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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        *****
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Filename: ERT01,C:\GENIE2K\CAMFILES\SMP-HTC-A01-S008-0006-01.CNF

Report Generated On              : 6/23/2017   7:49:03 PM

Sample Title                     : HTC-A01-S008-0006-01
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                      :  1.073E+003 GWET

Sample Taken On                  : 5/13/2017   8:21:00 AM
Acquisition Started              : 6/23/2017   5:46:04 PM

Live Time                        :     7200.0 seconds
Real Time                        :     7376.1 seconds

Dead Time                        :   2.39 %


            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-S008-0006-01
Peak Analysis Performed on: 6/23/2017 7:49:03 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	218-	239	231.10	57.64	0.92	6.33E+003	667.67	1.17E+005
M	2	239-	265	254.01	63.37	0.80	3.07E+003	218.02	5.78E+004
m	3	239-	265	261.38	65.21	0.80	1.34E+003	196.23	5.97E+004
M	4	285-	385	300.09	74.89	1.15	3.76E+004	304.97	9.01E+004
m	5	285-	385	309.17	77.15	1.15	9.62E+004	496.57	9.68E+004
m	6	285-	385	318.70	79.54	1.16	1.24E+003	198.27	9.70E+004
m	7	285-	385	325.64	81.27	1.16	3.67E+003	251.87	9.71E+004
m	8	285-	385	337.54	84.24	1.16	1.52E+004	262.56	9.73E+004
m	9	285-	385	349.67	87.27	1.17	2.64E+004	255.68	9.75E+004
m	10	285-	385	360.49	89.98	1.17	3.95E+004	362.92	9.78E+004
m	11	285-	385	373.29	93.18	1.18	4.95E+004	348.18	9.81E+004
	12	385-	407	397.23	99.16	1.80	4.81E+003	782.55	1.57E+005
M	13	407-	443	422.31	105.43	1.33	1.12E+004	319.66	1.17E+005
m	14	407-	443	435.97	108.84	1.33	3.77E+003	272.17	1.20E+005
	15	456-	469	461.49	115.22	1.14	2.52E+003	521.83	9.78E+004
M	16	508-	533	517.11	129.12	0.98	1.46E+004	298.07	9.50E+004
m	17	508-	533	527.16	131.63	0.99	1.14E+003	227.60	9.41E+004
	18	570-	582	576.39	143.94	1.15	3.45E+003	500.28	9.37E+004
	19	608-	633	616.96	154.08	1.08	9.72E+003	873.85	1.77E+005
	20	649-	661	654.38	163.43	0.87	9.75E+002	472.77	8.44E+004
	21	734-	753	744.77	186.02	1.23	4.23E+004	684.81	1.22E+005
	22	795-	807	798.06	199.34	1.07	1.87E+003	445.72	7.46E+004
M	23	815-	852	821.90	205.30	1.06	1.31E+003	208.96	7.90E+004
m	24	815-	852	837.71	209.25	1.06	2.96E+004	300.42	7.60E+004
	25	859-	872	864.77	216.01	0.99	1.76E+003	447.88	7.21E+004
M	26	939-	982	944.49	235.93	1.13	4.42E+003	212.06	6.23E+004
m	27	939-	982	955.13	238.59	1.13	3.42E+005	628.11	6.01E+004
m	28	939-	982	967.20	241.61	1.13	5.80E+004	301.92	5.16E+004
M	29	1007-	1042	1011.32	252.63	1.13	1.42E+003	172.61	4.08E+004
m	30	1007-	1042	1025.82	256.26	1.13	2.19E+003	177.93	4.65E+004
m	31	1007-	1042	1035.88	258.77	1.14	2.98E+003	190.50	4.56E+004
M	32	1072-	1122	1081.41	270.15	1.34	2.88E+004	266.49	5.31E+004
m	33	1072-	1122	1099.21	274.60	1.34	1.93E+003	173.99	5.16E+004
m	34	1072-	1122	1110.13	277.33	1.35	1.50E+004	219.97	5.08E+004
	35	1146-	1158	1153.04	288.05	1.00	2.06E+003	314.60	3.68E+004
	36	1173-	1191	1181.36	295.13	1.16	9.75E+004	519.21	5.07E+004
	37	1191-	1209	1200.98	300.03	1.15	2.19E+004	435.81	4.98E+004
M	38	1281-	1343	1287.03	321.54	1.19	1.26E+003	146.89	3.25E+004
m	39	1281-	1343	1296.08	323.80	1.20	1.20E+003	146.74	3.70E+004
m	40	1281-	1343	1312.42	327.88	1.20	1.80E+004	259.51	3.43E+004
m	41	1281-	1343	1329.90	332.25	1.20	2.34E+003	149.45	3.63E+004
M	42	1345-	1374	1353.73	338.21	1.16	7.29E+004	317.62	3.25E+004

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	FWHM (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
m	43	1345-	1374	1364.47	340.89	1.17	2.64E+003	142.45	3.11E+004
	44	1391-	1421	1408.11	351.80	1.20	1.76E+005	683.37	5.93E+004
M	45	1542-	1564	1547.64	386.67	1.22	1.20E+003	128.50	2.21E+004
m	46	1542-	1564	1556.00	388.76	1.22	2.00E+003	141.73	2.70E+004
M	47	1601-	1649	1607.82	401.71	1.22	1.73E+003	130.02	2.52E+004
m	48	1601-	1649	1621.11	405.03	1.22	1.27E+003	122.36	2.62E+004
m	49	1601-	1649	1638.28	409.32	1.23	1.08E+004	175.33	2.51E+004
	50	1705-	1727	1709.55	427.14	0.95	1.23E+003	357.39	3.26E+004
	51	1750-	1769	1762.23	440.30	0.60	7.14E+002	304.58	2.63E+004
M	52	1801-	1826	1811.79	452.69	1.05	1.89E+003	119.18	1.80E+004
m	53	1801-	1826	1819.23	454.55	1.05	8.25E+002	102.88	1.78E+004
	54	1842-	1861	1852.36	462.83	1.31	2.25E+004	328.29	2.44E+004
M	55	1908-	1936	1913.18	478.03	1.45	1.10E+003	112.61	1.57E+004
m	56	1908-	1936	1922.27	480.30	1.45	2.02E+003	127.30	1.99E+004
	57	1937-	1956	1948.56	486.87	1.19	1.58E+003	281.16	2.21E+004
	58	2009-	2023	2015.94	503.71	0.55	3.78E+002	218.52	1.64E+004
	59	2027-	2061	2043.36	510.56	1.40	4.85E+004	502.67	3.79E+004
	60	2125-	2141	2134.89	533.44	1.00	6.76E+002	232.74	1.71E+004
M	61	2181-	2209	2186.25	546.27	1.29	7.77E+002	106.58	1.38E+004
m	62	2181-	2209	2199.72	549.64	1.30	8.04E+002	108.21	1.63E+004
	63	2244-	2258	2250.49	562.33	1.31	3.87E+003	212.42	1.43E+004
	64	2324-	2344	2333.16	582.99	1.34	1.32E+005	453.28	2.04E+004
	65	2425-	2448	2437.61	609.09	1.35	1.45E+005	470.65	1.91E+004
M	66	2460-	2488	2464.99	615.93	1.16	5.22E+002	93.02	8.98E+003
m	67	2460-	2488	2482.15	620.22	1.17	2.74E+002	84.31	1.05E+004
	68	2652-	2677	2662.32	665.25	1.51	4.42E+003	287.92	1.84E+004
	69	2694-	2704	2699.33	674.50	0.27	1.15E+002	138.65	8.01E+003
M	70	2801-	2840	2811.95	702.65	1.92	1.73E+003	121.80	1.63E+004
m	71	2801-	2840	2830.59	707.31	1.92	8.16E+002	105.84	1.54E+004
M	72	2870-	2924	2879.76	719.59	1.44	9.51E+002	72.29	1.16E+004
m	73	2870-	2924	2889.94	722.14	1.44	2.67E+002	67.86	1.16E+004
m	74	2870-	2924	2909.70	727.08	1.45	2.98E+004	173.29	1.14E+004
	75	2963-	2976	2969.90	742.12	0.79	4.52E+002	155.80	8.63E+003
	76	3007-	3038	3021.88	755.11	1.41	4.31E+003	309.23	1.82E+004
M	77	3045-	3104	3054.10	763.16	1.51	2.29E+003	93.40	1.05E+004
m	78	3045-	3104	3074.02	768.14	1.51	1.35E+004	147.56	1.08E+004
m	79	3045-	3104	3089.78	772.08	1.51	5.78E+003	111.75	9.96E+003
M	80	3120-	3157	3129.32	781.96	1.54	1.88E+003	86.83	9.12E+003
m	81	3120-	3157	3143.41	785.49	1.54	7.36E+003	121.93	8.89E+003
	82	3171-	3193	3180.39	794.73	1.50	1.61E+004	236.50	1.02E+004
	83	3212-	3236	3225.51	806.00	1.35	3.39E+003	215.69	1.05E+004
	84	3264-	3296	3285.19	820.92	0.37	2.10E+001	268.17	1.40E+004
M	85	3316-	3377	3323.35	830.46	1.69	2.30E+003	87.27	7.27E+003
m	86	3316-	3377	3343.62	835.52	1.69	6.50E+003	112.38	8.28E+003
m	87	3316-	3377	3360.82	839.82	1.70	4.39E+003	100.17	8.08E+003
	88	3429-	3458	3443.04	860.37	1.51	1.69E+004	259.99	1.07E+004
	89	3532-	3544	3538.48	884.22	0.57	9.78E+001	109.92	4.55E+003
	90	3560-	3589	3574.83	893.31	1.38	1.44E+003	225.56	1.04E+004
	91	3606-	3628	3617.95	904.08	1.32	2.61E+003	183.63	8.02E+003
	92	3632-	3657	3645.85	911.05	1.54	9.71E+004	366.11	8.66E+003

Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	FWHM (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
93	3727-	3750	3737.37	933.93	1.51	7.71E+003	186.46	6.73E+003
M 94	3786-	3817	3793.11	947.86	1.22	2.66E+002	54.99	4.23E+003
m 95	3786-	3817	3809.26	951.89	1.23	4.38E+002	60.90	4.38E+003
M 96	3828-	3895	3835.68	958.50	1.57	9.92E+002	65.63	4.87E+003
m 97	3828-	3895	3860.19	964.62	1.58	1.83E+004	149.61	5.31E+003
m 98	3828-	3895	3877.07	968.84	1.58	5.73E+004	249.14	5.05E+003
99	3944-	3964	3954.19	988.11	1.45	7.79E+002	135.41	4.83E+003
100	3996-	4013	4005.52	1000.94	1.49	2.31E+003	129.49	4.45E+003
101	4121-	4143	4134.30	1033.13	1.09	8.05E+002	141.79	4.98E+003
102	4201-	4220	4209.65	1051.96	1.53	6.37E+002	125.86	4.34E+003
M103	4252-	4291	4262.65	1065.21	1.39	6.03E+002	57.93	3.69E+003
m104	4252-	4291	4281.81	1069.99	1.39	5.08E+002	55.47	3.86E+003
105	4305-	4328	4316.71	1078.72	1.60	1.77E+003	145.92	4.88E+003
106	4363-	4396	4377.51	1093.91	2.04	1.82E+003	190.43	6.56E+003
M107	4410-	4454	4418.20	1104.08	1.68	3.79E+002	54.02	3.79E+003
m108	4410-	4454	4444.29	1110.60	1.68	1.12E+003	67.31	4.15E+003
109	4467-	4510	4483.04	1120.28	1.66	3.40E+004	305.82	8.89E+003
110	4528-	4545	4537.12	1133.80	1.52	4.26E+002	108.98	3.52E+003
111	4607-	4635	4622.84	1155.22	1.62	4.03E+003	172.43	5.56E+003
112	4652-	4670	4660.09	1164.53	0.32	1.51E+002	110.24	3.55E+003
113	4723-	4737	4729.98	1182.00	1.62	3.19E+002	89.96	2.70E+003
114	4823-	4842	4833.09	1207.77	1.55	1.02E+003	113.94	3.41E+003
115	4942-	4972	4955.01	1238.24	1.69	1.23E+004	196.71	5.36E+003
M116	4973-	5030	4990.30	1247.06	2.32	1.48E+003	73.42	5.01E+003
m117	4973-	5030	5016.38	1253.58	2.33	6.71E+002	62.07	5.04E+003
118	5043-	5055	5048.92	1261.71	0.51	7.10E+001	75.89	2.16E+003
M119	5117-	5172	5126.91	1281.20	1.68	2.82E+003	77.07	3.46E+003
m120	5117-	5172	5151.41	1287.32	1.68	4.06E+002	48.14	3.36E+003
m121	5117-	5172	5166.21	1291.02	1.68	1.06E+002	44.86	2.63E+003
122	5210-	5226	5217.20	1303.77	0.99	2.34E+002	95.27	2.82E+003
M123	5492-	5527	5500.24	1374.50	1.76	3.51E+002	48.44	2.97E+003
m124	5492-	5527	5514.10	1377.97	1.76	8.80E+003	108.64	3.51E+003
125	5537-	5553	5544.88	1385.66	1.64	1.41E+003	99.02	2.68E+003
M126	5595-	5649	5609.83	1401.89	1.76	2.61E+003	70.74	3.42E+003
m127	5595-	5649	5635.60	1408.33	1.77	4.83E+003	87.45	3.56E+003
128	5656-	5671	5665.01	1415.68	0.33	5.79E+001	85.51	2.42E+003
129	5830-	5856	5840.40	1459.51	1.77	2.07E+003	139.19	3.93E+003
M130	5976-	6021	5988.04	1496.41	1.75	2.39E+003	70.50	3.20E+003
m131	5976-	6021	6010.60	1502.05	1.75	1.20E+003	57.74	3.19E+003
M132	6030-	6075	6041.35	1509.74	1.85	4.25E+003	83.45	3.21E+003
m133	6030-	6075	6055.66	1513.31	1.85	8.79E+002	52.13	3.06E+003
M134	6149-	6210	6158.81	1539.09	1.79	7.89E+002	46.44	2.80E+003
m135	6149-	6210	6178.23	1543.94	1.79	7.04E+002	43.43	2.76E+003
m136	6149-	6210	6200.25	1549.45	1.79	7.22E+001	32.86	2.59E+003
137	6222-	6241	6232.26	1557.45	0.46	2.53E+002	94.80	2.49E+003
M138	6313-	6414	6326.90	1581.10	1.92	1.69E+003	59.92	2.67E+003
m139	6313-	6414	6337.87	1583.84	1.92	1.23E+003	56.19	2.67E+003
m140	6313-	6414	6357.57	1588.77	1.92	8.32E+003	103.63	2.67E+003
m141	6313-	6414	6375.22	1593.18	1.92	5.10E+003	85.61	2.67E+003
m142	6313-	6414	6402.53	1600.00	1.92	6.03E+002	47.83	2.79E+003

Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	FWHM (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
143	6432-	6450	6440.70	1609.54	1.03	1.60E+002	82.45	1.96E+003
M144	6475-	6568	6488.09	1621.38	1.84	4.03E+003	77.31	2.45E+003
m145	6475-	6568	6504.82	1625.57	1.84	6.47E+002	46.13	2.41E+003
m146	6475-	6568	6527.76	1631.30	1.84	4.09E+003	77.44	2.36E+003
m147	6475-	6568	6558.25	1638.92	1.84	1.19E+003	52.09	2.20E+003
M148	6642-	6682	6650.74	1662.03	2.01	1.89E+003	60.10	1.79E+003
m149	6642-	6682	6671.66	1667.26	2.01	4.73E+002	41.76	1.97E+003
150	6732-	6756	6741.28	1684.66	1.87	5.35E+002	97.06	2.15E+003
151	6767-	6792	6777.23	1693.65	2.30	5.98E+002	95.86	2.02E+003
152	6911-	6939	6924.55	1730.47	1.92	6.03E+003	130.46	2.37E+003
153	7050-	7080	7064.51	1765.44	2.00	2.85E+004	202.55	2.57E+003
154	7222-	7248	7230.64	1806.96	0.39	2.06E+002	95.63	2.04E+003
155	7350-	7373	7360.67	1839.46	1.68	4.50E+002	90.46	1.93E+003
156	7383-	7416	7396.94	1848.52	1.95	3.89E+003	133.48	2.64E+003
157	7490-	7511	7500.84	1874.49	0.64	3.88E+002	83.03	1.73E+003
158	7545-	7560	7553.75	1887.72	0.70	1.43E+002	63.95	1.31E+003
159	7582-	7607	7590.03	1896.78	1.18	3.45E+002	93.74	1.98E+003
160	7741-	7765	7752.90	1937.49	0.31	2.60E+002	92.91	2.03E+003
161	7799-	7827	7816.93	1953.49	0.39	4.15E+002	99.69	2.06E+003

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-S008-0006-01
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	3.8555E+000	3.86E+000	1.1846E+001
	Co-60	1173.23	99.85	3.4119E-001	3.41E-001	3.8072E-003
		1332.49	99.98	3.6307E-001		2.0277E-001
>		2505.71	0.10	0.0000E+000		0.0000E+000
	Cs-137	32.06	5.54	3.0633E+004	4.84E-001	-2.0471E+004
		661.66	84.99	4.8369E-001		2.8208E-002
+	Tl-208	72.80	2.02	5.2868E+001	4.89E-001	-3.4938E+000
		74.97*	3.41	1.8811E+001		3.5827E+002
		84.90*	1.51	3.2907E+001		2.4338E+002
		277.36*	6.31	5.1398E+000		5.1792E+001
		510.77*	22.60	2.8101E+000		6.4582E+001
		583.19*	84.50	4.8862E-001		5.0737E+001
		763.13*	1.81	1.4566E+001		4.9285E+001
		860.56*	12.42	3.5949E+000		5.7776E+001
+	Bi-212	39.86	1.06	5.8793E+003	3.93E+000	1.1875E+003
		727.33*	6.74	3.9253E+000		1.6613E+002
		785.37*	1.11	2.2281E+001		2.6330E+002
		1620.74*	1.51	1.4785E+001		1.8166E+002
		1806.00*	0.09	3.4830E+002		1.6195E+002
+	Pb-212	74.81*	10.40	6.1679E+000	7.52E-001	1.1747E+002
		77.11*	17.50	3.4895E+000		1.6387E+002
		87.30*	7.81	5.9507E+000		7.6266E+001
		115.18*	0.59	6.8794E+001		7.1794E+001
		238.63*	43.30	7.5176E-001		1.5905E+002
		300.09*	3.28	1.3252E+001		1.5225E+002
+	Bi-214	76.86*	0.43	1.3758E+002	9.12E-001	6.4609E+003
		89.81*	0.24	1.7372E+002		3.3292E+003
		386.77*	0.30	8.2644E+001		1.0094E+002
		454.77*	0.29	8.3006E+001		7.7825E+001
		609.31*	45.49	9.1158E-001		1.0220E+002
		665.45*	1.53	2.9006E+001		9.8213E+001
		703.11*	0.48	6.1888E+001		1.2716E+002
		719.86*	0.39	6.4885E+001		8.6666E+001
		768.36*	4.89	5.2563E+000		1.0318E+002
		786.10*	0.31	7.6573E+001		9.0486E+002
		806.17*	1.26	2.9812E+001		1.0434E+002
		934.06*	3.10	1.0771E+001		1.0827E+002
		964.08*	0.36	5.9283E+001		2.2532E+003
		1051.96*	0.31	8.7540E+001		9.6735E+001
		1120.29*	14.91	3.8436E+000		1.1482E+002

	Nuclide Name	Energy (keV)	Yield (%)	Line MDA (pCi/GWET)	Nuclide MDA (pCi/GWET)	Activity (pCi/GWET)
+	Bi-214	1133.66*	0.25	1.0018E+002	9.12E-001	8.5241E+001
		1155.19*	1.63	2.3638E+001		1.2725E+002
		1207.68*	0.45	6.0661E+001		1.2161E+002
		1238.11*	5.79	7.1509E+000		1.1547E+002
		1280.96*	1.43	1.5258E+001		1.1063E+002
		1377.67*	4.00	5.7990E+000		1.2997E+002
		1385.31*	0.76	3.3608E+001		1.1035E+002
		1401.50*	1.27	1.8236E+001		1.2314E+002
		1407.98*	2.15	1.1030E+001		1.3495E+002
		1509.23*	2.11	1.1175E+001		1.2636E+002
		1538.50*	0.38	5.9228E+001		1.3334E+002
		1543.32*	0.20	1.1074E+002		2.2384E+002
		1583.22*	0.69	3.1999E+001		1.1520E+002
		1594.73	0.25	2.4297E+002		3.0896E+003
		1599.31*	0.23	9.8610E+001		1.6987E+002
		1661.28*	1.15	1.6128E+001		1.0873E+002
		1683.99*	0.22	1.3560E+002		1.6463E+002
		1729.59*	2.92	1.1265E+001		1.3847E+002
		1764.49*	15.40	2.2973E+000		1.2496E+002
		1847.42	2.11	2.0117E+001		1.3026E+002
		1873.16	0.22	1.4875E+002		1.2982E+002
>		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	3.0395E+002	1.59E+000	6.6309E-001
		74.81*	6.44	9.5600E+000		1.8208E+002
		77.11*	10.80	5.4269E+000		2.5485E+002
		87.30*	4.84	9.2161E+000		1.1812E+002
		242.00*	7.43	3.9205E+000		1.5205E+002
		258.87*	0.52	5.4231E+001		1.1465E+002
		274.80*	0.47	6.5867E+001		8.4831E+001
		295.22*	19.30	2.1684E+000		1.0945E+002
		351.93*	37.60	1.5867E+000		1.1126E+002
		462.00*	0.22	1.6898E+002		2.7908E+003
		533.66*	0.19	1.7209E+002		1.0786E+002
		785.96*	1.07	2.2185E+001		2.6215E+002
		839.04*	0.59	4.0535E+001		2.9963E+002
+	Ra-224	81.07*	0.13	4.0975E+002	7.40E+000	7.3210E+002
		83.78*	0.22	2.2898E+002		1.6936E+003
		240.99*	4.10	7.4024E+000		2.8709E+002
+	Ra-226	81.07*	0.20	2.6152E+002	1.45E+001	4.6725E+002
		83.78*	0.33	1.4540E+002		1.0754E+003
		94.90	0.15	3.9224E+002		3.9337E+003
		186.21*	3.59	1.4458E+001		2.0077E+002
+	Ac-228	99.50*	1.26	5.4209E+001	1.38E+000	7.1841E+001
		129.07*	2.50	1.3268E+001		9.5217E+001
		209.25*	3.97	8.6052E+000		1.4040E+002
		270.24*	3.55	9.2030E+000		1.7482E+002
		328.00*	3.04	9.5863E+000		1.4122E+002
		338.32*	11.40	2.5263E+000		1.5499E+002
		409.46*	2.02	1.3853E+001		1.4263E+002

	Nuclide Name	Energy (keV)	Yield (%)	Line MDA (pCi/GWET)	Nuclide MDA (pCi/GWET)	Activity (pCi/GWET)
+	Ac-228	463.00*	4.45	8.7434E+000	1.38E+000	1.4440E+002
		755.31*	1.03	5.2781E+001		1.6154E+002
		772.29*	1.52	1.7010E+001		1.4931E+002
		794.94*	4.31	8.6597E+000		1.4924E+002
		835.70*	1.70	1.4709E+001		1.5896E+002
		911.20*	26.20	1.5212E+000		1.6474E+002
		964.79*	4.99	4.4932E+000		1.7077E+002
		968.96*	15.90	1.3793E+000		1.6811E+002
		1588.20*	3.06	7.5373E+000		1.8317E+002
		1630.62*	1.52	1.4464E+001		1.8360E+002
+	Th-228	84.37*	1.26	3.9436E+001	3.94E+001	2.9167E+002
		131.61*	0.13	2.5260E+002		1.4260E+002
		166.41	0.10	4.6767E+002		2.0230E+002
		215.98*	0.25	1.5635E+002		1.3271E+002
+	Pa-234m	258.23*	0.07	3.8504E+002	3.05E+001	8.1403E+002
		742.81*	0.09	2.8055E+002		1.7620E+002
		766.36	0.32	1.5797E+002		1.4955E+002
		786.27*	0.05	4.4284E+002		5.2331E+003
		1001.03*	0.85	3.0501E+001		1.2535E+002
		1737.77	0.02	1.8264E+003		5.2066E+002
+	Th-234	63.30*	3.75	2.4746E+001	9.30E+000	4.7496E+001
		92.59*	4.33	9.3015E+000		2.2278E+002
		112.81	0.22	2.1178E+002		5.4603E+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

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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-S008-0006-01
Nuclide Library Used: C:\GENIE2K\CAMFILES\ERT_LIBRARY_LMDA.NLB

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

Nuclide Name	Id Confidence	Energy (keV)	Yield (%)	Activity (pCi/GWET)	Activity Uncertainty
Be-7	0.969	477.60*	10.44	5.06681E+000	5.42806E-001
Mn-54	0.928	834.84*	99.97	2.84422E+000	8.25534E-002
Cd-115m	0.803	484.47	0.29		
		933.80*	2.00	3.19505E+002	1.07448E+001
		1290.59*	0.89	1.27161E+001	5.41963E+000
Eu-152m	0.997	89.85*	69.90	1.16883E+001	3.40748E-001
Eu-155	0.927	45.30	1.31		
		60.01	1.22		
		86.55*	30.70	1.89310E+001	5.74567E-001
		105.31*	21.10	9.21274E+000	4.28624E-001
Tl-208	0.970	72.80 @	2.02		
		74.97* @	3.41	3.58275E+002	1.11916E+001
		84.90* @	1.51	2.43381E+002	7.98866E+000
		277.36*	6.31	5.17917E+001	1.97676E+000
		510.77* @	22.60	6.45819E+001	2.16879E+000
		583.19*	84.50	5.07371E+001	1.59016E+000
		763.13* @	1.81	4.92847E+001	2.34595E+000
		860.56*	12.42	5.77755E+001	1.66760E+000
TL-208e	0.936	1592.53*	99.16	3.46599E+000	2.20519E-001
Bi-211	0.909	351.03*	13.00	3.22952E+002	1.17207E+001
Pb-211	0.502	74.81* @	0.23	5.11638E+003	2.73912E+002
		77.11* @	0.39	7.13733E+003	3.80369E+002
		87.30* @	0.17	3.31630E+003	1.80550E+002
		404.85*	3.78	8.60933E+000	8.89002E-001
		427.09*	1.76	1.84017E+001	5.41709E+000
		832.01	3.52		
Bi-212	0.960	39.86 @	1.06		
		727.33*	6.74	1.66128E+002	5.26361E+000
		785.37*	1.11	2.63296E+002	8.06562E+000
		1620.74*	1.51	1.81660E+002	6.93714E+000
		1806.00* @	0.09	1.61947E+002	8.36552E+001
Pb-212	1.000	74.81*	10.40	1.17473E+002	4.99484E+000
		77.11*	17.50	1.63866E+002	6.80945E+000
		87.30*	7.81	7.62657E+001	3.28060E+000
		115.18* @	0.59	7.17941E+001	1.49684E+001
		238.63*	43.30	1.59051E+002	5.24073E+000
		300.09*	3.28	1.52247E+002	5.96328E+000
Bi-214	0.945	76.86* @	0.43	6.46088E+003	2.77272E+002
		89.81* @	0.24	3.32921E+003	1.53892E+002
		386.77* @	0.30	1.00935E+002	1.14661E+001
		454.77* @	0.29	7.78247E+001	1.01272E+001

Nuclide Name	Id Confidence	Energy (keV)	Yield (%)	Activity (pCi/GWET)	Activity Uncertainty
Bi-214	0.945	609.31*	45.49	1.02200E+002	3.03500E+000
		665.45* @	1.53	9.82130E+001	6.95584E+000
		703.11* @	0.48	1.27163E+002	9.99901E+000
		719.86* @	0.39	8.66660E+001	7.29831E+000
		768.36*	4.89	1.03184E+002	2.79158E+000
		786.10* @	0.31	9.04856E+002	1.48330E+002
		806.17* @	1.26	1.04336E+002	7.10447E+000
		934.06*	3.10	1.08268E+002	3.61300E+000
		964.08* @	0.36	2.25320E+003	9.24307E+001
		1051.96* @	0.31	9.67352E+001	1.95547E+001
		1120.29*	14.91	1.14817E+002	2.97497E+000
		1133.66* @	0.25	8.52412E+001	2.20840E+001
		1155.19* @	1.63	1.27254E+002	6.30210E+000
		1207.68* @	0.45	1.21612E+002	1.45125E+001
		1238.11*	5.79	1.15474E+002	3.79056E+000
		1280.96* @	1.43	1.10634E+002	4.39258E+000
		1377.67*	4.00	1.29970E+002	4.13612E+000
		1385.31* @	0.76	1.10346E+002	8.65082E+000
		1401.50* @	1.27	1.23141E+002	4.94527E+000
		1407.98* @	2.15	1.34948E+002	5.22718E+000
		1509.23* @	2.11	1.26361E+002	4.68587E+000
		1538.50* @	0.38	1.33340E+002	9.87572E+000
		1543.32* @	0.20	2.23843E+002	5.79167E+001
		1583.22* @	0.69	1.15204E+002	6.46645E+000
		1594.73 @	0.25		
		1599.31* @	0.23	1.69866E+002	4.65275E+001
		1661.28* @	1.15	1.08728E+002	5.37833E+000
		1683.99* @	0.22	1.64632E+002	3.05497E+001
		1729.59* @	2.92	1.38471E+002	5.52210E+000
		1764.49*	15.40	1.24960E+002	4.48444E+000
		1847.42 @	2.11		
		1873.16 @	0.22		
		2118.55 @	1.14		
		2204.21 @	5.08		
Pb-214	0.987	53.28 @	1.20		
		74.81*	6.44	1.82079E+002	8.22203E+000
		77.11*	10.80	2.54846E+002	1.21747E+001
		87.30*	4.84	1.18116E+002	5.55117E+000
		242.00*	7.43	1.52052E+002	5.36975E+000
		258.87* @	0.52	1.14653E+002	8.54992E+000
		274.80* @	0.47	8.48305E+001	8.36151E+000
		295.22*	19.30	1.09450E+002	3.77169E+000
		351.93*	37.60	1.11262E+002	3.88096E+000
		462.00* @	0.22	2.79076E+003	1.51444E+002
		533.66* @	0.19	1.07864E+002	3.76656E+001
		785.96* @	1.07	2.62155E+002	2.10496E+001
		839.04* @	0.59	2.99632E+002	1.10176E+001
Rn-220	0.999	549.73*	0.11	2.22034E+002	4.51190E+001
Ra-223	0.672	81.07*	15.30	6.03765E+000	4.49613E-001
		83.78*	25.40	1.39364E+001	5.33401E-001

Nuclide Name	Id Confidence	Energy (keV)		Yield (%)	Activity (pCi/GWET)	Activity Uncertainty
Ra-223	0.672	94.90		11.50		
		122.32	@	1.21		
		144.24*		3.27	1.66264E+001	2.49485E+000
		154.21*		5.70	2.72782E+001	2.68421E+000
		158.63	@	0.69		
		179.54	@	0.15		
		269.46*		13.90	4.30075E+001	1.89652E+000
		288.18*	@	0.16	2.76063E+002	4.39947E+001
		323.87*		3.99	6.89040E+000	8.83190E-001
		328.38*	@	0.21	1.97863E+003	1.03727E+002
		338.32*		2.84	5.99271E+002	2.47652E+001
		342.87	@	0.22		
		371.68	@	0.49		
		445.03	@	1.29		
Ra-224	0.943	81.07*	@	0.13	7.32096E+002	6.12616E+001
		83.78*	@	0.22	1.69357E+003	8.35967E+001
		240.99*		4.10	2.87093E+002	9.84819E+000
Ra-226	0.938	81.07*	@	0.20	4.67248E+002	3.85532E+001
		83.78*	@	0.33	1.07539E+003	5.28570E+001
		94.90	@	0.15		
		186.21*		3.59	2.00771E+002	7.54906E+000
Ac-228	0.994	99.50*	@	1.26	7.18409E+001	1.20414E+001
		129.07*	@	2.50	9.52167E+001	3.99778E+000
		209.25*		3.97	1.40397E+002	6.46301E+000
		270.24*		3.55	1.74824E+002	7.64034E+000
		328.00*		3.04	1.41224E+002	7.19042E+000
		338.32*		11.40	1.54991E+002	7.48373E+000
		409.46*	@	2.02	1.42626E+002	6.76136E+000
		463.00*		4.45	1.44401E+002	9.35278E+000
		755.31*	@	1.03	1.61545E+002	1.37781E+001
		772.29*	@	1.52	1.49313E+002	7.50745E+000
		794.94*		4.31	1.49244E+002	6.41259E+000
		835.70*	@	1.70	1.58957E+002	8.00794E+000
		911.20*		26.20	1.64736E+002	6.30671E+000
		964.79*		4.99	1.70773E+002	7.14524E+000
		968.96*		15.90	1.68107E+002	6.57992E+000
		1588.20*		3.06	1.83173E+002	8.89162E+000
		1630.62*	@	1.52	1.83603E+002	9.40681E+000
Th-228	0.890	84.37*		1.26	2.91671E+002	1.06344E+001
		131.61*	@	0.13	1.42598E+002	2.87462E+001
		166.41	@	0.10		
		215.98*		0.25	1.32711E+002	3.40137E+001
Pa-234m	0.587	258.23*	@	0.07	8.14026E+002	5.89135E+001
		742.81*	@	0.09	1.76195E+002	6.10946E+001
		766.36		0.32		
		786.27*	@	0.05	5.23305E+003	1.67768E+002
		1001.03*		0.85	1.25352E+002	7.69419E+000
		1737.77	@	0.02		
Th-234	0.915	63.30*		3.75	4.74964E+001	3.82913E+000
		92.59*		4.33	2.22785E+002	1.14117E+001

Nuclide Name	Id Confidence	Energy (keV)	Yield (%)	Activity (pCi/GWET)	Activity Uncertainty
Th-234	0.915	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		0.969	5.066814E+000	5.428064E-001
	Mn-54		0.928	3.437511E-002	8.654021E-002
X	Cd-109		0.912		
	Cd-115m		0.803	7.763596E+000	4.884329E+000
	Eu-152m		0.997	1.129484E+001	3.256731E-001
	Eu-155		0.927	5.025239E+000	3.132038E-001
X	Tm-170		0.999		
	Tl-208	@	0.970	5.343947E+001	9.450002E-001
	TL-208e		0.936	3.465988E+000	2.205190E-001
	Bi-211		0.909	1.595113E+002	1.373433E+001
	Pb-211	@	0.502	8.750758E+000	8.669975E-001
	Bi-212	@	0.960	1.709324E+002	3.234543E+000
	Pb-212	@	1.000	6.283658E+001	2.297242E+000
	Bi-214	@	0.945	1.120810E+002	1.255606E+000
	Pb-214	@	0.987	5.630793E+001	2.954354E+000
	Rn-220		0.999	2.220339E+002	4.511905E+001
	Ra-223	@	0.672	3.853598E+000	3.783079E-001
	Ra-224	@	0.943	1.738613E+002	1.070561E+001
	Ra-226	@	0.938	1.949198E+002	6.724341E+000
	Ac-228	@	0.994	1.570358E+002	1.451092E+000
	Th-228	@	0.890	6.920943E+001	1.171488E+001
X	Th-231		1.000		
	Pa-234m	@	0.587	1.251997E+002	7.595769E+000
	Th-234	@	0.915	6.523487E+001	3.630220E+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: 6/23/2017 7:49:03 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	8.7966E-001	10.54		
m 3	65.21	1.8681E-001	14.59	Tol.	Se-75
					Ta-182
m 6	79.54	1.7215E-001	16.00	Tol.	Ag-108m
					Th-227
m 14	108.84	5.2383E-001	7.22	Tol.	Cs-136
20	163.43	1.3547E-001	48.47	Sum	
22	199.34	2.5996E-001	23.81	Sum	
M 23	205.30	1.8205E-001	15.94	Sum	
M 26	235.93	6.1388E-001	4.80	Sum	
M 29	252.63	1.9701E-001	12.17	Sum	
m 30	256.26	3.0365E-001	8.14	Tol.	Th-227
M 38	321.54	1.7532E-001	11.64	Sum	
m 41	332.25	3.2506E-001	6.39	Sum	
m 43	340.89	3.6669E-001	5.40	Sum	
m 46	388.76	2.7806E-001	7.08	Sum	
M 47	401.71	2.4090E-001	7.50	Sum	
51	440.30	9.9132E-002	42.67	Tol.	Nd-147
M 52	452.69	2.6186E-001	6.32	Sum	
m 56	480.30	2.8033E-001	6.31	Sum	
57	486.87	2.1954E-001	17.79	D-Esc.	
58	503.71	5.2553E-002	57.75	Sum	
M 61	546.27	1.0788E-001	13.72	Sum	
63	562.33	5.3685E-001	5.50	D-Esc.	
M 66	615.93	7.2556E-002	17.81	Sum	
m 67	620.22	3.8030E-002	30.79	Sum	
69	674.50	1.6008E-002	120.30	Sum	
m 71	707.31	1.1337E-001	12.97	Sum	
m 73	722.14	3.7101E-002	25.40	Sum	
M 80	781.96	2.6152E-001	4.61	Sum	
84	820.92	2.9127E-003	1278.73	Sum	
M 85	830.46	3.1897E-001	3.80	Sum	
89	884.22	1.3582E-002	112.40	Sum	
90	893.31	1.9993E-001	15.67	Sum	
91	904.08	3.6271E-001	7.03	Sum	
M 94	947.86	3.6902E-002	20.70	Sum	
m 95	951.89	6.0855E-002	13.90	Sum	
M 96	958.50	1.3778E-001	6.62	Sum	
99	988.11	1.0815E-001	17.39	Sum	
101	1033.13	1.1184E-001	17.61	S-Esc.	
M103	1065.21	8.3772E-002	9.60	Sum	
m104	1069.99	7.0575E-002	10.92	Sum	
105	1078.72	2.4650E-001	8.22	S-Esc.	
106	1093.91	2.5223E-001	10.49	Sum	

Peak No.	Energy (keV)	Peak Size in Counts per Second	Peak CPS % Uncertainty	Peak Type	Tol. Nuclide
M107	1104.08	5.2673E-002	14.24		
m108	1110.60	1.5493E-001	6.03	S-Esc.	
112	1164.53	2.0988E-002	72.95	Sum	
113	1182.00	4.4238E-002	28.24	Sum	
M116	1247.06	2.0496E-001	4.97	Sum	
m117	1253.58	9.3147E-002	9.26	S-Esc.	
118	1261.71	9.8603E-003	106.90	Sum	
m120	1287.32	5.6333E-002	11.87	Sum	
122	1303.77	3.2519E-002	40.69	Sum	
M123	1374.50	4.8741E-002	13.80	Sum	
128	1415.68	8.0474E-003	147.58	Sum	
129	1459.51	2.8754E-001	6.72	Sum	
M130	1496.41	3.3145E-001	2.95	Sum	
m131	1502.05	1.6716E-001	4.80	Sum	
m133	1513.31	1.2212E-001	5.93	Sum	
m136	1549.45	1.0026E-002	45.52	Sum	
137	1557.45	3.5178E-002	37.43	Sum	
M138	1581.10	2.3429E-001	3.55	Sum	
143	1609.54	2.2229E-002	51.52	Sum	
m145	1625.57	8.9888E-002	7.13	Sum	
m147	1638.92	1.6494E-001	4.39	Sum	
m149	1667.26	6.5642E-002	8.84	Sum	
151	1693.65	8.3028E-002	16.04	Sum	
155	1839.46	6.2436E-002	20.12	Sum	
156	1848.52	5.3960E-001	3.44	Sum	
157	1874.49	5.3939E-002	21.38	Sum	
158	1887.72	1.9810E-002	44.84	Sum	
159	1896.78	4.7891E-002	27.18	Sum	
160	1937.49	3.6144E-002	35.70	Sum	
161	1953.49	5.7677E-002	24.01	Sum	

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

Errors quoted at 1.000 sigma