.42	230.91	7.335E-005	2.26	
m	116.68	Y	18645	11917	1.43	235.11	7.451E-005	2.22	
m	120.61	Y	4784	10759	1.43	242.96	7.654E-005	2.89	
m	122.84	Y	2094	10436	1.44	247.41	7.762E-005	4.54	
m	125.23	Y	8437	9988	1.44	252.19	7.871E-005	2.45	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	129.28	Y	40576	8741	1.45	260.28	8.043E-005	2.12	
M	144.13	Y	2591	6712	1.16	289.97	1.401E-004	9.90	1.16
m	146.32	Y	2107	6713	1.16	294.33	1.480E-004	10.70	
m	148.55	Y	5533	6713	1.17	298.79	1.550E-004	8.83	
M	160.89	Y	2683	7362	1.75	323.45	1.848E-004	14.49	7.06
m	164.59	Y	2334	9510	1.75	330.84	1.918E-004	12.99	
	171.38	Y	1828	6603	1.21	344.42	2.029E-004	9.24	
	179.10	Y	991	6254	1.31	359.84	2.133E-004	16.16	
	189.24	Y	1165	6123	1.56	380.10	2.243E-004	13.69	
	195.67	Y	1950	6398	1.17	392.95	2.299E-004	8.77	
M	203.51	Y	9506	5582	1.14	408.62	2.354E-004	1.78	12.94
m	207.98	Y	30954	5191	1.14	417.55	2.381E-004	1.39	
	243.61	Y	693	3607	1.50	488.74	2.486E-004	18.11	
	255.31	Y	1432	3251	1.23	512.14	2.491E-004	8.69	
M	263.87	Y	558	2586	1.14	529.23	2.488E-004	18.67	0.56
m	267.51	Y	1090	2476	1.15	536.50	2.495E-004	16.88	
M	297.43	Y	804	1572	1.10	596.30	2.500E-004	6.88	2.31
m	300.20	Y	143	1814	1.10	601.83	2.496E-004	28.95	
	311.76	Y	1388	2313	1.25	624.94	2.474E-004	7.75	
M	320.87	Y	959	2060	1.85	643.14	2.455E-004	6.61	3.46
m	323.39	Y	1684	2981	1.85	648.17	2.449E-004	4.09	
M	332.67	Y	10794	1663	1.37	666.72	2.426E-004	3.71	4.35
m	335.61	Y	4294	1522	1.37	672.59	2.419E-004	3.98	
m	341.45	Y	1207	1596	1.38	684.27	2.403E-004	5.79	
m	344.92	Y	9378	1484	1.38	691.19	2.394E-004	3.67	
	368.28	Y	3957	1804	2.46	737.87	2.326E-004	3.19	
M	375.00	Y	25221	1655	1.29	751.30	2.306E-004	1.41	25.87
m	380.08	Y	4859	1087	1.30	761.45	2.290E-004	2.09	
m	382.67	Y	4345	933	1.30	766.63	2.282E-004	2.16	
	392.84	Y	8708	964	1.58	786.96	2.251E-004	1.90	
	413.58	Y	23155	684	1.40	828.41	2.173E-004	1.45	
M	422.47	Y	1685	490	1.25	846.17	2.137E-004	3.27	1.14
m	426.54	Y	359	468	1.25	854.30	2.121E-004	8.20	
M	445.77	Y	121	258	1.33	892.73	2.047E-004	16.70	2.20
m	451.39	Y	2746	319	1.34	903.95	2.027E-004	2.53	
	618.73	Y	265	72	1.58	1238.35	1.557E-004	9.85	
M	640.04	Y	131	50	1.46	1280.92	1.514E-004	12.84	1.82
m	645.78	Y	153	46	1.47	1292.41	1.503E-004	11.97	
m	652.66	Y	164	52	1.47	1306.16	1.490E-004	11.56	
m	658.93	Y	90	53	1.48	1318.68	1.478E-004	16.86	
m	662.30	Y	1207	50	1.48	1325.41	1.472E-004	7.18	
	688.77	Y	94	41	1.15	1378.30	1.426E-004	18.69	
	703.66	Y	50	24	1.28	1408.06	1.402E-004	25.78	
	721.86	Y	512	58	1.54	1444.42	1.373E-004	6.14	
	756.00	Y	55	20	1.52	1512.66	1.325E-004	23.35	
	769.15	Y	130	19	1.22	1538.93	1.307E-004	12.36	
	2234.51		11980	57	1.08	4467.14	8.706E-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	< 3.864E-002 +/-	1.8%	< 3.680E-005	< 1.781E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 3.052E-002 +/-	2.0%	< 2.906E-005	< 4.822E-012
	Al-26	< 4.336E-002 +/-	14.7%	< 4.130E-005	< 2.281E-006
	K-40	< 3.326E-001 +/-	4.9%	< 3.168E-004	< 5.189E-002
X	Co-57				
	Co-60	< 3.663E-002 +/-	2.5%	< 3.489E-005	< 3.213E-011
	Se-75	< 2.966E-001 +/-	1.9%	< 2.825E-004	< 2.040E-011
	Kr-85	< 1.618E+001 +/-	3.1%	< 1.541E-002	< 4.078E-008
	Sr-90	3.377E-001 +/-	59.3%	3.216E-004	2.449E-009
	Sb-125	< 3.542E-001 +/-	2.3%	< 3.373E-004	< 3.407E-010
	Ba-133	< 2.275E-001 +/-	1.7%	< 2.166E-004	< 8.985E-010
	Cs-134	< 4.237E-002 +/-	1.8%	< 4.036E-005	< 3.233E-011
	Cs-137	3.377E-001 +/-	59.3%	3.216E-004	3.850E-009
X	Eu-152				
	Eu-154	< 8.714E-002 +/-	2.2%	< 8.299E-005	< 3.268E-010
	Ho-166m	< 6.525E-002 +/-	2.2%	< 6.215E-005	< 3.628E-008
	Bi-207	< 3.660E-002 +/-	1.8%	< 3.486E-005	< 6.661E-010
	Pb-210	< 2.780E+001 +/-	36.7%	< 2.648E-002	< 3.614E-007
	Ra-226	< 1.056E-001 +/-	2.3%	< 1.005E-004	< 1.056E-007
	Ac-227	< 1.025E+000 +/-	8.3%	< 9.762E-004	< 1.404E-008
	Th-230	< 1.325E+002 +/-	13.1%	< 1.262E-001	< 6.492E-003
	Pa-231	< 5.362E+000 +/-	11.2%	< 5.106E-003	< 1.121E-004
	Th-232	< 1.106E-001 +/-	2.4%	< 1.053E-004	< 9.961E-001
	U-232	< 1.899E-001 +/-	2.2%	< 1.808E-004	< 8.791E-009
	U-233	< 3.932E+003 +/-	2.7%	< 3.744E+000	< 4.010E-001
	Pa-234	< 2.124E-001 +/-	12.2%	< 2.023E-004	
	Pa-234m	< 2.556E+002 +/-	2.1%	< 2.435E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 3.447E-001 +/-	2.5%	< 3.283E-004	< 1.575E-001
	Np-237	2.117E+000 +/-	11.2%	2.016E-003	2.963E-003
	Pu-238	< 2.264E+004 +/-	2.6%	< 2.157E+001	< 1.309E-003
	U-238	< 3.413E+000 +/-	2.1%	< 3.251E-003	< 1.003E+001
	Pu-239	1.611E+006 +/-	1.5%	1.534E+003	2.561E+001
	Pu-239B	1.679E+006 +/-	1.3%	1.599E+003	2.669E+001
	U-239	< 4.994E+001 +/-	45.9%	< 4.756E-002	
	Pu-240	4.801E+005 +/-	22.9%	4.573E+002	2.088E+000
	Am-241	4.283E+005 +/-	6.4%	4.079E+002	1.234E-001
	Am-241B	5.939E+005 +/-	4.3%	5.656E+002	1.710E-001
	Pu-241	4.333E+006 +/-	9.3%	4.127E+003	4.168E-002
	Pu-241B	5.653E+006 +/-	2.8%	5.384E+003	5.438E-002
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 7.447E-001 +/-	8.4%	< 7.092E-004	< 3.686E-006
	Cm-243	< 1.088E+000 +/-	3.3%	< 1.036E-003	< 2.088E-008
	Cm-244	< 4.802E+004 +/-	14.2%	< 4.574E+001	< 5.859E-004
	Cm-245	< 2.105E+000 +/-	7.7%	< 2.005E-003	< 1.211E-005
	Cm-247	< 1.580E-001 +/-	8.5%	< 1.505E-004	< 1.691E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.815E-001 +/-	3.5%	< 1.729E-004	< 4.393E-008
Cf-251	< 1.201E+000 +/-	5.6%	< 1.144E-003	< 7.506E-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 -	2.56E+001 +- 3.76E-001

Beta: -6.25E+000 +- 1.14E+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\00000375_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P006_S006

Acquisition Start: 5/5/2009 8:02:01 AM
Elapsed Live Time: 88.58 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.001 +/- 0.0005
SE-75	264.66	0.176 +/- 0.0045
SE-75	279.54	0.191 +/- 0.0045
SE-75	400.66	0.317 +/- 0.0071

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: 5/5/2009 8:04:03 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	116004	10073	1.13	120.72	6.783E-007	1.27	
M	94.67	Y	20890	17097	1.54	191.12	3.231E-005	1.92	111.79
m	98.69	Y	84657	23428	1.55	199.16	3.883E-005	1.63	
m	100.89	Y	12970	24083	1.55	203.55	4.246E-005	2.31	
m	103.34	Y	59783	19613	1.56	208.44	4.650E-005	1.62	
M	111.08	Y	23144	11272	1.39	223.92	5.901E-005	4.19	153.27
m	114.51	Y	18576	14014	1.39	230.78	6.427E-005	4.04	
m	116.57	Y	19141	14102	1.40	234.89	6.729E-005	3.95	
m	120.57	Y	4432	12650	1.40	242.87	7.287E-005	4.54	
m	122.83	Y	2203	11259	1.41	247.39	7.584E-005	5.86	
m	125.24	Y	8844	10771	1.41	252.20	7.883E-005	4.07	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	129.28	Y	41864	9444	1.42	260.29	8.350E-005	3.81	
M	144.17	Y	2498	6560	1.17	290.04	1.572E-004	10.28	1.93
m	146.30	Y	2149	6596	1.17	294.29	1.669E-004	10.73	
m	148.54	Y	5289	6650	1.17	298.77	1.761E-004	9.25	
M	160.90	Y	2592	7514	1.53	323.48	2.152E-004	3.71	7.60
m	164.60	Y	2046	11282	1.53	330.86	2.241E-004	4.63	
	171.43	Y	1709	6567	1.20	344.51	2.380E-004	9.76	
	179.24	Y	1200	6729	1.23	360.12	2.505E-004	14.17	
	189.37	Y	1150	6026	1.21	380.36	2.621E-004	13.66	
	195.56	Y	1688	6413	1.15	392.72	2.673E-004	9.99	
M	203.51	Y	9398	5335	1.19	408.61	2.720E-004	2.31	1.72
m	207.97	Y	30136	4876	1.20	417.52	2.738E-004	1.96	
	243.24	Y	707	3529	1.02	488.02	2.757E-004	17.44	
	255.44	Y	1565	3347	1.24	512.40	2.729E-004	8.25	
M	263.92	Y	449	2822	1.31	529.34	2.706E-004	19.24	0.41
m	267.47	Y	1207	2898	1.32	536.43	2.695E-004	15.82	
	297.39	Y	643	4430	1.21	596.22	2.612E-004	25.81	
M	311.74	Y	1710	2160	1.51	624.90	2.570E-004	3.78	3.63
m	316.21	Y	259	2727	1.52	633.83	2.557E-004	16.85	
m	320.96	Y	1029	2436	1.52	643.31	2.542E-004	5.37	
m	323.32	Y	1456	2582	1.52	648.02	2.534E-004	4.17	
M	332.67	Y	10151	1956	1.31	666.71	2.505E-004	1.67	5.59
m	335.62	Y	4134	1776	1.32	672.61	2.495E-004	2.24	
m	341.37	Y	1195	1823	1.32	684.10	2.477E-004	4.47	
m	344.93	Y	9373	1685	1.33	691.22	2.467E-004	1.69	
	361.61	Y	131	1026	0.91	724.55	2.414E-004	46.03	
	368.28	Y	3837	1829	2.40	737.88	2.393E-004	3.25	
M	375.00	Y	24586	1570	1.29	751.31	2.372E-004	1.41	20.13
m	380.08	Y	4700	1048	1.29	761.46	2.357E-004	2.10	
m	382.67	Y	4139	908	1.30	766.64	2.350E-004	2.19	
	392.85	Y	8588	994	1.49	786.98	2.319E-004	1.90	
	413.58	Y	22108	742	1.42	828.41	2.246E-004	1.46	
M	422.51	Y	1666	494	1.22	846.25	2.212E-004	3.30	1.87
m	426.52	Y	365	438	1.22	854.25	2.198E-004	8.15	
	451.38	Y	2620	312	1.45	903.94	2.114E-004	2.91	
	618.82	Y	230	85	1.86	1238.53	1.721E-004	11.62	
	633.20	Y	41	35	1.23	1267.27	1.696E-004	34.55	
M	645.77	Y	142	82	1.37	1292.39	1.675E-004	11.78	2.25
m	652.45	Y	138	93	1.38	1305.73	1.664E-004	11.51	
m	658.79	Y	92	82	1.38	1318.39	1.654E-004	15.02	
m	662.31	Y	1114	58	1.38	1325.44	1.648E-004	3.71	
	688.69	Y	133	24	1.84	1378.15	1.609E-004	12.92	
	721.80	Y	564	55	1.66	1444.31	1.562E-004	5.73	
	737.34	Y	27	12	1.08	1475.36	1.540E-004	33.71	
	756.12	Y	70	9	1.91	1512.90	1.515E-004	16.85	
	769.08	Y	133	26	1.07	1538.79	1.499E-004	13.29	
	2234.46		11980	62	0.97	4467.04	5.170E-005	1.62	

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	< 2.918E-002 +/-	1.9%	< 2.779E-005	< 1.345E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 2.830E-002 +/-	1.9%	< 2.695E-005	< 4.471E-012
	Al-26	< 5.099E-002 +/-	19.8%	< 4.857E-005	< 2.682E-006
	K-40	< 3.381E-001 +/-	5.3%	< 3.220E-004	< 5.275E-002
	Co-57	2.207E+000 +/-	38.0%	2.102E-003	2.582E-010
	Co-60	< 3.431E-002 +/-	1.7%	< 3.268E-005	< 3.009E-011
	Se-75	< 2.630E-001 +/-	2.3%	< 2.504E-004	< 1.809E-011
	Kr-85	< 1.576E+001 +/-	3.2%	< 1.501E-002	< 3.971E-008
	Sr-90	< 8.304E-002 +/-	2.5%	< 7.909E-005	< 6.020E-010
	Sb-125	< 2.852E-001 +/-	2.7%	< 2.716E-004	< 2.744E-010
	Ba-133	< 2.064E-001 +/-	1.8%	< 1.965E-004	< 8.152E-010
	Cs-134	< 2.820E-002 +/-	2.0%	< 2.686E-005	< 2.152E-011
X	Cs-137				
	Eu-152	< 1.345E-001 +/-	3.8%	< 1.280E-004	< 7.556E-010
	Eu-154	< 8.083E-002 +/-	2.1%	< 7.698E-005	< 3.031E-010
	Ho-166m	< 4.624E-002 +/-	2.4%	< 4.404E-005	< 2.571E-008
	Bi-207	< 3.445E-002 +/-	1.9%	< 3.281E-005	< 6.271E-010
	Pb-210	< 3.342E+004 +/-	309.7%	< 3.183E+001	< 4.344E-004
	Ra-226	< 1.036E-001 +/-	2.7%	< 9.869E-005	< 1.036E-007
	Ac-227	< 9.076E-001 +/-	8.5%	< 8.644E-004	< 1.243E-008
	Th-230	< 4.471E+002 +/-	9.0%	< 4.258E-001	< 2.191E-002
	Pa-231	< 4.897E+000 +/-	11.3%	< 4.664E-003	< 1.024E-004
	Th-232	< 9.915E-002 +/-	2.4%	< 9.442E-005	< 8.933E-001
	U-232	< 1.783E-001 +/-	2.6%	< 1.698E-004	< 8.255E-009
	U-233	< 3.426E+003 +/-	4.0%	< 3.263E+000	< 3.495E-001
	Pa-234	< 1.235E-001 +/-	12.2%	< 1.176E-004	
	Pa-234m	< 1.462E+002 +/-	2.1%	< 1.393E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 2.831E-001 +/-	4.0%	< 2.696E-004	< 1.294E-001
	Np-237	2.847E+000 +/-	5.9%	2.712E-003	3.986E-003
	Pu-238	< 1.918E+004 +/-	4.2%	< 1.827E+001	< 1.109E-003
	U-238	< 3.328E+000 +/-	2.1%	< 3.169E-003	< 9.783E+000
	Pu-239	1.531E+006 +/-	4.7%	1.458E+003	2.434E+001
	Pu-239B	1.549E+006 +/-	1.3%	1.475E+003	2.462E+001
	U-239	< 2.229E+005 +/-	368.5%	< 2.123E+002	
	Pu-240	2.100E+005 +/-	18.2%	2.000E+002	9.136E-001
	Am-241	4.170E+005 +/-	4.0%	3.972E+002	1.201E-001
	Am-241B	4.286E+005 +/-	6.1%	4.082E+002	1.234E-001
	Pu-241	3.647E+006 +/-	10.2%	3.473E+003	3.508E-002
	Pu-241B	4.725E+006 +/-	3.3%	4.500E+003	4.545E-002
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 9.533E-001 +/-	2.2%	< 9.079E-004	< 4.719E-006
	Cm-243	< 9.832E-001 +/-	3.5%	< 9.364E-004	< 1.888E-008
	Cm-244	< 4.570E+004 +/-	14.2%	< 4.352E+001	< 5.575E-004
	Cm-245	< 1.741E+000 +/-	8.4%	< 1.658E-003	< 1.001E-005
	Cm-247	< 1.461E-001 +/-	8.5%	< 1.392E-004	< 1.564E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.707E-001 +/-	3.5%	< 1.625E-004	< 4.130E-008
Cf-251	< 9.968E-001 +/-	6.5%	< 9.493E-004	< 6.230E-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	2.43E+001 +- 1.13E+000	2.37E+001 +- 3.80E-001

Beta: 9.26E+000 +- 1.42E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	2.85E+001 +- 2.53E+000
203.55	2.17E+001 +- 8.88E-001
375.05	2.39E+001 +- 5.84E-001
413.71	2.40E+001 +- 6.26E-001

Segment 7 Results

Segment: 7 Detector: DET01 Position: 7
C:\Canberra\NDA2k\Data\00000375_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P007_S007

Acquisition Start: 5/5/2009 8:05:13 AM
Elapsed Live Time: 100.67 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.000 +/- 0.0000
SE-75	264.66	0.264 +/- 0.0051
SE-75	279.54	0.285 +/- 0.0059
SE-75	400.66	0.390 +/- 0.0081

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: 5/5/2009 8:07:14 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	76203	7643	1.12	120.83	3.526E-006	1.24	
M	94.73	Y	12641	12402	1.56	191.25	1.024E-004	2.16	63.97
m	98.73	Y	49645	16502	1.57	199.24	1.219E-004	1.77	
m	100.93	Y	7698	16504	1.58	203.63	1.329E-004	2.71	
m	103.37	Y	34997	13992	1.58	208.50	1.452E-004	1.74	
M	111.13	Y	13047	8185	1.41	224.01	1.839E-004	1.84	81.64
m	114.63	Y	10697	9072	1.41	231.02	2.008E-004	1.91	
m	116.74	Y	9223	8479	1.42	235.22	2.107E-004	1.92	
m	120.59	Y	2553	7638	1.42	242.92	2.281E-004	3.19	
m	122.91	Y	1306	6685	1.43	247.56	2.381E-004	5.14	
m	125.27	Y	4854	7038	1.43	252.28	2.478E-004	2.31	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	129.31	Y	23367	6098	1.44	260.34	2.635E-004	1.69	
M	144.19	Y	1515	4592	1.11	290.08	3.095E-004	8.78	0.87
m	146.30	Y	1253	5124	1.11	294.30	3.146E-004	9.38	
m	148.62	Y	3069	5160	1.12	298.92	3.197E-004	7.67	
M	161.09	Y	1494	5302	1.69	323.85	3.405E-004	4.69	4.96
m	164.76	Y	1260	8329	1.69	331.18	3.445E-004	5.69	
	171.39	Y	1184	4568	1.22	344.44	3.500E-004	10.61	
	179.18	Y	449	4352	1.32	359.99	3.534E-004	26.37	
	189.41	Y	720	4255	1.41	380.45	3.541E-004	16.50	
	195.56	Y	714	4648	1.39	392.73	3.528E-004	17.77	
M	203.54	Y	5175	3956	1.17	408.68	3.496E-004	2.84	0.75
m	208.00	Y	16630	3409	1.18	417.59	3.472E-004	2.33	
	255.33	Y	855	1945	1.20	512.16	3.087E-004	9.87	
M	263.96	Y	203	1607	1.07	529.42	3.008E-004	17.75	2.23
m	267.49	Y	536	1543	1.07	536.47	2.987E-004	8.25	
	297.44	Y	428	1828	1.37	596.31	2.796E-004	19.29	
M	311.81	Y	813	1636	1.44	625.04	2.698E-004	5.56	2.49
m	316.32	Y	121	1854	1.45	634.05	2.668E-004	26.83	
m	320.91	Y	574	1743	1.45	643.21	2.638E-004	6.87	
m	323.43	Y	759	1664	1.46	648.25	2.621E-004	5.56	
M	332.69	Y	5947	1263	1.30	666.76	2.562E-004	1.83	2.84
m	335.65	Y	2406	1181	1.30	672.66	2.544E-004	2.63	
m	341.35	Y	767	1126	1.31	684.06	2.509E-004	5.18	
m	344.97	Y	4984	1176	1.31	691.30	2.487E-004	1.94	
M	366.93	Y	665	908	1.29	735.18	2.363E-004	6.68	8.30
m	368.45	Y	1368	993	1.29	738.21	2.355E-004	3.95	
m	371.04	Y	196	965	1.29	743.40	2.341E-004	14.58	
m	375.02	Y	13731	821	1.29	751.34	2.320E-004	1.47	
m	380.14	Y	2646	637	1.30	761.57	2.294E-004	2.46	
m	382.72	Y	2417	586	1.30	766.73	2.281E-004	2.55	
	392.85	Y	4598	616	1.50	786.98	2.231E-004	2.24	
	413.64	Y	12301	444	1.42	828.51	2.129E-004	1.56	
M	422.50	Y	795	298	1.11	846.21	2.088E-004	4.56	2.26
m	426.57	Y	202	243	1.12	854.35	2.069E-004	9.87	
	451.41	Y	1567	206	1.42	903.99	1.965E-004	3.47	
	618.72	Y	110	40	1.21	1238.32	1.535E-004	15.19	
M	645.82	Y	68	33	1.53	1292.48	1.494E-004	15.62	0.96
m	652.47	Y	81	43	1.54	1305.76	1.484E-004	13.55	
m	658.84	Y	53	43	1.54	1318.50	1.475E-004	17.75	
m	662.34	Y	647	34	1.54	1325.49	1.470E-004	4.46	
	721.86	Y	346	27	1.58	1444.44	1.399E-004	6.60	
	756.14	Y	28	15	1.52	1512.93	1.364E-004	33.91	
	2234.58		11980	40	1.02	4467.28	4.191E-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	< 3.729E-002 +/-	1.8%	< 3.551E-005	< 1.719E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 3.214E-002 +/-	2.0%	< 3.061E-005	< 5.077E-012
	Al-26	< 4.707E-002 +/-	15.5%	< 4.483E-005	< 2.476E-006
	K-40	< 3.444E-001 +/-	5.0%	< 3.280E-004	< 5.373E-002
X	Co-57				
	Co-60	< 3.139E-002 +/-	2.6%	< 2.989E-005	< 2.753E-011
	Se-75	< 1.956E-001 +/-	1.9%	< 1.863E-004	< 1.346E-011
	Kr-85	< 1.208E+001 +/-	3.1%	< 1.150E-002	< 3.044E-008
	Sr-90	< 6.397E-002 +/-	2.0%	< 6.092E-005	< 4.638E-010
	Sb-125	< 2.418E-001 +/-	2.3%	< 2.303E-004	< 2.326E-010
	Ba-133	< 1.719E-001 +/-	1.7%	< 1.637E-004	< 6.791E-010
	Cs-134	< 3.304E-002 +/-	1.8%	< 3.146E-005	< 2.521E-011
X	Cs-137				
	Eu-152	< 1.200E-001 +/-	3.7%	< 1.143E-004	< 6.746E-010
	Eu-154	< 9.177E-002 +/-	2.2%	< 8.740E-005	< 3.441E-010
	Ho-166m	< 5.280E-002 +/-	2.2%	< 5.029E-005	< 2.936E-008
	Bi-207	< 2.698E-002 +/-	1.9%	< 2.569E-005	< 4.910E-010
	Pb-210	< 5.561E+003 +/-	70.4%	< 5.296E+000	< 7.229E-005
	Ra-226	< 8.832E-002 +/-	2.3%	< 8.411E-005	< 8.832E-008
	Ac-227	< 6.588E-001 +/-	8.3%	< 6.274E-004	< 9.025E-009
	Th-230	< 3.265E+002 +/-	8.6%	< 3.110E-001	< 1.600E-002
	Pa-231	< 3.939E+000 +/-	11.2%	< 3.751E-003	< 8.232E-005
	Th-232	< 8.614E-002 +/-	2.4%	< 8.204E-005	< 7.761E-001
	U-232	< 1.408E-001 +/-	2.2%	< 1.341E-004	< 6.519E-009
	U-233	< 2.485E+003 +/-	2.9%	< 2.366E+000	< 2.534E-001
	Pa-234	< 1.617E-001 +/-	12.2%	< 1.540E-004	
	Pa-234m	< 1.451E+002 +/-	2.1%	< 1.382E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 2.074E-001 +/-	2.6%	< 1.975E-004	< 9.478E-002
	Np-237	1.169E+000 +/-	8.8%	1.114E-003	1.637E-003
	Pu-238	< 1.402E+004 +/-	2.8%	< 1.335E+001	< 8.104E-004
	U-238	< 3.229E+000 +/-	2.2%	< 3.076E-003	< 9.494E+000
	Pu-239	1.430E+006 +/-	3.2%	1.362E+003	2.274E+001
	Pu-239B	8.823E+005 +/-	1.3%	8.403E+002	1.403E+001
	U-239	< 2.869E+004 +/-	85.6%	< 2.732E+001	
X	Pu-240				
	Am-241	2.766E+005 +/-	4.4%	2.634E+002	7.967E-002
	Am-241B	1.627E+005 +/-	3.9%	1.550E+002	4.687E-002
	Pu-241	1.166E+006 +/-	8.3%	1.110E+003	1.121E-002
	Pu-241B	2.029E+006 +/-	2.9%	1.932E+003	1.952E-002
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 7.314E-001 +/-	1.9%	< 6.966E-004	< 3.621E-006
	Cm-243	< 7.544E-001 +/-	3.4%	< 7.185E-004	< 1.448E-008
	Cm-244	< 2.973E+004 +/-	14.2%	< 2.832E+001	< 3.627E-004
	Cm-245	< 1.280E+000 +/-	7.7%	< 1.219E-003	< 7.359E-006
	Cm-247	< 1.160E-001 +/-	8.5%	< 1.105E-004	< 1.242E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.327E-001 +/-	3.5%	< 1.264E-004	< 3.213E-008
Cf-251	< 7.188E-001 +/-	5.7%	< 6.846E-004	< 4.493E-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	2.27E+001 +- 7.35E-001	8.52E+000 +- 1.39E-001

Beta: 1.92E+002 +- 7.71E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	5.03E+000 +- 1.93E-001
203.55	9.32E+000 +- 3.40E-001
375.05	1.36E+001 +- 3.33E-001
413.71	1.41E+001 +- 3.74E-001

Segment 8 Results

Segment: 8 Detector: DET01 Position: 8
C:\Canberra\NDA2k\Data\00000375_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P008_S008

Acquisition Start: 5/5/2009 8:08:24 AM
Elapsed Live Time: 113.19 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.277 +/- 0.0150
SE-75	264.66	0.452 +/- 0.0083
SE-75	279.54	0.468 +/- 0.0089
SE-75	400.66	0.537 +/- 0.0105

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: 5/5/2009 8:10:26 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
	59.54	Y	21322	3403	1.13	120.92	8.234E-005	1.38	
M	94.76		3765	6453	1.52	191.31	2.069E-004	3.72	18.40
m	98.75	Y	13942	9143	1.53	199.28	2.186E-004	2.78	
m	100.97	Y	2050	8981	1.53	203.72	2.248E-004	4.88	
m	103.37	Y	9012	7543	1.54	208.52	2.312E-004	2.79	
M	111.07		2794	4627	1.34	223.90	2.502E-004	2.78	10.79
m	114.77	Y	1529	8185	1.35	231.29	2.584E-004	4.58	
M	125.37	Y	239	4720	0.98	252.48	2.785E-004	11.23	70.81
m	129.39	Y	2736	3182	0.99	260.50	2.849E-004	9.67	
M	144.33		431	1819	1.02	290.36	3.076E-004	29.44	5.78
m	148.61	Y	937	3926	1.03	298.91	3.135E-004	15.51	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	189.51		173	1978	1.16	380.64	3.441E-004	40.79	
	195.47		328	1920	1.35	392.56	3.455E-004	21.62	
M	203.56	Y	1416	1723	1.13	408.71	3.464E-004	3.45	2.84
m	208.04	Y	4296	1654	1.13	417.68	3.466E-004	1.99	
	255.14		346	916	1.70	511.79	3.360E-004	15.13	
	311.83	Y	152	728	1.36	625.08	3.075E-004	28.92	
M	321.25		153	625	1.33	643.90	3.021E-004	15.03	1.05
m	323.46	Y	215	809	1.33	648.31	3.009E-004	11.29	
M	332.73	Y	1440	492	1.33	666.84	2.956E-004	3.05	1.88
m	335.67	Y	618	595	1.33	672.70	2.939E-004	4.87	
m	341.42	Y	171	633	1.34	684.21	2.907E-004	12.20	
m	345.01		1308	614	1.34	691.38	2.887E-004	3.20	
	368.39	Y	520	524	2.27	738.10	2.759E-004	8.79	
M	375.07	Y	3319	390	1.29	751.44	2.724E-004	2.08	3.09
m	380.16		602	299	1.29	761.62	2.697E-004	4.66	
m	382.70		588	273	1.30	766.69	2.684E-004	4.69	
	392.89		1148	262	1.51	787.05	2.632E-004	4.02	
	413.70	Y	3051	149	1.43	828.63	2.526E-004	2.27	
	422.51		128	178	0.95	846.23	2.483E-004	19.17	
	451.37		339	81	1.53	903.91	2.349E-004	7.26	
	662.28	Y	149	17	1.75	1325.37	1.676E-004	9.65	
	721.94	Y	98	11	1.31	1444.60	1.557E-004	11.94	
	2234.58		11980	16	1.06	4467.29	1.066E-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	< 3.125E-002 +/-	1.8%	< 2.977E-005	< 1.441E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 2.105E-002 +/-	1.9%	< 2.004E-005	< 3.325E-012
	Al-26	< 1.561E-002 +/-	18.8%	< 1.487E-005	< 8.212E-007
	K-40	< 3.365E-001 +/-	5.3%	< 3.205E-004	< 5.250E-002
	Co-57	< 1.703E-001 +/-	4.5%	< 1.622E-004	< 1.993E-011
	Co-60	< 3.398E-002 +/-	1.7%	< 3.236E-005	< 2.980E-011
	Se-75	< 1.287E-001 +/-	1.8%	< 1.226E-004	< 8.855E-012
	Kr-85	< 7.069E+000 +/-	3.0%	< 6.732E-003	< 1.781E-008
	Sr-90	< 3.894E-002 +/-	2.2%	< 3.709E-005	< 2.823E-010
	Sb-125	< 1.422E-001 +/-	1.9%	< 1.354E-004	< 1.368E-010
	Ba-133	< 1.054E-001 +/-	1.6%	< 1.004E-004	< 4.163E-010
	Cs-134	< 2.302E-002 +/-	1.8%	< 2.193E-005	< 1.757E-011
X	Cs-137				

	Eu-152	< 8.971E-002	+/- 3.8%	< 8.543E-005	< 5.042E-010
	Eu-154	< 6.009E-002	+/- 2.1%	< 5.723E-005	< 2.253E-010
	Ho-166m	< 2.627E-002	+/- 2.3%	< 2.502E-005	< 1.461E-008
	Bi-207	< 2.539E-002	+/- 2.1%	< 2.418E-005	< 4.621E-010
	Pb-210	< 1.528E+001	+/- 259.0%	< 1.456E-002	< 1.987E-007
	Ra-226	< 6.308E-002	+/- 2.4%	< 6.007E-005	< 6.308E-008
	Ac-227	< 4.474E-001	+/- 8.3%	< 4.261E-004	< 6.130E-009
	Th-230	< 6.143E+001	+/- 83.3%	< 5.850E-002	< 3.010E-003
	Pa-231	< 2.591E+000	+/- 11.2%	< 2.467E-003	< 5.414E-005
	Th-232	< 5.640E-002	+/- 2.3%	< 5.371E-005	< 5.082E-001
	U-232	< 8.533E-002	+/- 2.3%	< 8.127E-005	< 3.951E-009
	U-233	< 1.688E+003	+/- 3.0%	< 1.607E+000	< 1.721E-001
	Pa-234	< 1.419E-001	+/- 12.2%	< 1.351E-004	
	Pa-234m	< 1.760E+002	+/- 2.1%	< 1.677E-001	
	U-234	< 0.000E+000	+/- 0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 1.573E-001	+/- 2.9%	< 1.498E-004	< 7.190E-002
	Np-237	2.882E-001	+/- 29.0%	2.745E-004	4.035E-004
	Pu-238	< 1.025E+004	+/- 3.1%	< 9.761E+000	< 5.924E-004
	U-238	< 3.028E+000	+/- 2.1%	< 2.883E-003	< 8.901E+000
	Pu-239	3.549E+005	+/- 4.4%	3.380E+002	5.643E+000
	Pu-239B	< 6.977E+003	+/- 16.6%	< 6.644E+000	< 1.109E-001
	U-239	< 3.680E+001	+/- 308.3%	< 3.505E-002	
X	Pu-240				
	Am-241	5.979E+004	+/- 7.9%	5.694E+001	1.722E-002
	Am-241B	5.872E+004	+/- 8.3%	5.593E+001	1.691E-002
	Pu-241	3.628E+005	+/- 15.9%	3.455E+002	3.490E-003
	Pu-241B	5.375E+005	+/- 3.3%	5.119E+002	5.170E-003
	Pu-242	< 0.000E+000	+/- 0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 3.333E-001	+/- 57.8%	< 3.174E-004	< 1.650E-006
	Cm-243	< 5.030E-001	+/- 3.3%	< 4.791E-004	< 9.658E-009
	Cm-244	< 3.120E+004	+/- 14.1%	< 2.972E+001	< 3.807E-004
	Cm-245	< 9.756E-001	+/- 7.8%	< 9.291E-004	< 5.610E-006
	Cm-247	< 6.351E-002	+/- 8.5%	< 6.049E-005	< 6.796E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 7.647E-002 +/-	3.4%	< 7.283E-005	< 1.851E-008
Cf-251	< 5.362E-001 +/-	5.8%	< 5.106E-004	< 3.351E-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	5.64E+000 +- 2.50E-001	1.80E+000 +- 3.79E-002

Beta: 2.54E+002 +- 1.32E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	5.45E-001 +- 5.69E-002
203.55	2.57E+000 +- 1.08E-001
375.05	2.81E+000 +- 7.66E-002
413.71	2.95E+000 +- 8.78E-002

Segment 9 Results

Segment: 9 Detector: DET01 Position: 9
C:\Canberra\NDA2k\Data\00000375_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P009_S009

Acquisition Start: 5/5/2009 8:11:36 AM
Elapsed Live Time: 117.63 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.268 +/- 0.0137
SE-75	264.66	0.439 +/- 0.0078
SE-75	279.54	0.456 +/- 0.0085
SE-75	400.66	0.518 +/- 0.0099

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 5/5/2009 8:13:37 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
59.42	Y	2929	1180	1.29	120.69	1.145E-005	2.78	
129.18	Y	229	989	1.42	260.07	2.768E-004	20.54	
207.98	Y	122	596	1.13	417.56	3.518E-004	31.16	
374.88	Y	39	133	1.49	751.05	2.732E-004	48.17	
413.64	Y	50	30	0.99	828.52	2.564E-004	22.08	
2234.56		11980	10	1.05	4467.25	5.155E-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	< 1.733E-002 +/-	1.9%	< 1.651E-005	< 7.990E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.729E-002 +/-	1.9%	< 2.599E-005	< 4.312E-012
Al-26	< 3.938E-002 +/-	19.6%	< 3.751E-005	< 2.071E-006
K-40	< 2.566E-001 +/-	5.3%	< 2.444E-004	< 4.003E-002
Co-57	< 1.106E-001 +/-	4.5%	< 1.054E-004	< 1.294E-011
Co-60	< 3.549E-002 +/-	2.5%	< 3.380E-005	< 3.113E-011
Se-75	< 8.072E-002 +/-	2.3%	< 7.688E-005	< 5.554E-012
Kr-85	< 4.748E+000 +/-	3.2%	< 4.522E-003	< 1.196E-008
Sr-90	< 1.789E-002 +/-	2.3%	< 1.704E-005	< 1.297E-010
Sb-125	< 4.811E-002 +/-	2.1%	< 4.581E-005	< 4.628E-011
Ba-133	< 6.147E-002 +/-	1.8%	< 5.854E-005	< 2.428E-010
Cs-134	< 1.262E-002 +/-	2.4%	< 1.202E-005	< 9.632E-012
Cs-137	< 1.789E-002 +/-	2.3%	< 1.704E-005	< 2.039E-010
Eu-152	< 7.191E-002 +/-	1.8%	< 6.849E-005	< 4.041E-010
Eu-154	< 7.736E-002 +/-	1.8%	< 7.368E-005	< 2.901E-010
Ho-166m	< 2.245E-002 +/-	2.3%	< 2.138E-005	< 1.248E-008
Bi-207	< 1.452E-002 +/-	2.4%	< 1.383E-005	< 2.643E-010
Pb-210	< 4.096E+002 +/-	311.1%	< 3.901E-001	< 5.325E-006
Ra-226	< 3.574E-002 +/-	2.6%	< 3.404E-005	< 3.574E-008
Ac-227	< 2.858E-001 +/-	8.5%	< 2.722E-004	< 3.916E-009
Th-230	< 1.366E+002 +/-	9.1%	< 1.301E-001	< 6.694E-003
Pa-231	< 1.844E+000 +/-	11.3%	< 1.756E-003	< 3.854E-005
Th-232	< 5.852E-002 +/-	2.5%	< 5.573E-005	< 5.272E-001
U-232	< 5.852E-002 +/-	2.5%	< 5.573E-005	< 2.709E-009
U-233	< 1.003E+003 +/-	4.1%	< 9.553E-001	< 1.023E-001
Pa-234	< 9.831E-002 +/-	12.2%	< 9.363E-005	
Pa-234m	< 1.524E+002 +/-	2.1%	< 1.452E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 1.005E-001 +/-	4.1%	< 9.575E-005	< 4.595E-002
Np-237	< 1.284E-001 +/-	2.2%	< 1.223E-004	< 1.798E-004
Pu-238	< 7.004E+003 +/-	4.3%	< 6.671E+000	< 4.049E-004
U-238	< 1.915E+000 +/-	2.1%	< 1.824E-003	< 5.630E+000
Pu-239	2.816E+003 +/-	14.6%	2.682E+000	4.477E-002
Pu-239B	< 3.783E+003 +/-	18.9%	< 3.603E+000	< 6.015E-002
U-239	< 2.130E+003 +/-	370.1%	< 2.029E+000	
Pu-240	< 2.210E+003 +/-	13.4%	< 2.105E+000	< 9.615E-003
Am-241	1.606E+002 +/-	153.5%	1.529E-001	4.624E-005
Am-241B	< 8.620E+002 +/-	14.5%	< 8.209E-001	< 2.482E-004
Pu-241	< 3.622E+004 +/-	4.3%	< 3.450E+001	< 3.485E-004
Pu-241B	1.506E+004 +/-	31.4%	1.434E+001	1.448E-004
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 3.370E-001 +/-	2.2%	< 3.210E-004	< 1.668E-006
Cm-243	< 3.476E-001 +/-	3.6%	< 3.311E-004	< 6.675E-009
Cm-244	< 2.010E+004 +/-	14.1%	< 1.914E+001	< 2.452E-004
Cm-245	< 6.389E-001 +/-	8.4%	< 6.085E-004	< 3.674E-006
Cm-247	< 3.983E-002 +/-	8.5%	< 3.793E-005	< 4.262E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 4.030E-002 +/-	3.5%	< 3.838E-005	< 9.751E-009
Cf-251	< 3.470E-001 +/-	6.6%	< 3.305E-004	< 2.169E-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 -	4.48E-002 +- 6.55E-003

Beta: -1.54E+001 +- 5.58E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in attempted correction: 3

Energy	Mass (g)

Segment 10 Results

Segment: 10 Detector: DET01 Position: 10
C:\Canberra\NDA2k\Data\00000375_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P010_S010

Acquisition Start: 5/5/2009 8:14:47 AM
Elapsed Live Time: 118.19 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.230 +/- 0.0130
SE-75	264.66	0.416 +/- 0.0074
SE-75	279.54	0.423 +/- 0.0079
SE-75	400.66	0.494 +/- 0.0095

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 5/5/2009 8:16:49 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
59.51	Y	1257	779	1.23	120.87	5.024E-006	4.51	
2234.59		11980	4	1.04	4467.31	5.055E-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	< 2.371E-002 +/-	1.9%	< 2.258E-005	< 1.093E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.598E-002 +/-	1.9%	< 2.474E-005	< 4.105E-012
Al-26	< 2.429E-002 +/-	19.8%	< 2.313E-005	< 1.277E-006
K-40	< 3.188E-001 +/-	5.3%	< 3.036E-004	< 4.973E-002
Co-57	< 9.120E-002 +/-	4.6%	< 8.686E-005	< 1.067E-011
Co-60	< 2.631E-002 +/-	1.7%	< 2.506E-005	< 2.307E-011
Se-75	< 6.142E-002 +/-	2.2%	< 5.850E-005	< 4.226E-012
Kr-85	< 6.110E+000 +/-	3.3%	< 5.819E-003	< 1.540E-008
Sr-90	< 2.364E-002 +/-	2.4%	< 2.251E-005	< 1.714E-010
Sb-125	< 5.576E-002 +/-	2.2%	< 5.311E-005	< 5.364E-011
Ba-133	< 4.841E-002 +/-	1.8%	< 4.611E-005	< 1.912E-010
Cs-134	< 2.067E-002 +/-	2.5%	< 1.969E-005	< 1.577E-011
Cs-137	< 2.364E-002 +/-	2.4%	< 2.251E-005	< 2.695E-010
Eu-152	< 8.716E-002 +/-	3.8%	< 8.301E-005	< 4.899E-010
Eu-154	< 6.949E-002 +/-	2.4%	< 6.618E-005	< 2.606E-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	< 7.978E+002 +/-	308.2%	< 7.598E-001	< 1.037E-005
Ra-226	< 4.409E-002 +/-	2.7%	< 4.199E-005	< 4.409E-008
Ac-227	< 2.198E-001 +/-	8.5%	< 2.094E-004	< 3.012E-009
Th-230	< 1.051E+002 +/-	9.0%	< 1.001E-001	< 5.148E-003
Pa-231	< 1.343E+000 +/-	11.3%	< 1.279E-003	< 2.807E-005
Th-232	< 8.129E-002 +/-	2.6%	< 7.742E-005	< 7.325E-001
U-232	< 8.129E-002 +/-	2.6%	< 7.742E-005	< 3.764E-009
U-233	< 7.933E+002 +/-	4.0%	< 7.555E-001	< 8.091E-002
Pa-234	< 1.446E-001 +/-	12.2%	< 1.377E-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	< 7.208E-002 +/-	3.9%	< 6.865E-005	< 3.294E-002
Np-237	< 9.304E-002 +/-	2.2%	< 8.861E-005	< 1.303E-004
Pu-238	< 5.216E+003 +/-	4.2%	< 4.968E+000	< 3.015E-004
U-238	< 1.778E+000 +/-	2.2%	< 1.693E-003	< 5.227E+000
Pu-239	< 1.015E+003 +/-	3.7%	< 9.671E-001	< 1.615E-002
Pu-239B	< 3.647E+003 +/-	18.8%	< 3.473E+000	< 5.798E-002
U-239	< 4.576E+003 +/-	366.8%	< 4.358E+000	
Pu-240	< 2.078E+003 +/-	13.3%	< 1.980E+000	< 9.041E-003
Am-241	1.570E+002 +/-	151.3%	1.495E-001	4.521E-005
Am-241B	< 8.024E+002 +/-	14.4%	< 7.642E-001	< 2.311E-004
Pu-241	< 2.602E+004 +/-	4.2%	< 2.478E+001	< 2.503E-004
Pu-241B	< 7.442E+003 +/-	3.4%	< 7.087E+000	< 7.159E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 2.665E-001 +/-	2.2%	< 2.539E-004	< 1.319E-006
Cm-243	< 2.749E-001 +/-	3.5%	< 2.618E-004	< 5.279E-009
Cm-244	< 2.343E+004 +/-	14.1%	< 2.231E+001	< 2.858E-004
Cm-245	< 4.453E-001 +/-	8.3%	< 4.241E-004	< 2.560E-006
Cm-247	< 3.141E-002 +/-	8.5%	< 2.992E-005	< 3.361E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.875E-002 +/-	3.5%	< 2.738E-005	< 6.957E-009
Cf-251	< 2.392E-001 +/-	6.5%	< 2.278E-004	< 1.495E-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\00000375_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P011_S011

Acquisition Start: 5/5/2009 8:17:59 AM
Elapsed Live Time: 118.49 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.138 +/- 0.0096
SE-75	264.66	0.241 +/- 0.0043
SE-75	279.54	0.247 +/- 0.0048
SE-75	400.66	0.290 +/- 0.0058

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 5/5/2009 8:20:01 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
59.63	Y	441	546	1.20	121.10	4.305E-006	9.43	
2234.61		11980	4	1.03	4467.34	2.532E-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	< 2.161E-002 +/-	1.8%	< 2.058E-005	< 9.961E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.559E-002 +/-	2.0%	< 2.438E-005	< 4.044E-012
Al-26	< 3.488E-002 +/-	15.1%	< 3.322E-005	< 1.835E-006
K-40	< 3.165E-001 +/-	5.0%	< 3.015E-004	< 4.938E-002
Co-57	< 7.959E-002 +/-	3.4%	< 7.580E-005	< 9.312E-012
Co-60	< 3.114E-002 +/-	2.6%	< 2.966E-005	< 2.731E-011
Se-75	< 6.403E-002 +/-	1.8%	< 6.098E-005	< 4.406E-012
Kr-85	< 4.496E+000 +/-	3.0%	< 4.282E-003	< 1.133E-008
Sr-90	< 1.516E-002 +/-	1.9%	< 1.444E-005	< 1.099E-010
Sb-125	< 4.627E-002 +/-	2.1%	< 4.406E-005	< 4.451E-011
Ba-133	< 3.534E-002 +/-	1.7%	< 3.366E-005	< 1.396E-010
Cs-134	< 1.443E-002 +/-	1.9%	< 1.375E-005	< 1.101E-011
Cs-137	< 1.516E-002 +/-	1.9%	< 1.444E-005	< 1.728E-010
Eu-152	< 6.926E-002 +/-	2.1%	< 6.596E-005	< 3.893E-010
Eu-154	< 7.308E-002 +/-	2.2%	< 6.960E-005	< 2.740E-010
Ho-166m	< 3.054E-002 +/-	2.2%	< 2.908E-005	< 1.698E-008
Bi-207	< 1.371E-002 +/-	2.0%	< 1.306E-005	< 2.496E-010
Pb-210	< 9.613E+002 +/-	53.0%	< 9.155E-001	< 1.250E-005
Ra-226	< 3.075E-002 +/-	2.2%	< 2.929E-005	< 3.075E-008
Ac-227	< 2.010E-001 +/-	8.3%	< 1.914E-004	< 2.754E-009
Th-230	< 9.715E+001 +/-	8.6%	< 9.253E-002	< 4.760E-003
Pa-231	< 1.153E+000 +/-	11.2%	< 1.098E-003	< 2.410E-005
Th-232	< 4.793E-002 +/-	2.1%	< 4.565E-005	< 4.319E-001
U-232	< 4.793E-002 +/-	2.1%	< 4.565E-005	< 2.219E-009
U-233	< 7.097E+002 +/-	2.7%	< 6.759E-001	< 7.239E-002
Pa-234	< 8.979E-002 +/-	12.2%	< 8.551E-005	
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	< 6.512E-002 +/-	2.5%	< 6.202E-005	< 2.976E-002
Np-237	< 8.864E-002 +/-	1.9%	< 8.442E-005	< 1.241E-004
Pu-238	< 4.714E+003 +/-	2.6%	< 4.489E+000	< 2.724E-004
U-238	< 2.696E+000 +/-	2.2%	< 2.568E-003	< 7.927E+000
Pu-239	< 8.826E+002 +/-	3.1%	< 8.406E-001	< 1.403E-002
Pu-239B	< 2.687E+003 +/-	5.3%	< 2.559E+000	< 4.271E-002
U-239	< 6.687E+003 +/-	65.1%	< 6.369E+000	
Pu-240	< 1.687E+003 +/-	4.7%	< 1.607E+000	< 7.340E-003
Am-241	6.427E+001 +/-	25.0%	6.121E-002	1.851E-005
Am-241B	< 6.270E+002 +/-	4.9%	< 5.972E-001	< 1.806E-004
Pu-241	< 2.460E+004 +/-	2.8%	< 2.343E+001	< 2.367E-004
Pu-241B	< 7.202E+003 +/-	2.4%	< 6.859E+000	< 6.929E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 2.664E-001 +/-	1.8%	< 2.537E-004	< 1.319E-006
Cm-243	< 2.748E-001 +/-	3.3%	< 2.617E-004	< 5.276E-009
Cm-244	< 1.542E+004 +/-	14.1%	< 1.468E+001	< 1.881E-004
Cm-245	< 4.307E-001 +/-	7.7%	< 4.102E-004	< 2.477E-006
Cm-247	< 2.780E-002 +/-	8.5%	< 2.648E-005	< 2.975E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.207E-002 +/-	3.5%	< 2.102E-005	< 5.342E-009
Cf-251	< 2.341E-001 +/-	5.6%	< 2.230E-004	< 1.463E-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\00000375_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P012_S012

Acquisition Start: 5/5/2009 8:21:10 AM
Elapsed Live Time: 118.75 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.000 +/- 0.0000
SE-75	264.66	0.127 +/- 0.0024
SE-75	279.54	0.134 +/- 0.0028
SE-75	400.66	0.173 +/- 0.0037

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 5/5/2009 8:23:12 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
59.33	Y	266	344	1.26	120.51	1.215E-004	12.05	
2234.58		11980	10	1.05	4467.28	2.397E-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	< 2.189E-002 +/-	1.9%	< 2.085E-005	< 1.009E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.192E-002 +/-	2.0%	< 2.088E-005	< 3.464E-012
Al-26	< 3.238E-002 +/-	16.0%	< 3.084E-005	< 1.703E-006
K-40	< 2.503E-001 +/-	5.1%	< 2.384E-004	< 3.905E-002
Co-57	< 6.368E-002 +/-	4.0%	< 6.064E-005	< 7.450E-012
Co-60	< 2.171E-002 +/-	1.7%	< 2.068E-005	< 1.904E-011
Se-75	< 5.983E-002 +/-	2.5%	< 5.698E-005	< 4.116E-012
Kr-85	< 4.270E+000 +/-	3.3%	< 4.066E-003	< 1.076E-008
Sr-90	< 1.653E-002 +/-	2.2%	< 1.575E-005	< 1.199E-010
Sb-125	< 4.357E-002 +/-	2.4%	< 4.149E-005	< 4.191E-011
Ba-133	< 2.489E-002 +/-	2.0%	< 2.370E-005	< 9.830E-011
Cs-134	< 1.423E-002 +/-	2.3%	< 1.355E-005	< 1.086E-011
Cs-137	< 1.653E-002 +/-	2.2%	< 1.575E-005	< 1.885E-010
Eu-152	< 6.675E-002 +/-	2.7%	< 6.357E-005	< 3.751E-010
Eu-154	< 1.444E-002 +/-	2.1%	< 1.375E-005	< 5.416E-011
Ho-166m	< 1.779E-002 +/-	2.4%	< 1.694E-005	< 9.890E-009
Bi-207	< 1.695E-002 +/-	2.3%	< 1.614E-005	< 3.085E-010
Pb-210	< 1.063E+000 +/-	39.2%	< 1.012E-003	< 1.381E-008
Ra-226	< 3.367E-002 +/-	2.5%	< 3.206E-005	< 3.367E-008
Ac-227	< 2.043E-001 +/-	8.5%	< 1.946E-004	< 2.799E-009
Th-230	< 1.637E+001 +/-	13.8%	< 1.559E-002	< 8.020E-004
Pa-231	< 1.053E+000 +/-	11.3%	< 1.003E-003	< 2.200E-005
Th-232	< 4.167E-002 +/-	2.5%	< 3.969E-005	< 3.755E-001
U-232	< 4.167E-002 +/-	2.5%	< 3.969E-005	< 1.930E-009
U-233	< 6.551E+002 +/-	3.2%	< 6.239E-001	< 6.682E-002
Pa-234	< 9.416E-002 +/-	12.2%	< 8.968E-005	
Pa-234m	< 1.556E+002 +/-	2.1%	< 1.482E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 7.030E-002 +/-	3.2%	< 6.695E-005	< 3.213E-002
Np-237	< 6.701E-002 +/-	2.3%	< 6.382E-005	< 9.382E-005
Pu-238	< 4.802E+003 +/-	3.1%	< 4.573E+000	< 2.775E-004
U-238	< 1.817E+000 +/-	2.1%	< 1.731E-003	< 5.343E+000
Pu-239	< 8.159E+002 +/-	3.7%	< 7.771E-001	< 1.297E-002
Pu-239B	< 1.449E+003 +/-	6.3%	< 1.380E+000	< 2.304E-002
U-239	< 2.484E+000 +/-	49.2%	< 2.366E-003	
Pu-240	< 1.039E+003 +/-	5.6%	< 9.895E-001	< 4.520E-003
Am-241	1.375E+000 +/-	20.7%	1.309E-003	3.960E-007
Am-241B	< 3.748E+002 +/-	5.8%	< 3.570E-001	< 1.080E-004
Pu-241	< 2.371E+004 +/-	3.3%	< 2.258E+001	< 2.281E-004
Pu-241B	< 7.171E+003 +/-	3.2%	< 6.830E+000	< 6.899E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.088E-001 +/-	9.3%	< 1.036E-004	< 5.385E-007
Cm-243	< 2.410E-001 +/-	3.7%	< 2.295E-004	< 4.627E-009
Cm-244	< 1.635E+004 +/-	14.1%	< 1.557E+001	< 1.994E-004
Cm-245	< 4.440E-001 +/-	7.9%	< 4.228E-004	< 2.553E-006
Cm-247	< 1.993E-002 +/-	8.6%	< 1.898E-005	< 2.132E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.165E-002 +/-	3.6%	< 2.061E-005	< 5.238E-009
Cf-251	< 2.341E-001 +/-	5.9%	< 2.230E-004	< 1.463E-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\00000375_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P013_S013

Acquisition Start: 5/5/2009 8:24:22 AM
Elapsed Live Time: 118.95 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.252 +/- 0.0125
SE-75	264.66	0.399 +/- 0.0071
SE-75	279.54	0.404 +/- 0.0075
SE-75	400.66	0.466 +/- 0.0089

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 5/5/2009 8:26:24 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
59.63	Y	109	270	1.02	121.10	1.512E-004	24.37	
2234.61		11980	11	1.07	4467.35	6.899E-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	< 2.155E-002 +/-	1.8%	< 2.052E-005	< 9.933E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.011E-002 +/-	2.0%	< 1.915E-005	< 3.177E-012
Al-26	< 1.769E-002 +/-	14.9%	< 1.685E-005	< 9.304E-007
K-40	< 2.893E-001 +/-	4.9%	< 2.755E-004	< 4.513E-002
Co-57	< 5.058E-002 +/-	3.5%	< 4.818E-005	< 5.918E-012
Co-60	< 3.356E-002 +/-	2.6%	< 3.196E-005	< 2.943E-011
Se-75	< 4.637E-002 +/-	1.9%	< 4.416E-005	< 3.190E-012
Kr-85	< 4.305E+000 +/-	3.1%	< 4.100E-003	< 1.085E-008
Sr-90	< 1.374E-002 +/-	1.9%	< 1.309E-005	< 9.965E-011
Sb-125	< 4.019E-002 +/-	2.1%	< 3.828E-005	< 3.866E-011
Ba-133	< 2.788E-002 +/-	1.7%	< 2.655E-005	< 1.101E-010
Cs-134	< 1.340E-002 +/-	2.0%	< 1.276E-005	< 1.022E-011
Cs-137	< 1.374E-002 +/-	1.9%	< 1.309E-005	< 1.567E-010
Eu-152	< 5.164E-002 +/-	2.5%	< 4.918E-005	< 2.902E-010
Eu-154	< 5.740E-002 +/-	2.2%	< 5.467E-005	< 2.153E-010
Ho-166m	< 2.756E-002 +/-	2.2%	< 2.625E-005	< 1.533E-008
Bi-207	< 1.447E-002 +/-	2.0%	< 1.378E-005	< 2.633E-010
Pb-210	< 1.557E+000 +/-	36.7%	< 1.483E-003	< 2.025E-008
Ra-226	< 3.044E-002 +/-	1.9%	< 2.899E-005	< 3.044E-008
Ac-227	< 1.830E-001 +/-	8.3%	< 1.743E-004	< 2.507E-009
Th-230	< 1.592E+001 +/-	13.0%	< 1.516E-002	< 7.800E-004
Pa-231	< 8.079E-001 +/-	11.2%	< 7.694E-004	< 1.689E-005
Th-232	< 5.526E-002 +/-	2.2%	< 5.263E-005	< 4.979E-001
U-232	< 5.526E-002 +/-	2.2%	< 5.263E-005	< 2.559E-009
U-233	< 5.982E+002 +/-	1.9%	< 5.697E-001	< 6.102E-002
Pa-234	< 9.382E-002 +/-	12.2%	< 8.936E-005	
Pa-234m	< 1.624E+002 +/-	2.1%	< 1.546E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 5.806E-002 +/-	2.5%	< 5.529E-005	< 2.653E-002
Np-237	< 5.494E-002 +/-	1.9%	< 5.232E-005	< 7.691E-005
Pu-238	< 4.113E+003 +/-	2.6%	< 3.917E+000	< 2.377E-004
U-238	< 2.008E+000 +/-	2.1%	< 1.912E-003	< 5.903E+000
Pu-239	< 7.232E+002 +/-	3.2%	< 6.887E-001	< 1.150E-002
Pu-239B	< 1.090E+003 +/-	5.7%	< 1.038E+000	< 1.732E-002
U-239	< 4.473E+000 +/-	45.8%	< 4.260E-003	
Pu-240	< 8.512E+002 +/-	5.0%	< 8.107E-001	< 3.703E-003
Am-241	4.507E-001 +/-	28.9%	4.293E-004	1.298E-007
Am-241B	< 3.094E+002 +/-	5.5%	< 2.947E-001	< 8.912E-005
Pu-241	< 2.190E+004 +/-	2.8%	< 2.086E+001	< 2.107E-004
Pu-241B	< 5.934E+003 +/-	2.5%	< 5.652E+000	< 5.709E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 9.402E-002 +/-	8.4%	< 8.954E-005	< 4.654E-007
Cm-243	< 2.002E-001 +/-	3.3%	< 1.907E-004	< 3.844E-009
Cm-244	< 1.744E+004 +/-	14.1%	< 1.661E+001	< 2.128E-004
Cm-245	< 3.727E-001 +/-	7.7%	< 3.550E-004	< 2.143E-006
Cm-247	< 2.497E-002 +/-	8.5%	< 2.378E-005	< 2.672E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.009E-002 +/-	3.5%	< 1.914E-005	< 4.863E-009
Cf-251	< 2.035E-001 +/-	5.6%	< 1.938E-004	< 1.272E-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\00000375_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P014_S014

Acquisition Start: 5/5/2009 8:27:33 AM
Elapsed Live Time: 119.06 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.603 +/- 0.0202
SE-75	264.66	0.745 +/- 0.0133
SE-75	279.54	0.760 +/- 0.0140
SE-75	400.66	0.788 +/- 0.0148

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 5/5/2009 8:29:35 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
2234.59		11980	7	1.03	4467.30	5.273E-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	< 2.591E-002 +/-	1.9%	< 2.467E-005	< 1.194E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 5.068E-003 +/-	2.0%	< 4.826E-006	< 8.007E-013
Al-26	< 2.578E-002 +/-	15.2%	< 2.456E-005	< 1.356E-006
K-40	< 3.608E-001 +/-	5.0%	< 3.436E-004	< 5.629E-002
Co-57	< 4.826E-002 +/-	3.4%	< 4.596E-005	< 5.647E-012
Co-60	< 3.060E-002 +/-	1.7%	< 2.915E-005	< 2.684E-011
Se-75	< 4.042E-002 +/-	1.8%	< 3.850E-005	< 2.781E-012
Kr-85	< 5.012E+000 +/-	3.1%	< 4.774E-003	< 1.263E-008
Sr-90	< 2.194E-002 +/-	1.9%	< 2.090E-005	< 1.591E-010
Sb-125	< 5.153E-002 +/-	2.1%	< 4.908E-005	< 4.957E-011
Ba-133	< 1.892E-002 +/-	1.7%	< 1.802E-005	< 7.475E-011
Cs-134	< 1.683E-002 +/-	2.0%	< 1.603E-005	< 1.284E-011
Cs-137	< 2.194E-002 +/-	1.9%	< 2.090E-005	< 2.501E-010
Eu-152	< 5.138E-002 +/-	2.5%	< 4.893E-005	< 2.887E-010
Eu-154	< 1.447E-002 +/-	2.2%	< 1.378E-005	< 5.427E-011
Ho-166m	< 2.949E-002 +/-	2.2%	< 2.809E-005	< 1.640E-008
Bi-207	< 1.772E-002 +/-	2.0%	< 1.688E-005	< 3.225E-010
Pb-210	< 8.223E+002 +/-	56.7%	< 7.831E-001	< 1.069E-005
Ra-226	< 3.817E-002 +/-	2.0%	< 3.635E-005	< 3.817E-008
Ac-227	< 1.366E-001 +/-	8.3%	< 1.301E-004	< 1.872E-009
Th-230	< 6.408E+001 +/-	8.6%	< 6.103E-002	< 3.140E-003
Pa-231	< 6.540E-001 +/-	11.2%	< 6.229E-004	< 1.367E-005
Th-232	< 5.031E-002 +/-	2.0%	< 4.792E-005	< 4.533E-001
U-232	< 5.031E-002 +/-	2.0%	< 4.792E-005	< 2.330E-009
U-233	< 4.643E+002 +/-	2.7%	< 4.422E-001	< 4.736E-002
Pa-234	< 1.066E-001 +/-	12.2%	< 1.015E-004	
Pa-234m	< 1.263E+002 +/-	2.2%	< 1.203E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 4.172E-002 +/-	2.5%	< 3.973E-005	< 1.906E-002
Np-237	< 4.517E-002 +/-	1.9%	< 4.302E-005	< 6.323E-005
Pu-238	< 3.080E+003 +/-	2.6%	< 2.934E+000	< 1.780E-004
U-238	< 2.256E+000 +/-	2.2%	< 2.149E-003	< 6.633E+000
Pu-239	< 6.008E+002 +/-	3.1%	< 5.722E-001	< 9.553E-003
Pu-239B	< 1.440E+003 +/-	5.4%	< 1.371E+000	< 2.289E-002
U-239	< 7.259E+003 +/-	69.5%	< 6.914E+000	
Pu-240	< 9.346E+002 +/-	4.7%	< 8.901E-001	< 4.065E-003
Am-241	< 4.872E+000 +/-	25.0%	< 4.640E-003	< 1.403E-006
Am-241B	< 3.647E+002 +/-	5.0%	< 3.474E-001	< 1.050E-004
Pu-241	< 1.609E+004 +/-	2.8%	< 1.532E+001	< 1.548E-004
Pu-241B	< 4.588E+003 +/-	2.4%	< 4.370E+000	< 4.414E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.457E-001 +/-	1.8%	< 1.388E-004	< 7.214E-007
Cm-243	< 1.503E-001 +/-	3.3%	< 1.432E-004	< 2.886E-009
Cm-244	< 2.330E+004 +/-	14.1%	< 2.219E+001	< 2.843E-004
Cm-245	< 2.671E-001 +/-	7.7%	< 2.544E-004	< 1.536E-006
Cm-247	< 3.061E-002 +/-	8.5%	< 2.916E-005	< 3.276E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.709E-002 +/-	3.5%	< 1.627E-005	< 4.135E-009
Cf-251	< 1.413E-001 +/-	5.6%	< 1.346E-004	< 8.831E-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\00000375_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P015_S015

Acquisition Start: 5/5/2009 8:30:45 AM
Elapsed Live Time: 119.15 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.609 +/- 0.0205
SE-75	264.66	0.767 +/- 0.0138
SE-75	279.54	0.781 +/- 0.0144
SE-75	400.66	0.823 +/- 0.0155

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 5/5/2009 8:32:46 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
400.60		33	6	1.04	802.47	2.723E-004	20.83	
558.08		16	3	0.71	1117.16	2.040E-004	28.74	
2234.59		11980	2	1.07	4467.31	2.692E-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	< 2.428E-002 +/-	1.8%	< 2.313E-005	< 1.120E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.583E-002 +/-	2.1%	< 2.460E-005	< 4.081E-012
Al-26	< 2.844E-002 +/-	15.4%	< 2.709E-005	< 1.496E-006
K-40	< 3.181E-001 +/-	5.0%	< 3.029E-004	< 4.962E-002
Co-57	< 4.579E-002 +/-	3.5%	< 4.361E-005	< 5.358E-012
Co-60	< 4.220E-002 +/-	1.7%	< 4.019E-005	< 3.701E-011
Se-75	< 3.683E-002 +/-	1.8%	< 3.508E-005	< 2.534E-012
Kr-85	< 4.901E+000 +/-	3.0%	< 4.667E-003	< 1.235E-008
Sr-90	< 2.077E-002 +/-	1.9%	< 1.978E-005	< 1.506E-010
Sb-125	< 4.141E-002 +/-	2.1%	< 3.944E-005	< 3.983E-011
Ba-133	< 2.581E-002 +/-	1.7%	< 2.458E-005	< 1.019E-010
Cs-134	< 1.795E-002 +/-	1.9%	< 1.710E-005	< 1.370E-011
Cs-137	< 2.077E-002 +/-	1.9%	< 1.978E-005	< 2.368E-010
Eu-152	< 6.183E-002 +/-	2.5%	< 5.888E-005	< 3.475E-010
Eu-154	< 4.570E-002 +/-	1.9%	< 4.352E-005	< 1.714E-010
Ho-166m	< 2.075E-002 +/-	2.2%	< 1.976E-005	< 1.154E-008
Bi-207	< 1.622E-002 +/-	2.0%	< 1.545E-005	< 2.952E-010
Pb-210	< 1.036E+003 +/-	57.4%	< 9.869E-001	< 1.347E-005
Ra-226	< 4.017E-002 +/-	2.0%	< 3.825E-005	< 4.017E-008
Ac-227	< 1.346E-001 +/-	8.3%	< 1.282E-004	< 1.844E-009
Th-230	< 6.002E+001 +/-	8.6%	< 5.716E-002	< 2.941E-003
Pa-231	< 6.686E-001 +/-	11.2%	< 6.367E-004	< 1.397E-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	< 4.284E+002 +/-	2.8%	< 4.080E-001	< 4.370E-002
Pa-234	< 1.146E-001 +/-	12.2%	< 1.091E-004	
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	< 4.015E-002 +/-	2.5%	< 3.824E-005	< 1.835E-002
Np-237	< 4.701E-002 +/-	1.9%	< 4.477E-005	< 6.581E-005
Pu-238	< 2.894E+003 +/-	2.7%	< 2.756E+000	< 1.673E-004
U-238	< 2.624E+000 +/-	2.2%	< 2.499E-003	< 7.714E+000
Pu-239	< 5.465E+002 +/-	3.2%	< 5.205E-001	< 8.689E-003
Pu-239B	< 1.331E+003 +/-	5.6%	< 1.268E+000	< 2.116E-002
U-239	< 1.008E+004 +/-	70.2%	< 9.605E+000	
Pu-240	< 8.750E+002 +/-	4.9%	< 8.333E-001	< 3.806E-003
Am-241	< 4.916E+000 +/-	25.4%	< 4.682E-003	< 1.416E-006
Am-241B	< 3.504E+002 +/-	5.1%	< 3.338E-001	< 1.009E-004
Pu-241	< 1.523E+004 +/-	2.9%	< 1.450E+001	< 1.465E-004
Pu-241B	< 4.049E+003 +/-	2.4%	< 3.856E+000	< 3.895E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.483E-001 +/-	1.8%	< 1.413E-004	< 7.343E-007
Cm-243	< 1.530E-001 +/-	3.3%	< 1.457E-004	< 2.938E-009
Cm-244	< 2.280E+004 +/-	14.1%	< 2.171E+001	< 2.781E-004
Cm-245	< 2.736E-001 +/-	7.7%	< 2.605E-004	< 1.573E-006
Cm-247	< 3.246E-002 +/-	8.5%	< 3.092E-005	< 3.473E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.048E-002 +/-	3.5%	< 1.951E-005	< 4.956E-009
Cf-251	< 1.439E-001 +/-	5.6%	< 1.370E-004	< 8.994E-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\00000375_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P016_S016

Acquisition Start: 5/5/2009 8:33:56 AM
Elapsed Live Time: 119.16 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.544 +/- 0.0193
SE-75	264.66	0.735 +/- 0.0132
SE-75	279.54	0.736 +/- 0.0136
SE-75	400.66	0.798 +/- 0.0151

Errors quoted at 1.000 sigma

Peak Analysis Results

Peak Analysis Performed on: 5/5/2009 8:35:59 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
2234.63		11980	2	1.09	4467.38	2.443E-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	< 4.988E-002 +/-	2.3%	< 4.750E-005	< 2.299E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.991E-002 +/-	2.3%	< 2.848E-005	< 4.726E-012
Al-26	< 1.486E-002 +/-	18.0%	< 1.415E-005	< 7.815E-007
K-40	< 4.336E-001 +/-	5.6%	< 4.129E-004	< 6.764E-002
Co-57	< 7.153E-002 +/-	4.4%	< 6.813E-005	< 8.370E-012
Co-60	< 6.570E-002 +/-	2.0%	< 6.257E-005	< 5.762E-011
Se-75	< 5.992E-002 +/-	2.8%	< 5.706E-005	< 4.122E-012
Kr-85	< 7.269E+000 +/-	3.6%	< 6.923E-003	< 1.832E-008
Sr-90	< 2.361E-002 +/-	2.6%	< 2.249E-005	< 1.712E-010
Sb-125	< 6.157E-002 +/-	2.7%	< 5.864E-005	< 5.923E-011
Ba-133	< 2.140E-002 +/-	2.3%	< 2.039E-005	< 8.455E-011
Cs-134	< 2.231E-002 +/-	2.8%	< 2.124E-005	< 1.702E-011
Cs-137	< 2.361E-002 +/-	2.6%	< 2.249E-005	< 2.692E-010
Eu-152	< 4.696E-002 +/-	4.2%	< 4.472E-005	< 2.639E-010
Eu-154	< 8.539E-002 +/-	2.4%	< 8.132E-005	< 3.202E-010
Ho-166m	< 4.541E-002 +/-	2.6%	< 4.325E-005	< 2.525E-008
Bi-207	< 1.392E-002 +/-	2.8%	< 1.326E-005	< 2.533E-010
Pb-210	< 2.336E+000 +/-	46.8%	< 2.224E-003	< 3.036E-008
Ra-226	< 4.419E-002 +/-	3.0%	< 4.209E-005	< 4.419E-008
Ac-227	< 2.286E-001 +/-	8.7%	< 2.177E-004	< 3.132E-009
Th-230	< 2.165E+001 +/-	15.5%	< 2.062E-002	< 1.061E-003
Pa-231	< 8.440E-001 +/-	11.4%	< 8.038E-004	< 1.764E-005
Th-232	< 8.806E-002 +/-	3.2%	< 8.387E-005	< 7.934E-001
U-232	< 8.806E-002 +/-	3.2%	< 8.387E-005	< 4.077E-009
U-233	< 7.525E+002 +/-	2.5%	< 7.167E-001	< 7.675E-002
Pa-234	< 1.336E-001 +/-	11.7%	< 1.272E-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	< 8.215E-002 +/-	3.6%	< 7.824E-005	< 3.754E-002
Np-237	< 7.420E-002 +/-	2.6%	< 7.066E-005	< 1.039E-004
Pu-238	< 6.257E+003 +/-	3.6%	< 5.959E+000	< 3.616E-004
U-238	< 2.744E+000 +/-	2.4%	< 2.613E-003	< 8.067E+000
Pu-239	< 9.767E+002 +/-	4.1%	< 9.302E-001	< 1.553E-002
Pu-239B	< 1.433E+003 +/-	7.0%	< 1.365E+000	< 2.278E-002
U-239	< 8.274E+000 +/-	58.6%	< 7.880E-003	
Pu-240	< 1.167E+003 +/-	6.2%	< 1.112E+000	< 5.077E-003
Am-241	< 2.430E-001 +/-	19.9%	< 2.314E-004	< 6.999E-008
Am-241B	< 4.034E+002 +/-	6.8%	< 3.842E-001	< 1.162E-004
Pu-241	< 3.174E+004 +/-	3.7%	< 3.023E+001	< 3.053E-004
Pu-241B	< 7.946E+003 +/-	3.6%	< 7.568E+000	< 7.644E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.415E-001 +/-	10.7%	< 1.347E-004	< 7.003E-007
Cm-243	< 2.223E-001 +/-	3.9%	< 2.117E-004	< 4.268E-009
Cm-244	< 2.334E+004 +/-	14.2%	< 2.223E+001	< 2.848E-004
Cm-245	< 5.108E-001 +/-	8.1%	< 4.865E-004	< 2.937E-006
Cm-247	< 4.754E-002 +/-	8.7%	< 4.528E-005	< 5.087E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 3.174E-002 +/-	3.8%	< 3.023E-005	< 7.682E-009
Cf-251	< 2.924E-001 +/-	6.2%	< 2.785E-004	< 1.827E-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

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	< 4.988E-002 +/-	2.3%	< 2.969E-006	< 2.299E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 3.214E-002 +/-	2.0%	< 1.913E-006	< 5.077E-012
Al-26	< 5.099E-002 +/-	19.8%	< 3.035E-006	< 2.682E-006
K-40	< 4.336E-001 +/-	5.6%	< 2.581E-005	< 6.764E-002
Co-57	4.305E+000 +/-	19.6%	2.563E-004	5.037E-010
Co-60	< 6.570E-002 +/-	2.0%	< 3.910E-006	< 5.762E-011
Se-75	< 2.966E-001 +/-	1.9%	< 1.765E-005	< 2.040E-011
Kr-85	< 1.618E+001 +/-	3.1%	< 9.633E-004	< 4.078E-008
Sr-90	3.377E-001 +/-	59.3%	2.010E-005	2.449E-009
Sb-125	< 3.542E-001 +/-	2.3%	< 2.108E-005	< 3.407E-010
Ba-133	< 2.275E-001 +/-	1.7%	< 1.354E-005	< 8.985E-010
Cs-134	< 4.237E-002 +/-	1.8%	< 2.522E-006	< 3.233E-011
Cs-137	3.377E-001 +/-	59.3%	2.010E-005	3.850E-009
Eu-152	< 1.361E-001 +/-	3.6%	< 8.100E-006	< 7.648E-010
Eu-154	< 9.177E-002 +/-	2.2%	< 5.462E-006	< 3.441E-010
Ho-166m	< 6.525E-002 +/-	2.2%	< 3.884E-006	< 3.628E-008
Bi-207	< 4.277E-002 +/-	2.0%	< 2.546E-006	< 7.785E-010
Pb-210	< 3.342E+004 +/-	309.7%	< 1.989E+000	< 4.344E-004
Ra-226	< 1.056E-001 +/-	2.3%	< 6.283E-006	< 1.056E-007
Ac-227	< 1.025E+000 +/-	8.3%	< 6.101E-005	< 1.404E-008
Th-230	< 4.471E+002 +/-	9.0%	< 2.662E-002	< 2.191E-002
Pa-231	< 5.362E+000 +/-	11.2%	< 3.191E-004	< 1.121E-004
Th-232	< 1.106E-001 +/-	2.4%	< 6.581E-006	< 9.961E-001
U-232	< 1.899E-001 +/-	2.2%	< 1.130E-005	< 8.791E-009
U-233	< 3.932E+003 +/-	2.7%	< 2.340E-001	< 4.010E-001
Pa-234	< 2.124E-001 +/-	12.2%	< 1.264E-005	
Pa-234m	< 2.556E+002 +/-	2.1%	< 1.522E-002	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 3.447E-001 +/-	2.5%	< 2.052E-005	< 1.575E-001
Np-237	7.566E+000 +/-	4.8%	4.503E-004	1.059E-002
Pu-238	< 2.264E+004 +/-	2.6%	< 1.348E+000	< 1.309E-003
U-238	< 4.124E+000 +/-	2.4%	< 2.455E-004	< 1.212E+001
Pu-239	6.440E+006 +/-	1.5%	3.833E+002	1.024E+002
Pu-239B	4.897E+006 +/-	0.7%	2.915E+002	7.786E+001
U-239	< 2.229E+005 +/-	368.5%	< 1.327E+001	
Pu-240	6.901E+005 +/-	16.9%	4.108E+001	3.002E+000

Am-241	1.467E+006	+/-	2.5%	8.729E+001	4.224E-001
Am-241B	1.524E+006	+/-	2.5%	9.073E+001	4.390E-001
Pu-241	1.062E+007	+/-	5.4%	6.323E+002	1.022E-001
Pu-241B	1.513E+007	+/-	1.6%	9.007E+002	1.456E-001
Pu-242	< 0.000E+000	+/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 9.533E-001	+/-	2.2%	< 5.674E-005	< 4.719E-006
Cm-243	< 1.088E+000	+/-	3.3%	< 6.473E-005	< 2.088E-008
Cm-244	< 4.802E+004	+/-	14.2%	< 2.859E+000	< 5.859E-004
Cm-245	< 2.105E+000	+/-	7.7%	< 1.253E-004	< 1.211E-005
Cm-247	< 1.580E-001	+/-	8.5%	< 9.406E-006	< 1.691E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.815E-001 +/-	3.5%	< 1.081E-005	< 4.393E-008
Cf-251	< 1.201E+000 +/-	5.6%	< 7.149E-005	< 7.506E-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	1.02E+002 +- 1.57E+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: SGS100 Analysis Date: 5/5/2009

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

Net Weight	16800.0 g		
Pu mass	1.09E+002	+- 1.61E+001	g
TRU Alpha Activity	9.46E+000	+- 1.06E+000	Ci
TRU Activity Concentration	5.63E+005	+- 6.29E+004	nCi/g
Pu-239 Equivalent Activity	9.82E+000	+- 1.06E+000	Ci
Pu-239 FGE	1.03E+002	+- 1.60E+001	g
Decay heat	2.98E-001	+- 3.29E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	2.45E-009	3.38E-007	2.07E-007	0.00E+000
CS137	3.85E-009	3.38E-007	2.07E-007	8.77E-008
U233	<LLD	<LLD	0.00E+000	3.93E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.45E-007
NP237	1.06E-002	7.57E-006	1.23E-006	7.76E-007
PU238	1.04E-002	1.80E-001	3.07E-002	3.67E-004
U238	<LLD	<LLD	0.00E+000	4.12E-006
PU239	1.02E+002	6.44E+000	1.01E+000	1.31E-002
PU240	5.96E+000	1.37E+000	2.15E-001	2.79E-003
AM241	4.22E-001	1.47E+000	2.31E-001	5.89E-004
PU241	1.86E-001	1.93E+001	3.03E+000	3.93E-002
PU242	3.29E-002	1.30E-004	2.42E-005	0.00E+000

Errors quoted at 1.000 sigma

Operator:_____ Date:_____

ITR:_____ Date:_____

Summed Segment Spectra Results
Category: Segmented

C:\Canberra\NDA2k\Data\00000375_CNTR0001_DCAT0002_PROC00AI.CNF

Elapsed Live Time: 97.67 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: 5/5/2009 8:36:22 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
	49.23		7372	36929	2.28	100.33	7.277E-007	4.12	
	59.47	Y	350988	46070	1.13	120.78	6.647E-006	0.38	
	67.16	Y	766	26364	0.79	136.14	1.999E-005	32.68	
M	94.70	Y	63822	86829	1.56	191.19	1.524E-004	0.88	333.89
m	98.71	Y	246637	115507	1.57	199.20	1.783E-004	0.69	
m	100.91	Y	38884	115607	1.57	203.60	1.925E-004	1.14	
m	103.36	Y	176281	98180	1.58	208.48	2.082E-004	0.67	
M	111.10	Y	65069	57897	1.40	223.96	2.564E-004	0.41	448.78
m	114.58	Y	52509	71103	1.40	230.92	2.767E-004	0.43	
m	116.64	Y	50210	60793	1.41	235.03	2.882E-004	0.43	
m	120.61	Y	12864	60431	1.41	242.96	3.093E-004	0.70	
m	122.90	Y	6470	53353	1.42	247.54	3.207E-004	1.15	
m	125.25	Y	24633	50941	1.42	252.24	3.319E-004	0.51	
m	129.30	Y	116759	44881	1.43	260.31	3.496E-004	0.38	
M	144.17	Y	7305	33576	1.16	290.04	3.995E-004	5.73	2.33
m	146.32	Y	6084	33597	1.16	294.33	4.048E-004	6.03	
m	148.57	Y	15251	37359	1.17	298.82	4.099E-004	5.15	
M	161.10	Y	7545	37461	1.40	323.86	4.301E-004	6.69	13.71
m	164.63	Y	6597	63316	1.41	330.93	4.336E-004	5.57	
m	169.42	Y	1212	58712	1.41	340.50	4.371E-004	13.45	
m	171.36	Y	5040	58355	1.42	344.37	4.380E-004	5.84	
M	179.20	Y	2557	27784	1.24	360.03	4.400E-004	13.55	1.36
m	189.29	Y	3486	35980	1.26	380.21	4.384E-004	12.29	
	195.60	Y	4884	30767	1.25	392.81	4.357E-004	5.97	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
M	203.53	Y	26779	25371	1.14	408.66	4.306E-004	0.79	31.91
m	208.00	Y	86011	25345	1.15	417.59	4.271E-004	0.49	
M	221.41		1045	20568	1.66	444.39	4.149E-004	42.36	1.19
m	225.28		1037	25686	1.67	452.12	4.111E-004	38.61	
M	237.75	Y	1010	17784	1.39	477.03	3.977E-004	25.07	0.98
m	243.35	Y	1761	27542	1.40	488.24	3.916E-004	19.25	
m	249.01		503	26329	1.41	499.53	3.853E-004	24.74	
	255.37	Y	4468	15116	1.24	512.26	3.783E-004	4.70	
M	263.94	Y	1350	12622	1.21	529.38	3.687E-004	37.57	0.95
m	267.49	Y	3159	11991	1.21	536.47	3.648E-004	36.87	
M	297.41	Y	2356	7979	1.17	596.26	3.334E-004	3.87	1.43
m	300.04	Y	513	10270	1.17	601.51	3.309E-004	14.40	
M	311.80	Y	5032	13554	1.56	625.01	3.196E-004	2.04	6.39
m	316.20	Y	870	13009	1.57	633.80	3.156E-004	8.66	
m	320.93	Y	3202	12529	1.57	643.25	3.113E-004	2.85	
m	323.40	Y	4368	12198	1.58	648.20	3.091E-004	2.23	
M	332.69	Y	29752	8918	1.31	666.75	3.011E-004	0.69	14.78
m	335.63	Y	11980	8192	1.31	672.64	2.986E-004	1.07	
m	341.40	Y	3397	8442	1.32	684.17	2.939E-004	2.46	
m	344.95	Y	26401	7888	1.32	691.26	2.911E-004	0.72	
M	361.84	Y	464	5736	1.35	725.00	2.784E-004	14.04	21.95
m	366.97	Y	3657	5535	1.36	735.26	2.747E-004	3.07	
m	368.47	Y	7031	5427	1.36	738.26	2.736E-004	1.95	
m	370.89	Y	992	5881	1.36	743.09	2.720E-004	6.79	
m	375.00	Y	70720	4444	1.36	751.30	2.692E-004	0.90	
m	380.10	Y	13836	3520	1.37	761.50	2.658E-004	1.28	
m	382.69	Y	12128	3239	1.37	766.67	2.641E-004	1.31	
	392.86	Y	24039	3982	1.53	786.99	2.577E-004	0.86	
	400.01	Y	646	3233	2.34	801.28	2.535E-004	15.11	
M	413.64	Y	63096	2081	1.37	828.51	2.458E-004	0.70	10.28
m	419.04	Y	291	1654	1.37	839.32	2.429E-004	12.76	
m	422.49	Y	4767	1787	1.38	846.20	2.410E-004	1.77	
m	426.54	Y	1055	1551	1.38	854.29	2.390E-004	4.57	
M	445.78	Y	306	863	1.34	892.74	2.297E-004	10.13	2.57
m	451.40	Y	7634	1177	1.34	903.96	2.271E-004	1.23	
	481.59	Y	160	689	1.38	964.30	2.146E-004	27.68	
	558.35		142	389	1.24	1117.70	1.898E-004	23.97	
	597.79	Y	142	382	1.50	1196.50	1.801E-004	24.94	
	618.82	Y	680	397	1.56	1238.53	1.754E-004	6.46	
M	633.19	Y	81	210	1.50	1267.25	1.725E-004	19.24	3.76
m	640.06	Y	294	282	1.50	1280.96	1.711E-004	7.32	
m	645.78	Y	449	273	1.50	1292.41	1.701E-004	5.60	
m	652.46	Y	482	260	1.51	1305.75	1.688E-004	5.24	
m	658.80	Y	283	251	1.51	1318.42	1.676E-004	7.63	
m	662.32	Y	3289	229	1.52	1325.45	1.670E-004	1.81	
	688.66	Y	330	254	1.75	1378.09	1.624E-004	10.31	
	703.49	Y	115	168	1.80	1407.72	1.601E-004	20.96	
	721.84	Y	1585	250	1.52	1444.38	1.573E-004	3.11	
	737.14	Y	59	115	1.29	1474.96	1.551E-004	32.25	
	756.07	Y	168	89	1.75	1512.79	1.524E-004	11.91	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	769.13	Y	371	163	1.55	1538.89	1.507E-004	8.14	
	1099.21		99	57	1.87	2198.49	1.188E-004	16.32	
	1115.80		65	72	2.18	2231.64	1.175E-004	25.54	
	1173.19	Y	122	62	1.88	2346.31	1.132E-004	14.68	
	1291.96		40	63	1.68	2583.67	1.047E-004	37.63	
	1332.62	Y	170	42	2.02	2664.91	1.019E-004	10.46	
	1460.91	Y	67	46	1.32	2921.27	9.343E-005	22.69	
M	2224.70		30	7	1.01	4447.54	5.040E-005	19.85	3.54
m	2234.55		191681	120	1.01	4467.22	4.996E-005	0.44	
	2615.59		43	7	1.47	5228.66	3.453E-005	19.07	

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	< 1.291E-001 +/-	1.2%	< 7.684E-006	< 2.040E-011
	Al-26	< 1.345E-001 +/-	8.2%	< 8.005E-006	< 7.074E-006
	K-40	1.518E+000 +/-	22.9%	9.038E-005	2.369E-001
X	Co-57				
	Co-60	3.350E-001 +/-	8.8%	1.994E-005	2.938E-010
	Se-75	< 3.857E+000 +/-	1.1%	< 2.296E-004	< 2.654E-010
	Kr-85	< 4.437E+001 +/-	2.5%	< 2.641E-003	< 1.118E-007
	Sr-90	< 1.449E-001 +/-	1.0%	< 8.622E-006	< 1.050E-009
	Sb-125	< 1.015E+000 +/-	1.5%	< 6.039E-005	< 9.761E-010
	Ba-133	< 5.916E-001 +/-	1.0%	< 3.521E-005	< 2.337E-009
	Cs-134	< 1.530E-001 +/-	1.0%	< 9.107E-006	< 1.167E-010
X	Cs-137				
	Eu-152	< 4.213E-001 +/-	2.1%	< 2.508E-005	< 2.368E-009
	Eu-154	< 3.178E-001 +/-	1.5%	< 1.891E-005	< 1.192E-009
	Ho-166m	< 1.619E-001 +/-	1.7%	< 9.635E-006	< 9.000E-008
	Bi-207	< 1.357E-001 +/-	1.1%	< 8.080E-006	< 2.471E-009
	Pb-210	< 1.600E+004 +/-	12.2%	< 9.521E-001	< 2.079E-004
	Ra-226	< 2.921E-001 +/-	1.5%	< 1.738E-005	< 2.921E-007
	Ac-227	< 2.497E+000 +/-	8.2%	< 1.487E-004	< 3.421E-008
	Th-230	2.270E+003 +/-	33.8%	1.351E-001	1.112E-001
	Pa-231	< 1.381E+001 +/-	11.2%	< 8.222E-004	< 2.887E-004
	Th-232	< 3.586E-001 +/-	1.9%	< 2.135E-005	< 3.231E+000
	U-232	1.169E+000 +/-	28.0%	6.960E-005	5.414E-008
	U-233	< 9.118E+003 +/-	1.6%	< 5.427E-001	< 9.300E-001
	Pa-234	< 5.812E-001 +/-	12.1%	< 3.459E-005	

	Pa-234m	<	6.971E+002	+/-	1.5%	<	4.149E-002	
	U-234	<	0.000E+000	+/-	0.0%	<	0.000E+000	< 0.000E+000
	U-235	<	7.896E-001	+/-	1.8%	<	4.700E-005	< 3.609E-001
	Np-237		6.411E+000	+/-	3.1%		3.816E-004	8.975E-003
	Pu-238	<	5.400E+004	+/-	1.6%	<	3.215E+000	< 3.121E-003
	U-238	<	1.158E+001	+/-	1.6%	<	6.890E-004	< 3.403E+001
	Pu-239		6.919E+006	+/-	1.7%		4.118E+002	1.100E+002
	Pu-239B		3.963E+006	+/-	0.6%		2.359E+002	6.300E+001
	U-239	@	1.000E+020	+/-	100.0%	@	5.952E+015	
X	Pu-240							
	Am-241		1.193E+006	+/-	2.5%		7.103E+001	3.437E-001
	Am-241B		5.097E+005	+/-	1.7%		3.034E+001	1.468E-001
	Pu-241		4.695E+006	+/-	5.5%		2.795E+002	4.517E-002
	Pu-241B		8.935E+006	+/-	1.8%		5.319E+002	8.596E-002
	Pu-242	<	0.000E+000	+/-	0.0%	<	0.000E+000	< 0.000E+000
	Am-243	<	2.685E+000	+/-	1.2%	<	1.598E-004	< 1.329E-005
	Cm-243	<	2.822E+000	+/-	3.0%	<	1.680E-004	< 5.418E-008
	Cm-244	<	1.405E+005	+/-	14.1%	<	8.362E+000	< 1.714E-003
	Cm-245	<	4.890E+000	+/-	7.5%	<	2.910E-004	< 2.812E-005
	Cm-247	<	3.782E-001	+/-	8.4%	<	2.251E-005	< 4.047E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 4.319E-001 +/-	3.2%	< 2.571E-005	< 1.045E-007
Cf-251	< 2.738E+000 +/-	5.3%	< 1.630E-004	< 1.711E-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 +- 1.92E+000	3.12E+001 +- 2.69E-001

Beta: 2.22E+002 +- 3.82E+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	3.91E+001 +- 5.60E-001
375.05	6.06E+001 +- 8.86E-001
413.71	6.27E+001 +- 9.14E-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: SGS100 Analysis Date: 5/5/2009

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	9.78E+000 +-	1.13E+000	Ci
TRU Activity Concentration	5.82E+005 +-	6.70E+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	3.07E-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	1.45E-007
U233	<LLD	<LLD	0.00E+000	9.12E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	7.90E-007
NP237	8.98E-003	6.41E-006	1.02E-006	1.22E-006
PU238	1.12E-002	1.94E-001	3.30E-002	3.47E-004
U238	<LLD	<LLD	0.00E+000	1.16E-005
PU239	1.10E+002	6.92E+000	1.09E+000	1.24E-002
PU240	6.40E+000	1.47E+000	2.31E-001	2.64E-003
AM241	3.44E-001	1.19E+000	1.88E-001	1.17E-004
PU241	2.00E-001	2.08E+001	3.26E+000	3.72E-002
PU242	3.53E-002	1.40E-004	2.61E-005	0.00E+000

Errors quoted at 1.000 sigma

Operator:_____ Date:_____

ITR:_____ Date:_____

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

MGA version: MGA V9.63H CI

Measurement date = 5/5/09 Declared date = 5/5/09
Low energy spectrum sensitivity = 30.0% Total counts = 7.502E+006
High energy spectrum sensitivity : 10.0%

Pu g/cm2 = 0.7646 Cd g/cm2 = 2.0065 FWHM at 122 keV = 621 eV
QFIT = 1.06 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	0.000102	6.7	6.7	0.0561	6.9	0.00960	6.69	0.00992	6.91
Pu-239	1.000000	0.0	0.4	551.0425	0.8	94.29929	0.05	94.26149	0.05
Pu-240	0.058216	1.0	0.9	32.0793	1.2	5.48970	0.92	5.48925	0.92
Pu-241	0.001815	0.8	0.7	1.0000	0.0	0.17113	0.74	0.20908	0.91
Pu-242	(New alg.)			0.1769(10)		0.03027	(10)	0.03026	(9)
Am-241	0.005328	0.5	0.4	2.9358	0.8	0.50240	0.50	0.50537	0.50

Pu-240 effective (meas. date) = 5.565 +/- 0.99%
Am-241 separated about 28.392 +/- 0.163 years ago
Am/Pu-241 weight ratio = 2.93578 +/- 0.75%

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
5/5/09 8:36:27 AM

QA File: C:\CANBERRA\NDA2K\QA\CNTR0001_DC
Sample ID: SGS100
Sample Quantity: 1.0000E+000
Sample Date: 4/2/09 3:10:59 PM
Measurement Date: 5/5/09 7:45:02 AM
Elapsed Live Time: 48.1 seconds
Elapsed Real Time: 60.0 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
Trans Peak 400.6 keV cen [0.00+/-0.00]	8.0234E+002	0.00 < : : : >
Trans Peak 400.6 keV FWH [0.00+/-0.00]	1.3872E+000	0.00 < : : : >

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
5/5/09 8:36:32 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: 5/5/09 7:42:46 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: 1.0264E+002+/- 5.929]	1.0239E+002	-4.1827E-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
5/5/09 8:36:34 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: 5/5/09 7:46:04 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]	8.2851E+002	0.00 < : : : >
SGS-100 414 keV FWHM [0.00+/-0.00]	1.3681E+000	0.00 < : : : >
SGS-100 Pu-239 Mass [UD: 1.1082E+002+/- 3.000]	1.1001E+002	-2.7099E-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:	LL85101660TRU	Count Sequence Number:	376
Operator:	RHWM2\RHWM		
Assay Start:	5/5/2009 8:45:11 AM		
Description 1:	LL85101660TRU		
Description 2:			
Location:	LLNL		
Comment:			
Matrix Type:	Lucite		
Container Type:	55 Gal Galv 23.8		
Weight:	Gross: 76.4 kg	Net:	52.6 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

Reviewed By: Robert J Hasholt 6-3-09

Segment 1 Results

Segment: 1 Detector: DET01 Position: 1
C:\Canberra\NDA2k\Data\00000376_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P001_S001

Acquisition Start: 5/5/2009 8:46:13 AM
Elapsed Live Time: 119.25 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.030 +/- 0.0037
SE-75	264.66	0.054 +/- 0.0011
SE-75	279.54	0.058 +/- 0.0014
SE-75	400.66	0.081 +/- 0.0020

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:43:21 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
59.61	Y	2733	336	1.13	121.06	2.777E-006	2.40	
103.10	Y	101	105	0.73	207.96	6.667E-005	17.63	
208.04	Y	15	43	0.82	417.67	1.488E-004	65.93	
414.05		9	12	0.52	829.33	8.943E-005	61.35	

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\00000376_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P002_S002

Acquisition Start: 5/5/2009 8:49:25 AM
Elapsed Live Time: 119.22 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.028 +/- 0.0035
SE-75	264.66	0.049 +/- 0.0010
SE-75	279.54	0.054 +/- 0.0013
SE-75	400.66	0.072 +/- 0.0019

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:43:25 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
59.65	Y	2557	380	1.07	121.14	4.755E-005	2.51	
103.14	Y	76	128	0.84	208.06	1.184E-004	23.79	

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 **********

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\00000376_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P003_S003

Acquisition Start: 5/5/2009 8:52:36 AM
Elapsed Live Time: 119.22 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.070 +/- 0.0055
SE-75	264.66	0.126 +/- 0.0024
SE-75	279.54	0.130 +/- 0.0027
SE-75	400.66	0.168 +/- 0.0036

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:43:29 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
	59.64	Y	1483	355	1.14	121.12	4.986E-005	3.38	
M	99.86	Y	268	209	1.03	201.49	1.423E-004	21.74	1.26
m	103.36	Y	79	331	1.04	208.48	1.492E-004	19.27	
	185.71	Y	50	62	1.17	373.04	2.334E-004	26.48	

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\00000376_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P004_S004

Acquisition Start: 5/5/2009 8:55:48 AM
Elapsed Live Time: 118.91 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.144 +/- 0.0082
SE-75	264.66	0.246 +/- 0.0044
SE-75	279.54	0.255 +/- 0.0049
SE-75	400.66	0.311 +/- 0.0061

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:43:33 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
	59.64	Y	4320	596	1.09	121.13	3.707E-006	2.04	
M	99.91	Y	3071	436	1.12	201.60	1.174E-004	4.65	0.60
m	103.15	Y	216	345	1.13	208.08	1.319E-004	8.19	
	129.36	Y	90	256	1.15	260.45	2.369E-004	29.10	
	152.87	Y	749	157	1.11	307.42	2.998E-004	4.55	
	185.77	Y	156	103	1.18	373.18	3.342E-004	12.71	
	197.32		87	99	1.35	396.24	3.354E-004	20.08	
	208.06	Y	61	74	0.65	417.71	3.333E-004	24.52	
	238.71	Y	60	64	1.16	478.97	3.169E-004	23.45	
	375.00	Y	55	21	1.38	751.30	2.211E-004	18.50	
	582.97	Y	57	11	1.08	1166.88	1.502E-004	16.22	
	1274.36	Y	26	8	0.96	2548.50	9.693E-005	26.48	

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	9.68E-002 +- 3.12E-002	3.08E-002 +- 5.44E-003

Beta: 1.94E+002 +- 6.85E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 2

Energy	Mass (g)
129.30	2.15E-002 +- 6.31E-003
375.05	5.76E-002 +- 1.07E-002

Segment 5 Results

Segment: 5 Detector: DET01 Position: 5
C:\Canberra\NDA2k\Data\00000376_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P005_S005

Acquisition Start: 5/5/2009 8:58:59 AM
Elapsed Live Time: 118.50 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.167 +/- 0.0088
SE-75	264.66	0.273 +/- 0.0049
SE-75	279.54	0.281 +/- 0.0053
SE-75	400.66	0.340 +/- 0.0066

Errors quoted at 1.000 sigma

Peak Analysis Results

Peak Analysis Performed on: 6/3/2009 2:43:37 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
	59.58	Y	7417	973	1.07	121.00	7.225E-005	1.71	
M	99.93	Y	8310	728	1.12	201.64	1.829E-004	2.79	5.76
m	103.10	Y	363	504	1.12	207.96	1.902E-004	6.02	
	110.75		241	370	2.07	223.26	2.067E-004	13.53	
M	125.38	Y	122	271	1.00	252.50	2.329E-004	12.07	1.16
m	129.36	Y	269	254	1.01	260.45	2.388E-004	7.81	
	152.84	Y	2033	248	1.22	307.36	2.694E-004	2.73	
	185.84	Y	174	162	0.95	373.31	2.915E-004	13.51	
	197.17		229	158	1.08	395.95	2.943E-004	10.71	
	208.01	Y	94	149	0.92	417.60	2.952E-004	22.35	
	238.74	Y	200	87	1.26	479.02	2.912E-004	9.96	
	311.94	Y	42	51	1.27	625.29	2.622E-004	30.88	
	375.07	Y	80	45	1.26	751.45	2.331E-004	17.06	
	413.42	Y	56	24	0.85	828.08	2.168E-004	19.01	

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
510.89		149	24	2.33	1022.85	1.824E-004	9.86	
583.07	Y	159	23	1.66	1167.09	1.632E-004	9.34	
766.50	Y	19	14	0.72	1533.64	1.308E-004	37.70	
1274.61	Y	76	7	2.20	2548.99	9.623E-005	12.96	

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	7.27E-002 +- 1.42E-002	6.55E-002 +- 4.69E-003

Beta: 1.66E+001 +- 2.98E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 3

Energy	Mass (g)
129.30	6.39E-002 +- 5.50E-003
375.05	7.90E-002 +- 1.35E-002
413.71	6.28E-002 +- 1.20E-002

Segment 6 Results

Segment: 6 Detector: DET01 Position: 6
C:\Canberra\NDA2k\Data\00000376_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P006_S006

Acquisition Start: 5/5/2009 9:02:10 AM
Elapsed Live Time: 118.77 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.012 +/- 0.0029
SE-75	264.66	0.027 +/- 0.0007
SE-75	279.54	0.027 +/- 0.0008
SE-75	400.66	0.043 +/- 0.0013

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:43:42 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
	59.61	Y	4496	681	1.12	121.06	8.494E-007	2.03	
M	99.94	Y	5372	630	1.13	201.65	5.791E-005	3.43	3.01
m	103.08	Y	253	411	1.14	207.93	6.573E-005	7.46	
	129.35	Y	106	307	1.11	260.43	1.252E-004	26.55	
	152.87	Y	1409	223	1.20	307.42	1.606E-004	3.28	
	185.81	Y	115	116	1.18	373.24	1.793E-004	16.39	
	197.27		159	119	1.05	396.15	1.801E-004	13.13	
	207.95	Y	74	98	1.11	417.48	1.791E-004	23.10	
	238.59	Y	133	58	1.45	478.72	1.717E-004	12.36	
	374.95	Y	37	39	0.71	751.21	1.321E-004	29.51	
	413.64	Y	37	24	1.12	828.52	1.246E-004	25.37	
	583.25	Y	99	10	1.44	1167.44	1.056E-004	11.36	
	1274.89	Y	47	15	1.34	2549.54	6.948E-005	19.62	

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	8.30E-002 +- 2.63E-002	5.84E-002 +- 9.37E-003

Beta: 7.10E+001 +- 6.43E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 3

Energy	Mass (g)
129.30	4.81E-002 +- 1.31E-002
375.05	6.49E-002 +- 1.92E-002
413.71	7.33E-002 +- 1.87E-002

Segment 7 Results

Segment: 7 Detector: DET01 Position: 7
C:\Canberra\NDA2k\Data\00000376_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P007_S007

Acquisition Start: 5/5/2009 9:05:22 AM
Elapsed Live Time: 119.16 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.003 +/- 0.0008
SE-75	264.66	0.010 +/- 0.0003
SE-75	279.54	0.011 +/- 0.0005
SE-75	400.66	0.020 +/- 0.0008

Errors quoted at 1.000 sigma

Peak Analysis Results

Peak Analysis Performed on: 6/3/2009 2:44:50 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
59.62	Y	1050	277	1.13	121.08	1.301E-006	4.01	
99.90		845	309	1.25	201.58	4.548E-005	4.72	
152.76	Y	225	135	1.24	307.20	1.264E-004	10.16	

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\00000376_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P008_S008

Acquisition Start: 5/5/2009 9:08:33 AM
Elapsed Live Time: 119.24 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.012 +/- 0.0032
SE-75	264.66	0.024 +/- 0.0006
SE-75	279.54	0.027 +/- 0.0008
SE-75	400.66	0.044 +/- 0.0013

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:45:40 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
59.65	Y	424	196	1.30	121.14	3.204E-005	7.06	

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\00000376_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P009_S009

Acquisition Start: 5/5/2009 9:11:45 AM
Elapsed Live Time: 119.19 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.137 +/- 0.0080
SE-75	264.66	0.237 +/- 0.0042
SE-75	279.54	0.243 +/- 0.0046
SE-75	400.66	0.295 +/- 0.0058

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:45:45 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
59.69	Y	825	282	1.07	121.22	9.199E-006	4.75	
186.01	Y	85	70	1.04	373.65	2.833E-004	18.06	

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\00000376_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P010_S010

Acquisition Start: 5/5/2009 9:14:56 AM
Elapsed Live Time: 118.97 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.230 +/- 0.0104
SE-75	264.66	0.356 +/- 0.0063
SE-75	279.54	0.368 +/- 0.0069
SE-75	400.66	0.423 +/- 0.0081

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:45:49 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
	59.65	Y	1472	439	1.05	121.15	5.127E-006	3.51	
M	98.67	Y	148	188	0.91	199.11	1.264E-004	11.76	2.57
m	103.04	Y	58	247	0.92	207.85	1.487E-004	20.60	
	185.88	Y	654	165	1.09	373.38	4.038E-004	4.98	
	766.39	Y	61	27	1.21	1533.41	1.321E-004	18.62	
	1001.10	Y	126	7	2.07	2002.43	1.156E-004	9.58	

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

Segment 11 Results

Segment: 11 Detector: DET01 Position: 11
C:\Canberra\NDA2k\Data\00000376_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P011_S011

Acquisition Start: 5/5/2009 9:18:07 AM
Elapsed Live Time: 118.47 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.115 +/- 0.0075
SE-75	264.66	0.211 +/- 0.0038
SE-75	279.54	0.215 +/- 0.0042
SE-75	400.66	0.257 +/- 0.0052

Errors quoted at 1.000 sigma

Peak Analysis Results

Peak Analysis Performed on: 6/3/2009 2:45:53 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
	59.59	Y	4556	869	1.11	121.03	4.020E-006	2.07	
M	92.67		95	472	1.44	187.12	8.596E-005	27.36	1.71
m	94.70		234	636	1.44	191.19	9.422E-005	15.97	
m	98.70	Y	732	584	1.45	199.18	1.108E-004	13.35	
m	103.17	Y	257	482	1.46	208.11	1.295E-004	15.24	
	111.08		228	527	1.39	223.92	1.619E-004	16.00	
	125.36	Y	101	337	1.05	252.44	2.135E-004	27.86	
	143.95	Y	179	353	1.09	289.60	2.640E-004	17.21	
	163.54	Y	117	368	1.36	328.75	2.975E-004	25.91	
	185.79	Y	1957	329	1.32	373.21	3.121E-004	2.86	
M	205.38	Y	187	281	0.99	412.36	3.117E-004	10.00	1.29
m	208.06	Y	90	218	0.99	417.71	3.110E-004	14.79	
	766.45	Y	166	55	1.68	1533.54	1.300E-004	10.74	
	786.34		18	43	1.13	1573.29	1.281E-004	57.08	
	1001.10	Y	377	15	1.57	2002.44	1.096E-004	5.56	

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

Segment 12 Results

Segment: 12 Detector: DET01 Position: 12
C:\Canberra\NDA2k\Data\00000376_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P012_S012

Acquisition Start: 5/5/2009 9:21:19 AM
Elapsed Live Time: 118.18 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.091 +/- 0.0069
SE-75	264.66	0.190 +/- 0.0035
SE-75	279.54	0.196 +/- 0.0039
SE-75	400.66	0.254 +/- 0.0051

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:45:57 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
	59.60	Y	18668	2142	1.11	121.04	1.243E-004	1.36	
M	94.75		324	633	1.39	191.28	1.565E-004	9.84	8.11
m	98.91	Y	1726	903	1.40	199.60	1.622E-004	6.08	
m	103.08	Y	1203	758	1.41	207.94	1.679E-004	6.11	
M	111.33		330	436	1.14	224.41	1.788E-004	24.58	1.08
m	114.67	Y	222	715	1.15	231.09	1.830E-004	20.84	
M	125.38	Y	318	373	1.16	252.49	1.956E-004	21.09	1.34
m	129.41	Y	353	345	1.16	260.55	1.999E-004	20.89	
M	144.05	Y	162	243	0.91	289.79	2.168E-004	30.07	1.30
m	148.71	Y	124	391	0.92	299.11	2.222E-004	25.29	
	185.84	Y	1171	245	1.10	373.30	2.504E-004	3.68	
M	205.17	Y	135	180	0.97	411.93	2.564E-004	16.92	1.90
m	208.12	Y	405	245	0.98	417.83	2.569E-004	13.64	
	312.21	Y	29	135	1.55	625.83	2.381E-004	63.04	

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
375.00	Y	86	86	1.31	751.30	2.172E-004	19.31	
413.98	Y	99	96	1.14	829.20	2.047E-004	18.84	
766.35	Y	91	38	1.61	1533.33	1.383E-004	15.23	
1000.98	Y	233	14	1.53	2002.20	1.159E-004	7.18	

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	1.03E-001 +- 2.38E-002	1.01E-001 +- 1.17E-002

Beta: 4.71E+000 +- 4.92E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 3

Energy	Mass (g)
129.30	1.00E-001 +- 2.14E-002
375.05	9.14E-002 +- 1.77E-002
413.71	1.18E-001 +- 2.25E-002

Segment 13 Results

Segment: 13 Detector: DET01 Position: 13
C:\Canberra\NDA2k\Data\00000376_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P013_S013

Acquisition Start: 5/5/2009 9:24:30 AM
Elapsed Live Time: 117.96 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.097 +/- 0.0071
SE-75	264.66	0.194 +/- 0.0035
SE-75	279.54	0.199 +/- 0.0039
SE-75	400.66	0.248 +/- 0.0050

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: 6/3/2009 2:46:02 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
	59.61	Y	30976	3281	1.07	121.06	1.069E-004	1.26	
M	98.90	Y	2023	1015	1.31	199.58	1.683E-004	5.59	11.10
m	103.11	Y	1762	837	1.32	208.00	1.744E-004	5.36	
	111.33		158	565	1.44	224.42	1.855E-004	24.02	
M	125.35	Y	508	382	1.02	252.44	2.017E-004	5.09	3.51
m	129.39	Y	831	311	1.03	260.50	2.057E-004	3.84	
	148.77	Y	108	720	1.02	299.24	2.258E-004	48.46	
	185.81	Y	272	167	0.90	373.25	2.497E-004	9.28	
M	203.59	Y	107	100	1.03	408.79	2.540E-004	14.99	1.12
m	208.08	Y	627	124	1.03	417.74	2.545E-004	9.86	
	312.32	Y	62	72	0.99	626.05	2.316E-004	24.59	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
M	332.75	Y	123	53	1.21	666.88	2.241E-004	9.59	1.05
m	335.43	Y	59	62	1.21	672.23	2.231E-004	15.39	
	344.86		43	62	1.19	691.07	2.196E-004	31.28	
	375.02	Y	192	59	1.43	751.34	2.086E-004	9.55	
	393.02		72	29	1.14	787.31	2.022E-004	16.60	
	413.66	Y	186	21	1.53	828.56	1.953E-004	8.39	

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 -	2.28E-001 +- 9.18E-003

Beta: -4.22E+000 +- 1.61E+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\00000376_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P014_S014

Acquisition Start: 5/5/2009 9:27:41 AM
Elapsed Live Time: 118.22 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.250 +/- 0.0112
SE-75	264.66	0.390 +/- 0.0070
SE-75	279.54	0.401 +/- 0.0075
SE-75	400.66	0.454 +/- 0.0087

Errors quoted at 1.000 sigma

Peak Analysis Results

Peak Analysis Performed on: 6/3/2009 2:46:06 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
	59.61	Y	26821	2911	1.08	121.06	5.088E-006	1.28	
M	94.83		324	474	1.18	191.44	1.202E-004	8.60	8.49
m	98.90	Y	1970	647	1.19	199.58	1.415E-004	5.57	
m	100.88	Y	338	658	1.19	203.52	1.519E-004	8.79	
m	103.16	Y	1516	545	1.19	208.08	1.640E-004	5.51	
	110.90		55	461	1.04	223.56	2.039E-004	59.69	
M	123.07	Y	80	192	1.04	247.87	2.597E-004	20.39	1.67
m	125.32	Y	435	272	1.04	252.38	2.688E-004	11.01	
m	129.36	Y	625	206	1.05	260.44	2.839E-004	10.54	
	148.83	Y	134	210	0.97	299.35	3.419E-004	18.31	
	185.88	Y	84	156	1.04	373.38	3.815E-004	24.57	
M	203.71	Y	71	130	1.10	409.01	3.784E-004	14.75	1.52
m	208.06	Y	504	105	1.11	417.72	3.764E-004	4.85	
	311.77	Y	45	56	1.59	624.95	2.883E-004	28.67	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
M	332.76	Y	78	35	1.10	666.90	2.712E-004	28.90	0.77
m	335.60	Y	61	51	1.10	672.57	2.690E-004	26.71	
	345.09		51	36	1.41	691.54	2.619E-004	22.50	
	374.92	Y	152	47	1.40	751.14	2.419E-004	10.66	
	392.64		42	16	1.14	786.55	2.315E-004	20.93	
	413.66	Y	124	29	1.27	828.55	2.204E-004	11.35	
	662.55	Y	22	6	1.36	1325.90	1.511E-004	27.00	

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	1.48E-001 +- 1.94E-002	1.32E-001 +- 7.79E-003

Beta: 2.56E+001 +- 2.67E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.25E-001 +- 1.39E-002
203.55	1.18E-001 +- 1.76E-002
375.05	1.44E-001 +- 1.56E-002
413.71	1.38E-001 +- 1.59E-002

Segment 15 Results

Segment: 15 Detector: DET01 Position: 15
C:\Canberra\NDA2k\Data\00000376_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P015_S015

Acquisition Start: 5/5/2009 9:30:53 AM
Elapsed Live Time: 118.75 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.477 +/- 0.0159
SE-75	264.66	0.610 +/- 0.0110
SE-75	279.54	0.621 +/- 0.0116
SE-75	400.66	0.678 +/- 0.0129

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:46:09 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
	59.62	Y	14892	1688	1.03	121.08	5.673E-006	1.42	
M	98.95	Y	816	449	1.27	199.68	1.728E-004	9.09	5.12
m	103.08	Y	726	352	1.28	207.93	1.999E-004	8.76	
M	125.50	Y	193	158	0.89	252.73	3.303E-004	14.15	0.98
m	129.35	Y	273	171	0.90	260.43	3.478E-004	13.12	
	208.10	Y	229	81	1.51	417.78	4.345E-004	9.00	
	375.04	Y	64	25	1.17	751.38	2.683E-004	17.05	
	413.82	Y	61	7	1.82	828.88	2.446E-004	14.69	

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	6.67E-002 +- 1.20E-002	5.09E-002 +- 4.44E-003

Beta: 5.25E+001 +- 3.39E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 3

Energy	Mass (g)
129.30	4.45E-002 +- 6.04E-003
375.05	5.53E-002 +- 9.49E-003
413.71	6.11E-002 +- 9.06E-003

Segment 16 Results

Segment: 16 Detector: DET01 Position: 16
C:\Canberra\NDA2k\Data\00000376_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P016_S016

Acquisition Start: 5/5/2009 9:34:24 AM
Elapsed Live Time: 119.13 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.609 +/- 0.0190
SE-75	264.66	0.766 +/- 0.0139
SE-75	279.54	0.771 +/- 0.0144
SE-75	400.66	0.817 +/- 0.0155

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:46:15 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
	59.61	Y	4690	655	1.12	121.06	1.210E-004	1.98	
M	99.08	Y	281	178	1.49	199.93	1.717E-004	20.24	0.95
m	103.12	Y	211	254	1.50	208.00	1.770E-004	17.27	

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

C:\Canberra\NDA2k\Data\00000376_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	7.99E-001 +- 5.51E-002	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	< 4.447E-002 +/-	1.8%	< 8.455E-007	< 2.050E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	3.912E-001 +/-	10.6%	7.438E-006	6.182E-011
	Al-26	< 7.200E-002 +/-	18.0%	< 1.369E-006	< 3.787E-006
	K-40	< 5.092E-001 +/-	5.6%	< 9.681E-006	< 7.944E-002
	Co-57	< 6.901E-002 +/-	3.7%	< 1.312E-006	< 8.074E-012
	Co-60	< 6.630E-002 +/-	2.9%	< 1.260E-006	< 5.815E-011
	Se-75	< 5.242E-002 +/-	1.8%	< 9.965E-007	< 3.606E-012
	Kr-85	< 1.121E+001 +/-	3.0%	< 2.131E-004	< 2.825E-008
	Sr-90	3.767E-002 +/-	27.1%	7.162E-007	2.731E-010
	Sb-125	< 1.205E-001 +/-	2.1%	< 2.290E-006	< 1.159E-010
	Ba-133	< 5.067E-002 +/-	1.7%	< 9.632E-007	< 2.001E-010
	Cs-134	< 4.642E-002 +/-	1.9%	< 8.825E-007	< 3.542E-011
?	Cs-137	3.767E-002 +/-	27.1%	7.162E-007	4.295E-010
	Eu-152	< 1.324E-001 +/-	2.5%	< 2.518E-006	< 7.443E-010
	Eu-154	< 1.158E-001 +/-	4.4%	< 2.201E-006	< 4.341E-010
	Ho-166m	< 8.154E-002 +/-	2.2%	< 1.550E-006	< 4.533E-008
	Bi-207	< 3.883E-002 +/-	2.0%	< 7.382E-007	< 7.067E-010
	Pb-210	< 7.421E+003 +/-	309.7%	< 1.411E-001	< 9.648E-005
	Ra-226	< 8.814E-002 +/-	2.0%	< 1.676E-006	< 8.814E-008
	Ac-227	< 1.790E-001 +/-	8.3%	< 3.404E-006	< 2.453E-009
	Th-230	< 8.425E+001 +/-	8.6%	< 1.602E-003	< 4.128E-003
	Pa-231	< 1.101E+000 +/-	11.2%	< 2.093E-005	< 2.301E-005

Th-232	<	9.593E-002	+/-	2.4%	<	1.824E-006	< 8.644E-001
U-232		8.591E-001	+/-	7.8%		1.633E-005	3.978E-008
U-233	<	6.009E+002	+/-	2.7%	<	1.142E-002	< 6.129E-002
Pa-234	<	2.555E-001	+/-	12.2%	<	4.857E-006	
Pa-234m	<	3.012E+002	+/-	2.1%	<	5.726E-003	
U-234	<	0.000E+000	+/-	0.0%	<	0.000E+000	< 0.000E+000
U-235		6.234E+000	+/-	2.4%		1.185E-004	2.849E+000
Np-237		4.130E-001	+/-	17.2%		7.852E-006	5.782E-004
Pu-238		4.946E+005	+/-	3.3%		9.402E+000	2.859E-002
U-238		1.776E+002	+/-	3.7%		3.376E-003	5.221E+002
Pu-239		5.024E+004	+/-	6.9%		9.551E-001	7.988E-001
Pu-239B	<	3.770E+003	+/-	5.4%	<	7.166E-002	< 5.993E-002
U-239	<	4.014E+004	+/-	368.5%	<	7.631E-001	
Pu-240		6.876E+003	+/-	14.9%		1.307E-001	2.991E-002
Am-241		1.733E+004	+/-	32.3%		3.294E-001	4.991E-003
Am-241B		5.224E+004	+/-	2.8%		9.931E-001	1.504E-002
Pu-241		1.732E+005	+/-	19.8%		3.294E+000	1.667E-003
Pu-241B		3.126E+005	+/-	5.2%		5.943E+000	3.007E-003
Pu-242	<	0.000E+000	+/-	0.0%	<	0.000E+000	< 0.000E+000
Am-243	<	2.043E-001	+/-	1.8%	<	3.884E-006	< 1.011E-006
Cm-243	<	2.107E-001	+/-	3.3%	<	4.007E-006	< 4.046E-009
Cm-244	<	5.577E+004	+/-	13.1%	<	1.060E+000	< 6.804E-004
Cm-245	<	3.438E-001	+/-	7.9%	<	6.536E-006	< 1.977E-006
Cm-247	<	5.201E-002	+/-	8.7%	<	9.889E-007	< 5.566E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 4.624E-002 +/-	3.5%	< 8.792E-007	< 1.119E-008
Cf-251	< 1.845E-001 +/-	5.9%	< 3.507E-006	< 1.153E-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

********** 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: LL85101660TRU Analysis Date: 5/5/2009

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

Net Weight	52600.0 g		
Pu mass	8.72E-001 +-	1.71E-001	g
TRU Alpha Activity	4.07E-001 +-	7.17E-002	Ci
TRU Activity Concentration	7.74E+003 +-	1.36E+003	nCi/g
Pu-239 Equivalent Activity	3.81E-001 +-	6.54E-002	Ci
Pu-239 FGE	2.64E+000 +-	4.10E-001	g
Decay heat	1.34E-002 +-	2.37E-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	5.19E-008
U233	<LLD	<LLD	0.00E+000	6.01E-004
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	2.85E+000	6.23E-006	1.27E-006	1.21E-007
NP237	5.78E-004	4.13E-007	1.10E-007	1.50E-007
PU238	1.89E-002	3.28E-001	7.05E-002	1.65E-002
U238	5.22E+002	1.78E-004	3.64E-005	5.87E-006
PU239	7.99E-001	5.02E-002	1.07E-002	2.54E-003
PU240	5.23E-002	1.20E-002	2.67E-003	6.07E-004
AM241	4.99E-003	1.73E-002	6.60E-003	9.41E-005
PU241	2.03E-003	2.11E-001	4.62E-002	1.07E-002
PU242	4.13E-004	1.64E-006	4.01E-007	0.00E+000

Errors quoted at 1.000 sigma

Operator: Robert J Hyglett Jr Date: 6-3-09

ITR: Patty C Curtis Date: 6/12/09

Summed Segment Spectra Results
Category: Segmented

C:\Canberra\NDA2k\Data\00000376_CNTR0001_DCAT0002_PROC00AI.CNF

Elapsed Live Time: 118.61 sec Elapsed Real Time: 120.00 sec

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

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 1.237E-001 +/-	1.0%	< 2.352E-006	< 5.704E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	5.207E-001 +/-	10.4%	9.899E-006	8.227E-011
	Al-26	< 1.229E-001 +/-	6.9%	< 2.336E-006	< 6.463E-006
	K-40	1.567E+000 +/-	27.2%	2.980E-005	2.445E-001
X	Co-57				
	Co-60	2.422E-001 +/-	12.2%	4.604E-006	2.124E-010
	Se-75	< 2.354E-001 +/-	1.0%	< 4.475E-006	< 1.619E-011
	Kr-85	< 4.506E+001 +/-	2.4%	< 8.566E-004	< 1.135E-007
	Sr-90	3.039E-001 +/-	11.7%	5.777E-006	2.203E-009
	Sb-125	< 4.445E-001 +/-	1.3%	< 8.451E-006	< 4.276E-010
	Ba-133	< 2.090E-001 +/-	0.8%	< 3.974E-006	< 8.257E-010
	Cs-134	< 1.522E-001 +/-	0.8%	< 2.894E-006	< 1.162E-010
?	Cs-137	3.039E-001 +/-	11.7%	5.777E-006	3.464E-009
	Eu-152	< 4.525E-001 +/-	1.8%	< 8.603E-006	< 2.543E-009
	Eu-154	< 5.959E-001 +/-	1.4%	< 1.133E-005	< 2.235E-009
	Ho-166m	< 2.235E-001 +/-	1.6%	< 4.249E-006	< 1.243E-007
	Bi-207	< 1.455E-001 +/-	0.8%	< 2.766E-006	< 2.648E-009
	Pb-210	< 6.400E+003 +/-	11.3%	< 1.217E-001	< 8.320E-005
	Ra-226	< 3.235E-001 +/-	1.3%	< 6.150E-006	< 3.235E-007
	Ac-227	< 8.463E-001 +/-	8.2%	< 1.609E-005	< 1.159E-008
	Th-230	< 4.801E+002 +/-	8.2%	< 9.127E-003	< 2.352E-002
	Pa-231	< 4.741E+000 +/-	11.1%	< 9.014E-005	< 9.910E-005
	Th-232	1.196E+000 +/-	8.1%	2.274E-005	1.078E+001
X	U-232				
	U-233	< 3.377E+003 +/-	1.4%	< 6.420E-002	< 3.445E-001
	Pa-234	< 8.011E-001 +/-	12.1%	< 1.523E-005	
	Pa-234m	< 9.949E+002 +/-	1.5%	< 1.891E-002	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	6.655E+000 +/-	2.4%	1.265E-004	3.041E+000
	Np-237	1.117E+000 +/-	12.2%	2.124E-005	1.564E-003
	Pu-238	4.468E+005 +/-	3.8%	8.493E+000	2.582E-002
	U-238	2.034E+002 +/-	4.1%	3.868E-003	5.981E+002
	Pu-239	6.657E+004 +/-	5.9%	1.266E+000	1.059E+000
	Pu-239B	< 2.627E+004 +/-	3.3%	< 4.993E-001	< 4.176E-001
	U-239	< 1.354E+004 +/-	15.0%	< 2.575E-001	
X	Pu-240				
?	Am-241	7.105E+004 +/-	12.0%	1.351E+000	2.046E-002
	Am-241B	7.176E+004 +/-	2.4%	1.364E+000	2.067E-002
	Pu-241	3.228E+005 +/-	7.2%	6.137E+000	3.105E-003
X	Pu-241B				

Pu-242	< 0.000E+000 +/- 0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 9.611E-001 +/- 1.1%	< 1.827E-005	< 4.757E-006
Cm-243	< 9.913E-001 +/- 3.0%	< 1.885E-005	< 1.903E-008
Cm-244	< 1.790E+005 +/- 13.9%	< 3.403E+000	< 2.184E-003
Cm-245	< 1.699E+000 +/- 7.4%	< 3.230E-005	< 9.770E-006
Cm-247	< 2.149E-001 +/- 8.4%	< 4.085E-006	< 2.299E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.941E-001 +/-	3.1%	< 3.691E-006	< 4.698E-008
Cf-251	< 9.387E-001 +/-	5.3%	< 1.785E-005	< 5.867E-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	1.06E+000 +- 6.22E-002	9.16E-001 +- 2.56E-002

Beta: 3.12E+001 +- 1.18E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	8.37E-001 +- 4.11E-002
203.55	8.26E-001 +- 1.03E-001
375.05	1.01E+000 +- 4.07E-002
413.71	9.20E-001 +- 6.59E-002

********** 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: LL85101660TRU Analysis Date: 5/5/2009

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

Net Weight	52600.0 g	
Pu mass	1.16E+000 +-	2.23E-001 g
TRU Alpha Activity	5.88E-001 +-	9.47E-002 Ci
TRU Activity Concentration	1.12E+004 +-	1.80E+003 nCi/g
Pu-239 Equivalent Activity	5.54E-001 +-	8.66E-002 Ci
Pu-239 FGE	3.02E+000 +-	4.56E-001 g
Decay heat	1.93E-002 +-	3.13E-003 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	2.20E-009	3.04E-007	7.09E-008	0.00E+000
CS137	3.46E-009	3.04E-007	7.09E-008	1.53E-007
U233	<LLD	<LLD	0.00E+000	3.38E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	3.04E+000	6.65E-006	1.35E-006	2.88E-007
NP237	1.56E-003	1.12E-006	2.64E-007	4.33E-007
PU238	2.51E-002	4.34E-001	9.21E-002	2.64E-002
U238	5.98E+002	2.03E-004	4.19E-005	1.75E-005
PU239	1.06E+000	6.66E-002	1.40E-002	4.04E-003
PU240	6.93E-002	1.59E-002	3.49E-003	9.67E-004
AM241	2.05E-002	7.10E-002	1.67E-002	6.62E-005
PU241	2.69E-003	2.80E-001	6.04E-002	1.70E-002
PU242	5.48E-004	2.17E-006	5.26E-007	0.00E+000

Errors quoted at 1.000 sigma

Operator: Robert J. Haught Jr. Date: 6-3-09

ITR: Dilip Date: 6/12/09

Automated Independent Technical Review

Counter ID: SGS with Trans. Count Type: Assay - 55 Gal Galv 23.8
Container ID: LL85101660TRU Assay Date: 5/5/2009
Waste Matrix Code:
Sequence Number: 376

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

Source of results is undefined.

DISPOSITION:

MGA Analysis:

Note: The measured and declared isotopics are inconsistent. OK

DISPOSITION:

Gamma Analysis:
Analysis Status: No errors.
Spectrum Validity Check engine has suggested data review.
Pu-239/Am-241 ratio is less than the lower limit of 100.00 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 Analysis Warnings: OK Minimum Used.
Minimum transmission used.
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: 6-3-09

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:	LL85101660TRU	Analysis Date:	5/5/2009

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

MGA version: MGA V9.63H CI

Measurement date = 5/5/09 Declared date = 5/5/09
Low energy spectrum sensitivity = 30.0% Total counts = 4.862E+005
High energy spectrum sensitivity : 10.0%

Pu g/cm2 = 0.2745 Cd g/cm2 = 1.6705 FWHM at 122 keV = 629 eV
QFIT = 1.07 FWHM at 208 keV = 788 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	0.023699	3.0	0.9	9.3209	4.3	2.16984	2.82	2.35506	3.06
Pu-239	1.000000	0.0	2.9	393.3072	5.1	91.55885	0.44	91.23116	0.43
Pu-240	0.065435	6.6	5.8	25.7361	7.3	5.99116	6.21	5.97470	6.19
Pu-241	0.002543	5.0	4.0	1.0000	0.0	0.23279	4.94	0.39189	8.32
Pu-242	(New alg.)			0.2035(12)		0.04736	(12)	0.04718	(11)
Am-241	0.011665	3.3	1.2	4.5881	4.4	1.06807	3.09	1.08519	3.14
U-235	3.450682	4.9	5.7			315.94049	5.58	315.94022	5.58

Pu-240 effective (meas. date) = 11.539 +/- 4.38%
Am-241 separated about 36.547 +/- 0.544 years ago
Am/Pu-241 weight ratio = 4.58809 +/- 4.22%

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 4%.

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

Reviewed by: Robert J Hurlbutt Jr Date: 6-3-09

NDA 2000 Assay Report

Item Information

Item ID:	LL85234331TRU		Count Sequence Number:	377	
Operator:	RHWM2\RHWM				
Assay Start:	5/5/2009 9:53:50 AM				
Description 1:	LL85234331TRU				
Description 2:					
Location:	LLNL				
Comment:					
Matrix Type:	Lucite				
Container Type:	55 Gal Galv 23.8				
Weight:	Gross:	92.4 kg	Net:	68.6 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

Reviewed By: Robert J Haslett 6-3-09

Segment 1 Results

Segment: 1 Detector: DET01 Position: 1
C:\Canberra\NDA2k\Data\00000377_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P001_S001

Acquisition Start: 5/5/2009 9:54:56 AM
Elapsed Live Time: 119.26 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.076 +/- 0.0058
SE-75	264.66	0.138 +/- 0.0025
SE-75	279.54	0.144 +/- 0.0029
SE-75	400.66	0.190 +/- 0.0040

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:51:49 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

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\00000377_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P002_S002

Acquisition Start: 5/5/2009 9:58:09 AM
Elapsed Live Time: 119.19 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.141 +/- 0.0080
SE-75	264.66	0.240 +/- 0.0043
SE-75	279.54	0.247 +/- 0.0047
SE-75	400.66	0.297 +/- 0.0058

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:52:14 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
59.52	Y	218	93	1.18	120.88	7.675E-005	9.33	
98.75	Y	190	266	1.28	199.27	1.763E-004	14.56	
103.95	Y	91	205	1.06	209.67	1.861E-004	24.70	
129.42	Y	91	184	1.38	260.56	2.218E-004	24.24	
208.24	Y	38	102	0.80	418.07	2.635E-004	42.24	
332.74	Y	30	46	0.95	666.85	2.282E-004	38.53	
375.00	Y	133	29	1.45	751.31	2.121E-004	10.72	
393.00		55	10	1.62	787.28	2.055E-004	16.44	
413.69	Y	108	17	0.87	828.62	1.983E-004	11.37	

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	3.26E-001 +- 5.42E-002	4.78E-002 +- 5.08E-003

Beta: 3.39E+002 +- 4.86E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 3

Energy	Mass (g)
129.30	2.33E-002 +- 5.72E-003
375.05	1.45E-001 +- 1.58E-002
413.71	1.33E-001 +- 1.54E-002

Segment 3 Results

Segment: 3 Detector: DET01 Position: 3
C:\Canberra\NDA2k\Data\00000377_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P003_S003

Acquisition Start: 5/5/2009 10:01:20 AM
Elapsed Live Time: 119.17 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.060 +/- 0.0058
SE-75	264.66	0.143 +/- 0.0026
SE-75	279.54	0.151 +/- 0.0030
SE-75	400.66	0.192 +/- 0.0040

Errors quoted at 1.000 sigma

Peak Analysis Results

Peak Analysis Performed on: 6/3/2009 2:52:26 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
59.60	Y	311	123	0.98	121.05	4.737E-005	7.72	
129.42	Y	186	180	1.12	260.57	1.820E-004	12.89	
332.85		52	64	1.22	667.07	2.094E-004	27.59	
344.89		50	37	1.15	691.13	2.048E-004	22.28	
375.13	Y	154	41	1.36	751.57	1.935E-004	10.27	
392.84		80	14	1.37	786.95	1.871E-004	13.45	
413.88	Y	209	15	1.47	829.01	1.801E-004	7.54	
451.70		27	13	0.88	904.57	1.686E-004	27.62	

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	4.55E-001 +- 5.29E-002	9.68E-002 +- 6.92E-003

Beta: 2.69E+002 +- 2.94E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 3

Energy	Mass (g)
129.30	5.81E-002 +- 7.89E-003
375.05	1.84E-001 +- 1.91E-002
413.71	2.83E-001 +- 2.20E-002

Segment 4 Results

Segment: 4 Detector: DET01 Position: 4
C:\Canberra\NDA2k\Data\00000377_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P004_S004

Acquisition Start: 5/5/2009 10:04:31 AM
Elapsed Live Time: 119.19 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.001 +/- 0.0005
SE-75	264.66	0.006 +/- 0.0003
SE-75	279.54	0.007 +/- 0.0004
SE-75	400.66	0.015 +/- 0.0007

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:53:15 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
59.68	Y	191	135	1.13	121.20	1.528E-006	11.32	
374.86		105	25	1.66	751.02	9.498E-005	12.07	
392.81		43	14	1.02	786.90	9.148E-005	20.59	
413.69		100	12	1.48	828.62	8.794E-005	11.38	

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

Segment 5 Results

Segment: 5 Detector: DET01 Position: 5
C:\Canberra\NDA2k\Data\00000377_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P005_S005

Acquisition Start: 5/5/2009 10:07:43 AM
Elapsed Live Time: 119.19 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.023 +/- 0.0037
SE-75	264.66	0.048 +/- 0.0010
SE-75	279.54	0.054 +/- 0.0013
SE-75	400.66	0.072 +/- 0.0019

Errors quoted at 1.000 sigma

Peak Analysis Results

Peak Analysis Performed on: 6/3/2009 2:53:23 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
59.58	Y	91	137	0.80	121.00	3.981E-005	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 **********

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\00000377_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P006_S006

Acquisition Start: 5/5/2009 10:10:54 AM
Elapsed Live Time: 119.08 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.065 +/- 0.0063
SE-75	264.66	0.165 +/- 0.0030
SE-75	279.54	0.174 +/- 0.0034
SE-75	400.66	0.231 +/- 0.0047

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:53:27 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 7 Results

Segment: 7 Detector: DET01 Position: 7
C:\Canberra\NDA2k\Data\00000377_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P007_S007

Acquisition Start: 5/5/2009 10:14:05 AM
Elapsed Live Time: 118.74 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.042 +/- 0.0055
SE-75	264.66	0.130 +/- 0.0024
SE-75	279.54	0.140 +/- 0.0029
SE-75	400.66	0.187 +/- 0.0039

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:53:31 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
	59.58	Y	1230	425	1.18	121.01	2.138E-006	3.90	
	98.73		287	639	1.50	199.23	7.611E-005	13.57	
	129.40	Y	323	575	1.21	260.53	1.677E-004	12.34	
M	203.73	Y	93	303	1.03	409.05	2.640E-004	28.00	0.88
m	208.06	Y	160	262	1.03	417.72	2.637E-004	25.16	
	311.88	Y	247	135	1.15	625.18	2.130E-004	9.46	
	332.86		76	121	1.50	667.11	2.015E-004	24.69	
	345.16		70	88	1.14	691.67	1.952E-004	23.15	
	375.03	Y	188	194	1.72	751.36	1.814E-004	16.12	
	392.97		76	36	1.27	787.22	1.741E-004	16.85	
	413.74	Y	257	31	1.33	828.71	1.665E-004	7.23	

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	5.67E-001 +- 6.80E-002	1.73E-001 +- 1.20E-002

Beta: 2.14E+002 +- 2.84E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.09E-001 +- 1.44E-002
203.55	2.21E-001 +- 6.20E-002
375.05	2.39E-001 +- 3.87E-002
413.71	3.77E-001 +- 2.84E-002

Segment 8 Results

Segment: 8 Detector: DET01 Position: 8
C:\Canberra\NDA2k\Data\00000377_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P008_S008

Acquisition Start: 5/5/2009 10:17:16 AM
Elapsed Live Time: 117.35 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.008 +/- 0.0017
SE-75	264.66	0.022 +/- 0.0006
SE-75	279.54	0.023 +/- 0.0009
SE-75	400.66	0.035 +/- 0.0012

Errors quoted at 1.000 sigma

Peak Analysis Results

Peak Analysis Performed on: 6/3/2009 2:54:25 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	6110	1088	1.11	121.06	2.974E-005	1.87	
M	94.74		715	1449	1.78	191.27	7.997E-005	9.34	8.15
m	98.81	Y	2585	1948	1.79	199.39	8.501E-005	6.91	
m	103.40	Y	1485	1694	1.80	208.56	9.039E-005	7.19	
	111.30		462	1399	1.56	224.35	9.882E-005	12.90	
M	125.34	Y	310	1074	1.06	252.41	1.112E-004	8.76	1.74
m	129.37	Y	2355	1026	1.07	260.47	1.142E-004	2.49	
M	203.63	Y	573	815	1.14	408.85	1.438E-004	5.28	1.16
m	208.08	Y	1246	819	1.14	417.75	1.439E-004	3.37	
	300.10	Y	410	430	1.27	601.63	1.317E-004	9.49	
	311.88	Y	2048	370	1.28	625.18	1.296E-004	2.89	
M	332.81	Y	782	210	1.33	667.00	1.256E-004	3.84	2.18
m	335.77	Y	248	234	1.34	672.90	1.251E-004	7.17	
m	340.68	Y	323	235	1.34	682.73	1.241E-004	6.29	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	345.00		705	260	1.35	691.36	1.232E-004	4.11	
	368.15	Y	284	245	2.46	737.62	1.187E-004	10.64	
M	375.07	Y	1957	163	1.30	751.44	1.173E-004	5.45	1.69
m	380.20		332	118	1.30	761.69	1.163E-004	8.08	
m	382.79		306	106	1.31	766.87	1.158E-004	8.01	
M	392.89		675	96	1.42	787.05	1.138E-004	8.16	1.31
m	398.70		40	97	1.43	798.67	1.127E-004	35.17	
	413.76	Y	1866	85	1.42	828.75	1.104E-004	2.70	
	422.45		120	76	1.21	846.13	1.091E-004	15.05	
	451.50		233	37	1.32	904.18	1.049E-004	7.87	
	662.49	Y	65	10	1.77	1325.79	8.332E-005	14.94	
	722.12	Y	42	10	1.50	1444.94	7.931E-005	19.86	

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	7.29E+000 +- 3.64E-001	1.97E+000 +- 5.44E-002

Beta: 2.33E+002 +- 1.17E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.17E+000 +- 6.76E-002
203.55	2.51E+000 +- 1.46E-001
375.05	3.85E+000 +- 2.21E-001
413.71	4.13E+000 +- 1.39E-001

Segment 9 Results

Segment: 9 Detector: DET01 Position: 9
C:\Canberra\NDA2k\Data\00000377_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P009_S009

Acquisition Start: 5/5/2009 10:20:27 AM
Elapsed Live Time: 117.18 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.001 +/- 0.0005
SE-75	264.66	0.002 +/- 0.0002
SE-75	279.54	0.002 +/- 0.0004
SE-75	400.66	0.006 +/- 0.0005

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:54:49 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
	59.59	Y	6835	1178	1.08	121.02	3.788E-006	1.79	
M	94.72		647	1482	1.68	191.23	4.390E-005	8.83	7.97
m	98.78	Y	2564	1981	1.68	199.33	4.938E-005	6.19	
m	103.44	Y	1555	1706	1.69	208.65	5.538E-005	6.41	
M	111.16		797	1392	1.76	224.07	6.434E-005	18.21	4.78
m	115.74		879	2536	1.76	233.23	6.901E-005	13.06	
M	125.30	Y	323	1102	1.05	252.34	7.718E-005	8.54	2.90
m	129.40	Y	2320	1097	1.06	260.53	8.004E-005	2.54	
	148.77	Y	123	1184	1.00	299.22	9.058E-005	42.83	
	195.55		117	948	0.99	392.70	9.731E-005	41.50	
M	203.54	Y	635	745	1.20	408.67	9.687E-005	8.27	1.12
m	208.04	Y	1396	734	1.20	417.67	9.648E-005	7.20	
	255.44		119	468	1.07	512.38	9.002E-005	28.75	
	300.06	Y	439	493	1.28	601.55	8.625E-005	9.39	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	311.91	Y	2357	426	1.35	625.23	8.589E-005	2.73	
M	332.77	Y	784	219	1.32	666.92	8.473E-005	7.69	1.50
m	335.76	Y	274	259	1.32	672.89	8.452E-005	9.42	
m	340.67	Y	295	244	1.32	682.70	8.419E-005	9.12	
m	345.06		810	248	1.33	691.47	8.387E-005	7.07	
M	367.03		157	199	1.31	735.37	8.213E-005	11.91	1.33
m	368.71	Y	187	194	1.31	738.73	8.198E-005	10.40	
m	375.07	Y	2190	149	1.31	751.45	8.144E-005	4.16	
m	380.13		435	106	1.32	761.56	8.103E-005	6.47	
m	382.75		327	93	1.32	766.80	8.081E-005	7.13	
M	392.87		708	137	1.42	787.01	7.993E-005	9.45	1.21
m	398.51		89	117	1.42	798.29	7.945E-005	15.69	
	413.70	Y	2037	101	1.38	828.64	7.835E-005	2.61	
	422.61		114	72	1.21	846.44	7.774E-005	14.99	
	451.41		234	27	0.96	903.99	7.595E-005	7.56	
	662.38	Y	67	13	1.85	1325.57	6.618E-005	14.81	
	722.12	Y	42	7	0.88	1444.96	6.399E-005	18.12	

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	1.18E+001 +- 6.76E-001	3.38E+000 +- 1.06E-001

Beta: 2.48E+002 +- 1.57E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.64E+000 +- 1.38E-001
203.55	4.13E+000 +- 3.80E-001
375.05	6.20E+000 +- 2.98E-001
413.71	6.35E+000 +- 2.35E-001

Segment 10 Results

Segment: 10 Detector: DET01 Position: 10
C:\Canberra\NDA2k\Data\00000377_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P010_S010

Acquisition Start: 5/5/2009 10:23:39 AM
Elapsed Live Time: 118.32 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.191 +/- 0.0096
SE-75	264.66	0.308 +/- 0.0055
SE-75	279.54	0.315 +/- 0.0059
SE-75	400.66	0.363 +/- 0.0070

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:54:53 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
	59.55	Y	2664	700	1.05	120.94	4.700E-006	2.65	
M	94.82		295	930	1.72	191.42	1.008E-004	15.47	2.01
m	98.79	Y	1080	1258	1.73	199.35	1.192E-004	12.80	
m	103.37	Y	503	1026	1.73	208.50	1.412E-004	13.40	
	111.04		81	915	1.07	223.84	1.785E-004	56.33	
	129.40	Y	823	595	1.15	260.51	2.597E-004	5.62	
M	203.49	Y	240	478	1.16	408.57	3.841E-004	17.20	0.77
m	208.10	Y	487	412	1.16	417.78	3.829E-004	15.35	
	300.37	Y	130	240	1.32	602.16	3.023E-004	19.71	
	311.89	Y	863	257	1.38	625.20	2.910E-004	4.61	
	332.84	Y	319	246	1.73	667.05	2.718E-004	9.63	
M	340.66	Y	121	141	1.24	682.68	2.651E-004	11.11	1.79
m	345.02		301	138	1.24	691.39	2.614E-004	6.38	
M	375.09	Y	818	118	1.26	751.48	2.384E-004	3.70	1.34

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	380.08		149	85	1.26	761.46	2.349E-004	8.64	
m	382.87		133	63	1.27	767.04	2.330E-004	9.14	
	392.92		285	81	1.17	787.11	2.264E-004	7.88	
	413.76	Y	819	55	1.46	828.77	2.139E-004	3.95	
	422.65		28	43	1.11	846.52	2.091E-004	40.91	
	451.40		111	28	1.41	903.97	1.951E-004	12.13	
	662.31	Y	43	10	1.02	1325.44	1.390E-004	18.87	

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	1.84E+000 +- 1.06E-001	3.07E-001 +- 1.11E-002

Beta: 3.02E+002 +- 1.46E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.80E-001 +- 1.25E-002
203.55	3.93E-001 +- 6.87E-002
375.05	7.91E-001 +- 3.31E-002
413.71	9.36E-001 +- 4.20E-002

Segment 11 Results

Segment: 11 Detector: DET01 Position: 11
C:\Canberra\NDA2k\Data\00000377_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P011_S011

Acquisition Start: 5/5/2009 10:26:50 AM
Elapsed Live Time: 119.01 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.097 +/- 0.0080
SE-75	264.66	0.255 +/- 0.0046
SE-75	279.54	0.266 +/- 0.0051
SE-75	400.66	0.335 +/- 0.0065

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:54:57 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
59.35	Y	505	239	1.39	120.55	3.640E-006	6.32	

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\00000377_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P012_S012

Acquisition Start: 5/5/2009 10:30:01 AM
Elapsed Live Time: 119.14 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.060 +/- 0.0069
SE-75	264.66	0.204 +/- 0.0037
SE-75	279.54	0.215 +/- 0.0042
SE-75	400.66	0.280 +/- 0.0055

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:55:01 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
59.60	Y	216	183	0.88	121.04	1.090E-004	11.56	

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 13 Results

Segment: 13 Detector: DET01 Position: 13
C:\Canberra\NDA2k\Data\00000377_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P013_S013

Acquisition Start: 5/5/2009 10:33:13 AM
Elapsed Live Time: 119.21 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.119 +/- 0.0081
SE-75	264.66	0.262 +/- 0.0047
SE-75	279.54	0.274 +/- 0.0052
SE-75	400.66	0.333 +/- 0.0065

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:55:07 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

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 14 Results

Segment: 14 Detector: DET01 Position: 14
C:\Canberra\NDA2k\Data\00000377_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P014_S014

Acquisition Start: 5/5/2009 10:36:24 AM
Elapsed Live Time: 119.27 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.297 +/- 0.0124
SE-75	264.66	0.475 +/- 0.0085
SE-75	279.54	0.484 +/- 0.0090
SE-75	400.66	0.545 +/- 0.0103

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:55:11 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

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 15 Results

Segment: 15 Detector: DET01 Position: 15
C:\Canberra\NDA2k\Data\00000377_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P015_S015

Acquisition Start: 5/5/2009 10:39:35 AM
Elapsed Live Time: 119.30 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.465 +/- 0.0157
SE-75	264.66	0.611 +/- 0.0110
SE-75	279.54	0.629 +/- 0.0116
SE-75	400.66	0.680 +/- 0.0128

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:55:15 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

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 16 Results

Segment: 16 Detector: DET01 Position: 16
C:\Canberra\NDA2k\Data\00000377_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P016_S016

Acquisition Start: 5/5/2009 10:42:47 AM
Elapsed Live Time: 119.30 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.533 +/- 0.0174
SE-75	264.66	0.700 +/- 0.0126
SE-75	279.54	0.706 +/- 0.0131
SE-75	400.66	0.748 +/- 0.0141

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 2:55:20 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

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

Sum of Segment NID Results
Category: Segmented

C:\Canberra\NDA2k\Data\00000377_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	2.23E+001 +- 7.82E-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	< 3.180E-002 +/-	2.3%	< 4.635E-007	< 1.466E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 4.537E-002 +/-	2.3%	< 6.614E-007	< 7.168E-012
	Al-26	< 4.036E-002 +/-	18.0%	< 5.883E-007	< 2.123E-006
	K-40	< 4.331E-001 +/-	5.6%	< 6.313E-006	< 6.756E-002
	Co-57	< 9.360E-002 +/-	4.5%	< 1.364E-006	< 1.095E-011
	Co-60	< 5.880E-002 +/-	2.0%	< 8.572E-007	< 5.157E-011
	Se-75	< 9.164E-002 +/-	2.3%	< 1.336E-006	< 6.305E-012
	Kr-85	< 7.420E+000 +/-	3.6%	< 1.082E-004	< 1.870E-008
	Sr-90	8.278E-002 +/-	19.0%	1.207E-006	6.002E-010
	Sb-125	< 9.445E-002 +/-	2.1%	< 1.377E-006	< 9.086E-011
	Ba-133	< 6.827E-002 +/-	1.6%	< 9.952E-007	< 2.697E-010
	Cs-134	< 2.002E-002 +/-	2.1%	< 2.919E-007	< 1.528E-011
?	Cs-137	8.278E-002 +/-	19.0%	1.207E-006	9.437E-010
	Eu-152	< 8.960E-002 +/-	1.8%	< 1.306E-006	< 5.035E-010
	Eu-154	< 1.098E-001 +/-	4.4%	< 1.600E-006	< 4.116E-010
	Ho-166m	< 3.724E-002 +/-	2.6%	< 5.429E-007	< 2.071E-008
	Bi-207	< 2.285E-002 +/-	2.4%	< 3.331E-007	< 4.159E-010
	Pb-210	< 4.328E+003 +/-	309.7%	< 6.308E-002	< 5.626E-005
	Ra-226	< 5.597E-002 +/-	2.1%	< 8.159E-007	< 5.597E-008
	Ac-227	< 3.168E-001 +/-	8.3%	< 4.618E-006	< 4.340E-009
	Th-230	< 1.205E+002 +/-	99.7%	< 1.756E-003	< 5.903E-003
	Pa-231	< 1.976E+000 +/-	11.3%	< 2.880E-005	< 4.129E-005

Th-232	< 7.201E-002	+/-	2.3%	< 1.050E-006	< 6.488E-001
U-232	< 7.245E-002	+/-	2.5%	< 1.056E-006	< 3.354E-009
U-233	< 1.065E+003	+/-	3.0%	< 1.553E-002	< 1.087E-001
Pa-234	< 1.625E-001	+/-	11.7%	< 2.369E-006	
Pa-234m	< 2.554E+002	+/-	2.3%	< 3.723E-003	
U-234	< 0.000E+000	+/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 1.026E-001	+/-	2.9%	< 1.496E-006	< 4.689E-002
Np-237	2.789E+001	+/-	2.4%	4.066E-004	3.905E-002
Pu-238	< 6.833E+003	+/-	3.1%	< 9.961E-002	< 3.950E-004
U-238	< 3.545E+000	+/-	2.4%	< 5.168E-005	< 1.042E+001
Pu-239	1.402E+006	+/-	3.5%	2.044E+001	2.229E+001
Pu-239B	< 3.927E+003	+/-	18.9%	< 5.724E-002	< 6.243E-002
U-239	< 2.915E+004	+/-	368.5%	< 4.250E-001	
Pu-240	< 1.146E+004	+/-	15.7%	< 1.671E-001	< 4.987E-002
Am-241	1.381E+005	+/-	7.8%	2.013E+000	3.976E-002
Am-241B	6.406E+004	+/-	8.9%	9.338E-001	1.845E-002
Pu-241	1.650E+005	+/-	43.4%	2.405E+000	1.587E-003
Pu-241B	1.090E+006	+/-	5.1%	1.589E+001	1.049E-002
Pu-242	< 0.000E+000	+/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 3.396E-001	+/-	2.2%	< 4.951E-006	< 1.681E-006
Cm-243	< 3.556E-001	+/-	3.3%	< 5.184E-006	< 6.828E-009
Cm-244	< 3.148E+004	+/-	14.1%	< 4.590E-001	< 3.841E-004
Cm-245	< 6.163E-001	+/-	7.8%	< 8.984E-006	< 3.544E-006
Cm-247	< 4.864E-002	+/-	8.7%	< 7.090E-007	< 5.204E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 5.042E-002 +/-	3.4%	< 7.349E-007	< 1.220E-008
Cf-251	< 3.404E-001 +/-	5.8%	< 4.961E-006	< 2.127E-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

********** 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: LL85234331TRU Analysis Date: 5/5/2009

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

Net Weight	68600.0 g	
Pu mass	2.38E+001 +-	5.09E+000 g
TRU Alpha Activity	2.13E+000 +-	3.35E-001 Ci
TRU Activity Concentration	3.10E+004 +-	4.89E+003 nCi/g
Pu-239 Equivalent Activity	2.15E+000 +-	3.35E-001 Ci
Pu-239 FGE	2.24E+001 +-	5.08E+000 g
Decay heat	6.69E-002 +-	1.04E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	6.00E-010	8.28E-008	2.44E-008	0.00E+000
CS137	9.44E-010	8.28E-008	2.44E-008	8.26E-008
U233	<LLD	<LLD	0.00E+000	1.07E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.03E-007
NP237	3.90E-002	2.79E-005	6.31E-006	7.46E-007
PU238	1.47E-002	2.54E-001	6.00E-002	1.30E-003
U238	<LLD	<LLD	0.00E+000	3.55E-006
PU239	2.23E+001	1.40E+000	3.19E-001	7.16E-003
PU240	1.44E+000	3.31E-001	7.65E-002	1.69E-003
AM241	3.98E-002	1.38E-001	3.29E-002	2.98E-005
PU241	2.48E-002	2.58E+000	6.03E-001	1.32E-002
PU242	6.53E-003	2.59E-005	6.67E-006	0.00E+000

Errors quoted at 1.000 sigma

Operator: Robert J Haskett Jr Date: 6-3-09

ITR: [signature] Date: 6/12/09

Summed Segment Spectra Results
Category: Segmented

C:\Canberra\NDA2k\Data\00000377_CNTR0001_DCAT0002_PROC00AI.CNF

Elapsed Live Time: 118.39 sec Elapsed Real Time: 120.00 sec

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

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 9.850E-002 +/-	1.0%	< 1.436E-006	< 4.541E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	4.023E-002 +/-	57.3%	5.865E-007	6.357E-012
	Al-26	< 1.116E-001 +/-	6.5%	< 1.627E-006	< 5.872E-006
	K-40	1.509E+000 +/-	21.7%	2.200E-005	2.355E-001
	Co-57	< 5.460E-001 +/-	1.5%	< 7.959E-006	< 6.388E-011
	Co-60	2.196E-001 +/-	12.6%	3.201E-006	1.926E-010
	Se-75	< 4.204E-001 +/-	1.0%	< 6.128E-006	< 2.892E-011
	Kr-85	< 3.552E+001 +/-	2.4%	< 5.178E-004	< 8.951E-008
	Sr-90	< 1.263E-001 +/-	0.7%	< 1.841E-006	< 9.158E-010
	Sb-125	< 4.023E-001 +/-	1.3%	< 5.865E-006	< 3.871E-010
	Ba-133	< 2.820E-001 +/-	0.8%	< 4.110E-006	< 1.114E-009
	Cs-134	< 9.700E-002 +/-	0.7%	< 1.414E-006	< 7.401E-011
X	Cs-137				
	Eu-152	< 4.067E-001 +/-	1.7%	< 5.928E-006	< 2.286E-009
	Eu-154	< 2.824E-001 +/-	1.4%	< 4.117E-006	< 1.059E-009
	Ho-166m	< 1.634E-001 +/-	1.6%	< 2.383E-006	< 9.088E-008
	Bi-207	< 1.166E-001 +/-	0.7%	< 1.700E-006	< 2.122E-009
	Pb-210	< 3.820E+003 +/-	11.3%	< 5.569E-002	< 4.967E-005
	Ra-226	< 2.572E-001 +/-	1.3%	< 3.749E-006	< 2.572E-007
	Ac-227	< 1.482E+000 +/-	8.2%	< 2.161E-005	< 2.031E-008
	Th-230	< 7.233E+002 +/-	8.2%	< 1.054E-002	< 3.544E-002
	Pa-231	< 8.408E+000 +/-	11.1%	< 1.226E-004	< 1.757E-004
	Th-232	< 4.069E-001 +/-	1.1%	< 5.931E-006	< 3.666E+000
	U-232	< 4.069E-001 +/-	1.1%	< 5.931E-006	< 1.884E-008
	U-233	< 5.340E+003 +/-	1.4%	< 7.785E-002	< 5.447E-001
	Pa-234	< 5.826E-001 +/-	12.1%	< 8.493E-006	
	Pa-234m	< 7.021E+002 +/-	1.5%	< 1.023E-002	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 4.766E-001 +/-	1.7%	< 6.948E-006	< 2.178E-001
	Np-237	1.684E+001 +/-	2.1%	2.455E-004	2.358E-002
	Pu-238	5.998E+004 +/-	22.7%	8.744E-001	3.467E-003
	U-238	< 1.230E+001 +/-	1.6%	< 1.793E-004	< 3.616E+001
	Pu-239	1.010E+006 +/-	2.1%	1.473E+001	1.606E+001
	Pu-239B	< 2.218E+004 +/-	3.2%	< 3.233E-001	< 3.526E-001
	U-239	< 9.416E+003 +/-	15.0%	< 1.373E-001	
X	Pu-240				
	Am-241	1.074E+005 +/-	9.6%	1.566E+000	3.094E-002
	Am-241B	5.472E+004 +/-	4.2%	7.977E-001	1.576E-002
	Pu-241	3.184E+005 +/-	22.6%	4.642E+000	3.063E-003
	Pu-241B	6.332E+005 +/-	5.5%	9.230E+000	6.091E-003

Pu-242	< 0.000E+000 +/- 0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.614E+000 +/- 1.1%	< 2.353E-005	< 7.990E-006
Cm-243	< 1.665E+000 +/- 3.0%	< 2.427E-005	< 3.197E-008
Cm-244	< 1.282E+005 +/- 13.9%	< 1.869E+000	< 1.564E-003
Cm-245	< 3.004E+000 +/- 7.4%	< 4.378E-005	< 1.727E-005
Cm-247	< 2.227E-001 +/- 8.4%	< 3.246E-006	< 2.383E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.107E-001 +/-	3.1%	< 3.072E-006	< 5.100E-008
Cf-251	< 1.634E+000 +/-	5.3%	< 2.382E-005	< 1.021E-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	1.61E+001 +- 3.38E-001	2.83E+000 +- 3.65E-002

Beta: 2.71E+002 +- 4.54E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.98E+000 +- 3.97E-002
203.55	4.46E+000 +- 2.73E-001
375.05	7.70E+000 +- 1.29E-001
413.71	8.47E+000 +- 1.58E-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: LL85234331TRU Analysis Date: 5/5/2009

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

Net Weight	68600.0 g	
Pu mass	1.71E+001 +-	3.64E+000 g
TRU Alpha Activity	1.54E+000 +-	2.40E-001 Ci
TRU Activity Concentration	2.24E+004 +-	3.50E+003 nCi/g
Pu-239 Equivalent Activity	1.56E+000 +-	2.40E-001 Ci
Pu-239 FGE	1.61E+001 +-	3.63E+000 g
Decay heat	4.85E-002 +-	7.47E-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	1.26E-007
U233	<LLD	<LLD	0.00E+000	5.34E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	4.77E-007
NP237	2.36E-002	1.68E-005	3.81E-006	6.49E-007
PU238	1.06E-002	1.83E-001	4.30E-002	1.13E-003
U238	<LLD	<LLD	0.00E+000	1.23E-005
PU239	1.61E+001	1.01E+000	2.28E-001	6.24E-003
PU240	1.04E+000	2.39E-001	5.47E-002	1.47E-003
AM241	3.09E-002	1.07E-001	2.63E-002	3.96E-005
PU241	1.79E-002	1.86E+000	4.32E-001	1.15E-002
PU242	4.71E-003	1.87E-005	4.78E-006	0.00E+000

Errors quoted at 1.000 sigma

Operator: Robert J. Haskett Jr Date: 6-3-09

ITR: Date: 6/12/09

Automated Independent Technical Review

Counter ID: SGS with Trans. Count Type: Assay - 55 Gal Galv 23.8
Container ID: LL85234331TRU Assay Date: 5/5/2009
Waste Matrix Code:
Sequence Number: 377

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

Source of results is undefined. ok

DISPOSITION:

MGA Analysis:

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
Spectrum Validity Check engine has suggested data review.

DISPOSITION:

Segment Data Review:
Segment: 1 OK
Segment: 2 OK
Segment: 3 OK
Segment: 4 Analysis Warnings: ok Minimum Used.
Minimum transmission used.
Segment: 5 OK
Segment: 6 OK
Segment: 7 OK
Segment: 8 OK
Segment: 9 Analysis Warnings: ok Minimum Used.
Minimum transmission used.
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: 6-3-09

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:	LL85234331TRU	Analysis Date:	5/5/2009

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

MGA version: MGA V9.63H CI

Measurement date = 5/5/09 Declared date = 5/5/09
Low energy spectrum sensitivity = 30.0% Total counts = 9.802E+005
High energy spectrum sensitivity : 10.0%

Pu g/cm2 = 0.3251 Cd g/cm2 = 2.1715 FWHM at 122 keV = 605 eV
QFIT = 1.12 FWHM at 208 keV = 737 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	0.000660	6.4	6.2	0.5935	8.5	0.06185	6.19	0.06732	6.74
Pu-239	1.000000	0.0	2.0	899.6298	5.9	93.74940	0.26	93.67220	0.26
Pu-240	0.064609	4.3	4.0	58.1243	7.0	6.05707	3.98	6.05714	3.98
Pu-241	0.001112	5.7	5.2	1.0000	0.0	0.10421	5.50	0.17592	9.28
Pu-242	(New alg.)			0.2635(12)		0.02746 (12)		0.02743 (11)	
Am-241	0.003626	2.7	1.9	3.2624	5.9	0.33997	2.57	0.34521	2.61

Pu-240 effective (meas. date) = 6.259 +/- 4.29%
Am-241 separated about 30.224 +/- 0.828 years ago
Am/Pu-241 weight ratio = 3.26236 +/- 5.56%

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 Heuslett Jr Date: 6-3-09

NDA 2000 Assay Report

Item Information

Item ID:	LL85234314TRU	Count Sequence Number:	378		
Operator:	RHWM2\RHWM				
Assay Start:	5/5/2009 11:25:29 AM				
Description 1:	LL85234314TRU				
Description 2:					
Location:	LLNL				
Comment:					
Matrix Type:	Lucite				
Container Type:	55 Gal Galv 23.8				
Weight:	Gross: 83.6 kg		Net: 59.8 kg		
Container:	Volume: 208.0 l		Full: 100.0 %		
Density:	0.290 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

Reviewed By: Robert J Haslett 6-3-09

Segment 1 Results

Segment: 1 Detector: DET01 Position: 1
C:\Canberra\NDA2k\Data\00000378_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P001_S001

Acquisition Start: 5/5/2009 11:26:31 AM
Elapsed Live Time: 119.33 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.015 +/- 0.0027
SE-75	264.66	0.029 +/- 0.0007
SE-75	279.54	0.032 +/- 0.0009
SE-75	400.66	0.041 +/- 0.0013

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 1:33:25 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
99.96		81	90	1.12	201.70	5.135E-005	20.53	

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 **********

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\00000378_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P002_S002

Acquisition Start: 5/5/2009 11:29:43 AM
Elapsed Live Time: 119.31 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.071 +/- 0.0059
SE-75	264.66	0.146 +/- 0.0027
SE-75	279.54	0.152 +/- 0.0031
SE-75	400.66	0.193 +/- 0.0040

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 1:33:28 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		216	127	1.29	201.52	1.452E-004	10.29	
152.92	Y	117	79	1.09	307.51	2.032E-004	14.50	

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\00000378_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P003_S003

Acquisition Start: 5/5/2009 11:32:54 AM
Elapsed Live Time: 119.26 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.057 +/- 0.0056
SE-75	264.66	0.129 +/- 0.0024
SE-75	279.54	0.131 +/- 0.0027
SE-75	400.66	0.173 +/- 0.0037

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 1:33:31 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
99.90		198	190	1.26	201.58	1.346E-004	12.47	
153.03	Y	106	107	0.85	307.74	2.081E-004	17.24	
558.65		15	6	1.30	1118.30	1.388E-004	35.87	

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\00000378_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P004_S004

Acquisition Start: 5/5/2009 11:36:06 AM
Elapsed Live Time: 119.22 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.049 +/- 0.0048
SE-75	264.66	0.094 +/- 0.0018
SE-75	279.54	0.098 +/- 0.0021
SE-75	400.66	0.135 +/- 0.0030

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 1:33:35 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
99.91		478	314	1.14	201.59	8.537E-005	7.19	
152.72	Y	196	170	1.09	307.12	2.214E-004	12.17	

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\00000378_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P005_S005

Acquisition Start: 5/5/2009 11:39:17 AM
Elapsed Live Time: 119.00 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.048 +/- 0.0049
SE-75	264.66	0.095 +/- 0.0018
SE-75	279.54	0.101 +/- 0.0022
SE-75	400.66	0.134 +/- 0.0030

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 1:33:38 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
	59.58	Y	664	231	1.09	121.00	4.805E-005	5.20	
	99.91		1176	648	1.27	201.59	1.260E-004	4.44	
	129.34	Y	200	247	1.10	260.40	1.667E-004	13.07	
	152.79	Y	461	274	1.27	307.26	1.902E-004	7.12	
M	203.46	Y	49	132	0.88	408.51	2.110E-004	21.20	1.09
m	208.07	Y	98	123	0.88	417.72	2.113E-004	13.94	
	311.81	Y	48	79	1.15	625.03	1.911E-004	31.66	
	333.05		53	100	1.12	667.47	1.845E-004	32.53	
	344.86		38	86	1.10	691.07	1.808E-004	41.61	
	374.96	Y	163	51	1.59	751.23	1.715E-004	10.45	
	392.97		53	23	1.46	787.21	1.660E-004	19.38	
	413.69	Y	191	16	1.34	828.61	1.603E-004	7.95	

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 **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	4.90E-001 +- 5.77E-002	1.14E-001 +- 7.87E-003

Beta: 2.56E+002 +- 2.88E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	6.79E-002 +- 9.32E-003
203.55	1.47E-001 +- 3.13E-002
375.05	2.19E-001 +- 2.32E-002
413.71	2.91E-001 +- 2.39E-002

Segment 6 Results

Segment: 6 Detector: DET01 Position: 6
C:\Canberra\NDA2k\Data\00000378_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P006_S006

Acquisition Start: 5/5/2009 11:42:28 AM
Elapsed Live Time: 118.25 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.062 +/- 0.0059
SE-75	264.66	0.123 +/- 0.0023
SE-75	279.54	0.129 +/- 0.0027
SE-75	400.66	0.168 +/- 0.0036

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 1:33:41 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	3843	589	1.17	121.04	1.300E-006	2.15	
M	94.86		512	1077	1.69	191.50	6.844E-005	5.88	11.02
m	99.48	Y	3141	1767	1.70	200.74	8.503E-005	2.00	
m	103.51	Y	1203	1425	1.71	208.79	9.990E-005	3.06	
	111.30		168	1037	1.53	224.35	1.284E-004	30.87	
M	125.19	Y	273	550	1.11	252.10	1.740E-004	8.00	2.78
m	129.42	Y	1340	516	1.12	260.56	1.859E-004	3.10	
	152.81	Y	428	545	1.18	307.31	2.371E-004	9.50	
M	203.71	Y	303	349	1.11	409.02	2.658E-004	7.27	1.83
m	208.12	Y	573	367	1.12	417.83	2.651E-004	4.85	
	311.84	Y	201	162	0.94	625.09	2.200E-004	12.03	
M	332.82	Y	472	148	1.28	667.02	2.110E-004	12.83	1.03
m	335.87	Y	111	179	1.28	673.10	2.097E-004	16.67	
	345.04		394	178	1.37	691.44	2.060E-004	7.22	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
M	375.08	Y	1158	127	1.29	751.47	1.947E-004	3.10	1.37
m	380.18		247	79	1.30	761.65	1.930E-004	6.44	
m	382.76		219	66	1.30	766.82	1.921E-004	6.82	
	392.85		386	84	1.66	786.97	1.887E-004	6.47	
	413.74	Y	1132	63	1.43	828.72	1.825E-004	3.37	
	422.48		61	70	1.45	846.18	1.801E-004	25.66	
	451.43		116	28	1.42	904.03	1.728E-004	11.80	
	510.69		66	16	1.05	1022.46	1.605E-004	15.64	
	662.57	Y	36	13	1.75	1325.95	1.388E-004	22.58	

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	2.67E+000 +- 1.32E-001	6.72E-001 +- 1.84E-002

Beta: 2.46E+002 +- 1.18E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	4.09E-001 +- 2.25E-002
203.55	7.18E-001 +- 5.75E-002
375.05	1.37E+000 +- 5.04E-002
413.71	1.52E+000 +- 6.05E-002

Segment 7 Results

Segment: 7 Detector: DET01 Position: 7
C:\Canberra\NDA2k\Data\00000378_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P007_S007

Acquisition Start: 5/5/2009 11:45:39 AM
Elapsed Live Time: 117.99 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.140 +/- 0.0087
SE-75	264.66	0.263 +/- 0.0047
SE-75	279.54	0.271 +/- 0.0052
SE-75	400.66	0.328 +/- 0.0064

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 1:33:44 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
	59.59	Y	5286	844	1.07	121.03	3.131E-006	1.93	
M	99.66	Y	4060	1394	1.63	201.09	1.120E-004	6.31	17.46
m	103.58	Y	1457	2053	1.64	208.93	1.295E-004	5.27	
	111.16		425	1030	1.69	224.08	1.633E-004	12.18	
M	125.31	Y	285	697	1.12	252.35	2.205E-004	10.29	0.46
m	129.39	Y	1694	561	1.12	260.50	2.347E-004	6.07	
M	148.54	Y	105	486	1.03	298.77	2.912E-004	18.44	1.96
m	152.82	Y	641	641	1.04	307.32	3.009E-004	5.05	
	171.34		122	499	0.94	344.33	3.290E-004	28.64	
M	203.64	Y	408	459	1.07	408.87	3.386E-004	6.04	0.46
m	208.04	Y	688	370	1.08	417.68	3.373E-004	4.44	
	311.86	Y	199	187	1.21	625.13	2.612E-004	12.50	
M	332.84	Y	526	154	1.33	667.06	2.459E-004	11.18	0.58
m	335.83	Y	165	154	1.33	673.02	2.439E-004	13.57	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	341.33	Y	74	153	1.34	684.02	2.402E-004	19.16	
m	345.04		493	138	1.34	691.44	2.378E-004	10.98	
	368.28	Y	226	158	2.23	737.88	2.235E-004	11.29	
M	375.06	Y	1397	139	1.25	751.42	2.197E-004	2.88	1.80
m	380.17		282	99	1.25	761.64	2.169E-004	6.29	
m	382.81		219	88	1.26	766.92	2.155E-004	7.03	
	392.93		511	88	1.63	787.13	2.103E-004	5.41	
	413.71	Y	1327	58	1.39	828.65	2.004E-004	3.11	
	422.64		76	52	1.18	846.50	1.965E-004	18.40	
	451.47		185	31	1.48	904.12	1.853E-004	8.85	
	662.38	Y	32	15	1.10	1325.57	1.399E-004	25.89	

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	2.98E+000 +- 1.57E-001	8.05E-001 +- 2.12E-002

Beta: 2.64E+002 +- 1.42E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	4.10E-001 +- 2.95E-002
203.55	7.58E-001 +- 4.89E-002
375.05	1.47E+000 +- 5.08E-002
413.71	1.62E+000 +- 6.09E-002

Segment 8 Results

Segment: 8 Detector: DET01 Position: 8
C:\Canberra\NDA2k\Data\00000378_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P008_S008

Acquisition Start: 5/5/2009 11:48:51 AM
Elapsed Live Time: 118.51 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.181 +/- 0.0098
SE-75	264.66	0.327 +/- 0.0058
SE-75	279.54	0.340 +/- 0.0064
SE-75	400.66	0.398 +/- 0.0077

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 1:33:48 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
M	56.60		147	697	1.03	115.05	6.056E-005	14.07	3.97
m	59.60	Y	3180	720	1.03	121.04	6.979E-005	4.52	
M	99.90	Y	4395	1033	1.17	201.58	1.911E-004	4.36	4.57
m	103.57	Y	595	1214	1.18	208.92	1.999E-004	5.28	
	129.39	Y	563	541	1.17	260.50	2.472E-004	7.50	
	144.15		75	488	0.55	290.00	2.679E-004	46.27	
	152.87	Y	992	449	1.15	307.42	2.788E-004	4.61	
M	203.65	Y	159	259	1.19	408.90	3.064E-004	9.87	2.13
m	208.14	Y	295	300	1.20	417.87	3.067E-004	7.06	
	311.99	Y	98	139	1.29	625.39	2.744E-004	21.36	
	332.94	Y	208	137	1.08	667.26	2.640E-004	11.34	
	345.08		211	87	1.21	691.51	2.580E-004	9.70	
M	375.07	Y	597	63	1.32	751.44	2.437E-004	9.14	0.67
m	380.04		103	51	1.32	761.38	2.414E-004	13.31	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	382.69		94	48	1.32	766.68	2.402E-004	13.32	
	392.90		170	45	1.59	787.07	2.356E-004	9.88	
	413.75	Y	533	37	1.44	828.73	2.265E-004	4.84	
	422.74		30	31	0.85	846.70	2.228E-004	34.35	
	451.50		58	18	1.43	904.17	2.114E-004	17.10	

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	1.15E+000 +- 8.81E-002	2.07E-001 +- 9.63E-003

Beta: 2.79E+002 +- 1.75E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.29E-001 +- 1.09E-002
203.55	3.26E-001 +- 3.31E-002
375.05	5.65E-001 +- 5.26E-002
413.71	5.75E-001 +- 2.99E-002

Segment 9 Results

Segment: 9 Detector: DET01 Position: 9
C:\Canberra\NDA2k\Data\00000378_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P009_S009

Acquisition Start: 5/5/2009 11:52:21 AM
Elapsed Live Time: 118.95 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.119 +/- 0.0075
SE-75	264.66	0.210 +/- 0.0038
SE-75	279.54	0.222 +/- 0.0043
SE-75	400.66	0.276 +/- 0.0055

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 1:33:51 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
59.59	Y	1419	347	1.02	121.02	8.642E-006	3.45	
99.91		3432	762	1.16	201.59	1.306E-004	2.34	
152.82	Y	864	215	1.12	307.32	2.516E-004	4.36	
413.73		35	11	1.15	828.71	2.053E-004	22.13	

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

Segment 10 Results

Segment: 10 Detector: DET01 Position: 10
C:\Canberra\NDA2k\Data\00000378_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P010_S010

Acquisition Start: 5/5/2009 11:55:33 AM
Elapsed Live Time: 119.08 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.252 +/- 0.0106
SE-75	264.66	0.356 +/- 0.0063
SE-75	279.54	0.367 +/- 0.0069
SE-75	400.66	0.417 +/- 0.0080

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 1:33:54 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
59.60	Y	753	265	1.12	121.05	5.279E-006	4.93	
99.90		2260	477	1.21	201.57	1.370E-004	2.76	
152.86	Y	634	170	1.07	307.41	3.648E-004	5.10	

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 **********

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\00000378_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P011_S011

Acquisition Start: 5/5/2009 11:58:44 AM
Elapsed Live Time: 119.16 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.077 +/- 0.0060
SE-75	264.66	0.144 +/- 0.0026
SE-75	279.54	0.151 +/- 0.0030
SE-75	400.66	0.187 +/- 0.0039

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 1:33:57 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
59.70	Y	659	192	1.04	121.24	3.586E-006	5.07	
99.92		1824	416	1.17	201.61	1.027E-004	3.06	
152.89	Y	517	132	1.20	307.45	2.511E-004	5.58	

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\00000378_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P012_S012

Acquisition Start: 5/5/2009 12:01:55 PM
Elapsed Live Time: 119.17 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.109 +/- 0.0073
SE-75	264.66	0.200 +/- 0.0036
SE-75	279.54	0.209 +/- 0.0040
SE-75	400.66	0.254 +/- 0.0051

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 1:34:01 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
59.62	Y	1288	230	1.03	121.08	1.316E-004	3.44	
99.91		1595	387	1.16	201.59	1.723E-004	3.27	
152.89	Y	511	124	1.27	307.47	2.360E-004	5.57	

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 **********

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\00000378_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P013_S013

Acquisition Start: 5/5/2009 12:05:06 PM
Elapsed Live Time: 119.21 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.248 +/- 0.0105
SE-75	264.66	0.354 +/- 0.0063
SE-75	279.54	0.365 +/- 0.0068
SE-75	400.66	0.419 +/- 0.0080

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 1:34:04 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
59.63	Y	1003	187	0.93	121.11	1.503E-004	3.88	
99.88		1066	322	1.30	201.54	2.305E-004	4.08	
152.86	Y	272	113	1.12	307.40	3.004E-004	8.40	
374.94		13	7	0.72	751.18	2.512E-004	39.99	

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\00000378_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P014_S014

Acquisition Start: 5/5/2009 12:08:18 PM
Elapsed Live Time: 119.30 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.393 +/- 0.0141
SE-75	264.66	0.548 +/- 0.0098
SE-75	279.54	0.552 +/- 0.0102
SE-75	400.66	0.618 +/- 0.0116

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 1:34:07 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
59.61	Y	264	101	0.99	121.06	6.155E-006	8.30	
99.89		313	165	1.19	201.56	1.734E-004	8.32	
152.94	Y	93	71	1.11	307.57	4.072E-004	16.99	

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\00000378_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P015_S015

Acquisition Start: 5/5/2009 12:11:29 PM
Elapsed Live Time: 119.32 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.501 +/- 0.0165
SE-75	264.66	0.654 +/- 0.0118
SE-75	279.54	0.668 +/- 0.0124
SE-75	400.66	0.710 +/- 0.0134

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 1:34:10 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
59.55	Y	72	65	1.08	120.95	5.737E-006	19.69	

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 16 Results

Segment: 16 Detector: DET01 Position: 16
C:\Canberra\NDA2k\Data\00000378_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P016_S016

Acquisition Start: 5/5/2009 12:14:40 PM
Elapsed Live Time: 119.32 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.565 +/- 0.0179
SE-75	264.66	0.716 +/- 0.0129
SE-75	279.54	0.723 +/- 0.0134
SE-75	400.66	0.765 +/- 0.0145

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 1:34:15 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
1291.81		12	2	1.02	2583.35	6.534E-005	34.63	

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\00000378_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	7.30E+000 +- 2.30E-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	< 4.615E-002 +/-	2.3%	< 7.718E-007	< 2.128E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 4.536E-002 +/-	2.3%	< 7.586E-007	< 7.167E-012
	Al-26	< 5.092E-002 +/-	18.0%	< 8.514E-007	< 2.678E-006
	K-40	< 4.330E-001 +/-	5.6%	< 7.241E-006	< 6.755E-002
	Co-57	< 7.838E-002 +/-	3.6%	< 1.311E-006	< 9.170E-012
	Co-60	< 5.879E-002 +/-	2.0%	< 9.832E-007	< 5.156E-011
	Se-75	< 5.823E-002 +/-	1.9%	< 9.737E-007	< 4.006E-012
	Kr-85	< 7.260E+000 +/-	3.6%	< 1.214E-004	< 1.829E-008
	Sr-90	1.300E-001 +/-	17.2%	2.173E-006	9.423E-010
	Sb-125	< 7.913E-002 +/-	2.1%	< 1.323E-006	< 7.612E-011
	Ba-133	< 5.759E-002 +/-	1.7%	< 9.630E-007	< 2.275E-010
	Cs-134	< 2.415E-002 +/-	2.1%	< 4.038E-007	< 1.842E-011
?	Cs-137	1.300E-001 +/-	17.2%	2.173E-006	1.482E-009
	Eu-152	< 8.834E-002 +/-	3.7%	< 1.477E-006	< 4.965E-010
	Eu-154	< 9.670E-002 +/-	2.1%	< 1.617E-006	< 3.626E-010
	Ho-166m	< 3.884E-002 +/-	2.3%	< 6.495E-007	< 2.160E-008
	Bi-207	< 2.248E-002 +/-	2.8%	< 3.759E-007	< 4.091E-010
	Pb-210	< 6.558E+003 +/-	309.7%	< 1.097E-001	< 8.526E-005
	Ra-226	< 4.931E-002 +/-	2.1%	< 8.245E-007	< 4.931E-008
	Ac-227	< 1.998E-001 +/-	8.3%	< 3.341E-006	< 2.737E-009
	Th-230	< 9.534E+001 +/-	8.6%	< 1.594E-003	< 4.672E-003
	Pa-231	< 1.205E+000 +/-	11.2%	< 2.014E-005	< 2.518E-005

Th-232	< 8.261E-002	+/-	2.0%	< 1.381E-006	< 7.443E-001
U-232	< 8.573E-002	+/-	2.1%	< 1.434E-006	< 3.969E-009
U-233	< 7.113E+002	+/-	2.9%	< 1.189E-002	< 7.255E-002
Pa-234	< 1.632E-001	+/-	12.3%	< 2.729E-006	
Pa-234m	< 2.351E+002	+/-	2.4%	< 3.932E-003	
U-234	< 0.000E+000	+/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 6.231E-002	+/-	2.6%	< 1.042E-006	< 2.848E-002
Np-237	1.333E+000	+/-	8.1%	2.230E-005	1.867E-003
Pu-238	5.390E+005	+/-	2.3%	9.013E+000	3.115E-002
U-238	< 5.140E+000	+/-	2.4%	< 8.596E-005	< 1.511E+001
Pu-239	4.590E+005	+/-	3.2%	7.675E+000	7.298E+000
Pu-239B	< 5.816E+003	+/-	6.1%	< 9.726E-002	< 9.246E-002
U-239	< 4.536E+004	+/-	368.5%	< 7.585E-001	
Pu-240	< 5.763E+003	+/-	14.2%	< 9.637E-002	< 2.507E-002
Am-241	3.078E+004	+/-	17.0%	5.146E-001	8.863E-003
Am-241B	3.458E+004	+/-	6.4%	5.782E-001	9.958E-003
Pu-241	4.389E+004	+/-	18.7%	7.340E-001	4.223E-004
Pu-241B	2.439E+005	+/-	3.4%	4.078E+000	2.346E-003
Pu-242	< 0.000E+000	+/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 2.357E-001	+/-	1.9%	< 3.942E-006	< 1.167E-006
Cm-243	< 2.432E-001	+/-	3.4%	< 4.066E-006	< 4.669E-009
Cm-244	< 2.539E+004	+/-	14.1%	< 4.246E-001	< 3.098E-004
Cm-245	< 3.744E-001	+/-	7.7%	< 6.261E-006	< 2.153E-006
Cm-247	< 4.863E-002	+/-	8.7%	< 8.132E-007	< 5.204E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 4.707E-002 +/-	3.5%	< 7.872E-007	< 1.139E-008
Cf-251	< 2.104E-001 +/-	5.7%	< 3.518E-006	< 1.315E-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

********** 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: LL85234314TRU Analysis Date: 5/5/2009

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

Net Weight	59800.0 g		
Pu mass	7.87E+000	+-	1.58E+000 g
TRU Alpha Activity	3.38E+000	+-	6.20E-001 Ci
TRU Activity Concentration	5.66E+004	+-	1.04E+004 nCi/g
Pu-239 Equivalent Activity	3.15E+000	+-	5.66E-001 Ci
Pu-239 FGE	7.35E+000	+-	1.57E+000 g
Decay heat	1.11E-001	+-	2.05E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	9.42E-010	1.30E-007	3.56E-008	0.00E+000
CS137	1.48E-009	1.30E-007	3.56E-008	4.34E-008
U233	<LLD	<LLD	0.00E+000	7.11E-004
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	6.23E-008
NP237	1.87E-003	1.33E-006	3.04E-007	1.77E-007
PU238	1.62E-001	2.80E+000	6.12E-001	1.29E-002
U238	<LLD	<LLD	0.00E+000	5.14E-006
PU239	7.30E+000	4.59E-001	9.90E-002	2.11E-003
PU240	3.99E-001	9.17E-002	2.13E-002	4.22E-004
AM241	8.86E-003	3.08E-002	8.40E-003	5.68E-005
PU241	1.03E-002	1.07E+000	2.45E-001	4.93E-003
PU242	1.91E-003	7.58E-006	1.99E-006	0.00E+000

Errors quoted at 1.000 sigma

Operator: Robert J Haslett Jr Date: 6-3-09

ITR: Philip Cantt Date: 6/12/09

Summed Segment Spectra Results
Category: Segmented

C:\Canberra\NDA2k\Data\00000378_CNTR0001_DCAT0002_PROC00AI.CNF

Elapsed Live Time: 118.80 sec Elapsed Real Time: 120.00 sec

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

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 1.040E-001 +/-	1.0%	< 1.739E-006	< 4.795E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	2.443E-001 +/-	17.3%	4.085E-006	3.860E-011
	Al-26	< 1.170E-001 +/-	6.7%	< 1.956E-006	< 6.153E-006
	K-40	< 1.253E+000 +/-	2.7%	< 2.096E-005	< 1.955E-001
	Co-57	< 4.049E-001 +/-	1.5%	< 6.770E-006	< 4.737E-011
	Co-60	3.031E-001 +/-	9.4%	5.068E-006	2.658E-010
	Se-75	< 2.706E-001 +/-	1.0%	< 4.525E-006	< 1.862E-011
	Kr-85	< 3.755E+001 +/-	2.4%	< 6.279E-004	< 9.463E-008
	Sr-90	< 1.114E-001 +/-	0.8%	< 1.863E-006	< 8.075E-010
	Sb-125	< 3.530E-001 +/-	1.3%	< 5.903E-006	< 3.396E-010
	Ba-133	< 2.235E-001 +/-	0.8%	< 3.737E-006	< 8.827E-010
	Cs-134	< 1.056E-001 +/-	0.7%	< 1.766E-006	< 8.058E-011
X	Cs-137				
	Eu-152	< 3.755E-001 +/-	1.7%	< 6.279E-006	< 2.110E-009
	Eu-154	< 4.485E-001 +/-	1.4%	< 7.500E-006	< 1.682E-009
	Ho-166m	< 1.743E-001 +/-	1.5%	< 2.915E-006	< 9.691E-008
	Bi-207	< 1.059E-001 +/-	0.7%	< 1.771E-006	< 1.927E-009
	Pb-210	< 3.309E+003 +/-	11.3%	< 5.533E-002	< 4.301E-005
	Ra-226	< 2.446E-001 +/-	1.3%	< 4.090E-006	< 2.446E-007
	Ac-227	< 9.882E-001 +/-	8.2%	< 1.652E-005	< 1.354E-008
	Th-230	< 5.218E+002 +/-	8.2%	< 8.725E-003	< 2.557E-002
	Pa-231	< 5.265E+000 +/-	11.1%	< 8.804E-005	< 1.100E-004
	Th-232	< 4.095E-001 +/-	1.8%	< 6.849E-006	< 3.690E+000
	U-232	6.178E-001 +/-	22.0%	1.033E-005	2.860E-008
	U-233	< 3.826E+003 +/-	1.3%	< 6.398E-002	< 3.903E-001
	Pa-234	< 5.927E-001 +/-	12.1%	< 9.911E-006	
	Pa-234m	< 7.791E+002 +/-	1.5%	< 1.303E-002	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 3.150E-001 +/-	1.7%	< 5.267E-006	< 1.440E-001
	Np-237	1.663E+000 +/-	9.7%	2.781E-005	2.328E-003
	Pu-238	6.246E+005 +/-	3.2%	1.045E+001	3.610E-002
	U-238	< 1.166E+001 +/-	1.6%	< 1.949E-004	< 3.427E+001
	Pu-239	5.102E+005 +/-	2.9%	8.531E+000	8.111E+000
	Pu-239B	< 2.975E+004 +/-	3.2%	< 4.974E-001	< 4.729E-001
	U-239	< 8.097E+003 +/-	14.9%	< 1.354E-001	
X	Pu-240				
	Am-241	4.651E+004 +/-	17.1%	7.778E-001	1.339E-002
	Am-241B	3.629E+004 +/-	2.7%	6.068E-001	1.045E-002
	Pu-241	2.661E+005 +/-	8.6%	4.451E+000	2.560E-003
	Pu-241B	2.974E+005 +/-	3.4%	4.973E+000	2.861E-003

Pu-242	< 0.000E+000 +/- 0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.092E+000 +/- 1.1%	< 1.826E-005	< 5.404E-006
Cm-243	< 1.126E+000 +/- 3.0%	< 1.883E-005	< 2.162E-008
Cm-244	< 1.208E+005 +/- 13.9%	< 2.020E+000	< 1.473E-003
Cm-245	< 1.989E+000 +/- 7.4%	< 3.326E-005	< 1.144E-005
Cm-247	< 2.057E-001 +/- 8.4%	< 3.440E-006	< 2.201E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.796E-001 +/-	3.1%	< 3.003E-006	< 4.346E-008
Cf-251	< 1.086E+000 +/-	5.3%	< 1.816E-005	< 6.788E-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	8.11E+000 +- 2.37E-001	2.56E+000 +- 3.86E-002

Beta: 2.30E+002 +- 7.57E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.47E+000 +- 5.25E-002
203.55	2.19E+000 +- 1.06E-001
375.05	4.41E+000 +- 8.68E-002
413.71	4.78E+000 +- 1.09E-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: LL85234314TRU Analysis Date: 5/5/2009

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

Net Weight	59800.0 g		
Pu mass	8.75E+000 +-	1.75E+000	g
TRU Alpha Activity	3.77E+000 +-	6.89E-001	Ci
TRU Activity Concentration	6.31E+004 +-	1.15E+004	nCi/g
Pu-239 Equivalent Activity	3.51E+000 +-	6.28E-001	Ci
Pu-239 FGE	8.17E+000 +-	1.75E+000	g
Decay heat	1.24E-001 +-	2.28E-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	1.11E-007
U233	<LLD	<LLD	0.00E+000	3.83E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.15E-007
NP237	2.33E-003	1.66E-006	3.90E-007	4.88E-007
PU238	1.80E-001	3.12E+000	6.79E-001	5.51E-002
U238	<LLD	<LLD	0.00E+000	1.17E-005
PU239	8.11E+000	5.10E-001	1.10E-001	9.02E-003
PU240	4.43E-001	1.02E-001	2.36E-002	1.80E-003
AM241	1.34E-002	4.65E-002	1.27E-002	3.43E-005
PU241	1.15E-002	1.19E+000	2.71E-001	2.11E-002
PU242	2.12E-003	8.43E-006	2.21E-006	0.00E+000

Errors quoted at 1.000 sigma

Operator: Robert J. Howlett Jr Date: 6-3-09

ITR: Philip C. Curtis Date: 6/12/09

Automated Independent Technical Review

Counter ID: SGS with Trans. Count Type: Assay - 55 Gal Galv 23.8
Container ID: LL85234314TRU Assay Date: 5/5/2009
Waste Matrix Code:
Sequence Number: 378

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

Source of results is undefined.

DISPOSITION:

MGA Analysis:

Note: The measured and declared isotopics are inconsistent. OK

DISPOSITION:

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

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: 6-3-09

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:	LL85234314TRU	Analysis Date:	5/5/2009

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

MGA version: MGA V9.63H CI

Measurement date = 5/5/09 Declared date = 5/5/09
Low energy spectrum sensitivity = 30.0% Total counts = 5.452E+005
High energy spectrum sensitivity : 10.0%

Pu g/cm2 = 0.2500 Cd g/cm2 = 1.7341 FWHM at 122 keV = 664 eV
QFIT = 2.07 FWHM at 208 keV = 786 eV
NQFIT = 1.10 OK

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	0.022199	3.6	1.1	15.7210	9.6	2.05826	3.36	2.23576	3.65
Pu-239	1.000000	0.0	3.4	708.1823	10.6	92.71796	0.49	92.46072	0.49
Pu-240	0.054667	8.9	8.1	38.7139	15.0	5.06858	8.50	5.05874	8.49
Pu-241	0.001412	7.5	6.6	1.0000	0.0	0.13092	7.46	0.22058	12.57
Pu-242	(New alg.)			0.1854(15)		0.02427 (15)		0.02419 (14)	
Am-241	0.003875	4.9	3.2	2.7444	10.5	0.35931	4.77	0.36470	4.84

Pu-240 effective (meas. date) = 10.296 +/- 5.51%
Am-241 separated about 29.446 +/- 1.250 years ago
Am/Pu-241 weight ratio = 2.74439 +/- 7.30%

Messages:

Lead x-rays detected.
Efficiency curvature boundary reached.
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 Hardtke Date: 6-3-09

NDA 2000 Assay Report

Item Information

Item ID:	LL85901401TRU	Count Sequence Number:	379
Operator:	RHWM2\RHWM		
Assay Start:	5/5/2009 12:49:10 PM		
Description 1:	LL85901401TRU		
Description 2:			
Location:	LLNL		
Comment:			
Matrix Type:	Lucite		
Container Type:	55 Gal Galv 23.8		
Weight:	Gross: 80.4 kg	Net:	56.6 kg
Container:	Volume: 208.0 l	Full:	100.0 %
Density:	0.270 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

Reviewed By: Robert Haskett Jr 6-3-09

Segment 1 Results

Segment: 1 Detector: DET01 Position: 1
C:\Canberra\NDA2k\Data\00000379_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P001_S001

Acquisition Start: 5/5/2009 12:50:13 PM
Elapsed Live Time: 118.13 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.048 +/- 0.0052
SE-75	264.66	0.079 +/- 0.0016
SE-75	279.54	0.081 +/- 0.0018
SE-75	400.66	0.101 +/- 0.0024

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 3:01:35 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
59.56	Y	5046	1690	1.16	120.96	3.128E-006	2.17	
129.35	Y	175	848	1.30	260.43	1.272E-004	25.23	
208.01	Y	52	358	0.71	417.61	1.651E-004	54.48	
238.60	Y	295	266	1.09	478.74	1.548E-004	9.97	
510.96		82	29	1.80	1023.00	7.988E-005	15.27	
583.25	Y	149	26	1.37	1167.45	7.252E-005	9.94	
727.20	Y	25	8	0.70	1455.10	6.340E-005	26.50	
2615.28		62	2	2.25	5228.03	2.834E-005	13.30	

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

Segment 2 Results

Segment: 2 Detector: DET01 Position: 2
C:\Canberra\NDA2k\Data\00000379_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P002_S002

Acquisition Start: 5/5/2009 12:53:24 PM
Elapsed Live Time: 115.35 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.023 +/- 0.0054
SE-75	264.66	0.052 +/- 0.0011
SE-75	279.54	0.055 +/- 0.0014
SE-75	400.66	0.071 +/- 0.0019

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 3:01:39 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
	59.55	Y	29580	5574	1.11	120.95	4.501E-005	1.31	
M	94.70		1496	4097	1.46	191.18	1.021E-004	6.79	10.30
m	98.76	Y	5236	6320	1.47	199.30	1.074E-004	4.72	
m	103.23	Y	2899	5505	1.47	208.22	1.129E-004	4.87	
	111.18		708	3121	1.48	224.11	1.217E-004	12.47	
M	125.37	Y	540	2101	1.05	252.47	1.344E-004	8.98	1.20
m	129.35	Y	3345	1975	1.05	260.42	1.373E-004	5.96	
M	203.60	Y	462	1000	1.09	408.79	1.668E-004	6.50	1.32
m	208.06		1312	855	1.10	417.71	1.669E-004	3.39	
	238.62	Y	390	739	1.20	478.78	1.651E-004	12.14	
	311.81	Y	215	364	1.44	625.04	1.516E-004	15.61	
M	332.75	Y	405	227	1.21	666.87	1.466E-004	5.94	1.85
m	335.79	Y	153	297	1.21	672.96	1.459E-004	11.03	
	344.99		349	295	1.14	691.34	1.437E-004	9.38	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
M	375.06	Y	998	231	1.27	751.43	1.365E-004	3.48	0.87
m	380.17		228	174	1.28	761.63	1.353E-004	7.43	
m	382.78		197	156	1.28	766.85	1.347E-004	8.06	
	392.85		399	146	1.53	786.97	1.324E-004	7.23	
	413.75	Y	950	90	1.37	828.73	1.283E-004	3.83	
	422.76		94	73	1.85	846.75	1.267E-004	18.30	
	451.41		135	57	1.18	903.99	1.219E-004	12.87	
	510.83		93	56	1.75	1022.73	1.129E-004	17.03	
	583.13	Y	225	18	1.59	1167.21	1.037E-004	7.61	
M	721.80	Y	28	13	1.28	1444.31	9.042E-005	38.23	0.63
m	727.12	Y	38	14	1.28	1454.94	9.001E-005	36.12	
	860.69	Y	36	7	1.12	1721.86	8.136E-005	20.52	
	2615.82		103	2	2.19	5229.11	8.834E-005	10.47	

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	1.93E+000 +- 1.13E-001	1.69E+000 +- 4.37E-002

Beta: 3.75E+001 +- 1.58E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.38E+000 +- 1.19E-001
203.55	1.74E+000 +- 1.21E-001
375.05	1.69E+000 +- 6.67E-002
413.71	1.81E+000 +- 7.92E-002

Segment 3 Results

Segment: 3 Detector: DET01 Position: 3
C:\Canberra\NDA2k\Data\00000379_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P003_S003

Acquisition Start: 5/5/2009 12:56:36 PM
Elapsed Live Time: 106.70 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.001 +/- 0.0005
SE-75	264.66	0.011 +/- 0.0005
SE-75	279.54	0.012 +/- 0.0009
SE-75	400.66	0.020 +/- 0.0011

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: 6/3/2009 3:02:01 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
	49.42		4059	16653	2.31	100.70	1.638E-005	5.72	
	59.45	Y	118600	16256	1.13	120.75	2.576E-005	1.20	
M	94.68		5792	9804	1.41	191.15	6.055E-005	3.11	31.13
m	98.66	Y	19531	13166	1.42	199.10	6.388E-005	2.43	
m	100.89	Y	2530	12485	1.42	203.55	6.565E-005	4.49	
m	103.19	Y	10373	10772	1.43	208.15	6.742E-005	2.51	
M	111.06		4619	7378	1.69	223.88	7.296E-005	2.26	19.14
m	115.03	Y	3878	13388	1.70	231.81	7.545E-005	2.68	
M	125.26	Y	2183	5192	1.06	252.25	8.093E-005	3.38	7.72
m	129.31	Y	13396	4778	1.06	260.34	8.275E-005	1.50	
M	144.17		726	3716	1.16	290.03	9.651E-005	22.37	0.75

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	146.32	Y	641	3637	1.16	294.34	9.884E-005	22.97	
m	148.54	Y	1323	3934	1.17	298.78	1.011E-004	20.36	
	171.39		390	3124	1.17	344.43	1.167E-004	24.44	
	195.86		410	2722	1.11	393.33	1.244E-004	22.36	
M	203.55	Y	2021	2247	1.15	408.69	1.256E-004	4.67	0.92
m	207.99	Y	5204	2282	1.16	417.57	1.260E-004	3.91	
	238.59	Y	422	1591	1.23	478.71	1.261E-004	17.02	
	255.30		352	1253	1.48	512.12	1.244E-004	18.08	
	267.51	Y	111	948	1.10	536.51	1.229E-004	45.80	
M	297.66		149	835	1.04	596.75	1.190E-004	39.85	1.47
m	300.16	Y	138	832	1.04	601.74	1.186E-004	39.30	
	311.80	Y	753	837	1.31	625.01	1.168E-004	7.55	
M	320.98		137	601	0.61	643.36	1.153E-004	43.86	1.98
m	324.09		202	1089	0.61	649.58	1.147E-004	22.63	
M	332.72	Y	1739	743	1.30	666.82	1.132E-004	2.95	2.04
m	335.63	Y	751	763	1.30	672.62	1.127E-004	4.67	
m	341.20	Y	238	708	1.31	683.76	1.117E-004	10.38	
m	344.97		1581	722	1.31	691.30	1.110E-004	3.04	
	368.05	Y	512	703	2.64	737.42	1.068E-004	10.29	
M	374.99	Y	4158	516	1.31	751.28	1.055E-004	1.99	3.85
m	380.04		829	425	1.32	761.37	1.046E-004	4.16	
m	382.72		699	379	1.32	766.73	1.041E-004	4.53	
	392.84		1327	414	1.55	786.95	1.023E-004	4.17	
	413.66	Y	3726	259	1.40	828.55	9.908E-005	2.22	
	422.50		249	193	1.16	846.23	9.786E-005	11.71	
	451.40		490	111	1.51	903.97	9.406E-005	6.21	
	583.12	Y	163	44	1.62	1167.18	8.040E-005	10.89	
	662.30	Y	180	36	1.53	1325.41	7.455E-005	9.84	
	721.83	Y	112	29	1.92	1444.38	7.103E-005	13.33	
	860.67	Y	17	11	0.87	1721.82	6.494E-005	42.43	
	2615.62		100	0	1.64	5228.71	5.303E-005	10.72	

Reference Peak Correction factor (from 2234.4 keV peak) is 1.13 +/- 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 -	9.24E+000 +- 1.73E-001

Beta: -1.17E+001 +- 1.35E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in attempted correction: 4

Energy	Mass (g)

Segment 4 Results

Segment: 4 Detector: DET01 Position: 4
C:\Canberra\NDA2k\Data\00000379_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P004_S004

Acquisition Start: 5/5/2009 12:59:48 PM
Elapsed Live Time: 101.53 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.001 +/- 0.0005
SE-75	264.66	0.025 +/- 0.0008
SE-75	279.54	0.028 +/- 0.0013
SE-75	400.66	0.042 +/- 0.0016

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: 6/3/2009 3:03:00 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
	49.45		5706	23250	2.23	100.77	1.757E-007	5.15	
	59.43	Y	172676	22384	1.15	120.69	1.465E-006	1.21	
M	94.66	Y	8526	12896	1.46	191.10	3.494E-005	2.87	43.00
m	98.62	Y	28362	18753	1.46	199.02	4.103E-005	2.30	
m	100.88	Y	3959	16399	1.47	203.53	4.455E-005	3.86	
m	103.17	Y	15474	15420	1.47	208.11	4.812E-005	2.34	
M	111.08	Y	6737	8077	1.20	223.92	6.014E-005	2.60	31.01
m	114.41	Y	4613	9291	1.21	230.58	6.496E-005	3.03	
m	116.07	Y	3864	8921	1.21	233.89	6.729E-005	3.12	
m	120.14	Y	590	8137	1.22	242.02	7.273E-005	11.59	
m	125.23	Y	4137	7393	1.22	252.20	7.901E-005	2.91	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	129.27	Y	20010	6376	1.23	260.27	8.351E-005	2.07	
M	144.19	Y	1144	4361	1.15	290.08	1.147E-004	5.68	1.43
m	146.20	Y	841	5385	1.15	294.09	1.191E-004	7.18	
m	148.53	Y	1736	5268	1.16	298.75	1.239E-004	4.25	
M	160.80	Y	1067	5368	1.68	323.27	1.434E-004	25.35	2.87
m	164.56	Y	712	6624	1.68	330.78	1.479E-004	23.36	
	171.29	Y	685	3960	1.51	344.24	1.546E-004	16.76	
	195.67	Y	553	3691	1.17	392.95	1.673E-004	20.47	
M	203.50	Y	2743	3053	1.16	408.59	1.686E-004	2.77	3.52
m	207.97	Y	7435	3049	1.16	417.54	1.688E-004	1.79	
	255.34	Y	294	1667	1.13	512.18	1.601E-004	25.32	
	267.48	Y	132	1582	1.14	536.44	1.563E-004	55.52	
	311.77	Y	1253	1191	1.29	624.95	1.417E-004	5.98	
	323.96	Y	379	1062	2.94	649.31	1.375E-004	16.26	
M	332.70	Y	2520	1003	1.31	666.77	1.346E-004	2.58	1.36
m	335.54	Y	958	1071	1.31	672.45	1.337E-004	4.33	
m	341.28	Y	308	944	1.32	683.92	1.319E-004	9.70	
m	344.93	Y	2256	1011	1.32	691.22	1.307E-004	2.71	
	368.30	Y	916	957	2.45	737.92	1.236E-004	7.49	
M	374.97	Y	6136	789	1.34	751.25	1.217E-004	1.80	4.13
m	380.06	Y	1233	595	1.34	761.41	1.203E-004	3.53	
m	382.67	Y	1094	488	1.34	766.63	1.196E-004	3.74	
	392.85	Y	2145	530	1.52	786.97	1.169E-004	3.34	
	413.59	Y	5431	382	1.43	828.42	1.121E-004	2.01	
	422.49	Y	349	403	1.23	846.21	1.103E-004	12.50	
	451.33	Y	684	175	1.32	903.83	1.051E-004	5.71	
	510.78		121	90	1.50	1022.63	9.644E-005	17.75	
	583.05		130	43	1.08	1167.05	8.892E-005	13.31	
	619.08	Y	61	35	1.32	1239.04	8.606E-005	23.35	
	639.83	Y	34	45	1.01	1280.50	8.461E-005	40.63	
	662.16	Y	223	57	1.59	1325.14	8.321E-005	9.76	
	721.95	Y	121	37	1.12	1444.61	8.003E-005	13.76	
	2615.63		54	4	1.36	5228.73	3.656E-005	16.91	

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

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

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.22E+001 +- 5.81E-001	1.13E+001 +- 1.92E-001

Beta: 2.22E+001 +- 1.33E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.36E+001 +- 1.09E+000
203.55	1.02E+001 +- 3.56E-001
375.05	1.16E+001 +- 3.10E-001
413.71	1.18E+001 +- 3.54E-001

Segment 5 Results

Segment: 5 Detector: DET01 Position: 5
C:\Canberra\NDA2k\Data\00000379_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P005_S005

Acquisition Start: 5/5/2009 1:02:59 PM
Elapsed Live Time: 103.21 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.001 +/- 0.0005
SE-75	264.66	0.027 +/- 0.0008
SE-75	279.54	0.030 +/- 0.0013
SE-75	400.66	0.045 +/- 0.0016

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 3:04:02 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
	49.55		6227	22831	2.18	100.96	1.922E-005	4.63	
	59.44	Y	170031	21662	1.13	120.72	2.793E-005	1.19	
M	94.65	Y	8038	11790	1.44	191.08	5.984E-005	2.83	37.06
m	98.65	Y	25858	17151	1.45	199.07	6.290E-005	2.25	
m	100.88	Y	3396	15006	1.45	203.53	6.454E-005	4.04	
m	103.15	Y	14207	14116	1.46	208.07	6.615E-005	2.31	
M	111.03	Y	6297	9320	1.51	223.82	7.127E-005	2.04	19.76
m	114.79	Y	4151	15217	1.51	231.32	7.346E-005	2.75	
M	123.13	Y	373	5604	1.13	247.99	7.776E-005	19.03	2.10
m	125.26	Y	2935	6055	1.14	252.25	7.872E-005	3.74	
m	129.28	Y	17882	4808	1.15	260.29	8.043E-005	2.43	
M	144.24	Y	982	3816	1.12	290.18	1.025E-004	14.76	0.38
m	146.25	Y	862	4258	1.12	294.20	1.058E-004	14.65	
m	148.57	Y	1583	4678	1.13	298.83	1.092E-004	13.15	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
M	161.04	Y	897	4399	1.53	323.76	1.233E-004	28.49	2.23
m	164.61	Y	639	6441	1.53	330.89	1.264E-004	25.43	
	171.31	Y	635	3585	1.03	344.27	1.315E-004	16.91	
	179.08	Y	253	3733	0.81	359.80	1.362E-004	43.54	
	195.50	Y	374	2923	1.28	392.60	1.432E-004	25.59	
M	203.50	Y	2548	2582	1.20	408.60	1.454E-004	4.50	0.66
m	207.96	Y	6393	2307	1.21	417.51	1.463E-004	3.86	
	238.58	Y	209	1853	0.93	478.70	1.486E-004	37.41	
	255.33	Y	391	1562	1.25	512.18	1.477E-004	18.84	
	267.48	Y	217	1325	1.08	536.45	1.465E-004	30.90	
M	297.29	Y	154	866	1.04	596.02	1.427E-004	46.68	0.73
m	300.20	Y	184	762	1.05	601.84	1.421E-004	45.29	
	311.75	Y	1006	1140	1.33	624.91	1.399E-004	7.11	
M	332.67	Y	2258	715	1.34	666.71	1.355E-004	5.39	1.60
m	335.61	Y	963	692	1.34	672.59	1.349E-004	6.29	
m	341.07	Y	294	748	1.35	683.50	1.337E-004	10.85	
m	344.93	Y	2039	726	1.35	691.21	1.329E-004	5.27	
	368.49	Y	826	737	1.81	738.30	1.277E-004	7.20	
M	374.99	Y	5482	605	1.32	751.28	1.263E-004	1.84	3.92
m	380.08	Y	1038	466	1.32	761.46	1.252E-004	3.79	
m	382.73	Y	860	427	1.33	766.74	1.246E-004	4.18	
	392.85	Y	1873	433	1.49	786.96	1.225E-004	3.46	
	413.64	Y	4799	289	1.42	828.52	1.186E-004	2.05	
M	422.45	Y	378	149	1.29	846.12	1.171E-004	6.43	0.91
m	426.62	Y	106	182	1.29	854.46	1.164E-004	13.97	
	451.41	Y	557	123	1.63	903.99	1.124E-004	5.99	
	510.58		121	51	1.33	1022.22	1.039E-004	14.90	
	583.32	Y	87	45	1.32	1167.58	9.536E-005	18.33	
	618.66	Y	63	34	0.95	1238.22	9.188E-005	22.72	
	662.35	Y	230	43	1.67	1325.52	8.806E-005	8.94	
	721.89	Y	136	25	1.89	1444.50	8.363E-005	11.52	
	2615.87		66	3	2.57	5229.21	6.469E-005	14.43	

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

********** 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 -	1.02E+001 +- 1.85E-001

Beta: -4.51E+001 +- 1.38E+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\00000379_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P006_S006

Acquisition Start: 5/5/2009 1:06:10 PM
Elapsed Live Time: 111.10 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.045 +/- 0.0073
SE-75	264.66	0.088 +/- 0.0018
SE-75	279.54	0.090 +/- 0.0021
SE-75	400.66	0.126 +/- 0.0030

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 3:04:07 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
	49.26		2687	11742	2.22	100.39	6.080E-008	6.76	
	59.52	Y	84942	12636	1.11	120.87	1.162E-006	1.20	
M	94.76		4111	6889	1.41	191.31	6.237E-005	3.51	22.28
m	98.70	Y	13090	9037	1.42	199.18	7.530E-005	2.71	
m	100.88	Y	1770	8416	1.42	203.53	8.263E-005	5.06	
m	103.20	Y	7025	7081	1.42	208.17	9.051E-005	2.81	
M	111.10		3382	5509	1.99	223.97	1.172E-004	2.46	22.85
m	115.05	Y	2429	7873	1.53	231.86	1.300E-004	3.23	
M	123.06	Y	368	4097	1.11	247.85	1.540E-004	13.76	0.24
m	125.34	Y	1677	3407	1.11	252.41	1.603E-004	4.42	
m	129.33	Y	8885	2768	1.12	260.39	1.706E-004	2.76	
M	144.26		535	2176	1.07	290.22	2.032E-004	65.44	2.41
m	146.27	Y	472	2738	1.07	294.24	2.068E-004	63.01	
m	148.61	Y	843	3043	1.08	298.92	2.109E-004	61.93	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	164.67	Y	122	2149	0.70	331.01	2.308E-004	59.91	
	171.38		249	2108	0.97	344.42	2.359E-004	30.14	
	195.85		235	1898	0.98	393.30	2.428E-004	31.20	
M	203.57	Y	1080	1400	1.13	408.74	2.422E-004	5.91	1.20
m	208.01	Y	3148	1424	1.14	417.61	2.415E-004	4.60	
	267.51	Y	77	567	1.03	536.51	2.180E-004	48.13	
M	297.33		91	532	1.00	596.09	2.049E-004	22.62	0.50
m	300.03	Y	92	537	1.00	601.49	2.039E-004	22.75	
	311.89	Y	665	631	1.17	625.20	1.994E-004	7.63	
M	332.73	Y	1108	497	1.35	666.83	1.918E-004	3.48	1.30
m	335.77	Y	416	461	1.36	672.91	1.908E-004	6.13	
m	341.14	Y	189	474	1.36	683.64	1.889E-004	10.30	
m	345.00		1013	441	1.37	691.35	1.876E-004	3.60	
	368.18	Y	351	414	2.15	737.69	1.800E-004	11.29	
M	375.03	Y	2574	341	1.32	751.36	1.779E-004	2.31	2.51
m	380.16		525	245	1.32	761.62	1.763E-004	5.02	
m	382.78		427	217	1.33	766.85	1.755E-004	5.63	
	392.87		918	210	1.51	787.01	1.726E-004	4.54	
	413.70	Y	2417	161	1.41	828.64	1.671E-004	2.56	
	422.55		150	129	1.13	846.32	1.651E-004	15.11	
	451.36		276	55	1.29	903.90	1.588E-004	7.85	
	618.74	Y	26	23	1.15	1238.37	1.335E-004	36.70	
	662.46	Y	90	16	1.89	1325.74	1.288E-004	13.36	
	721.76	Y	57	20	0.92	1444.24	1.232E-004	19.07	

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	3.73E+000 +- 1.72E-001	3.28E+000 +- 6.65E-002

Beta: 3.71E+001 +- 1.25E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	2.96E+000 +- 1.84E-001
203.55	2.81E+000 +- 1.93E-001
375.05	3.33E+000 +- 1.01E-001
413.71	3.53E+000 +- 1.18E-001

Segment 7 Results

Segment: 7 Detector: DET01 Position: 7
C:\Canberra\NDA2k\Data\00000379_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P007_S007

Acquisition Start: 5/5/2009 1:09:22 PM
Elapsed Live Time: 114.64 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.114 +/- 0.0089
SE-75	264.66	0.227 +/- 0.0042
SE-75	279.54	0.231 +/- 0.0046
SE-75	400.66	0.290 +/- 0.0058

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 3:04:11 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
	59.56	Y	36544	7299	1.12	120.96	2.895E-006	1.28	
M	94.75		2170	4683	1.55	191.28	8.487E-005	5.19	18.50
m	98.78	Y	7323	7691	1.56	199.33	1.013E-004	3.72	
m	103.24	Y	4158	5899	1.57	208.24	1.200E-004	3.85	
M	111.14		1704	3430	1.60	224.03	1.531E-004	3.41	8.05
m	115.13	Y	1423	5624	1.61	232.02	1.693E-004	4.07	
M	125.29	Y	1025	2354	1.13	252.31	2.070E-004	5.56	1.80
m	129.34	Y	4837	2172	1.14	260.41	2.203E-004	3.52	
	148.48	Y	410	1994	0.95	298.65	2.744E-004	17.60	
M	203.61	Y	683	1162	1.08	408.82	3.214E-004	5.13	1.13
m	208.07	Y	1957	910	1.08	417.74	3.204E-004	2.80	
	300.25	Y	106	410	1.27	601.92	2.567E-004	30.47	
	311.87	Y	909	437	1.22	625.15	2.485E-004	5.11	
M	332.75	Y	679	297	1.10	666.87	2.345E-004	15.81	2.17

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	335.78	Y	214	347	1.10	672.92	2.326E-004	17.80	
	345.00		450	398	1.23	691.36	2.270E-004	8.65	
M	368.47	Y	181	203	1.35	738.26	2.136E-004	8.90	2.38
m	375.05	Y	1685	190	1.36	751.41	2.102E-004	2.68	
m	380.19		329	136	1.36	761.68	2.076E-004	6.11	
m	382.78		257	127	1.37	766.86	2.063E-004	6.75	
	392.91		600	135	1.64	787.09	2.014E-004	5.39	
	413.72	Y	1496	99	1.44	828.67	1.922E-004	3.07	
	422.71		83	81	1.23	846.63	1.885E-004	20.77	
	451.39		173	57	1.57	903.96	1.780E-004	10.61	
	662.34	Y	68	16	1.48	1325.48	1.352E-004	15.77	
	721.84	Y	31	13	1.07	1444.40	1.290E-004	26.54	

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	2.31E+000 +- 1.08E-001	1.60E+000 +- 3.40E-002

Beta: 8.79E+001 +- 1.15E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.25E+000 +- 6.73E-002
203.55	1.34E+000 +- 7.51E-002
375.05	1.85E+000 +- 6.09E-002
413.71	1.90E+000 +- 7.10E-002

Segment 8 Results

Segment: 8 Detector: DET01 Position: 8
C:\Canberra\NDA2k\Data\00000379_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P008_S008

Acquisition Start: 5/5/2009 1:12:33 PM
Elapsed Live Time: 112.79 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.123 +/- 0.0099
SE-75	264.66	0.262 +/- 0.0048
SE-75	279.54	0.271 +/- 0.0053
SE-75	400.66	0.335 +/- 0.0067

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: 6/3/2009 3:04:18 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
	59.53	Y	65319	8898	1.11	120.91	6.051E-005	1.21	
M	94.74		3541	5004	1.46	191.26	1.568E-004	3.66	26.41
m	98.72	Y	12163	6649	1.47	199.22	1.660E-004	2.88	
m	100.91	Y	1665	6132	1.47	203.60	1.708E-004	5.17	
m	103.23	Y	6821	5300	1.48	208.23	1.757E-004	2.94	
M	111.09		2872	3872	1.48	223.94	1.912E-004	2.53	9.08
m	114.83	Y	1863	6141	1.48	231.40	1.978E-004	3.58	
M	123.08	Y	382	2403	1.05	247.90	2.107E-004	10.66	4.83
m	125.32	Y	1705	2951	1.05	252.37	2.138E-004	3.29	
m	129.34	Y	8667	2418	1.06	260.41	2.191E-004	1.60	
M	144.45		557	1798	1.11	290.60	2.397E-004	20.19	5.42

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	148.63	Y	994	3756	1.11	298.96	2.453E-004	13.01	
m	152.82	Y	265	3428	1.12	307.32	2.504E-004	16.87	
	195.69		211	1268	1.33	392.99	2.791E-004	26.73	
M	203.59	Y	1145	1029	1.11	408.77	2.808E-004	3.80	4.35
m	208.04	Y	3146	1309	1.12	417.67	2.814E-004	2.26	
	255.33		213	726	0.98	512.16	2.766E-004	21.65	
	267.64	Y	74	542	1.20	536.76	2.729E-004	49.56	
	300.13	Y	369	618	1.42	601.69	2.603E-004	12.44	
	311.88	Y	2025	488	1.27	625.18	2.554E-004	3.11	
M	332.77	Y	1129	448	1.39	666.91	2.466E-004	6.71	1.79
m	335.74	Y	437	400	1.39	672.85	2.453E-004	8.17	
m	340.85	Y	290	327	1.40	683.06	2.431E-004	9.49	
m	344.96		1060	286	1.40	691.28	2.414E-004	6.57	
M	368.48	Y	277	291	1.29	738.27	2.315E-004	7.39	3.51
m	375.06	Y	2744	237	1.30	751.43	2.288E-004	2.23	
m	380.05		496	178	1.30	761.40	2.267E-004	5.05	
m	382.75		491	163	1.30	766.79	2.256E-004	5.02	
M	392.89		976	134	1.60	787.05	2.216E-004	7.89	1.42
m	398.70		35	129	1.61	798.66	2.193E-004	41.26	
	413.72	Y	2454	148	1.46	828.68	2.133E-004	2.51	
	422.50		136	132	1.06	846.22	2.100E-004	16.41	
	451.39		293	116	1.28	903.96	1.995E-004	9.82	
	662.18	Y	111	23	0.94	1325.18	1.461E-004	12.26	
	721.88	Y	77	8	1.21	1444.47	1.364E-004	13.31	

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

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

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	3.10E+000 +- 1.19E-001	2.64E+000 +- 4.66E-002

Beta: 4.08E+001 +- 9.24E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	2.25E+000 +- 1.02E-001
203.55	2.57E+000 +- 1.15E-001
375.05	2.76E+000 +- 7.85E-002
413.71	2.81E+000 +- 8.88E-002

Segment 9 Results

Segment: 9 Detector: DET01 Position: 9
C:\Canberra\NDA2k\Data\00000379_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P009_S009

Acquisition Start: 5/5/2009 1:15:44 PM
Elapsed Live Time: 113.88 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.171 +/- 0.0102
SE-75	264.66	0.294 +/- 0.0054
SE-75	279.54	0.307 +/- 0.0059
SE-75	400.66	0.370 +/- 0.0073

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: 6/3/2009 3:04:23 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
	49.75		2356	8303	3.08	101.37	1.635E-006	6.40	
	59.54	Y	68612	8428	1.09	120.93	9.779E-006	1.19	
M	94.75		2611	4083	1.48	191.28	1.258E-004	4.05	21.23
m	98.75	Y	10302	5399	1.49	199.28	1.422E-004	3.03	
m	100.87	Y	1482	5040	1.49	203.51	1.506E-004	5.39	
m	103.23	Y	6059	4236	1.49	208.22	1.598E-004	3.06	
M	111.12		2267	2960	1.57	223.99	1.884E-004	2.75	7.32
m	114.97	Y	1628	5291	1.57	231.69	2.009E-004	3.64	
M	123.01	Y	316	2195	1.06	247.75	2.240E-004	11.41	4.13
m	125.35	Y	1568	2314	1.07	252.43	2.299E-004	3.29	
m	129.36	Y	6558	1890	1.08	260.45	2.392E-004	1.72	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
M	144.12		519	1496	1.13	289.93	2.682E-004	514.20	5.68
m	146.40	Y	454	2154	1.13	294.49	2.720E-004	449.58	
m	148.66	Y	949	2801	1.14	299.00	2.754E-004	434.25	
m	152.87	Y	263	2597	1.14	307.43	2.814E-004	422.37	
	171.45		293	1284	1.13	344.56	2.985E-004	20.00	
M	203.61	Y	967	895	1.17	408.82	3.055E-004	6.14	1.27
m	208.05	Y	2915	925	1.18	417.70	3.050E-004	5.16	
	255.29		170	548	1.39	512.09	2.906E-004	23.37	
	300.11	Y	285	467	1.37	601.66	2.719E-004	13.90	
	311.86	Y	1673	392	1.25	625.13	2.667E-004	3.37	
M	332.74	Y	788	234	1.32	666.86	2.577E-004	3.95	1.23
m	335.60	Y	336	301	1.32	672.58	2.565E-004	6.35	
m	340.71	Y	252	251	1.33	682.78	2.544E-004	7.56	
m	345.00		755	251	1.33	691.35	2.526E-004	4.02	
M	368.57	Y	237	173	1.34	738.45	2.433E-004	9.36	3.16
m	375.06	Y	1970	139	1.35	751.42	2.409E-004	5.76	
m	380.15		354	93	1.35	761.60	2.390E-004	8.14	
m	382.79		332	85	1.36	766.87	2.381E-004	8.00	
	392.91		654	137	1.59	787.09	2.344E-004	5.16	
	413.72	Y	1784	71	1.40	828.68	2.271E-004	2.78	
	422.52		64	108	1.44	846.26	2.242E-004	29.59	
	451.44		205	48	1.30	904.05	2.151E-004	9.17	
	662.29	Y	106	13	1.47	1325.40	1.673E-004	11.28	
	721.84	Y	38	16	1.61	1444.39	1.574E-004	24.80	

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

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

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	2.12E+000 +- 1.03E-001	1.79E+000 +- 4.26E-002

Beta: 3.74E+001 +- 1.02E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.56E+000 +- 7.06E-002
203.55	1.99E+000 +- 1.40E-001
375.05	1.88E+000 +- 1.15E-001
413.71	1.92E+000 +- 6.69E-002

Segment 10 Results

Segment: 10 Detector: DET01 Position: 10
C:\Canberra\NDA2k\Data\00000379_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P010_S010

Acquisition Start: 5/5/2009 1:18:56 PM
Elapsed Live Time: 115.92 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.144 +/- 0.0134
SE-75	264.66	0.286 +/- 0.0052
SE-75	279.54	0.300 +/- 0.0057
SE-75	400.66	0.359 +/- 0.0070

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 3:04:27 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
	49.42		2434	6714	2.06	100.70	6.080E-007	5.68	
	59.59	Y	58393	6383	1.09	121.02	4.260E-006	1.19	
M	94.75		1058	2757	1.59	191.28	9.139E-005	6.06	29.00
m	99.02	Y	6872	4352	1.60	199.82	1.096E-004	3.47	
m	103.09	Y	5093	3521	1.61	207.95	1.274E-004	3.43	
M	111.10		696	1760	1.37	223.95	1.631E-004	5.42	2.87
m	114.45	Y	641	2745	1.37	230.65	1.777E-004	6.27	
M	123.03	Y	259	1425	1.07	247.79	2.134E-004	10.92	2.21
m	125.32	Y	1339	1306	1.08	252.36	2.223E-004	3.33	
m	129.37	Y	1804	1059	1.08	260.46	2.373E-004	2.81	
M	146.52	Y	132	731	0.84	294.73	2.952E-004	17.47	1.97
m	148.63	Y	432	807	0.84	298.95	3.014E-004	7.34	
m	152.77	Y	190	726	0.85	307.23	3.126E-004	12.38	
	164.81	Y	107	815	0.97	331.28	3.387E-004	41.74	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
M	203.52	Y	243	553	1.15	408.63	3.677E-004	11.02	0.75
m	208.07	Y	1950	471	1.15	417.72	3.672E-004	5.87	
	300.08	Y	98	219	1.06	601.59	2.984E-004	26.44	
	311.89	Y	455	183	1.39	625.18	2.874E-004	6.83	
M	332.70	Y	251	154	1.17	666.78	2.692E-004	7.23	1.66
m	335.49	Y	222	148	1.17	672.35	2.669E-004	7.82	
	345.02		134	103	1.32	691.39	2.592E-004	14.01	
M	368.60	Y	106	121	1.25	738.52	2.415E-004	11.55	2.44
m	375.06	Y	459	140	1.25	751.42	2.370E-004	5.19	
m	380.17		43	158	1.26	761.64	2.336E-004	24.99	
	392.94		181	64	1.38	787.16	2.254E-004	10.54	
	413.76	Y	447	30	1.45	828.77	2.132E-004	5.33	
	422.37		22	33	1.13	845.97	2.085E-004	42.97	
	451.69		52	28	1.01	904.55	1.943E-004	21.36	
	662.10	Y	69	11	1.13	1325.02	1.387E-004	14.59	
	721.94	Y	35	6	1.53	1444.60	1.310E-004	20.40	

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	4.96E-001 +- 3.27E-002	4.54E-001 +- 1.41E-002

Beta: 1.97E+001 +- 1.32E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	4.32E-001 +- 2.37E-002
203.55	4.16E-001 +- 4.79E-002
375.05	4.47E-001 +- 2.48E-002
413.71	5.12E-001 +- 2.94E-002

Segment 11 Results

Segment: 11 Detector: DET01 Position: 11
C:\Canberra\NDA2k\Data\00000379_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P011_S011

Acquisition Start: 5/5/2009 1:22:07 PM
Elapsed Live Time: 116.64 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.173 +/- 0.0097
SE-75	264.66	0.309 +/- 0.0056
SE-75	279.54	0.318 +/- 0.0060
SE-75	400.66	0.380 +/- 0.0074

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 3:04:31 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
	59.60	Y	51518	5458	1.09	121.04	4.650E-006	1.20	
M	94.73		740	1899	1.55	191.24	1.075E-004	6.74	25.10
m	99.06	Y	5696	3085	1.55	199.91	1.279E-004	3.53	
m	103.08	Y	4310	2439	1.56	207.92	1.469E-004	3.50	
M	111.05		336	1185	1.32	223.86	1.838E-004	8.79	1.27
m	114.24	Y	469	2039	1.32	230.24	1.979E-004	7.42	
M	123.09	Y	271	917	1.11	247.92	2.337E-004	14.06	0.83
m	125.40	Y	1129	811	1.12	252.52	2.421E-004	8.89	
m	129.35	Y	742	722	1.12	260.43	2.556E-004	9.32	
M	146.61	Y	207	665	1.26	294.92	3.056E-004	7.26	1.52
m	148.64	Y	435	724	1.26	298.97	3.104E-004	6.01	
m	152.71	Y	278	622	1.27	307.10	3.192E-004	6.46	
	164.67	Y	99	606	1.25	331.00	3.386E-004	39.04	
	207.98	Y	1703	373	1.19	417.55	3.533E-004	3.19	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	267.45	Y	44	159	0.99	536.40	3.161E-004	45.91	
	311.75	Y	202	129	1.46	624.91	2.818E-004	11.51	
M	332.66	Y	158	97	1.28	666.69	2.673E-004	8.75	0.93
m	335.55	Y	169	100	1.29	672.48	2.654E-004	8.35	
	344.92		66	68	1.46	691.19	2.595E-004	22.84	
M	368.67	Y	77	60	1.25	738.65	2.455E-004	12.80	2.48
m	375.00	Y	195	85	1.26	751.31	2.420E-004	7.71	
	392.80		81	29	1.12	786.87	2.328E-004	15.57	
	413.81	Y	175	30	1.35	828.86	2.229E-004	9.28	
	662.56	Y	64	8	1.73	1325.93	1.580E-004	14.39	

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	2.01E-001 +- 2.09E-002	1.81E-001 +- 9.41E-003

Beta: 2.59E+001 +- 2.26E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 3

Energy	Mass (g)
129.30	1.65E-001 +- 1.65E-002
375.05	1.86E-001 +- 1.47E-002
413.71	1.92E-001 +- 1.83E-002

Segment 12 Results

Segment: 12 Detector: DET01 Position: 12
C:\Canberra\NDA2k\Data\00000379_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P012_S012

Acquisition Start: 5/5/2009 1:25:18 PM
Elapsed Live Time: 117.28 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.127 +/- 0.0084
SE-75	264.66	0.239 +/- 0.0043
SE-75	279.54	0.248 +/- 0.0048
SE-75	400.66	0.297 +/- 0.0059

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 3:04:35 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
	59.59	Y	35614	4511	1.12	121.02	1.387E-004	1.25	
M	94.79		489	1740	1.46	191.36	1.731E-004	8.75	18.29
m	98.95	Y	3526	2784	1.46	199.67	1.793E-004	4.50	
m	103.10	Y	2712	2150	1.47	207.96	1.854E-004	4.46	
M	122.97	Y	127	716	1.07	247.67	2.125E-004	17.02	1.67
m	125.34	Y	733	848	1.07	252.41	2.153E-004	4.47	
m	129.35	Y	1127	695	1.08	260.42	2.199E-004	3.48	
	146.57	Y	83	751	0.50	294.84	2.408E-004	50.81	
M	203.59	Y	161	294	1.25	408.77	2.774E-004	13.20	0.93
m	208.06	Y	982	260	1.26	417.71	2.781E-004	8.28	
	311.89	Y	156	81	1.72	625.19	2.553E-004	11.93	
M	332.70	Y	175	73	1.23	666.78	2.468E-004	19.39	1.15
m	335.48	Y	88	116	1.23	672.34	2.457E-004	19.99	
	345.19		95	69	1.45	691.73	2.417E-004	16.72	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
M	368.70	Y	65	40	1.36	738.71	2.324E-004	17.56	1.84
m	375.07	Y	297	43	1.37	751.44	2.299E-004	12.74	
m	379.96		51	42	1.37	761.21	2.281E-004	19.79	
m	382.78		68	38	1.38	766.85	2.270E-004	17.05	
	392.92		95	43	1.31	787.11	2.231E-004	14.91	
	413.72	Y	247	38	1.29	828.68	2.158E-004	7.64	
	662.46	Y	53	13	1.46	1325.73	1.582E-004	17.50	

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 -	2.93E-001 +- 1.19E-002

Beta: -2.98E+000 +- 1.62E+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\00000379_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P013_S013

Acquisition Start: 5/5/2009 1:28:30 PM
Elapsed Live Time: 117.00 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.108 +/- 0.0076
SE-75	264.66	0.205 +/- 0.0037
SE-75	279.54	0.214 +/- 0.0042
SE-75	400.66	0.276 +/- 0.0055

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 3:04:39 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
	49.59		1713	5561	2.28	101.03	9.985E-005	7.16	
	59.60	Y	44001	5239	1.14	121.04	1.104E-004	1.22	
M	94.74		764	1737	1.33	191.25	1.671E-004	6.51	12.27
m	98.88	Y	3893	2425	1.34	199.53	1.734E-004	4.10	
m	103.11	Y	2639	1786	1.35	207.98	1.797E-004	4.13	
M	111.09		621	1070	1.48	223.94	1.908E-004	5.14	1.90
m	114.78	Y	509	1737	1.48	231.30	1.955E-004	6.31	
M	123.21	Y	205	789	1.09	248.15	2.053E-004	15.25	1.13
m	125.32	Y	811	730	1.09	252.38	2.076E-004	9.31	
m	129.36	Y	1915	586	1.10	260.43	2.117E-004	8.69	
	148.56	Y	155	646	0.78	298.82	2.317E-004	26.09	
M	203.67	Y	240	299	1.21	408.94	2.595E-004	13.36	0.87
m	208.07	Y	720	315	1.21	417.72	2.599E-004	11.43	
	311.95	Y	168	112	1.29	625.30	2.382E-004	12.52	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
M	332.79	Y	213	92	0.99	666.95	2.309E-004	16.19	0.82
m	335.65	Y	138	107	0.99	672.66	2.298E-004	15.95	
	344.95		168	70	1.32	691.25	2.265E-004	10.89	
	368.50	Y	117	67	1.40	738.32	2.181E-004	14.73	
M	375.07	Y	436	78	1.39	751.44	2.158E-004	3.57	1.53
m	380.12		87	50	1.40	761.53	2.140E-004	5.62	
m	382.91		81	46	1.40	767.11	2.130E-004	5.72	
	392.93		177	43	1.45	787.13	2.095E-004	9.78	
	413.65	Y	408	33	1.61	828.55	2.023E-004	5.60	
	422.65		17	35	0.89	846.51	1.993E-004	56.52	
	451.33		37	26	0.81	903.84	1.900E-004	27.57	

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 -	4.81E-001 +- 1.48E-002

Beta: -1.92E+001 +- 1.88E+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\00000379_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P014_S014

Acquisition Start: 5/5/2009 1:31:41 PM
Elapsed Live Time: 116.71 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.032 +/- 0.0051
SE-75	264.66	0.093 +/- 0.0018
SE-75	279.54	0.101 +/- 0.0022
SE-75	400.66	0.155 +/- 0.0034

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 3:04:44 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
	49.63		2138	6415	2.43	101.12	2.991E-007	6.28	
	59.59	Y	52104	5954	1.11	121.02	2.585E-006	1.20	
	87.10		92	1191	0.57	176.00	4.372E-005	56.04	
M	94.79		916	1556	1.34	191.37	6.460E-005	5.64	16.68
m	98.85	Y	4692	2210	1.35	199.49	7.635E-005	3.61	
m	103.12	Y	3398	1682	1.36	208.00	8.886E-005	3.62	
M	111.15		725	1046	1.51	224.06	1.121E-004	4.62	4.14
m	114.97	Y	567	1752	1.51	231.68	1.225E-004	5.85	
M	125.30	Y	940	769	1.10	252.34	1.483E-004	5.69	2.06
m	129.38	Y	2252	585	1.11	260.48	1.571E-004	4.70	
	148.73	Y	519	1039	1.38	299.16	1.959E-004	12.44	
M	203.57	Y	287	288	1.11	408.74	2.316E-004	7.20	1.67
m	208.06	Y	873	340	1.12	417.72	2.311E-004	3.82	
	312.03	Y	188	106	1.17	625.47	1.901E-004	11.12	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
M	332.83	Y	253	90	1.29	667.04	1.817E-004	6.62	1.25
m	335.66	Y	159	104	1.29	672.68	1.806E-004	8.67	
	344.97		165	88	1.59	691.30	1.770E-004	11.70	
	375.07	Y	393	383	1.28	751.45	1.662E-004	11.34	
	392.87		193	47	1.65	787.02	1.604E-004	9.37	
	413.67	Y	513	45	1.50	828.58	1.539E-004	5.07	
	422.43		23	43	0.91	846.09	1.514E-004	48.10	
	451.59		77	21	1.38	904.36	1.437E-004	15.12	
	662.30	Y	66	6	1.68	1325.41	1.124E-004	13.71	
	721.94	Y	31	11	1.22	1444.58	1.076E-004	24.80	

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 -	7.57E-001 +- 2.71E-002

Beta: -2.08E+001 +- 1.61E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in attempted correction: 4

Energy	Mass (g)

Segment 15 Results

Segment: 15 Detector: DET01 Position: 15
C:\Canberra\NDA2k\Data\00000379_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P015_S015

Acquisition Start: 5/5/2009 1:34:53 PM
Elapsed Live Time: 117.47 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.179 +/- 0.0099
SE-75	264.66	0.335 +/- 0.0060
SE-75	279.54	0.344 +/- 0.0065
SE-75	400.66	0.417 +/- 0.0080

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: 6/3/2009 3:04:48 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
	49.57		1428	4910	1.98	100.99	4.043E-007	7.99	
	59.60	Y	36934	4495	1.11	121.05	3.769E-006	1.24	
M	94.90		592	1173	1.37	191.59	1.022E-004	7.20	11.94
m	98.85	Y	3106	1528	1.37	199.48	1.205E-004	4.63	
m	103.08	Y	2221	1255	1.38	207.93	1.403E-004	4.67	
M	111.10		513	700	1.55	223.96	1.772E-004	19.44	2.37
m	115.20	Y	401	1172	1.56	232.14	1.949E-004	16.44	
M	125.35	Y	604	596	1.05	252.43	2.343E-004	4.82	3.57
m	129.38	Y	1540	505	1.06	260.47	2.478E-004	2.90	
M	203.50	Y	175	205	1.13	408.59	3.393E-004	9.17	0.65
m	208.06	Y	593	281	1.14	417.71	3.376E-004	4.65	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	311.77	Y	129	72	1.15	624.96	2.608E-004	13.50	
M	332.74	Y	148	68	1.32	666.86	2.465E-004	8.59	1.44
m	335.57	Y	125	72	1.32	672.50	2.448E-004	9.39	
	345.10		135	74	1.16	691.55	2.388E-004	13.19	
M	368.61	Y	86	43	1.37	738.53	2.255E-004	13.82	1.67
m	375.07	Y	416	41	1.38	751.45	2.222E-004	9.67	
m	380.02		90	30	1.38	761.33	2.197E-004	13.41	
m	382.71		77	24	1.39	766.71	2.184E-004	13.77	
	392.90		136	36	1.62	787.06	2.135E-004	11.30	
	413.71	Y	312	32	1.33	828.66	2.043E-004	6.48	
	451.48		56	12	0.81	904.13	1.900E-004	16.77	

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	3.93E-001 +- 3.33E-002	3.59E-001 +- 1.21E-002

Beta: 1.58E+001 +- 1.42E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	3.53E-001 +- 1.65E-002
203.55	3.24E-001 +- 3.06E-002
375.05	4.32E-001 +- 4.25E-002
413.71	3.73E-001 +- 2.54E-002

Segment 16 Results

Segment: 16 Detector: DET01 Position: 16
C:\Canberra\NDA2k\Data\00000379_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P016_S016

Acquisition Start: 5/5/2009 1:38:04 PM
Elapsed Live Time: 118.55 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.366 +/- 0.0140
SE-75	264.66	0.539 +/- 0.0096
SE-75	279.54	0.546 +/- 0.0101
SE-75	400.66	0.606 +/- 0.0115

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 3:04:54 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
	59.63	Y	14169	1994	1.07	121.10	9.594E-005	1.45	
M	98.88	Y	841	810	1.18	199.54	1.402E-004	16.08	2.69
m	103.09	Y	660	531	1.18	207.96	1.450E-004	16.03	
	111.17		59	457	0.93	224.09	1.536E-004	53.89	
M	125.34	Y	183	330	1.10	252.41	1.668E-004	9.65	1.84
m	129.37	Y	466	298	1.11	260.46	1.700E-004	5.34	
M	203.60	Y	84	104	1.16	408.79	2.076E-004	23.35	0.77
m	208.03	Y	184	99	1.17	417.65	2.082E-004	20.49	
	311.85	Y	59	40	1.39	625.12	1.935E-004	21.29	
	332.73	Y	26	57	1.40	666.84	1.877E-004	47.43	
	345.17		22	50	0.91	691.69	1.842E-004	53.55	
	375.01	Y	109	36	1.27	751.32	1.759E-004	12.96	
	413.64	Y	100	15	1.18	828.52	1.654E-004	11.82	

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 -	1.53E-001 +- 8.16E-003

Beta: -1.12E+001 +- 2.13E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in attempted correction: 4

Energy	Mass (g)

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:

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

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 4.189E-002 +/-	2.1%	< 7.402E-007	< 1.931E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 4.726E-002 +/-	2.0%	< 8.350E-007	< 7.467E-012
	Al-26	< 5.528E-002 +/-	15.4%	< 9.767E-007	< 2.908E-006
	K-40	< 5.117E-001 +/-	5.6%	< 9.041E-006	< 7.983E-002
	Co-57	< 1.381E+000 +/-	7.9%	< 2.440E-005	< 1.616E-010
	Co-60	< 7.361E-002 +/-	2.0%	< 1.300E-006	< 6.455E-011
	Se-75	< 1.679E-001 +/-	1.9%	< 2.967E-006	< 1.155E-011
	Kr-85	< 1.337E+001 +/-	3.0%	< 2.363E-004	< 3.370E-008
	Sr-90	1.972E-001 +/-	11.3%	3.485E-006	1.430E-009
	Sb-125	< 2.317E-001 +/-	2.2%	< 4.093E-006	< 2.229E-010
	Ba-133	< 1.494E-001 +/-	1.7%	< 2.639E-006	< 5.900E-010
	Cs-134	< 4.047E-002 +/-	1.8%	< 7.151E-007	< 3.088E-011
?	Cs-137	1.972E-001 +/-	11.3%	3.485E-006	2.248E-009
	Eu-152	< 1.853E-001 +/-	3.8%	< 3.273E-006	< 1.041E-009
	Eu-154	< 1.350E-001 +/-	2.2%	< 2.384E-006	< 5.061E-010
	Ho-166m	< 5.770E-002 +/-	2.4%	< 1.019E-006	< 3.208E-008
	Bi-207	< 4.094E-002 +/-	2.0%	< 7.234E-007	< 7.451E-010
	Pb-210	< 2.995E+004 +/-	309.7%	< 5.292E-001	< 3.894E-004
	Ra-226	< 8.708E-002 +/-	2.3%	< 1.538E-006	< 8.708E-008
	Ac-227	< 6.103E-001 +/-	8.3%	< 1.078E-005	< 8.361E-009
	Th-230	< 3.195E+002 +/-	8.5%	< 5.646E-003	< 1.566E-002
	Pa-231	< 3.403E+000 +/-	11.2%	< 6.013E-005	< 7.113E-005
	Th-232	1.561E+000 +/-	9.4%	2.759E-005	1.407E+001
	U-232	2.955E+000 +/-	11.1%	5.221E-005	1.368E-007
	U-233	< 2.548E+003 +/-	2.7%	< 4.501E-002	< 2.599E-001
	Pa-234	< 2.194E-001 +/-	12.3%	< 3.877E-006	
	Pa-234m	< 2.901E+002 +/-	2.3%	< 5.125E-003	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 2.178E-001 +/-	2.5%	< 3.848E-006	< 9.954E-002
	Np-237	2.840E+001 +/-	2.2%	5.017E-004	3.976E-002
	Pu-238	8.342E+004 +/-	113.7%	1.474E+000	4.822E-003
	U-238	< 4.208E+000 +/-	2.2%	< 7.435E-005	< 1.237E+001

Pu-239	2.997E+006	+/-	1.5%	5.295E+001	4.765E+001
Pu-239B	1.427E+006	+/-	1.4%	2.522E+001	2.269E+001
U-239	< 1.651E+005	+/-	368.5%	< 2.917E+000	
Pu-240	< 4.536E+004	+/-	8.5%	< 8.014E-001	< 1.973E-001
Am-241	8.174E+005	+/-	3.6%	1.444E+001	2.354E-001
Am-241B	1.202E+006	+/-	3.2%	2.123E+001	3.461E-001
Pu-241	7.377E+006	+/-	25.6%	1.303E+002	7.096E-002
Pu-241B	8.290E+006	+/-	1.7%	1.465E+002	7.975E-002
Pu-242	< 0.000E+000	+/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 6.592E-001	+/-	1.8%	< 1.165E-005	< 3.263E-006
Cm-243	< 6.799E-001	+/-	3.3%	< 1.201E-005	< 1.305E-008
Cm-244	< 4.905E+004	+/-	14.2%	< 8.667E-001	< 5.985E-004
Cm-245	< 1.306E+000	+/-	7.7%	< 2.308E-005	< 7.512E-006
Cm-247	< 1.053E-001	+/-	8.5%	< 1.860E-006	< 1.127E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.170E-001 +/-	3.5%	< 2.067E-006	< 2.831E-008
Cf-251	< 7.394E-001 +/-	5.6%	< 1.306E-005	< 4.621E-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

********** 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: LL85901401TRU Analysis Date: 5/5/2009

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

Net Weight	56600.0 g	
Pu mass	5.09E+001 +-	9.94E+000 g
TRU Alpha Activity	4.77E+000 +-	6.66E-001 Ci
TRU Activity Concentration	8.42E+004 +-	1.18E+004 nCi/g
Pu-239 Equivalent Activity	4.91E+000 +-	6.67E-001 Ci
Pu-239 FGE	4.79E+001 +-	9.92E+000 g
Decay heat	1.51E-001 +-	2.08E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	1.43E-009	1.97E-007	4.66E-008	0.00E+000
CS137	2.25E-009	1.97E-007	4.66E-008	1.55E-007
U233	<LLD	<LLD	0.00E+000	2.55E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.18E-007
NP237	3.98E-002	2.84E-005	5.93E-006	8.44E-007
PU238	1.29E-002	2.22E-001	4.70E-002	1.22E-003
U238	<LLD	<LLD	0.00E+000	4.21E-006
PU239	4.77E+001	3.00E+000	6.24E-001	1.65E-002
PU240	3.17E+000	7.30E-001	1.52E-001	4.01E-003
AM241	2.35E-001	8.17E-001	1.72E-001	3.60E-004
PU241	7.82E-002	8.13E+000	1.70E+000	4.47E-002
PU242	1.77E-002	7.03E-005	1.62E-005	0.00E+000

Errors quoted at 1.000 sigma

Operator: Robert J Hazlett Date: 6-3-09

ITR: [signature] Date: 6/12/09

Summed Segment Spectra Results
Category: Segmented

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Elapsed Live Time: 109.51 sec Elapsed Real Time: 120.00 sec

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

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 1.213E-001 +/-	1.0%	< 2.144E-006	< 5.593E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
X	Na-22				
	Al-26	< 1.807E-001 +/-	6.8%	< 3.192E-006	< 9.502E-006
	K-40	1.717E+000 +/-	27.7%	3.034E-005	2.679E-001
X	Co-57				
	Co-60	2.172E-001 +/-	15.1%	3.838E-006	1.905E-010
	Se-75	< 7.571E-001 +/-	1.0%	< 1.338E-005	< 5.209E-011
	Kr-85	< 5.418E+001 +/-	2.4%	< 9.572E-004	< 1.365E-007
	Sr-90	3.485E+000 +/-	4.0%	6.158E-005	2.527E-008
	Sb-125	< 8.571E-001 +/-	1.3%	< 1.514E-005	< 8.246E-010
	Ba-133	< 5.682E-001 +/-	0.8%	< 1.004E-005	< 2.244E-009
	Cs-134	< 1.439E-001 +/-	0.8%	< 2.543E-006	< 1.098E-010
	Cs-137	3.485E+000 +/-	4.0%	6.158E-005	3.973E-008
	Eu-152	< 6.322E-001 +/-	1.8%	< 1.117E-005	< 3.553E-009
	Eu-154	5.154E+000 +/-	5.2%	9.107E-005	1.933E-008
	Ho-166m	< 2.178E-001 +/-	1.6%	< 3.848E-006	< 1.211E-007
	Bi-207	< 1.674E-001 +/-	0.8%	< 2.958E-006	< 3.047E-009
	Pb-210	< 1.961E+004 +/-	11.3%	< 3.464E-001	< 2.549E-004
	Ra-226	< 3.581E-001 +/-	1.3%	< 6.326E-006	< 3.581E-007
	Ac-227	< 2.718E+000 +/-	8.2%	< 4.802E-005	< 3.724E-008
X	Th-230				
	Pa-231	< 1.481E+001 +/-	11.1%	< 2.616E-004	< 3.095E-004
X	Th-232				
	U-232	3.576E+000 +/-	10.3%	6.318E-005	1.656E-007
	U-233	< 1.211E+004 +/-	1.3%	< 2.139E-001	< 1.235E+000
	Pa-234	< 6.811E-001 +/-	12.1%	< 1.203E-005	
	Pa-234m	< 9.675E+002 +/-	1.5%	< 1.709E-002	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
X	U-235				
	Np-237	2.437E+001 +/-	2.1%	4.306E-004	3.412E-002
	Pu-238	1.568E+005 +/-	5.5%	2.770E+000	9.062E-003
	U-238	< 1.530E+001 +/-	1.6%	< 2.702E-004	< 4.497E+001
	Pu-239	2.473E+006 +/-	1.7%	4.370E+001	3.932E+001
	Pu-239B	2.178E+006 +/-	0.8%	3.848E+001	3.462E+001
	U-239	< 4.140E+004 +/-	14.9%	< 7.314E-001	
X	Pu-240				
X	Am-241				
	Am-241B	7.373E+005 +/-	1.7%	1.303E+001	2.123E-001
	Pu-241	4.593E+006 +/-	2.5%	8.114E+001	4.418E-002
	Pu-241B	6.044E+006 +/-	2.1%	1.068E+002	5.814E-002

Pu-242	< 0.000E+000 +/- 0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 2.925E+000 +/- 1.1%	< 5.167E-005	< 1.448E-005
Cm-243	< 3.017E+000 +/- 3.0%	< 5.330E-005	< 5.792E-008
Cm-244	< 1.900E+005 +/- 14.1%	< 3.357E+000	< 2.318E-003
Cm-245	< 5.954E+000 +/- 7.4%	< 1.052E-004	< 3.424E-005
Cm-247	< 3.915E-001 +/- 8.4%	< 6.917E-006	< 4.189E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 4.378E-001 +/-	3.1%	< 7.734E-006	< 1.059E-007
Cf-251	< 3.318E+000 +/-	5.3%	< 5.862E-005	< 2.074E-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	3.93E+001 +- 6.73E-001	3.01E+001 +- 2.43E-001

Beta: 5.89E+001 +- 3.70E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	2.51E+001 +- 4.17E-001
203.55	2.89E+001 +- 5.90E-001
375.05	3.38E+001 +- 5.29E-001
413.71	3.41E+001 +- 4.56E-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: LL85901401TRU Analysis Date: 5/5/2009

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

Net Weight	56600.0 g		
Pu mass	4.20E+001	+- 8.21E+000	g
TRU Alpha Activity	3.26E+000	+- 5.32E-001	Ci
TRU Activity Concentration	5.76E+004	+- 9.39E+003	nCi/g
Pu-239 Equivalent Activity	3.37E+000	+- 5.32E-001	Ci
Pu-239 FGE	3.95E+001	+- 8.19E+000	g
Decay heat	1.02E-001	+- 1.65E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	2.53E-008	3.49E-006	7.37E-007	0.00E+000
CS137	3.97E-008	3.49E-006	7.37E-007	3.39E-007
U233	<LLD	<LLD	0.00E+000	1.21E-002
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.07E-006
NP237	3.41E-002	2.44E-005	5.09E-006	1.28E-006
PU238	1.06E-002	1.84E-001	3.88E-002	1.21E-003
U238	<LLD	<LLD	0.00E+000	1.53E-005
PU239	3.93E+001	2.47E+000	5.15E-001	1.63E-002
PU240	2.62E+000	6.02E-001	1.26E-001	3.98E-003
AM241	<LLD	<LLD	0.00E+000	2.18E-004
PU241	6.46E-002	6.71E+000	1.40E+000	4.44E-002
PU242	1.46E-002	5.80E-005	1.34E-005	0.00E+000

Errors quoted at 1.000 sigma

Operator: Robert J Haught Jr Date: 6-3-09

ITR: Philip C Curtis Date: 6/12/09

Automated Independent Technical Review

Counter ID: SGS with Trans. Count Type: Assay - 55 Gal Galv 23.8
Container ID: LL85901401TRU Assay Date: 5/5/2009
Waste Matrix Code:
Sequence Number: 379

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

Source of results is undefined.

DISPOSITION:

MGA Analysis:

Note: The measured and declared isotopics are inconsistent. Ok

DISPOSITION:

Gamma Analysis:
Analysis Status: No errors.
Spectrum Validity Check engine has suggested data review.
Pu-239/Am-241 ratio is less than the lower limit of 100.00 OK

DISPOSITION:

Segment Data Review:
Segment: 1 OK
Segment: 2 OK
Segment: 3 Analysis Warnings:
Minimum transmission used.
Segment: 4 Analysis Warnings:
Minimum transmission used.
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

> OK Minimum Used.

DISPOSITION:

Miscellaneous:

DISPOSITION:

Expert Review by: Robert J. Haslett Jr Date: 6-3-09

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:	LL85901401TRU	Analysis Date:	5/5/2009

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

MGA version: MGA V9.63H CI

Measurement date = 5/5/09 Declared date = 5/5/09
Low energy spectrum sensitivity = 30.0% Total counts = 4.484E+006
High energy spectrum sensitivity : 10.0%

Pu g/cm2 = 0.5607 Cd g/cm2 = 1.6402 FWHM at 122 keV = 612 eV
QFIT = 1.00 FWHM at 208 keV = 781 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	0.000270	3.7	3.6	0.1644	3.8	0.02524	3.67	0.02746	3.99
Pu-239	1.000000	0.0	0.6	609.1514	1.3	93.55436	0.08	93.44845	0.08
Pu-240	0.066614	1.2	1.1	40.5780	1.6	6.23203	1.16	6.23017	1.16
Pu-241	0.001642	1.4	1.2	1.0000	0.0	0.15358	1.35	0.25919	2.28
Pu-242	(New alg.)			0.2265(10)		0.03479	(10)	0.03474	(9)
Am-241	0.006084	0.7	0.4	3.7064	1.3	0.56923	0.69	0.57814	0.70
U-235	0.016950	36.4	36.4			1.58579	36.37	1.58550	36.36

Pu-240 effective (meas. date) = 6.354 +/- 1.28%
Am-241 separated about 32.015 +/- 0.208 years ago
Am/Pu-241 weight ratio = 3.70636 +/- 1.26%

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 1%.

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

Reviewed by: Robert J. Haslett Jr Date: 6-3-09

NDA 2000 Assay Report

Item Information

Item ID:	LL85001778TRU	Count Sequence Number:	380
Operator:	RHWM2\RHWM		
Assay Start:	5/5/2009 1:48:43 PM		
Description 1:	LL85001778TRU		
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

Reviewed By: Robert J Haslett 6-3-09

Segment 1 Results

Segment: 1 Detector: DET01 Position: 1
C:\Canberra\NDA2k\Data\00000380_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P001_S001

Acquisition Start: 5/5/2009 1:49:45 PM
Elapsed Live Time: 118.14 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.117 +/- 0.0078
SE-75	264.66	0.211 +/- 0.0038
SE-75	279.54	0.218 +/- 0.0042
SE-75	400.66	0.273 +/- 0.0055

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 10:05:44 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
59.56	Y	1766	569	1.05	120.97	4.152E-006	3.28	
99.90		10442	1327	1.19	201.58	8.783E-005	1.56	
129.31	Y	127	412	1.05	260.35	1.634E-004	24.64	
152.87	Y	2828	370	1.18	307.42	2.016E-004	2.40	
197.24		318	250	1.16	396.09	2.212E-004	9.53	
238.66	Y	125	197	1.25	478.85	2.075E-004	19.34	
510.78		480	85	2.32	1022.64	1.066E-004	5.68	
558.46		72	56	1.80	1117.92	9.880E-005	20.40	
583.06	Y	125	44	1.38	1167.07	9.541E-005	12.04	
766.62	Y	19	32	1.57	1533.87	7.877E-005	51.57	
1274.65	Y	170	18	1.33	2549.07	6.128E-005	8.94	
2615.42		17	8	0.99	5228.32	3.298E-005	34.58	

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

Segment 2 Results

Segment: 2 Detector: DET01 Position: 2
C:\Canberra\NDA2k\Data\00000380_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P002_S002

Acquisition Start: 5/5/2009 1:52:57 PM
Elapsed Live Time: 117.68 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.091 +/- 0.0072
SE-75	264.66	0.180 +/- 0.0033
SE-75	279.54	0.184 +/- 0.0037
SE-75	400.66	0.229 +/- 0.0047

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 10:05:47 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
59.61	Y	2617	721	1.08	121.06	6.650E-005	2.70	
99.90		15993	1864	1.20	201.57	1.563E-004	1.41	
109.97		400	524	2.87	221.69	1.722E-004	9.50	
129.44	Y	173	639	1.28	260.60	1.952E-004	23.03	
152.83	Y	4278	526	1.18	307.34	2.175E-004	2.05	
197.25		469	328	1.15	396.10	2.369E-004	7.60	
208.39	Y	76	236	0.94	418.37	2.379E-004	32.17	
238.67	Y	163	230	1.17	478.88	2.359E-004	16.00	
511.03		674	122	2.48	1023.12	1.564E-004	4.82	
558.45		90	62	1.50	1117.89	1.463E-004	17.37	
583.11	Y	218	81	1.21	1167.17	1.415E-004	9.61	
1274.55	Y	286	22	1.37	2548.87	8.595E-005	6.72	
2615.81		40	3	0.74	5229.10	1.053E-004	17.53	

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 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\00000380_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P003_S003

Acquisition Start: 5/5/2009 1:56:09 PM
Elapsed Live Time: 117.73 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.056 +/- 0.0063
SE-75	264.66	0.135 +/- 0.0025
SE-75	279.54	0.139 +/- 0.0029
SE-75	400.66	0.183 +/- 0.0039

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 10:05:51 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
59.60	Y	1993	757	1.08	121.04	4.643E-005	3.23	
99.90		13582	1893	1.18	201.57	1.335E-004	1.47	
110.00		324	602	2.02	221.76	1.515E-004	12.32	
152.85	Y	3703	524	1.20	307.38	2.076E-004	2.19	
197.13		450	328	1.36	395.88	2.343E-004	7.88	
207.97		81	244	1.10	417.54	2.360E-004	30.98	
238.74	Y	159	224	1.72	479.01	2.348E-004	16.57	
510.83		682	87	2.76	1022.72	1.511E-004	4.58	
558.31		76	48	1.62	1117.62	1.410E-004	18.19	
583.00	Y	179	49	1.52	1166.96	1.363E-004	9.63	
890.66		41	35	1.09	1781.74	1.005E-004	27.58	
1274.80	Y	225	28	1.83	2549.36	8.346E-005	7.98	

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 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\00000380_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P004_S004

Acquisition Start: 5/5/2009 1:59:20 PM
Elapsed Live Time: 117.67 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.120 +/- 0.0076
SE-75	264.66	0.190 +/- 0.0035
SE-75	279.54	0.194 +/- 0.0038
SE-75	400.66	0.241 +/- 0.0049

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 10:05:54 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
48.57		297	889	1.47	99.00	2.917E-007	15.86	
59.54	Y	2379	820	1.00	120.93	3.411E-006	2.93	
99.90		13101	2131	1.18	201.58	1.106E-004	1.50	
111.62		246	646	2.60	224.99	1.595E-004	16.04	
129.37	Y	186	651	1.35	260.46	2.237E-004	21.30	
152.83	Y	3623	547	1.22	307.35	2.813E-004	2.22	
197.29		354	273	1.41	396.18	3.112E-004	8.73	
207.95	Y	63	295	1.09	417.49	3.087E-004	42.47	
238.55	Y	173	235	0.98	478.63	2.921E-004	15.66	
510.92		604	107	2.68	1022.91	1.543E-004	5.08	
558.49		94	47	1.30	1117.98	1.439E-004	15.99	
583.02	Y	198	46	1.40	1166.99	1.393E-004	9.16	
1274.75	Y	238	26	1.54	2549.27	9.203E-005	7.55	

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 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\00000380_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P005_S005

Acquisition Start: 5/5/2009 2:02:31 PM
Elapsed Live Time: 116.74 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.166 +/- 0.0090
SE-75	264.66	0.262 +/- 0.0047
SE-75	279.54	0.269 +/- 0.0052
SE-75	400.66	0.321 +/- 0.0063

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 10:05:57 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
	59.53	Y	6020	1421	1.08	120.90	7.191E-005	1.94	
M	99.94	Y	23354	2777	1.13	201.66	1.824E-004	1.96	14.50
m	103.29	Y	370	1334	1.14	208.35	1.902E-004	7.49	
	110.92		464	1299	2.02	223.59	2.065E-004	12.77	
	129.40	Y	923	823	1.22	260.52	2.383E-004	5.76	
	152.83	Y	6111	736	1.16	307.34	2.679E-004	1.83	
	197.18		489	471	1.10	395.97	2.912E-004	8.34	
	208.01	Y	172	372	1.10	417.61	2.919E-004	18.67	
	238.70	Y	224	310	1.50	478.94	2.873E-004	13.98	
	345.06		107	212	1.47	691.47	2.423E-004	23.82	
	375.10	Y	226	152	1.26	751.51	2.286E-004	10.87	
	413.76	Y	124	192	1.18	828.75	2.123E-004	20.47	
	510.79		763	114	2.74	1022.66	1.791E-004	4.49	
	558.48		53	73	1.67	1117.95	1.663E-004	29.31	

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
583.02	Y	254	69	1.41	1166.98	1.604E-004	8.37	
766.25	Y	68	56	1.67	1533.14	1.289E-004	22.50	
1274.58	Y	269	40	2.02	2548.93	9.511E-005	7.47	

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 -	2.09E-001 +- 1.18E-002

Beta: -2.73E+001 +- 2.34E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in attempted correction: 3

Energy	Mass (g)

Segment 6 Results

Segment: 6 Detector: DET01 Position: 6
C:\Canberra\NDA2k\Data\00000380_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P006_S006

Acquisition Start: 5/5/2009 2:05:43 PM
Elapsed Live Time: 116.18 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.211 +/- 0.0107
SE-75	264.66	0.341 +/- 0.0061
SE-75	279.54	0.351 +/- 0.0066
SE-75	400.66	0.405 +/- 0.0079

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 10:06:00 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
	59.58	Y	9266	1936	1.09	121.01	1.966E-006	1.68	
M	99.94	Y	28804	3462	1.13	201.66	1.265E-004	1.82	15.20
m	103.40	Y	628	1704	1.14	208.56	1.449E-004	5.33	
M	111.04		928	1348	1.76	223.84	1.850E-004	3.98	3.67
m	115.02	Y	526	2119	1.75	231.78	2.049E-004	6.35	
	129.39	Y	1516	951	1.24	260.50	2.673E-004	4.12	
M	148.61	Y	135	856	1.13	298.90	3.275E-004	19.41	1.64
m	152.79	Y	7436	715	1.13	307.26	3.370E-004	2.61	
	197.12		718	484	1.22	395.85	3.739E-004	6.20	
M	203.61	Y	203	379	1.14	408.82	3.728E-004	9.84	1.43
m	207.97	Y	354	396	1.14	417.52	3.716E-004	6.82	
	238.77	Y	258	338	1.31	479.07	3.554E-004	12.82	
	332.78	Y	109	174	0.91	666.94	2.878E-004	20.02	
	345.02		60	240	0.80	691.39	2.801E-004	42.51	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
M	375.03	Y	354	171	1.26	751.36	2.631E-004	5.99	1.61
m	380.04		55	161	1.27	761.38	2.605E-004	20.03	
m	382.70		67	158	1.27	766.69	2.592E-004	17.23	
	392.90		99	186	1.46	787.08	2.540E-004	24.71	
	413.70	Y	277	182	1.33	828.63	2.445E-004	9.85	
	511.18		915	135	2.51	1023.43	2.103E-004	4.14	
	558.40		48	57	1.63	1117.80	1.980E-004	27.84	
	583.04	Y	278	58	1.13	1167.04	1.923E-004	7.59	
	766.41	Y	89	60	1.70	1533.45	1.603E-004	18.27	
	890.79		34	39	1.09	1782.00	1.441E-004	32.96	
	1274.81	Y	308	36	1.63	2549.40	1.065E-004	6.75	
	2615.72		54	0	1.90	5228.92	4.302E-005	13.91	

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 -	3.12E-001 +- 1.15E-002

Beta: -1.46E+001 +- 1.52E+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\00000380_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P007_S007

Acquisition Start: 5/5/2009 2:08:55 PM
Elapsed Live Time: 116.74 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.165 +/- 0.0098
SE-75	264.66	0.309 +/- 0.0056
SE-75	279.54	0.319 +/- 0.0061
SE-75	400.66	0.374 +/- 0.0073

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 10:06:04 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
	59.57	Y	6689	1692	1.17	120.98	3.308E-006	1.89	
M	99.94	Y	19371	2919	1.12	201.66	1.194E-004	2.11	10.60
m	103.39	Y	443	1526	1.13	208.55	1.356E-004	6.72	
	111.02		458	1351	1.80	223.79	1.714E-004	13.10	
	129.37	Y	861	1128	1.17	260.46	2.468E-004	6.91	
	152.83	Y	5199	853	1.18	307.34	3.169E-004	1.97	
	197.17		347	486	1.13	395.94	3.584E-004	11.08	
M	203.59	Y	63	492	1.14	408.77	3.575E-004	25.16	2.12
m	208.09	Y	312	456	1.15	417.77	3.562E-004	7.62	
	238.63	Y	223	362	1.40	478.79	3.384E-004	14.92	
	332.85	Y	48	263	1.12	667.08	2.588E-004	55.57	
	344.96		118	218	1.35	691.27	2.500E-004	21.54	
	375.06	Y	262	433	1.23	751.42	2.305E-004	16.89	
	392.90		131	146	1.40	787.07	2.203E-004	17.17	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
M	413.68	Y	345	102	1.27	828.61	2.098E-004	14.22	1.04
m	416.82		41	90	1.27	834.87	2.083E-004	25.74	
	511.20		650	121	2.14	1023.47	1.743E-004	5.01	
	558.10		44	83	1.78	1117.18	1.629E-004	37.22	
	583.03	Y	229	81	1.67	1167.02	1.579E-004	9.35	
	766.55	Y	63	64	1.48	1533.74	1.339E-004	24.46	
	890.55		30	36	1.44	1781.52	1.243E-004	35.50	
	1274.79	Y	244	16	1.81	2549.35	1.015E-004	7.23	

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	2.76E-001 +- 5.54E-002	1.95E-001 +- 1.27E-002

Beta: 5.44E+001 +- 3.14E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.98E-001 +- 1.57E-002
203.55	1.11E-001 +- 2.81E-002
375.05	2.62E-001 +- 4.45E-002
413.71	4.01E-001 +- 5.77E-002

Segment 8 Results

Segment: 8 Detector: DET01 Position: 8
C:\Canberra\NDA2k\Data\00000380_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P008_S008

Acquisition Start: 5/5/2009 2:12:06 PM
Elapsed Live Time: 115.58 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.179 +/- 0.0098
SE-75	264.66	0.276 +/- 0.0050
SE-75	279.54	0.285 +/- 0.0055
SE-75	400.66	0.330 +/- 0.0065

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 10:06:07 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
	59.56	Y	6429	1773	1.07	120.97	6.934E-005	1.94	
M	99.93	Y	30126	4003	1.12	201.63	1.904E-004	1.90	10.15
m	103.37	Y	794	2025	1.12	208.51	1.986E-004	4.89	
	129.39	Y	393	1548	1.08	260.51	2.462E-004	16.06	
	152.82	Y	10165	1152	1.18	307.32	2.739E-004	1.57	
	197.00		483	631	1.11	395.61	2.935E-004	9.19	
	208.04	Y	303	513	1.12	417.67	2.935E-004	12.80	
	238.66	Y	618	472	1.23	478.86	2.878E-004	6.93	
	311.85	Y	89	304	1.40	625.11	2.578E-004	31.45	
	332.57	Y	57	375	1.00	666.51	2.479E-004	55.31	
	344.96		152	258	1.16	691.27	2.421E-004	18.02	
M	375.03	Y	454	228	1.30	751.36	2.284E-004	5.31	0.87
m	380.04		83	205	1.31	761.37	2.262E-004	15.43	
m	382.87		89	197	1.31	767.02	2.249E-004	14.66	

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
392.87		189	225	1.62	787.01	2.206E-004	15.08	
413.70	Y	400	185	1.37	828.63	2.122E-004	7.54	
422.63		43	111	0.97	846.48	2.089E-004	39.82	
510.82		960	147	3.02	1022.72	1.798E-004	4.04	
558.31		55	118	1.15	1117.60	1.672E-004	35.09	
583.05	Y	398	83	1.42	1167.04	1.614E-004	6.33	
727.63	Y	37	89	1.70	1455.96	1.351E-004	46.42	
766.29	Y	117	76	1.48	1533.22	1.298E-004	15.49	
870.86		25	52	0.88	1742.19	1.183E-004	48.84	
890.74		47	56	1.30	1781.90	1.165E-004	29.22	
1274.68	Y	287	52	1.99	2549.12	9.635E-005	7.53	
2615.65		129	10	2.57	5228.77	1.088E-004	9.96	

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	1.02E+000 +- 1.09E-001	2.16E-001 +- 1.22E-002

Beta: 3.12E+002 +- 3.27E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 3

Energy	Mass (g)
129.30	9.05E-002 +- 1.50E-002
375.05	4.58E-001 +- 2.56E-002
413.71	4.60E-001 +- 3.58E-002

Segment 9 Results

Segment: 9 Detector: DET01 Position: 9
C:\Canberra\NDA2k\Data\00000380_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P009_S009

Acquisition Start: 5/5/2009 2:15:17 PM
Elapsed Live Time: 110.39 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.114 +/- 0.0091
SE-75	264.66	0.199 +/- 0.0037
SE-75	279.54	0.204 +/- 0.0041
SE-75	400.66	0.244 +/- 0.0051

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 10:06:10 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
	59.52	Y	16279	2973	1.14	120.89	8.430E-006	1.48	
M	99.88	Y	86582	7340	1.16	201.54	1.287E-004	1.41	41.69
m	103.17	Y	2025	3191	1.17	208.11	1.401E-004	3.05	
	110.91		1422	2932	2.12	223.57	1.650E-004	6.81	
M	125.28	Y	273	1645	0.99	252.29	2.025E-004	13.30	2.36
m	129.38	Y	1055	2073	0.99	260.47	2.110E-004	5.02	
	152.76	Y	27723	2075	1.18	307.21	2.480E-004	1.31	
	197.14		1352	1110	1.31	395.89	2.690E-004	5.07	
M	203.58	Y	129	660	1.06	408.75	2.688E-004	18.73	1.85
m	208.11	Y	493	808	1.06	417.82	2.684E-004	6.65	
	238.65	Y	1693	764	1.28	478.83	2.611E-004	3.86	
	300.08	Y	95	595	0.99	601.59	2.369E-004	44.45	
	311.80	Y	343	492	1.27	625.01	2.321E-004	12.07	
M	332.77	Y	296	372	1.00	666.93	2.240E-004	19.52	1.68

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	335.63	Y	87	424	1.01	672.63	2.229E-004	25.08	
	344.98		219	360	1.35	691.33	2.195E-004	15.25	
M	368.60	Y	99	339	1.32	738.52	2.112E-004	19.13	1.16
m	375.10	Y	693	361	1.33	751.50	2.090E-004	10.79	
m	380.07		131	349	1.33	761.44	2.073E-004	16.36	
m	382.81		118	314	1.34	766.92	2.064E-004	17.08	
	392.93		208	357	1.57	787.14	2.032E-004	16.94	
	413.77	Y	574	246	1.56	828.77	1.972E-004	6.37	
	510.85		2335	329	2.80	1022.78	1.746E-004	2.78	
	583.04	Y	994	177	1.53	1167.02	1.613E-004	4.19	
	727.38	Y	87	138	1.54	1455.47	1.400E-004	26.56	
	742.82		71	99	1.37	1486.32	1.381E-004	27.63	
	766.40	Y	370	104	1.36	1533.43	1.351E-004	7.37	
	786.46	Y	106	74	1.16	1573.52	1.327E-004	17.61	
	860.71	Y	70	97	0.97	1721.89	1.242E-004	27.49	
	870.69		66	91	0.87	1741.84	1.231E-004	27.66	
	890.44		76	107	1.93	1781.31	1.210E-004	26.30	
	1235.87		21	43	1.09	2471.57	9.087E-005	57.21	
	1274.64	Y	809	84	1.88	2549.05	8.812E-005	4.40	
	1528.32		19	22	1.51	3055.98	7.255E-005	48.56	
	2615.46		244	10	2.87	5228.39	3.732E-005	7.27	

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	1.08E+000 +- 1.00E-001	3.56E-001 +- 1.66E-002

Beta: 1.79E+002 +- 1.75E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	2.84E-001 +- 1.90E-002
203.55	3.02E-001 +- 5.76E-002
375.05	7.64E-001 +- 8.38E-002
413.71	7.11E-001 +- 4.77E-002

Segment 10 Results

Segment: 10 Detector: DET01 Position: 10
C:\Canberra\NDA2k\Data\00000380_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P010_S010

Acquisition Start: 5/5/2009 2:18:29 PM
Elapsed Live Time: 113.14 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.146 +/- 0.0098
SE-75	264.66	0.262 +/- 0.0048
SE-75	279.54	0.270 +/- 0.0053
SE-75	400.66	0.317 +/- 0.0064

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 10:06:13 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
	59.58	Y	28427	3568	1.08	121.00	4.278E-006	1.31	
M	99.90	Y	48453	5374	1.15	201.58	1.140E-004	1.62	22.09
m	103.28	Y	2289	3421	1.15	208.33	1.290E-004	2.74	
M	111.00		1703	2103	1.68	223.75	1.635E-004	3.05	3.69
m	115.10	Y	1045	3782	1.69	231.95	1.815E-004	4.55	
M	125.41	Y	426	1386	1.02	252.56	2.239E-004	8.36	2.55
m	129.35	Y	2202	1951	1.03	260.42	2.385E-004	2.89	
	152.79	Y	14793	1634	1.20	307.25	3.115E-004	1.46	
	197.18		941	962	1.26	395.96	3.608E-004	6.38	
M	203.53	Y	321	758	1.15	408.66	3.607E-004	8.40	1.11
m	208.06	Y	715	829	1.16	417.72	3.598E-004	4.85	
	238.57	Y	841	673	1.14	478.68	3.433E-004	6.20	
	300.19	Y	322	468	1.57	601.81	2.873E-004	12.55	
	311.86	Y	930	465	1.29	625.13	2.766E-004	5.23	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
M	332.72	Y	365	411	1.22	666.82	2.587E-004	24.03	0.82
m	335.68	Y	157	412	1.22	672.73	2.563E-004	25.43	
	345.03		286	391	1.34	691.41	2.488E-004	12.85	
M	375.05	Y	1026	294	1.31	751.40	2.272E-004	3.51	1.31
m	380.24		200	245	1.31	761.78	2.238E-004	8.70	
m	382.79		163	229	1.32	766.87	2.222E-004	9.96	
	392.84		348	285	1.72	786.95	2.159E-004	9.97	
	413.65	Y	833	230	1.39	828.54	2.043E-004	4.80	
	422.32		83	153	1.45	845.86	1.998E-004	25.97	
	451.45		127	163	1.46	904.07	1.865E-004	18.93	
	510.79		1639	232	2.57	1022.64	1.653E-004	3.22	
	583.02	Y	631	108	1.47	1166.99	1.473E-004	5.09	
	662.35	Y	46	86	1.35	1325.50	1.338E-004	36.00	
	766.37	Y	190	77	1.90	1533.38	1.223E-004	10.74	
	890.39		84	62	1.67	1781.21	1.136E-004	18.86	
	1073.24		17	28	0.59	2146.58	1.050E-004	50.96	
	1274.66	Y	590	51	1.85	2549.09	9.710E-005	4.89	
	1528.27		15	9	0.97	3055.88	8.590E-005	40.50	
	1592.66		17	9	0.72	3184.54	8.271E-005	37.01	
	2615.64		159	11	2.56	5228.75	2.851E-005	9.07	

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

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

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	1.41E+000 +- 7.89E-002	7.02E-001 +- 1.92E-002

Beta: 1.35E+002 +- 1.22E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	5.24E-001 +- 2.70E-002
203.55	5.60E-001 +- 5.06E-002
375.05	1.04E+000 +- 4.19E-002
413.71	9.96E-001 +- 5.23E-002

Segment 11 Results

Segment: 11 Detector: DET01 Position: 11
C:\Canberra\NDA2k\Data\00000380_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P011_S011

Acquisition Start: 5/5/2009 2:21:40 PM
Elapsed Live Time: 115.49 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.252 +/- 0.0115
SE-75	264.66	0.380 +/- 0.0069
SE-75	279.54	0.389 +/- 0.0073
SE-75	400.66	0.446 +/- 0.0086

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: 6/3/2009 10:06:17 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
	59.60	Y	45235	4288	1.08	121.04	5.381E-006	1.22	
M	94.79		2388	3547	2.09	191.37	1.229E-004	5.55	20.00
m	99.18	Y	9784	4367	2.09	200.14	1.462E-004	4.19	
m	103.38	Y	3238	2608	2.10	208.53	1.687E-004	4.45	
M	111.09		1657	1733	1.58	223.93	2.089E-004	2.97	6.89
m	115.13	Y	1081	3056	1.58	232.01	2.289E-004	4.16	
M	125.36	Y	745	1305	1.06	252.46	2.740E-004	4.86	5.19
m	129.37	Y	3911	1302	1.07	260.47	2.893E-004	2.04	
M	148.58	Y	206	1408	1.13	298.85	3.473E-004	13.35	2.44
m	152.77	Y	1173	1333	1.14	307.23	3.564E-004	3.80	
M	203.53	Y	540	671	1.14	408.66	3.868E-004	11.33	1.09

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	208.07	Y	966	691	1.15	417.72	3.849E-004	10.47	
M	297.28		54	223	0.93	596.00	3.134E-004	26.63	1.27
m	300.17	Y	374	331	0.93	601.78	3.109E-004	14.11	
	311.89	Y	2343	312	1.31	625.19	3.012E-004	2.67	
M	332.81	Y	564	211	1.36	667.01	2.850E-004	4.66	2.05
m	335.81	Y	226	244	1.36	672.99	2.829E-004	7.64	
m	340.55	Y	270	228	1.36	682.47	2.795E-004	6.73	
m	345.04		531	209	1.37	691.44	2.763E-004	4.74	
	368.50	Y	195	193	1.15	738.32	2.609E-004	13.43	
M	375.05	Y	1512	159	1.38	751.40	2.570E-004	5.92	0.71
m	380.13		300	155	1.38	761.56	2.540E-004	8.68	
m	382.76		250	138	1.38	766.81	2.525E-004	9.00	
M	392.89		519	131	1.74	787.06	2.468E-004	11.75	1.39
m	398.78		55	150	1.75	798.82	2.437E-004	31.52	
	413.74	Y	1498	125	1.42	828.71	2.361E-004	3.12	
	422.55		79	110	1.15	846.33	2.319E-004	24.17	
	451.40		179	77	1.05	903.98	2.195E-004	11.09	
	511.46		271	92	1.91	1023.99	1.988E-004	8.64	
	557.98		63	35	0.75	1116.95	1.864E-004	19.46	
	583.05		70	44	1.59	1167.04	1.806E-004	19.53	
	1274.59	Y	62	28	1.66	2548.94	9.811E-005	19.37	

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	2.03E+000 +- 1.05E-001	9.73E-001 +- 2.52E-002

Beta: 1.28E+002 +- 1.00E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	7.67E-001 +- 3.10E-002
203.55	8.79E-001 +- 1.01E-001
375.05	1.36E+000 +- 8.44E-002
413.71	1.55E+000 +- 5.82E-002

Segment 12 Results

Segment: 12 Detector: DET01 Position: 12
C:\Canberra\NDA2k\Data\00000380_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P012_S012

Acquisition Start: 5/5/2009 2:24:52 PM
Elapsed Live Time: 114.94 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.283 +/- 0.0126
SE-75	264.66	0.438 +/- 0.0079
SE-75	279.54	0.444 +/- 0.0084
SE-75	400.66	0.504 +/- 0.0097

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 10:06:20 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
	49.44		2069	6547	2.03	100.75	2.200E-004	6.66	
	59.59	Y	67124	6263	1.08	121.03	1.883E-004	1.19	
	86.61		409	2179	0.92	175.02	2.130E-004	17.95	
M	94.76		2700	3020	1.70	191.31	2.278E-004	4.42	25.67
m	98.82	Y	8784	3725	1.71	199.41	2.353E-004	3.45	
m	103.24	Y	3984	2608	1.71	208.25	2.433E-004	3.67	
M	111.14		1988	1815	1.54	224.04	2.573E-004	2.71	7.77
m	115.24	Y	1348	2908	1.54	232.23	2.641E-004	3.57	
M	123.03	Y	180	1321	1.12	247.79	2.764E-004	17.84	0.42
m	125.32	Y	853	1271	1.12	252.37	2.797E-004	6.41	
m	129.36	Y	4704	1097	1.13	260.45	2.853E-004	4.59	
M	144.11		314	1176	1.18	289.93	3.057E-004	21.30	2.87
m	148.71	Y	312	1227	1.19	299.12	3.117E-004	20.50	
m	152.84	Y	225	1162	1.19	307.37	3.167E-004	21.89	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	189.31		90	748	0.78	380.24	3.434E-004	48.15	
M	203.61	Y	694	650	1.20	408.81	3.470E-004	8.96	0.79
m	208.04	Y	1214	636	1.21	417.68	3.475E-004	8.10	
	300.20	Y	689	376	1.29	601.82	3.176E-004	6.11	
	311.89	Y	3576	341	1.31	625.19	3.116E-004	2.21	
M	332.79	Y	546	246	1.34	666.96	3.004E-004	4.76	1.59
m	335.79	Y	190	229	1.34	672.94	2.988E-004	8.68	
m	340.57	Y	461	233	1.34	682.50	2.963E-004	5.12	
m	345.08		565	208	1.35	691.51	2.939E-004	4.64	
M	368.31	Y	176	166	1.34	737.94	2.820E-004	10.54	1.84
m	375.01	Y	1615	172	1.35	751.32	2.787E-004	5.32	
m	380.18		298	143	1.35	761.65	2.761E-004	8.49	
m	382.71		204	139	1.35	766.72	2.749E-004	9.52	
M	392.87		530	135	1.52	787.01	2.700E-004	4.61	1.29
m	398.53		115	147	1.52	798.33	2.674E-004	11.22	
	413.65	Y	1502	126	1.36	828.54	2.604E-004	3.12	
	422.51		69	118	1.49	846.25	2.565E-004	28.46	
	451.45		195	81	1.46	904.06	2.443E-004	10.68	
	558.51		33	41	1.38	1118.02	2.087E-004	35.11	

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	1.67E+000 +- 9.24E-002	1.22E+000 +- 3.36E-002

Beta: 7.35E+001 +- 1.28E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	9.36E-001 +- 5.68E-002
203.55	1.26E+000 +- 1.19E-001
375.05	1.34E+000 +- 7.66E-002
413.71	1.41E+000 +- 5.48E-002

Segment 13 Results

Segment: 13 Detector: DET01 Position: 13
C:\Canberra\NDA2k\Data\00000380_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P013_S013

Acquisition Start: 5/5/2009 2:28:03 PM
Elapsed Live Time: 115.91 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.227 +/- 0.0108
SE-75	264.66	0.354 +/- 0.0064
SE-75	279.54	0.360 +/- 0.0068
SE-75	400.66	0.430 +/- 0.0083

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: 6/3/2009 10:06:23 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
	59.60	Y	58921	5889	1.09	121.04	1.449E-004	1.19	
	86.56		233	1727	0.83	174.92	1.975E-004	27.30	
M	94.74		1805	2456	1.59	191.27	2.136E-004	4.92	16.46
m	98.81	Y	6074	2963	1.60	199.40	2.213E-004	3.73	
m	103.21	Y	3082	1980	1.61	208.19	2.292E-004	3.96	
M	111.11		1347	1390	1.48	223.97	2.424E-004	3.26	5.13
m	114.94	Y	791	2192	1.49	231.62	2.483E-004	4.92	
M	125.36	Y	658	1068	1.12	252.45	2.625E-004	6.49	3.23
m	129.35	Y	3313	841	1.13	260.43	2.673E-004	3.98	
M	144.35		251	618	0.74	290.40	2.848E-004	147.47	1.63
m	148.74	Y	365	1473	0.75	299.17	2.895E-004	44.01	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
M	203.62	Y	463	390	1.16	408.84	3.162E-004	9.79	1.72
m	208.02	Y	909	401	1.16	417.63	3.163E-004	8.63	
	300.08	Y	479	276	1.30	601.59	2.876E-004	7.35	
	311.86	Y	2753	245	1.36	625.14	2.823E-004	2.41	
M	332.76	Y	369	162	1.42	666.89	2.725E-004	5.61	1.13
m	335.73	Y	159	178	1.43	672.84	2.711E-004	8.97	
m	340.57	Y	357	143	1.43	682.51	2.688E-004	5.60	
m	344.96		368	131	1.44	691.27	2.667E-004	5.51	
M	368.53	Y	76	153	1.23	738.38	2.559E-004	15.34	1.64
m	375.06	Y	826	133	1.23	751.43	2.529E-004	3.75	
m	380.16		136	112	1.24	761.61	2.506E-004	9.71	
m	382.65		157	105	1.24	766.59	2.495E-004	8.83	
M	392.91		291	70	1.28	787.09	2.450E-004	12.55	1.36
m	398.56		67	68	1.28	798.38	2.425E-004	25.29	
	413.72	Y	818	99	1.30	828.67	2.359E-004	4.21	
	422.68		43	44	1.07	846.58	2.320E-004	27.79	
	451.48		112	35	1.55	904.14	2.204E-004	13.03	
	558.41		44	25	1.55	1117.80	1.854E-004	23.10	

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	8.41E-001 +- 4.48E-002	7.71E-001 +- 2.02E-002

Beta: 2.12E+001 +- 1.18E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	7.03E-001 +- 3.76E-002
203.55	9.21E-001 +- 9.25E-002
375.05	7.53E-001 +- 3.16E-002
413.71	8.47E-001 +- 3.98E-002

Segment 14 Results

Segment: 14 Detector: DET01 Position: 14
C:\Canberra\NDA2k\Data\00000380_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P014_S014

Acquisition Start: 5/5/2009 2:31:14 PM
Elapsed Live Time: 117.57 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.286 +/- 0.0122
SE-75	264.66	0.427 +/- 0.0077
SE-75	279.54	0.438 +/- 0.0082
SE-75	400.66	0.492 +/- 0.0094

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 10:06:27 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
	59.61	Y	28014	3484	1.10	121.07	5.379E-006	1.28	
M	94.74		726	1633	1.65	191.25	1.256E-004	8.27	7.42
m	98.88	Y	2716	2138	1.66	199.53	1.484E-004	5.76	
m	103.21	Y	1334	1455	1.67	208.20	1.723E-004	6.15	
	111.09		264	919	1.24	223.93	2.147E-004	18.06	
M	125.34	Y	362	592	1.09	252.40	2.815E-004	6.73	2.25
m	129.38	Y	1245	585	1.10	260.48	2.973E-004	3.28	
M	203.63	Y	128	241	1.25	408.86	3.927E-004	15.58	0.99
m	208.05	Y	424	257	1.26	417.69	3.904E-004	11.55	
	248.24		28	133	0.50	498.00	3.580E-004	62.16	
	300.22	Y	155	164	1.16	601.88	3.079E-004	15.07	
	311.90	Y	966	127	1.41	625.21	2.973E-004	3.87	
	332.74	Y	64	160	1.23	666.85	2.796E-004	33.40	
M	340.51	Y	100	60	1.12	682.38	2.735E-004	11.36	0.89

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	344.94		108	57	1.12	691.24	2.701E-004	10.65	
M	375.03	Y	314	67	1.28	751.37	2.492E-004	5.91	1.05
m	379.98		57	57	1.29	761.26	2.461E-004	15.18	
m	382.85		63	53	1.29	767.00	2.443E-004	14.14	
	393.00		105	58	0.99	787.27	2.382E-004	15.24	
	413.74	Y	290	57	1.43	828.71	2.269E-004	7.35	
	846.78	Y	15	14	1.26	1694.05	1.333E-004	43.32	

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	3.27E-001 +- 2.51E-002	2.57E-001 +- 8.59E-003

Beta: 4.35E+001 +- 1.34E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	2.38E-001 +- 1.13E-002
203.55	2.05E-001 +- 3.22E-002
375.05	2.90E-001 +- 1.80E-002
413.71	3.13E-001 +- 2.39E-002

Segment 15 Results

Segment: 15 Detector: DET01 Position: 15
C:\Canberra\NDA2k\Data\00000380_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P015_S015

Acquisition Start: 5/5/2009 2:34:26 PM
Elapsed Live Time: 118.36 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.342 +/- 0.0133
SE-75	264.66	0.485 +/- 0.0087
SE-75	279.54	0.492 +/- 0.0091
SE-75	400.66	0.549 +/- 0.0104

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 10:06:30 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
	59.62	Y	12658	2065	1.10	121.08	4.896E-006	1.50	
M	98.96	Y	719	996	1.33	199.69	1.520E-004	4.60	3.09
m	103.31	Y	500	935	1.34	208.38	1.773E-004	5.43	
M	125.36	Y	120	418	1.03	252.45	2.917E-004	14.05	1.28
m	129.38	Y	430	408	1.03	260.47	3.080E-004	6.09	
	208.13	Y	149	230	1.05	417.85	3.943E-004	17.57	
	312.00	Y	74	97	1.35	625.40	2.939E-004	24.04	
	332.64	Y	23	83	1.14	666.65	2.767E-004	62.72	
M	375.06	Y	94	54	1.00	751.42	2.471E-004	12.11	1.89
m	380.34		22	45	1.01	761.97	2.439E-004	30.19	
	413.67	Y	95	43	1.30	828.59	2.259E-004	14.66	

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	1.01E-001 +- 1.47E-002	8.32E-002 +- 4.71E-003

Beta: 3.11E+001 +- 2.29E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 3

Energy	Mass (g)
129.30	7.93E-002 +- 5.57E-003
375.05	8.77E-002 +- 1.07E-002
413.71	1.03E-001 +- 1.53E-002

Segment 16 Results

Segment: 16 Detector: DET01 Position: 16
C:\Canberra\NDA2k\Data\00000380_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P016_S016

Acquisition Start: 5/5/2009 2:37:37 PM
Elapsed Live Time: 118.76 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.400 +/- 0.0146
SE-75	264.66	0.551 +/- 0.0099
SE-75	279.54	0.565 +/- 0.0105
SE-75	400.66	0.620 +/- 0.0118

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 10:06:35 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
	59.61	Y	4809	1001	1.13	121.06	9.977E-005	2.05	
M	99.01	Y	348	698	1.25	199.80	1.452E-004	7.23	5.92
m	103.44	Y	231	585	1.26	208.65	1.504E-004	8.78	
	129.36	Y	200	340	1.05	260.44	1.756E-004	15.47	
	207.98	Y	97	147	1.25	417.54	2.114E-004	21.14	
	375.12	Y	60	49	1.10	751.54	1.775E-004	22.00	
	413.83	Y	75	26	1.51	828.89	1.668E-004	15.52	
	558.55		37	25	1.08	1118.09	1.337E-004	26.61	

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	1.14E-001 +- 2.38E-002	7.69E-002 +- 7.91E-003

Beta: 7.43E+001 +- 3.98E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 3

Energy	Mass (g)
129.30	6.46E-002 +- 1.04E-002
375.05	7.82E-002 +- 1.73E-002
413.71	1.10E-001 +- 1.73E-002

Sum of Segment NID Results
Category: Segmented

C:\Canberra\NDA2k\Data\00000380_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	3.210E-002 +/-	43.4%	7.499E-007	1.480E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	8.649E+000 +/-	2.2%	2.021E-004	1.367E-009
	Al-26	< 9.254E-002 +/-	19.8%	< 2.162E-006	< 4.868E-006
	K-40	< 7.144E-001 +/-	5.3%	< 1.669E-005	< 1.115E-001
	Co-57	< 1.708E-001 +/-	4.2%	< 3.991E-006	< 1.998E-011
	Co-60	< 6.592E-002 +/-	2.0%	< 1.540E-006	< 5.781E-011
	Se-75	< 1.020E-001 +/-	2.3%	< 2.384E-006	< 7.019E-012
	Kr-85	< 3.144E+001 +/-	3.2%	< 7.345E-004	< 7.922E-008
	Sr-90	9.039E-002 +/-	36.1%	2.112E-006	6.554E-010
	Sb-125	< 1.703E-001 +/-	2.1%	< 3.980E-006	< 1.639E-010
	Ba-133	< 8.919E-002 +/-	1.8%	< 2.084E-006	< 3.523E-010
	Cs-134	< 7.099E-002 +/-	2.1%	< 1.659E-006	< 5.417E-011
?	Cs-137	9.039E-002 +/-	36.1%	2.112E-006	1.030E-009
	Eu-152	< 2.843E-001 +/-	2.6%	< 6.642E-006	< 1.598E-009
	Eu-154	< 2.934E-001 +/-	4.4%	< 6.856E-006	< 1.100E-009
	Ho-166m	< 8.210E-002 +/-	4.2%	< 1.918E-006	< 4.565E-008
	Bi-207	< 6.227E-002 +/-	2.4%	< 1.455E-006	< 1.133E-009
	Pb-210	< 1.217E+004 +/-	309.7%	< 2.843E-001	< 1.582E-004
	Ra-226	< 1.392E-001 +/-	2.1%	< 3.253E-006	< 1.392E-007
	Ac-227	< 3.956E-001 +/-	8.5%	< 9.242E-006	< 5.419E-009
	Th-230	< 2.207E+002 +/-	9.1%	< 5.156E-003	< 1.081E-002
	Pa-231	< 2.179E+000 +/-	11.3%	< 5.092E-005	< 4.555E-005
	Th-232	2.861E+000 +/-	3.7%	6.684E-005	2.578E+001
	U-232	6.029E+000 +/-	3.5%	1.409E-004	2.792E-007
	U-233	< 1.651E+003 +/-	4.1%	< 3.858E-002	< 1.684E-001
	Pa-234	< 3.911E-001 +/-	12.2%	< 9.137E-006	
	Pa-234m	< 5.381E+002 +/-	2.3%	< 1.257E-002	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 1.049E-001 +/-	4.1%	< 2.450E-006	< 4.792E-002
	Np-237	2.208E+001 +/-	1.6%	5.160E-004	3.092E-002
	Pu-238	7.907E+006 +/-	1.7%	1.847E+002	4.570E-001
	U-238	< 9.550E+000 +/-	2.1%	< 2.231E-004	< 2.808E+001

Pu-239		5.997E+005	+/-	2.5%		1.401E+001		9.535E+000
Pu-239B	<	1.229E+004	+/-	5.4%	<	2.872E-001	<	1.954E-001
U-239	<	7.440E+004	+/-	368.5%	<	1.738E+000		
Pu-240	<	7.189E+003	+/-	14.2%	<	1.680E-001	<	3.127E-002
Am-241		4.257E+004	+/-	21.4%		9.947E-001		1.226E-002
Am-241B		1.371E+005	+/-	3.3%		3.202E+000		3.947E-002
Pu-241		3.966E+005	+/-	18.5%		9.267E+000		3.815E-003
Pu-241B		6.893E+005	+/-	3.5%		1.610E+001		6.631E-003
Pu-242	<	0.000E+000	+/-	0.0%	<	0.000E+000	<	0.000E+000
Am-243	<	4.290E-001	+/-	2.2%	<	1.002E-005	<	2.124E-006
Cm-243	<	4.425E-001	+/-	3.6%	<	1.034E-005	<	8.496E-009
Cm-244	<	7.794E+004	+/-	14.1%	<	1.821E+000	<	9.509E-004
Cm-245	<	6.623E-001	+/-	8.4%	<	1.547E-005	<	3.808E-006
Cm-247	<	7.433E-002	+/-	8.5%	<	1.737E-006	<	7.953E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 8.850E-002 +/-	3.5%	< 2.068E-006	< 2.142E-008
Cf-251	< 3.524E-001 +/-	6.6%	< 8.233E-006	< 2.202E-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

********** 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: LL85001778TRU Analysis Date: 5/5/2009

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

Net Weight	42800.0 g		
Pu mass	1.03E+001	+-	1.84E+000 g
TRU Alpha Activity	9.11E+000	+-	1.64E+000 Ci
TRU Activity Concentration	2.13E+005	+-	3.83E+004 nCi/g
Pu-239 Equivalent Activity	8.36E+000	+-	1.49E+000 Ci
Pu-239 FGE	9.61E+000	+-	1.83E+000 g
Decay heat	3.00E-001	+-	5.43E-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	1.02E-007
U233	<LLD	<LLD	0.00E+000	1.65E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.05E-007
NP237	3.09E-002	2.21E-005	4.22E-006	3.07E-007
PU238	4.85E-001	8.39E+000	1.64E+000	5.52E-002
U238	<LLD	<LLD	0.00E+000	9.55E-006
PU239	9.53E+000	6.00E-001	1.15E-001	3.95E-003
PU240	3.08E-001	7.07E-002	2.37E-002	4.65E-004
AM241	1.23E-002	4.26E-002	1.22E-002	6.96E-005
PU241	7.53E-003	7.82E-001	2.13E-001	5.15E-003
PU242	1.49E-003	5.93E-006	2.11E-006	0.00E+000

Errors quoted at 1.000 sigma

Operator: Robert J Haslett Jr Date: 6-3-09

ITR: Philip C Tuttle Date: 6/12/09

Summed Segment Spectra Results
Category: Segmented

C:\Canberra\NDA2k\Data\00000380_CNTR0001_DCAT0002_PROC00AI.CNF

Elapsed Live Time: 115.21 sec Elapsed Real Time: 120.00 sec

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

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	3.037E-001 +/-	30.0%	7.096E-006	1.400E-014
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	8.604E+000 +/-	2.4%	2.010E-004	1.359E-009
	Al-26	< 3.164E-001 +/-	7.1%	< 7.392E-006	< 1.664E-005
	K-40	< 2.137E+000 +/-	2.8%	< 4.992E-005	< 3.333E-001
X	Co-57				
	Co-60	< 2.405E-001 +/-	1.3%	< 5.619E-006	< 2.109E-010
	Se-75	< 4.586E-001 +/-	1.0%	< 1.071E-005	< 3.155E-011
	Kr-85	< 1.169E+002 +/-	2.5%	< 2.731E-003	< 2.945E-007
	Sr-90	5.973E-001 +/-	15.2%	1.396E-005	4.331E-009
	Sb-125	< 7.660E-001 +/-	1.3%	< 1.790E-005	< 7.369E-010
	Ba-133	< 3.877E-001 +/-	0.8%	< 9.057E-006	< 1.531E-009
	Cs-134	< 2.614E-001 +/-	0.9%	< 6.108E-006	< 1.995E-010
?	Cs-137	5.973E-001 +/-	15.2%	1.396E-005	6.810E-009
	Eu-152	< 9.510E-001 +/-	1.9%	< 2.222E-005	< 5.345E-009
	Eu-154	< 1.337E+000 +/-	1.1%	< 3.124E-005	< 5.013E-009
	Ho-166m	< 3.847E-001 +/-	1.9%	< 8.987E-006	< 2.139E-007
	Bi-207	< 2.616E-001 +/-	0.8%	< 6.113E-006	< 4.762E-009
	Pb-210	< 1.060E+004 +/-	11.4%	< 2.476E-001	< 1.378E-004
	Ra-226	< 5.917E-001 +/-	1.3%	< 1.382E-005	< 5.917E-007
	Ac-227	< 1.658E+000 +/-	8.2%	< 3.875E-005	< 2.272E-008
	Th-230	1.841E+003 +/-	34.7%	4.302E-002	9.021E-002
	Pa-231	< 9.730E+000 +/-	11.1%	< 2.273E-004	< 2.034E-004
	Th-232	1.086E+001 +/-	2.0%	2.538E-004	9.788E+001
X	U-232				
	U-233	< 7.132E+003 +/-	1.4%	< 1.666E-001	< 7.275E-001
	Pa-234	< 1.402E+000 +/-	12.1%	< 3.276E-005	
	Pa-234m	< 1.781E+003 +/-	1.5%	< 4.162E-002	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 4.888E-001 +/-	1.7%	< 1.142E-005	< 2.234E-001
	Np-237	2.677E+001 +/-	1.6%	6.255E-004	3.748E-002
	Pu-238	7.247E+006 +/-	1.2%	1.693E+002	4.189E-001
	U-238	< 3.222E+001 +/-	1.6%	< 7.529E-004	< 9.474E+001
	Pu-239	6.840E+005 +/-	2.1%	1.598E+001	1.088E+001
	Pu-239B	< 6.087E+004 +/-	5.2%	< 1.422E+000	< 9.677E-001
	U-239	< 2.486E+004 +/-	15.1%	< 5.808E-001	
X	Pu-240				
?	Am-241	1.397E+005 +/-	15.4%	3.263E+000	4.022E-002
	Am-241B	1.446E+005 +/-	2.2%	3.379E+000	4.165E-002
	Pu-241	9.597E+005 +/-	4.6%	2.242E+001	9.232E-003
	Pu-241B	8.350E+005 +/-	2.0%	1.951E+001	8.033E-003

Pu-242	< 0.000E+000 +/- 0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.876E+000 +/- 1.1%	< 4.383E-005	< 9.286E-006
Cm-243	< 1.935E+000 +/- 3.0%	< 4.521E-005	< 3.715E-008
Cm-244	< 3.001E+005 +/- 13.9%	< 7.011E+000	< 3.661E-003
Cm-245	< 3.010E+000 +/- 7.4%	< 7.034E-005	< 1.731E-005
Cm-247	< 3.458E-001 +/- 8.4%	< 8.080E-006	< 3.700E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 3.526E-001 +/-	3.1%	< 8.238E-006	< 8.533E-008
Cf-251	< 1.657E+000 +/-	5.3%	< 3.872E-005	< 1.036E-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	1.09E+001 +- 2.24E-001	6.26E+000 +- 6.09E-002

Beta: 1.03E+002 +- 4.10E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	5.01E+000 +- 8.33E-002
203.55	5.71E+000 +- 1.67E-001
375.05	8.40E+000 +- 1.33E-001
413.71	8.60E+000 +- 1.73E-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: LL85001778TRU Analysis Date: 5/5/2009

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

Net Weight	42800.0 g		
Pu mass	1.18E+001 +-	2.09E+000	g
TRU Alpha Activity	1.05E+001 +-	1.87E+000	Ci
TRU Activity Concentration	2.45E+005 +-	4.36E+004	nCi/g
Pu-239 Equivalent Activity	9.63E+000 +-	1.70E+000	Ci
Pu-239 FGE	1.10E+001 +-	2.08E+000	g
Decay heat	3.46E-001 +-	6.18E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	4.33E-009	5.97E-007	1.45E-007	0.00E+000
CS137	6.81E-009	5.97E-007	1.45E-007	2.82E-007
U233	<LLD	<LLD	0.00E+000	7.13E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	4.89E-007
NP237	3.75E-002	2.68E-005	5.12E-006	8.17E-007
PU238	5.53E-001	9.57E+000	1.86E+000	1.20E-001
U238	<LLD	<LLD	0.00E+000	3.22E-005
PU239	1.09E+001	6.84E-001	1.31E-001	8.58E-003
PU240	3.51E-001	8.07E-002	2.71E-002	1.01E-003
AM241	4.02E-002	1.40E-001	3.42E-002	1.02E-004
PU241	8.58E-003	8.92E-001	2.43E-001	1.12E-002
PU242	1.70E-003	6.76E-006	2.41E-006	0.00E+000

Errors quoted at 1.000 sigma

Operator: Robert J. Howlett Jr. Date: 6-3-09

ITR: Dilip Curtis Date: 6/12/09

Automated Independent Technical Review

Counter ID: SGS with Trans. Count Type: Assay - 55 Gal Galv 23.8
Container ID: LL85001778TRU Assay Date: 5/5/2009
Waste Matrix Code:
Sequence Number: 380

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

Source of results is undefined. OK

DISPOSITION:

MGA Analysis:
Expert review is recommended; the following validity tests failed:
Normalized fit value (1.53) is greater than allowed (1.15). OK
Fit value (8.87) is greater than allowed (2.50). OK

Note: The measured and declared isotopics are inconsistent. OK

DISPOSITION:

Gamma Analysis:
Analysis Status: No errors. OK
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: 6-3-09

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:	LL85001778TRU	Analysis Date:	5/5/2009

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

MGA version: MGA V9.63H CI

Measurement date = 5/5/09 Declared date = 5/5/09
Low energy spectrum sensitivity = 30.0% Total counts = 2.737E+006
High energy spectrum sensitivity : 10.0%

Pu g/cm2 = 0.7500 Cd g/cm2 = 1.7341 FWHM at 122 keV = 616 eV
QFIT = 8.87 OK FWHM at 208 keV = 787 eV
NQFIT = 1.53

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	0.050885	3.1	0.6	64.4620	50.9	4.69379	3.12	5.08877	3.38
Pu-239	1.000000	0.0	3.0	1266.806	51.7	92.24220	0.89	91.80914	0.88
Pu-240	0.032271	27.0	26.8	40.8812	94.6	2.97675	27.52	2.96525	27.42
Pu-241	0.000789	18.5	17.1	1.0000	0.0	0.07281	19.35	0.12245	32.54
Pu-242	(New alg.)			0.1985(30)		0.01445 (30)		0.01438 (29)	
Am-241	0.004264	5.8	4.7	5.4022	52.8	0.39336	6.37	0.39975	6.48

Pu-240 effective (meas. date) = 14.829 +/- 6.68%
U-237 separated more than 10 days ago
Am-241 separated about 35.580 +/- 2.007 years ago
Am/Pu-241 weight ratio = 5.40220 +/- 17.72%

Messages:

Lead x-rays detected.
Error in GFIT routine: probable weak peak in location 8. OK
Calculations in MGAABS didn't converge: results may be suspect. OK
Efficiency curvature boundary reached.
Pu-241/Pu-239 efficiency changed in MGACAL by 4%. OK
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: 6-3-09

NDA 2000 Assay Report

Item Information

Item ID:	LL85201616TRU	Count Sequence Number:	381
Operator:	RHWM2\RHWM		
Assay Start:	5/5/2009 2:49:54 PM		
Description 1:	LL85201616TRU		
Description 2:			
Location:	LLNL		
Comment:			
Matrix Type:	Lucite		
Container Type:	55 Gal Galv 23.8		
Weight:	Gross: 54.0 kg	Net:	30.2 kg
Container:	Volume: 208.0 l	Full:	100.0 %
Density:	0.150 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

Reviewed By: Robert J Haslett 6-3-09

Segment 1 Results

Segment: 1 Detector: DET01 Position: 1
C:\Canberra\NDA2k\Data\00000381_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P001_S001

Acquisition Start: 5/5/2009 2:50:56 PM
Elapsed Live Time: 119.02 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.323 +/- 0.0123
SE-75	264.66	0.436 +/- 0.0078
SE-75	279.54	0.451 +/- 0.0084
SE-75	400.66	0.509 +/- 0.0097

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 3:11:27 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
	86.57		253	258	0.90	174.93	7.091E-005	11.12	
M	94.89	Y	303	361	1.21	191.57	1.034E-004	15.53	2.29
m	98.52	Y	464	340	1.22	198.82	1.182E-004	14.60	
M	111.27	Y	213	266	1.02	224.30	1.686E-004	31.57	0.75
m	114.73	Y	107	378	1.02	231.21	1.813E-004	25.96	
	300.15	Y	372	144	1.44	601.74	2.241E-004	7.29	
	311.92	Y	2304	65	1.27	625.25	2.160E-004	2.41	
	340.44	Y	282	15	1.42	682.24	1.979E-004	6.43	
	375.34		34	18	1.10	751.99	1.788E-004	26.21	
	398.36	Y	91	19	1.60	797.97	1.680E-004	12.94	
	415.83	Y	80	11	1.15	832.90	1.606E-004	12.80	

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 **********

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\00000381_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P002_S002

Acquisition Start: 5/5/2009 2:54:08 PM
Elapsed Live Time: 119.11 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.244 +/- 0.0108
SE-75	264.66	0.375 +/- 0.0067
SE-75	279.54	0.381 +/- 0.0071
SE-75	400.66	0.442 +/- 0.0084

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 3:11:31 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
86.50		131	239	1.16	174.80	1.811E-004	19.06	
98.48		138	251	1.03	198.74	2.117E-004	18.65	
300.18	Y	223	76	1.44	601.80	2.790E-004	9.08	
311.91	Y	1201	64	1.28	625.24	2.736E-004	3.25	
340.59	Y	129	28	1.19	682.53	2.602E-004	10.91	
415.79	Y	42	11	1.30	832.81	2.271E-004	19.49	

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 3 Results

Segment: 3 Detector: DET01 Position: 3
C:\Canberra\NDA2k\Data\00000381_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P003_S003

Acquisition Start: 5/5/2009 2:57:19 PM
Elapsed Live Time: 119.19 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.224 +/- 0.0103
SE-75	264.66	0.356 +/- 0.0063
SE-75	279.54	0.365 +/- 0.0068
SE-75	400.66	0.422 +/- 0.0081

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 3:11:35 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
300.32	Y	69	58	1.34	602.08	2.958E-004	20.51	
311.96	Y	396	50	1.41	625.33	2.891E-004	5.84	
340.63	Y	46	26	1.34	682.62	2.729E-004	22.34	

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\00000381_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P004_S004

Acquisition Start: 5/5/2009 3:00:30 PM
Elapsed Live Time: 119.19 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.173 +/- 0.0093
SE-75	264.66	0.296 +/- 0.0053
SE-75	279.54	0.307 +/- 0.0058
SE-75	400.66	0.364 +/- 0.0070

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 3:11:40 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
59.74	Y	363	204	1.29	121.32	4.028E-006	8.09	

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\00000381_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P005_S005

Acquisition Start: 5/5/2009 3:03:41 PM
Elapsed Live Time: 118.82 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.228 +/- 0.0103
SE-75	264.66	0.335 +/- 0.0060
SE-75	279.54	0.353 +/- 0.0066
SE-75	400.66	0.402 +/- 0.0077

Errors quoted at 1.000 sigma

Peak Analysis Results

Peak Analysis Performed on: 6/3/2009 3:11:44 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
	59.61	Y	2197	505	1.08	121.06	8.139E-005	2.82	
M	98.86	Y	587	721	1.29	199.49	2.003E-004	4.94	3.09
m	103.50	Y	521	706	1.29	208.77	2.121E-004	5.06	
	111.25		93	475	0.86	224.25	2.302E-004	35.62	
M	125.51	Y	59	324	1.06	252.75	2.578E-004	23.56	1.55
m	129.37	Y	306	335	1.07	260.47	2.640E-004	7.32	
M	203.52	Y	113	171	1.12	408.63	3.192E-004	12.62	1.74
m	207.98	Y	180	227	1.12	417.55	3.192E-004	9.21	
	332.82	Y	98	162	1.07	667.02	2.706E-004	22.34	
	345.09		154	77	1.26	691.53	2.639E-004	11.78	
M	375.02	Y	506	69	1.25	751.34	2.483E-004	4.62	0.87
m	380.14		92	51	1.26	761.58	2.458E-004	10.99	
m	382.70		73	46	1.26	766.69	2.445E-004	12.52	
	392.90		179	35	1.68	787.07	2.395E-004	9.14	

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
413.84	Y	530	28	1.45	828.92	2.298E-004	4.76	
451.59		58	19	0.85	904.36	2.139E-004	17.71	
662.32	Y	31	6	1.15	1325.45	1.541E-004	22.33	

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	1.40E+000 +- 9.33E-002	1.04E-001 +- 5.06E-003

Beta: 3.94E+002 +- 1.68E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	6.58E-002 +- 5.36E-003
203.55	2.22E-001 +- 2.84E-002
375.05	4.70E-001 +- 2.34E-002
413.71	5.63E-001 +- 2.93E-002

Segment 6 Results

Segment: 6 Detector: DET01 Position: 6
C:\Canberra\NDA2k\Data\00000381_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P006_S006

Acquisition Start: 5/5/2009 3:06:53 PM
Elapsed Live Time: 118.34 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.021 +/- 0.0045
SE-75	264.66	0.072 +/- 0.0014
SE-75	279.54	0.076 +/- 0.0018
SE-75	400.66	0.107 +/- 0.0025

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: 6/3/2009 3:11:48 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
	59.61	Y	6990	864	1.08	121.06	9.744E-007	1.73	
M	94.75		283	809	1.54	191.28	5.172E-005	12.13	5.81
m	98.93	Y	1679	1329	1.55	199.64	6.318E-005	6.79	
m	103.26	Y	1326	1112	1.56	208.28	7.539E-005	6.81	
	111.22		181	799	1.58	224.20	9.782E-005	24.26	
M	123.31	Y	54	459	1.03	248.36	1.290E-004	17.49	3.78
m	125.38	Y	245	650	1.03	252.49	1.338E-004	4.95	
m	129.41	Y	580	534	1.04	260.55	1.425E-004	3.02	
M	203.71	Y	144	366	1.01	409.02	2.232E-004	12.21	1.12
m	208.06	Y	453	332	1.01	417.70	2.231E-004	5.82	
M	332.80	Y	398	127	1.35	666.98	1.828E-004	14.12	0.81

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	335.66	Y	144	141	1.35	672.70	1.818E-004	15.36	
	345.00		274	144	1.43	691.36	1.787E-004	8.95	
M	368.55	Y	113	91	1.33	738.43	1.713E-004	12.27	1.77
m	375.08	Y	1008	85	1.33	751.46	1.694E-004	6.50	
m	380.19		187	70	1.34	761.68	1.679E-004	9.85	
m	382.72		167	69	1.34	766.73	1.671E-004	10.05	
	392.90		303	60	1.72	787.08	1.644E-004	7.16	
	413.75	Y	891	64	1.37	828.73	1.592E-004	3.82	
	422.58		24	36	1.08	846.38	1.572E-004	42.23	
	451.50		119	37	1.59	904.18	1.513E-004	12.40	
	662.48	Y	48	14	1.68	1325.77	1.236E-004	19.11	
	721.58	Y	25	4	1.17	1443.86	1.183E-004	23.33	

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	3.17E+000 +- 2.08E-001	3.38E-001 +- 1.44E-002

Beta: 3.49E+002 +- 1.54E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	2.31E-001 +- 1.57E-002
203.55	4.05E-001 +- 5.13E-002
375.05	1.37E+000 +- 9.31E-002
413.71	1.37E+000 +- 5.98E-002

Segment 7 Results

Segment: 7 Detector: DET01 Position: 7
C:\Canberra\NDA2k\Data\00000381_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P007_S007

Acquisition Start: 5/5/2009 3:10:04 PM
Elapsed Live Time: 118.37 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.007 +/- 0.0014
SE-75	264.66	0.028 +/- 0.0007
SE-75	279.54	0.031 +/- 0.0009
SE-75	400.66	0.049 +/- 0.0014

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 3:13:18 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
	59.63	Y	9954	1000	1.09	121.10	1.430E-006	1.55	
M	98.92	Y	1506	1154	1.45	199.61	5.180E-005	6.98	4.58
m	103.23	Y	1431	997	1.46	208.23	6.117E-005	6.82	
M	125.37	Y	275	472	1.07	252.48	1.071E-004	8.07	1.33
m	129.44	Y	576	474	1.07	260.61	1.142E-004	4.97	
M	203.75	Y	171	256	1.16	409.10	1.776E-004	15.27	1.07
m	208.07	Y	451	371	1.16	417.73	1.772E-004	12.76	
M	332.70	Y	232	106	1.21	666.78	1.359E-004	7.01	1.13
m	335.77	Y	123	113	1.21	672.92	1.349E-004	10.20	
m	341.42		37	107	1.21	684.21	1.330E-004	24.02	
m	345.01		241	113	1.22	691.38	1.319E-004	7.13	
	368.35	Y	131	103	1.35	738.02	1.249E-004	15.28	
M	375.07	Y	712	91	1.31	751.45	1.230E-004	3.90	1.35
m	380.14		154	56	1.32	761.57	1.216E-004	8.17	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	382.79		134	46	1.32	766.87	1.209E-004	8.73	
	392.91		257	53	1.40	787.10	1.182E-004	7.84	
	413.69	Y	663	34	1.24	828.63	1.135E-004	4.27	
	422.39		45	30	1.30	846.01	1.117E-004	23.15	
	451.60		84	22	1.19	904.37	1.065E-004	14.02	
	662.09	Y	43	9	1.56	1324.99	8.643E-005	18.86	

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	2.99E+000 +- 1.78E-001	4.78E-001 +- 1.80E-002

Beta: 3.05E+002 +- 1.49E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	2.86E-001 +- 2.02E-002
203.55	6.08E-001 +- 9.38E-002
375.05	1.34E+000 +- 5.83E-002
413.71	1.43E+000 +- 6.84E-002

Segment 8 Results

Segment: 8 Detector: DET01 Position: 8
C:\Canberra\NDA2k\Data\00000381_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P008_S008

Acquisition Start: 5/5/2009 3:13:15 PM
Elapsed Live Time: 118.85 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.062 +/- 0.0060
SE-75	264.66	0.145 +/- 0.0027
SE-75	279.54	0.149 +/- 0.0030
SE-75	400.66	0.190 +/- 0.0040

Errors quoted at 1.000 sigma

Peak Analysis Results

Peak Analysis Performed on: 6/3/2009 3:13:22 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
	59.64		6171	687	1.12	121.12	4.881E-005	1.78	
M	98.94	Y	719	582	1.20	199.65	1.361E-004	9.84	3.51
m	103.13	Y	706	427	1.20	208.03	1.437E-004	9.42	
M	125.49		249	268	1.03	252.72	1.762E-004	14.83	1.45
m	129.45	Y	265	309	1.04	260.63	1.806E-004	13.37	
	208.12	Y	152	196	1.19	417.83	2.329E-004	16.28	
	345.00		51	59	1.21	691.35	1.993E-004	26.20	
M	375.11	Y	202	47	1.19	751.53	1.889E-004	7.17	1.26
m	380.19		43	34	1.19	761.68	1.872E-004	17.11	
m	383.09		31	33	1.19	767.46	1.862E-004	20.59	
	392.79		70	36	0.80	786.85	1.830E-004	17.67	
	413.73	Y	201	24	1.20	828.69	1.766E-004	8.14	

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	4.57E-001 +- 4.95E-002	1.53E-001 +- 9.05E-003

Beta: 2.21E+002 +- 2.93E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 3

Energy	Mass (g)
129.30	8.31E-002 +- 1.17E-002
375.05	2.47E-001 +- 1.82E-002
413.71	2.78E-001 +- 2.33E-002

Segment 9 Results

Segment: 9 Detector: DET01 Position: 9
C:\Canberra\NDA2k\Data\00000381_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P009_S009

Acquisition Start: 5/5/2009 3:16:27 PM
Elapsed Live Time: 119.17 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.131 +/- 0.0079
SE-75	264.66	0.235 +/- 0.0042
SE-75	279.54	0.242 +/- 0.0046
SE-75	400.66	0.298 +/- 0.0059

Errors quoted at 1.000 sigma

Peak Analysis Results

Peak Analysis Performed on: 6/3/2009 3:13:26 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
	59.65	Y	1905	339	1.16	121.14	9.006E-006	2.90	
M	99.00	Y	221	275	1.28	199.78	1.312E-004	18.17	1.10
m	103.09	Y	232	269	1.29	207.94	1.460E-004	16.89	
	129.33	Y	54	125	1.02	260.38	2.199E-004	31.87	
	345.10		30	23	0.97	691.55	2.336E-004	29.51	
	375.23	Y	63	29	0.98	751.76	2.230E-004	17.87	
	413.68	Y	39	15	1.46	828.61	2.106E-004	21.85	

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	1.01E-001 +- 2.61E-002	2.41E-002 +- 3.85E-003

Beta: 2.53E+002 +- 6.60E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 3

Energy	Mass (g)
129.30	1.39E-002 +- 4.46E-003
375.05	6.50E-002 +- 1.17E-002
413.71	4.55E-002 +- 9.99E-003

Segment 10 Results

Segment: 10 Detector: DET01 Position: 10
C:\Canberra\NDA2k\Data\00000381_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P010_S010

Acquisition Start: 5/5/2009 3:19:38 PM
Elapsed Live Time: 119.27 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.239 +/- 0.0105
SE-75	264.66	0.363 +/- 0.0064
SE-75	279.54	0.373 +/- 0.0069
SE-75	400.66	0.427 +/- 0.0081

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 3:13:30 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
59.53	Y	406	173	1.32	120.91	5.110E-006	7.04	
374.86		12	12	0.53	751.03	2.529E-004	46.86	

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

Segment 11 Results

Segment: 11 Detector: DET01 Position: 11
C:\Canberra\NDA2k\Data\00000381_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P011_S011

Acquisition Start: 5/5/2009 3:22:49 PM
Elapsed Live Time: 119.27 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.231 +/- 0.0103
SE-75	264.66	0.352 +/- 0.0063
SE-75	279.54	0.357 +/- 0.0067
SE-75	400.66	0.411 +/- 0.0079

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 3:13:34 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
59.64	Y	601	212	1.27	121.12	5.232E-006	5.51	

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 12 Results

Segment: 12 Detector: DET01 Position: 12
C:\Canberra\NDA2k\Data\00000381_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P012_S012

Acquisition Start: 5/5/2009 3:26:00 PM
Elapsed Live Time: 119.20 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.174 +/- 0.0087
SE-75	264.66	0.262 +/- 0.0047
SE-75	279.54	0.269 +/- 0.0051
SE-75	400.66	0.325 +/- 0.0063

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 3:13:39 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
59.61	Y	1725	302	1.10	121.07	1.555E-004	3.02	
98.82		208	340	1.21	199.42	1.985E-004	14.77	
129.36	Y	267	137	1.09	260.44	2.426E-004	8.83	
375.00	Y	67	20	1.31	751.30	2.372E-004	15.80	
413.63	Y	48	15	1.50	828.49	2.227E-004	19.16	

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 -	6.09E-002 +- 4.65E-003

Beta: -1.21E+001 +- 3.02E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in attempted correction: 3

Energy	Mass (g)

Segment 13 Results

Segment: 13 Detector: DET01 Position: 13
C:\Canberra\NDA2k\Data\00000381_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P013_S013

Acquisition Start: 5/5/2009 3:29:32 PM
Elapsed Live Time: 119.08 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.156 +/- 0.0087
SE-75	264.66	0.271 +/- 0.0049
SE-75	279.54	0.286 +/- 0.0054
SE-75	400.66	0.341 +/- 0.0066

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 3:13:43 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
	59.62	Y	3706	504	1.04	121.09	1.259E-004	2.16	
M	94.88		233	302	1.54	191.54	1.884E-004	13.75	3.26
m	98.73	Y	720	344	1.55	199.24	1.949E-004	10.94	
m	103.19	Y	345	319	1.55	208.14	2.022E-004	11.80	
	111.22		105	259	1.66	224.19	2.144E-004	24.74	
M	125.38	Y	89	166	1.01	252.49	2.326E-004	13.51	0.93
m	129.38	Y	585	177	1.02	260.48	2.370E-004	4.64	
M	203.69	Y	94	91	1.27	408.99	2.860E-004	23.15	1.17
m	208.04	Y	168	78	1.28	417.66	2.863E-004	21.35	
	311.95	Y	111	43	1.21	625.32	2.602E-004	13.13	
	332.82	Y	54	50	1.17	667.01	2.511E-004	24.47	
	344.97		40	41	1.03	691.29	2.458E-004	29.03	
	375.07	Y	138	25	1.28	751.44	2.329E-004	10.27	
	392.68		55	8	1.40	786.63	2.256E-004	15.62	
	413.78	Y	113	15	1.43	828.80	2.173E-004	10.94	

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 -	1.38E-001 +- 6.33E-003

Beta: -1.07E+001 +- 1.84E+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\00000381_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P014_S014

Acquisition Start: 5/5/2009 3:32:43 PM
Elapsed Live Time: 119.06 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.204 +/- 0.0098
SE-75	264.66	0.327 +/- 0.0058
SE-75	279.54	0.338 +/- 0.0063
SE-75	400.66	0.395 +/- 0.0076

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 3:13:48 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
	59.64	Y	3729	515	1.09	121.13	4.723E-006	2.16	
M	98.84	Y	514	468	1.12	199.46	1.315E-004	5.28	7.63
m	103.27	Y	269	370	1.13	208.30	1.533E-004	7.28	
	111.19		105	248	1.08	224.13	1.915E-004	24.37	
	129.38	Y	520	164	1.15	260.48	2.653E-004	5.74	
	208.05	Y	109	140	1.30	417.70	3.533E-004	19.35	
	311.95	Y	104	38	1.34	625.32	2.720E-004	13.50	
	344.94		40	26	1.04	691.24	2.481E-004	24.37	
	374.86	Y	145	26	1.65	751.03	2.296E-004	10.02	
	413.74	Y	135	11	1.23	828.72	2.095E-004	9.47	

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	1.77E-001 +- 1.94E-002	1.25E-001 +- 6.12E-003

Beta: 5.99E+001 +- 1.87E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 3

Energy	Mass (g)
129.30	1.11E-001 +- 7.49E-003
375.05	1.46E-001 +- 1.49E-002
413.71	1.57E-001 +- 1.53E-002

Segment 15 Results

Segment: 15 Detector: DET01 Position: 15
C:\Canberra\NDA2k\Data\00000381_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P015_S015

Acquisition Start: 5/5/2009 3:35:54 PM
Elapsed Live Time: 119.22 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.253 +/- 0.0107
SE-75	264.66	0.356 +/- 0.0063
SE-75	279.54	0.366 +/- 0.0068
SE-75	400.66	0.417 +/- 0.0080

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 3:13:52 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
	59.61	Y	1363	232	1.12	121.07	4.317E-006	3.34	
	98.85		146	290	1.41	199.48	1.357E-004	19.03	
M	125.38	Y	42	73	0.79	252.50	2.628E-004	27.62	1.41
m	129.36	Y	195	81	0.80	260.45	2.776E-004	19.82	
	208.00	Y	40	90	1.14	417.59	3.538E-004	40.23	
	311.98	Y	28	30	0.84	625.37	2.644E-004	34.97	
	375.09	Y	42	24	1.05	751.49	2.229E-004	22.89	
	413.68	Y	57	10	0.97	828.60	2.043E-004	15.55	

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	6.54E-002 +- 1.44E-002	4.81E-002 +- 5.40E-003

Beta: 6.57E+001 +- 4.68E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 3

Energy	Mass (g)
129.30	3.98E-002 +- 8.02E-003
375.05	4.33E-002 +- 9.96E-003
413.71	6.83E-002 +- 1.07E-002

Segment 16 Results

Segment: 16 Detector: DET01 Position: 16
C:\Canberra\NDA2k\Data\00000381_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P016_S016

Acquisition Start: 5/5/2009 3:39:05 PM
Elapsed Live Time: 119.32 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Galv 23.8 1.75"
Calibration Date: 3/16/2009 1:39:35 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.440 +/- 0.0149
SE-75	264.66	0.569 +/- 0.0102
SE-75	279.54	0.581 +/- 0.0107
SE-75	400.66	0.627 +/- 0.0118

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 3:13:58 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
59.75	Y	241	84	1.09	121.34	1.041E-004	8.57	

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 **********

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	8.55E+000 +- 2.96E-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	< 3.182E-002 +/-	2.3%	< 1.054E-006	< 1.467E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 3.686E-002 +/-	2.2%	< 1.220E-006	< 5.823E-012
	Al-26	< 5.902E-002 +/-	18.0%	< 1.954E-006	< 3.105E-006
	K-40	< 5.720E-001 +/-	5.6%	< 1.894E-005	< 8.922E-002
	Co-57	< 2.117E-001 +/-	6.5%	< 7.010E-006	< 2.477E-011
	Co-60	< 5.391E-002 +/-	2.9%	< 1.785E-006	< 4.728E-011
	Se-75	< 5.278E-002 +/-	1.9%	< 1.748E-006	< 3.632E-012
	Kr-85	< 6.596E+000 +/-	3.2%	< 2.184E-004	< 1.662E-008
	Sr-90	1.846E-001 +/-	15.0%	6.114E-006	1.339E-009
	Sb-125	< 7.243E-002 +/-	2.1%	< 2.398E-006	< 6.968E-011
	Ba-133	< 4.637E-002 +/-	1.8%	< 1.535E-006	< 1.832E-010
	Cs-134	< 2.910E-002 +/-	2.1%	< 9.634E-007	< 2.220E-011
?	Cs-137	1.846E-001 +/-	15.0%	6.114E-006	2.105E-009
	Eu-152	< 8.756E-002 +/-	2.6%	< 2.899E-006	< 4.921E-010
	Eu-154	< 1.052E-001 +/-	2.4%	< 3.485E-006	< 3.947E-010
	Ho-166m	< 3.724E-002 +/-	2.6%	< 1.233E-006	< 2.070E-008
	Bi-207	< 2.375E-002 +/-	2.8%	< 7.864E-007	< 4.322E-010
	Pb-210	< 7.512E+003 +/-	309.7%	< 2.487E-001	< 9.766E-005
	Ra-226	< 5.653E-002 +/-	2.4%	< 1.872E-006	< 5.653E-008
	Ac-227	< 1.835E-001 +/-	8.3%	< 6.077E-006	< 2.514E-009
	Th-230	< 8.720E+001 +/-	8.6%	< 2.887E-003	< 4.273E-003
	Pa-231	< 1.518E+000 +/-	6.0%	< 5.026E-005	< 3.172E-005

Th-232	< 6.793E-002	+/-	2.3%	< 2.249E-006	< 6.121E-001
U-232	< 6.793E-002	+/-	2.3%	< 2.249E-006	< 3.145E-009
U-233	< 6.220E+002	+/-	4.0%	< 2.060E-002	< 6.344E-002
Pa-234	< 1.800E-001	+/-	12.3%	< 5.959E-006	
Pa-234m	< 2.559E+002	+/-	2.3%	< 8.474E-003	
U-234	< 0.000E+000	+/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 5.569E-002	+/-	2.5%	< 1.844E-006	< 2.545E-002
Np-237	1.012E+001	+/-	2.0%	3.352E-004	1.417E-002
Pu-238	< 4.133E+003	+/-	2.7%	< 1.368E-001	< 2.389E-004
U-238	< 3.487E+000	+/-	2.4%	< 1.155E-004	< 1.025E+001
Pu-239	5.380E+005	+/-	3.5%	1.782E+001	8.555E+000
Pu-239B	1.756E+004	+/-	9.8%	5.814E-001	2.791E-001
U-239	< 4.493E+004	+/-	368.5%	< 1.488E+000	
Pu-240	< 7.887E+003	+/-	6.5%	< 2.612E-001	< 3.431E-002
Am-241	6.863E+004	+/-	10.9%	2.272E+000	1.976E-002
Am-241B	5.768E+004	+/-	4.6%	1.910E+000	1.661E-002
Pu-241	< 2.205E+004	+/-	2.8%	< 7.302E-001	< 2.121E-004
Pu-241B	2.947E+005	+/-	6.0%	9.759E+000	2.835E-003
Pu-242	< 0.000E+000	+/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 2.290E-001	+/-	1.9%	< 7.583E-006	< 1.134E-006
Cm-243	< 2.362E-001	+/-	3.4%	< 7.821E-006	< 4.535E-009
Cm-244	< 2.843E+004	+/-	14.1%	< 9.413E-001	< 3.468E-004
Cm-245	< 3.487E-001	+/-	8.4%	< 1.155E-005	< 2.005E-006
Cm-247	< 4.624E-002	+/-	8.6%	< 1.531E-006	< 4.948E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 3.873E-002 +/-	3.5%	< 1.282E-006	< 9.372E-009
Cf-251	< 1.925E-001 +/-	5.6%	< 6.375E-006	< 1.203E-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

********** 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: LL85201616TRU Analysis Date: 5/5/2009

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

Net Weight	30200.0 g		
Pu mass	9.06E+000	+- 1.52E+000	g
TRU Alpha Activity	7.47E-001	+- 9.90E-002	Ci
TRU Activity Concentration	2.47E+004	+- 3.28E+003	nCi/g
Pu-239 Equivalent Activity	7.65E-001	+- 9.91E-002	Ci
Pu-239 FGE	8.59E+000	+- 1.52E+000	g
Decay heat	2.34E-002	+- 3.08E-003	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	1.34E-009	1.85E-007	4.24E-008	0.00E+000
CS137	2.11E-009	1.85E-007	4.24E-008	5.59E-008
U233	<LLD	<LLD	0.00E+000	6.22E-004
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	5.57E-008
NP237	1.42E-002	1.01E-005	1.77E-006	1.19E-007
PU238	1.53E-003	2.64E-002	7.89E-003	1.62E-004
U238	<LLD	<LLD	0.00E+000	3.49E-006
PU239	8.55E+000	5.38E-001	9.54E-002	3.29E-003
PU240	4.94E-001	1.14E-001	2.11E-002	6.96E-004
AM241	1.98E-002	6.86E-002	1.41E-002	9.18E-005
PU241	1.02E-002	1.06E+000	2.03E-001	6.52E-003
PU242	3.04E-003	1.21E-005	2.58E-006	0.00E+000

Errors quoted at 1.000 sigma

Operator: Robert J Haslett Jr Date: 6-3-09

ITR: _____ Date: _____

Summed Segment Spectra Results
Category: Segmented

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Elapsed Live Time: 118.91 sec Elapsed Real Time: 120.00 sec

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

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 8.581E-002 +/-	1.0%	< 2.841E-006	< 3.956E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 8.361E-002 +/-	1.2%	< 2.768E-006	< 1.321E-011
	Al-26	< 8.322E-002 +/-	7.6%	< 2.756E-006	< 4.377E-006
	K-40	1.665E+000 +/-	16.8%	5.512E-005	2.597E-001
	Co-57	< 2.840E-001 +/-	1.7%	< 9.404E-006	< 3.323E-011
	Co-60	2.472E-001 +/-	9.7%	8.187E-006	2.168E-010
	Se-75	< 2.057E-001 +/-	1.0%	< 6.813E-006	< 1.416E-011
	Kr-85	< 2.430E+001 +/-	2.5%	< 8.046E-004	< 6.124E-008
	Sr-90	< 1.025E-001 +/-	0.9%	< 3.394E-006	< 7.432E-010
	Sb-125	< 2.494E-001 +/-	1.4%	< 8.257E-006	< 2.399E-010
	Ba-133	< 1.600E-001 +/-	0.9%	< 5.297E-006	< 6.319E-010
	Cs-134	< 7.802E-002 +/-	0.9%	< 2.584E-006	< 5.953E-011
X	Cs-137				
	Eu-152	< 3.664E-001 +/-	2.0%	< 1.213E-005	< 2.059E-009
	Eu-154	< 2.387E-001 +/-	1.4%	< 7.903E-006	< 8.951E-010
	Ho-166m	< 1.230E-001 +/-	1.7%	< 4.073E-006	< 6.839E-008
	Bi-207	< 7.701E-002 +/-	0.9%	< 2.550E-006	< 1.402E-009
	Pb-210	< 4.484E+003 +/-	11.7%	< 1.485E-001	< 5.829E-005
	Ra-226	< 1.740E-001 +/-	1.4%	< 5.761E-006	< 1.740E-007
	Ac-227	< 7.342E-001 +/-	8.2%	< 2.431E-005	< 1.006E-008
	Th-230	< 3.530E+002 +/-	8.2%	< 1.169E-002	< 1.730E-002
	Pa-231	< 4.606E+000 +/-	11.1%	< 1.525E-004	< 9.627E-005
	Th-232	< 2.444E-001 +/-	1.2%	< 8.092E-006	< 2.202E+000
	U-232	< 2.444E-001 +/-	1.2%	< 8.092E-006	< 1.131E-008
	U-233	< 2.635E+003 +/-	1.4%	< 8.725E-002	< 2.688E-001
	Pa-234	< 4.832E-001 +/-	12.1%	< 1.600E-005	
	Pa-234m	< 6.104E+002 +/-	1.5%	< 2.021E-002	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 2.296E-001 +/-	1.7%	< 7.603E-006	< 1.049E-001
	Np-237	9.235E+000 +/-	2.2%	3.058E-004	1.293E-002
	Pu-238	< 1.679E+004 +/-	1.5%	< 5.560E-001	< 9.706E-004
	U-238	< 8.598E+000 +/-	1.6%	< 2.847E-004	< 2.528E+001
	Pu-239	3.774E+005 +/-	3.3%	1.250E+001	6.001E+000
	Pu-239B	< 1.408E+004 +/-	3.3%	< 4.661E-001	< 2.238E-001
	U-239	< 1.109E+004 +/-	15.5%	< 3.673E-001	
X	Pu-240				
	Am-241	5.518E+004 +/-	13.3%	1.827E+000	1.589E-002
	Am-241B	4.615E+004 +/-	3.2%	1.528E+000	1.329E-002
	Pu-241	< 9.036E+004 +/-	1.7%	< 2.992E+000	< 8.693E-004
	Pu-241B	2.223E+005 +/-	7.6%	7.360E+000	2.138E-003

Pu-242	< 0.000E+000 +/- 0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 8.221E-001 +/- 1.1%	< 2.722E-005	< 4.069E-006
Cm-243	< 8.479E-001 +/- 3.0%	< 2.808E-005	< 1.628E-008
Cm-244	< 9.341E+004 +/- 14.0%	< 3.093E+000	< 1.140E-003
Cm-245	< 1.391E+000 +/- 7.4%	< 4.607E-005	< 7.999E-006
Cm-247	< 1.538E-001 +/- 8.4%	< 5.093E-006	< 1.646E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.282E-001 +/-	3.2%	< 4.243E-006	< 3.101E-008
Cf-251	< 7.817E-001 +/-	5.3%	< 2.588E-005	< 4.886E-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	6.00E+000 +- 1.96E-001	8.80E-001 +- 1.66E-002

Beta: 2.77E+002 +- 6.11E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	7.10E-001 +- 1.73E-002
203.55	1.30E+000 +- 1.18E-001
375.05	3.07E+000 +- 1.60E-001
413.71	3.06E+000 +- 6.95E-002

********** 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: LL85201616TRU Analysis Date: 5/5/2009

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

Net Weight	30200.0 g		
Pu mass	6.36E+000	+-	1.06E+000 g
TRU Alpha Activity	5.31E-001	+-	6.97E-002 Ci
TRU Activity Concentration	1.76E+004	+-	2.31E+003 nCi/g
Pu-239 Equivalent Activity	5.44E-001	+-	6.97E-002 Ci
Pu-239 FGE	6.03E+000	+-	1.06E+000 g
Decay heat	1.67E-002	+-	2.17E-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	1.03E-007
U233	<LLD	<LLD	0.00E+000	2.64E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.30E-007
NP237	1.29E-002	9.24E-006	1.62E-006	3.30E-007
PU238	1.07E-003	1.85E-002	5.53E-003	1.47E-004
U238	<LLD	<LLD	0.00E+000	8.60E-006
PU239	6.00E+000	3.77E-001	6.68E-002	3.00E-003
PU240	3.47E-001	7.97E-002	1.48E-002	6.34E-004
AM241	1.59E-002	5.52E-002	1.21E-002	3.72E-005
PU241	7.19E-003	7.47E-001	1.42E-001	5.94E-003
PU242	2.13E-003	8.46E-006	1.81E-006	0.00E+000

Errors quoted at 1.000 sigma

Operator: Robert J Hurlett Date: 6-3-09

ITR: Philip Coutts Date: 6/12/09

Automated Independent Technical Review

Counter ID: SGS with Trans. Count Type: Assay - 55 Gal Galv 23.8
Container ID: LL85201616TRU Assay Date: 5/5/2009
Waste Matrix Code:
Sequence Number: 381

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

Source of results is undefined. OK

DISPOSITION:

MGA Analysis:

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
Spectrum Validity Check engine has suggested data review.
Pu-239/Np-237 ratio is less than the lower limit of 85.00 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 Analysis Warnings: OK No Activity,
Reference Peak Error 5: The reference peak correction was less than 1.

DISPOSITION:

Miscellaneous:

DISPOSITION:

Expert Review by: Robert J Haslett Jr Date: 6-3-09

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:	LL85201616TRU	Analysis Date:	5/5/2009

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

MGA version: MGA V9.63H CI

Measurement date = 5/5/09 Declared date = 5/5/09
Low energy spectrum sensitivity = 30.0% Total counts = 4.735E+005
High energy spectrum sensitivity : 10.0%

Pu g/cm2 = 0.5002 Cd g/cm2 = 1.7869 FWHM at 122 keV = 603 eV
QFIT = 1.04 FWHM at 208 keV = 735 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	0.000178	24.7	24.5	0.1490	25.9	0.01684	24.05	0.01833	26.17
Pu-239	1.000000	0.0	2.4	835.1215	7.0	94.38197	0.31	94.30278	0.31
Pu-240	0.057793	5.9	5.3	48.2643	8.5	5.45463	5.41	5.45460	5.41
Pu-241	0.001197	7.1	6.4	1.0000	0.0	0.11302	6.89	0.19079	11.63
Pu-242	(New alg.)			0.2967(12)		0.03354 (12)		0.03350 (11)	
Am-241	0.007506	2.7	1.6	6.2685	6.7	0.70844	2.57	0.72008	2.61

Pu-240 effective (meas. date) = 5.553 +/- 5.78%
Am-241 separated about 42.134 +/- 0.707 years ago
Am/Pu-241 weight ratio = 6.26848 +/- 6.59%

Messages:

Lead x-rays detected.
Pu-241/Pu-239 efficiency changed in MGACAL by 5%. ok

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

Reviewed by: Robert J Haskett Jr Date: 6-3-09

NDA 2000 Assay Report

Item Information

Item ID:	Background	Count Sequence Number:	382
Operator:	RHWM2\RHWM		
Assay Start:	5/6/2009 7:45:27 AM		
Description 1:	Background		
Description 2:			
Location:	LLNL		
Comment:			
Matrix Type:	Lucite		
Container Type:	55 Gal Galv 23.8		
Weight:	Gross: 0.0 kg	Net:	0.0 kg
Container:	Volume: 208.0 l	Full:	100.0 %
Density:	0.000 kg /l		

System Configuration

Counter:	SGS with Trans.		
Efficiency Description:	062308 Carbon Steel Eff.		
Segments:	Number: 16	Offset:	0
Scanning Platform:	Start: 934 mm	Delta:	-51 mm
Count Type:	BKG - 55 Gal Galv 23.8#		
Collimator/Geometry Setting:	Default - 0		
Transmission Mode:	No Transmission		

Errors quoted at 1.000 sigma

Segment 8 Results

Segment: 8 Detector: DET01 Position: 8
C:\Canberra\NDA2k\Data\00000382_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P008_S008

Acquisition Start: 5/6/2009 7:45:27 AM
Elapsed Live Time: 298.35 sec Elapsed Real Time: 300.00 sec

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

Peak Analysis Performed on: 5/6/2009 7:50:28 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
59.61		53	67	0.84	121.06	1.503E-004	26.11	
400.64		112	26	1.14	802.55	3.313E-004	11.76	
558.02		28	14	1.03	1117.04	2.409E-004	27.49	
1115.94		19	8	0.67	2231.92	1.315E-004	32.17	
1292.07		24	1	1.03	2583.88	1.214E-004	21.45	
1332.37		27	8	0.93	2664.41	1.198E-004	24.89	
2234.77		29950	17	1.05	4467.67	1.187E-004	1.00	

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

Reviewed by: _____ Date: _____

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

Last Results Report
5/6/09 7:50:30 AM

QA File: C:\CANBERRA\NDA2K\QA\CNTR0001_DC
Sample ID: Background
Sample Quantity: 1.0000E+000
Sample Date: 5/6/09 7:43:59 AM
Measurement Date: 5/6/09 7:45:27 AM
Elapsed Live Time: 298.3 seconds
Elapsed Real Time: 300.0 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
Background Count Rate [0.00+/-0.00]	1.3230E+002	0.00 < : : : >
Pulser Channel 4467 cent [0.00+/-0.00]	4.4677E+003	0.00 < : : : >
Pulser Channel 4467 FWHM [0.00+/-0.00]	1.0484E+000	0.00 < : : : >
Pulser Channel 4467 cps [0.00+/-0.00]	9.9834E+001	0.00 < : : : >

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:	Background	Count Sequence Number:	383
Operator:	RHWM2\RHWM		
Assay Start:	5/6/2009 7:57:36 AM		
Description 1:	Background		
Description 2:			
Location:	LLNL		
Comment:			
Matrix Type:	Lucite		
Container Type:	55 Gal Carbon St		
Weight:	Gross: 0.0 kg	Net:	0.0 kg
Container:	Volume: 208.0 l	Full:	100.0 %
Density:	0.000 kg /l		

System Configuration

Counter:	SGS with Trans.		
Efficiency Description:	062308 Carbon Steel Eff.		
Segments:	Number: 16	Offset:	0
Scanning Platform:	Start: 934 mm	Delta:	-51 mm
Count Type:	BKG - 55 Carbon Steel		
Collimator/Geometry Setting:	Default - 0		
Transmission Mode:	No Transmission		

Errors quoted at 1.000 sigma

Segment 8 Results

Segment: 8 Detector: DET01 Position: 8
C:\Canberra\NDA2k\Data\00000383_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P008_S008

Acquisition Start: 5/6/2009 7:57:36 AM
Elapsed Live Time: 298.37 sec Elapsed Real Time: 300.00 sec

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

Peak Analysis Performed on: 5/6/2009 8:02:37 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
400.80		86	36	0.93	802.86	3.311E-004	15.44	
1116.22		15	6	0.98	2232.47	1.315E-004	34.64	
1173.62		29	3	1.27	2347.17	1.276E-004	20.98	
1332.95		33	6	1.47	2665.57	1.198E-004	20.79	
2234.77		29950	11	1.07	4467.67	1.187E-004	1.00	

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

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
5/6/09 8:02:40 AM

QA File: C:\CANBERRA\NDA2K\QA\CNTR0001_DC
Sample ID: Background
Sample Quantity: 1.0000E+000
Sample Date: 5/6/09 7:56:08 AM
Measurement Date: 5/6/09 7:57:36 AM
Elapsed Live Time: 298.4 seconds
Elapsed Real Time: 300.0 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
Background Count Rate [0.00+/-0.00]	1.3301E+002	0.00 < : : : : >
Pulser Channel 4467 cent [0.00+/-0.00]	4.4677E+003	0.00 < : : : : >
Pulser Channel 4467 FWHM [0.00+/-0.00]	1.0697E+000	0.00 < : : : : >
Pulser Channel 4467 cps [0.00+/-0.00]	9.9834E+001	0.00 < : : : : >

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:	384	
Operator:	RHWM2\RHWM				
Assay Start:	5/6/2009 8:10:38 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\00000384_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P001_S001

Acquisition Start: 5/6/2009 8:11:39 AM
Elapsed Live Time: 118.16 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.235 +/- 0.0127
SE-75	264.66	0.391 +/- 0.0070
SE-75	279.54	0.398 +/- 0.0075
SE-75	400.66	0.456 +/- 0.0088

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 5/6/2009 8:13:41 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
59.49	Y	703	785	1.25	120.82	5.301E-006	7.26	
2234.74		11980	3	1.11	4467.60	4.472E-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	< 3.707E-002 +/-	2.1%	< 3.531E-005	< 1.709E-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	< 4.812E-001 +/-	5.3%	< 4.583E-004	< 7.507E-002
Co-57	< 1.289E-001 +/-	3.4%	< 1.228E-004	< 1.508E-011
Co-60	< 4.280E-002 +/-	1.9%	< 4.076E-005	< 3.754E-011
Se-75	< 1.018E-001 +/-	1.9%	< 9.691E-005	< 7.001E-012
Kr-85	< 8.325E+000 +/-	3.2%	< 7.928E-003	< 2.098E-008
Sr-90	< 2.752E-002 +/-	2.1%	< 2.621E-005	< 1.995E-010
Sb-125	< 8.743E-002 +/-	2.3%	< 8.327E-005	< 8.411E-011
Ba-133	< 5.804E-002 +/-	1.8%	< 5.528E-005	< 2.293E-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	< 8.704E-002 +/-	2.4%	< 8.290E-005	< 3.264E-010
Ho-166m	< 4.514E-002 +/-	2.4%	< 4.299E-005	< 2.510E-008
Bi-207	< 2.873E-002 +/-	2.1%	< 2.736E-005	< 5.229E-010
Pb-210	< 9.232E+002 +/-	47.8%	< 8.792E-001	< 1.200E-005
Ra-226	< 5.981E-002 +/-	2.4%	< 5.696E-005	< 5.981E-008
Ac-227	< 3.323E-001 +/-	8.3%	< 3.165E-004	< 4.553E-009
Th-230	< 1.564E+002 +/-	8.6%	< 1.490E-001	< 7.666E-003
Pa-231	< 2.015E+000 +/-	11.2%	< 1.919E-003	< 4.212E-005
Th-232	< 7.838E-002 +/-	2.3%	< 7.465E-005	< 7.062E-001
U-232	< 7.838E-002 +/-	2.3%	< 7.465E-005	< 3.629E-009
U-233	< 1.147E+003 +/-	2.7%	< 1.092E+000	< 1.170E-001
Pa-234	< 2.194E-001 +/-	12.3%	< 2.089E-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	< 1.064E-001 +/-	2.5%	< 1.014E-004	< 4.864E-002
Np-237	< 1.503E-001 +/-	2.0%	< 1.432E-004	< 2.104E-004
Pu-238	< 7.620E+003 +/-	2.7%	< 7.257E+000	< 4.404E-004
U-238	< 2.716E+000 +/-	2.4%	< 2.586E-003	< 7.984E+000
Pu-239	< 1.422E+003 +/-	3.1%	< 1.355E+000	< 2.262E-002
Pu-239B	< 4.230E+003 +/-	5.2%	< 4.029E+000	< 6.725E-002
U-239	< 1.924E+003 +/-	59.1%	< 1.833E+000	
Pu-240	< 2.583E+003 +/-	4.6%	< 2.460E+000	< 1.124E-002
Am-241	8.321E+001 +/-	21.8%	7.925E-002	2.397E-005
Am-241B	< 9.743E+002 +/-	4.9%	< 9.279E-001	< 2.806E-004
Pu-241	< 3.993E+004 +/-	2.8%	< 3.802E+001	< 3.841E-004
Pu-241B	< 1.092E+004 +/-	2.5%	< 1.040E+001	< 1.050E-004
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 4.324E-001 +/-	1.9%	< 4.118E-004	< 2.140E-006
Cm-243	< 4.460E-001 +/-	3.4%	< 4.247E-004	< 8.562E-009
Cm-244	< 3.590E+004 +/-	14.1%	< 3.419E+001	< 4.379E-004
Cm-245	< 6.927E-001 +/-	7.7%	< 6.597E-004	< 3.983E-006
Cm-247	< 4.491E-002 +/-	8.6%	< 4.277E-005	< 4.805E-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	< 3.534E-001 +/-	5.6%	< 3.366E-004	< 2.209E-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\00000384_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P002_S002

Acquisition Start: 5/6/2009 8:14:53 AM
Elapsed Live Time: 117.71 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.312 +/- 0.0144
SE-75	264.66	0.456 +/- 0.0081
SE-75	279.54	0.465 +/- 0.0087
SE-75	400.66	0.521 +/- 0.0100

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 5/6/2009 8:16:54 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	1557	1104	1.34	120.85	1.044E-004	4.25	
2234.73		11980	0	1.11	4467.58	1.048E-004	1.42	

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	< 2.731E-002 +/-	1.8%	< 2.601E-005	< 1.259E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.106E-002 +/-	2.0%	< 2.006E-005	< 3.327E-012
Al-26	< 1.963E-002 +/-	15.5%	< 1.870E-005	< 1.033E-006
K-40	< 2.326E-001 +/-	4.9%	< 2.216E-004	< 3.629E-002
Co-57	< 1.072E-001 +/-	3.5%	< 1.021E-004	< 1.255E-011
Co-60	< 3.393E-002 +/-	1.7%	< 3.231E-005	< 2.976E-011
Se-75	< 8.072E-002 +/-	1.9%	< 7.688E-005	< 5.554E-012
Kr-85	< 5.093E+000 +/-	3.1%	< 4.851E-003	< 1.283E-008
Sr-90	< 2.363E-002 +/-	2.0%	< 2.250E-005	< 1.713E-010
Sb-125	< 6.371E-002 +/-	2.1%	< 6.068E-005	< 6.129E-011
Ba-133	< 6.326E-002 +/-	1.7%	< 6.024E-005	< 2.499E-010
Cs-134	< 1.804E-002 +/-	2.0%	< 1.718E-005	< 1.376E-011
Cs-137	< 2.363E-002 +/-	2.0%	< 2.250E-005	< 2.693E-010
Eu-152	< 7.126E-002 +/-	3.7%	< 6.786E-005	< 4.005E-010
Eu-154	< 6.013E-002 +/-	2.2%	< 5.727E-005	< 2.255E-010
Ho-166m	< 3.364E-002 +/-	2.3%	< 3.204E-005	< 1.870E-008
Bi-207	< 1.617E-002 +/-	2.1%	< 1.540E-005	< 2.943E-010
Pb-210	< 7.285E+000 +/-	81.7%	< 6.938E-003	< 9.470E-008
Ra-226	< 4.922E-002 +/-	2.3%	< 4.688E-005	< 4.922E-008
Ac-227	< 2.902E-001 +/-	8.3%	< 2.764E-004	< 3.976E-009
Th-230	< 3.629E+001 +/-	25.1%	< 3.456E-002	< 1.778E-003
Pa-231	< 1.858E+000 +/-	11.2%	< 1.770E-003	< 3.883E-005
Th-232	< 5.326E-002 +/-	2.2%	< 5.073E-005	< 4.799E-001
U-232	< 5.326E-002 +/-	2.2%	< 5.073E-005	< 2.466E-009
U-233	< 1.067E+003 +/-	2.7%	< 1.016E+000	< 1.088E-001
Pa-234	< 1.227E-001 +/-	12.2%	< 1.169E-004	
Pa-234m	< 1.148E+002 +/-	2.1%	< 1.094E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 1.121E-001 +/-	2.5%	< 1.068E-004	< 5.122E-002
Np-237	< 1.365E-001 +/-	2.0%	< 1.300E-004	< 1.911E-004
Pu-238	< 7.354E+003 +/-	2.7%	< 7.004E+000	< 4.250E-004
U-238	< 2.824E+000 +/-	2.1%	< 2.690E-003	< 8.304E+000
Pu-239	< 1.299E+003 +/-	3.2%	< 1.237E+000	< 2.065E-002
Pu-239B	< 2.662E+003 +/-	6.4%	< 2.535E+000	< 4.232E-002
U-239	< 9.074E+000 +/-	98.9%	< 8.642E-003	
Pu-240	< 1.755E+003 +/-	5.4%	< 1.671E+000	< 7.633E-003
Am-241	9.355E+000 +/-	37.9%	8.909E-003	2.694E-006
Am-241B	< 6.530E+002 +/-	5.7%	< 6.219E-001	< 1.881E-004
Pu-241	< 3.703E+004 +/-	2.9%	< 3.527E+001	< 3.562E-004
Pu-241B	< 1.087E+004 +/-	2.5%	< 1.035E+001	< 1.046E-004
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.992E-001 +/-	16.6%	< 1.897E-004	< 9.862E-007
Cm-243	< 3.639E-001 +/-	3.4%	< 3.466E-004	< 6.987E-009
Cm-244	< 2.757E+004 +/-	14.1%	< 2.625E+001	< 3.363E-004
Cm-245	< 6.919E-001 +/-	7.7%	< 6.589E-004	< 3.978E-006
Cm-247	< 3.620E-002 +/-	8.5%	< 3.447E-005	< 3.873E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 3.896E-002 +/-	3.5%	< 3.711E-005	< 9.429E-009
Cf-251	< 3.693E-001 +/-	5.6%	< 3.517E-004	< 2.308E-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\00000384_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P003_S003

Acquisition Start: 5/6/2009 8:18:04 AM
Elapsed Live Time: 114.71 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.281 +/- 0.0143
SE-75	264.66	0.400 +/- 0.0072
SE-75	279.54	0.407 +/- 0.0077
SE-75	400.66	0.468 +/- 0.0091

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 5/6/2009 8:20:05 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
	59.48	Y	9062	2372	1.08	120.81	8.125E-005	1.74	
	67.25	Y	89	1227	0.95	136.32	1.090E-004	56.88	
M	94.72		2100	5874	1.54	191.23	2.062E-004	5.90	9.46
m	98.76	Y	7768	9118	1.55	199.30	2.188E-004	4.25	
m	100.89	Y	897	9079	1.55	203.56	2.251E-004	8.99	
m	103.36	Y	5043	7393	1.56	208.49	2.323E-004	4.23	
M	111.14		2089	3893	1.56	224.04	2.531E-004	3.06	3.84
m	114.56	Y	1487	6841	1.57	230.87	2.614E-004	4.23	
m	116.70	Y	1423	6748	1.57	235.14	2.663E-004	4.34	
M	125.33	Y	540	2072	1.02	252.40	2.842E-004	7.70	2.14
m	129.36	Y	3519	2597	1.02	260.45	2.915E-004	2.30	
	148.71	Y	451	2348	1.32	299.10	3.209E-004	17.27	
	195.72		262	1865	0.85	393.06	3.490E-004	26.80	
M	203.57	Y	768	1529	1.13	408.75	3.492E-004	4.98	1.82

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	208.05	Y	2683	1463	1.13	417.70	3.488E-004	2.42	
	311.95	Y	150	830	1.19	625.32	3.006E-004	32.24	
M	332.76	Y	951	586	1.40	666.89	2.883E-004	11.18	1.77
m	335.81	Y	438	678	1.41	672.99	2.865E-004	11.47	
	344.96		764	518	1.35	691.27	2.811E-004	6.00	
M	375.10	Y	2398	283	1.30	751.50	2.641E-004	2.34	1.91
m	380.19		415	243	1.31	761.67	2.614E-004	5.63	
m	382.76		388	223	1.31	766.81	2.600E-004	5.80	
	392.90		790	214	1.46	787.07	2.546E-004	4.89	
	413.75	Y	2138	103	1.32	828.74	2.440E-004	2.59	
M	422.67		136	68	1.04	846.56	2.396E-004	10.24	1.00
m	426.56	Y	31	64	1.04	854.34	2.378E-004	25.37	
	451.50		221	54	1.54	904.17	2.264E-004	8.81	
	662.44	Y	98	18	1.82	1325.69	1.608E-004	12.64	
	721.89	Y	54	15	1.30	1444.49	1.493E-004	18.41	
	2234.75		11980	16	1.09	4467.63	8.575E-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	< 2.163E-002 +/-	1.8%	< 2.060E-005	< 9.972E-016
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 1.455E-002 +/-	2.0%	< 1.386E-005	< 2.299E-012
	Al-26	< 2.480E-002 +/-	18.9%	< 2.362E-005	< 1.304E-006
	K-40	< 2.390E-001 +/-	5.3%	< 2.276E-004	< 3.729E-002
	Co-57	< 1.510E-001 +/-	4.4%	< 1.438E-004	< 1.766E-011
	Co-60	< 3.901E-002 +/-	1.7%	< 3.715E-005	< 3.421E-011
	Se-75	< 1.188E-001 +/-	1.8%	< 1.131E-004	< 8.173E-012
	Kr-85	< 7.416E+000 +/-	3.1%	< 7.063E-003	< 1.869E-008
	Sr-90	< 4.245E-002 +/-	2.2%	< 4.043E-005	< 3.077E-010
	Sb-125	< 1.177E-001 +/-	1.9%	< 1.121E-004	< 1.132E-010
	Ba-133	< 9.650E-002 +/-	1.6%	< 9.191E-005	< 3.812E-010
	Cs-134	< 2.282E-002 +/-	1.9%	< 2.173E-005	< 1.741E-011
X	Cs-137				
	Eu-152	< 9.712E-002 +/-	2.2%	< 9.249E-005	< 5.458E-010
	Eu-154	< 4.156E-002 +/-	2.1%	< 3.958E-005	< 1.558E-010
	Ho-166m	< 6.546E-003 +/-	2.3%	< 6.235E-006	< 3.640E-009
	Bi-207	< 2.547E-002 +/-	2.1%	< 2.426E-005	< 4.636E-010
	Pb-210	< 1.310E+001 +/-	259.0%	< 1.248E-002	< 1.704E-007
	Ra-226	< 6.005E-002 +/-	2.4%	< 5.719E-005	< 6.005E-008
	Ac-227	< 4.039E-001 +/-	8.3%	< 3.847E-004	< 5.534E-009

	Th-230	4.828E+001	+/- 102.3%	4.598E-002		2.366E-003
	Pa-231	< 2.374E+000	+/- 11.2%	< 2.261E-003	<	4.961E-005
	Th-232	< 9.319E-002	+/- 2.3%	< 8.875E-005	<	8.396E-001
	U-232	< 9.319E-002	+/- 2.3%	< 8.875E-005	<	4.314E-009
	U-233	< 1.524E+003	+/- 3.0%	< 1.452E+000	<	1.555E-001
	Pa-234	< 8.819E-002	+/- 12.1%	< 8.400E-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	< 1.426E-001	+/- 2.9%	< 1.358E-004	<	6.517E-002
	Np-237	2.912E-001	+/- 32.3%	2.773E-004		4.077E-004
	Pu-238	< 9.588E+003	+/- 3.1%	< 9.131E+000	<	5.542E-004
	U-238	< 2.413E+000	+/- 2.2%	< 2.298E-003	<	7.095E+000
	Pu-239	2.309E+005	+/- 3.9%	2.200E+002		3.672E+000
	Pu-239B	< 5.594E+003	+/- 16.5%	< 5.328E+000	<	8.893E-002
	U-239	< 1.992E+001	+/- 308.4%	< 1.897E-002		
X	Pu-240					
	Am-241	3.869E+004	+/- 10.7%	3.684E+001		1.114E-002
	Am-241B	2.887E+004	+/- 10.3%	2.750E+001		8.315E-003
	Pu-241	1.705E+005	+/- 17.6%	1.623E+002		1.640E-003
	Pu-241B	3.335E+005	+/- 3.6%	3.176E+002		3.208E-003
	Pu-242	< 0.000E+000	+/- 0.0%	< 0.000E+000	<	0.000E+000
	Am-243	< 3.220E-001	+/- 57.7%	< 3.066E-004	<	1.594E-006
	Cm-243	< 4.760E-001	+/- 3.3%	< 4.534E-004	<	9.140E-009
	Cm-244	< 3.123E+004	+/- 14.2%	< 2.975E+001	<	3.810E-004
	Cm-245	< 8.779E-001	+/- 7.8%	< 8.361E-004	<	5.048E-006
	Cm-247	< 5.876E-002	+/- 8.5%	< 5.596E-005	<	6.287E-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	< 4.956E-001 +/-	5.8%	< 4.720E-004	< 3.097E-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	3.67E+000 +- 1.42E-001	1.15E+000 +- 2.42E-002

Beta: 2.14E+002 +- 9.22E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	6.85E-001 +- 3.07E-002
203.55	1.38E+000 +- 7.64E-002
375.05	2.09E+000 +- 6.13E-002
413.71	2.14E+000 +- 6.90E-002

Segment 4 Results

Segment: 4 Detector: DET01 Position: 4
C:\Canberra\NDA2k\Data\00000384_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P004_S004

Acquisition Start: 5/6/2009 8:21:15 AM
Elapsed Live Time: 102.18 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.253 +/- 0.0163
SE-75	264.66	0.375 +/- 0.0071
SE-75	279.54	0.391 +/- 0.0079
SE-75	400.66	0.462 +/- 0.0094

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: 5/6/2009 8:23:17 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	55035	6196	1.13	120.81	4.464E-006	1.27	
M	94.72	Y	11105	11689	1.56	191.23	1.148E-004	2.27	57.56
m	98.72	Y	43466	15504	1.57	199.22	1.357E-004	1.85	
m	100.94	Y	7040	15455	1.57	203.65	1.475E-004	2.83	
m	103.37	Y	31725	13034	1.58	208.52	1.605E-004	1.81	
M	111.10	Y	11878	7670	1.40	223.95	2.011E-004	2.34	77.49
m	114.62	Y	9675	8537	1.40	230.99	2.188E-004	2.49	
m	116.68	Y	9223	7991	1.41	235.10	2.289E-004	2.38	
m	120.56	Y	2324	7218	1.42	242.86	2.471E-004	4.10	
m	122.95	Y	1143	6331	1.42	247.63	2.577E-004	6.90	
m	125.29	Y	4286	6048	1.42	252.31	2.677E-004	2.98	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	129.31	Y	20400	5274	1.43	260.34	2.838E-004	2.13	
M	141.76	Y	185	3356	1.15	285.22	3.268E-004	31.87	1.21
m	144.18	Y	1352	4341	1.16	290.06	3.340E-004	13.25	
m	146.37	Y	1168	4369	1.16	294.44	3.401E-004	14.22	
m	148.55	Y	3014	4897	1.16	298.79	3.458E-004	12.03	
M	161.02	Y	1263	4988	1.64	323.70	3.712E-004	5.15	4.98
m	164.56	Y	1314	7408	1.64	330.78	3.764E-004	5.35	
	171.45	Y	968	4543	1.20	344.54	3.842E-004	12.63	
	179.06	Y	690	4110	1.69	359.77	3.898E-004	16.64	
	189.41	Y	613	4086	1.34	380.43	3.929E-004	18.60	
	195.70	Y	1087	4290	1.26	393.00	3.928E-004	11.26	
M	203.55	Y	5121	3532	1.19	408.69	3.910E-004	2.58	1.52
m	208.02	Y	16039	3203	1.20	417.62	3.893E-004	2.06	
	255.45	Y	653	1917	1.07	512.40	3.529E-004	12.43	
	267.55	Y	368	1792	1.00	536.59	3.418E-004	20.82	
	297.45	Y	334	1711	1.14	596.33	3.155E-004	22.87	
	311.77	Y	740	1287	1.05	624.95	3.029E-004	9.16	
M	320.97	Y	546	1627	1.74	643.35	2.950E-004	7.97	1.94
m	323.39	Y	841	2277	1.74	648.16	2.930E-004	5.49	
M	332.72	Y	5526	1173	1.29	666.82	2.855E-004	1.87	4.19
m	335.67	Y	2195	1232	1.29	672.71	2.832E-004	2.74	
m	341.53	Y	629	1178	1.30	684.43	2.786E-004	5.95	
m	345.00	Y	4996	1239	1.30	691.36	2.760E-004	1.93	
	368.25	Y	1879	1168	2.34	737.82	2.594E-004	4.32	
M	375.05	Y	13342	986	1.29	751.41	2.549E-004	1.47	12.77
m	380.13	Y	2573	678	1.29	761.55	2.517E-004	2.48	
m	382.73	Y	2252	595	1.29	766.76	2.500E-004	2.61	
	392.89	Y	4418	595	1.54	787.05	2.438E-004	2.25	
M	413.68	Y	11903	306	1.37	828.61	2.318E-004	1.95	3.08
m	422.54	Y	935	229	1.38	846.31	2.270E-004	4.27	
m	426.60	Y	199	221	1.38	854.42	2.249E-004	10.34	
M	445.73	Y	84	120	1.34	892.64	2.156E-004	17.63	0.99
m	451.41	Y	1430	151	1.35	904.00	2.129E-004	6.14	
	619.10	Y	142	39	1.32	1239.09	1.616E-004	12.39	
M	640.06	Y	55	46	1.47	1280.97	1.575E-004	18.69	1.90
m	645.81	Y	79	52	1.47	1292.47	1.565E-004	14.28	
m	652.47	Y	93	51	1.48	1305.77	1.553E-004	12.43	
m	658.85	Y	48	41	1.48	1318.52	1.542E-004	18.99	
m	662.32	Y	630	27	1.48	1325.46	1.536E-004	4.52	
	721.94	Y	331	15	1.52	1444.59	1.446E-004	6.46	
	2234.70		11980	27	1.16	4467.54	6.650E-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	< 2.910E-002 +/-	1.8%	< 2.772E-005	< 1.342E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 2.788E-002 +/-	2.0%	< 2.656E-005	< 4.406E-012
	Al-26	< 2.972E-002 +/-	14.5%	< 2.830E-005	< 1.563E-006
	K-40	< 2.859E-001 +/-	4.8%	< 2.723E-004	< 4.460E-002
X	Co-57				
	Co-60	< 3.283E-002 +/-	2.5%	< 3.127E-005	< 2.879E-011
	Se-75	< 1.868E-001 +/-	1.7%	< 1.779E-004	< 1.285E-011
	Kr-85	< 1.265E+001 +/-	3.0%	< 1.204E-002	< 3.187E-008
	Sr-90	< 5.472E-002 +/-	2.0%	< 5.211E-005	< 3.967E-010
	Sb-125	< 2.424E-001 +/-	2.2%	< 2.309E-004	< 2.332E-010
	Ba-133	< 1.623E-001 +/-	1.7%	< 1.546E-004	< 6.410E-010
	Cs-134	< 1.352E-002 +/-	1.8%	< 1.288E-005	< 1.032E-011
X	Cs-137				
	Eu-152	< 9.991E-002 +/-	3.6%	< 9.516E-005	< 5.615E-010
	Eu-154	< 7.962E-002 +/-	2.2%	< 7.583E-005	< 2.986E-010
	Ho-166m	< 3.589E-002 +/-	2.3%	< 3.418E-005	< 1.995E-008
	Bi-207	< 3.064E-002 +/-	1.9%	< 2.918E-005	< 5.576E-010
	Pb-210	< 4.209E+003 +/-	37.2%	< 4.009E+000	< 5.472E-005
	Ra-226	< 8.793E-002 +/-	2.2%	< 8.374E-005	< 8.793E-008
	Ac-227	< 6.376E-001 +/-	8.3%	< 6.072E-004	< 8.735E-009
	Th-230	< 3.129E+002 +/-	8.5%	< 2.980E-001	< 1.533E-002
	Pa-231	< 3.773E+000 +/-	11.2%	< 3.593E-003	< 7.886E-005
	Th-232	< 7.197E-002 +/-	2.4%	< 6.854E-005	< 6.484E-001
	U-232	< 1.581E-001 +/-	2.1%	< 1.506E-004	< 7.320E-009
	U-233	< 2.392E+003 +/-	2.6%	< 2.278E+000	< 2.440E-001
	Pa-234	< 9.634E-002 +/-	12.2%	< 9.175E-005	
	Pa-234m	< 2.176E+002 +/-	2.1%	< 2.072E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 2.048E-001 +/-	2.4%	< 1.951E-004	< 9.361E-002
	Np-237	9.150E-001 +/-	14.5%	8.715E-004	1.281E-003
	Pu-238	< 1.345E+004 +/-	2.5%	< 1.281E+001	< 7.774E-004
	U-238	< 2.874E+000 +/-	2.2%	< 2.737E-003	< 8.449E+000
	Pu-239	1.320E+006 +/-	3.4%	1.257E+003	2.099E+001
	Pu-239B	7.642E+005 +/-	1.4%	7.278E+002	1.215E+001
	U-239	< 1.609E+004 +/-	46.3%	< 1.532E+001	
X	Pu-240				
	Am-241	2.571E+005 +/-	4.3%	2.448E+002	7.404E-002
	Am-241B	1.527E+005 +/-	3.9%	1.455E+002	4.399E-002
	Pu-241	1.058E+006 +/-	12.5%	1.008E+003	1.018E-002
	Pu-241B	1.761E+006 +/-	2.8%	1.677E+003	1.694E-002
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 7.193E-001 +/-	1.8%	< 6.851E-004	< 3.561E-006
	Cm-243	< 7.419E-001 +/-	3.3%	< 7.066E-004	< 1.424E-008
	Cm-244	< 3.005E+004 +/-	14.2%	< 2.862E+001	< 3.666E-004
	Cm-245	< 1.255E+000 +/-	7.6%	< 1.195E-003	< 7.218E-006
	Cm-247	< 1.080E-001 +/-	8.5%	< 1.029E-004	< 1.156E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.242E-001 +/-	3.5%	< 1.183E-004	< 3.006E-008
Cf-251	< 7.049E-001 +/-	5.6%	< 6.714E-004	< 4.406E-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 +- 7.10E-001	7.38E+000 +- 1.24E-001

Beta: 2.06E+002 +- 8.24E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	4.08E+000 +- 1.76E-001
203.55	8.24E+000 +- 2.76E-001
375.05	1.21E+001 +- 2.90E-001
413.71	1.25E+001 +- 3.60E-001

Segment 5 Results

Segment: 5 Detector: DET01 Position: 5
C:\Canberra\NDA2k\Data\00000384_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P005_S005

Acquisition Start: 5/6/2009 8:24:27 AM
Elapsed Live Time: 87.81 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.001 +/- 0.0005
SE-75	264.66	0.182 +/- 0.0037
SE-75	279.54	0.208 +/- 0.0048
SE-75	400.66	0.335 +/- 0.0074

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: 5/6/2009 8:26:29 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	129324	10524	1.14	120.70	2.792E-005	1.27	
M	94.66	Y	21990	16983	1.54	191.11	5.985E-005	1.91	104.89
m	98.69	Y	88366	23501	1.55	199.16	6.294E-005	1.63	
m	100.86	Y	13365	24373	1.55	203.50	6.453E-005	2.30	
m	103.32	Y	62931	20050	1.55	208.41	6.627E-005	1.62	
M	111.06	Y	23922	11561	1.39	223.88	7.129E-005	1.30	150.26
m	114.56	Y	19602	12823	1.40	230.87	7.334E-005	1.31	
m	116.65	Y	18814	11970	1.40	235.05	7.449E-005	1.31	
m	120.67	Y	4843	10787	1.41	243.08	7.657E-005	1.60	
m	125.21	Y	8726	9993	1.42	252.16	7.871E-005	1.41	
m	129.27	Y	41148	8709	1.42	260.27	8.042E-005	1.28	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
M	144.13	Y	2880	6475	1.15	289.96	1.397E-004	8.16	2.48
m	146.23	Y	2341	7291	1.15	294.16	1.471E-004	8.40	
m	148.53	Y	5529	7452	1.16	298.75	1.544E-004	7.33	
M	161.06	Y	2369	6788	1.23	323.79	1.844E-004	13.57	7.76
m	164.65	Y	2011	11345	1.24	330.96	1.911E-004	10.88	
	171.34	Y	2041	6528	1.11	344.33	2.019E-004	8.36	
	179.14	Y	973	6809	0.98	359.91	2.124E-004	17.72	
	189.33	Y	1054	6800	1.18	380.28	2.233E-004	16.38	
	195.64	Y	1653	5903	1.18	392.89	2.287E-004	9.73	
M	203.50	Y	9400	5583	1.20	408.60	2.343E-004	2.19	1.70
m	207.97	Y	31180	4871	1.21	417.52	2.369E-004	1.80	
	255.37	Y	1262	3316	1.23	512.25	2.478E-004	9.94	
M	263.87	Y	511	2599	1.22	529.24	2.474E-004	19.95	0.76
m	267.45	Y	1077	2814	1.23	536.39	2.480E-004	17.67	
M	297.25	Y	809	1982	1.12	595.94	2.481E-004	6.82	0.50
m	299.83	Y	213	1978	1.12	601.08	2.477E-004	19.72	
M	307.26		131	1683	1.56	615.93	2.464E-004	33.01	3.50
m	311.81	Y	1704	2676	1.56	625.03	2.455E-004	3.72	
m	315.89	Y	271	2599	1.57	633.18	2.447E-004	15.74	
m	320.85	Y	1214	2517	1.57	643.10	2.436E-004	4.67	
m	323.31	Y	1607	2461	1.58	648.01	2.430E-004	3.83	
M	332.69	Y	11055	1871	1.31	666.75	2.407E-004	1.64	5.12
m	335.65	Y	4425	1757	1.32	672.66	2.400E-004	2.20	
m	341.35	Y	1119	1852	1.32	684.06	2.385E-004	4.75	
m	344.96	Y	9600	1769	1.33	691.27	2.375E-004	1.70	
M	368.29	Y	2826	1370	1.33	737.89	2.308E-004	2.66	27.56
m	370.68	Y	415	1338	1.33	742.68	2.301E-004	9.72	
m	375.00	Y	25997	1306	1.34	751.30	2.288E-004	1.41	
m	380.10	Y	5014	1071	1.34	761.50	2.272E-004	2.07	
m	382.71	Y	4277	916	1.34	766.72	2.264E-004	2.19	
	392.85	Y	8485	1014	1.50	786.98	2.233E-004	1.93	
M	413.64	Y	23099	574	1.37	828.52	2.156E-004	1.69	3.59
m	422.53	Y	1735	549	1.38	846.27	2.120E-004	3.49	
m	426.67	Y	414	484	1.38	854.55	2.104E-004	8.28	
M	445.58	Y	117	246	1.31	892.35	2.032E-004	17.04	1.79
m	451.40	Y	2660	297	1.31	903.97	2.011E-004	2.57	
	618.86	Y	258	71	1.87	1238.62	1.546E-004	10.27	
M	645.97	Y	153	69	1.50	1292.77	1.493E-004	10.84	1.58
m	652.71	Y	160	78	1.50	1306.24	1.480E-004	10.24	
m	658.74	Y	95	71	1.51	1318.30	1.469E-004	14.29	
m	662.37	Y	1176	53	1.51	1325.55	1.462E-004	3.61	
	688.74	Y	113	40	1.39	1378.24	1.417E-004	16.52	
	721.84	Y	594	43	1.36	1444.39	1.365E-004	5.43	
	736.77	Y	28	15	1.25	1474.24	1.343E-004	36.12	
	755.88	Y	35	17	0.66	1512.42	1.317E-004	31.60	
	769.38	Y	177	25	1.92	1539.40	1.299E-004	10.92	
	2234.68		11980	72	1.16	4467.48	8.674E-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	< 2.892E-002 +/-	1.8%	< 2.754E-005	< 1.333E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 3.048E-002 +/-	2.0%	< 2.903E-005	< 4.816E-012
	Al-26	< 4.807E-002 +/-	14.7%	< 4.578E-005	< 2.528E-006
	K-40	< 3.322E-001 +/-	4.9%	< 3.164E-004	< 5.183E-002
	Co-57	1.601E+001 +/-	8.5%	1.525E-002	1.874E-009
	Co-60	< 4.039E-002 +/-	1.6%	< 3.847E-005	< 3.542E-011
	Se-75	< 2.991E-001 +/-	1.9%	< 2.849E-004	< 2.058E-011
	Kr-85	< 1.711E+001 +/-	3.1%	< 1.629E-002	< 4.311E-008
	Sr-90	< 9.022E-002 +/-	2.0%	< 8.593E-005	< 6.541E-010
	Sb-125	< 3.338E-001 +/-	2.3%	< 3.179E-004	< 3.212E-010
	Ba-133	< 2.241E-001 +/-	1.7%	< 2.134E-004	< 8.852E-010
	Cs-134	< 3.338E-002 +/-	1.8%	< 3.179E-005	< 2.547E-011
X	Cs-137				
	Eu-152	< 3.417E-002 +/-	3.6%	< 3.254E-005	< 1.920E-010
	Eu-154	< 8.704E-002 +/-	2.2%	< 8.290E-005	< 3.264E-010
	Ho-166m	< 5.704E-002 +/-	2.2%	< 5.432E-005	< 3.171E-008
	Bi-207	< 3.276E-002 +/-	1.8%	< 3.120E-005	< 5.963E-010
	Pb-210	< 2.797E+001 +/-	36.7%	< 2.664E-002	< 3.636E-007
	Ra-226	< 1.104E-001 +/-	2.3%	< 1.051E-004	< 1.104E-007
	Ac-227	< 1.038E+000 +/-	8.3%	< 9.889E-004	< 1.423E-008
	Th-230	< 1.349E+002 +/-	13.1%	< 1.285E-001	< 6.610E-003
	Pa-231	< 5.358E+000 +/-	11.2%	< 5.103E-003	< 1.120E-004
	Th-232	< 1.104E-001 +/-	2.4%	< 1.052E-004	< 9.950E-001
	U-232	< 2.117E-001 +/-	2.2%	< 2.016E-004	< 9.801E-009
	U-233	< 3.996E+003 +/-	2.7%	< 3.805E+000	< 4.076E-001
	Pa-234	< 1.829E-001 +/-	12.2%	< 1.742E-004	
	Pa-234m	< 2.417E+002 +/-	2.1%	< 2.301E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 3.413E-001 +/-	2.5%	< 3.250E-004	< 1.560E-001
	Np-237	2.936E+000 +/-	5.4%	2.797E-003	4.111E-003
	Pu-238	< 2.264E+004 +/-	2.6%	< 2.156E+001	< 1.309E-003
	U-238	< 4.530E+000 +/-	2.1%	< 4.314E-003	< 1.332E+001
	Pu-239	1.637E+006 +/-	4.2%	1.559E+003	2.603E+001
	Pu-239B	1.662E+006 +/-	1.2%	1.583E+003	2.642E+001
	U-239	< 4.953E+001 +/-	45.9%	< 4.717E-002	
	Pu-240	3.481E+005 +/-	26.8%	3.315E+002	1.514E+000
	Am-241	4.986E+005 +/-	3.8%	4.748E+002	1.436E-001
	Am-241B	5.977E+005 +/-	4.3%	5.692E+002	1.721E-001
	Pu-241	4.348E+006 +/-	7.8%	4.141E+003	4.182E-002
	Pu-241B	5.663E+006 +/-	3.0%	5.393E+003	5.448E-002
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 7.428E-001 +/-	8.4%	< 7.074E-004	< 3.677E-006
	Cm-243	< 1.073E+000 +/-	3.3%	< 1.022E-003	< 2.061E-008
	Cm-244	< 5.418E+004 +/-	14.2%	< 5.160E+001	< 6.610E-004
	Cm-245	< 2.066E+000 +/-	7.7%	< 1.968E-003	< 1.188E-005
	Cm-247	< 1.556E-001 +/-	8.5%	< 1.482E-004	< 1.665E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.806E-001 +/-	3.5%	< 1.720E-004	< 4.369E-008
Cf-251	< 1.189E+000 +/-	5.6%	< 1.133E-003	< 7.434E-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	2.60E+001 +- 1.09E+000	2.60E+001 +- 3.95E-001

Beta: 3.92E-002 +- 1.18E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	2.90E+001 +- 2.29E+000
203.55	2.53E+001 +- 7.85E-001
375.05	2.62E+001 +- 6.21E-001
413.71	2.62E+001 +- 7.09E-001

Segment 6 Results

Segment: 6 Detector: DET01 Position: 6
C:\Canberra\NDA2k\Data\00000384_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P006_S006

Acquisition Start: 5/6/2009 8:27:38 AM
Elapsed Live Time: 88.56 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.001 +/- 0.0005
SE-75	264.66	0.171 +/- 0.0043
SE-75	279.54	0.187 +/- 0.0044
SE-75	400.66	0.308 +/- 0.0069

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: 5/6/2009 8:29:40 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
	49.50		2072	9214	1.69	100.86	4.272E-008	9.49	
	59.43	Y	116527	10080	1.13	120.70	6.770E-007	1.28	
M	94.66	Y	21219	16781	1.54	191.11	3.231E-005	1.92	104.96
m	98.68	Y	85320	23023	1.54	199.15	3.882E-005	1.64	
m	100.87	Y	13079	23694	1.55	203.52	4.243E-005	2.31	
m	103.33	Y	61019	19321	1.55	208.42	4.648E-005	1.62	
M	111.05	Y	22627	11429	1.40	223.86	5.897E-005	2.06	141.77
m	114.55	Y	18399	12728	1.40	230.86	6.432E-005	2.13	
m	116.63	Y	17551	11919	1.41	235.00	6.737E-005	2.06	
m	120.65	Y	4661	10793	1.41	243.04	7.298E-005	3.04	
m	125.21	Y	8331	10024	1.42	252.16	7.881E-005	2.41	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	129.27	Y	40419	8771	1.43	260.27	8.350E-005	1.91	
M	144.17	Y	2615	6501	1.12	290.05	1.562E-004	8.60	1.51
m	146.31	Y	2266	6587	1.12	294.31	1.658E-004	8.90	
m	148.55	Y	5165	6715	1.13	298.79	1.750E-004	7.75	
M	161.09	Y	2416	6778	1.26	323.85	2.142E-004	9.12	5.35
m	164.62	Y	2079	10448	1.26	330.91	2.226E-004	8.13	
m	169.49	Y	490	11000	1.27	340.63	2.326E-004	17.41	
m	171.35	Y	1697	10922	1.27	344.35	2.360E-004	8.49	
	179.07	Y	866	6127	1.35	359.78	2.483E-004	18.23	
	189.29	Y	1315	6761	1.03	380.20	2.599E-004	13.08	
	195.61	Y	2095	5694	1.26	392.83	2.651E-004	7.61	
M	203.51	Y	9505	5359	1.20	408.62	2.697E-004	2.17	2.54
m	207.96	Y	30719	4798	1.20	417.51	2.715E-004	1.79	
	243.06	Y	722	3538	1.21	487.64	2.732E-004	17.23	
	255.31	Y	1422	2818	1.45	512.12	2.705E-004	8.04	
M	263.92	Y	438	2188	1.32	529.33	2.680E-004	11.41	0.67
m	267.46	Y	1203	2904	1.32	536.41	2.672E-004	5.21	
M	297.41	Y	765	1769	1.09	596.25	2.593E-004	7.11	0.40
m	300.14	Y	210	1720	1.09	601.71	2.585E-004	19.43	
M	311.78	Y	1697	2061	1.45	624.97	2.551E-004	3.79	3.48
m	316.43	Y	233	2436	1.45	634.26	2.537E-004	18.20	
m	320.80	Y	1124	2397	1.45	643.00	2.523E-004	4.95	
m	323.36	Y	1358	2368	1.46	648.11	2.514E-004	4.34	
M	332.68	Y	10505	1721	1.29	666.74	2.484E-004	1.66	6.88
m	335.65	Y	4286	1813	1.29	672.67	2.474E-004	2.23	
m	341.35	Y	1015	1746	1.29	684.07	2.456E-004	5.10	
m	344.94	Y	9031	1842	1.30	691.24	2.444E-004	1.73	
	368.50	Y	3789	2223	2.49	738.31	2.370E-004	3.57	
M	375.00	Y	24982	1648	1.28	751.31	2.350E-004	1.41	25.70
m	380.10	Y	4768	1073	1.29	761.50	2.334E-004	2.10	
m	382.68	Y	4271	919	1.29	766.65	2.327E-004	2.18	
	392.86	Y	8568	933	1.56	787.00	2.296E-004	1.90	
	413.63	Y	22451	685	1.46	828.49	2.223E-004	1.46	
M	422.53	Y	1625	471	1.23	846.29	2.190E-004	3.36	2.81
m	426.55	Y	346	463	1.23	854.31	2.176E-004	8.54	
M	445.62	Y	113	298	1.34	892.41	2.112E-004	17.17	3.41
m	451.42	Y	2716	300	1.34	904.01	2.093E-004	2.53	
	618.93	Y	307	58	1.87	1238.75	1.706E-004	8.64	
M	640.13	Y	82	62	1.46	1281.12	1.670E-004	15.19	1.77
m	645.82	Y	131	55	1.46	1292.47	1.661E-004	11.24	
m	652.49	Y	170	59	1.47	1305.80	1.650E-004	9.46	
m	658.77	Y	90	52	1.47	1318.35	1.640E-004	14.13	
m	662.35	Y	1187	47	1.47	1325.50	1.635E-004	3.57	
	688.79	Y	91	45	1.85	1378.35	1.595E-004	19.56	
	721.87	Y	541	67	1.67	1444.46	1.549E-004	6.06	
	756.39	Y	38	21	1.46	1513.44	1.504E-004	31.25	
	769.30	Y	181	19	1.40	1539.23	1.488E-004	10.23	
	2234.67		11980	72	1.17	4467.47	5.146E-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	< 3.412E-002 +/-	1.9%	< 3.250E-005	< 1.573E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 4.274E-002 +/-	1.9%	< 4.071E-005	< 6.753E-012
	Al-26	< 6.560E-002 +/-	19.8%	< 6.247E-005	< 3.450E-006
	K-40	< 4.093E-001 +/-	5.3%	< 3.898E-004	< 6.385E-002
	Co-57	1.622E+001 +/-	9.5%	1.545E-002	1.898E-009
	Co-60	< 3.488E-002 +/-	2.5%	< 3.322E-005	< 3.059E-011
	Se-75	< 2.609E-001 +/-	2.3%	< 2.485E-004	< 1.795E-011
	Kr-85	< 1.510E+001 +/-	3.2%	< 1.438E-002	< 3.805E-008
	Sr-90	< 7.621E-002 +/-	2.5%	< 7.258E-005	< 5.525E-010
	Sb-125	< 3.104E-001 +/-	2.7%	< 2.956E-004	< 2.986E-010
	Ba-133	< 2.114E-001 +/-	1.8%	< 2.014E-004	< 8.351E-010
	Cs-134	< 2.821E-002 +/-	2.0%	< 2.687E-005	< 2.152E-011
X	Cs-137				
	Eu-152	< 1.135E-001 +/-	1.8%	< 1.081E-004	< 6.378E-010
	Eu-154	< 1.221E-001 +/-	2.1%	< 1.163E-004	< 4.578E-010
	Ho-166m	< 3.987E-002 +/-	2.4%	< 3.797E-005	< 2.217E-008
	Bi-207	< 3.707E-002 +/-	1.9%	< 3.531E-005	< 6.747E-010
	Pb-210	< 3.357E+004 +/-	309.7%	< 3.197E+001	< 4.364E-004
	Ra-226	< 8.911E-002 +/-	2.7%	< 8.487E-005	< 8.911E-008
	Ac-227	< 9.011E-001 +/-	8.5%	< 8.582E-004	< 1.234E-008
	Th-230	< 4.455E+002 +/-	9.0%	< 4.243E-001	< 2.183E-002
	Pa-231	< 4.805E+000 +/-	11.3%	< 4.576E-003	< 1.004E-004
	Th-232	< 1.328E-001 +/-	2.4%	< 1.265E-004	< 1.197E+000
	U-232	< 1.831E-001 +/-	2.6%	< 1.744E-004	< 8.479E-009
	U-233	< 3.441E+003 +/-	4.0%	< 3.277E+000	< 3.510E-001
	Pa-234	< 1.348E-001 +/-	12.2%	< 1.284E-004	
	Pa-234m	< 1.781E+002 +/-	2.1%	< 1.696E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 2.845E-001 +/-	4.0%	< 2.710E-004	< 1.300E-001
	Np-237	2.834E+000 +/-	5.6%	2.700E-003	3.968E-003
	Pu-238	< 1.932E+004 +/-	4.2%	< 1.840E+001	< 1.117E-003
	U-238	< 3.328E+000 +/-	2.1%	< 3.170E-003	< 9.785E+000
	Pu-239	1.584E+006 +/-	4.5%	1.508E+003	2.518E+001
	Pu-239B	1.557E+006 +/-	1.3%	1.482E+003	2.475E+001
	U-239	< 2.222E+005 +/-	368.5%	< 2.117E+002	
	Pu-240	1.821E+005 +/-	34.8%	1.734E+002	7.919E-001
	Am-241	4.300E+005 +/-	4.0%	4.095E+002	1.238E-001
	Am-241B	4.000E+005 +/-	5.8%	3.810E+002	1.152E-001
	Pu-241	3.584E+006 +/-	8.7%	3.413E+003	3.447E-002
	Pu-241B	5.060E+006 +/-	3.1%	4.819E+003	4.867E-002
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 9.528E-001 +/-	2.2%	< 9.075E-004	< 4.717E-006
	Cm-243	< 9.828E-001 +/-	3.5%	< 9.360E-004	< 1.887E-008
	Cm-244	< 4.404E+004 +/-	14.2%	< 4.195E+001	< 5.373E-004
	Cm-245	< 1.744E+000 +/-	8.4%	< 1.661E-003	< 1.003E-005
	Cm-247	< 1.481E-001 +/-	8.5%	< 1.411E-004	< 1.585E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.660E-001 +/-	3.5%	< 1.581E-004	< 4.017E-008
Cf-251	< 9.835E-001 +/-	6.5%	< 9.367E-004	< 6.147E-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 +- 1.13E+000	2.42E+001 +- 3.87E-001

Beta: 1.26E+001 +- 1.35E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	2.75E+001 +- 2.26E+000
203.55	2.22E+001 +- 8.87E-001
375.05	2.45E+001 +- 5.99E-001
413.71	2.47E+001 +- 6.42E-001

Segment 7 Results

Segment: 7 Detector: DET01 Position: 7
C:\Canberra\NDA2k\Data\00000384_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P007_S007

Acquisition Start: 5/6/2009 8:30:49 AM
Elapsed Live Time: 100.73 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.000 +/- 0.0000
SE-75	264.66	0.246 +/- 0.0048
SE-75	279.54	0.265 +/- 0.0056
SE-75	400.66	0.366 +/- 0.0077

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: 5/6/2009 8:32:51 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
	59.48	Y	75217	7579	1.12	120.79	3.406E-006	1.24	
M	94.70	Y	12593	12633	1.55	191.18	9.940E-005	2.23	73.04
m	98.70	Y	48202	17187	1.56	199.18	1.184E-004	1.83	
m	100.91	Y	7358	17564	1.56	203.60	1.292E-004	2.82	
m	103.34	Y	34083	14217	1.56	208.45	1.411E-004	1.80	
M	111.09	Y	12785	8302	1.37	223.93	1.788E-004	1.30	87.84
m	114.58	Y	10231	9196	1.37	230.90	1.952E-004	1.32	
m	116.65	Y	9594	8585	1.38	235.05	2.047E-004	1.32	
m	120.58	Y	2306	8468	1.38	242.90	2.219E-004	1.88	
m	122.92	Y	1320	7468	1.39	247.58	2.318E-004	2.59	
m	125.29	Y	4760	7113	1.39	252.32	2.413E-004	1.46	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	129.31	Y	23496	6151	1.40	260.34	2.565E-004	1.25	
M	144.26	Y	1448	4163	1.18	290.22	3.017E-004	12.91	0.83
m	146.31	Y	1338	4609	1.19	294.31	3.064E-004	12.97	
m	148.59	Y	3031	4488	1.19	298.88	3.114E-004	11.35	
M	161.14	Y	1173	4784	1.32	323.95	3.318E-004	14.48	4.83
m	164.62	Y	1196	6871	1.32	330.90	3.357E-004	13.13	
m	169.54	Y	381	6800	1.33	340.74	3.399E-004	20.75	
m	171.45	Y	846	6773	1.33	344.55	3.412E-004	13.86	
	179.03	Y	371	4416	0.92	359.69	3.445E-004	31.87	
	189.29	Y	698	4719	1.26	380.21	3.453E-004	18.25	
	195.59	Y	785	4670	1.09	392.80	3.441E-004	16.22	
M	203.56	Y	5085	3930	1.13	408.72	3.410E-004	2.08	6.58
m	208.01	Y	16672	3927	1.14	417.61	3.388E-004	1.45	
	255.26	Y	789	2191	1.19	512.02	3.017E-004	11.44	
	267.51	Y	407	1801	1.11	536.51	2.918E-004	19.13	
	297.33	Y	462	1487	1.31	596.10	2.730E-004	15.55	
	311.85	Y	599	1724	1.23	625.11	2.634E-004	13.38	
M	321.09	Y	564	1614	1.87	643.57	2.575E-004	8.38	2.72
m	323.49	Y	853	2135	1.87	648.37	2.560E-004	5.72	
M	332.71	Y	5760	1190	1.33	666.80	2.503E-004	3.17	2.20
m	335.68	Y	2362	1112	1.34	672.73	2.485E-004	3.74	
m	341.46	Y	612	1180	1.34	684.27	2.451E-004	7.02	
m	344.99	Y	4941	1119	1.35	691.34	2.430E-004	3.14	
	368.27	Y	1976	1253	2.36	737.85	2.302E-004	4.30	
M	375.03	Y	13495	1098	1.27	751.37	2.268E-004	1.48	11.63
m	380.13	Y	2581	751	1.27	761.56	2.242E-004	2.51	
m	382.74	Y	2233	657	1.28	766.77	2.229E-004	2.66	
	392.87	Y	4701	592	1.55	787.02	2.181E-004	2.21	
M	413.67	Y	12175	320	1.37	828.59	2.082E-004	2.22	2.92
m	419.32	Y	67	268	1.37	839.88	2.056E-004	25.35	
m	422.49	Y	901	291	1.38	846.21	2.042E-004	4.58	
m	426.63	Y	211	256	1.38	854.47	2.024E-004	10.34	
	451.43	Y	1527	195	1.38	904.04	1.923E-004	3.50	
	618.63	Y	116	45	1.13	1238.15	1.507E-004	15.00	
M	646.03	Y	71	53	1.44	1292.91	1.466E-004	15.44	0.93
m	652.70	Y	89	47	1.45	1306.22	1.457E-004	13.00	
m	658.88	Y	61	43	1.45	1318.59	1.449E-004	16.51	
m	662.38	Y	698	29	1.45	1325.57	1.444E-004	4.33	
	688.63	Y	43	22	1.63	1378.03	1.411E-004	26.28	
	721.82	Y	334	23	1.58	1444.36	1.374E-004	6.67	
	769.37	Y	56	19	1.43	1539.37	1.329E-004	20.11	
	2234.69		11980	55	1.15	4467.51	4.147E-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	< 3.132E-002 +/-	1.8%	< 2.982E-005	< 1.444E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 3.016E-002 +/-	2.0%	< 2.873E-005	< 4.766E-012
	Al-26	< 3.591E-002 +/-	15.5%	< 3.420E-005	< 1.889E-006
	K-40	< 2.753E-001 +/-	5.0%	< 2.622E-004	< 4.295E-002
X	Co-57				
	Co-60	< 3.340E-002 +/-	1.7%	< 3.181E-005	< 2.929E-011
	Se-75	< 1.922E-001 +/-	1.9%	< 1.830E-004	< 1.322E-011
	Kr-85	< 1.255E+001 +/-	3.1%	< 1.195E-002	< 3.163E-008
	Sr-90	< 6.104E-002 +/-	2.0%	< 5.813E-005	< 4.425E-010
	Sb-125	< 2.560E-001 +/-	2.3%	< 2.438E-004	< 2.463E-010
	Ba-133	< 1.739E-001 +/-	1.7%	< 1.656E-004	< 6.867E-010
	Cs-134	< 2.888E-002 +/-	1.8%	< 2.751E-005	< 2.204E-011
X	Cs-137				
	Eu-152	< 1.200E-001 +/-	3.7%	< 1.142E-004	< 6.742E-010
	Eu-154	< 8.613E-002 +/-	2.2%	< 8.203E-005	< 3.230E-010
	Ho-166m	< 4.909E-002 +/-	2.2%	< 4.676E-005	< 2.730E-008
	Bi-207	< 2.696E-002 +/-	1.9%	< 2.568E-005	< 4.907E-010
	Pb-210	< 5.571E+003 +/-	70.4%	< 5.305E+000	< 7.242E-005
	Ra-226	< 9.521E-002 +/-	2.3%	< 9.068E-005	< 9.521E-008
	Ac-227	< 6.532E-001 +/-	8.3%	< 6.221E-004	< 8.949E-009
	Th-230	< 3.279E+002 +/-	8.6%	< 3.123E-001	< 1.607E-002
	Pa-231	< 3.868E+000 +/-	11.2%	< 3.684E-003	< 8.085E-005
	Th-232	< 9.261E-002 +/-	2.4%	< 8.820E-005	< 8.344E-001
	U-232	< 1.526E-001 +/-	2.2%	< 1.453E-004	< 7.065E-009
	U-233	< 2.506E+003 +/-	2.9%	< 2.387E+000	< 2.556E-001
	Pa-234	< 1.529E-001 +/-	12.2%	< 1.457E-004	
	Pa-234m	< 1.899E+002 +/-	2.1%	< 1.809E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 2.069E-001 +/-	2.6%	< 1.970E-004	< 9.454E-002
	Np-237	7.211E-001 +/-	24.8%	6.867E-004	1.009E-003
	Pu-238	< 1.404E+004 +/-	2.8%	< 1.337E+001	< 8.115E-004
	U-238	< 3.227E+000 +/-	2.2%	< 3.074E-003	< 9.489E+000
	Pu-239	1.431E+006 +/-	3.4%	1.363E+003	2.275E+001
	Pu-239B	9.048E+005 +/-	1.4%	8.617E+002	1.438E+001
	U-239	< 2.847E+004 +/-	85.6%	< 2.712E+001	
X	Pu-240				
	Am-241	2.912E+005 +/-	4.3%	2.774E+002	8.388E-002
	Am-241B	1.455E+005 +/-	3.5%	1.385E+002	4.190E-002
	Pu-241	1.182E+006 +/-	11.8%	1.125E+003	1.137E-002
	Pu-241B	2.100E+006 +/-	2.9%	2.000E+003	2.020E-002
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 7.349E-001 +/-	1.9%	< 7.000E-004	< 3.638E-006
	Cm-243	< 7.580E-001 +/-	3.4%	< 7.219E-004	< 1.455E-008
	Cm-244	< 3.925E+004 +/-	14.2%	< 3.738E+001	< 4.788E-004
	Cm-245	< 1.287E+000 +/-	7.7%	< 1.226E-003	< 7.402E-006
	Cm-247	< 1.117E-001 +/-	8.5%	< 1.064E-004	< 1.195E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.345E-001 +/-	3.5%	< 1.281E-004	< 3.254E-008
Cf-251	< 7.161E-001 +/-	5.7%	< 6.820E-004	< 4.475E-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 **********

Absorption correction model: FULL

Nuclide	Corrected Mass (g)	Uncorrected Mass (g)
Pu-239	2.28E+001 +- 7.64E-001	8.42E+000 +- 1.37E-001

Beta: 1.88E+002 +- 7.59E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	5.20E+000 +- 1.90E-001
203.55	9.38E+000 +- 2.90E-001
375.05	1.37E+001 +- 3.35E-001
413.71	1.43E+001 +- 4.41E-001

Segment 8 Results

Segment: 8 Detector: DET01 Position: 8
C:\Canberra\NDA2k\Data\00000384_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P008_S008

Acquisition Start: 5/6/2009 8:34:01 AM
Elapsed Live Time: 113.16 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.222 +/- 0.0143
SE-75	264.66	0.439 +/- 0.0080
SE-75	279.54	0.444 +/- 0.0085
SE-75	400.66	0.516 +/- 0.0100

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: 5/6/2009 8:36:02 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
	59.50	Y	21481	3398	1.11	120.85	7.513E-005	1.38	
M	94.72		3548	6431	1.54	191.22	1.908E-004	3.96	24.19
m	98.74	Y	13554	9970	1.54	199.26	2.018E-004	2.92	
m	100.85	Y	1856	9900	1.55	203.46	2.073E-004	5.31	
m	103.37	Y	8975	7363	1.55	208.51	2.137E-004	2.90	
M	111.05		2942	5355	1.40	223.86	2.314E-004	2.69	11.28
m	114.74	Y	1447	8262	1.40	231.23	2.390E-004	4.81	
M	125.32	Y	934	3361	1.05	252.38	2.580E-004	5.34	5.98
m	129.37	Y	6249	2996	1.05	260.46	2.641E-004	1.81	
M	144.31		361	2220	1.00	290.32	2.879E-004	6.75	1.34
m	146.52	Y	310	2480	1.00	294.73	2.914E-004	7.23	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	148.66	Y	817	2729	1.01	299.01	2.947E-004	5.13	
	164.52	Y	185	2676	1.38	330.70	3.146E-004	44.57	
	171.39		395	2201	1.23	344.42	3.209E-004	19.34	
	189.46		142	2111	1.06	380.54	3.322E-004	51.31	
M	203.57	Y	1363	1818	1.19	408.74	3.365E-004	5.10	0.91
m	208.04	Y	4318	1488	1.19	417.67	3.373E-004	3.92	
	255.25		126	904	1.30	512.02	3.316E-004	38.30	
	267.44	Y	152	743	0.96	536.38	3.268E-004	28.62	
	311.76	Y	323	768	1.48	624.94	3.022E-004	14.96	
M	332.77	Y	1488	679	1.26	666.91	2.906E-004	6.44	1.66
m	335.74	Y	578	633	1.26	672.86	2.890E-004	7.59	
m	341.47	Y	182	594	1.26	684.29	2.859E-004	13.14	
m	344.99		1267	560	1.27	691.34	2.840E-004	6.29	
M	368.39	Y	371	412	1.36	738.09	2.716E-004	7.46	4.41
m	375.05	Y	3602	341	1.37	751.40	2.682E-004	3.57	
m	380.12		693	264	1.37	761.53	2.656E-004	5.45	
m	382.77		615	217	1.37	766.82	2.642E-004	5.58	
	392.89		1129	247	1.66	787.06	2.592E-004	4.03	
	413.73	Y	3136	111	1.34	828.71	2.489E-004	2.23	
M	422.65		220	91	1.19	846.53	2.446E-004	7.55	0.96
m	426.61	Y	48	66	1.19	854.43	2.427E-004	19.25	
	451.47		379	49	1.42	904.10	2.315E-004	6.22	
	662.20	Y	155	27	1.87	1325.22	1.657E-004	10.06	
	721.98	Y	85	17	1.59	1444.67	1.539E-004	13.71	
	2234.73		11980	19	1.13	4467.59	1.059E-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	< 2.635E-002 +/-	1.8%	< 2.510E-005	< 1.215E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 2.758E-002 +/-	1.9%	< 2.626E-005	< 4.357E-012
	Al-26	< 1.562E-002 +/-	18.8%	< 1.487E-005	< 8.214E-007
	K-40	< 2.321E-001 +/-	5.3%	< 2.211E-004	< 3.621E-002
	Co-57	< 1.679E-001 +/-	4.5%	< 1.599E-004	< 1.965E-011
	Co-60	< 2.643E-002 +/-	1.7%	< 2.517E-005	< 2.318E-011
	Se-75	< 1.280E-001 +/-	1.8%	< 1.219E-004	< 8.809E-012
	Kr-85	< 7.430E+000 +/-	3.0%	< 7.076E-003	< 1.872E-008
	Sr-90	< 4.940E-002 +/-	2.2%	< 4.705E-005	< 3.581E-010
	Sb-125	< 1.329E-001 +/-	1.9%	< 1.266E-004	< 1.279E-010
	Ba-133	< 1.066E-001 +/-	1.6%	< 1.015E-004	< 4.210E-010
	Cs-134	< 1.962E-002 +/-	1.8%	< 1.868E-005	< 1.497E-011
X	Cs-137				
	Eu-152	< 8.973E-002 +/-	3.8%	< 8.546E-005	< 5.043E-010
	Eu-154	< 7.875E-002 +/-	2.1%	< 7.500E-005	< 2.953E-010
	Ho-166m	< 3.442E-002 +/-	2.3%	< 3.279E-005	< 1.914E-008
	Bi-207	< 2.190E-002 +/-	1.9%	< 2.086E-005	< 3.986E-010
	Pb-210	< 1.548E+001 +/-	259.0%	< 1.475E-002	< 2.013E-007
	Ra-226	< 6.095E-002 +/-	2.4%	< 5.805E-005	< 6.095E-008
	Ac-227	< 4.561E-001 +/-	8.3%	< 4.344E-004	< 6.249E-009
	Th-230	< 6.349E+001 +/-	83.3%	< 6.047E-002	< 3.111E-003
	Pa-231	< 2.622E+000 +/-	11.2%	< 2.497E-003	< 5.479E-005
	Th-232	< 7.297E-002 +/-	2.3%	< 6.950E-005	< 6.575E-001
	U-232	< 1.045E-001 +/-	2.3%	< 9.949E-005	< 4.837E-009
	U-233	< 1.697E+003 +/-	3.0%	< 1.616E+000	< 1.731E-001
	Pa-234	< 1.135E-001 +/-	12.2%	< 1.081E-004	
	Pa-234m	< 1.344E+002 +/-	2.1%	< 1.280E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 1.599E-001 +/-	2.9%	< 1.523E-004	< 7.309E-002
	Np-237	6.245E-001 +/-	15.1%	5.948E-004	8.743E-004
	Pu-238	< 1.047E+004 +/-	3.1%	< 9.975E+000	< 6.054E-004
	U-238	< 3.028E+000 +/-	2.1%	< 2.884E-003	< 8.903E+000
	Pu-239	2.885E+005 +/-	4.0%	2.747E+002	4.586E+000
	Pu-239B	< 6.925E+003 +/-	16.6%	< 6.595E+000	< 1.101E-001
	U-239	< 3.760E+001 +/-	308.3%	< 3.581E-002	
X	Pu-240				
	Am-241	5.968E+004 +/-	8.5%	5.684E+001	1.719E-002
	Am-241B	5.716E+004 +/-	9.8%	5.444E+001	1.646E-002
	Pu-241	3.365E+005 +/-	6.3%	3.204E+002	3.237E-003
	Pu-241B	5.459E+005 +/-	4.7%	5.199E+002	5.252E-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	< 5.220E-001 +/-	3.3%	< 4.971E-004	< 1.002E-008
	Cm-244	< 2.684E+004 +/-	14.2%	< 2.556E+001	< 3.274E-004
	Cm-245	< 9.620E-001 +/-	7.8%	< 9.162E-004	< 5.531E-006
	Cm-247	< 6.353E-002 +/-	8.5%	< 6.050E-005	< 6.798E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 7.396E-002 +/-	3.4%	< 7.044E-005	< 1.790E-008
Cf-251	< 5.441E-001 +/-	5.8%	< 5.182E-004	< 3.401E-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 +- 1.84E-001	2.09E+000 +- 4.40E-002

Beta: 1.54E+002 +- 9.20E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.34E+000 +- 5.97E-002
203.55	2.55E+000 +- 1.44E-001
375.05	3.10E+000 +- 1.23E-001
413.71	3.08E+000 +- 9.06E-002

Segment 9 Results

Segment: 9 Detector: DET01 Position: 9
C:\Canberra\NDA2k\Data\00000384_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P009_S009

Acquisition Start: 5/6/2009 8:37:12 AM
Elapsed Live Time: 117.65 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.232 +/- 0.0134
SE-75	264.66	0.442 +/- 0.0079
SE-75	279.54	0.447 +/- 0.0083
SE-75	400.66	0.509 +/- 0.0097

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 5/6/2009 8:39:14 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	2931	1192	1.26	120.72	1.083E-005	2.79	
98.78		516	3476	1.46	199.34	1.579E-004	17.83	
129.33	Y	184	1168	0.97	260.38	2.641E-004	28.20	
208.04	Y	84	412	1.24	417.67	3.480E-004	34.58	
375.02	Y	80	114	1.55	751.35	2.712E-004	23.93	
2234.75		11980	11	1.09	4467.63	5.137E-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	< 1.733E-002 +/-	1.9%	< 1.650E-005	< 7.988E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.083E-002 +/-	1.9%	< 1.983E-005	< 3.291E-012
Al-26	< 4.510E-002 +/-	19.6%	< 4.295E-005	< 2.372E-006
K-40	< 3.012E-001 +/-	5.3%	< 2.869E-004	< 4.699E-002
Co-57	< 1.113E-001 +/-	4.5%	< 1.060E-004	< 1.302E-011
Co-60	< 3.435E-002 +/-	1.7%	< 3.271E-005	< 3.013E-011
Se-75	< 8.172E-002 +/-	2.3%	< 7.783E-005	< 5.622E-012
Kr-85	< 5.101E+000 +/-	3.2%	< 4.858E-003	< 1.285E-008
Sr-90	< 1.890E-002 +/-	2.3%	< 1.800E-005	< 1.370E-010
Sb-125	< 5.622E-002 +/-	2.1%	< 5.355E-005	< 5.409E-011
Ba-133	< 6.309E-002 +/-	1.8%	< 6.008E-005	< 2.492E-010
Cs-134	< 1.677E-002 +/-	2.4%	< 1.597E-005	< 1.280E-011
Cs-137	< 1.890E-002 +/-	2.3%	< 1.800E-005	< 2.154E-010
Eu-152	< 9.592E-002 +/-	3.8%	< 9.135E-005	< 5.391E-010
Eu-154	< 5.947E-002 +/-	2.1%	< 5.664E-005	< 2.230E-010
Ho-166m	< 2.505E-002 +/-	2.3%	< 2.386E-005	< 1.393E-008
Bi-207	< 1.897E-002 +/-	2.4%	< 1.807E-005	< 3.452E-010
Pb-210	< 3.981E+002 +/-	311.1%	< 3.791E-001	< 5.175E-006
Ra-226	< 3.573E-002 +/-	2.6%	< 3.403E-005	< 3.573E-008
Ac-227	< 2.817E-001 +/-	8.5%	< 2.682E-004	< 3.859E-009
Th-230	< 1.352E+002 +/-	9.1%	< 1.287E-001	< 6.623E-003
Pa-231	< 1.734E+000 +/-	11.3%	< 1.652E-003	< 3.624E-005
Th-232	< 6.903E-002 +/-	2.5%	< 6.574E-005	< 6.220E-001
U-232	< 6.903E-002 +/-	2.5%	< 6.575E-005	< 3.196E-009
U-233	< 9.748E+002 +/-	4.1%	< 9.284E-001	< 9.943E-002
Pa-234	< 8.809E-002 +/-	12.2%	< 8.390E-005	
Pa-234m	< 1.524E+002 +/-	2.1%	< 1.451E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 1.000E-001 +/-	4.1%	< 9.525E-005	< 4.570E-002
Np-237	< 1.308E-001 +/-	2.2%	< 1.245E-004	< 1.831E-004
Pu-238	< 6.717E+003 +/-	4.3%	< 6.397E+000	< 3.882E-004
U-238	< 2.136E+000 +/-	2.1%	< 2.035E-003	< 6.281E+000
Pu-239	5.673E+003 +/-	39.6%	5.402E+000	9.019E-002
Pu-239B	< 3.794E+003 +/-	18.9%	< 3.613E+000	< 6.032E-002
U-239	< 2.157E+003 +/-	370.1%	< 2.054E+000	
Pu-240	< 2.232E+003 +/-	13.4%	< 2.126E+000	< 9.710E-003
Am-241	1.698E+002 +/-	153.4%	1.617E-001	4.889E-005
Am-241B	< 8.458E+002 +/-	14.5%	< 8.055E-001	< 2.436E-004
Pu-241	< 3.393E+004 +/-	4.3%	< 3.231E+001	< 3.264E-004
Pu-241B	1.051E+004 +/-	34.8%	1.001E+001	1.011E-004
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 3.578E-001 +/-	2.2%	< 3.408E-004	< 1.771E-006
Cm-243	< 3.690E-001 +/-	3.6%	< 3.515E-004	< 7.086E-009
Cm-244	< 1.664E+004 +/-	14.1%	< 1.585E+001	< 2.030E-004
Cm-245	< 6.329E-001 +/-	8.4%	< 6.028E-004	< 3.639E-006
Cm-247	< 3.513E-002 +/-	8.5%	< 3.345E-005	< 3.759E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 4.000E-002 +/-	3.5%	< 3.809E-005	< 9.680E-009
Cf-251	< 3.451E-001 +/-	6.6%	< 3.287E-004	< 2.157E-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	9.02E-002 +- 3.57E-002	4.87E-002 +- 9.28E-003

Beta: 1.07E+002 +- 7.36E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 2

Energy	Mass (g)
129.30	3.96E-002 +- 1.13E-002
375.05	6.79E-002 +- 1.63E-002

Segment 10 Results

Segment: 10 Detector: DET01 Position: 10
C:\Canberra\NDA2k\Data\00000384_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P010_S010

Acquisition Start: 5/6/2009 8:40:24 AM
Elapsed Live Time: 118.19 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.231 +/- 0.0128
SE-75	264.66	0.402 +/- 0.0072
SE-75	279.54	0.408 +/- 0.0077
SE-75	400.66	0.475 +/- 0.0091

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 5/6/2009 8:42:25 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
59.60	Y	1147	818	1.32	121.04	5.097E-006	4.94	
67.08		59	549	0.54	136.00	1.384E-005	59.85	
2234.75		11980	8	1.08	4467.62	5.021E-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	< 2.019E-002 +/-	1.9%	< 1.923E-005	< 9.308E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.213E-002 +/-	1.9%	< 2.107E-005	< 3.496E-012
Al-26	< 1.925E-002 +/-	19.8%	< 1.833E-005	< 1.012E-006
K-40	< 2.508E-001 +/-	5.3%	< 2.388E-004	< 3.912E-002
Co-57	< 9.308E-002 +/-	4.6%	< 8.865E-005	< 1.089E-011
Co-60	< 2.920E-002 +/-	1.7%	< 2.781E-005	< 2.561E-011
Se-75	< 6.530E-002 +/-	2.2%	< 6.219E-005	< 4.493E-012
Kr-85	< 5.629E+000 +/-	3.3%	< 5.361E-003	< 1.419E-008
Sr-90	< 2.853E-002 +/-	2.4%	< 2.717E-005	< 2.069E-010
Sb-125	< 5.990E-002 +/-	2.2%	< 5.705E-005	< 5.762E-011
Ba-133	< 4.443E-002 +/-	1.8%	< 4.231E-005	< 1.755E-010
Cs-134	< 1.711E-002 +/-	2.5%	< 1.630E-005	< 1.306E-011
Cs-137	< 2.853E-002 +/-	2.4%	< 2.717E-005	< 3.253E-010
Eu-152	< 1.207E-001 +/-	2.6%	< 1.149E-004	< 6.782E-010
Eu-154	< 6.318E-002 +/-	2.1%	< 6.017E-005	< 2.369E-010
Ho-166m	< 3.039E-002 +/-	2.6%	< 2.894E-005	< 1.690E-008
Bi-207	< 1.869E-002 +/-	2.4%	< 1.780E-005	< 3.402E-010
Pb-210	< 8.138E+002 +/-	308.2%	< 7.751E-001	< 1.058E-005
Ra-226	< 4.735E-002 +/-	2.7%	< 4.510E-005	< 4.735E-008
Ac-227	< 2.064E-001 +/-	8.5%	< 1.966E-004	< 2.828E-009
Th-230	< 1.039E+002 +/-	9.0%	< 9.894E-002	< 5.091E-003
Pa-231	< 1.375E+000 +/-	11.3%	< 1.309E-003	< 2.873E-005
Th-232	< 5.310E-002 +/-	2.6%	< 5.058E-005	< 4.785E-001
U-232	< 5.310E-002 +/-	2.6%	< 5.058E-005	< 2.459E-009
U-233	< 7.330E+002 +/-	4.0%	< 6.981E-001	< 7.477E-002
Pa-234	< 1.094E-001 +/-	12.2%	< 1.042E-004	
Pa-234m	< 1.580E+002 +/-	2.1%	< 1.505E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 7.010E-002 +/-	3.9%	< 6.677E-005	< 3.204E-002
Np-237	< 1.009E-001 +/-	2.2%	< 9.610E-005	< 1.413E-004
Pu-238	< 5.031E+003 +/-	4.2%	< 4.792E+000	< 2.908E-004
U-238	< 2.700E+000 +/-	2.2%	< 2.571E-003	< 7.938E+000
Pu-239	< 1.038E+003 +/-	3.7%	< 9.883E-001	< 1.650E-002
Pu-239B	< 3.587E+003 +/-	18.8%	< 3.416E+000	< 5.702E-002
U-239	< 4.536E+003 +/-	366.8%	< 4.320E+000	
Pu-240	< 2.099E+003 +/-	13.3%	< 1.999E+000	< 9.133E-003
Am-241	1.412E+002 +/-	150.6%	1.345E-001	4.067E-005
Am-241B	< 8.107E+002 +/-	14.4%	< 7.721E-001	< 2.335E-004
Pu-241	< 2.646E+004 +/-	4.2%	< 2.520E+001	< 2.545E-004
Pu-241B	< 7.189E+003 +/-	3.4%	< 6.846E+000	< 6.915E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 2.714E-001 +/-	2.2%	< 2.585E-004	< 1.344E-006
Cm-243	< 2.800E-001 +/-	3.5%	< 2.666E-004	< 5.376E-009
Cm-244	< 2.049E+004 +/-	14.1%	< 1.952E+001	< 2.500E-004
Cm-245	< 4.598E-001 +/-	8.3%	< 4.379E-004	< 2.644E-006
Cm-247	< 3.069E-002 +/-	8.5%	< 2.922E-005	< 3.283E-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	< 2.505E-001 +/-	6.5%	< 2.385E-004	< 1.565E-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\00000384_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P011_S011

Acquisition Start: 5/6/2009 8:43:35 AM
Elapsed Live Time: 118.52 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.136 +/- 0.0096
SE-75	264.66	0.242 +/- 0.0044
SE-75	279.54	0.251 +/- 0.0048
SE-75	400.66	0.304 +/- 0.0061

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 5/6/2009 8:45:37 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
59.44	Y	395	523	1.31	120.72	4.144E-006	10.13	
2234.76		11980	6	1.07	4467.64	2.551E-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	< 2.300E-002 +/-	1.8%	< 2.190E-005	< 1.060E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.101E-002 +/-	2.0%	< 2.001E-005	< 3.320E-012
Al-26	< 2.764E-002 +/-	15.1%	< 2.632E-005	< 1.454E-006
K-40	< 2.415E-001 +/-	5.0%	< 2.300E-004	< 3.768E-002
Co-57	< 7.630E-002 +/-	3.4%	< 7.267E-005	< 8.927E-012
Co-60	< 2.801E-002 +/-	1.7%	< 2.668E-005	< 2.457E-011
Se-75	< 5.949E-002 +/-	1.8%	< 5.666E-005	< 4.093E-012
Kr-85	< 5.107E+000 +/-	3.0%	< 4.863E-003	< 1.287E-008
Sr-90	< 1.895E-002 +/-	1.9%	< 1.805E-005	< 1.374E-010
Sb-125	< 4.625E-002 +/-	2.1%	< 4.405E-005	< 4.450E-011
Ba-133	< 3.369E-002 +/-	1.7%	< 3.209E-005	< 1.331E-010
Cs-134	< 1.341E-002 +/-	1.9%	< 1.277E-005	< 1.023E-011
Cs-137	< 1.895E-002 +/-	1.9%	< 1.805E-005	< 2.160E-010
Eu-152	< 6.924E-002 +/-	2.1%	< 6.595E-005	< 3.892E-010
Eu-154	< 5.999E-002 +/-	2.2%	< 5.713E-005	< 2.250E-010
Ho-166m	< 2.600E-002 +/-	2.2%	< 2.476E-005	< 1.446E-008
Bi-207	< 1.763E-002 +/-	2.0%	< 1.679E-005	< 3.209E-010
Pb-210	< 9.909E+002 +/-	53.0%	< 9.438E-001	< 1.288E-005
Ra-226	< 2.619E-002 +/-	2.2%	< 2.494E-005	< 2.619E-008
Ac-227	< 2.183E-001 +/-	8.3%	< 2.079E-004	< 2.991E-009
Th-230	< 9.825E+001 +/-	8.6%	< 9.357E-002	< 4.814E-003
Pa-231	< 1.209E+000 +/-	11.2%	< 1.151E-003	< 2.526E-005
Th-232	< 3.833E-002 +/-	2.1%	< 3.651E-005	< 3.454E-001
U-232	< 3.833E-002 +/-	2.1%	< 3.651E-005	< 1.775E-009
U-233	< 7.255E+002 +/-	2.7%	< 6.909E-001	< 7.400E-002
Pa-234	< 7.744E-002 +/-	12.2%	< 7.375E-005	
Pa-234m	< 1.023E+002 +/-	2.1%	< 9.743E-002	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 6.532E-002 +/-	2.5%	< 6.221E-005	< 2.985E-002
Np-237	< 9.080E-002 +/-	1.9%	< 8.648E-005	< 1.271E-004
Pu-238	< 4.692E+003 +/-	2.6%	< 4.468E+000	< 2.712E-004
U-238	< 2.695E+000 +/-	2.2%	< 2.567E-003	< 7.925E+000
Pu-239	< 8.975E+002 +/-	3.1%	< 8.548E-001	< 1.427E-002
Pu-239B	< 2.638E+003 +/-	5.3%	< 2.513E+000	< 4.194E-002
U-239	< 6.723E+003 +/-	65.1%	< 6.403E+000	
Pu-240	< 1.622E+003 +/-	4.7%	< 1.545E+000	< 7.055E-003
Am-241	5.983E+001 +/-	25.5%	5.698E-002	1.723E-005
Am-241B	< 6.187E+002 +/-	4.9%	< 5.892E-001	< 1.782E-004
Pu-241	< 2.495E+004 +/-	2.8%	< 2.377E+001	< 2.401E-004
Pu-241B	< 7.059E+003 +/-	2.4%	< 6.723E+000	< 6.791E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 2.526E-001 +/-	1.8%	< 2.405E-004	< 1.250E-006
Cm-243	< 2.605E-001 +/-	3.3%	< 2.481E-004	< 5.002E-009
Cm-244	< 1.838E+004 +/-	14.2%	< 1.751E+001	< 2.243E-004
Cm-245	< 4.375E-001 +/-	7.7%	< 4.166E-004	< 2.515E-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	< 2.370E-002 +/-	3.5%	< 2.258E-005	< 5.736E-009
Cf-251	< 2.235E-001 +/-	5.6%	< 2.129E-004	< 1.397E-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\00000384_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P012_S012

Acquisition Start: 5/6/2009 8:46:46 AM
Elapsed Live Time: 118.76 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.074 +/- 0.0070
SE-75	264.66	0.128 +/- 0.0024
SE-75	279.54	0.136 +/- 0.0029
SE-75	400.66	0.179 +/- 0.0038

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 5/6/2009 8:48:48 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
2234.74		11980	3	1.08	4467.60	2.412E-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	< 1.751E-002 +/-	1.9%	< 1.667E-005	< 8.071E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 1.965E-002 +/-	2.0%	< 1.871E-005	< 3.104E-012
Al-26	< 4.188E-002 +/-	16.0%	< 3.988E-005	< 2.203E-006
K-40	< 2.503E-001 +/-	5.1%	< 2.384E-004	< 3.905E-002
Co-57	< 6.526E-002 +/-	4.0%	< 6.215E-005	< 7.635E-012
Co-60	< 2.884E-002 +/-	1.7%	< 2.747E-005	< 2.529E-011
Se-75	< 6.008E-002 +/-	2.5%	< 5.722E-005	< 4.134E-012
Kr-85	< 4.736E+000 +/-	3.3%	< 4.511E-003	< 1.194E-008
Sr-90	< 1.408E-002 +/-	2.2%	< 1.341E-005	< 1.021E-010
Sb-125	< 3.857E-002 +/-	2.4%	< 3.673E-005	< 3.710E-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	< 1.408E-002 +/-	2.2%	< 1.341E-005	< 1.605E-010
Eu-152	< 7.317E-002 +/-	2.7%	< 6.968E-005	< 4.112E-010
Eu-154	< 5.607E-002 +/-	2.2%	< 5.340E-005	< 2.103E-010
Ho-166m	< 2.658E-002 +/-	2.3%	< 2.531E-005	< 1.478E-008
Bi-207	< 1.180E-002 +/-	2.3%	< 1.124E-005	< 2.148E-010
Pb-210	< 1.085E+000 +/-	39.2%	< 1.034E-003	< 1.411E-008
Ra-226	< 2.849E-002 +/-	2.5%	< 2.713E-005	< 2.849E-008
Ac-227	< 2.083E-001 +/-	8.5%	< 1.983E-004	< 2.853E-009
Th-230	< 1.630E+001 +/-	13.8%	< 1.552E-002	< 7.986E-004
Pa-231	< 1.023E+000 +/-	11.3%	< 9.742E-004	< 2.138E-005
Th-232	< 4.437E-002 +/-	2.5%	< 4.226E-005	< 3.998E-001
U-232	< 4.437E-002 +/-	2.5%	< 4.226E-005	< 2.054E-009
U-233	< 6.887E+002 +/-	3.2%	< 6.559E-001	< 7.025E-002
Pa-234	< 7.279E-002 +/-	12.2%	< 6.933E-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	< 6.921E-002 +/-	3.2%	< 6.592E-005	< 3.163E-002
Np-237	< 7.124E-002 +/-	2.3%	< 6.784E-005	< 9.973E-005
Pu-238	< 4.896E+003 +/-	3.1%	< 4.663E+000	< 2.830E-004
U-238	< 2.213E+000 +/-	2.1%	< 2.108E-003	< 6.506E+000
Pu-239	< 8.348E+002 +/-	3.7%	< 7.951E-001	< 1.327E-002
Pu-239B	< 1.413E+003 +/-	6.3%	< 1.346E+000	< 2.246E-002
U-239	< 2.469E+000 +/-	49.2%	< 2.351E-003	
Pu-240	< 1.010E+003 +/-	5.6%	< 9.623E-001	< 4.395E-003
Am-241	< 2.086E-001 +/-	16.6%	< 1.987E-004	< 6.008E-008
Am-241B	< 3.807E+002 +/-	5.8%	< 3.626E-001	< 1.097E-004
Pu-241	< 2.446E+004 +/-	3.3%	< 2.330E+001	< 2.353E-004
Pu-241B	< 6.831E+003 +/-	3.2%	< 6.505E+000	< 6.571E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.057E-001 +/-	9.3%	< 1.007E-004	< 5.233E-007
Cm-243	< 2.348E-001 +/-	3.7%	< 2.237E-004	< 4.509E-009
Cm-244	< 1.814E+004 +/-	14.1%	< 1.727E+001	< 2.213E-004
Cm-245	< 4.303E-001 +/-	7.9%	< 4.098E-004	< 2.474E-006
Cm-247	< 2.278E-002 +/-	8.6%	< 2.169E-005	< 2.437E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.111E-002 +/-	3.6%	< 2.010E-005	< 5.108E-009
Cf-251	< 2.341E-001 +/-	5.9%	< 2.229E-004	< 1.463E-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\00000384_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P013_S013

Acquisition Start: 5/6/2009 8:49:57 AM
Elapsed Live Time: 118.96 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.237 +/- 0.0124
SE-75	264.66	0.392 +/- 0.0070
SE-75	279.54	0.398 +/- 0.0075
SE-75	400.66	0.464 +/- 0.0089

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 5/6/2009 8:51:59 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
2234.76		11980	5	1.08	4467.64	6.895E-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	< 2.154E-002 +/-	1.8%	< 2.052E-005	< 9.931E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.448E-002 +/-	2.0%	< 2.332E-005	< 3.868E-012
Al-26	< 2.232E-002 +/-	14.9%	< 2.126E-005	< 1.174E-006
K-40	< 2.893E-001 +/-	4.9%	< 2.755E-004	< 4.513E-002
Co-57	< 5.156E-002 +/-	3.5%	< 4.910E-005	< 6.032E-012
Co-60	< 2.935E-002 +/-	1.7%	< 2.795E-005	< 2.574E-011
Se-75	< 4.965E-002 +/-	1.9%	< 4.728E-005	< 3.416E-012
Kr-85	< 4.192E+000 +/-	3.1%	< 3.992E-003	< 1.056E-008
Sr-90	< 1.674E-002 +/-	1.9%	< 1.594E-005	< 1.213E-010
Sb-125	< 4.851E-002 +/-	2.1%	< 4.620E-005	< 4.666E-011
Ba-133	< 2.659E-002 +/-	1.7%	< 2.532E-005	< 1.050E-010
Cs-134	< 1.227E-002 +/-	2.0%	< 1.169E-005	< 9.364E-012
Cs-137	< 1.674E-002 +/-	1.9%	< 1.594E-005	< 1.908E-010
Eu-152	< 5.620E-002 +/-	2.5%	< 5.353E-005	< 3.159E-010
Eu-154	< 6.990E-002 +/-	2.2%	< 6.657E-005	< 2.621E-010
Ho-166m	< 2.263E-002 +/-	2.2%	< 2.155E-005	< 1.258E-008
Bi-207	< 1.359E-002 +/-	2.0%	< 1.294E-005	< 2.473E-010
Pb-210	< 1.562E+000 +/-	36.7%	< 1.488E-003	< 2.031E-008
Ra-226	< 3.457E-002 +/-	2.2%	< 3.293E-005	< 3.457E-008
Ac-227	< 1.792E-001 +/-	8.3%	< 1.707E-004	< 2.455E-009
Th-230	< 1.453E+001 +/-	13.0%	< 1.384E-002	< 7.121E-004
Pa-231	< 8.230E-001 +/-	11.2%	< 7.838E-004	< 1.720E-005
Th-232	< 4.159E-002 +/-	2.2%	< 3.961E-005	< 3.747E-001
U-232	< 4.159E-002 +/-	2.2%	< 3.961E-005	< 1.925E-009
U-233	< 5.766E+002 +/-	2.7%	< 5.492E-001	< 5.882E-002
Pa-234	< 1.032E-001 +/-	12.1%	< 9.832E-005	
Pa-234m	< 1.729E+002 +/-	2.1%	< 1.646E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 5.480E-002 +/-	2.5%	< 5.219E-005	< 2.504E-002
Np-237	< 4.733E-002 +/-	1.9%	< 4.507E-005	< 6.626E-005
Pu-238	< 4.053E+003 +/-	2.6%	< 3.860E+000	< 2.343E-004
U-238	< 2.008E+000 +/-	2.1%	< 1.912E-003	< 5.903E+000
Pu-239	< 7.240E+002 +/-	3.2%	< 6.895E-001	< 1.151E-002
Pu-239B	< 1.104E+003 +/-	5.7%	< 1.051E+000	< 1.754E-002
U-239	< 4.692E+000 +/-	45.8%	< 4.468E-003	
Pu-240	< 8.231E+002 +/-	5.0%	< 7.839E-001	< 3.581E-003
Am-241	< 1.911E-001 +/-	15.6%	< 1.820E-004	< 5.503E-008
Am-241B	< 3.088E+002 +/-	5.5%	< 2.941E-001	< 8.895E-005
Pu-241	< 2.075E+004 +/-	2.8%	< 1.976E+001	< 1.996E-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	< 9.591E-002 +/-	8.4%	< 9.134E-005	< 4.747E-007
Cm-243	< 1.890E-001 +/-	3.3%	< 1.800E-004	< 3.629E-009
Cm-244	< 1.744E+004 +/-	14.1%	< 1.661E+001	< 2.128E-004
Cm-245	< 3.720E-001 +/-	7.7%	< 3.543E-004	< 2.139E-006
Cm-247	< 2.781E-002 +/-	8.5%	< 2.648E-005	< 2.975E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.812E-002 +/-	3.5%	< 1.725E-005	< 4.384E-009
Cf-251	< 1.946E-001 +/-	5.6%	< 1.853E-004	< 1.216E-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\00000384_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P014_S014

Acquisition Start: 5/6/2009 8:53:08 AM
Elapsed Live Time: 119.08 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.582 +/- 0.0198
SE-75	264.66	0.729 +/- 0.0131
SE-75	279.54	0.743 +/- 0.0137
SE-75	400.66	0.779 +/- 0.0147

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 5/6/2009 8:55:10 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
400.54		24	19	0.98	802.34	2.792E-004	33.50	
2234.74		11980	3	1.09	4467.61	5.262E-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	< 2.432E-002 +/-	1.9%	< 2.316E-005	< 1.121E-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	< 2.989E-002 +/-	15.2%	< 2.846E-005	< 1.572E-006
K-40	< 1.464E-001 +/-	5.0%	< 1.394E-004	< 2.283E-002
Co-57	< 4.755E-002 +/-	3.4%	< 4.529E-005	< 5.564E-012
Co-60	< 3.186E-002 +/-	1.7%	< 3.034E-005	< 2.794E-011
Se-75	< 3.967E-002 +/-	1.8%	< 3.778E-005	< 2.729E-012
Kr-85	< 5.012E+000 +/-	3.1%	< 4.773E-003	< 1.263E-008
Sr-90	< 1.813E-002 +/-	1.9%	< 1.726E-005	< 1.314E-010
Sb-125	< 3.177E-002 +/-	2.1%	< 3.025E-005	< 3.056E-011
Ba-133	< 1.892E-002 +/-	1.7%	< 1.802E-005	< 7.474E-011
Cs-134	< 1.867E-002 +/-	2.0%	< 1.779E-005	< 1.425E-011
Cs-137	< 1.813E-002 +/-	1.9%	< 1.726E-005	< 2.067E-010
Eu-152	< 5.394E-002 +/-	2.5%	< 5.137E-005	< 3.032E-010
Eu-154	< 6.422E-002 +/-	2.2%	< 6.117E-005	< 2.408E-010
Ho-166m	< 2.421E-002 +/-	2.2%	< 2.306E-005	< 1.346E-008
Bi-207	< 1.394E-002 +/-	2.0%	< 1.328E-005	< 2.537E-010
Pb-210	< 8.160E+002 +/-	56.7%	< 7.772E-001	< 1.061E-005
Ra-226	< 3.131E-002 +/-	2.2%	< 2.982E-005	< 3.131E-008
Ac-227	< 1.204E-001 +/-	8.3%	< 1.147E-004	< 1.650E-009
Th-230	< 6.239E+001 +/-	8.6%	< 5.942E-002	< 3.057E-003
Pa-231	< 6.210E-001 +/-	11.2%	< 5.914E-004	< 1.298E-005
Th-232	< 4.195E-002 +/-	2.2%	< 3.995E-005	< 3.780E-001
U-232	< 4.195E-002 +/-	2.2%	< 3.995E-005	< 1.942E-009
U-233	< 4.699E+002 +/-	2.7%	< 4.475E-001	< 4.793E-002
Pa-234	< 8.240E-002 +/-	12.2%	< 7.847E-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	< 3.931E-002 +/-	2.5%	< 3.744E-005	< 1.797E-002
Np-237	< 4.786E-002 +/-	1.9%	< 4.558E-005	< 6.700E-005
Pu-238	< 3.119E+003 +/-	2.6%	< 2.971E+000	< 1.803E-004
U-238	< 1.744E+000 +/-	2.2%	< 1.661E-003	< 5.127E+000
Pu-239	< 6.143E+002 +/-	3.1%	< 5.851E-001	< 9.767E-003
Pu-239B	< 1.444E+003 +/-	5.4%	< 1.375E+000	< 2.295E-002
U-239	< 7.105E+003 +/-	69.5%	< 6.766E+000	
Pu-240	< 1.005E+003 +/-	4.7%	< 9.569E-001	< 4.371E-003
Am-241	< 4.831E+000 +/-	25.0%	< 4.601E-003	< 1.391E-006
Am-241B	< 3.785E+002 +/-	5.0%	< 3.605E-001	< 1.090E-004
Pu-241	< 1.642E+004 +/-	2.8%	< 1.564E+001	< 1.579E-004
Pu-241B	< 4.660E+003 +/-	2.4%	< 4.438E+000	< 4.483E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.438E-001 +/-	1.8%	< 1.370E-004	< 7.119E-007
Cm-243	< 1.483E-001 +/-	3.3%	< 1.413E-004	< 2.848E-009
Cm-244	< 1.193E+004 +/-	14.1%	< 1.136E+001	< 1.455E-004
Cm-245	< 2.664E-001 +/-	7.7%	< 2.537E-004	< 1.532E-006
Cm-247	< 3.515E-002 +/-	8.5%	< 3.348E-005	< 3.761E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.296E-002 +/-	3.5%	< 2.186E-005	< 5.555E-009
Cf-251	< 1.492E-001 +/-	5.6%	< 1.421E-004	< 9.328E-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\00000384_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P015_S015

Acquisition Start: 5/6/2009 8:56:20 AM
Elapsed Live Time: 119.13 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.590 +/- 0.0202
SE-75	264.66	0.758 +/- 0.0136
SE-75	279.54	0.766 +/- 0.0142
SE-75	400.66	0.809 +/- 0.0153

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 5/6/2009 8:58:21 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
2234.76		11980	15	1.09	4467.65	2.684E-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	< 3.241E-002 +/-	1.8%	< 3.087E-005	< 1.494E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.367E-002 +/-	2.1%	< 2.254E-005	< 3.739E-012
Al-26	< 4.161E-002 +/-	15.4%	< 3.963E-005	< 2.189E-006
K-40	< 3.387E-001 +/-	5.0%	< 3.226E-004	< 5.284E-002
Co-57	< 4.412E-002 +/-	3.5%	< 4.202E-005	< 5.162E-012
Co-60	< 3.826E-002 +/-	1.7%	< 3.644E-005	< 3.356E-011
Se-75	< 3.946E-002 +/-	1.8%	< 3.758E-005	< 2.715E-012
Kr-85	< 5.380E+000 +/-	3.0%	< 5.124E-003	< 1.356E-008
Sr-90	< 1.814E-002 +/-	1.9%	< 1.727E-005	< 1.315E-010
Sb-125	< 4.376E-002 +/-	2.1%	< 4.168E-005	< 4.210E-011
Ba-133	< 2.638E-002 +/-	1.7%	< 2.512E-005	< 1.042E-010
Cs-134	< 1.484E-002 +/-	1.9%	< 1.413E-005	< 1.132E-011
Cs-137	< 1.814E-002 +/-	1.9%	< 1.727E-005	< 2.068E-010
Eu-152	< 4.397E-002 +/-	1.8%	< 4.188E-005	< 2.471E-010
Eu-154	< 6.758E-002 +/-	2.2%	< 6.436E-005	< 2.534E-010
Ho-166m	< 2.490E-002 +/-	2.2%	< 2.371E-005	< 1.384E-008
Bi-207	< 1.622E-002 +/-	2.0%	< 1.545E-005	< 2.953E-010
Pb-210	< 9.571E+002 +/-	57.4%	< 9.115E-001	< 1.244E-005
Ra-226	< 3.600E-002 +/-	2.0%	< 3.429E-005	< 3.600E-008
Ac-227	< 1.229E-001 +/-	8.3%	< 1.171E-004	< 1.684E-009
Th-230	< 5.783E+001 +/-	8.6%	< 5.508E-002	< 2.834E-003
Pa-231	< 5.863E-001 +/-	11.2%	< 5.584E-004	< 1.225E-005
Th-232	< 5.123E-002 +/-	2.0%	< 4.879E-005	< 4.616E-001
U-232	< 5.123E-002 +/-	2.0%	< 4.879E-005	< 2.372E-009
U-233	< 4.371E+002 +/-	2.8%	< 4.163E-001	< 4.458E-002
Pa-234	< 1.233E-001 +/-	12.2%	< 1.174E-004	
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	< 4.189E-002 +/-	2.5%	< 3.990E-005	< 1.915E-002
Np-237	< 4.519E-002 +/-	1.9%	< 4.304E-005	< 6.327E-005
Pu-238	< 2.946E+003 +/-	2.7%	< 2.806E+000	< 1.703E-004
U-238	< 2.624E+000 +/-	2.2%	< 2.499E-003	< 7.715E+000
Pu-239	< 5.304E+002 +/-	3.2%	< 5.051E-001	< 8.433E-003
Pu-239B	< 1.351E+003 +/-	5.6%	< 1.286E+000	< 2.147E-002
U-239	< 9.483E+003 +/-	70.2%	< 9.032E+000	
Pu-240	< 8.701E+002 +/-	4.9%	< 8.287E-001	< 3.785E-003
Am-241	< 5.192E+000 +/-	25.4%	< 4.945E-003	< 1.495E-006
Am-241B	< 3.223E+002 +/-	5.1%	< 3.069E-001	< 9.281E-005
Pu-241	< 1.500E+004 +/-	2.9%	< 1.429E+001	< 1.443E-004
Pu-241B	< 3.958E+003 +/-	2.4%	< 3.770E+000	< 3.808E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.398E-001 +/-	1.8%	< 1.332E-004	< 6.922E-007
Cm-243	< 1.442E-001 +/-	3.3%	< 1.374E-004	< 2.769E-009
Cm-244	< 1.846E+004 +/-	14.1%	< 1.758E+001	< 2.252E-004
Cm-245	< 2.657E-001 +/-	7.7%	< 2.530E-004	< 1.528E-006
Cm-247	< 3.529E-002 +/-	8.5%	< 3.361E-005	< 3.776E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.792E-002 +/-	3.5%	< 1.707E-005	< 4.336E-009
Cf-251	< 1.410E-001 +/-	5.6%	< 1.343E-004	< 8.814E-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
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Acquisition Start: 5/6/2009 8:59:31 AM
Elapsed Live Time: 119.16 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.539 +/- 0.0191
SE-75	264.66	0.717 +/- 0.0128
SE-75	279.54	0.728 +/- 0.0134
SE-75	400.66	0.784 +/- 0.0148

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 5/6/2009 9:01:35 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
400.86		45	7	1.36	802.98	1.867E-004	17.08	
2234.75		11980	4	1.08	4467.63	2.434E-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	< 3.182E-002 +/-	2.3%	< 3.031E-005	< 1.467E-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	< 5.098E-002 +/-	18.0%	< 4.856E-005	< 2.682E-006
K-40	< 4.732E-001 +/-	5.6%	< 4.507E-004	< 7.382E-002
Co-57	< 7.832E-002 +/-	4.4%	< 7.459E-005	< 9.163E-012
Co-60	< 5.509E-002 +/-	2.0%	< 5.247E-005	< 4.832E-011
Se-75	< 6.277E-002 +/-	2.8%	< 5.978E-005	< 4.318E-012
Kr-85	< 6.219E+000 +/-	3.6%	< 5.923E-003	< 1.567E-008
Sr-90	< 2.952E-002 +/-	2.6%	< 2.811E-005	< 2.140E-010
Sb-125	< 6.157E-002 +/-	2.7%	< 5.864E-005	< 5.923E-011
Ba-133	< 3.480E-002 +/-	2.3%	< 3.315E-005	< 1.375E-010
Cs-134	< 2.151E-002 +/-	2.3%	< 2.048E-005	< 1.641E-011
Cs-137	< 2.952E-002 +/-	2.6%	< 2.811E-005	< 3.365E-010
Eu-152	< 6.210E-002 +/-	2.9%	< 5.915E-005	< 3.490E-010
Eu-154	< 6.767E-002 +/-	2.4%	< 6.444E-005	< 2.537E-010
Ho-166m	< 3.729E-002 +/-	2.6%	< 3.551E-005	< 2.073E-008
Bi-207	< 2.592E-002 +/-	2.2%	< 2.469E-005	< 4.718E-010
Pb-210	< 2.204E+000 +/-	46.8%	< 2.099E-003	< 2.865E-008
Ra-226	< 4.419E-002 +/-	3.0%	< 4.209E-005	< 4.419E-008
Ac-227	< 2.263E-001 +/-	8.7%	< 2.155E-004	< 3.100E-009
Th-230	< 2.116E+001 +/-	15.5%	< 2.015E-002	< 1.037E-003
Pa-231	< 9.137E-001 +/-	11.4%	< 8.702E-004	< 1.910E-005
Th-232	< 8.579E-002 +/-	2.9%	< 8.171E-005	< 7.730E-001
U-232	< 8.579E-002 +/-	2.9%	< 8.171E-005	< 3.972E-009
U-233	< 7.166E+002 +/-	2.5%	< 6.825E-001	< 7.309E-002
Pa-234	< 1.464E-001 +/-	12.3%	< 1.395E-004	
Pa-234m	< 1.322E+002 +/-	2.4%	< 1.259E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 7.930E-002 +/-	3.6%	< 7.553E-005	< 3.624E-002
Np-237	< 5.943E-002 +/-	2.6%	< 5.660E-005	< 8.321E-005
Pu-238	< 6.242E+003 +/-	3.6%	< 5.945E+000	< 3.608E-004
U-238	< 2.744E+000 +/-	2.4%	< 2.613E-003	< 8.067E+000
Pu-239	< 1.009E+003 +/-	4.1%	< 9.612E-001	< 1.605E-002
Pu-239B	< 1.478E+003 +/-	7.0%	< 1.408E+000	< 2.350E-002
U-239	< 8.201E+000 +/-	58.6%	< 7.811E-003	
Pu-240	< 1.044E+003 +/-	6.2%	< 9.947E-001	< 4.543E-003
Am-241	< 2.383E-001 +/-	19.9%	< 2.270E-004	< 6.864E-008
Am-241B	< 3.883E+002 +/-	6.4%	< 3.698E-001	< 1.118E-004
Pu-241	< 3.114E+004 +/-	3.7%	< 2.965E+001	< 2.995E-004
Pu-241B	< 8.722E+003 +/-	3.6%	< 8.306E+000	< 8.390E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.403E-001 +/-	10.7%	< 1.336E-004	< 6.943E-007
Cm-243	< 2.305E-001 +/-	3.9%	< 2.195E-004	< 4.426E-009
Cm-244	< 2.375E+004 +/-	14.2%	< 2.262E+001	< 2.898E-004
Cm-245	< 5.442E-001 +/-	8.1%	< 5.183E-004	< 3.129E-006
Cm-247	< 5.038E-002 +/-	8.7%	< 4.798E-005	< 5.391E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 3.174E-002 +/-	3.8%	< 3.023E-005	< 7.682E-009
Cf-251	< 2.854E-001 +/-	6.2%	< 2.718E-004	< 1.784E-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

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	< 3.707E-002 +/-	2.1%	< 2.207E-006	< 1.709E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 4.274E-002 +/-	1.9%	< 2.544E-006	< 6.753E-012
Al-26	< 6.560E-002 +/-	19.8%	< 3.905E-006	< 3.450E-006
K-40	< 4.812E-001 +/-	5.3%	< 2.864E-005	< 7.507E-002
Co-57	3.224E+001 +/-	6.3%	1.919E-003	3.772E-009
Co-60	< 5.509E-002 +/-	2.0%	< 3.279E-006	< 4.832E-011
Se-75	< 2.991E-001 +/-	1.9%	< 1.781E-005	< 2.058E-011
Kr-85	< 1.711E+001 +/-	3.1%	< 1.018E-003	< 4.311E-008
Sr-90	< 9.022E-002 +/-	2.0%	< 5.370E-006	< 6.541E-010
Sb-125	< 3.338E-001 +/-	2.3%	< 1.987E-005	< 3.212E-010
Ba-133	< 2.241E-001 +/-	1.7%	< 1.334E-005	< 8.852E-010
Cs-134	< 3.338E-002 +/-	1.8%	< 1.987E-006	< 2.547E-011
Cs-137	< 9.022E-002 +/-	2.0%	< 5.370E-006	< 1.029E-009
Eu-152	< 1.325E-001 +/-	4.0%	< 7.889E-006	< 7.449E-010
Eu-154	< 1.221E-001 +/-	2.1%	< 7.267E-006	< 4.578E-010
Ho-166m	< 5.704E-002 +/-	2.2%	< 3.395E-006	< 3.171E-008
Bi-207	< 3.707E-002 +/-	1.9%	< 2.207E-006	< 6.747E-010
Pb-210	< 3.357E+004 +/-	309.7%	< 1.998E+000	< 4.364E-004
Ra-226	< 1.104E-001 +/-	2.3%	< 6.570E-006	< 1.104E-007
Ac-227	< 1.038E+000 +/-	8.3%	< 6.181E-005	< 1.423E-008
Th-230	4.828E+001 +/-	102.3%	2.874E-003	2.366E-003
Pa-231	< 5.358E+000 +/-	11.2%	< 3.189E-004	< 1.120E-004
Th-232	< 1.328E-001 +/-	2.4%	< 7.907E-006	< 1.197E+000
U-232	< 2.117E-001 +/-	2.2%	< 1.260E-005	< 9.801E-009
U-233	< 3.996E+003 +/-	2.7%	< 2.378E-001	< 4.076E-001
Pa-234	< 2.194E-001 +/-	12.3%	< 1.306E-005	
Pa-234m	< 2.417E+002 +/-	2.1%	< 1.438E-002	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 3.413E-001 +/-	2.5%	< 2.031E-005	< 1.560E-001
Np-237	8.323E+000 +/-	4.1%	4.954E-004	1.165E-002
Pu-238	< 2.264E+004 +/-	2.6%	< 1.348E+000	< 1.309E-003
U-238	< 4.530E+000 +/-	2.1%	< 2.696E-004	< 1.332E+001
Pu-239	6.497E+006 +/-	1.8%	3.867E+002	1.033E+002
Pu-239B	4.887E+006 +/-	0.7%	2.909E+002	7.770E+001
U-239	< 2.222E+005 +/-	368.5%	< 1.323E+001	
Pu-240	5.302E+005 +/-	21.3%	3.156E+001	2.306E+000

Am-241	1.576E+006	+/-	2.0%	9.379E+001	4.538E-001
Am-241B	1.382E+006	+/-	2.6%	8.226E+001	3.980E-001
Pu-241	1.068E+007	+/-	4.7%	6.356E+002	1.027E-001
Pu-241B	1.547E+007	+/-	1.6%	9.210E+002	1.489E-001
Pu-242	< 0.000E+000	+/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 9.528E-001	+/-	2.2%	< 5.672E-005	< 4.717E-006
Cm-243	< 1.073E+000	+/-	3.3%	< 6.389E-005	< 2.061E-008
Cm-244	< 5.418E+004	+/-	14.2%	< 3.225E+000	< 6.610E-004
Cm-245	< 2.066E+000	+/-	7.7%	< 1.230E-004	< 1.188E-005
Cm-247	< 1.556E-001	+/-	8.5%	< 9.265E-006	< 1.665E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.806E-001 +/-	3.5%	< 1.075E-005	< 4.369E-008
Cf-251	< 1.189E+000 +/-	5.6%	< 7.080E-005	< 7.434E-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	1.03E+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: SGS100 Analysis Date: 5/6/2009

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

Net Weight	16800.0 g		
Pu mass	1.10E+002	+- 1.62E+001	g
TRU Alpha Activity	9.66E+000	+- 1.07E+000	Ci
TRU Activity Concentration	5.75E+005	+- 6.38E+004	nCi/g
Pu-239 Equivalent Activity	1.00E+001	+- 1.07E+000	Ci
Pu-239 FGE	1.04E+002	+- 1.62E+001	g
Decay heat	3.04E-001	+- 3.34E-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	9.02E-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	3.41E-007
NP237	1.17E-002	8.32E-006	1.34E-006	7.90E-007
PU238	1.06E-002	1.84E-001	3.16E-002	3.59E-004
U238	<LLD	<LLD	0.00E+000	4.53E-006
PU239	1.03E+002	6.50E+000	1.02E+000	1.27E-002
PU240	6.09E+000	1.40E+000	2.20E-001	2.73E-003
AM241	4.54E-001	1.58E+000	2.48E-001	5.91E-004
PU241	1.85E-001	1.93E+001	3.03E+000	3.76E-002
PU242	3.35E-002	1.33E-004	2.47E-005	0.00E+000

Errors quoted at 1.000 sigma

Operator:_____ Date:_____

ITR:_____ Date:_____

Summed Segment Spectra Results
Category: Segmented

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Elapsed Live Time: 97.70 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: 5/6/2009 9:01:58 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		7946	42657	2.31	100.70	7.654E-007	4.21	
	59.44	Y	349635	46104	1.13	120.73	6.620E-006	0.34	
	67.26	Y	992	26253	1.09	136.35	2.024E-005	25.20	
M	94.69	Y	63138	87304	1.54	191.15	1.523E-004	0.86	337.06
m	98.70	Y	242866	118220	1.55	199.18	1.782E-004	0.66	
m	100.89	Y	36375	120345	1.56	203.54	1.923E-004	1.15	
m	103.33	Y	171581	97030	1.56	208.44	2.081E-004	0.65	
M	111.08	Y	64417	57957	1.39	223.92	2.563E-004	0.60	434.91
m	114.58	Y	52439	64729	1.39	230.92	2.767E-004	0.64	
m	116.65	Y	49588	60777	1.40	235.05	2.883E-004	0.63	
m	120.59	Y	12779	55055	1.40	242.93	3.092E-004	1.32	
m	122.84	Y	6386	53264	1.41	247.42	3.204E-004	2.30	
m	125.25	Y	23999	50840	1.41	252.24	3.319E-004	0.87	
m	129.29	Y	115499	44738	1.42	260.30	3.496E-004	0.51	
M	141.61	Y	858	32417	1.16	284.91	3.926E-004	15.41	2.43
m	144.18	Y	7792	36295	1.16	290.06	3.995E-004	5.10	
m	146.31	Y	6600	32952	1.16	294.31	4.048E-004	5.35	
m	148.56	Y	15401	36981	1.17	298.81	4.099E-004	4.61	
M	161.12	Y	6920	33802	1.32	323.91	4.301E-004	6.85	12.81
m	164.62	Y	6562	55888	1.32	330.91	4.336E-004	5.71	
m	169.44	Y	1353	54838	1.33	340.54	4.371E-004	11.98	
m	171.36	Y	5101	58118	1.33	344.37	4.380E-004	5.90	
	179.12	Y	2493	34207	1.13	359.88	4.400E-004	12.11	
	189.34	Y	3173	32762	1.22	380.30	4.384E-004	9.36	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	195.65	Y	5342	27483	1.23	392.90	4.356E-004	5.06	
M	203.53	Y	26219	25491	1.19	408.66	4.305E-004	1.14	2.81
m	207.99	Y	85518	22572	1.20	417.56	4.272E-004	0.90	
	225.47		425	18081	1.05	452.50	4.109E-004	49.79	
M	237.74	Y	726	18144	1.33	477.01	3.978E-004	13.14	3.96
m	243.31	Y	1286	20957	1.34	488.15	3.917E-004	8.11	
	255.34	Y	3902	15324	1.26	512.20	3.783E-004	5.37	
M	263.94	Y	1298	10997	1.24	529.37	3.687E-004	6.58	1.36
m	267.48	Y	3185	13324	1.24	536.45	3.648E-004	3.19	
M	297.36	Y	2199	10287	1.15	596.16	3.335E-004	4.15	1.25
m	299.95	Y	522	10082	1.16	601.34	3.309E-004	13.82	
M	311.82	Y	4680	10775	1.51	625.06	3.195E-004	2.16	9.26
m	316.17	Y	623	13440	1.52	633.74	3.156E-004	11.94	
m	320.89	Y	3137	12834	1.52	643.18	3.113E-004	2.87	
m	323.38	Y	4091	12417	1.52	648.15	3.091E-004	2.32	
M	332.70	Y	29915	8802	1.31	666.78	3.011E-004	0.67	14.73
m	335.67	Y	12123	8234	1.31	672.70	2.986E-004	1.05	
m	341.41	Y	3109	8610	1.31	684.17	2.939E-004	2.64	
m	344.97	Y	26034	8185	1.32	691.30	2.911E-004	0.71	
M	368.29	Y	7896	6051	1.37	737.90	2.738E-004	1.53	72.52
m	370.77	Y	1059	5313	1.37	742.85	2.721E-004	6.45	
m	375.01	Y	71515	4521	1.38	751.32	2.692E-004	0.73	
m	380.11	Y	13756	3665	1.38	761.51	2.658E-004	1.16	
m	382.72	Y	11842	3410	1.39	766.72	2.641E-004	1.21	
	392.87	Y	23668	3925	1.54	787.01	2.578E-004	0.85	
	400.09	Y	532	3239	2.28	801.44	2.534E-004	18.25	
M	413.66	Y	63195	1923	1.38	828.56	2.457E-004	0.69	9.16
m	419.14	Y	391	1445	1.39	839.51	2.428E-004	9.47	
m	422.53	Y	4999	1550	1.39	846.29	2.411E-004	1.70	
m	426.62	Y	1276	1331	1.39	854.45	2.389E-004	3.83	
m	429.95	Y	178	1452	1.40	861.10	2.372E-004	18.48	
M	445.64	Y	314	1069	1.32	892.46	2.297E-004	9.78	4.11
m	451.42	Y	7568	1203	1.33	904.02	2.271E-004	1.22	
	481.53	Y	164	776	1.48	964.19	2.146E-004	29.24	
	558.38		180	373	1.76	1117.75	1.898E-004	19.00	
	597.55	Y	134	331	1.36	1196.02	1.801E-004	24.79	
	618.89	Y	745	356	1.83	1238.67	1.754E-004	5.80	
M	632.84	Y	93	275	1.52	1266.54	1.726E-004	16.60	2.85
m	640.06	Y	298	250	1.53	1280.97	1.712E-004	6.90	
m	645.89	Y	464	271	1.53	1292.63	1.701E-004	5.41	
m	652.54	Y	531	245	1.54	1305.90	1.688E-004	4.86	
m	658.74	Y	297	243	1.54	1318.29	1.676E-004	7.11	
m	662.35	Y	3383	259	1.55	1325.51	1.670E-004	1.78	
	688.74	Y	258	286	1.62	1378.25	1.625E-004	13.11	
	703.71	Y	101	157	1.73	1408.16	1.600E-004	22.46	
M	717.53	Y	64	170	1.64	1435.77	1.579E-004	20.04	2.02
m	721.94	Y	1683	178	1.64	1444.58	1.572E-004	2.53	
	736.78	Y	78	114	1.92	1474.25	1.551E-004	25.59	
	756.04	Y	179	120	2.12	1512.74	1.524E-004	13.16	
	769.36	Y	471	153	1.72	1539.35	1.507E-004	6.69	

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
1099.37		105	71	2.22	2198.80	1.188E-004	18.03	
1115.60		26	61	0.72	2231.24	1.175E-004	51.31	
1173.57	Y	117	54	1.63	2347.09	1.132E-004	14.10	
1291.95		78	48	1.96	2583.64	1.047E-004	18.96	
1332.66	Y	151	42	1.96	2664.98	1.020E-004	11.32	
1460.98	Y	50	37	1.53	2921.40	9.341E-005	26.90	
2234.73		191681	360	1.11	4467.59	4.994E-005	0.36	
2293.75		29	35	1.35	4585.53	4.727E-005	38.36	
2615.14		37	15	1.12	5227.76	3.453E-005	25.04	

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	< 1.310E-001 +/-	1.2%	< 7.799E-006	< 2.070E-011
	Al-26	< 1.456E-001 +/-	8.2%	< 8.666E-006	< 7.658E-006
	K-40	1.123E+000 +/-	27.1%	6.683E-005	1.751E-001
X	Co-57				
	Co-60	3.078E-001 +/-	9.0%	1.832E-005	2.700E-010
	Se-75	< 3.858E+000 +/-	1.1%	< 2.296E-004	< 2.654E-010
	Kr-85	< 4.592E+001 +/-	2.5%	< 2.733E-003	< 1.157E-007
	Sr-90	< 1.538E-001 +/-	1.0%	< 9.155E-006	< 1.115E-009
	Sb-125	< 9.695E-001 +/-	1.5%	< 5.771E-005	< 9.327E-010
	Ba-133	< 5.955E-001 +/-	1.0%	< 3.545E-005	< 2.352E-009
	Cs-134	< 1.304E-001 +/-	1.0%	< 7.762E-006	< 9.949E-011
X	Cs-137				
	Eu-152	< 4.323E-001 +/-	2.1%	< 2.573E-005	< 2.430E-009
	Eu-154	< 3.223E-001 +/-	1.5%	< 1.919E-005	< 1.209E-009
	Ho-166m	< 1.564E-001 +/-	1.7%	< 9.312E-006	< 8.698E-008
	Bi-207	< 1.239E-001 +/-	1.2%	< 7.374E-006	< 2.255E-009
	Pb-210	< 1.608E+004 +/-	12.2%	< 9.574E-001	< 2.091E-004
	Ra-226	< 2.898E-001 +/-	1.5%	< 1.725E-005	< 2.898E-007
	Ac-227	< 2.486E+000 +/-	8.2%	< 1.480E-004	< 3.406E-008
	Th-230	2.903E+003 +/-	26.6%	1.728E-001	1.423E-001
	Pa-231	< 1.372E+001 +/-	11.2%	< 8.167E-004	< 2.868E-004
	Th-232	< 3.801E-001 +/-	1.9%	< 2.263E-005	< 3.425E+000
	U-232	9.436E-001 +/-	13.3%	5.616E-005	4.369E-008
	U-233	< 9.172E+003 +/-	1.6%	< 5.460E-001	< 9.356E-001
	Pa-234	< 5.137E-001 +/-	12.1%	< 3.058E-005	
	Pa-234m	< 6.745E+002 +/-	1.5%	< 4.015E-002	

U-234	< 0.000E+000	+/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 7.874E-001	+/-	1.8%	< 4.687E-005	< 3.598E-001
Np-237	5.891E+000	+/-	3.3%	3.506E-004	8.247E-003
Pu-238	< 5.400E+004	+/-	1.6%	< 3.214E+000	< 3.121E-003
U-238	< 1.177E+001	+/-	1.6%	< 7.009E-004	< 3.462E+001
Pu-239	7.007E+006	+/-	1.7%	4.171E+002	1.114E+002
Pu-239B	3.864E+006	+/-	0.6%	2.300E+002	6.143E+001
U-239	@ 1.000E+020	+/-	100.0%	@ 5.952E+015	
X Pu-240					
Am-241	1.244E+006	+/-	2.3%	7.404E+001	3.582E-001
Am-241B	5.848E+005	+/-	1.8%	3.481E+001	1.684E-001
Pu-241	4.742E+006	+/-	5.0%	2.823E+002	4.562E-002
Pu-241B	9.251E+006	+/-	1.7%	5.507E+002	8.899E-002
Pu-242	< 0.000E+000	+/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 2.684E+000	+/-	1.2%	< 1.598E-004	< 1.329E-005
Cm-243	< 2.822E+000	+/-	3.0%	< 1.680E-004	< 5.418E-008
Cm-244	< 1.428E+005	+/-	14.1%	< 8.499E+000	< 1.742E-003
Cm-245	< 4.867E+000	+/-	7.5%	< 2.897E-004	< 2.799E-005
Cm-247	< 3.801E-001	+/-	8.4%	< 2.263E-005	< 4.067E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 4.277E-001 +/-	3.2%	< 2.546E-005	< 1.035E-007
Cf-251	< 2.722E+000 +/-	5.3%	< 1.620E-004	< 1.701E-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 +- 1.91E+000	3.11E+001 +- 2.75E-001

Beta: 2.27E+002 +- 3.87E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.88E+001 +- 3.51E-001
203.55	3.83E+001 +- 6.32E-001
375.05	6.12E+001 +- 8.33E-001
413.71	6.28E+001 +- 9.12E-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: SGS100 Analysis Date: 5/6/2009

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	9.96E+000	+- 1.14E+000	Ci
TRU Activity Concentration	5.93E+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	3.13E-001	+- 3.55E-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	1.54E-007
U233	<LLD	<LLD	0.00E+000	9.17E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	7.87E-007
NP237	8.25E-003	5.89E-006	9.39E-007	1.09E-006
PU238	1.15E-002	1.98E-001	3.40E-002	3.50E-004
U238	<LLD	<LLD	0.00E+000	1.18E-005
PU239	1.11E+002	7.01E+000	1.10E+000	1.24E-002
PU240	6.57E+000	1.51E+000	2.37E-001	2.67E-003
AM241	3.58E-001	1.24E+000	1.96E-001	1.17E-004
PU241	2.00E-001	2.08E+001	3.26E+000	3.67E-002
PU242	3.61E-002	1.43E-004	2.67E-005	0.00E+000

Errors quoted at 1.000 sigma

Operator:_____ Date:_____

ITR:_____ Date:_____

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

MGA version: MGA V9.63H CI

Measurement date = 5/6/09 Declared date = 5/6/09
Low energy spectrum sensitivity = 30.0% Total counts = 7.492E+006
High energy spectrum sensitivity : 10.0%

Pu g/cm2 = 0.7613 Cd g/cm2 = 2.0151 FWHM at 122 keV = 625 eV
QFIT = 1.20 FWHM at 208 keV = 799 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	0.000103	6.9	6.9	0.0574	7.6	0.00970	6.93	0.01002	7.16
Pu-239	1.000000	0.0	0.4	557.6365	0.9	94.23376	0.06	94.19637	0.06
Pu-240	0.058970	1.0	1.0	32.8840	1.3	5.55699	0.96	5.55656	0.96
Pu-241	0.001793	0.8	0.7	1.0000	0.0	0.16899	0.80	0.20649	0.97
Pu-242	(New alg.)			0.1809(10)		0.03057 (10)		0.03055 (9)	
Am-241	0.005351	0.5	0.4	2.9840	0.9	0.50427	0.53	0.50726	0.53

Pu-240 effective (meas. date) = 5.633 +/- 1.04%
Am-241 separated about 28.640 +/- 0.171 years ago
Am/Pu-241 weight ratio = 2.98404 +/- 0.81%

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
5/6/09 9:02:02 AM

QA File: C:\CANBERRA\NDA2K\QA\CNTR0001_DC
Sample ID: SGS100
Sample Quantity: 1.0000E+000
Sample Date: 4/2/09 3:10:59 PM
Measurement Date: 5/6/09 8:10:38 AM
Elapsed Live Time: 48.2 seconds
Elapsed Real Time: 60.0 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
Trans Peak 400.6 keV cen [0.00+/-0.00]	8.0241E+002	0.00 < : : : : >
Trans Peak 400.6 keV FWH [0.00+/-0.00]	1.4061E+000	0.00 < : : : : >

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
                          5/6/09    9:02:07 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:       5/6/09    8:08:23 AM
Elapsed Live Time:             0.0 seconds
Elapsed Real Time:             0.0 seconds


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

SGS-100 Pu-239 Trans Mas      1.0330E+002               1.1103E-001
 [UD: 1.0264E+002+/- 5.929]                         <    :    :    :    >



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
                          5/6/09    9:02:08 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:       5/6/09    8:11:39 AM
Elapsed Live Time:            97.7 seconds
Elapsed Real Time:           120.0 seconds


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

SGS-100 414 keV centroid      8.2856E+002                 0.00
     [0.00+/-0.00]                                <    :    :    :    >

SGS-100 414 keV FWHM          1.3818E+000                 0.00
     [0.00+/-0.00]                                <    :    :    :    >

SGS-100 Pu-239 Mass           1.1141E+002              1.9710E-001
 [UD: 1.1082E+002+/- 3.000]                       <    :    :    :    >


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)
```

NDA 2000 Assay Report

Item Information

Item ID:	LL85238300TRU	Count Sequence Number:	386
Operator:	RHWM2\RHWM		
Assay Start:	5/6/2009 10:28:23 AM		
Description 1:	LL85238300TRU		
Description 2:			
Location:	LLNL		
Comment:			
Matrix Type:	Lucite		
Container Type:	55 Gal Carbon St		
Weight:	Gross: 89.6 kg	Net:	61.6 kg
Container:	Volume: 208.0 l	Full:	100.0 %
Density:	0.300 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 Carbon Steel		
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

Reviewed By: Robert J Haslett 6-5-09

Segment 1 Results

Segment: 1 Detector: DET01 Position: 1
C:\Canberra\NDA2k\Data\00000386_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P001_S001

Acquisition Start: 5/6/2009 10:29:33 AM
Elapsed Live Time: 119.34 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Carbon Steel 1.75"
Calibration Date: 3/16/2009 2:31:21 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.113 +/- 0.0075
SE-75	264.66	0.201 +/- 0.0036
SE-75	279.54	0.206 +/- 0.0040
SE-75	400.66	0.252 +/- 0.0051

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 1:17:17 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
99.94		144	84	1.27	201.65	8.687E-005	12.58	

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

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

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 2.890E-002 +/-	2.1%	< 7.506E-006	< 1.332E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 3.368E-002 +/-	2.2%	< 8.748E-006	< 5.321E-012
Al-26	< 9.665E-003 +/-	16.2%	< 2.510E-006	< 5.084E-007
K-40	< 4.032E-001 +/-	5.3%	< 1.047E-004	< 6.290E-002
Co-57	< 3.233E-002 +/-	3.4%	< 8.398E-006	< 3.783E-012
Co-60	< 4.451E-002 +/-	1.9%	< 1.156E-005	< 3.904E-011
Se-75	< 2.797E-002 +/-	1.9%	< 7.265E-006	< 1.924E-012
Kr-85	< 7.124E+000 +/-	3.2%	< 1.850E-003	< 1.795E-008
Sr-90	< 2.238E-002 +/-	2.1%	< 5.812E-006	< 1.622E-010
Sb-125	< 4.937E-002 +/-	2.3%	< 1.282E-005	< 4.750E-011
Ba-133	< 2.649E-002 +/-	1.8%	< 6.882E-006	< 1.047E-010
Cs-134	< 2.643E-002 +/-	2.1%	< 6.865E-006	< 2.017E-011
Cs-137	< 2.238E-002 +/-	2.1%	< 5.812E-006	< 2.551E-010
Eu-152	< 6.594E-002 +/-	2.6%	< 1.713E-005	< 3.706E-010
Eu-154	< 7.117E-002 +/-	3.4%	< 1.849E-005	< 2.669E-010
Ho-166m	< 2.147E-002 +/-	2.7%	< 5.577E-006	< 1.194E-008
Bi-207	< 1.884E-002 +/-	2.1%	< 4.893E-006	< 3.429E-010
Pb-210	< 2.380E+002 +/-	47.8%	< 6.182E-002	< 3.094E-006
Ra-226	< 5.468E-002 +/-	2.1%	< 1.420E-005	< 5.468E-008
Ac-227	< 1.045E-001 +/-	8.3%	< 2.715E-005	< 1.432E-009
Th-230	< 4.705E+001 +/-	8.6%	< 1.222E-002	< 2.305E-003
Pa-231	< 5.883E-001 +/-	11.2%	< 1.528E-004	< 1.230E-005
Th-232	< 4.466E-002 +/-	2.0%	< 1.160E-005	< 4.024E-001
U-232	< 4.466E-002 +/-	2.0%	< 1.160E-005	< 2.068E-009
U-233	< 3.700E+002 +/-	2.7%	< 9.611E-002	< 3.774E-002
Pa-234	< 1.007E-001 +/-	12.3%	< 2.617E-005	
Pa-234m	< 1.681E+002 +/-	2.3%	< 4.365E-002	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 3.079E-002 +/-	2.5%	< 7.997E-006	< 1.407E-002
Np-237	< 4.540E-002 +/-	2.0%	< 1.179E-005	< 6.356E-005
Pu-238	< 3.084E+003 +/-	2.7%	< 8.011E-001	< 1.783E-004
U-238	< 3.478E+000 +/-	2.4%	< 9.033E-004	< 1.022E+001
Pu-239	< 3.910E+002 +/-	3.1%	< 1.015E-001	< 6.216E-003
Pu-239B	< 1.401E+003 +/-	5.2%	< 3.638E-001	< 2.227E-002
U-239	< 5.764E+002 +/-	59.1%	< 1.497E-001	
Pu-240	< 5.390E+002 +/-	4.6%	< 1.400E-001	< 2.345E-003
Am-241	< 1.993E+000 +/-	20.4%	< 5.176E-004	< 5.739E-007
Am-241B	< 2.010E+002 +/-	4.9%	< 5.221E-002	< 5.789E-005
Pu-241	< 1.122E+004 +/-	2.8%	< 2.913E+000	< 1.079E-004
Pu-241B	< 3.288E+003 +/-	2.5%	< 8.541E-001	< 3.163E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.284E-001 +/-	1.9%	< 3.335E-005	< 6.356E-007

Cm-243	< 1.324E-001 +/-	3.4%	< 3.440E-005	< 2.543E-009
Cm-244	< 3.152E+004 +/-	13.1%	< 8.187E+000	< 3.845E-004
Cm-245	< 1.846E-001 +/-	7.7%	< 4.795E-005	< 1.061E-006
Cm-247	< 3.178E-002 +/-	8.6%	< 8.255E-006	< 3.401E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.410E-002 +/-	3.6%	< 6.259E-006	< 5.831E-009
Cf-251	< 9.463E-002 +/-	5.6%	< 2.458E-005	< 5.914E-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

Segment 2 Results

Segment: 2 Detector: DET01 Position: 2
C:\Canberra\NDA2k\Data\00000386_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P002_S002

Acquisition Start: 5/6/2009 10:33:04 AM
Elapsed Live Time: 119.29 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Carbon Steel 1.75"
Calibration Date: 3/16/2009 2:31:21 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.064 +/- 0.0058
SE-75	264.66	0.127 +/- 0.0024
SE-75	279.54	0.132 +/- 0.0027
SE-75	400.66	0.170 +/- 0.0036

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 1:17:20 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
99.91		341	115	1.16	201.60	1.408E-004	7.19	
152.76	Y	165	74	1.07	307.20	1.965E-004	10.92	

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

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

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 1.383E-002 +/-	1.8%	< 3.591E-006	< 6.374E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.531E-002 +/-	2.0%	< 6.573E-006	< 3.999E-012
Al-26	< 1.937E-002 +/-	15.5%	< 5.032E-006	< 1.019E-006
K-40	< 2.506E-001 +/-	4.9%	< 6.508E-005	< 3.909E-002
Co-57	< 2.607E-002 +/-	3.5%	< 6.771E-006	< 3.050E-012
Co-60	< 2.958E-002 +/-	2.5%	< 7.684E-006	< 2.595E-011
Se-75	< 2.839E-002 +/-	1.9%	< 7.373E-006	< 1.953E-012
Kr-85	< 5.415E+000 +/-	3.1%	< 1.407E-003	< 1.365E-008
Sr-90	< 1.755E-002 +/-	2.0%	< 4.557E-006	< 1.272E-010
Sb-125	< 4.377E-002 +/-	2.1%	< 1.137E-005	< 4.211E-011
Ba-133	< 1.873E-002 +/-	1.7%	< 4.865E-006	< 7.398E-011
Cs-134	< 1.604E-002 +/-	2.0%	< 4.166E-006	< 1.224E-011
Cs-137	< 1.755E-002 +/-	2.0%	< 4.557E-006	< 2.000E-010
Eu-152	< 4.865E-002 +/-	2.5%	< 1.264E-005	< 2.734E-010
Eu-154	< 5.505E-002 +/-	3.5%	< 1.430E-005	< 2.064E-010
Ho-166m	< 2.372E-002 +/-	2.7%	< 6.161E-006	< 1.319E-008
Bi-207	< 1.752E-002 +/-	2.1%	< 4.550E-006	< 3.188E-010
Pb-210	< 1.946E+000 +/-	81.7%	< 5.054E-004	< 2.530E-008
Ra-226	< 3.797E-002 +/-	2.3%	< 9.862E-006	< 3.797E-008
Ac-227	< 8.860E-002 +/-	8.3%	< 2.301E-005	< 1.214E-009
Th-230	< 8.594E+000 +/-	25.1%	< 2.232E-003	< 4.211E-004
Pa-231	< 5.044E-001 +/-	11.2%	< 1.310E-004	< 1.054E-005
Th-232	< 4.200E-002 +/-	2.0%	< 1.091E-005	< 3.784E-001
U-232	< 4.200E-002 +/-	2.0%	< 1.091E-005	< 1.945E-009
U-233	< 3.129E+002 +/-	2.7%	< 8.128E-002	< 3.192E-002
Pa-234	< 9.943E-002 +/-	12.2%	< 2.583E-005	
Pa-234m	< 1.466E+002 +/-	2.1%	< 3.807E-002	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 2.905E-002 +/-	2.5%	< 7.545E-006	< 1.328E-002
Np-237	< 3.696E-002 +/-	2.0%	< 9.600E-006	< 5.175E-005
Pu-238	2.024E+004 +/-	11.4%	5.258E+000	1.170E-003
U-238	< 2.127E+000 +/-	2.1%	< 5.525E-004	< 6.254E+000
Pu-239	< 3.301E+002 +/-	3.2%	< 8.574E-002	< 5.248E-003
Pu-239B	< 8.446E+002 +/-	7.2%	< 2.194E-001	< 1.343E-002
U-239	< 2.602E+000 +/-	98.9%	< 6.759E-004	
Pu-240	< 3.736E+002 +/-	5.4%	< 9.704E-002	< 1.625E-003
Am-241	< 1.690E-001 +/-	37.6%	< 4.389E-005	< 4.866E-008
Am-241B	< 1.378E+002 +/-	5.7%	< 3.579E-002	< 3.969E-005
Pu-241	< 1.001E+004 +/-	2.9%	< 2.600E+000	< 9.630E-005
Pu-241B	< 3.768E+003 +/-	2.5%	< 9.787E-001	< 3.625E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 4.515E-002 +/-	16.6%	< 1.173E-005	< 2.235E-007

Cm-243	< 1.071E-001 +/- 3.4%	< 2.783E-005	< 2.057E-009
Cm-244	< 2.198E+004 +/- 14.1%	< 5.709E+000	< 2.682E-004
Cm-245	< 1.871E-001 +/- 7.7%	< 4.860E-005	< 1.076E-006
Cm-247	< 2.211E-002 +/- 8.5%	< 5.743E-006	< 2.366E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.653E-002 +/-	3.5%	< 4.294E-006	< 4.001E-009
Cf-251	< 1.019E-001 +/-	5.6%	< 2.647E-005	< 6.370E-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

Segment 3 Results

Segment: 3 Detector: DET01 Position: 3
C:\Canberra\NDA2k\Data\00000386_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P003_S003

Acquisition Start: 5/6/2009 10:36:15 AM
Elapsed Live Time: 119.28 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Carbon Steel 1.75"
Calibration Date: 3/16/2009 2:31:21 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.000 +/- 0.0000
SE-75	264.66	0.027 +/- 0.0007
SE-75	279.54	0.030 +/- 0.0009
SE-75	400.66	0.046 +/- 0.0014

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 1:17:37 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
99.93		384	184	1.11	201.63	9.457E-005	7.34	
152.90	Y	191	117	1.27	307.48	1.433E-004	11.05	

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

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

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 2.084E-002 +/-	1.8%	< 5.414E-006	< 9.609E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.856E-002 +/-	2.0%	< 7.418E-006	< 4.512E-012
Al-26	< 2.385E-002 +/-	18.9%	< 6.194E-006	< 1.254E-006
K-40	< 2.299E-001 +/-	5.3%	< 5.970E-005	< 3.586E-002
Co-57	< 3.076E-002 +/-	4.4%	< 7.989E-006	< 3.599E-012
Co-60	< 1.434E-002 +/-	2.5%	< 3.725E-006	< 1.258E-011
Se-75	< 2.732E-002 +/-	1.8%	< 7.096E-006	< 1.879E-012
Kr-85	< 5.424E+000 +/-	3.1%	< 1.409E-003	< 1.367E-008
Sr-90	< 1.716E-002 +/-	2.1%	< 4.456E-006	< 1.244E-010
Sb-125	< 3.390E-002 +/-	1.9%	< 8.806E-006	< 3.261E-011
Ba-133	< 2.337E-002 +/-	1.6%	< 6.070E-006	< 9.232E-011
Cs-134	< 1.470E-002 +/-	2.2%	< 3.817E-006	< 1.121E-011
Cs-137	< 1.716E-002 +/-	2.1%	< 4.456E-006	< 1.956E-010
Eu-152	< 4.948E-002 +/-	2.4%	< 1.285E-005	< 2.781E-010
Eu-154	< 6.652E-002 +/-	4.3%	< 1.728E-005	< 2.495E-010
Ho-166m	< 2.386E-002 +/-	3.0%	< 6.198E-006	< 1.327E-008
Bi-207	< 1.470E-002 +/-	2.1%	< 3.819E-006	< 2.676E-010
Pb-210	< 2.943E+000 +/-	259.0%	< 7.645E-004	< 3.827E-008
Ra-226	< 4.033E-002 +/-	2.4%	< 1.048E-005	< 4.033E-008
Ac-227	< 9.600E-002 +/-	8.3%	< 2.493E-005	< 1.315E-009
Th-230	< 1.349E+001 +/-	83.2%	< 3.503E-003	< 6.608E-004
Pa-231	< 4.858E-001 +/-	11.2%	< 1.262E-004	< 1.015E-005
Th-232	< 4.012E-002 +/-	2.0%	< 1.042E-005	< 3.615E-001
U-232	< 4.012E-002 +/-	2.0%	< 1.042E-005	< 1.858E-009
U-233	< 3.270E+002 +/-	3.0%	< 8.492E-002	< 3.335E-002
Pa-234	< 9.724E-002 +/-	12.2%	< 2.526E-005	
Pa-234m	< 1.285E+002 +/-	2.1%	< 3.336E-002	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 3.115E-002 +/-	2.9%	< 8.091E-006	< 1.424E-002
Np-237	< 4.243E-002 +/-	1.9%	< 1.102E-005	< 5.940E-005
Pu-238	3.196E+004 +/-	11.5%	8.302E+000	1.848E-003
U-238	< 2.321E+000 +/-	2.2%	< 6.028E-004	< 6.823E+000
Pu-239	< 4.002E+002 +/-	3.4%	< 1.039E-001	< 6.362E-003
Pu-239B	< 1.118E+003 +/-	16.5%	< 2.905E-001	< 1.778E-002
U-239	< 4.737E+000 +/-	308.4%	< 1.230E-003	
Pu-240	< 4.200E+002 +/-	12.0%	< 1.091E-001	< 1.827E-003
Am-241	< 2.932E-001 +/-	126.9%	< 7.616E-005	< 8.445E-008
Am-241B	< 1.664E+002 +/-	12.9%	< 4.321E-002	< 4.791E-005
Pu-241	< 1.163E+004 +/-	3.2%	< 3.020E+000	< 1.118E-004
Pu-241B	< 3.317E+003 +/-	2.6%	< 8.617E-001	< 3.191E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 6.477E-002 +/-	57.7%	< 1.682E-005	< 3.206E-007

Cm-243	< 1.233E-001 +/- 3.3%	< 3.202E-005	< 2.367E-009
Cm-244	< 1.870E+004 +/- 14.1%	< 4.856E+000	< 2.281E-004
Cm-245	< 1.772E-001 +/- 7.8%	< 4.602E-005	< 1.019E-006
Cm-247	< 1.765E-002 +/- 8.5%	< 4.585E-006	< 1.889E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.723E-002 +/-	3.4%	< 4.474E-006	< 4.169E-009
Cf-251	< 1.084E-001 +/-	5.8%	< 2.815E-005	< 6.775E-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

Segment 4 Results

Segment: 4 Detector: DET01 Position: 4
C:\Canberra\NDA2k\Data\00000386_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P004_S004

Acquisition Start: 5/6/2009 10:39:27 AM
Elapsed Live Time: 119.20 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Carbon Steel 1.75"
Calibration Date: 3/16/2009 2:31:21 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.069 +/- 0.0060
SE-75	264.66	0.140 +/- 0.0026
SE-75	279.54	0.147 +/- 0.0030
SE-75	400.66	0.194 +/- 0.0040

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 1:17:41 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	485	171	1.20	121.06	2.887E-006	6.07	
100.04		140	346	0.94	201.86	9.453E-005	20.87	
375.13		79	28	1.16	751.56	1.881E-004	15.19	
413.64		50	26	1.17	828.53	1.724E-004	21.17	

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

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

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 2.116E-002 +/-	1.8%	< 5.495E-006	< 9.753E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.571E-002 +/-	2.0%	< 6.679E-006	< 4.063E-012
Al-26	< 2.548E-002 +/-	14.5%	< 6.617E-006	< 1.340E-006
K-40	< 2.013E-001 +/-	4.8%	< 5.227E-005	< 3.140E-002
Co-57	< 3.791E-002 +/-	3.3%	< 9.847E-006	< 4.436E-012
Co-60	< 1.610E-002 +/-	1.7%	< 4.183E-006	< 1.412E-011
Se-75	< 2.856E-002 +/-	1.7%	< 7.418E-006	< 1.965E-012
Kr-85	< 4.745E+000 +/-	3.0%	< 1.232E-003	< 1.196E-008
Sr-90	< 1.927E-002 +/-	1.9%	< 5.005E-006	< 1.397E-010
Sb-125	< 4.220E-002 +/-	2.1%	< 1.096E-005	< 4.059E-011
Ba-133	< 2.619E-002 +/-	1.7%	< 6.801E-006	< 1.034E-010
Cs-134	< 1.551E-002 +/-	1.9%	< 4.030E-006	< 1.184E-011
Cs-137	< 1.927E-002 +/-	1.9%	< 5.005E-006	< 2.197E-010
Eu-152	< 4.365E-002 +/-	1.8%	< 1.134E-005	< 2.453E-010
Eu-154	< 7.342E-002 +/-	2.2%	< 1.907E-005	< 2.753E-010
Ho-166m	< 2.074E-002 +/-	2.2%	< 5.387E-006	< 1.153E-008
Bi-207	< 1.955E-002 +/-	2.0%	< 5.079E-006	< 3.559E-010
Pb-210	< 6.300E+002 +/-	37.2%	< 1.636E-001	< 8.191E-006
Ra-226	< 3.522E-002 +/-	2.2%	< 9.149E-006	< 3.522E-008
Ac-227	< 1.152E-001 +/-	8.3%	< 2.992E-005	< 1.578E-009
Th-230	< 4.649E+001 +/-	8.5%	< 1.207E-002	< 2.278E-003
Pa-231	< 6.372E-001 +/-	11.2%	< 1.655E-004	< 1.332E-005
Th-232	< 4.559E-002 +/-	1.9%	< 1.184E-005	< 4.108E-001
U-232	< 4.559E-002 +/-	1.9%	< 1.184E-005	< 2.111E-009
U-233	< 3.679E+002 +/-	2.6%	< 9.557E-002	< 3.753E-002
Pa-234	< 1.166E-001 +/-	12.2%	< 3.028E-005	
Pa-234m	< 1.658E+002 +/-	2.1%	< 4.307E-002	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 3.439E-002 +/-	2.4%	< 8.933E-006	< 1.572E-002
Np-237	< 4.866E-002 +/-	1.9%	< 1.264E-005	< 6.812E-005
Pu-238	< 2.770E+003 +/-	2.5%	< 7.195E-001	< 1.601E-004
U-238	< 2.463E+000 +/-	2.2%	< 6.398E-004	< 7.242E+000
Pu-239	< 5.349E+002 +/-	3.0%	< 1.389E-001	< 8.505E-003
Pu-239B	< 1.749E+003 +/-	5.2%	< 4.544E-001	< 2.781E-002
U-239	< 2.519E+003 +/-	46.3%	< 6.544E-001	
Pu-240	< 9.275E+002 +/-	4.6%	< 2.409E-001	< 4.035E-003
Am-241	1.054E+002 +/-	17.0%	2.738E-002	3.036E-005
Am-241B	< 3.573E+002 +/-	4.8%	< 9.281E-002	< 1.029E-004
Pu-241	< 1.261E+004 +/-	2.7%	< 3.275E+000	< 1.213E-004
Pu-241B	< 4.408E+003 +/-	2.4%	< 1.145E+000	< 4.241E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.288E-001 +/-	1.8%	< 3.344E-005	< 6.373E-007

Cm-243	< 1.328E-001 +/- 3.3%	< 3.449E-005	< 2.550E-009
Cm-244	< 1.642E+004 +/- 14.1%	< 4.265E+000	< 2.003E-004
Cm-245	< 1.782E-001 +/- 7.6%	< 4.629E-005	< 1.025E-006
Cm-247	< 2.801E-002 +/- 8.5%	< 7.276E-006	< 2.998E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.412E-002 +/-	3.5%	< 6.265E-006	< 5.837E-009
Cf-251	< 1.108E-001 +/-	5.6%	< 2.879E-005	< 6.928E-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

Segment 5 Results

Segment: 5 Detector: DET01 Position: 5
C:\Canberra\NDA2k\Data\00000386_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P005_S005

Acquisition Start: 5/6/2009 10:42:38 AM
Elapsed Live Time: 119.00 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Carbon Steel 1.75"
Calibration Date: 3/16/2009 2:31:21 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.101 +/- 0.0072
SE-75	264.66	0.180 +/- 0.0033
SE-75	279.54	0.191 +/- 0.0038
SE-75	400.66	0.238 +/- 0.0048

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 1:17:44 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
	59.63	Y	1553	318	1.12	121.10	6.066E-005	3.22	
M	99.19	Y	473	512	1.69	200.16	1.544E-004	5.03	2.21
m	103.33	Y	320	743	1.69	208.43	1.628E-004	6.72	
M	125.22	Y	42	192	0.88	252.17	1.994E-004	28.77	2.30
m	129.35	Y	131	273	0.88	260.43	2.049E-004	13.42	
	208.21	Y	76	226	1.52	418.01	2.564E-004	32.12	
	332.90	Y	67	92	1.47	667.18	2.229E-004	25.05	
	344.86		93	59	1.52	691.07	2.181E-004	16.08	
M	375.12	Y	268	46	1.27	751.55	2.061E-004	6.07	0.63
m	380.09		51	49	1.27	761.48	2.042E-004	15.98	
m	382.69		47	48	1.27	766.67	2.032E-004	16.87	
	393.04		86	31	1.29	787.34	1.993E-004	14.78	
	413.75	Y	287	19	1.22	828.74	1.920E-004	6.45	

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	9.72E-001 +- 9.54E-002	6.57E-002 +- 4.82E-003

Beta: 4.26E+002 +- 2.86E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 3

Energy	Mass (g)
129.30	3.64E-002 +- 5.08E-003
375.05	2.99E-001 +- 1.90E-002
413.71	3.66E-001 +- 2.48E-002

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

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 1.821E-002 +/-	1.8%	< 4.730E-006	< 8.395E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.016E-002 +/-	2.0%	< 5.236E-006	< 3.185E-012
Al-26	< 1.976E-002 +/-	14.7%	< 5.134E-006	< 1.040E-006
K-40	< 2.452E-001 +/-	4.9%	< 6.368E-005	< 3.824E-002
Co-57	< 4.654E-002 +/-	3.6%	< 1.209E-005	< 5.445E-012
Co-60	< 2.700E-002 +/-	2.5%	< 7.013E-006	< 2.368E-011
Se-75	< 4.552E-002 +/-	1.9%	< 1.182E-005	< 3.132E-012
Kr-85	< 4.786E+000 +/-	3.1%	< 1.243E-003	< 1.206E-008
Sr-90	< 3.275E-002 +/-	1.9%	< 8.507E-006	< 2.375E-010
Sb-125	< 5.298E-002 +/-	2.1%	< 1.376E-005	< 5.096E-011
Ba-133	< 3.501E-002 +/-	1.7%	< 9.093E-006	< 1.383E-010
Cs-134	< 2.033E-002 +/-	2.0%	< 5.281E-006	< 1.551E-011
Cs-137	< 3.275E-002 +/-	1.9%	< 8.507E-006	< 3.734E-010
Eu-152	< 9.280E-002 +/-	1.7%	< 2.410E-005	< 5.215E-010
Eu-154	< 5.756E-002 +/-	2.2%	< 1.495E-005	< 2.159E-010
Ho-166m	< 3.049E-002 +/-	2.2%	< 7.921E-006	< 1.695E-008
Bi-207	< 1.912E-002 +/-	2.0%	< 4.966E-006	< 3.479E-010
Pb-210	< 3.828E+000 +/-	36.7%	< 9.943E-004	< 4.977E-008
Ra-226	< 4.338E-002 +/-	2.3%	< 1.127E-005	< 4.338E-008
Ac-227	< 1.521E-001 +/-	8.3%	< 3.950E-005	< 2.083E-009
Th-230	< 1.752E+001 +/-	13.1%	< 4.550E-003	< 8.584E-004
Pa-231	< 8.785E-001 +/-	11.2%	< 2.282E-004	< 1.836E-005
Th-232	< 5.390E-002 +/-	2.2%	< 1.400E-005	< 4.856E-001
U-232	< 5.390E-002 +/-	2.2%	< 1.400E-005	< 2.495E-009
U-233	< 4.962E+002 +/-	2.7%	< 1.289E-001	< 5.061E-002
Pa-234	< 1.080E-001 +/-	12.2%	< 2.804E-005	
Pa-234m	< 3.213E+001 +/-	2.1%	< 8.347E-003	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 5.036E-002 +/-	2.5%	< 1.308E-005	< 2.302E-002
Np-237	< 6.527E-002 +/-	1.9%	< 1.695E-005	< 9.138E-005
Pu-238	< 3.548E+003 +/-	2.6%	< 9.215E-001	< 2.051E-004
U-238	< 2.516E+000 +/-	2.1%	< 6.534E-004	< 7.396E+000

	Pu-239		6.113E+004	+/-	9.8%		1.588E+001	9.720E-001
	Pu-239B	<	1.512E+003	+/-	5.7%	<	3.927E-001	< 2.403E-002
	U-239	<	6.337E+000	+/-	45.9%	<	1.646E-003	
X	Pu-240							
	Am-241		1.610E+001	+/-	16.0%		4.181E-003	4.636E-006
	Am-241B		2.679E+003	+/-	6.0%		6.957E-001	7.714E-004
	Pu-241	<	1.743E+004	+/-	2.8%	<	4.527E+000	< 1.677E-004
	Pu-241B		1.284E+004	+/-	32.2%		3.334E+000	1.235E-004
	Pu-242	<	0.000E+000	+/-	0.0%	<	0.000E+000	< 0.000E+000
	Am-243	<	9.448E-002	+/-	8.4%	<	2.454E-005	< 4.677E-007
	Cm-243	<	1.851E-001	+/-	3.3%	<	4.808E-005	< 3.554E-009
	Cm-244	<	1.969E+004	+/-	14.1%	<	5.114E+000	< 2.402E-004
	Cm-245	<	3.165E-001	+/-	7.7%	<	8.220E-005	< 1.820E-006
	Cm-247	<	2.624E-002	+/-	8.5%	<	6.816E-006	< 2.808E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.812E-002 +/-	3.5%	< 7.304E-006	< 6.805E-009
Cf-251	< 1.740E-001 +/-	5.6%	< 4.520E-005	< 1.088E-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

Segment 6 Results

Segment: 6 Detector: DET01 Position: 6
C:\Canberra\NDA2k\Data\00000386_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P006_S006

Acquisition Start: 5/6/2009 10:45:49 AM
Elapsed Live Time: 118.74 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Carbon Steel 1.75"
Calibration Date: 3/16/2009 2:31:21 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.001 +/- 0.0005
SE-75	264.66	0.014 +/- 0.0004
SE-75	279.54	0.016 +/- 0.0006
SE-75	400.66	0.027 +/- 0.0010

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 1:17:47 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
	59.60	Y	2731	462	1.13	121.03	7.020E-007	2.48	
M	98.99	Y	678	758	1.46	199.76	3.932E-005	12.07	2.17
m	103.31	Y	604	707	1.47	208.39	4.645E-005	11.66	
M	125.50	Y	151	364	1.03	252.74	7.916E-005	19.79	1.02
m	129.39	Y	320	391	1.03	260.51	8.362E-005	17.61	
M	203.74	Y	68	295	1.02	409.08	1.504E-004	19.74	1.33
m	208.04	Y	234	268	1.03	417.67	1.506E-004	8.75	
M	332.81	Y	171	146	1.31	667.00	1.262E-004	27.23	0.72
m	335.81	Y	69	139	1.31	673.00	1.256E-004	30.49	
	345.14		158	105	1.23	691.63	1.236E-004	12.33	
M	375.14	Y	520	86	1.33	751.58	1.176E-004	4.61	1.95
m	380.04		102	66	1.33	761.37	1.167E-004	10.47	
m	382.76		126	48	1.33	766.81	1.162E-004	9.06	
	392.94		196	56	1.42	787.15	1.143E-004	9.36	

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
413.81	Y	557	37	1.31	828.85	1.111E-004	4.70	
451.37		89	10	1.65	903.92	1.065E-004	12.05	
662.59	Y	40	7	1.77	1325.99	9.030E-005	18.72	
722.18	Y	32	6	1.20	1445.06	8.720E-005	20.89	

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	3.32E+000 +- 4.45E-001	6.00E-001 +- 2.58E-002

Beta: 4.34E+002 +- 4.70E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	2.17E-001 +- 4.20E-002
203.55	2.86E-001 +- 5.72E-002
375.05	1.02E+000 +- 5.13E-002
413.71	1.22E+000 +- 6.37E-002

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

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 1.409E-002 +/-	1.9%	< 3.660E-006	< 6.496E-016
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 1.293E-002 +/-	1.9%	< 3.359E-006	< 2.043E-012
	Al-26	< 2.505E-002 +/-	19.8%	< 6.506E-006	< 1.318E-006
	K-40	< 2.071E-001 +/-	5.3%	< 5.380E-005	< 3.231E-002
	Co-57	< 5.742E-002 +/-	4.6%	< 1.491E-005	< 6.718E-012
	Co-60	< 2.216E-002 +/-	2.5%	< 5.755E-006	< 1.943E-011
	Se-75	< 4.967E-002 +/-	2.3%	< 1.290E-005	< 3.417E-012
	Kr-85	< 5.079E+000 +/-	3.2%	< 1.319E-003	< 1.280E-008
	Sr-90	< 4.676E-002 +/-	2.6%	< 1.214E-005	< 3.390E-010
	Sb-125	< 6.799E-002 +/-	2.1%	< 1.766E-005	< 6.541E-011
	Ba-133	< 4.402E-002 +/-	1.8%	< 1.143E-005	< 1.739E-010
	Cs-134	< 1.231E-002 +/-	2.0%	< 3.198E-006	< 9.396E-012
X	Cs-137				

	Eu-152	<	7.975E-002	+/-	2.3%	<	2.071E-005	< 4.482E-010
	Eu-154	<	2.095E-002	+/-	1.9%	<	5.440E-006	< 7.855E-011
	Ho-166m	<	2.379E-002	+/-	2.4%	<	6.178E-006	< 1.323E-008
	Bi-207	<	1.443E-002	+/-	1.9%	<	3.747E-006	< 2.626E-010
	Pb-210	<	5.810E+003	+/-	309.7%	<	1.509E+000	< 7.553E-005
	Ra-226	<	4.444E-002	+/-	2.7%	<	1.154E-005	< 4.444E-008
	Ac-227	<	1.662E-001	+/-	8.5%	<	4.316E-005	< 2.276E-009
	Th-230	<	7.017E+001	+/-	9.0%	<	1.822E-002	< 3.438E-003
	Pa-231	<	1.017E+000	+/-	11.3%	<	2.641E-004	< 2.125E-005
	Th-232	<	4.574E-002	+/-	2.4%	<	1.188E-005	< 4.121E-001
	U-232	<	4.834E-002	+/-	2.6%	<	1.256E-005	< 2.238E-009
	U-233	<	5.140E+002	+/-	4.0%	<	1.335E-001	< 5.243E-002
	Pa-234	<	7.124E-002	+/-	12.2%	<	1.850E-005	
	Pa-234m	<	1.091E+002	+/-	2.1%	<	2.833E-002	
	U-234	<	0.000E+000	+/-	0.0%	<	0.000E+000	< 0.000E+000
	U-235	<	5.048E-002	+/-	4.0%	<	1.311E-005	< 2.307E-002
	Np-237	<	7.662E-002	+/-	2.2%	<	1.990E-005	< 1.073E-004
	Pu-238	<	3.777E+003	+/-	4.2%	<	9.810E-001	< 2.183E-004
	U-238	<	1.780E+000	+/-	2.1%	<	4.622E-004	< 5.232E+000
	Pu-239		2.090E+005	+/-	13.4%		5.429E+001	3.323E+000
	Pu-239B	<	2.957E+003	+/-	18.8%	<	7.681E-001	< 4.702E-002
	U-239	<	3.656E+004	+/-	368.5%	<	9.496E+000	
X	Pu-240							
	Am-241		3.131E+004	+/-	14.4%		8.131E+000	9.016E-003
	Am-241B		1.630E+004	+/-	15.0%		4.234E+000	4.694E-003
	Pu-241	<	1.806E+004	+/-	4.2%	<	4.690E+000	< 1.737E-004
	Pu-241B		6.749E+004	+/-	9.4%		1.753E+001	6.493E-004
	Pu-242	<	0.000E+000	+/-	0.0%	<	0.000E+000	< 0.000E+000
	Am-243	<	1.867E-001	+/-	2.2%	<	4.848E-005	< 9.240E-007
	Cm-243	<	1.925E-001	+/-	3.5%	<	5.001E-005	< 3.697E-009
	Cm-244	<	2.153E+004	+/-	14.1%	<	5.592E+000	< 2.626E-004
	Cm-245	<	2.940E-001	+/-	8.4%	<	7.635E-005	< 1.690E-006
	Cm-247	<	2.905E-002	+/-	8.5%	<	7.545E-006	< 3.108E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.856E-002 +/-	3.5%	< 7.417E-006	< 6.911E-009
Cf-251	< 1.619E-001 +/-	6.5%	< 4.205E-005	< 1.012E-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

Segment 7 Results

Segment: 7 Detector: DET01 Position: 7
C:\Canberra\NDA2k\Data\00000386_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P007_S007

Acquisition Start: 5/6/2009 10:49:00 AM
Elapsed Live Time: 118.64 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Carbon Steel 1.75"
Calibration Date: 3/16/2009 2:31:21 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.001 +/- 0.0005
SE-75	264.66	0.031 +/- 0.0007
SE-75	279.54	0.035 +/- 0.0010
SE-75	400.66	0.052 +/- 0.0015

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 1:17:50 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
	59.61	Y	4821	603	1.06	121.06	1.299E-006	1.95	
M	99.02	Y	772	788	1.46	199.82	4.043E-005	9.73	3.22
m	103.13	Y	772	677	1.47	208.03	4.692E-005	9.28	
M	125.41	Y	231	435	1.06	252.56	7.895E-005	8.92	1.68
m	129.43	Y	302	422	1.07	260.59	8.358E-005	7.44	
M	203.74	Y	107	252	1.06	409.08	1.760E-004	27.39	1.14
m	207.99	Y	250	286	1.06	417.58	1.762E-004	24.72	
	311.89	Y	34	169	1.33	625.18	1.468E-004	61.95	
	332.74	Y	123	209	1.40	666.86	1.391E-004	20.01	
	344.98		147	138	1.27	691.32	1.349E-004	14.55	
	368.31	Y	81	139	0.66	737.94	1.274E-004	25.33	
M	375.09	Y	665	111	1.29	751.49	1.254E-004	302.63	5.70
m	380.27		133	129	1.30	761.83	1.239E-004	275.21	
m	382.79		139	116	1.30	766.87	1.232E-004	272.82	

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
392.95		216	67	1.59	787.17	1.204E-004	9.09	
413.84	Y	580	54	1.32	828.91	1.155E-004	4.76	
451.56		89	20	1.19	904.30	1.084E-004	13.08	
662.57	Y	63	10	1.55	1325.95	8.777E-005	15.08	
722.18	Y	27	3	1.51	1445.08	8.501E-005	21.78	

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	2.78E+000 +- 2.56E-001	3.17E-001 +- 2.06E-002

Beta: 3.41E+002 +- 2.30E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	2.05E-001 +- 2.22E-002
203.55	3.83E-001 +- 1.05E-001
375.05	1.22E+000 +- 3.70E+000
413.71	1.23E+000 +- 6.42E-002

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

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 1.420E-002 +/-	1.8%	< 3.689E-006	< 6.547E-016
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 1.686E-002 +/-	2.0%	< 4.380E-006	< 2.664E-012
	Al-26	< 2.084E-002 +/-	15.5%	< 5.413E-006	< 1.096E-006
	K-40	< 2.745E-001 +/-	5.0%	< 7.129E-005	< 4.282E-002
	Co-57	< 6.168E-002 +/-	3.6%	< 1.602E-005	< 7.216E-012
	Co-60	< 1.390E-002 +/-	2.6%	< 3.610E-006	< 1.219E-011
	Se-75	< 5.135E-002 +/-	1.9%	< 1.334E-005	< 3.533E-012
	Kr-85	< 4.836E+000 +/-	3.1%	< 1.256E-003	< 1.219E-008
	Sr-90	< 5.945E-002 +/-	2.1%	< 1.544E-005	< 4.310E-010
	Sb-125	< 8.268E-002 +/-	2.1%	< 2.148E-005	< 7.954E-011
	Ba-133	< 5.517E-002 +/-	1.7%	< 1.433E-005	< 2.179E-010
	Cs-134	< 1.857E-002 +/-	1.8%	< 4.822E-006	< 1.417E-011
X	Cs-137				
	Eu-152	< 6.962E-002 +/-	3.7%	< 1.808E-005	< 3.913E-010
	Eu-154	< 4.815E-002 +/-	2.2%	< 1.251E-005	< 1.806E-010
	Ho-166m	< 1.629E-002 +/-	2.2%	< 4.232E-006	< 9.060E-009
	Bi-207	< 1.565E-002 +/-	1.9%	< 4.064E-006	< 2.848E-010
	Pb-210	< 1.479E+003 +/-	70.4%	< 3.841E-001	< 1.922E-005
	Ra-226	< 3.743E-002 +/-	2.3%	< 9.723E-006	< 3.743E-008
	Ac-227	< 1.737E-001 +/-	8.3%	< 4.511E-005	< 2.380E-009
	Th-230	< 7.188E+001 +/-	8.6%	< 1.867E-002	< 3.522E-003
	Pa-231	< 1.049E+000 +/-	11.2%	< 2.724E-004	< 2.192E-005
	Th-232	< 5.184E-002 +/-	2.2%	< 1.347E-005	< 4.671E-001
	U-232	< 5.184E-002 +/-	2.2%	< 1.347E-005	< 2.400E-009
	U-233	< 5.677E+002 +/-	2.9%	< 1.475E-001	< 5.791E-002
	Pa-234	< 1.039E-001 +/-	12.2%	< 2.698E-005	
	Pa-234m	< 1.231E+002 +/-	2.1%	< 3.197E-002	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 5.230E-002 +/-	2.6%	< 1.358E-005	< 2.390E-002
	Np-237	1.354E-001 +/-	62.0%	3.517E-005	1.896E-004
	Pu-238	< 3.785E+003 +/-	2.8%	< 9.832E-001	< 2.188E-004
	U-238	< 2.895E+000 +/-	2.2%	< 7.520E-004	< 8.512E+000
	Pu-239	1.746E+005 +/-	9.2%	4.534E+001	2.776E+000
	Pu-239B	< 3.062E+003 +/-	6.1%	< 7.954E-001	< 4.869E-002
	U-239	< 6.804E+003 +/-	85.6%	< 1.767E+000	
X	Pu-240				
	Am-241	4.129E+004 +/-	12.7%	1.072E+001	1.189E-002
	Am-241B	1.993E+004 +/-	9.3%	5.177E+000	5.740E-003
	Pu-241	< 1.925E+004 +/-	3.0%	< 4.999E+000	< 1.852E-004
	Pu-241B	6.163E+004 +/-	24.9%	1.601E+001	5.929E-004
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 2.052E-001 +/-	1.9%	< 5.329E-005	< 1.016E-006
	Cm-243	< 2.116E-001 +/-	3.4%	< 5.497E-005	< 4.063E-009
	Cm-244	< 2.753E+004 +/-	14.2%	< 7.152E+000	< 3.359E-004
	Cm-245	< 3.227E-001 +/-	7.7%	< 8.382E-005	< 1.856E-006
	Cm-247	< 3.934E-002 +/-	8.5%	< 1.022E-005	< 4.210E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 3.964E-002 +/-	3.5%	< 1.030E-005	< 9.592E-009
Cf-251	< 1.776E-001 +/-	5.7%	< 4.613E-005	< 1.110E-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

Segment 8 Results

Segment: 8 Detector: DET01 Position: 8
C:\Canberra\NDA2k\Data\00000386_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P008_S008

Acquisition Start: 5/6/2009 10:52:12 AM
Elapsed Live Time: 118.80 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Carbon Steel 1.75"
Calibration Date: 3/16/2009 2:31:21 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.167 +/- 0.0094
SE-75	264.66	0.282 +/- 0.0051
SE-75	279.54	0.286 +/- 0.0055
SE-75	400.66	0.354 +/- 0.0069

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 1:17:54 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
	59.62	Y	3999	521	1.11	121.09	6.788E-005	2.09	
M	99.01	Y	666	684	1.45	199.80	1.841E-004	12.41	1.85
m	103.20	Y	619	645	1.46	208.17	1.940E-004	11.62	
M	125.43	Y	138	368	0.94	252.58	2.356E-004	12.02	1.22
m	129.39	Y	242	308	0.94	260.51	2.412E-004	8.74	
	146.65	Y	43	312	0.50	295.00	2.635E-004	60.74	
M	203.58	Y	70	165	1.02	408.76	2.934E-004	17.89	2.14
m	208.09	Y	168	212	1.03	417.76	2.935E-004	10.05	
M	332.75	Y	122	78	1.26	666.88	2.512E-004	10.02	0.91
m	335.47	Y	79	105	1.27	672.31	2.500E-004	13.51	
	345.14		131	84	0.99	691.64	2.458E-004	13.69	
M	375.09	Y	387	53	1.28	751.48	2.331E-004	11.74	1.12
m	380.34		79	47	1.28	761.97	2.309E-004	16.19	
m	382.85		83	44	1.29	766.98	2.299E-004	15.41	

Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
393.01		128	38	1.49	787.29	2.257E-004	11.55	
413.80	Y	395	40	1.27	828.84	2.173E-004	5.72	
451.43		39	22	0.77	904.04	2.031E-004	23.83	
662.27	Y	27	9	1.21	1325.36	1.484E-004	25.84	

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	1.11E+000 +- 1.02E-001	7.92E-002 +- 5.20E-003

Beta: 3.86E+002 +- 2.09E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	5.69E-002 +- 5.45E-003
203.55	1.50E-001 +- 2.70E-002
375.05	3.83E-001 +- 4.55E-002
413.71	4.44E-001 +- 2.68E-002

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

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 2.641E-002 +/-	1.8%	< 6.861E-006	< 1.218E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 2.442E-002 +/-	1.9%	< 6.343E-006	< 3.858E-012
	Al-26	< 1.487E-002 +/-	18.8%	< 3.863E-006	< 7.824E-007
	K-40	< 2.413E-001 +/-	5.3%	< 6.268E-005	< 3.765E-002
	Co-57	< 5.388E-002 +/-	4.5%	< 1.399E-005	< 6.304E-012
	Co-60	< 3.360E-002 +/-	1.7%	< 8.727E-006	< 2.947E-011
	Se-75	< 5.100E-002 +/-	1.8%	< 1.325E-005	< 3.509E-012
	Kr-85	< 5.303E+000 +/-	3.0%	< 1.377E-003	< 1.336E-008
	Sr-90	4.814E-002 +/-	25.9%	1.250E-005	3.490E-010
	Sb-125	< 6.005E-002 +/-	1.9%	< 1.560E-005	< 5.777E-011
	Ba-133	< 3.840E-002 +/-	1.6%	< 9.975E-006	< 1.517E-010
	Cs-134	< 1.444E-002 +/-	1.8%	< 3.752E-006	< 1.102E-011
?	Cs-137	4.814E-002 +/-	25.9%	1.250E-005	5.488E-010

	Eu-152	< 6.773E-002 +/-	3.8%	< 1.759E-005	< 3.807E-010
	Eu-154	< 6.973E-002 +/-	2.1%	< 1.811E-005	< 2.615E-010
	Ho-166m	< 2.159E-002 +/-	2.3%	< 5.608E-006	< 1.200E-008
	Bi-207	< 1.391E-002 +/-	2.1%	< 3.613E-006	< 2.532E-010
	Pb-210	< 6.112E+000 +/-	259.0%	< 1.588E-003	< 7.946E-008
	Ra-226	< 3.153E-002 +/-	2.4%	< 8.189E-006	< 3.153E-008
	Ac-227	< 1.742E-001 +/-	8.3%	< 4.525E-005	< 2.387E-009
	Th-230	< 1.946E+001 +/-	83.3%	< 5.055E-003	< 9.536E-004
	Pa-231	< 9.489E-001 +/-	11.2%	< 2.465E-004	< 1.983E-005
	Th-232	< 4.880E-002 +/-	2.3%	< 1.267E-005	< 4.396E-001
	U-232	< 4.880E-002 +/-	2.3%	< 1.267E-005	< 2.259E-009
	U-233	< 5.873E+002 +/-	3.0%	< 1.525E-001	< 5.990E-002
	Pa-234	< 9.121E-002 +/-	12.3%	< 2.369E-005	
	Pa-234m	< 1.280E+002 +/-	2.1%	< 3.325E-002	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 5.635E-002 +/-	2.9%	< 1.464E-005	< 2.575E-002
	Np-237	< 8.112E-002 +/-	1.9%	< 2.107E-005	< 1.136E-004
	Pu-238	< 3.678E+003 +/-	3.1%	< 9.553E-001	< 2.126E-004
	U-238	< 2.709E+000 +/-	2.1%	< 7.037E-004	< 7.965E+000
	Pu-239	6.984E+004 +/-	9.2%	1.814E+001	1.111E+000
	Pu-239B	< 1.726E+003 +/-	16.6%	< 4.484E-001	< 2.745E-002
	U-239	< 1.424E+001 +/-	308.3%	< 3.700E-003	
X	Pu-240				
?	Am-241	1.125E+004 +/-	26.1%	2.923E+000	3.241E-003
	Am-241B	3.811E+003 +/-	13.2%	9.900E-001	1.098E-003
	Pu-241	< 2.036E+004 +/-	3.2%	< 5.288E+000	< 1.958E-004
	Pu-241B	2.480E+004 +/-	10.4%	6.442E+000	2.386E-004
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 1.017E-001 +/-	57.8%	< 2.642E-005	< 5.036E-007
	Cm-243	< 1.920E-001 +/-	3.3%	< 4.986E-005	< 3.686E-009
	Cm-244	< 2.390E+004 +/-	14.1%	< 6.208E+000	< 2.916E-004
	Cm-245	< 3.292E-001 +/-	7.8%	< 8.550E-005	< 1.893E-006
	Cm-247	< 3.410E-002 +/-	8.5%	< 8.856E-006	< 3.648E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 3.431E-002 +/-	3.4%	< 8.911E-006	< 8.302E-009
Cf-251	< 1.832E-001 +/-	5.8%	< 4.758E-005	< 1.145E-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

Segment 9 Results

Segment: 9 Detector: DET01 Position: 9
C:\Canberra\NDA2k\Data\00000386_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P009_S009

Acquisition Start: 5/6/2009 10:55:23 AM
Elapsed Live Time: 119.18 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 Gal Carbon Steel 1.75"
Calibration Date: 3/16/2009 2:31:21 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.195 +/- 0.0100
SE-75	264.66	0.327 +/- 0.0058
SE-75	279.54	0.342 +/- 0.0064
SE-75	400.66	0.400 +/- 0.0077

Errors quoted at 1.000 sigma

Peak Analysis Results

Peak Analysis Performed on: 6/3/2009 1:17:57 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
59.56	Y	1033	293	1.17	120.96	1.029E-005	4.07	
103.09	Y	73	210	0.66	207.94	1.663E-004	30.51	

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

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

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 2.143E-002 +/-	1.9%	< 5.565E-006	< 9.878E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 1.773E-002 +/-	1.9%	< 4.606E-006	< 2.802E-012
Al-26	< 2.753E-002 +/-	19.6%	< 7.151E-006	< 1.448E-006
K-40	< 2.764E-001 +/-	5.3%	< 7.179E-005	< 4.312E-002
Co-57	< 3.443E-002 +/-	4.5%	< 8.944E-006	< 4.029E-012
Co-60	< 3.710E-002 +/-	1.7%	< 9.637E-006	< 3.254E-011
Se-75	< 3.305E-002 +/-	2.3%	< 8.585E-006	< 2.274E-012
Kr-85	< 4.204E+000 +/-	3.2%	< 1.092E-003	< 1.059E-008
Sr-90	< 2.048E-002 +/-	2.3%	< 5.320E-006	< 1.485E-010
Sb-125	< 3.329E-002 +/-	2.1%	< 8.646E-006	< 3.202E-011
Ba-133	< 2.940E-002 +/-	1.8%	< 7.637E-006	< 1.161E-010
Cs-134	< 1.142E-002 +/-	2.4%	< 2.965E-006	< 8.711E-012
Cs-137	< 2.048E-002 +/-	2.3%	< 5.320E-006	< 2.335E-010
Eu-152	< 2.759E-002 +/-	3.8%	< 7.167E-006	< 1.551E-010
Eu-154	< 5.064E-002 +/-	2.1%	< 1.315E-005	< 1.899E-010
Ho-166m	< 2.525E-002 +/-	2.5%	< 6.560E-006	< 1.404E-008
Bi-207	< 1.085E-002 +/-	2.4%	< 2.819E-006	< 1.975E-010
Pb-210	< 1.828E+002 +/-	311.1%	< 4.749E-002	< 2.377E-006
Ra-226	< 3.527E-002 +/-	2.6%	< 9.162E-006	< 3.527E-008
Ac-227	< 1.158E-001 +/-	8.5%	< 3.008E-005	< 1.586E-009
Th-230	< 4.785E+001 +/-	9.1%	< 1.243E-002	< 2.345E-003
Pa-231	< 7.488E-001 +/-	11.3%	< 1.945E-004	< 1.565E-005
Th-232	< 4.462E-002 +/-	2.6%	< 1.159E-005	< 4.020E-001
U-232	< 4.462E-002 +/-	2.6%	< 1.159E-005	< 2.066E-009
U-233	< 3.769E+002 +/-	4.1%	< 9.790E-002	< 3.844E-002
Pa-234	< 9.608E-002 +/-	12.1%	< 2.496E-005	
Pa-234m	< 1.399E+002 +/-	2.1%	< 3.632E-002	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 3.921E-002 +/-	4.1%	< 1.018E-005	< 1.792E-002
Np-237	< 5.268E-002 +/-	2.2%	< 1.368E-005	< 7.376E-005
Pu-238	< 2.714E+003 +/-	4.3%	< 7.048E-001	< 1.568E-004
U-238	< 2.109E+000 +/-	2.1%	< 5.478E-004	< 6.200E+000
Pu-239	< 4.951E+002 +/-	3.7%	< 1.286E-001	< 7.871E-003
Pu-239B	< 1.278E+003 +/-	18.9%	< 3.319E-001	< 2.031E-002
U-239	< 1.050E+003 +/-	370.1%	< 2.728E-001	
Pu-240	1.393E+003 +/-	33.8%	3.617E-001	6.058E-003
Am-241	6.298E+001 +/-	152.4%	1.636E-002	1.814E-005
Am-241B	< 3.012E+002 +/-	14.5%	< 7.825E-002	< 8.676E-005
Pu-241	< 1.329E+004 +/-	4.3%	< 3.453E+000	< 1.279E-004
Pu-241B	< 4.453E+003 +/-	3.5%	< 1.157E+000	< 4.284E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.243E-001 +/-	2.2%	< 3.228E-005	< 6.152E-007

Cm-243	< 1.282E-001	+/- 3.6%	< 3.330E-005	< 2.461E-009
Cm-244	< 1.543E+004	+/- 14.1%	< 4.007E+000	< 1.882E-004
Cm-245	< 2.333E-001	+/- 8.4%	< 6.059E-005	< 1.341E-006
Cm-247	< 2.505E-002	+/- 8.5%	< 6.507E-006	< 2.680E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.050E-002 +/-	3.5%	< 5.324E-006	< 4.960E-009
Cf-251	< 1.159E-001 +/-	6.6%	< 3.010E-005	< 7.243E-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

Segment 10 Results

Segment: 10 Detector: DET01 Position: 10
C:\Canberra\NDA2k\Data\00000386_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P010_S010

Acquisition Start: 5/6/2009 10:58:34 AM
Elapsed Live Time: 119.26 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Carbon Steel 1.75"
Calibration Date: 3/16/2009 2:31:21 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.205 +/- 0.0100
SE-75	264.66	0.318 +/- 0.0057
SE-75	279.54	0.329 +/- 0.0062
SE-75	400.66	0.380 +/- 0.0073

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 1:18:00 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
59.40	Y	281	110	1.38	120.65	4.717E-006	8.28	
99.94		128	199	1.22	201.65	1.277E-004	18.49	
152.79	Y	70	93	0.85	307.26	3.428E-004	23.60	

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

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

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 2.354E-002 +/-	1.9%	< 6.114E-006	< 1.085E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.897E-002 +/-	1.9%	< 7.524E-006	< 4.577E-012
Al-26	< 1.907E-002 +/-	19.8%	< 4.954E-006	< 1.003E-006
K-40	< 3.008E-001 +/-	5.3%	< 7.812E-005	< 4.692E-002
Co-57	< 3.230E-002 +/-	4.6%	< 8.390E-006	< 3.779E-012
Co-60	< 2.276E-002 +/-	1.7%	< 5.913E-006	< 1.996E-011
Se-75	< 2.386E-002 +/-	2.2%	< 6.197E-006	< 1.642E-012
Kr-85	< 4.579E+000 +/-	3.3%	< 1.189E-003	< 1.154E-008
Sr-90	< 2.230E-002 +/-	2.4%	< 5.793E-006	< 1.617E-010
Sb-125	< 3.310E-002 +/-	2.2%	< 8.596E-006	< 3.184E-011
Ba-133	< 1.881E-002 +/-	1.8%	< 4.885E-006	< 7.429E-011
Cs-134	< 1.499E-002 +/-	2.0%	< 3.893E-006	< 1.144E-011
Cs-137	< 2.230E-002 +/-	2.4%	< 5.793E-006	< 2.543E-010
Eu-152	< 4.967E-002 +/-	2.6%	< 1.290E-005	< 2.792E-010
Eu-154	< 6.219E-002 +/-	4.4%	< 1.615E-005	< 2.332E-010
Ho-166m	< 2.096E-002 +/-	4.0%	< 5.444E-006	< 1.165E-008
Bi-207	< 2.042E-002 +/-	1.9%	< 5.303E-006	< 3.716E-010
Pb-210	< 3.547E+002 +/-	308.2%	< 9.212E-002	< 4.611E-006
Ra-226	< 3.617E-002 +/-	2.7%	< 9.395E-006	< 3.617E-008
Ac-227	< 8.426E-002 +/-	8.5%	< 2.188E-005	< 1.154E-009
Th-230	< 4.177E+001 +/-	9.0%	< 1.085E-002	< 2.047E-003
Pa-231	< 5.374E-001 +/-	11.3%	< 1.396E-004	< 1.123E-005
Th-232	< 3.123E-002 +/-	2.6%	< 8.112E-006	< 2.814E-001
U-232	< 3.123E-002 +/-	2.6%	< 8.112E-006	< 1.446E-009
U-233	< 2.813E+002 +/-	4.0%	< 7.308E-002	< 2.870E-002
Pa-234	< 8.385E-002 +/-	12.2%	< 2.178E-005	
Pa-234m	< 1.109E+002 +/-	2.1%	< 2.880E-002	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 2.594E-002 +/-	3.9%	< 6.736E-006	< 1.185E-002
Np-237	< 4.105E-002 +/-	2.2%	< 1.066E-005	< 5.747E-005
Pu-238	4.889E+003 +/-	24.0%	1.270E+000	2.826E-004
U-238	< 2.676E+000 +/-	2.2%	< 6.950E-004	< 7.867E+000
Pu-239	< 3.594E+002 +/-	3.7%	< 9.335E-002	< 5.714E-003
Pu-239B	< 1.394E+003 +/-	18.8%	< 3.622E-001	< 2.217E-002
U-239	< 1.942E+003 +/-	366.8%	< 5.044E-001	
Pu-240	< 6.476E+002 +/-	13.3%	< 1.682E-001	< 2.817E-003
Am-241	3.740E+001 +/-	152.3%	9.714E-003	1.077E-005
Am-241B	< 2.494E+002 +/-	14.4%	< 6.478E-002	< 7.183E-005
Pu-241	< 9.438E+003 +/-	4.2%	< 2.451E+000	< 9.079E-005
Pu-241B	< 2.809E+003 +/-	3.4%	< 7.297E-001	< 2.703E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 9.145E-002 +/-	2.2%	< 2.375E-005	< 4.527E-007

Cm-243	< 9.432E-002 +/-	3.5%	< 2.450E-005	< 1.811E-009
Cm-244	< 1.615E+004 +/-	14.2%	< 4.195E+000	< 1.970E-004
Cm-245	< 1.509E-001 +/-	8.3%	< 3.919E-005	< 8.676E-007
Cm-247	< 2.605E-002 +/-	8.5%	< 6.765E-006	< 2.787E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.323E-002 +/-	3.5%	< 6.034E-006	< 5.622E-009
Cf-251	< 8.549E-002 +/-	6.5%	< 2.220E-005	< 5.343E-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

Segment 11 Results

Segment: 11 Detector: DET01 Position: 11
C:\Canberra\NDA2k\Data\00000386_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P011_S011

Acquisition Start: 5/6/2009 11:01:46 AM
Elapsed Live Time: 119.27 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Carbon Steel 1.75"
Calibration Date: 3/16/2009 2:31:21 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.123 +/- 0.0076
SE-75	264.66	0.209 +/- 0.0038
SE-75	279.54	0.219 +/- 0.0042
SE-75	400.66	0.261 +/- 0.0052

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 1:18:03 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
59.69	Y	141	115	1.02	121.22	4.177E-006	14.09	
99.91		322	171	1.30	201.58	1.181E-004	8.22	
152.92	Y	202	115	1.36	307.51	2.860E-004	10.54	

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

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

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 1.416E-002 +/-	1.8%	< 3.678E-006	< 6.528E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.543E-002 +/-	2.0%	< 6.605E-006	< 4.018E-012
Al-26	< 3.465E-002 +/-	15.1%	< 9.001E-006	< 1.823E-006
K-40	< 2.678E-001 +/-	5.0%	< 6.957E-005	< 4.178E-002
Co-57	< 2.931E-002 +/-	3.4%	< 7.613E-006	< 3.429E-012
Co-60	< 3.056E-002 +/-	1.7%	< 7.938E-006	< 2.680E-011
Se-75	< 2.629E-002 +/-	1.8%	< 6.828E-006	< 1.809E-012
Kr-85	< 4.782E+000 +/-	3.0%	< 1.242E-003	< 1.205E-008
Sr-90	< 1.769E-002 +/-	1.9%	< 4.594E-006	< 1.282E-010
Sb-125	< 4.069E-002 +/-	2.1%	< 1.057E-005	< 3.914E-011
Ba-133	< 2.139E-002 +/-	1.7%	< 5.555E-006	< 8.448E-011
Cs-134	< 1.434E-002 +/-	1.9%	< 3.724E-006	< 1.094E-011
Cs-137	< 1.769E-002 +/-	1.9%	< 4.594E-006	< 2.016E-010
Eu-152	< 2.874E-002 +/-	3.7%	< 7.466E-006	< 1.615E-010
Eu-154	< 5.722E-002 +/-	3.4%	< 1.486E-005	< 2.146E-010
Ho-166m	< 1.967E-002 +/-	2.6%	< 5.109E-006	< 1.094E-008
Bi-207	< 1.943E-002 +/-	2.0%	< 5.047E-006	< 3.536E-010
Pb-210	< 4.031E+002 +/-	53.0%	< 1.047E-001	< 5.240E-006
Ra-226	< 3.748E-002 +/-	2.0%	< 9.734E-006	< 3.748E-008
Ac-227	< 8.685E-002 +/-	8.3%	< 2.256E-005	< 1.190E-009
Th-230	< 3.958E+001 +/-	8.6%	< 1.028E-002	< 1.939E-003
Pa-231	< 4.976E-001 +/-	11.2%	< 1.292E-004	< 1.040E-005
Th-232	< 3.458E-002 +/-	2.0%	< 8.982E-006	< 3.116E-001
U-232	< 3.458E-002 +/-	2.0%	< 8.982E-006	< 1.601E-009
U-233	< 2.982E+002 +/-	2.7%	< 7.744E-002	< 3.041E-002
Pa-234	< 1.315E-001 +/-	12.2%	< 3.415E-005	
Pa-234m	< 1.315E+002 +/-	2.1%	< 3.416E-002	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 2.438E-002 +/-	2.5%	< 6.333E-006	< 1.114E-002
Np-237	< 4.112E-002 +/-	1.9%	< 1.068E-005	< 5.756E-005
Pu-238	1.697E+004 +/-	11.0%	4.409E+000	9.811E-004
U-238	< 2.516E+000 +/-	2.2%	< 6.534E-004	< 7.396E+000
Pu-239	< 4.165E+002 +/-	3.1%	< 1.082E-001	< 6.623E-003
Pu-239B	< 1.530E+003 +/-	5.3%	< 3.974E-001	< 2.432E-002
U-239	< 2.891E+003 +/-	65.1%	< 7.508E-001	
Pu-240	< 5.154E+002 +/-	4.7%	< 1.339E-001	< 2.242E-003
Am-241	2.112E+001 +/-	27.0%	5.486E-003	6.083E-006
Am-241B	< 1.991E+002 +/-	4.9%	< 5.171E-002	< 5.734E-005
Pu-241	< 1.023E+004 +/-	2.8%	< 2.657E+000	< 9.840E-005
Pu-241B	< 3.148E+003 +/-	2.4%	< 8.177E-001	< 3.029E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 8.087E-002 +/-	1.8%	< 2.100E-005	< 4.003E-007

Cm-243	< 8.341E-002 +/- 3.3%	< 2.167E-005	< 1.601E-009
Cm-244	< 1.531E+004 +/- 14.1%	< 3.978E+000	< 1.868E-004
Cm-245	< 1.525E-001 +/- 7.7%	< 3.962E-005	< 8.771E-007
Cm-247	< 2.083E-002 +/- 8.5%	< 5.411E-006	< 2.229E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.504E-002 +/-	3.5%	< 3.907E-006	< 3.640E-009
Cf-251	< 8.626E-002 +/-	5.6%	< 2.240E-005	< 5.391E-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

Segment 12 Results

Segment: 12 Detector: DET01 Position: 12
C:\Canberra\NDA2k\Data\00000386_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P012_S012

Acquisition Start: 5/6/2009 11:04:57 AM
Elapsed Live Time: 119.29 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Carbon Steel 1.75"
Calibration Date: 3/16/2009 2:31:21 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.114 +/- 0.0073
SE-75	264.66	0.193 +/- 0.0035
SE-75	279.54	0.199 +/- 0.0039
SE-75	400.66	0.240 +/- 0.0049

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 1:18:07 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
59.66	Y	169	72	0.93	121.15	1.338E-004	10.50	
99.98		297	131	1.05	201.74	1.751E-004	8.15	
152.80	Y	120	100	1.26	307.29	2.378E-004	15.24	

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

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

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 2.051E-002 +/-	1.9%	< 5.326E-006	< 9.453E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.883E-002 +/-	2.0%	< 7.488E-006	< 4.555E-012
Al-26	< 2.554E-002 +/-	16.0%	< 6.634E-006	< 1.344E-006
K-40	< 2.926E-001 +/-	5.1%	< 7.600E-005	< 4.565E-002
Co-57	< 2.657E-002 +/-	4.0%	< 6.902E-006	< 3.109E-012
Co-60	< 2.747E-002 +/-	1.7%	< 7.135E-006	< 2.409E-011
Se-75	< 2.668E-002 +/-	2.5%	< 6.931E-006	< 1.836E-012
Kr-85	< 4.348E+000 +/-	3.3%	< 1.129E-003	< 1.096E-008
Sr-90	< 1.852E-002 +/-	2.2%	< 4.810E-006	< 1.343E-010
Sb-125	< 3.460E-002 +/-	2.4%	< 8.986E-006	< 3.328E-011
Ba-133	< 1.796E-002 +/-	2.0%	< 4.664E-006	< 7.093E-011
Cs-134	< 1.237E-002 +/-	2.3%	< 3.213E-006	< 9.437E-012
Cs-137	< 1.852E-002 +/-	2.2%	< 4.810E-006	< 2.111E-010
Eu-152	< 5.102E-002 +/-	2.7%	< 1.325E-005	< 2.868E-010
Eu-154	< 5.719E-002 +/-	2.1%	< 1.486E-005	< 2.145E-010
Ho-166m	< 2.084E-002 +/-	3.3%	< 5.412E-006	< 1.158E-008
Bi-207	< 1.494E-002 +/-	2.3%	< 3.880E-006	< 2.719E-010
Pb-210	< 4.672E-001 +/-	39.2%	< 1.213E-004	< 6.073E-009
Ra-226	< 2.201E-002 +/-	2.2%	< 5.717E-006	< 2.201E-008
Ac-227	< 9.150E-002 +/-	8.5%	< 2.377E-005	< 1.253E-009
Th-230	< 5.536E+000 +/-	13.8%	< 1.438E-003	< 2.713E-004
Pa-231	< 4.405E-001 +/-	11.3%	< 1.144E-004	< 9.206E-006
Th-232	< 3.913E-002 +/-	2.7%	< 1.016E-005	< 3.526E-001
U-232	< 3.913E-002 +/-	2.7%	< 1.016E-005	< 1.812E-009
U-233	< 2.992E+002 +/-	3.2%	< 7.770E-002	< 3.051E-002
Pa-234	< 9.374E-002 +/-	12.2%	< 2.435E-005	
Pa-234m	< 1.454E+002 +/-	2.1%	< 3.778E-002	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 2.776E-002 +/-	3.2%	< 7.211E-006	< 1.269E-002
Np-237	< 3.558E-002 +/-	2.3%	< 9.240E-006	< 4.981E-005
Pu-238	1.215E+004 +/-	15.6%	3.155E+000	7.021E-004
U-238	< 1.561E+000 +/-	2.1%	< 4.053E-004	< 4.588E+000
Pu-239	< 4.183E+002 +/-	3.7%	< 1.087E-001	< 6.651E-003
Pu-239B	< 8.861E+002 +/-	6.7%	< 2.302E-001	< 1.409E-002
U-239	< 9.955E-001 +/-	49.2%	< 2.586E-004	
Pu-240	< 3.604E+002 +/-	5.6%	< 9.360E-002	< 1.568E-003
Am-241	7.900E-001 +/-	19.7%	2.052E-004	2.275E-007
Am-241B	< 1.333E+002 +/-	5.8%	< 3.463E-002	< 3.840E-005
Pu-241	< 1.158E+004 +/-	3.3%	< 3.008E+000	< 1.114E-004
Pu-241B	< 3.253E+003 +/-	3.2%	< 8.449E-001	< 3.129E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 4.037E-002 +/-	9.3%	< 1.049E-005	< 1.998E-007

Cm-243	< 9.940E-002	+/- 3.7%	< 2.582E-005	< 1.908E-009
Cm-244	< 1.528E+004	+/- 14.1%	< 3.969E+000	< 1.864E-004
Cm-245	< 1.824E-001	+/- 7.9%	< 4.738E-005	< 1.049E-006
Cm-247	< 2.131E-002	+/- 8.6%	< 5.535E-006	< 2.280E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.101E-002 +/-	3.6%	< 5.458E-006	< 5.085E-009
Cf-251	< 9.023E-002 +/-	5.9%	< 2.344E-005	< 5.639E-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

Segment 13 Results

Segment: 13 Detector: DET01 Position: 13
C:\Canberra\NDA2k\Data\00000386_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P013_S013

Acquisition Start: 5/6/2009 11:08:08 AM
Elapsed Live Time: 119.33 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Carbon Steel 1.75"
Calibration Date: 3/16/2009 2:31:21 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.155 +/- 0.0089
SE-75	264.66	0.267 +/- 0.0048
SE-75	279.54	0.278 +/- 0.0053
SE-75	400.66	0.338 +/- 0.0066

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 1:18:10 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	115	64	0.71	121.00	1.255E-004	13.79	

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 **********

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

Absorption correction model: FULL

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

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 2.315E-002 +/-	1.8%	< 6.013E-006	< 1.067E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.626E-002 +/-	2.0%	< 6.820E-006	< 4.148E-012
Al-26	< 2.579E-002 +/-	14.9%	< 6.699E-006	< 1.357E-006
K-40	< 2.884E-001 +/-	4.9%	< 7.490E-005	< 4.499E-002
Co-57	< 2.263E-002 +/-	3.5%	< 5.878E-006	< 2.648E-012
Co-60	< 3.047E-002 +/-	2.6%	< 7.913E-006	< 2.672E-011
Se-75	< 2.606E-002 +/-	1.9%	< 6.770E-006	< 1.793E-012
Kr-85	< 4.063E+000 +/-	3.1%	< 1.055E-003	< 1.024E-008
Sr-90	< 1.529E-002 +/-	1.9%	< 3.971E-006	< 1.108E-010
Sb-125	< 4.525E-002 +/-	2.1%	< 1.175E-005	< 4.353E-011
Ba-133	< 1.856E-002 +/-	1.7%	< 4.820E-006	< 7.330E-011
Cs-134	< 1.393E-002 +/-	1.8%	< 3.619E-006	< 1.063E-011
Cs-137	< 1.529E-002 +/-	1.9%	< 3.971E-006	< 1.743E-010
Eu-152	< 2.563E-002 +/-	3.7%	< 6.656E-006	< 1.440E-010
Eu-154	< 4.752E-002 +/-	3.5%	< 1.234E-005	< 1.782E-010
Ho-166m	< 1.754E-002 +/-	2.7%	< 4.555E-006	< 9.751E-009
Bi-207	< 1.442E-002 +/-	2.0%	< 3.746E-006	< 2.625E-010
Pb-210	< 7.607E-001 +/-	36.7%	< 1.976E-004	< 9.889E-009
Ra-226	< 2.808E-002 +/-	1.9%	< 7.293E-006	< 2.808E-008
Ac-227	< 8.655E-002 +/-	8.3%	< 2.248E-005	< 1.186E-009
Th-230	< 7.508E+000 +/-	13.0%	< 1.950E-003	< 3.679E-004
Pa-231	< 4.432E-001 +/-	11.2%	< 1.151E-004	< 9.262E-006
Th-232	< 3.204E-002 +/-	2.1%	< 8.323E-006	< 2.887E-001
U-232	< 3.204E-002 +/-	2.1%	< 8.323E-006	< 1.484E-009
U-233	< 2.783E+002 +/-	2.7%	< 7.230E-002	< 2.839E-002
Pa-234	< 3.642E-002 +/-	43.9%	< 9.458E-006	
Pa-234m	< 1.504E+002 +/-	2.1%	< 3.908E-002	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 2.325E-002 +/-	2.5%	< 6.039E-006	< 1.063E-002
Np-237	< 3.450E-002 +/-	1.9%	< 8.961E-006	< 4.830E-005
Pu-238	< 2.581E+003 +/-	2.6%	< 6.704E-001	< 1.492E-004
U-238	< 2.233E+000 +/-	2.1%	< 5.801E-004	< 6.566E+000
Pu-239	< 3.335E+002 +/-	3.2%	< 8.662E-002	< 5.303E-003
Pu-239B	< 6.227E+002 +/-	5.7%	< 1.617E-001	< 9.900E-003
U-239	< 2.187E+000 +/-	45.8%	< 5.680E-004	
Pu-240	< 3.160E+002 +/-	5.0%	< 8.209E-002	< 1.375E-003
Am-241	5.772E-001 +/-	20.9%	1.499E-004	1.662E-007
Am-241B	< 1.227E+002 +/-	5.3%	< 3.187E-002	< 3.534E-005
Pu-241	< 9.206E+003 +/-	2.8%	< 2.391E+000	< 8.857E-005
Pu-241B	< 3.285E+003 +/-	2.5%	< 8.532E-001	< 3.160E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 3.619E-002 +/-	8.4%	< 9.399E-006	< 1.791E-007

Cm-243	< 9.543E-002 +/- 3.3%	< 2.479E-005	< 1.832E-009
Cm-244	< 1.739E+004 +/- 14.1%	< 4.517E+000	< 2.121E-004
Cm-245	< 1.579E-001 +/- 7.7%	< 4.101E-005	< 9.079E-007
Cm-247	< 2.532E-002 +/- 8.5%	< 6.576E-006	< 2.709E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.735E-002 +/-	3.5%	< 4.506E-006	< 4.198E-009
Cf-251	< 8.850E-002 +/-	5.6%	< 2.299E-005	< 5.531E-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

Segment 14 Results

Segment: 14 Detector: DET01 Position: 14
C:\Canberra\NDA2k\Data\00000386_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P014_S014

Acquisition Start: 5/6/2009 11:11:19 AM
Elapsed Live Time: 119.31 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Carbon Steel 1.75"
Calibration Date: 3/16/2009 2:31:21 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.262 +/- 0.0115
SE-75	264.66	0.398 +/- 0.0071
SE-75	279.54	0.408 +/- 0.0076
SE-75	400.66	0.472 +/- 0.0090

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 1:18:13 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

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

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

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 2.261E-002 +/-	1.9%	< 5.873E-006	< 1.042E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.450E-002 +/-	2.0%	< 6.364E-006	< 3.871E-012
Al-26	< 7.498E-003 +/-	15.2%	< 1.948E-006	< 3.944E-007
K-40	< 2.603E-001 +/-	5.0%	< 6.760E-005	< 4.060E-002
Co-57	< 2.253E-002 +/-	3.4%	< 5.852E-006	< 2.636E-012
Co-60	< 2.913E-002 +/-	2.6%	< 7.567E-006	< 2.555E-011
Se-75	< 2.135E-002 +/-	1.8%	< 5.546E-006	< 1.469E-012
Kr-85	< 5.549E+000 +/-	3.1%	< 1.441E-003	< 1.398E-008
Sr-90	< 1.658E-002 +/-	1.9%	< 4.306E-006	< 1.202E-010
Sb-125	< 3.723E-002 +/-	2.1%	< 9.669E-006	< 3.581E-011
Ba-133	< 2.094E-002 +/-	1.7%	< 5.440E-006	< 8.273E-011
Cs-134	< 1.343E-002 +/-	2.0%	< 3.490E-006	< 1.025E-011
Cs-137	< 1.658E-002 +/-	1.9%	< 4.306E-006	< 1.890E-010
Eu-152	< 4.376E-002 +/-	1.8%	< 1.137E-005	< 2.459E-010
Eu-154	< 4.717E-002 +/-	3.4%	< 1.225E-005	< 1.769E-010
Ho-166m	< 1.752E-002 +/-	2.6%	< 4.550E-006	< 9.741E-009
Bi-207	< 1.594E-002 +/-	2.0%	< 4.139E-006	< 2.900E-010
Pb-210	< 4.114E+002 +/-	56.7%	< 1.069E-001	< 5.348E-006
Ra-226	< 3.078E-002 +/-	2.0%	< 7.995E-006	< 3.078E-008
Ac-227	< 7.051E-002 +/-	8.3%	< 1.831E-005	< 9.660E-010
Th-230	< 3.586E+001 +/-	8.6%	< 9.313E-003	< 1.757E-003
Pa-231	< 4.435E-001 +/-	11.2%	< 1.152E-004	< 9.269E-006
Th-232	< 3.231E-002 +/-	2.0%	< 8.393E-006	< 2.912E-001
U-232	< 3.231E-002 +/-	2.0%	< 8.393E-006	< 1.496E-009
U-233	< 2.382E+002 +/-	2.7%	< 6.188E-002	< 2.430E-002
Pa-234	< 1.319E-001 +/-	11.5%	< 3.426E-005	
Pa-234m	< 1.535E+002 +/-	2.2%	< 3.987E-002	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 2.026E-002 +/-	2.5%	< 5.263E-006	< 9.260E-003
Np-237	< 3.099E-002 +/-	1.9%	< 8.048E-006	< 4.338E-005
Pu-238	< 1.646E+003 +/-	2.6%	< 4.276E-001	< 9.516E-005
U-238	< 2.457E+000 +/-	2.2%	< 6.382E-004	< 7.224E+000
Pu-239	< 3.147E+002 +/-	3.1%	< 8.173E-002	< 5.003E-003
Pu-239B	< 7.763E+002 +/-	5.4%	< 2.016E-001	< 1.234E-002
U-239	< 3.740E+003 +/-	69.5%	< 9.714E-001	
Pu-240	< 4.360E+002 +/-	4.7%	< 1.132E-001	< 1.896E-003
Am-241	< 3.561E+000 +/-	25.0%	< 9.249E-004	< 1.026E-006
Am-241B	< 1.760E+002 +/-	5.0%	< 4.571E-002	< 5.069E-005
Pu-241	< 8.137E+003 +/-	2.8%	< 2.113E+000	< 7.827E-005
Pu-241B	< 2.878E+003 +/-	2.4%	< 7.476E-001	< 2.769E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 8.107E-002 +/-	1.8%	< 2.106E-005	< 4.013E-007

Cm-243	< 8.361E-002 +/- 3.3%	< 2.172E-005	< 1.605E-009
Cm-244	< 1.681E+004 +/- 14.1%	< 4.366E+000	< 2.050E-004
Cm-245	< 1.231E-001 +/- 7.7%	< 3.196E-005	< 7.076E-007
Cm-247	< 2.659E-002 +/- 8.5%	< 6.907E-006	< 2.845E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.949E-002 +/-	3.5%	< 5.063E-006	< 4.717E-009
Cf-251	< 6.583E-002 +/-	5.6%	< 1.710E-005	< 4.114E-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

Segment 15 Results

Segment: 15 Detector: DET01 Position: 15
C:\Canberra\NDA2k\Data\00000386_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P015_S015

Acquisition Start: 5/6/2009 11:14:31 AM
Elapsed Live Time: 119.33 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Carbon Steel 1.75"
Calibration Date: 3/16/2009 2:31:21 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.527 +/- 0.0175
SE-75	264.66	0.682 +/- 0.0123
SE-75	279.54	0.700 +/- 0.0130
SE-75	400.66	0.739 +/- 0.0140

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 1:18:16 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

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

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

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 2.069E-002 +/-	1.8%	< 5.374E-006	< 9.539E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 1.827E-002 +/-	2.1%	< 4.745E-006	< 2.886E-012
Al-26	< 5.059E-002 +/-	15.4%	< 1.314E-005	< 2.661E-006
K-40	< 2.953E-001 +/-	5.0%	< 7.669E-005	< 4.606E-002
Co-57	< 2.452E-002 +/-	3.5%	< 6.369E-006	< 2.869E-012
Co-60	< 3.923E-002 +/-	1.7%	< 1.019E-005	< 3.440E-011
Se-75	< 1.812E-002 +/-	1.8%	< 4.706E-006	< 1.246E-012
Kr-85	< 4.765E+000 +/-	3.0%	< 1.238E-003	< 1.201E-008
Sr-90	< 2.074E-002 +/-	1.9%	< 5.387E-006	< 1.504E-010
Sb-125	< 4.994E-002 +/-	2.1%	< 1.297E-005	< 4.804E-011
Ba-133	< 2.063E-002 +/-	1.7%	< 5.358E-006	< 8.149E-011
Cs-134	< 1.671E-002 +/-	1.8%	< 4.340E-006	< 1.275E-011
Cs-137	< 2.074E-002 +/-	1.9%	< 5.387E-006	< 2.364E-010
Eu-152	< 5.260E-002 +/-	2.5%	< 1.366E-005	< 2.956E-010
Eu-154	< 2.353E-002 +/-	1.9%	< 6.112E-006	< 8.824E-011
Ho-166m	< 1.607E-002 +/-	2.7%	< 4.175E-006	< 8.936E-009
Bi-207	< 2.030E-002 +/-	2.0%	< 5.273E-006	< 3.695E-010
Pb-210	< 5.012E+002 +/-	57.4%	< 1.302E-001	< 6.516E-006
Ra-226	< 3.112E-002 +/-	2.0%	< 8.084E-006	< 3.112E-008
Ac-227	< 7.472E-002 +/-	2.8%	< 1.941E-005	< 1.024E-009
Th-230	< 3.078E+001 +/-	8.6%	< 7.996E-003	< 1.508E-003
Pa-231	< 4.676E-001 +/-	11.2%	< 1.215E-004	< 9.773E-006
Th-232	< 3.102E-002 +/-	2.0%	< 8.057E-006	< 2.795E-001
U-232	< 3.102E-002 +/-	2.0%	< 8.057E-006	< 1.436E-009
U-233	< 2.505E+002 +/-	2.8%	< 6.507E-002	< 2.555E-002
Pa-234	< 8.104E-002 +/-	12.2%	< 2.105E-005	
Pa-234m	< 8.489E+001 +/-	2.1%	< 2.205E-002	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 2.205E-002 +/-	2.5%	< 5.726E-006	< 1.007E-002
Np-237	< 3.981E-002 +/-	1.9%	< 1.034E-005	< 5.573E-005
Pu-238	< 1.569E+003 +/-	2.7%	< 4.076E-001	< 9.071E-005
U-238	< 1.367E+000 +/-	2.2%	< 3.551E-004	< 4.019E+000
Pu-239	< 2.987E+002 +/-	3.2%	< 7.760E-002	< 4.750E-003
Pu-239B	< 7.252E+002 +/-	5.6%	< 1.884E-001	< 1.153E-002
U-239	< 5.761E+003 +/-	70.2%	< 1.496E+000	
Pu-240	< 4.563E+002 +/-	4.9%	< 1.185E-001	< 1.985E-003
Am-241	< 3.283E+000 +/-	25.4%	< 8.528E-004	< 9.456E-007
Am-241B	< 1.736E+002 +/-	5.1%	< 4.508E-002	< 4.998E-005
Pu-241	< 8.144E+003 +/-	2.9%	< 2.115E+000	< 7.835E-005
Pu-241B	< 2.682E+003 +/-	2.4%	< 6.965E-001	< 2.580E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 9.430E-002 +/-	1.8%	< 2.449E-005	< 4.668E-007

Cm-243	< 9.726E-002 +/-	3.3%	< 2.526E-005	< 1.867E-009
Cm-244	< 1.966E+004 +/-	13.1%	< 5.107E+000	< 2.399E-004
Cm-245	< 1.379E-001 +/-	7.7%	< 3.581E-005	< 7.927E-007
Cm-247	< 3.636E-002 +/-	8.5%	< 9.445E-006	< 3.891E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.879E-002 +/-	3.5%	< 4.880E-006	< 4.547E-009
Cf-251	< 6.619E-002 +/-	5.6%	< 1.719E-005	< 4.137E-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

Segment 16 Results

Segment: 16 Detector: DET01 Position: 16
C:\Canberra\NDA2k\Data\00000386_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P016_S016

Acquisition Start: 5/6/2009 11:17:42 AM
Elapsed Live Time: 119.36 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 Gal Carbon Steel 1.75"
Calibration Date: 3/16/2009 2:31:21 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.562 +/- 0.0184
SE-75	264.66	0.738 +/- 0.0133
SE-75	279.54	0.754 +/- 0.0140
SE-75	400.66	0.797 +/- 0.0151

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 6/3/2009 1:18:21 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

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

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

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
n on Fe	< 3.474E-002 +/-	2.3%	< 9.024E-006	< 1.602E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.366E-002 +/-	2.3%	< 6.146E-006	< 3.739E-012
Al-26	< 1.483E-002 +/-	18.0%	< 3.853E-006	< 7.802E-007
K-40	< 4.724E-001 +/-	5.6%	< 1.227E-004	< 7.370E-002
Co-57	< 3.979E-002 +/-	4.4%	< 1.034E-005	< 4.656E-012
Co-60	< 5.692E-002 +/-	2.0%	< 1.479E-005	< 4.992E-011
Se-75	< 3.669E-002 +/-	2.8%	< 9.530E-006	< 2.524E-012
Kr-85	< 7.095E+000 +/-	3.6%	< 1.843E-003	< 1.788E-008
Sr-90	< 2.112E-002 +/-	2.6%	< 5.487E-006	< 1.532E-010
Sb-125	< 5.079E-002 +/-	2.7%	< 1.319E-005	< 4.886E-011
Ba-133	< 3.378E-002 +/-	2.3%	< 8.775E-006	< 1.334E-010
Cs-134	< 1.897E-002 +/-	2.8%	< 4.926E-006	< 1.447E-011
Cs-137	< 2.112E-002 +/-	2.6%	< 5.487E-006	< 2.408E-010
Eu-152	< 6.200E-002 +/-	2.9%	< 1.610E-005	< 3.484E-010
Eu-154	< 6.755E-002 +/-	2.4%	< 1.755E-005	< 2.533E-010
Ho-166m	< 3.722E-002 +/-	2.6%	< 9.669E-006	< 2.070E-008
Bi-207	< 2.493E-002 +/-	2.8%	< 6.477E-006	< 4.538E-010
Pb-210	< 1.305E+000 +/-	46.8%	< 3.390E-004	< 1.697E-008
Ra-226	< 4.842E-002 +/-	2.5%	< 1.258E-005	< 4.842E-008
Ac-227	< 1.275E-001 +/-	8.7%	< 3.310E-005	< 1.746E-009
Th-230	< 1.087E+001 +/-	15.5%	< 2.824E-003	< 5.328E-004
Pa-231	< 6.413E-001 +/-	11.4%	< 1.666E-004	< 1.340E-005
Th-232	< 6.404E-002 +/-	3.2%	< 1.663E-005	< 5.770E-001
U-232	< 6.404E-002 +/-	3.2%	< 1.663E-005	< 2.965E-009
U-233	< 4.366E+002 +/-	3.6%	< 1.134E-001	< 4.453E-002
Pa-234	< 1.687E-001 +/-	7.8%	< 4.382E-005	
Pa-234m	< 2.351E+002 +/-	2.4%	< 6.105E-002	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 4.961E-002 +/-	3.6%	< 1.289E-005	< 2.267E-002
Np-237	< 4.866E-002 +/-	2.6%	< 1.264E-005	< 6.812E-005
Pu-238	< 3.201E+003 +/-	3.6%	< 8.314E-001	< 1.850E-004
U-238	< 4.160E+000 +/-	2.4%	< 1.081E-003	< 1.223E+001
Pu-239	< 4.851E+002 +/-	4.1%	< 1.260E-001	< 7.713E-003
Pu-239B	< 5.760E+002 +/-	7.0%	< 1.496E-001	< 9.158E-003
U-239	< 4.375E+000 +/-	58.6%	< 1.136E-003	
Pu-240	< 4.931E+002 +/-	6.2%	< 1.281E-001	< 2.145E-003
Am-241	< 1.364E-001 +/-	19.9%	< 3.544E-005	< 3.929E-008
Am-241B	< 1.631E+002 +/-	6.8%	< 4.236E-002	< 4.697E-005
Pu-241	< 1.705E+004 +/-	3.7%	< 4.428E+000	< 1.640E-004
Pu-241B	< 5.370E+003 +/-	3.6%	< 1.395E+000	< 5.166E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 6.246E-002 +/-	10.7%	< 1.622E-005	< 3.092E-007

Cm-243	<	1.697E-001	+/-	6.7%	<	4.408E-005	< 3.259E-009
Cm-244	<	2.870E+004	+/-	14.2%	<	7.454E+000	< 3.501E-004
Cm-245	<	2.731E-001	+/-	8.1%	<	7.093E-005	< 1.570E-006
Cm-247	<	5.191E-002	+/-	8.7%	<	1.348E-005	< 5.555E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.294E-002 +/-	3.8%	< 5.959E-006	< 5.552E-009
Cf-251	< 1.532E-001 +/-	6.2%	< 3.979E-005	< 9.574E-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

Sum of Segment NID Results
Category: Segmented

C:\Canberra\NDA2k\Data\00000386_CNTR0001_DCAT0002_PROC00AK.CNF

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

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 3.474E-002 +/-	2.3%	< 5.640E-007	< 1.602E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 3.368E-002 +/-	2.2%	< 5.467E-007	< 5.321E-012
	Al-26	< 5.059E-002 +/-	15.4%	< 8.213E-007	< 2.661E-006
	K-40	< 4.724E-001 +/-	5.6%	< 7.670E-006	< 7.370E-002
	Co-57	< 6.168E-002 +/-	3.6%	< 1.001E-006	< 7.216E-012
	Co-60	< 5.692E-002 +/-	2.0%	< 9.241E-007	< 4.992E-011
	Se-75	< 5.135E-002 +/-	1.9%	< 8.336E-007	< 3.533E-012
	Kr-85	< 7.124E+000 +/-	3.2%	< 1.156E-004	< 1.795E-008
	Sr-90	4.814E-002 +/-	25.9%	7.814E-007	3.490E-010
	Sb-125	< 8.268E-002 +/-	2.1%	< 1.342E-006	< 7.954E-011
	Ba-133	< 5.517E-002 +/-	1.7%	< 8.956E-007	< 2.179E-010
	Cs-134	< 2.643E-002 +/-	2.1%	< 4.291E-007	< 2.017E-011
?	Cs-137	4.814E-002 +/-	25.9%	7.814E-007	5.488E-010
	Eu-152	< 9.280E-002 +/-	1.7%	< 1.506E-006	< 5.215E-010
	Eu-154	< 7.342E-002 +/-	2.2%	< 1.192E-006	< 2.753E-010
	Ho-166m	< 3.722E-002 +/-	2.6%	< 6.043E-007	< 2.070E-008
	Bi-207	< 2.493E-002 +/-	2.8%	< 4.048E-007	< 4.538E-010
	Pb-210	< 5.810E+003 +/-	309.7%	< 9.432E-002	< 7.553E-005
	Ra-226	< 5.468E-002 +/-	2.1%	< 8.877E-007	< 5.468E-008
	Ac-227	< 1.742E-001 +/-	8.3%	< 2.828E-006	< 2.387E-009
	Th-230	< 7.188E+001 +/-	8.6%	< 1.167E-003	< 3.522E-003
	Pa-231	< 1.049E+000 +/-	11.2%	< 1.703E-005	< 2.192E-005
	Th-232	< 6.404E-002 +/-	3.2%	< 1.040E-006	< 5.770E-001
	U-232	< 6.404E-002 +/-	3.2%	< 1.040E-006	< 2.965E-009
	U-233	< 5.873E+002 +/-	3.0%	< 9.533E-003	< 5.990E-002
	Pa-234	< 1.687E-001 +/-	7.8%	< 2.739E-006	
	Pa-234m	< 2.351E+002 +/-	2.4%	< 3.816E-003	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 5.635E-002 +/-	2.9%	< 9.148E-007	< 2.575E-002
	Np-237	1.354E-001 +/-	62.0%	2.198E-006	1.896E-004
	Pu-238	8.622E+004 +/-	6.1%	1.400E+000	4.983E-003
	U-238	< 4.160E+000 +/-	2.4%	< 6.754E-005	< 1.223E+001
	Pu-239	5.146E+005 +/-	6.5%	8.353E+000	8.181E+000
	Pu-239B	< 3.062E+003 +/-	6.1%	< 4.971E-002	< 4.869E-002
	U-239	< 3.656E+004 +/-	368.5%	< 5.935E-001	
	Pu-240	1.393E+003 +/-	33.8%	2.261E-002	6.058E-003
	Am-241	8.409E+004 +/-	8.9%	1.365E+000	2.422E-002
	Am-241B	4.272E+004 +/-	7.3%	6.935E-001	1.230E-002
	Pu-241	< 2.036E+004 +/-	3.2%	< 3.305E-001	< 1.958E-004
	Pu-241B	1.668E+005 +/-	10.4%	2.707E+000	1.604E-003

Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 2.052E-001 +/-	1.9%	< 3.331E-006	< 1.016E-006
Cm-243	< 2.116E-001 +/-	3.4%	< 3.436E-006	< 4.063E-009
Cm-244	< 3.152E+004 +/-	13.1%	< 5.117E-001	< 3.845E-004
Cm-245	< 3.292E-001 +/-	7.8%	< 5.344E-006	< 1.893E-006
Cm-247	< 5.191E-002 +/-	8.7%	< 8.428E-007	< 5.555E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 3.964E-002 +/-	3.5%	< 6.434E-007	< 9.592E-009
Cf-251	< 1.832E-001 +/-	5.8%	< 2.974E-006	< 1.145E-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	8.18E+000 +- 5.32E-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)

********** 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: LL85238300TRU Analysis Date: 5/6/2009

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

Net Weight	61600.0 g	
Pu mass	8.82E+000 +-	1.85E+000 g
TRU Alpha Activity	1.66E+000 +-	2.48E-001 Ci
TRU Activity Concentration	2.69E+004 +-	4.02E+003 nCi/g
Pu-239 Equivalent Activity	1.61E+000 +-	2.31E-001 Ci
Pu-239 FGE	8.24E+000 +-	1.85E+000 g
Decay heat	5.36E-002 +-	8.09E-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	5.94E-008
U233	<LLD	<LLD	0.00E+000	5.87E-004
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	5.64E-008
NP237	0.00E+000	0.00E+000	0.00E+000	2.77E-007
PU238	5.36E-002	9.27E-001	2.16E-001	7.65E-003
U238	<LLD	<LLD	0.00E+000	4.16E-006
PU239	8.18E+000	5.15E-001	1.16E-001	4.25E-003
PU240	5.66E-001	1.30E-001	3.28E-002	1.07E-003
AM241	2.42E-002	8.41E-002	1.97E-002	9.34E-005
PU241	1.64E-002	1.71E+000	4.36E-001	1.41E-002
PU242	4.27E-003	1.69E-005	4.59E-006	0.00E+000

Errors quoted at 1.000 sigma

Operator: Robert J. Haslett Jr. Date: 6-3-09

ITR: Philip C. Smith Date: 6/12/09

Summed Segment Spectra Results
Category: Segmented

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Elapsed Live Time: 119.07 sec Elapsed Real Time: 120.00 sec

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

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 9.839E-002 +/-	1.0%	< 1.597E-006	< 4.536E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 1.167E-001 +/-	1.1%	< 1.894E-006	< 1.844E-011
	Al-26	< 1.064E-001 +/-	6.6%	< 1.728E-006	< 5.598E-006
	K-40	1.121E+000 +/-	26.3%	1.820E-005	1.749E-001
	Co-57	< 3.552E-001 +/-	1.5%	< 5.766E-006	< 4.156E-011
	Co-60	2.850E-001 +/-	9.8%	4.627E-006	2.499E-010
	Se-75	< 2.678E-001 +/-	1.0%	< 4.348E-006	< 1.843E-011
	Kr-85	< 3.288E+001 +/-	2.4%	< 5.337E-004	< 8.285E-008
	Sr-90	< 1.254E-001 +/-	0.8%	< 2.036E-006	< 9.094E-010
	Sb-125	< 3.303E-001 +/-	1.3%	< 5.363E-006	< 3.178E-010
	Ba-133	< 2.179E-001 +/-	0.8%	< 3.538E-006	< 8.609E-010
	Cs-134	< 1.001E-001 +/-	0.7%	< 1.625E-006	< 7.638E-011
X	Cs-137				
	Eu-152	< 3.915E-001 +/-	1.7%	< 6.356E-006	< 2.200E-009
	Eu-154	< 3.332E-001 +/-	1.4%	< 5.408E-006	< 1.249E-009
	Ho-166m	< 1.581E-001 +/-	1.6%	< 2.567E-006	< 8.792E-008
	Bi-207	< 1.045E-001 +/-	0.7%	< 1.697E-006	< 1.902E-009
	Pb-210	< 2.928E+003 +/-	11.3%	< 4.753E-002	< 3.806E-005
	Ra-226	< 2.382E-001 +/-	1.3%	< 3.867E-006	< 2.382E-007
	Ac-227	< 9.413E-001 +/-	8.2%	< 1.528E-005	< 1.290E-008
	Th-230	< 4.533E+002 +/-	8.2%	< 7.359E-003	< 2.221E-002
	Pa-231	< 5.199E+000 +/-	11.1%	< 8.440E-005	< 1.087E-004
	Th-232	< 3.614E-001 +/-	1.1%	< 5.867E-006	< 3.256E+000
	U-232	< 3.614E-001 +/-	1.1%	< 5.867E-006	< 1.673E-008
	U-233	< 3.390E+003 +/-	1.3%	< 5.504E-002	< 3.458E-001
	Pa-234	< 5.651E-001 +/-	12.1%	< 9.174E-006	
	Pa-234m	< 6.887E+002 +/-	1.5%	< 1.118E-002	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 3.045E-001 +/-	1.7%	< 4.942E-006	< 1.391E-001
	Np-237	2.393E-001 +/-	54.6%	3.885E-006	3.350E-004
	Pu-238	1.069E+005 +/-	7.9%	1.735E+000	6.178E-003
	U-238	< 1.218E+001 +/-	1.6%	< 1.977E-004	< 3.581E+001
	Pu-239	4.582E+005 +/-	4.4%	7.438E+000	7.285E+000
	Pu-239B	< 1.620E+004 +/-	3.2%	< 2.630E-001	< 2.576E-001
	U-239	< 6.980E+003 +/-	14.9%	< 1.133E-001	
X	Pu-240				
	Am-241	7.692E+004 +/-	11.9%	1.249E+000	2.215E-002
	Am-241B	3.686E+004 +/-	4.5%	5.984E-001	1.062E-002
	Pu-241	< 1.165E+005 +/-	1.7%	< 1.892E+000	< 1.121E-003
	Pu-241B	1.565E+005 +/-	5.0%	2.541E+000	1.506E-003

Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.035E+000 +/-	1.1%	< 1.680E-005	< 5.121E-006
Cm-243	< 1.067E+000 +/-	3.0%	< 1.732E-005	< 2.049E-008
Cm-244	< 1.262E+005 +/-	13.9%	< 2.049E+000	< 1.540E-003
Cm-245	< 1.841E+000 +/-	7.4%	< 2.989E-005	< 1.059E-005
Cm-247	< 2.004E-001 +/-	8.4%	< 3.254E-006	< 2.145E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.689E-001 +/-	3.1%	< 2.742E-006	< 4.088E-008
Cf-251	< 1.012E+000 +/-	5.3%	< 1.642E-005	< 6.322E-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	7.29E+000 +- 3.24E-001	4.82E-001 +- 1.52E-002

Beta: 3.92E+002 +- 9.85E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	3.62E-001 +- 1.58E-002
203.55	8.61E-001 +- 8.15E-002
375.05	2.54E+000 +- 1.46E-001
413.71	2.87E+000 +- 8.51E-002

********** 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: LL85238300TRU Analysis Date: 5/6/2009

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

Net Weight	61600.0 g		
Pu mass	7.85E+000	+-	1.61E+000 g
TRU Alpha Activity	1.48E+000	+-	2.16E-001 Ci
TRU Activity Concentration	2.40E+004	+-	3.51E+003 nCi/g
Pu-239 Equivalent Activity	1.43E+000	+-	2.02E-001 Ci
Pu-239 FGE	7.34E+000	+-	1.61E+000 g
Decay heat	4.78E-002	+-	7.06E-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	3.39E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.04E-007
NP237	0.00E+000	0.00E+000	0.00E+000	4.31E-007
PU238	4.77E-002	8.26E-001	1.88E-001	7.76E-003
U238	<LLD	<LLD	0.00E+000	1.22E-005
PU239	7.29E+000	4.58E-001	1.01E-001	4.31E-003
PU240	5.04E-001	1.16E-001	2.87E-002	1.09E-003
AM241	2.22E-002	7.69E-002	1.90E-002	3.02E-005
PU241	1.46E-002	1.52E+000	3.82E-001	1.43E-002
PU242	3.80E-003	1.51E-005	4.03E-006	0.00E+000

Errors quoted at 1.000 sigma

Operator: Robert J Hazlett Date: 6-3-09

ITR: Philip Cattle Date: 6/12/09

Combined Sum Spectrum and Segment NID Results
Category: Segmented

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

	Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
	n on Fe	< 9.839E-002 +/-	1.0%	< 1.597E-006	< 4.536E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 1.167E-001 +/-	1.1%	< 1.894E-006	< 1.844E-011
	Al-26	< 1.064E-001 +/-	6.6%	< 1.728E-006	< 5.598E-006
	K-40	1.121E+000 +/-	26.3%	1.820E-005	1.749E-001
	Co-57	< 3.552E-001 +/-	1.5%	< 5.766E-006	< 4.156E-011
	Co-60	2.850E-001 +/-	9.8%	4.627E-006	2.499E-010
	Se-75	< 2.678E-001 +/-	1.0%	< 4.348E-006	< 1.843E-011
	Kr-85	< 3.288E+001 +/-	2.4%	< 5.337E-004	< 8.285E-008
	Sr-90	4.814E-002 +/-	25.9%	7.814E-007	3.490E-010
	Sb-125	< 3.303E-001 +/-	1.3%	< 5.363E-006	< 3.178E-010
	Ba-133	< 2.179E-001 +/-	0.8%	< 3.538E-006	< 8.609E-010
	Cs-134	< 1.001E-001 +/-	0.7%	< 1.625E-006	< 7.638E-011
?	Cs-137	4.814E-002 +/-	25.9%	7.814E-007	5.488E-010
	Eu-152	< 3.915E-001 +/-	1.7%	< 6.356E-006	< 2.200E-009
	Eu-154	< 3.332E-001 +/-	1.4%	< 5.408E-006	< 1.249E-009
	Ho-166m	< 1.581E-001 +/-	1.6%	< 2.567E-006	< 8.792E-008
	Bi-207	< 1.045E-001 +/-	0.7%	< 1.697E-006	< 1.902E-009
	Pb-210	< 2.928E+003 +/-	11.3%	< 4.753E-002	< 3.806E-005
	Ra-226	< 2.382E-001 +/-	1.3%	< 3.867E-006	< 2.382E-007
	Ac-227	< 9.413E-001 +/-	8.2%	< 1.528E-005	< 1.290E-008
	Th-230	< 4.533E+002 +/-	8.2%	< 7.359E-003	< 2.221E-002
	Pa-231	< 5.199E+000 +/-	11.1%	< 8.440E-005	< 1.087E-004
	Th-232	< 3.614E-001 +/-	1.1%	< 5.867E-006	< 3.256E+000
	U-232	< 3.614E-001 +/-	1.1%	< 5.867E-006	< 1.673E-008
	U-233	< 3.390E+003 +/-	1.3%	< 5.504E-002	< 3.458E-001
	Pa-234	< 5.651E-001 +/-	12.1%	< 9.174E-006	
	Pa-234m	< 6.887E+002 +/-	1.5%	< 1.118E-002	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 3.045E-001 +/-	1.7%	< 4.942E-006	< 1.391E-001
	Np-237	1.354E-001 +/-	62.0%	2.198E-006	1.896E-004
	Pu-238	8.622E+004 +/-	6.1%	1.400E+000	4.983E-003
	U-238	< 1.218E+001 +/-	1.6%	< 1.977E-004	< 3.581E+001
	Pu-239	5.146E+005 +/-	6.5%	8.353E+000	8.181E+000
	Pu-239B	< 1.620E+004 +/-	3.2%	< 2.630E-001	< 2.576E-001
	U-239	< 6.980E+003 +/-	14.9%	< 1.133E-001	
	Pu-240	1.393E+003 +/-	33.8%	2.261E-002	6.058E-003
	Am-241	8.409E+004 +/-	8.9%	1.365E+000	2.422E-002
	Am-241B	4.272E+004 +/-	7.3%	6.935E-001	1.230E-002
	Pu-241	< 1.165E+005 +/-	1.7%	< 1.892E+000	< 1.121E-003
	Pu-241B	1.668E+005 +/-	10.4%	2.707E+000	1.604E-003
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 1.035E+000 +/-	1.1%	< 1.680E-005	< 5.121E-006

Cm-243	< 1.067E+000 +/- 3.0%	< 1.732E-005	< 2.049E-008
Cm-244	< 1.262E+005 +/- 13.9%	< 2.049E+000	< 1.540E-003
Cm-245	< 1.841E+000 +/- 7.4%	< 2.989E-005	< 1.059E-005
Cm-247	< 2.004E-001 +/- 8.4%	< 3.254E-006	< 2.145E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.689E-001 +/-	3.1%	< 2.742E-006	< 4.088E-008
Cf-251	< 1.012E+000 +/-	5.3%	< 1.642E-005	< 6.322E-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	8.18E+000 +- 5.32E-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)

Automated Independent Technical Review

Counter ID: SGS with Trans. Count Type: Assay - 55 Carbon Steel
Container ID: LL85238300TRU Assay Date: 5/6/2009
Waste Matrix Code:
Sequence Number: 386

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

Source of results is undefined.

DISPOSITION:

MGA Analysis:

Note: The measured and declared isotopics are inconsistent. OK

DISPOSITION:

Gamma Analysis:
Analysis Status: No errors. OK
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 Analysis Warnings:
Some transmission peaks rejected.
Segment: 4 OK
Segment: 5 OK
Segment: 6 Analysis Warnings:
Minimum transmission used.
Segment: 7 Analysis Warnings:
Minimum transmission used.
OK Minimum Used.
Segment: 8 OK
Segment: 9 OK
Segment: 10 OK
Segment: 11 OK
Segment: 12 OK
Segment: 13 OK
Segment: 14 OK
Segment: 15 Analysis Warnings:
Reference Peak Error 5: The reference peak correction was less than 1.
OK. No Activity.
Segment: 16 Analysis Warnings:
OK. No Activity.

Reference Peak Error 5: The reference peak correction was less than 1.

DISPOSITION:

Miscellaneous:

DISPOSITION:

Expert Review by: Robert J. Hamlett Jr. Date: 6-3-09

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:	LL85238300TRU	Analysis Date:	5/6/2009

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

MGA version: MGA V9.63H CI

Measurement date = 5/6/09 Declared date = 5/6/09
Low energy spectrum sensitivity = 30.0% Total counts = 3.914E+005
High energy spectrum sensitivity : 10.0%

Pu g/cm2 = 0.1000 Cd g/cm2 = 2.0706 FWHM at 122 keV = 664 eV
QFIT = 1.46 OK FWHM at 208 keV = 786 eV
NQFIT = 1.05

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	0.006551	6.0	2.9	3.2650	12.3	0.60759	5.49	0.66060	5.97
Pu-239	1.000000	0.0	5.2	498.3774	13.3	92.74451	0.80	92.57053	0.79
Pu-240	0.069152	12.4	11.2	34.4636	17.9	6.41343	11.23	6.40674	11.22
Pu-241	0.002007	12.6	9.7	1.0000	0.0	0.18609	11.94	0.31386	20.14
Pu-242	(New alg.)			0.2599(15)		0.04837 (15)		0.04827 (14)	
Am-241	0.011689	6.0	2.1	5.8255	12.0	1.08408	5.45	1.10181	5.54

Pu-240 effective (meas. date) = 8.026 +/- 10.23%
Am-241 separated about 39.764 +/- 0.971 years ago
Am/Pu-241 weight ratio = 5.82549 +/- 9.95%

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 2%.

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

Reviewed by: Robert J. Hackett Jr Date: 6-3-09

NDA 2000 Assay Report

Item Information

Item ID:	SGS100		Count Sequence Number:	387	
Operator:	RHWM2\RHWM				
Assay Start:	5/6/2009 11:28:28 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\00000387_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P001_S001

Acquisition Start: 5/6/2009 11:29:32 AM
Elapsed Live Time: 118.18 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.238 +/- 0.0125
SE-75	264.66	0.371 +/- 0.0066
SE-75	279.54	0.382 +/- 0.0072
SE-75	400.66	0.441 +/- 0.0085

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 5/6/2009 11:31:33 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
59.53	Y	720	769	1.00	120.89	5.364E-006	7.06	
2234.65		11980	4	1.12	4467.43	4.447E-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	< 3.138E-002 +/-	2.1%	< 2.988E-005	< 1.446E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 3.401E-002 +/-	2.2%	< 3.239E-005	< 5.373E-012
Al-26	< 4.332E-002 +/-	16.2%	< 4.126E-005	< 2.279E-006
K-40	< 3.108E-001 +/-	5.3%	< 2.960E-004	< 4.848E-002
Co-57	< 1.297E-001 +/-	3.4%	< 1.235E-004	< 1.518E-011
Co-60	< 4.698E-002 +/-	1.9%	< 4.475E-005	< 4.121E-011
Se-75	< 1.028E-001 +/-	1.9%	< 9.795E-005	< 7.076E-012
Kr-85	< 8.616E+000 +/-	3.2%	< 8.205E-003	< 2.171E-008
Sr-90	< 3.152E-002 +/-	2.1%	< 3.002E-005	< 2.285E-010
Sb-125	< 8.325E-002 +/-	2.3%	< 7.928E-005	< 8.008E-011
Ba-133	< 6.614E-002 +/-	1.8%	< 6.299E-005	< 2.613E-010
Cs-134	< 2.021E-002 +/-	2.1%	< 1.924E-005	< 1.542E-011
Cs-137	< 3.152E-002 +/-	2.1%	< 3.002E-005	< 3.593E-010
Eu-152	< 3.862E-002 +/-	4.0%	< 3.678E-005	< 2.170E-010
Eu-154	< 9.711E-002 +/-	2.4%	< 9.248E-005	< 3.642E-010
Ho-166m	< 4.135E-002 +/-	2.4%	< 3.938E-005	< 2.299E-008
Bi-207	< 2.639E-002 +/-	2.1%	< 2.514E-005	< 4.804E-010
Pb-210	< 9.076E+002 +/-	47.8%	< 8.644E-001	< 1.180E-005
Ra-226	< 5.388E-002 +/-	2.4%	< 5.132E-005	< 5.388E-008
Ac-227	< 3.168E-001 +/-	8.3%	< 3.017E-004	< 4.340E-009
Th-230	< 1.510E+002 +/-	8.6%	< 1.438E-001	< 7.399E-003
Pa-231	< 2.154E+000 +/-	11.2%	< 2.052E-003	< 4.502E-005
Th-232	< 9.466E-002 +/-	2.3%	< 9.015E-005	< 8.528E-001
U-232	< 9.466E-002 +/-	2.3%	< 9.015E-005	< 4.383E-009
U-233	< 1.099E+003 +/-	2.7%	< 1.046E+000	< 1.121E-001
Pa-234	< 1.812E-001 +/-	12.3%	< 1.726E-004	
Pa-234m	< 2.396E+002 +/-	2.3%	< 2.282E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 1.063E-001 +/-	2.5%	< 1.013E-004	< 4.859E-002
Np-237	< 1.462E-001 +/-	2.0%	< 1.392E-004	< 2.046E-004
Pu-238	< 7.568E+003 +/-	2.7%	< 7.207E+000	< 4.374E-004
U-238	< 3.147E+000 +/-	2.4%	< 2.998E-003	< 9.254E+000
Pu-239	< 1.401E+003 +/-	3.1%	< 1.335E+000	< 2.228E-002
Pu-239B	< 4.199E+003 +/-	5.2%	< 3.999E+000	< 6.675E-002
U-239	< 1.903E+003 +/-	59.1%	< 1.812E+000	
Pu-240	< 2.572E+003 +/-	4.6%	< 2.449E+000	< 1.119E-002
Am-241	8.416E+001 +/-	21.7%	8.015E-002	2.424E-005
Am-241B	< 9.714E+002 +/-	4.9%	< 9.252E-001	< 2.798E-004
Pu-241	< 3.930E+004 +/-	2.8%	< 3.743E+001	< 3.780E-004
Pu-241B	< 1.068E+004 +/-	2.5%	< 1.017E+001	< 1.028E-004
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 4.238E-001 +/-	1.9%	< 4.036E-004	< 2.098E-006
Cm-243	< 4.371E-001 +/-	3.4%	< 4.163E-004	< 8.393E-009
Cm-244	< 2.500E+004 +/-	14.1%	< 2.381E+001	< 3.049E-004
Cm-245	< 6.819E-001 +/-	7.7%	< 6.495E-004	< 3.921E-006
Cm-247	< 3.739E-002 +/-	8.6%	< 3.561E-005	< 4.000E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 3.983E-002 +/-	3.6%	< 3.793E-005	< 9.639E-009
Cf-251	< 3.679E-001 +/-	5.6%	< 3.504E-004	< 2.300E-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\00000387_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P002_S002

Acquisition Start: 5/6/2009 11:32:43 AM
Elapsed Live Time: 117.71 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.278 +/- 0.0140
SE-75	264.66	0.449 +/- 0.0080
SE-75	279.54	0.457 +/- 0.0085
SE-75	400.66	0.514 +/- 0.0098

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 5/6/2009 11:34:44 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
59.43	Y	1492	1111	1.27	120.69	9.922E-005	4.43	
111.12		158	1850	0.76	224.00	2.486E-004	40.23	
2234.68		11980	5	1.15	4467.48	1.046E-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	< 2.124E-002 +/-	1.8%	< 2.023E-005	< 9.792E-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	< 1.963E-002 +/-	15.5%	< 1.870E-005	< 1.033E-006
K-40	< 2.085E-001 +/-	4.9%	< 1.986E-004	< 3.253E-002
Co-57	< 1.079E-001 +/-	3.5%	< 1.028E-004	< 1.262E-011
Co-60	< 3.117E-002 +/-	1.7%	< 2.969E-005	< 2.734E-011
Se-75	< 8.427E-002 +/-	1.9%	< 8.026E-005	< 5.798E-012
Kr-85	< 5.764E+000 +/-	3.1%	< 5.490E-003	< 1.453E-008
Sr-90	< 1.913E-002 +/-	2.0%	< 1.822E-005	< 1.387E-010
Sb-125	< 5.716E-002 +/-	2.1%	< 5.444E-005	< 5.499E-011
Ba-133	< 6.761E-002 +/-	1.7%	< 6.439E-005	< 2.671E-010
Cs-134	< 2.177E-002 +/-	2.0%	< 2.074E-005	< 1.661E-011
Cs-137	< 1.913E-002 +/-	2.0%	< 1.822E-005	< 2.181E-010
Eu-152	< 1.163E-001 +/-	3.7%	< 1.108E-004	< 6.537E-010
Eu-154	< 5.187E-002 +/-	2.2%	< 4.940E-005	< 1.945E-010
Ho-166m	< 2.937E-002 +/-	2.3%	< 2.797E-005	< 1.633E-008
Bi-207	< 2.173E-002 +/-	2.1%	< 2.069E-005	< 3.954E-010
Pb-210	< 7.363E+000 +/-	81.7%	< 7.012E-003	< 9.572E-008
Ra-226	< 3.251E-002 +/-	2.1%	< 3.096E-005	< 3.251E-008
Ac-227	< 2.892E-001 +/-	8.3%	< 2.754E-004	< 3.962E-009
Th-230	< 3.637E+001 +/-	25.1%	< 3.464E-002	< 1.782E-003
Pa-231	< 1.804E+000 +/-	11.2%	< 1.718E-003	< 3.771E-005
Th-232	< 5.848E-002 +/-	2.2%	< 5.569E-005	< 5.269E-001
U-232	< 5.848E-002 +/-	2.2%	< 5.569E-005	< 2.708E-009
U-233	< 1.050E+003 +/-	2.7%	< 1.000E+000	< 1.071E-001
Pa-234	< 1.406E-001 +/-	12.2%	< 1.339E-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	< 1.115E-001 +/-	2.5%	< 1.062E-004	< 5.097E-002
Np-237	< 1.353E-001 +/-	2.0%	< 1.289E-004	< 1.895E-004
Pu-238	< 7.441E+003 +/-	2.7%	< 7.086E+000	< 4.301E-004
U-238	< 2.406E+000 +/-	2.1%	< 2.291E-003	< 7.072E+000
Pu-239	< 1.263E+003 +/-	3.2%	< 1.203E+000	< 2.009E-002
Pu-239B	< 2.653E+003 +/-	6.4%	< 2.527E+000	< 4.218E-002
U-239	< 9.011E+000 +/-	98.9%	< 8.582E-003	
Pu-240	< 1.723E+003 +/-	5.4%	< 1.641E+000	< 7.495E-003
Am-241	9.431E+000 +/-	38.1%	8.982E-003	2.716E-006
Am-241B	< 6.415E+002 +/-	5.7%	< 6.110E-001	< 1.848E-004
Pu-241	< 3.800E+004 +/-	2.9%	< 3.619E+001	< 3.655E-004
Pu-241B	< 1.102E+004 +/-	2.5%	< 1.050E+001	< 1.060E-004
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.980E-001 +/-	16.6%	< 1.886E-004	< 9.803E-007
Cm-243	< 3.639E-001 +/-	3.4%	< 3.466E-004	< 6.987E-009
Cm-244	< 2.470E+004 +/-	14.1%	< 2.353E+001	< 3.014E-004
Cm-245	< 6.886E-001 +/-	7.7%	< 6.559E-004	< 3.960E-006
Cm-247	< 3.898E-002 +/-	8.5%	< 3.712E-005	< 4.171E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 4.027E-002 +/-	3.5%	< 3.836E-005	< 9.746E-009
Cf-251	< 3.674E-001 +/-	5.6%	< 3.499E-004	< 2.297E-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 3 Results

Segment: 3 Detector: DET01 Position: 3
C:\Canberra\NDA2k\Data\00000387_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P003_S003

Acquisition Start: 5/6/2009 11:35:54 AM
Elapsed Live Time: 114.79 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.274 +/- 0.0140
SE-75	264.66	0.399 +/- 0.0072
SE-75	279.54	0.398 +/- 0.0076
SE-75	400.66	0.468 +/- 0.0091

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: 5/6/2009 11:37:55 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
	59.53	Y	8927	2384	1.13	120.90	8.054E-005	1.75	
M	94.81		2226	6356	1.54	191.40	2.045E-004	5.75	14.33
m	98.74	Y	7716	8792	1.55	199.25	2.166E-004	4.20	
m	100.82	Y	1261	8603	1.55	203.42	2.228E-004	6.94	
m	103.42	Y	5256	7295	1.56	208.61	2.303E-004	4.16	
M	111.02		1645	4443	1.53	223.79	2.504E-004	15.23	4.80
m	114.71	Y	767	5490	1.54	231.16	2.593E-004	16.21	
M	125.29	Y	597	3322	1.00	252.31	2.816E-004	7.20	4.69
m	129.39	Y	3161	2303	1.01	260.50	2.889E-004	2.45	
M	144.22		192	1671	0.90	290.13	3.124E-004	16.79	0.62
m	146.28	Y	159	1680	0.91	294.25	3.153E-004	19.49	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	148.64	Y	396	1693	0.91	298.98	3.184E-004	9.93	
	195.72		102	1137	0.89	393.05	3.477E-004	47.66	
M	203.63	Y	693	1393	1.12	408.86	3.480E-004	5.40	2.10
m	208.06	Y	2616	1477	1.13	417.71	3.478E-004	2.46	
	255.57		92	724	1.22	512.66	3.328E-004	44.97	
	311.97	Y	142	676	0.78	625.35	2.989E-004	29.53	
M	332.72	Y	962	663	1.28	666.81	2.871E-004	3.82	1.46
m	335.60	Y	361	600	1.29	672.57	2.854E-004	6.89	
m	341.47	Y	97	599	1.29	684.30	2.821E-004	18.52	
m	345.02		855	496	1.30	691.40	2.801E-004	3.98	
M	368.37	Y	296	317	1.44	738.05	2.673E-004	8.70	3.02
m	375.03	Y	2291	262	1.45	751.37	2.637E-004	4.62	
m	380.14		481	205	1.45	761.57	2.610E-004	6.80	
m	382.76		356	208	1.46	766.82	2.597E-004	7.52	
	392.90		766	208	1.51	787.08	2.544E-004	4.98	
	413.74	Y	1996	95	1.45	828.73	2.439E-004	2.67	
M	422.54		153	66	1.18	846.31	2.396E-004	9.10	0.80
m	426.35	Y	36	66	1.19	853.91	2.378E-004	22.60	
	451.44		233	67	1.43	904.06	2.263E-004	8.98	
	662.46	Y	122	15	1.28	1325.73	1.607E-004	10.79	
	2234.66		11980	12	1.15	4467.45	8.573E-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	< 2.432E-002 +/-	1.8%	< 2.316E-005	< 1.121E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 2.374E-002 +/-	2.0%	< 2.261E-005	< 3.751E-012
	Al-26	< 2.138E-002 +/-	18.9%	< 2.036E-005	< 1.124E-006
	K-40	< 2.388E-001 +/-	5.3%	< 2.275E-004	< 3.726E-002
	Co-57	< 1.495E-001 +/-	4.4%	< 1.424E-004	< 1.750E-011
	Co-60	< 2.856E-002 +/-	2.5%	< 2.720E-005	< 2.505E-011
	Se-75	< 1.192E-001 +/-	1.8%	< 1.135E-004	< 8.200E-012
	Kr-85	< 7.275E+000 +/-	3.1%	< 6.929E-003	< 1.833E-008
	Sr-90	2.002E-001 +/-	11.0%	1.906E-004	1.451E-009
	Sb-125	< 1.188E-001 +/-	1.9%	< 1.132E-004	< 1.143E-010
	Ba-133	< 9.968E-002 +/-	1.6%	< 9.494E-005	< 3.937E-010
	Cs-134	< 2.430E-002 +/-	2.2%	< 2.315E-005	< 1.854E-011
?	Cs-137	2.002E-001 +/-	11.0%	1.906E-004	2.282E-009
	Eu-152	< 7.274E-002 +/-	3.8%	< 6.928E-005	< 4.088E-010
	Eu-154	< 6.778E-002 +/-	2.1%	< 6.456E-005	< 2.542E-010

	Ho-166m	< 2.904E-002	+/- 2.3%	< 2.765E-005	< 1.614E-008
	Bi-207	< 3.076E-002	+/- 2.1%	< 2.929E-005	< 5.598E-010
	Pb-210	< 1.334E+001	+/- 259.0%	< 1.270E-002	< 1.734E-007
	Ra-226	< 5.311E-002	+/- 2.4%	< 5.058E-005	< 5.311E-008
	Ac-227	< 3.961E-001	+/- 8.3%	< 3.773E-004	< 5.427E-009
	Th-230	< 5.923E+001	+/- 83.2%	< 5.641E-002	< 2.902E-003
	Pa-231	< 2.501E+000	+/- 11.2%	< 2.382E-003	< 5.228E-005
	Th-232	< 6.493E-002	+/- 2.4%	< 6.184E-005	< 5.850E-001
	U-232	< 8.392E-002	+/- 2.3%	< 7.993E-005	< 3.886E-009
	U-233	< 1.448E+003	+/- 3.0%	< 1.379E+000	< 1.477E-001
	Pa-234	< 1.324E-001	+/- 12.2%	< 1.261E-004	
	Pa-234m	< 1.626E+002	+/- 2.1%	< 1.548E-001	
	U-234	< 0.000E+000	+/- 0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 1.423E-001	+/- 2.9%	< 1.355E-004	< 6.502E-002
	Np-237	2.764E-001	+/- 29.6%	2.632E-004	3.870E-004
	Pu-238	< 9.677E+003	+/- 3.1%	< 9.216E+000	< 5.593E-004
	U-238	< 3.015E+000	+/- 2.2%	< 2.871E-003	< 8.864E+000
	Pu-239	2.192E+005	+/- 4.5%	2.088E+002	3.486E+000
	Pu-239B	< 5.546E+003	+/- 16.5%	< 5.282E+000	< 8.817E-002
	U-239	< 1.987E+001	+/- 308.4%	< 1.893E-002	
X	Pu-240				
?	Am-241	4.680E+004	+/- 11.3%	4.457E+001	1.348E-002
	Am-241B	3.027E+004	+/- 10.2%	2.883E+001	8.719E-003
	Pu-241	1.510E+005	+/- 10.5%	1.438E+002	1.453E-003
	Pu-241B	3.261E+005	+/- 3.6%	3.106E+002	3.137E-003
	Pu-242	< 0.000E+000	+/- 0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 3.152E-001	+/- 57.7%	< 3.002E-004	< 1.560E-006
	Cm-243	< 4.773E-001	+/- 3.3%	< 4.546E-004	< 9.164E-009
	Cm-244	< 3.323E+004	+/- 14.2%	< 3.165E+001	< 4.054E-004
	Cm-245	< 8.908E-001	+/- 7.8%	< 8.484E-004	< 5.122E-006
	Cm-247	< 5.251E-002	+/- 8.5%	< 5.001E-005	< 5.618E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 6.419E-002 +/-	3.4%	< 6.114E-005	< 1.553E-008
Cf-251	< 4.864E-001 +/-	5.8%	< 4.632E-004	< 3.040E-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	3.49E+000 +- 1.58E-001	9.47E-001 +- 2.38E-002

Beta: 2.21E+002 +- 9.88E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	6.21E-001 +- 2.83E-002
203.55	1.25E+000 +- 7.40E-002
375.05	2.00E+000 +- 9.90E-002
413.71	2.00E+000 +- 6.58E-002

Segment 4 Results

Segment: 4 Detector: DET01 Position: 4
C:\Canberra\NDA2k\Data\00000387_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P004_S004

Acquisition Start: 5/6/2009 11:39:05 AM
Elapsed Live Time: 102.44 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.286 +/- 0.0164
SE-75	264.66	0.388 +/- 0.0073
SE-75	279.54	0.400 +/- 0.0080
SE-75	400.66	0.459 +/- 0.0093

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: 5/6/2009 11:41:06 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	53372	6197	1.10	120.85	4.710E-006	1.27	
M	94.72	Y	10884	11266	1.56	191.23	1.200E-004	2.27	62.13
m	98.73	Y	43291	15014	1.57	199.24	1.418E-004	1.84	
m	100.91	Y	6708	15035	1.57	203.60	1.539E-004	2.86	
m	103.38	Y	31467	12757	1.57	208.53	1.676E-004	1.81	
M	111.12	Y	11622	7670	1.37	223.99	2.099E-004	1.84	84.36
m	114.58	Y	9428	9351	1.37	230.92	2.281E-004	1.97	
m	116.67	Y	8954	8745	1.38	235.09	2.387E-004	1.90	
m	120.60	Y	2469	7827	1.39	242.94	2.579E-004	3.46	
m	122.88	Y	1053	6902	1.39	247.50	2.685E-004	6.67	
m	125.26	Y	4359	6579	1.39	252.25	2.790E-004	2.48	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	129.32	Y	20510	5721	1.40	260.36	2.960E-004	1.62	
M	144.20	Y	1286	4378	1.15	290.10	3.470E-004	29.64	2.98
m	146.28	Y	1110	4875	1.15	294.25	3.527E-004	29.65	
m	148.56	Y	2906	4892	1.16	298.82	3.586E-004	28.27	
M	161.10	Y	1177	5085	1.47	323.86	3.835E-004	18.32	4.68
m	164.60	Y	1283	7581	1.47	330.86	3.883E-004	15.32	
	171.46	Y	904	4469	1.20	344.58	3.956E-004	13.31	
	179.38	Y	559	4201	1.11	360.40	4.006E-004	20.50	
	189.34	Y	704	4509	1.06	380.30	4.028E-004	17.38	
	195.59	Y	898	4302	0.95	392.80	4.021E-004	13.46	
M	203.55	Y	4847	3632	1.14	408.70	3.996E-004	2.08	8.02
m	208.02	Y	15754	3642	1.15	417.63	3.974E-004	1.45	
	225.45		127	1885	0.99	452.46	3.854E-004	56.47	
	255.31	Y	644	1715	1.38	512.13	3.578E-004	11.62	
M	263.88	Y	341	1710	1.19	529.26	3.492E-004	24.93	0.87
m	267.54	Y	567	1805	1.20	536.56	3.458E-004	23.56	
	297.49	Y	518	1739	1.29	596.42	3.174E-004	15.41	
	311.84	Y	767	1395	1.09	625.08	3.042E-004	9.30	
M	320.99	Y	595	1479	1.82	643.38	2.961E-004	7.76	3.28
m	323.36	Y	829	2164	1.83	648.11	2.941E-004	5.73	
M	332.73	Y	5591	1253	1.32	666.84	2.862E-004	1.85	3.46
m	335.64	Y	2230	1180	1.33	672.65	2.838E-004	2.70	
m	341.42	Y	626	1244	1.33	684.19	2.792E-004	5.89	
m	344.98	Y	4847	1190	1.33	691.31	2.764E-004	1.94	
M	366.98	Y	677	947	1.27	735.28	2.602E-004	6.35	8.62
m	368.52	Y	1209	1034	1.27	738.36	2.592E-004	4.15	
m	375.03	Y	13064	844	1.28	751.37	2.547E-004	1.47	
m	380.14	Y	2501	640	1.28	761.58	2.513E-004	2.50	
m	382.74	Y	2094	586	1.29	766.78	2.497E-004	2.70	
	392.86	Y	4564	564	1.59	787.00	2.433E-004	2.20	
	413.68	Y	11809	355	1.42	828.59	2.312E-004	1.55	
M	422.54	Y	945	221	1.28	846.31	2.265E-004	6.97	1.48
m	426.74	Y	188	173	1.28	854.70	2.243E-004	7.76	
m	429.91	Y	54	157	1.28	861.02	2.227E-004	11.99	
	451.42	Y	1380	193	1.47	904.01	2.124E-004	3.63	
	618.82	Y	128	27	1.41	1238.53	1.613E-004	12.20	
M	645.88	Y	67	40	1.41	1292.60	1.562E-004	16.59	1.63
m	652.60	Y	78	53	1.41	1306.03	1.549E-004	14.23	
m	659.03	Y	46	53	1.42	1318.88	1.538E-004	19.94	
m	662.36	Y	644	35	1.42	1325.53	1.533E-004	4.48	
	721.93	Y	310	26	1.25	1444.58	1.443E-004	6.94	
	769.70	Y	59	17	0.71	1540.03	1.384E-004	19.58	
	2234.64		11980	53	1.11	4467.41	6.641E-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	< 2.903E-002 +/-	1.8%	< 2.765E-005	< 1.338E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 3.848E-002 +/-	2.0%	< 3.665E-005	< 6.080E-012
	Al-26	< 3.308E-002 +/-	14.5%	< 3.150E-005	< 1.740E-006
	K-40	< 2.613E-001 +/-	4.8%	< 2.489E-004	< 4.076E-002
X	Co-57				
	Co-60	< 2.645E-002 +/-	1.7%	< 2.519E-005	< 2.320E-011
	Se-75	< 1.914E-001 +/-	1.7%	< 1.823E-004	< 1.317E-011
	Kr-85	< 1.222E+001 +/-	3.0%	< 1.164E-002	< 3.080E-008
	Sr-90	< 6.098E-002 +/-	2.0%	< 5.808E-005	< 4.421E-010
	Sb-125	< 2.296E-001 +/-	2.2%	< 2.187E-004	< 2.209E-010
	Ba-133	< 1.608E-001 +/-	1.7%	< 1.531E-004	< 6.351E-010
	Cs-134	< 2.752E-002 +/-	1.8%	< 2.621E-005	< 2.100E-011
X	Cs-137				
	Eu-152	< 9.966E-002 +/-	3.6%	< 9.492E-005	< 5.601E-010
	Eu-154	< 1.099E-001 +/-	2.2%	< 1.046E-004	< 4.120E-010
	Ho-166m	< 2.939E-002 +/-	2.3%	< 2.799E-005	< 1.634E-008
	Bi-207	< 4.037E-002 +/-	1.9%	< 3.844E-005	< 7.347E-010
	Pb-210	< 4.161E+003 +/-	37.2%	< 3.963E+000	< 5.409E-005
	Ra-226	< 8.034E-002 +/-	2.2%	< 7.651E-005	< 8.034E-008
	Ac-227	< 6.344E-001 +/-	8.3%	< 6.042E-004	< 8.691E-009
	Th-230	< 3.118E+002 +/-	8.5%	< 2.969E-001	< 1.528E-002
	Pa-231	< 3.701E+000 +/-	11.2%	< 3.525E-003	< 7.735E-005
	Th-232	< 1.001E-001 +/-	2.4%	< 9.536E-005	< 9.022E-001
	U-232	< 1.600E-001 +/-	2.1%	< 1.524E-004	< 7.408E-009
	U-233	< 2.374E+003 +/-	2.6%	< 2.261E+000	< 2.422E-001
	Pa-234	< 1.243E-001 +/-	12.2%	< 1.184E-004	
	Pa-234m	< 2.054E+002 +/-	2.1%	< 1.956E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 2.018E-001 +/-	2.4%	< 1.922E-004	< 9.221E-002
	Np-237	9.683E-001 +/-	14.4%	9.222E-004	1.356E-003
	Pu-238	< 1.350E+004 +/-	2.5%	< 1.286E+001	< 7.802E-004
	U-238	< 3.283E+000 +/-	2.2%	< 3.127E-003	< 9.653E+000
	Pu-239	1.322E+006 +/-	3.2%	1.259E+003	2.101E+001
	Pu-239B	7.515E+005 +/-	1.4%	7.157E+002	1.195E+001
	U-239	< 1.603E+004 +/-	46.3%	< 1.527E+001	
X	Pu-240				
	Am-241	2.551E+005 +/-	4.4%	2.430E+002	7.348E-002
	Am-241B	1.355E+005 +/-	3.9%	1.290E+002	3.902E-002
	Pu-241	9.841E+005 +/-	28.4%	9.372E+002	9.467E-003
	Pu-241B	1.720E+006 +/-	2.8%	1.638E+003	1.654E-002
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 7.022E-001 +/-	1.8%	< 6.688E-004	< 3.476E-006
	Cm-243	< 7.243E-001 +/-	3.3%	< 6.898E-004	< 1.391E-008
	Cm-244	< 4.698E+004 +/-	14.2%	< 4.474E+001	< 5.731E-004
	Cm-245	< 1.252E+000 +/-	7.6%	< 1.193E-003	< 7.201E-006
	Cm-247	< 1.086E-001 +/-	8.5%	< 1.034E-004	< 1.162E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.212E-001 +/-	3.5%	< 1.154E-004	< 2.932E-008
Cf-251	< 7.085E-001 +/-	5.6%	< 6.747E-004	< 4.428E-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 +- 6.79E-001	6.98E+000 +- 1.10E-001

Beta: 2.13E+002 +- 7.74E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	3.93E+000 +- 1.56E-001
203.55	7.64E+000 +- 2.28E-001
375.05	1.18E+001 +- 2.84E-001
413.71	1.25E+001 +- 3.26E-001

Segment 5 Results

Segment: 5 Detector: DET01 Position: 5
C:\Canberra\NDA2k\Data\00000387_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P005_S005

Acquisition Start: 5/6/2009 11:42:16 AM
Elapsed Live Time: 87.89 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.001 +/- 0.0005
SE-75	264.66	0.180 +/- 0.0039
SE-75	279.54	0.209 +/- 0.0049
SE-75	400.66	0.335 +/- 0.0075

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: 5/6/2009 11:44:17 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		1998	8208	1.81	100.66	1.909E-005	9.19	
	59.43	Y	129877	10469	1.13	120.71	2.792E-005	1.28	
M	94.68	Y	22030	17165	1.55	191.13	5.986E-005	1.91	107.27
m	98.70	Y	88701	23008	1.56	199.17	6.294E-005	1.63	
m	100.90	Y	13939	23158	1.57	203.57	6.456E-005	2.28	
m	103.34	Y	65604	19767	1.57	208.45	6.629E-005	1.61	
M	111.06	Y	23945	11880	1.40	223.88	7.129E-005	1.60	139.09
m	114.57	Y	19722	11894	1.41	230.89	7.334E-005	1.69	
m	116.67	Y	18459	11072	1.41	235.08	7.450E-005	1.67	
m	120.62	Y	4542	10048	1.42	242.97	7.654E-005	2.96	
m	125.21	Y	8339	9320	1.43	252.16	7.871E-005	2.14	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	129.27	Y	40991	8090	1.44	260.26	8.042E-005	1.47	
M	144.22	Y	2669	6447	1.19	290.14	1.397E-004	10.05	1.64
m	146.27	Y	2387	6448	1.20	294.24	1.469E-004	10.36	
m	148.56	Y	5889	6450	1.20	298.82	1.541E-004	8.84	
M	160.91	Y	2589	7438	1.61	323.49	1.836E-004	13.57	4.98
m	164.58	Y	2275	9572	1.61	330.83	1.904E-004	12.55	
	171.39	Y	1945	6461	1.41	344.43	2.014E-004	8.77	
	179.16	Y	794	6956	1.29	359.96	2.118E-004	21.99	
	189.38	Y	1495	6063	1.44	380.39	2.227E-004	10.89	
	195.65	Y	1524	5896	1.27	392.91	2.280E-004	10.56	
M	203.52	Y	9698	5461	1.19	408.64	2.335E-004	2.18	1.29
m	207.97	Y	31289	4899	1.20	417.52	2.361E-004	1.81	
M	237.81	Y	350	3044	1.27	477.16	2.458E-004	35.37	1.22
m	243.16	Y	670	5099	1.28	487.85	2.465E-004	26.28	
	255.31	Y	1455	3199	1.37	512.12	2.469E-004	8.63	
M	263.94	Y	430	2648	1.20	529.38	2.466E-004	23.15	0.87
m	267.55	Y	1167	2780	1.21	536.59	2.475E-004	20.42	
M	297.44	Y	795	2046	1.14	596.32	2.486E-004	24.03	1.38
m	300.20	Y	152	1812	1.15	601.82	2.481E-004	36.37	
	311.76	Y	1346	2271	1.15	624.93	2.460E-004	8.03	
M	321.09	Y	951	2434	1.67	643.58	2.439E-004	6.43	5.51
m	323.42	Y	1551	3133	1.67	648.24	2.433E-004	4.28	
M	332.69	Y	10950	1833	1.30	666.76	2.410E-004	1.65	6.37
m	335.61	Y	4332	1726	1.31	672.58	2.403E-004	2.22	
m	341.41	Y	1132	1823	1.31	684.18	2.387E-004	4.70	
m	344.95	Y	9616	1744	1.32	691.25	2.377E-004	1.70	
	368.48	Y	3657	2504	2.32	738.27	2.309E-004	3.91	
M	375.00	Y	25369	1673	1.28	751.30	2.289E-004	1.42	19.45
m	380.08	Y	4999	1198	1.29	761.46	2.274E-004	2.10	
m	382.67	Y	4171	1068	1.29	766.62	2.266E-004	2.23	
	392.85	Y	8822	914	1.57	786.98	2.234E-004	1.90	
M	413.63	Y	22542	512	1.37	828.50	2.157E-004	1.73	4.10
m	418.90	Y	75	521	1.37	839.03	2.136E-004	32.09	
m	422.51	Y	1781	464	1.38	846.25	2.121E-004	3.46	
m	426.47	Y	384	510	1.38	854.16	2.106E-004	8.70	
	451.37	Y	2697	328	1.39	903.92	2.012E-004	2.93	
	481.46	Y	71	171	1.20	964.05	1.909E-004	40.84	
	618.91	Y	282	51	1.40	1238.71	1.547E-004	8.85	
M	640.37	Y	104	58	1.63	1281.59	1.504E-004	12.97	1.49
m	645.90	Y	172	67	1.64	1292.64	1.493E-004	9.70	
M	658.75	Y	76	59	1.46	1318.31	1.469E-004	17.05	2.76
m	662.33	Y	1215	51	1.47	1325.48	1.463E-004	3.58	
	688.69	Y	82	50	1.54	1378.15	1.417E-004	23.22	
	721.89	Y	570	51	1.62	1444.50	1.365E-004	5.77	
	756.16	Y	73	14	1.22	1512.97	1.317E-004	18.26	
	769.22	Y	144	23	1.59	1539.06	1.300E-004	12.41	
	2234.62		11980	65	1.07	4467.36	8.677E-005	1.63	

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	< 3.856E-002 +/-	1.8%	< 3.672E-005	< 1.778E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 3.576E-002 +/-	2.0%	< 3.405E-005	< 5.650E-012
	Al-26	< 4.572E-002 +/-	14.7%	< 4.354E-005	< 2.405E-006
	K-40	< 4.017E-001 +/-	4.9%	< 3.826E-004	< 6.267E-002
	Co-57	1.498E+001 +/-	8.9%	1.427E-002	1.752E-009
	Co-60	< 4.218E-002 +/-	1.6%	< 4.017E-005	< 3.699E-011
	Se-75	< 2.942E-001 +/-	1.9%	< 2.801E-004	< 2.024E-011
	Kr-85	< 1.665E+001 +/-	3.1%	< 1.586E-002	< 4.197E-008
	Sr-90	< 8.911E-002 +/-	2.0%	< 8.486E-005	< 6.460E-010
	Sb-125	< 2.940E-001 +/-	2.3%	< 2.800E-004	< 2.828E-010
	Ba-133	< 2.228E-001 +/-	1.7%	< 2.122E-004	< 8.802E-010
	Cs-134	< 4.602E-002 +/-	1.8%	< 4.383E-005	< 3.511E-011
X	Cs-137				
	Eu-152	< 1.551E-001 +/-	1.8%	< 1.477E-004	< 8.717E-010
	Eu-154	< 1.021E-001 +/-	2.2%	< 9.724E-005	< 3.829E-010
	Ho-166m	< 4.985E-002 +/-	2.2%	< 4.748E-005	< 2.772E-008
	Bi-207	< 4.824E-002 +/-	1.8%	< 4.595E-005	< 8.781E-010
	Pb-210	< 2.779E+001 +/-	36.7%	< 2.647E-002	< 3.613E-007
	Ra-226	< 1.150E-001 +/-	2.3%	< 1.095E-004	< 1.150E-007
	Ac-227	< 1.033E+000 +/-	8.3%	< 9.841E-004	< 1.416E-008
	Th-230	< 1.342E+002 +/-	13.1%	< 1.278E-001	< 6.577E-003
	Pa-231	< 5.301E+000 +/-	11.2%	< 5.048E-003	< 1.108E-004
	Th-232	< 1.175E-001 +/-	2.4%	< 1.119E-004	< 1.058E+000
	U-232	7.224E-001 +/-	35.9%	6.880E-004	3.345E-008
	U-233	< 3.964E+003 +/-	2.7%	< 3.776E+000	< 4.044E-001
	Pa-234	< 1.388E-001 +/-	43.9%	< 1.322E-004	
	Pa-234m	< 2.108E+002 +/-	2.1%	< 2.008E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 3.384E-001 +/-	2.5%	< 3.223E-004	< 1.546E-001
	Np-237	2.035E+000 +/-	12.2%	1.938E-003	2.849E-003
	Pu-238	< 2.255E+004 +/-	2.6%	< 2.147E+001	< 1.303E-003
	U-238	< 4.712E+000 +/-	2.1%	< 4.488E-003	< 1.385E+001
	Pu-239	1.621E+006 +/-	1.5%	1.544E+003	2.578E+001
	Pu-239B	1.676E+006 +/-	1.3%	1.596E+003	2.664E+001
	U-239	< 4.935E+001 +/-	45.9%	< 4.700E-002	
	Pu-240	4.349E+005 +/-	23.4%	4.142E+002	1.892E+000
	Am-241	5.007E+005 +/-	3.8%	4.769E+002	1.442E-001
	Am-241B	5.994E+005 +/-	5.1%	5.709E+002	1.726E-001
	Pu-241	4.639E+006 +/-	9.2%	4.418E+003	4.463E-002
	Pu-241B	5.761E+006 +/-	3.0%	5.486E+003	5.542E-002
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 7.427E-001 +/-	8.4%	< 7.073E-004	< 3.676E-006
	Cm-243	< 1.081E+000 +/-	3.3%	< 1.029E-003	< 2.075E-008
	Cm-244	< 5.216E+004 +/-	14.2%	< 4.968E+001	< 6.364E-004
	Cm-245	< 2.090E+000 +/-	7.7%	< 1.991E-003	< 1.202E-005
	Cm-247	< 1.528E-001 +/-	8.5%	< 1.455E-004	< 1.635E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.795E-001 +/-	3.5%	< 1.709E-004	< 4.344E-008
Cf-251	< 1.185E+000 +/-	5.6%	< 1.129E-003	< 7.409E-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 -	2.58E+001 +- 3.93E-001

Beta: -1.63E+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\00000387_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P006_S006

Acquisition Start: 5/6/2009 11:45:47 AM
Elapsed Live Time: 88.51 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.001 +/- 0.0005
SE-75	264.66	0.176 +/- 0.0044
SE-75	279.54	0.194 +/- 0.0046
SE-75	400.66	0.316 +/- 0.0071

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: 5/6/2009 11:47:48 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
	59.43	Y	118537	9960	1.13	120.71	6.780E-007	1.28	
M	94.66	Y	21041	16821	1.54	191.11	3.231E-005	1.92	111.04
m	98.69	Y	85935	23040	1.54	199.16	3.883E-005	1.63	
m	100.88	Y	13034	23673	1.55	203.53	4.244E-005	2.31	
m	103.33	Y	61368	19269	1.55	208.42	4.648E-005	1.62	
M	111.07	Y	22673	11700	1.39	223.89	5.899E-005	1.84	139.50
m	114.58	Y	19294	12983	1.40	230.91	6.436E-005	1.92	
m	116.66	Y	17417	12124	1.41	235.07	6.741E-005	1.88	
m	120.55	Y	4290	10935	1.41	242.85	7.285E-005	3.14	
m	122.82	Y	2204	9594	1.42	247.38	7.583E-005	5.01	
m	125.26	Y	8513	9160	1.42	252.25	7.887E-005	2.26	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	129.27	Y	39978	7926	1.43	260.27	8.349E-005	1.70	
M	141.49	Y	390	5619	1.17	284.68	1.430E-004	20.42	1.33
m	144.16	Y	2706	7100	1.17	290.02	1.571E-004	8.65	
m	146.30	Y	2335	6480	1.17	294.30	1.669E-004	9.09	
m	148.54	Y	5648	7322	1.18	298.77	1.761E-004	7.74	
M	160.87	Y	2587	7432	1.73	323.41	2.151E-004	16.29	5.44
m	164.64	Y	2162	9497	1.74	330.94	2.242E-004	14.73	
	171.40	Y	1886	6583	1.19	344.44	2.379E-004	9.02	
	179.24	Y	646	5584	1.07	360.11	2.505E-004	22.74	
	189.40	Y	1812	5866	1.32	380.42	2.622E-004	8.89	
	195.55	Y	1672	6430	1.14	392.71	2.673E-004	10.23	
M	203.50	Y	9401	5533	1.14	408.60	2.720E-004	1.80	13.97
m	207.97	Y	30503	5064	1.15	417.53	2.740E-004	1.39	
	237.67		169	2689	0.71	476.87	2.766E-004	57.73	
	255.34	Y	1544	2816	1.24	512.19	2.731E-004	7.51	
M	263.88	Y	521	2497	1.11	529.26	2.706E-004	9.72	0.88
m	267.44	Y	1138	2377	1.11	536.37	2.698E-004	5.48	
	297.28	Y	671	2387	1.10	595.99	2.621E-004	15.51	
M	311.84	Y	1710	2154	1.55	625.08	2.576E-004	3.83	3.96
m	316.26	Y	202	2683	1.56	633.93	2.562E-004	21.40	
m	320.90	Y	1155	2561	1.56	643.21	2.546E-004	4.98	
m	323.24	Y	1497	2470	1.56	647.87	2.539E-004	4.12	
M	332.67	Y	10769	1781	1.35	666.72	2.508E-004	2.34	5.02
m	335.62	Y	4446	1644	1.35	672.61	2.499E-004	2.76	
m	341.36	Y	1304	1550	1.36	684.08	2.480E-004	4.71	
m	344.94	Y	9364	1454	1.36	691.24	2.468E-004	2.32	
M	366.96	Y	1208	1635	1.28	735.24	2.397E-004	5.46	3.61
m	368.49	Y	2567	1654	1.28	738.29	2.391E-004	3.21	
M	375.01	Y	25238	1639	1.29	751.32	2.372E-004	1.41	22.58
m	380.08	Y	4854	1129	1.29	761.46	2.356E-004	2.10	
m	382.66	Y	4102	992	1.29	766.61	2.348E-004	2.23	
	392.86	Y	8734	955	1.56	787.00	2.318E-004	1.90	
	413.61	Y	22796	709	1.45	828.45	2.243E-004	1.46	
M	422.49	Y	1622	430	1.18	846.21	2.210E-004	3.41	3.79
m	426.54	Y	318	515	1.19	854.30	2.196E-004	9.37	
M	445.79	Y	135	298	1.32	892.76	2.129E-004	15.47	2.50
m	451.40	Y	2707	307	1.33	903.97	2.111E-004	2.56	
	481.30	Y	131	175	1.21	963.73	2.021E-004	23.97	
	618.94	Y	207	75	1.59	1238.76	1.719E-004	12.16	
M	639.93	Y	87	45	1.41	1280.71	1.683E-004	15.27	1.64
m	645.74	Y	161	63	1.42	1292.32	1.673E-004	10.15	
m	652.44	Y	165	61	1.42	1305.70	1.663E-004	9.83	
m	658.64	Y	67	59	1.42	1318.11	1.652E-004	17.66	
m	662.27	Y	1218	55	1.43	1325.35	1.647E-004	3.56	
	688.50	Y	94	33	0.75	1377.77	1.607E-004	17.41	
	703.61	Y	41	36	1.38	1407.96	1.585E-004	38.19	
	721.84	Y	515	27	1.44	1444.39	1.560E-004	5.67	
	755.86	Y	37	25	1.50	1512.38	1.514E-004	35.53	
	769.14	Y	159	20	1.43	1538.90	1.498E-004	11.29	
	2234.61		11980	62	1.08	4467.34	5.164E-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	< 2.636E-002 +/-	1.9%	< 2.510E-005	< 1.215E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 3.541E-002 +/-	1.9%	< 3.372E-005	< 5.594E-012
Al-26	< 4.744E-002 +/-	19.8%	< 4.518E-005	< 2.495E-006
K-40	< 4.302E-001 +/-	5.3%	< 4.097E-004	< 6.710E-002
Co-57	2.330E+000 +/-	34.5%	2.219E-003	2.726E-010
Co-60	< 3.244E-002 +/-	2.5%	< 3.090E-005	< 2.845E-011
Se-75	< 2.640E-001 +/-	2.3%	< 2.515E-004	< 1.817E-011
Kr-85	< 1.547E+001 +/-	3.2%	< 1.473E-002	< 3.897E-008
Sr-90	3.338E-001 +/-	39.2%	3.179E-004	2.420E-009
Sb-125	< 2.892E-001 +/-	2.7%	< 2.754E-004	< 2.782E-010
Ba-133	< 2.136E-001 +/-	1.8%	< 2.035E-004	< 8.438E-010
Cs-134	< 3.227E-002 +/-	2.0%	< 3.073E-005	< 2.462E-011
Cs-137	3.338E-001 +/-	39.2%	3.179E-004	3.805E-009
Eu-152	< 1.469E-001 +/-	1.8%	< 1.399E-004	< 8.255E-010
Eu-154	< 1.011E-001 +/-	2.1%	< 9.631E-005	< 3.792E-010
Ho-166m	< 5.344E-002 +/-	2.4%	< 5.090E-005	< 2.971E-008
Bi-207	< 3.448E-002 +/-	1.9%	< 3.284E-005	< 6.276E-010
Pb-210	< 3.338E+004 +/-	309.7%	< 3.179E+001	< 4.339E-004
Ra-226	< 9.544E-002 +/-	2.7%	< 9.090E-005	< 9.544E-008
Ac-227	< 8.977E-001 +/-	8.5%	< 8.550E-004	< 1.230E-008
Th-230	< 4.475E+002 +/-	9.0%	< 4.262E-001	< 2.193E-002
Pa-231	< 4.878E+000 +/-	11.3%	< 4.646E-003	< 1.020E-004
Th-232	< 9.922E-002 +/-	2.4%	< 9.450E-005	< 8.940E-001
U-232	< 1.813E-001 +/-	2.6%	< 1.727E-004	< 8.396E-009
U-233	< 3.455E+003 +/-	4.0%	< 3.290E+000	< 3.524E-001
Pa-234	< 1.579E-001 +/-	12.1%	< 1.504E-004	
Pa-234m	< 1.917E+002 +/-	2.1%	< 1.826E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 2.834E-001 +/-	4.0%	< 2.699E-004	< 1.295E-001
Np-237	2.814E+000 +/-	6.0%	2.680E-003	3.939E-003
Pu-238	< 1.920E+004 +/-	4.2%	< 1.828E+001	< 1.110E-003
U-238	< 3.128E+000 +/-	2.1%	< 2.979E-003	< 9.196E+000
Pu-239	1.623E+006 +/-	4.5%	1.546E+003	2.581E+001
Pu-239B	1.586E+006 +/-	1.3%	1.510E+003	2.521E+001
U-239	< 2.278E+005 +/-	368.5%	< 2.169E+002	
Pu-240	2.687E+005 +/-	41.6%	2.559E+002	1.169E+000
Am-241	3.796E+005 +/-	6.1%	3.615E+002	1.093E-001
Am-241B	4.175E+005 +/-	6.2%	3.976E+002	1.202E-001
Pu-241	3.893E+006 +/-	8.8%	3.708E+003	3.746E-002
Pu-241B	4.962E+006 +/-	3.1%	4.726E+003	4.774E-002
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 9.447E-001 +/-	2.2%	< 8.998E-004	< 4.677E-006
Cm-243	< 9.744E-001 +/-	3.5%	< 9.280E-004	< 1.871E-008
Cm-244	< 5.838E+004 +/-	14.2%	< 5.560E+001	< 7.122E-004

Cm-245	< 1.764E+000	+/- 8.4%	< 1.680E-003	< 1.015E-005
Cm-247	< 1.486E-001	+/- 8.5%	< 1.415E-004	< 1.590E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.697E-001 +/-	3.5%	< 1.616E-004	< 4.106E-008
Cf-251	< 9.871E-001 +/-	6.5%	< 9.401E-004	< 6.170E-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	2.58E+001 +- 1.16E+000	2.41E+001 +- 3.83E-001

Beta: 2.13E+001 +- 1.33E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	2.72E+001 +- 2.23E+000
203.55	2.18E+001 +- 8.29E-001
375.05	2.45E+001 +- 6.00E-001
413.71	2.48E+001 +- 6.47E-001

Segment 7 Results

Segment: 7 Detector: DET01 Position: 7
C:\Canberra\NDA2k\Data\00000387_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P007_S007

Acquisition Start: 5/6/2009 11:48:58 AM
Elapsed Live Time: 100.48 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.000 +/- 0.0000
SE-75	264.66	0.250 +/- 0.0049
SE-75	279.54	0.265 +/- 0.0056
SE-75	400.66	0.377 +/- 0.0078

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: 5/6/2009 11:50:59 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
	59.49	Y	76119	7869	1.11	120.82	3.439E-006	1.24	
M	94.72	Y	12935	12602	1.52	191.22	1.002E-004	2.15	71.43
m	98.72	Y	49401	17178	1.53	199.21	1.193E-004	1.78	
m	100.90	Y	7683	17581	1.54	203.57	1.300E-004	2.69	
m	103.33	Y	34141	14255	1.54	208.44	1.420E-004	1.76	
M	111.10	Y	13010	8365	1.38	223.95	1.800E-004	2.23	85.80
m	114.53	Y	10268	8486	1.39	230.81	1.962E-004	2.38	
m	116.57	Y	9649	8628	1.39	234.89	2.056E-004	2.29	
m	120.49	Y	2376	7076	1.40	242.72	2.230E-004	4.07	
m	122.83	Y	1369	6778	1.40	247.39	2.328E-004	6.05	
m	125.28	Y	5065	7124	1.40	252.29	2.428E-004	2.75	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	129.31	Y	23583	5514	1.41	260.34	2.582E-004	2.02	
M	144.15	Y	1484	4582	1.15	290.00	3.033E-004	10.25	1.55
m	146.31	Y	1322	4647	1.15	294.32	3.084E-004	10.63	
m	148.60	Y	3053	4742	1.16	298.89	3.133E-004	9.04	
M	161.07	Y	1401	4740	1.32	323.80	3.337E-004	16.28	4.73
m	164.73	Y	1361	8281	1.32	331.11	3.378E-004	13.14	
	171.34	Y	1520	4394	1.06	344.34	3.431E-004	8.25	
	179.15	Y	657	4693	1.33	359.93	3.466E-004	19.34	
	189.52	Y	668	4729	1.80	380.67	3.473E-004	19.13	
	195.64	Y	1108	4518	1.28	392.88	3.461E-004	11.49	
M	203.54	Y	5405	3792	1.18	408.67	3.430E-004	2.55	0.91
m	208.00	Y	17181	3319	1.19	417.60	3.407E-004	2.02	
	255.27	Y	679	2004	1.36	512.05	3.033E-004	12.37	
M	264.13	Y	312	1703	1.13	529.76	2.954E-004	11.90	1.13
m	267.51	Y	653	1696	1.13	536.52	2.930E-004	6.98	
	297.51	Y	341	1841	1.16	596.46	2.735E-004	24.11	
	311.83	Y	824	1442	1.25	625.08	2.644E-004	9.03	
M	321.02	Y	522	1646	1.88	643.44	2.588E-004	9.62	3.09
m	323.40	Y	980	2178	1.88	648.19	2.573E-004	5.37	
M	332.71	Y	5878	1143	1.36	666.79	2.518E-004	2.84	2.25
m	335.69	Y	2280	1094	1.37	672.74	2.500E-004	3.53	
m	341.48	Y	646	1179	1.37	684.32	2.467E-004	6.70	
m	344.96	Y	5110	1139	1.38	691.27	2.447E-004	2.83	
M	366.95	Y	660	1111	1.27	735.21	2.329E-004	6.83	1.87
m	368.49	Y	1332	1125	1.28	738.30	2.321E-004	4.09	
M	375.04	Y	13684	1081	1.28	751.38	2.288E-004	1.48	12.59
m	380.11	Y	2665	727	1.29	761.51	2.263E-004	2.48	
m	382.72	Y	2384	630	1.29	766.73	2.251E-004	2.58	
	392.85	Y	4838	645	1.53	786.98	2.204E-004	2.20	
	413.67	Y	12354	419	1.47	828.57	2.104E-004	1.56	
M	422.60	Y	903	322	1.27	846.42	2.063E-004	4.06	1.83
m	426.57	Y	201	279	1.27	854.35	2.045E-004	9.81	
M	445.55	Y	87	142	1.39	892.28	1.965E-004	17.60	0.57
m	451.42	Y	1562	160	1.39	904.01	1.943E-004	5.82	
	618.91	Y	133	68	2.00	1238.70	1.520E-004	15.41	
M	640.07	Y	34	50	1.39	1281.00	1.487E-004	26.17	1.13
m	645.85	Y	73	52	1.40	1292.54	1.479E-004	14.91	
m	652.65	Y	82	48	1.40	1306.13	1.470E-004	13.58	
m	658.71	Y	57	43	1.41	1318.23	1.461E-004	17.32	
m	662.31	Y	653	32	1.41	1325.43	1.456E-004	4.49	
	688.71	Y	57	12	1.70	1378.18	1.423E-004	18.48	
	721.87	Y	299	23	1.62	1444.46	1.386E-004	7.09	
	756.19	Y	43	8	1.01	1513.04	1.351E-004	20.97	
	769.12	Y	74	23	1.18	1538.88	1.339E-004	17.67	
	2234.63		11980	51	1.11	4467.39	4.167E-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	< 3.008E-002 +/-	1.8%	< 2.865E-005	< 1.387E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 3.024E-002 +/-	2.0%	< 2.880E-005	< 4.778E-012
	Al-26	< 5.021E-002 +/-	15.5%	< 4.782E-005	< 2.641E-006
	K-40	< 3.646E-001 +/-	5.0%	< 3.472E-004	< 5.688E-002
X	Co-57				
	Co-60	< 3.188E-002 +/-	1.7%	< 3.036E-005	< 2.796E-011
	Se-75	< 1.973E-001 +/-	1.9%	< 1.879E-004	< 1.357E-011
	Kr-85	< 1.252E+001 +/-	3.1%	< 1.193E-002	< 3.156E-008
	Sr-90	< 6.318E-002 +/-	2.0%	< 6.017E-005	< 4.580E-010
	Sb-125	< 2.520E-001 +/-	2.3%	< 2.400E-004	< 2.424E-010
	Ba-133	< 1.724E-001 +/-	1.7%	< 1.641E-004	< 6.808E-010
	Cs-134	< 2.740E-002 +/-	1.8%	< 2.610E-005	< 2.091E-011
X	Cs-137				
	Eu-152	< 1.037E-001 +/-	3.7%	< 9.880E-005	< 5.830E-010
	Eu-154	< 8.635E-002 +/-	2.2%	< 8.224E-005	< 3.238E-010
	Ho-166m	< 4.078E-002 +/-	2.2%	< 3.884E-005	< 2.267E-008
	Bi-207	< 1.848E-002 +/-	1.9%	< 1.760E-005	< 3.363E-010
	Pb-210	< 5.674E+003 +/-	70.4%	< 5.404E+000	< 7.377E-005
	Ra-226	< 9.640E-002 +/-	2.3%	< 9.181E-005	< 9.640E-008
	Ac-227	< 6.604E-001 +/-	8.3%	< 6.290E-004	< 9.048E-009
	Th-230	< 3.278E+002 +/-	8.6%	< 3.122E-001	< 1.606E-002
	Pa-231	< 3.870E+000 +/-	11.2%	< 3.686E-003	< 8.088E-005
	Th-232	< 9.284E-002 +/-	2.4%	< 8.842E-005	< 8.365E-001
	U-232	< 1.651E-001 +/-	2.2%	< 1.573E-004	< 7.645E-009
	U-233	< 2.490E+003 +/-	2.9%	< 2.371E+000	< 2.540E-001
	Pa-234	< 7.514E-002 +/-	12.2%	< 7.156E-005	
	Pa-234m	< 2.027E+002 +/-	2.1%	< 1.931E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 2.087E-001 +/-	2.6%	< 1.987E-004	< 9.536E-002
	Np-237	1.194E+000 +/-	14.0%	1.137E-003	1.672E-003
	Pu-238	< 1.419E+004 +/-	2.8%	< 1.352E+001	< 8.204E-004
	U-238	< 3.419E+000 +/-	2.2%	< 3.256E-003	< 1.005E+001
	Pu-239	1.434E+006 +/-	3.2%	1.366E+003	2.280E+001
	Pu-239B	9.331E+005 +/-	1.5%	8.886E+002	1.483E+001
	U-239	< 2.864E+004 +/-	85.6%	< 2.728E+001	
X	Pu-240				
	Am-241	2.658E+005 +/-	4.5%	2.532E+002	7.656E-002
	Am-241B	1.879E+005 +/-	3.8%	1.789E+002	5.410E-002
	Pu-241	1.183E+006 +/-	9.6%	1.127E+003	1.138E-002
	Pu-241B	2.242E+006 +/-	3.0%	2.135E+003	2.157E-002
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 7.375E-001 +/-	1.9%	< 7.024E-004	< 3.650E-006
	Cm-243	< 7.607E-001 +/-	3.4%	< 7.244E-004	< 1.460E-008
	Cm-244	< 3.497E+004 +/-	14.2%	< 3.331E+001	< 4.267E-004
	Cm-245	< 1.255E+000 +/-	7.7%	< 1.196E-003	< 7.219E-006
	Cm-247	< 1.138E-001 +/-	8.5%	< 1.084E-004	< 1.218E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.323E-001 +/-	3.5%	< 1.260E-004	< 3.203E-008
Cf-251	< 7.245E-001 +/-	5.7%	< 6.900E-004	< 4.528E-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	2.28E+001 +- 7.40E-001	8.96E+000 +- 1.45E-001

Beta: 1.86E+002 +- 7.81E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	5.18E+000 +- 2.07E-001
203.55	9.92E+000 +- 3.39E-001
375.05	1.38E+001 +- 3.37E-001
413.71	1.43E+001 +- 3.79E-001

Segment 8 Results

Segment: 8 Detector: DET01 Position: 8
C:\Canberra\NDA2k\Data\00000387_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P008_S008

Acquisition Start: 5/6/2009 11:52:09 AM
Elapsed Live Time: 113.05 sec Elapsed Real Time: 120.00 sec

Transmission Results

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.248 +/- 0.0146
SE-75	264.66	0.436 +/- 0.0079
SE-75	279.54	0.450 +/- 0.0086
SE-75	400.66	0.514 +/- 0.0100

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: 5/6/2009 11:54:11 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
	59.54	Y	22199	3294	1.10	120.93	7.864E-005	1.37	
M	94.76		4107	6378	1.53	191.30	1.985E-004	3.64	20.16
m	98.74	Y	14100	9136	1.54	199.25	2.098E-004	2.77	
m	100.85	Y	2135	9076	1.54	203.47	2.155E-004	4.73	
m	103.39	Y	9321	7735	1.55	208.55	2.221E-004	2.78	
M	111.06		2815	4723	1.33	223.88	2.404E-004	2.79	12.24
m	114.75	Y	1523	8289	1.33	231.25	2.483E-004	4.60	
M	125.38	Y	202	4792	0.99	252.50	2.679E-004	12.06	82.58
m	129.39	Y	2558	3235	1.00	260.50	2.741E-004	10.49	
M	144.16		429	2191	1.21	290.02	2.967E-004	14.34	3.58
m	146.54	Y	424	2712	1.21	294.77	3.003E-004	15.71	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
m	148.55	Y	951	2683	1.21	298.79	3.031E-004	9.84	
	189.34		247	2310	1.07	380.31	3.361E-004	32.00	
	195.47		232	2016	1.04	392.55	3.379E-004	30.97	
M	203.59	Y	1428	1578	1.13	408.77	3.393E-004	3.45	2.01
m	208.04	Y	4655	1716	1.13	417.67	3.397E-004	1.94	
	255.32		123	934	1.20	512.15	3.311E-004	40.07	
	267.64	Y	131	808	1.30	536.77	3.264E-004	34.14	
	297.66		148	710	0.95	596.75	3.110E-004	29.36	
	311.77	Y	187	804	0.88	624.96	3.030E-004	25.48	
M	332.73	Y	1497	595	1.25	666.84	2.912E-004	3.04	1.39
m	335.66	Y	556	627	1.25	672.69	2.895E-004	5.28	
m	341.31	Y	191	597	1.26	683.99	2.864E-004	11.25	
m	344.98		1246	567	1.26	691.32	2.843E-004	3.33	
	368.51	Y	484	537	1.71	738.34	2.716E-004	9.28	
M	375.07	Y	3478	474	1.26	751.43	2.681E-004	2.06	3.20
m	380.16		588	335	1.27	761.62	2.655E-004	4.80	
m	382.70		561	298	1.27	766.70	2.641E-004	4.90	
	392.88		1238	198	1.64	787.04	2.590E-004	3.63	
	413.70	Y	3278	126	1.34	828.65	2.486E-004	2.19	
M	422.62		223	93	1.17	846.46	2.443E-004	7.63	1.11
m	426.52	Y	57	86	1.18	854.26	2.425E-004	17.49	
	451.47		377	70	1.40	904.11	2.313E-004	6.55	
	662.57	Y	158	18	1.53	1325.96	1.654E-004	9.40	
	721.83	Y	73	9	1.84	1444.38	1.538E-004	14.10	
	2234.65		11980	18	1.09	4467.42	1.058E-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	< 1.792E-002 +/-	1.8%	< 1.707E-005	< 8.261E-016
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 2.107E-002 +/-	1.9%	< 2.007E-005	< 3.329E-012
	Al-26	< 1.563E-002 +/-	18.8%	< 1.489E-005	< 8.222E-007
	K-40	< 2.905E-001 +/-	5.3%	< 2.766E-004	< 4.531E-002
	Co-57	< 1.692E-001 +/-	4.5%	< 1.611E-004	< 1.980E-011
	Co-60	< 3.126E-002 +/-	1.7%	< 2.977E-005	< 2.741E-011
	Se-75	< 1.333E-001 +/-	1.8%	< 1.270E-004	< 9.174E-012
	Kr-85	< 8.169E+000 +/-	3.0%	< 7.780E-003	< 2.059E-008
	Sr-90	< 4.122E-002 +/-	2.2%	< 3.926E-005	< 2.988E-010
	Sb-125	< 1.444E-001 +/-	2.4%	< 1.375E-004	< 1.389E-010
	Ba-133	< 1.060E-001 +/-	1.6%	< 1.009E-004	< 4.187E-010
	Cs-134	< 2.808E-002 +/-	2.1%	< 2.674E-005	< 2.143E-011
X	Cs-137				
	Eu-152	< 8.982E-002 +/-	3.8%	< 8.554E-005	< 5.048E-010
	Eu-154	< 6.017E-002 +/-	2.1%	< 5.730E-005	< 2.256E-010
	Ho-166m	< 3.877E-002 +/-	2.3%	< 3.692E-005	< 2.155E-008
	Bi-207	< 2.437E-002 +/-	2.1%	< 2.321E-005	< 4.436E-010
	Pb-210	< 1.497E+001 +/-	259.0%	< 1.426E-002	< 1.946E-007
	Ra-226	< 5.400E-002 +/-	2.4%	< 5.143E-005	< 5.400E-008
	Ac-227	< 4.604E-001 +/-	8.3%	< 4.385E-004	< 6.307E-009
	Th-230	< 6.274E+001 +/-	83.3%	< 5.975E-002	< 3.074E-003
	Pa-231	< 2.578E+000 +/-	11.2%	< 2.456E-003	< 5.389E-005
	Th-232	< 7.850E-002 +/-	2.3%	< 7.476E-005	< 7.072E-001
	U-232	< 7.850E-002 +/-	2.3%	< 7.476E-005	< 3.634E-009
	U-233	< 1.696E+003 +/-	3.0%	< 1.616E+000	< 1.730E-001
	Pa-234	< 6.961E-002 +/-	12.2%	< 6.630E-005	
	Pa-234m	< 1.501E+002 +/-	2.1%	< 1.430E-001	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 1.594E-001 +/-	2.9%	< 1.518E-004	< 7.284E-002
	Np-237	3.607E-001 +/-	25.6%	3.435E-004	5.050E-004
	Pu-238	< 1.058E+004 +/-	3.1%	< 1.007E+001	< 6.114E-004
	U-238	< 2.847E+000 +/-	2.1%	< 2.711E-003	< 8.370E+000
	Pu-239	3.957E+005 +/-	4.5%	3.769E+002	6.292E+000
	Pu-239B	< 7.051E+003 +/-	16.6%	< 6.715E+000	< 1.121E-001
	U-239	< 3.825E+001 +/-	308.3%	< 3.643E-002	
X	Pu-240				
	Am-241	5.736E+004 +/-	8.2%	5.463E+001	1.652E-002
	Am-241B	5.732E+004 +/-	9.8%	5.459E+001	1.651E-002
	Pu-241	3.811E+005 +/-	10.5%	3.630E+002	3.666E-003
	Pu-241B	5.933E+005 +/-	3.3%	5.651E+002	5.708E-003
	Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	Am-243	< 3.421E-001 +/-	57.8%	< 3.258E-004	< 1.693E-006
	Cm-243	< 5.129E-001 +/-	3.3%	< 4.884E-004	< 9.847E-009
	Cm-244	< 2.932E+004 +/-	14.2%	< 2.792E+001	< 3.577E-004
	Cm-245	< 9.699E-001 +/-	7.8%	< 9.237E-004	< 5.577E-006
	Cm-247	< 6.811E-002 +/-	8.5%	< 6.486E-005	< 7.287E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 7.607E-002 +/-	3.4%	< 7.244E-005	< 1.841E-008
Cf-251	< 5.455E-001 +/-	5.8%	< 5.196E-004	< 3.410E-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	6.29E+000 +- 2.82E-001	1.88E+000 +- 3.99E-002

Beta: 2.68E+002 +- 1.36E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	5.30E-001 +- 5.95E-002
203.55	2.65E+000 +- 1.11E-001
375.05	2.99E+000 +- 8.11E-002
413.71	3.22E+000 +- 9.38E-002

Segment 9 Results

Segment: 9 Detector: DET01 Position: 9
C:\Canberra\NDA2k\Data\00000387_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P009_S009

Acquisition Start: 5/6/2009 11:55:21 AM
Elapsed Live Time: 117.59 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.263 +/- 0.0135
SE-75	264.66	0.437 +/- 0.0078
SE-75	279.54	0.449 +/- 0.0084
SE-75	400.66	0.510 +/- 0.0097

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 5/6/2009 11:57:22 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
59.51	Y	2864	1246	1.23	120.86	1.150E-005	2.85	
98.89		467	3163	1.26	199.55	1.655E-004	18.23	
129.28	Y	220	1043	1.07	260.29	2.753E-004	21.86	
375.15	Y	74	113	1.63	751.60	2.714E-004	24.64	
413.62	Y	43	40	1.40	828.48	2.549E-004	27.74	
2234.65		11980	5	1.13	4467.42	5.138E-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	< 2.293E-002 +/-	1.9%	< 2.184E-005	< 1.057E-015
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 1.424E-002 +/-	1.9%	< 1.357E-005	< 2.251E-012
Al-26	< 3.235E-002 +/-	19.6%	< 3.081E-005	< 1.702E-006
K-40	< 2.567E-001 +/-	5.3%	< 2.444E-004	< 4.004E-002
Co-57	< 1.104E-001 +/-	4.5%	< 1.052E-004	< 1.292E-011
Co-60	< 3.073E-002 +/-	1.7%	< 2.927E-005	< 2.695E-011
Se-75	< 8.423E-002 +/-	2.3%	< 8.022E-005	< 5.795E-012
Kr-85	< 5.510E+000 +/-	3.2%	< 5.248E-003	< 1.389E-008
Sr-90	< 1.562E-002 +/-	2.3%	< 1.488E-005	< 1.133E-010
Sb-125	< 5.625E-002 +/-	2.1%	< 5.357E-005	< 5.411E-011
Ba-133	< 6.523E-002 +/-	1.8%	< 6.212E-005	< 2.576E-010
Cs-134	< 1.677E-002 +/-	1.9%	< 1.597E-005	< 1.279E-011
Cs-137	< 1.562E-002 +/-	2.3%	< 1.488E-005	< 1.781E-010
Eu-152	< 9.597E-002 +/-	3.8%	< 9.140E-005	< 5.394E-010
Eu-154	< 4.067E-002 +/-	2.1%	< 3.874E-005	< 1.525E-010
Ho-166m	< 2.345E-002 +/-	2.5%	< 2.233E-005	< 1.304E-008
Bi-207	< 1.724E-002 +/-	2.4%	< 1.642E-005	< 3.137E-010
Pb-210	< 4.163E+002 +/-	311.1%	< 3.965E-001	< 5.412E-006
Ra-226	< 3.863E-002 +/-	2.6%	< 3.679E-005	< 3.863E-008
Ac-227	< 2.746E-001 +/-	8.5%	< 2.615E-004	< 3.762E-009
Th-230	< 1.377E+002 +/-	9.1%	< 1.312E-001	< 6.749E-003
Pa-231	< 1.809E+000 +/-	11.3%	< 1.723E-003	< 3.780E-005
Th-232	< 4.767E-002 +/-	2.5%	< 4.540E-005	< 4.295E-001
U-232	< 4.767E-002 +/-	2.5%	< 4.540E-005	< 2.207E-009
U-233	< 1.028E+003 +/-	4.1%	< 9.791E-001	< 1.049E-001
Pa-234	< 9.834E-002 +/-	12.2%	< 9.366E-005	
Pa-234m	< 1.417E+002 +/-	2.1%	< 1.350E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 1.011E-001 +/-	4.1%	< 9.628E-005	< 4.620E-002
Np-237	< 1.369E-001 +/-	2.2%	< 1.304E-004	< 1.916E-004
Pu-238	< 6.814E+003 +/-	4.3%	< 6.489E+000	< 3.938E-004
U-238	< 2.137E+000 +/-	2.1%	< 2.036E-003	< 6.284E+000
Pu-239	3.149E+003 +/-	30.0%	2.999E+000	5.007E-002
Pu-239B	< 3.857E+003 +/-	18.9%	< 3.673E+000	< 6.132E-002
U-239	< 2.227E+003 +/-	370.1%	< 2.121E+000	
Pu-240	< 2.181E+003 +/-	13.4%	< 2.077E+000	< 9.488E-003
Am-241	1.562E+002 +/-	152.8%	1.488E-001	4.499E-005
Am-241B	< 8.444E+002 +/-	14.5%	< 8.042E-001	< 2.432E-004
Pu-241	< 3.571E+004 +/-	4.3%	< 3.400E+001	< 3.435E-004
Pu-241B	< 1.097E+004 +/-	3.5%	< 1.045E+001	< 1.056E-004
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 3.380E-001 +/-	2.2%	< 3.219E-004	< 1.673E-006
Cm-243	< 3.486E-001 +/-	3.6%	< 3.320E-004	< 6.694E-009
Cm-244	< 2.607E+004 +/-	14.1%	< 2.483E+001	< 3.180E-004
Cm-245	< 6.218E-001 +/-	8.4%	< 5.921E-004	< 3.575E-006
Cm-247	< 3.771E-002 +/-	8.5%	< 3.592E-005	< 4.035E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 4.002E-002 +/-	3.5%	< 3.811E-005	< 9.684E-009
Cf-251	< 3.537E-001 +/-	6.6%	< 3.369E-004	< 2.211E-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	5.01E-002 +- 1.50E-002	4.72E-002 +- 6.80E-003

Beta: 1.20E+001 +- 5.57E+001 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 3

Energy	Mass (g)
129.30	4.53E-002 +- 1.01E-002
375.05	6.26E-002 +- 1.55E-002
413.71	4.13E-002 +- 1.15E-002

Segment 10 Results

Segment: 10 Detector: DET01 Position: 10
C:\Canberra\NDA2k\Data\00000387_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P010_S010

Acquisition Start: 5/6/2009 11:58:32 AM
Elapsed Live Time: 118.19 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.229 +/- 0.0126
SE-75	264.66	0.393 +/- 0.0070
SE-75	279.54	0.403 +/- 0.0075
SE-75	400.66	0.466 +/- 0.0089

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 5/6/2009 12:00:34 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
59.53	Y	1224	759	1.43	120.90	5.027E-006	4.56	
2234.66		11980	8	1.14	4467.45	5.006E-005	1.42	

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	< 1.812E-002 +/-	1.9%	< 1.726E-005	< 8.354E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.415E-002 +/-	1.9%	< 2.300E-005	< 3.816E-012
Al-26	< 7.077E-003 +/-	19.8%	< 6.740E-006	< 3.723E-007
K-40	< 3.726E-001 +/-	5.3%	< 3.549E-004	< 5.813E-002
Co-57	< 9.369E-002 +/-	4.6%	< 8.923E-005	< 1.096E-011
Co-60	< 3.298E-002 +/-	1.7%	< 3.141E-005	< 2.893E-011
Se-75	< 6.162E-002 +/-	2.2%	< 5.868E-005	< 4.239E-012
Kr-85	< 5.827E+000 +/-	3.3%	< 5.549E-003	< 1.468E-008
Sr-90	< 2.364E-002 +/-	2.4%	< 2.251E-005	< 1.714E-010
Sb-125	< 4.963E-002 +/-	2.2%	< 4.726E-005	< 4.774E-011
Ba-133	< 4.318E-002 +/-	1.8%	< 4.112E-005	< 1.706E-010
Cs-134	< 2.135E-002 +/-	2.0%	< 2.033E-005	< 1.629E-011
Cs-137	< 2.364E-002 +/-	2.4%	< 2.251E-005	< 2.695E-010
Eu-152	< 1.010E-001 +/-	3.8%	< 9.623E-005	< 5.679E-010
Eu-154	< 6.896E-002 +/-	2.1%	< 6.567E-005	< 2.586E-010
Ho-166m	< 2.252E-002 +/-	2.4%	< 2.145E-005	< 1.252E-008
Bi-207	< 2.060E-002 +/-	1.9%	< 1.962E-005	< 3.749E-010
Pb-210	< 8.247E+002 +/-	308.2%	< 7.855E-001	< 1.072E-005
Ra-226	< 4.575E-002 +/-	2.7%	< 4.358E-005	< 4.575E-008
Ac-227	< 2.092E-001 +/-	8.5%	< 1.992E-004	< 2.866E-009
Th-230	< 1.060E+002 +/-	9.0%	< 1.010E-001	< 5.194E-003
Pa-231	< 1.315E+000 +/-	11.3%	< 1.252E-003	< 2.749E-005
Th-232	< 4.988E-002 +/-	2.6%	< 4.750E-005	< 4.494E-001
U-232	< 4.988E-002 +/-	2.6%	< 4.750E-005	< 2.309E-009
U-233	< 7.670E+002 +/-	4.0%	< 7.304E-001	< 7.823E-002
Pa-234	< 1.195E-001 +/-	12.2%	< 1.138E-004	
Pa-234m	< 1.297E+002 +/-	2.1%	< 1.235E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 6.961E-002 +/-	3.9%	< 6.630E-005	< 3.181E-002
Np-237	< 1.025E-001 +/-	2.2%	< 9.760E-005	< 1.435E-004
Pu-238	< 5.130E+003 +/-	4.2%	< 4.886E+000	< 2.965E-004
U-238	< 2.510E+000 +/-	2.2%	< 2.390E-003	< 7.379E+000
Pu-239	< 1.046E+003 +/-	3.7%	< 9.959E-001	< 1.663E-002
Pu-239B	< 3.681E+003 +/-	18.8%	< 3.505E+000	< 5.851E-002
U-239	< 4.424E+003 +/-	366.8%	< 4.213E+000	
Pu-240	< 2.134E+003 +/-	13.3%	< 2.032E+000	< 9.281E-003
Am-241	1.528E+002 +/-	151.2%	1.455E-001	4.400E-005
Am-241B	< 8.170E+002 +/-	14.4%	< 7.781E-001	< 2.353E-004
Pu-241	< 2.655E+004 +/-	4.2%	< 2.529E+001	< 2.554E-004
Pu-241B	< 7.181E+003 +/-	3.4%	< 6.839E+000	< 6.908E-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	< 2.153E+004 +/-	14.1%	< 2.050E+001	< 2.626E-004
Cm-245	< 4.439E-001 +/-	8.3%	< 4.228E-004	< 2.552E-006
Cm-247	< 2.838E-002 +/-	8.5%	< 2.703E-005	< 3.036E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 3.043E-002 +/-	3.5%	< 2.898E-005	< 7.364E-009
Cf-251	< 2.448E-001 +/-	6.5%	< 2.331E-004	< 1.530E-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\00000387_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P011_S011

Acquisition Start: 5/6/2009 12:01:43 PM
Elapsed Live Time: 118.49 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.149 +/- 0.0101
SE-75	264.66	0.271 +/- 0.0049
SE-75	279.54	0.278 +/- 0.0053
SE-75	400.66	0.329 +/- 0.0065

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 5/6/2009 12:03:45 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
59.63	Y	483	550	0.90	121.11	4.429E-006	8.66	
2234.68		11980	5	1.18	4467.49	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	< 4.151E-003 +/-	1.8%	< 3.954E-006	< 1.914E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.753E-002 +/-	2.0%	< 2.622E-005	< 4.350E-012
Al-26	< 4.044E-002 +/-	15.1%	< 3.851E-005	< 2.127E-006
K-40	< 3.165E-001 +/-	5.0%	< 3.015E-004	< 4.938E-002
Co-57	< 7.795E-002 +/-	3.4%	< 7.423E-005	< 9.120E-012
Co-60	< 3.456E-002 +/-	2.6%	< 3.291E-005	< 3.031E-011
Se-75	< 6.053E-002 +/-	1.8%	< 5.765E-005	< 4.164E-012
Kr-85	< 4.914E+000 +/-	3.0%	< 4.680E-003	< 1.238E-008
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	< 3.267E-002 +/-	1.7%	< 3.111E-005	< 1.290E-010
Cs-134	< 1.537E-002 +/-	1.9%	< 1.464E-005	< 1.173E-011
Cs-137	< 2.103E-002 +/-	1.9%	< 2.003E-005	< 2.398E-010
Eu-152	< 8.793E-002 +/-	2.5%	< 8.374E-005	< 4.942E-010
Eu-154	< 7.861E-002 +/-	2.2%	< 7.487E-005	< 2.948E-010
Ho-166m	< 3.054E-002 +/-	2.2%	< 2.908E-005	< 1.698E-008
Bi-207	< 1.620E-002 +/-	2.0%	< 1.543E-005	< 2.949E-010
Pb-210	< 9.656E+002 +/-	53.0%	< 9.196E-001	< 1.255E-005
Ra-226	< 3.460E-002 +/-	2.2%	< 3.295E-005	< 3.460E-008
Ac-227	< 2.144E-001 +/-	8.3%	< 2.042E-004	< 2.937E-009
Th-230	< 9.560E+001 +/-	8.6%	< 9.105E-002	< 4.685E-003
Pa-231	< 1.215E+000 +/-	11.2%	< 1.157E-003	< 2.539E-005
Th-232	< 4.185E-002 +/-	2.1%	< 3.986E-005	< 3.771E-001
U-232	< 4.185E-002 +/-	2.1%	< 3.986E-005	< 1.938E-009
U-233	< 6.989E+002 +/-	2.7%	< 6.656E-001	< 7.128E-002
Pa-234	< 9.891E-002 +/-	12.1%	< 9.420E-005	
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	< 6.563E-002 +/-	2.5%	< 6.251E-005	< 3.000E-002
Np-237	< 8.913E-002 +/-	1.9%	< 8.489E-005	< 1.248E-004
Pu-238	< 4.812E+003 +/-	2.6%	< 4.583E+000	< 2.782E-004
U-238	< 2.354E+000 +/-	2.2%	< 2.242E-003	< 6.920E+000
Pu-239	< 8.847E+002 +/-	3.1%	< 8.426E-001	< 1.407E-002
Pu-239B	< 2.765E+003 +/-	5.3%	< 2.634E+000	< 4.396E-002
U-239	< 6.631E+003 +/-	65.1%	< 6.315E+000	
Pu-240	< 1.631E+003 +/-	4.7%	< 1.553E+000	< 7.094E-003
Am-241	6.845E+001 +/-	24.7%	6.519E-002	1.971E-005
Am-241B	< 6.268E+002 +/-	4.9%	< 5.969E-001	< 1.805E-004
Pu-241	< 2.416E+004 +/-	2.8%	< 2.301E+001	< 2.324E-004
Pu-241B	< 6.881E+003 +/-	2.4%	< 6.553E+000	< 6.619E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 2.555E-001 +/-	1.8%	< 2.434E-004	< 1.265E-006
Cm-243	< 2.636E-001 +/-	3.3%	< 2.510E-004	< 5.061E-009
Cm-244	< 2.132E+004 +/-	14.2%	< 2.030E+001	< 2.600E-004
Cm-245	< 4.352E-001 +/-	7.7%	< 4.145E-004	< 2.502E-006
Cm-247	< 2.741E-002 +/-	8.5%	< 2.610E-005	< 2.933E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.473E-002 +/-	3.5%	< 2.356E-005	< 5.986E-009
Cf-251	< 2.348E-001 +/-	5.6%	< 2.236E-004	< 1.468E-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 **********

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\00000387_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P012_S012

Acquisition Start: 5/6/2009 12:04:54 PM
Elapsed Live Time: 118.74 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.000 +/- 0.0000
SE-75	264.66	0.132 +/- 0.0025
SE-75	279.54	0.137 +/- 0.0029
SE-75	400.66	0.183 +/- 0.0039

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 5/6/2009 12:06:56 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
2234.65		11980	10	1.13	4467.43	2.420E-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	< 1.356E-002 +/-	1.9%	< 1.291E-005	< 6.249E-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	< 9.436E-003 +/-	16.0%	< 8.987E-006	< 4.963E-007
K-40	< 2.504E-001 +/-	5.1%	< 2.384E-004	< 3.906E-002
Co-57	< 6.652E-002 +/-	4.0%	< 6.335E-005	< 7.783E-012
Co-60	< 2.760E-002 +/-	1.7%	< 2.628E-005	< 2.420E-011
Se-75	< 5.824E-002 +/-	2.5%	< 5.547E-005	< 4.007E-012
Kr-85	< 4.170E+000 +/-	3.3%	< 3.971E-003	< 1.051E-008
Sr-90	< 1.537E-002 +/-	2.2%	< 1.464E-005	< 1.114E-010
Sb-125	< 4.509E-002 +/-	2.4%	< 4.295E-005	< 4.338E-011
Ba-133	< 2.935E-002 +/-	2.0%	< 2.795E-005	< 1.159E-010
Cs-134	< 1.337E-002 +/-	2.3%	< 1.273E-005	< 1.020E-011
Cs-137	< 1.537E-002 +/-	2.2%	< 1.464E-005	< 1.752E-010
Eu-152	< 2.691E-002 +/-	3.8%	< 2.563E-005	< 1.513E-010
Eu-154	< 4.838E-002 +/-	2.2%	< 4.607E-005	< 1.814E-010
Ho-166m	< 2.436E-002 +/-	2.3%	< 2.320E-005	< 1.354E-008
Bi-207	< 1.082E-002 +/-	2.3%	< 1.030E-005	< 1.969E-010
Pb-210	< 1.071E+000 +/-	39.2%	< 1.020E-003	< 1.392E-008
Ra-226	< 2.849E-002 +/-	2.5%	< 2.714E-005	< 2.849E-008
Ac-227	< 2.138E-001 +/-	8.5%	< 2.036E-004	< 2.928E-009
Th-230	< 1.637E+001 +/-	13.8%	< 1.559E-002	< 8.020E-004
Pa-231	< 1.060E+000 +/-	11.3%	< 1.010E-003	< 2.216E-005
Th-232	< 4.677E-002 +/-	2.4%	< 4.454E-005	< 4.214E-001
U-232	< 4.925E-002 +/-	2.5%	< 4.690E-005	< 2.280E-009
U-233	< 7.130E+002 +/-	3.2%	< 6.790E-001	< 7.273E-002
Pa-234	< 8.953E-002 +/-	11.6%	< 8.527E-005	
Pa-234m	< 9.621E+001 +/-	2.1%	< 9.163E-002	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 6.942E-002 +/-	3.2%	< 6.612E-005	< 3.173E-002
Np-237	< 7.093E-002 +/-	2.3%	< 6.756E-005	< 9.931E-005
Pu-238	< 4.717E+003 +/-	3.1%	< 4.492E+000	< 2.726E-004
U-238	< 1.817E+000 +/-	2.1%	< 1.731E-003	< 5.343E+000
Pu-239	< 7.765E+002 +/-	2.0%	< 7.395E-001	< 1.235E-002
Pu-239B	< 1.424E+003 +/-	6.3%	< 1.356E+000	< 2.263E-002
U-239	< 2.552E+000 +/-	49.2%	< 2.431E-003	
Pu-240	< 1.086E+003 +/-	5.6%	< 1.035E+000	< 4.725E-003
Am-241	< 2.098E-001 +/-	16.6%	< 1.998E-004	< 6.041E-008
Am-241B	< 3.931E+002 +/-	5.8%	< 3.744E-001	< 1.132E-004
Pu-241	< 2.500E+004 +/-	3.3%	< 2.381E+001	< 2.405E-004
Pu-241B	< 7.242E+003 +/-	3.2%	< 6.897E+000	< 6.967E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.036E-001 +/-	9.3%	< 9.865E-005	< 5.127E-007
Cm-243	< 2.181E-001 +/-	3.7%	< 2.077E-004	< 4.187E-009
Cm-244	< 1.172E+004 +/-	14.1%	< 1.116E+001	< 1.430E-004
Cm-245	< 4.507E-001 +/-	7.9%	< 4.292E-004	< 2.592E-006
Cm-247	< 1.941E-002 +/-	8.6%	< 1.848E-005	< 2.077E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.940E-002 +/-	3.6%	< 1.848E-005	< 4.695E-009
Cf-251	< 2.360E-001 +/-	5.9%	< 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 13 Results

Segment: 13 Detector: DET01 Position: 13
C:\Canberra\NDA2k\Data\00000387_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P013_S013

Acquisition Start: 5/6/2009 12:08:06 PM
Elapsed Live Time: 118.93 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.227 +/- 0.0120
SE-75	264.66	0.370 +/- 0.0066
SE-75	279.54	0.379 +/- 0.0071
SE-75	400.66	0.441 +/- 0.0085

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 5/6/2009 12:10:07 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
59.50	Y	91	220	0.93	120.85	1.449E-004	26.06	
2234.65		11980	4	1.11	4467.43	6.835E-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	< 2.158E-002 +/-	1.8%	< 2.055E-005	< 9.948E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 2.244E-002 +/-	2.0%	< 2.137E-005	< 3.545E-012
Al-26	< 1.769E-002 +/-	14.9%	< 1.685E-005	< 9.305E-007
K-40	< 2.315E-001 +/-	4.9%	< 2.204E-004	< 3.611E-002
Co-57	< 5.509E-002 +/-	3.5%	< 5.247E-005	< 6.446E-012
Co-60	< 2.935E-002 +/-	1.7%	< 2.796E-005	< 2.574E-011
Se-75	< 5.241E-002 +/-	1.9%	< 4.992E-005	< 3.606E-012
Kr-85	< 3.568E+000 +/-	3.1%	< 3.398E-003	< 8.990E-009
Sr-90	< 2.026E-002 +/-	1.9%	< 1.930E-005	< 1.469E-010
Sb-125	< 4.375E-002 +/-	2.1%	< 4.167E-005	< 4.209E-011
Ba-133	< 1.927E-002 +/-	1.7%	< 1.835E-005	< 7.612E-011
Cs-134	< 1.703E-002 +/-	2.0%	< 1.622E-005	< 1.299E-011
Cs-137	< 2.026E-002 +/-	1.9%	< 1.930E-005	< 2.310E-010
Eu-152	< 5.939E-002 +/-	2.5%	< 5.656E-005	< 3.338E-010
Eu-154	< 6.406E-002 +/-	2.2%	< 6.101E-005	< 2.402E-010
Ho-166m	< 2.757E-002 +/-	2.2%	< 2.626E-005	< 1.533E-008
Bi-207	< 1.447E-002 +/-	2.0%	< 1.378E-005	< 2.634E-010
Pb-210	< 1.529E+000 +/-	36.7%	< 1.456E-003	< 1.987E-008
Ra-226	< 3.803E-002 +/-	1.9%	< 3.622E-005	< 3.803E-008
Ac-227	< 1.614E-001 +/-	8.3%	< 1.537E-004	< 2.212E-009
Th-230	< 1.554E+001 +/-	13.0%	< 1.480E-002	< 7.614E-004
Pa-231	< 7.767E-001 +/-	11.2%	< 7.397E-004	< 1.623E-005
Th-232	< 4.764E-002 +/-	2.2%	< 4.538E-005	< 4.293E-001
U-232	< 4.764E-002 +/-	2.2%	< 4.538E-005	< 2.206E-009
U-233	< 5.865E+002 +/-	2.7%	< 5.586E-001	< 5.982E-002
Pa-234	< 1.047E-001 +/-	12.2%	< 9.972E-005	
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	< 5.782E-002 +/-	2.5%	< 5.507E-005	< 2.643E-002
Np-237	< 5.129E-002 +/-	1.9%	< 4.885E-005	< 7.181E-005
Pu-238	< 4.186E+003 +/-	2.6%	< 3.986E+000	< 2.419E-004
U-238	< 2.008E+000 +/-	2.1%	< 1.913E-003	< 5.904E+000
Pu-239	< 6.686E+002 +/-	3.2%	< 6.368E-001	< 1.063E-002
Pu-239B	< 1.098E+003 +/-	5.7%	< 1.046E+000	< 1.745E-002
U-239	< 4.373E+000 +/-	45.8%	< 4.164E-003	
Pu-240	< 8.450E+002 +/-	5.0%	< 8.048E-001	< 3.676E-003
Am-241	3.923E-001 +/-	30.4%	3.736E-004	1.130E-007
Am-241B	< 3.052E+002 +/-	5.5%	< 2.907E-001	< 8.790E-005
Pu-241	< 2.197E+004 +/-	2.8%	< 2.092E+001	< 2.113E-004
Pu-241B	< 6.584E+003 +/-	2.5%	< 6.271E+000	< 6.334E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 9.196E-002 +/-	8.4%	< 8.758E-005	< 4.552E-007
Cm-243	< 1.987E-001 +/-	3.3%	< 1.892E-004	< 3.814E-009
Cm-244	< 2.024E+004 +/-	14.1%	< 1.928E+001	< 2.469E-004
Cm-245	< 3.849E-001 +/-	7.7%	< 3.666E-004	< 2.213E-006
Cm-247	< 2.271E-002 +/-	8.5%	< 2.162E-005	< 2.430E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.401E-002 +/-	3.5%	< 2.286E-005	< 5.810E-009
Cf-251	< 2.012E-001 +/-	5.6%	< 1.916E-004	< 1.258E-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\00000387_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P014_S014

Acquisition Start: 5/6/2009 12:11:17 PM
Elapsed Live Time: 119.07 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.561 +/- 0.0196
SE-75	264.66	0.730 +/- 0.0131
SE-75	279.54	0.740 +/- 0.0136
SE-75	400.66	0.787 +/- 0.0148

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 5/6/2009 12:13:18 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
2234.64		11980	5	1.11	4467.42	5.271E-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	< 2.249E-002 +/-	2.0%	< 2.142E-005	< 3.554E-012
Al-26	< 2.578E-002 +/-	15.2%	< 2.455E-005	< 1.356E-006
K-40	< 2.805E-001 +/-	5.0%	< 2.672E-004	< 4.376E-002
Co-57	< 4.747E-002 +/-	3.4%	< 4.521E-005	< 5.554E-012
Co-60	< 3.060E-002 +/-	1.7%	< 2.915E-005	< 2.684E-011
Se-75	< 3.852E-002 +/-	1.8%	< 3.668E-005	< 2.650E-012
Kr-85	< 4.648E+000 +/-	3.1%	< 4.427E-003	< 1.171E-008
Sr-90	< 1.950E-002 +/-	1.9%	< 1.857E-005	< 1.414E-010
Sb-125	< 5.153E-002 +/-	2.1%	< 4.907E-005	< 4.957E-011
Ba-133	< 2.284E-002 +/-	1.7%	< 2.175E-005	< 9.021E-011
Cs-134	< 1.952E-002 +/-	2.0%	< 1.859E-005	< 1.490E-011
Cs-137	< 1.950E-002 +/-	1.9%	< 1.857E-005	< 2.223E-010
Eu-152	< 5.518E-002 +/-	2.5%	< 5.256E-005	< 3.101E-010
Eu-154	< 5.812E-002 +/-	2.0%	< 5.536E-005	< 2.180E-010
Ho-166m	< 2.527E-002 +/-	2.3%	< 2.407E-005	< 1.405E-008
Bi-207	< 1.394E-002 +/-	2.0%	< 1.328E-005	< 2.537E-010
Pb-210	< 8.053E+002 +/-	56.7%	< 7.669E-001	< 1.047E-005
Ra-226	< 3.524E-002 +/-	2.0%	< 3.356E-005	< 3.524E-008
Ac-227	< 1.324E-001 +/-	8.3%	< 1.261E-004	< 1.813E-009
Th-230	< 6.014E+001 +/-	8.6%	< 5.727E-002	< 2.947E-003
Pa-231	< 6.278E-001 +/-	11.2%	< 5.979E-004	< 1.312E-005
Th-232	< 5.245E-002 +/-	2.2%	< 4.995E-005	< 4.726E-001
U-232	< 5.245E-002 +/-	2.2%	< 4.995E-005	< 2.428E-009
U-233	< 4.479E+002 +/-	2.7%	< 4.266E-001	< 4.568E-002
Pa-234	< 1.154E-001 +/-	11.5%	< 1.099E-004	
Pa-234m	< 1.263E+002 +/-	2.2%	< 1.203E-001	
U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
U-235	< 4.244E-002 +/-	2.5%	< 4.042E-005	< 1.940E-002
Np-237	< 5.138E-002 +/-	1.9%	< 4.893E-005	< 7.193E-005
Pu-238	< 3.171E+003 +/-	2.6%	< 3.020E+000	< 1.833E-004
U-238	< 2.022E+000 +/-	2.2%	< 1.925E-003	< 5.944E+000
Pu-239	< 5.944E+002 +/-	3.1%	< 5.661E-001	< 9.451E-003
Pu-239B	< 1.433E+003 +/-	5.4%	< 1.365E+000	< 2.279E-002
U-239	< 7.090E+003 +/-	69.5%	< 6.752E+000	
Pu-240	< 9.473E+002 +/-	4.7%	< 9.022E-001	< 4.121E-003
Am-241	< 4.982E+000 +/-	25.0%	< 4.744E-003	< 1.435E-006
Am-241B	< 3.584E+002 +/-	5.0%	< 3.413E-001	< 1.032E-004
Pu-241	< 1.505E+004 +/-	2.8%	< 1.433E+001	< 1.447E-004
Pu-241B	< 4.142E+003 +/-	2.4%	< 3.945E+000	< 3.984E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.635E-001 +/-	1.8%	< 1.557E-004	< 8.094E-007
Cm-243	< 1.687E-001 +/-	3.3%	< 1.606E-004	< 3.238E-009
Cm-244	< 2.584E+004 +/-	14.1%	< 2.461E+001	< 3.152E-004
Cm-245	< 2.765E-001 +/-	7.7%	< 2.634E-004	< 1.590E-006
Cm-247	< 3.480E-002 +/-	8.5%	< 3.314E-005	< 3.724E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.953E-002 +/-	3.5%	< 1.860E-005	< 4.727E-009
Cf-251	< 1.478E-001 +/-	5.6%	< 1.407E-004	< 9.236E-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\00000387_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P015_S015

Acquisition Start: 5/6/2009 12:14:28 PM
Elapsed Live Time: 119.15 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.585 +/- 0.0199
SE-75	264.66	0.745 +/- 0.0133
SE-75	279.54	0.755 +/- 0.0139
SE-75	400.66	0.797 +/- 0.0150

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 5/6/2009 12:16:30 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
400.73		44	11	0.95	802.73	2.688E-004	18.85	
2234.68		11980	2	1.16	4467.50	2.677E-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	< 2.071E-002 +/-	1.8%	< 1.972E-005	< 9.547E-016
Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
Na-22	< 1.829E-002 +/-	2.1%	< 1.742E-005	< 2.890E-012
Al-26	< 2.844E-002 +/-	15.4%	< 2.709E-005	< 1.496E-006
K-40	< 2.709E-001 +/-	5.0%	< 2.580E-004	< 4.226E-002
Co-57	< 4.491E-002 +/-	3.5%	< 4.277E-005	< 5.255E-012
Co-60	< 3.378E-002 +/-	1.7%	< 3.217E-005	< 2.963E-011
Se-75	< 3.838E-002 +/-	1.8%	< 3.656E-005	< 2.641E-012
Kr-85	< 5.025E+000 +/-	3.0%	< 4.786E-003	< 1.266E-008
Sr-90	< 2.077E-002 +/-	1.9%	< 1.978E-005	< 1.506E-010
Sb-125	< 4.595E-002 +/-	2.1%	< 4.377E-005	< 4.421E-011
Ba-133	< 2.581E-002 +/-	1.7%	< 2.458E-005	< 1.019E-010
Cs-134	< 1.483E-002 +/-	1.9%	< 1.413E-005	< 1.132E-011
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	< 5.223E-002 +/-	2.2%	< 4.975E-005	< 1.959E-010
Ho-166m	< 3.180E-002 +/-	2.7%	< 3.029E-005	< 1.768E-008
Bi-207	< 1.714E-002 +/-	2.0%	< 1.632E-005	< 3.119E-010
Pb-210	< 9.819E+002 +/-	57.4%	< 9.351E-001	< 1.276E-005
Ra-226	< 4.300E-002 +/-	2.0%	< 4.095E-005	< 4.300E-008
Ac-227	< 1.236E-001 +/-	8.3%	< 1.177E-004	< 1.693E-009
Th-230	< 6.227E+001 +/-	8.6%	< 5.930E-002	< 3.051E-003
Pa-231	< 6.616E-001 +/-	11.2%	< 6.301E-004	< 1.383E-005
Th-232	< 4.678E-002 +/-	2.0%	< 4.455E-005	< 4.215E-001
U-232	< 4.678E-002 +/-	2.0%	< 4.455E-005	< 2.166E-009
U-233	< 4.284E+002 +/-	2.8%	< 4.080E-001	< 4.370E-002
Pa-234	< 6.432E-002 +/-	12.2%	< 6.126E-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	< 4.001E-002 +/-	2.5%	< 3.811E-005	< 1.829E-002
Np-237	< 4.818E-002 +/-	1.9%	< 4.589E-005	< 6.746E-005
Pu-238	< 2.924E+003 +/-	2.7%	< 2.784E+000	< 1.690E-004
U-238	< 2.439E+000 +/-	2.2%	< 2.323E-003	< 7.171E+000
Pu-239	< 5.867E+002 +/-	3.2%	< 5.588E-001	< 9.328E-003
Pu-239B	< 1.341E+003 +/-	5.6%	< 1.277E+000	< 2.131E-002
U-239	< 9.237E+003 +/-	70.2%	< 8.797E+000	
Pu-240	< 8.717E+002 +/-	4.9%	< 8.301E-001	< 3.792E-003
Am-241	< 4.713E+000 +/-	25.4%	< 4.489E-003	< 1.357E-006
Am-241B	< 3.348E+002 +/-	5.1%	< 3.189E-001	< 9.642E-005
Pu-241	< 1.492E+004 +/-	2.9%	< 1.421E+001	< 1.436E-004
Pu-241B	< 4.121E+003 +/-	2.4%	< 3.925E+000	< 3.964E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.583E-001 +/-	1.8%	< 1.508E-004	< 7.837E-007
Cm-243	< 1.633E-001 +/-	3.3%	< 1.555E-004	< 3.135E-009
Cm-244	< 1.965E+004 +/-	14.1%	< 1.872E+001	< 2.398E-004
Cm-245	< 2.343E-001 +/-	7.7%	< 2.231E-004	< 1.347E-006
Cm-247	< 3.858E-002 +/-	8.5%	< 3.675E-005	< 4.128E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.126E-002 +/-	3.5%	< 2.024E-005	< 5.144E-009
Cf-251	< 1.310E-001 +/-	5.6%	< 1.248E-004	< 8.187E-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\00000387_CNTR0001_DCAT0002_PROC00AG_ANLZ0003_P016_S016

Acquisition Start: 5/6/2009 12:17:39 PM
Elapsed Live Time: 119.16 sec Elapsed Real Time: 120.00 sec

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

Calibration Description: 55 TRU Galv 81.5# 1.75"
Calibration Date: 3/16/2009 2:01:07 PM

Nuclide	Energy	Transmission Ratio
SE-75	136.00	0.513 +/- 0.0187
SE-75	264.66	0.699 +/- 0.0125
SE-75	279.54	0.711 +/- 0.0131
SE-75	400.66	0.765 +/- 0.0144

Errors quoted at 1.000 sigma

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

Peak Analysis Performed on: 5/6/2009 12:19:42 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
400.83		25	18	0.67	802.93	1.849E-004	32.85	
1332.86		14	2	0.90	2665.39	6.290E-005	31.65	
2234.64		11980	0	1.12	4467.41	2.424E-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	< 4.209E-002 +/-	2.3%	< 4.009E-005	< 1.941E-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	< 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	< 7.554E-002 +/-	4.4%	< 7.194E-005	< 8.838E-012
Co-60	< 4.644E-002 +/-	2.0%	< 4.423E-005	< 4.073E-011
Se-75	< 6.116E-002 +/-	2.8%	< 5.824E-005	< 4.208E-012
Kr-85	< 6.590E+000 +/-	3.6%	< 6.276E-003	< 1.661E-008
Sr-90	< 1.825E-002 +/-	2.6%	< 1.738E-005	< 1.323E-010
Sb-125	< 8.272E-002 +/-	2.7%	< 7.879E-005	< 7.958E-011
Ba-133	< 3.574E-002 +/-	2.3%	< 3.404E-005	< 1.412E-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	< 6.759E-002 +/-	2.9%	< 6.437E-005	< 3.799E-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	< 2.170E+000 +/-	46.8%	< 2.067E-003	< 2.821E-008
Ra-226	< 4.754E-002 +/-	3.0%	< 4.528E-005	< 4.754E-008
Ac-227	< 2.365E-001 +/-	3.5%	< 2.252E-004	< 3.240E-009
Th-230	< 2.151E+001 +/-	15.5%	< 2.049E-002	< 1.054E-003
Pa-231	< 8.440E-001 +/-	11.4%	< 8.038E-004	< 1.764E-005
Th-232	< 8.933E-002 +/-	2.9%	< 8.508E-005	< 8.049E-001
U-232	< 8.933E-002 +/-	2.9%	< 8.508E-005	< 4.136E-009
U-233	< 6.377E+002 +/-	2.5%	< 6.074E-001	< 6.505E-002
Pa-234	< 1.282E-001 +/-	12.1%	< 1.221E-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	< 7.843E-002 +/-	3.6%	< 7.469E-005	< 3.584E-002
Np-237	< 5.438E-002 +/-	2.6%	< 5.179E-005	< 7.614E-005
Pu-238	< 5.802E+003 +/-	3.6%	< 5.526E+000	< 3.353E-004
U-238	< 2.744E+000 +/-	2.4%	< 2.613E-003	< 8.067E+000
Pu-239	< 1.016E+003 +/-	4.1%	< 9.678E-001	< 1.616E-002
Pu-239B	< 1.481E+003 +/-	7.0%	< 1.410E+000	< 2.354E-002
U-239	< 8.790E+000 +/-	58.6%	< 8.371E-003	
Pu-240	< 1.040E+003 +/-	6.2%	< 9.904E-001	< 4.523E-003
Am-241	< 2.295E-001 +/-	19.9%	< 2.185E-004	< 6.609E-008
Am-241B	< 3.972E+002 +/-	6.4%	< 3.783E-001	< 1.144E-004
Pu-241	< 2.965E+004 +/-	3.7%	< 2.824E+001	< 2.852E-004
Pu-241B	< 8.818E+003 +/-	3.6%	< 8.398E+000	< 8.483E-005
Pu-242	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 1.248E-001 +/-	10.7%	< 1.188E-004	< 6.176E-007
Cm-243	< 2.345E-001 +/-	3.9%	< 2.233E-004	< 4.502E-009
Cm-244	< 1.950E+004 +/-	14.2%	< 1.858E+001	< 2.379E-004
Cm-245	< 5.349E-001 +/-	8.1%	< 5.094E-004	< 3.076E-006
Cm-247	< 5.093E-002 +/-	8.7%	< 4.850E-005	< 5.449E-004

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 2.955E-002 +/-	3.8%	< 2.815E-005	< 7.152E-009
Cf-251	< 2.932E-001 +/-	6.2%	< 2.793E-004	< 1.833E-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

Sum of Segment NID Results
Category: Segmented

C:\Canberra\NDA2k\Data\00000387_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	< 4.209E-002 +/-	2.3%	< 2.506E-006	< 1.941E-015
	Pulser	< 0.000E+000 +/-	0.0%	< 0.000E+000	
	Na-22	< 3.848E-002 +/-	2.0%	< 2.290E-006	< 6.080E-012
	Al-26	< 5.021E-002 +/-	15.5%	< 2.989E-006	< 2.641E-006
	K-40	< 4.336E-001 +/-	5.6%	< 2.581E-005	< 6.764E-002
	Co-57	1.731E+001 +/-	9.0%	1.030E-003	2.025E-009
	Co-60	< 4.698E-002 +/-	1.9%	< 2.797E-006	< 4.121E-011
	Se-75	< 2.942E-001 +/-	1.9%	< 1.751E-005	< 2.024E-011
	Kr-85	< 1.665E+001 +/-	3.1%	< 9.912E-004	< 4.197E-008
	Sr-90	5.339E-001 +/-	24.8%	3.178E-005	3.871E-009
	Sb-125	< 2.940E-001 +/-	2.3%	< 1.750E-005	< 2.828E-010
	Ba-133	< 2.228E-001 +/-	1.7%	< 1.326E-005	< 8.802E-010
	Cs-134	< 4.602E-002 +/-	1.8%	< 2.739E-006	< 3.511E-011
?	Cs-137	5.339E-001 +/-	24.8%	3.178E-005	6.087E-009
	Eu-152	< 1.551E-001 +/-	1.8%	< 9.232E-006	< 8.717E-010
	Eu-154	< 1.099E-001 +/-	2.2%	< 6.540E-006	< 4.120E-010
	Ho-166m	< 5.344E-002 +/-	2.4%	< 3.181E-006	< 2.971E-008
	Bi-207	< 4.824E-002 +/-	1.8%	< 2.872E-006	< 8.781E-010
	Pb-210	< 3.338E+004 +/-	309.7%	< 1.987E+000	< 4.339E-004
	Ra-226	< 1.150E-001 +/-	2.3%	< 6.844E-006	< 1.150E-007
	Ac-227	< 1.033E+000 +/-	8.3%	< 6.151E-005	< 1.416E-008
	Th-230	< 4.475E+002 +/-	9.0%	< 2.664E-002	< 2.193E-002
	Pa-231	< 5.301E+000 +/-	11.2%	< 3.155E-004	< 1.108E-004
	Th-232	< 1.175E-001 +/-	2.4%	< 6.992E-006	< 1.058E+000
	U-232	7.224E-001 +/-	35.9%	4.300E-005	3.345E-008
	U-233	< 3.964E+003 +/-	2.7%	< 2.360E-001	< 4.044E-001
	Pa-234	< 1.812E-001 +/-	12.3%	< 1.079E-005	
	Pa-234m	< 2.396E+002 +/-	2.3%	< 1.426E-002	
	U-234	< 0.000E+000 +/-	0.0%	< 0.000E+000	< 0.000E+000
	U-235	< 3.384E-001 +/-	2.5%	< 2.014E-005	< 1.546E-001
	Np-237	7.648E+000 +/-	5.1%	4.553E-004	1.071E-002
	Pu-238	< 2.255E+004 +/-	2.6%	< 1.342E+000	< 1.303E-003
	U-238	< 4.712E+000 +/-	2.1%	< 2.805E-004	< 1.385E+001
	Pu-239	6.618E+006 +/-	1.5%	3.940E+002	1.052E+002
	Pu-239B	4.946E+006 +/-	0.7%	2.944E+002	7.863E+001
	U-239	< 2.278E+005 +/-	368.5%	< 1.356E+001	
	Pu-240	7.036E+005 +/-	21.5%	4.188E+001	3.060E+000

Am-241	1.506E+006 +/- 2.3%	8.964E+001	4.337E-001
Am-241B	1.428E+006 +/- 2.9%	8.499E+001	4.112E-001
Pu-241	1.123E+007 +/- 5.6%	6.686E+002	1.081E-001
Pu-241B	1.560E+007 +/- 1.6%	9.288E+002	1.501E-001
Pu-242	< 0.000E+000 +/- 0.0%	< 0.000E+000	< 0.000E+000
Am-243	< 9.447E-001 +/- 2.2%	< 5.624E-005	< 4.677E-006
Cm-243	< 1.081E+000 +/- 3.3%	< 6.434E-005	< 2.075E-008
Cm-244	< 5.838E+004 +/- 14.2%	< 3.475E+000	< 7.122E-004
Cm-245	< 2.090E+000 +/- 7.7%	< 1.244E-004	< 1.202E-005
Cm-247	< 1.528E-001 +/- 8.5%	< 9.095E-006	< 1.635E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 1.795E-001 +/-	3.5%	< 1.068E-005	< 4.344E-008
Cf-251	< 1.185E+000 +/-	5.6%	< 7.057E-005	< 7.409E-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	1.05E+002 +- 1.61E+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: SGS100 Analysis Date: 5/6/2009

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

Net Weight	16800.0 g	
Pu mass	1.12E+002 +-	1.65E+001 g
TRU Alpha Activity	9.71E+000 +-	1.09E+000 Ci
TRU Activity Concentration	5.78E+005 +-	6.47E+004 nCi/g
Pu-239 Equivalent Activity	1.01E+001 +-	1.09E+000 Ci
Pu-239 FGE	1.06E+002 +-	1.65E+001 g
Decay heat	3.06E-001 +-	3.38E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	3.87E-009	5.34E-007	1.57E-007	0.00E+000
CS137	6.09E-009	5.34E-007	1.57E-007	8.91E-008
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	1.07E-002	7.65E-006	1.25E-006	7.72E-007
PU238	9.29E-003	1.61E-001	2.78E-002	3.11E-004
U238	<LLD	<LLD	0.00E+000	4.71E-006
PU239	1.05E+002	6.62E+000	1.04E+000	1.28E-002
PU240	6.19E+000	1.42E+000	2.23E-001	2.75E-003
AM241	4.34E-001	1.51E+000	2.37E-001	5.86E-004
PU241	1.89E-001	1.96E+001	3.08E+000	3.80E-002
PU242	3.41E-002	1.35E-004	2.52E-005	0.00E+000

Errors quoted at 1.000 sigma

Operator:_____ Date:_____

ITR:_____ Date:_____

Summed Segment Spectra Results
Category: Segmented

C:\Canberra\NDA2k\Data\00000387_CNTR0001_DCAT0002_PROC00AI.CNF

Elapsed Live Time: 97.71 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: 5/6/2009 12:20:05 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
	49.38		7871	36423	2.32	100.62	7.572E-007	3.85	
	59.46	Y	350801	46166	1.12	120.76	6.639E-006	0.40	
	67.24	Y	762	26546	0.95	136.31	2.020E-005	32.89	
	75.04		633	38240	1.00	151.90	4.519E-005	47.60	
M	94.70	Y	63889	86729	1.56	191.18	1.524E-004	0.88	347.06
m	98.71	Y	246139	115267	1.57	199.19	1.782E-004	0.69	
m	100.90	Y	38159	115289	1.57	203.57	1.924E-004	1.15	
m	103.35	Y	176826	97825	1.57	208.47	2.082E-004	0.68	
M	111.08	Y	66241	58565	1.37	223.92	2.563E-004	2.84	479.57
m	114.57	Y	54334	78455	1.37	230.90	2.767E-004	2.71	
m	116.64	Y	51077	73756	1.38	235.02	2.882E-004	2.67	
m	120.58	Y	12890	66368	1.38	242.90	3.092E-004	2.96	
m	122.82	Y	6338	58901	1.39	247.37	3.203E-004	3.71	
m	125.26	Y	25332	56221	1.39	252.24	3.319E-004	2.70	
m	129.30	Y	120368	49674	1.40	260.33	3.496E-004	2.57	
M	144.18	Y	7186	33370	1.15	290.07	3.996E-004	5.13	3.33
m	146.32	Y	6291	33466	1.15	294.33	4.048E-004	5.39	
m	148.56	Y	15532	33604	1.16	298.82	4.099E-004	4.53	
m	152.85	Y	625	33784	1.16	307.39	4.183E-004	21.18	
M	161.04	Y	7110	33612	1.38	323.76	4.301E-004	6.72	10.16
m	164.65	Y	6653	59144	1.39	330.97	4.336E-004	5.64	
m	169.43	Y	1502	54314	1.39	340.52	4.371E-004	11.38	
m	171.32	Y	5227	57506	1.40	344.29	4.380E-004	5.85	
	179.21	Y	2305	30990	1.24	360.06	4.400E-004	12.16	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	189.38	Y	4159	29194	1.39	380.38	4.384E-004	6.64	
	195.60	Y	4773	30945	1.14	392.81	4.356E-004	6.13	
M	203.53	Y	26504	25490	1.14	408.67	4.306E-004	0.81	33.98
m	208.00	Y	86155	25329	1.15	417.58	4.272E-004	0.50	
M	237.87	Y	877	14175	1.57	477.28	3.976E-004	27.95	1.14
m	243.24	Y	1717	23985	1.58	488.00	3.917E-004	22.32	
	255.32	Y	3811	15441	1.32	512.15	3.783E-004	5.52	
M	263.95	Y	1582	13932	1.21	529.40	3.688E-004	804.24	2.64
m	267.51	Y	3403	16225	1.21	536.51	3.648E-004	782.86	
M	297.43	Y	2176	10496	1.13	596.29	3.335E-004	4.27	1.95
m	300.13	Y	312	9189	1.13	601.69	3.308E-004	23.03	
M	311.83	Y	4781	9601	1.54	625.07	3.196E-004	2.13	10.49
m	316.30	Y	751	13336	1.55	634.00	3.155E-004	10.04	
m	320.99	Y	3183	13659	1.55	643.37	3.113E-004	2.87	
m	323.37	Y	4243	12307	1.56	648.14	3.091E-004	2.29	
M	332.70	Y	29992	8733	1.31	666.78	3.011E-004	0.70	17.00
m	335.63	Y	11895	8151	1.31	672.64	2.986E-004	1.09	
m	341.40	Y	3348	8504	1.32	684.17	2.939E-004	2.49	
m	344.96	Y	26205	8063	1.32	691.28	2.911E-004	0.74	
M	361.83	Y	583	4365	1.29	724.98	2.784E-004	10.36	28.64
m	366.95	Y	3730	6681	1.30	735.21	2.747E-004	2.57	
m	368.50	Y	7208	5969	1.30	738.31	2.736E-004	1.58	
m	370.90	Y	1090	6426	1.30	743.12	2.720E-004	5.72	
m	375.02	Y	71000	5121	1.31	751.34	2.692E-004	0.51	
m	380.10	Y	13743	4218	1.31	761.49	2.658E-004	0.97	
m	382.69	Y	11594	3974	1.31	766.67	2.641E-004	1.06	
	392.86	Y	24313	3876	1.56	786.99	2.578E-004	0.87	
	400.34	Y	521	3496	1.96	801.93	2.533E-004	19.80	
M	413.65	Y	62825	1823	1.39	828.54	2.458E-004	0.68	10.75
m	419.11	Y	418	1318	1.39	839.44	2.428E-004	8.67	
m	422.53	Y	5180	1404	1.39	846.28	2.410E-004	1.66	
m	426.53	Y	1282	1330	1.40	854.28	2.390E-004	3.75	
m	429.86	Y	292	1300	1.40	860.92	2.373E-004	11.48	
M	445.72	Y	338	974	1.33	892.63	2.296E-004	9.28	3.77
m	451.41	Y	7615	1176	1.34	903.99	2.271E-004	1.24	
	481.36	Y	284	828	1.60	963.85	2.146E-004	18.30	
	558.55		158	377	1.70	1118.10	1.898E-004	21.42	
	597.50	Y	111	408	1.47	1195.93	1.801E-004	33.02	
	618.87	Y	728	355	1.62	1238.63	1.754E-004	5.92	
M	633.07	Y	110	231	1.52	1267.00	1.725E-004	183.62	8.16
m	640.09	Y	330	343	1.53	1281.04	1.712E-004	168.88	
m	645.81	Y	518	336	1.53	1292.46	1.701E-004	166.46	
m	652.53	Y	532	328	1.53	1305.89	1.688E-004	163.77	
m	658.75	Y	310	300	1.54	1318.31	1.676E-004	161.60	
m	662.32	Y	3736	307	1.54	1325.46	1.670E-004	159.86	
	688.62	Y	263	231	1.59	1378.01	1.625E-004	11.91	
M	696.52	Y	36	159	1.02	1393.80	1.612E-004	32.26	0.97
m	703.53	Y	73	133	1.03	1407.81	1.601E-004	18.21	
m	709.53		32	114	1.03	1419.79	1.592E-004	32.35	
	721.88	Y	1519	195	1.59	1444.48	1.573E-004	3.08	

	Energy (keV)	ID	Net Peak Area	Continuum Counts	FWHM (keV)	Peak centroid	Peak Efficiency	Net Area %Uncert.	Fit
	737.30	Y	56	117	1.58	1475.28	1.550E-004	33.90	
	756.04	Y	145	320	1.26	1512.72	1.525E-004	30.13	
M	766.52	Y	85	85	1.65	1533.68	1.511E-004	14.98	2.35
m	769.19	Y	323	121	1.65	1539.00	1.507E-004	6.24	
	1099.58		70	79	1.75	2199.22	1.187E-004	24.84	
	1173.47	Y	118	52	1.40	2346.88	1.132E-004	14.53	
	1291.80		114	36	1.91	2583.34	1.048E-004	13.81	
	1332.81	Y	163	41	1.41	2665.29	1.019E-004	10.70	
	1461.18	Y	60	30	1.10	2921.82	9.341E-005	20.35	
M	2224.31		30	14	1.01	4446.76	5.042E-005	20.81	2.98
m	2234.64		191681	141	1.01	4467.40	4.994E-005	0.47	
	2293.77		38	56	0.93	4585.56	4.727E-005	40.79	

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	< 1.347E-001 +/-	1.2%	< 8.016E-006	< 2.128E-011
	Al-26	< 1.292E-001 +/-	8.2%	< 7.688E-006	< 6.794E-006
	K-40	1.351E+000 +/-	20.6%	8.042E-005	2.108E-001
X	Co-57				
	Co-60	3.217E-001 +/-	8.9%	1.915E-005	2.822E-010
	Se-75	< 3.899E+000 +/-	1.1%	< 2.321E-004	< 2.682E-010
	Kr-85	< 4.589E+001 +/-	2.5%	< 2.731E-003	< 1.156E-007
	Sr-90	< 1.670E-001 +/-	1.0%	< 9.938E-006	< 1.210E-009
	Sb-125	< 9.695E-001 +/-	1.5%	< 5.771E-005	< 9.327E-010
	Ba-133	< 5.976E-001 +/-	1.0%	< 3.557E-005	< 2.361E-009
	Cs-134	< 1.580E-001 +/-	1.0%	< 9.402E-006	< 1.205E-010
X	Cs-137				
	Eu-152	< 4.268E-001 +/-	2.1%	< 2.540E-005	< 2.398E-009
	Eu-154	< 3.313E-001 +/-	1.5%	< 1.972E-005	< 1.242E-009
	Ho-166m	< 1.588E-001 +/-	1.7%	< 9.450E-006	< 8.827E-008
	Bi-207	< 1.359E-001 +/-	1.2%	< 8.088E-006	< 2.473E-009
	Pb-210	< 1.605E+004 +/-	12.2%	< 9.553E-001	< 2.086E-004
	Ra-226	< 2.941E-001 +/-	1.5%	< 1.751E-005	< 2.941E-007
	Ac-227	< 2.479E+000 +/-	8.2%	< 1.475E-004	< 3.396E-008
	Th-230	2.237E+003 +/-	34.0%	1.331E-001	1.096E-001
	Pa-231	< 1.375E+001 +/-	11.2%	< 8.185E-004	< 2.874E-004
	Th-232	< 3.839E-001 +/-	1.9%	< 2.285E-005	< 3.459E+000
	U-232	8.597E-001 +/-	36.9%	5.117E-005	3.980E-008

	U-233	<	9.124E+003	+/-	1.6%	<	5.431E-001	< 9.306E-001
	Pa-234	<	5.403E-001	+/-	12.1%	<	3.216E-005	
	Pa-234m	<	6.968E+002	+/-	1.5%	<	4.148E-002	
	U-234	<	0.000E+000	+/-	0.0%	<	0.000E+000	< 0.000E+000
	U-235	<	7.849E-001	+/-	1.8%	<	4.672E-005	< 3.587E-001
	Np-237		5.944E+000	+/-	3.3%		3.538E-004	8.322E-003
	Pu-238		3.892E+004	+/-	19.6%		2.317E+000	2.250E-003
	U-238	<	1.171E+001	+/-	1.6%	<	6.968E-004	< 3.442E+001
	Pu-239		6.683E+006	+/-	1.9%		3.978E+002	1.063E+002
	Pu-239B		3.807E+006	+/-	0.6%		2.266E+002	6.053E+001
	U-239	@	1.000E+020	+/-	100.0%	@	5.952E+015	
X	Pu-240							
	Am-241		1.111E+006	+/-	3.8%		6.615E+001	3.201E-001
	Am-241B		6.882E+005	+/-	1.9%		4.096E+001	1.982E-001
	Pu-241		4.783E+006	+/-	4.9%		2.847E+002	4.601E-002
	Pu-241B		8.957E+006	+/-	1.8%		5.332E+002	8.617E-002
	Pu-242	<	0.000E+000	+/-	0.0%	<	0.000E+000	< 0.000E+000
	Am-243	<	2.668E+000	+/-	1.2%	<	1.588E-004	< 1.320E-005
	Cm-243	<	2.804E+000	+/-	3.0%	<	1.669E-004	< 5.384E-008
	Cm-244	<	1.559E+005	+/-	14.1%	<	9.278E+000	< 1.902E-003
	Cm-245	<	4.870E+000	+/-	7.5%	<	2.899E-004	< 2.800E-005
	Cm-247	<	3.799E-001	+/-	8.4%	<	2.261E-005	< 4.065E-003

Nuclide	Total Activity (uCi)	%Error	Concentration (uCi/g)	Mass g
Cf-249	< 4.269E-001 +/-	3.2%	< 2.541E-005	< 1.033E-007
Cf-251	< 2.732E+000 +/-	5.3%	< 1.626E-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	1.06E+002 +- 2.06E+000	4.05E+001 +- 3.37E-001

Beta: 2.11E+002 +- 5.02E+000 Alpha: 1.00E+000 +- 0.00E+000
Number of energy lines used in correction: 4

Energy	Mass (g)
129.30	1.95E+001 +- 6.14E-001
203.55	3.87E+001 +- 5.58E-001
375.05	6.08E+001 +- 7.66E-001
413.71	6.24E+001 +- 9.05E-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: SGS100 Analysis Date: 5/6/2009

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

Net Weight	16800.0 g		
Pu mass	1.13E+002	+-	1.67E+001 g
TRU Alpha Activity	9.39E+000	+-	1.09E+000 Ci
TRU Activity Concentration	5.59E+005	+-	6.48E+004 nCi/g
Pu-239 Equivalent Activity	9.77E+000	+-	1.09E+000 Ci
Pu-239 FGE	1.07E+002	+-	1.67E+001 g
Decay heat	2.95E-001	+-	3.38E-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	1.67E-007
U233	<LLD	<LLD	0.00E+000	9.12E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	7.85E-007
NP237	8.32E-003	5.94E-006	9.47E-007	1.03E-006
PU238	9.39E-003	1.62E-001	2.82E-002	3.17E-004
U238	<LLD	<LLD	0.00E+000	1.17E-005
PU239	1.06E+002	6.68E+000	1.05E+000	1.30E-002
PU240	6.25E+000	1.44E+000	2.26E-001	2.80E-003
AM241	3.20E-001	1.11E+000	1.78E-001	1.17E-004
PU241	1.91E-001	1.98E+001	3.12E+000	3.87E-002
PU242	3.44E-002	1.37E-004	2.55E-005	0.00E+000

Errors quoted at 1.000 sigma

Operator:_____ Date:_____

ITR:_____ Date:_____

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

MGA version: MGA V9.63H CI

Measurement date = 5/6/09 Declared date = 5/6/09
Low energy spectrum sensitivity = 30.0% Total counts = 7.493E+006
High energy spectrum sensitivity : 10.0%

Pu g/cm2 = 0.7803 Cd g/cm2 = 2.0052 FWHM at 122 keV = 625 eV
QFIT = 1.00 FWHM at 208 keV = 799 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	0.000088	7.4	7.4	0.0492	7.4	0.00832	7.37	0.00860	7.61
Pu-239	1.000000	0.0	0.4	557.1443	0.8	94.24605	0.05	94.20866	0.05
Pu-240	0.058845	0.9	0.9	32.7853	1.1	5.54593	0.88	5.54550	0.88
Pu-241	0.001795	0.7	0.6	1.0000	0.0	0.16916	0.72	0.20671	0.88
Pu-242	(New alg.)			0.1806(10)		0.03055 (10)		0.03054 (9)	
Am-241	0.005364	0.5	0.3	2.9887	0.7	0.50557	0.48	0.50857	0.48

Pu-240 effective (meas. date) = 5.618 +/- 0.95%
Am-241 separated about 28.620 +/- 0.159 years ago
Am/Pu-241 weight ratio = 2.98870 +/- 0.74%

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
5/6/09 12:20:10 PM

QA File: C:\CANBERRA\NDA2K\QA\CNTR0001_DC
Sample ID: SGS100
Sample Quantity: 1.0000E+000
Sample Date: 4/2/09 3:10:59 PM
Measurement Date: 5/6/09 11:28:28 AM
Elapsed Live Time: 48.2 seconds
Elapsed Real Time: 60.0 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
Trans Peak 400.6 keV cen [0.00+/-0.00]	8.0238E+002	0.00 < : : : >
Trans Peak 400.6 keV FWH [0.00+/-0.00]	1.3934E+000	0.00 < : : : >

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 *****
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Last Results Report
5/6/09 12:20:15 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: 5/6/09 11:26:12 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: 1.0264E+002+/- 5.929]	1.0523E+002	4.3713E-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)

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***** GENIE QUALITY ASSURANCE *****
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Last Results Report
5/6/09 12:20:16 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:	5/6/09 11:29:32 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]	1.3868E+000	0.00 < : : : >
SGS-100 Pu-239 Mass [UD: 1.1082E+002+/- 3.000]	1.0626E+002	-1.5183E+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)