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


Filename: ERT01,C:\GENIE2K\CAMFILES\SMP-HTC-A01-S001-0006-01.CNF

Report Generated On              : 6/6/2017    2:36:55 PM

Sample Title                     : HTC-A01-S001-0006-01
Sample Description               : 450 cc Soil
Sample Identification            :
Sample Type                      :
Sample Geometry                  :

Peak Locate Threshold            :  3.00
Peak Locate Range (in channels)  :   100 -  8192
Peak Area Range (in channels)    :   100 -  8192
Identification Energy Tolerance  :    1.000 keV

Sample Size                      :  1.031E+003 GWET

Sample Taken On                  : 5/13/2017   1:36:00 PM
Acquisition Started              : 6/6/2017   12:35:45 PM

Live Time                        :     7200.0 seconds
Real Time                        :     7265.8 seconds

Dead Time                        :   0.91 %


            Energy Calibration Used Done On       : 5/10/2017
            Efficiency Calibration Used Done On   : 12/14/2016
            Efficiency ID                         : ERT0101
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****
***** P E A K A N A L Y S I S R E P O R T *****
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Detector Name: ERT01
Sample Title: HTC-A01-S001-0006-01
Peak Analysis Performed on: 6/6/2017 2:36:55 PM
Peak Analysis From Channel: 100
Peak Analysis To Channel: 8192

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	FWHM (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
M	1	216-	239	225.84	56.33	0.99	1.07E+003	126.78	2.62E+004
m	2	216-	239	230.92	57.60	0.99	2.08E+003	148.87	2.64E+004
M	3	241-	266	254.02	63.37	0.81	1.33E+003	134.26	2.21E+004
m	4	241-	266	260.93	65.10	0.81	7.39E+002	124.06	2.30E+004
M	5	280-	316	292.65	73.02	1.00	1.93E+003	136.96	3.11E+004
m	6	280-	316	300.03	74.87	1.00	1.54E+004	188.57	3.16E+004
m	7	280-	316	309.10	77.14	1.01	2.45E+004	221.21	3.23E+004
M	8	321-	386	325.33	81.19	1.36	1.37E+003	159.44	3.27E+004
m	9	321-	386	337.17	84.15	1.36	6.11E+003	178.45	4.27E+004
m	10	321-	386	349.55	87.25	1.37	1.31E+004	205.52	4.25E+004
m	11	321-	386	360.50	89.98	1.37	9.80E+003	189.29	4.23E+004
m	12	321-	386	372.76	93.05	1.38	1.51E+004	212.86	4.46E+004
	13	390-	406	398.99	99.60	1.13	2.90E+003	368.51	4.24E+004
M	14	410-	447	422.24	105.41	1.29	2.73E+003	187.86	4.10E+004
m	15	410-	447	436.67	109.02	1.29	1.11E+003	162.62	4.45E+004
M	16	448-	467	452.03	112.86	1.01	3.71E+002	138.84	2.90E+004
m	17	448-	467	461.48	115.22	1.01	1.21E+003	167.50	3.42E+004
	18	510-	523	516.86	129.06	1.08	4.92E+003	336.64	3.93E+004
	19	570-	581	576.45	143.95	1.06	1.28E+003	288.39	3.26E+004
	20	605-	629	616.88	154.06	1.12	3.04E+003	516.73	6.39E+004
	21	629-	646	633.65	158.25	0.45	4.37E+002	379.54	4.41E+004
	22	646-	657	653.62	163.24	0.59	5.51E+002	270.29	2.89E+004
	23	732-	755	744.40	185.93	1.22	1.39E+004	480.22	5.42E+004
M	24	812-	851	821.07	205.09	1.07	5.89E+002	127.10	2.89E+004
m	25	812-	851	837.58	209.21	1.07	1.06E+004	182.13	2.80E+004
	26	861-	871	864.44	215.93	1.33	5.33E+002	226.48	2.12E+004
M	27	938-	976	944.45	235.92	1.12	2.39E+003	132.08	2.51E+004
m	28	938-	976	954.92	238.54	1.12	1.22E+005	376.26	2.23E+004
m	29	938-	976	966.65	241.47	1.12	1.84E+004	174.43	2.05E+004
M	30	1007-	1044	1010.82	252.51	1.00	5.72E+002	98.91	1.25E+004
m	31	1007-	1044	1025.39	256.15	1.00	1.28E+003	110.42	1.59E+004
m	32	1007-	1044	1035.18	258.60	1.00	8.36E+002	102.35	1.56E+004
M	33	1066-	1120	1081.12	270.08	1.48	1.21E+004	171.13	2.16E+004
m	34	1066-	1120	1098.70	274.47	1.49	5.83E+002	109.41	2.10E+004
m	35	1066-	1120	1109.88	277.27	1.49	5.43E+003	137.01	2.07E+004
M	36	1129-	1162	1135.24	283.60	0.94	3.49E+002	88.10	1.28E+004
m	37	1129-	1162	1144.61	285.95	0.94	3.66E+002	86.14	1.36E+004
m	38	1129-	1162	1152.70	287.97	0.94	8.93E+002	99.67	1.23E+004
	39	1170-	1190	1181.09	295.06	1.11	2.93E+004	322.89	2.07E+004
	40	1190-	1208	1200.75	299.98	1.08	7.37E+003	269.01	1.93E+004
M	41	1280-	1342	1286.55	321.42	1.22	5.32E+002	90.63	1.20E+004
m	42	1280-	1342	1296.50	323.91	1.22	7.72E+002	89.50	1.27E+004

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	FWHM (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
m	43	1280-	1342	1312.21	327.83	1.22	6.78E+003	143.67	1.33E+004
m	44	1280-	1342	1330.24	332.34	1.23	1.00E+003	90.71	1.31E+004
M	45	1345-	1375	1353.40	338.13	1.17	2.67E+004	192.06	1.18E+004
m	46	1345-	1375	1364.25	340.84	1.17	8.56E+002	85.32	1.13E+004
	47	1400-	1415	1407.78	351.72	1.19	5.33E+004	296.17	1.15E+004
	48	1552-	1566	1556.47	388.88	0.60	2.32E+001	168.13	9.79E+003
M	49	1595-	1646	1607.27	401.57	1.20	1.09E+003	80.57	9.05E+003
m	50	1595-	1646	1619.61	404.66	1.20	7.23E+002	75.77	8.84E+003
m	51	1595-	1646	1637.86	409.22	1.21	4.04E+003	105.52	9.05E+003
	52	1758-	1769	1762.21	440.30	0.49	1.75E+002	121.78	5.83E+003
	53	1805-	1816	1811.12	452.52	1.18	5.85E+002	123.95	5.88E+003
	54	1841-	1861	1851.84	462.70	1.25	8.19E+003	208.52	9.73E+003
	55	1917-	1930	1922.17	480.27	0.84	1.37E+002	132.35	6.29E+003
	56	1942-	1957	1947.76	486.67	1.48	4.98E+002	142.77	6.60E+003
	57	2008-	2023	2014.67	503.39	0.63	2.58E+002	139.65	6.40E+003
	58	2023-	2059	2042.87	510.44	1.41	1.88E+004	317.74	1.46E+004
M	59	2180-	2205	2186.14	546.24	0.87	1.92E+002	52.79	4.48E+003
m	60	2180-	2205	2199.82	549.66	0.87	2.99E+002	57.50	4.32E+003
	61	2241-	2258	2250.02	562.21	1.22	1.25E+003	148.59	6.40E+003
	62	2325-	2346	2332.59	582.85	1.37	4.73E+004	277.80	7.68E+003
	63	2422-	2451	2437.09	608.96	1.35	4.33E+004	292.15	8.86E+003
	64	2651-	2672	2661.92	665.15	1.36	1.20E+003	153.73	5.98E+003
	65	2747-	2759	2751.59	687.56	1.36	1.30E+002	96.40	3.47E+003
	66	2873-	2896	2879.97	719.65	0.90	1.67E+002	153.52	5.83E+003
	67	2896-	2922	2908.98	726.90	1.44	1.13E+004	193.93	6.01E+003
	68	2966-	2981	2971.99	742.64	0.69	1.84E+002	105.09	3.61E+003
	69	3013-	3030	3021.25	754.96	1.43	1.29E+003	119.17	3.97E+003
M	70	3042-	3103	3053.02	762.90	1.56	8.57E+002	58.04	4.22E+003
m	71	3042-	3103	3073.25	767.95	1.56	4.03E+003	85.32	4.05E+003
m	72	3042-	3103	3089.18	771.93	1.56	2.05E+003	68.01	3.89E+003
M	73	3118-	3151	3128.77	781.83	1.51	7.99E+002	54.05	3.47E+003
m	74	3118-	3151	3142.50	785.26	1.51	2.47E+003	72.10	3.31E+003
	75	3170-	3194	3179.65	794.54	1.43	5.93E+003	153.74	4.23E+003
	76	3216-	3238	3224.75	805.81	1.36	1.07E+003	122.33	3.58E+003
	77	3273-	3292	3285.63	821.03	1.07	2.09E+002	102.75	2.95E+003
M	78	3312-	3371	3323.17	830.41	1.74	8.46E+002	54.01	3.38E+003
m	79	3312-	3371	3342.94	835.35	1.74	2.32E+003	68.22	3.19E+003
m	80	3312-	3371	3360.49	839.74	1.75	1.65E+003	61.21	2.88E+003
	81	3424-	3460	3442.18	860.15	1.55	6.35E+003	179.85	4.62E+003
	82	3561-	3581	3573.48	892.97	1.70	4.71E+002	102.89	2.79E+003
	83	3608-	3626	3617.48	903.97	1.49	1.01E+003	94.26	2.33E+003
	84	3628-	3658	3644.95	910.83	1.53	3.63E+004	232.15	3.58E+003
	85	3705-	3718	3710.08	927.11	0.66	5.47E+001	65.06	1.51E+003
	86	3727-	3747	3736.65	933.75	1.58	2.14E+003	102.95	2.32E+003
	87	3800-	3816	3808.38	951.68	0.85	1.74E+002	74.55	1.72E+003
M	88	3823-	3896	3835.05	958.34	1.57	3.50E+002	39.14	1.94E+003
m	89	3823-	3896	3859.30	964.40	1.58	6.65E+003	89.70	1.91E+003
m	90	3823-	3896	3876.15	968.61	1.58	2.11E+004	151.64	1.83E+003
	91	3995-	4014	4004.56	1000.70	1.66	9.74E+002	82.83	1.67E+003
	92	4123-	4140	4133.49	1032.93	1.11	2.83E+002	68.09	1.34E+003

Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	FWHM (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
93	4202-	4216	4208.12	1051.58	1.25	1.70E+002	59.30	1.16E+003
94	4255-	4270	4261.67	1064.96	0.99	2.21E+002	64.51	1.31E+003
M 95	4290-	4324	4294.93	1073.27	1.67	9.35E+001	30.57	1.11E+003
m 96	4290-	4324	4315.34	1078.37	1.67	6.90E+002	45.03	1.48E+003
97	4366-	4388	4376.47	1093.65	0.46	3.97E+002	84.05	1.71E+003
98	4434-	4454	4442.81	1110.23	1.28	3.75E+002	77.86	1.56E+003
99	4463-	4500	4481.98	1120.02	1.65	1.05E+004	160.38	2.65E+003
100	4530-	4544	4535.86	1133.48	1.23	1.37E+002	56.30	1.05E+003
101	4606-	4633	4621.73	1154.95	1.75	1.22E+003	100.46	1.97E+003
102	4823-	4839	4832.88	1207.72	0.47	2.10E+002	60.45	1.10E+003
103	4894-	4907	4901.23	1224.80	1.13	7.30E+001	49.06	8.46E+002
104	4943-	4966	4953.80	1237.94	1.67	3.74E+003	101.01	1.61E+003
105	4977-	4997	4989.79	1246.93	1.83	4.74E+002	77.43	1.52E+003
106	5114-	5138	5125.51	1280.85	1.64	1.02E+003	84.61	1.49E+003
107	5503-	5524	5512.65	1377.61	1.70	2.50E+003	89.72	1.47E+003
108	5533-	5554	5543.14	1385.22	1.43	4.83E+002	70.65	1.20E+003
M109	5598-	5643	5608.60	1401.58	1.70	8.00E+002	40.04	1.12E+003
m110	5598-	5643	5634.25	1407.99	1.70	1.47E+003	49.32	1.09E+003
111	5826-	5854	5839.27	1459.23	1.99	9.27E+002	89.21	1.52E+003
M112	5976-	6020	5986.21	1495.96	1.70	9.28E+002	42.75	1.10E+003
m113	5976-	6020	6009.24	1501.71	1.70	4.91E+002	34.61	1.01E+003
M114	6029-	6064	6039.62	1509.30	1.81	1.21E+003	46.44	1.10E+003
m115	6029-	6064	6054.05	1512.91	1.81	3.40E+002	32.27	1.09E+003
M116	6150-	6186	6157.64	1538.80	1.29	1.50E+002	27.05	8.45E+002
m117	6150-	6186	6177.05	1543.65	1.30	1.81E+002	27.17	7.33E+002
118	6224-	6239	6231.08	1557.16	0.46	1.00E+002	47.26	7.08E+002
M119	6312-	6406	6325.53	1580.76	1.89	5.98E+002	35.61	9.26E+002
m120	6312-	6406	6336.86	1583.59	1.89	3.56E+002	31.10	9.79E+002
m121	6312-	6406	6356.08	1588.40	1.89	3.44E+003	66.44	1.02E+003
m122	6312-	6406	6373.61	1592.78	1.89	1.78E+003	50.98	1.02E+003
m123	6312-	6406	6399.26	1599.19	1.89	9.05E+001	27.36	9.10E+002
M124	6470-	6570	6486.52	1620.99	1.93	1.63E+003	47.80	8.51E+002
m125	6470-	6570	6503.01	1625.12	1.93	2.71E+002	27.42	7.99E+002
m126	6470-	6570	6526.17	1630.90	1.93	1.65E+003	47.54	7.78E+002
m127	6470-	6570	6556.75	1638.55	1.93	5.29E+002	32.01	7.52E+002
M128	6636-	6683	6649.32	1661.68	2.01	6.26E+002	36.67	8.23E+002
m129	6636-	6683	6670.15	1666.89	2.01	1.24E+002	25.64	8.71E+002
130	6911-	6937	6923.05	1730.09	1.96	1.85E+003	74.10	8.27E+002
131	7048-	7078	7062.81	1765.02	2.00	8.95E+003	115.39	8.93E+002
132	7349-	7368	7358.12	1838.82	1.38	1.53E+002	47.83	6.07E+002
133	7382-	7409	7395.24	1848.10	2.31	1.13E+003	68.71	7.97E+002

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.000 sigma

****
***** N U C L I D E M D A R E P O R T *****
****

Detector Name: ERT01
Sample Geometry:
Sample Title: HTC-A01-S001-0006-01
Nuclide Library Used: C:\GENIE2K\CAMFILES\ERT_LIBRARY_LMDA.NLB

	Nuclide Name	Energy (keV)	Yield (%)	Line MDA (pCi/GWET)	Nuclide MDA (pCi/GWET)	Activity (pCi/GWET)
	K-40	1460.82	10.55	2.4743E+000	2.47E+000	7.2088E+000
	Co-60	1173.23	99.85	2.1290E-001	2.13E-001	-9.3367E-002
		1332.49	99.98	2.2823E-001		-1.6364E-002
>		2505.71	0.10	0.0000E+000		0.0000E+000
	Cs-137	32.06	5.54	2.0024E+004	3.04E-001	4.5236E+003
		661.66	84.99	3.0350E-001		-5.2327E-002
+	Tl-208	72.80*	2.02	2.0655E+001	3.18E-001	3.4222E+001
		74.97*	3.41	1.1414E+001		1.5044E+002
		84.90*	1.51	2.2353E+001		1.0031E+002
		277.36*	6.31	3.3549E+000		1.9209E+001
		510.77*	22.60	1.8251E+000		2.5473E+001
		583.19*	84.50	3.1814E-001		1.8664E+001
		763.13*	1.81	9.4431E+000		1.8821E+001
		860.56*	12.42	2.6353E+000		2.2221E+001
+	Bi-212	39.86	1.06	3.7386E+003	4.32E+000	-5.5990E+002
		727.33*	6.74	4.3184E+000		6.4511E+001
		785.37*	1.11	1.3948E+001		9.0264E+001
		1620.74*	1.51	8.9631E+000		7.5102E+001
		1806.00	0.09	2.2279E+002		6.6829E+001
+	Pb-212	74.81*	10.40	3.7426E+000	4.68E-001	4.9327E+001
		77.11*	17.50	2.0657E+000		4.2723E+001
		87.30*	7.81	4.0222E+000		3.8804E+001
		115.18*	0.59	3.5489E+001		3.5078E+001
		238.63*	43.30	4.6839E-001		5.8017E+001
		300.09*	3.28	8.4353E+000		5.2352E+001
+	Bi-214	76.86*	0.43	8.2867E+001	7.03E-001	1.7138E+003
		89.81*	0.24	1.1898E+002		8.6055E+002
		386.77	0.30	8.7298E+001		2.2566E+001
		454.77	0.29	8.7755E+001		7.7902E+001
		609.31*	45.49	7.0277E-001		3.1778E+001
		665.45*	1.53	1.6154E+001		2.7719E+001
		703.11	0.48	5.5087E+001		8.9394E+001
		719.86*	0.39	6.7736E+001		1.5806E+001
		768.36*	4.89	3.3579E+000		3.2157E+001
		786.10*	0.31	4.8772E+001		3.1561E+002
		806.17*	1.26	1.7639E+001		3.4323E+001
		934.06*	3.10	6.2829E+000		3.1268E+001
		964.08*	0.36	3.7167E+001		8.5171E+002
		1051.96*	0.31	4.2958E+001		2.6909E+001
		1120.29*	14.91	2.0255E+000		3.6882E+001

	Nuclide Name	Energy (keV)	Yield (%)	Line MDA (pCi/GWET)	Nuclide MDA (pCi/GWET)	Activity (pCi/GWET)
+	Bi-214	1133.66*	0.25	5.3916E+001	7.03E-001	2.8476E+001
		1155.19*	1.63	1.4483E+001		4.0215E+001
		1207.68*	0.45	3.4024E+001		2.5982E+001
		1238.11*	5.79	3.6909E+000		3.6627E+001
		1280.96*	1.43	1.4965E+001		4.1381E+001
		1377.67*	4.00	5.3679E+000		3.8384E+001
		1385.31*	0.76	2.5677E+001		3.9352E+001
		1401.50*	1.27	1.0925E+001		3.9222E+001
		1407.98*	2.15	6.3726E+000		4.2713E+001
		1509.23*	2.11	6.8436E+000		3.7554E+001
		1538.50*	0.38	3.4051E+001		2.6314E+001
		1543.32*	0.20	5.9796E+001		6.0057E+001
		1583.22*	0.69	2.0277E+001		3.4639E+001
		1594.73	0.25	1.5325E+002		5.0110E+000
		1599.31*	0.23	5.9010E+001		2.6550E+001
		1661.28*	1.15	1.1441E+001		3.7415E+001
		1683.99	0.22	9.5908E+001		3.2446E+001
		1729.59*	2.92	6.7749E+000		4.4265E+001
		1764.49*	15.40	1.4164E+000		4.0806E+001
		1847.42*	2.11	9.4761E+000		3.8131E+001
		1873.16	0.22	9.4989E+001		3.6538E+001
>		2118.55	1.14	0.0000E+000		0.0000E+000
>		2204.21	5.08	0.0000E+000		0.0000E+000
+	Pb-214	53.28	1.20	1.9568E+002	5.69E-001	5.7451E+000
		74.81*	6.44	5.9021E+000		7.7788E+001
		77.11*	10.80	3.2686E+000		6.7601E+001
		87.30*	4.84	6.3379E+000		6.1145E+001
		242.00*	7.43	2.5755E+000		5.0155E+001
		258.87*	0.52	3.3072E+001		3.3516E+001
		274.80*	0.47	4.3745E+001		2.6658E+001
		295.22*	19.30	1.4903E+000		3.4211E+001
		351.93*	37.60	5.6872E-001		3.5046E+001
		462.00*	0.22	1.1320E+002		1.0581E+003
		533.66	0.19	1.3278E+002		-1.3195E+001
		785.96*	1.07	1.4130E+001		9.1440E+001
		839.04*	0.59	2.5252E+001		1.1698E+002
+	Ra-224	81.07*	0.13	2.4411E+002	4.78E+000	2.8027E+002
		83.78*	0.22	1.5555E+002		6.9800E+002
		240.99*	4.10	4.7796E+000		9.3075E+001
+	Ra-226	81.07*	0.20	1.5852E+002	1.07E+001	1.8200E+002
		83.78*	0.33	1.0049E+002		4.5094E+002
		94.90	0.15	2.4595E+002		-2.1384E+001
		186.21*	3.59	1.0724E+001		6.8510E+001
+	Ac-228	99.50*	1.26	2.5828E+001	8.53E-001	4.4173E+001
		129.07*	2.50	1.0257E+001		3.2900E+001
		209.25*	3.97	5.3472E+000		5.1294E+001
		270.24*	3.55	6.0169E+000		7.4798E+001
		328.00*	3.04	6.1205E+000		5.4421E+001
		338.32*	11.40	1.5577E+000		5.8064E+001
		409.46*	2.02	8.5201E+000		5.4746E+001

	Nuclide Name	Energy (keV)	Yield (%)	Line MDA (pCi/GWET)	Nuclide MDA (pCi/GWET)	Activity (pCi/GWET)
+	Ac-228	463.00*	4.45	5.7567E+000	8.53E-001	5.3809E+001
		755.31*	1.03	2.0357E+001		4.9617E+001
		772.29*	1.52	1.0887E+001		5.4159E+001
		794.94*	4.31	5.9063E+000		5.6399E+001
		835.70*	1.70	9.3631E+000		5.8011E+001
		911.20*	26.20	1.0754E+000		6.2902E+001
		964.79*	4.99	2.7687E+000		6.3447E+001
		968.96*	15.90	8.5344E-001		6.3473E+001
		1588.20*	3.06	4.7762E+000		7.7492E+001
		1630.62*	1.52	8.5413E+000		7.5575E+001
+	Th-228	84.37*	1.26	2.6789E+001	2.68E+001	1.2021E+002
		131.61	0.13	2.4685E+002		-3.0120E+001
		166.41	0.10	2.9113E+002		-1.8046E+002
		215.98*	0.25	8.0877E+001		4.1030E+001
+	Pa-234m	258.23*	0.07	2.3481E+002	2.03E+001	2.3797E+002
		742.81*	0.09	1.9756E+002		7.4441E+001
		766.36	0.32	9.8068E+001		8.1902E+001
		786.27	0.05	5.1544E+002		-9.4780E+001
		1001.03*	0.85	2.0314E+001		5.4774E+001
		1737.77	0.02	1.0541E+003		3.4946E+002
+	Th-234	63.30*	3.75	1.5961E+001	6.54E+000	2.1100E+001
		92.59*	4.33	6.5448E+000		7.0496E+001
		112.81*	0.22	8.8791E+001		2.9347E+001

+ = Nuclide identified during the nuclide identification
* = Energy line found in the spectrum
> = Calculated MDA is zero due to zero counts in the region, or the region is outside the spectrum, or has not been calculated
@ = Half-life too short to be able to perform the decay correction

****
***** N U C L I D E I D E N T I F I C A T I O N R E P O R T *****
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Sample Title: HTC-A01-S001-0006-01
Nuclide Library Used: C:\GENIE2K\CAMFILES\ERT_LIBRARY_LMDA.NLB

..... IDENTIFIED NUCLIDES .....

Nuclide Name	Id Confidence	Energy (keV)	Yield (%)	Activity (pCi/GWET)	Activity Uncertainty
Te-123m	0.920	158.97*	83.99	1.00021E-001	8.68328E-002
Eu-152m	0.997	89.85*	69.90	3.01395E+000	1.01679E-001
Eu-155	0.930	45.30	1.31		
		60.01	1.22		
		86.55*	30.70	9.73220E+000	3.18867E-001
		105.31*	21.10	2.32368E+000	1.81081E-001
Tl-208	0.981	72.80* @	2.02	3.42221E+001	2.64628E+000
		74.97* @	3.41	1.50440E+002	4.89650E+000
		84.90* @	1.51	1.00308E+002	4.05433E+000
		277.36*	6.31	1.92087E+001	8.32403E-001
		510.77* @	22.60	2.54731E+001	9.21951E-001
		583.19*	84.50	1.86637E+001	5.91713E-001
		763.13* @	1.81	1.88213E+001	1.35680E+000
		860.56*	12.42	2.22214E+001	8.31197E-001
TL-208e	0.991	1592.53*	99.16	1.23671E+000	8.37608E-002
Bi-211	0.927	351.03*	13.00	1.01573E+002	3.70831E+000
Bi-212	0.946	39.86 @	1.06		
		727.33*	6.74	6.45110E+001	2.29399E+000
		785.37*	1.11	9.02637E+001	3.51757E+000
		1620.74*	1.51	7.51018E+001	3.31648E+000
		1806.00 @	0.09		
Pb-212	0.999	74.81*	10.40	4.93269E+001	2.14527E+000
		77.11*	17.50	4.27225E+001	1.80342E+000
		87.30*	7.81	3.88037E+001	1.73651E+000
		115.18* @	0.59	3.50780E+001	4.96190E+000
		238.63*	43.30	5.80170E+001	1.91700E+000
		300.09*	3.28	5.23519E+001	2.60182E+000
Bi-214	0.957	76.86* @	0.43	1.71383E+003	7.46416E+001
		89.81* @	0.24	8.60552E+002	4.23769E+001
		386.77 @	0.30		
		454.77 @	0.29		
		609.31*	45.49	3.17776E+001	9.62378E-001
		665.45* @	1.53	2.77187E+001	3.63441E+000
		703.11 @	0.48		
		719.86* @	0.39	1.58065E+001	1.45744E+001
		768.36*	4.89	3.21573E+001	1.04684E+000
		786.10* @	0.31	3.15615E+002	5.22931E+001
		806.17* @	1.26	3.43228E+001	4.00476E+000
		934.06*	3.10	3.12684E+001	1.66641E+000
		964.08* @	0.36	8.51715E+002	3.61130E+001
		1051.96* @	0.31	2.69091E+001	9.44415E+000

Nuclide Name	Id Confidence	Energy (keV)		Yield (%)	Activity (pCi/GWET)	Activity Uncertainty
Bi-214	0.957	1120.29*		14.91	3.68820E+001	1.05849E+000
		1133.66*	@	0.25	2.84762E+001	1.17837E+001
		1155.19*	@	1.63	4.02151E+001	3.45059E+000
		1207.68*	@	0.45	2.59822E+001	7.54763E+000
		1238.11*		5.79	3.66273E+001	1.44214E+000
		1280.96*	@	1.43	4.13812E+001	3.64914E+000
		1377.67*		4.00	3.83842E+001	1.78028E+000
		1385.31*	@	0.76	3.93521E+001	5.91902E+000
		1401.50*	@	1.27	3.92223E+001	2.28232E+000
		1407.98*	@	2.15	4.27133E+001	2.04755E+000
		1509.23*	@	2.11	3.75541E+001	1.86018E+000
		1538.50*	@	0.38	2.63144E+001	4.89820E+000
		1543.32*	@	0.20	6.00568E+001	1.75659E+001
		1583.22*	@	0.69	3.46389E+001	3.23110E+000
		1594.73	@	0.25		
		1599.31*	@	0.23	2.65505E+001	1.06272E+001
		1661.28*	@	1.15	3.74153E+001	2.61175E+000
		1683.99	@	0.22		
		1729.59*	@	2.92	4.42647E+001	2.31004E+000
		1764.49*		15.40	4.08061E+001	1.52794E+000
		1847.42*	@	2.11	3.81311E+001	2.81002E+000
		1873.16	@	0.22		
		2118.55	@	1.14		
		2204.21	@	5.08		
Pb-214	0.979	53.28	@	1.20		
		74.81*		6.44	7.77882E+001	3.58391E+000
		77.11*		10.80	6.76011E+001	3.26822E+000
		87.30*		4.84	6.11451E+001	2.97111E+000
		242.00*		7.43	5.01547E+001	1.81517E+000
		258.87*	@	0.52	3.35160E+001	4.29988E+000
		274.80*	@	0.47	2.66576E+001	5.11615E+000
		295.22*		19.30	3.42112E+001	1.22428E+000
		351.93*		37.60	3.50462E+001	1.23034E+000
		462.00*	@	0.22	1.05805E+003	6.15103E+001
		533.66	@	0.19		
		785.96*	@	1.07	9.14397E+001	7.66541E+000
		839.04*	@	0.59	1.16981E+002	5.50224E+000
Rn-220	0.999	549.73*		0.11	8.42990E+001	2.06969E+001
Ra-223	0.693	81.07*		15.30	2.34819E+000	2.81672E-001
		83.78*		25.40	5.83523E+000	2.62336E-001
		94.90		11.50		
		122.32	@	1.21		
		144.24*		3.27	6.35705E+000	1.46618E+000
		154.21*		5.70	8.86474E+000	1.54815E+000
		158.63*	@	0.69	1.05386E+001	9.15309E+000
		179.54	@	0.15		
		269.46*		13.90	1.86933E+001	8.48523E-001
		288.18*	@	0.16	1.24438E+002	1.49789E+001
		323.87*		3.99	4.59504E+000	5.62913E-001
		328.38*	@	0.21	7.74599E+002	4.23505E+001

Nuclide Name	Id Confidence	Energy (keV)		Yield (%)	Activity (pCi/GWET)	Activity Uncertainty
Ra-223	0.693	338.32*		2.84	2.28073E+002	9.51516E+000
		342.87	@	0.22		
		371.68	@	0.49		
		445.03	@	1.29		
Ra-224	0.965	81.07*	@	0.13	2.80270E+002	3.52800E+001
		83.78*	@	0.22	6.97999E+002	3.81850E+001
		240.99*		4.10	9.30753E+001	3.27666E+000
Ra-226	0.933	81.07*	@	0.20	1.81997E+002	2.27687E+001
		83.78*	@	0.33	4.50945E+002	2.45843E+001
		94.90	@	0.15		
		186.21*		3.59	6.85099E+001	3.32316E+000
Ac-228	0.985	99.50*	@	1.26	4.41731E+001	5.87578E+000
		129.07*	@	2.50	3.29000E+001	2.55405E+000
		209.25*		3.97	5.12944E+001	2.46664E+000
		270.24*		3.55	7.47978E+001	3.36657E+000
		328.00*		3.04	5.44210E+001	2.89681E+000
		338.32*		11.40	5.80637E+001	2.82322E+000
		409.46*	@	2.02	5.47461E+001	2.82587E+000
		463.00*		4.45	5.38086E+001	3.66135E+000
		755.31*	@	1.03	4.96169E+001	5.10899E+000
		772.29*	@	1.52	5.41593E+001	3.08862E+000
		794.94*		4.31	5.63986E+001	2.70511E+000
		835.70*	@	1.70	5.80111E+001	3.23198E+000
		911.20*		26.20	6.29022E+001	2.43003E+000
		964.79*		4.99	6.34471E+001	2.74045E+000
		968.96*		15.90	6.34731E+001	2.51059E+000
		1588.20*		3.06	7.74921E+001	3.93079E+000
		1630.62*	@	1.52	7.55745E+001	4.20725E+000
Th-228	0.748	84.37*		1.26	1.20211E+002	5.22000E+000
		131.61	@	0.13		
		166.41	@	0.10		
		215.98*		0.25	4.10301E+001	1.74919E+001
Pa-234m	0.525	258.23*	@	0.07	2.37966E+002	3.02282E+001
		742.81*	@	0.09	7.44415E+001	4.27124E+001
		766.36		0.32		
		786.27	@	0.05		
		1001.03*		0.85	5.47738E+001	4.87442E+000
		1737.77	@	0.02		
Th-234	0.982	63.30*		3.75	2.11004E+001	2.31974E+000
		92.59*		4.33	7.04959E+001	3.71526E+000
		112.81*	@	0.22	2.93470E+001	1.13961E+001

* = Energy line found in the spectrum.
@ = Energy line not used for Weighted Mean Activity
Energy Tolerance : 1.000 keV
Nuclide confidence index threshold = 0.45
Errors quoted at 1.000 sigma

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***** I N T E R F E R E N C E C O R R E C T E D R E P O R T *****
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	Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/GWET)	Wt mean Activity Uncertainty
X	Mn-54		0.959		
X	Cd-109		0.906		
	Te-123m		0.920	7.872268E-002	8.685895E-002
	Eu-152m		0.997	2.892236E+000	9.834579E-002
	Eu-155		0.930	1.380796E+000	1.537477E-001
X	Tm-170		0.998		
X	Lu-177		0.872		
	Tl-208	@	0.981	1.961267E+001	4.003616E-001
	TL-208e		0.991	1.236714E+000	8.376085E-002
	Bi-211		0.927	3.343818E+001	4.531197E+000
	Bi-212	@	0.946	6.578262E+001	1.498392E+000
	Pb-212	@	0.999	3.063073E+001	8.791772E-001
	Bi-214	@	0.957	3.475274E+001	4.624666E-001
	Pb-214	@	0.979	2.350888E+001	1.034181E+000
	Rn-220		0.999	8.429896E+001	2.069691E+001
	Ra-223	@	0.693	2.244063E+000	2.249173E-001
	Ra-224	@	0.965	4.821060E+001	3.617159E+000
	Ra-226	@	0.933	6.654577E+001	3.108750E+000
	Ac-228	@	0.985	5.992134E+001	6.017978E-001
	Th-228	@	0.748	2.562431E+001	6.344050E+000
X	Th-231		0.999		
	Pa-234m	@	0.525	5.477385E+001	4.874423E+000
	Th-234	@	0.982	3.495583E+001	1.967682E+000

? = 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 1.000 sigma

********** U N I D E N T I F I E D P E A K S **********

Peak Locate Performed on: 6/6/2017 2:36:55 PM
Peak Locate From Channel: 100
Peak Locate To Channel: 8192

Peak No.	Energy (keV)	Peak Size in Counts per Second	Peak CPS % Uncertainty	Peak Type	Tol. Nuclide
M 1	56.33	1.4871E-001	11.84	Tol.	Np-237
m 2	57.60	2.8868E-001	7.16	Tol.	Np-237
m 4	65.10	1.0264E-001	16.79		
m 15	109.02	1.5380E-001	14.69	Tol.	Cs-136
22	163.24	7.6543E-002	49.04	Sum	
M 24	205.09	8.1748E-002	21.59	Sum	
M 27	235.92	3.3219E-001	5.52	Sum	
M 30	252.51	7.9378E-002	17.31		
m 31	256.15	1.7738E-001	8.65	Sum	
M 36	283.60	4.8485E-002	25.24	Sum	
m 37	285.95	5.0900E-002	23.50	Sum	
M 41	321.42	7.3832E-002	17.05	Sum	
m 44	332.34	1.3887E-001	9.07	Sum	
m 46	340.84	1.1885E-001	9.97	Sum	
48	388.88	3.2180E-003	725.66	Sum	
M 49	401.57	1.5177E-001	7.37	Sum	
m 50	404.66	1.0038E-001	10.48	Sum	
52	440.30	2.4300E-002	69.60	Sum	
53	452.52	8.1299E-002	21.17	Sum	
55	480.27	1.9024E-002	96.63	Sum	
56	486.67	6.9147E-002	28.68	D-Esc.	
57	503.39	3.5824E-002	54.14	Sum	
M 59	546.24	2.6717E-002	27.44	Sum	
61	562.21	1.7375E-001	11.88	D-Esc.	
65	687.56	1.8065E-002	74.11	Sum	
M 73	781.83	1.1101E-001	6.76		
77	821.03	2.9063E-002	49.10	Sum	
M 78	830.41	1.1751E-001	6.38	Sum	
82	892.97	6.5441E-002	21.84	Sum	
83	903.97	1.4024E-001	9.34	Sum	
85	927.11	7.6037E-003	118.83	Sum	
87	951.68	2.4205E-002	42.78	Sum	
M 88	958.34	4.8565E-002	11.19	Sum	
92	1032.93	3.9317E-002	24.05	S-Esc.	
94	1064.96	3.0643E-002	29.24	Sum	
M 95	1073.27	1.2991E-002	32.69	S-Esc.	
m 96	1078.37	9.5895E-002	6.52	S-Esc.	
97	1093.65	5.5101E-002	21.19	Sum	
98	1110.23	5.2014E-002	20.79	S-Esc.	
103	1224.80	1.0138E-002	67.20	Sum	
105	1246.93	6.5885E-002	16.32	Sum	
111	1459.23	1.2877E-001	9.62	Sum	
M112	1495.96	1.2893E-001	4.61	Sum	
m113	1501.71	6.8176E-002	7.05	Sum	

Peak No.	Energy (keV)	Peak Size in Counts per Second	Peak CPS % Uncertainty	Peak Type	Tol. Nuclide
m115	1512.91	4.7174E-002	9.50	Sum	
118	1557.16	1.3921E-002	47.15	Sum	
M119	1580.76	8.3070E-002	5.95	Sum	
m125	1625.12	3.7647E-002	10.12	Sum	
m127	1638.55	7.3459E-002	6.05	Sum	
m129	1666.89	1.7196E-002	20.71	Sum	
132	1838.82	2.1269E-002	31.24	Sum	

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.000 sigma