Apex-Gamma

Analysis Report for 1606064-11
CP-5015 05-09

6/17

GAMMA SPECTRUM ANALYSIS

Sample Identification	: 1606064-11
Sample Description	: CP-5015 05-09
Sample Type	: SOIL
Sample Size	: 3.808E+02 grams
Facility	: Countroom
Sample Taken On	: 6/7/2016 12:21:19PM
Acquisition Started	: 6/17/2016 6:14:33AM
Procedure	: GAS-1402 pCi
Operator	: Administrator
Detector Name	: GE3
Geometry	: GAS-1402
Live Time	: 3600.0 seconds
Real Time	: 3612.9 seconds
Dead Time	: 0.36 %
Peak Locate Threshold	: 2.50
Peak Locate Range (in channels)	: 1 - 4096
Peak Area Range (in channels)	: 9 - 4096
Identification Energy Tolerance	: 1.000 keV
Energy Calibration Used Done On	: 10/25/2014
Efficiency Calibration Used Done On	: 10/25/2014
Efficiency Calibration Description	:
Sample Number	: 39058

PEAK-TO-TOTAL CALIBRATION REPORT

Peak-to-Total Efficiency Calibration Equation

AG
6/17/16

Analysis Report for 1606064-11

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PEAK LOCATE REPORT

Peak Locate Performed on : 6/17/2016 7:14:48AM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096
Peak Search Sensitivity : 2.50

Peak No.	Energy (keV)	Centroid Channel	Centroid Uncertainty	Peak Significance
1	46.74	46.97	0.0000	0.00
2	63.57	63.79	0.0000	0.00
3	74.94	75.15	0.0000	0.00
4	77.69	77.90	0.0000	0.00
5	88.23	88.44	0.0000	0.00
6	93.32	93.53	0.0000	0.00
7	129.43	129.62	0.0000	0.00
8	186.16	186.31	0.0000	0.00
9	209.04	209.19	0.0000	0.00
10	238.91	239.04	0.0000	0.00
11	242.05	242.17	0.0000	0.00
12	270.06	270.17	0.0000	0.00
13	277.72	277.82	0.0000	0.00
14	295.53	295.63	0.0000	0.00
15	339.09	339.17	0.0000	0.00
16	352.34	352.41	0.0000	0.00
17	439.20	439.22	0.0000	0.00
18	463.69	463.71	0.0000	0.00
19	507.01	507.00	0.0000	0.00
20	511.10	511.09	0.0000	0.00
21	515.82	515.81	0.0000	0.00
22	579.19	579.15	0.0000	0.00
23	583.85	583.80	0.0000	0.00
24	609.87	609.82	0.0000	0.00
25	728.07	727.96	0.0000	0.00
26	861.20	861.03	0.0000	0.00
27	912.04	911.84	0.0000	0.00
28	965.44	965.22	0.0000	0.00
29	969.37	969.15	0.0000	0.00
30	1014.90	1014.66	0.0000	0.00
31	1077.94	1077.68	0.0000	0.00
32	1121.41	1121.13	0.0000	0.00
33	1156.68	1156.38	0.0000	0.00
34	1178.72	1178.41	0.0000	0.00
35	1186.45	1186.13	0.0000	0.00
36	1333.99	1333.62	0.0000	0.00
37	1340.87	1340.50	0.0000	0.00
38	1377.07	1376.68	0.0000	0.00
39	1383.68	1383.29	0.0000	0.00
40	1439.41	1439.00	0.0000	0.00
41	1457.42	1457.00	0.0000	0.00
42	1461.37	1460.95	0.0000	0.00

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Peak No.	Energy (keV)	Centroid Channel	Centroid Uncertainty	Peak Significance
43	1491.13	1490.70	0.0000	0.00
44	1537.37	1536.92	0.0000	0.00
45	1592.58	1592.11	0.0000	0.00
46	1631.38	1630.89	0.0000	0.00
47	1731.88	1731.36	0.0000	0.00
48	1765.10	1764.57	0.0000	0.00
49	1787.70	1787.16	0.0000	0.00
50	1926.35	1925.76	0.0000	0.00
51	2017.06	2016.44	0.0000	0.00
52	2180.38	2179.72	0.0000	0.00
53	2269.83	2269.14	0.0000	0.00
54	2459.32	2458.58	0.0000	0.00
55	2615.32	2614.54	0.0000	0.00

? = Adjacent peak noted
Errors quoted at 2.000sigma

Analysis Report for 1606064-11

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PEAK ANALYSIS REPORT

Peak Analysis Performed on : 6/17/2016 7:14:48AM

Peak Analysis From Channel : 1

Peak Analysis To Channel : 4096

	Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	FWHM (keV)
	1	46.74	43	50	46.97	1.65E+02	82.73	1.04E+03	1.37
	2	63.57	60	66	63.79	1.55E+02	91.10	1.39E+03	1.78
M	3	74.94	71	81	75.15	3.29E+02	83.29	9.85E+02	1.66
m	4	77.69	71	81	77.90	6.27E+02	90.61	9.63E+02	1.67
	5	88.23	86	91	88.44	1.40E+02	86.98	1.41E+03	1.72
	6	93.32	91	97	93.53	1.92E+02	91.56	1.28E+03	1.41
	7	129.43	127	132	129.62	7.81E+01	57.00	5.82E+02	2.43
	8	186.16	183	190	186.31	1.73E+02	69.89	7.04E+02	1.79
	9	209.04	205	212	209.19	1.05E+02	61.16	5.47E+02	2.08
M	10	238.91	234	246	239.04	7.92E+02	70.32	3.71E+02	1.89
m	11	242.05	234	246	242.17	1.38E+02	69.38	3.17E+02	1.89
M	12	270.06	267	281	270.17	7.88E+01	38.83	2.37E+02	1.92
m	13	277.72	267	281	277.82	4.06E+01	37.26	2.44E+02	1.93
	14	295.53	292	298	295.63	1.45E+02	49.07	3.32E+02	1.81
	15	339.09	335	343	339.17	1.57E+02	52.67	3.23E+02	1.60
	16	352.34	349	357	352.41	3.37E+02	56.75	2.88E+02	2.01
	17	439.20	437	442	439.22	2.40E+01	26.94	1.26E+02	2.87
	18	463.69	462	467	463.71	4.54E+01	27.75	1.23E+02	1.74
M	19	507.01	506	518	507.00	1.45E+01	12.49	4.44E+01	1.93
m	20	511.10	506	518	511.09	1.20E+02	38.16	1.47E+02	2.58
m	21	515.82	506	518	515.81	2.09E+01	25.14	8.30E+01	2.13
M	22	579.19	577	592	579.15	1.54E+01	19.36	8.63E+01	2.18
m	23	583.85	577	592	583.80	2.01E+02	35.93	9.32E+01	2.18
	24	609.87	604	615	609.82	2.40E+02	47.50	1.61E+02	2.01
	25	728.07	724	732	727.96	4.58E+01	33.11	1.32E+02	1.73
	26	861.20	855	864	861.03	3.49E+01	30.17	1.10E+02	1.96
	27	912.04	908	917	911.84	1.21E+02	33.56	9.57E+01	1.99
M	28	965.44	958	981	965.22	4.65E+01	21.89	5.46E+01	2.42
m	29	969.37	958	981	969.15	1.00E+02	25.44	3.74E+01	2.42
	30	1014.90	1010	1018	1014.66	2.48E+01	19.76	4.45E+01	6.57
	31	1077.94	1071	1081	1077.68	2.30E+01	24.15	6.41E+01	3.80
	32	1121.41	1117	1126	1121.13	4.81E+01	29.10	8.98E+01	1.83
	33	1156.68	1153	1160	1156.38	1.90E+01	19.49	4.79E+01	2.80
	34	1178.72	1176	1182	1178.41	1.89E+01	17.29	3.81E+01	2.67
	35	1186.45	1184	1189	1186.13	1.32E+01	12.61	2.16E+01	2.93
M	36	1333.99	1329	1346	1333.62	1.96E+01	17.60	3.57E+01	3.81
m	37	1340.87	1329	1346	1340.50	1.15E+01	16.42	2.44E+01	2.86
	38	1377.07	1372	1380	1376.68	2.84E+01	14.17	1.32E+01	5.01
	39	1383.68	1381	1387	1383.29	1.27E+01	11.53	1.66E+01	3.24
	40	1439.41	1437	1441	1439.00	6.50E+00	6.96	5.00E+00	2.71

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	Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	FWHM (keV)
M	41	1457.42	1456 -	1466	1457.00	1.12E+01	0.87	1.00E+00	2.41
m	42	1461.37	1456 -	1466	1460.95	4.81E+02	44.91	1.11E+01	2.20
	43	1491.13	1483 -	1494	1490.70	1.18E+01	15.49	2.45E+01	4.50
	44	1537.37	1533 -	1540	1536.92	1.20E+01	6.93	0.00E+00	2.36
	45	1592.58	1590 -	1595	1592.11	8.95E+00	11.79	2.01E+01	2.68
	46	1631.38	1627 -	1634	1630.89	8.00E+00	8.94	8.00E+00	3.32
	47	1731.88	1726 -	1737	1731.36	2.08E+01	11.49	6.42E+00	5.08
	48	1765.10	1760 -	1768	1764.57	3.53E+01	15.12	1.34E+01	3.13
	49	1787.70	1783 -	1789	1787.16	6.06E+00	6.65	3.88E+00	1.37
	50	1926.35	1922 -	1928	1925.76	7.17E+00	6.95	3.67E+00	3.51
	51	2017.06	2011 -	2020	2016.44	9.00E+00	6.00	0.00E+00	2.74
	52	2180.38	2174 -	2185	2179.72	1.00E+01	9.38	5.92E+00	7.43
	53	2269.83	2265 -	2272	2269.14	7.00E+00	5.29	0.00E+00	1.47
	54	2459.32	2454 -	2461	2458.58	5.88E+00	6.93	4.25E+00	2.71
	55	2615.32	2610 -	2618	2614.54	5.70E+01	15.10	0.00E+00	2.57

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

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 6/17/2016 7:14:48AM

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

	Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
	1	46.74	43 -	50	1.65E+02	82.73	1.04E+03	6.46E+01
	2	63.57	60 -	66	1.55E+02	91.10	1.39E+03	7.20E+01
M	3	74.94	71 -	81	3.29E+02	83.29	9.85E+02	5.16E+01
m	4	77.69	71 -	81	6.27E+02	90.61	9.63E+02	5.10E+01
	5	88.23	86 -	91	1.40E+02	86.98	1.41E+03	6.88E+01
	6	93.32	91 -	97	1.92E+02	91.56	1.28E+03	7.17E+01
	7	129.43	127 -	132	7.81E+01	57.00	5.82E+02	4.45E+01
	8	186.16	183 -	190	1.73E+02	69.89	7.04E+02	5.32E+01
	9	209.04	205 -	212	1.05E+02	61.16	5.47E+02	4.74E+01
M	10	238.91	234 -	246	7.92E+02	70.32	3.71E+02	3.17E+01
m	11	242.05	234 -	246	1.38E+02	69.38	3.17E+02	2.93E+01
M	12	270.06	267 -	281	7.88E+01	38.83	2.37E+02	2.53E+01
m	13	277.72	267 -	281	4.06E+01	37.26	2.44E+02	2.57E+01

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	Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
	14	295.53	292 -	298	1.45E+02	49.07	3.32E+02	3.51E+01
	15	339.09	335 -	343	1.57E+02	52.67	3.23E+02	3.81E+01
	16	352.34	349 -	357	3.37E+02	56.75	2.88E+02	3.56E+01
	17	439.20	437 -	442	2.40E+01	26.94	1.26E+02	2.06E+01
	18	463.69	462 -	467	4.54E+01	27.75	1.23E+02	1.99E+01
M	19	507.01	506 -	518	1.45E+01	12.49	4.44E+01	1.10E+01
m	20	511.10	506 -	518	1.20E+02	38.16	1.47E+02	1.99E+01
m	21	515.82	506 -	518	2.09E+01	25.14	8.30E+01	1.50E+01
M	22	579.19	577 -	592	1.54E+01	19.36	8.63E+01	1.53E+01
m	23	583.85	577 -	592	2.01E+02	35.93	9.32E+01	1.59E+01
	24	609.87	604 -	615	2.40E+02	47.50	1.61E+02	2.96E+01
	25	728.07	724 -	732	4.58E+01	33.11	1.32E+02	2.48E+01
	26	861.20	855 -	864	3.49E+01	30.17	1.10E+02	2.28E+01
	27	912.04	908 -	917	1.21E+02	33.56	9.57E+01	2.08E+01
M	28	965.44	958 -	981	4.65E+01	21.89	5.46E+01	1.22E+01
m	29	969.37	958 -	981	1.00E+02	25.44	3.74E+01	1.00E+01
	30	1014.90	1010 -	1018	2.48E+01	19.76	4.45E+01	1.40E+01
	31	1077.94	1071 -	1081	2.30E+01	24.15	6.41E+01	1.82E+01
	32	1121.41	1117 -	1126	4.81E+01	29.10	8.98E+01	2.10E+01
	33	1156.68	1153 -	1160	1.90E+01	19.49	4.79E+01	1.43E+01
	34	1178.72	1176 -	1182	1.89E+01	17.29	3.81E+01	1.23E+01
	35	1186.45	1184 -	1189	1.32E+01	12.61	2.16E+01	8.47E+00
M	36	1333.99	1329 -	1346	1.96E+01	17.60	3.57E+01	9.83E+00
m	37	1340.87	1329 -	1346	1.15E+01	16.42	2.44E+01	8.12E+00
	38	1377.07	1372 -	1380	2.84E+01	14.17	1.32E+01	7.67E+00
	39	1383.68	1381 -	1387	1.27E+01	11.53	1.66E+01	7.45E+00
	40	1439.41	1437 -	1441	6.50E+00	6.96	5.00E+00	3.90E+00
M	41	1457.42	1456 -	1466	1.12E+01	0.87	1.00E+00	1.64E+00
m	42	1461.37	1456 -	1466	4.81E+02	44.91	1.11E+01	5.47E+00
	43	1491.13	1483 -	1494	1.18E+01	15.49	2.45E+01	1.14E+01
	44	1537.37	1533 -	1540	1.20E+01	6.93	0.00E+00	0.00E+00
	45	1592.58	1590 -	1595	8.95E+00	11.79	2.01E+01	8.35E+00
	46	1631.38	1627 -	1634	8.00E+00	8.94	8.00E+00	5.70E+00
	47	1731.88	1726 -	1737	2.08E+01	11.49	6.42E+00	5.74E+00
	48	1765.10	1760 -	1768	3.53E+01	15.12	1.34E+01	7.69E+00
	49	1787.70	1783 -	1789	6.06E+00	6.65	3.88E+00	3.68E+00
	50	1926.35	1922 -	1928	7.17E+00	6.95	3.67E+00	3.64E+00
	51	2017.06	2011 -	2020	9.00E+00	6.00	0.00E+00	0.00E+00
	52	2180.38	2174 -	2185	1.00E+01	9.38	5.92E+00	5.69E+00
	53	2269.83	2265 -	2272	7.00E+00	5.29	0.00E+00	0.00E+00
	54	2459.32	2454 -	2461	5.88E+00	6.93	4.25E+00	4.07E+00
	55	2615.32	2610 -	2618	5.70E+01	15.10	0.00E+00	0.00E+00

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

Analysis Report for 1606064-11

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PEAK WITH NID REPORT

Peak Analysis Performed on : 6/17/2016 7:14:48AM

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

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

	Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
	1	46.74	43 -	50	46.97	1.65E+02	82.73	1.04E+03	PB-210
	2	63.57	60 -	66	63.79	1.55E+02	91.10	1.39E+03	TH-234
									TH-230
M	3	74.94	71 -	81	75.15	3.29E+02	83.29	9.85E+02	AM-243
m	4	77.69	71 -	81	77.90	6.27E+02	90.61	9.63E+02	TI-44
	5	88.23	86 -	91	88.44	1.40E+02	86.98	1.41E+03	LU-176
									CD-109
									SN-126
	6	93.32	91 -	97	93.53	1.92E+02	91.56	1.28E+03	GA-67
	7	129.43	127 -	132	129.62	7.81E+01	57.00	5.82E+02	.....
	8	186.16	183 -	190	186.31	1.73E+02	69.89	7.04E+02	RA-226
	9	209.04	205 -	212	209.19	1.05E+02	61.16	5.47E+02	GA-67
									CM-243
M	10	238.91	234 -	246	239.04	7.92E+02	70.32	3.71E+02	PB-212
m	11	242.05	234 -	246	242.17	1.38E+02	69.38	3.17E+02	.....
M	12	270.06	267 -	281	270.17	7.88E+01	38.83	2.37E+02	.....
m	13	277.72	267 -	281	277.82	4.06E+01	37.26	2.44E+02	CM-243
									NP-239
	14	295.53	292 -	298	295.63	1.45E+02	49.07	3.32E+02	PB-214
	15	339.09	335 -	343	339.17	1.57E+02	52.67	3.23E+02	AC-228
	16	352.34	349 -	357	352.41	3.37E+02	56.75	2.88E+02	PB-214
	17	439.20	437 -	442	439.22	2.40E+01	26.94	1.26E+02	.....
	18	463.69	462 -	467	463.71	4.54E+01	27.75	1.23E+02	SB-125
M	19	507.01	506 -	518	507.00	1.45E+01	12.49	4.44E+01	.....
m	20	511.10	506 -	518	511.09	1.20E+02	38.16	1.47E+02	.....
m	21	515.82	506 -	518	515.81	2.09E+01	25.14	8.30E+01	.....
M	22	579.19	577 -	592	579.15	1.54E+01	19.36	8.63E+01	.....
m	23	583.85	577 -	592	583.80	2.01E+02	35.93	9.32E+01	TL-208
	24	609.87	604 -	615	609.82	2.40E+02	47.50	1.61E+02	BI-214
	25	728.07	724 -	732	727.96	4.58E+01	33.11	1.32E+02	BI-212
	26	861.20	855 -	864	861.03	3.49E+01	30.17	1.10E+02	TL-208
	27	912.04	908 -	917	911.84	1.21E+02	33.56	9.57E+01	LU-172
									AC-228
M	28	965.44	958 -	981	965.22	4.65E+01	21.89	5.46E+01	.....
m	29	969.37	958 -	981	969.15	1.00E+02	25.44	3.74E+01	AC-228
	30	1014.90	1010 -	1018	1014.66	2.48E+01	19.76	4.45E+01	.....
	31	1077.94	1071 -	1081	1077.68	2.30E+01	24.15	6.41E+01	.....
	32	1121.41	1117 -	1126	1121.13	4.81E+01	29.10	8.98E+01	TA-182

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	Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
									SC-46
	33	1156.68	1153 -	1160	1156.38	1.90E+01	19.49	4.79E+01	.....
	34	1178.72	1176 -	1182	1178.41	1.89E+01	17.29	3.81E+01	.....
	35	1186.45	1184 -	1189	1186.13	1.32E+01	12.61	2.16E+01	.....
M	36	1333.99	1329 -	1346	1333.62	1.96E+01	17.60	3.57E+01	.....
m	37	1340.87	1329 -	1346	1340.50	1.15E+01	16.42	2.44E+01	.....
	38	1377.07	1372 -	1380	1376.68	2.84E+01	14.17	1.32E+01	.....
	39	1383.68	1381 -	1387	1383.29	1.27E+01	11.53	1.66E+01	AG-110M
	40	1439.41	1437 -	1441	1439.00	6.50E+00	6.96	5.00E+00	.....
M	41	1457.42	1456 -	1466	1457.00	1.12E+01	0.87	1.00E+00	.....
m	42	1461.37	1456 -	1466	1460.95	4.81E+02	44.91	1.11E+01	K-40
	43	1491.13	1483 -	1494	1490.70	1.18E+01	15.49	2.45E+01	.....
	44	1537.37	1533 -	1540	1536.92	1.20E+01	6.93	0.00E+00	.....
	45	1592.58	1590 -	1595	1592.11	8.95E+00	11.79	2.01E+01	.....
	46	1631.38	1627 -	1634	1630.89	8.00E+00	8.94	8.00E+00	.....
	47	1731.88	1726 -	1737	1731.36	2.08E+01	11.49	6.42E+00	.....
	48	1765.10	1760 -	1768	1764.57	3.53E+01	15.12	1.34E+01	BI-214
	49	1787.70	1783 -	1789	1787.16	6.06E+00	6.65	3.88E+00	.....
	50	1926.35	1922 -	1928	1925.76	7.17E+00	6.95	3.67E+00	.....
	51	2017.06	2011 -	2020	2016.44	9.00E+00	6.00	0.00E+00	.....
	52	2180.38	2174 -	2185	2179.72	1.00E+01	9.38	5.92E+00	.....
	53	2269.83	2265 -	2272	2269.14	7.00E+00	5.29	0.00E+00	.....
	54	2459.32	2454 -	2461	2458.58	5.88E+00	6.93	4.25E+00	.....
	55	2615.32	2610 -	2618	2614.54	5.70E+01	15.10	0.00E+00	TL-208

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

PEAK EFFICIENCY REPORT

Peak Analysis Performed on : 6/17/2016 7:14:48AM

	Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
	1	46.74	1.65E+02	82.73	1.51E-02	1.58E-03
	2	63.57	1.55E+02	91.10	2.17E-02	1.72E-03
M	3	74.94	3.29E+02	83.29	2.36E-02	2.09E-03
m	4	77.69	6.27E+02	90.61	2.39E-02	2.18E-03
	5	88.23	1.40E+02	86.98	2.44E-02	2.52E-03
	6	93.32	1.92E+02	91.56	2.44E-02	2.40E-03

Analysis Report for 1606064-11

CP-5015 05-09

	Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
	7	129.43	7.81E+01	57.00	2.25E-02	1.70E-03
	8	186.16	1.73E+02	69.89	1.83E-02	1.42E-03
	9	209.04	1.05E+02	61.16	1.68E-02	1.32E-03
M	10	238.91	7.92E+02	70.32	1.52E-02	1.18E-03
m	11	242.05	1.38E+02	69.38	1.51E-02	1.17E-03
M	12	270.06	7.88E+01	38.83	1.38E-02	1.04E-03
m	13	277.72	4.06E+01	37.26	1.35E-02	1.00E-03
	14	295.53	1.45E+02	49.07	1.28E-02	9.74E-04
	15	339.09	1.57E+02	52.67	1.14E-02	9.12E-04
	16	352.34	3.37E+02	56.75	1.10E-02	8.93E-04
	17	439.20	2.40E+01	26.94	9.14E-03	7.90E-04
	18	463.69	4.54E+01	27.75	8.72E-03	7.65E-04
M	19	507.01	1.45E+01	12.49	8.07E-03	7.22E-04
m	20	511.10	1.20E+02	38.16	8.01E-03	7.18E-04
m	21	515.82	2.09E+01	25.14	7.95E-03	7.13E-04
M	22	579.19	1.54E+01	19.36	7.18E-03	6.50E-04
m	23	583.85	2.01E+02	35.93	7.13E-03	6.45E-04
	24	609.87	2.40E+02	47.50	6.87E-03	6.20E-04
	25	728.07	4.58E+01	33.11	5.89E-03	5.14E-04
	26	861.20	3.49E+01	30.17	5.09E-03	4.05E-04
	27	912.04	1.21E+02	33.56	4.85E-03	3.72E-04
M	28	965.44	4.65E+01	21.89	4.62E-03	3.62E-04
m	29	969.37	1.00E+02	25.44	4.60E-03	3.61E-04
	30	1014.90	2.48E+01	19.76	4.43E-03	3.53E-04
	31	1077.94	2.30E+01	24.15	4.21E-03	3.41E-04
	32	1121.41	4.81E+01	29.10	4.07E-03	3.33E-04
	33	1156.68	1.90E+01	19.49	3.97E-03	3.27E-04
	34	1178.72	1.89E+01	17.29	3.91E-03	3.22E-04
	35	1186.45	1.32E+01	12.61	3.89E-03	3.21E-04
M	36	1333.99	1.96E+01	17.60	3.54E-03	2.88E-04
m	37	1340.87	1.15E+01	16.42	3.52E-03	2.87E-04
	38	1377.07	2.84E+01	14.17	3.45E-03	2.82E-04
	39	1383.68	1.27E+01	11.53	3.43E-03	2.81E-04
	40	1439.41	6.50E+00	6.96	3.33E-03	2.73E-04
M	41	1457.42	1.12E+01	0.87	3.30E-03	2.70E-04
m	42	1461.37	4.81E+02	44.91	3.29E-03	2.69E-04
	43	1491.13	1.18E+01	15.49	3.24E-03	2.65E-04
	44	1537.37	1.20E+01	6.93	3.16E-03	2.58E-04
	45	1592.58	8.95E+00	11.79	3.08E-03	2.50E-04
	46	1631.38	8.00E+00	8.94	3.03E-03	2.44E-04
	47	1731.88	2.08E+01	11.49	2.90E-03	2.29E-04
	48	1765.10	3.53E+01	15.12	2.86E-03	2.24E-04
	49	1787.70	6.06E+00	6.65	2.83E-03	2.20E-04
	50	1926.35	7.17E+00	6.95	2.69E-03	2.13E-04
	51	2017.06	9.00E+00	6.00	2.61E-03	2.13E-04
	52	2180.38	1.00E+01	9.38	2.48E-03	2.13E-04
	53	2269.83	7.00E+00	5.29	2.42E-03	2.13E-04
	54	2459.32	5.88E+00	6.93	2.31E-03	2.13E-04
	55	2615.32	5.70E+01	15.10	2.24E-03	2.13E-04

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

BACKGROUND SUBTRACT REPORT

Peak Analysis Performed on : 6/17/2016 7:14:48AM

Env. Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000038678.CNF

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
	1	46.74	1.65E+02	82.73	4.97E+01	7.81E+00	1.15E+02	8.31E+01
	2	63.57	1.55E+02	91.10	4.47E+01	1.66E+01	1.10E+02	9.26E+01
M	3	74.94	3.29E+02	83.29			3.29E+02	8.33E+01
m	4	77.69	6.27E+02	90.61	6.70E+00	3.28E+00	6.20E+02	9.07E+01
	5	88.23	1.40E+02	86.98	1.07E+01	3.99E+00	1.29E+02	8.71E+01
	6	93.32	1.92E+02	91.56	8.20E+01	2.30E+01	1.10E+02	9.44E+01
	7	129.43	7.81E+01	57.00			7.81E+01	5.70E+01
	8	186.16	1.73E+02	69.89	3.45E+01	5.92E+00	1.39E+02	7.01E+01
	9	209.04	1.05E+02	61.16			1.05E+02	6.12E+01
M	10	238.91	7.92E+02	70.32	1.33E+01	5.09E+00	7.79E+02	7.05E+01
m	11	242.05	1.38E+02	69.38			1.38E+02	6.94E+01
M	12	270.06	7.88E+01	38.83			7.88E+01	3.88E+01
m	13	277.72	4.06E+01	37.26			4.06E+01	3.73E+01
	14	295.53	1.45E+02	49.07	1.94E+00	4.39E+00	1.43E+02	4.93E+01
	15	339.09	1.57E+02	52.67			1.57E+02	5.27E+01
	16	352.34	3.37E+02	56.75	4.00E+00	3.58E+00	3.33E+02	5.69E+01
	17	439.20	2.40E+01	26.94	0.00E+00	0.00E+00	2.40E+01	2.69E+01
	18	463.69	4.54E+01	27.75			4.54E+01	2.77E+01
M	19	507.01	1.45E+01	12.49			1.45E+01	1.25E+01
m	20	511.10	1.20E+02	38.16	6.05E+01	4.93E+00	5.90E+01	3.85E+01
m	21	515.82	2.09E+01	25.14			2.09E+01	2.51E+01
M	22	579.19	1.54E+01	19.36			1.54E+01	1.94E+01
m	23	583.85	2.01E+02	35.93	5.50E+00	3.61E+00	1.95E+02	3.61E+01
	24	609.87	2.40E+02	47.50	5.07E+00	3.83E+00	2.35E+02	4.77E+01
	25	728.07	4.58E+01	33.11			4.58E+01	3.31E+01
	26	861.20	3.49E+01	30.17			3.49E+01	3.02E+01
	27	912.04	1.21E+02	33.56			1.21E+02	3.36E+01
M	28	965.44	4.65E+01	21.89			4.65E+01	2.19E+01
m	29	969.37	1.00E+02	25.44			1.00E+02	2.54E+01
	30	1014.90	2.48E+01	19.76			2.48E+01	1.98E+01
	31	1077.94	2.30E+01	24.15			2.30E+01	2.41E+01
	32	1121.41	4.81E+01	29.10	1.09E+00	2.08E+00	4.70E+01	2.92E+01
	33	1156.68	1.90E+01	19.49			1.90E+01	1.95E+01
	34	1178.72	1.89E+01	17.29			1.89E+01	1.73E+01
	35	1186.45	1.32E+01	12.61			1.32E+01	1.26E+01

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	Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
M	36	1333.99	1.96E+01	17.60			1.96E+01	1.76E+01
m	37	1340.87	1.15E+01	16.42			1.15E+01	1.64E+01
	38	1377.07	2.84E+01	14.17			2.84E+01	1.42E+01
	39	1383.68	1.27E+01	11.53			1.27E+01	1.15E+01
	40	1439.41	6.50E+00	6.96			6.50E+00	6.96E+00
M	41	1457.42	1.12E+01	0.87			1.12E+01	8.66E-01
m	42	1461.37	4.81E+02	44.91	4.33E+00	2.02E+00	4.77E+02	4.50E+01
	43	1491.13	1.18E+01	15.49			1.18E+01	1.55E+01
	44	1537.37	1.20E+01	6.93			1.20E+01	6.93E+00
	45	1592.58	8.95E+00	11.79			8.95E+00	1.18E+01
	46	1631.38	8.00E+00	8.94			8.00E+00	8.94E+00
	47	1731.88	2.08E+01	11.49			2.08E+01	1.15E+01
	48	1765.10	3.53E+01	15.12			3.53E+01	1.51E+01
	49	1787.70	6.06E+00	6.65			6.06E+00	6.65E+00
	50	1926.35	7.17E+00	6.95			7.17E+00	6.95E+00
	51	2017.06	9.00E+00	6.00			9.00E+00	6.00E+00
	52	2180.38	1.00E+01	9.38			1.00E+01	9.38E+00
	53	2269.83	7.00E+00	5.29			7.00E+00	5.29E+00
	54	2459.32	5.88E+00	6.93			5.88E+00	6.93E+00
	55	2615.32	5.70E+01	15.10	2.52E+00	1.44E+00	5.45E+01	1.52E+01

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

AREA CORRECTION REPORT
REFERENCE PEAK / BKG. SUBTRACT

Peak Analysis Performed on : 6/17/2016 7:14:48AM

Ref. Peak Energy : 0.00 Reference Date :
Peak Ratio : 0.00 Uncertainty : 0.00
Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000038678.CNF

Corrected Area is: Original * Peak Ratio - Background

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
	1	46.74	1.65E+02	82.73	4.97E+01	7.81E+00	1.15E+02	8.31E+01
	2	63.57	1.55E+02	91.10	4.47E+01	1.66E+01	1.10E+02	9.26E+01
M	3	74.94	3.29E+02	83.29			3.29E+02	8.33E+01
m	4	77.69	6.27E+02	90.61	6.70E+00	3.28E+00	6.20E+02	9.07E+01
	5	88.23	1.40E+02	86.98	1.07E+01	3.99E+00	1.29E+02	8.71E+01
	6	93.32	1.92E+02	91.56	8.20E+01	2.30E+01	1.10E+02	9.44E+01
	7	129.43	7.81E+01	57.00			7.81E+01	5.70E+01
	8	186.16	1.73E+02	69.89	3.45E+01	5.92E+00	1.39E+02	7.01E+01

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	Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
	9	209.04	1.05E+02	61.16			1.05E+02	6.12E+01
M	10	238.91	7.92E+02	70.32	1.33E+01	5.09E+00	7.79E+02	7.05E+01
m	11	242.05	1.38E+02	69.38			1.38E+02	6.94E+01
M	12	270.06	7.88E+01	38.83			7.88E+01	3.88E+01
m	13	277.72	4.06E+01	37.26			4.06E+01	3.73E+01
	14	295.53	1.45E+02	49.07	1.94E+00	4.39E+00	1.43E+02	4.93E+01
	15	339.09	1.57E+02	52.67			1.57E+02	5.27E+01
	16	352.34	3.37E+02	56.75	4.00E+00	3.58E+00	3.33E+02	5.69E+01
	17	439.20	2.40E+01	26.94	0.00E+00	0.00E+00	2.40E+01	2.69E+01
	18	463.69	4.54E+01	27.75			4.54E+01	2.77E+01
M	19	507.01	1.45E+01	12.49			1.45E+01	1.25E+01
m	20	511.10	1.20E+02	38.16	6.05E+01	4.93E+00	5.90E+01	3.85E+01
m	21	515.82	2.09E+01	25.14			2.09E+01	2.51E+01
M	22	579.19	1.54E+01	19.36			1.54E+01	1.94E+01
m	23	583.85	2.01E+02	35.93	5.50E+00	3.61E+00	1.95E+02	3.61E+01
	24	609.87	2.40E+02	47.50	5.07E+00	3.83E+00	2.35E+02	4.77E+01
	25	728.07	4.58E+01	33.11			4.58E+01	3.31E+01
	26	861.20	3.49E+01	30.17			3.49E+01	3.02E+01
	27	912.04	1.21E+02	33.56			1.21E+02	3.36E+01
M	28	965.44	4.65E+01	21.89			4.65E+01	2.19E+01
m	29	969.37	1.00E+02	25.44			1.00E+02	2.54E+01
	30	1014.90	2.48E+01	19.76			2.48E+01	1.98E+01
	31	1077.94	2.30E+01	24.15			2.30E+01	2.41E+01
	32	1121.41	4.81E+01	29.10	1.09E+00	2.08E+00	4.70E+01	2.92E+01
	33	1156.68	1.90E+01	19.49			1.90E+01	1.95E+01
	34	1178.72	1.89E+01	17.29			1.89E+01	1.73E+01
	35	1186.45	1.32E+01	12.61			1.32E+01	1.26E+01
M	36	1333.99	1.96E+01	17.60			1.96E+01	1.76E+01
m	37	1340.87	1.15E+01	16.42			1.15E+01	1.64E+01
	38	1377.07	2.84E+01	14.17			2.84E+01	1.42E+01
	39	1383.68	1.27E+01	11.53			1.27E+01	1.15E+01
	40	1439.41	6.50E+00	6.96			6.50E+00	6.96E+00
M	41	1457.42	1.12E+01	0.87			1.12E+01	8.66E-01
m	42	1461.37	4.81E+02	44.91	4.33E+00	2.02E+00	4.77E+02	4.50E+01
	43	1491.13	1.18E+01	15.49			1.18E+01	1.55E+01
	44	1537.37	1.20E+01	6.93			1.20E+01	6.93E+00
	45	1592.58	8.95E+00	11.79			8.95E+00	1.18E+01
	46	1631.38	8.00E+00	8.94			8.00E+00	8.94E+00
	47	1731.88	2.08E+01	11.49			2.08E+01	1.15E+01
	48	1765.10	3.53E+01	15.12			3.53E+01	1.51E+01
	49	1787.70	6.06E+00	6.65			6.06E+00	6.65E+00
	50	1926.35	7.17E+00	6.95			7.17E+00	6.95E+00
	51	2017.06	9.00E+00	6.00			9.00E+00	6.00E+00
	52	2180.38	1.00E+01	9.38			1.00E+01	9.38E+00
	53	2269.83	7.00E+00	5.29			7.00E+00	5.29E+00
	54	2459.32	5.88E+00	6.93			5.88E+00	6.93E+00
	55	2615.32	5.70E+01	15.10	2.52E+00	1.44E+00	5.45E+01	1.52E+01

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

Analysis Report for 1606064-11

CP-5015 05-09

NUCLIDE IDENTIFICATION REPORT

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

IDENTIFIED NUCLIDES

Nuclide Name	Id Confidence	Energy (keV)		Yield(%)	Activity (pCi/grams)	Activity Uncertainty
K-40	0.951	1460.81	*	10.67	2.68E+01	3.39E+00
GA-67	0.597	93.31	*	35.70	1.98E+00	3.77E+00
		208.95	*	2.24	4.39E+01	6.14E+01
		300.22		16.00		
CD-109	0.994	88.03	*	3.72	2.84E+00	1.95E+00
SN-126	0.933	87.57	*	37.00	2.81E-01	1.92E-01
TL-208	0.926	583.14	*	30.22	1.78E+00	3.68E-01
		860.37	*	4.48	3.02E+00	2.62E+00
		2614.66	*	35.85	1.34E+00	3.94E-01
PB-210	0.991	46.50	*	4.25	3.53E+00	2.57E+00
BI-212	0.670	727.17	*	11.80	1.30E+00	9.47E-01
		1620.62		2.75		
PB-212	0.884	238.63	*	44.60	2.27E+00	2.70E-01
		300.09		3.41		
BI-214	0.632	609.31	*	46.30	1.46E+00	3.24E-01
		1120.29		15.10		
		1764.49	*	15.80	1.54E+00	6.72E-01
		2204.22		4.98		
PB-214	0.977	295.21	*	19.19	1.15E+00	4.05E-01
		351.92	*	37.19	1.60E+00	3.02E-01
RA-226	1.000	186.21	*	3.28	4.56E+00	8.67E+00
AC-228	0.907	338.32	*	11.40	2.38E+00	8.20E-01
		911.07	*	27.70	1.78E+00	5.11E-01
		969.11	*	16.60	2.59E+00	6.87E-01
TH-234	0.988	63.29	*	3.80	2.64E+00	2.23E+00
AM-243	0.989	74.67	*	66.00	4.16E-01	1.12E-01
CM-243	0.360	209.75	*	3.29	3.75E+00	2.20E+00
		228.14		10.60		
		277.60	*	14.00	4.24E-01	3.91E-01

* = Energy line found in the spectrum.
\- = Manually added nuclide.
? = Manually edited nuclide.
Energy Tolerance : 1.000 keV
Nuclide confidence index threshold = 0.30
Errors quoted at 2.000sigma

Analysis Report for 1606064-11

CP-5015 05-09

UNIDENTIFIED PEAKS

Peak Locate Performed on : 6/17/2016 7:14:48AM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096

	Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
m	4	77.69	1.72290E-01	7.31	Tol.	TI-44
	7	129.43	2.16964E-02	36.49		
m	11	242.05	3.83878E-02	25.10		
M	12	270.06	2.18855E-02	24.64		
	17	439.20	6.66667E-03	56.13	D-Esc	
	18	463.69	1.25987E-02	30.59	Sum	
M	19	507.01	4.01603E-03	43.19		
m	20	511.10	1.63977E-02	32.59		
m	21	515.82	5.81018E-03	60.09	Sum	
M	22	579.19	4.26523E-03	63.06		
M	28	965.44	1.29131E-02	23.54		
	30	1014.90	6.87943E-03	39.90		
	31	1077.94	6.37626E-03	52.59		
	32	1121.41	1.30602E-02	31.03	Sum	
	33	1156.68	5.28747E-03	51.20	Sum	
	34	1178.72	5.26316E-03	45.63	Sum	
	35	1186.45	3.66898E-03	47.73		
M	36	1333.99	5.45111E-03	44.84		
m	37	1340.87	3.18385E-03	71.65		
	38	1377.07	7.88889E-03	24.94		
	39	1383.68	3.53175E-03	45.35	Tol.	AG-110M
	40	1439.41	1.80556E-03	53.57		
M	41	1457.42	3.11959E-03	3.86		
	43	1491.13	3.26389E-03	65.92		
	44	1537.37	3.33333E-03	28.87		
	45	1592.58	2.48538E-03	65.88	D-Esc	
	46	1631.38	2.22222E-03	55.90		
	47	1731.88	5.77546E-03	27.63		
	49	1787.70	1.68403E-03	54.86		
	50	1926.35	1.99074E-03	48.46		
	51	2017.06	2.50000E-03	33.33		
	52	2180.38	2.78846E-03	46.72		
	53	2269.83	1.94444E-03	37.80		
	54	2459.32	1.63194E-03	58.96		

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

Analysis Report for 1606064-11

CP-5015 05-09

NUCLIDE IDENTIFICATION REPORT

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

IDENTIFIED NUCLIDES

Nuclide Name	Id Confidence	Energy (keV)		Yield(%)	Activity (pCi/grams)	Activity Uncertainty
K-40	0.95	1460.81	*	10.67	2.68E+01	3.39E+00
GA-67	0.59	93.31	*	35.70	1.98E+00	3.77E+00
		208.95	*	2.24	4.39E+01	6.14E+01
		300.22		16.00		
CD-109	0.99	88.03	*	3.72	2.84E+00	1.95E+00
SN-126	0.93	87.57	*	37.00	2.81E-01	1.92E-01
TL-208	0.92	583.14	*	30.22	1.78E+00	3.68E-01
		860.37	*	4.48	3.02E+00	2.62E+00
		2614.66	*	35.85	1.34E+00	3.94E-01
PB-210	0.99	46.50	*	4.25	3.53E+00	2.57E+00
BI-212	0.67	727.17	*	11.80	1.30E+00	9.47E-01
		1620.62		2.75		
PB-212	0.88	238.63	*	44.60	2.27E+00	2.70E-01
		300.09		3.41		
BI-214	0.63	609.31	*	46.30	1.46E+00	3.24E-01
		1120.29		15.10		
		1764.49	*	15.80	1.54E+00	6.72E-01
		2204.22		4.98		
PB-214	0.97	295.21	*	19.19	1.15E+00	4.05E-01
		351.92	*	37.19	1.60E+00	3.02E-01
RA-226	1.00	186.21	*	3.28	4.56E+00	8.67E+00
AC-228	0.90	338.32	*	11.40	2.38E+00	8.20E-01
		911.07	*	27.70	1.78E+00	5.11E-01
		969.11	*	16.60	2.59E+00	6.87E-01
TH-234	0.98	63.29	*	3.80	2.64E+00	2.23E+00
AM-243	0.98	74.67	*	66.00	4.16E-01	1.12E-01
CM-243	0.36	209.75	*	3.29	3.75E+00	2.20E+00
		228.14		10.60		
		277.60	*	14.00	4.24E-01	3.91E-01

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

Analysis Report for 1606064-11

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INTERFERENCE CORRECTED REPORT

	Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
	K-40	0.951	2.68E+01	3.39E+00	
	GA-67	0.597	2.14E+00	3.21E+00	
?	CD-109	0.994	2.84E+00	1.95E+00	
?	SN-126	0.933	2.81E-01	1.92E-01	
	TL-208	0.926	1.59E+00	2.67E-01	
	PB-210	0.991	3.53E+00	2.57E+00	
	BI-212	0.670	1.30E+00	9.47E-01	
	PB-212	0.884	2.27E+00	2.70E-01	
	BI-214	0.632	1.48E+00	2.92E-01	
	PB-214	0.977	1.44E+00	2.42E-01	
	RA-226	1.000	4.56E+00	8.67E+00	
	AC-228	0.907	2.13E+00	3.67E-01	
	TH-234	0.988	2.64E+00	2.23E+00	
	AM-243	0.989	4.16E-01	1.12E-01	
	CM-243	0.360	5.20E-01	3.85E-01	

? = nuclide is part of an undetermined solution

X = nuclide rejected by the interference analysis

@ = nuclide contains energy lines not used in Weighted Mean Activity

Errors quoted at 2.000sigma

Analysis Report for 1606064-11

CP-5015 05-09

UNIDENTIFIED PEAKS

Peak Locate Performed on : 6/17/2016 7:14:48AM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096

	Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
m	4	77.69	1.72290E-01	7.31	Tol.	TI-44
	7	129.43	2.16964E-02	36.49		
m	11	242.05	3.83878E-02	25.10		
M	12	270.06	2.18855E-02	24.64		
	17	439.20	6.66667E-03	56.13	D-Esc	
	18	463.69	1.25987E-02	30.59	Sum	
M	19	507.01	4.01603E-03	43.19		
m	20	511.10	1.63977E-02	32.59		
m	21	515.82	5.81018E-03	60.09	Sum	
M	22	579.19	4.26523E-03	63.06		
M	28	965.44	1.29131E-02	23.54		
	30	1014.90	6.87943E-03	39.90		
	31	1077.94	6.37626E-03	52.59		
	32	1121.41	1.30602E-02	31.03	Sum	
	33	1156.68	5.28747E-03	51.20	Sum	
	34	1178.72	5.26316E-03	45.63	Sum	
	35	1186.45	3.66898E-03	47.73		
M	36	1333.99	5.45111E-03	44.84		
m	37	1340.87	3.18385E-03	71.65		
	38	1377.07	7.88889E-03	24.94		
	39	1383.68	3.53175E-03	45.35	Tol.	AG-110M
	40	1439.41	1.80556E-03	53.57		
M	41	1457.42	3.11959E-03	3.86		
	43	1491.13	3.26389E-03	65.92		
	44	1537.37	3.33333E-03	28.87		
	45	1592.58	2.48538E-03	65.88	D-Esc	
	46	1631.38	2.22222E-03	55.90		
	47	1731.88	5.77546E-03	27.63		
	49	1787.70	1.68403E-03	54.86		
	50	1926.35	1.99074E-03	48.46		
	51	2017.06	2.50000E-03	33.33		
	52	2180.38	2.78846E-03	46.72		
	53	2269.83	1.94444E-03	37.80		
	54	2459.32	1.63194E-03	58.96		

Analysis Report for 1606064-11

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

NUCLIDE MDA REPORT

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

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	BE-7	477.59		10.42	4.60E-03	1.10E+00	1.10E+00
+	NA-22	1274.54		99.94	-5.63E-02	1.66E-01	1.66E-01
+	NA-24	1368.53		99.99	4.12E+02	3.36E+03	5.96E+03
		2754.09		99.86	-2.28E+03		3.36E+03
+	AL-26	1808.65		99.76	2.14E-02	1.17E-01	1.17E-01
+	K-40	1460.81	*	10.67	2.68E+01	1.22E+00	1.22E+00
+	@ AR-41	1293.64		99.16	1.00E+26	1.00E+26	1.00E+26
+	TI-44	67.88		94.40	3.30E-02	1.00E-01	1.00E-01
		78.34		96.00	3.62E-01		1.35E-01
+	SC-46	889.25		99.98	4.51E-02	1.30E-01	1.30E-01
		1120.51		99.99	1.52E-01		2.30E-01
+	V-48	983.52		99.98	1.22E-02	1.87E-01	1.87E-01
		1312.10		97.50	-1.45E-02		2.50E-01
+	CR-51	320.08		9.83	-4.12E-01	1.28E+00	1.28E+00
+	MN-54	834.83		99.97	-4.35E-02	1.31E-01	1.31E-01
+	CO-56	846.75		99.96	2.70E-02	1.48E-01	1.48E-01
		1037.75		14.03	1.10E-01		1.02E+00
		1238.25		67.00	2.01E-01		3.36E-01
		1771.40		15.51	-3.63E-01		9.47E-01
		2598.48		16.90	9.43E-03		5.26E-01
+	CO-57	122.06		85.51	-1.55E-02	8.25E-02	8.25E-02
		136.48		10.60	-1.94E-01		6.79E-01
+	CO-58	810.76		99.40	-2.03E-02	1.35E-01	1.35E-01
+	FE-59	1099.22		56.50	8.93E-02	3.26E-01	3.26E-01
		1291.56		43.20	-2.20E-02		4.00E-01
+	CO-60	1173.22		100.00	5.13E-02	1.74E-01	1.74E-01
		1332.49		100.00	1.90E-02		1.80E-01
+	ZN-65	1115.52		50.75	-9.76E-03	3.17E-01	3.17E-01
+	GA-67	93.31	*	35.70	1.98E+00	2.78E+00	2.78E+00
		208.95	*	2.24	4.39E+01		4.06E+01
		300.22		16.00	1.50E+00		5.53E+00
+	SE-75	121.11		16.70	1.19E-01	1.30E-01	4.49E-01

Analysis Report for 1606064-11

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	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	SE-75	136.00		59.20	7.54E-02	1.30E-01	1.30E-01
		264.65		59.80	5.70E-02		1.54E-01
		279.53		25.20	-2.97E-02		3.91E-01
		400.65		11.40	3.66E-02		9.89E-01
+	RB-82	776.52		13.00	1.84E-01	1.24E+00	1.24E+00
+	RB-83	520.41		46.00	1.02E-01	2.35E-01	2.35E-01
		529.64		30.30	1.36E-01		3.82E-01
		552.65		16.40	3.61E-02		7.84E-01
+	KR-85	513.99		0.43	5.10E+01	3.64E+01	3.64E+01
+	SR-85	513.99		99.27	2.47E-01	1.76E-01	1.76E-01
+	Y-88	898.02		93.40	-4.60E-02	9.14E-02	1.29E-01
		1836.01		99.38	-3.80E-02		9.14E-02
+	NB-93M	16.57		9.43	-1.77E+00	1.20E+02	1.20E+02
+	NB-94	702.63		100.00	-6.85E-02	1.19E-01	1.19E-01
		871.10		100.00	-1.73E-02		1.44E-01
+	NB-95	765.79		99.81	1.93E-01	2.07E-01	2.07E-01
+	NB-95M	235.69		25.00	1.12E+01	4.52E+00	4.52E+00
+	ZR-95	724.18		43.70	2.09E-02	2.36E-01	3.80E-01
		756.72		55.30	-8.89E-02		2.36E-01
+	MO-99	181.06		6.20	2.69E+00	1.04E+01	1.49E+01
		739.58		12.80	-1.21E+00		1.04E+01
		778.00		4.50	-2.84E+01		2.86E+01
+	RU-103	497.08		89.00	-1.26E-02	1.44E-01	1.44E-01
+	RU-106	621.84		9.80	3.63E-01	1.29E+00	1.29E+00
+	AG-108M	433.93		89.90	2.25E-02	1.13E-01	1.13E-01
		614.37		90.40	1.83E-03		1.60E-01
		722.95		90.50	1.98E-02		1.50E-01
+	CD-109	88.03	*	3.72	2.84E+00	3.11E+00	3.11E+00
+	AG-110M	657.75		93.14	-3.43E-02	1.23E-01	1.23E-01
		677.61		10.53	4.00E-01		1.24E+00
		706.67		16.46	-7.59E-02		7.52E-01
		763.93		21.98	-5.08E-01		6.89E-01
		884.67		71.63	-8.47E-02		1.60E-01
		1384.27		23.94	-2.83E-01		6.28E-01
+	CD-113M	263.70		0.02	1.60E+02	3.88E+02	3.88E+02
+	SN-113	255.12		1.93	-6.51E-01	1.78E-01	5.20E+00
		391.69		64.90	5.41E-02		1.78E-01
+	TE123M	159.00		84.10	4.92E-03	9.32E-02	9.32E-02
+	SB-124	602.71		97.87	1.95E-02	1.36E-01	1.36E-01
		645.85		7.26	-7.06E-01		1.70E+00
		722.78		11.10	1.81E-01		1.37E+00
		1691.02		49.00	1.95E-02		2.15E-01
+	I-125	35.49		6.49	-2.60E+00	3.40E+00	3.40E+00
+	SB-125	176.33		6.89	-6.35E-01	3.26E-01	1.07E+00
		427.89		29.33	-8.96E-02		3.26E-01
		463.38		10.35	-2.17E-01		1.17E+00
		600.56		17.80	1.16E-01		6.35E-01
		635.90		11.32	7.29E-01		1.08E+00

Analysis Report for 1606064-11

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	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	SB-126	414.70		83.30	-8.72E-02	2.16E-01	2.22E-01
		666.33		99.60	4.76E-02		2.16E-01
		695.00		99.60	5.69E-02		2.21E-01
		720.50		53.80	6.87E-03		4.19E-01
+	SN-126	87.57	*	37.00	2.81E-01	3.08E-01	3.08E-01
+	SB-127	473.00		25.00	-1.82E+00	1.80E+00	2.13E+00
		685.20		35.70	-2.45E-01		1.80E+00
		783.80		14.70	1.97E+00		5.38E+00
+	I-129	29.78		57.00	-1.15E-01	6.11E-01	6.11E-01
		33.60		13.20	-1.02E+00		1.71E+00
		39.58		7.52	6.48E-01		2.11E+00
+	I-131	284.30		6.05	3.93E-01	2.65E-01	3.40E+00
		364.48		81.20	-8.42E-02		2.65E-01
		636.97		7.26	-5.97E-01		3.67E+00
		722.89		1.80	2.31E+00		1.75E+01
+	TE-132	49.72		13.10	2.46E-02	8.86E-01	6.70E+00
		228.16		88.00	7.34E-02		8.86E-01
+	BA-133	81.00		33.00	-1.69E-01	2.38E-01	2.63E-01
		302.84		17.80	2.54E-01		5.88E-01
		356.01		60.00	-1.88E-02		2.38E-01
+	I-133	529.87		86.30	1.09E+02	3.06E+02	3.06E+02
+	XE-133	81.00		38.00	-5.33E-01	8.29E-01	8.29E-01
+	CS-134	563.23		8.38	2.75E-01	1.31E-01	1.34E+00
		569.32		15.43	2.59E-01		7.41E-01
		604.70		97.60	-7.37E-04		1.31E-01
		795.84		85.40	1.32E-01		1.76E-01
		801.93		8.73	-7.48E-01		1.40E+00
+	CS-135	268.24		16.00	8.51E-02	6.33E-01	6.33E-01
+	I-135	1131.51		22.50	-3.36E+09	2.66E+10	3.13E+10
		1260.41		28.60	7.92E+08		2.66E+10
		1678.03		9.54	1.50E+08		5.97E+10
+	CS-136	153.22		7.46	-3.13E-02	1.88E-01	1.71E+00
		163.89		4.61	3.26E-01		2.74E+00
		176.55		13.56	-5.63E-01		9.03E-01
		273.65		12.66	-1.38E+00		1.30E+00
		340.57		48.50	8.37E-01		4.71E-01
		818.50		99.70	-1.08E-01		1.88E-01
		1048.07		79.60	-2.06E-02		2.91E-01
		1235.34		19.70	2.13E-01		1.60E+00
+	CS-137	661.65		85.12	-1.93E-02	1.43E-01	1.43E-01
+	LA-138	788.74		34.00	-1.46E-01	2.06E-01	3.65E-01
		1435.80		66.00	6.89E-03		2.06E-01
+	CE-139	165.85		80.35	-1.37E-02	9.99E-02	9.99E-02
+	BA-140	162.64		6.70	-1.08E-01	7.83E-01	1.88E+00
		304.84		4.50	-2.19E+00		3.61E+00
		423.70		3.20	1.95E-01		5.38E+00
		437.55		2.00	-7.30E-01		8.99E+00
		537.32		25.00	3.14E-01		7.83E-01
+	LA-140	328.77		20.50	1.65E-01	2.68E-01	9.20E-01

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	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	LA-140	487.03	45.50	4.56E-03	2.68E-01	4.04E-01
		815.85	23.50	-2.03E-01		8.18E-01
		1596.49	95.49	2.28E-02		2.68E-01
+	CE-141	145.44	48.40	-3.72E-02	1.88E-01	1.88E-01
+	CE-143	57.36	11.80	-3.57E+01	4.20E+01	1.21E+02
		293.26	42.00	1.04E+01		4.20E+01
		664.55	5.20	1.59E+02		3.41E+02
+	CE-144	133.54	10.80	1.50E-01	6.66E-01	6.66E-01
+	PM-144	476.78	42.00	1.06E-02	1.18E-01	2.45E-01
		618.01	98.60	-5.40E-02		1.18E-01
		696.49	99.49	3.32E-02		1.31E-01
+	PM-145	36.85	21.70	-8.12E-02	4.66E-01	8.47E-01
		37.36	39.70	3.28E-01		4.66E-01
		42.30	15.10	3.19E-02		8.77E-01
		72.40	2.31	-7.59E+00		4.82E+00
+	PM-146	453.90	39.94	6.06E-02	2.67E-01	2.67E-01
		735.90	14.01	2.27E-01		8.21E-01
		747.13	13.10	1.03E-01		9.76E-01
+	ND-147	91.11	28.90	2.79E-02	6.55E-01	6.55E-01
		531.02	13.10	-1.60E-01		1.48E+00
+	PM-149	285.90	3.10	-2.52E+01	6.19E+01	6.19E+01
+	EU-152	121.78	20.50	-6.31E-02	3.36E-01	3.36E-01
		244.69	5.40	-4.62E-01		1.99E+00
		344.27	19.13	-9.44E-02		4.97E-01
		778.89	9.20	-2.23E-01		1.31E+00
		964.01	10.40	-2.33E+00		1.78E+00
		1085.78	7.22	8.32E-01		1.92E+00
		1112.02	9.60	3.97E-01		1.67E+00
		1407.95	14.94	-1.76E-01		8.75E-01
+	GD-153	97.43	31.30	8.38E-04	2.41E-01	2.41E-01
		103.18	22.20	-2.29E-02		3.29E-01
+	EU-154	123.07	40.50	-1.96E-02	1.71E-01	1.71E-01
		723.30	19.70	9.12E-02		6.91E-01
		873.19	11.50	6.91E-01		1.26E+00
		996.32	10.30	-6.22E-01		1.26E+00
		1004.76	17.90	9.07E-02		8.03E-01
		1274.45	35.50	-1.58E-01		4.65E-01
+	EU-155	86.50	30.90	6.88E-02	3.27E-01	3.27E-01
		105.30	20.70	4.01E-02		3.43E-01
+	EU-156	811.77	10.40	1.09E-01	1.82E+00	1.82E+00
		1153.47	7.20	5.16E-01		3.41E+00
		1230.71	8.90	-1.02E-01		2.84E+00
+	HO-166M	184.41	72.60	2.83E-01	1.41E-01	1.41E-01
		280.45	29.60	1.03E-02		3.16E-01
		410.94	11.10	3.48E-01		1.07E+00
		711.69	54.10	-1.25E-01		2.10E-01
+	TM-171	66.72	0.14	1.43E+01	6.99E+01	6.99E+01
+	HF-172	81.75	4.52	-2.82E-01	6.22E-01	1.96E+00
		125.81	11.30	-2.92E-02		6.22E-01

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	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	LU-172	181.53		20.60	3.65E-02	6.13E-01	1.05E+00
		810.06		16.63	-1.99E-01		2.06E+00
		912.12		15.25	7.65E+00		4.36E+00
		1093.66		62.50	-1.61E-01		6.13E-01
+	LU-173	100.72		5.24	4.02E-01	5.08E-01	1.39E+00
		272.11		21.20	4.82E-01		5.08E-01
+	HF-175	343.40		84.00	-3.56E-02	1.32E-01	1.32E-01
+	LU-176	88.34		13.30	7.91E-01	9.98E-02	7.92E-01
		201.83		86.00	-7.20E-03		1.08E-01
		306.78		94.00	-3.59E-02		9.98E-02
+	TA-182	67.75		41.20	8.04E-02	2.43E-01	2.43E-01
		1121.30		34.90	5.47E-01		6.40E-01
		1189.05		16.23	-1.19E-02		9.50E-01
		1221.41		26.98	1.76E-01		7.00E-01
		1231.02		11.44	-1.03E-01		1.50E+00
+	IR-192	308.46		29.68	1.71E-02	2.30E-01	3.47E-01
		468.07		48.10	-1.68E-02		2.30E-01
+	HG-203	279.19		77.30	6.69E-02	1.45E-01	1.45E-01
+	BI-207	569.67		97.72	2.36E-02	1.14E-01	1.14E-01
		1063.62		74.90	5.59E-02		1.85E-01
+	TL-208	583.14	*	30.22	1.78E+00	2.07E-01	7.00E-01
		860.37	*	4.48	3.02E+00		4.18E+00
		2614.66	*	35.85	1.34E+00		2.07E-01
+	BI-210M	262.00		45.00	5.65E-02	2.07E-01	2.07E-01
		300.00		23.00	1.31E-01		4.83E-01
+	PB-210	46.50	*	4.25	3.53E+00	4.13E+00	4.13E+00
+	PB-211	404.84		2.90	-5.34E-01	3.87E+00	3.87E+00
		831.96		2.90	-1.09E+00		4.02E+00
+	BI-212	727.17	*	11.80	1.30E+00	1.49E+00	1.49E+00
		1620.62		2.75	2.94E+00		5.42E+00
+	PB-212	238.63	*	44.60	2.27E+00	3.76E-01	3.76E-01
		300.09		3.41	8.84E-01		3.26E+00
+	BI-214	609.31	*	46.30	1.46E+00	3.89E-01	3.89E-01
		1120.29		15.10	9.29E-01		1.40E+00
		1764.49	*	15.80	1.54E+00		7.91E-01
		2204.22		4.98	1.39E+00		3.33E+00
+	PB-214	295.21	*	19.19	1.15E+00	3.57E-01	5.90E-01
		351.92	*	37.19	1.60E+00		3.57E-01
+	RN-219	401.80		6.50	-1.12E-01	1.64E+00	1.64E+00
+	RA-223	323.87		3.88	-1.51E+00	2.68E+00	2.68E+00
+	RA-224	240.98		3.95	2.80E+01	5.09E+00	5.09E+00
+	RA-225	40.00		31.00	2.43E-01	7.89E-01	7.89E-01
+	RA-226	186.21	*	3.28	4.56E+00	3.66E+00	3.66E+00
+	TH-227	50.10		8.40	4.75E-03	1.30E+00	1.30E+00
		236.00		11.50	3.73E+00		1.51E+00
		256.20		6.30	3.73E-01		1.51E+00
+	AC-228	338.32	*	11.40	2.38E+00	6.51E-01	1.20E+00
		911.07	*	27.70	1.78E+00		6.51E-01

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	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	AC-228	969.11	*	16.60	2.59E+00	6.51E-01	1.87E+00
+	TH-230	48.44		16.90	6.85E-01	7.58E-01	7.58E-01
		62.85		4.60	3.43E+00		2.43E+00
		67.67		0.37	8.44E+00		2.55E+01
+	PA-231	283.67		1.60	6.40E-01	4.54E+00	5.53E+00
		302.67		2.30	1.96E+00		4.54E+00
+	TH-231	25.64		14.70	1.15E+00	1.39E+00	4.60E+00
		84.21		6.40	-3.96E-01		1.39E+00
+	PA-233	311.98		38.60	6.97E-02	3.21E-01	3.21E-01
+	PA-234	131.20		20.40	5.70E-02	3.65E-01	3.65E-01
		733.99		8.80	2.25E-01		1.26E+00
		946.00		12.00	1.12E-02		1.11E+00
+	PA-234M	1001.03		0.92	8.69E+00	1.73E+01	1.73E+01
+	TH-234	63.29	*	3.80	2.64E+00	3.62E+00	3.62E+00
+	U-235	143.76		10.50	2.41E-01	7.16E-01	7.16E-01
		163.35		4.70	1.91E-01		1.60E+00
		205.31		4.70	-4.67E-01		2.01E+00
+	NP-237	86.50		12.60	1.68E-01	7.98E-01	7.98E-01
+	NP-239	106.10		22.70	1.25E+00	5.51E+00	5.51E+00
		228.18		10.70	1.34E+00		1.62E+01
		277.60		14.10	7.22E+00		1.21E+01
+	AM-241	59.54		35.90	-3.60E-02	2.86E-01	2.86E-01
+	AM-243	74.67	*	66.00	4.16E-01	2.47E-01	2.47E-01
+	CM-243	209.75	*	3.29	3.75E+00	9.21E-01	3.47E+00
		228.14		10.60	7.64E-02		9.21E-01
		277.60	*	14.00	4.24E-01		1.24E+00

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

NUCLIDE MDA REPORT

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

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	Nuclide Name	Energy (keV)		Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
	BE-7	477.59		10.42	1.10E+00	1.10E+00	4.60E-03	5.16E-01
	NA-22	1274.54		99.94	1.66E-01	1.66E-01	-5.63E-02	7.56E-02
	NA-24	1368.53		99.99	5.96E+03	3.36E+03	4.12E+02	2.59E+03
		2754.09		99.86	3.36E+03		-2.28E+03	1.06E+03
	AL-26	1808.65		99.76	1.17E-01	1.17E-01	2.14E-02	4.91E-02
+	K-40	1460.81	*	10.67	1.22E+00	1.22E+00	2.68E+01	5.35E-01
@	AR-41	1293.64		99.16	1.00E+26	1.00E+26	1.00E+26	1.00E+20
	TI-44	67.88		94.40	1.00E-01	1.00E-01	3.30E-02	4.87E-02
		78.34		96.00	1.35E-01		3.62E-01	6.61E-02
	SC-46	889.25		99.98	1.30E-01	1.30E-01	4.51E-02	5.94E-02
		1120.51		99.99	2.30E-01		1.52E-01	1.08E-01
	V-48	983.52		99.98	1.87E-01	1.87E-01	1.22E-02	8.44E-02
		1312.10		97.50	2.50E-01		-1.45E-02	1.13E-01
	CR-51	320.08		9.83	1.28E+00	1.28E+00	-4.12E-01	6.09E-01
	MN-54	834.83		99.97	1.31E-01	1.31E-01	-4.35E-02	6.01E-02
	CO-56	846.75		99.96	1.48E-01	1.48E-01	2.70E-02	6.84E-02
		1037.75		14.03	1.02E+00		1.10E-01	4.64E-01
		1238.25		67.00	3.36E-01		2.01E-01	1.56E-01
		1771.40		15.51	9.47E-01		-3.63E-01	4.08E-01
		2598.48		16.90	5.26E-01		9.43E-03	1.86E-01
	CO-57	122.06		85.51	8.25E-02	8.25E-02	-1.55E-02	3.99E-02
		136.48		10.60	6.79E-01		-1.94E-01	3.28E-01
	CO-58	810.76		99.40	1.35E-01	1.35E-01	-2.03E-02	6.21E-02
	FE-59	1099.22		56.50	3.26E-01	3.26E-01	8.93E-02	1.50E-01
		1291.56		43.20	4.00E-01		-2.20E-02	1.80E-01
	CO-60	1173.22		100.00	1.74E-01	1.74E-01	5.13E-02	8.04E-02
		1332.49		100.00	1.80E-01		1.90E-02	8.22E-02
	ZN-65	1115.52		50.75	3.17E-01	3.17E-01	-9.76E-03	1.45E-01
+	GA-67	93.31	*	35.70	2.78E+00	2.78E+00	1.98E+00	1.36E+00
		208.95	*	2.24	4.06E+01		4.39E+01	1.98E+01
		300.22		16.00	5.53E+00		1.50E+00	2.66E+00
	SE-75	121.11		16.70	4.49E-01	1.30E-01	1.19E-01	2.17E-01
		136.00		59.20	1.30E-01		7.54E-02	6.30E-02
		264.65		59.80	1.54E-01		5.70E-02	7.37E-02
		279.53		25.20	3.91E-01		-2.97E-02	1.87E-01
		400.65		11.40	9.89E-01		3.66E-02	4.69E-01
	RB-82	776.52		13.00	1.24E+00	1.24E+00	1.84E-01	5.72E-01
	RB-83	520.41		46.00	2.35E-01	2.35E-01	1.02E-01	1.09E-01
		529.64		30.30	3.82E-01		1.36E-01	1.79E-01
		552.65		16.40	7.84E-01		3.61E-02	3.68E-01
	KR-85	513.99		0.43	3.64E+01	3.64E+01	5.10E+01	1.74E+01
	SR-85	513.99		99.27	1.76E-01	1.76E-01	2.47E-01	8.44E-02
	Y-88	898.02		93.40	1.29E-01	9.14E-02	-4.60E-02	5.83E-02
		1836.01		99.38	9.14E-02		-3.80E-02	3.54E-02
	NB-93M	16.57		9.43	1.20E+02	1.20E+02	-1.77E+00	5.85E+01
	NB-94	702.63		100.00	1.19E-01	1.19E-01	-6.85E-02	5.50E-02
		871.10		100.00	1.44E-01		-1.73E-02	6.68E-02
	NB-95	765.79		99.81	2.07E-01	2.07E-01	1.93E-01	9.80E-02
	NB-95M	235.69		25.00	4.52E+00	4.52E+00	1.12E+01	2.21E+00
	ZR-95	724.18		43.70	3.80E-01	2.36E-01	2.09E-02	1.79E-01
		756.72		55.30	2.36E-01		-8.89E-02	1.09E-01

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	Nuclide Name	Energy (keV)		Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
	MO-99	181.06		6.20	1.49E+01	1.04E+01	2.69E+00	7.18E+00
		739.58		12.80	1.04E+01		-1.21E+00	4.80E+00
		778.00		4.50	2.86E+01		-2.84E+01	1.31E+01
	RU-103	497.08		89.00	1.44E-01	1.44E-01	-1.26E-02	6.75E-02
	RU-106	621.84		9.80	1.29E+00	1.29E+00	3.63E-01	6.03E-01
	AG-108M	433.93		89.90	1.13E-01	1.13E-01	2.25E-02	5.33E-02
		614.37		90.40	1.60E-01		1.83E-03	7.55E-02
		722.95		90.50	1.50E-01		1.98E-02	7.01E-02
+	CD-109	88.03	*	3.72	3.11E+00	3.11E+00	2.84E+00	1.52E+00
	AG-110M	657.75		93.14	1.23E-01	1.23E-01	-3.43E-02	5.68E-02
		677.61		10.53	1.24E+00		4.00E-01	5.76E-01
		706.67		16.46	7.52E-01		-7.59E-02	3.48E-01
		763.93		21.98	6.89E-01		-5.08E-01	3.22E-01
		884.67		71.63	1.60E-01		-8.47E-02	7.24E-02
		1384.27		23.94	6.28E-01		-2.83E-01	2.81E-01
	CD-113M	263.70		0.02	3.88E+02	3.88E+02	1.60E+02	1.86E+02
	SN-113	255.12		1.93	5.20E+00	1.78E-01	-6.51E-01	2.50E+00
		391.69		64.90	1.78E-01		5.41E-02	8.47E-02
	TE123M	159.00		84.10	9.32E-02	9.32E-02	4.92E-03	4.49E-02
	SB-124	602.71		97.87	1.36E-01	1.36E-01	1.95E-02	6.37E-02
		645.85		7.26	1.70E+00		-7.06E-01	7.88E-01
		722.78		11.10	1.37E+00		1.81E-01	6.39E-01
		1691.02		49.00	2.15E-01		1.95E-02	8.71E-02
	I-125	35.49		6.49	3.40E+00	3.40E+00	-2.60E+00	1.64E+00
	SB-125	176.33		6.89	1.07E+00	3.26E-01	-6.35E-01	5.12E-01
		427.89		29.33	3.26E-01		-8.96E-02	1.53E-01
		463.38		10.35	1.17E+00		-2.17E-01	5.56E-01
		600.56		17.80	6.35E-01		1.16E-01	2.96E-01
		635.90		11.32	1.08E+00		7.29E-01	5.04E-01
	SB-126	414.70		83.30	2.22E-01	2.16E-01	-8.72E-02	1.05E-01
		666.33		99.60	2.16E-01		4.76E-02	1.01E-01
		695.00		99.60	2.21E-01		5.69E-02	1.03E-01
		720.50		53.80	4.19E-01		6.87E-03	1.95E-01
+	SN-126	87.57	*	37.00	3.08E-01	3.08E-01	2.81E-01	1.51E-01
	SB-127	473.00		25.00	2.13E+00	1.80E+00	-1.82E+00	9.94E-01
		685.20		35.70	1.80E+00		-2.45E-01	8.33E-01
		783.80		14.70	5.38E+00		1.97E+00	2.50E+00
	I-129	29.78		57.00	6.11E-01	6.11E-01	-1.15E-01	2.96E-01
		33.60		13.20	1.71E+00		-1.02E+00	8.28E-01
		39.58		7.52	2.11E+00		6.48E-01	1.02E+00
	I-131	284.30		6.05	3.40E+00	2.65E-01	3.93E-01	1.62E+00
		364.48		81.20	2.65E-01		-8.42E-02	1.25E-01
		636.97		7.26	3.67E+00		-5.97E-01	1.70E+00
		722.89		1.80	1.75E+01		2.31E+00	8.17E+00
	TE-132	49.72		13.10	6.70E+00	8.86E-01	2.46E-02	3.25E+00
		228.16		88.00	8.86E-01		7.34E-02	4.28E-01
	BA-133	81.00		33.00	2.63E-01	2.38E-01	-1.69E-01	1.28E-01
		302.84		17.80	5.88E-01		2.54E-01	2.82E-01
		356.01		60.00	2.38E-01		-1.88E-02	1.15E-01
	I-133	529.87		86.30	3.06E+02	3.06E+02	1.09E+02	1.43E+02
	XE-133	81.00		38.00	8.29E-01	8.29E-01	-5.33E-01	4.04E-01
	CS-134	563.23		8.38	1.34E+00	1.31E-01	2.75E-01	6.28E-01
		569.32		15.43	7.41E-01		2.59E-01	3.47E-01

Analysis Report for 1606064-11

CP-5015 05-09

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
CS-134	604.70	97.60	1.31E-01	1.31E-01	-7.37E-04	6.13E-02
	795.84	85.40	1.76E-01		1.32E-01	8.20E-02
	801.93	8.73	1.40E+00		-7.48E-01	6.42E-01
CS-135	268.24	16.00	6.33E-01	6.33E-01	8.51E-02	3.04E-01
I-135	1131.51	22.50	3.13E+10	2.66E+10	-3.36E+09	1.43E+10
	1260.41	28.60	2.66E+10		7.92E+08	1.21E+10
	1678.03	9.54	5.97E+10		1.50E+08	2.54E+10
CS-136	153.22	7.46	1.71E+00	1.88E-01	-3.13E-02	8.28E-01
	163.89	4.61	2.74E+00		3.26E-01	1.32E+00
	176.55	13.56	9.03E-01		-5.63E-01	4.34E-01
	273.65	12.66	1.30E+00		-1.38E+00	6.25E-01
	340.57	48.50	4.71E-01		8.37E-01	2.27E-01
	818.50	99.70	1.88E-01		-1.08E-01	8.56E-02
	1048.07	79.60	2.91E-01		-2.06E-02	1.32E-01
	1235.34	19.70	1.60E+00		2.13E-01	7.39E-01
CS-137	661.65	85.12	1.43E-01	1.43E-01	-1.93E-02	6.64E-02
LA-138	788.74	34.00	3.65E-01	2.06E-01	-1.46E-01	1.68E-01
	1435.80	66.00	2.06E-01		6.89E-03	9.08E-02
CE-139	165.85	80.35	9.99E-02	9.99E-02	-1.37E-02	4.82E-02
BA-140	162.64	6.70	1.88E+00	7.83E-01	-1.08E-01	9.06E-01
	304.84	4.50	3.61E+00		-2.19E+00	1.73E+00
	423.70	3.20	5.38E+00		1.95E-01	2.54E+00
	437.55	2.00	8.99E+00		-7.30E-01	4.25E+00
	537.32	25.00	7.83E-01		3.14E-01	3.68E-01
LA-140	328.77	20.50	9.20E-01	2.68E-01	1.65E-01	4.41E-01
	487.03	45.50	4.04E-01		4.56E-03	1.90E-01
	815.85	23.50	8.18E-01		-2.03E-01	3.73E-01
	1596.49	95.49	2.68E-01		2.28E-02	1.19E-01
CE-141	145.44	48.40	1.88E-01	1.88E-01	-3.72E-02	9.07E-02
CE-143	57.36	11.80	1.21E+02	4.20E+01	-3.57E+01	5.88E+01
	293.26	42.00	4.20E+01		1.04E+01	2.03E+01
	664.55	5.20	3.41E+02		1.59E+02	1.59E+02
CE-144	133.54	10.80	6.66E-01	6.66E-01	1.50E-01	3.22E-01
PM-144	476.78	42.00	2.45E-01	1.18E-01	1.06E-02	1.15E-01
	618.01	98.60	1.18E-01		-5.40E-02	5.50E-02
	696.49	99.49	1.31E-01		3.32E-02	6.10E-02
PM-145	36.85	21.70	8.47E-01	4.66E-01	-8.12E-02	4.10E-01
	37.36	39.70	4.66E-01		3.28E-01	2.26E-01
	42.30	15.10	8.77E-01		3.19E-02	4.25E-01
	72.40	2.31	4.82E+00		-7.59E+00	2.36E+00
PM-146	453.90	39.94	2.67E-01	2.67E-01	6.06E-02	1.26E-01
	735.90	14.01	8.21E-01		2.27E-01	3.78E-01
	747.13	13.10	9.76E-01		1.03E-01	4.53E-01
ND-147	91.11	28.90	6.55E-01	6.55E-01	2.79E-02	3.20E-01
	531.02	13.10	1.48E+00		-1.60E-01	6.90E-01
PM-149	285.90	3.10	6.19E+01	6.19E+01	-2.52E+01	2.96E+01
EU-152	121.78	20.50	3.36E-01	3.36E-01	-6.31E-02	1.62E-01
	244.69	5.40	1.99E+00		-4.62E-01	9.62E-01
	344.27	19.13	4.97E-01		-9.44E-02	2.36E-01
	778.89	9.20	1.31E+00		-2.23E-01	6.03E-01
	964.01	10.40	1.78E+00		-2.33E+00	8.32E-01
	1085.78	7.22	1.92E+00		8.32E-01	8.73E-01
	1112.02	9.60	1.67E+00		3.97E-01	7.65E-01

Analysis Report for 1606064-11

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	Nuclide Name	Energy (keV)		Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
	EU-152	1407.95		14.94	8.75E-01	3.36E-01	-1.76E-01	3.85E-01
	GD-153	97.43		31.30	2.41E-01	2.41E-01	8.38E-04	1.17E-01
		103.18		22.20	3.29E-01		-2.29E-02	1.59E-01
	EU-154	123.07		40.50	1.71E-01	1.71E-01	-1.96E-02	8.27E-02
		723.30		19.70	6.91E-01		9.12E-02	3.23E-01
		873.19		11.50	1.26E+00		6.91E-01	5.84E-01
		996.32		10.30	1.26E+00		-6.22E-01	5.70E-01
		1004.76		17.90	8.03E-01		9.07E-02	3.68E-01
		1274.45		35.50	4.65E-01		-1.58E-01	2.12E-01
	EU-155	86.50		30.90	3.27E-01	3.27E-01	6.88E-02	1.60E-01
		105.30		20.70	3.43E-01		4.01E-02	1.66E-01
	EU-156	811.77		10.40	1.82E+00	1.82E+00	1.09E-01	8.33E-01
		1153.47		7.20	3.41E+00		5.16E-01	1.56E+00
		1230.71		8.90	2.84E+00		-1.02E-01	1.30E+00
	HO-166M	184.41		72.60	1.41E-01	1.41E-01	2.83E-01	6.85E-02
		280.45		29.60	3.16E-01		1.03E-02	1.51E-01
		410.94		11.10	1.07E+00		3.48E-01	5.10E-01
		711.69		54.10	2.10E-01		-1.25E-01	9.68E-02
	TM-171	66.72		0.14	6.99E+01	6.99E+01	1.43E+01	3.41E+01
	HF-172	81.75		4.52	1.96E+00	6.22E-01	-2.82E-01	9.55E-01
		125.81		11.30	6.22E-01		-2.92E-02	3.01E-01
	LU-172	181.53		20.60	1.05E+00	6.13E-01	3.65E-02	5.08E-01
		810.06		16.63	2.06E+00		-1.99E-01	9.47E-01
		912.12		15.25	4.36E+00		7.65E+00	2.08E+00
		1093.66		62.50	6.13E-01		-1.61E-01	2.78E-01
	LU-173	100.72		5.24	1.39E+00	5.08E-01	4.02E-01	6.76E-01
		272.11		21.20	5.08E-01		4.82E-01	2.45E-01
	HF-175	343.40		84.00	1.32E-01	1.32E-01	-3.56E-02	6.30E-02
	LU-176	88.34		13.30	7.92E-01	9.98E-02	7.91E-01	3.88E-01
		201.83		86.00	1.08E-01		-7.20E-03	5.24E-02
		306.78		94.00	9.98E-02		-3.59E-02	4.76E-02
	TA-182	67.75		41.20	2.43E-01	2.43E-01	8.04E-02	1.19E-01
		1121.30		34.90	6.40E-01		5.47E-01	3.00E-01
		1189.05		16.23	9.50E-01		-1.19E-02	4.30E-01
		1221.41		26.98	7.00E-01		1.76E-01	3.22E-01
		1231.02		11.44	1.50E+00		-1.03E-01	6.86E-01
	IR-192	308.46		29.68	3.47E-01	2.30E-01	1.71E-02	1.66E-01
		468.07		48.10	2.30E-01		-1.68E-02	1.08E-01
	HG-203	279.19		77.30	1.45E-01	1.45E-01	6.69E-02	6.93E-02
	BI-207	569.67		97.72	1.14E-01	1.14E-01	2.36E-02	5.32E-02
		1063.62		74.90	1.85E-01		5.59E-02	8.39E-02
+	TL-208	583.14	*	30.22	7.00E-01	2.07E-01	1.78E+00	3.38E-01
		860.37	*	4.48	4.18E+00		3.02E+00	1.97E+00
		2614.66	*	35.85	2.07E-01		1.34E+00	7.04E-02
	BI-210M	262.00		45.00	2.07E-01	2.07E-01	5.65E-02	9.91E-02
		300.00		23.00	4.83E-01		1.31E-01	2.32E-01
+	PB-210	46.50	*	4.25	4.13E+00	4.13E+00	3.53E+00	2.02E+00
	PB-211	404.84		2.90	3.87E+00	3.87E+00	-5.34E-01	1.84E+00
		831.96		2.90	4.02E+00		-1.09E+00	1.83E+00
+	BI-212	727.17	*	11.80	1.49E+00	1.49E+00	1.30E+00	7.05E-01
		1620.62		2.75	5.42E+00		2.94E+00	2.39E+00
+	PB-212	238.63	*	44.60	3.76E-01	3.76E-01	2.27E+00	1.84E-01
		300.09		3.41	3.26E+00		8.84E-01	1.57E+00

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	Nuclide Name	Energy (keV)		Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
+	BI-214	609.31	*	46.30	3.89E-01	3.89E-01	1.46E+00	1.86E-01
		1120.29		15.10	1.40E+00		9.29E-01	6.58E-01
		1764.49	*	15.80	7.91E-01		1.54E+00	3.36E-01
		2204.22		4.98	3.33E+00		1.39E+00	1.45E+00
+	PB-214	295.21	*	19.19	5.90E-01	3.57E-01	1.15E+00	2.84E-01
		351.92	*	37.19	3.57E-01		1.60E+00	1.72E-01
	RN-219	401.80		6.50	1.64E+00	1.64E+00	-1.12E-01	7.77E-01
	RA-223	323.87		3.88	2.68E+00	2.68E+00	-1.51E+00	1.28E+00
	RA-224	240.98		3.95	5.09E+00	5.09E+00	2.80E+01	2.50E+00
	RA-225	40.00		31.00	7.89E-01	7.89E-01	2.43E-01	3.83E-01
+	RA-226	186.21	*	3.28	3.66E+00	3.66E+00	4.56E+00	1.79E+00
	TH-227	50.10		8.40	1.30E+00	1.30E+00	4.75E-03	6.29E-01
		236.00		11.50	1.51E+00		3.73E+00	7.38E-01
		256.20		6.30	1.51E+00		3.73E-01	7.28E-01
+	AC-228	338.32	*	11.40	1.20E+00	6.51E-01	2.38E+00	5.77E-01
		911.07	*	27.70	6.51E-01		1.78E+00	3.06E-01
		969.11	*	16.60	1.87E+00		2.59E+00	9.01E-01
	TH-230	48.44		16.90	7.58E-01	7.58E-01	6.85E-01	3.69E-01
		62.85		4.60	2.43E+00		3.43E+00	1.19E+00
		67.67		0.37	2.55E+01		8.44E+00	1.25E+01
	PA-231	283.67		1.60	5.53E+00	4.54E+00	6.40E-01	2.64E+00
		302.67		2.30	4.54E+00		1.96E+00	2.18E+00
	TH-231	25.64		14.70	4.60E+00	1.39E+00	1.15E+00	2.23E+00
		84.21		6.40	1.39E+00		-3.96E-01	6.78E-01
	PA-233	311.98		38.60	3.21E-01	3.21E-01	6.97E-02	1.53E-01
	PA-234	131.20		20.40	3.65E-01	3.65E-01	5.70E-02	1.76E-01
		733.99		8.80	1.26E+00		2.25E-01	5.78E-01
		946.00		12.00	1.11E+00		1.12E-02	5.08E-01
	PA-234M	1001.03		0.92	1.73E+01	1.73E+01	8.69E+00	8.03E+00
+	TH-234	63.29	*	3.80	3.62E+00	3.62E+00	2.64E+00	1.78E+00
	U-235	143.76		10.50	7.16E-01	7.16E-01	2.41E-01	3.46E-01
		163.35		4.70	1.60E+00		1.91E-01	7.72E-01
		205.31		4.70	2.01E+00		-4.67E-01	9.71E-01
	NP-237	86.50		12.60	7.98E-01	7.98E-01	1.68E-01	3.91E-01
	NP-239	106.10		22.70	5.51E+00	5.51E+00	1.25E+00	2.67E+00
		228.18		10.70	1.62E+01		1.34E+00	7.80E+00
		277.60		14.10	1.21E+01		7.22E+00	5.81E+00
	AM-241	59.54		35.90	2.86E-01	2.86E-01	-3.60E-02	1.39E-01
+	AM-243	74.67	*	66.00	2.47E-01	2.47E-01	4.16E-01	1.22E-01
+	CM-243	209.75	*	3.29	3.47E+00	9.21E-01	3.75E+00	1.69E+00
		228.14		10.60	9.21E-01		7.64E-02	4.45E-01
		277.60	*	14.00	1.24E+00		4.24E-01	6.07E-01

+ = Nuclide identified during the nuclide identification
* = Energy line found in the spectrum
> = MDA value not calculated
@ = Half-life too short to be able to perform the decay correction

Analysis Report for 1606064-11

CP-5015 05-09

No Action Level results available for reporting purposes.

DATA REVIEW COMMENTS REPORT

Creation Date	Comment	User

No Data Review Comments Entered.

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

Sample Title: CP-5015 05-09

Elapsed Live time: 3600
Elapsed Real Time: 3613

Channel								
1:	0	0	0	0	0	0	0	0
9:	3	154	131	75	95	112	96	96
17:	84	70	73	68	78	69	69	63
25:	73	60	59	73	56	51	62	56
33:	65	58	41	63	69	65	77	70
41:	67	56	57	64	66	88	170	99
49:	62	77	67	71	66	90	95	85
57:	96	82	108	104	98	109	145	182
65:	121	91	97	110	112	103	100	110
73:	129	132	295	250	319	464	115	97
81:	105	82	95	129	132	90	169	177
89:	116	141	150	94	208	143	88	92
97:	56	66	57	85	61	72	66	61
105:	68	68	60	64	56	53	46	55
113:	55	49	59	55	63	48	72	56
121:	45	57	68	53	57	59	48	62
129:	75	82	61	41	49	70	52	57
137:	48	59	47	52	59	51	62	61
145:	62	51	49	50	69	48	65	54
153:	61	43	54	51	57	49	47	48
161:	47	42	51	54	48	53	48	48
169:	51	61	53	39	45	50	40	39
177:	42	39	51	60	47	36	44	51
185:	48	116	139	42	40	45	49	50
193:	40	35	33	46	52	33	38	45
201:	51	36	40	36	42	41	38	55
209:	59	78	44	22	39	40	38	39
217:	35	38	37	38	37	33	30	40
225:	45	42	41	33	33	33	35	36
233:	39	33	50	49	40	128	469	213
241:	65	100	62	22	25	25	24	27
249:	37	40	26	26	20	36	35	25
257:	29	34	28	29	27	33	26	22
265:	24	23	16	18	33	57	46	27
273:	21	26	24	29	25	41	28	20
281:	18	23	15	25	19	23	26	25
289:	19	29	29	11	24	23	80	109
297:	38	26	29	32	41	27	24	22
305:	25	17	25	15	24	19	25	21
313:	18	18	26	16	23	25	17	19
321:	20	30	16	23	30	28	19	31
329:	43	20	21	23	24	23	22	19
337:	21	60	102	36	15	25	19	10
345:	17	18	19	19	13	28	42	156
353:	166	29	12	17	18	14	14	15
361:	19	15	14	18	14	17	15	12

369:	19	16	15	8	14	23	20	18

Sample Title: CP-5015 05-09

Channel								
377:	17	16	18	25	15	13	19	20
385:	9	17	11	19	19	19	19	18
393:	18	19	18	15	19	18	14	14
401:	18	26	12	17	17	16	17	25
409:	20	25	21	20	15	17	15	22
417:	13	11	18	15	14	15	14	15
425:	14	8	17	13	10	5	16	16
433:	10	15	15	10	11	19	14	21
441:	10	12	9	17	20	8	12	14
449:	13	8	9	14	14	15	16	11
457:	15	11	15	15	7	5	28	37
465:	11	15	11	15	13	10	5	13
473:	9	9	8	10	14	14	9	13
481:	9	12	13	7	15	16	16	11
489:	10	11	8	16	8	10	13	9
497:	12	13	10	15	15	10	10	14
505:	11	12	18	11	13	41	55	43
513:	23	16	9	17	9	3	10	12
521:	12	8	10	8	7	7	12	11
529:	7	8	13	9	12	8	10	12
537:	14	13	15	10	11	5	6	17
545:	12	13	12	17	20	7	13	18
553:	14	10	12	9	3	10	13	15
561:	8	9	12	9	6	11	5	9
569:	15	11	7	13	8	9	8	9
577:	9	6	16	12	7	17	80	90
585:	21	15	7	8	8	6	13	5
593:	5	13	10	8	8	12	5	9
601:	13	9	9	6	11	14	14	17
609:	74	103	35	10	13	16	8	4
617:	17	6	12	9	6	11	13	11
625:	11	6	7	8	9	6	9	4
633:	11	12	7	9	5	11	12	3
641:	7	14	6	5	6	9	5	13
649:	9	12	6	9	4	6	7	10
657:	5	10	8	7	5	14	9	5
665:	14	14	9	9	5	4	10	10
673:	11	10	13	10	11	9	4	8
681:	10	6	5	9	13	2	9	4
689:	7	6	6	13	10	9	8	5
697:	11	7	13	4	8	13	8	7
705:	9	4	8	14	4	8	8	5
713:	6	8	8	9	8	5	10	9
721:	10	8	12	10	8	10	24	33
729:	10	8	7	2	8	7	5	6
737:	7	5	7	6	5	8	6	9
745:	8	8	8	6	11	5	11	4
753:	13	1	7	9	5	8	3	12
761:	7	9	11	13	7	14	11	20
769:	22	5	9	7	12	9	4	4
777:	7	4	8	4	6	12	6	10
785:	8	10	6	6	7	8	7	3
793:	9	8	12	14	12	7	6	3

801:	8	9	2	7	8	11	5	7

Sample Title: CP-5015 05-09

Channel								
809:	5	4	7	8	9	3	6	6
817:	5	3	4	7	4	7	10	7
825:	8	4	4	4	3	8	5	6
833:	4	2	9	9	8	7	5	14
841:	5	5	8	7	6	6	9	12
849:	3	7	7	5	8	7	5	6
857:	4	5	6	15	25	15	6	3
865:	7	11	8	3	12	11	7	6
873:	9	6	7	8	3	3	8	11
881:	7	10	2	2	2	4	3	6
889:	4	4	5	9	3	7	3	1
897:	4	4	7	6	5	6	7	8
905:	13	3	3	2	6	9	47	56
913:	13	9	9	9	9	4	7	8
921:	5	3	3	8	4	3	10	6
929:	5	4	8	7	3	10	10	4
937:	1	10	2	9	4	9	3	3
945:	6	5	5	12	5	5	4	6
953:	7	7	9	3	5	5	4	6
961:	9	8	5	12	24	12	6	16
969:	46	32	4	9	6	5	7	8
977:	6	6	4	5	2	0	6	5
985:	5	7	5	5	7	5	3	4
993:	4	4	6	4	4	6	5	8
1001:	11	8	8	6	6	5	3	5
1009:	3	3	7	2	7	4	5	9
1017:	8	2	2	4	11	5	3	5
1025:	2	7	3	5	4	5	6	4
1033:	6	6	4	8	6	4	1	6
1041:	3	5	1	3	6	4	5	4
1049:	3	6	7	8	8	5	4	7
1057:	8	2	7	5	7	8	2	3
1065:	5	4	5	1	10	4	5	3
1073:	4	4	6	4	8	6	8	6
1081:	1	2	6	5	3	1	8	4
1089:	6	3	5	2	10	4	4	5
1097:	8	5	5	8	5	7	6	5
1105:	3	6	3	4	9	6	6	5
1113:	6	4	7	7	5	7	6	23
1121:	27	5	5	4	10	1	6	5
1129:	5	7	7	4	4	4	7	7
1137:	8	4	5	1	4	6	10	7
1145:	6	7	13	6	3	7	4	4
1153:	5	1	10	8	10	3	5	1
1161:	3	6	1	6	5	9	8	4
1169:	6	9	7	10	8	5	5	3
1177:	9	6	12	3	3	2	2	1
1185:	6	6	6	3	2	2	6	6
1193:	4	9	7	4	7	7	2	8
1201:	5	7	6	2	6	4	6	9
1209:	4	3	7	7	5	5	3	5
1217:	4	6	7	5	7	8	7	6
1225:	6	6	4	3	10	3	9	1

1233:	7	4	6	6	5	22	9	6

Sample Title: CP-5015 05-09

Channel								
1241:	8	4	7	4	7	6	7	8
1249:	2	7	3	4	4	5	5	6
1257:	3	7	8	7	5	3	2	3
1265:	6	4	2	4	4	4	4	4
1273:	6	5	2	3	5	3	6	6
1281:	7	3	4	5	5	1	2	2
1289:	4	3	4	6	4	1	2	3
1297:	4	5	2	4	4	5	3	6
1305:	2	6	2	5	0	4	3	3
1313:	3	6	4	4	2	5	5	5
1321:	2	5	2	4	6	6	6	1
1329:	4	3	4	3	9	10	1	5
1337:	3	1	3	6	2	3	4	5
1345:	1	0	2	1	1	3	5	3
1353:	6	7	2	3	3	1	1	3
1361:	4	2	2	5	1	1	0	2
1369:	3	0	3	0	3	4	5	5
1377:	6	6	6	0	0	4	7	2
1385:	5	2	1	3	2	2	2	5
1393:	0	1	3	4	4	2	1	1
1401:	4	3	2	2	1	1	5	3
1409:	2	2	1	1	2	3	0	2
1417:	2	0	1	2	2	0	1	1
1425:	1	0	3	3	2	4	3	2
1433:	3	1	3	1	0	3	3	3
1441:	0	1	0	2	3	2	2	3
1449:	3	1	4	4	3	3	1	0
1457:	5	4	28	122	212	107	19	3
1465:	2	1	1	1	3	0	5	1
1473:	1	1	1	2	2	0	1	2
1481:	0	2	2	1	1	2	0	1
1489:	4	6	1	1	5	0	0	5
1497:	2	2	2	2	3	2	1	2
1505:	2	0	0	0	3	3	2	3
1513:	2	2	0	0	2	0	4	1
1521:	1	0	1	2	3	0	1	0
1529:	2	3	1	0	0	2	1	0
1537:	4	3	2	0	0	1	2	1
1545:	1	0	1	2	0	2	1	0
1553:	1	3	1	2	2	0	1	2
1561:	2	0	0	0	0	1	2	1
1569:	3	2	1	0	1	2	2	4
1577:	1	0	4	2	1	3	1	2
1585:	0	2	3	6	3	1	5	6
1593:	5	2	0	3	2	1	0	1
1601:	2	0	2	1	0	3	0	1
1609:	2	1	2	0	1	1	1	3
1617:	1	2	1	2	5	2	0	3
1625:	0	1	0	0	2	3	2	4
1633:	1	0	1	1	0	2	5	1
1641:	0	1	1	1	0	0	0	1
1649:	0	1	3	1	2	2	0	0
1657:	0	1	0	2	0	2	0	0

1665:	0	1	2	0	1	1	4	2

Sample Title: CP-5015 05-09

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

2097:	0	0	0	0	1	0	1	2

Sample Title: CP-5015 05-09

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

2529:	0	1	0	0	1	0	0	0

Sample Title: CP-5015 05-09

Channel								
2537:	0	0	1	1	0	0	1	0
2545:	0	0	0	2	0	0	1	0
2553:	1	1	0	0	0	0	0	0
2561:	1	1	1	0	0	0	0	1
2569:	0	0	0	0	0	0	0	1
2577:	1	0	0	1	1	0	0	0
2585:	0	1	0	1	0	0	0	1
2593:	0	0	0	0	0	0	1	1
2601:	0	0	0	0	0	1	1	0
2609:	0	0	0	0	10	16	22	8
2617:	1	0	0	0	0	0	0	0
2625:	0	0	0	0	0	0	0	0
2633:	1	0	1	0	0	0	0	0
2641:	0	1	1	0	0	1	0	0
2649:	0	0	0	0	0	0	0	0
2657:	1	0	0	1	0	0	0	0
2665:	0	1	0	0	0	1	0	0
2673:	0	0	0	1	0	0	0	0
2681:	0	0	0	0	0	1	0	0
2689:	0	0	0	0	0	0	0	0
2697:	0	0	0	0	0	1	1	0
2705:	0	0	0	0	0	0	0	0
2713:	0	0	0	1	0	0	1	0
2721:	0	0	1	0	0	0	0	0
2729:	0	0	0	0	1	0	0	0
2737:	0	1	0	0	1	1	0	0
2745:	0	1	0	1	0	0	0	0
2753:	0	0	1	0	0	0	0	2
2761:	0	1	0	1	0	0	0	1
2769:	0	1	1	0	0	0	0	0
2777:	0	0	0	0	0	0	0	2
2785:	0	0	0	0	1	0	0	0
2793:	0	0	0	0	1	0	1	1
2801:	0	0	0	0	0	1	0	0
2809:	0	0	1	0	0	0	0	1
2817:	0	0	0	0	0	0	0	0
2825:	0	0	0	1	0	1	0	0
2833:	0	0	0	0	0	0	0	1
2841:	0	0	1	0	0	0	0	2
2849:	0	0	0	0	0	0	1	1
2857:	0	1	0	0	0	0	0	0
2865:	0	0	1	0	0	0	1	0
2873:	0	0	0	0	0	0	0	0
2881:	0	1	0	0	0	0	0	0
2889:	0	0	0	0	1	1	1	1
2897:	2	0	1	1	0	0	0	0
2905:	0	0	0	0	1	0	0	0
2913:	0	0	0	0	0	0	0	1
2921:	0	2	0	1	0	0	0	0
2929:	0	0	0	0	0	0	0	0
2937:	1	0	0	0	0	0	0	1
2945:	0	0	0	0	1	0	0	0
2953:	0	0	1	1	0	1	0	0

2961:	0	1	0	1	0	0	0	0

Sample Title: CP-5015 05-09

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

3393:	0	0	0	1	0	0	0	0

Sample Title: CP-5015 05-09

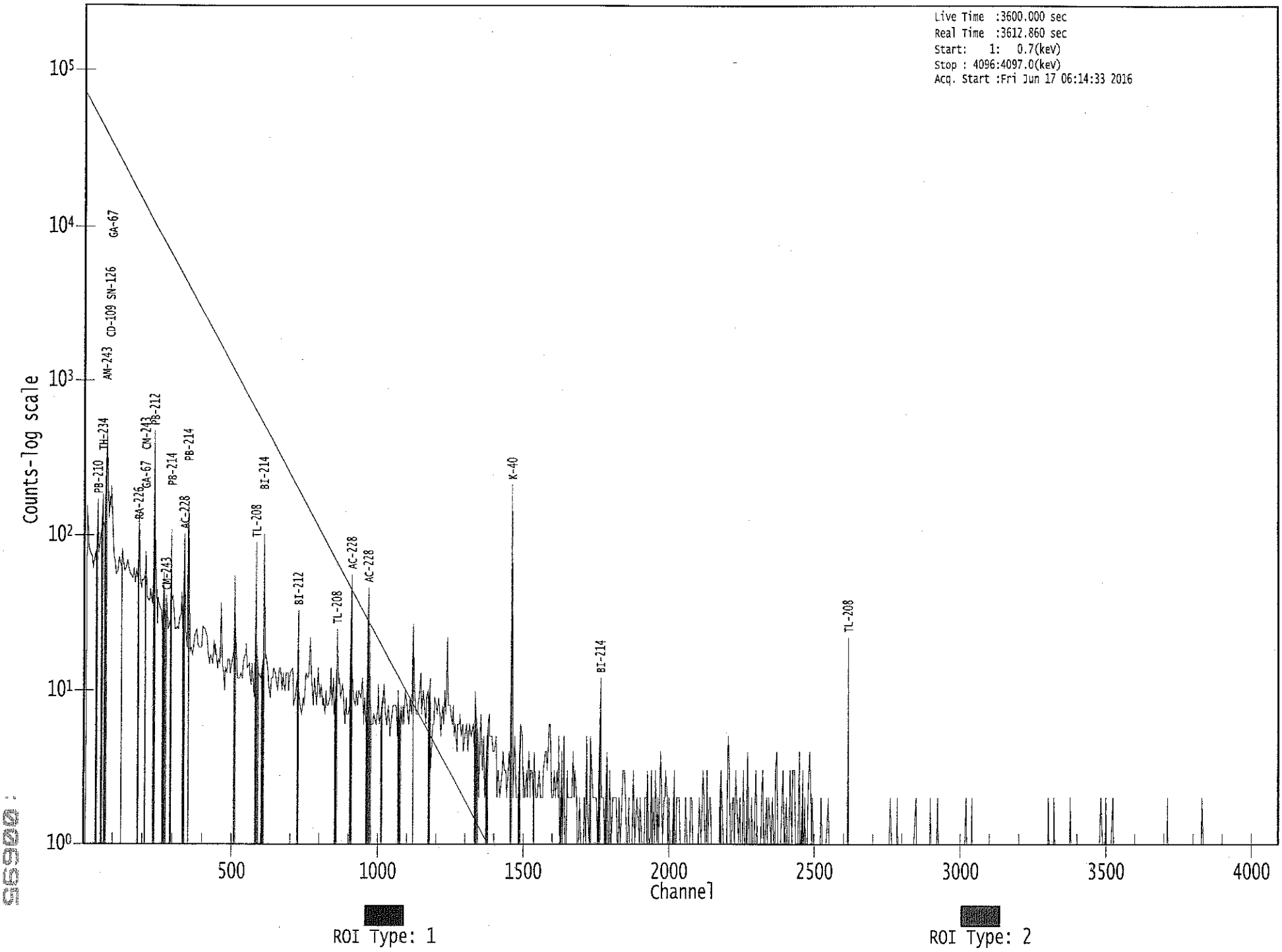
Channel								
3401:	0	0	0	0	0	1	0	0
3409:	0	0	0	0	0	0	0	0
3417:	1	0	0	0	0	0	0	0
3425:	1	0	0	1	0	1	0	0
3433:	0	1	1	0	0	1	0	0
3441:	0	0	0	0	0	1	0	0
3449:	0	0	0	0	0	0	1	0
3457:	0	0	0	0	0	0	1	0
3465:	0	0	0	0	0	0	0	0
3473:	1	0	0	0	0	1	0	0
3481:	0	0	2	1	0	0	1	1
3489:	0	0	0	0	0	0	0	0
3497:	0	1	2	0	0	1	0	0
3505:	0	0	0	0	0	0	0	0
3513:	0	0	0	0	1	0	0	0
3521:	0	0	0	2	0	0	0	0
3529:	0	0	0	0	0	0	0	0
3537:	0	0	0	0	0	1	0	0
3545:	0	1	0	0	1	0	0	0
3553:	0	0	0	0	0	0	0	1
3561:	0	0	0	0	0	0	1	0
3569:	1	0	0	0	0	1	0	0
3577:	0	0	0	0	0	0	0	0
3585:	0	0	0	0	1	0	0	0
3593:	0	0	0	0	0	0	0	0
3601:	0	0	0	0	0	0	0	0
3609:	0	0	0	0	0	1	0	0
3617:	0	0	0	0	0	1	0	0
3625:	0	0	0	1	1	1	0	0
3633:	0	0	0	0	0	0	1	0
3641:	1	0	0	1	0	1	0	1
3649:	0	1	0	0	0	0	0	0
3657:	0	0	0	0	1	0	0	0
3665:	0	0	0	0	0	0	0	0
3673:	0	0	0	0	0	0	0	0
3681:	0	0	0	0	0	0	0	0
3689:	0	0	0	0	0	0	0	0
3697:	0	0	0	0	0	0	0	0
3705:	0	0	0	0	1	1	0	2
3713:	0	0	0	0	0	0	0	0
3721:	0	0	0	0	0	0	0	0
3729:	0	0	0	0	0	0	0	0
3737:	0	0	1	0	0	0	0	0
3745:	0	0	0	0	1	0	0	0
3753:	1	0	0	0	1	0	0	0
3761:	0	0	0	1	0	0	0	0
3769:	0	0	0	0	0	1	0	0
3777:	0	0	0	0	0	0	0	0
3785:	0	0	0	0	0	0	0	0
3793:	0	0	0	0	0	0	0	0
3801:	0	0	0	0	0	0	1	0
3809:	0	0	0	0	1	0	0	0
3817:	0	0	0	0	0	0	0	0

3825:	0	0	1	1	0	2	0	0

Sample Title: CP-5015 05-09

Channel								
3833:	1	0	1	0	0	0	0	0
3841:	0	0	0	0	0	0	1	1
3849:	0	0	0	0	1	0	0	0
3857:	0	0	0	0	0	0	0	0
3865:	0	0	0	0	0	0	0	0
3873:	0	0	0	0	0	0	0	0
3881:	0	0	0	0	0	0	0	0
3889:	0	0	1	0	1	0	0	0
3897:	0	0	1	0	0	0	0	0
3905:	0	0	0	0	0	0	0	0
3913:	0	0	0	0	0	0	1	0
3921:	1	0	0	0	0	0	0	0
3929:	0	0	0	0	1	0	1	0
3937:	0	0	0	0	0	0	0	1
3945:	0	0	0	0	0	0	0	0
3953:	0	0	0	1	1	0	0	0
3961:	0	0	0	0	0	0	0	0
3969:	0	0	1	0	0	0	0	0
3977:	0	0	0	0	0	0	0	0
3985:	0	0	0	0	1	0	0	0
3993:	0	0	0	0	0	0	0	0
4001:	0	0	0	0	0	0	0	0
4009:	0	0	0	0	0	0	0	0
4017:	0	0	0	0	0	0	0	0
4025:	0	0	0	0	0	0	0	0
4033:	0	0	0	0	0	0	0	0
4041:	0	0	0	0	0	0	0	0
4049:	0	0	0	1	0	0	0	1
4057:	0	0	0	0	0	0	0	0
4065:	0	0	1	0	0	0	0	0
4073:	0	0	0	0	0	0	0	0
4081:	0	0	0	0	0	0	0	1
4089:	0	0	0	1	0	1	0	0

0000039058.CNF



Apex-Gamma

Analysis Report for 1606064-12
CP-5015 09-15

6/17

GAMMA SPECTRUM ANALYSIS

Sample Identification	: 1606064-12
Sample Description	: CP-5015 09-15
Sample Type	: SOIL
Sample Size	: 4.334E+02 grams
Facility	: Countroom
Sample Taken On	: 6/7/2016 12:21:49PM
Acquisition Started	: 6/17/2016 7:04:15AM
Procedure	: GAS-1402 pCi
Operator	: Administrator
Detector Name	: GE4
Geometry	: GAS-1402
Live Time	: 3600.0 seconds
Real Time	: 3613.6 seconds
Dead Time	: 0.38 %
Peak Locate Threshold	: 2.50
Peak Locate Range (in channels)	: 1 - 4096
Peak Area Range (in channels)	: 15 - 4096
Identification Energy Tolerance	: 1.000 keV
Energy Calibration Used Done On	: 10/25/2014
Efficiency Calibration Used Done On	: 11/8/2014
Efficiency Calibration Description	:
Sample Number	: 39064

PEAK-TO-TOTAL CALIBRATION REPORT

Peak-to-Total Efficiency Calibration Equation

AG
6/17/16

Analysis Report for 1606064-12

CP-5015 09-15

PEAK LOCATE REPORT

Peak Locate Performed on : 6/17/2016 8:04:30AM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096
Peak Search Sensitivity : 2.50

Peak No.	Energy (keV)	Centroid Channel	Centroid Uncertainty	Peak Significance
1	24.65	23.90	0.0000	0.00
2	31.34	30.59	0.0000	0.00
3	76.40	75.66	0.0000	0.00
4	93.10	92.38	0.0000	0.00
5	186.67	185.98	0.0000	0.00
6	210.00	209.33	0.0000	0.00
7	239.21	238.55	0.0000	0.00
8	280.34	279.70	0.0000	0.00
9	295.55	294.91	0.0000	0.00
10	327.94	327.31	0.0000	0.00
11	338.71	338.09	0.0000	0.00
12	352.34	351.72	0.0000	0.00
13	511.11	510.57	0.0000	0.00
14	584.24	583.74	0.0000	0.00
15	609.61	609.12	0.0000	0.00
16	634.52	634.04	0.0000	0.00
17	727.47	727.03	0.0000	0.00
18	757.06	756.64	0.0000	0.00
19	912.31	911.97	0.0000	0.00
20	1051.82	1051.56	0.0000	0.00
21	1156.90	1156.69	0.0000	0.00
22	1167.44	1167.24	0.0000	0.00
23	1399.76	1399.69	0.0000	0.00
24	1439.28	1439.24	0.0000	0.00
25	1461.38	1461.35	0.0000	0.00
26	1512.21	1512.21	0.0000	0.00
27	1554.34	1554.37	0.0000	0.00
28	1572.35	1572.39	0.0000	0.00
29	1629.50	1629.57	0.0000	0.00
30	1764.92	1765.09	0.0000	0.00
31	2143.15	2143.57	0.0000	0.00
32	2339.74	2340.31	0.0000	0.00
33	2615.39	2616.16	0.0000	0.00

? = Adjacent peak noted
Errors quoted at 2.000sigma

Analysis Report for 1606064-12

CP-5015 09-15

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 6/17/2016 8:04:30AM

Peak Analysis From Channel : 1

Peak Analysis To Channel : 4096

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	FWHM (keV)
1	24.65	20 -	27	23.90	1.06E+02	69.28	7.16E+02	4.78
2	31.34	28 -	34	30.59	4.74E+01	59.15	6.07E+02	1.57
3	76.40	68 -	82	75.66	6.58E+02	162.98	2.52E+03	3.58
4	93.10	89 -	96	92.38	1.73E+02	88.43	1.14E+03	2.73
5	186.67	182 -	190	185.98	1.22E+02	69.99	6.65E+02	1.89
6	210.00	206 -	213	209.33	6.15E+01	55.21	4.65E+02	1.64
7	239.21	232 -	245	238.55	5.06E+02	94.60	7.68E+02	2.44
8	280.34	274 -	285	279.70	7.40E+01	60.30	4.10E+02	1.93
9	295.55	290 -	298	294.91	8.25E+01	51.10	3.51E+02	2.63
10	327.94	322 -	331	327.31	5.03E+01	47.14	2.85E+02	3.54
11	338.71	334 -	343	338.09	7.90E+01	47.79	2.84E+02	3.24
12	352.34	347 -	357	351.72	1.45E+02	52.57	2.89E+02	2.33
13	511.11	504 -	518	510.57	1.30E+02	48.02	1.90E+02	3.61
14	584.24	577 -	590	583.74	1.27E+02	48.26	2.01E+02	2.33
15	609.61	605 -	614	609.12	1.33E+02	36.65	1.19E+02	2.34
16	634.52	629 -	639	634.04	2.36E+01	28.18	9.29E+01	5.78
17	727.47	723 -	732	727.03	3.38E+01	28.84	9.83E+01	1.95
18	757.06	754 -	759	756.64	1.95E+01	15.17	3.10E+01	3.07
19	912.31	905 -	917	911.97	7.02E+01	35.67	1.16E+02	3.10
20	1051.82	1045 -	1059	1051.56	2.90E+01	26.19	6.00E+01	2.94
21	1156.90	1151 -	1163	1156.69	1.82E+01	22.58	4.96E+01	7.63
22	1167.44	1163 -	1173	1167.24	2.92E+01	18.09	2.97E+01	4.88
23	1399.76	1395 -	1403	1399.69	1.14E+01	11.52	1.32E+01	6.59
24	1439.28	1435 -	1444	1439.24	1.10E+01	12.12	1.39E+01	2.27
25	1461.38	1457 -	1467	1461.35	2.85E+02	34.38	6.63E+00	3.16
26	1512.21	1503 -	1521	1512.21	1.90E+01	8.72	0.00E+00	3.92
27	1554.34	1549 -	1557	1554.37	6.50E+00	7.50	5.00E+00	2.41
28	1572.35	1568 -	1576	1572.39	6.82E+00	9.19	8.36E+00	6.00
29	1629.50	1623 -	1633	1629.57	8.00E+00	8.62	6.00E+00	2.42
30	1764.92	1759 -	1768	1765.09	3.40E+01	11.66	0.00E+00	1.71
31	2143.15	2139 -	2146	2143.57	7.00E+00	5.29	0.00E+00	2.74
32	2339.74	2336 -	2342	2340.31	4.67E+00	6.02	2.67E+00	1.89
33	2615.39	2611 -	2620	2616.16	3.46E+01	13.15	4.78E+00	3.31

Analysis Report for 1606064-12

CP-5015 09-15

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

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 6/17/2016 8:04:30AM

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

Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
1	24.65	20 -	27	1.06E+02	69.28	7.16E+02	5.44E+01
2	31.34	28 -	34	4.74E+01	59.15	6.07E+02	4.73E+01
3	76.40	68 -	82	6.58E+02	162.98	2.52E+03	1.27E+02
4	93.10	89 -	96	1.73E+02	88.43	1.14E+03	6.94E+01
5	186.67	182 -	190	1.22E+02	69.99	6.65E+02	5.46E+01
6	210.00	206 -	213	6.15E+01	55.21	4.65E+02	4.35E+01
7	239.21	232 -	245	5.06E+02	94.60	7.68E+02	6.84E+01
8	280.34	274 -	285	7.40E+01	60.30	4.10E+02	4.75E+01
9	295.55	290 -	298	8.25E+01	51.10	3.51E+02	3.93E+01
10	327.94	322 -	331	5.03E+01	47.14	2.85E+02	3.70E+01
11	338.71	334 -	343	7.90E+01	47.79	2.84E+02	3.65E+01
12	352.34	347 -	357	1.45E+02	52.57	2.89E+02	3.84E+01
13	511.11	504 -	518	1.30E+02	48.02	1.90E+02	3.47E+01
14	584.24	577 -	590	1.27E+02	48.26	2.01E+02	3.51E+01
15	609.61	605 -	614	1.33E+02	36.65	1.19E+02	2.34E+01
16	634.52	629 -	639	2.36E+01	28.18	9.29E+01	2.17E+01
17	727.47	723 -	732	3.38E+01	28.84	9.83E+01	2.17E+01
18	757.06	754 -	759	1.95E+01	15.17	3.10E+01	1.01E+01
19	912.31	905 -	917	7.02E+01	35.67	1.16E+02	2.59E+01
20	1051.82	1045 -	1059	2.90E+01	26.19	6.00E+01	1.96E+01
21	1156.90	1151 -	1163	1.82E+01	22.58	4.96E+01	1.72E+01
22	1167.44	1163 -	1173	2.92E+01	18.09	2.97E+01	1.19E+01
23	1399.76	1395 -	1403	1.14E+01	11.52	1.32E+01	7.68E+00
24	1439.28	1435 -	1444	1.10E+01	12.12	1.39E+01	8.34E+00
25	1461.38	1457 -	1467	2.85E+02	34.38	6.63E+00	5.42E+00
26	1512.21	1503 -	1521	1.90E+01	8.72	0.00E+00	0.00E+00
27	1554.34	1549 -	1557	6.50E+00	7.50	5.00E+00	4.52E+00
28	1572.35	1568 -	1576	6.82E+00	9.19	8.36E+00	6.22E+00
29	1629.50	1623 -	1633	8.00E+00	8.62	6.00E+00	5.34E+00
30	1764.92	1759 -	1768	3.40E+01	11.66	0.00E+00	0.00E+00
31	2143.15	2139 -	2146	7.00E+00	5.29	0.00E+00	0.00E+00

Analysis Report for 1606064-12

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Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
32	2339.74	2336 -	2342	4.67E+00	6.02	2.67E+00	3.45E+00
33	2615.39	2611 -	2620	3.46E+01	13.15	4.78E+00	4.83E+00

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

PEAK WITH NID REPORT

Peak Analysis Performed on : 6/17/2016 8:04:30AM

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

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

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
1	24.65	20 -	27	23.90	1.06E+02	69.28	7.16E+02	TH-231
2	31.34	28 -	34	30.59	4.74E+01	59.15	6.07E+02	.....
3	76.40	68 -	82	75.66	6.58E+02	162.98	2.52E+03	.....
4	93.10	89 -	96	92.38	1.73E+02	88.43	1.14E+03	GA-67
5	186.67	182 -	190	185.98	1.22E+02	69.99	6.65E+02	RA-226
6	210.00	206 -	213	209.33	6.15E+01	55.21	4.65E+02	CM-243
7	239.21	232 -	245	238.55	5.06E+02	94.60	7.68E+02	PB-212
8	280.34	274 -	285	279.70	7.40E+01	60.30	4.10E+02	HO-166M SE-75
9	295.55	290 -	298	294.91	8.25E+01	51.10	3.51E+02	PB-214
10	327.94	322 -	331	327.31	5.03E+01	47.14	2.85E+02	LA-140
11	338.71	334 -	343	338.09	7.90E+01	47.79	2.84E+02	AC-228
12	352.34	347 -	357	351.72	1.45E+02	52.57	2.89E+02	PB-214
13	511.11	504 -	518	510.57	1.30E+02	48.02	1.90E+02	.....
14	584.24	577 -	590	583.74	1.27E+02	48.26	2.01E+02	.....
15	609.61	605 -	614	609.12	1.33E+02	36.65	1.19E+02	BI-214
16	634.52	629 -	639	634.04	2.36E+01	28.18	9.29E+01	.....
17	727.47	723 -	732	727.03	3.38E+01	28.84	9.83E+01	BI-212
18	757.06	754 -	759	756.64	1.95E+01	15.17	3.10E+01	ZR-95
19	912.31	905 -	917	911.97	7.02E+01	35.67	1.16E+02	LU-172
20	1051.82	1045 -	1059	1051.56	2.90E+01	26.19	6.00E+01	.....
21	1156.90	1151 -	1163	1156.69	1.82E+01	22.58	4.96E+01	.....
22	1167.44	1163 -	1173	1167.24	2.92E+01	18.09	2.97E+01	.....
23	1399.76	1395 -	1403	1399.69	1.14E+01	11.52	1.32E+01	.....

Analysis Report for 1606064-12

CP-5015 09-15

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
24	1439.28	1435 -	1444	1439.24	1.10E+01	12.12	1.39E+01	.....
25	1461.38	1457 -	1467	1461.35	2.85E+02	34.38	6.63E+00	K-40
26	1512.21	1503 -	1521	1512.21	1.90E+01	8.72	0.00E+00	.....
27	1554.34	1549 -	1557	1554.37	6.50E+00	7.50	5.00E+00	.....
28	1572.35	1568 -	1576	1572.39	6.82E+00	9.19	8.36E+00	.....
29	1629.50	1623 -	1633	1629.57	8.00E+00	8.62	6.00E+00	.....
30	1764.92	1759 -	1768	1765.09	3.40E+01	11.66	0.00E+00	BI-214
31	2143.15	2139 -	2146	2143.57	7.00E+00	5.29	0.00E+00	.....
32	2339.74	2336 -	2342	2340.31	4.67E+00	6.02	2.67E+00	.....
33	2615.39	2611 -	2620	2616.16	3.46E+01	13.15	4.78E+00	TL-208

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

PEAK EFFICIENCY REPORT

Peak Analysis Performed on : 6/17/2016 8:04:30AM

Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
1	24.65	1.06E+02	69.28	3.02E-02	1.78E-03
2	31.34	4.74E+01	59.15	2.92E-02	1.78E-03
3	76.40	6.58E+02	162.98	2.12E-02	1.69E-03
4	93.10	1.73E+02	88.43	1.90E-02	1.62E-03
5	186.67	1.22E+02	69.99	1.16E-02	1.15E-03
6	210.00	6.15E+01	55.21	1.05E-02	1.08E-03
7	239.21	5.06E+02	94.60	9.40E-03	9.85E-04
8	280.34	7.40E+01	60.30	8.16E-03	8.60E-04
9	295.55	8.25E+01	51.10	7.78E-03	8.43E-04
10	327.94	5.03E+01	47.14	7.06E-03	8.07E-04
11	338.71	7.90E+01	47.79	6.85E-03	7.95E-04
12	352.34	1.45E+02	52.57	6.60E-03	7.80E-04
13	511.11	1.30E+02	48.02	4.61E-03	5.61E-04
14	584.24	1.27E+02	48.26	4.04E-03	4.54E-04
15	609.61	1.33E+02	36.65	3.87E-03	4.17E-04
16	634.52	2.36E+01	28.18	3.72E-03	3.80E-04
17	727.47	3.38E+01	28.84	3.25E-03	3.03E-04
18	757.06	1.95E+01	15.17	3.13E-03	2.87E-04
19	912.31	7.02E+01	35.67	2.61E-03	2.06E-04
20	1051.82	2.90E+01	26.19	2.28E-03	1.88E-04

Analysis Report for 1606064-12

CP-5015 09-15

Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
21	1156.90	1.82E+01	22.58	2.08E-03	1.75E-04
22	1167.44	2.92E+01	18.09	2.06E-03	1.73E-04
23	1399.76	1.14E+01	11.52	1.75E-03	2.02E-04
24	1439.28	1.10E+01	12.12	1.71E-03	1.93E-04
25	1461.38	2.85E+02	34.38	1.68E-03	1.89E-04
26	1512.21	1.90E+01	8.72	1.63E-03	1.78E-04
27	1554.34	6.50E+00	7.50	1.60E-03	1.70E-04
28	1572.35	6.82E+00	9.19	1.58E-03	1.66E-04
29	1629.50	8.00E+00	8.62	1.53E-03	1.54E-04
30	1764.92	3.40E+01	11.66	1.43E-03	1.26E-04
31	2143.15	7.00E+00	5.29	1.23E-03	1.11E-04
32	2339.74	4.67E+00	6.02	1.16E-03	1.11E-04
33	2615.39	3.46E+01	13.15	1.07E-03	1.11E-04

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

BACKGROUND SUBTRACT REPORT

Peak Analysis Performed on : 6/17/2016 8:04:30AM

Env. Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000038679.CNF

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
1	24.65	1.06E+02	69.28			1.06E+02	6.93E+01
2	31.34	4.74E+01	59.15			4.74E+01	5.92E+01
3	76.40	6.58E+02	162.98			6.58E+02	1.63E+02
4	93.10	1.73E+02	88.43	5.93E+01	9.62E+00	1.14E+02	8.90E+01
5	186.67	1.22E+02	69.99	2.90E+01	7.24E+00	9.34E+01	7.04E+01
6	210.00	6.15E+01	55.21			6.15E+01	5.52E+01
7	239.21	5.06E+02	94.60	7.10E+00	5.46E+00	4.99E+02	9.48E+01
8	280.34	7.40E+01	60.30			7.40E+01	6.03E+01
9	295.55	8.25E+01	51.10			8.25E+01	5.11E+01
10	327.94	5.03E+01	47.14			5.03E+01	4.71E+01
11	338.71	7.90E+01	47.79			7.90E+01	4.78E+01
12	352.34	1.45E+02	52.57	1.61E+00	4.34E+00	1.44E+02	5.27E+01
13	511.11	1.30E+02	48.02	4.57E+01	5.07E+00	8.41E+01	4.83E+01
14	584.24	1.27E+02	48.26	2.37E+00	3.72E+00	1.24E+02	4.84E+01
15	609.61	1.33E+02	36.65			1.33E+02	3.66E+01
16	634.52	2.36E+01	28.18			2.36E+01	2.82E+01
17	727.47	3.38E+01	28.84			3.38E+01	2.88E+01

Analysis Report for 1606064-12

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Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
18	757.06	1.95E+01	15.17			1.95E+01	1.52E+01
19	912.31	7.02E+01	35.67			7.02E+01	3.57E+01
20	1051.82	2.90E+01	26.19			2.90E+01	2.62E+01
21	1156.90	1.82E+01	22.58			1.82E+01	2.26E+01
22	1167.44	2.92E+01	18.09			2.92E+01	1.81E+01
23	1399.76	1.14E+01	11.52			1.14E+01	1.15E+01
24	1439.28	1.10E+01	12.12			1.10E+01	1.21E+01
25	1461.38	2.85E+02	34.38	9.79E-01	1.85E+00	2.84E+02	3.44E+01
26	1512.21	1.90E+01	8.72			1.90E+01	8.72E+00
27	1554.34	6.50E+00	7.50			6.50E+00	7.50E+00
28	1572.35	6.82E+00	9.19			6.82E+00	9.19E+00
29	1629.50	8.00E+00	8.62			8.00E+00	8.62E+00
30	1764.92	3.40E+01	11.66			3.40E+01	1.17E+01
31	2143.15	7.00E+00	5.29			7.00E+00	5.29E+00
32	2339.74	4.67E+00	6.02			4.67E+00	6.02E+00
33	2615.39	3.46E+01	13.15			3.46E+01	1.32E+01

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

AREA CORRECTION REPORT
REFERENCE PEAK / BKG. SUBTRACT

Peak Analysis Performed on : 6/17/2016 8:04:30AM

Ref. Peak Energy : 0.00 Reference Date :
Peak Ratio : 0.00 Uncertainty : 0.00
Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000038679.CNF

Corrected Area is: Original * Peak Ratio - Background

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
1	24.65	1.06E+02	69.28			1.06E+02	6.93E+01
2	31.34	4.74E+01	59.15			4.74E+01	5.92E+01
3	76.40	6.58E+02	162.98			6.58E+02	1.63E+02
4	93.10	1.73E+02	88.43	5.93E+01	9.62E+00	1.14E+02	8.90E+01
5	186.67	1.22E+02	69.99	2.90E+01	7.24E+00	9.34E+01	7.04E+01
6	210.00	6.15E+01	55.21			6.15E+01	5.52E+01
7	239.21	5.06E+02	94.60	7.10E+00	5.46E+00	4.99E+02	9.48E+01
8	280.34	7.40E+01	60.30			7.40E+01	6.03E+01
9	295.55	8.25E+01	51.10			8.25E+01	5.11E+01
10	327.94	5.03E+01	47.14			5.03E+01	4.71E+01
11	338.71	7.90E+01	47.79			7.90E+01	4.78E+01
12	352.34	1.45E+02	52.57	1.61E+00	4.34E+00	1.44E+02	5.27E+01

Analysis Report for 1606064-12

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Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
13	511.11	1.30E+02	48.02	4.57E+01	5.07E+00	8.41E+01	4.83E+01
14	584.24	1.27E+02	48.26	2.37E+00	3.72E+00	1.24E+02	4.84E+01
15	609.61	1.33E+02	36.65			1.33E+02	3.66E+01
16	634.52	2.36E+01	28.18			2.36E+01	2.82E+01
17	727.47	3.38E+01	28.84			3.38E+01	2.88E+01
18	757.06	1.95E+01	15.17			1.95E+01	1.52E+01
19	912.31	7.02E+01	35.67			7.02E+01	3.57E+01
20	1051.82	2.90E+01	26.19			2.90E+01	2.62E+01
21	1156.90	1.82E+01	22.58			1.82E+01	2.26E+01
22	1167.44	2.92E+01	18.09			2.92E+01	1.81E+01
23	1399.76	1.14E+01	11.52			1.14E+01	1.15E+01
24	1439.28	1.10E+01	12.12			1.10E+01	1.21E+01
25	1461.38	2.85E+02	34.38	9.79E-01	1.85E+00	2.84E+02	3.44E+01
26	1512.21	1.90E+01	8.72			1.90E+01	8.72E+00
27	1554.34	6.50E+00	7.50			6.50E+00	7.50E+00
28	1572.35	6.82E+00	9.19			6.82E+00	9.19E+00
29	1629.50	8.00E+00	8.62			8.00E+00	8.62E+00
30	1764.92	3.40E+01	11.66			3.40E+01	1.17E+01
31	2143.15	7.00E+00	5.29			7.00E+00	5.29E+00
32	2339.74	4.67E+00	6.02			4.67E+00	6.02E+00
33	2615.39	3.46E+01	13.15			3.46E+01	1.32E+01

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

NUCLIDE IDENTIFICATION REPORT

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

IDENTIFIED NUCLIDES

Nuclide Name	Id Confidence	Energy (keV)		Yield(%)	Activity (pCi/grams)	Activity Uncertainty
K-40	0.949	1460.81	*	10.67	2.74E+01	4.56E+00
GA-67	0.570	93.31	*	35.70	2.34E+00	4.38E+00
		208.95		2.24		
		300.22		16.00		
BI-212	0.768	727.17	*	11.80	1.53E+00	1.31E+00
		1620.62		2.75		
PB-212	0.847	238.63	*	44.60	2.06E+00	4.47E-01
		300.09		3.41		
BI-214	0.666	609.31	*	46.30	1.28E+00	3.80E-01
		1120.29		15.10		

Analysis Report for 1606064-12

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Nuclide Name	Id Confidence	Energy (keV)		Yield(%)	Activity (pCi/grams)	Activity Uncertainty
BI-214	0.666	1764.49	*	15.80	2.60E+00	9.20E-01
		2204.22		4.98		
PB-214	0.976	295.21	*	19.19	9.58E-01	6.02E-01
		351.92	*	37.19	1.01E+00	3.91E-01
RA-226	0.967	186.21	*	3.28	4.26E+00	8.44E+00
TH-231	0.476	25.64	*	14.70	4.15E-01	2.72E-01
		84.21		6.40		

* = Energy line found in the spectrum.
\- = Manually added nuclide.
? = Manually edited nuclide.
Energy Tolerance : 1.000 keV
Nuclide confidence index threshold = 0.30
Errors quoted at 2.000sigma

UNIDENTIFIED PEAKS

Peak Locate Performed on : 6/17/2016 8:04:30AM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
2	31.34	1.31743E-02	62.36		
3	76.40	1.82654E-01	12.39		
6	210.00	1.70895E-02	44.87	Tol.	CM-243
8	280.34	2.05675E-02	40.72	Sum	
10	327.94	1.39738E-02	46.85	Tol.	LA-140
11	338.71	2.19470E-02	30.24	Tol.	AC-228
13	511.11	2.33544E-02	28.72		
14	584.24	3.44921E-02	19.49		
16	634.52	6.54563E-03	59.80	Sum	
18	757.06	5.41270E-03	38.92	Tol.	ZR-95
19	912.31	1.95009E-02	25.41	Tol.	LU-172
20	1051.82	8.05556E-03	45.16		
21	1156.90	5.06137E-03	61.97		
22	1167.44	8.09975E-03	31.02		
23	1399.76	3.16358E-03	50.58		
24	1439.28	3.06327E-03	54.97		
26	1512.21	5.27778E-03	22.94		
27	1554.34	1.80556E-03	57.69	Sum	
28	1572.35	1.89394E-03	67.41		
29	1629.50	2.22222E-03	53.86		
31	2143.15	1.94444E-03	37.80		

Analysis Report for 1606064-12

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Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
32	2339.74	1.29630E-03	64.51		
33	2615.39	9.61336E-03	19.00	Tol.	TL-208

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

NUCLIDE IDENTIFICATION REPORT

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

IDENTIFIED NUCLIDES

Nuclide Name	Id Confidence	Energy (keV)		Yield(%)	Activity (pCi/grams)	Activity Uncertainty
K-40	0.94	1460.81	*	10.67	2.74E+01	4.56E+00
GA-67	0.57	93.31	*	35.70	2.34E+00	4.38E+00
		208.95		2.24		
		300.22		16.00		
BI-212	0.76	727.17	*	11.80	1.53E+00	1.31E+00
		1620.62		2.75		
PB-212	0.84	238.63	*	44.60	2.06E+00	4.47E-01
		300.09		3.41		
BI-214	0.66	609.31	*	46.30	1.28E+00	3.80E-01
		1120.29		15.10		
		1764.49	*	15.80	2.60E+00	9.20E-01
		2204.22		4.98		
PB-214	0.97	295.21	*	19.19	9.58E-01	6.02E-01
		351.92	*	37.19	1.01E+00	3.91E-01
RA-226	0.96	186.21	*	3.28	4.26E+00	8.44E+00
TH-231	0.47	25.64	*	14.70	4.15E-01	2.72E-01
		84.21		6.40		

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

Analysis Report for 1606064-12

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INTERFERENCE CORRECTED REPORT

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40	0.949	2.74E+01	4.56E+00	
GA-67	0.570	2.34E+00	4.38E+00	
BI-212	0.768	1.53E+00	1.31E+00	
PB-212	0.847	2.06E+00	4.47E-01	
BI-214	0.666	1.47E+00	3.51E-01	
PB-214	0.976	9.98E-01	3.28E-01	
RA-226	0.967	4.26E+00	8.44E+00	
TH-231	0.476	4.15E-01	2.72E-01	

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

Errors quoted at 2.000sigma

Analysis Report for 1606064-12

CP-5015 09-15

UNIDENTIFIED PEAKS

Peak Locate Performed on : 6/17/2016 8:04:30AM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
2	31.34	1.31743E-02	62.36		
3	76.40	1.82654E-01	12.39		
6	210.00	1.70895E-02	44.87	Tol.	CM-243
8	280.34	2.05675E-02	40.72	Sum	
10	327.94	1.39738E-02	46.85	Tol.	LA-140
11	338.71	2.19470E-02	30.24	Tol.	AC-228
13	511.11	2.33544E-02	28.72		
14	584.24	3.44921E-02	19.49		
16	634.52	6.54563E-03	59.80	Sum	
18	757.06	5.41270E-03	38.92	Tol.	ZR-95
19	912.31	1.95009E-02	25.41	Tol.	LU-172
20	1051.82	8.05556E-03	45.16		
21	1156.90	5.06137E-03	61.97		
22	1167.44	8.09975E-03	31.02		
23	1399.76	3.16358E-03	50.58		
24	1439.28	3.06327E-03	54.97		
26	1512.21	5.27778E-03	22.94		
27	1554.34	1.80556E-03	57.69	Sum	
28	1572.35	1.89394E-03	67.41		
29	1629.50	2.22222E-03	53.86		
31	2143.15	1.94444E-03	37.80		
32	2339.74	1.29630E-03	64.51		
33	2615.39	9.61336E-03	19.00	Tol.	TL-208

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

Analysis Report for 1606064-12

CP-5015 09-15

NUCLIDE MDA REPORT

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

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	BE-7	477.59		10.42	-5.26E-01	1.74E+00	1.74E+00
+	NA-22	1274.54		99.94	-5.51E-03	2.38E-01	2.38E-01
+	NA-24	1368.53		99.99	-5.56E+03	6.47E+03	7.66E+03
		2754.09		99.86	-1.46E+03		6.47E+03
+	AL-26	1808.65		99.76	-4.12E-03	1.85E-01	1.85E-01
+	K-40	1460.81	*	10.67	2.74E+01	1.39E+00	1.39E+00
+	@ AR-41	1293.64		99.16	1.00E+26	1.00E+26	1.00E+26
+	TI-44	67.88		94.40	3.63E-03	1.09E-01	1.09E-01
		78.34		96.00	4.31E-01		1.49E-01
+	SC-46	889.25		99.98	-2.81E-02	2.13E-01	2.13E-01
		1120.51		99.99	1.05E-01		3.40E-01
+	V-48	983.52		99.98	-1.51E-01	3.35E-01	3.35E-01
		1312.10		97.50	2.11E-01		4.20E-01
+	CR-51	320.08		9.83	6.25E-01	1.94E+00	1.94E+00
+	MN-54	834.83		99.97	2.87E-02	2.20E-01	2.20E-01
+	CO-56	846.75		99.96	-1.00E-01	2.14E-01	2.14E-01
		1037.75		14.03	-7.89E-03		1.81E+00
		1238.25		67.00	1.06E-01		4.79E-01
		1771.40		15.51	-3.89E+00		1.48E+00
		2598.48		16.90	1.73E-01		1.12E+00
+	CO-57	122.06		85.51	-1.25E-01	1.24E-01	1.24E-01
		136.48		10.60	-6.06E-02		1.13E+00
+	CO-58	810.76		99.40	-1.67E-02	2.06E-01	2.06E-01
+	FE-59	1099.22		56.50	-2.29E-01	4.68E-01	4.68E-01
		1291.56		43.20	2.14E-01		7.41E-01
+	CO-60	1173.22		100.00	4.83E-02	2.03E-01	2.46E-01
		1332.49		100.00	-7.61E-02		2.03E-01
+	ZN-65	1115.52		50.75	-5.18E-01	5.42E-01	5.42E-01
+	GA-67	93.31	*	35.70	2.34E+00	2.97E+00	2.97E+00
		208.95		2.24	6.97E-01		5.21E+01
		300.22		16.00	2.77E-01		7.84E+00
+	SE-75	121.11		16.70	-4.22E-01	2.04E-01	6.56E-01
		136.00		59.20	-1.05E-01		2.04E-01
		264.65		59.80	-1.95E-01		2.40E-01
		279.53		25.20	5.92E-01		6.48E-01
		400.65		11.40	4.50E-01		1.48E+00
+	RB-82	776.52		13.00	-3.47E-01	1.79E+00	1.79E+00
+	RB-83	520.41		46.00	1.23E-01	4.30E-01	4.30E-01
		529.64		30.30	-3.73E-01		6.27E-01
		552.65		16.40	9.04E-02		1.17E+00
+	KR-85	513.99		0.43	8.02E+01	5.56E+01	5.56E+01
+	SR-85	513.99		99.27	3.89E-01	2.69E-01	2.69E-01

Analysis Report for 1606064-12

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	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	Y-88	898.02	93.40	-7.93E-02	2.33E-01	2.37E-01
		1836.01	99.38	-7.13E-03		2.33E-01
+	NB-93M	16.57	9.43	6.76E-01	5.26E-01	5.26E-01
+	NB-94	702.63	100.00	2.38E-03	2.17E-01	2.17E-01
		871.10	100.00	6.46E-02		2.28E-01
+	NB-95	765.79	99.81	6.30E-02	2.64E-01	2.64E-01
+	NB-95M	235.69	25.00	1.45E+01	5.85E+00	5.85E+00
+	ZR-95	724.18	43.70	1.70E-02	3.74E-01	6.05E-01
		756.72	55.30	-1.45E-01		3.74E-01
+	MO-99	181.06	6.20	-4.22E-01	1.69E+01	2.53E+01
		739.58	12.80	2.08E+00		1.69E+01
		778.00	4.50	-1.27E+01		4.57E+01
+	RU-103	497.08	89.00	8.26E-02	2.15E-01	2.15E-01
+	RU-106	621.84	9.80	8.95E-02	1.79E+00	1.79E+00
+	AG-108M	433.93	89.90	-1.24E-01	1.65E-01	1.65E-01
		614.37	90.40	2.90E-02		2.61E-01
		722.95	90.50	2.58E-02		2.55E-01
+	CD-109	88.03	3.72	1.60E+00	3.44E+00	3.44E+00
+	AG-110M	657.75	93.14	-3.94E-02	2.06E-01	2.06E-01
		677.61	10.53	3.07E-01		1.93E+00
		706.67	16.46	5.40E-01		1.39E+00
		763.93	21.98	-2.61E-02		9.80E-01
		884.67	71.63	3.55E-02		2.83E-01
		1384.27	23.94	8.42E-02		9.90E-01
+	CD-113M	263.70	0.02	-2.51E+02	5.98E+02	5.98E+02
+	SN-113	255.12	1.93	2.83E+00	2.59E-01	7.89E+00
		391.69	64.90	1.13E-01		2.59E-01
+	TE123M	159.00	84.10	5.33E-02	1.63E-01	1.63E-01
+	SB-124	602.71	97.87	-1.18E-02	1.98E-01	1.98E-01
		645.85	7.26	1.60E+00		3.04E+00
		722.78	19.10	2.49E-02		2.07E+00
		1691.02	49.00	2.96E-03		4.44E-01
+	I-125	35.49	6.49	1.16E-01	1.10E+00	1.10E+00
+	SB-125	176.33	6.89	-4.46E-01	5.29E-01	1.81E+00
		427.89	29.33	-3.17E-02		5.29E-01
		463.38	10.35	9.79E-01		1.71E+00
		600.56	17.80	-1.73E-01		9.66E-01
		635.90	11.32	6.56E-02		1.59E+00
+	SB-126	414.70	83.30	-1.38E-01	3.16E-01	3.16E-01
		666.33	99.60	3.98E-02		3.43E-01
		695.00	99.60	-2.11E-01		3.37E-01
		720.50	53.80	-1.92E-02		6.04E-01
+	SN-126	87.57	37.00	1.58E-01	3.40E-01	3.40E-01
+	SB-127	473.00	25.00	-2.46E+00	3.00E+00	3.52E+00
		685.20	35.70	-6.53E-01		3.00E+00
		783.80	14.70	6.98E-01		7.72E+00
+	I-129	29.78	57.00	-3.88E-02	1.06E-01	1.06E-01
		33.60	13.20	-7.35E-02		4.69E-01

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	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	I-129	39.58	7.52	-1.28E+00	1.06E-01	8.56E-01
+	I-131	284.30	6.05	-8.58E-01	4.10E-01	5.24E+00
		364.48	81.20	5.19E-02		4.10E-01
		636.97	7.26	-2.01E+00		5.62E+00
		722.89	1.80	3.19E-01		2.65E+01
+	TE-132	49.72	13.10	2.10E+00	1.26E+00	4.96E+00
		228.16	88.00	6.32E-01		1.26E+00
+	BA-133	81.00	33.00	-1.07E-01	3.35E-01	4.09E-01
		302.84	17.80	-1.72E-01		8.17E-01
		356.01	60.00	1.77E-02		3.35E-01
+	I-133	529.87	86.30	-3.07E+02	5.16E+02	5.16E+02
+	XE-133	81.00	38.00	-3.38E-01	1.29E+00	1.29E+00
+	CS-134	563.23	8.38	-6.11E-01	2.10E-01	2.17E+00
		569.32	15.43	-2.16E-01		1.16E+00
		604.70	97.60	-3.45E-02		2.10E-01
		795.84	85.40	9.20E-02		2.66E-01
		801.93	8.73	-2.15E-01		2.34E+00
+	CS-135	268.24	16.00	3.43E-01	8.90E-01	8.90E-01
+	I-135	1131.51	22.50	-1.68E+10	4.21E+10	5.49E+10
		1260.41	28.60	-8.50E+09		4.21E+10
		1678.03	9.54	-1.11E+10		8.82E+10
+	CS-136	153.22	7.46	-1.55E+00	3.44E-01	2.76E+00
		163.89	4.61	6.15E-01		4.62E+00
		176.55	13.56	-3.77E-01		1.53E+00
		273.65	12.66	5.36E-01		1.88E+00
		340.57	48.50	8.24E-01		6.23E-01
		818.50	99.70	1.16E-01		3.44E-01
		1048.07	79.60	-7.42E-02		4.83E-01
		1235.34	19.70	6.77E-01		2.55E+00
+	CS-137	661.65	85.12	-9.03E-04	2.23E-01	2.23E-01
+	LA-138	788.74	34.00	-1.16E-01	3.45E-01	5.98E-01
		1435.80	66.00	0.00E+00		3.45E-01
+	CE-139	165.85	80.35	-1.97E-02	1.61E-01	1.61E-01
+	BA-140	162.64	6.70	2.67E+00	1.34E+00	3.31E+00
		304.84	4.50	-1.30E+00		5.46E+00
		423.70	3.20	1.48E+00		8.68E+00
		437.55	2.00	6.85E+00		1.42E+01
		537.32	25.00	7.17E-01		1.34E+00
+	LA-140	328.77	20.50	1.31E+00	3.72E-01	1.34E+00
		487.03	45.50	-2.14E-01		5.83E-01
		815.85	23.50	-7.58E-01		1.34E+00
		1596.49	95.49	0.00E+00		3.72E-01
+	CE-141	145.44	48.40	4.49E-02	3.09E-01	3.09E-01
+	CE-143	57.36	11.80	-3.80E+01	5.75E+01	1.06E+02
		293.26	42.00	7.68E+01		5.75E+01
		664.55	5.20	-7.20E+01		5.07E+02
+	CE-144	133.54	10.80	-2.55E-01	1.10E+00	1.10E+00
+	PM-144	476.78	42.00	-5.61E-03	1.84E-01	3.93E-01
		618.01	98.60	6.27E-02		1.84E-01

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	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	PM-144	696.49	99.49	-3.00E-02	1.84E-01	2.07E-01
+	PM-145	36.85	21.70	5.61E-02	1.60E-01	2.91E-01
		37.36	39.70	1.53E-02		1.60E-01
		42.30	15.10	3.11E-01		4.82E-01
		72.40	2.31	6.00E+00		5.65E+00
+	PM-146	453.90	39.94	-9.52E-02	3.86E-01	3.86E-01
		735.90	14.01	5.59E-01		1.36E+00
		747.13	13.10	6.77E-01		1.39E+00
+	ND-147	91.11	28.90	3.91E-01	8.61E-01	8.61E-01
		531.02	13.10	-1.51E+00		2.49E+00
+	PM-149	285.90	3.10	-6.02E+00	9.34E+01	9.34E+01
+	EU-152	121.78	20.50	-5.10E-01	5.04E-01	5.04E-01
		244.69	5.40	-5.04E-01		3.01E+00
		344.27	19.13	3.61E-02		7.89E-01
		778.89	9.20	-5.25E-01		1.90E+00
		964.01	10.40	-2.11E-01		2.71E+00
		1085.78	7.22	7.25E-01		3.65E+00
		1112.02	9.60	1.05E+00		2.90E+00
		1407.95	14.94	-2.33E-01		1.53E+00
+	GD-153	97.43	31.30	-1.16E-02	3.60E-01	3.60E-01
		103.18	22.20	-4.45E-02		4.61E-01
+	EU-154	123.07	40.50	-2.17E-01	2.59E-01	2.59E-01
		723.30	19.70	1.19E-01		1.17E+00
		873.19	11.50	5.76E-01		1.94E+00
		996.32	10.30	-2.11E-01		1.92E+00
		1004.76	17.90	8.75E-02		1.12E+00
		1274.45	35.50	-1.54E-02		6.67E-01
+	EU-155	86.50	30.90	1.89E-01	4.01E-01	4.01E-01
		105.30	20.70	-2.21E-01		4.83E-01
+	EU-156	811.77	10.40	5.45E-01	2.83E+00	2.83E+00
		1153.47	7.20	-3.61E-01		5.01E+00
		1230.71	8.90	-2.07E+00		4.68E+00
+	HO-166M	184.41	72.60	9.01E-03	2.09E-01	2.09E-01
		280.45	29.60	5.03E-01		5.21E-01
		410.94	11.10	-9.77E-01		1.29E+00
		711.69	54.10	5.32E-02		3.73E-01
+	TM-171	66.72	0.14	1.74E+01	7.41E+01	7.41E+01
+	HF-172	81.75	4.52	-1.02E+00	1.01E+00	2.80E+00
		125.81	11.30	5.91E-01		1.01E+00
+	LU-172	181.53	20.60	8.04E-02	1.08E+00	1.89E+00
		810.06	16.63	-2.50E-01		3.08E+00
		912.12	15.25	1.14E+01		6.34E+00
		1093.66	62.50	1.76E-01		1.08E+00
+	LU-173	100.72	5.24	-1.43E+00	6.74E-01	1.90E+00
		272.11	21.20	1.20E-01		6.74E-01
+	HF-175	343.40	84.00	9.03E-03	2.09E-01	2.09E-01
+	LU-176	88.34	13.30	4.51E-01	1.51E-01	9.65E-01
		201.83	86.00	1.19E-01		1.68E-01
		306.78	94.00	-5.31E-02		1.51E-01

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	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	TA-182	67.75		41.20	8.82E-03	2.64E-01	2.64E-01
		1121.30		34.90	2.11E-01		9.45E-01
		1189.05		16.23	-6.37E-02		1.75E+00
		1221.41		26.98	2.14E-01		1.16E+00
		1231.02		11.44	-1.10E+00		2.47E+00
+	IR-192	308.46		29.68	-4.90E-02	3.78E-01	5.36E-01
		468.07		48.10	3.54E-02		3.78E-01
+	HG-203	279.19		77.30	2.11E-01	2.31E-01	2.31E-01
+	BI-207	569.67		97.72	-3.39E-02	1.82E-01	1.82E-01
		1063.62		74.90	6.36E-02		2.98E-01
+	TL-208	583.14		30.22	1.50E+00	9.37E-01	9.37E-01
		860.37		4.48	3.55E-01		4.85E+00
		2614.66		35.85	1.50E+00		1.40E+00
+	BI-210M	262.00		45.00	7.36E-02	3.16E-01	3.16E-01
		300.00		23.00	-5.38E-02		7.27E-01
+	PB-210	46.50		4.25	4.51E-01	1.81E+00	1.81E+00
+	PB-211	404.84		2.90	-1.20E+00	5.18E+00	5.18E+00
		831.96		2.90	-6.27E-01		7.03E+00
+	BI-212	727.17	*	11.80	1.53E+00	2.08E+00	2.08E+00
		1620.62		2.75	4.55E-02		5.36E+00
+	PB-212	238.63	*	44.60	2.06E+00	5.79E-01	5.79E-01
		300.09		3.41	-3.63E-01		4.91E+00
+	BI-214	609.31	*	46.30	1.28E+00	2.07E-01	4.79E-01
		1120.29		15.10	6.42E-01		2.07E+00
		1764.49	*	15.80	2.60E+00		2.07E-01
		2204.22		4.98	1.10E+00		4.80E+00
+	PB-214	295.21	*	19.19	9.58E-01	5.64E-01	9.44E-01
		351.92	*	37.19	1.01E+00		5.64E-01
+	RN-219	401.80		6.50	9.40E-01	2.44E+00	2.44E+00
+	RA-223	323.87		3.88	6.27E-01	4.06E+00	4.06E+00
+	RA-224	240.98		3.95	2.36E+01	6.08E+00	6.08E+00
+	RA-225	40.00		31.00	-4.93E-01	3.30E-01	3.30E-01
+	RA-226	186.21	*	3.28	4.26E+00	5.20E+00	5.20E+00
+	TH-227	50.10		8.40	4.07E-01	9.65E-01	9.65E-01
		236.00		11.50	4.79E+00		1.94E+00
		256.20		6.30	7.73E-01		2.28E+00
+	AC-228	338.32		11.40	1.75E+00	1.25E+00	1.54E+00
		911.07		27.70	1.77E+00		1.25E+00
		969.11		16.60	1.61E+00		1.89E+00
+	TH-230	48.44		16.90	2.39E-01	4.72E-01	4.72E-01
		62.85		4.60	7.53E-01		2.13E+00
		67.67		0.37	9.25E-01		2.77E+01
+	PA-231	283.67		1.60	-2.68E-01	6.31E+00	8.97E+00
		302.67		2.30	-1.33E+00		6.31E+00
+	TH-231	25.64	*	14.70	4.15E-01	4.35E-01	4.35E-01
		84.21		6.40	4.58E-01		1.86E+00
+	PA-233	311.98		38.60	5.17E-02	4.94E-01	4.94E-01
+	PA-234	131.20		20.40	5.20E-01	5.86E-01	5.86E-01

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	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	PA-234	733.99	8.80	7.95E-01	5.86E-01	2.13E+00
		946.00	12.00	3.38E-01		1.80E+00
+	PA-234M	1001.03	0.92	-5.94E+00	2.01E+01	2.01E+01
+	TH-234	63.29	3.80	1.93E+00	2.65E+00	2.65E+00
+	U-235	143.76	10.50	-3.27E-01	1.13E+00	1.13E+00
		163.35	4.70	3.59E-01		2.70E+00
		205.31	4.70	2.42E-01		3.08E+00
+	NP-237	86.50	12.60	4.62E-01	9.79E-01	9.79E-01
+	NP-239	106.10	22.70	-3.61E+00	7.89E+00	7.89E+00
		228.18	10.70	6.32E+00		2.28E+01
		277.60	14.10	7.50E+00		1.94E+01
+	AM-241	59.54	35.90	1.46E-01	2.64E-01	2.64E-01
+	AM-243	74.67	66.00	7.47E-01	2.17E-01	2.17E-01
+	CM-243	209.75	3.29	3.86E-01	1.10E+00	4.32E+00
		228.14	10.60	6.53E-01		1.31E+00
		277.60	14.00	4.22E-01		1.10E+00

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

NUCLIDE MDA REPORT

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

	Nuclide Name	Energy (keV)		Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
	BE-7	477.59		10.42	1.74E+00	1.74E+00	-5.26E-01	8.17E-01
	NA-22	1274.54		99.94	2.38E-01	2.38E-01	-5.51E-03	1.07E-01
	NA-24	1368.53		99.99	7.66E+03	6.47E+03	-5.56E+03	3.14E+03
		2754.09		99.86	6.47E+03		-1.46E+03	2.04E+03
	AL-26	1808.65		99.76	1.85E-01	1.85E-01	-4.12E-03	7.60E-02
+	K-40	1460.81	*	10.67	1.39E+00	1.39E+00	2.74E+01	5.66E-01

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	Nuclide Name	Energy (keV)		Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
@	AR-41	1293.64		99.16	1.00E+26	1.00E+26	1.00E+26	1.00E+20
	TI-44	67.88		94.40	1.09E-01	1.09E-01	3.63E-03	5.32E-02
		78.34		96.00	1.49E-01		4.31E-01	7.36E-02
	SC-46	889.25		99.98	2.13E-01	2.13E-01	-2.81E-02	9.67E-02
		1120.51		99.99	3.40E-01		1.05E-01	1.58E-01
	V-48	983.52		99.98	3.35E-01	3.35E-01	-1.51E-01	1.53E-01
		1312.10		97.50	4.20E-01		2.11E-01	1.90E-01
	CR-51	320.08		9.83	1.94E+00	1.94E+00	6.25E-01	9.26E-01
	MN-54	834.83		99.97	2.20E-01	2.20E-01	2.87E-02	1.01E-01
	CO-56	846.75		99.96	2.14E-01	2.14E-01	-1.00E-01	9.79E-02
		1037.75		14.03	1.81E+00		-7.89E-03	8.27E-01
		1238.25		67.00	4.79E-01		1.06E-01	2.20E-01
		1771.40		15.51	1.48E+00		-3.89E+00	6.26E-01
		2598.48		16.90	1.12E+00		1.73E-01	4.18E-01
	CO-57	122.06		85.51	1.24E-01	1.24E-01	-1.25E-01	6.02E-02
		136.48		10.60	1.13E+00		-6.06E-02	5.48E-01
	CO-58	810.76		99.40	2.06E-01	2.06E-01	-1.67E-02	9.41E-02
	FE-59	1099.22		56.50	4.68E-01	4.68E-01	-2.29E-01	2.12E-01
		1291.56		43.20	7.41E-01		2.14E-01	3.37E-01
	CO-60	1173.22		100.00	2.46E-01	2.03E-01	4.83E-02	1.11E-01
		1332.49		100.00	2.03E-01		-7.61E-02	8.85E-02
	ZN-65	1115.52		50.75	5.42E-01	5.42E-01	-5.18E-01	2.49E-01
+	GA-67	93.31	*	35.70	2.97E+00	2.97E+00	2.34E+00	1.46E+00
		208.95		2.24	5.21E+01		6.97E-01	2.52E+01
		300.22		16.00	7.84E+00		2.77E-01	3.77E+00
	SE-75	121.11		16.70	6.56E-01	2.04E-01	-4.22E-01	3.19E-01
		136.00		59.20	2.04E-01		-1.05E-01	9.93E-02
		264.65		59.80	2.40E-01		-1.95E-01	1.15E-01
		279.53		25.20	6.48E-01		5.92E-01	3.12E-01
		400.65		11.40	1.48E+00		4.50E-01	7.05E-01
	RB-82	776.52		13.00	1.79E+00	1.79E+00	-3.47E-01	8.17E-01
	RB-83	520.41		46.00	4.30E-01	4.30E-01	1.23E-01	2.03E-01
		529.64		30.30	6.27E-01		-3.73E-01	2.95E-01
		552.65		16.40	1.17E+00		9.04E-02	5.47E-01
	KR-85	513.99		0.43	5.56E+01	5.56E+01	8.02E+01	2.66E+01
	SR-85	513.99		99.27	2.69E-01	2.69E-01	3.89E-01	1.29E-01
	Y-88	898.02		93.40	2.37E-01	2.33E-01	-7.93E-02	1.08E-01
		1836.01		99.38	2.33E-01		-7.13E-03	9.84E-02
	NB-93M	16.57		9.43	5.26E-01	5.26E-01	6.76E-01	2.55E-01
	NB-94	702.63		100.00	2.17E-01	2.17E-01	2.38E-03	1.02E-01
		871.10		100.00	2.28E-01		6.46E-02	1.06E-01
	NB-95	765.79		99.81	2.64E-01	2.64E-01	6.30E-02	1.23E-01
	NB-95M	235.69		25.00	5.85E+00	5.85E+00	1.45E+01	2.86E+00
	ZR-95	724.18		43.70	6.05E-01	3.74E-01	1.70E-02	2.84E-01
		756.72		55.30	3.74E-01		-1.45E-01	1.72E-01
	MO-99	181.06		6.20	2.53E+01	1.69E+01	-4.22E-01	1.23E+01
		739.58		12.80	1.69E+01		2.08E+00	7.80E+00
		778.00		4.50	4.57E+01		-1.27E+01	2.08E+01
	RU-103	497.08		89.00	2.15E-01	2.15E-01	8.26E-02	1.01E-01
	RU-106	621.84		9.80	1.79E+00	1.79E+00	8.95E-02	8.33E-01
	AG-108M	433.93		89.90	1.65E-01	1.65E-01	-1.24E-01	7.78E-02
		614.37		90.40	2.61E-01		2.90E-02	1.24E-01
		722.95		90.50	2.55E-01		2.58E-02	1.19E-01

Analysis Report for 1606064-12

CP-5015 09-15

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
CD-109	88.03	3.72	3.44E+00	3.44E+00	1.60E+00	1.69E+00
AG-110M	657.75	93.14	2.06E-01	2.06E-01	-3.94E-02	9.59E-02
	677.61	10.53	1.93E+00		3.07E-01	9.02E-01
	706.67	16.46	1.39E+00		5.40E-01	6.51E-01
	763.93	21.98	9.80E-01		-2.61E-02	4.55E-01
	884.67	71.63	2.83E-01		3.55E-02	1.29E-01
	1384.27	23.94	9.90E-01		8.42E-02	4.38E-01
CD-113M	263.70	0.02	5.98E+02	5.98E+02	-2.51E+02	2.87E+02
SN-113	255.12	1.93	7.89E+00	2.59E-01	2.83E+00	3.80E+00
	391.69	64.90	2.59E-01		1.13E-01	1.23E-01
TE123M	159.00	84.10	1.63E-01	1.63E-01	5.33E-02	7.90E-02
SB-124	602.71	97.87	1.98E-01	1.98E-01	-1.18E-02	9.19E-02
	645.85	7.26	3.04E+00		1.60E+00	1.42E+00
	722.78	11.10	2.07E+00		2.49E-02	9.62E-01
	1691.02	49.00	4.44E-01		2.96E-03	1.86E-01
I-125	35.49	6.49	1.10E+00	1.10E+00	1.16E-01	5.34E-01
SB-125	176.33	6.89	1.81E+00	5.29E-01	-4.46E-01	8.78E-01
	427.89	29.33	5.29E-01		-3.17E-02	2.50E-01
	463.38	10.35	1.71E+00		9.79E-01	8.11E-01
	600.56	17.80	9.66E-01		-1.73E-01	4.49E-01
	635.90	11.32	1.59E+00		6.56E-02	7.41E-01
SB-126	414.70	83.30	3.16E-01	3.16E-01	-1.38E-01	1.50E-01
	666.33	99.60	3.43E-01		3.98E-02	1.60E-01
	695.00	99.60	3.37E-01		-2.11E-01	1.57E-01
	720.50	53.80	6.04E-01		-1.92E-02	2.79E-01
SN-126	87.57	37.00	3.40E-01	3.40E-01	1.58E-01	1.67E-01
SB-127	473.00	25.00	3.52E+00	3.00E+00	-2.46E+00	1.65E+00
	685.20	35.70	3.00E+00		-6.53E-01	1.39E+00
	783.80	14.70	7.72E+00		6.98E-01	3.55E+00
I-129	29.78	57.00	1.06E-01	1.06E-01	-3.88E-02	5.16E-02
	33.60	13.20	4.69E-01		-7.35E-02	2.29E-01
	39.58	7.52	8.56E-01		-1.28E+00	4.17E-01
I-131	284.30	6.05	5.24E+00	4.10E-01	-8.58E-01	2.51E+00
	364.48	81.20	4.10E-01		5.19E-02	1.95E-01
	636.97	7.26	5.62E+00		-2.01E+00	2.61E+00
	722.89	1.80	2.65E+01		3.19E-01	1.23E+01
TE-132	49.72	13.10	4.96E+00	1.26E+00	2.10E+00	2.43E+00
	228.16	88.00	1.26E+00		6.32E-01	6.10E-01
BA-133	81.00	33.00	4.09E-01	3.35E-01	-1.07E-01	2.01E-01
	302.84	17.80	8.17E-01		-1.72E-01	3.91E-01
	356.01	60.00	3.35E-01		1.77E-02	1.61E-01
I-133	529.87	86.30	5.16E+02	5.16E+02	-3.07E+02	2.43E+02
XE-133	81.00	38.00	1.29E+00	1.29E+00	-3.38E-01	6.36E-01
CS-134	563.23	8.38	2.17E+00	2.10E-01	-6.11E-01	1.02E+00
	569.32	15.43	1.16E+00		-2.16E-01	5.43E-01
	604.70	97.60	2.10E-01		-3.45E-02	9.90E-02
	795.84	85.40	2.66E-01		9.20E-02	1.24E-01
	801.93	8.73	2.34E+00		-2.15E-01	1.08E+00
CS-135	268.24	16.00	8.90E-01	8.90E-01	3.43E-01	4.28E-01
I-135	1131.51	22.50	5.49E+10	4.21E+10	-1.68E+10	2.49E+10
	1260.41	28.60	4.21E+10		-8.50E+09	1.89E+10
	1678.03	9.54	8.82E+10		-1.11E+10	3.56E+10
CS-136	153.22	7.46	2.76E+00	3.44E-01	-1.55E+00	1.34E+00

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Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
CS-136	163.89	4.61	4.62E+00	3.44E-01	6.15E-01	2.24E+00
	176.55	13.56	1.53E+00		-3.77E-01	7.43E-01
	273.65	12.66	1.88E+00		5.36E-01	9.02E-01
	340.57	48.50	6.23E-01		8.24E-01	3.00E-01
	818.50	99.70	3.44E-01		1.16E-01	1.59E-01
	1048.07	79.60	4.83E-01		-7.42E-02	2.20E-01
	1235.34	19.70	2.55E+00		6.77E-01	1.17E+00
CS-137	661.65	85.12	2.23E-01	2.23E-01	-9.03E-04	1.04E-01
LA-138	788.74	34.00	5.98E-01	3.45E-01	-1.16E-01	2.76E-01
	1435.80	66.00	3.45E-01		0.00E+00	1.52E-01
CE-139	165.85	80.35	1.61E-01	1.61E-01	-1.97E-02	7.82E-02
BA-140	162.64	6.70	3.31E+00	1.34E+00	2.67E+00	1.61E+00
	304.84	4.50	5.46E+00		-1.30E+00	2.61E+00
	423.70	3.20	8.68E+00		1.48E+00	4.12E+00
	437.55	2.00	1.42E+01		6.85E+00	6.73E+00
	537.32	25.00	1.34E+00		7.17E-01	6.34E-01
LA-140	328.77	20.50	1.34E+00	3.72E-01	1.31E+00	6.40E-01
	487.03	45.50	5.83E-01		-2.14E-01	2.74E-01
	815.85	23.50	1.34E+00		-7.58E-01	6.10E-01
	1596.49	95.49	3.72E-01		0.00E+00	1.59E-01
CE-141	145.44	48.40	3.09E-01	3.09E-01	4.49E-02	1.50E-01
CE-143	57.36	11.80	1.06E+02	5.75E+01	-3.80E+01	5.19E+01
	293.26	42.00	5.75E+01		7.68E+01	2.77E+01
	664.55	5.20	5.07E+02		-7.20E+01	2.36E+02
CE-144	133.54	10.80	1.10E+00	1.10E+00	-2.55E-01	5.35E-01
PM-144	476.78	42.00	3.93E-01	1.84E-01	-5.61E-03	1.85E-01
	618.01	98.60	1.84E-01		6.27E-02	8.58E-02
	696.49	99.49	2.07E-01		-3.00E-02	9.65E-02
PM-145	36.85	21.70	2.91E-01	1.60E-01	5.61E-02	1.42E-01
	37.36	39.70	1.60E-01		1.53E-02	7.78E-02
	42.30	15.10	4.82E-01		3.11E-01	2.35E-01
	72.40	2.31	5.65E+00		6.00E+00	2.78E+00
PM-146	453.90	39.94	3.86E-01	3.86E-01	-9.52E-02	1.81E-01
	735.90	14.01	1.36E+00		5.59E-01	6.28E-01
	747.13	13.10	1.39E+00		6.77E-01	6.39E-01
ND-147	91.11	28.90	8.61E-01	8.61E-01	3.91E-01	4.23E-01
	531.02	13.10	2.49E+00		-1.51E+00	1.17E+00
PM-149	285.90	3.10	9.34E+01	9.34E+01	-6.02E+00	4.47E+01
EU-152	121.78	20.50	5.04E-01	5.04E-01	-5.10E-01	2.45E-01
	244.69	5.40	3.01E+00		-5.04E-01	1.46E+00
	344.27	19.13	7.89E-01		3.61E-02	3.76E-01
	778.89	9.20	1.90E+00		-5.25E-01	8.65E-01
	964.01	10.40	2.71E+00		-2.11E-01	1.27E+00
	1085.78	7.22	3.65E+00		7.25E-01	1.68E+00
	1112.02	9.60	2.90E+00		1.05E+00	1.34E+00
	1407.95	14.94	1.53E+00		-2.33E-01	6.77E-01
GD-153	97.43	31.30	3.60E-01	3.60E-01	-1.16E-02	1.76E-01
	103.18	22.20	4.61E-01		-4.45E-02	2.24E-01
EU-154	123.07	40.50	2.59E-01	2.59E-01	-2.17E-01	1.26E-01
	723.30	19.70	1.17E+00		1.19E-01	5.50E-01
	873.19	11.50	1.94E+00		5.76E-01	8.94E-01
	996.32	10.30	1.92E+00		-2.11E-01	8.66E-01
	1004.76	17.90	1.12E+00		8.75E-02	5.02E-01

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	Nuclide Name	Energy (keV)		Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
	EU-154	1274.45		35.50	6.67E-01	2.59E-01	-1.54E-02	2.99E-01
	EU-155	86.50		30.90	4.01E-01	4.01E-01	1.89E-01	1.97E-01
		105.30		20.70	4.83E-01		-2.21E-01	2.35E-01
	EU-156	811.77		10.40	2.83E+00	2.83E+00	5.45E-01	1.30E+00
		1153.47		7.20	5.01E+00		-3.61E-01	2.26E+00
		1230.71		8.90	4.68E+00		-2.07E+00	2.13E+00
	HO-166M	184.41		72.60	2.09E-01	2.09E-01	9.01E-03	1.02E-01
		280.45		29.60	5.21E-01		5.03E-01	2.51E-01
		410.94		11.10	1.29E+00		-9.77E-01	6.08E-01
		711.69		54.10	3.73E-01		5.32E-02	1.74E-01
	TM-171	66.72		0.14	7.41E+01	7.41E+01	1.74E+01	3.63E+01
	HF-172	81.75		4.52	2.80E+00	1.01E+00	-1.02E+00	1.37E+00
		125.81		11.30	1.01E+00		5.91E-01	4.93E-01
	LU-172	181.53		20.60	1.89E+00	1.08E+00	8.04E-02	9.19E-01
		810.06		16.63	3.08E+00		-2.50E-01	1.41E+00
		912.12		15.25	6.34E+00		1.14E+01	3.01E+00
		1093.66		62.50	1.08E+00		1.76E-01	4.93E-01
	LU-173	100.72		5.24	1.90E+00	6.74E-01	-1.43E+00	9.25E-01
		272.11		21.20	6.74E-01		1.20E-01	3.23E-01
	HF-175	343.40		84.00	2.09E-01	2.09E-01	9.03E-03	9.98E-02
	LU-176	88.34		13.30	9.65E-01	1.51E-01	4.51E-01	4.74E-01
		201.83		86.00	1.68E-01		1.19E-01	8.17E-02
		306.78		94.00	1.51E-01		-5.31E-02	7.24E-02
	TA-182	67.75		41.20	2.64E-01	2.64E-01	8.82E-03	1.29E-01
		1121.30		34.90	9.45E-01		2.11E-01	4.39E-01
		1189.05		16.23	1.75E+00		-6.37E-02	8.01E-01
		1221.41		26.98	1.16E+00		2.14E-01	5.31E-01
		1231.02		11.44	2.47E+00		-1.10E+00	1.13E+00
	IR-192	308.46		29.68	5.36E-01	3.78E-01	-4.90E-02	2.57E-01
		468.07		48.10	3.78E-01		3.54E-02	1.78E-01
	HG-203	279.19		77.30	2.31E-01	2.31E-01	2.11E-01	1.11E-01
	BI-207	569.67		97.72	1.82E-01	1.82E-01	-3.39E-02	8.51E-02
		1063.62		74.90	2.98E-01		6.36E-02	1.35E-01
	TL-208	583.14		30.22	9.37E-01	9.37E-01	1.50E+00	4.49E-01
		860.37		4.48	4.85E+00		3.55E-01	2.23E+00
		2614.66		35.85	1.40E+00		1.50E+00	6.38E-01
	BI-210M	262.00		45.00	3.16E-01	3.16E-01	7.36E-02	1.52E-01
		300.00		23.00	7.27E-01		-5.38E-02	3.50E-01
	PB-210	46.50		4.25	1.81E+00	1.81E+00	4.51E-01	8.82E-01
	PB-211	404.84		2.90	5.18E+00	5.18E+00	-1.20E+00	2.45E+00
		831.96		2.90	7.03E+00		-6.27E-01	3.23E+00
+	BI-212	727.17	*	11.80	2.08E+00	2.08E+00	1.53E+00	9.80E-01
		1620.62		2.75	5.36E+00		4.55E-02	2.13E+00
+	PB-212	238.63	*	44.60	5.79E-01	5.79E-01	2.06E+00	2.84E-01
		300.09		3.41	4.91E+00		-3.63E-01	2.36E+00
+	BI-214	609.31	*	46.30	4.79E-01	2.07E-01	1.28E+00	2.26E-01
		1120.29		15.10	2.07E+00		6.42E-01	9.64E-01
		1764.49	*	15.80	2.07E-01		2.60E+00	0.00E+00
		2204.22		4.98	4.80E+00		1.10E+00	2.01E+00
+	PB-214	295.21	*	19.19	9.44E-01	5.64E-01	9.58E-01	4.56E-01
		351.92	*	37.19	5.64E-01		1.01E+00	2.73E-01
	RN-219	401.80		6.50	2.44E+00	2.44E+00	9.40E-01	1.16E+00
	RA-223	323.87		3.88	4.06E+00	4.06E+00	6.27E-01	1.94E+00

Analysis Report for 1606064-12

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	Nuclide Name	Energy (keV)		Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
	RA-224	240.98		3.95	6.08E+00	6.08E+00	2.36E+01	2.98E+00
	RA-225	40.00		31.00	3.30E-01	3.30E-01	-4.93E-01	1.60E-01
+	RA-226	186.21	*	3.28	5.20E+00	5.20E+00	4.26E+00	2.54E+00
	TH-227	50.10		8.40	9.65E-01	9.65E-01	4.07E-01	4.72E-01
		236.00		11.50	1.94E+00		4.79E+00	9.49E-01
		256.20		6.30	2.28E+00		7.73E-01	1.10E+00
	AC-228	338.32		11.40	1.54E+00	1.25E+00	1.75E+00	7.40E-01
		911.07		27.70	1.25E+00		1.77E+00	5.92E-01
		969.11		16.60	1.89E+00		1.61E+00	8.88E-01
	TH-230	48.44		16.90	4.72E-01	4.72E-01	2.39E-01	2.31E-01
		62.85		4.60	2.13E+00		7.53E-01	1.05E+00
		67.67		0.37	2.77E+01		9.25E-01	1.36E+01
	PA-231	283.67		1.60	8.97E+00	6.31E+00	-2.68E-01	4.30E+00
		302.67		2.30	6.31E+00		-1.33E+00	3.02E+00
+	TH-231	25.64	*	14.70	4.35E-01	4.35E-01	4.15E-01	2.12E-01
		84.21		6.40	1.86E+00		4.58E-01	9.12E-01
	PA-233	311.98		38.60	4.94E-01	4.94E-01	5.17E-02	2.37E-01
	PA-234	131.20		20.40	5.86E-01	5.86E-01	5.20E-01	2.85E-01
		733.99		8.80	2.13E+00		7.95E-01	9.84E-01
		946.00		12.00	1.80E+00		3.38E-01	8.22E-01
	PA-234M	1001.03		0.92	2.01E+01	2.01E+01	-5.94E+00	9.00E+00
	TH-234	63.29		3.80	2.65E+00	2.65E+00	1.93E+00	1.30E+00
	U-235	143.76		10.50	1.13E+00	1.13E+00	-3.27E-01	5.52E-01
		163.35		4.70	2.70E+00		3.59E-01	1.31E+00
		205.31		4.70	3.08E+00		2.42E-01	1.50E+00
	NP-237	86.50		12.60	9.79E-01	9.79E-01	4.62E-01	4.80E-01
	NP-239	106.10		22.70	7.89E+00	7.89E+00	-3.61E+00	3.84E+00
		228.18		10.70	2.28E+01		6.32E+00	1.10E+01
		277.60		14.10	1.94E+01		7.50E+00	9.36E+00
	AM-241	59.54		35.90	2.64E-01	2.64E-01	1.46E-01	1.29E-01
	AM-243	74.67		66.00	2.17E-01	2.17E-01	7.47E-01	1.07E-01
	CM-243	209.75		3.29	4.32E+00	1.10E+00	3.86E-01	2.09E+00
		228.14		10.60	1.31E+00		6.53E-01	6.30E-01
		277.60		14.00	1.10E+00		4.22E-01	5.27E-01

\+ = Nuclide identified during the nuclide identification
* = Energy line found in the spectrum
\> = MDA value not calculated
@ = Half-life too short to be able to perform the decay correction

No Action Level results available for reporting purposes.

Analysis Report for 1606064-12

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DATA REVIEW COMMENTS REPORT

Creation Date	Comment	User

No Data Review Comments Entered.

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

Sample Title: CP-5015 09-15

Elapsed Live time: 3600
Elapsed Real Time: 3614

Channel								
1:	0	0	0	0	0	0	0	0
9:	0	0	0	0	0	0	15	78
17:	68	59	53	56	49	68	69	67
25:	55	57	43	32	52	51	70	55
33:	46	45	51	39	55	48	68	53
41:	57	43	48	71	80	102	70	56
49:	60	67	56	67	76	76	67	75
57:	77	63	100	82	81	108	104	84
65:	69	84	99	74	89	92	92	95
73:	130	174	201	258	250	118	93	94
81:	84	72	91	78	94	127	115	109
89:	86	113	94	120	124	98	53	55
97:	53	53	55	54	55	42	33	61
105:	54	51	58	53	41	59	48	60
113:	46	66	43	52	45	43	38	41
121:	43	52	44	42	47	51	55	60
129:	63	48	46	48	59	50	33	47
137:	46	42	44	60	40	43	52	49
145:	42	42	44	64	49	45	41	43
153:	42	50	35	35	61	48	52	53
161:	35	51	50	43	39	42	22	38
169:	37	37	30	34	38	36	33	35
177:	43	36	34	38	48	42	36	48
185:	83	93	39	35	48	31	31	40
193:	33	28	38	26	46	37	39	46
201:	33	46	40	43	29	32	34	37
209:	55	41	36	33	26	30	28	28
217:	31	28	30	23	18	23	32	25
225:	39	30	19	30	26	29	33	24
233:	30	29	41	38	99	201	168	83
241:	50	52	26	25	24	29	16	17
249:	28	22	27	27	22	32	21	18
257:	27	36	26	22	27	21	14	19
265:	25	25	20	19	25	28	24	23
273:	21	21	17	21	19	43	32	27
281:	26	22	20	16	15	13	19	12
289:	20	19	17	15	20	53	55	41
297:	22	16	23	23	21	14	20	24
305:	19	12	18	17	18	19	24	15
313:	17	20	22	18	21	15	18	25
321:	17	17	10	21	19	22	30	24
329:	23	19	8	16	13	11	12	17
337:	38	40	33	26	13	16	15	17
345:	15	14	14	15	14	29	61	70
353:	34	11	14	17	11	14	14	12
361:	7	15	8	15	12	17	14	16

369:	13	11	10	7	13	8	13	10

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Channel								
377:	15	14	13	19	10	15	14	13
385:	7	8	22	15	17	10	13	8
393:	15	9	15	16	14	7	20	20
401:	13	9	14	8	13	8	11	8
409:	16	11	10	5	11	11	14	11
417:	23	6	15	16	16	8	13	9
425:	12	14	10	9	14	8	9	7
433:	12	10	4	16	8	24	12	11
441:	14	15	9	9	10	17	6	16
449:	7	7	10	11	12	13	10	10
457:	6	7	7	13	11	17	14	12
465:	16	11	9	10	7	13	5	12
473:	7	8	7	7	11	13	11	11
481:	9	10	14	11	7	7	9	9
489:	5	5	12	6	13	12	6	4
497:	7	11	9	7	10	9	3	7
505:	9	7	14	11	20	34	31	28
513:	17	12	10	10	10	5	10	9
521:	10	10	15	15	13	9	8	11
529:	4	12	3	11	12	13	10	11
537:	10	8	17	13	9	10	6	9
545:	6	10	8	14	5	5	8	10
553:	7	6	8	14	4	6	15	7
561:	9	13	7	11	8	1	6	12
569:	12	9	3	10	12	3	8	12
577:	5	8	8	4	7	36	60	38
585:	20	6	7	5	14	9	3	11
593:	6	10	3	6	7	7	8	3
601:	8	5	13	3	6	8	11	29
609:	57	44	16	8	9	4	10	5
617:	7	11	9	8	3	5	5	2
625:	7	9	5	4	5	6	8	4
633:	6	10	7	11	6	4	3	5
641:	9	8	9	8	8	6	8	5
649:	9	5	8	6	7	7	8	8
657:	4	9	6	4	7	4	14	7
665:	6	11	3	4	11	6	7	8
673:	8	11	7	8	7	5	3	6
681:	9	3	8	7	2	6	8	3
689:	7	11	6	8	6	6	9	6
697:	5	7	5	11	8	13	1	10
705:	12	5	12	9	6	7	5	5
713:	6	4	6	6	4	3	8	6
721:	8	5	6	4	9	11	20	13
729:	8	3	5	4	5	4	5	6
737:	6	10	4	3	4	3	4	6
745:	4	4	5	3	5	4	8	5
753:	0	3	4	9	5	11	3	4
761:	6	7	8	4	5	9	8	5
769:	8	7	4	5	3	5	3	4
777:	2	7	4	5	2	4	5	6
785:	6	4	9	5	4	6	6	3
793:	7	7	10	10	5	4	8	5

801:	7	4	7	4	5	3	3	4

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Channel								
809:	4	5	3	4	6	6	4	4
817:	3	3	4	8	7	7	4	4
825:	2	4	3	3	4	5	5	5
833:	4	7	6	5	5	7	10	3
841:	6	3	5	1	7	5	4	4
849:	5	5	3	5	9	3	4	5
857:	5	6	6	8	6	3	5	3
865:	5	2	7	8	3	10	2	6
873:	9	1	5	8	4	4	1	4
881:	5	2	7	4	1	6	5	2
889:	2	6	4	4	5	5	6	2
897:	6	5	3	5	5	2	5	9
905:	5	3	2	4	6	19	28	25
913:	15	6	8	5	2	2	1	4
921:	1	2	0	8	3	7	2	4
929:	2	5	5	4	6	9	5	4
937:	2	1	4	7	3	4	4	5
945:	4	3	4	5	6	3	1	5
953:	2	4	4	2	6	3	5	4
961:	5	5	5	8	11	12	7	8
969:	15	10	7	5	6	5	3	4
977:	7	5	2	5	6	6	4	3
985:	7	1	2	5	5	7	2	2
993:	6	3	4	4	2	4	0	3
1001:	2	1	5	2	5	4	4	2
1009:	4	3	4	2	2	4	6	3
1017:	5	1	2	2	4	2	5	1
1025:	3	5	5	2	0	3	4	6
1033:	6	4	4	3	6	6	5	3
1041:	0	4	5	3	1	1	10	2
1049:	8	4	4	2	5	6	6	4
1057:	1	5	0	4	5	4	5	6
1065:	3	3	2	4	4	4	4	4
1073:	3	6	8	4	4	3	7	5
1081:	1	5	3	6	7	7	2	1
1089:	7	6	5	3	4	3	4	3
1097:	2	4	4	3	5	4	2	9
1105:	7	3	2	2	7	6	4	5
1113:	4	9	3	7	6	2	3	14
1121:	11	7	7	3	6	5	5	5
1129:	1	4	4	2	5	3	4	2
1137:	6	6	4	3	3	2	1	8
1145:	4	5	3	4	4	2	3	6
1153:	3	4	5	0	2	3	9	3
1161:	4	1	0	3	6	7	6	7
1169:	5	1	4	4	1	3	3	4
1177:	7	2	5	1	9	4	7	5
1185:	4	4	4	6	6	6	3	2
1193:	3	5	4	2	3	5	7	9
1201:	8	1	7	4	6	4	3	1
1209:	6	3	6	3	7	3	5	6
1217:	2	2	4	6	6	4	8	5
1225:	7	3	3	5	3	4	6	6

1233:	2	0	6	6	6	5	8	2

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Channel								
1241:	5	5	6	3	1	4	6	5
1249:	2	4	5	6	1	8	5	2
1257:	6	5	3	0	5	2	0	2
1265:	4	2	2	1	4	3	2	2
1273:	3	1	5	2	2	5	2	7
1281:	1	7	5	1	2	6	4	5
1289:	2	2	5	3	5	2	6	2
1297:	1	5	2	5	3	1	3	4
1305:	1	2	3	1	3	4	5	0
1313:	2	3	5	8	2	1	2	5
1321:	2	3	0	2	1	2	5	2
1329:	2	0	0	1	4	1	3	3
1337:	1	3	4	2	2	7	1	0
1345:	3	3	2	1	0	0	1	1
1353:	1	1	2	1	1	2	0	0
1361:	2	1	1	0	1	0	2	1
1369:	0	1	1	1	0	5	3	0
1377:	1	4	6	5	2	1	1	0
1385:	3	2	2	4	0	1	1	2
1393:	0	1	0	3	1	1	1	5
1401:	1	5	1	1	1	2	2	4
1409:	2	3	1	3	1	1	6	2
1417:	2	0	1	1	1	3	4	0
1425:	4	3	1	1	1	0	3	3
1433:	0	1	1	2	1	4	4	2
1441:	1	1	2	0	1	2	0	1
1449:	1	0	3	2	1	1	1	0
1457:	0	3	19	51	84	76	40	11
1465:	3	1	0	1	0	0	2	1
1473:	1	1	1	1	1	2	0	3
1481:	0	4	2	1	0	1	0	0
1489:	2	2	1	1	1	1	2	3
1497:	0	1	2	1	0	0	0	1
1505:	0	0	0	3	2	2	2	1
1513:	1	1	1	1	1	1	1	1
1521:	0	0	2	3	1	1	1	2
1529:	3	0	0	0	1	3	2	2
1537:	1	2	1	0	2	0	1	0
1545:	2	1	0	0	1	0	0	1
1553:	0	2	3	2	0	0	1	1
1561:	0	1	1	1	0	2	2	0
1569:	3	0	0	2	2	3	1	0
1577:	0	2	0	1	2	1	0	0
1585:	3	0	1	2	4	3	1	2
1593:	1	3	2	2	1	1	1	0
1601:	1	0	2	1	1	0	1	1
1609:	1	2	1	0	2	0	0	1
1617:	0	1	0	0	1	1	0	1
1625:	1	1	1	0	0	2	3	2
1633:	0	0	1	0	1	2	2	1
1641:	0	0	2	0	0	1	1	0
1649:	1	0	1	1	0	1	0	0
1657:	0	0	2	1	1	2	0	5

1665:	2	0	2	1	0	2	0	1

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

2097:	1	0	1	1	1	0	0	0

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

2529:	0	0	0	0	0	0	0	0

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

2961:	0	0	0	0	1	0	1	1

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

3393:	0	0	0	0	0	0	0	0

Sample Title: CP-5015 09-15

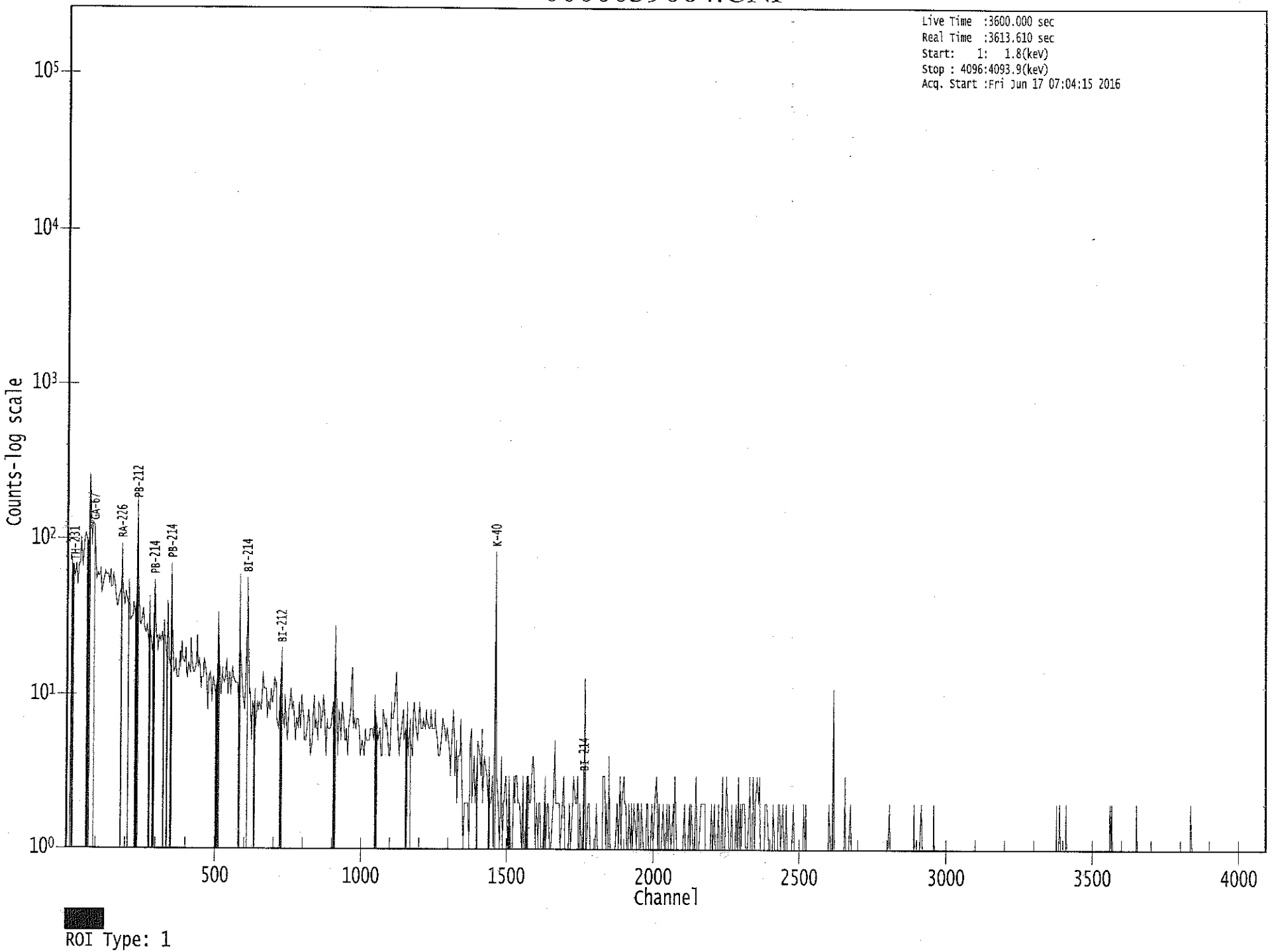
Channel								
3401:	0	0	0	0	0	0	0	0
3409:	0	0	2	0	0	0	0	0
3417:	0	0	0	0	0	1	0	0
3425:	0	0	0	0	0	0	0	0
3433:	0	0	1	0	0	0	0	0
3441:	0	0	0	0	0	0	0	0
3449:	0	1	0	0	0	1	0	1
3457:	1	0	0	0	0	0	0	0
3465:	0	0	0	0	0	1	0	1
3473:	1	0	1	1	0	0	0	0
3481:	1	1	0	0	0	0	0	0
3489:	0	0	1	0	0	0	0	0
3497:	0	0	0	0	0	0	0	0
3505:	0	0	0	0	0	0	0	0
3513:	0	0	0	0	0	0	0	0
3521:	0	0	0	0	0	0	0	0
3529:	0	0	0	0	0	0	1	0
3537:	0	0	1	0	0	0	0	1
3545:	1	0	1	0	0	0	1	0
3553:	0	0	0	0	0	0	2	0
3561:	0	0	0	1	2	0	0	0
3569:	0	0	0	0	0	0	0	0
3577:	0	0	0	0	0	0	0	0
3585:	0	0	0	0	1	0	0	0
3593:	0	0	0	0	0	0	0	0
3601:	0	0	0	0	0	0	0	0
3609:	0	1	0	1	0	0	0	0
3617:	0	0	0	1	0	0	0	0
3625:	0	0	0	0	0	0	0	0
3633:	0	0	0	0	0	1	0	0
3641:	0	0	0	0	0	0	0	0
3649:	0	2	0	1	0	0	0	0
3657:	0	1	0	1	0	0	0	0
3665:	0	0	0	0	0	0	0	0
3673:	0	0	0	0	0	0	0	0
3681:	0	0	0	1	0	0	1	0
3689:	0	0	0	0	0	0	0	0
3697:	0	0	0	0	0	0	0	0
3705:	0	0	0	0	0	0	0	0
3713:	1	0	0	0	0	0	0	0
3721:	0	1	0	0	0	0	0	0
3729:	0	0	0	0	0	0	0	1
3737:	0	1	0	0	0	0	0	0
3745:	0	0	0	1	0	0	0	0
3753:	0	0	0	0	0	0	0	1
3761:	1	0	0	0	0	0	0	1
3769:	0	0	0	0	0	0	0	0
3777:	0	0	0	0	0	0	0	0
3785:	0	0	0	1	0	0	0	0
3793:	0	0	0	1	0	0	0	0
3801:	0	0	0	0	0	0	0	0
3809:	0	1	0	0	1	0	0	0
3817:	0	0	0	0	0	0	0	0

3825:	0	0	0	0	0	0	0	0

Sample Title: CP-5015 09-15

Channel								
3833:	0	0	2	0	0	0	1	0
3841:	0	0	0	0	0	0	0	0
3849:	0	0	1	0	0	0	0	0
3857:	0	0	0	1	0	0	0	0
3865:	0	0	0	0	0	0	0	0
3873:	0	0	0	0	0	0	0	0
3881:	0	0	0	1	0	0	0	0
3889:	0	0	0	0	0	0	0	0
3897:	0	0	0	1	0	0	0	0
3905:	0	0	0	0	0	0	0	0
3913:	0	0	0	1	0	1	0	0
3921:	0	0	0	0	0	0	0	0
3929:	0	0	0	0	0	0	0	0
3937:	0	1	0	0	0	1	0	0
3945:	1	0	0	0	0	0	0	0
3953:	0	0	0	0	0	0	0	0
3961:	0	0	1	0	0	0	0	0
3969:	0	0	0	0	0	0	0	0
3977:	0	0	0	0	0	0	0	0
3985:	0	0	0	0	1	0	0	0
3993:	0	0	0	0	0	0	1	1
4001:	0	0	0	0	0	0	0	0
4009:	1	0	0	0	0	0	0	0
4017:	0	0	1	0	0	0	0	0
4025:	0	0	0	0	0	0	0	0
4033:	0	0	0	0	1	0	0	0
4041:	0	0	0	0	0	0	1	0
4049:	0	0	0	0	0	0	0	0
4057:	1	0	1	0	0	0	0	0
4065:	0	0	0	0	0	0	0	0
4073:	0	0	0	0	0	0	0	0
4081:	0	0	0	0	0	0	0	0
4089:	0	0	0	0	0	0	0	0

0000039064.CNF



Apex-Gamma

Analysis Report for 1606064-13
CP-5013 00-02

6/17

GAMMA SPECTRUM ANALYSIS

Sample Identification	: 1606064-13
Sample Description	: CP-5013 00-02
Sample Type	: SOIL
Sample Size	: 5.356E+02 grams
Facility	: Countroom
Sample Taken On	: 6/8/2016 12:22:14PM
Acquisition Started	: 6/17/2016 7:14:25AM
Procedure	: GAS-1402 pCi
Operator	: Administrator
Detector Name	: GE1
Geometry	: GAS-1402
Live Time	: 3600.0 seconds
Real Time	: 3601.2 seconds
Dead Time	: 0.03 %
Peak Locate Threshold	: 2.50
Peak Locate Range (in channels)	: 1 - 4096
Peak Area Range (in channels)	: 19 - 4096
Identification Energy Tolerance	: 1.000 keV
Energy Calibration Used Done On	: 10/25/2014
Efficiency Calibration Used Done On	: 10/25/2014
Efficiency Calibration Description	:
Sample Number	: 39065

PEAK-TO-TOTAL CALIBRATION REPORT

Peak-to-Total Efficiency Calibration Equation

AG
6/17/16

Analysis Report for 1606064-13

CP-5013 00-02

PEAK LOCATE REPORT

Peak Locate Performed on : 6/17/2016 8:14:29AM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096
Peak Search Sensitivity : 2.50

Peak No.	Energy (keV)	Centroid Channel	Centroid Uncertainty	Peak Significance
1	47.15	47.50	0.0000	0.00
2	51.07	51.42	0.0000	0.00
3	76.73	77.07	0.0000	0.00
4	88.52	88.86	0.0000	0.00
5	186.37	186.67	0.0000	0.00
6	195.26	195.56	0.0000	0.00
7	209.95	210.25	0.0000	0.00
8	216.45	216.75	0.0000	0.00
9	239.21	239.50	0.0000	0.00
10	242.58	242.87	0.0000	0.00
11	270.95	271.23	0.0000	0.00
12	295.83	296.10	0.0000	0.00
13	300.58	300.84	0.0000	0.00
14	338.95	339.20	0.0000	0.00
15	352.52	352.77	0.0000	0.00
16	409.63	409.86	0.0000	0.00
17	463.77	463.98	0.0000	0.00
18	511.38	511.58	0.0000	0.00
19	583.77	583.94	0.0000	0.00
20	610.00	610.16	0.0000	0.00
21	613.84	614.00	0.0000	0.00
22	727.62	727.74	0.0000	0.00
23	769.09	769.19	0.0000	0.00
24	795.83	795.93	0.0000	0.00
25	802.93	803.02	0.0000	0.00
26	861.12	861.20	0.0000	0.00
27	879.18	879.24	0.0000	0.00
28	912.09	912.15	0.0000	0.00
29	969.70	969.73	0.0000	0.00
30	1002.47	1002.49	0.0000	0.00
31	1121.00	1120.98	0.0000	0.00
32	1238.07	1238.01	0.0000	0.00
33	1305.29	1305.20	0.0000	0.00
34	1377.64	1377.52	0.0000	0.00
35	1457.14	1457.00	0.0000	0.00
36	1461.69	1461.55	0.0000	0.00
37	1482.33	1482.18	0.0000	0.00
38	1582.41	1582.22	0.0000	0.00
39	1589.19	1589.00	0.0000	0.00
40	1592.97	1592.78	0.0000	0.00
41	1662.47	1662.25	0.0000	0.00
42	1730.10	1729.85	0.0000	0.00

Analysis Report for 1606064-13

CP-5013 00-02

Peak No.	Energy (keV)	Centroid Channel	Centroid Uncertainty	Peak Significance
43	1765.58	1765.33	0.0000	0.00
44	1770.11	1769.85	0.0000	0.00
45	1849.37	1849.09	0.0000	0.00
46	1890.72	1890.42	0.0000	0.00
47	2104.11	2103.72	0.0000	0.00
48	2204.02	2203.60	0.0000	0.00
49	2211.30	2210.87	0.0000	0.00
50	2346.28	2345.81	0.0000	0.00
51	2539.55	2539.00	0.0000	0.00
52	2615.46	2614.88	0.0000	0.00

? = Adjacent peak noted
Errors quoted at 2.000sigma

Analysis Report for 1606064-13

CP-5013 00-02

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 6/17/2016 8:14:29AM

Peak Analysis From Channel : 1

Peak Analysis To Channel : 4096

	Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	FWHM (keV)
M	1	47.15	45 -	56	47.50	1.59E+02	68.67	8.07E+02	1.86
m	2	51.07	45 -	56	51.42	6.10E+01	58.95	6.69E+02	1.71
	3	76.73	72 -	83	77.07	1.02E+03	166.17	2.91E+03	2.83
	4	88.52	86 -	91	88.86	8.54E+01	94.60	1.72E+03	0.94
	5	186.37	183 -	191	186.67	2.31E+02	85.34	9.71E+02	1.47
	6	195.26	194 -	198	195.56	4.04E+01	48.57	4.89E+02	1.24
	7	209.95	207 -	213	210.25	8.31E+01	63.02	6.50E+02	1.39
	8	216.45	214 -	220	216.75	5.60E+01	55.69	5.20E+02	4.57
M	9	239.21	236 -	246	239.50	8.61E+02	71.99	4.09E+02	1.66
m	10	242.58	236 -	246	242.87	2.53E+02	70.21	4.56E+02	2.04
	11	270.95	267 -	275	271.23	5.89E+01	65.50	6.20E+02	1.65
M	12	295.83	290 -	305	296.10	2.82E+02	44.36	2.16E+02	1.44
m	13	300.58	290 -	305	300.84	6.35E+01	37.47	2.37E+02	1.74
	14	338.95	335 -	342	339.20	1.29E+02	58.28	4.80E+02	1.28
	15	352.52	349 -	357	352.77	5.55E+02	69.18	3.92E+02	1.70
	16	409.63	407 -	413	409.86	3.92E+01	36.43	2.12E+02	3.02
	17	463.77	461 -	467	463.98	6.14E+01	35.17	1.77E+02	1.53
	18	511.38	507 -	515	511.58	1.87E+02	47.93	2.38E+02	2.28
	19	583.77	580 -	587	583.94	2.24E+02	49.84	2.65E+02	1.36
M	20	610.00	606 -	619	610.16	3.79E+02	44.50	1.02E+02	1.73
m	21	613.84	606 -	619	614.00	1.79E+01	30.34	7.81E+01	1.80
	22	727.62	724 -	730	727.74	6.80E+01	30.74	1.22E+02	2.00
	23	769.09	765 -	774	769.19	5.35E+01	36.95	1.63E+02	1.89
M	24	795.83	792 -	806	795.93	3.62E+01	22.89	7.65E+01	2.07
m	25	802.93	792 -	806	803.02	1.80E+01	22.63	9.43E+01	2.10
	26	861.12	858 -	863	861.20	3.74E+01	20.45	5.32E+01	1.90
	27	879.18	871 -	891	879.24	5.34E+01	52.10	2.03E+02	17.13
	28	912.09	908 -	916	912.15	1.84E+02	40.79	1.39E+02	1.76
	29	969.70	966 -	973	969.73	6.97E+01	37.52	1.73E+02	1.75
	30	1002.47	999 -	1006	1002.49	3.05E+01	24.49	7.91E+01	2.00
	31	1121.00	1117 -	1125	1120.98	8.66E+01	38.23	1.73E+02	1.65
	32	1238.07	1233 -	1241	1238.01	5.82E+01	25.29	6.16E+01	2.17
	33	1305.29	1303 -	1310	1305.20	1.37E+01	16.37	3.47E+01	3.17
	34	1377.64	1373 -	1380	1377.52	3.24E+01	14.97	1.52E+01	2.15
M	35	1457.14	1456 -	1467	1457.00	6.98E+00	7.19	1.20E+01	2.19
m	36	1461.69	1456 -	1467	1461.55	7.85E+02	56.26	2.45E+01	2.44
	37	1482.33	1479 -	1485	1482.18	1.15E+01	8.02	3.08E+00	1.17
M	38	1582.41	1577 -	1597	1582.22	9.56E+00	10.04	1.30E+01	2.47
m	39	1589.19	1577 -	1597	1589.00	2.22E+01	12.36	1.00E+01	2.24
m	40	1592.97	1577 -	1597	1592.78	1.28E+01	12.52	8.52E+00	2.47

Analysis Report for 1606064-13

CP-5013 00-02

	Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	FWHM (keV)
	41	1662.47	1660 -	1664	1662.25	8.50E+00	8.17	7.00E+00	1.43
	42	1730.10	1725 -	1734	1729.85	2.95E+01	13.64	9.00E+00	1.62
M	43	1765.58	1760 -	1772	1765.33	5.37E+01	16.87	1.03E+01	2.43
m	44	1770.11	1760 -	1772	1769.85	9.50E+00	13.59	1.34E+01	3.07
	45	1849.37	1843 -	1855	1849.09	2.41E+01	12.26	5.89E+00	5.47
	46	1890.72	1886 -	1894	1890.42	1.08E+01	8.50	4.46E+00	3.69
	47	2104.11	2099 -	2107	2103.72	9.47E+00	11.17	1.31E+01	1.78
	48	2204.02	2200 -	2206	2203.60	1.15E+01	9.19	7.00E+00	1.83
	49	2211.30	2209 -	2213	2210.87	6.38E+00	6.67	3.25E+00	2.91
	50	2346.28	2341 -	2351	2345.81	1.30E+01	9.71	5.94E+00	2.59
	51	2539.55	2535 -	2541	2539.00	6.00E+00	4.90	0.00E+00	2.88
	52	2615.46	2611 -	2620	2614.88	1.06E+02	20.59	0.00E+00	2.47

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

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 6/17/2016 8:14:29AM

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

	Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
M	1	47.15	45 -	56	1.59E+02	68.67	8.07E+02	4.67E+01
m	2	51.07	45 -	56	6.10E+01	58.95	6.69E+02	4.25E+01
	3	76.73	72 -	83	1.02E+03	166.17	2.91E+03	1.26E+02
	4	88.52	86 -	91	8.54E+01	94.60	1.72E+03	7.63E+01
	5	186.37	183 -	191	2.31E+02	85.34	9.71E+02	6.55E+01
	6	195.26	194 -	198	4.04E+01	48.57	4.89E+02	3.85E+01
	7	209.95	207 -	213	8.31E+01	63.02	6.50E+02	4.96E+01
	8	216.45	214 -	220	5.60E+01	55.69	5.20E+02	4.41E+01
M	9	239.21	236 -	246	8.61E+02	71.99	4.09E+02	3.33E+01
m	10	242.58	236 -	246	2.53E+02	70.21	4.56E+02	3.51E+01
	11	270.95	267 -	275	5.89E+01	65.50	6.20E+02	5.23E+01
M	12	295.83	290 -	305	2.82E+02	44.36	2.16E+02	2.42E+01
m	13	300.58	290 -	305	6.35E+01	37.47	2.37E+02	2.53E+01
	14	338.95	335 -	342	1.29E+02	58.28	4.80E+02	4.41E+01
	15	352.52	349 -	357	5.55E+02	69.18	3.92E+02	4.16E+01
	16	409.63	407 -	413	3.92E+01	36.43	2.12E+02	2.81E+01

Analysis Report for 1606064-13

CP-5013 00-02

	Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
	17	463.77	461 -	467	6.14E+01	35.17	1.77E+02	2.59E+01
	18	511.38	507 -	515	1.87E+02	47.93	2.38E+02	3.24E+01
	19	583.77	580 -	587	2.24E+02	49.84	2.65E+02	3.27E+01
M	20	610.00	606 -	619	3.79E+02	44.50	1.02E+02	1.66E+01
m	21	613.84	606 -	619	1.79E+01	30.34	7.81E+01	1.45E+01
	22	727.62	724 -	730	6.80E+01	30.74	1.22E+02	2.13E+01
	23	769.09	765 -	774	5.35E+01	36.95	1.63E+02	2.79E+01
M	24	795.83	792 -	806	3.62E+01	22.89	7.65E+01	1.44E+01
m	25	802.93	792 -	806	1.80E+01	22.63	9.43E+01	1.60E+01
	26	861.12	858 -	863	3.74E+01	20.45	5.32E+01	1.35E+01
	27	879.18	871 -	891	5.34E+01	52.10	2.03E+02	4.11E+01
	28	912.09	908 -	916	1.84E+02	40.79	1.39E+02	2.50E+01
	29	969.70	966 -	973	6.97E+01	37.52	1.73E+02	3.12E+01
	30	1002.47	999 -	1006	3.05E+01	24.49	7.91E+01	1.80E+01
	31	1121.00	1117 -	1125	8.66E+01	38.23	1.73E+02	2.75E+01
	32	1238.07	1233 -	1241	5.82E+01	25.29	6.16E+01	1.66E+01
	33	1305.29	1303 -	1310	1.37E+01	16.37	3.47E+01	1.20E+01
	34	1377.64	1373 -	1380	3.24E+01	14.97	1.52E+01	7.99E+00
M	35	1457.14	1456 -	1467	6.98E+00	7.19	1.20E+01	5.69E+00
m	36	1461.69	1456 -	1467	7.85E+02	56.26	2.45E+01	8.14E+00
	37	1482.33	1479 -	1485	1.15E+01	8.02	3.08E+00	3.53E+00
M	38	1582.41	1577 -	1597	9.56E+00	10.04	1.30E+01	5.92E+00
m	39	1589.19	1577 -	1597	2.22E+01	12.36	1.00E+01	5.21E+00
m	40	1592.97	1577 -	1597	1.28E+01	12.52	8.52E+00	4.80E+00
	41	1662.47	1660 -	1664	8.50E+00	8.17	7.00E+00	4.70E+00
	42	1730.10	1725 -	1734	2.95E+01	13.64	9.00E+00	6.78E+00
M	43	1765.58	1760 -	1772	5.37E+01	16.87	1.03E+01	5.27E+00
m	44	1770.11	1760 -	1772	9.50E+00	13.59	1.34E+01	6.02E+00
	45	1849.37	1843 -	1855	2.41E+01	12.26	5.89E+00	6.04E+00
	46	1890.72	1886 -	1894	1.08E+01	8.50	4.46E+00	4.44E+00
	47	2104.11	2099 -	2107	9.47E+00	11.17	1.31E+01	7.66E+00
	48	2204.02	2200 -	2206	1.15E+01	9.19	7.00E+00	5.10E+00
	49	2211.30	2209 -	2213	6.38E+00	6.67	3.25E+00	3.58E+00
	50	2346.28	2341 -	2351	1.30E+01	9.71	5.94E+00	5.34E+00
	51	2539.55	2535 -	2541	6.00E+00	4.90	0.00E+00	0.00E+00
	52	2615.46	2611 -	2620	1.06E+02	20.59	0.00E+00	0.00E+00

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

Analysis Report for 1606064-13

CP-5013 00-02

PEAK WITH NID REPORT

Peak Analysis Performed on : 6/17/2016 8:14:29AM

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

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

	Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
M	1	47.15	45 -	56	47.50	1.59E+02	68.67	8.07E+02	PB-210
m	2	51.07	45 -	56	51.42	6.10E+01	58.95	6.69E+02	TH-227
	3	76.73	72 -	83	77.07	1.02E+03	166.17	2.91E+03	.....
	4	88.52	86 -	91	88.86	8.54E+01	94.60	1.72E+03	LU-176 CD-109 SN-126
	5	186.37	183 -	191	186.67	2.31E+02	85.34	9.71E+02	RA-226
	6	195.26	194 -	198	195.56	4.04E+01	48.57	4.89E+02	.....
	7	209.95	207 -	213	210.25	8.31E+01	63.02	6.50E+02	CM-243 GA-67
	8	216.45	214 -	220	216.75	5.60E+01	55.69	5.20E+02	.....
M	9	239.21	236 -	246	239.50	8.61E+02	71.99	4.09E+02	PB-212
m	10	242.58	236 -	246	242.87	2.53E+02	70.21	4.56E+02	.....
	11	270.95	267 -	275	271.23	5.89E+01	65.50	6.20E+02	.....
M	12	295.83	290 -	305	296.10	2.82E+02	44.36	2.16E+02	PB-214
m	13	300.58	290 -	305	300.84	6.35E+01	37.47	2.37E+02	GA-67 PB-212 BI-210M
	14	338.95	335 -	342	339.20	1.29E+02	58.28	4.80E+02	AC-228
	15	352.52	349 -	357	352.77	5.55E+02	69.18	3.92E+02	PB-214
	16	409.63	407 -	413	409.86	3.92E+01	36.43	2.12E+02	.....
	17	463.77	461 -	467	463.98	6.14E+01	35.17	1.77E+02	SB-125
	18	511.38	507 -	515	511.58	1.87E+02	47.93	2.38E+02	.....
	19	583.77	580 -	587	583.94	2.24E+02	49.84	2.65E+02	TL-208
M	20	610.00	606 -	619	610.16	3.79E+02	44.50	1.02E+02	BI-214
m	21	613.84	606 -	619	614.00	1.79E+01	30.34	7.81E+01	AG-108M
	22	727.62	724 -	730	727.74	6.80E+01	30.74	1.22E+02	BI-212
	23	769.09	765 -	774	769.19	5.35E+01	36.95	1.63E+02	.....
M	24	795.83	792 -	806	795.93	3.62E+01	22.89	7.65E+01	CS-134
m	25	802.93	792 -	806	803.02	1.80E+01	22.63	9.43E+01	CS-134
	26	861.12	858 -	863	861.20	3.74E+01	20.45	5.32E+01	TL-208
	27	879.18	871 -	891	879.24	5.34E+01	52.10	2.03E+02	.....
	28	912.09	908 -	916	912.15	1.84E+02	40.79	1.39E+02	LU-172
	29	969.70	966 -	973	969.73	6.97E+01	37.52	1.73E+02	AC-228
	30	1002.47	999 -	1006	1002.49	3.05E+01	24.49	7.91E+01	.....
	31	1121.00	1117 -	1125	1120.98	8.66E+01	38.23	1.73E+02	TA-182 SC-46 BI-214
	32	1238.07	1233 -	1241	1238.01	5.82E+01	25.29	6.16E+01	CO-56
	33	1305.29	1303 -	1310	1305.20	1.37E+01	16.37	3.47E+01	.....
	34	1377.64	1373 -	1380	1377.52	3.24E+01	14.97	1.52E+01	.....

Analysis Report for 1606064-13

CP-5013 00-02

	Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
M	35	1457.14	1456 -	1467	1457.00	6.98E+00	7.19	1.20E+01	.....
m	36	1461.69	1456 -	1467	1461.55	7.85E+02	56.26	2.45E+01	K-40
	37	1482.33	1479 -	1485	1482.18	1.15E+01	8.02	3.08E+00	.....
M	38	1582.41	1577 -	1597	1582.22	9.56E+00	10.04	1.30E+01	.....
m	39	1589.19	1577 -	1597	1589.00	2.22E+01	12.36	1.00E+01	.....
m	40	1592.97	1577 -	1597	1592.78	1.28E+01	12.52	8.52E+00	.....
	41	1662.47	1660 -	1664	1662.25	8.50E+00	8.17	7.00E+00	.....
	42	1730.10	1725 -	1734	1729.85	2.95E+01	13.64	9.00E+00	.....
M	43	1765.58	1760 -	1772	1765.33	5.37E+01	16.87	1.03E+01	.....
m	44	1770.11	1760 -	1772	1769.85	9.50E+00	13.59	1.34E+01	.....
	45	1849.37	1843 -	1855	1849.09	2.41E+01	12.26	5.89E+00	.....
	46	1890.72	1886 -	1894	1890.42	1.08E+01	8.50	4.46E+00	.....
	47	2104.11	2099 -	2107	2103.72	9.47E+00	11.17	1.31E+01	.....
	48	2204.02	2200 -	2206	2203.60	1.15E+01	9.19	7.00E+00	BI-214
	49	2211.30	2209 -	2213	2210.87	6.38E+00	6.67	3.25E+00	.....
	50	2346.28	2341 -	2351	2345.81	1.30E+01	9.71	5.94E+00	.....
	51	2539.55	2535 -	2541	2539.00	6.00E+00	4.90	0.00E+00	.....
	52	2615.46	2611 -	2620	2614.88	1.06E+02	20.59	0.00E+00	TL-208

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

PEAK EFFICIENCY REPORT

Peak Analysis Performed on : 6/17/2016 8:14:29AM

	Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
M	1	47.15	1.59E+02	68.67	1.72E-02	1.78E-03
m	2	51.07	6.10E+01	58.95	1.96E-02	1.78E-03
	3	76.73	1.02E+03	166.17	2.77E-02	2.36E-03
	4	88.52	8.54E+01	94.60	2.85E-02	2.73E-03
	5	186.37	2.31E+02	85.34	2.24E-02	2.02E-03
	6	195.26	4.04E+01	48.57	2.18E-02	1.96E-03
	7	209.95	8.31E+01	63.02	2.08E-02	1.85E-03
	8	216.45	5.60E+01	55.69	2.04E-02	1.80E-03
M	9	239.21	8.61E+02	71.99	1.92E-02	1.63E-03
m	10	242.58	2.53E+02	70.21	1.90E-02	1.61E-03
	11	270.95	5.89E+01	65.50	1.77E-02	1.40E-03
M	12	295.83	2.82E+02	44.36	1.67E-02	1.31E-03

Analysis Report for 1606064-13

CP-5013 00-02

	Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
m	13	300.58	6.35E+01	37.47	1.65E-02	1.30E-03
	14	338.95	1.29E+02	58.28	1.52E-02	1.22E-03
	15	352.52	5.55E+02	69.18	1.47E-02	1.19E-03
	16	409.63	3.92E+01	36.43	1.32E-02	1.10E-03
	17	463.77	6.14E+01	35.17	1.21E-02	1.04E-03
	18	511.38	1.87E+02	47.93	1.12E-02	9.90E-04
	19	583.77	2.24E+02	49.84	1.02E-02	9.15E-04
M	20	610.00	3.79E+02	44.50	9.82E-03	8.88E-04
m	21	613.84	1.79E+01	30.34	9.77E-03	8.84E-04
	22	727.62	6.80E+01	30.74	8.55E-03	7.75E-04
	23	769.09	5.35E+01	36.95	8.18E-03	7.38E-04
M	24	795.83	3.62E+01	22.89	7.96E-03	7.14E-04
m	25	802.93	1.80E+01	22.63	7.91E-03	7.08E-04
	26	861.12	3.74E+01	20.45	7.48E-03	6.55E-04
	27	879.18	5.34E+01	52.10	7.36E-03	6.39E-04
	28	912.09	1.84E+02	40.79	7.14E-03	6.15E-04
	29	969.70	6.97E+01	37.52	6.80E-03	5.85E-04
	30	1002.47	3.05E+01	24.49	6.62E-03	5.68E-04
	31	1121.00	8.66E+01	38.23	6.06E-03	5.06E-04
	32	1238.07	5.82E+01	25.29	5.61E-03	4.68E-04
	33	1305.29	1.37E+01	16.37	5.39E-03	4.56E-04
	34	1377.64	3.24E+01	14.97	5.18E-03	4.40E-04
M	35	1457.14	6.98E+00	7.19	4.98E-03	4.20E-04
m	36	1461.69	7.85E+02	56.26	4.97E-03	4.19E-04
	37	1482.33	1.15E+01	8.02	4.92E-03	4.14E-04
M	38	1582.41	9.56E+00	10.04	4.71E-03	3.89E-04
m	39	1589.19	2.22E+01	12.36	4.69E-03	3.87E-04
m	40	1592.97	1.28E+01	12.52	4.69E-03	3.86E-04
	41	1662.47	8.50E+00	8.17	4.56E-03	3.69E-04
	42	1730.10	2.95E+01	13.64	4.45E-03	3.52E-04
M	43	1765.58	5.37E+01	16.87	4.39E-03	3.43E-04
m	44	1770.11	9.50E+00	13.59	4.39E-03	3.42E-04
	45	1849.37	2.41E+01	12.26	4.28E-03	3.26E-04
	46	1890.72	1.08E+01	8.50	4.23E-03	3.26E-04
	47	2104.11	9.47E+00	11.17	4.02E-03	3.26E-04
	48	2204.02	1.15E+01	9.19	3.95E-03	3.26E-04
	49	2211.30	6.38E+00	6.67	3.94E-03	3.26E-04
	50	2346.28	1.30E+01	9.71	3.87E-03	3.26E-04
	51	2539.55	6.00E+00	4.90	3.81E-03	3.26E-04
	52	2615.46	1.06E+02	20.59	3.79E-03	3.26E-04

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

Analysis Report for 1606064-13

CP-5013 00-02

BACKGROUND SUBTRACT REPORT

Peak Analysis Performed on : 6/17/2016 8:14:29AM

Env. Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000038676.CNF

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
M	1	47.15	1.59E+02	68.67	4.33E+01	8.35E+00	1.16E+02	6.92E+01
m	2	51.07	6.10E+01	58.95			6.10E+01	5.89E+01
	3	76.73	1.02E+03	166.17			1.02E+03	1.66E+02
	4	88.52	8.54E+01	94.60			8.54E+01	9.46E+01
	5	186.37	2.31E+02	85.34	5.81E+01	8.50E+00	1.73E+02	8.58E+01
	6	195.26	4.04E+01	48.57			4.04E+01	4.86E+01
	7	209.95	8.31E+01	63.02			8.31E+01	6.30E+01
	8	216.45	5.60E+01	55.69			5.60E+01	5.57E+01
M	9	239.21	8.61E+02	71.99	1.81E+01	5.76E+00	8.43E+02	7.22E+01
m	10	242.58	2.53E+02	70.21			2.53E+02	7.02E+01
	11	270.95	5.89E+01	65.50			5.89E+01	6.55E+01
M	12	295.83	2.82E+02	44.36	1.02E+00	5.38E+00	2.81E+02	4.47E+01
m	13	300.58	6.35E+01	37.47			6.35E+01	3.75E+01
	14	338.95	1.29E+02	58.28	3.86E+00	4.98E+00	1.25E+02	5.85E+01
	15	352.52	5.55E+02	69.18	7.25E+00	4.86E+00	5.48E+02	6.94E+01
	16	409.63	3.92E+01	36.43			3.92E+01	3.64E+01
	17	463.77	6.14E+01	35.17			6.14E+01	3.52E+01
	18	511.38	1.87E+02	47.93	7.58E+01	5.38E+00	1.11E+02	4.82E+01
	19	583.77	2.24E+02	49.84	6.11E+00	3.78E+00	2.18E+02	5.00E+01
M	20	610.00	3.79E+02	44.50	6.74E+00	3.64E+00	3.72E+02	4.46E+01
m	21	613.84	1.79E+01	30.34			1.79E+01	3.03E+01
	22	727.62	6.80E+01	30.74			6.80E+01	3.07E+01
	23	769.09	5.35E+01	36.95			5.35E+01	3.69E+01
M	24	795.83	3.62E+01	22.89			3.62E+01	2.29E+01
m	25	802.93	1.80E+01	22.63			1.80E+01	2.26E+01
	26	861.12	3.74E+01	20.45			3.74E+01	2.04E+01
	27	879.18	5.34E+01	52.10			5.34E+01	5.21E+01
	28	912.09	1.84E+02	40.79	4.21E+00	2.98E+00	1.80E+02	4.09E+01
	29	969.70	6.97E+01	37.52			6.97E+01	3.75E+01
	30	1002.47	3.05E+01	24.49	4.72E+00	2.83E+00	2.58E+01	2.47E+01
	31	1121.00	8.66E+01	38.23			8.66E+01	3.82E+01
	32	1238.07	5.82E+01	25.29			5.82E+01	2.53E+01
	33	1305.29	1.37E+01	16.37			1.37E+01	1.64E+01
	34	1377.64	3.24E+01	14.97			3.24E+01	1.50E+01
M	35	1457.14	6.98E+00	7.19			6.98E+00	7.19E+00
m	36	1461.69	7.85E+02	56.26	6.83E+00	2.10E+00	7.78E+02	5.63E+01
	37	1482.33	1.15E+01	8.02			1.15E+01	8.02E+00
M	38	1582.41	9.56E+00	10.04			9.56E+00	1.00E+01
m	39	1589.19	2.22E+01	12.36			2.22E+01	1.24E+01
m	40	1592.97	1.28E+01	12.52			1.28E+01	1.25E+01
	41	1662.47	8.50E+00	8.17			8.50E+00	8.17E+00
	42	1730.10	2.95E+01	13.64			2.95E+01	1.36E+01
M	43	1765.58	5.37E+01	16.87	1.66E+00	1.65E+00	5.20E+01	1.70E+01
m	44	1770.11	9.50E+00	13.59			9.50E+00	1.36E+01

Analysis Report for 1606064-13

CP-5013 00-02

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
45	1849.37	2.41E+01	12.26			2.41E+01	1.23E+01
46	1890.72	1.08E+01	8.50			1.08E+01	8.50E+00
47	2104.11	9.47E+00	11.17			9.47E+00	1.12E+01
48	2204.02	1.15E+01	9.19			1.15E+01	9.19E+00
49	2211.30	6.38E+00	6.67			6.38E+00	6.67E+00
50	2346.28	1.30E+01	9.71			1.30E+01	9.71E+00
51	2539.55	6.00E+00	4.90			6.00E+00	4.90E+00
52	2615.46	1.06E+02	20.59	4.95E+00	1.35E+00	1.01E+02	2.06E+01

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

AREA CORRECTION REPORT
REFERENCE PEAK / BKG. SUBTRACT

Peak Analysis Performed on : 6/17/2016 8:14:29AM

Ref. Peak Energy : 0.00 Reference Date :
Peak Ratio : 0.00 Uncertainty : 0.00
Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000038676.CNF

Corrected Area is: Original * Peak Ratio - Background

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
M	1	47.15	1.59E+02	68.67	4.33E+01	8.35E+00	1.16E+02	6.92E+01
m	2	51.07	6.10E+01	58.95			6.10E+01	5.89E+01
	3	76.73	1.02E+03	166.17			1.02E+03	1.66E+02
	4	88.52	8.54E+01	94.60			8.54E+01	9.46E+01
	5	186.37	2.31E+02	85.34	5.81E+01	8.50E+00	1.73E+02	8.58E+01
	6	195.26	4.04E+01	48.57			4.04E+01	4.86E+01
	7	209.95	8.31E+01	63.02			8.31E+01	6.30E+01
	8	216.45	5.60E+01	55.69			5.60E+01	5.57E+01
M	9	239.21	8.61E+02	71.99	1.81E+01	5.76E+00	8.43E+02	7.22E+01
m	10	242.58	2.53E+02	70.21			2.53E+02	7.02E+01
	11	270.95	5.89E+01	65.50			5.89E+01	6.55E+01
M	12	295.83	2.82E+02	44.36	1.02E+00	5.38E+00	2.81E+02	4.47E+01
m	13	300.58	6.35E+01	37.47			6.35E+01	3.75E+01
	14	338.95	1.29E+02	58.28	3.86E+00	4.98E+00	1.25E+02	5.85E+01
	15	352.52	5.55E+02	69.18	7.25E+00	4.86E+00	5.48E+02	6.94E+01
	16	409.63	3.92E+01	36.43			3.92E+01	3.64E+01
	17	463.77	6.14E+01	35.17			6.14E+01	3.52E+01
	18	511.38	1.87E+02	47.93	7.58E+01	5.38E+00	1.11E+02	4.82E+01
	19	583.77	2.24E+02	49.84	6.11E+00	3.78E+00	2.18E+02	5.00E+01
M	20	610.00	3.79E+02	44.50	6.74E+00	3.64E+00	3.72E+02	4.46E+01

Analysis Report for 1606064-13

CP-5013 00-02

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
m	21	613.84	1.79E+01	30.34			1.79E+01	3.03E+01
	22	727.62	6.80E+01	30.74			6.80E+01	3.07E+01
	23	769.09	5.35E+01	36.95			5.35E+01	3.69E+01
M	24	795.83	3.62E+01	22.89			3.62E+01	2.29E+01
m	25	802.93	1.80E+01	22.63			1.80E+01	2.26E+01
	26	861.12	3.74E+01	20.45			3.74E+01	2.04E+01
	27	879.18	5.34E+01	52.10			5.34E+01	5.21E+01
	28	912.09	1.84E+02	40.79	4.21E+00	2.98E+00	1.80E+02	4.09E+01
	29	969.70	6.97E+01	37.52			6.97E+01	3.75E+01
	30	1002.47	3.05E+01	24.49	4.72E+00	2.83E+00	2.58E+01	2.47E+01
	31	1121.00	8.66E+01	38.23			8.66E+01	3.82E+01
	32	1238.07	5.82E+01	25.29			5.82E+01	2.53E+01
	33	1305.29	1.37E+01	16.37			1.37E+01	1.64E+01
	34	1377.64	3.24E+01	14.97			3.24E+01	1.50E+01
M	35	1457.14	6.98E+00	7.19			6.98E+00	7.19E+00
m	36	1461.69	7.85E+02	56.26	6.83E+00	2.10E+00	7.78E+02	5.63E+01
	37	1482.33	1.15E+01	8.02			1.15E+01	8.02E+00
M	38	1582.41	9.56E+00	10.04			9.56E+00	1.00E+01
m	39	1589.19	2.22E+01	12.36			2.22E+01	1.24E+01
m	40	1592.97	1.28E+01	12.52			1.28E+01	1.25E+01
	41	1662.47	8.50E+00	8.17			8.50E+00	8.17E+00
	42	1730.10	2.95E+01	13.64			2.95E+01	1.36E+01
M	43	1765.58	5.37E+01	16.87	1.66E+00	1.65E+00	5.20E+01	1.70E+01
m	44	1770.11	9.50E+00	13.59			9.50E+00	1.36E+01
	45	1849.37	2.41E+01	12.26			2.41E+01	1.23E+01
	46	1890.72	1.08E+01	8.50			1.08E+01	8.50E+00
	47	2104.11	9.47E+00	11.17			9.47E+00	1.12E+01
	48	2204.02	1.15E+01	9.19			1.15E+01	9.19E+00
	49	2211.30	6.38E+00	6.67			6.38E+00	6.67E+00
	50	2346.28	1.30E+01	9.71			1.30E+01	9.71E+00
	51	2539.55	6.00E+00	4.90			6.00E+00	4.90E+00
	52	2615.46	1.06E+02	20.59	4.95E+00	1.35E+00	1.01E+02	2.06E+01

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

NUCLIDE IDENTIFICATION REPORT

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

IDENTIFIED NUCLIDES

Analysis Report for 1606064-13

CP-5013 00-02

Nuclide Name	Id Confidence	Energy (keV)		Yield(%)	Activity (pCi/grams)	Activity Uncertainty
K-40	0.883	1460.81	*	10.67	2.06E+01	2.32E+00
CD-109	0.962	88.03	*	3.72	1.14E+00	1.27E+00
SN-126	0.865	87.57	*	37.00	1.13E-01	1.26E-01
TL-208	0.918	583.14	*	30.22	9.97E-01	2.45E-01
		860.37	*	4.48	1.56E+00	8.66E-01
		2614.66	*	35.85	1.04E+00	2.31E-01
PB-210	0.935	46.50	*	4.25	2.22E+00	1.35E+00
BI-212	0.740	727.17	*	11.80	9.44E-01	4.35E-01
		1620.62		2.75		
PB-212	0.948	238.63	*	44.60	1.38E+00	1.67E-01
		300.09	*	3.41	1.58E+00	9.43E-01
BI-214	0.709	609.31	*	46.30	1.15E+00	1.72E-01
		1120.29	*	15.10	1.33E+00	5.96E-01
		1764.49		15.80		
		2204.22	*	4.98	8.20E-01	6.59E-01
PB-214	0.942	295.21	*	19.19	1.23E+00	2.18E-01
		351.92	*	37.19	1.40E+00	2.10E-01
RA-226	0.996	186.21	*	3.28	3.31E+00	6.28E+00

* = Energy line found in the spectrum.
- = Manually added nuclide.
? = Manually edited nuclide.
Energy Tolerance : 1.000 keV
Nuclide confidence index threshold = 0.30
Errors quoted at 2.000sigma

UNIDENTIFIED PEAKS

Peak Locate Performed on : 6/17/2016 8:14:29AM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096

	Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
m	2	51.07	1.69449E-02	48.32	Tol.	TH-227
	3	76.73	2.83384E-01	8.14		
	6	195.26	1.12281E-02	60.08		
	7	209.95	2.30923E-02	37.90	Tol.	GA-67 CM-243
	8	216.45	1.55573E-02	49.72		
m	10	242.58	7.03328E-02	13.86		
	11	270.95	1.63686E-02	55.58		
	14	338.95	3.48102E-02	23.34	Tol.	AC-228
	16	409.63	1.09023E-02	46.41		
	17	463.77	1.70556E-02	28.64	Tol.	SB-125

Analysis Report for 1606064-13

CP-5013 00-02

	Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
	18	511.38	3.08487E-02	21.71		
m	21	613.84	4.97809E-03	84.64	Tol.	AG-108M
	23	769.09	1.48580E-02	34.54		
M	24	795.83	1.00673E-02	31.58	Sum	
m	25	802.93	4.98977E-03	62.98	Tol.	CS-134
	27	879.18	1.48432E-02	48.75	Sum	
	28	912.09	5.00706E-02	11.35	Tol.	LU-172
	29	969.70	1.93625E-02	26.92	Tol.	AC-228
	30	1002.47	7.15286E-03	47.88		
	32	1238.07	1.61689E-02	21.72		
	33	1305.29	3.79480E-03	59.92		
	34	1377.64	9.00000E-03	23.10		
M	35	1457.14	1.94025E-03	51.49		
	37	1482.33	3.18376E-03	34.97		
M	38	1582.41	2.65449E-03	52.52		
m	39	1589.19	6.15995E-03	27.87	Sum	
m	40	1592.97	3.55175E-03	48.96	D-Esc	
	41	1662.47	2.36111E-03	48.06		
	42	1730.10	8.19444E-03	23.12	Sum	
M	43	1765.58	1.44536E-02	16.29		
m	44	1770.11	2.63966E-03	71.52		
	45	1849.37	6.68210E-03	25.48	Sum	
	46	1890.72	2.99145E-03	39.46		
	47	2104.11	2.63021E-03	58.98	S-Esc	
	49	2211.30	1.77083E-03	52.32		
	50	2346.28	3.61979E-03	37.25		
	51	2539.55	1.66667E-03	40.82		

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

NUCLIDE IDENTIFICATION REPORT

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

IDENTIFIED NUCLIDES

Nuclide Name	Id Confidence	Energy (keV)		Yield(%)	Activity (pCi/grams)	Activity Uncertainty
K-40	0.88	1460.81	*	10.67	2.06E+01	2.32E+00

Analysis Report for 1606064-13

CP-5013 00-02

Nuclide Name	Id Confidence	Energy (keV)		Yield(%)	Activity (pCi/grams)	Activity Uncertainty
CD-109	0.96	88.03	*	3.72	1.14E+00	1.27E+00
SN-126	0.86	87.57	*	37.00	1.13E-01	1.26E-01
TL-208	0.91	583.14	*	30.22	9.97E-01	2.45E-01
		860.37	*	4.48	1.56E+00	8.66E-01
		2614.66	*	35.85	1.04E+00	2.31E-01
PB-210	0.93	46.50	*	4.25	2.22E+00	1.35E+00
BI-212	0.74	727.17	*	11.80	9.44E-01	4.35E-01
		1620.62		2.75		
PB-212	0.94	238.63	*	44.60	1.38E+00	1.67E-01
		300.09	*	3.41	1.58E+00	9.43E-01
BI-214	0.70	609.31	*	46.30	1.15E+00	1.72E-01
		1120.29	*	15.10	1.33E+00	5.96E-01
		1764.49		15.80		
		2204.22	*	4.98	8.20E-01	6.59E-01
PB-214	0.94	295.21	*	19.19	1.23E+00	2.18E-01
		351.92	*	37.19	1.40E+00	2.10E-01
RA-226	0.99	186.21	*	3.28	3.31E+00	6.28E+00

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

INTERFERENCE CORRECTED REPORT

	Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
	K-40	0.883	2.06E+01	2.32E+00	
?	CD-109	0.962	1.14E+00	1.27E+00	
?	SN-126	0.865	1.13E-01	1.26E-01	
	TL-208	0.918	1.04E+00	1.65E-01	
	PB-210	0.935	2.22E+00	1.35E+00	
	BI-212	0.740	9.44E-01	4.35E-01	
	PB-212	0.948	1.39E+00	1.64E-01	
	BI-214	0.709	1.14E+00	1.61E-01	
	PB-214	0.942	1.32E+00	1.51E-01	
	RA-226	0.996	3.31E+00	6.28E+00	

Analysis Report for 1606064-13

CP-5013 00-02

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

Errors quoted at 2.000sigma

Analysis Report for 1606064-13

CP-5013 00-02

UNIDENTIFIED PEAKS

Peak Locate Performed on : 6/17/2016 8:14:29AM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096

	Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
m	2	51.07	1.69449E-02	48.32	Tol.	TH-227
	3	76.73	2.83384E-01	8.14		
	6	195.26	1.12281E-02	60.08		
	7	209.95	2.30923E-02	37.90	Tol.	GA-67 CM-243
	8	216.45	1.55573E-02	49.72		
m	10	242.58	7.03328E-02	13.86		
	11	270.95	1.63686E-02	55.58		
	14	338.95	3.48102E-02	23.34	Tol.	AC-228
	16	409.63	1.09023E-02	46.41		
	17	463.77	1.70556E-02	28.64	Tol.	SB-125
	18	511.38	3.08487E-02	21.71		
m	21	613.84	4.97809E-03	84.64	Tol.	AG-108M
	23	769.09	1.48580E-02	34.54		
M	24	795.83	1.00673E-02	31.58	Sum	
m	25	802.93	4.98977E-03	62.98	Tol.	CS-134
	27	879.18	1.48432E-02	48.75	Sum	
	28	912.09	5.00706E-02	11.35	Tol.	LU-172
	29	969.70	1.93625E-02	26.92	Tol.	AC-228
	30	1002.47	7.15286E-03	47.88		
	32	1238.07	1.61689E-02	21.72		
	33	1305.29	3.79480E-03	59.92		
	34	1377.64	9.00000E-03	23.10		
M	35	1457.14	1.94025E-03	51.49		
	37	1482.33	3.18376E-03	34.97		
M	38	1582.41	2.65449E-03	52.52		
m	39	1589.19	6.15995E-03	27.87	Sum	
m	40	1592.97	3.55175E-03	48.96	D-Esc	
	41	1662.47	2.36111E-03	48.06		
	42	1730.10	8.19444E-03	23.12	Sum	
M	43	1765.58	1.44536E-02	16.29		
m	44	1770.11	2.63966E-03	71.52		
	45	1849.37	6.68210E-03	25.48	Sum	
	46	1890.72	2.99145E-03	39.46		
	47	2104.11	2.63021E-03	58.98	S-Esc	

Analysis Report for 1606064-13

CP-5013 00-02

Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
49	2211.30	1.77083E-03	52.32		
50	2346.28	3.61979E-03	37.25		
51	2539.55	1.66667E-03	40.82		

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

NUCLIDE MDA REPORT

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

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	BE-7	477.59		10.42	-1.42E-01	6.48E-01	6.48E-01
+	NA-22	1274.54		99.94	-2.83E-03	7.24E-02	7.24E-02
+	NA-24	1368.53		99.99	4.79E+02	6.01E+02	9.73E+02
		2754.09		99.86	-2.16E+01		6.01E+02
+	AL-26	1808.65		99.76	9.58E-03	5.88E-02	5.88E-02
+	K-40	1460.81	*	10.67	2.06E+01	8.65E-01	8.65E-01
+	@ AR-41	1293.64		99.16	1.00E+26	1.00E+26	1.00E+26
+	TI-44	67.88		94.40	-2.30E-02	6.84E-02	6.84E-02
		78.34		96.00	1.34E-01		8.66E-02
+	SC-46	889.25		99.98	1.63E-02	7.50E-02	7.50E-02
		1120.51		99.99	2.13E-01		1.49E-01
+	V-48	983.52		99.98	-3.43E-02	1.00E-01	1.06E-01
		1312.10		97.50	3.47E-02		1.00E-01
+	CR-51	320.08		9.83	-3.51E-01	6.19E-01	6.19E-01
+	MN-54	834.83		99.97	4.62E-03	7.82E-02	7.82E-02
+	CO-56	846.75		99.96	2.88E-03	7.56E-02	7.56E-02
		1037.75		14.03	-3.79E-01		5.19E-01
		1238.25		67.00	1.73E-01		1.78E-01
		1771.40		15.51	-8.91E-02		4.34E-01
		2598.48		16.90	-1.06E-01		2.19E-01
+	CO-57	122.06		85.51	2.57E-02	5.70E-02	5.70E-02
		136.48		10.60	-1.85E-01		4.78E-01
+	CO-58	810.76		99.40	-2.49E-03	6.22E-02	6.22E-02
+	FE-59	1099.22		56.50	7.21E-02	1.64E-01	1.64E-01
		1291.56		43.20	-3.19E-02		2.01E-01
+	CO-60	1173.22		100.00	-2.18E-04	7.00E-02	8.07E-02

Analysis Report for 1606064-13

CP-5013 00-02

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	CO-60	1332.49		100.00	2.90E-02	7.00E-02	7.00E-02
+	ZN-65	1115.52		50.75	5.55E-03	1.79E-01	1.79E-01
+	GA-67	93.31		35.70	1.65E+00	1.20E+00	1.20E+00
		208.95		2.24	9.97E+00		1.68E+01
		300.22		16.00	-7.60E+00		2.29E+00
+	SE-75	121.11		16.70	-9.26E-02	8.73E-02	2.93E-01
		136.00		59.20	7.29E-02		9.19E-02
		264.65		59.80	-1.62E-02		8.73E-02
		279.53		25.20	9.40E-02		2.20E-01
		400.65		11.40	1.98E-01		4.87E-01
+	RB-82	776.52		13.00	-6.42E-02	6.68E-01	6.68E-01
+	RB-83	520.41		46.00	3.25E-02	1.40E-01	1.40E-01
		529.64		30.30	2.25E-02		2.09E-01
		552.65		16.40	6.21E-02		3.99E-01
+	KR-85	513.99		0.43	-1.54E+00	2.24E+01	2.24E+01
+	SR-85	513.99		99.27	-7.39E-03	1.07E-01	1.07E-01
+	Y-88	898.02		93.40	-4.74E-03	4.90E-02	8.31E-02
		1836.01		99.38	-7.82E-03		4.90E-02
+	NB-93M	16.57		9.43	-1.39E+02	5.68E+01	5.68E+01
+	NB-94	702.63		100.00	7.09E-04	7.11E-02	7.11E-02
		871.10		100.00	2.41E-03		7.27E-02
+	NB-95	765.79		99.81	2.12E-02	1.03E-01	1.03E-01
+	NB-95M	235.69		25.00	-5.38E-02	1.20E+00	1.20E+00
+	ZR-95	724.18		43.70	4.08E-02	1.55E-01	2.01E-01
		756.72		55.30	5.94E-02		1.55E-01
+	MO-99	181.06		6.20	-1.07E+00	4.59E+00	7.34E+00
		739.58		12.80	-2.43E-01		4.59E+00
		778.00		4.50	-7.22E+00		1.38E+01
+	RU-103	497.08		89.00	-1.08E-02	7.18E-02	7.18E-02
+	RU-106	621.84		9.80	2.85E-01	6.17E-01	6.17E-01
+	AG-108M	433.93		89.90	-1.04E-02	6.62E-02	6.62E-02
		614.37		90.40	-5.75E-01		7.59E-02
		722.95		90.50	2.34E-02		7.94E-02
+	CD-109	88.03	*	3.72	1.14E+00	2.08E+00	2.08E+00
+	AG-110M	657.75		93.14	-3.74E-02	7.88E-02	7.88E-02
		677.61		10.53	1.92E-01		6.40E-01
		706.67		16.46	1.50E-01		4.52E-01
		763.93		21.98	1.61E-02		3.54E-01
		884.67		71.63	-7.28E-02		9.20E-02
		1384.27		23.94	-2.07E-02		3.02E-01
+	CD-113M	263.70		0.02	-6.62E+01	2.17E+02	2.17E+02
+	SN-113	255.12		1.93	3.72E-01	8.65E-02	2.72E+00
		391.69		64.90	2.99E-02		8.65E-02
+	TE123M	159.00		84.10	2.98E-02	6.21E-02	6.21E-02
+	SB-124	602.71		97.87	-6.09E-03	7.80E-02	7.80E-02
		645.85		7.26	-7.69E-01		8.39E-01
		722.78		11.10	2.11E-01		7.16E-01
		1691.02		49.00	-7.46E-02		1.32E-01

Analysis Report for 1606064-13

CP-5013 00-02

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	I-125	35.49		6.49	-1.33E+00	2.40E+00	2.40E+00
+	SB-125	176.33		6.89	-4.34E-02	2.14E-01	6.95E-01
		427.89		29.33	7.20E-02		2.14E-01
		463.38		10.35	4.42E-01		6.72E-01
		600.56		17.80	2.36E-01		3.96E-01
		635.90		11.32	1.38E-01		5.84E-01
+	SB-126	414.70		83.30	-8.72E-03	1.08E-01	1.14E-01
		666.33		99.60	2.31E-03		1.23E-01
		695.00		99.60	0.00E+00		1.08E-01
		720.50		53.80	5.70E-02		2.11E-01
+	SN-126	87.57	*	37.00	1.13E-01	2.06E-01	2.06E-01
+	SB-127	473.00		25.00	6.94E-02	8.47E-01	1.13E+00
		685.20		35.70	-5.93E-01		8.47E-01
		783.80		14.70	2.68E-01		2.36E+00
+	I-129	29.78		57.00	-5.50E-02	4.87E-01	4.87E-01
		33.60		13.20	1.45E+00		1.35E+00
		39.58		7.52	3.24E-01		1.43E+00
+	I-131	284.30		6.05	-2.88E-01	1.35E-01	1.74E+00
		364.48		81.20	2.61E-02		1.35E-01
		636.97		7.26	2.81E-02		1.91E+00
		722.89		1.80	2.52E+00		8.53E+00
+	TE-132	49.72		13.10	-3.19E+00	3.87E-01	3.87E+00
		228.16		88.00	-6.44E-02		3.87E-01
+	BA-133	81.00		33.00	-1.12E+00	9.83E-02	1.81E-01
		302.84		17.80	9.04E-02		3.00E-01
		356.01		60.00	-4.38E-01		9.83E-02
+	I-133	529.87		86.30	8.42E+00	7.84E+01	7.84E+01
+	XE-133	81.00		38.00	-3.12E+00	5.02E-01	5.02E-01
+	CS-134	563.23		8.38	2.32E-01	7.07E-02	7.61E-01
		569.32		15.43	-1.44E-02		4.03E-01
		604.70		97.60	3.87E-03		7.07E-02
		795.84		85.40	5.31E-02		9.10E-02
		801.93		8.73	3.49E-01		8.79E-01
+	CS-135	268.24		16.00	7.15E-02	3.53E-01	3.53E-01
+	I-135	1131.51		22.50	-3.61E+08	1.09E+09	1.56E+09
		1260.41		28.60	1.87E+07		1.09E+09
		1678.03		9.54	1.21E+09		2.49E+09
+	CS-136	153.22		7.46	-1.53E-01	1.03E-01	1.07E+00
		163.89		4.61	-1.04E+00		1.65E+00
		176.55		13.56	-3.49E-02		5.58E-01
		273.65		12.66	-1.98E-01		6.58E-01
		340.57		48.50	3.91E-01		2.42E-01
		818.50		99.70	6.36E-03		1.03E-01
		1048.07		79.60	-7.17E-02		1.52E-01
		1235.34		19.70	-6.96E-01		7.03E-01
+	CS-137	661.65		85.12	7.32E-03	8.97E-02	8.97E-02
+	LA-138	788.74		34.00	3.68E-02	9.00E-02	1.98E-01
		1435.80		66.00	2.32E-02		9.00E-02
+	CE-139	165.85		80.35	-1.29E-02	6.47E-02	6.47E-02

Analysis Report for 1606064-13

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	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	BA-140	162.64	6.70	4.93E-01	3.87E-01	1.16E+00
		304.84	4.50	2.47E-02		1.68E+00
		423.70	3.20	-1.41E+00		2.94E+00
		437.55	2.00	-2.64E+00		4.45E+00
		537.32	25.00	1.90E-01		3.87E-01
+	LA-140	328.77	20.50	2.20E-01	1.13E-01	4.39E-01
		487.03	45.50	-1.44E-02		2.02E-01
		815.85	23.50	-1.38E-01		3.91E-01
		1596.49	95.49	1.69E-03		1.13E-01
+	CE-141	145.44	48.40	-8.35E-03	1.23E-01	1.23E-01
+	CE-143	57.36	11.80	-3.46E+00	1.51E+01	4.52E+01
		293.26	42.00	2.59E+01		1.51E+01
		664.55	5.20	1.95E+01		1.23E+02
+	CE-144	133.54	10.80	-4.01E-02	4.69E-01	4.69E-01
+	PM-144	476.78	42.00	5.78E-02	6.32E-02	1.50E-01
		618.01	98.60	7.89E-03		6.32E-02
		696.49	99.49	-2.32E-02		6.87E-02
+	PM-145	36.85	21.70	-1.22E-02	3.12E-01	5.92E-01
		37.36	39.70	-7.97E-02		3.12E-01
		42.30	15.10	4.09E-02		6.03E-01
		72.40	2.31	-1.36E+01		2.96E+00
+	PM-146	453.90	39.94	7.15E-02	1.65E-01	1.65E-01
		735.90	14.01	8.89E-02		5.03E-01
		747.13	13.10	2.98E-02		4.77E-01
+	ND-147	91.11	28.90	-5.78E-01	3.87E-01	3.87E-01
		531.02	13.10	4.66E-03		7.92E-01
+	PM-149	285.90	3.10	6.28E-01	2.53E+01	2.53E+01
+	EU-152	121.78	20.50	1.05E-01	2.32E-01	2.32E-01
		244.69	5.40	5.01E-01		1.18E+00
		344.27	19.13	-1.34E-02		2.69E-01
		778.89	9.20	2.15E-01		7.74E-01
		964.01	10.40	-7.15E-02		8.65E-01
		1085.78	7.22	1.09E-01		9.07E-01
		1112.02	9.60	-8.12E-02		8.21E-01
		1407.95	14.94	7.23E-02		5.03E-01
+	GD-153	97.43	31.30	-9.65E-02	1.64E-01	1.64E-01
		103.18	22.20	-7.70E-02		2.16E-01
+	EU-154	123.07	40.50	-4.96E-02	1.16E-01	1.16E-01
		723.30	19.70	1.08E-01		3.66E-01
		873.19	11.50	5.16E-02		6.14E-01
		996.32	10.30	1.38E-01		6.51E-01
		1004.76	17.90	-2.75E-02		4.63E-01
		1274.45	35.50	-7.92E-03		2.03E-01
+	EU-155	86.50	30.90	2.83E-01	2.16E-01	2.16E-01
		105.30	20.70	-4.17E-03		2.29E-01
+	EU-156	811.77	10.40	-1.28E-01	7.87E-01	7.87E-01
		1153.47	7.20	1.68E-01		1.81E+00
		1230.71	8.90	1.49E-02		1.29E+00
+	HO-166M	184.41	72.60	1.38E-01	9.08E-02	9.08E-02

Analysis Report for 1606064-13

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	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	HO-166M	280.45		29.60	2.36E-02	9.08E-02	1.72E-01
		410.94		11.10	3.73E-01		5.72E-01
		711.69		54.10	8.43E-03		1.25E-01
+	TM-171	66.72		0.14	-9.32E+01	4.77E+01	4.77E+01
+	HF-172	81.75		4.52	-3.83E+00	4.31E-01	1.25E+00
		125.81		11.30	4.07E-04		4.31E-01
+	LU-172	181.53		20.60	6.85E-02	2.96E-01	6.13E-01
		810.06		16.63	-6.29E-02		8.77E-01
		912.12		15.25	5.89E+00		2.38E+00
		1093.66		62.50	4.15E-02		2.96E-01
+	LU-173	100.72		5.24	6.71E-01	2.76E-01	9.50E-01
		272.11		21.20	1.98E-01		2.76E-01
+	HF-175	343.40		84.00	4.89E-03	6.93E-02	6.93E-02
+	LU-176	88.34		13.30	1.10E+00	5.04E-02	5.06E-01
		201.83		86.00	3.44E-02		6.40E-02
		306.78		94.00	1.04E-02		5.04E-02
+	TA-182	67.75		41.20	-5.57E-02	1.65E-01	1.65E-01
		1121.30		34.90	5.76E-01		4.17E-01
		1189.05		16.23	1.18E-01		6.09E-01
		1221.41		26.98	1.20E-01		3.50E-01
		1231.02		11.44	8.18E-03		7.11E-01
+	IR-192	308.46		29.68	3.46E-02	1.36E-01	1.79E-01
		468.07		48.10	2.17E-02		1.36E-01
+	HG-203	279.19		77.30	1.94E-02	7.62E-02	7.62E-02
+	BI-207	569.67		97.72	-9.56E-03	6.36E-02	6.36E-02
		1063.62		74.90	-4.44E-03		1.05E-01
+	TL-208	583.14	*	30.22	9.97E-01	1.07E-01	3.15E-01
		860.37	*	4.48	1.56E+00		1.24E+00
		2614.66	*	35.85	1.04E+00		1.07E-01
+	BI-210M	262.00		45.00	3.23E-02	1.15E-01	1.15E-01
		300.00		23.00	-8.13E-01		2.45E-01
+	PB-210	46.50	*	4.25	2.22E+00	3.43E+00	3.43E+00
+	PB-211	404.84		2.90	-5.89E-01	1.64E+00	1.64E+00
		831.96		2.90	-1.64E+00		2.30E+00
+	BI-212	727.17	*	11.80	9.44E-01	6.30E-01	6.30E-01
		1620.62		2.75	3.41E-01		2.28E+00
+	PB-212	238.63	*	44.60	1.38E+00	2.09E-01	2.09E-01
		300.09	*	3.41	1.58E+00		3.55E+00
+	BI-214	609.31	*	46.30	1.15E+00	2.49E-01	2.49E-01
		1120.29	*	15.10	1.33E+00		8.82E-01
		1764.49		15.80	1.06E+00		7.94E-01
		2204.22	*	4.98	8.20E-01		9.20E-01
+	PB-214	295.21	*	19.19	1.23E+00	2.22E-01	6.23E-01
		351.92	*	37.19	1.40E+00		2.22E-01
+	RN-219	401.80		6.50	3.53E-01	8.16E-01	8.16E-01
+	RA-223	323.87		3.88	-3.93E-01	1.30E+00	1.30E+00
+	RA-224	240.98		3.95	1.76E+01	3.04E+00	3.04E+00
+	RA-225	40.00		31.00	1.16E-01	5.10E-01	5.10E-01

Analysis Report for 1606064-13

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	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	RA-226	186.21	*	3.28	3.31E+00	2.62E+00	2.62E+00
+	TH-227	50.10		8.40	-7.56E-01	4.81E-01	9.15E-01
		236.00		11.50	-2.16E-02		4.81E-01
		256.20		6.30	1.76E-01		8.06E-01
+	AC-228	338.32		11.40	1.16E+00	5.26E-01	6.57E-01
		911.07		27.70	1.24E+00		5.26E-01
		969.11		16.60	1.07E+00		7.48E-01
+	TH-230	48.44		16.90	6.39E-01	5.09E-01	5.09E-01
		62.85		4.60	2.05E+00		1.62E+00
		67.67		0.37	-5.88E+00		1.75E+01
+	PA-231	283.67		1.60	-7.49E-01	2.32E+00	3.09E+00
		302.67		2.30	6.98E-01		2.32E+00
+	TH-231	25.64		14.70	-3.74E+01	9.26E-01	4.76E+00
		84.21		6.40	5.69E-01		9.26E-01
+	PA-233	311.98		38.60	-6.89E-02	1.57E-01	1.57E-01
+	PA-234	131.20		20.40	1.55E-01	2.58E-01	2.58E-01
		733.99		8.80	-1.68E-01		8.01E-01
		946.00		12.00	3.07E-01		5.94E-01
+	PA-234M	1001.03		0.92	2.44E+00	9.11E+00	9.11E+00
+	TH-234	63.29		3.80	3.34E+00	1.96E+00	1.96E+00
+	U-235	143.76		10.50	2.82E-01	4.88E-01	4.88E-01
		163.35		4.70	-6.41E-01		1.02E+00
		205.31		4.70	1.84E-01		1.13E+00
+	NP-237	86.50		12.60	6.92E-01	5.27E-01	5.27E-01
+	NP-239	106.10		22.70	-5.07E-02	2.78E+00	2.78E+00
		228.18		10.70	-1.09E+00		6.52E+00
		277.60		14.10	1.07E+00		4.84E+00
+	AM-241	59.54		35.90	3.82E-02	1.85E-01	1.85E-01
+	AM-243	74.67		66.00	-5.48E-01	1.23E-01	1.23E-01
+	CM-243	209.75		3.29	2.03E+00	3.65E-01	1.75E+00
		228.14		10.60	-8.22E-02		4.93E-01
		277.60		14.00	8.09E-02		3.65E-01

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

Analysis Report for 1606064-13

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NUCLIDE MDA REPORT

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

	Nuclide Name	Energy (keV)		Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
	BE-7	477.59		10.42	6.48E-01	6.48E-01	-1.42E-01	3.07E-01
	NA-22	1274.54		99.94	7.24E-02	7.24E-02	-2.83E-03	3.27E-02
	NA-24	1368.53		99.99	9.73E+02	6.01E+02	4.79E+02	4.23E+02
		2754.09		99.86	6.01E+02		-2.16E+01	2.13E+02
	AL-26	1808.65		99.76	5.88E-02	5.88E-02	9.58E-03	2.50E-02
+	K-40	1460.81	*	10.67	8.65E-01	8.65E-01	2.06E+01	3.97E-01
@	AR-41	1293.64		99.16	1.00E+26	1.00E+26	1.00E+26	1.00E+20
	TI-44	67.88		94.40	6.84E-02	6.84E-02	-2.30E-02	3.34E-02
		78.34		96.00	8.66E-02		1.34E-01	4.26E-02
	SC-46	889.25		99.98	7.50E-02	7.50E-02	1.63E-02	3.47E-02
		1120.51		99.99	1.49E-01		2.13E-01	7.13E-02
	V-48	983.52		99.98	1.06E-01	1.00E-01	-3.43E-02	4.87E-02
		1312.10		97.50	1.00E-01		3.47E-02	4.47E-02
	CR-51	320.08		9.83	6.19E-01	6.19E-01	-3.51E-01	2.94E-01
	MN-54	834.83		99.97	7.82E-02	7.82E-02	4.62E-03	3.66E-02
	CO-56	846.75		99.96	7.56E-02	7.56E-02	2.88E-03	3.51E-02
		1037.75		14.03	5.19E-01		-3.79E-01	2.37E-01
		1238.25		67.00	1.78E-01		1.73E-01	8.38E-02
		1771.40		15.51	4.34E-01		-8.91E-02	1.87E-01
		2598.48		16.90	2.19E-01		-1.06E-01	7.77E-02
	CO-57	122.06		85.51	5.70E-02	5.70E-02	2.57E-02	2.77E-02
		136.48		10.60	4.78E-01		-1.85E-01	2.32E-01
	CO-58	810.76		99.40	6.22E-02	6.22E-02	-2.49E-03	2.85E-02
	FE-59	1099.22		56.50	1.64E-01	1.64E-01	7.21E-02	7.60E-02
		1291.56		43.20	2.01E-01		-3.19E-02	9.14E-02
	CO-60	1173.22		100.00	8.07E-02	7.00E-02	-2.18E-04	3.71E-02
		1332.49		100.00	7.00E-02		2.90E-02	3.14E-02
	ZN-65	1115.52		50.75	1.79E-01	1.79E-01	5.55E-03	8.31E-02
	GA-67	93.31		35.70	1.20E+00	1.20E+00	1.65E+00	5.88E-01
		208.95		2.24	1.68E+01		9.97E+00	8.11E+00
		300.22		16.00	2.29E+00		-7.60E+00	1.10E+00
	SE-75	121.11		16.70	2.93E-01	8.73E-02	-9.26E-02	1.42E-01
		136.00		59.20	9.19E-02		7.29E-02	4.47E-02
		264.65		59.80	8.73E-02		-1.62E-02	4.18E-02
		279.53		25.20	2.20E-01		9.40E-02	1.05E-01
		400.65		11.40	4.87E-01		1.98E-01	2.30E-01
	RB-82	776.52		13.00	6.68E-01	6.68E-01	-6.42E-02	3.11E-01
	RB-83	520.41		46.00	1.40E-01	1.40E-01	3.25E-02	6.62E-02
		529.64		30.30	2.09E-01		2.25E-02	9.85E-02
		552.65		16.40	3.99E-01		6.21E-02	1.88E-01
	KR-85	513.99		0.43	2.24E+01	2.24E+01	-1.54E+00	1.08E+01
	SR-85	513.99		99.27	1.07E-01	1.07E-01	-7.39E-03	5.18E-02
	Y-88	898.02		93.40	8.31E-02	4.90E-02	-4.74E-03	3.86E-02
		1836.01		99.38	4.90E-02		-7.82E-03	1.98E-02
	NB-93M	16.57		9.43	5.68E+01	5.68E+01	-1.39E+02	2.59E+01

Analysis Report for 1606064-13

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	Nuclide Name	Energy (keV)		Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
	NB-94	702.63		100.00	7.11E-02	7.11E-02	7.09E-04	3.34E-02
		871.10		100.00	7.27E-02		2.41E-03	3.38E-02
	NB-95	765.79		99.81	1.03E-01	1.03E-01	2.12E-02	4.90E-02
	NB-95M	235.69		25.00	1.20E+00	1.20E+00	-5.38E-02	5.79E-01
	ZR-95	724.18		43.70	2.01E-01	1.55E-01	4.08E-02	9.51E-02
		756.72		55.30	1.55E-01		5.94E-02	7.30E-02
	MO-99	181.06		6.20	7.34E+00	4.59E+00	-1.07E+00	3.55E+00
		739.58		12.80	4.59E+00		-2.43E-01	2.13E+00
		778.00		4.50	1.38E+01		-7.22E+00	6.42E+00
	RU-103	497.08		89.00	7.18E-02	7.18E-02	-1.08E-02	3.38E-02
	RU-106	621.84		9.80	6.17E-01	6.17E-01	2.85E-01	2.88E-01
	AG-108M	433.93		89.90	6.62E-02	6.62E-02	-1.04E-02	3.14E-02
		614.37		90.40	7.59E-02		-5.75E-01	3.58E-02
		722.95		90.50	7.94E-02		2.34E-02	3.73E-02
+	CD-109	88.03	*	3.72	2.08E+00	2.08E+00	1.14E+00	1.02E+00
	AG-110M	657.75		93.14	7.88E-02	7.88E-02	-3.74E-02	3.72E-02
		677.61		10.53	6.40E-01		1.92E-01	3.00E-01
		706.67		16.46	4.52E-01		1.50E-01	2.13E-01
		763.93		21.98	3.54E-01		1.61E-02	1.66E-01
		884.67		71.63	9.20E-02		-7.28E-02	4.23E-02
		1384.27		23.94	3.02E-01		-2.07E-02	1.35E-01
	CD-113M	263.70		0.02	2.17E+02	2.17E+02	-6.62E+01	1.04E+02
	SN-113	255.12		1.93	2.72E+00	8.65E-02	3.72E-01	1.31E+00
		391.69		64.90	8.65E-02		2.99E-02	4.10E-02
	TE123M	159.00		84.10	6.21E-02	6.21E-02	2.98E-02	3.01E-02
	SB-124	602.71		97.87	7.80E-02	7.80E-02	-6.09E-03	3.68E-02
		645.85		7.26	8.39E-01		-7.69E-01	3.89E-01
		722.78		11.10	7.16E-01		2.11E-01	3.36E-01
		1691.02		49.00	1.32E-01		-7.46E-02	5.66E-02
	I-125	35.49		6.49	2.40E+00	2.40E+00	-1.33E+00	1.16E+00
	SB-125	176.33		6.89	6.95E-01	2.14E-01	-4.34E-02	3.35E-01
		427.89		29.33	2.14E-01		7.20E-02	1.02E-01
		463.38		10.35	6.72E-01		4.42E-01	3.21E-01
		600.56		17.80	3.96E-01		2.36E-01	1.87E-01
		635.90		11.32	5.84E-01		1.38E-01	2.74E-01
	SB-126	414.70		83.30	1.14E-01	1.08E-01	-8.72E-03	5.41E-02
		666.33		99.60	1.23E-01		2.31E-03	5.79E-02
		695.00		99.60	1.08E-01		0.00E+00	5.05E-02
		720.50		53.80	2.11E-01		5.70E-02	9.90E-02
+	SN-126	87.57	*	37.00	2.06E-01	2.06E-01	1.13E-01	1.01E-01
	SB-127	473.00		25.00	1.13E+00	8.47E-01	6.94E-02	5.35E-01
		685.20		35.70	8.47E-01		-5.93E-01	3.95E-01
		783.80		14.70	2.36E+00		2.68E-01	1.10E+00
	I-129	29.78		57.00	4.87E-01	4.87E-01	-5.50E-02	2.36E-01
		33.60		13.20	1.35E+00		1.45E+00	6.55E-01
		39.58		7.52	1.43E+00		3.24E-01	6.94E-01
	I-131	284.30		6.05	1.74E+00	1.35E-01	-2.88E-01	8.32E-01
		364.48		81.20	1.35E-01		2.61E-02	6.42E-02
		636.97		7.26	1.91E+00		2.81E-02	8.98E-01
		722.89		1.80	8.53E+00		2.52E+00	4.00E+00
	TE-132	49.72		13.10	3.87E+00	3.87E-01	-3.19E+00	1.88E+00
		228.16		88.00	3.87E-01		-6.44E-02	1.86E-01
	BA-133	81.00		33.00	1.81E-01	9.83E-02	-1.12E+00	8.83E-02

Analysis Report for 1606064-13

CP-5013 00-02

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
BA-133	302.84	17.80	3.00E-01	9.83E-02	9.04E-02	1.44E-01
	356.01	60.00	9.83E-02		-4.38E-01	4.70E-02
I-133	529.87	86.30	7.84E+01	7.84E+01	8.42E+00	3.69E+01
XE-133	81.00	38.00	5.02E-01	5.02E-01	-3.12E+00	2.45E-01
CS-134	563.23	8.38	7.61E-01	7.07E-02	2.32E-01	3.58E-01
	569.32	15.43	4.03E-01		-1.44E-02	1.90E-01
	604.70	97.60	7.07E-02		3.87E-03	3.34E-02
	795.84	85.40	9.10E-02		5.31E-02	4.27E-02
	801.93	8.73	8.79E-01		3.49E-01	4.12E-01
CS-135	268.24	16.00	3.53E-01	3.53E-01	7.15E-02	1.70E-01
I-135	1131.51	22.50	1.56E+09	1.09E+09	-3.61E+08	7.19E+08
	1260.41	28.60	1.09E+09		1.87E+07	4.92E+08
	1678.03	9.54	2.49E+09		1.21E+09	1.06E+09
CS-136	153.22	7.46	1.07E+00	1.03E-01	-1.53E-01	5.16E-01
	163.89	4.61	1.65E+00		-1.04E+00	8.00E-01
	176.55	13.56	5.58E-01		-3.49E-02	2.69E-01
	273.65	12.66	6.58E-01		-1.98E-01	3.15E-01
	340.57	48.50	2.42E-01		3.91E-01	1.17E-01
	818.50	99.70	1.03E-01		6.36E-03	4.77E-02
	1048.07	79.60	1.52E-01		-7.17E-02	6.99E-02
	1235.34	19.70	7.03E-01		-6.96E-01	3.24E-01
CS-137	661.65	85.12	8.97E-02	8.97E-02	7.32E-03	4.24E-02
LA-138	788.74	34.00	1.98E-01	9.00E-02	3.68E-02	9.18E-02
	1435.80	66.00	9.00E-02		2.32E-02	3.93E-02
CE-139	165.85	80.35	6.47E-02	6.47E-02	-1.29E-02	3.13E-02
BA-140	162.64	6.70	1.16E+00	3.87E-01	4.93E-01	5.61E-01
	304.84	4.50	1.68E+00		2.47E-02	8.00E-01
	423.70	3.20	2.94E+00		-1.41E+00	1.40E+00
	437.55	2.00	4.45E+00		-2.64E+00	2.10E+00
	537.32	25.00	3.87E-01		1.90E-01	1.82E-01
LA-140	328.77	20.50	4.39E-01	1.13E-01	2.20E-01	2.10E-01
	487.03	45.50	2.02E-01		-1.44E-02	9.51E-02
	815.85	23.50	3.91E-01		-1.38E-01	1.79E-01
	1596.49	95.49	1.13E-01		1.69E-03	4.99E-02
CE-141	145.44	48.40	1.23E-01	1.23E-01	-8.35E-03	5.99E-02
CE-143	57.36	11.80	4.52E+01	1.51E+01	-3.46E+00	2.20E+01
	293.26	42.00	1.51E+01		2.59E+01	7.33E+00
	664.55	5.20	1.23E+02		1.95E+01	5.82E+01
CE-144	133.54	10.80	4.69E-01	4.69E-01	-4.01E-02	2.28E-01
PM-144	476.78	42.00	1.50E-01	6.32E-02	5.78E-02	7.09E-02
	618.01	98.60	6.32E-02		7.89E-03	2.96E-02
	696.49	99.49	6.87E-02		-2.32E-02	3.22E-02
PM-145	36.85	21.70	5.92E-01	3.12E-01	-1.22E-02	2.87E-01
	37.36	39.70	3.12E-01		-7.97E-02	1.51E-01
	42.30	15.10	6.03E-01		4.09E-02	2.92E-01
	72.40	2.31	2.96E+00		-1.36E+01	1.45E+00
PM-146	453.90	39.94	1.65E-01	1.65E-01	7.15E-02	7.86E-02
	735.90	14.01	5.03E-01		8.89E-02	2.35E-01
	747.13	13.10	4.77E-01		2.98E-02	2.21E-01
ND-147	91.11	28.90	3.87E-01	3.87E-01	-5.78E-01	1.89E-01
	531.02	13.10	7.92E-01		4.66E-03	3.73E-01
PM-149	285.90	3.10	2.53E+01	2.53E+01	6.28E-01	1.21E+01
EU-152	121.78	20.50	2.32E-01	2.32E-01	1.05E-01	1.13E-01

Analysis Report for 1606064-13

CP-5013 00-02

	Nuclide Name	Energy (keV)		Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
	EU-152	244.69		5.40	1.18E+00	2.32E-01	5.01E-01	5.74E-01
		344.27		19.13	2.69E-01		-1.34E-02	1.28E-01
		778.89		9.20	7.74E-01		2.15E-01	3.61E-01
		964.01		10.40	8.65E-01		-7.15E-02	4.06E-01
		1085.78		7.22	9.07E-01		1.09E-01	4.11E-01
		1112.02		9.60	8.21E-01		-8.12E-02	3.78E-01
		1407.95		14.94	5.03E-01		7.23E-02	2.27E-01
	GD-153	97.43		31.30	1.64E-01	1.64E-01	-9.65E-02	7.99E-02
		103.18		22.20	2.16E-01		-7.70E-02	1.05E-01
	EU-154	123.07		40.50	1.16E-01	1.16E-01	-4.96E-02	5.65E-02
		723.30		19.70	3.66E-01		1.08E-01	1.72E-01
		873.19		11.50	6.14E-01		5.16E-02	2.85E-01
		996.32		10.30	6.51E-01		1.38E-01	2.98E-01
		1004.76		17.90	4.63E-01		-2.75E-02	2.16E-01
		1274.45		35.50	2.03E-01		-7.92E-03	9.18E-02
	EU-155	86.50		30.90	2.16E-01	2.16E-01	2.83E-01	1.06E-01
		105.30		20.70	2.29E-01		-4.17E-03	1.11E-01
	EU-156	811.77		10.40	7.87E-01	7.87E-01	-1.28E-01	3.59E-01
		1153.47		7.20	1.81E+00		1.68E-01	8.39E-01
		1230.71		8.90	1.29E+00		1.49E-02	5.91E-01
	HO-166M	184.41		72.60	9.08E-02	9.08E-02	1.38E-01	4.42E-02
		280.45		29.60	1.72E-01		2.36E-02	8.24E-02
		410.94		11.10	5.72E-01		3.73E-01	2.73E-01
		711.69		54.10	1.25E-01		8.43E-03	5.84E-02
	TM-171	66.72		0.14	4.77E+01	4.77E+01	-9.32E+01	2.33E+01
	HF-172	81.75		4.52	1.25E+00	4.31E-01	-3.83E+00	6.10E-01
		125.81		11.30	4.31E-01		4.07E-04	2.09E-01
	LU-172	181.53		20.60	6.13E-01	2.96E-01	6.85E-02	2.96E-01
		810.06		16.63	8.77E-01		-6.29E-02	4.02E-01
		912.12		15.25	2.38E+00		5.89E+00	1.15E+00
		1093.66		62.50	2.96E-01		4.15E-02	1.36E-01
	LU-173	100.72		5.24	9.50E-01	2.76E-01	6.71E-01	4.62E-01
		272.11		21.20	2.76E-01		1.98E-01	1.33E-01
	HF-175	343.40		84.00	6.93E-02	6.93E-02	4.89E-03	3.30E-02
	LU-176	88.34		13.30	5.06E-01	5.04E-02	1.10E+00	2.48E-01
		201.83		86.00	6.40E-02		3.44E-02	3.10E-02
		306.78		94.00	5.04E-02		1.04E-02	2.40E-02
	TA-182	67.75		41.20	1.65E-01	1.65E-01	-5.57E-02	8.09E-02
		1121.30		34.90	4.17E-01		5.76E-01	1.99E-01
		1189.05		16.23	6.09E-01		1.18E-01	2.83E-01
		1221.41		26.98	3.50E-01		1.20E-01	1.62E-01
		1231.02		11.44	7.11E-01		8.18E-03	3.24E-01
	IR-192	308.46		29.68	1.79E-01	1.36E-01	3.46E-02	8.50E-02
		468.07		48.10	1.36E-01		2.17E-02	6.43E-02
	HG-203	279.19		77.30	7.62E-02	7.62E-02	1.94E-02	3.65E-02
	BI-207	569.67		97.72	6.36E-02	6.36E-02	-9.56E-03	2.99E-02
		1063.62		74.90	1.05E-01		-4.44E-03	4.87E-02
+	TL-208	583.14	*	30.22	3.15E-01	1.07E-01	9.97E-01	1.51E-01
		860.37	*	4.48	1.24E+00		1.56E+00	5.64E-01
		2614.66	*	35.85	1.07E-01		1.04E+00	3.94E-02
	BI-210M	262.00		45.00	1.15E-01	1.15E-01	3.23E-02	5.52E-02
		300.00		23.00	2.45E-01		-8.13E-01	1.17E-01
+	PB-210	46.50	*	4.25	3.43E+00	3.43E+00	2.22E+00	1.69E+00

Analysis Report for 1606064-13

CP-5013 00-02

	Nuclide Name	Energy (keV)		Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
	PB-211	404.84		2.90	1.64E+00	1.64E+00	-5.89E-01	7.72E-01
		831.96		2.90	2.30E+00		-1.64E+00	1.06E+00
+	BI-212	727.17	*	11.80	6.30E-01	6.30E-01	9.44E-01	2.96E-01
		1620.62		2.75	2.28E+00		3.41E-01	9.91E-01
+	PB-212	238.63	*	44.60	2.09E-01	2.09E-01	1.38E+00	1.03E-01
		300.09	*	3.41	3.55E+00		1.58E+00	1.74E+00
+	BI-214	609.31	*	46.30	2.49E-01	2.49E-01	1.15E+00	1.20E-01
		1120.29	*	15.10	8.82E-01		1.33E+00	4.20E-01
		1764.49		15.80	7.94E-01		1.06E+00	3.70E-01
		2204.22	*	4.98	9.20E-01		8.20E-01	3.64E-01
+	PB-214	295.21	*	19.19	6.23E-01	2.22E-01	1.23E+00	3.06E-01
		351.92	*	37.19	2.22E-01		1.40E+00	1.08E-01
	RN-219	401.80		6.50	8.16E-01	8.16E-01	3.53E-01	3.86E-01
	RA-223	323.87		3.88	1.30E+00	1.30E+00	-3.93E-01	6.19E-01
	RA-224	240.98		3.95	3.04E+00	3.04E+00	1.76E+01	1.49E+00
	RA-225	40.00		31.00	5.10E-01	5.10E-01	1.16E-01	2.47E-01
+	RA-226	186.21	*	3.28	2.62E+00	2.62E+00	3.31E+00	1.28E+00
	TH-227	50.10		8.40	9.15E-01	4.81E-01	-7.56E-01	4.46E-01
		236.00		11.50	4.81E-01		-2.16E-02	2.32E-01
		256.20		6.30	8.06E-01		1.76E-01	3.87E-01
	AC-228	338.32		11.40	6.57E-01	5.26E-01	1.16E+00	3.17E-01
		911.07		27.70	5.26E-01		1.24E+00	2.54E-01
		969.11		16.60	7.48E-01		1.07E+00	3.57E-01
	TH-230	48.44		16.90	5.09E-01	5.09E-01	6.39E-01	2.48E-01
		62.85		4.60	1.62E+00		2.05E+00	7.92E-01
		67.67		0.37	1.75E+01		-5.88E+00	8.54E+00
	PA-231	283.67		1.60	3.09E+00	2.32E+00	-7.49E-01	1.48E+00
		302.67		2.30	2.32E+00		6.98E-01	1.11E+00
	TH-231	25.64		14.70	4.76E+00	9.26E-01	-3.74E+01	2.32E+00
		84.21		6.40	9.26E-01		5.69E-01	4.53E-01
	PA-233	311.98		38.60	1.57E-01	1.57E-01	-6.89E-02	7.46E-02
	PA-234	131.20		20.40	2.58E-01	2.58E-01	1.55E-01	1.26E-01
		733.99		8.80	8.01E-01		-1.68E-01	3.75E-01
		946.00		12.00	5.94E-01		3.07E-01	2.74E-01
	PA-234M	1001.03		0.92	9.11E+00	9.11E+00	2.44E+00	4.24E+00
	TH-234	63.29		3.80	1.96E+00	1.96E+00	3.34E+00	9.60E-01
	U-235	143.76		10.50	4.88E-01	4.88E-01	2.82E-01	2.37E-01
		163.35		4.70	1.02E+00		-6.41E-01	4.92E-01
		205.31		4.70	1.13E+00		1.84E-01	5.45E-01
	NP-237	86.50		12.60	5.27E-01	5.27E-01	6.92E-01	2.58E-01
	NP-239	106.10		22.70	2.78E+00	2.78E+00	-5.07E-02	1.35E+00
		228.18		10.70	6.52E+00		-1.09E+00	3.14E+00
		277.60		14.10	4.84E+00		1.07E+00	2.32E+00
	AM-241	59.54		35.90	1.85E-01	1.85E-01	3.82E-02	9.01E-02
	AM-243	74.67		66.00	1.23E-01	1.23E-01	-5.48E-01	6.05E-02
	CM-243	209.75		3.29	1.75E+00	3.65E-01	2.03E+00	8.50E-01
		228.14		10.60	4.93E-01		-8.22E-02	2.37E-01
		277.60		14.00	3.65E-01		8.09E-02	1.75E-01

Analysis Report for 1606064-13

CP-5013 00-02

+ = Nuclide identified during the nuclide identification
* = Energy line found in the spectrum
> = MDA value not calculated
@ = Half-life too short to be able to perform the decay correction

No Action Level results available for reporting purposes.

DATA REVIEW COMMENTS REPORT

Creation Date	Comment	User

No Data Review Comments Entered.

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

Sample Title: CP-5013 00-02

Elapsed Live time: 3600
Elapsed Real Time: 3601

Channel								
1:	0	0	0	0	0	0	0	0
9:	0	0	0	0	0	0	0	0
17:	0	0	37	113	101	154	791	220
25:	90	68	65	71	77	59	52	83
33:	74	61	70	73	53	68	75	73
41:	75	64	76	68	67	74	143	123
49:	90	79	103	83	95	106	94	74
57:	59	106	103	114	115	111	137	253
65:	151	125	107	144	133	132	126	145
73:	138	138	224	393	235	572	191	116
81:	108	114	101	120	174	114	125	246
89:	147	130	184	102	192	274	132	99
97:	85	71	99	101	83	77	75	74
105:	63	101	86	70	82	84	80	71
113:	71	68	77	85	78	67	68	76
121:	70	66	77	84	65	83	66	78
129:	74	119	78	68	78	93	76	64
137:	77	97	58	74	64	73	74	82
145:	87	64	66	52	70	72	74	58
153:	60	70	87	65	68	67	79	47
161:	62	51	63	60	61	56	73	60
169:	67	53	61	69	51	52	48	53
177:	54	60	49	55	58	59	57	63
185:	66	115	190	74	52	50	50	52
193:	53	43	78	61	57	46	53	60
201:	67	59	63	55	51	65	47	57
209:	54	98	65	45	42	37	54	55
217:	46	45	48	31	40	43	36	45
225:	44	50	41	56	40	46	54	50
233:	49	41	48	39	51	72	415	426
241:	80	116	157	53	38	34	40	42
249:	46	32	37	37	33	33	48	34
257:	34	39	27	42	45	36	27	40
265:	30	40	34	36	42	35	73	57
273:	36	25	31	34	24	43	29	40
281:	37	30	31	31	30	32	29	32
289:	32	29	30	27	24	29	60	209
297:	89	22	38	34	61	32	28	26
305:	18	26	27	28	27	23	28	23
313:	29	25	30	35	26	24	32	25
321:	21	24	26	38	22	23	39	30
329:	43	23	26	31	25	38	23	29
337:	27	42	129	60	26	33	26	31
345:	24	23	22	23	24	20	28	203
353:	339	75	20	24	18	23	17	22
361:	28	27	25	21	21	29	20	13

369:	21	23	23	23	19	18	17	34

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Channel								
377:	17	17	23	14	16	25	19	21
385:	23	18	26	15	22	25	26	19
393:	21	21	15	23	16	20	19	21
401:	30	17	19	20	13	18	14	27
409:	17	35	24	19	9	20	20	12
417:	18	25	21	27	15	17	16	19
425:	17	17	20	17	20	23	22	15
433:	17	24	12	16	15	12	21	15
441:	11	23	12	18	14	15	24	14
449:	18	21	22	21	21	22	12	17
457:	24	14	14	20	10	22	25	44
465:	22	19	8	14	16	14	17	11
473:	15	16	11	16	11	15	26	18
481:	10	17	19	9	16	13	11	13
489:	15	15	13	7	10	11	6	9
497:	15	14	13	14	16	17	16	18
505:	13	13	14	12	19	30	76	89
513:	41	16	9	17	10	13	21	5
521:	15	15	17	7	11	10	10	17
529:	18	12	12	8	10	11	14	14
537:	10	13	15	10	12	9	8	16
545:	21	9	16	11	10	12	18	11
553:	9	16	15	6	15	9	16	14
561:	15	13	21	12	7	9	12	8
569:	11	15	17	13	10	20	15	13
577:	10	10	14	14	12	16	63	164
585:	46	23	19	19	8	7	9	14
593:	6	10	7	5	7	14	17	13
601:	13	18	15	12	11	16	11	13
609:	72	218	106	22	10	17	11	12
617:	10	12	5	9	14	10	8	10
625:	12	6	7	5	20	8	13	11
633:	9	14	9	10	15	13	11	7
641:	10	14	11	2	9	6	5	11
649:	10	13	13	8	9	12	13	11
657:	13	12	17	12	14	15	27	9
665:	10	17	14	9	12	15	12	9
673:	10	11	14	4	11	8	8	15
681:	13	4	10	8	8	12	11	10
689:	15	9	11	9	8	12	8	10
697:	11	12	8	12	14	17	6	13
705:	7	12	9	16	19	8	6	11
713:	6	11	10	11	5	9	7	11
721:	14	14	11	8	12	9	31	42
729:	20	7	9	13	6	10	14	10
737:	12	11	10	7	9	6	4	3
745:	11	11	7	9	5	9	6	13
753:	9	5	13	20	9	13	18	9
761:	8	10	18	12	6	14	13	15
769:	29	21	6	12	11	8	7	12
777:	11	10	8	7	6	14	12	5
785:	9	10	11	10	10	7	5	6
793:	10	4	13	25	10	6	10	11

801:	7	10	17	11	9	5	12	6

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Channel								
809:	5	6	4	5	4	9	3	4
817:	3	8	8	8	11	9	4	12
825:	9	7	8	6	7	4	8	8
833:	10	8	8	14	16	7	11	15
841:	15	4	5	9	7	3	8	8
849:	13	9	4	18	4	13	8	11
857:	6	5	8	7	22	19	3	4
865:	5	8	8	8	10	4	4	9
873:	13	11	8	6	5	7	7	13
881:	12	6	3	5	4	8	6	12
889:	10	5	1	10	5	10	11	9
897:	8	9	11	4	5	9	9	10
905:	10	8	10	11	5	8	49	104
913:	50	10	12	5	6	4	8	4
921:	3	2	3	8	1	8	6	5
929:	10	10	7	7	8	7	10	17
937:	6	4	4	8	6	1	5	8
945:	11	8	5	8	4	6	4	7
953:	6	8	10	10	6	5	12	3
961:	7	9	5	9	20	18	10	8
969:	42	55	15	5	3	8	8	2
977:	6	9	13	9	7	8	10	3
985:	4	10	5	7	6	3	8	3
993:	6	2	4	9	7	7	4	4
1001:	12	19	12	5	9	5	4	7
1009:	6	7	11	8	3	9	6	8
1017:	4	5	5	9	6	13	2	13
1025:	7	9	11	4	3	6	6	5
1033:	8	4	2	5	8	7	7	4
1041:	4	11	10	7	7	8	6	4
1049:	6	5	11	6	13	9	3	11
1057:	3	5	4	9	9	6	7	5
1065:	9	5	9	5	11	7	9	7
1073:	4	7	5	6	10	5	5	4
1081:	7	4	6	5	3	2	8	1
1089:	7	1	5	4	8	4	8	6
1097:	7	9	4	7	7	10	3	5
1105:	12	4	6	5	4	8	6	4
1113:	7	7	10	7	10	8	10	30
1121:	58	27	9	8	13	8	7	4
1129:	4	10	10	10	8	4	8	10
1137:	8	8	10	9	9	5	7	4
1145:	7	9	3	5	8	5	5	4
1153:	12	6	10	12	12	4	6	6
1161:	5	12	2	8	3	7	10	5
1169:	5	4	5	5	11	2	10	7
1177:	7	8	7	3	9	9	8	9
1185:	6	10	11	13	7	8	7	4
1193:	5	10	9	5	5	4	4	5
1201:	7	7	8	5	4	7	9	8
1209:	6	4	6	7	12	10	6	5
1217:	8	2	11	12	7	7	5	8
1225:	3	7	8	6	8	5	6	3

1233:	2	7	8	5	8	15	25	15

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Channel								
1241:	4	5	7	5	8	9	8	11
1249:	6	4	9	5	7	7	2	7
1257:	5	6	2	4	9	3	3	7
1265:	2	4	3	8	4	7	4	3
1273:	2	5	7	5	4	6	1	7
1281:	8	8	6	5	4	8	4	8
1289:	5	4	2	4	7	3	4	6
1297:	5	6	6	5	7	2	3	6
1305:	7	6	4	2	2	1	3	8
1313:	3	2	5	5	1	7	0	3
1321:	5	3	2	7	3	1	3	3
1329:	4	5	4	1	2	5	5	1
1337:	2	3	3	2	4	1	1	2
1345:	5	4	3	7	2	5	0	3
1353:	1	5	5	4	4	4	2	5
1361:	2	5	0	2	2	4	2	1
1369:	2	4	0	0	1	3	2	4
1377:	6	11	13	0	3	6	4	1
1385:	3	6	2	3	1	4	2	1
1393:	1	3	1	3	6	3	1	5
1401:	3	3	7	1	4	2	3	6
1409:	7	4	2	3	3	2	2	3
1417:	2	1	2	0	1	1	0	0
1425:	1	2	1	3	1	3	1	2
1433:	0	3	4	3	2	1	3	2
1441:	1	0	3	5	1	5	2	2
1449:	3	3	1	1	0	2	3	1
1457:	5	3	13	84	286	295	78	11
1465:	9	5	0	3	2	1	1	2
1473:	1	0	1	4	0	1	0	2
1481:	3	1	6	1	0	0	0	1
1489:	1	1	2	2	4	1	3	4
1497:	2	3	1	0	3	3	4	3
1505:	2	4	2	1	4	2	5	0
1513:	1	2	2	2	2	3	1	3
1521:	1	2	1	2	1	1	3	1
1529:	2	2	4	1	1	1	2	0
1537:	2	5	0	2	1	3	4	2
1545:	4	2	0	2	3	0	2	0
1553:	2	2	2	2	3	2	1	1
1561:	4	2	0	1	2	1	2	0
1569:	0	2	0	0	1	0	2	1
1577:	1	2	0	0	0	5	5	3
1585:	3	1	4	7	10	1	1	5
1593:	6	2	5	2	0	1	2	2
1601:	1	2	2	2	0	1	1	2
1609:	0	2	0	3	1	2	1	0
1617:	3	0	4	0	6	2	0	2
1625:	3	4	4	1	3	2	3	2
1633:	3	3	2	1	4	2	0	2
1641:	2	1	1	0	3	0	0	1
1649:	1	0	1	0	1	2	2	0
1657:	5	1	1	1	3	3	5	0

1665:	1	1	2	1	1	0	1	1

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Channel								
1673:	0	0	2	3	0	1	1	4
1681:	0	1	0	1	4	2	6	2
1689:	1	0	3	1	3	2	4	1
1697:	3	3	1	2	2	0	2	0
1705:	2	1	0	3	1	1	0	1
1713:	0	1	0	0	2	0	0	0
1721:	2	2	1	1	1	3	3	2
1729:	3	12	6	2	2	0	0	0
1737:	2	1	2	0	3	0	2	0
1745:	2	2	1	3	3	0	0	1
1753:	0	0	0	0	0	0	1	0
1761:	2	1	1	11	21	20	6	2
1769:	3	5	1	0	2	0	4	2
1777:	2	3	3	1	0	1	2	1
1785:	4	0	2	0	0	3	1	0
1793:	1	2	0	1	1	1	1	0
1801:	2	0	2	1	4	1	2	0
1809:	3	0	1	1	1	1	0	0
1817:	0	0	0	0	2	2	1	0
1825:	1	2	0	1	1	1	2	0
1833:	0	1	0	0	1	2	2	0
1841:	3	0	1	0	2	0	6	2
1849:	6	3	2	3	1	1	0	0
1857:	2	0	0	2	0	2	3	1
1865:	3	0	0	1	2	2	0	2
1873:	1	1	2	0	0	1	1	0
1881:	2	1	0	0	0	0	1	1
1889:	1	3	3	2	2	0	1	1
1897:	0	0	1	1	1	1	1	1
1905:	1	0	0	1	0	0	0	0
1913:	1	1	0	0	2	1	0	1
1921:	2	1	0	2	0	0	1	0
1929:	0	1	2	2	2	2	2	1
1937:	0	1	1	1	1	0	0	0
1945:	3	2	1	0	2	1	3	2
1953:	1	2	0	0	0	1	1	1
1961:	0	1	1	1	1	3	1	2
1969:	1	4	2	0	2	1	1	1
1977:	1	1	1	4	3	0	3	0
1985:	3	1	0	0	0	1	2	1
1993:	0	1	1	0	1	1	1	0
2001:	0	0	0	3	2	0	0	4
2009:	0	0	0	0	0	2	1	1
2017:	1	2	1	1	0	0	0	1
2025:	0	0	2	0	2	2	0	0
2033:	1	2	1	0	1	1	1	1
2041:	2	3	1	1	0	1	1	1
2049:	3	1	1	1	0	0	0	1
2057:	0	1	0	1	2	0	0	0
2065:	0	1	0	1	0	2	1	1
2073:	0	0	0	1	1	0	1	2
2081:	0	0	0	0	0	0	1	1
2089:	1	1	0	0	2	2	1	1

2097:	1	1	1	1	1	2	3	5

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

2529:	0	0	1	0	1	0	0	0

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Channel								
2537:	0	2	2	2	0	0	1	0
2545:	0	0	0	0	0	0	0	0
2553:	0	1	0	0	0	0	0	1
2561:	0	0	0	0	0	0	0	1
2569:	0	0	1	0	1	0	0	0
2577:	0	1	0	0	0	1	1	0
2585:	0	1	0	0	0	0	0	0
2593:	0	1	0	0	0	0	1	0
2601:	0	0	0	2	1	0	1	1
2609:	0	0	0	1	13	26	38	18
2617:	7	2	1	0	0	0	0	0
2625:	0	0	0	1	0	0	0	0
2633:	0	0	0	0	0	0	1	1
2641:	0	1	1	0	0	0	0	0
2649:	0	0	0	1	1	0	0	1
2657:	0	0	1	0	0	0	0	0
2665:	1	0	0	2	0	1	1	0
2673:	0	0	0	1	0	0	0	1
2681:	0	0	0	0	0	1	0	2
2689:	0	0	0	0	1	0	0	0
2697:	1	0	0	0	0	1	0	0
2705:	0	0	0	1	0	0	0	0
2713:	0	0	0	0	1	0	0	0
2721:	0	1	0	0	0	0	0	0
2729:	0	0	1	0	1	0	0	0
2737:	0	0	0	1	0	0	1	0
2745:	1	0	0	0	0	1	0	1
2753:	0	0	0	0	0	1	0	0
2761:	0	0	1	0	0	0	0	0
2769:	2	0	0	1	0	0	1	0
2777:	0	1	1	0	1	1	1	0
2785:	0	0	0	1	0	0	0	0
2793:	0	0	0	0	0	0	0	1
2801:	0	0	1	0	0	0	0	0
2809:	0	0	0	0	0	0	0	0
2817:	0	1	0	0	0	0	1	1
2825:	0	0	1	0	2	1	0	0
2833:	1	0	0	1	0	0	0	0
2841:	1	0	0	1	1	1	0	0
2849:	0	1	1	0	1	0	0	1
2857:	1	1	0	0	2	0	1	0
2865:	0	0	0	0	0	0	0	1
2873:	0	0	0	0	0	1	0	0
2881:	0	1	0	1	0	0	0	0
2889:	0	0	0	0	0	0	2	0
2897:	0	0	0	1	0	0	0	1
2905:	0	1	1	0	0	0	0	0
2913:	0	0	0	0	0	0	0	1
2921:	0	1	0	0	0	0	0	1
2929:	0	0	0	0	0	0	0	0
2937:	0	0	0	0	0	0	0	0
2945:	1	0	0	0	0	0	0	0
2953:	1	0	0	0	0	0	0	1

2961:	2	0	0	1	0	0	0	0

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

3393:	0	1	0	1	1	0	0	0

Sample Title: CP-5013 00-02

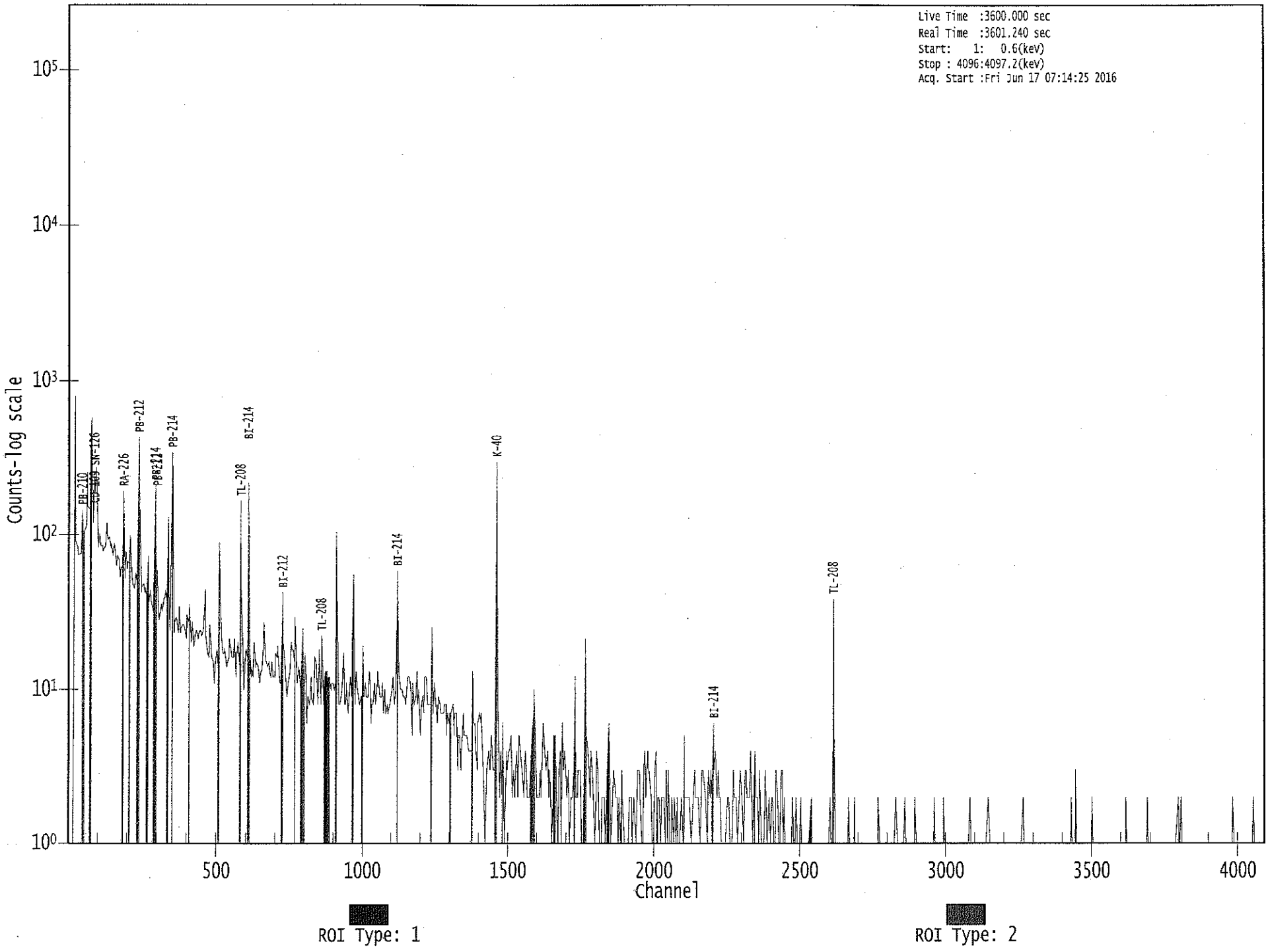
Channel								
3401:	0	0	0	0	0	0	0	0
3409:	0	0	0	0	1	0	0	0
3417:	0	0	0	0	0	0	0	0
3425:	0	0	0	0	0	0	2	0
3433:	0	0	0	0	0	0	0	1
3441:	0	0	0	0	3	1	0	0
3449:	0	0	0	0	0	0	0	0
3457:	0	0	0	0	0	0	0	0
3465:	0	0	0	0	0	0	0	0
3473:	0	1	0	0	1	0	0	0
3481:	0	0	0	0	0	0	0	0
3489:	0	0	0	0	1	0	0	0
3497:	0	1	0	1	0	2	0	0
3505:	0	0	0	0	1	0	0	0
3513:	0	0	0	0	1	0	0	1
3521:	1	0	0	1	0	0	0	0
3529:	0	0	0	0	1	0	0	0
3537:	1	1	0	0	0	0	0	0
3545:	0	0	1	0	0	0	0	0
3553:	0	0	0	0	1	0	0	0
3561:	0	0	0	1	0	1	0	0
3569:	0	0	0	0	0	0	1	0
3577:	1	0	1	0	0	0	0	0
3585:	0	1	0	0	0	0	0	0
3593:	0	0	0	0	0	0	0	0
3601:	0	0	0	0	0	0	0	0
3609:	0	0	0	0	0	0	0	0
3617:	2	0	0	0	0	0	0	0
3625:	0	0	1	0	0	0	0	1
3633:	0	0	0	0	0	0	0	0
3641:	0	0	0	0	1	0	0	0
3649:	0	0	0	0	1	0	0	0
3657:	0	0	0	0	0	0	1	0
3665:	0	0	0	0	0	0	0	1
3673:	0	0	0	0	0	0	0	0
3681:	0	0	0	0	0	0	0	1
3689:	0	2	0	0	0	0	0	0
3697:	0	1	0	0	0	0	0	1
3705:	1	0	0	0	0	1	0	0
3713:	1	0	0	0	0	0	0	1
3721:	0	0	0	0	0	0	0	0
3729:	0	0	0	0	0	0	1	0
3737:	0	0	0	1	0	1	0	0
3745:	0	0	0	0	0	1	0	0
3753:	0	0	0	0	1	0	0	0
3761:	0	0	0	0	0	0	1	0
3769:	1	0	0	0	0	1	1	0
3777:	0	0	1	0	0	0	0	0
3785:	0	1	0	0	1	0	0	0
3793:	0	0	0	2	0	0	0	0
3801:	0	1	0	0	1	2	0	0
3809:	0	0	0	0	0	0	0	0
3817:	1	1	0	0	0	0	1	0

3825:	0	0	0	0	0	0	0	0

Sample Title: CP-5013 00-02

Channel								
3833:	0	0	0	0	0	0	0	0
3841:	0	0	0	1	0	0	0	0
3849:	0	0	0	0	0	1	0	0
3857:	0	0	0	0	1	0	0	0
3865:	0	1	0	0	0	0	0	1
3873:	0	0	0	0	0	0	0	0
3881:	0	0	0	0	0	0	0	0
3889:	0	0	0	0	0	0	0	0
3897:	0	0	0	0	0	0	0	0
3905:	0	0	0	0	0	0	0	1
3913:	0	0	0	0	0	0	0	0
3921:	0	0	0	1	0	0	0	0
3929:	0	1	0	0	1	0	0	0
3937:	0	0	0	0	0	0	0	0
3945:	0	0	0	0	0	0	0	0
3953:	0	0	0	0	1	1	0	0
3961:	0	0	1	0	0	0	0	0
3969:	1	0	0	0	1	0	0	0
3977:	0	0	0	0	0	1	2	0
3985:	0	0	0	1	0	0	0	0
3993:	1	0	0	0	0	0	0	0
4001:	0	0	0	0	0	0	0	1
4009:	0	0	0	0	0	0	0	0
4017:	0	0	0	0	0	0	0	0
4025:	0	0	0	0	1	0	0	1
4033:	0	0	0	0	0	0	0	0
4041:	0	1	0	0	0	0	0	0
4049:	0	1	1	0	0	1	2	0
4057:	0	0	0	0	0	0	1	0
4065:	0	0	0	0	0	0	0	1
4073:	0	0	0	0	1	0	0	0
4081:	0	0	0	0	0	1	1	0
4089:	0	0	0	0	0	0	0	0

0000039065.CNF



Apex-Gamma

Analysis Report for 1606064-14
CP-5013 02-05

6/17

GAMMA SPECTRUM ANALYSIS

Sample Identification	: 1606064-14
Sample Description	: CP-5013 02-05
Sample Type	: SOIL
Sample Size	: 6.375E+02 grams
Facility	: Countroom
Sample Taken On	: 6/8/2016 12:22:38PM
Acquisition Started	: 6/17/2016 7:17:14AM
Procedure	: GAS-1402 pCi
Operator	: Administrator
Detector Name	: GE3
Geometry	: GAS-1402
Live Time	: 3600.0 seconds
Real Time	: 3613.9 seconds
Dead Time	: 0.38 %
Peak Locate Threshold	: 2.50
Peak Locate Range (in channels)	: 1 - 4096
Peak Area Range (in channels)	: 9 - 4096
Identification Energy Tolerance	: 1.000 keV
Energy Calibration Used Done On	: 10/25/2014
Efficiency Calibration Used Done On	: 10/25/2014
Efficiency Calibration Description	:
Sample Number	: 39066

PEAK-TO-TOTAL CALIBRATION REPORT

Peak-to-Total Efficiency Calibration Equation

AG
6/17/16

Analysis Report for 1606064-14

CP-5013 02-05

PEAK LOCATE REPORT

Peak Locate Performed on : 6/17/2016 8:17:30AM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096
Peak Search Sensitivity : 2.50

Peak No.	Energy (keV)	Centroid Channel	Centroid Uncertainty	Peak Significance
1	16.76	17.01	0.0000	0.00
2	74.94	75.15	0.0000	0.00
3	77.63	77.85	0.0000	0.00
4	87.94	88.15	0.0000	0.00
5	92.79	93.00	0.0000	0.00
6	129.61	129.80	0.0000	0.00
7	186.49	186.65	0.0000	0.00
8	209.98	210.13	0.0000	0.00
9	217.23	217.37	0.0000	0.00
10	238.99	239.12	0.0000	0.00
11	242.05	242.17	0.0000	0.00
12	269.75	269.86	0.0000	0.00
13	277.31	277.41	0.0000	0.00
14	295.63	295.73	0.0000	0.00
15	300.28	300.37	0.0000	0.00
16	338.72	338.80	0.0000	0.00
17	352.36	352.43	0.0000	0.00
18	462.69	462.71	0.0000	0.00
19	510.84	510.83	0.0000	0.00
20	518.83	518.81	0.0000	0.00
21	563.85	563.82	0.0000	0.00
22	583.63	583.58	0.0000	0.00
23	609.79	609.73	0.0000	0.00
24	715.23	715.12	0.0000	0.00
25	728.07	727.96	0.0000	0.00
26	770.07	769.93	0.0000	0.00
27	784.91	784.77	0.0000	0.00
28	795.53	795.38	0.0000	0.00
29	907.19	907.00	0.0000	0.00
30	911.78	911.59	0.0000	0.00
31	934.21	934.01	0.0000	0.00
32	964.24	964.02	0.0000	0.00
33	969.29	969.07	0.0000	0.00
34	1120.55	1120.26	0.0000	0.00
35	1237.70	1237.36	0.0000	0.00
36	1257.57	1257.23	0.0000	0.00
37	1378.42	1378.03	0.0000	0.00
38	1461.36	1460.94	0.0000	0.00
39	1510.25	1509.81	0.0000	0.00
40	1588.48	1588.01	0.0000	0.00
41	1593.54	1593.07	0.0000	0.00
42	1693.48	1692.97	0.0000	0.00

Analysis Report for 1606064-14

CP-5013 02-05

Peak No.	Energy (keV)	Centroid Channel	Centroid Uncertainty	Peak Significance
43	1728.42	1727.90	0.0000	0.00
44	1765.01	1764.48	0.0000	0.00
45	2010.02	2009.41	0.0000	0.00
46	2040.40	2039.78	0.0000	0.00
47	2105.33	2104.69	0.0000	0.00
48	2182.87	2182.20	0.0000	0.00
49	2206.19	2205.52	0.0000	0.00
50	2240.88	2240.20	0.0000	0.00
51	2447.78	2447.04	0.0000	0.00
52	2615.28	2614.50	0.0000	0.00
53	2630.91	2630.13	0.0000	0.00

? = Adjacent peak noted
Errors quoted at 2.000sigma

Analysis Report for 1606064-14

CP-5013 02-05

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 6/17/2016 8:17:30AM

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

	Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	FWHM (keV)
	1	16.76	15 -	20	17.01	9.34E+01	73.31	9.93E+02	2.16
M	2	74.94	71 -	83	75.15	4.17E+02	92.51	1.26E+03	1.66
m	3	77.63	71 -	83	77.85	6.93E+02	99.91	1.22E+03	1.67
M	4	87.94	83 -	98	88.15	2.33E+02	75.74	9.74E+02	1.68
m	5	92.79	83 -	98	93.00	2.95E+02	77.13	9.53E+02	1.69
	6	129.61	126 -	133	129.80	9.56E+01	79.90	1.00E+03	3.65
	7	186.49	183 -	191	186.65	2.08E+02	84.80	9.82E+02	2.00
	8	209.98	208 -	213	210.13	7.53E+01	55.52	5.53E+02	2.15
	9	217.23	214 -	220	217.37	5.93E+01	58.84	5.83E+02	3.52
M	10	238.99	233 -	246	239.12	8.66E+02	72.53	3.92E+02	1.67
m	11	242.05	233 -	246	242.17	1.66E+02	76.71	4.19E+02	1.89
	12	269.75	265 -	274	269.86	9.63E+01	66.88	5.81E+02	1.81
	13	277.31	275 -	281	277.41	6.16E+01	47.09	3.55E+02	2.78
	14	295.63	292 -	298	295.73	1.91E+02	55.08	4.13E+02	1.48
	15	300.28	299 -	303	300.37	5.15E+01	37.84	2.69E+02	1.49
	16	338.72	335 -	343	338.80	1.55E+02	58.10	4.25E+02	1.88
	17	352.36	347 -	357	352.43	3.91E+02	71.18	4.67E+02	2.07
	18	462.69	457 -	466	462.71	9.33E+01	46.42	2.53E+02	2.19
	19	510.84	505 -	516	510.83	1.51E+02	51.15	2.50E+02	2.47
	20	518.83	516 -	521	518.81	2.53E+01	24.70	1.01E+02	2.11
	21	563.85	559 -	568	563.82	5.59E+01	34.10	1.32E+02	6.56
	22	583.63	581 -	586	583.58	2.32E+02	38.09	1.05E+02	2.06
	23	609.79	606 -	613	609.73	2.43E+02	46.26	1.92E+02	1.84
	24	715.23	712 -	719	715.12	3.63E+01	26.00	8.94E+01	5.44
	25	728.07	724 -	732	727.96	6.51E+01	32.35	1.20E+02	2.27
	26	770.07	765 -	776	769.93	4.01E+01	42.14	1.96E+02	7.85
	27	784.91	781 -	788	784.77	2.52E+01	25.92	9.36E+01	3.62
	28	795.53	791 -	799	795.38	3.03E+01	30.51	1.21E+02	1.92
M	29	907.19	906 -	917	907.00	1.33E+01	8.66	1.65E+01	2.17
m	30	911.78	906 -	917	911.59	1.55E+02	31.84	8.04E+01	2.43
	31	934.21	929 -	939	934.01	3.40E+01	29.67	9.99E+01	2.21
M	32	964.24	962 -	975	964.02	2.41E+01	14.42	2.87E+01	3.21
m	33	969.29	962 -	975	969.07	9.41E+01	29.33	6.49E+01	2.56
	34	1120.55	1114 -	1124	1120.26	6.87E+01	31.88	9.85E+01	1.91
	35	1237.70	1233 -	1242	1237.36	2.49E+01	30.12	1.16E+02	1.67
	36	1257.57	1254 -	1260	1257.23	1.85E+01	17.41	4.11E+01	3.09
	37	1378.42	1370 -	1385	1378.03	2.60E+01	27.28	6.40E+01	2.62
	38	1461.36	1456 -	1467	1460.94	5.69E+02	50.71	3.99E+01	2.38
	39	1510.25	1504 -	1515	1509.81	1.72E+01	10.77	5.60E+00	5.39
M	40	1588.48	1586 -	1596	1588.01	7.38E+00	7.48	1.82E+01	2.71

Analysis Report for 1606064-14

CP-5013 02-05

	Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	FWHM (keV)
m	41	1593.54	1586 -	1596	1593.07	2.38E+01	14.42	1.91E+01	2.71
	42	1693.48	1690 -	1695	1692.97	5.50E+00	7.94	7.00E+00	1.40
	43	1728.42	1721 -	1734	1727.90	2.36E+01	12.53	6.89E+00	8.30
	44	1765.01	1760 -	1769	1764.48	4.37E+01	17.66	1.86E+01	2.39
	45	2010.02	2005 -	2013	2009.41	1.08E+01	8.50	4.46E+00	3.37
	46	2040.40	2036 -	2042	2039.78	5.43E+00	6.34	3.14E+00	2.52
	47	2105.33	2100 -	2109	2104.69	1.58E+01	9.85	4.50E+00	2.16
	48	2182.87	2179 -	2185	2182.20	7.50E+00	6.95	3.00E+00	2.84
	49	2206.19	2201 -	2209	2205.52	9.93E+00	9.82	8.14E+00	3.50
	50	2240.88	2236 -	2243	2240.20	1.00E+01	6.32	0.00E+00	1.16
	51	2447.78	2443 -	2450	2447.04	7.27E+00	8.72	7.45E+00	2.87
	52	2615.28	2610 -	2618	2614.50	6.78E+01	17.33	4.47E+00	2.76
	53	2630.91	2625 -	2634	2630.13	8.00E+00	5.66	0.00E+00	7.00

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

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 6/17/2016 8:17:30AM

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

	Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
	1	16.76	15 -	20	9.34E+01	73.31	9.93E+02	5.81E+01
M	2	74.94	71 -	83	4.17E+02	92.51	1.26E+03	5.84E+01
m	3	77.63	71 -	83	6.93E+02	99.91	1.22E+03	5.74E+01
M	4	87.94	83 -	98	2.33E+02	75.74	9.74E+02	5.13E+01
m	5	92.79	83 -	98	2.95E+02	77.13	9.53E+02	5.08E+01
	6	129.61	126 -	133	9.56E+01	79.90	1.00E+03	6.37E+01
	7	186.49	183 -	191	2.08E+02	84.80	9.82E+02	6.55E+01
	8	209.98	208 -	213	7.53E+01	55.52	5.53E+02	4.33E+01
	9	217.23	214 -	220	5.93E+01	58.84	5.83E+02	4.67E+01
M	10	238.99	233 -	246	8.66E+02	72.53	3.92E+02	3.26E+01
m	11	242.05	233 -	246	1.66E+02	76.71	4.19E+02	3.37E+01
	12	269.75	265 -	274	9.63E+01	66.88	5.81E+02	5.26E+01
	13	277.31	275 -	281	6.16E+01	47.09	3.55E+02	3.65E+01
	14	295.63	292 -	298	1.91E+02	55.08	4.13E+02	3.92E+01
	15	300.28	299 -	303	5.15E+01	37.84	2.69E+02	2.88E+01

Analysis Report for 1606064-14

CP-5013 02-05

	Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
	16	338.72	335 -	343	1.55E+02	58.10	4.25E+02	4.31E+01
	17	352.36	347 -	357	3.91E+02	71.18	4.67E+02	4.87E+01
	18	462.69	457 -	466	9.33E+01	46.42	2.53E+02	3.47E+01
	19	510.84	505 -	516	1.51E+02	51.15	2.50E+02	3.69E+01
	20	518.83	516 -	521	2.53E+01	24.70	1.01E+02	1.85E+01
	21	563.85	559 -	568	5.59E+01	34.10	1.32E+02	2.52E+01
	22	583.63	581 -	586	2.32E+02	38.09	1.05E+02	1.88E+01
	23	609.79	606 -	613	2.43E+02	46.26	1.92E+02	2.81E+01
	24	715.23	712 -	719	3.63E+01	26.00	8.94E+01	1.89E+01
	25	728.07	724 -	732	6.51E+01	32.35	1.20E+02	2.30E+01
	26	770.07	765 -	776	4.01E+01	42.14	1.96E+02	3.30E+01
	27	784.91	781 -	788	2.52E+01	25.92	9.36E+01	1.96E+01
	28	795.53	791 -	799	3.03E+01	30.51	1.21E+02	2.34E+01
M	29	907.19	906 -	917	1.33E+01	8.66	1.65E+01	6.68E+00
m	30	911.78	906 -	917	1.55E+02	31.84	8.04E+01	1.47E+01
	31	934.21	929 -	939	3.40E+01	29.67	9.99E+01	2.24E+01
M	32	964.24	962 -	975	2.41E+01	14.42	2.87E+01	8.81E+00
m	33	969.29	962 -	975	9.41E+01	29.33	6.49E+01	1.32E+01
	34	1120.55	1114 -	1124	6.87E+01	31.88	9.85E+01	2.24E+01
	35	1237.70	1233 -	1242	2.49E+01	30.12	1.16E+02	2.34E+01
	36	1257.57	1254 -	1260	1.85E+01	17.41	4.11E+01	1.24E+01
	37	1378.42	1370 -	1385	2.60E+01	27.28	6.40E+01	2.08E+01
	38	1461.36	1456 -	1467	5.69E+02	50.71	3.99E+01	1.41E+01
	39	1510.25	1504 -	1515	1.72E+01	10.77	5.60E+00	5.65E+00
M	40	1588.48	1586 -	1596	7.38E+00	7.48	1.82E+01	7.02E+00
m	41	1593.54	1586 -	1596	2.38E+01	14.42	1.91E+01	7.18E+00
	42	1693.48	1690 -	1695	5.50E+00	7.94	7.00E+00	5.26E+00
	43	1728.42	1721 -	1734	2.36E+01	12.53	6.89E+00	6.51E+00
	44	1765.01	1760 -	1769	4.37E+01	17.66	1.86E+01	9.63E+00
	45	2010.02	2005 -	2013	1.08E+01	8.50	4.46E+00	4.44E+00
	46	2040.40	2036 -	2042	5.43E+00	6.34	3.14E+00	3.54E+00
	47	2105.33	2100 -	2109	1.58E+01	9.85	4.50E+00	4.79E+00
	48	2182.87	2179 -	2185	7.50E+00	6.95	3.00E+00	3.51E+00
	49	2206.19	2201 -	2209	9.93E+00	9.82	8.14E+00	6.19E+00
	50	2240.88	2236 -	2243	1.00E+01	6.32	0.00E+00	0.00E+00
	51	2447.78	2443 -	2450	7.27E+00	8.72	7.45E+00	5.63E+00
	52	2615.28	2610 -	2618	6.78E+01	17.33	4.47E+00	4.44E+00
	53	2630.91	2625 -	2634	8.00E+00	5.66	0.00E+00	0.00E+00

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

Analysis Report for 1606064-14

CP-5013 02-05

PEAK WITH NID REPORT

Peak Analysis Performed on : 6/17/2016 8:17:30AM

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

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

	Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
	1	16.76	15 -	20	17.01	9.34E+01	73.31	9.93E+02	NB-93M
M	2	74.94	71 -	83	75.15	4.17E+02	92.51	1.26E+03	AM-243
m	3	77.63	71 -	83	77.85	6.93E+02	99.91	1.22E+03	TI-44
M	4	87.94	83 -	98	88.15	2.33E+02	75.74	9.74E+02	CD-109
									SN-126
									LU-176
m	5	92.79	83 -	98	93.00	2.95E+02	77.13	9.53E+02	GA-67
	6	129.61	126 -	133	129.80	9.56E+01	79.90	1.00E+03	.....
	7	186.49	183 -	191	186.65	2.08E+02	84.80	9.82E+02	RA-226
	8	209.98	208 -	213	210.13	7.53E+01	55.52	5.53E+02	CM-243
	9	217.23	214 -	220	217.37	5.93E+01	58.84	5.83E+02	.....
M	10	238.99	233 -	246	239.12	8.66E+02	72.53	3.92E+02	PB-212
m	11	242.05	233 -	246	242.17	1.66E+02	76.71	4.19E+02	.....
	12	269.75	265 -	274	269.86	9.63E+01	66.88	5.81E+02	.....
	13	277.31	275 -	281	277.41	6.16E+01	47.09	3.55E+02	CM-243
									NP-239
	14	295.63	292 -	298	295.73	1.91E+02	55.08	4.13E+02	PB-214
	15	300.28	299 -	303	300.37	5.15E+01	37.84	2.69E+02	GA-67
									PB-212
									BI-210M
	16	338.72	335 -	343	338.80	1.55E+02	58.10	4.25E+02	AC-228
	17	352.36	347 -	357	352.43	3.91E+02	71.18	4.67E+02	PB-214
	18	462.69	457 -	466	462.71	9.33E+01	46.42	2.53E+02	SB-125
	19	510.84	505 -	516	510.83	1.51E+02	51.15	2.50E+02	.....
	20	518.83	516 -	521	518.81	2.53E+01	24.70	1.01E+02	.....
	21	563.85	559 -	568	563.82	5.59E+01	34.10	1.32E+02	CS-134
	22	583.63	581 -	586	583.58	2.32E+02	38.09	1.05E+02	TL-208
	23	609.79	606 -	613	609.73	2.43E+02	46.26	1.92E+02	BI-214
	24	715.23	712 -	719	715.12	3.63E+01	26.00	8.94E+01	.....
	25	728.07	724 -	732	727.96	6.51E+01	32.35	1.20E+02	BI-212
	26	770.07	765 -	776	769.93	4.01E+01	42.14	1.96E+02	.....
	27	784.91	781 -	788	784.77	2.52E+01	25.92	9.36E+01	.....
	28	795.53	791 -	799	795.38	3.03E+01	30.51	1.21E+02	CS-134
M	29	907.19	906 -	917	907.00	1.33E+01	8.66	1.65E+01	.....
m	30	911.78	906 -	917	911.59	1.55E+02	31.84	8.04E+01	LU-172
									AC-228
	31	934.21	929 -	939	934.01	3.40E+01	29.67	9.99E+01	.....
M	32	964.24	962 -	975	964.02	2.41E+01	14.42	2.87E+01	EU-152
m	33	969.29	962 -	975	969.07	9.41E+01	29.33	6.49E+01	AC-228
	34	1120.55	1114 -	1124	1120.26	6.87E+01	31.88	9.85E+01	SC-46
									BI-214

Analysis Report for 1606064-14

CP-5013 02-05

	Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
									TA-182
	35	1237.70	1233 -	1242	1237.36	2.49E+01	30.12	1.16E+02	CO-56
	36	1257.57	1254 -	1260	1257.23	1.85E+01	17.41	4.11E+01	.....
	37	1378.42	1370 -	1385	1378.03	2.60E+01	27.28	6.40E+01	.....
	38	1461.36	1456 -	1467	1460.94	5.69E+02	50.71	3.99E+01	K-40
	39	1510.25	1504 -	1515	1509.81	1.72E+01	10.77	5.60E+00	.....
M	40	1588.48	1586 -	1596	1588.01	7.38E+00	7.48	1.82E+01	.....
m	41	1593.54	1586 -	1596	1593.07	2.38E+01	14.42	1.91E+01	.....
	42	1693.48	1690 -	1695	1692.97	5.50E+00	7.94	7.00E+00	.....
	43	1728.42	1721 -	1734	1727.90	2.36E+01	12.53	6.89E+00	.....
	44	1765.01	1760 -	1769	1764.48	4.37E+01	17.66	1.86E+01	BI-214
	45	2010.02	2005 -	2013	2009.41	1.08E+01	8.50	4.46E+00	.....
	46	2040.40	2036 -	2042	2039.78	5.43E+00	6.34	3.14E+00	.....
	47	2105.33	2100 -	2109	2104.69	1.58E+01	9.85	4.50E+00	.....
	48	2182.87	2179 -	2185	2182.20	7.50E+00	6.95	3.00E+00	.....
	49	2206.19	2201 -	2209	2205.52	9.93E+00	9.82	8.14E+00	.....
	50	2240.88	2236 -	2243	2240.20	1.00E+01	6.32	0.00E+00	.....
	51	2447.78	2443 -	2450	2447.04	7.27E+00	8.72	7.45E+00	.....
	52	2615.28	2610 -	2618	2614.50	6.78E+01	17.33	4.47E+00	TL-208
	53	2630.91	2625 -	2634	2630.13	8.00E+00	5.66	0.00E+00	.....

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

PEAK EFFICIENCY REPORT

Peak Analysis Performed on : 6/17/2016 8:17:30AM

	Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
	1	16.76	9.34E+01	73.31	1.86E-04	1.58E-03
M	2	74.94	4.17E+02	92.51	2.36E-02	2.09E-03
m	3	77.63	6.93E+02	99.91	2.39E-02	2.18E-03
M	4	87.94	2.33E+02	75.74	2.44E-02	2.52E-03
m	5	92.79	2.95E+02	77.13	2.44E-02	2.41E-03
	6	129.61	9.56E+01	79.90	2.25E-02	1.69E-03
	7	186.49	2.08E+02	84.80	1.83E-02	1.42E-03
	8	209.98	7.53E+01	55.52	1.68E-02	1.31E-03
	9	217.23	5.93E+01	58.84	1.64E-02	1.28E-03
M	10	238.99	8.66E+02	72.53	1.52E-02	1.18E-03

Analysis Report for 1606064-14

CP-5013 02-05

	Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
m	11	242.05	1.66E+02	76.71	1.51E-02	1.17E-03
	12	269.75	9.63E+01	66.88	1.38E-02	1.04E-03
	13	277.31	6.16E+01	47.09	1.35E-02	1.01E-03
	14	295.63	1.91E+02	55.08	1.28E-02	9.73E-04
	15	300.28	5.15E+01	37.84	1.26E-02	9.67E-04
	16	338.72	1.55E+02	58.10	1.14E-02	9.12E-04
	17	352.36	3.91E+02	71.18	1.10E-02	8.93E-04
	18	462.69	9.33E+01	46.42	8.74E-03	7.66E-04
	19	510.84	1.51E+02	51.15	8.01E-03	7.18E-04
	20	518.83	2.53E+01	24.70	7.91E-03	7.10E-04
	21	563.85	5.59E+01	34.10	7.35E-03	6.65E-04
	22	583.63	2.32E+02	38.09	7.13E-03	6.46E-04
	23	609.79	2.43E+02	46.26	6.87E-03	6.20E-04
	24	715.23	3.63E+01	26.00	5.98E-03	5.24E-04
	25	728.07	6.51E+01	32.35	5.89E-03	5.14E-04
	26	770.07	4.01E+01	42.14	5.61E-03	4.79E-04
	27	784.91	2.52E+01	25.92	5.51E-03	4.67E-04
	28	795.53	3.03E+01	30.51	5.45E-03	4.58E-04
M	29	907.19	1.33E+01	8.66	4.87E-03	3.73E-04
m	30	911.78	1.55E+02	31.84	4.85E-03	3.72E-04
	31	934.21	3.40E+01	29.67	4.75E-03	3.68E-04
M	32	964.24	2.41E+01	14.42	4.62E-03	3.62E-04
m	33	969.29	9.41E+01	29.33	4.60E-03	3.61E-04
	34	1120.55	6.87E+01	31.88	4.08E-03	3.33E-04
	35	1237.70	2.49E+01	30.12	3.76E-03	3.09E-04
	36	1257.57	1.85E+01	17.41	3.71E-03	3.05E-04
	37	1378.42	2.60E+01	27.28	3.45E-03	2.82E-04
	38	1461.36	5.69E+02	50.71	3.29E-03	2.69E-04
	39	1510.25	1.72E+01	10.77	3.21E-03	2.62E-04
M	40	1588.48	7.38E+00	7.48	3.09E-03	2.50E-04
m	41	1593.54	2.38E+01	14.42	3.08E-03	2.49E-04
	42	1693.48	5.50E+00	7.94	2.94E-03	2.34E-04
	43	1728.42	2.36E+01	12.53	2.90E-03	2.29E-04
	44	1765.01	4.37E+01	17.66	2.86E-03	2.24E-04
	45	2010.02	1.08E+01	8.50	2.61E-03	2.13E-04
	46	2040.40	5.43E+00	6.34	2.59E-03	2.13E-04
	47	2105.33	1.58E+01	9.85	2.53E-03	2.13E-04
	48	2182.87	7.50E+00	6.95	2.48E-03	2.13E-04
	49	2206.19	9.93E+00	9.82	2.46E-03	2.13E-04
	50	2240.88	1.00E+01	6.32	2.44E-03	2.13E-04
	51	2447.78	7.27E+00	8.72	2.32E-03	2.13E-04
	52	2615.28	6.78E+01	17.33	2.24E-03	2.13E-04
	53	2630.91	8.00E+00	5.66	2.23E-03	2.13E-04

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

Analysis Report for 1606064-14

CP-5013 02-05

BACKGROUND SUBTRACT REPORT

Peak Analysis Performed on : 6/17/2016 8:17:30AM

Env. Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000038678.CNF

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
	1	16.76	9.34E+01	73.31			9.34E+01	7.33E+01
M	2	74.94	4.17E+02	92.51			4.17E+02	9.25E+01
m	3	77.63	6.93E+02	99.91	6.70E+00	3.28E+00	6.86E+02	1.00E+02
M	4	87.94	2.33E+02	75.74	1.07E+01	3.99E+00	2.23E+02	7.58E+01
m	5	92.79	2.95E+02	77.13	8.20E+01	2.30E+01	2.13E+02	8.05E+01
	6	129.61	9.56E+01	79.90			9.56E+01	7.99E+01
	7	186.49	2.08E+02	84.80	3.45E+01	5.92E+00	1.74E+02	8.50E+01
	8	209.98	7.53E+01	55.52			7.53E+01	5.55E+01
	9	217.23	5.93E+01	58.84			5.93E+01	5.88E+01
M	10	238.99	8.66E+02	72.53	1.33E+01	5.09E+00	8.52E+02	7.27E+01
m	11	242.05	1.66E+02	76.71			1.66E+02	7.67E+01
	12	269.75	9.63E+01	66.88			9.63E+01	6.69E+01
	13	277.31	6.16E+01	47.09			6.16E+01	4.71E+01
	14	295.63	1.91E+02	55.08	1.94E+00	4.39E+00	1.89E+02	5.53E+01
	15	300.28	5.15E+01	37.84			5.15E+01	3.78E+01
	16	338.72	1.55E+02	58.10			1.55E+02	5.81E+01
	17	352.36	3.91E+02	71.18	4.00E+00	3.58E+00	3.87E+02	7.13E+01
	18	462.69	9.33E+01	46.42			9.33E+01	4.64E+01
	19	510.84	1.51E+02	51.15	6.05E+01	4.93E+00	9.06E+01	5.14E+01
	20	518.83	2.53E+01	24.70			2.53E+01	2.47E+01
	21	563.85	5.59E+01	34.10			5.59E+01	3.41E+01
	22	583.63	2.32E+02	38.09	5.50E+00	3.61E+00	2.26E+02	3.83E+01
	23	609.79	2.43E+02	46.26	5.07E+00	3.83E+00	2.38E+02	4.64E+01
	24	715.23	3.63E+01	26.00			3.63E+01	2.60E+01
	25	728.07	6.51E+01	32.35			6.51E+01	3.24E+01
	26	770.07	4.01E+01	42.14			4.01E+01	4.21E+01
	27	784.91	2.52E+01	25.92			2.52E+01	2.59E+01
	28	795.53	3.03E+01	30.51			3.03E+01	3.05E+01
M	29	907.19	1.33E+01	8.66			1.33E+01	8.66E+00
m	30	911.78	1.55E+02	31.84			1.55E+02	3.18E+01
	31	934.21	3.40E+01	29.67			3.40E+01	2.97E+01
M	32	964.24	2.41E+01	14.42			2.41E+01	1.44E+01
m	33	969.29	9.41E+01	29.33			9.41E+01	2.93E+01
	34	1120.55	6.87E+01	31.88	1.09E+00	2.08E+00	6.76E+01	3.20E+01
	35	1237.70	2.49E+01	30.12			2.49E+01	3.01E+01
	36	1257.57	1.85E+01	17.41			1.85E+01	1.74E+01
	37	1378.42	2.60E+01	27.28			2.60E+01	2.73E+01
	38	1461.36	5.69E+02	50.71	4.33E+00	2.02E+00	5.65E+02	5.08E+01
	39	1510.25	1.72E+01	10.77			1.72E+01	1.08E+01
M	40	1588.48	7.38E+00	7.48			7.38E+00	7.48E+00
m	41	1593.54	2.38E+01	14.42			2.38E+01	1.44E+01
	42	1693.48	5.50E+00	7.94			5.50E+00	7.94E+00
	43	1728.42	2.36E+01	12.53			2.36E+01	1.25E+01
	44	1765.01	4.37E+01	17.66			4.37E+01	1.77E+01

Analysis Report for 1606064-14

CP-5013 02-05

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
45	2010.02	1.08E+01	8.50			1.08E+01	8.50E+00
46	2040.40	5.43E+00	6.34			5.43E+00	6.34E+00
47	2105.33	1.58E+01	9.85			1.58E+01	9.85E+00
48	2182.87	7.50E+00	6.95			7.50E+00	6.95E+00
49	2206.19	9.93E+00	9.82			9.93E+00	9.82E+00
50	2240.88	1.00E+01	6.32			1.00E+01	6.32E+00
51	2447.78	7.27E+00	8.72			7.27E+00	8.72E+00
52	2615.28	6.78E+01	17.33	2.52E+00	1.44E+00	6.52E+01	1.74E+01
53	2630.91	8.00E+00	5.66			8.00E+00	5.66E+00

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

AREA CORRECTION REPORT
REFERENCE PEAK / BKG. SUBTRACT

Peak Analysis Performed on : 6/17/2016 8:17:30AM

Ref. Peak Energy : 0.00 Reference Date :
Peak Ratio : 0.00 Uncertainty : 0.00
Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000038678.CNF

Corrected Area is: Original * Peak Ratio - Background

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
	1	16.76	9.34E+01	73.31			9.34E+01	7.33E+01
M	2	74.94	4.17E+02	92.51			4.17E+02	9.25E+01
m	3	77.63	6.93E+02	99.91	6.70E+00	3.28E+00	6.86E+02	1.00E+02
M	4	87.94	2.33E+02	75.74	1.07E+01	3.99E+00	2.23E+02	7.58E+01
m	5	92.79	2.95E+02	77.13	8.20E+01	2.30E+01	2.13E+02	8.05E+01
	6	129.61	9.56E+01	79.90			9.56E+01	7.99E+01
	7	186.49	2.08E+02	84.80	3.45E+01	5.92E+00	1.74E+02	8.50E+01
	8	209.98	7.53E+01	55.52			7.53E+01	5.55E+01
	9	217.23	5.93E+01	58.84			5.93E+01	5.88E+01
M	10	238.99	8.66E+02	72.53	1.33E+01	5.09E+00	8.52E+02	7.27E+01
m	11	242.05	1.66E+02	76.71			1.66E+02	7.67E+01
	12	269.75	9.63E+01	66.88			9.63E+01	6.69E+01
	13	277.31	6.16E+01	47.09			6.16E+01	4.71E+01
	14	295.63	1.91E+02	55.08	1.94E+00	4.39E+00	1.89E+02	5.53E+01
	15	300.28	5.15E+01	37.84			5.15E+01	3.78E+01
	16	338.72	1.55E+02	58.10			1.55E+02	5.81E+01
	17	352.36	3.91E+02	71.18	4.00E+00	3.58E+00	3.87E+02	7.13E+01
	18	462.69	9.33E+01	46.42			9.33E+01	4.64E+01
	19	510.84	1.51E+02	51.15	6.05E+01	4.93E+00	9.06E+01	5.14E+01

Analysis Report for 1606064-14

CP-5013 02-05

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
	20	518.83	2.53E+01	24.70			2.53E+01	2.47E+01
	21	563.85	5.59E+01	34.10			5.59E+01	3.41E+01
	22	583.63	2.32E+02	38.09	5.50E+00	3.61E+00	2.26E+02	3.83E+01
	23	609.79	2.43E+02	46.26	5.07E+00	3.83E+00	2.38E+02	4.64E+01
	24	715.23	3.63E+01	26.00			3.63E+01	2.60E+01
	25	728.07	6.51E+01	32.35			6.51E+01	3.24E+01
	26	770.07	4.01E+01	42.14			4.01E+01	4.21E+01
	27	784.91	2.52E+01	25.92			2.52E+01	2.59E+01
	28	795.53	3.03E+01	30.51			3.03E+01	3.05E+01
M	29	907.19	1.33E+01	8.66			1.33E+01	8.66E+00
m	30	911.78	1.55E+02	31.84			1.55E+02	3.18E+01
	31	934.21	3.40E+01	29.67			3.40E+01	2.97E+01
M	32	964.24	2.41E+01	14.42			2.41E+01	1.44E+01
m	33	969.29	9.41E+01	29.33			9.41E+01	2.93E+01
	34	1120.55	6.87E+01	31.88	1.09E+00	2.08E+00	6.76E+01	3.20E+01
	35	1237.70	2.49E+01	30.12			2.49E+01	3.01E+01
	36	1257.57	1.85E+01	17.41			1.85E+01	1.74E+01
	37	1378.42	2.60E+01	27.28			2.60E+01	2.73E+01
	38	1461.36	5.69E+02	50.71	4.33E+00	2.02E+00	5.65E+02	5.08E+01
	39	1510.25	1.72E+01	10.77			1.72E+01	1.08E+01
M	40	1588.48	7.38E+00	7.48			7.38E+00	7.48E+00
m	41	1593.54	2.38E+01	14.42			2.38E+01	1.44E+01
	42	1693.48	5.50E+00	7.94			5.50E+00	7.94E+00
	43	1728.42	2.36E+01	12.53			2.36E+01	1.25E+01
	44	1765.01	4.37E+01	17.66			4.37E+01	1.77E+01
	45	2010.02	1.08E+01	8.50			1.08E+01	8.50E+00
	46	2040.40	5.43E+00	6.34			5.43E+00	6.34E+00
	47	2105.33	1.58E+01	9.85			1.58E+01	9.85E+00
	48	2182.87	7.50E+00	6.95			7.50E+00	6.95E+00
	49	2206.19	9.93E+00	9.82			9.93E+00	9.82E+00
	50	2240.88	1.00E+01	6.32			1.00E+01	6.32E+00
	51	2447.78	7.27E+00	8.72			7.27E+00	8.72E+00
	52	2615.28	6.78E+01	17.33	2.52E+00	1.44E+00	6.52E+01	1.74E+01
	53	2630.91	8.00E+00	5.66			8.00E+00	5.66E+00

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

NUCLIDE IDENTIFICATION REPORT

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

IDENTIFIED NUCLIDES

Analysis Report for 1606064-14

CP-5013 02-05

Nuclide Name	Id Confidence	Energy (keV)		Yield(%)	Activity (pCi/grams)	Activity Uncertainty
K-40	0.953	1460.81	*	10.67	1.89E+01	2.33E+00
GA-67	0.879	93.31	*	35.70	1.87E+00	3.09E+00
		208.95		2.24		
		300.22	*	16.00	1.95E+00	3.45E+00
NB-93M	0.994	16.57	*	9.43	6.27E+01	5.35E+02
CD-109	0.999	88.03	*	3.72	2.93E+00	1.06E+00
SN-126	0.978	87.57	*	37.00	2.90E-01	1.03E-01
TL-208	0.842	583.14	*	30.22	1.24E+00	2.37E-01
		860.37		4.48		
		2614.66	*	35.85	9.57E-01	2.71E-01
BI-212	0.671	727.17	*	11.80	1.10E+00	5.57E-01
		1620.62		2.75		
PB-212	0.980	238.63	*	44.60	1.48E+00	1.71E-01
		300.09	*	3.41	1.41E+00	1.04E+00
BI-214	0.903	609.31	*	46.30	8.81E-01	1.89E-01
		1120.29	*	15.10	1.29E+00	6.20E-01
		1764.49	*	15.80	1.14E+00	4.69E-01
		2204.22		4.98		
PB-214	0.970	295.21	*	19.19	9.04E-01	2.74E-01
		351.92	*	37.19	1.11E+00	2.23E-01
RA-226	0.987	186.21	*	3.28	3.42E+00	6.48E+00
AC-228	0.954	338.32	*	11.40	1.41E+00	5.37E-01
		911.07	*	27.70	1.36E+00	2.98E-01
		969.11	*	16.60	1.45E+00	4.66E-01
AM-243	0.989	74.67	*	66.00	3.15E-01	7.52E-02
CM-243	0.363	209.75	*	3.29	1.61E+00	1.19E+00
		228.14		10.60		
		277.60	*	14.00	3.84E-01	2.95E-01

* = Energy line found in the spectrum.
\- = Manually added nuclide.
? = Manually edited nuclide.
Energy Tolerance : 1.000 keV
Nuclide confidence index threshold = 0.30
Errors quoted at 2.000sigma

UNIDENTIFIED PEAKS

Peak Locate Performed on : 6/17/2016 8:17:30AM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096

	Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
m	3	77.63	1.90625E-01	7.28		

Analysis Report for 1606064-14

CP-5013 02-05

	Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
	6	129.61	2.65455E-02	41.80		
	9	217.23	1.64843E-02	49.57		
m	11	242.05	4.60421E-02	23.14		
	12	269.75	2.67374E-02	34.74		
	18	462.69	2.59217E-02	24.87	Tol.	SB-125
	19	510.84	2.51568E-02	28.37	Sum	
	20	518.83	7.03216E-03	48.78		
	21	563.85	1.55373E-02	30.48	Tol.	CS-134
	24	715.23	1.00857E-02	35.80		
	26	770.07	1.11514E-02	52.49	Sum	
	27	784.91	6.99846E-03	51.45		
	28	795.53	8.41880E-03	50.34	Sum	
M	29	907.19	3.69284E-03	32.57		
	31	934.21	9.45767E-03	43.58		
M	32	964.24	6.68100E-03	29.98	Tol.	EU-152
	35	1237.70	6.92771E-03	60.38	Tol.	CO-56
	36	1257.57	5.13177E-03	47.11		
	37	1378.42	7.22222E-03	52.45		
	39	1510.25	4.77778E-03	31.31		
M	40	1588.48	2.04980E-03	50.70		
m	41	1593.54	6.61967E-03	30.26	D-Esc	
	42	1693.48	1.52778E-03	72.16		
	43	1728.42	6.54321E-03	26.60		
	45	2010.02	2.99145E-03	39.46		
	46	2040.40	1.50794E-03	58.43		
	47	2105.33	4.37500E-03	31.27		
	48	2182.87	2.08333E-03	46.31		
	49	2206.19	2.75794E-03	49.47		
	50	2240.88	2.77778E-03	31.62	Sum	
	51	2447.78	2.02020E-03	59.93		
	53	2630.91	2.22222E-03	35.36		

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

NUCLIDE IDENTIFICATION REPORT

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

IDENTIFIED NUCLIDES

Analysis Report for 1606064-14

CP-5013 02-05

Nuclide Name	Id Confidence	Energy (keV)		Yield(%)	Activity (pCi/grams)	Activity Uncertainty
K-40	0.95	1460.81	*	10.67	1.89E+01	2.33E+00
GA-67	0.87	93.31	*	35.70	1.87E+00	3.09E+00
		208.95		2.24		
		300.22	*	16.00	1.95E+00	3.45E+00
NB-93M	0.99	16.57	*	9.43	6.27E+01	5.35E+02
CD-109	0.99	88.03	*	3.72	2.93E+00	1.06E+00
SN-126	0.97	87.57	*	37.00	2.90E-01	1.03E-01
TL-208	0.84	583.14	*	30.22	1.24E+00	2.37E-01
		860.37		4.48		
		2614.66	*	35.85	9.57E-01	2.71E-01
BI-212	0.67	727.17	*	11.80	1.10E+00	5.57E-01
		1620.62		2.75		
PB-212	0.98	238.63	*	44.60	1.48E+00	1.71E-01
		300.09	*	3.41	1.41E+00	1.04E+00
BI-214	0.90	609.31	*	46.30	8.81E-01	1.89E-01
		1120.29	*	15.10	1.29E+00	6.20E-01
		1764.49	*	15.80	1.14E+00	4.69E-01
		2204.22		4.98		
PB-214	0.97	295.21	*	19.19	9.04E-01	2.74E-01
		351.92	*	37.19	1.11E+00	2.23E-01
RA-226	0.98	186.21	*	3.28	3.42E+00	6.48E+00
AC-228	0.95	338.32	*	11.40	1.41E+00	5.37E-01
		911.07	*	27.70	1.36E+00	2.98E-01
		969.11	*	16.60	1.45E+00	4.66E-01
AM-243	0.98	74.67	*	66.00	3.15E-01	7.52E-02
CM-243	0.36	209.75	*	3.29	1.61E+00	1.19E+00
		228.14		10.60		
		277.60	*	14.00	3.84E-01	2.95E-01

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

INTERFERENCE CORRECTED REPORT

Analysis Report for 1606064-14

CP-5013 02-05

	Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
	K-40	0.953	1.89E+01	2.33E+00	
	GA-67	0.879	1.48E+00	1.81E+00	
	NB-93M	0.994	6.27E+01	5.35E+02	
?	CD-109	0.999	2.93E+00	1.06E+00	
?	SN-126	0.978	2.90E-01	1.03E-01	
	TL-208	0.842	1.11E+00	1.78E-01	
	BI-212	0.671	1.10E+00	5.57E-01	
	PB-212	0.980	1.45E+00	1.69E-01	
	BI-214	0.903	9.45E-01	1.69E-01	
	PB-214	0.970	1.03E+00	1.73E-01	
	RA-226	0.987	3.42E+00	6.48E+00	
	AC-228	0.954	1.39E+00	2.27E-01	
	AM-243	0.989	3.15E-01	7.52E-02	
	CM-243	0.363	4.55E-01	2.86E-01	

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

Errors quoted at 2.000sigma

Analysis Report for 1606064-14

CP-5013 02-05

UNIDENTIFIED PEAKS

Peak Locate Performed on : 6/17/2016 8:17:30AM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096

	Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
m	3	77.63	1.90625E-01	7.28		
	6	129.61	2.65455E-02	41.80		
	9	217.23	1.64843E-02	49.57		
m	11	242.05	4.60421E-02	23.14		
	12	269.75	2.67374E-02	34.74		
	18	462.69	2.59217E-02	24.87	Tol.	SB-125
	19	510.84	2.51568E-02	28.37	Sum	
	20	518.83	7.03216E-03	48.78		
	21	563.85	1.55373E-02	30.48	Tol.	CS-134
	24	715.23	1.00857E-02	35.80		
	26	770.07	1.11514E-02	52.49	Sum	
	27	784.91	6.99846E-03	51.45		
	28	795.53	8.41880E-03	50.34	Sum	
M	29	907.19	3.69284E-03	32.57		
	31	934.21	9.45767E-03	43.58		
M	32	964.24	6.68100E-03	29.98	Tol.	EU-152
	35	1237.70	6.92771E-03	60.38	Tol.	CO-56
	36	1257.57	5.13177E-03	47.11		
	37	1378.42	7.22222E-03	52.45		
	39	1510.25	4.77778E-03	31.31		
M	40	1588.48	2.04980E-03	50.70		
m	41	1593.54	6.61967E-03	30.26	D-Esc	
	42	1693.48	1.52778E-03	72.16		
	43	1728.42	6.54321E-03	26.60		
	45	2010.02	2.99145E-03	39.46		
	46	2040.40	1.50794E-03	58.43		
	47	2105.33	4.37500E-03	31.27		
	48	2182.87	2.08333E-03	46.31		
	49	2206.19	2.75794E-03	49.47		
	50	2240.88	2.77778E-03	31.62	Sum	
	51	2447.78	2.02020E-03	59.93		
	53	2630.91	2.22222E-03	35.36		

Analysis Report for 1606064-14

CP-5013 02-05

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

NUCLIDE MDA REPORT

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

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	BE-7	477.59		10.42	1.28E-01	8.25E-01	8.25E-01
+	NA-22	1274.54		99.94	2.38E-02	1.03E-01	1.03E-01
+	NA-24	1368.53		99.99	2.55E+01	8.77E+02	1.37E+03
		2754.09		99.86	3.15E+01		8.77E+02
+	AL-26	1808.65		99.76	6.73E-03	7.32E-02	7.32E-02
+	K-40	1460.81	*	10.67	1.89E+01	1.07E+00	1.07E+00
+	@ AR-41	1293.64		99.16	1.00E+26	1.00E+26	1.00E+26
+	TI-44	67.88		94.40	-3.66E-02	6.46E-02	6.46E-02
		78.34		96.00	2.44E-01		8.65E-02
+	SC-46	889.25		99.98	5.40E-03	8.31E-02	8.31E-02
		1120.51		99.99	1.91E-01		1.49E-01
+	V-48	983.52		99.98	-6.16E-02	1.02E-01	1.02E-01
		1312.10		97.50	1.18E-01		1.81E-01
+	CR-51	320.08		9.83	1.40E-01	7.96E-01	7.96E-01
+	MN-54	834.83		99.97	-3.56E-02	8.25E-02	8.25E-02
+	CO-56	846.75		99.96	3.56E-02	8.86E-02	8.86E-02
		1037.75		14.03	-9.78E-02		5.61E-01
		1238.25		67.00	1.01E-01		2.02E-01
		1771.40		15.51	8.64E-02		5.42E-01
		2598.48		16.90	-6.70E-02		2.47E-01
+	CO-57	122.06		85.51	1.98E-02	5.59E-02	5.59E-02
		136.48		10.60	6.24E-02		4.65E-01
+	CO-58	810.76		99.40	-7.71E-02	8.00E-02	8.00E-02
+	FE-59	1099.22		56.50	7.90E-02	1.98E-01	1.98E-01
		1291.56		43.20	1.04E-02		2.70E-01
+	CO-60	1173.22		100.00	8.42E-02	1.02E-01	1.11E-01
		1332.49		100.00	1.49E-02		1.02E-01
+	ZN-65	1115.52		50.75	-4.47E-03	1.99E-01	1.99E-01
+	GA-67	93.31	*	35.70	1.87E+00	2.28E+00	2.42E+00
		208.95		2.24	1.16E+00		2.00E+01
		300.22	*	16.00	1.95E+00		2.28E+00
+	SE-75	121.11		16.70	1.90E-02	8.45E-02	2.96E-01

Analysis Report for 1606064-14

CP-5013 02-05

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	SE-75	136.00		59.20	-1.55E-02	8.45E-02	8.45E-02
		264.65		59.80	-5.59E-03		1.13E-01
		279.53		25.20	1.07E-02		2.66E-01
		400.65		11.40	-9.57E-02		6.24E-01
+	RB-82	776.52		13.00	7.15E-02	7.88E-01	7.88E-01
+	RB-83	520.41		46.00	-3.80E-03	1.67E-01	1.67E-01
		529.64		30.30	-2.04E-02		2.31E-01
		552.65		16.40	7.35E-03		4.80E-01
+	KR-85	513.99		0.43	1.15E+01	2.17E+01	2.17E+01
+	SR-85	513.99		99.27	5.53E-02	1.04E-01	1.04E-01
+	Y-88	898.02		93.40	3.96E-02	6.78E-02	9.22E-02
		1836.01		99.38	2.41E-02		6.78E-02
+	NB-93M	16.57	*	9.43	6.27E+01	7.98E+01	7.98E+01
+	NB-94	702.63		100.00	5.57E-03	8.00E-02	8.40E-02
		871.10		100.00	3.08E-02		8.00E-02
+	NB-95	765.79		99.81	1.41E-02	1.18E-01	1.18E-01
+	NB-95M	235.69		25.00	5.71E+00	2.37E+00	2.37E+00
+	ZR-95	724.18		43.70	5.42E-02	1.61E-01	2.32E-01
		756.72		55.30	1.48E-02		1.61E-01
+	MO-99	181.06		6.20	-1.10E+00	5.99E+00	7.13E+00
		739.58		12.80	1.31E+00		5.99E+00
		778.00		4.50	1.73E+00		1.56E+01
+	RU-103	497.08		89.00	6.39E-03	8.96E-02	8.96E-02
+	RU-106	621.84		9.80	-2.26E-01	7.88E-01	7.88E-01
+	AG-108M	433.93		89.90	-2.12E-02	7.40E-02	7.40E-02
		614.37		90.40	1.78E-02		9.84E-02
		722.95		90.50	2.26E-02		8.97E-02
+	CD-109	88.03	*	3.72	2.93E+00	3.57E+00	3.57E+00
+	AG-110M	657.75		93.14	9.72E-03	8.45E-02	8.45E-02
		677.61		10.53	-4.16E-01		7.20E-01
		706.67		16.46	5.12E-02		4.99E-01
		763.93		21.98	4.69E-02		4.16E-01
		884.67		71.63	3.54E-02		1.26E-01
		1384.27		23.94	3.08E-02		3.88E-01
+	CD-113M	263.70		0.02	-4.07E+01	2.78E+02	2.78E+02
+	SN-113	255.12		1.93	5.50E-02	1.06E-01	3.26E+00
		391.69		64.90	-2.87E-02		1.06E-01
+	TE123M	159.00		84.10	-3.05E-02	6.04E-02	6.04E-02
+	SB-124	602.71		97.87	2.50E-02	9.09E-02	9.09E-02
		645.85		7.26	4.35E-02		1.17E+00
		722.78		11.10	2.04E-01		8.09E-01
		1691.02		49.00	-4.51E-03		1.76E-01
+	I-125	35.49		6.49	2.81E-01	2.17E+00	2.17E+00
+	SB-125	176.33		6.89	1.64E-01	2.46E-01	7.16E-01
		427.89		29.33	1.73E-01		2.46E-01
		463.38		10.35	9.21E-01		8.29E-01
		600.56		17.80	-1.48E-01		4.39E-01
		635.90		11.32	3.56E-01		7.05E-01

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	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	SB-126	414.70		83.30	-4.06E-02	1.24E-01	1.24E-01
		666.33		99.60	5.99E-03		1.32E-01
		695.00		99.60	-1.11E-02		1.31E-01
		720.50		53.80	6.20E-02		2.37E-01
+	SN-126	87.57	*	37.00	2.90E-01	3.54E-01	3.54E-01
+	SB-127	473.00		25.00	5.69E-01	1.10E+00	1.42E+00
		685.20		35.70	-3.14E-01		1.10E+00
		783.80		14.70	1.95E+00		2.93E+00
+	I-129	29.78		57.00	-8.66E-03	3.86E-01	3.86E-01
		33.60		13.20	3.82E-02		1.13E+00
		39.58		7.52	-1.64E-01		1.32E+00
+	I-131	284.30		6.05	6.84E-01	1.64E-01	2.14E+00
		364.48		81.20	-1.01E-01		1.64E-01
		636.97		7.26	1.45E+00		2.38E+00
		722.89		1.80	2.43E+00		9.63E+00
+	TE-132	49.72		13.10	-5.92E+00	4.51E-01	3.43E+00
		228.16		88.00	-9.33E-02		4.51E-01
+	BA-133	81.00		33.00	-6.50E-01	1.58E-01	1.69E-01
		302.84		17.80	2.19E-02		3.78E-01
		356.01		60.00	4.55E-03		1.58E-01
+	I-133	529.87		86.30	-7.65E+00	8.67E+01	8.67E+01
+	XE-133	81.00		38.00	-1.81E+00	4.70E-01	4.70E-01
+	CS-134	563.23		8.38	5.78E-01	8.53E-02	9.21E-01
		569.32		15.43	-9.04E-02		4.51E-01
		604.70		97.60	7.72E-03		8.53E-02
		795.84		85.40	4.87E-02		1.10E-01
		801.93		8.73	-2.56E-01		8.94E-01
+	CS-135	268.24		16.00	2.22E-01	4.36E-01	4.36E-01
+	I-135	1131.51		22.50	-6.20E+08	1.50E+09	1.79E+09
		1260.41		28.60	1.42E+08		1.50E+09
		1678.03		9.54	-1.77E+08		2.49E+09
+	CS-136	153.22		7.46	3.43E-01	1.38E-01	1.11E+00
		163.89		4.61	3.55E-01		1.76E+00
		176.55		13.56	1.75E-01		5.78E-01
		273.65		12.66	-3.31E-01		8.58E-01
		340.57		48.50	5.62E-01		2.91E-01
		818.50		99.70	7.95E-02		1.38E-01
		1048.07		79.60	7.10E-02		1.91E-01
		1235.34		19.70	-5.95E-02		9.71E-01
+	CS-137	661.65		85.12	-9.83E-03	9.31E-02	9.31E-02
+	LA-138	788.74		34.00	3.52E-02	1.20E-01	2.41E-01
		1435.80		66.00	-2.41E-02		1.20E-01
+	CE-139	165.85		80.35	2.51E-03	6.69E-02	6.69E-02
+	BA-140	162.64		6.70	1.02E-01	4.34E-01	1.22E+00
		304.84		4.50	-1.29E-01		2.11E+00
		423.70		3.20	3.93E-01		3.39E+00
		437.55		2.00	1.66E+00		5.64E+00
		537.32		25.00	-7.12E-02		4.34E-01
+	LA-140	328.77		20.50	3.53E-01	1.74E-01	5.55E-01

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	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	LA-140	487.03	45.50	4.48E-02	1.74E-01	2.53E-01
		815.85	23.50	-1.12E-01		5.54E-01
		1596.49	95.49	2.78E-02		1.74E-01
+	CE-141	145.44	48.40	-5.85E-03	1.24E-01	1.24E-01
+	CE-143	57.36	11.80	2.27E+01	1.76E+01	4.70E+01
		293.26	42.00	9.97E-01		1.76E+01
		664.55	5.20	2.98E+01		1.34E+02
+	CE-144	133.54	10.80	-5.49E-02	4.43E-01	4.43E-01
+	PM-144	476.78	42.00	7.38E-02	8.30E-02	1.85E-01
		618.01	98.60	3.38E-02		8.43E-02
		696.49	99.49	2.36E-02		8.30E-02
+	PM-145	36.85	21.70	-2.79E-01	2.82E-01	5.31E-01
		37.36	39.70	-8.19E-02		2.82E-01
		42.30	15.10	-2.06E-01		5.73E-01
		72.40	2.31	-4.40E+00		3.23E+00
+	PM-146	453.90	39.94	1.14E-02	1.71E-01	1.71E-01
		735.90	14.01	-1.73E-01		5.60E-01
		747.13	13.10	-8.59E-02		5.93E-01
+	ND-147	91.11	28.90	-3.35E-01	3.92E-01	3.92E-01
		531.02	13.10	4.06E-01		9.02E-01
+	PM-149	285.90	3.10	9.03E+00	3.20E+01	3.20E+01
+	EU-152	121.78	20.50	8.09E-02	2.28E-01	2.28E-01
		244.69	5.40	-1.45E-01		1.33E+00
		344.27	19.13	-2.44E-02		3.33E-01
		778.89	9.20	9.24E-02		7.91E-01
		964.01	10.40	-1.66E+00		9.27E-01
		1085.78	7.22	-5.56E-02		1.15E+00
		1112.02	9.60	3.74E-01		1.07E+00
		1407.95	14.94	6.99E-02		5.60E-01
+	GD-153	97.43	31.30	6.47E-02	1.59E-01	1.59E-01
		103.18	22.20	-1.37E-01		2.15E-01
+	EU-154	123.07	40.50	1.71E-03	1.14E-01	1.14E-01
		723.30	19.70	1.04E-01		4.13E-01
		873.19	11.50	-2.08E-01		6.55E-01
		996.32	10.30	-5.18E-01		8.18E-01
		1004.76	17.90	-8.64E-02		4.58E-01
		1274.45	35.50	6.68E-02		2.88E-01
+	EU-155	86.50	30.90	2.24E-01	2.14E-01	2.14E-01
		105.30	20.70	1.40E-01		2.37E-01
+	EU-156	811.77	10.40	-2.78E-01	1.11E+00	1.11E+00
		1153.47	7.20	4.41E-01		2.06E+00
		1230.71	8.90	7.96E-01		1.93E+00
+	HO-166M	184.41	72.60	1.43E-01	9.02E-02	9.02E-02
		280.45	29.60	1.30E-02		2.15E-01
		410.94	11.10	2.21E-01		6.22E-01
		711.69	54.10	-3.41E-02		1.44E-01
+	TM-171	66.72	0.14	-6.99E+01	4.43E+01	4.43E+01
+	HF-172	81.75	4.52	-5.25E+00	4.09E-01	1.25E+00
		125.81	11.30	6.37E-03		4.09E-01

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	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	LU-172	181.53		20.60	4.23E-02	3.54E-01	5.89E-01
		810.06		16.63	-6.47E-01		1.11E+00
		912.12		15.25	5.17E+00		2.60E+00
		1093.66		62.50	-1.71E-01		3.54E-01
+	LU-173	100.72		5.24	-3.40E-01	3.26E-01	9.03E-01
		272.11		21.20	7.89E-02		3.26E-01
+	HF-175	343.40		84.00	-6.04E-03	8.89E-02	8.89E-02
+	LU-176	88.34		13.30	1.19E-01	6.23E-02	5.03E-01
		201.83		86.00	1.56E-02		7.52E-02
		306.78		94.00	-1.82E-02		6.23E-02
+	TA-182	67.75		41.20	-8.86E-02	1.56E-01	1.56E-01
		1121.30		34.90	5.23E-01		4.18E-01
		1189.05		16.23	1.84E-01		7.09E-01
		1221.41		26.98	1.38E-01		4.55E-01
		1231.02		11.44	3.99E-01		1.07E+00
+	IR-192	308.46		29.68	-8.40E-02	1.51E-01	2.18E-01
		468.07		48.10	4.97E-03		1.51E-01
+	HG-203	279.19		77.30	4.71E-02	9.68E-02	9.68E-02
+	BI-207	569.67		97.72	-1.45E-03	7.16E-02	7.16E-02
		1063.62		74.90	2.54E-02		1.17E-01
+	TL-208	583.14	*	30.22	1.24E+00	1.95E-01	2.27E-01
		860.37		4.48	3.83E-01		1.98E+00
		2614.66	*	35.85	9.57E-01		1.95E-01
+	BI-210M	262.00		45.00	-4.07E-02	1.38E-01	1.38E-01
		300.00		23.00	-8.76E-01		3.07E-01
+	PB-210	46.50		4.25	2.65E+00	1.96E+00	1.96E+00
+	PB-211	404.84		2.90	-1.10E+00	2.34E+00	2.34E+00
		831.96		2.90	-1.40E+00		2.68E+00
+	BI-212	727.17	*	11.80	1.10E+00	8.28E-01	8.28E-01
		1620.62		2.75	-3.52E-01		2.35E+00
+	PB-212	238.63	*	44.60	1.48E+00	2.69E-01	2.69E-01
		300.09	*	3.41	1.41E+00		1.65E+00
+	BI-214	609.31	*	46.30	8.81E-01	2.21E-01	2.21E-01
		1120.29	*	15.10	1.29E+00		9.14E-01
		1764.49	*	15.80	1.14E+00		5.73E-01
		2204.22		4.98	1.25E+00		2.05E+00
+	PB-214	295.21	*	19.19	9.04E-01	2.88E-01	3.91E-01
		351.92	*	37.19	1.11E+00		2.88E-01
+	RN-219	401.80		6.50	9.10E-02	1.06E+00	1.06E+00
+	RA-223	323.87		3.88	-1.28E+00	1.64E+00	1.64E+00
+	RA-224	240.98		3.95	1.99E+01	3.32E+00	3.32E+00
+	RA-225	40.00		31.00	-5.88E-02	4.71E-01	4.71E-01
+	RA-226	186.21	*	3.28	3.42E+00	2.67E+00	2.67E+00
+	TH-227	50.10		8.40	-1.40E+00	8.13E-01	8.13E-01
		236.00		11.50	2.29E+00		9.52E-01
		256.20		6.30	2.61E-01		9.60E-01
+	AC-228	338.32	*	11.40	1.41E+00	4.77E-01	8.05E-01
		911.07	*	27.70	1.36E+00		4.77E-01

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	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	AC-228	969.11	*	16.60	1.45E+00	4.77E-01	8.08E-01
+	TH-230	48.44		16.90	3.62E-01	4.60E-01	4.60E-01
		62.85		4.60	1.19E+00		1.50E+00
		67.67		0.37	-9.36E+00		1.65E+01
+	PA-231	283.67		1.60	1.21E+00	2.92E+00	3.79E+00
		302.67		2.30	1.69E-01		2.92E+00
+	TH-231	25.64		14.70	-2.19E+00	8.98E-01	2.76E+00
		84.21		6.40	-1.62E+00		8.98E-01
+	PA-233	311.98		38.60	1.62E-01	2.09E-01	2.09E-01
+	PA-234	131.20		20.40	1.37E-01	2.45E-01	2.45E-01
		733.99		8.80	-6.20E-02		9.08E-01
		946.00		12.00	4.88E-02		7.37E-01
+	PA-234M	1001.03		0.92	4.60E+00	1.04E+01	1.04E+01
+	TH-234	63.29		3.80	2.07E+00	1.82E+00	1.82E+00
+	U-235	143.76		10.50	1.55E-01	4.82E-01	4.82E-01
		163.35		4.70	2.18E-01		1.08E+00
		205.31		4.70	-1.16E-01		1.36E+00
+	NP-237	86.50		12.60	5.47E-01	5.22E-01	5.22E-01
+	NP-239	106.10		22.70	1.30E+00	2.89E+00	2.89E+00
		228.18		10.70	-1.58E+00		7.61E+00
		277.60		14.10	2.44E+00		6.18E+00
+	AM-241	59.54		35.90	-1.04E-01	1.83E-01	1.83E-01
+	AM-243	74.67	*	66.00	3.15E-01	1.92E-01	1.92E-01
+	CM-243	209.75	*	3.29	1.61E+00	4.72E-01	1.91E+00
		228.14		10.60	-1.19E-01		5.75E-01
		277.60	*	14.00	3.84E-01		4.72E-01

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

NUCLIDE MDA REPORT

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

Analysis Report for 1606064-14

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	Nuclide Name	Energy (keV)		Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
	BE-7	477.59		10.42	8.25E-01	8.25E-01	1.28E-01	3.92E-01
	NA-22	1274.54		99.94	1.03E-01	1.03E-01	2.38E-02	4.70E-02
	NA-24	1368.53		99.99	1.37E+03	8.77E+02	2.55E+01	6.03E+02
		2754.09		99.86	8.77E+02		3.15E+01	3.11E+02
	AL-26	1808.65		99.76	7.32E-02	7.32E-02	6.73E-03	3.09E-02
+	K-40	1460.81	*	10.67	1.07E+00	1.07E+00	1.89E+01	4.91E-01
@	AR-41	1293.64		99.16	1.00E+26	1.00E+26	1.00E+26	1.00E+20
	TI-44	67.88		94.40	6.46E-02	6.46E-02	-3.66E-02	3.15E-02
		78.34		96.00	8.65E-02		2.44E-01	4.26E-02
	SC-46	889.25		99.98	8.31E-02	8.31E-02	5.40E-03	3.81E-02
		1120.51		99.99	1.49E-01		1.91E-01	7.05E-02
	V-48	983.52		99.98	1.02E-01	1.02E-01	-6.16E-02	4.59E-02
		1312.10		97.50	1.81E-01		1.18E-01	8.37E-02
	CR-51	320.08		9.83	7.96E-01	7.96E-01	1.40E-01	3.81E-01
	MN-54	834.83		99.97	8.25E-02	8.25E-02	-3.56E-02	3.82E-02
	CO-56	846.75		99.96	8.86E-02	8.86E-02	3.56E-02	4.09E-02
		1037.75		14.03	5.61E-01		-9.78E-02	2.52E-01
		1238.25		67.00	2.02E-01		1.01E-01	9.41E-02
		1771.40		15.51	5.42E-01		8.64E-02	2.32E-01
		2598.48		16.90	2.47E-01		-6.70E-02	7.80E-02
	CO-57	122.06		85.51	5.59E-02	5.59E-02	1.98E-02	2.71E-02
		136.48		10.60	4.65E-01		6.24E-02	2.26E-01
	CO-58	810.76		99.40	8.00E-02	8.00E-02	-7.71E-02	3.67E-02
	FE-59	1099.22		56.50	1.98E-01	1.98E-01	7.90E-02	9.10E-02
		1291.56		43.20	2.70E-01		1.04E-02	1.24E-01
	CO-60	1173.22		100.00	1.11E-01	1.02E-01	8.42E-02	5.15E-02
		1332.49		100.00	1.02E-01		1.49E-02	4.66E-02
	ZN-65	1115.52		50.75	1.99E-01	1.99E-01	-4.47E-03	9.18E-02
+	GA-67	93.31	*	35.70	2.42E+00	2.28E+00	1.87E+00	1.20E+00
		208.95		2.24	2.00E+01		1.16E+00	9.71E+00
		300.22	*	16.00	2.28E+00		1.95E+00	1.09E+00
	SE-75	121.11		16.70	2.96E-01	8.45E-02	1.90E-02	1.44E-01
		136.00		59.20	8.45E-02		-1.55E-02	4.09E-02
		264.65		59.80	1.13E-01		-5.59E-03	5.44E-02
		279.53		25.20	2.66E-01		1.07E-02	1.28E-01
		400.65		11.40	6.24E-01		-9.57E-02	2.97E-01
	RB-82	776.52		13.00	7.88E-01	7.88E-01	7.15E-02	3.66E-01
	RB-83	520.41		46.00	1.67E-01	1.67E-01	-3.80E-03	7.86E-02
		529.64		30.30	2.31E-01		-2.04E-02	1.08E-01
		552.65		16.40	4.80E-01		7.35E-03	2.26E-01
	KR-85	513.99		0.43	2.17E+01	2.17E+01	1.15E+01	1.04E+01
	SR-85	513.99		99.27	1.04E-01	1.04E-01	5.53E-02	4.98E-02
	Y-88	898.02		93.40	9.22E-02	6.78E-02	3.96E-02	4.24E-02
		1836.01		99.38	6.78E-02		2.41E-02	2.78E-02
+	NB-93M	16.57	*	9.43	7.98E+01	7.98E+01	6.27E+01	3.90E+01
	NB-94	702.63		100.00	8.40E-02	8.00E-02	5.57E-03	3.93E-02
		871.10		100.00	8.00E-02		3.08E-02	3.69E-02
	NB-95	765.79		99.81	1.18E-01	1.18E-01	1.41E-02	5.56E-02
	NB-95M	235.69		25.00	2.37E+00	2.37E+00	5.71E+00	1.16E+00
	ZR-95	724.18		43.70	2.32E-01	1.61E-01	5.42E-02	1.09E-01
		756.72		55.30	1.61E-01		1.48E-02	7.48E-02

Analysis Report for 1606064-14

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	Nuclide Name	Energy (keV)		Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
	MO-99	181.06		6.20	7.13E+00	5.99E+00	-1.10E+00	3.44E+00
		739.58		12.80	5.99E+00		1.31E+00	2.80E+00
		778.00		4.50	1.56E+01		1.73E+00	7.20E+00
	RU-103	497.08		89.00	8.96E-02	8.96E-02	6.39E-03	4.22E-02
	RU-106	621.84		9.80	7.88E-01	7.88E-01	-2.26E-01	3.69E-01
	AG-108M	433.93		89.90	7.40E-02	7.40E-02	-2.12E-02	3.51E-02
		614.37		90.40	9.84E-02		1.78E-02	4.66E-02
		722.95		90.50	8.97E-02		2.26E-02	4.19E-02
+	CD-109	88.03	*	3.72	3.57E+00	3.57E+00	2.93E+00	1.77E+00
	AG-110M	657.75		93.14	8.45E-02	8.45E-02	9.72E-03	3.95E-02
		677.61		10.53	7.20E-01		-4.16E-01	3.35E-01
		706.67		16.46	4.99E-01		5.12E-02	2.33E-01
		763.93		21.98	4.16E-01		4.69E-02	1.95E-01
		884.67		71.63	1.26E-01		3.54E-02	5.84E-02
		1384.27		23.94	3.88E-01		3.08E-02	1.74E-01
	CD-113M	263.70		0.02	2.78E+02	2.78E+02	-4.07E+01	1.34E+02
	SN-113	255.12		1.93	3.26E+00	1.06E-01	5.50E-02	1.57E+00
		391.69		64.90	1.06E-01		-2.87E-02	5.07E-02
	TE123M	159.00		84.10	6.04E-02	6.04E-02	-3.05E-02	2.92E-02
	SB-124	602.71		97.87	9.09E-02	9.09E-02	2.50E-02	4.28E-02
		645.85		7.26	1.17E+00		4.35E-02	5.46E-01
		722.78		11.10	8.09E-01		2.04E-01	3.78E-01
		1691.02		49.00	1.76E-01		-4.51E-03	7.57E-02
	I-125	35.49		6.49	2.17E+00	2.17E+00	2.81E-01	1.05E+00
	SB-125	176.33		6.89	7.16E-01	2.46E-01	1.64E-01	3.46E-01
		427.89		29.33	2.46E-01		1.73E-01	1.17E-01
		463.38		10.35	8.29E-01		9.21E-01	3.97E-01
		600.56		17.80	4.39E-01		-1.48E-01	2.06E-01
		635.90		11.32	7.05E-01		3.56E-01	3.31E-01
	SB-126	414.70		83.30	1.24E-01	1.24E-01	-4.06E-02	5.88E-02
		666.33		99.60	1.32E-01		5.99E-03	6.17E-02
		695.00		99.60	1.31E-01		-1.11E-02	6.15E-02
		720.50		53.80	2.37E-01		6.20E-02	1.10E-01
+	SN-126	87.57	*	37.00	3.54E-01	3.54E-01	2.90E-01	1.75E-01
	SB-127	473.00		25.00	1.42E+00	1.10E+00	5.69E-01	6.73E-01
		685.20		35.70	1.10E+00		-3.14E-01	5.13E-01
		783.80		14.70	2.93E+00		1.95E+00	1.37E+00
	I-129	29.78		57.00	3.86E-01	3.86E-01	-8.66E-03	1.87E-01
		33.60		13.20	1.13E+00		3.82E-02	5.50E-01
		39.58		7.52	1.32E+00		-1.64E-01	6.38E-01
	I-131	284.30		6.05	2.14E+00	1.64E-01	6.84E-01	1.03E+00
		364.48		81.20	1.64E-01		-1.01E-01	7.83E-02
		636.97		7.26	2.38E+00		1.45E+00	1.12E+00
		722.89		1.80	9.63E+00		2.43E+00	4.50E+00
	TE-132	49.72		13.10	3.43E+00	4.51E-01	-5.92E+00	1.67E+00
		228.16		88.00	4.51E-01		-9.33E-02	2.18E-01
	BA-133	81.00		33.00	1.69E-01	1.58E-01	-6.50E-01	8.26E-02
		302.84		17.80	3.78E-01		2.19E-02	1.82E-01
		356.01		60.00	1.58E-01		4.55E-03	7.64E-02
	I-133	529.87		86.30	8.67E+01	8.67E+01	-7.65E+00	4.06E+01
	XE-133	81.00		38.00	4.70E-01	4.70E-01	-1.81E+00	2.30E-01
	CS-134	563.23		8.38	9.21E-01	8.53E-02	5.78E-01	4.34E-01
		569.32		15.43	4.51E-01		-9.04E-02	2.11E-01

Analysis Report for 1606064-14

CP-5013 02-05

Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
CS-134	604.70	97.60	8.53E-02	8.53E-02	7.72E-03	4.03E-02
	795.84	85.40	1.10E-01		4.87E-02	5.17E-02
	801.93	8.73	8.94E-01		-2.56E-01	4.13E-01
CS-135	268.24	16.00	4.36E-01	4.36E-01	2.22E-01	2.11E-01
I-135	1131.51	22.50	1.79E+09	1.50E+09	-6.20E+08	8.18E+08
	1260.41	28.60	1.50E+09		1.42E+08	6.86E+08
	1678.03	9.54	2.49E+09		-1.77E+08	1.01E+09
CS-136	153.22	7.46	1.11E+00	1.38E-01	3.43E-01	5.39E-01
	163.89	4.61	1.76E+00		3.55E-01	8.52E-01
	176.55	13.56	5.78E-01		1.75E-01	2.79E-01
	273.65	12.66	8.58E-01		-3.31E-01	4.14E-01
	340.57	48.50	2.91E-01		5.62E-01	1.41E-01
	818.50	99.70	1.38E-01		7.95E-02	6.42E-02
	1048.07	79.60	1.91E-01		7.10E-02	8.80E-02
	1235.34	19.70	9.71E-01		-5.95E-02	4.52E-01
CS-137	661.65	85.12	9.31E-02	9.31E-02	-9.83E-03	4.36E-02
LA-138	788.74	34.00	2.41E-01	1.20E-01	3.52E-02	1.12E-01
	1435.80	66.00	1.20E-01		-2.41E-02	5.28E-02
CE-139	165.85	80.35	6.69E-02	6.69E-02	2.51E-03	3.24E-02
BA-140	162.64	6.70	1.22E+00	4.34E-01	1.02E-01	5.92E-01
	304.84	4.50	2.11E+00		-1.29E-01	1.01E+00
	423.70	3.20	3.39E+00		3.93E-01	1.61E+00
	437.55	2.00	5.64E+00		1.66E+00	2.68E+00
	537.32	25.00	4.34E-01		-7.12E-02	2.03E-01
LA-140	328.77	20.50	5.55E-01	1.74E-01	3.53E-01	2.67E-01
	487.03	45.50	2.53E-01		4.48E-02	1.20E-01
	815.85	23.50	5.54E-01		-1.12E-01	2.56E-01
	1596.49	95.49	1.74E-01		2.78E-02	7.81E-02
CE-141	145.44	48.40	1.24E-01	1.24E-01	-5.85E-03	6.04E-02
CE-143	57.36	11.80	4.70E+01	1.76E+01	2.27E+01	2.29E+01
	293.26	42.00	1.76E+01		9.97E-01	8.53E+00
	664.55	5.20	1.34E+02		2.98E+01	6.31E+01
CE-144	133.54	10.80	4.43E-01	4.43E-01	-5.49E-02	2.15E-01
PM-144	476.78	42.00	1.85E-01	8.30E-02	7.38E-02	8.78E-02
	618.01	98.60	8.43E-02		3.38E-02	3.97E-02
	696.49	99.49	8.30E-02		2.36E-02	3.89E-02
PM-145	36.85	21.70	5.31E-01	2.82E-01	-2.79E-01	2.57E-01
	37.36	39.70	2.82E-01		-8.19E-02	1.37E-01
	42.30	15.10	5.73E-01		-2.06E-01	2.78E-01
	72.40	2.31	3.23E+00		-4.40E+00	1.58E+00
PM-146	453.90	39.94	1.71E-01	1.71E-01	1.14E-02	8.09E-02
	735.90	14.01	5.60E-01		-1.73E-01	2.61E-01
	747.13	13.10	5.93E-01		-8.59E-02	2.75E-01
ND-147	91.11	28.90	3.92E-01	3.92E-01	-3.35E-01	1.92E-01
	531.02	13.10	9.02E-01		4.06E-01	4.24E-01
PM-149	285.90	3.10	3.20E+01	3.20E+01	9.03E+00	1.54E+01
EU-152	121.78	20.50	2.28E-01	2.28E-01	8.09E-02	1.11E-01
	244.69	5.40	1.33E+00		-1.45E-01	6.47E-01
	344.27	19.13	3.33E-01		-2.44E-02	1.59E-01
	778.89	9.20	7.91E-01		9.24E-02	3.64E-01
	964.01	10.40	9.27E-01		-1.66E+00	4.31E-01
	1085.78	7.22	1.15E+00		-5.56E-02	5.22E-01
	1112.02	9.60	1.07E+00		3.74E-01	4.93E-01

Analysis Report for 1606064-14

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	Nuclide Name	Energy (keV)		Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
	EU-152	1407.95		14.94	5.60E-01	2.28E-01	6.99E-02	2.48E-01
	GD-153	97.43		31.30	1.59E-01	1.59E-01	6.47E-02	7.75E-02
		103.18		22.20	2.15E-01		-1.37E-01	1.05E-01
	EU-154	123.07		40.50	1.14E-01	1.14E-01	1.71E-03	5.54E-02
		723.30		19.70	4.13E-01		1.04E-01	1.93E-01
		873.19		11.50	6.55E-01		-2.08E-01	3.00E-01
		996.32		10.30	8.18E-01		-5.18E-01	3.75E-01
		1004.76		17.90	4.58E-01		-8.64E-02	2.09E-01
		1274.45		35.50	2.88E-01		6.68E-02	1.32E-01
	EU-155	86.50		30.90	2.14E-01	2.14E-01	2.24E-01	1.05E-01
		105.30		20.70	2.37E-01		1.40E-01	1.15E-01
	EU-156	811.77		10.40	1.11E+00	1.11E+00	-2.78E-01	5.15E-01
		1153.47		7.20	2.06E+00		4.41E-01	9.48E-01
		1230.71		8.90	1.93E+00		7.96E-01	8.96E-01
	HO-166M	184.41		72.60	9.02E-02	9.02E-02	1.43E-01	4.39E-02
		280.45		29.60	2.15E-01		1.30E-02	1.04E-01
		410.94		11.10	6.22E-01		2.21E-01	2.96E-01
		711.69		54.10	1.44E-01		-3.41E-02	6.70E-02
	TM-171	66.72		0.14	4.43E+01	4.43E+01	-6.99E+01	2.16E+01
	HF-172	81.75		4.52	1.25E+00	4.09E-01	-5.25E+00	6.09E-01
		125.81		11.30	4.09E-01		6.37E-03	1.98E-01
	LU-172	181.53		20.60	5.89E-01	3.54E-01	4.23E-02	2.84E-01
		810.06		16.63	1.11E+00		-6.47E-01	5.12E-01
		912.12		15.25	2.60E+00		5.17E+00	1.25E+00
		1093.66		62.50	3.54E-01		-1.71E-01	1.62E-01
	LU-173	100.72		5.24	9.03E-01	3.26E-01	-3.40E-01	4.39E-01
		272.11		21.20	3.26E-01		7.89E-02	1.58E-01
	HF-175	343.40		84.00	8.89E-02	8.89E-02	-6.04E-03	4.26E-02
	LU-176	88.34		13.30	5.03E-01	6.23E-02	1.19E-01	2.46E-01
		201.83		86.00	7.52E-02		1.56E-02	3.65E-02
		306.78		94.00	6.23E-02		-1.82E-02	2.98E-02
	TA-182	67.75		41.20	1.56E-01	1.56E-01	-8.86E-02	7.63E-02
		1121.30		34.90	4.18E-01		5.23E-01	1.97E-01
		1189.05		16.23	7.09E-01		1.84E-01	3.28E-01
		1221.41		26.98	4.55E-01		1.38E-01	2.11E-01
		1231.02		11.44	1.07E+00		3.99E-01	4.97E-01
	IR-192	308.46		29.68	2.18E-01	1.51E-01	-8.40E-02	1.04E-01
		468.07		48.10	1.51E-01		4.97E-03	7.12E-02
	HG-203	279.19		77.30	9.68E-02	9.68E-02	4.71E-02	4.66E-02
	BI-207	569.67		97.72	7.16E-02	7.16E-02	-1.45E-03	3.36E-02
		1063.62		74.90	1.17E-01		2.54E-02	5.37E-02
+	TL-208	583.14	*	30.22	2.27E-01	1.95E-01	1.24E+00	1.06E-01
		860.37		4.48	1.98E+00		3.83E-01	9.22E-01
		2614.66	*	35.85	1.95E-01		9.57E-01	7.76E-02
	BI-210M	262.00		45.00	1.38E-01	1.38E-01	-4.07E-02	6.64E-02
		300.00		23.00	3.07E-01		-8.76E-01	1.48E-01
	PB-210	46.50		4.25	1.96E+00	1.96E+00	2.65E+00	9.57E-01
	PB-211	404.84		2.90	2.34E+00	2.34E+00	-1.10E+00	1.12E+00
		831.96		2.90	2.68E+00		-1.40E+00	1.23E+00
+	BI-212	727.17	*	11.80	8.28E-01	8.28E-01	1.10E+00	3.91E-01
		1620.62		2.75	2.35E+00		-3.52E-01	9.83E-01
+	PB-212	238.63	*	44.60	2.69E-01	2.69E-01	1.48E+00	1.32E-01
		300.09	*	3.41	1.65E+00		1.41E+00	7.87E-01

Analysis Report for 1606064-14

CP-5013 02-05

	Nuclide Name	Energy (keV)		Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
+	BI-214	609.31	*	46.30	2.21E-01	2.21E-01	8.81E-01	1.06E-01
		1120.29	*	15.10	9.14E-01		1.29E+00	4.31E-01
		1764.49	*	15.80	5.73E-01		1.14E+00	2.51E-01
		2204.22		4.98	2.05E+00		1.25E+00	8.93E-01
+	PB-214	295.21	*	19.19	3.91E-01	2.88E-01	9.04E-01	1.89E-01
		351.92	*	37.19	2.88E-01		1.11E+00	1.40E-01
	RN-219	401.80		6.50	1.06E+00	1.06E+00	9.10E-02	5.03E-01
	RA-223	323.87		3.88	1.64E+00	1.64E+00	-1.28E+00	7.85E-01
	RA-224	240.98		3.95	3.32E+00	3.32E+00	1.99E+01	1.63E+00
	RA-225	40.00		31.00	4.71E-01	4.71E-01	-5.88E-02	2.28E-01
+	RA-226	186.21	*	3.28	2.67E+00	2.67E+00	3.42E+00	1.31E+00
	TH-227	50.10		8.40	8.13E-01	8.13E-01	-1.40E+00	3.95E-01
		236.00		11.50	9.52E-01		2.29E+00	4.67E-01
		256.20		6.30	9.60E-01		2.61E-01	4.62E-01
+	AC-228	338.32	*	11.40	8.05E-01	4.77E-01	1.41E+00	3.90E-01
		911.07	*	27.70	4.77E-01		1.36E+00	2.27E-01
		969.11	*	16.60	8.08E-01		1.45E+00	3.83E-01
	TH-230	48.44		16.90	4.60E-01	4.60E-01	3.62E-01	2.24E-01
		62.85		4.60	1.50E+00		1.19E+00	7.36E-01
		67.67		0.37	1.65E+01		-9.36E+00	8.06E+00
	PA-231	283.67		1.60	3.79E+00	2.92E+00	1.21E+00	1.82E+00
		302.67		2.30	2.92E+00		1.69E-01	1.40E+00
	TH-231	25.64		14.70	2.76E+00	8.98E-01	-2.19E+00	1.34E+00
		84.21		6.40	8.98E-01		-1.62E+00	4.39E-01
	PA-233	311.98		38.60	2.09E-01	2.09E-01	1.62E-01	1.00E-01
	PA-234	131.20		20.40	2.45E-01	2.45E-01	1.37E-01	1.19E-01
		733.99		8.80	9.08E-01		-6.20E-02	4.23E-01
		946.00		12.00	7.37E-01		4.88E-02	3.40E-01
	PA-234M	1001.03		0.92	1.04E+01	1.04E+01	4.60E+00	4.79E+00
	TH-234	63.29		3.80	1.82E+00	1.82E+00	2.07E+00	8.90E-01
	U-235	143.76		10.50	4.82E-01	4.82E-01	1.55E-01	2.34E-01
		163.35		4.70	1.08E+00		2.18E-01	5.24E-01
		205.31		4.70	1.36E+00		-1.16E-01	6.59E-01
	NP-237	86.50		12.60	5.22E-01	5.22E-01	5.47E-01	2.56E-01
	NP-239	106.10		22.70	2.89E+00	2.89E+00	1.30E+00	1.41E+00
		228.18		10.70	7.61E+00		-1.58E+00	3.68E+00
		277.60		14.10	6.18E+00		2.44E+00	2.98E+00
	AM-241	59.54		35.90	1.83E-01	1.83E-01	-1.04E-01	8.94E-02
+	AM-243	74.67	*	66.00	1.92E-01	1.92E-01	3.15E-01	9.51E-02
+	CM-243	209.75	*	3.29	1.91E+00	4.72E-01	1.61E+00	9.26E-01
		228.14		10.60	5.75E-01		-1.19E-01	2.78E-01
		277.60	*	14.00	4.72E-01		3.84E-01	2.28E-01

\+ = Nuclide identified during the nuclide identification
* = Energy line found in the spectrum
\> = MDA value not calculated
@ = Half-life too short to be able to perform the decay correction

Analysis Report for 1606064-14

CP-5013 02-05

No Action Level results available for reporting purposes.

DATA REVIEW COMMENTS REPORT

Creation Date	Comment	User

No Data Review Comments Entered.

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

Sample Title: CP-5013 02-05

Elapsed Live time: 3600
Elapsed Real Time: 3614

Channel								
1:	0	0	0	0	0	0	0	0
9:	5	172	130	130	110	84	93	119
17:	110	93	92	83	75	72	88	74
25:	67	54	75	61	75	53	70	76
33:	62	68	81	63	69	65	70	86
41:	72	73	80	67	81	78	156	101
49:	80	73	80	83	93	105	86	83
57:	96	105	116	133	104	120	151	202
65:	126	111	119	125	120	127	139	154
73:	140	150	386	293	397	504	142	123
81:	111	117	83	146	149	125	166	242
89:	141	157	147	101	259	220	116	91
97:	77	85	101	88	77	67	71	93
105:	91	92	88	74	81	88	69	89
113:	76	65	74	62	94	67	79	74
121:	77	75	65	73	63	61	72	71
129:	84	84	86	74	64	62	69	69
137:	74	68	71	76	66	67	79	85
145:	66	71	63	68	79	62	84	58
153:	65	72	84	69	60	60	62	54
161:	61	66	58	76	60	60	72	53
169:	71	58	66	51	57	43	48	61
177:	63	53	46	48	50	57	47	53
185:	63	147	148	66	65	59	51	62
193:	56	53	51	52	50	43	65	53
201:	61	53	52	42	66	62	54	43
209:	68	82	64	49	46	43	40	72
217:	54	39	56	47	32	53	46	34
225:	35	39	42	49	49	37	36	52
233:	40	45	37	46	45	144	549	250
241:	82	119	80	38	33	32	33	26
249:	35	35	27	29	38	29	40	21
257:	30	43	33	35	30	33	45	28
265:	34	43	37	30	23	56	69	37
273:	33	25	30	45	31	58	32	26
281:	17	31	30	30	33	32	25	30
289:	30	25	34	25	26	32	92	161
297:	41	20	39	42	55	27	23	28
305:	19	25	21	22	23	23	30	22
313:	33	27	33	16	21	31	25	18
321:	18	31	29	26	18	24	28	44
329:	36	33	21	25	28	22	23	20
337:	30	71	105	49	21	23	26	23
345:	19	22	22	22	24	28	50	188
353:	184	47	18	21	20	21	24	27
361:	16	19	23	19	19	20	19	17

369:	29	24	16	16	22	23	24	21

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Channel								
377:	22	15	19	19	18	14	23	21
385:	23	25	18	20	19	24	17	12
393:	21	22	17	22	23	17	18	22
401:	18	22	19	19	21	17	20	16
409:	21	29	18	22	14	15	12	18
417:	16	13	19	10	16	15	13	15
425:	27	15	20	21	15	21	17	13
433:	14	18	19	19	13	18	19	24
441:	12	17	13	12	15	16	14	10
449:	14	11	10	18	16	15	20	13
457:	17	16	18	22	19	15	41	41
465:	21	10	11	13	12	14	18	10
473:	13	17	21	23	15	14	19	18
481:	18	17	20	15	18	7	11	18
489:	22	15	12	8	17	8	19	21
497:	9	16	13	7	18	8	16	11
505:	12	17	14	11	24	42	65	44
513:	17	12	14	4	15	14	17	20
521:	6	10	12	12	10	12	7	9
529:	10	9	14	12	14	13	10	6
537:	15	8	11	15	15	8	10	18
545:	11	12	22	19	14	10	18	11
553:	11	10	10	19	11	8	8	6
561:	18	16	21	8	12	13	17	3
569:	8	13	7	13	15	13	12	6
577:	10	17	16	9	9	20	105	112
585:	30	8	9	11	12	14	12	13
593:	11	13	11	10	19	16	7	17
601:	11	20	9	6	19	10	13	20
609:	97	144	39	9	7	13	15	13
617:	14	15	12	11	11	9	12	10
625:	12	11	12	8	12	7	8	6
633:	9	8	12	18	10	11	13	12
641:	7	10	10	8	16	6	11	13
649:	9	15	8	8	8	8	15	8
657:	9	6	12	10	11	13	8	16
665:	5	16	12	7	12	11	8	13
673:	12	15	4	12	12	10	4	10
681:	10	14	8	10	7	10	13	10
689:	13	14	7	9	7	12	13	10
697:	13	6	11	10	8	13	16	7
705:	6	16	9	15	9	6	5	5
713:	13	14	11	15	8	11	4	8
721:	14	9	8	7	7	14	29	28
729:	12	8	14	6	6	13	6	5
737:	13	10	7	9	12	12	7	8
745:	9	9	6	10	5	10	8	9
753:	8	10	10	9	11	5	7	9
761:	6	10	8	15	6	12	17	19
769:	15	11	15	9	8	13	10	3
777:	10	6	8	6	8	5	11	11
785:	13	14	7	3	7	12	6	9
793:	9	11	21	15	8	6	6	4

801:	13	5	11	7	4	12	10	6

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Channel								
809:	5	6	8	7	3	8	12	9
817:	8	8	5	8	11	8	3	10
825:	8	8	7	11	5	10	9	9
833:	4	3	7	12	7	9	10	9
841:	13	6	5	7	5	9	8	7
849:	6	9	5	5	6	1	9	8
857:	4	6	11	14	14	7	3	5
865:	8	5	5	9	6	8	9	3
873:	7	4	8	1	5	9	8	7
881:	7	8	9	8	9	4	10	5
889:	6	5	6	5	3	4	5	7
897:	7	7	6	7	6	4	6	9
905:	5	3	10	5	8	22	56	68
913:	17	7	5	7	8	7	9	6
921:	7	3	7	3	6	4	4	4
929:	3	8	2	7	10	11	17	8
937:	9	5	4	7	5	6	5	2
945:	5	6	13	7	11	9	7	6
953:	5	7	5	7	6	11	2	3
961:	6	1	9	5	21	9	6	23
969:	43	35	8	6	4	5	6	3
977:	4	8	6	2	4	5	6	3
985:	1	6	4	7	5	7	9	6
993:	4	6	6	7	6	6	5	7
1001:	12	7	9	6	5	3	6	1
1009:	4	5	2	9	7	2	3	9
1017:	10	5	4	6	10	9	4	2
1025:	6	5	2	7	4	6	10	8
1033:	3	8	3	1	2	7	5	3
1041:	6	2	5	5	9	7	10	6
1049:	7	5	4	6	4	5	6	8
1057:	6	11	4	5	9	4	6	3
1065:	5	7	3	2	9	8	7	8
1073:	5	6	8	7	7	5	5	9
1081:	7	5	3	4	6	5	3	9
1089:	3	4	4	6	4	9	5	6
1097:	8	10	3	9	3	7	2	4
1105:	10	7	5	5	6	10	10	5
1113:	8	5	6	9	4	9	7	35
1121:	30	5	5	3	2	6	2	8
1129:	6	8	4	6	6	3	11	8
1137:	6	7	6	10	8	6	10	4
1145:	7	4	4	4	6	3	6	5
1153:	8	9	6	7	3	8	4	5
1161:	8	4	4	6	11	7	7	4
1169:	4	11	3	9	7	5	10	9
1177:	2	5	5	6	10	6	8	7
1185:	6	7	7	6	5	11	6	9
1193:	6	5	7	7	7	6	4	6
1201:	7	8	13	4	6	9	7	9
1209:	5	4	4	8	7	3	5	9
1217:	6	9	5	9	7	10	8	8
1225:	7	4	7	11	8	11	7	6

1233:	4	8	7	9	8	17	12	5

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Channel								
1241:	6	7	6	8	2	1	6	7
1249:	1	7	4	9	4	3	4	8
1257:	9	7	5	3	2	7	6	5
1265:	3	6	5	2	3	3	3	3
1273:	4	5	7	4	7	3	4	5
1281:	11	6	4	4	3	4	4	7
1289:	4	4	2	6	3	6	2	2
1297:	7	5	6	5	1	2	6	7
1305:	2	3	4	4	7	4	6	6
1313:	7	6	6	7	4	2	2	7
1321:	5	3	4	4	5	10	0	5
1329:	4	3	8	3	5	2	1	5
1337:	5	0	2	5	2	3	4	5
1345:	3	3	5	2	1	4	2	2
1353:	4	2	3	0	4	2	5	2
1361:	2	3	3	5	3	3	1	0
1369:	2	2	2	1	5	4	2	4
1377:	7	9	6	2	3	3	4	4
1385:	0	4	1	5	3	3	3	3
1393:	4	1	3	3	1	6	2	0
1401:	2	3	1	2	0	3	3	3
1409:	1	6	1	2	1	3	2	1
1417:	2	0	0	2	3	4	1	1
1425:	6	0	5	0	3	2	3	0
1433:	3	1	1	0	4	4	2	3
1441:	2	3	0	0	1	3	3	1
1449:	5	2	1	3	3	1	1	0
1457:	3	6	25	143	239	143	18	4
1465:	2	3	3	2	1	1	1	0
1473:	1	2	0	1	2	0	1	1
1481:	1	1	0	1	0	3	3	1
1489:	2	2	1	1	1	4	1	4
1497:	1	1	2	0	0	0	1	0
1505:	1	2	0	3	5	3	1	1
1513:	3	1	0	0	2	2	1	1
1521:	1	0	2	1	1	3	3	0
1529:	1	2	1	0	1	3	0	4
1537:	1	5	2	0	4	3	2	3
1545:	1	1	0	2	0	4	0	0
1553:	1	1	1	3	1	2	5	2
1561:	3	3	2	2	0	0	3	2
1569:	1	2	1	2	3	1	2	4
1577:	0	1	2	2	0	3	0	1
1585:	5	0	1	5	2	1	3	7
1593:	10	4	1	0	1	1	3	0
1601:	0	0	0	1	1	3	1	0
1609:	1	1	0	5	0	1	1	0
1617:	1	1	2	1	3	0	0	1
1625:	1	2	1	1	2	8	1	1
1633:	3	1	2	1	2	1	1	1
1641:	1	2	3	1	2	2	0	0
1649:	0	0	1	3	3	1	4	0
1657:	1	2	0	2	2	2	2	2

1665:	0	2	1	0	1	0	2	1

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Channel								
1673:	1	0	0	0	0	0	2	0
1681:	0	4	0	0	3	2	0	2
1689:	2	1	1	2	4	1	0	0
1697:	0	1	1	0	1	1	1	1
1705:	0	0	0	0	0	1	3	0
1713:	1	0	0	1	1	0	2	0
1721:	0	1	1	3	1	1	2	5
1729:	4	3	2	3	1	0	1	1
1737:	0	3	1	1	1	1	2	0
1745:	1	1	1	0	0	0	1	0
1753:	2	1	0	1	3	2	0	3
1761:	1	1	7	17	14	6	3	1
1769:	0	1	1	0	2	3	1	0
1777:	1	0	2	1	0	1	3	1
1785:	0	1	0	2	1	1	1	2
1793:	0	2	0	0	1	0	1	0
1801:	0	1	0	1	1	1	1	2
1809:	3	0	1	0	1	0	3	1
1817:	1	0	0	0	1	3	1	0
1825:	1	2	1	0	1	0	1	0
1833:	0	0	1	0	4	1	0	0
1841:	0	0	1	2	3	2	1	4
1849:	2	0	0	0	0	0	0	1
1857:	1	1	0	1	0	1	0	2
1865:	0	1	3	1	1	0	2	1
1873:	1	2	1	1	0	2	3	1
1881:	1	2	0	2	1	0	0	1
1889:	0	2	0	0	0	1	1	0
1897:	0	1	1	1	0	2	0	1
1905:	1	1	0	3	1	1	1	1
1913:	1	1	0	1	2	2	2	1
1921:	1	1	2	3	1	1	1	2
1929:	1	1	2	3	0	0	2	2
1937:	2	0	2	0	2	1	0	0
1945:	1	0	1	1	0	1	2	3
1953:	0	0	0	0	0	0	0	0
1961:	0	0	3	0	1	0	1	1
1969:	0	3	1	1	1	0	1	1
1977:	1	1	1	1	0	0	3	0
1985:	0	0	0	0	2	0	0	1
1993:	2	0	1	0	0	1	1	1
2001:	0	0	2	0	0	0	1	4
2009:	1	3	2	2	0	1	3	1
2017:	3	1	3	1	0	0	0	1
2025:	2	0	1	0	0	1	2	1
2033:	1	1	0	0	0	0	3	2
2041:	2	0	1	0	4	0	0	0
2049:	0	1	3	1	1	0	0	3
2057:	0	2	1	1	1	1	0	3
2065:	1	0	1	3	1	2	1	3
2073:	0	1	0	0	2	1	1	0
2081:	0	1	2	0	2	0	0	1
2089:	0	3	1	0	3	1	0	3

2097:	2	0	1	0	1	2	2	4

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

2529:	1	0	1	0	1	1	0	0

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Channel								
2537:	0	0	1	0	0	0	0	2
2545:	2	0	2	0	0	0	0	1
2553:	0	0	0	0	0	0	0	0
2561:	1	0	0	0	2	0	0	0
2569:	0	0	0	0	0	0	1	1
2577:	0	0	0	1	1	0	0	1
2585:	0	1	0	0	0	0	0	0
2593:	1	0	0	0	1	0	0	0
2601:	0	0	1	0	0	1	2	0
2609:	0	0	1	0	14	15	28	10
2617:	2	0	1	1	0	1	0	0
2625:	0	1	2	0	0	0	2	0
2633:	3	0	0	0	1	0	0	0
2641:	1	0	0	0	0	0	0	1
2649:	2	0	0	0	1	0	1	1
2657:	0	1	0	2	0	0	0	0
2665:	0	0	0	0	0	0	0	2
2673:	0	0	0	0	0	0	0	0
2681:	0	0	0	0	0	2	0	0
2689:	0	0	0	1	0	0	0	0
2697:	1	0	0	1	0	0	0	0
2705:	1	0	0	0	0	1	0	0
2713:	0	0	2	1	0	1	0	0
2721:	0	0	0	0	0	0	1	0
2729:	1	0	0	0	1	0	0	0
2737:	0	0	1	0	0	0	1	0
2745:	0	0	0	0	0	0	0	0
2753:	0	0	1	1	0	1	1	0
2761:	0	0	1	0	0	0	0	1
2769:	0	1	0	0	0	0	1	0
2777:	0	0	0	0	0	0	0	0
2785:	1	0	0	0	0	0	1	0
2793:	0	1	1	0	0	0	0	0
2801:	0	0	0	0	0	0	0	0
2809:	0	0	0	0	0	1	0	0
2817:	0	0	1	0	0	1	0	0
2825:	0	0	0	0	0	0	0	0
2833:	1	0	0	0	1	0	0	1
2841:	1	0	0	1	0	1	0	0
2849:	0	0	0	0	1	0	1	0
2857:	0	0	0	0	0	0	1	1
2865:	0	0	0	0	0	1	0	1
2873:	0	0	0	1	1	0	0	0
2881:	0	0	0	1	0	1	1	2
2889:	0	0	0	1	0	0	0	0
2897:	0	0	0	0	0	0	0	1
2905:	0	0	0	0	0	0	0	0
2913:	1	0	0	0	1	0	0	0
2921:	0	0	0	1	0	1	0	1
2929:	0	0	0	0	0	0	2	0
2937:	1	0	0	0	0	0	0	0
2945:	0	0	0	0	0	0	0	0
2953:	0	1	1	0	0	0	1	0

2961:	0	0	0	0	0	0	0	0

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

3393:	0	0	0	0	0	0	0	0

Sample Title: CP-5013 02-05

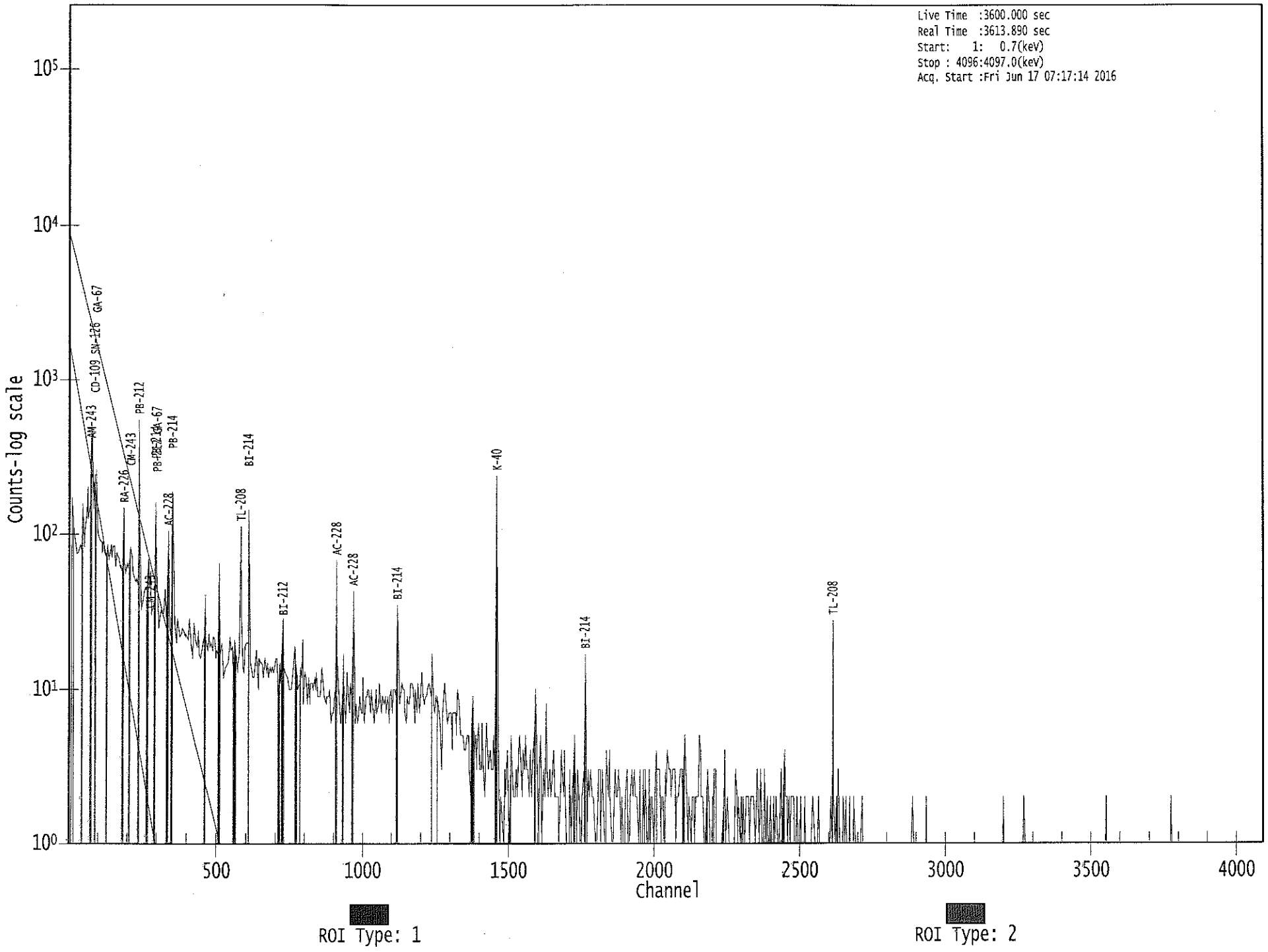
Channel								
3401:	1	0	0	0	0	0	0	1
3409:	0	0	0	1	0	0	0	0
3417:	1	0	0	0	0	0	0	0
3425:	0	0	0	0	0	0	0	0
3433:	0	0	0	0	0	0	0	0
3441:	0	0	0	0	1	0	0	0
3449:	0	0	0	1	0	0	0	0
3457:	0	1	0	0	0	0	0	1
3465:	0	0	0	0	0	0	0	0
3473:	0	0	0	0	0	0	0	0
3481:	0	0	0	1	0	0	0	0
3489:	0	0	0	0	0	0	0	0
3497:	0	0	1	0	0	0	0	1
3505:	0	0	0	0	0	0	0	0
3513:	0	0	0	0	0	1	0	0
3521:	0	0	0	0	0	0	0	0
3529:	0	0	0	1	0	0	0	0
3537:	0	1	0	0	0	0	1	0
3545:	0	0	0	0	0	0	0	2
3553:	0	0	0	0	0	0	0	0
3561:	1	0	1	0	0	0	0	0
3569:	0	0	1	0	1	0	0	0
3577:	0	1	0	0	0	0	0	1
3585:	0	0	0	0	0	0	0	0
3593:	0	0	0	0	0	0	0	0
3601:	0	0	0	0	0	0	0	0
3609:	0	0	0	0	0	0	0	0
3617:	1	0	0	0	0	0	1	0
3625:	1	0	0	1	0	0	0	0
3633:	0	0	0	0	0	0	0	0
3641:	0	0	0	0	0	0	0	1
3649:	0	0	0	0	0	0	0	0
3657:	0	0	0	0	1	0	0	0
3665:	0	0	1	0	0	0	0	0
3673:	1	0	0	0	0	0	0	0
3681:	0	0	0	0	0	0	0	0
3689:	0	0	0	0	0	0	0	0
3697:	0	1	0	0	0	0	0	0
3705:	0	0	0	0	0	0	0	1
3713:	0	0	0	0	0	0	0	1
3721:	0	0	0	0	0	0	0	0
3729:	0	0	0	1	0	0	0	1
3737:	0	0	1	0	0	0	1	0
3745:	0	0	0	0	0	0	0	0
3753:	0	0	0	0	0	0	0	0
3761:	1	0	0	0	0	0	0	0
3769:	0	0	0	1	0	0	2	0
3777:	0	0	0	0	0	0	0	0
3785:	0	0	1	0	1	0	0	0
3793:	0	0	0	0	0	0	1	0
3801:	0	0	0	0	0	0	0	0
3809:	0	0	0	1	0	0	0	0
3817:	0	0	0	0	0	0	0	0

3825:	0	1	0	0	0	0	0	0

Sample Title: CP-5013 02-05

Channel								
3833:	0	0	0	0	0	0	0	0
3841:	0	0	1	0	0	0	0	0
3849:	0	0	0	0	0	0	0	0
3857:	0	0	0	0	0	0	0	0
3865:	0	0	0	0	0	0	0	0
3873:	0	0	0	0	0	1	1	0
3881:	0	0	0	0	0	0	0	1
3889:	0	0	0	0	0	0	1	0
3897:	0	1	0	0	0	0	1	0
3905:	0	0	1	1	0	0	0	0
3913:	0	0	0	0	0	0	0	1
3921:	1	0	0	0	0	0	0	0
3929:	0	0	0	0	0	0	0	0
3937:	0	0	0	0	0	1	0	0
3945:	0	0	0	0	0	0	0	0
3953:	0	0	0	0	1	0	0	0
3961:	0	0	0	0	0	0	0	0
3969:	0	0	0	0	0	0	0	0
3977:	0	0	0	0	0	0	0	0
3985:	1	0	0	0	0	0	0	0
3993:	0	0	0	1	0	0	0	0
4001:	0	0	0	0	0	0	0	0
4009:	0	0	0	0	0	0	0	0
4017:	0	0	0	0	0	0	0	0
4025:	0	0	0	0	0	0	0	0
4033:	1	0	0	0	0	0	0	0
4041:	0	1	0	0	1	0	0	0
4049:	0	0	0	0	0	0	0	0
4057:	0	0	0	0	0	0	0	0
4065:	0	0	0	0	0	0	0	0
4073:	0	0	0	0	0	0	0	1
4081:	0	0	1	0	0	0	0	0
4089:	0	0	0	0	0	0	0	0

0000039066.CNF



Apex-Gamma

Analysis Report for 1606064-15
CP-5013 05-09

6/17

GAMMA SPECTRUM ANALYSIS

Sample Identification	: 1606064-15
Sample Description	: CP-5013 05-09
Sample Type	: SOIL
Sample Size	: 3.498E+02 grams
Facility	: Countroom
Sample Taken On	: 6/8/2016 12:23:04PM
Acquisition Started	: 6/17/2016 8:07:59AM
Procedure	: GAS-1402 pCi
Operator	: Administrator
Detector Name	: GE4
Geometry	: GAS-1402
Live Time	: 3600.0 seconds
Real Time	: 3618.5 seconds
Dead Time	: 0.51 %
Peak Locate Threshold	: 2.50
Peak Locate Range (in channels)	: 1 - 4096
Peak Area Range (in channels)	: 15 - 4096
Identification Energy Tolerance	: 1.000 keV
Energy Calibration Used Done On	: 10/25/2014
Efficiency Calibration Used Done On	: 11/8/2014
Efficiency Calibration Description	:
Sample Number	: 39067

PEAK-TO-TOTAL CALIBRATION REPORT

Peak-to-Total Efficiency Calibration Equation

AG
6/17/16

Analysis Report for 1606064-15

CP-5013 05-09

PEAK LOCATE REPORT

Peak Locate Performed on : 6/17/2016 9:08:19AM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096
Peak Search Sensitivity : 2.50

Peak No.	Energy (keV)	Centroid Channel	Centroid Uncertainty	Peak Significance
1	75.95	75.22	0.0000	0.00
2	92.63	91.90	0.0000	0.00
3	163.93	163.23	0.0000	0.00
4	186.17	185.49	0.0000	0.00
5	239.69	239.02	0.0000	0.00
6	253.23	252.57	0.0000	0.00
7	295.49	294.85	0.0000	0.00
8	326.85	326.23	0.0000	0.00
9	339.20	338.58	0.0000	0.00
10	352.34	351.73	0.0000	0.00
11	473.09	472.53	0.0000	0.00
12	511.34	510.80	0.0000	0.00
13	582.84	582.33	0.0000	0.00
14	609.49	609.00	0.0000	0.00
15	618.71	618.22	0.0000	0.00
16	860.57	860.20	0.0000	0.00
17	911.39	911.05	0.0000	0.00
18	968.73	968.42	0.0000	0.00
19	1018.19	1017.90	0.0000	0.00
20	1060.57	1060.31	0.0000	0.00
21	1095.48	1095.24	0.0000	0.00
22	1120.01	1119.78	0.0000	0.00
23	1146.16	1145.94	0.0000	0.00
24	1225.38	1225.21	0.0000	0.00
25	1242.90	1242.75	0.0000	0.00
26	1379.62	1379.54	0.0000	0.00
27	1449.47	1449.43	0.0000	0.00
28	1461.37	1461.35	0.0000	0.00
29	1501.48	1501.48	0.0000	0.00
30	1538.85	1538.87	0.0000	0.00
31	1591.53	1591.59	0.0000	0.00
32	1620.29	1620.36	0.0000	0.00
33	1728.76	1728.90	0.0000	0.00
34	1739.76	1739.91	0.0000	0.00
35	1764.40	1764.57	0.0000	0.00
36	1953.83	1954.12	0.0000	0.00
37	2102.15	2102.54	0.0000	0.00
38	2615.04	2615.81	0.0000	0.00

? = Adjacent peak noted
Errors quoted at 2.000sigma

Analysis Report for 1606064-15

CP-5013 05-09

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 6/17/2016 9:08:19AM

Peak Analysis From Channel : 1

Peak Analysis To Channel : 4096

	Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	FWHM (keV)
	1	75.95	69 -	80	75.22	6.35E+02	128.30	1.74E+03	4.06
	2	92.63	88 -	97	91.90	1.84E+02	98.12	1.21E+03	2.47
	3	163.93	158 -	169	163.23	6.95E+01	77.61	7.13E+02	7.69
	4	186.17	180 -	189	185.49	1.23E+02	66.14	5.53E+02	2.41
	5	239.69	234 -	246	239.02	4.30E+02	86.35	6.50E+02	2.74
	6	253.23	250 -	256	252.57	3.05E+01	36.93	2.29E+02	3.47
	7	295.49	291 -	298	294.85	1.22E+02	46.09	2.74E+02	2.99
	8	326.85	322 -	331	326.23	3.67E+01	41.13	2.23E+02	1.45
	9	339.20	332 -	344	338.58	7.52E+01	59.22	3.78E+02	3.01
	10	352.34	347 -	356	351.73	1.82E+02	51.81	2.78E+02	2.62
	11	473.09	467 -	481	472.53	6.97E+01	44.47	1.75E+02	7.41
	12	511.34	506 -	515	510.80	9.30E+01	36.77	1.40E+02	2.93
	13	582.84	575 -	587	582.33	1.10E+02	40.66	1.41E+02	3.10
M	14	609.49	605 -	624	609.00	8.82E+01	28.84	7.73E+01	3.38
m	15	618.71	605 -	624	618.22	2.29E+01	32.81	9.97E+01	4.93
	16	860.57	856 -	866	860.20	2.53E+01	24.47	6.74E+01	3.51
	17	911.39	906 -	915	911.05	7.06E+01	27.15	6.48E+01	2.64
	18	968.73	961 -	973	968.42	6.70E+01	33.13	9.79E+01	2.27
	19	1018.19	1013 -	1023	1017.90	3.01E+01	20.19	3.78E+01	5.68
	20	1060.57	1057 -	1064	1060.31	2.17E+01	12.65	1.25E+01	3.57
	21	1095.48	1092 -	1099	1095.24	1.19E+01	15.36	3.02E+01	1.35
	22	1120.01	1115 -	1124	1119.78	3.77E+01	21.56	4.46E+01	1.85
	23	1146.16	1143 -	1148	1145.94	1.24E+01	11.75	1.71E+01	2.82
	24	1225.38	1219 -	1233	1225.21	2.55E+01	28.54	7.50E+01	6.50
	25	1242.90	1234 -	1251	1242.75	5.28E+01	29.98	6.03E+01	11.95
	26	1379.62	1377 -	1383	1379.54	8.75E+00	11.19	1.45E+01	3.36
	27	1449.47	1445 -	1452	1449.43	1.12E+01	8.25	3.54E+00	1.17
	28	1461.37	1456 -	1467	1461.35	2.22E+02	31.30	1.06E+01	2.98
	29	1501.48	1495 -	1506	1501.48	1.10E+01	11.83	1.20E+01	7.99
	30	1538.85	1534 -	1546	1538.87	1.18E+01	12.67	1.43E+01	1.27
	31	1591.53	1586 -	1596	1591.59	1.09E+01	12.91	1.62E+01	6.35
	32	1620.29	1617 -	1623	1620.36	1.04E+01	7.76	3.25E+00	4.52
	33	1728.76	1723 -	1734	1728.90	1.02E+01	9.38	5.54E+00	8.29
	34	1739.76	1736 -	1743	1739.91	1.10E+01	6.63	0.00E+00	3.75
	35	1764.40	1759 -	1769	1764.57	1.93E+01	10.87	5.32E+00	4.06
	36	1953.83	1949 -	1957	1954.12	7.65E+00	7.76	4.70E+00	2.42
	37	2102.15	2098 -	2105	2102.54	1.16E+01	9.59	6.80E+00	1.87
	38	2615.04	2610 -	2621	2615.81	3.20E+01	11.31	0.00E+00	3.20

Analysis Report for 1606064-15

CP-5013 05-09

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

PEAK ANALYSIS REPORT

Peak Analysis Performed on : 6/17/2016 9:08:19AM

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

	Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
	1	75.95	69 -	80	6.35E+02	128.30	1.74E+03	9.70E+01
	2	92.63	88 -	97	1.84E+02	98.12	1.21E+03	7.75E+01
	3	163.93	158 -	169	6.95E+01	77.61	7.13E+02	6.23E+01
	4	186.17	180 -	189	1.23E+02	66.14	5.53E+02	5.12E+01
	5	239.69	234 -	246	4.30E+02	86.35	6.50E+02	6.23E+01
	6	253.23	250 -	256	3.05E+01	36.93	2.29E+02	2.90E+01
	7	295.49	291 -	298	1.22E+02	46.09	2.74E+02	3.33E+01
	8	326.85	322 -	331	3.67E+01	41.13	2.23E+02	3.23E+01
	9	339.20	332 -	344	7.52E+01	59.22	3.78E+02	4.65E+01
	10	352.34	347 -	356	1.82E+02	51.81	2.78E+02	3.64E+01
	11	473.09	467 -	481	6.97E+01	44.47	1.75E+02	3.39E+01
	12	511.34	506 -	515	9.30E+01	36.77	1.40E+02	2.57E+01
	13	582.84	575 -	587	1.10E+02	40.66	1.41E+02	2.86E+01
M	14	609.49	605 -	624	8.82E+01	28.84	7.73E+01	1.45E+01
m	15	618.71	605 -	624	2.29E+01	32.81	9.97E+01	1.64E+01
	16	860.57	856 -	866	2.53E+01	24.47	6.74E+01	1.83E+01
	17	911.39	906 -	915	7.06E+01	27.15	6.48E+01	1.75E+01
	18	968.73	961 -	973	6.70E+01	33.13	9.79E+01	2.37E+01
	19	1018.19	1013 -	1023	3.01E+01	20.19	3.78E+01	1.39E+01
	20	1060.57	1057 -	1064	2.17E+01	12.65	1.25E+01	7.03E+00
	21	1095.48	1092 -	1099	1.19E+01	15.36	3.02E+01	1.13E+01
	22	1120.01	1115 -	1124	3.77E+01	21.56	4.46E+01	1.46E+01
	23	1146.16	1143 -	1148	1.24E+01	11.75	1.71E+01	7.72E+00
	24	1225.38	1219 -	1233	2.55E+01	28.54	7.50E+01	2.19E+01
	25	1242.90	1234 -	1251	5.28E+01	29.98	6.03E+01	2.16E+01
	26	1379.62	1377 -	1383	8.75E+00	11.19	1.45E+01	7.81E+00
	27	1449.47	1445 -	1452	1.12E+01	8.25	3.54E+00	3.95E+00
	28	1461.37	1456 -	1467	2.22E+02	31.30	1.06E+01	7.94E+00
	29	1501.48	1495 -	1506	1.10E+01	11.83	1.20E+01	8.05E+00
	30	1538.85	1534 -	1546	1.18E+01	12.67	1.43E+01	8.74E+00
	31	1591.53	1586 -	1596	1.09E+01	12.91	1.62E+01	9.12E+00

Analysis Report for 1606064-15

CP-5013 05-09

Peak No.	Energy (keV)	ROI start	ROI end	Net Peak Area	Net Area Uncertainty	Continuum Counts	Critical Level
32	1620.29	1617 -	1623	1.04E+01	7.76	3.25E+00	3.56E+00
33	1728.76	1723 -	1734	1.02E+01	9.38	5.54E+00	5.64E+00
34	1739.76	1736 -	1743	1.10E+01	6.63	0.00E+00	0.00E+00
35	1764.40	1759 -	1769	1.93E+01	10.87	5.32E+00	5.26E+00
36	1953.83	1949 -	1957	7.65E+00	7.76	4.70E+00	4.48E+00
37	2102.15	2098 -	2105	1.16E+01	9.59	6.80E+00	5.55E+00
38	2615.04	2610 -	2621	3.20E+01	11.31	0.00E+00	0.00E+00

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

PEAK WITH NID REPORT

Peak Analysis Performed on : 6/17/2016 9:08:19AM

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

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

	Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
	1	75.95	69 -	80	75.22	6.35E+02	128.30	1.74E+03	.....
	2	92.63	88 -	97	91.90	1.84E+02	98.12	1.21E+03	GA-67
	3	163.93	158 -	169	163.23	6.95E+01	77.61	7.13E+02	CS-136
									U-235
	4	186.17	180 -	189	185.49	1.23E+02	66.14	5.53E+02	RA-226
	5	239.69	234 -	246	239.02	4.30E+02	86.35	6.50E+02	.....
	6	253.23	250 -	256	252.57	3.05E+01	36.93	2.29E+02	.....
	7	295.49	291 -	298	294.85	1.22E+02	46.09	2.74E+02	PB-214
	8	326.85	322 -	331	326.23	3.67E+01	41.13	2.23E+02	.....
	9	339.20	332 -	344	338.58	7.52E+01	59.22	3.78E+02	AC-228
	10	352.34	347 -	356	351.73	1.82E+02	51.81	2.78E+02	PB-214
	11	473.09	467 -	481	472.53	6.97E+01	44.47	1.75E+02	SB-127
	12	511.34	506 -	515	510.80	9.30E+01	36.77	1.40E+02	.....
	13	582.84	575 -	587	582.33	1.10E+02	40.66	1.41E+02	TL-208
M	14	609.49	605 -	624	609.00	8.82E+01	28.84	7.73E+01	BI-214
m	15	618.71	605 -	624	618.22	2.29E+01	32.81	9.97E+01	PM-144
	16	860.57	856 -	866	860.20	2.53E+01	24.47	6.74E+01	TL-208
	17	911.39	906 -	915	911.05	7.06E+01	27.15	6.48E+01	AC-228
									LU-172

Analysis Report for 1606064-15

CP-5013 05-09

Peak No.	Energy (keV)	ROI start	ROI end	Peak Centroid	Net Peak Area	Net Area Uncertainty	Continuum Counts	Tentative Nuclide
18	968.73	961 -	973	968.42	6.70E+01	33.13	9.79E+01	AC-228
19	1018.19	1013 -	1023	1017.90	3.01E+01	20.19	3.78E+01	.....
20	1060.57	1057 -	1064	1060.31	2.17E+01	12.65	1.25E+01	.....
21	1095.48	1092 -	1099	1095.24	1.19E+01	15.36	3.02E+01	.....
22	1120.01	1115 -	1124	1119.78	3.77E+01	21.56	4.46E+01	BI-214 SC-46
23	1146.16	1143 -	1148	1145.94	1.24E+01	11.75	1.71E+01	.....
24	1225.38	1219 -	1233	1225.21	2.55E+01	28.54	7.50E+01	.....
25	1242.90	1234 -	1251	1242.75	5.28E+01	29.98	6.03E+01	.....
26	1379.62	1377 -	1383	1379.54	8.75E+00	11.19	1.45E+01	.....
27	1449.47	1445 -	1452	1449.43	1.12E+01	8.25	3.54E+00	.....
28	1461.37	1456 -	1467	1461.35	2.22E+02	31.30	1.06E+01	K-40
29	1501.48	1495 -	1506	1501.48	1.10E+01	11.83	1.20E+01	.....
30	1538.85	1534 -	1546	1538.87	1.18E+01	12.67	1.43E+01	.....
31	1591.53	1586 -	1596	1591.59	1.09E+01	12.91	1.62E+01	.....
32	1620.29	1617 -	1623	1620.36	1.04E+01	7.76	3.25E+00	BI-212
33	1728.76	1723 -	1734	1728.90	1.02E+01	9.38	5.54E+00	.....
34	1739.76	1736 -	1743	1739.91	1.10E+01	6.63	0.00E+00	.....
35	1764.40	1759 -	1769	1764.57	1.93E+01	10.87	5.32E+00	BI-214
36	1953.83	1949 -	1957	1954.12	7.65E+00	7.76	4.70E+00	.....
37	2102.15	2098 -	2105	2102.54	1.16E+01	9.59	6.80E+00	.....
38	2615.04	2610 -	2621	2615.81	3.20E+01	11.31	0.00E+00	TL-208

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

PEAK EFFICIENCY REPORT

Peak Analysis Performed on : 6/17/2016 9:08:19AM

Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
1	75.95	6.35E+02	128.30	2.13E-02	1.69E-03
2	92.63	1.84E+02	98.12	1.90E-02	1.62E-03
3	163.93	6.95E+01	77.61	1.28E-02	1.23E-03
4	186.17	1.23E+02	66.14	1.16E-02	1.15E-03
5	239.69	4.30E+02	86.35	9.38E-03	9.84E-04
6	253.23	3.05E+01	36.93	8.94E-03	9.42E-04
7	295.49	1.22E+02	46.09	7.78E-03	8.43E-04
8	326.85	3.67E+01	41.13	7.08E-03	8.08E-04

Analysis Report for 1606064-15

CP-5013 05-09

	Peak No.	Energy (keV)	Net Peak Area	Net Area Uncertainty	Peak Efficiency	Efficiency Uncertainty
	9	339.20	7.52E+01	59.22	6.84E-03	7.94E-04
	10	352.34	1.82E+02	51.81	6.60E-03	7.80E-04
	11	473.09	6.97E+01	44.47	4.97E-03	6.17E-04
	12	511.34	9.30E+01	36.77	4.61E-03	5.61E-04
	13	582.84	1.10E+02	40.66	4.05E-03	4.56E-04
M	14	609.49	8.82E+01	28.84	3.87E-03	4.17E-04
m	15	618.71	2.29E+01	32.81	3.82E-03	4.03E-04
	16	860.57	2.53E+01	24.47	2.76E-03	2.29E-04
	17	911.39	7.06E+01	27.15	2.61E-03	2.06E-04
	18	968.73	6.70E+01	33.13	2.46E-03	1.99E-04
	19	1018.19	3.01E+01	20.19	2.35E-03	1.93E-04
	20	1060.57	2.17E+01	12.65	2.26E-03	1.87E-04
	21	1095.48	1.19E+01	15.36	2.19E-03	1.83E-04
	22	1120.01	3.77E+01	21.56	2.14E-03	1.79E-04
	23	1146.16	1.24E+01	11.75	2.10E-03	1.76E-04
	24	1225.38	2.55E+01	28.54	1.97E-03	1.87E-04
	25	1242.90	5.28E+01	29.98	1.95E-03	1.91E-04
	26	1379.62	8.75E+00	11.19	1.77E-03	2.06E-04
	27	1449.47	1.12E+01	8.25	1.70E-03	1.91E-04
	28	1461.37	2.22E+02	31.30	1.68E-03	1.89E-04
	29	1501.48	1.10E+01	11.83	1.64E-03	1.81E-04
	30	1538.85	1.18E+01	12.67	1.61E-03	1.73E-04
	31	1591.53	1.09E+01	12.91	1.56E-03	1.62E-04
	32	1620.29	1.04E+01	7.76	1.54E-03	1.56E-04
	33	1728.76	1.02E+01	9.38	1.46E-03	1.33E-04
	34	1739.76	1.10E+01	6.63	1.45E-03	1.31E-04
	35	1764.40	1.93E+01	10.87	1.43E-03	1.26E-04
	36	1953.83	7.65E+00	7.76	1.32E-03	1.11E-04
	37	2102.15	1.16E+01	9.59	1.25E-03	1.11E-04
	38	2615.04	3.20E+01	11.31	1.07E-03	1.11E-04

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

BACKGROUND SUBTRACT REPORT

Peak Analysis Performed on : 6/17/2016 9:08:19AM

Env. Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000038679.CNF

Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.

Analysis Report for 1606064-15

CP-5013 05-09

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
	1	75.95	6.35E+02	128.30	1.70E+01	4.04E+00	6.18E+02	1.28E+02
	2	92.63	1.84E+02	98.12	5.93E+01	9.62E+00	1.25E+02	9.86E+01
	3	163.93	6.95E+01	77.61	2.91E+00	5.63E+00	6.66E+01	7.78E+01
	4	186.17	1.23E+02	66.14	2.90E+01	7.24E+00	9.44E+01	6.65E+01
	5	239.69	4.30E+02	86.35	7.10E+00	5.46E+00	4.23E+02	8.65E+01
	6	253.23	3.05E+01	36.93			3.05E+01	3.69E+01
	7	295.49	1.22E+02	46.09			1.22E+02	4.61E+01
	8	326.85	3.67E+01	41.13			3.67E+01	4.11E+01
	9	339.20	7.52E+01	59.22			7.52E+01	5.92E+01
	10	352.34	1.82E+02	51.81	1.61E+00	4.34E+00	1.80E+02	5.20E+01
	11	473.09	6.97E+01	44.47			6.97E+01	4.45E+01
	12	511.34	9.30E+01	36.77	4.57E+01	5.07E+00	4.73E+01	3.71E+01
	13	582.84	1.10E+02	40.66	2.37E+00	3.72E+00	1.08E+02	4.08E+01
M	14	609.49	8.82E+01	28.84			8.82E+01	2.88E+01
m	15	618.71	2.29E+01	32.81			2.29E+01	3.28E+01
	16	860.57	2.53E+01	24.47			2.53E+01	2.45E+01
	17	911.39	7.06E+01	27.15			7.06E+01	2.71E+01
	18	968.73	6.70E+01	33.13			6.70E+01	3.31E+01
	19	1018.19	3.01E+01	20.19			3.01E+01	2.02E+01
	20	1060.57	2.17E+01	12.65			2.17E+01	1.26E+01
	21	1095.48	1.19E+01	15.36			1.19E+01	1.54E+01
	22	1120.01	3.77E+01	21.56			3.77E+01	2.16E+01
	23	1146.16	1.24E+01	11.75			1.24E+01	1.17E+01
	24	1225.38	2.55E+01	28.54			2.55E+01	2.85E+01
	25	1242.90	5.28E+01	29.98			5.28E+01	3.00E+01
	26	1379.62	8.75E+00	11.19			8.75E+00	1.12E+01
	27	1449.47	1.12E+01	8.25			1.12E+01	8.25E+00
	28	1461.37	2.22E+02	31.30	9.79E-01	1.85E+00	2.21E+02	3.14E+01
	29	1501.48	1.10E+01	11.83			1.10E+01	1.18E+01
	30	1538.85	1.18E+01	12.67			1.18E+01	1.27E+01
	31	1591.53	1.09E+01	12.91			1.09E+01	1.29E+01
	32	1620.29	1.04E+01	7.76			1.04E+01	7.76E+00
	33	1728.76	1.02E+01	9.38			1.02E+01	9.38E+00
	34	1739.76	1.10E+01	6.63			1.10E+01	6.63E+00
	35	1764.40	1.93E+01	10.87			1.93E+01	1.09E+01
	36	1953.83	7.65E+00	7.76			7.65E+00	7.76E+00
	37	2102.15	1.16E+01	9.59			1.16E+01	9.59E+00
	38	2615.04	3.20E+01	11.31			3.20E+01	1.13E+01

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

Analysis Report for 1606064-15

CP-5013 05-09

AREA CORRECTION REPORT
REFERENCE PEAK / BKG. SUBTRACT

Peak Analysis Performed on : 6/17/2016 9:08:19AM

Ref. Peak Energy : 0.00 Reference Date :
Peak Ratio : 0.00 Uncertainty : 0.00
Background File : \\OR-GAMMA1\ApexRoot\Countroom\Data\0000038679.CNF

Corrected Area is: Original * Peak Ratio - Background

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncertainty	Ambient Background	Backgr. Uncert.	Corrected Area	Corrected Uncert.
	1	75.95	6.35E+02	128.30	1.70E+01	4.04E+00	6.18E+02	1.28E+02
	2	92.63	1.84E+02	98.12	5.93E+01	9.62E+00	1.25E+02	9.86E+01
	3	163.93	6.95E+01	77.61	2.91E+00	5.63E+00	6.66E+01	7.78E+01
	4	186.17	1.23E+02	66.14	2.90E+01	7.24E+00	9.44E+01	6.65E+01
	5	239.69	4.30E+02	86.35	7.10E+00	5.46E+00	4.23E+02	8.65E+01
	6	253.23	3.05E+01	36.93			3.05E+01	3.69E+01
	7	295.49	1.22E+02	46.09			1.22E+02	4.61E+01
	8	326.85	3.67E+01	41.13			3.67E+01	4.11E+01
	9	339.20	7.52E+01	59.22			7.52E+01	5.92E+01
	10	352.34	1.82E+02	51.81	1.61E+00	4.34E+00	1.80E+02	5.20E+01
	11	473.09	6.97E+01	44.47			6.97E+01	4.45E+01
	12	511.34	9.30E+01	36.77	4.57E+01	5.07E+00	4.73E+01	3.71E+01
	13	582.84	1.10E+02	40.66	2.37E+00	3.72E+00	1.08E+02	4.08E+01
M	14	609.49	8.82E+01	28.84			8.82E+01	2.88E+01
m	15	618.71	2.29E+01	32.81			2.29E+01	3.28E+01
	16	860.57	2.53E+01	24.47			2.53E+01	2.45E+01
	17	911.39	7.06E+01	27.15			7.06E+01	2.71E+01
	18	968.73	6.70E+01	33.13			6.70E+01	3.31E+01
	19	1018.19	3.01E+01	20.19			3.01E+01	2.02E+01
	20	1060.57	2.17E+01	12.65			2.17E+01	1.26E+01
	21	1095.48	1.19E+01	15.36			1.19E+01	1.54E+01
	22	1120.01	3.77E+01	21.56			3.77E+01	2.16E+01
	23	1146.16	1.24E+01	11.75			1.24E+01	1.17E+01
	24	1225.38	2.55E+01	28.54			2.55E+01	2.85E+01
	25	1242.90	5.28E+01	29.98			5.28E+01	3.00E+01
	26	1379.62	8.75E+00	11.19			8.75E+00	1.12E+01
	27	1449.47	1.12E+01	8.25			1.12E+01	8.25E+00
	28	1461.37	2.22E+02	31.30	9.79E-01	1.85E+00	2.21E+02	3.14E+01
	29	1501.48	1.10E+01	11.83			1.10E+01	1.18E+01
	30	1538.85	1.18E+01	12.67			1.18E+01	1.27E+01
	31	1591.53	1.09E+01	12.91			1.09E+01	1.29E+01
	32	1620.29	1.04E+01	7.76			1.04E+01	7.76E+00
	33	1728.76	1.02E+01	9.38			1.02E+01	9.38E+00
	34	1739.76	1.10E+01	6.63			1.10E+01	6.63E+00
	35	1764.40	1.93E+01	10.87			1.93E+01	1.09E+01
	36	1953.83	7.65E+00	7.76			7.65E+00	7.76E+00
	37	2102.15	1.16E+01	9.59			1.16E+01	9.59E+00
	38	2615.04	3.20E+01	11.31			3.20E+01	1.13E+01

Analysis Report for 1606064-15

CP-5013 05-09

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

NUCLIDE IDENTIFICATION REPORT

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

IDENTIFIED NUCLIDES

Nuclide Name	Id Confidence	Energy (keV)		Yield(%)	Activity (pCi/grams)	Activity Uncertainty
K-40	0.950	1460.81	*	10.67	2.64E+01	4.81E+00
GA-67	0.533	93.31	*	35.70	2.58E+00	4.62E+00
		208.95		2.24		
		300.22		16.00		
TL-208	0.982	583.14	*	30.22	1.90E+00	7.47E-01
		860.37	*	4.48	4.39E+00	4.27E+00
		2614.66	*	35.85	1.79E+00	6.59E-01
BI-214	0.931	609.31	*	46.30	1.06E+00	3.63E-01
		1120.29	*	15.10	2.50E+00	1.44E+00
		1764.49	*	15.80	1.83E+00	1.04E+00
		2204.22		4.98		
PB-214	0.977	295.21	*	19.19	1.75E+00	6.90E-01
		351.92	*	37.19	1.58E+00	4.91E-01
RA-226	1.000	186.21	*	3.28	5.32E+00	1.04E+01
AC-228	0.960	338.32	*	11.40	2.07E+00	1.65E+00
		911.07	*	27.70	2.10E+00	8.23E-01
		969.11	*	16.60	3.52E+00	1.76E+00

* = Energy line found in the spectrum.
- = Manually added nuclide.
? = Manually edited nuclide.
Energy Tolerance : 1.000 keV
Nuclide confidence index threshold = 0.30
Errors quoted at 2.000sigma

Analysis Report for 1606064-15

CP-5013 05-09

UNIDENTIFIED PEAKS

Peak Locate Performed on : 6/17/2016 9:08:19AM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096

	Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
	1	75.95	1.71678E-01	10.38		
	3	163.93	1.85087E-02	58.40	Tol.	CS-136 U-235
	5	239.69	1.17538E-01	10.22		
	6	253.23	8.47318E-03	60.54		
	8	326.85	1.02065E-02	55.97		
	11	473.09	1.93560E-02	31.91	Tol.	SB-127
	12	511.34	1.31322E-02	39.26		
m	15	618.71	6.36387E-03	71.61	Tol.	PM-144
	19	1018.19	8.36451E-03	33.53		
	20	1060.57	6.03671E-03	29.10	Sum	
	21	1095.48	3.30247E-03	64.61		
	23	1146.16	3.45238E-03	47.26		
	24	1225.38	7.08333E-03	55.96		
	25	1242.90	1.46770E-02	28.37		
	26	1379.62	2.43056E-03	63.95		
	27	1449.47	3.11966E-03	36.71		
	29	1501.48	3.05556E-03	53.78		
	30	1538.85	3.28947E-03	53.49		
	31	1591.53	3.02632E-03	59.26		
	32	1620.29	2.88194E-03	37.41	Tol.	BI-212
	33	1728.76	2.84188E-03	45.85	Sum	
	34	1739.76	3.05556E-03	30.15		
	36	1953.83	2.12500E-03	50.73		
	37	2102.15	3.22222E-03	41.34		

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

NUCLIDE IDENTIFICATION REPORT

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

IDENTIFIED NUCLIDES

Analysis Report for 1606064-15

CP-5013 05-09

Nuclide Name	Id Confidence	Energy (keV)		Yield(%)	Activity (pCi/grams)	Activity Uncertainty
K-40	0.95	1460.81	*	10.67	2.64E+01	4.81E+00
GA-67	0.53	93.31	*	35.70	2.58E+00	4.62E+00
		208.95		2.24		
		300.22		16.00		
TL-208	0.98	583.14	*	30.22	1.90E+00	7.47E-01
		860.37	*	4.48	4.39E+00	4.27E+00
		2614.66	*	35.85	1.79E+00	6.59E-01
BI-214	0.93	609.31	*	46.30	1.06E+00	3.63E-01
		1120.29	*	15.10	2.50E+00	1.44E+00
		1764.49	*	15.80	1.83E+00	1.04E+00
		2204.22		4.98		
PB-214	0.97	295.21	*	19.19	1.75E+00	6.90E-01
		351.92	*	37.19	1.58E+00	4.91E-01
RA-226	1.00	186.21	*	3.28	5.32E+00	1.04E+01
AC-228	0.96	338.32	*	11.40	2.07E+00	1.65E+00
		911.07	*	27.70	2.10E+00	8.23E-01
		969.11	*	16.60	3.52E+00	1.76E+00

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

INTERFERENCE CORRECTED REPORT

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40	0.950	2.64E+01	4.81E+00	
GA-67	0.533	2.58E+00	4.62E+00	
TL-208	0.982	1.87E+00	4.91E-01	
BI-214	0.931	1.21E+00	3.34E-01	
PB-214	0.977	1.64E+00	4.00E-01	
RA-226	1.000	5.32E+00	1.04E+01	
AC-228	0.960	2.30E+00	6.79E-01	

Analysis Report for 1606064-15

CP-5013 05-09

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

Errors quoted at 2.000sigma

Analysis Report for 1606064-15

CP-5013 05-09

UNIDENTIFIED PEAKS

Peak Locate Performed on : 6/17/2016 9:08:19AM
Peak Locate From Channel : 1
Peak Locate To Channel : 4096

	Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
	1	75.95	1.71678E-01	10.38		
	3	163.93	1.85087E-02	58.40	Tol.	CS-136 U-235
	5	239.69	1.17538E-01	10.22		
	6	253.23	8.47318E-03	60.54		
	8	326.85	1.02065E-02	55.97		
	11	473.09	1.93560E-02	31.91	Tol.	SB-127
	12	511.34	1.31322E-02	39.26		
m	15	618.71	6.36387E-03	71.61	Tol.	PM-144
	19	1018.19	8.36451E-03	33.53		
	20	1060.57	6.03671E-03	29.10	Sum	
	21	1095.48	3.30247E-03	64.61		
	23	1146.16	3.45238E-03	47.26		
	24	1225.38	7.08333E-03	55.96		
	25	1242.90	1.46770E-02	28.37		
	26	1379.62	2.43056E-03	63.95		
	27	1449.47	3.11966E-03	36.71		
	29	1501.48	3.05556E-03	53.78		
	30	1538.85	3.28947E-03	53.49		
	31	1591.53	3.02632E-03	59.26		
	32	1620.29	2.88194E-03	37.41	Tol.	BI-212
	33	1728.76	2.84188E-03	45.85	Sum	
	34	1739.76	3.05556E-03	30.15		
	36	1953.83	2.12500E-03	50.73		
	37	2102.15	3.22222E-03	41.34		

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

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NUCLIDE MDA REPORT

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

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	BE-7	477.59		10.42	-3.46E-01	2.09E+00	2.09E+00
+	NA-22	1274.54		99.94	-8.03E-02	2.95E-01	2.95E-01
+	NA-24	1368.53		99.99	-1.12E+03	3.81E+03	3.81E+03
		2754.09		99.86	3.35E+02		4.06E+03
+	AL-26	1808.65		99.76	1.09E-01	2.98E-01	2.98E-01
+	K-40	1460.81	*	10.67	2.64E+01	2.29E+00	2.29E+00
+	@ AR-41	1293.64		99.16	1.00E+26	1.00E+26	1.00E+26
+	TI-44	67.88		94.40	6.60E-02	1.31E-01	1.31E-01
		78.34		96.00	-1.56E-02		1.76E-01
+	SC-46	889.25		99.98	2.53E-02	2.68E-01	2.68E-01
		1120.51		99.99	3.35E-01		4.04E-01
+	V-48	983.52		99.98	-2.16E-01	3.12E-01	3.12E-01
		1312.10		97.50	4.57E-02		4.84E-01
+	CR-51	320.08		9.83	3.85E-01	2.00E+00	2.00E+00
+	MN-54	834.83		99.97	9.94E-02	2.64E-01	2.64E-01
+	CO-56	846.75		99.96	-1.06E-02	2.60E-01	2.60E-01
		1037.75		14.03	4.25E-01		2.53E+00
		1238.25		67.00	5.60E-02		5.95E-01
		1771.40		15.51	9.47E-02		1.97E+00
		2598.48		16.90	-2.13E-01		1.18E+00
+	CO-57	122.06		85.51	-1.55E-01	1.45E-01	1.45E-01
		136.48		10.60	-5.79E-01		1.33E+00
+	CO-58	810.76		99.40	-4.31E-02	2.73E-01	2.73E-01
+	FE-59	1099.22		56.50	-1.02E-03	5.71E-01	5.71E-01
		1291.56		43.20	-1.62E-01		7.59E-01
+	CO-60	1173.22		100.00	-6.34E-02	2.58E-01	3.00E-01
		1332.49		100.00	-6.15E-02		2.58E-01
+	ZN-65	1115.52		50.75	-9.65E-03	6.32E-01	6.32E-01
+	GA-67	93.31	*	35.70	2.58E+00	3.32E+00	3.32E+00
		208.95		2.24	1.14E+01		4.93E+01
		300.22		16.00	-5.72E-01		8.08E+00
+	SE-75	121.11		16.70	-6.46E-01	2.45E-01	7.66E-01
		136.00		59.20	-6.55E-02		2.45E-01
		264.65		59.80	-2.89E-01		2.57E-01
		279.53		25.20	9.42E-02		6.91E-01
		400.65		11.40	6.78E-01		1.73E+00
+	RB-82	776.52		13.00	-4.87E-01	2.13E+00	2.13E+00
+	RB-83	520.41		46.00	-6.24E-02	4.73E-01	4.73E-01
		529.64		30.30	2.29E-02		7.49E-01
		552.65		16.40	-4.51E-01		1.22E+00
+	KR-85	513.99		0.43	1.76E+00	6.57E+01	6.57E+01
+	SR-85	513.99		99.27	8.44E-03	3.15E-01	3.15E-01

Analysis Report for 1606064-15

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	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	Y-88	898.02	93.40	-6.23E-02	2.16E-01	2.63E-01
		1836.01	99.38	-1.65E-02		2.16E-01
+	NB-93M	16.57	9.43	1.35E+00	6.71E-01	6.71E-01
+	NB-94	702.63	100.00	-4.83E-03	2.37E-01	2.37E-01
		871.10	100.00	-8.53E-03		2.53E-01
+	NB-95	765.79	99.81	3.42E-02	2.84E-01	2.84E-01
+	NB-95M	235.69	25.00	4.43E-01	5.61E+00	5.61E+00
+	ZR-95	724.18	43.70	5.52E-01	4.34E-01	7.50E-01
		756.72	55.30	-4.09E-02		4.34E-01
+	MO-99	181.06	6.20	-2.35E+00	1.75E+01	2.16E+01
		739.58	12.80	2.94E+00		1.75E+01
		778.00	4.50	-1.91E+01		4.45E+01
+	RU-103	497.08	89.00	-8.62E-02	2.44E-01	2.44E-01
+	RU-106	621.84	9.80	-6.36E-01	2.18E+00	2.18E+00
+	AG-108M	433.93	89.90	0.00E+00	2.10E-01	2.10E-01
		614.37	90.40	-1.96E-01		2.85E-01
		722.95	90.50	1.37E-01		3.19E-01
+	CD-109	88.03	3.72	3.48E-01	3.93E+00	3.93E+00
+	AG-110M	657.75	93.14	3.22E-02	2.38E-01	2.38E-01
		677.61	10.53	-1.75E-01		2.25E+00
		706.67	16.46	1.45E-01		1.57E+00
		763.93	21.98	1.35E-01		1.11E+00
		884.67	71.63	-6.20E-02		3.54E-01
		1384.27	23.94	6.69E-02		1.05E+00
+	CD-113M	263.70	0.02	-5.48E+02	6.37E+02	6.37E+02
+	SN-113	255.12	1.93	1.41E+00	2.96E-01	8.92E+00
		391.69	64.90	-6.40E-02		2.96E-01
+	TE123M	159.00	84.10	-1.64E-02	1.73E-01	1.73E-01
+	SB-124	602.71	97.87	5.08E-04	2.62E-01	2.62E-01
		645.85	7.26	1.69E+00		3.60E+00
		722.78	11.10	3.82E-01		2.83E+00
		1691.02	49.00	0.00E+00		4.60E-01
+	I-125	35.49	6.49	-1.02E-01	1.30E+00	1.30E+00
+	SB-125	176.33	6.89	2.22E-01	6.58E-01	2.07E+00
		427.89	29.33	1.29E-01		6.58E-01
		463.38	10.35	6.00E-01		2.03E+00
		600.56	17.80	-4.22E-01		1.28E+00
		635.90	11.32	1.71E-01		1.94E+00
+	SB-126	414.70	83.30	1.52E-02	3.58E-01	3.58E-01
		666.33	99.60	1.13E-01		3.95E-01
		695.00	99.60	3.32E-02		3.80E-01
		720.50	53.80	-1.52E-01		8.07E-01
+	SN-126	87.57	37.00	3.44E-02	3.89E-01	3.89E-01
+	SB-127	473.00	25.00	4.20E+00	3.10E+00	4.48E+00
		685.20	35.70	-2.73E-01		3.10E+00
		783.80	14.70	-3.08E-01		8.05E+00
+	I-129	29.78	57.00	-6.37E-02	1.29E-01	1.29E-01
		33.60	13.20	3.01E-02		5.72E-01

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	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	I-129	39.58	7.52	-1.26E+00	1.29E-01	1.04E+00
+	I-131	284.30	6.05	1.74E+00	4.72E-01	5.95E+00
		364.48	81.20	3.54E-02		4.72E-01
		636.97	7.26	-1.25E+00		6.41E+00
		722.89	1.80	4.56E+00		3.38E+01
+	TE-132	49.72	13.10	4.43E+00	1.23E+00	4.84E+00
		228.16	88.00	-4.18E-01		1.23E+00
+	BA-133	81.00	33.00	-7.92E-02	4.45E-01	4.70E-01
		302.84	17.80	-3.51E-01		9.87E-01
		356.01	60.00	-2.50E-02		4.45E-01
+	I-133	529.87	86.30	8.82E+00	2.89E+02	2.89E+02
+	XE-133	81.00	38.00	-2.21E-01	1.31E+00	1.31E+00
+	CS-134	563.23	8.38	3.24E-01	2.50E-01	2.58E+00
		569.32	15.43	-3.18E-02		1.37E+00
		604.70	97.60	-2.23E-03		2.50E-01
		795.84	85.40	1.23E-01		3.00E-01
		801.93	8.73	-1.42E+00		2.60E+00
+	CS-135	268.24	16.00	-1.52E-01	9.87E-01	9.87E-01
+	I-135	1131.51	22.50	-7.90E+08	4.70E+09	5.78E+09
		1260.41	28.60	-5.91E+08		4.70E+09
		1678.03	9.54	3.95E+09		1.05E+10
+	CS-136	153.22	7.46	6.19E-01	3.97E-01	2.97E+00
		163.89	4.61	4.61E+00		5.11E+00
		176.55	13.56	1.79E-01		1.67E+00
		273.65	12.66	1.53E+00		2.19E+00
		340.57	48.50	6.52E-01		7.15E-01
		818.50	99.70	-6.32E-02		3.97E-01
		1048.07	79.60	-9.83E-02		5.54E-01
		1235.34	19.70	-1.20E-01		2.82E+00
+	CS-137	661.65	85.12	6.29E-02	2.80E-01	2.80E-01
+	LA-138	788.74	34.00	6.50E-02	3.31E-01	7.69E-01
		1435.80	66.00	7.61E-02		3.31E-01
+	CE-139	165.85	80.35	9.33E-02	1.91E-01	1.91E-01
+	BA-140	162.64	6.70	3.13E+00	1.25E+00	3.57E+00
		304.84	4.50	-7.25E-01		6.20E+00
		423.70	3.20	-2.87E+00		9.12E+00
		437.55	2.00	-4.41E-01		1.54E+01
		537.32	25.00	-9.62E-01		1.25E+00
+	LA-140	328.77	20.50	5.38E-01	4.38E-01	1.39E+00
		487.03	45.50	1.33E-01		6.69E-01
		815.85	23.50	1.21E-01		1.76E+00
		1596.49	95.49	-6.21E-02		4.38E-01
+	CE-141	145.44	48.40	-4.98E-02	3.50E-01	3.50E-01
+	CE-143	57.36	11.80	-1.01E+02	4.46E+01	7.43E+01
		293.26	42.00	-6.13E+00		4.46E+01
		664.55	5.20	6.75E+01		4.03E+02
+	CE-144	133.54	10.80	7.46E-03	1.33E+00	1.33E+00
+	PM-144	476.78	42.00	3.67E-02	2.30E-01	4.86E-01
		618.01	98.60	8.86E-02		2.30E-01

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	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	PM-144	696.49	99.49	-2.78E-02	2.30E-01	2.34E-01
+	PM-145	36.85	21.70	1.63E-02	1.94E-01	3.56E-01
		37.36	39.70	8.36E-03		1.94E-01
		42.30	15.10	1.87E-01		5.66E-01
		72.40	2.31	1.18E+01		6.84E+00
+	PM-146	453.90	39.94	1.74E-01	4.70E-01	4.70E-01
		735.90	14.01	-1.18E+00		1.54E+00
		747.13	13.10	2.65E-01		1.95E+00
+	ND-147	91.11	28.90	3.41E-02	9.17E-01	9.17E-01
		531.02	13.10	7.10E-01		2.88E+00
+	PM-149	285.90	3.10	1.40E+01	8.60E+01	8.60E+01
+	EU-152	121.78	20.50	-6.33E-01	5.91E-01	5.91E-01
		244.69	5.40	3.87E-01		3.71E+00
		344.27	19.13	5.50E-02		1.01E+00
		778.89	9.20	-1.01E+00		2.35E+00
		964.01	10.40	-1.87E+00		3.43E+00
		1085.78	7.22	6.54E-01		3.74E+00
		1112.02	9.60	-5.74E-01		3.22E+00
		1407.95	14.94	8.27E-02		1.56E+00
+	GD-153	97.43	31.30	5.22E-02	4.09E-01	4.09E-01
		103.18	22.20	-7.20E-02		5.37E-01
+	EU-154	123.07	40.50	-3.41E-01	3.03E-01	3.03E-01
		723.30	19.70	6.30E-01		1.47E+00
		873.19	11.50	6.36E-01		2.31E+00
		996.32	10.30	-8.41E-01		2.53E+00
		1004.76	17.90	-1.09E-02		1.57E+00
		1274.45	35.50	-2.25E-01		8.27E-01
+	EU-155	86.50	30.90	8.48E-03	4.57E-01	4.57E-01
		105.30	20.70	-1.14E-01		5.66E-01
+	EU-156	811.77	10.40	-4.09E-01	3.62E+00	3.62E+00
		1153.47	7.20	1.63E+00		6.80E+00
		1230.71	8.90	-5.48E+00		5.26E+00
+	HO-166M	184.41	72.60	2.89E-01	2.34E-01	2.34E-01
		280.45	29.60	-1.11E-01		5.51E-01
		410.94	11.10	-2.45E-01		1.63E+00
		711.69	54.10	-2.40E-03		4.55E-01
+	TM-171	66.72	0.14	6.63E+01	8.92E+01	8.92E+01
+	HF-172	81.75	4.52	-8.11E-01	1.20E+00	3.20E+00
		125.81	11.30	2.46E-01		1.20E+00
+	LU-172	181.53	20.60	-3.40E-01	1.15E+00	1.85E+00
		810.06	16.63	-5.90E-01		3.73E+00
		912.12	15.25	8.20E+00		6.57E+00
		1093.66	62.50	-2.32E-02		1.15E+00
+	LU-173	100.72	5.24	1.18E-01	8.05E-01	2.22E+00
		272.11	21.20	2.97E-01		8.05E-01
+	HF-175	343.40	84.00	1.36E-02	2.62E-01	2.62E-01
+	LU-176	88.34	13.30	1.93E-02	1.81E-01	1.11E+00
		201.83	86.00	-1.49E-02		1.84E-01
		306.78	94.00	-3.02E-02		1.81E-01

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	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	TA-182	67.75		41.20	1.59E-01	3.16E-01	3.16E-01
		1121.30		34.90	7.83E-01		1.09E+00
		1189.05		16.23	-1.66E-02		1.91E+00
		1221.41		26.98	-9.90E-02		1.32E+00
		1231.02		11.44	-3.01E+00		2.88E+00
+	IR-192	308.46		29.68	-1.48E-01	4.93E-01	5.97E-01
		468.07		48.10	-3.94E-02		4.93E-01
+	HG-203	279.19		77.30	3.33E-02	2.44E-01	2.44E-01
+	BI-207	569.67		97.72	-4.98E-03	2.15E-01	2.15E-01
		1063.62		74.90	-3.94E-02		3.59E-01
+	TL-208	583.14	*	30.22	1.90E+00	1.51E-01	1.06E+00
		860.37	*	4.48	4.39E+00		6.84E+00
		2614.66	*	35.85	1.79E+00		1.51E-01
+	BI-210M	262.00		45.00	1.82E-01	3.52E-01	3.52E-01
		300.00		23.00	3.97E-02		9.33E-01
+	PB-210	46.50		4.25	2.43E-01	2.12E+00	2.12E+00
+	PB-211	404.84		2.90	-3.38E+00	6.12E+00	6.12E+00
		831.96		2.90	-5.70E+00		7.95E+00
+	BI-212	727.17		11.80	7.57E-01	2.34E+00	2.34E+00
		1620.62		2.75	-1.01E+00		9.88E+00
+	PB-212	238.63		44.60	2.12E+00	6.25E-01	6.25E-01
		300.09		3.41	2.68E-01		6.30E+00
+	BI-214	609.31	*	46.30	1.06E+00	9.03E-01	9.03E-01
		1120.29	*	15.10	2.50E+00		2.11E+00
		1764.49	*	15.80	1.83E+00		1.25E+00
		2204.22		4.98	4.41E+00		7.62E+00
+	PB-214	295.21	*	19.19	1.75E+00	6.64E-01	9.96E-01
		351.92	*	37.19	1.58E+00		6.64E-01
+	RN-219	401.80		6.50	-7.77E-02	2.80E+00	2.80E+00
+	RA-223	323.87		3.88	-7.38E-02	4.29E+00	4.29E+00
+	RA-224	240.98		3.95	2.61E+01	7.11E+00	7.11E+00
+	RA-225	40.00		31.00	-4.63E-01	3.82E-01	3.82E-01
+	RA-226	186.21	*	3.28	5.32E+00	6.05E+00	6.05E+00
+	TH-227	50.10		8.40	1.06E+00	1.15E+00	1.15E+00
		236.00		11.50	1.77E-01		2.24E+00
		256.20		6.30	6.22E-01		2.59E+00
+	AC-228	338.32	*	11.40	2.07E+00	1.12E+00	2.64E+00
		911.07	*	27.70	2.10E+00		1.12E+00
		969.11	*	16.60	3.52E+00		2.63E+00
+	TH-230	48.44		16.90	4.98E-01	5.58E-01	5.58E-01
		62.85		4.60	2.01E+00		2.57E+00
		67.67		0.37	1.68E+01		3.33E+01
+	PA-231	283.67		1.60	-2.58E+00	7.62E+00	1.01E+01
		302.67		2.30	-2.71E+00		7.62E+00
+	TH-231	25.64		14.70	-1.69E-01	5.02E-01	5.02E-01
		84.21		6.40	-5.72E-01		2.10E+00
+	PA-233	311.98		38.60	3.64E-02	5.35E-01	5.35E-01
+	PA-234	131.20		20.40	8.36E-01	7.12E-01	7.12E-01

Analysis Report for 1606064-15

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	Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	PA-234	733.99	8.80	-2.43E+00	7.12E-01	2.40E+00
		946.00	12.00	8.32E-01		2.06E+00
+	PA-234M	1001.03	0.92	-4.48E+00	2.88E+01	2.88E+01
+	TH-234	63.29	3.80	2.52E+00	3.16E+00	3.16E+00
+	U-235	143.76	10.50	1.57E-01	1.33E+00	1.33E+00
		163.35	4.70	2.83E+00		3.14E+00
		205.31	4.70	9.08E-01		3.53E+00
+	NP-237	86.50	12.60	2.07E-02	1.12E+00	1.12E+00
+	NP-239	106.10	22.70	-1.41E+00	6.98E+00	6.98E+00
		228.18	10.70	-1.06E+01		2.08E+01
		277.60	14.10	-3.01E+00		1.59E+01
+	AM-241	59.54	35.90	1.12E-01	3.11E-01	3.11E-01
+	AM-243	74.67	66.00	9.56E-01	2.58E-01	2.58E-01
+	CM-243	209.75	3.29	1.43E+00	1.19E+00	5.15E+00
		228.14	10.60	-5.30E-01		1.56E+00
		277.60	14.00	-2.25E-01		1.19E+00

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

NUCLIDE MDA REPORT

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

	Nuclide Name	Energy (keV)		Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
	BE-7	477.59		10.42	2.09E+00	2.09E+00	-3.46E-01	9.82E-01
	NA-22	1274.54		99.94	2.95E-01	2.95E-01	-8.03E-02	1.32E-01
	NA-24	1368.53		99.99	3.81E+03	3.81E+03	-1.12E+03	1.61E+03
		2754.09		99.86	4.06E+03		3.35E+02	1.52E+03
	AL-26	1808.65		99.76	2.98E-01	2.98E-01	1.09E-01	1.28E-01
+	K-40	1460.81	*	10.67	2.29E+00	2.29E+00	2.64E+01	9.86E-01

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	Nuclide Name	Energy (keV)		Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
@	AR-41	1293.64		99.16	1.00E+26	1.00E+26	1.00E+26	1.00E+20
	TI-44	67.88		94.40	1.31E-01	1.31E-01	6.60E-02	6.41E-02
		78.34		96.00	1.76E-01		-1.56E-02	8.64E-02
	SC-46	889.25		99.98	2.68E-01	2.68E-01	2.53E-02	1.22E-01
		1120.51		99.99	4.04E-01		3.35E-01	1.88E-01
	V-48	983.52		99.98	3.12E-01	3.12E-01	-2.16E-01	1.39E-01
		1312.10		97.50	4.84E-01		4.57E-02	2.18E-01
	CR-51	320.08		9.83	2.00E+00	2.00E+00	3.85E-01	9.49E-01
	MN-54	834.83		99.97	2.64E-01	2.64E-01	9.94E-02	1.22E-01
	CO-56	846.75		99.96	2.60E-01	2.60E-01	-1.06E-02	1.19E-01
		1037.75		14.03	2.53E+00		4.25E-01	1.17E+00
		1238.25		67.00	5.95E-01		5.60E-02	2.74E-01
		1771.40		15.51	1.97E+00		9.47E-02	8.43E-01
		2598.48		16.90	1.18E+00		-2.13E-01	4.20E-01
	CO-57	122.06		85.51	1.45E-01	1.45E-01	-1.55E-01	7.04E-02
		136.48		10.60	1.33E+00		-5.79E-01	6.45E-01
	CO-58	810.76		99.40	2.73E-01	2.73E-01	-4.31E-02	1.26E-01
	FE-59	1099.22		56.50	5.71E-01	5.71E-01	-1.02E-03	2.59E-01
		1291.56		43.20	7.59E-01		-1.62E-01	3.38E-01
	CO-60	1173.22		100.00	3.00E-01	2.58E-01	-6.34E-02	1.36E-01
		1332.49		100.00	2.58E-01		-6.15E-02	1.13E-01
	ZN-65	1115.52		50.75	6.32E-01	6.32E-01	-9.65E-03	2.89E-01
+	GA-67	93.31	*	35.70	3.32E+00	3.32E+00	2.58E+00	1.63E+00
		208.95		2.24	4.93E+01		1.14E+01	2.39E+01
		300.22		16.00	8.08E+00		-5.72E-01	3.88E+00
	SE-75	121.11		16.70	7.66E-01	2.45E-01	-6.46E-01	3.71E-01
		136.00		59.20	2.45E-01		-6.55E-02	1.19E-01
		264.65		59.80	2.57E-01		-2.89E-01	1.23E-01
		279.53		25.20	6.91E-01		9.42E-02	3.30E-01
		400.65		11.40	1.73E+00		6.78E-01	8.20E-01
	RB-82	776.52		13.00	2.13E+00	2.13E+00	-4.87E-01	9.73E-01
	RB-83	520.41		46.00	4.73E-01	4.73E-01	-6.24E-02	2.21E-01
		529.64		30.30	7.49E-01		2.29E-02	3.51E-01
		552.65		16.40	1.22E+00		-4.51E-01	5.63E-01
	KR-85	513.99		0.43	6.57E+01	6.57E+01	1.76E+00	3.14E+01
	SR-85	513.99		99.27	3.15E-01	3.15E-01	8.44E-03	1.51E-01
	Y-88	898.02		93.40	2.63E-01	2.16E-01	-6.23E-02	1.19E-01
		1836.01		99.38	2.16E-01		-1.65E-02	8.57E-02
	NB-93M	16.57		9.43	6.71E-01	6.71E-01	1.35E+00	3.25E-01
	NB-94	702.63		100.00	2.37E-01	2.37E-01	-4.83E-03	1.10E-01
		871.10		100.00	2.53E-01		-8.53E-03	1.16E-01
	NB-95	765.79		99.81	2.84E-01	2.84E-01	3.42E-02	1.31E-01
	NB-95M	235.69		25.00	5.61E+00	5.61E+00	4.43E-01	2.74E+00
	ZR-95	724.18		43.70	7.50E-01	4.34E-01	5.52E-01	3.53E-01
		756.72		55.30	4.34E-01		-4.09E-02	1.98E-01
	MO-99	181.06		6.20	2.16E+01	1.75E+01	-2.35E+00	1.04E+01
		739.58		12.80	1.75E+01		2.94E+00	8.08E+00
		778.00		4.50	4.45E+01		-1.91E+01	2.03E+01
	RU-103	497.08		89.00	2.44E-01	2.44E-01	-8.62E-02	1.14E-01
	RU-106	621.84		9.80	2.18E+00	2.18E+00	-6.36E-01	1.01E+00
	AG-108M	433.93		89.90	2.10E-01	2.10E-01	0.00E+00	9.91E-02
		614.37		90.40	2.85E-01		-1.96E-01	1.34E-01
		722.95		90.50	3.19E-01		1.37E-01	1.50E-01

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Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
CD-109	88.03	3.72	3.93E+00	3.93E+00	3.48E-01	1.92E+00
AG-110M	657.75	93.14	2.38E-01	2.38E-01	3.22E-02	1.10E-01
	677.61	10.53	2.25E+00		-1.75E-01	1.04E+00
	706.67	16.46	1.57E+00		1.45E-01	7.31E-01
	763.93	21.98	1.11E+00		1.35E-01	5.09E-01
	884.67	71.63	3.54E-01		-6.20E-02	1.62E-01
	1384.27	23.94	1.05E+00		6.69E-02	4.53E-01
CD-113M	263.70	0.02	6.37E+02	6.37E+02	-5.48E+02	3.04E+02
SN-113	255.12	1.93	8.92E+00	2.96E-01	1.41E+00	4.28E+00
	391.69	64.90	2.96E-01		-6.40E-02	1.40E-01
TE123M	159.00	84.10	1.73E-01	1.73E-01	-1.64E-02	8.38E-02
SB-124	602.71	97.87	2.62E-01	2.62E-01	5.08E-04	1.22E-01
	645.85	7.26	3.60E+00		1.69E+00	1.68E+00
	722.78	11.10	2.83E+00		3.82E-01	1.33E+00
	1691.02	49.00	4.60E-01		0.00E+00	1.86E-01
I-125	35.49	6.49	1.30E+00	1.30E+00	-1.02E-01	6.33E-01
SB-125	176.33	6.89	2.07E+00	6.58E-01	2.22E-01	9.99E-01
	427.89	29.33	6.58E-01		1.29E-01	3.11E-01
	463.38	10.35	2.03E+00		6.00E-01	9.62E-01
	600.56	17.80	1.28E+00		-4.22E-01	5.96E-01
	635.90	11.32	1.94E+00		1.71E-01	9.02E-01
SB-126	414.70	83.30	3.58E-01	3.58E-01	1.52E-02	1.69E-01
	666.33	99.60	3.95E-01		1.13E-01	1.84E-01
	695.00	99.60	3.80E-01		3.32E-02	1.76E-01
	720.50	53.80	8.07E-01		-1.52E-01	3.76E-01
SN-126	87.57	37.00	3.89E-01	3.89E-01	3.44E-02	1.90E-01
SB-127	473.00	25.00	4.48E+00	3.10E+00	4.20E+00	2.13E+00
	685.20	35.70	3.10E+00		-2.73E-01	1.44E+00
	783.80	14.70	8.05E+00		-3.08E-01	3.70E+00
I-129	29.78	57.00	1.29E-01	1.29E-01	-6.37E-02	6.26E-02
	33.60	13.20	5.72E-01		3.01E-02	2.78E-01
	39.58	7.52	1.04E+00		-1.26E+00	5.05E-01
I-131	284.30	6.05	5.95E+00	4.72E-01	1.74E+00	2.85E+00
	364.48	81.20	4.72E-01		3.54E-02	2.24E-01
	636.97	7.26	6.41E+00		-1.25E+00	2.97E+00
	722.89	1.80	3.38E+01		4.56E+00	1.58E+01
TE-132	49.72	13.10	4.84E+00	1.23E+00	4.43E+00	2.36E+00
	228.16	88.00	1.23E+00		-4.18E-01	5.94E-01
BA-133	81.00	33.00	4.70E-01	4.45E-01	-7.92E-02	2.30E-01
	302.84	17.80	9.87E-01		-3.51E-01	4.72E-01
	356.01	60.00	4.45E-01		-2.50E-02	2.15E-01
I-133	529.87	86.30	2.89E+02	2.89E+02	8.82E+00	1.36E+02
XE-133	81.00	38.00	1.31E+00	1.31E+00	-2.21E-01	6.43E-01
CS-134	563.23	8.38	2.58E+00	2.50E-01	3.24E-01	1.21E+00
	569.32	15.43	1.37E+00		-3.18E-02	6.40E-01
	604.70	97.60	2.50E-01		-2.23E-03	1.17E-01
	795.84	85.40	3.00E-01		1.23E-01	1.39E-01
	801.93	8.73	2.60E+00		-1.42E+00	1.19E+00
CS-135	268.24	16.00	9.87E-01	9.87E-01	-1.52E-01	4.72E-01
I-135	1131.51	22.50	5.78E+09	4.70E+09	-7.90E+08	2.61E+09
	1260.41	28.60	4.70E+09		-5.91E+08	2.11E+09
	1678.03	9.54	1.05E+10		3.95E+09	4.29E+09
CS-136	153.22	7.46	2.97E+00	3.97E-01	6.19E-01	1.44E+00

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Nuclide Name	Energy (keV)	Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
CS-136	163.89	4.61	5.11E+00	3.97E-01	4.61E+00	2.48E+00
	176.55	13.56	1.67E+00		1.79E-01	8.04E-01
	273.65	12.66	2.19E+00		1.53E+00	1.05E+00
	340.57	48.50	7.15E-01		6.52E-01	3.44E-01
	818.50	99.70	3.97E-01		-6.32E-02	1.83E-01
	1048.07	79.60	5.54E-01		-9.83E-02	2.52E-01
	1235.34	19.70	2.82E+00		-1.20E-01	1.29E+00
CS-137	661.65	85.12	2.80E-01	2.80E-01	6.29E-02	1.30E-01
LA-138	788.74	34.00	7.69E-01	3.31E-01	6.50E-02	3.56E-01
	1435.80	66.00	3.31E-01		7.61E-02	1.40E-01
CE-139	165.85	80.35	1.91E-01	1.91E-01	9.33E-02	9.23E-02
BA-140	162.64	6.70	3.57E+00	1.25E+00	3.13E+00	1.73E+00
	304.84	4.50	6.20E+00		-7.25E-01	2.96E+00
	423.70	3.20	9.12E+00		-2.87E+00	4.30E+00
	437.55	2.00	1.54E+01		-4.41E-01	7.25E+00
	537.32	25.00	1.25E+00		-9.62E-01	5.84E-01
LA-140	328.77	20.50	1.39E+00	4.38E-01	5.38E-01	6.61E-01
	487.03	45.50	6.69E-01		1.33E-01	3.13E-01
	815.85	23.50	1.76E+00		1.21E-01	8.09E-01
	1596.49	95.49	4.38E-01		-6.21E-02	1.88E-01
CE-141	145.44	48.40	3.50E-01	3.50E-01	-4.98E-02	1.70E-01
CE-143	57.36	11.80	7.43E+01	4.46E+01	-1.01E+02	3.63E+01
	293.26	42.00	4.46E+01		-6.13E+00	2.15E+01
	664.55	5.20	4.03E+02		6.75E+01	1.88E+02
CE-144	133.54	10.80	1.33E+00	1.33E+00	7.46E-03	6.46E-01
PM-144	476.78	42.00	4.86E-01	2.30E-01	3.67E-02	2.29E-01
	618.01	98.60	2.30E-01		8.86E-02	1.07E-01
	696.49	99.49	2.34E-01		-2.78E-02	1.08E-01
PM-145	36.85	21.70	3.56E-01	1.94E-01	1.63E-02	1.73E-01
	37.36	39.70	1.94E-01		8.36E-03	9.43E-02
	42.30	15.10	5.66E-01		1.87E-01	2.76E-01
	72.40	2.31	6.84E+00		1.18E+01	3.36E+00
PM-146	453.90	39.94	4.70E-01	4.70E-01	1.74E-01	2.21E-01
	735.90	14.01	1.54E+00		-1.18E+00	7.03E-01
	747.13	13.10	1.95E+00		2.65E-01	9.03E-01
ND-147	91.11	28.90	9.17E-01	9.17E-01	3.41E-02	4.50E-01
	531.02	13.10	2.88E+00		7.10E-01	1.35E+00
PM-149	285.90	3.10	8.60E+01	8.60E+01	1.40E+01	4.11E+01
EU-152	121.78	20.50	5.91E-01	5.91E-01	-6.33E-01	2.87E-01
	244.69	5.40	3.71E+00		3.87E-01	1.79E+00
	344.27	19.13	1.01E+00		5.50E-02	4.84E-01
	778.89	9.20	2.35E+00		-1.01E+00	1.07E+00
	964.01	10.40	3.43E+00		-1.87E+00	1.60E+00
	1085.78	7.22	3.74E+00		6.54E-01	1.69E+00
	1112.02	9.60	3.22E+00		-5.74E-01	1.47E+00
	1407.95	14.94	1.56E+00		8.27E-02	6.66E-01
GD-153	97.43	31.30	4.09E-01	4.09E-01	5.22E-02	1.99E-01
	103.18	22.20	5.37E-01		-7.20E-02	2.61E-01
EU-154	123.07	40.50	3.03E-01	3.03E-01	-3.41E-01	1.47E-01
	723.30	19.70	1.47E+00		6.30E-01	6.90E-01
	873.19	11.50	2.31E+00		6.36E-01	1.06E+00
	996.32	10.30	2.53E+00		-8.41E-01	1.15E+00
	1004.76	17.90	1.57E+00		-1.09E-02	7.15E-01

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	Nuclide Name	Energy (keV)		Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
	EU-154	1274.45		35.50	8.27E-01	3.03E-01	-2.25E-01	3.70E-01
	EU-155	86.50		30.90	4.57E-01	4.57E-01	8.48E-03	2.24E-01
		105.30		20.70	5.66E-01		-1.14E-01	2.75E-01
	EU-156	811.77		10.40	3.62E+00	3.62E+00	-4.09E-01	1.67E+00
		1153.47		7.20	6.80E+00		1.63E+00	3.11E+00
		1230.71		8.90	5.26E+00		-5.48E+00	2.38E+00
	HO-166M	184.41		72.60	2.34E-01	2.34E-01	2.89E-01	1.14E-01
		280.45		29.60	5.51E-01		-1.11E-01	2.63E-01
		410.94		11.10	1.63E+00		-2.45E-01	7.69E-01
		711.69		54.10	4.55E-01		-2.40E-03	2.11E-01
	TM-171	66.72		0.14	8.92E+01	8.92E+01	6.63E+01	4.37E+01
	HF-172	81.75		4.52	3.20E+00	1.20E+00	-8.11E-01	1.57E+00
		125.81		11.30	1.20E+00		2.46E-01	5.81E-01
	LU-172	181.53		20.60	1.85E+00	1.15E+00	-3.40E-01	8.93E-01
		810.06		16.63	3.73E+00		-5.90E-01	1.72E+00
		912.12		15.25	6.57E+00		8.20E+00	3.10E+00
		1093.66		62.50	1.15E+00		-2.32E-02	5.23E-01
	LU-173	100.72		5.24	2.22E+00	8.05E-01	1.18E-01	1.08E+00
		272.11		21.20	8.05E-01		2.97E-01	3.86E-01
	HF-175	343.40		84.00	2.62E-01	2.62E-01	1.36E-02	1.25E-01
	LU-176	88.34		13.30	1.11E+00	1.81E-01	1.93E-02	5.45E-01
		201.83		86.00	1.84E-01		-1.49E-02	8.88E-02
		306.78		94.00	1.81E-01		-3.02E-02	8.63E-02
	TA-182	67.75		41.20	3.16E-01	3.16E-01	1.59E-01	1.55E-01
		1121.30		34.90	1.09E+00		7.83E-01	5.03E-01
		1189.05		16.23	1.91E+00		-1.66E-02	8.62E-01
		1221.41		26.98	1.32E+00		-9.90E-02	6.00E-01
		1231.02		11.44	2.88E+00		-3.01E+00	1.31E+00
	IR-192	308.46		29.68	5.97E-01	4.93E-01	-1.48E-01	2.84E-01
		468.07		48.10	4.93E-01		-3.94E-02	2.33E-01
	HG-203	279.19		77.30	2.44E-01	2.44E-01	3.33E-02	1.17E-01
	BI-207	569.67		97.72	2.15E-01	2.15E-01	-4.98E-03	1.00E-01
		1063.62		74.90	3.59E-01		-3.94E-02	1.62E-01
+	TL-208	583.14	*	30.22	1.06E+00	1.51E-01	1.90E+00	5.07E-01
		860.37	*	4.48	6.84E+00		4.39E+00	3.19E+00
		2614.66	*	35.85	1.51E-01		1.79E+00	0.00E+00
	BI-210M	262.00		45.00	3.52E-01	3.52E-01	1.82E-01	1.68E-01
		300.00		23.00	9.33E-01		3.97E-02	4.50E-01
	PB-210	46.50		4.25	2.12E+00	2.12E+00	2.43E-01	1.04E+00
	PB-211	404.84		2.90	6.12E+00	6.12E+00	-3.38E+00	2.89E+00
		831.96		2.90	7.95E+00		-5.70E+00	3.62E+00
	BI-212	727.17		11.80	2.34E+00	2.34E+00	7.57E-01	1.10E+00
		1620.62		2.75	9.88E+00		-1.01E+00	4.25E+00
	PB-212	238.63		44.60	6.25E-01	6.25E-01	2.12E+00	3.05E-01
		300.09		3.41	6.30E+00		2.68E-01	3.04E+00
+	BI-214	609.31	*	46.30	9.03E-01	9.03E-01	1.06E+00	4.35E-01
		1120.29	*	15.10	2.11E+00		2.50E+00	9.66E-01
		1764.49	*	15.80	1.25E+00		1.83E+00	4.98E-01
		2204.22		4.98	7.62E+00		4.41E+00	3.32E+00
+	PB-214	295.21	*	19.19	9.96E-01	6.64E-01	1.75E+00	4.79E-01
		351.92	*	37.19	6.64E-01		1.58E+00	3.20E-01
	RN-219	401.80		6.50	2.80E+00	2.80E+00	-7.77E-02	1.33E+00
	RA-223	323.87		3.88	4.29E+00	4.29E+00	-7.38E-02	2.04E+00

Analysis Report for 1606064-15

CP-5013 05-09

	Nuclide Name	Energy (keV)		Yield(%)	Line MDA (pCi/grams)	Nuclide MDA (pCi/grams)	Activity (pCi/grams)	Dec. Level (pCi/grams)
	RA-224	240.98		3.95	7.11E+00	7.11E+00	2.61E+01	3.48E+00
	RA-225	40.00		31.00	3.82E-01	3.82E-01	-4.63E-01	1.86E-01
+	RA-226	186.21	*	3.28	6.05E+00	6.05E+00	5.32E+00	2.95E+00
	TH-227	50.10		8.40	1.15E+00	1.15E+00	1.06E+00	5.63E-01
		236.00		11.50	2.24E+00		1.77E-01	1.09E+00
		256.20		6.30	2.59E+00		6.22E-01	1.24E+00
+	AC-228	338.32	*	11.40	2.64E+00	1.12E+00	2.07E+00	1.28E+00
		911.07	*	27.70	1.12E+00		2.10E+00	5.21E-01
		969.11	*	16.60	2.63E+00		3.52E+00	1.24E+00
	TH-230	48.44		16.90	5.58E-01	5.58E-01	4.98E-01	2.73E-01
		62.85		4.60	2.57E+00		2.01E+00	1.26E+00
		67.67		0.37	3.33E+01		1.68E+01	1.63E+01
	PA-231	283.67		1.60	1.01E+01	7.62E+00	-2.58E+00	4.81E+00
		302.67		2.30	7.62E+00		-2.71E+00	3.64E+00
	TH-231	25.64		14.70	5.02E-01	5.02E-01	-1.69E-01	2.44E-01
		84.21		6.40	2.10E+00		-5.72E-01	1.03E+00
	PA-233	311.98		38.60	5.35E-01	5.35E-01	3.64E-02	2.55E-01
	PA-234	131.20		20.40	7.12E-01	7.12E-01	8.36E-01	3.47E-01
		733.99		8.80	2.40E+00		-2.43E+00	1.10E+00
		946.00		12.00	2.06E+00		8.32E-01	9.35E-01
	PA-234M	1001.03		0.92	2.88E+01	2.88E+01	-4.48E+00	1.31E+01
	TH-234	63.29		3.80	3.16E+00	3.16E+00	2.52E+00	1.55E+00
	U-235	143.76		10.50	1.33E+00	1.33E+00	1.57E-01	6.46E-01
		163.35		4.70	3.14E+00		2.83E+00	1.52E+00
		205.31		4.70	3.53E+00		9.08E-01	1.71E+00
	NP-237	86.50		12.60	1.12E+00	1.12E+00	2.07E-02	5.46E-01
	NP-239	106.10		22.70	6.98E+00	6.98E+00	-1.41E+00	3.39E+00
		228.18		10.70	2.08E+01		-1.06E+01	1.00E+01
		277.60		14.10	1.59E+01		-3.01E+00	7.62E+00
	AM-241	59.54		35.90	3.11E-01	3.11E-01	1.12E-01	1.52E-01
	AM-243	74.67		66.00	2.58E-01	2.58E-01	9.56E-01	1.27E-01
	CM-243	209.75		3.29	5.15E+00	1.19E+00	1.43E+00	2.49E+00
		228.14		10.60	1.56E+00		-5.30E-01	7.52E-01
		277.60		14.00	1.19E+00		-2.25E-01	5.69E-01

\+ = Nuclide identified during the nuclide identification
* = Energy line found in the spectrum
\> = MDA value not calculated
@ = Half-life too short to be able to perform the decay correction

No Action Level results available for reporting purposes.

Analysis Report for 1606064-15

CP-5013 05-09

DATA REVIEW COMMENTS REPORT

Creation Date	Comment	User

No Data Review Comments Entered.

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

Sample Title: CP-5013 05-09

Elapsed Live time: 3600
Elapsed Real Time: 3619

Channel								
1:	0	0	0	0	0	0	0	0
9:	0	0	0	0	0	0	19	74
17:	64	70	58	65	42	58	57	60
25:	49	41	48	58	55	45	47	55
33:	44	57	44	54	47	50	48	50
41:	48	48	53	44	67	103	57	51
49:	64	49	59	78	61	49	53	71
57:	65	63	70	80	70	90	120	90
65:	67	80	83	82	63	84	74	96
73:	128	183	210	228	189	108	73	69
81:	76	71	82	81	77	86	89	80
89:	101	79	95	120	99	70	57	47
97:	40	50	52	43	48	42	38	49
105:	54	31	45	48	44	37	42	56
113:	48	51	52	49	47	26	34	39
121:	45	39	31	48	44	50	46	52
129:	59	55	50	56	50	43	35	39
137:	32	43	46	45	41	35	52	49
145:	36	34	34	46	40	39	43	39
153:	39	36	43	25	30	35	40	24
161:	37	41	42	43	43	40	30	29
169:	22	33	26	33	29	30	36	36
177:	23	30	29	30	30	35	27	35
185:	67	74	49	27	26	26	39	46
193:	33	33	27	27	33	26	32	28
201:	28	33	36	32	28	34	26	40
209:	40	34	31	32	33	28	28	28
217:	19	22	17	27	32	32	26	29
225:	26	36	30	19	27	24	27	24
233:	38	27	31	28	83	162	151	92
241:	49	37	26	32	16	21	19	27
249:	10	18	22	20	26	30	17	12
257:	24	25	18	20	19	15	16	16
265:	20	11	10	17	22	29	21	19
273:	18	22	26	20	17	22	15	20
281:	12	15	21	20	16	13	23	28
289:	16	11	19	16	20	56	57	49
297:	26	16	22	24	13	30	16	16
305:	11	15	19	12	15	15	18	14
313:	17	10	15	15	12	18	15	13
321:	8	8	13	13	14	18	26	11
329:	15	15	15	13	14	18	15	13
337:	34	33	34	20	18	17	22	13
345:	17	18	12	19	15	28	75	79
353:	49	14	19	11	15	14	9	16
361:	15	11	8	12	18	13	13	12

369:	11	11	16	8	17	15	12	5

Sample Title: CP-5013 05-09

Channel								
377:	16	16	14	9	15	11	11	18
385:	10	16	13	14	7	8	13	20
393:	7	16	8	13	5	17	17	14
401:	5	12	10	15	6	15	7	10
409:	19	13	9	11	6	5	16	7
417:	13	14	9	9	8	10	15	11
425:	8	10	9	12	11	12	11	9
433:	11	12	7	13	7	5	15	11
441:	12	13	10	8	5	8	6	3
449:	12	11	9	6	8	6	9	14
457:	8	4	7	15	7	21	14	16
465:	7	9	5	12	17	17	13	12
473:	15	8	12	10	10	5	8	7
481:	6	4	6	12	8	9	7	10
489:	5	12	6	10	6	5	9	4
497:	8	11	4	10	11	10	9	8
505:	7	7	9	8	21	24	38	30
513:	14	6	6	8	9	8	5	9
521:	10	8	8	9	9	7	11	4
529:	9	11	12	11	4	12	7	7
537:	7	7	7	5	7	10	12	7
545:	7	7	8	4	9	6	6	3
553:	10	6	5	5	11	8	4	6
561:	9	10	9	8	7	10	8	8
569:	8	4	9	6	6	6	3	10
577:	7	9	10	4	13	27	38	34
585:	18	4	4	9	11	10	6	5
593:	9	10	13	7	5	10	8	7
601:	11	8	8	5	6	9	9	16
609:	51	27	12	6	3	4	4	12
617:	10	9	8	5	6	5	5	2
625:	5	10	7	6	8	7	5	6
633:	5	9	4	7	5	5	11	4
641:	3	8	11	5	5	9	4	10
649:	10	3	5	3	3	4	7	2
657:	5	7	8	7	9	8	9	4
665:	6	11	6	5	5	9	5	4
673:	3	7	8	8	4	8	8	3
681:	7	8	7	6	4	6	3	6
689:	5	5	7	6	9	6	5	8
697:	3	2	7	6	7	4	9	7
705:	8	5	8	7	6	8	11	2
713:	6	4	6	6	5	8	6	10
721:	8	10	6	7	10	11	11	11
729:	7	3	5	3	4	6	4	6
737:	2	6	4	8	7	7	7	5
745:	4	8	7	11	3	4	7	9
753:	2	2	4	5	2	6	2	7
761:	4	4	6	5	6	4	3	7
769:	7	6	4	3	6	6	3	5
777:	1	7	1	5	2	6	5	10
785:	4	9	3	8	4	6	3	6
793:	4	6	9	8	3	3	7	4

801:	2	0	1	6	8	6	4	8

Sample Title: CP-5013 05-09

Channel								
809:	4	4	8	3	6	2	7	7
817:	4	3	7	4	7	3	5	4
825:	7	5	4	2	4	8	4	1
833:	8	0	3	6	9	7	6	3
841:	3	4	3	5	5	4	4	3
849:	7	3	6	6	2	6	4	1
857:	3	8	10	6	13	2	5	4
865:	5	2	5	3	4	5	4	5
873:	5	3	6	8	4	4	5	4
881:	5	2	8	4	3	2	5	4
889:	6	5	4	4	4	5	4	0
897:	5	8	1	1	4	3	4	5
905:	4	3	6	3	7	17	28	25
913:	8	4	2	4	4	5	3	3
921:	4	6	4	6	5	0	2	1
929:	6	3	1	2	3	4	6	3
937:	3	5	1	1	3	0	4	1
945:	2	6	3	7	4	5	3	2
953:	4	8	5	4	6	4	5	7
961:	3	5	6	8	11	6	7	15
969:	23	13	11	5	3	2	8	6
977:	4	2	4	1	1	2	4	1
985:	3	2	3	6	3	4	8	3
993:	4	4	5	3	2	3	4	4
1001:	4	6	3	2	5	6	6	1
1009:	6	2	7	1	3	4	4	6
1017:	9	3	3	6	7	3	1	2
1025:	4	2	4	5	2	4	0	4
1033:	7	6	7	2	5	8	4	4
1041:	6	8	5	6	5	3	2	1
1049:	3	3	6	4	3	2	3	0
1057:	1	4	3	7	5	3	4	1
1065:	1	2	4	5	3	4	3	4
1073:	2	3	1	5	5	3	2	0
1081:	5	2	4	4	1	3	4	4
1089:	3	4	2	3	4	2	7	4
1097:	4	2	1	2	3	4	4	4
1105:	3	5	4	3	1	5	2	8
1113:	5	1	4	8	2	7	1	14
1121:	10	6	7	1	3	2	2	1
1129:	3	4	1	1	7	6	4	4
1137:	6	7	2	3	3	2	2	1
1145:	8	3	7	0	2	4	3	1
1153:	7	6	2	7	7	2	5	4
1161:	2	4	4	2	3	4	3	3
1169:	0	3	5	0	6	4	4	5
1177:	4	5	6	4	1	3	3	2
1185:	3	3	5	3	3	3	4	4
1193:	1	2	5	4	3	3	2	2
1201:	4	3	3	1	6	4	5	2
1209:	4	4	6	7	6	5	6	3
1217:	2	2	3	4	1	6	5	9
1225:	5	3	5	8	3	2	2	4

1233:	3	2	2	6	5	11	4	2

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Channel								
1241:	8	4	3	9	6	3	5	3
1249:	6	4	0	2	3	3	0	7
1257:	4	1	3	2	3	3	1	1
1265:	3	5	3	0	5	3	3	3
1273:	1	2	3	4	3	3	4	4
1281:	5	2	1	3	1	4	1	4
1289:	0	1	4	5	1	3	4	3
1297:	4	4	2	1	3	3	5	1
1305:	0	2	2	3	1	4	2	5
1313:	5	4	2	3	3	4	6	1
1321:	1	2	4	4	0	4	4	2
1329:	2	4	1	1	2	2	1	2
1337:	3	3	1	2	3	2	3	3
1345:	2	0	4	2	2	4	0	1
1353:	2	4	2	2	3	1	3	1
1361:	0	3	3	2	1	0	0	1
1369:	1	1	1	3	0	3	1	4
1377:	0	4	5	3	3	1	0	1
1385:	2	1	1	2	1	0	2	2
1393:	1	2	3	1	2	2	3	2
1401:	0	1	0	0	1	1	0	3
1409:	1	3	2	1	5	1	1	1
1417:	1	4	2	1	1	2	3	2
1425:	1	2	5	0	0	2	0	1
1433:	0	2	1	0	3	0	2	1
1441:	1	1	0	0	0	2	0	2
1449:	1	2	6	0	1	3	2	0
1457:	2	1	11	44	69	67	25	5
1465:	2	1	0	0	2	0	0	0
1473:	2	2	2	2	2	1	0	2
1481:	2	0	1	1	1	0	1	1
1489:	3	0	0	0	0	1	0	1
1497:	1	3	1	1	2	0	3	2
1505:	3	0	1	0	1	0	2	2
1513:	0	4	1	1	0	2	0	2
1521:	1	2	0	0	1	2	2	1
1529:	0	0	0	0	0	0	1	1
1537:	1	2	6	1	2	1	2	1
1545:	1	0	2	0	1	3	1	1
1553:	1	0	1	0	1	0	1	2
1561:	1	2	0	2	0	0	1	0
1569:	0	0	0	0	1	1	2	0
1577:	0	0	0	2	0	1	3	2
1585:	2	0	2	1	4	2	1	1
1593:	2	4	2	0	1	0	0	0
1601:	3	1	0	0	0	2	0	2
1609:	0	2	0	1	1	1	1	1
1617:	0	3	1	1	4	3	0	0
1625:	1	0	1	1	0	1	0	2
1633:	1	2	0	1	0	2	0	1
1641:	1	0	2	1	2	0	2	0
1649:	1	0	2	0	0	2	0	0
1657:	0	1	0	2	1	1	1	1

1665:	0	0	0	0	2	0	0	0

Sample Title: CP-5013 05-09

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

2097:	0	0	0	2	2	1	5	5

Sample Title: CP-5013 05-09

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

2529:	0	0	1	0	0	0	0	0

Sample Title: CP-5013 05-09

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

2961:	1	0	0	0	0	1	0	0

Sample Title: CP-5013 05-09

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

3393:	0	0	0	1	1	0	0	0

Sample Title: CP-5013 05-09

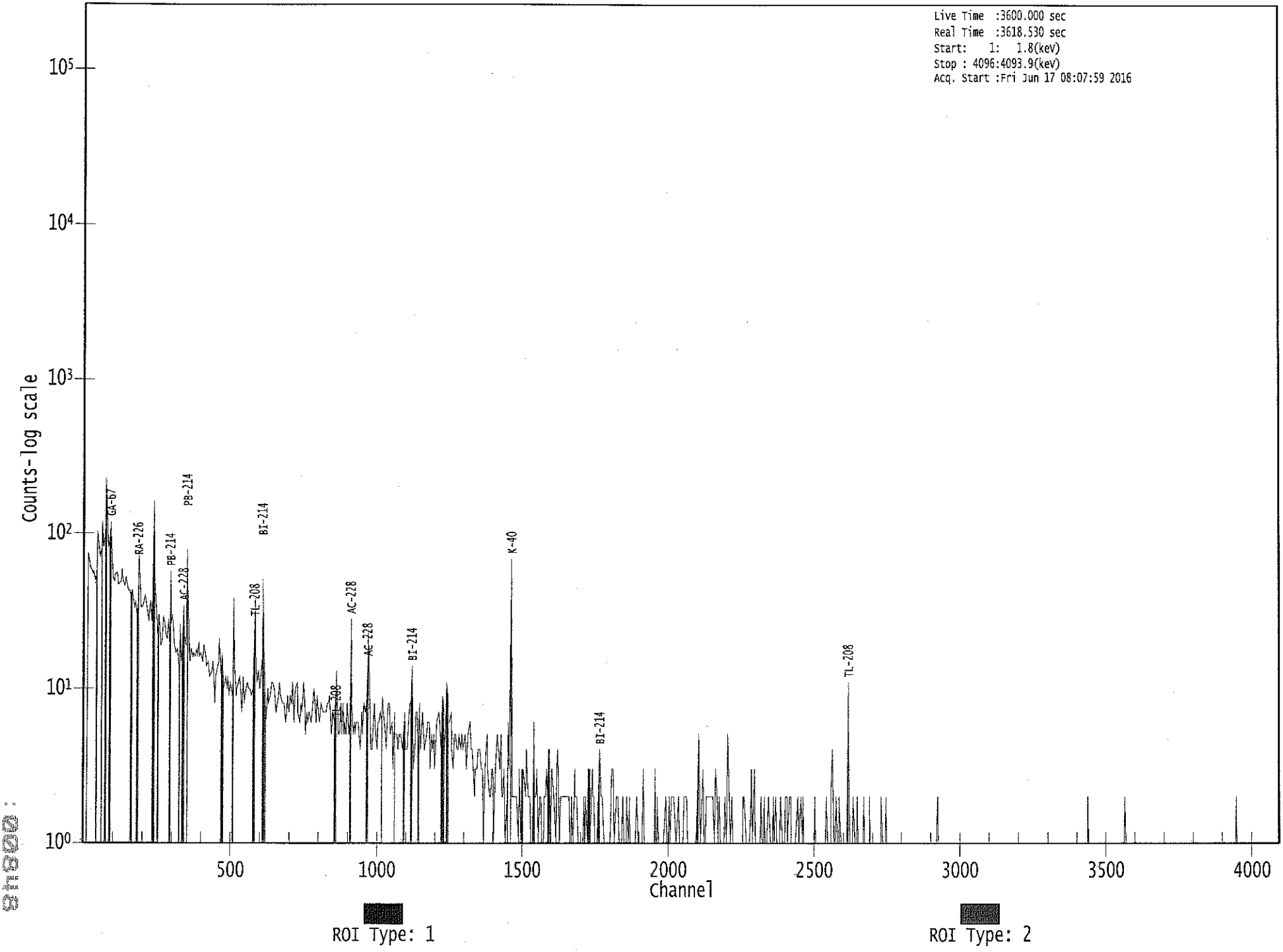
Channel								
3401:	1	0	0	1	0	1	0	0
3409:	1	0	0	0	0	0	0	0
3417:	0	0	0	0	0	0	0	0
3425:	0	0	1	0	1	0	0	0
3433:	0	0	0	0	2	0	0	0
3441:	0	0	0	0	0	0	0	0
3449:	0	0	0	0	0	1	0	0
3457:	0	0	1	0	0	0	0	1
3465:	0	0	1	0	0	0	0	0
3473:	0	0	0	0	0	1	0	0
3481:	0	0	1	0	0	0	0	1
3489:	0	0	0	0	0	1	0	0
3497:	0	0	0	0	0	0	1	0
3505:	1	0	0	0	0	0	1	0
3513:	0	0	0	0	0	0	0	0
3521:	0	0	0	0	0	0	0	0
3529:	0	0	0	1	0	0	1	0
3537:	0	0	1	0	1	0	0	0
3545:	0	0	0	0	0	0	0	0
3553:	0	0	0	0	0	0	0	0
3561:	0	1	0	0	2	0	0	0
3569:	0	0	0	0	0	0	0	0
3577:	0	0	0	0	0	0	0	0
3585:	0	1	1	0	0	0	1	0
3593:	0	0	0	0	0	1	0	0
3601:	0	0	0	0	0	0	0	1
3609:	0	0	0	0	0	0	0	0
3617:	0	0	0	0	0	0	0	0
3625:	1	0	0	0	0	0	1	0
3633:	0	1	0	0	0	0	0	0
3641:	0	0	0	0	0	0	0	0
3649:	0	1	1	0	0	0	0	0
3657:	0	1	0	0	0	0	0	0
3665:	0	0	0	1	0	0	0	0
3673:	0	0	0	0	0	0	0	1
3681:	0	0	0	0	0	0	0	0
3689:	0	0	1	0	0	0	0	0
3697:	0	0	0	0	0	0	0	0
3705:	0	0	0	0	0	1	0	0
3713:	0	0	0	0	0	0	0	0
3721:	0	0	0	0	0	0	1	0
3729:	0	0	0	1	0	0	0	0
3737:	1	0	0	0	0	0	0	0
3745:	1	0	1	0	0	0	0	0
3753:	0	0	0	0	0	0	0	0
3761:	0	0	0	0	0	0	0	0
3769:	0	0	0	0	0	0	0	0
3777:	0	1	0	0	0	0	0	1
3785:	0	0	0	0	0	0	0	0
3793:	1	0	0	0	0	0	0	0
3801:	0	0	0	0	0	0	0	0
3809:	1	0	0	0	0	1	0	0
3817:	0	0	0	0	0	0	0	0

3825:	0	0	0	0	0	0	0	0

Sample Title: CP-5013 05-09

Channel								
3833:	0	0	0	0	0	0	0	0
3841:	0	0	1	0	0	0	0	0
3849:	0	0	1	1	0	0	0	0
3857:	1	1	0	1	0	1	0	0
3865:	0	0	0	0	0	0	0	0
3873:	0	1	0	0	0	0	0	0
3881:	0	0	0	0	0	0	0	0
3889:	0	0	0	0	0	0	0	0
3897:	0	0	1	0	0	0	0	0
3905:	0	0	0	0	1	0	0	0
3913:	0	0	0	0	0	0	0	0
3921:	1	0	0	1	0	0	1	1
3929:	0	0	0	0	0	0	0	0
3937:	0	0	0	0	0	0	0	0
3945:	0	0	2	0	0	0	0	0
3953:	0	0	0	0	0	0	0	0
3961:	0	0	0	1	0	0	1	0
3969:	0	0	0	0	0	0	0	0
3977:	0	0	0	1	1	0	0	0
3985:	0	0	0	0	0	0	0	1
3993:	0	0	0	0	0	0	0	0
4001:	0	0	0	1	0	1	0	0
4009:	0	1	0	0	0	0	1	0
4017:	0	0	0	0	0	0	0	0
4025:	1	0	0	0	0	0	1	0
4033:	0	0	0	0	0	0	0	0
4041:	0	0	0	0	0	0	1	0
4049:	0	0	0	0	1	0	0	0
4057:	0	1	0	0	0	1	0	0
4065:	1	0	0	0	0	0	0	0
4073:	0	0	0	0	0	0	0	0
4081:	0	0	0	0	0	0	1	1
4089:	0	0	0	0	0	0	0	0

0000039067.CNF



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

6/16

Last Results Report
6/16/16 6:04:08 AM

QA File: \\OR-GAMMA1\ApexRoot\Countroom\QA\D0000000001B.QCK

Detector: GE1
Geometry: <None>
Certificate: <None>
Sample ID: QA Background Ch
Sample Desc: QA Count
Sample Quantity: 1.0000E+000
Sample Date: 6/16/16 5:48:55 AM
Measurement Date: 6/16/16 5:48:57 AM
Elapsed Live Time: 900.0 seconds
Elapsed Real Time: 900.1 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
DAILY BKG CT RATE GE1	2.3678E+000	5.7781E-002
[SD: 2.2815E+000+/- 1.492]		< : : : >

Trend Test: The last 9 samples exhibit a bias trend.

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

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

Last Results Report
6/16/16 6:04:17 AM

6/16

QA File: \\OR-GAMMA1\ApexRoot\Countroom\QA\D0000000002B.QCK

Detector: GE2
Geometry: <None>
Certificate: <None>
Sample ID: QA Background Ch
Sample Desc: QA Count
Sample Quantity: 1.0000E+000
Sample Date: 6/16/16 5:49:03 AM
Measurement Date: 6/16/16 5:49:05 AM
Elapsed Live Time: 900.0 seconds
Elapsed Real Time: 900.2 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
DAILY BKG CT RATE GE2	3.4578E+000	3.7851E-002
[SD:-2.4376E+035+/-******]		< : : : >

Trend Test: The last 9 samples exhibit a bias trend.

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

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

Last Results Report
6/16/16 6:04:25 AM

6116

QA File: \\OR-GAMMA1\ApexRoot\Countroom\QA\D0000000003B.QCK

Detector: GE3
Geometry: <None>
Certificate: <None>
Sample ID: QA Background Ch
Sample Desc: QA Count
Sample Quantity: 1.0000E+000
Sample Date: 6/16/16 5:49:11 AM
Measurement Date: 6/16/16 5:49:13 AM
Elapsed Live Time: 900.0 seconds
Elapsed Real Time: 902.9 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
DAILY BKG CT RATE GE3 [SD: 2.2369E+003+/-1366.4]	1.5880E+003	-4.7485E-001 < : : : >

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

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

Last Results Report
6/16/16 6:04:33 AM

6/16

QA File: \\OR-GAMMA1\ApexRoot\Countroom\QA\D0000000004B.QCK

Detector: GE4
Geometry: <None>
Certificate: <None>
Sample ID: QA Background Ch
Sample Desc: QA Count
Sample Quantity: 1.0000E+000
Sample Date: 6/16/16 5:49:18 AM
Measurement Date: 6/16/16 5:49:20 AM
Elapsed Live Time: 900.0 seconds
Elapsed Real Time: 900.2 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
DAILY BKG CT RATE GE4 [SD: 9.5453E+000+/-157.17]	1.5322E+000	-5.0981E-002 < : : : >

Trend Test: The last 9 samples exhibit a bias trend.

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

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

Last Results Report
6/16/16 7:26:52 AM

6/16

QA File: \\OR-GAMMA1\ApexRoot\Countroom\QA\D0000000001GAF-14C.QCK

Detector: GE1
Geometry: <None>
Certificate: GAF-14
Sample ID: QA Calibration C
Sample Desc: QA Count
Sample Quantity: 1.0000E+000
Sample Date: 10/1/14 12:00:00 AM
Measurement Date: 6/16/16 7:11:21 AM
Elapsed Live Time: 900.0 seconds
Elapsed Real Time: 918.4 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
Peak centroid 59.54 kev	6.0471E+001	
Boundary Limits: [5.800E+001, 6.100E+001]		< : : : >
Trend Test: The last 9 samples exhibit a bias trend.		
Peak centroid 661.65 kev	6.6241E+002	
Boundary Limits: [6.600E+002, 6.630E+002]		< : : : >
Trend Test: The last 9 samples exhibit a bias trend.		
Peak centroid 1332.49 ke	1.3334E+003	
Boundary Limits: [1.331E+003, 1.334E+003]		< : : : >
Trend Test: The last 9 samples exhibit a bias trend.		
Peak centroid 1836.01 ke	1.8367E+003	
Boundary Limits: [1.834E+003, 1.838E+003]		< : : : >
Peak FWHM Am-241	8.8355E-001	
Boundary Limits: [5.000E-001, 3.000E+000]		< : : : >
Trend Test: The last 9 samples exhibit a bias trend.		
Peak FWHM Cs-137	2.0406E+000	
Boundary Limits: [5.000E-001, 3.000E+000]		< : : : >
Peak FWHM Co-60	2.1487E+000	
Boundary Limits: [5.000E-001, 3.000E+000]		< : : : >
Peak FWHM Y-90	2.2832E+000	
Boundary Limits: [5.000E-001, 3.000E+000]		< : : : >
Decay corrected activity	1.7215E+004	
Boundary Limits: [1.170E-002, 1.754E-002]		< : : : >
Trend Test: The last 9 samples exhibit a bias trend.		

Decay corrected activity 6.5708E+003
Boundary Limits: [4.716E-003, 7.075E-003] < : : : >

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
Decay corrected activity Boundary Limits: [7.572E-003, 1.136E-002]	1.0745E+004	< : : : >
Trend Test: The last 9 samples exhibit a bias trend.		
Decay corrected activity Boundary Limits: [1.626E-002, 2.440E-002]	1.9594E+004	< : : : >

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
6/16/16 5:39:56 AM

6/16

QA File: \\OR-GAMMA1\ApexRoot\Countroom\QA\D0000000002GAS-1401C.QC

Detector: GE2
Geometry: <None>
Certificate: GAS-1401
Sample ID: QA Calibration C
Sample Desc: QA Count
Sample Quantity: 1.0000E+000
Sample Date: 10/1/14 12:00:00 AM
Measurement Date: 6/16/16 5:24:17 AM
Elapsed Live Time: 900.0 seconds
Elapsed Real Time: 928.0 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
Peak centroid 59.54kev	5.9878E+001	
Boundary Limits: [5.800E+001, 6.100E+001]		< : : : >
Peak centroid 661.65 kev	6.6133E+002	
Boundary Limits: [6.600E+002, 6.640E+002]		< : : : >
Trend Test: The last 9 samples exhibit a bias trend.		
Peak centroid 1332.49 ke	1.3320E+003	
Boundary Limits: [1.331E+003, 1.334E+003]		< : : : >
Trend Test: The last 9 samples exhibit a bias trend.		
Peak centroid 1836.1 kev	1.8353E+003	
Boundary Limits: [1.834E+003, 1.838E+003]		< : : : >
Trend Test: The last 9 samples exhibit a bias trend.		
Peak FWHM Am-241	1.6498E+000	
Boundary Limits: [5.000E-001, 3.000E+000]		< : : : >
Peak FWHM Cs-137	1.8564E+000	
Boundary Limits: [5.000E-001, 3.000E+000]		< : : : >
Peak FWHM Co-60	1.8804E+000	
Boundary Limits: [5.000E-001, 3.000E+000]		< : : : >
Peak FWHM Y-88	2.4911E+000	
Boundary Limits: [5.000E-001, 3.000E+000]		< : : : >
Trend Test: The last 9 samples exhibit a bias trend.		
Decay corrected activity	1.4760E+005	
Boundary Limits: [1.224E-001, 1.836E-001]		< : : : >
Decay corrected activity	6.1547E+004	

Boundary Limits: [4.971E-002, 7.457E-002]		< : : : >
Decay corrected activity	9.8284E+004	
Boundary Limits: [7.978E-002, 1.197E-001]		< : : : >

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
Decay corrected activity	2.0307E+005	
Boundary Limits: [1.714E-001, 2.571E-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 *****
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6116

Last Results Report
6/16/16 7:09:58 AM

QA File: \\OR-GAMMA1\ApexRoot\Countroom\QA\D0000000003GAS-1402C.QC

Detector: GE3
Geometry: <None>
Certificate: GAS-1402
Sample ID: QA Calibration C
Sample Desc: QA Count
Sample Quantity: 1.0000E+000
Sample Date: 10/1/14 12:00:00 AM
Measurement Date: 6/16/16 6:54:18 AM
Elapsed Live Time: 900.0 seconds
Elapsed Real Time: 930.6 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
Peak centroid 59.54 kev	6.0000E+001	
Boundary Limits: [5.800E+001, 6.100E+001]		< : : : >
Trend Test: The last 9 samples exhibit a bias trend.		
Peak centroid 661.65 kev	6.6197E+002	
Boundary Limits: [6.600E+002, 6.640E+002]		< : : : >
Peak centroid 1332.49 ke	1.3326E+003	
Boundary Limits: [1.331E+003, 1.334E+003]		< : : : >
Peak centroid 1836.1 kev	1.8361E+003	
Boundary Limits: [1.833E+003, 1.838E+003]		< : : : >
Peak FWHM Am-241	1.3791E+000	
Boundary Limits: [5.000E-001, 3.000E+000]		< : : : >
Trend Test: The last 9 samples exhibit a bias trend.		
Peak FWHM Cs-137	1.7210E+000	
Boundary Limits: [5.000E-001, 3.000E+000]		< : : : >
Peak FWHM Co-60	2.2776E+000	
Boundary Limits: [5.000E-001, 3.000E+000]		< : : : >
Peak FWHM Y-88	2.4288E+000	
Boundary Limits: [5.000E-001, 3.000E+000]		< : : : >
Decay corrected activity	1.6957E+005	
Boundary Limits: [1.223E-001, 1.834E-001]		< : : : >
Decay corrected activity	6.7611E+004	
Boundary Limits: [4.969E-002, 7.453E-002]		< : : : >

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
Decay corrected activity	1.0346E+005	
Boundary Limits: [7.972E-002, 1.120E-001]		< : : : >
Decay corrected activity	2.1390E+005	
Boundary Limits: [1.713E-001, 2.569E-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 *****
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Last Results Report
6/16/16 5:40:22 AM

6/16

QA File: \\OR-GAMMA1\ApexRoot\Countroom\QA\D0000000004GAW-14C.QCK

Detector: GE4
Geometry: <None>
Certificate: GAW-14
Sample ID: QA Calibration C
Sample Desc: QA Count
Sample Quantity: 1.0000E+000
Sample Date: 10/1/14 12:00:00 AM
Measurement Date: 6/16/16 5:24:34 AM
Elapsed Live Time: 900.0 seconds
Elapsed Real Time: 935.5 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
Peak centroid 59.54 kev	5.8816E+001	
Boundary Limits: [5.800E+001, 6.100E+001]		< : : : >
Trend Test: The last 9 samples exhibit a bias trend.		
Peak centroid 661.65 kev	6.6101E+002	
Boundary Limits: [6.600E+002, 6.630E+002]		< : : : >
Peak centroid 1332.49 ke	1.3320E+003	
Boundary Limits: [1.331E+003, 1.334E+003]		< : : : >
Peak centroid 1836.1 kev	1.8356E+003	
Boundary Limits: [1.834E+003, 1.838E+003]		< : : : >
Trend Test: The last 9 samples exhibit a bias trend.		
Peak FWHM Am-241	2.2044E+000	
Boundary Limits: [5.000E-001, 3.000E+000]		< : : : >
Trend Test: The last 9 samples exhibit a bias trend.		
Peak FWHM Cs-137	2.5433E+000	
Boundary Limits: [5.000E-001, 3.000E+000]		< : : : >
Trend Test: The last 9 samples exhibit a bias trend.		
Peak FWHM Co-60	2.8396E+000	
Boundary Limits: [5.000E-001, 3.000E+000]		< : : : >
Peak FWHM Y-88	2.8656E+000	
Boundary Limits: [5.000E-001, 3.500E+000]		< : : : >
Decay corrected activity	1.2556E+005	
Boundary Limits: [1.200E-001, 1.816E-001]		< : : : >
Decay corrected activity	6.8489E+004	

Boundary Limits: [4.918E-002, 7.377E-002] < : : : >
Trend Test: The last 9 samples exhibit a bias trend.

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
Decay corrected activity	1.0589E+005	
Boundary Limits: [7.892E-002, 1.184E-001]		< : : : >
Trend Test: The last 9 samples exhibit a bias trend.		
Decay corrected activity	2.3119E+005	
Boundary Limits: [1.695E-001, 2.543E-001]		< : : : >
Trend Test: The last 9 samples exhibit a bias trend.		

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

****
***** GENIE QUALITY ASSURANCE *****
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Last Results Report
6/17/16 6:07:22 AM

6/17

QA File: \\OR-GAMMA1\ApexRoot\Countroom\QA\D0000000003B.QCK

Detector: GE3
Geometry: <None>
Certificate: <None>
Sample ID: QA Background Ch
Sample Desc: QA Count
Sample Quantity: 1.0000E+000
Sample Date: 6/17/16 5:52:08 AM
Measurement Date: 6/17/16 5:52:10 AM
Elapsed Live Time: 900.0 seconds
Elapsed Real Time: 902.7 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
DAILY BKG CT RATE GE3 [SD: 2.2359E+003+/-1365.6]	1.6340E+003	-4.4075E-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 *****
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Last Results Report
6/17/16 5:40:01 AM

6/17

QA File: \\OR-GAMMA1\ApexRoot\Countroom\QA\D0000000003GAS-1402C.QC

Detector: GE3
Geometry: <None>
Certificate: GAS-1402
Sample ID: QA Calibration C
Sample Desc: QA Count
Sample Quantity: 1.0000E+000
Sample Date: 10/1/14 12:00:00 AM
Measurement Date: 6/17/16 5:24:20 AM
Elapsed Live Time: 900.0 seconds
Elapsed Real Time: 930.2 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
Peak centroid 59.54 kev	6.0000E+001	
Boundary Limits: [5.800E+001, 6.100E+001]		< : : : >
Trend Test: The last 9 samples exhibit a bias trend.		
Peak centroid 661.65 kev	6.6180E+002	
Boundary Limits: [6.600E+002, 6.640E+002]		< : : : >
Peak centroid 1332.49 ke	1.3325E+003	
Boundary Limits: [1.331E+003, 1.334E+003]		< : : : >
Peak centroid 1836.1 kev	1.8361E+003	
Boundary Limits: [1.833E+003, 1.838E+003]		< : : : >
Peak FWHM Am-241	1.4141E+000	
Boundary Limits: [5.000E-001, 3.000E+000]		< : : : >
Trend Test: The last 9 samples exhibit a bias trend.		
Peak FWHM Cs-137	1.7543E+000	
Boundary Limits: [5.000E-001, 3.000E+000]		< : : : >
Trend Test: The last 9 samples exhibit a bias trend.		
Peak FWHM Co-60	2.3699E+000	
Boundary Limits: [5.000E-001, 3.000E+000]		< : : : >
Peak FWHM Y-88	2.5712E+000	
Boundary Limits: [5.000E-001, 3.000E+000]		< : : : >
Decay corrected activity	1.6817E+005	
Boundary Limits: [1.223E-001, 1.834E-001]		< : : : >
Decay corrected activity	6.5217E+004	
Boundary Limits: [4.969E-002, 7.453E-002]		< : : : >

Decay corrected activity	1.0349E+005	
Boundary Limits: [7.972E-002,	1.120E-001]	< : : : >

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
Decay corrected activity	2.2895E+005	
Boundary Limits: [1.713E-001,	2.569E-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 *****
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Last Results Report
6/17/16 6:54:07 AM

6/17

QA File: \\OR-GAMMA1\ApexRoot\Countroom\QA\D0000000004GAW-14C.QCK

Detector: GE4
Geometry: <None>
Certificate: GAW-14
Sample ID: QA Calibration C
Sample Desc: QA Count
Sample Quantity: 1.0000E+000
Sample Date: 10/1/14 12:00:00 AM
Measurement Date: 6/17/16 6:38:20 AM
Elapsed Live Time: 900.0 seconds
Elapsed Real Time: 935.2 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
Peak centroid 59.54 kev	5.8841E+001	
Boundary Limits: [5.800E+001, 6.100E+001]		< : : : >
Trend Test: The last 9 samples exhibit a bias trend.		
Peak centroid 661.65 kev	6.6133E+002	
Boundary Limits: [6.600E+002, 6.630E+002]		< : : : >
Peak centroid 1332.49 ke	1.3329E+003	
Boundary Limits: [1.331E+003, 1.334E+003]		< : : : >
Peak centroid 1836.1 kev	1.8369E+003	
Boundary Limits: [1.834E+003, 1.838E+003]		< : : : >
Trend Test: The last 9 samples exhibit a bias trend.		
Peak FWHM Am-241	2.2102E+000	
Boundary Limits: [5.000E-001, 3.000E+000]		< : : : >
Trend Test: The last 9 samples exhibit a bias trend.		
Peak FWHM Cs-137	2.6132E+000	
Boundary Limits: [5.000E-001, 3.000E+000]		< : : : >
Trend Test: The last 9 samples exhibit a bias trend.		
Peak FWHM Co-60	2.8010E+000	
Boundary Limits: [5.000E-001, 3.000E+000]		< : : : >
Peak FWHM Y-88	3.2130E+000	
Boundary Limits: [5.000E-001, 3.500E+000]		< : : : >
Decay corrected activity	1.2554E+005	
Boundary Limits: [1.200E-001, 1.816E-001]		< : : : >
Decay corrected activity	6.7746E+004	

Boundary Limits: [4.918E-002, 7.377E-002] < : : : >
Trend Test: The last 9 samples exhibit a bias trend.

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
Decay corrected activity	1.0531E+005	
Boundary Limits: [7.892E-002, 1.184E-001]		< : : : >
Trend Test: The last 9 samples exhibit a bias trend.		
Decay corrected activity	2.5364E+005	
Boundary Limits: [1.695E-001, 2.543E-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 *****
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6117

Last Results Report
6/17/16 6:07:30 AM

QA File: \\OR-GAMMA1\ApexRoot\Countroom\QA\D0000000004B.QCK

Detector: GE4
Geometry: <None>
Certificate: <None>
Sample ID: QA Background Ch
Sample Desc: QA Count
Sample Quantity: 1.0000E+000
Sample Date: 6/17/16 5:52:16 AM
Measurement Date: 6/17/16 5:52:18 AM
Elapsed Live Time: 900.0 seconds
Elapsed Real Time: 900.2 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
DAILY BKG CT RATE GE4 [SD: 9.5336E+000+/-157.06]	1.5811E+000	-5.0633E-002 < : : : >

Trend Test: The last 9 samples exhibit a bias trend.

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

****
***** GENIE QUALITY ASSURANCE *****
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Last Results Report
6/17/16 7:11:39 AM

6/17

QA File: \\OR-GAMMA1\ApexRoot\Countroom\QA\D0000000001GAF-14C.QCK

Detector: GE1
Geometry: <None>
Certificate: GAF-14
Sample ID: QA Calibration C
Sample Desc: QA Count
Sample Quantity: 1.0000E+000
Sample Date: 10/1/14 12:00:00 AM
Measurement Date: 6/17/16 6:56:07 AM
Elapsed Live Time: 900.0 seconds
Elapsed Real Time: 918.5 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
Peak centroid 59.54 kev	6.0493E+001	
Boundary Limits: [5.800E+001, 6.100E+001]		< : : : >
Trend Test: The last 9 samples exhibit a bias trend.		
Peak centroid 661.65 kev	6.6246E+002	
Boundary Limits: [6.600E+002, 6.630E+002]		< : : : >
Trend Test: The last 9 samples exhibit a bias trend.		
Peak centroid 1332.49 ke	1.3334E+003	
Boundary Limits: [1.331E+003, 1.334E+003]		< : : : >
Trend Test: The last 9 samples exhibit a bias trend.		
Peak centroid 1836.01 ke	1.8366E+003	
Boundary Limits: [1.834E+003, 1.838E+003]		< : : : >
Peak FWHM Am-241	8.5950E-001	
Boundary Limits: [5.000E-001, 3.000E+000]		< : : : >
Trend Test: The last 9 samples exhibit a bias trend.		
Peak FWHM Cs-137	2.1036E+000	
Boundary Limits: [5.000E-001, 3.000E+000]		< : : : >
Peak FWHM Co-60	2.1715E+000	
Boundary Limits: [5.000E-001, 3.000E+000]		< : : : >
Peak FWHM Y-90	2.8952E+000	
Boundary Limits: [5.000E-001, 3.000E+000]		< : : : >
Decay corrected activity	1.7597E+004	
Boundary Limits: [1.170E-002, 1.754E-002]		<Ab : : : >
Trend Test: The last 9 samples exhibit a bias trend.		

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
Decay corrected activity	6.4198E+003	
Boundary Limits: [4.716E-003, 7.075E-003]		< : : : >
Decay corrected activity	1.1028E+004	
Boundary Limits: [7.572E-003, 1.136E-002]		< : : : >
Decay corrected activity	1.9175E+004	
Boundary Limits: [1.626E-002, 2.440E-002]		< : : : >

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

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***** GENIE QUALITY ASSURANCE *****
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6117

Last Results Report
6/17/16 6:07:05 AM

QA File: \\OR-GAMMA1\ApexRoot\Countroom\QA\D0000000001B.QCK

Detector: GE1
Geometry: <None>
Certificate: <None>
Sample ID: QA Background Ch
Sample Desc: QA Count
Sample Quantity: 1.0000E+000
Sample Date: 6/17/16 5:51:52 AM
Measurement Date: 6/17/16 5:51:53 AM
Elapsed Live Time: 900.0 seconds
Elapsed Real Time: 900.1 seconds

Parameter Description [Mean +/- Std. Dev.]	Value	Deviation/Flags < LU : SD : UD : BS >
DAILY BKG CT RATE GE1	2.2922E+000	7.0750E-003
[SD: 2.2817E+000+/- 1.491]		< : : : >
Trend Test: The last 9 samples exhibit a bias trend.		

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