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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-S008-0006-02.CNF

Report Generated On              : 6/24/2017  12:07:17 PM

Sample Title                     : HTC-A01-S008-0006-02
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                      :  9.583E+002 GWET

Sample Taken On                  : 5/13/2017   8:21:00 AM
Acquisition Started              : 6/24/2017  10:06:13 AM

Live Time                        :     7200.0 seconds
Real Time                        :     7262.2 seconds

Dead Time                        :   0.86 %


            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-S008-0006-02
Peak Analysis Performed on: 6/24/2017 12:07:17 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
	1	219-	236	231.10	57.64	0.91	3.34E+003	341.37	3.48E+004
M	2	239-	266	254.02	63.37	0.83	1.52E+003	132.55	2.16E+004
m	3	239-	266	261.04	65.13	0.83	1.02E+003	127.34	2.50E+004
M	4	285-	316	300.05	74.87	1.01	2.12E+004	204.62	3.37E+004
m	5	285-	316	309.09	77.13	1.02	3.39E+004	240.84	3.36E+004
M	6	321-	386	325.03	81.12	1.29	6.51E+002	148.26	2.86E+004
m	7	321-	386	337.53	84.24	1.29	6.39E+003	170.69	4.01E+004
m	8	321-	386	349.55	87.25	1.30	1.71E+004	211.75	3.95E+004
m	9	321-	386	360.40	89.96	1.30	1.26E+004	189.10	3.89E+004
m	10	321-	386	373.21	93.16	1.31	1.69E+004	208.11	3.82E+004
	11	386-	409	399.01	99.61	1.11	3.25E+003	466.84	5.36E+004
M	12	412-	442	422.03	105.36	1.41	4.71E+003	192.60	4.08E+004
m	13	412-	442	435.53	108.73	1.41	1.28E+003	159.85	3.72E+004
	14	456-	473	461.62	115.25	1.00	1.19E+003	372.18	4.21E+004
	15	502-	523	516.89	129.07	1.04	6.99E+003	460.53	5.47E+004
	16	570-	581	576.07	143.86	0.86	1.02E+003	270.17	2.87E+004
	17	610-	632	616.75	154.02	0.98	3.96E+003	449.36	5.10E+004
	18	650-	659	654.15	163.37	0.50	2.79E+002	219.90	2.12E+004
	19	701-	713	707.11	176.61	0.49	9.56E+001	263.84	2.64E+004
	20	735-	755	744.42	185.93	1.24	1.23E+004	404.40	4.16E+004
	21	791-	802	797.77	199.27	0.68	8.45E+002	240.22	2.27E+004
	22	829-	849	837.50	209.19	1.07	1.41E+004	384.84	3.68E+004
	23	859-	869	863.57	215.71	0.84	5.72E+002	214.43	1.90E+004
M	24	939-	977	944.48	235.93	1.11	1.71E+003	122.97	2.07E+004
m	25	939-	977	954.85	238.52	1.11	1.57E+005	418.28	1.95E+004
m	26	939-	977	965.68	241.23	1.11	2.02E+004	174.85	1.77E+004
M	27	1003-	1042	1010.86	252.52	1.12	6.45E+002	101.34	1.53E+004
m	28	1003-	1042	1025.45	256.17	1.13	9.24E+002	104.50	1.59E+004
m	29	1003-	1042	1035.63	258.71	1.13	7.38E+002	101.34	1.55E+004
	30	1072-	1090	1080.92	270.03	1.35	1.29E+004	277.86	1.90E+004
	31	1105-	1119	1109.71	277.22	1.10	6.59E+003	219.98	1.44E+004
	32	1138-	1165	1152.74	287.98	1.28	1.17E+003	338.16	2.51E+004
	33	1174-	1190	1181.04	295.05	1.17	2.53E+004	267.61	1.47E+004
	34	1190-	1207	1200.68	299.96	1.12	8.96E+003	246.78	1.60E+004
M	35	1276-	1337	1286.34	321.37	1.17	3.74E+002	83.32	1.14E+004
m	36	1276-	1337	1294.99	323.53	1.17	5.05E+002	84.93	1.21E+004
m	37	1276-	1337	1312.11	327.81	1.18	7.86E+003	151.24	1.13E+004
m	38	1276-	1337	1329.40	332.13	1.18	9.33E+002	86.52	1.13E+004
M	39	1345-	1376	1353.35	338.12	1.17	3.26E+004	204.80	1.06E+004
m	40	1345-	1376	1364.01	340.78	1.17	1.05E+003	82.37	1.07E+004
	41	1393-	1421	1407.69	351.69	1.21	4.70E+004	360.60	1.79E+004
M	42	1597-	1653	1607.76	401.70	1.22	8.36E+002	75.71	8.76E+003

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	FWHM (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
m	43	1597-	1653	1619.80	404.70	1.22	6.15E+002	72.47	8.59E+003
m	44	1597-	1653	1637.74	409.19	1.22	4.69E+003	108.96	8.29E+003
	45	1705-	1720	1710.17	427.29	0.39	2.91E+002	151.05	7.48E+003
	46	1806-	1816	1810.90	452.47	0.98	5.05E+002	111.52	5.00E+003
	47	1845-	1865	1851.81	462.69	1.23	9.61E+003	205.35	8.73E+003
	48	1905-	1917	1912.07	477.75	1.17	2.11E+002	116.73	5.09E+003
	49	1943-	1956	1948.28	486.80	0.49	6.93E+001	122.34	5.40E+003
	50	2028-	2059	2042.70	510.40	1.42	1.95E+004	282.06	1.20E+004
M	51	2176-	2204	2185.13	545.99	1.15	3.20E+002	61.97	5.20E+003
m	52	2176-	2204	2198.12	549.24	1.15	2.88E+002	60.75	4.74E+003
	53	2241-	2257	2249.76	562.15	1.13	1.58E+003	140.03	5.76E+003
	54	2279-	2294	2285.65	571.11	1.14	5.25E+002	126.90	5.17E+003
	55	2323-	2343	2332.47	582.82	1.37	5.66E+004	286.67	7.08E+003
	56	2419-	2447	2436.93	608.92	1.36	3.67E+004	274.23	8.05E+003
	57	2655-	2675	2661.39	665.02	1.30	1.03E+003	144.49	5.43E+003
	58	2801-	2816	2809.30	701.99	1.78	5.29E+002	115.31	4.25E+003
	59	2872-	2887	2879.22	719.46	0.28	1.74E+002	108.95	3.89E+003
	60	2898-	2925	2908.79	726.85	1.53	1.29E+004	199.81	5.91E+003
	61	3007-	3031	3020.89	754.86	1.52	1.73E+003	150.72	5.09E+003
M	62	3044-	3105	3053.09	762.91	1.55	1.13E+003	59.06	3.65E+003
m	63	3044-	3105	3073.18	767.93	1.55	3.70E+003	79.52	3.66E+003
m	64	3044-	3105	3088.91	771.86	1.55	2.30E+003	68.46	3.50E+003
M	65	3119-	3152	3128.27	781.70	1.54	8.50E+002	52.54	3.02E+003
m	66	3119-	3152	3142.32	785.21	1.54	2.49E+003	71.18	3.09E+003
	67	3163-	3200	3179.52	794.51	1.53	6.83E+003	199.74	5.74E+003
	68	3217-	3234	3224.34	805.71	1.36	6.25E+002	97.85	2.74E+003
	69	3259-	3270	3265.81	816.08	1.57	2.24E+002	63.96	1.54E+003
M	70	3313-	3382	3322.07	830.14	1.60	7.98E+002	12.77	2.69E+003
m	71	3313-	3382	3342.54	835.25	1.61	2.54E+003	20.13	2.89E+003
m	72	3313-	3382	3360.70	839.79	1.61	1.53E+003	15.19	2.66E+003
m	73	3313-	3382	3374.86	843.33	1.61	1.43E+001	9.82	2.36E+003
	74	3429-	3456	3442.01	860.11	1.51	6.95E+003	150.43	3.48E+003
	75	3568-	3584	3573.82	893.05	1.15	4.99E+002	80.03	1.88E+003
	76	3602-	3626	3616.87	903.81	1.46	1.13E+003	113.12	2.83E+003
	77	3627-	3658	3644.71	910.77	1.55	4.10E+004	240.61	3.34E+003
	78	3727-	3752	3736.32	933.67	1.55	1.89E+003	110.44	2.39E+003
	79	3802-	3817	3808.22	951.63	1.62	2.63E+002	65.84	1.35E+003
M	80	3825-	3891	3834.43	958.18	1.59	3.50E+002	37.48	1.63E+003
m	81	3825-	3891	3859.02	964.33	1.59	7.54E+003	93.72	1.68E+003
m	82	3825-	3891	3875.93	968.56	1.59	2.42E+004	159.58	1.56E+003
	83	3939-	3964	3952.87	987.79	1.33	2.69E+002	92.47	1.95E+003
	84	3994-	4013	4004.32	1000.64	1.73	6.64E+002	78.86	1.59E+003
	85	4119-	4138	4132.75	1032.74	0.82	1.72E+002	73.13	1.48E+003
	86	4200-	4213	4207.42	1051.40	0.72	1.06E+002	52.05	9.41E+002
	87	4253-	4269	4261.32	1064.87	1.44	3.01E+002	64.12	1.22E+003
M	88	4305-	4341	4315.15	1078.32	1.57	7.67E+002	42.33	1.23E+003
m	89	4305-	4341	4335.83	1083.49	1.58	6.29E+001	27.21	9.43E+002
	90	4367-	4396	4375.73	1093.47	1.50	8.11E+002	99.55	1.90E+003
	91	4427-	4453	4442.81	1110.23	1.43	5.92E+002	90.21	1.72E+003
	92	4459-	4502	4481.65	1119.94	1.65	8.62E+003	162.38	2.73E+003

Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	FWHM (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
93	4607-	4630	4621.59	1154.91	1.81	1.04E+003	83.87	1.50E+003
94	4694-	4710	4702.47	1175.13	0.44	2.74E+001	56.34	1.00E+003
95	4821-	4838	4830.97	1207.24	0.70	1.94E+002	60.37	1.06E+003
96	4945-	4967	4953.55	1237.87	1.66	3.21E+003	89.00	1.19E+003
97	4968-	5005	4988.95	1246.72	1.78	6.91E+002	116.14	2.23E+003
98	5114-	5137	5125.30	1280.80	1.39	7.70E+002	79.78	1.40E+003
M 99	5492-	5526	5498.80	1374.14	1.77	1.29E+002	29.94	1.03E+003
m100	5492-	5526	5512.42	1377.55	1.78	2.17E+003	57.30	1.27E+003
101	5529-	5553	5543.34	1385.28	1.33	4.05E+002	77.41	1.35E+003
M102	5597-	5649	5607.71	1401.36	1.87	7.13E+002	39.17	1.10E+003
m103	5597-	5649	5633.90	1407.91	1.87	1.22E+003	45.83	1.11E+003
104	5825-	5858	5838.24	1458.97	1.93	1.04E+003	95.23	1.52E+003
M105	5976-	6019	5985.87	1495.87	1.79	9.44E+002	42.22	9.47E+002
m106	5976-	6019	6008.61	1501.56	1.79	4.92E+002	34.34	9.84E+002
M107	6028-	6065	6039.25	1509.21	1.92	1.07E+003	43.39	9.66E+002
m108	6028-	6065	6054.39	1513.00	1.92	4.56E+002	32.81	9.41E+002
M109	6143-	6183	6155.49	1538.26	1.73	2.33E+002	28.79	7.93E+002
m110	6143-	6183	6176.34	1543.47	1.73	2.15E+002	28.38	7.39E+002
111	6213-	6237	6230.28	1556.95	1.03	1.91E+002	62.49	9.00E+002
M112	6307-	6407	6324.87	1580.59	1.97	7.35E+002	37.10	8.31E+002
m113	6307-	6407	6336.43	1583.48	1.97	3.61E+002	30.56	8.68E+002
m114	6307-	6407	6355.67	1588.29	1.97	3.59E+003	65.55	8.76E+002
m115	6307-	6407	6373.24	1592.68	1.98	1.94E+003	51.17	8.86E+002
m116	6307-	6407	6400.64	1599.53	1.98	1.50E+002	26.10	7.14E+002
M117	6473-	6540	6486.04	1620.87	1.90	1.66E+003	48.20	8.39E+002
m118	6473-	6540	6502.73	1625.04	1.90	2.87E+002	27.14	7.81E+002
m119	6473-	6540	6525.85	1630.82	1.90	1.73E+003	48.06	7.14E+002
120	6544-	6568	6556.67	1638.53	1.77	5.16E+002	60.52	7.59E+002
M121	6638-	6678	6648.66	1661.52	1.80	4.03E+002	31.96	7.38E+002
m122	6638-	6678	6669.45	1666.71	1.80	1.57E+002	24.48	6.56E+002
123	6906-	6936	6922.13	1729.86	1.83	1.50E+003	76.38	8.88E+002
124	7049-	7081	7062.43	1764.92	1.99	7.29E+003	108.74	8.75E+002
125	7218-	7238	7228.52	1806.43	1.04	1.31E+002	47.60	5.88E+002
126	7382-	7408	7394.80	1847.99	1.66	9.76E+002	64.92	7.37E+002
127	7546-	7563	7554.63	1887.93	1.24	3.06E+001	42.82	5.49E+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-S008-0006-02
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	2.5469E+000	2.55E+000	5.3966E+000
	Co-60	1173.23	99.85	2.2096E-001	2.21E-001	1.1533E-001
		1332.49	99.98	2.3507E-001		1.7572E-001
>		2505.71	0.10	0.0000E+000		0.0000E+000
	Cs-137	32.06	5.54	2.0674E+004	3.21E-001	-8.1708E+002
		661.66	84.99	3.2146E-001		5.6027E-002
+	Tl-208	72.80	2.02	3.7421E+001	3.23E-001	-3.1637E+000
		74.97*	3.41	1.2916E+001		2.2626E+002
		84.90*	1.51	2.3701E+001		1.1483E+002
		277.36*	6.31	3.6965E+000		2.5542E+001
		510.77*	22.60	1.7114E+000		2.8917E+001
		583.19*	84.50	3.2277E-001		2.4432E+001
		763.13*	1.81	9.6238E+000		2.7141E+001
		860.56*	12.42	2.2437E+000		2.6647E+001
+	Bi-212	39.86	1.06	3.9394E+003	4.79E+000	-7.4837E+002
		727.33*	6.74	4.7917E+000		8.0674E+001
		785.37*	1.11	1.4755E+001		9.9944E+001
		1620.74*	1.51	9.7533E+000		8.3878E+001
		1806.00*	0.09	1.9193E+002		1.1522E+002
+	Pb-212	74.81*	10.40	4.2349E+000	4.81E-001	7.4188E+001
		77.11*	17.50	2.3091E+000		6.4661E+001
		87.30*	7.81	4.2498E+000		5.5384E+001
		115.18*	0.59	5.5027E+001		3.7891E+001
		238.63*	43.30	4.8064E-001		8.2045E+001
		300.09*	3.28	8.2633E+000		6.9652E+001
+	Bi-214	76.86*	0.43	9.0983E+001	7.23E-001	2.5477E+003
		89.81*	0.24	1.2287E+002		1.1906E+003
		386.77	0.30	8.9453E+001		8.5476E+001
		454.77	0.29	8.9904E+001		7.1795E+001
		609.31*	45.49	7.2296E-001		2.9051E+001
		665.45*	1.53	1.6361E+001		2.5580E+001
		703.11	0.48	5.8096E+001		3.2355E+001
		719.86*	0.39	5.1609E+001		1.7779E+001
		768.36*	4.89	3.4412E+000		3.1770E+001
		786.10*	0.31	5.0673E+001		3.4324E+002
		806.17*	1.26	1.5256E+001		2.1537E+001
		934.06*	3.10	7.4562E+000		2.9730E+001
		964.08*	0.36	3.7439E+001		1.0385E+003
		1051.96*	0.31	4.0812E+001		1.7955E+001
		1120.29*	14.91	2.3528E+000		3.2585E+001

	Nuclide Name	Energy (keV)	Yield (%)	Line MDA (pCi/GWET)	Nuclide MDA (pCi/GWET)	Activity (pCi/GWET)
+	Bi-214	1133.66	0.25	8.6532E+001	7.23E-001	1.2283E+002
		1155.19*	1.63	1.2831E+001		3.6685E+001
		1207.68*	0.45	3.6616E+001		2.5777E+001
		1238.11*	5.79	3.3954E+000		3.3910E+001
		1280.96*	1.43	1.5374E+001		3.3766E+001
		1377.67*	4.00	3.9247E+000		3.5960E+001
		1385.31*	0.76	3.0753E+001		3.5592E+001
		1401.50*	1.27	1.1660E+001		3.7575E+001
		1407.98*	2.15	6.9318E+000		3.8103E+001
		1509.23*	2.11	6.8988E+000		3.5490E+001
		1538.50*	0.38	3.5517E+001		4.4032E+001
		1543.32*	0.20	6.4675E+001		7.6658E+001
		1583.22*	0.69	2.0578E+001		3.7816E+001
		1594.73	0.25	1.6406E+002		-1.7107E+000
		1599.31*	0.23	5.6318E+001		4.7417E+001
		1661.28*	1.15	1.1659E+001		2.5900E+001
		1683.99	0.22	1.0197E+002		1.1589E+002
		1729.59*	2.92	7.9411E+000		3.8664E+001
		1764.49*	15.40	1.5527E+000		3.5805E+001
		1847.42*	2.11	9.6944E+000		3.5379E+001
		1873.16	0.22	9.7993E+001		6.9240E+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	2.0567E+002	9.50E-001	-1.4253E+001
		74.81*	6.44	6.5595E+000		1.1491E+002
		77.11*	10.80	3.5888E+000		1.0049E+002
		87.30*	4.84	6.5775E+000		8.5717E+001
		242.00*	7.43	2.5755E+000		5.9157E+001
		258.87*	0.52	3.5435E+001		3.1838E+001
		274.80	0.47	6.5857E+001		-1.2981E+002
		295.22*	19.30	1.2611E+000		3.1779E+001
		351.93*	37.60	9.4971E-001		3.3270E+001
		462.00*	0.22	1.1705E+002		1.3366E+003
		533.66	0.19	1.3807E+002		1.2421E+002
		785.96*	1.07	1.4681E+001		9.9443E+001
		839.04*	0.59	2.6153E+001		1.1724E+002
+	Ra-224	81.07*	0.13	2.5068E+002	4.87E+000	1.4645E+002
		83.78*	0.22	1.6492E+002		7.9902E+002
		240.99*	4.10	4.8662E+000		1.1177E+002
+	Ra-226	81.07*	0.20	1.5989E+002	9.64E+000	9.3406E+001
		83.78*	0.33	1.0465E+002		5.0702E+002
		94.90	0.15	2.5751E+002		1.9427E+003
		186.21*	3.59	9.6413E+000		6.5470E+001
+	Ac-228	99.50*	1.26	3.5953E+001	8.62E-001	5.4190E+001
		129.07*	2.50	1.5448E+001		5.1180E+001
		209.25*	3.97	9.0519E+000		7.5104E+001
		270.24*	3.55	8.0322E+000		8.7645E+001
		328.00*	3.04	6.1761E+000		6.9084E+001
		338.32*	11.40	1.6181E+000		7.7750E+001
		409.46*	2.02	8.9360E+000		6.9720E+001

	Nuclide Name	Energy (keV)	Yield (%)	Line MDA (pCi/GWET)	Nuclide MDA (pCi/GWET)	Activity (pCi/GWET)
+	Ac-228	463.00*	4.45	6.0607E+000	8.62E-001	6.9207E+001
		755.31*	1.03	2.8402E+001		7.2452E+001
		772.29*	1.52	1.1333E+001		6.6445E+001
		794.94*	4.31	8.8345E+000		7.1120E+001
		835.70*	1.70	9.7595E+000		6.9597E+001
		911.20*	26.20	1.1545E+000		7.7856E+001
		964.79*	4.99	2.8395E+000		7.8759E+001
		968.96*	15.90	8.6210E-001		7.9452E+001
		1588.20*	3.06	4.8627E+000		8.8498E+001
		1630.62*	1.52	8.9789E+000		8.6980E+001
+	Th-228	84.37*	1.26	2.8403E+001	2.84E+001	1.3761E+002
		131.61	0.13	2.5878E+002		-9.8357E+001
		166.41	0.10	2.9946E+002		9.2947E+001
		215.98*	0.25	8.3762E+001		4.8254E+001
	Pa-234m	258.23	0.07	3.7130E+002	2.65E+001	-2.7469E+001
		742.81	0.09	2.8532E+002		1.0778E+001
		766.36	0.32	1.0315E+002		5.5345E+001
		786.27	0.05	5.4248E+002		3.6756E+001
		1001.03	0.85	2.6458E+001		5.8363E+001
		1737.77	0.02	1.0488E+003		-5.8023E+001
+	Th-234	63.30*	3.75	1.6962E+001	6.51E+000	2.6042E+001
		92.59*	4.33	6.5146E+000		8.5140E+001
		112.81	0.22	1.3783E+002		1.4833E+000

+ = 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

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***** 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-S008-0006-02
Nuclide Library Used: C:\GENIE2K\CAMFILES\ERT_LIBRARY_LMDA.NLB

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

Nuclide Name	Id Confidence	Energy (keV)		Yield (%)	Activity (pCi/GWET)	Activity Uncertainty
Be-7	0.993	477.60*		10.44	1.09454E+000	6.05686E-001
Eu-152m	0.998	89.85*		69.90	4.18028E+000	1.31595E-001
Eu-155	0.931	45.30		1.31		
		60.01		1.22		
		86.55*		30.70	1.37420E+001	4.30484E-001
		105.31*		21.10	4.33774E+000	2.38576E-001
Tm-170	0.999	84.25*		2.48	8.42609E+001	4.46606E+000
Tl-208	0.955	72.80	@	2.02		
		74.97*	@	3.41	2.26262E+002	7.16712E+000
		84.90*	@	1.51	1.14826E+002	4.43406E+000
		277.36*		6.31	2.55417E+001	1.23966E+000
		510.77*	@	22.60	2.89173E+001	1.01537E+000
		583.19*		84.50	2.44319E+001	7.71211E-001
		763.13*	@	1.81	2.71413E+001	1.57133E+000
		860.56*		12.42	2.66467E+001	8.69434E-001
TL-208e	0.996	1592.53*		99.16	1.47535E+000	9.85643E-002
Bi-211	0.932	351.03*		13.00	9.65768E+001	3.56264E+000
Pb-211	0.501	74.81*	@	0.23	3.22918E+003	1.73709E+002
		77.11*	@	0.39	2.81464E+003	1.50639E+002
		87.30*	@	0.17	2.40679E+003	1.32357E+002
		404.85*		3.78	4.67029E+000	5.76740E-001
		427.09*		1.76	4.89181E+000	2.54457E+000
		832.01		3.52		
Bi-212	0.953	39.86	@	1.06		
		727.33*		6.74	8.06736E+001	2.80600E+000
		785.37*		1.11	9.99436E+001	3.84438E+000
		1620.74*		1.51	8.38775E+001	3.68618E+000
		1806.00*	@	0.09	1.15216E+002	4.93507E+001
Pb-212	0.999	74.81*		10.40	7.41880E+001	3.17840E+000
		77.11*		17.50	6.46611E+001	2.70579E+000
		87.30*		7.81	5.53835E+001	2.42077E+000
		115.18*	@	0.59	3.78912E+001	1.19086E+001
		238.63*		43.30	8.20454E+001	2.70786E+000
		300.09*		3.28	6.96521E+001	3.03478E+000
Bi-214	0.953	76.86*	@	0.43	2.54773E+003	1.10055E+002
		89.81*	@	0.24	1.19056E+003	5.68216E+001
		386.77	@	0.30		
		454.77	@	0.29		
		609.31*		45.49	2.90506E+001	8.84649E-001
		665.45*	@	1.53	2.55799E+001	3.66329E+000
		703.11	@	0.48		

Nuclide Name	Id Confidence	Energy (keV)	Yield (%)	Activity (pCi/GWET)	Activity Uncertainty
Bi-214	0.953	719.86* @	0.39	1.77786E+001	1.11397E+001
		768.36*	4.89	3.17704E+001	1.04108E+000
		786.10* @	0.31	3.43240E+002	5.68298E+001
		806.17* @	1.26	2.15369E+001	3.41290E+000
		934.06*	3.10	2.97303E+001	1.86462E+000
		964.08* @	0.36	1.03845E+003	4.36950E+001
		1051.96* @	0.31	1.79550E+001	8.88403E+000
		1120.29*	14.91	3.25854E+001	1.00183E+000
		1133.66 @	0.25		
		1155.19* @	1.63	3.66854E+001	3.10362E+000
		1207.68* @	0.45	2.57772E+001	8.09095E+000
		1238.11*	5.79	3.39096E+001	1.35081E+000
		1280.96* @	1.43	3.37655E+001	3.63203E+000
		1377.67*	4.00	3.59602E+001	1.41819E+000
		1385.31* @	0.76	3.55924E+001	6.90722E+000
		1401.50* @	1.27	3.75746E+001	2.34760E+000
		1407.98* @	2.15	3.81034E+001	1.93729E+000
		1509.23* @	2.11	3.54903E+001	1.82584E+000
		1538.50* @	0.38	4.40318E+001	5.79204E+000
		1543.32* @	0.20	7.66579E+001	2.17551E+001
		1583.22* @	0.69	3.78163E+001	3.43192E+000
		1594.73 @	0.25		
		1599.31* @	0.23	4.74169E+001	1.49131E+001
		1661.28* @	1.15	2.59003E+001	2.27717E+000
		1683.99 @	0.22		
		1729.59* @	2.92	3.86635E+001	2.35238E+000
		1764.49*	15.40	3.58047E+001	1.36704E+000
		1847.42* @	2.11	3.53787E+001	2.77953E+000
		1873.16 @	0.22		
		2118.55 @	1.14		
		2204.21 @	5.08		
Pb-214	0.965	53.28 @	1.20		
		74.81*	6.44	1.14911E+002	5.22398E+000
		77.11*	10.80	1.00494E+002	4.82630E+000
		87.30*	4.84	8.57172E+001	4.08300E+000
		242.00*	7.43	5.91571E+001	2.12860E+000
		258.87* @	0.52	3.18375E+001	4.53979E+000
		274.80 @	0.47		
		295.22*	19.30	3.17792E+001	1.13300E+000
		351.93*	37.60	3.32703E+001	1.18116E+000
		462.00* @	0.22	1.33663E+003	7.54693E+001
		533.66 @	0.19		
		785.96* @	1.07	9.94433E+001	8.31315E+000
		839.04* @	0.59	1.17243E+002	3.57380E+000
Rn-220	0.962	549.73*	0.11	8.90657E+001	2.31723E+001
Ra-223	0.675	81.07*	15.30	1.20703E+000	2.76862E-001
		83.78*	25.40	6.57106E+000	2.84813E-001
		94.90	11.50		
		122.32 @	1.21		
		144.24*	3.27	5.48466E+000	1.47482E+000

Nuclide Name	Id Confidence	Energy (keV)	Yield (%)	Activity (pCi/GWET)	Activity Uncertainty
Ra-223	0.675	154.21*	5.70	1.24588E+001	1.49770E+000
		158.63 @	0.69		
		179.54 @	0.15		
		269.46*	13.90	2.15479E+001	1.03860E+000
		288.18* @	0.16	1.75241E+002	5.13975E+001
		323.87*	3.99	3.23540E+000	5.58893E-001
		328.38* @	0.21	9.67318E+002	5.21880E+001
		338.32*	2.84	3.00435E+002	1.24895E+001
		342.87 @	0.22		
		371.68 @	0.49		
		445.03 @	1.29		
Ra-224	0.990	81.07* @	0.13	1.46449E+002	3.40535E+001
		83.78* @	0.22	7.99018E+002	4.26581E+001
		240.99*	4.10	1.11771E+002	3.91080E+000
Ra-226	0.933	81.07* @	0.20	9.34056E+001	2.16804E+001
		83.78* @	0.33	5.07019E+002	2.69706E+001
		94.90 @	0.15		
		186.21*	3.59	6.54702E+001	3.09281E+000
Ac-228	0.980	99.50* @	1.26	5.41903E+001	8.07460E+000
		129.07* @	2.50	5.11797E+001	3.86052E+000
		209.25*	3.97	7.51044E+001	3.94316E+000
		270.24*	3.55	8.76454E+001	4.19288E+000
		328.00*	3.04	6.90842E+001	3.62601E+000
		338.32*	11.40	7.77502E+001	3.77052E+000
		409.46* @	2.02	6.97196E+001	3.50024E+000
		463.00*	4.45	6.92074E+001	4.61062E+000
		755.31* @	1.03	7.24521E+001	7.15569E+000
		772.29* @	1.52	6.64451E+001	3.66525E+000
		794.94*	4.31	7.11200E+001	3.54516E+000
		835.70* @	1.70	6.95974E+001	3.33911E+000
		911.20*	26.20	7.78561E+001	3.00119E+000
		964.79*	4.99	7.87590E+001	3.37682E+000
		968.96*	15.90	7.94518E+001	3.13478E+000
		1588.20*	3.06	8.84984E+001	4.45492E+000
		1630.62* @	1.52	8.69801E+001	4.79488E+000
Th-228	0.749	84.37*	1.26	1.37609E+002	5.74524E+000
		131.61 @	0.13		
		166.41 @	0.10		
		215.98*	0.25	4.82537E+001	1.81477E+001
Th-234	0.917	63.30*	3.75	2.60421E+001	2.51199E+000
		92.59*	4.33	8.51404E+001	4.44604E+000
		112.81 @	0.22		

* = 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
	Be-7		0.993	1.094535E+000	6.056860E-001
X	Mn-54		0.973		
X	Cd-109		0.905		
	Eu-152m		0.998	4.067009E+000	1.266177E-001
	Eu-155		0.931	3.034521E+000	1.895392E-001
	Tm-170		0.999	4.360367E+000	1.195669E+001
	Tl-208	@	0.955	2.545246E+001	5.036383E-001
	TL-208e		0.996	1.475347E+000	9.856433E-002
	Bi-211		0.932	2.347735E+001	4.383926E+000
	Pb-211	@	0.501	4.626962E+000	5.579846E-001
	Bi-212	@	0.953	7.826883E+001	1.738240E+000
	Pb-212	@	0.999	4.784456E+001	1.111772E+000
	Bi-214	@	0.953	3.226072E+001	4.328082E-001
	Pb-214	@	0.965	2.518249E+001	1.005479E+000
	Rn-220		0.962	8.906566E+001	2.317230E+001
	Ra-223	@	0.675	1.131923E+000	2.345531E-001
	Ra-224	@	0.990	6.236840E+001	4.119855E+000
	Ra-226	@	0.933	6.368985E+001	2.884974E+000
	Ac-228	@	0.980	7.666494E+001	7.683948E-001
	Th-228	@	0.749	4.825370E+001	1.813876E+001
X	Th-231		1.000		
	Th-234	@	0.917	4.034245E+001	2.187054E+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: 6/24/2017 12:07:17 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
1	57.64	4.6382E-001	10.22		
m 3	65.13	1.4137E-001	12.51		
m 13	108.73	1.7804E-001	12.47		
18	163.37	3.8793E-002	78.73	Sum	
19	176.61	1.3277E-002	276.01	Sum	
21	199.27	1.1496E-001	29.03	Sum	
M 24	235.93	2.3750E-001	7.19	Sum	
M 27	252.52	8.9649E-002	15.70		
m 28	256.17	1.2840E-001	11.30	Tol.	Th-227 Pa-231
M 35	321.37	5.1979E-002	22.26	Sum	
m 38	332.13	1.2961E-001	9.27	Sum	
m 40	340.78	1.4567E-001	7.85	Sum	
M 42	401.70	1.1605E-001	9.06	Sum	
46	452.47	7.0101E-002	22.09	Sum	
49	486.80	9.6185E-003	176.66	D-Esc.	
M 51	545.99	4.4390E-002	19.39	Sum	
53	562.15	2.1984E-001	8.85	D-Esc.	
54	571.11	7.2941E-002	24.16	D-Esc.	
58	701.99	7.3409E-002	21.82	Sum	
M 65	781.70	1.1807E-001	6.18		
69	816.08	3.1170E-002	28.50	Sum	
M 70	830.14	1.1079E-001	1.60	Sum	
m 73	843.33	1.9903E-003	68.53	Sum	
75	893.05	6.9267E-002	16.05	Sum	
76	903.81	1.5697E-001	10.01	Sum	
79	951.63	3.6564E-002	25.01	Tol.	La-140
M 80	958.18	4.8625E-002	10.71	Sum	
83	987.79	3.7298E-002	34.43	Sum	
84	1000.64	9.1673E-002	11.95	Sum	
85	1032.74	2.3857E-002	42.57	S-Esc.	
87	1064.87	4.1800E-002	21.30	Sum	
M 88	1078.32	1.0656E-001	5.52	Sum	
m 89	1083.49	8.7341E-003	43.26	Sum	
90	1093.47	1.1265E-001	12.27	Sum	
91	1110.23	8.2277E-002	15.23	S-Esc.	
94	1175.13	3.8028E-003	205.75	Sum	
97	1246.72	9.6031E-002	16.80	Sum	
M 99	1374.14	1.7946E-002	23.18	Sum	
104	1458.97	1.4441E-001	9.16	Sum	
M105	1495.87	1.3112E-001	4.47	Sum	
m106	1501.56	6.8401E-002	6.97	Sum	
m108	1513.00	6.3345E-002	7.19	Sum	
111	1556.95	2.6483E-002	32.77	Sum	

Peak No.	Energy (keV)	Peak Size in Counts per Second	Peak CPS % Uncertainty	Peak Type	Tol. Nuclide
M112	1580.59	1.0203E-001	5.05	Sum	
m118	1625.04	3.9804E-002	9.47	Sum	
120	1638.53	7.1698E-002	11.72	Sum	
m122	1666.71	2.1790E-002	15.60	Sum	
127	1887.93	4.2448E-003	140.09	Sum	

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

Errors quoted at 1.000 sigma