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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-S007-0612-01.CNF

Report Generated On	: 6/16/2017 3:06:41 PM
Sample Title	: HTC-A01-S007-0612-01
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	: 8.215E+002 GWET
Sample Taken On	: 5/13/2017 9:18:00 AM
Acquisition Started	: 6/16/2017 1:00:30 PM
Live Time	: 7200.0 seconds
Real Time	: 7568.2 seconds
Dead Time	: 4.87 %

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-S007-0612-01
Peak Analysis Performed on: 6/16/2017 3:06:41 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	206-	221	213.90	53.34	0.69	1.34E+003	710.14	1.67E+005
	2	224-	235	231.09	57.64	0.79	5.52E+002	565.68	1.27E+005
	3	249-	260	254.06	63.38	0.91	1.06E+004	595.79	1.37E+005
M	4	276-	386	292.02	72.87	1.16	1.33E+004	297.71	1.75E+005
m	5	276-	386	300.05	74.87	1.17	8.66E+004	449.46	1.87E+005
m	6	276-	386	309.14	77.15	1.17	2.54E+005	673.15	1.86E+005
m	7	276-	386	318.23	79.42	1.18	1.37E+004	526.27	1.86E+005
m	8	276-	386	325.45	81.22	1.18	1.26E+004	380.54	1.86E+005
m	9	276-	386	337.41	84.21	1.18	4.96E+004	455.31	1.86E+005
m	10	276-	386	349.58	87.25	1.19	7.68E+004	376.89	1.85E+005
m	11	276-	386	360.46	89.97	1.19	1.34E+005	641.97	1.85E+005
m	12	276-	386	373.20	93.16	1.20	1.67E+005	592.82	1.84E+005
	13	387-	407	396.09	98.88	2.03	2.98E+004	984.01	2.58E+005
M	14	409-	473	422.40	105.45	1.46	4.17E+004	463.22	2.32E+005
m	15	409-	473	435.89	108.82	1.46	1.85E+004	391.38	2.20E+005
m	16	409-	473	444.72	111.03	1.47	7.68E+003	389.89	2.33E+005
m	17	409-	473	451.89	112.82	1.47	7.11E+003	384.28	2.21E+005
m	18	409-	473	461.26	115.16	1.47	1.38E+004	387.10	2.33E+005
M	19	510-	532	517.06	129.11	1.00	3.69E+004	420.49	1.76E+005
m	20	510-	532	526.58	131.49	1.00	2.83E+003	312.83	1.74E+005
M	21	571-	591	576.14	143.87	1.02	1.20E+004	383.67	1.62E+005
m	22	571-	591	583.67	145.76	1.02	2.27E+003	311.57	1.74E+005
	23	606-	631	616.93	154.07	1.12	1.98E+004	1213.69	3.41E+005
M	24	648-	671	653.98	163.33	1.06	4.05E+003	363.48	1.61E+005
m	25	648-	671	666.55	166.47	1.06	1.81E+003	317.33	1.46E+005
	26	727-	753	744.66	185.99	1.25	1.23E+005	1229.82	3.17E+005
	27	761-	771	765.44	191.19	0.47	9.16E+002	549.59	1.26E+005
	28	793-	806	798.08	199.34	1.23	4.88E+003	658.50	1.55E+005
M	29	814-	853	821.68	205.24	1.05	3.84E+003	292.23	1.52E+005
m	30	814-	853	837.59	209.22	1.06	7.01E+004	434.35	1.35E+005
	31	856-	876	864.46	215.93	1.13	5.09E+003	869.59	2.07E+005
M	32	925-	979	934.51	233.44	1.15	3.13E+003	282.25	1.35E+005
m	33	925-	979	944.41	235.91	1.15	1.21E+004	290.31	1.33E+005
m	34	925-	979	954.96	238.55	1.15	8.56E+005	990.75	1.12E+005
m	35	925-	979	967.27	241.62	1.15	1.66E+005	484.16	1.06E+005
M	36	1006-	1046	1010.92	252.54	1.19	3.99E+003	248.74	8.47E+004
m	37	1006-	1046	1025.23	256.11	1.19	5.97E+003	254.70	9.61E+004
m	38	1006-	1046	1035.82	258.76	1.20	9.06E+003	278.41	1.01E+005
M	39	1070-	1131	1081.27	270.12	1.37	6.99E+004	381.90	1.01E+005
m	40	1070-	1131	1098.98	274.54	1.37	5.82E+003	244.96	1.05E+005
m	41	1070-	1131	1109.84	277.26	1.37	3.56E+004	312.83	1.04E+005
m	42	1070-	1131	1126.88	281.51	1.38	6.29E+002	234.29	8.02E+004

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	FWHM (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	43	1149-	1161	1152.97	288.04	0.96	4.67E+003	443.09	7.26E+004
	44	1170-	1193	1181.14	295.08	1.14	2.70E+005	897.00	1.33E+005
M	45	1195-	1215	1200.74	299.97	1.13	5.38E+004	332.69	6.60E+004
m	46	1195-	1215	1210.58	302.43	1.13	6.82E+002	199.21	6.57E+004
	47	1246-	1266	1258.33	314.37	1.07	7.67E+002	598.00	9.83E+004
M	48	1278-	1342	1286.62	321.44	1.21	2.85E+003	206.59	6.83E+004
m	49	1278-	1342	1295.90	323.76	1.21	2.87E+003	197.68	7.25E+004
m	50	1278-	1342	1312.19	327.83	1.21	4.64E+004	307.56	7.19E+004
m	51	1278-	1342	1330.01	332.28	1.21	5.79E+003	211.17	7.11E+004
M	52	1345-	1377	1353.50	338.15	1.17	1.73E+005	479.03	6.49E+004
m	53	1345-	1377	1364.17	340.82	1.17	5.35E+003	202.56	6.28E+004
	54	1390-	1420	1407.90	351.75	1.20	4.89E+005	1042.52	1.21E+005
M	55	1533-	1564	1547.52	386.64	1.15	3.17E+003	182.61	5.18E+004
m	56	1533-	1564	1555.77	388.70	1.15	4.44E+003	197.67	5.19E+004
M	57	1600-	1647	1607.46	401.62	1.21	3.86E+003	184.55	5.09E+004
m	58	1600-	1647	1620.56	404.90	1.21	3.16E+003	176.28	5.01E+004
m	59	1600-	1647	1637.95	409.24	1.21	2.39E+004	257.20	5.20E+004
	60	1705-	1723	1709.53	427.13	0.43	1.23E+003	434.06	5.53E+004
M	61	1752-	1787	1761.55	440.13	0.99	1.45E+003	167.08	3.41E+004
m	62	1752-	1787	1780.96	444.98	0.99	4.20E+002	140.10	3.13E+004
M	63	1801-	1831	1811.40	452.59	1.24	4.57E+003	179.96	4.04E+004
m	64	1801-	1831	1819.38	454.59	1.24	2.52E+003	158.64	3.99E+004
	65	1836-	1860	1852.07	462.75	1.30	5.33E+004	550.74	6.01E+004
M	66	1875-	1931	1879.75	469.67	1.45	1.29E+003	158.65	3.25E+004
m	67	1875-	1931	1896.82	473.94	1.46	1.22E+003	156.68	4.11E+004
m	68	1875-	1931	1912.82	477.94	1.46	2.38E+003	162.03	4.04E+004
m	69	1875-	1931	1921.80	480.18	1.46	4.33E+003	183.26	4.00E+004
	70	1936-	1956	1948.39	486.83	1.64	4.20E+003	414.11	4.61E+004
	71	1983-	1992	1987.78	496.67	0.33	5.71E+001	220.01	2.14E+004
	72	2000-	2026	2015.14	503.51	1.30	1.50E+003	504.95	5.79E+004
	73	2026-	2057	2042.98	510.47	1.41	1.01E+005	669.81	6.95E+004
M	74	2072-	2104	2079.71	519.65	1.50	8.58E+002	161.22	3.48E+004
m	75	2072-	2104	2092.86	522.93	1.50	1.03E+003	166.85	3.87E+004
	76	2126-	2144	2134.58	533.36	1.18	1.71E+003	363.95	3.86E+004
M	77	2169-	2226	2174.35	543.30	1.20	7.40E+002	135.66	2.57E+004
m	78	2169-	2226	2185.99	546.21	1.20	1.95E+003	151.37	3.15E+004
m	79	2169-	2226	2198.84	549.42	1.20	1.46E+003	144.40	3.12E+004
m	80	2169-	2226	2221.07	554.98	1.21	3.80E+002	132.62	2.70E+004
	81	2242-	2257	2249.92	562.19	1.33	8.43E+003	316.97	3.06E+004
	82	2276-	2299	2286.47	571.32	2.73	3.64E+003	432.25	4.57E+004
M	83	2312-	2347	2320.54	579.83	1.34	3.06E+003	148.98	3.23E+004
m	84	2312-	2347	2332.75	582.89	1.34	2.92E+005	566.76	3.16E+004
	85	2425-	2449	2437.25	609.00	1.36	3.76E+005	741.92	4.22E+004
M	86	2455-	2487	2464.72	615.87	1.16	1.12E+003	134.85	2.38E+004
m	87	2455-	2487	2482.08	620.21	1.17	7.75E+002	124.90	2.00E+004
M	88	2586-	2613	2597.07	648.95	1.14	5.16E+002	118.08	2.10E+004
m	89	2586-	2613	2606.16	651.22	1.14	6.73E+002	125.67	2.25E+004
	90	2650-	2676	2661.85	665.13	1.49	1.17E+004	430.53	3.96E+004
	91	2725-	2742	2731.81	682.62	0.87	3.35E+002	292.93	2.62E+004
M	92	2795-	2840	2811.27	702.48	2.09	5.34E+003	191.11	3.90E+004

Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	FWHM (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
m 93	2795-	2840	2830.03	707.16	2.10	1.69E+003	156.78	3.53E+004
M 94	2865-	2923	2879.42	719.51	1.45	2.65E+003	130.12	2.54E+004
m 95	2865-	2923	2889.57	722.05	1.45	8.66E+002	119.35	2.53E+004
m 96	2865-	2923	2909.17	726.94	1.45	6.58E+004	294.32	2.34E+004
97	2954-	2984	2970.32	742.23	1.48	2.79E+003	435.16	3.83E+004
98	3003-	3033	3021.20	754.94	1.48	8.82E+003	437.86	3.75E+004
M 99	3045-	3113	3053.50	763.02	1.54	5.03E+003	136.98	2.08E+004
m100	3045-	3113	3073.48	768.01	1.54	3.48E+004	232.23	2.10E+004
m101	3045-	3113	3089.21	771.94	1.54	1.25E+004	161.21	2.11E+004
M102	3121-	3160	3128.65	781.80	1.57	4.56E+003	128.74	1.78E+004
m103	3121-	3160	3142.88	785.35	1.57	1.74E+004	182.89	1.97E+004
104	3167-	3193	3179.88	794.60	1.42	3.36E+004	385.86	2.63E+004
105	3213-	3238	3224.83	805.83	1.50	8.73E+003	327.38	2.31E+004
M106	3278-	3383	3284.61	820.77	1.81	1.31E+003	111.94	1.53E+004
m107	3278-	3383	3303.09	825.39	1.81	1.39E+003	115.05	1.86E+004
m108	3278-	3383	3322.93	830.35	1.81	4.60E+003	123.43	1.84E+004
m109	3278-	3383	3343.01	835.37	1.82	1.54E+004	180.94	1.82E+004
m110	3278-	3383	3359.95	839.60	1.82	1.08E+004	155.15	1.79E+004
111	3432-	3454	3442.39	860.21	1.46	3.56E+004	325.72	1.81E+004
112	3565-	3586	3573.78	893.04	1.54	2.32E+003	256.51	1.69E+004
113	3603-	3629	3617.19	903.89	1.64	5.63E+003	309.44	2.06E+004
114	3629-	3658	3645.13	910.88	1.53	2.10E+005	561.81	2.21E+004
115	3725-	3748	3736.76	933.78	1.54	1.79E+004	284.93	1.58E+004
M116	3766-	3887	3776.92	943.81	1.58	1.12E+003	88.15	1.16E+004
m117	3766-	3887	3792.43	947.69	1.58	7.15E+002	73.94	1.16E+004
m118	3766-	3887	3808.93	951.81	1.58	8.82E+002	61.03	1.16E+004
m119	3766-	3887	3834.83	958.28	1.58	1.71E+003	75.61	1.16E+004
m120	3766-	3887	3859.47	964.44	1.59	4.49E+004	247.62	1.15E+004
m121	3766-	3887	3876.38	968.67	1.59	1.20E+005	364.52	1.13E+004
122	3897-	3911	3904.18	975.62	1.29	4.95E+002	153.69	8.03E+003
M123	3924-	3965	3931.14	982.35	1.74	4.88E+002	87.31	9.85E+003
m124	3924-	3965	3953.52	987.95	1.74	1.12E+003	102.63	1.14E+004
125	3995-	4016	4004.89	1000.79	1.53	5.70E+003	226.56	1.21E+004
126	4117-	4144	4133.63	1032.96	2.04	2.34E+003	244.76	1.28E+004
127	4154-	4176	4161.56	1039.94	0.93	7.03E+002	206.05	1.07E+004
128	4200-	4227	4208.32	1051.63	1.65	2.27E+003	244.51	1.27E+004
M129	4254-	4290	4261.34	1064.88	1.53	1.45E+003	89.44	8.35E+003
m130	4254-	4290	4281.20	1069.84	1.53	1.49E+003	89.39	8.93E+003
131	4304-	4326	4315.74	1078.47	1.49	3.55E+003	210.98	1.06E+004
132	4369-	4401	4376.47	1093.65	1.54	3.84E+003	280.56	1.45E+004
M133	4401-	4458	4417.39	1103.88	1.95	1.19E+003	85.74	1.05E+004
m134	4401-	4458	4443.34	1110.36	1.95	3.35E+003	108.39	1.06E+004
135	4460-	4504	4482.25	1120.09	1.65	8.52E+004	462.76	1.95E+004
136	4529-	4544	4536.11	1133.55	1.38	1.14E+003	147.81	6.89E+003
137	4599-	4635	4622.06	1155.03	1.76	1.06E+004	312.67	1.54E+004
M138	4649-	4684	4659.25	1164.32	2.05	5.11E+002	84.73	9.18E+003
m139	4649-	4684	4675.51	1168.39	2.05	5.43E+002	85.47	8.67E+003
140	4719-	4747	4729.50	1181.88	0.77	9.73E+002	233.09	1.15E+004
141	4822-	4841	4832.31	1207.57	1.47	1.92E+003	171.55	7.85E+003
142	4936-	4966	4954.21	1238.04	1.66	3.02E+004	298.46	1.20E+004

Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	FWHM (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
M143	4974-	5027	4989.12	1246.76	2.60	3.32E+003	113.69	1.19E+004
m144	4974-	5027	5015.50	1253.36	2.61	1.79E+003	98.83	1.11E+004
M145	5088-	5140	5100.07	1274.49	1.67	2.71E+002	69.35	7.96E+003
m146	5088-	5140	5125.89	1280.95	1.67	6.99E+003	118.03	8.07E+003
147	5208-	5225	5216.89	1303.69	0.66	5.08E+002	147.07	6.48E+003
148	5364-	5377	5369.28	1341.77	0.40	1.22E+002	116.56	4.88E+003
149	5503-	5530	5513.13	1377.72	1.75	2.09E+004	266.56	1.10E+004
150	5530-	5554	5543.73	1385.37	1.77	3.78E+003	198.54	8.64E+003
M151	5597-	5647	5608.74	1401.62	1.75	6.40E+003	108.80	7.72E+003
m152	5597-	5647	5634.57	1408.07	1.75	1.12E+004	131.71	7.51E+003
153	5652-	5674	5664.84	1415.64	0.81	2.87E+002	171.34	7.50E+003
154	5694-	5714	5703.82	1425.38	1.07	2.39E+002	157.93	6.80E+003
155	5801-	5814	5806.59	1451.07	0.49	4.78E+001	111.12	4.46E+003
156	5821-	5852	5839.33	1459.25	1.90	4.54E+003	232.69	9.92E+003
M157	5977-	6020	5986.68	1496.07	1.83	5.25E+003	105.40	6.69E+003
m158	5977-	6020	6009.31	1501.73	1.83	2.58E+003	86.49	7.42E+003
M159	6027-	6065	6040.06	1509.42	1.84	9.83E+003	126.82	7.71E+003
m160	6027-	6065	6054.38	1512.99	1.85	2.00E+003	80.36	7.28E+003
161	6113-	6130	6119.87	1529.36	1.19	3.32E+002	134.42	5.44E+003
M162	6144-	6188	6157.34	1538.72	1.89	2.33E+003	84.73	6.55E+003
m163	6144-	6188	6177.03	1543.65	1.89	2.19E+003	82.55	6.53E+003
164	6223-	6249	6231.44	1557.24	2.13	1.06E+003	174.75	6.71E+003
M165	6316-	6414	6325.74	1580.81	1.94	3.39E+003	86.42	5.16E+003
m166	6316-	6414	6336.97	1583.62	1.95	3.26E+003	84.71	5.64E+003
m167	6316-	6414	6356.41	1588.48	1.95	1.82E+004	151.56	5.90E+003
m168	6316-	6414	6374.13	1592.91	1.95	9.77E+003	118.18	5.70E+003
m169	6316-	6414	6401.39	1599.72	1.95	1.37E+003	70.44	5.97E+003
M170	6472-	6570	6487.02	1621.12	1.90	8.29E+003	111.54	5.32E+003
m171	6472-	6570	6504.38	1625.46	1.90	1.58E+003	67.79	5.13E+003
m172	6472-	6570	6526.55	1631.00	1.90	9.17E+003	113.86	4.71E+003
m173	6472-	6570	6557.16	1638.65	1.91	2.74E+003	76.11	4.65E+003
M174	6637-	6681	6649.39	1661.70	1.93	4.44E+003	92.04	4.92E+003
m175	6637-	6681	6670.08	1666.87	1.94	9.33E+002	60.29	4.41E+003
M176	6709-	6762	6719.95	1679.33	3.10	6.61E+002	67.30	5.21E+003
m177	6709-	6762	6742.75	1685.03	3.10	1.54E+003	81.31	6.54E+003
178	6762-	6791	6776.40	1693.44	2.37	1.43E+003	158.49	4.99E+003
179	6910-	6938	6923.34	1730.16	1.94	1.48E+004	193.86	4.93E+003
180	7047-	7084	7063.22	1765.12	1.97	7.01E+004	327.68	6.42E+003
181	7217-	7241	7230.27	1806.87	1.78	4.76E+002	129.97	3.98E+003
182	7287-	7309	7296.65	1823.46	0.64	1.99E+002	118.32	3.56E+003
183	7339-	7371	7359.75	1839.23	1.43	9.58E+002	175.43	5.82E+003
184	7383-	7414	7395.75	1848.23	2.04	9.58E+003	188.59	5.13E+003
185	7482-	7509	7498.82	1873.99	1.55	1.13E+003	144.80	4.41E+003
M186	7543-	7609	7554.30	1887.85	2.40	6.01E+002	60.92	4.19E+003
m187	7543-	7609	7567.83	1891.23	2.40	5.17E+002	58.94	4.84E+003
m188	7543-	7609	7590.79	1896.97	2.40	7.74E+002	64.35	4.87E+003
189	7735-	7775	7752.89	1937.48	2.41	7.50E+002	206.48	6.83E+003
190	7809-	7829	7815.43	1953.11	0.57	2.88E+002	111.76	3.36E+003
191	7932-	7946	7938.10	1983.77	0.41	4.92E+001	80.56	2.23E+003
M192	8038-	8085	8049.44	2011.60	2.13	4.92E+002	55.73	3.37E+003

Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	FWHM (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
m193	8038-	8085	8075.88	2018.20	2.13	4.02E+002	53.47	3.13E+003

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

Errors quoted at 1.000 sigma

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***** N U C L I D E M D A R E P O R T *****
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Detector Name: ERT01
Sample Geometry:
Sample Title: HTC-A01-S007-0612-01
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	7.3782E+000	7.38E+000	3.2735E+001
	Co-60	1173.23	99.85	6.6120E-001	6.61E-001	2.1484E-001
		1332.49	99.98	7.0364E-001		1.9773E-001
>		2505.71	0.10	0.0000E+000		0.0000E+000
	Cs-137	32.06	5.54	5.7393E+004	9.23E-001	-3.7954E+004
		661.66	84.99	9.2333E-001		8.5263E-002
+	Tl-208	72.80*	2.02	6.2387E+001	5.86E-001	3.0208E+002
		74.97*	3.41	3.5136E+001		1.0697E+003
		84.90*	1.51	5.8974E+001		1.0321E+003
		277.36*	6.31	9.5429E+000		1.5972E+002
		510.77*	22.60	4.7496E+000		1.7519E+002
		583.19*	84.50	5.8557E-001		1.4593E+002
		763.13*	1.81	2.6485E+001		1.4016E+002
		860.56*	12.42	5.4948E+000		1.5784E+002
+	Bi-212	39.86	1.06	1.0935E+004	7.29E+000	-2.2112E+003
		727.33*	6.74	7.2920E+000		4.7567E+002
		785.37*	1.11	4.2911E+001		8.0624E+002
		1620.74*	1.51	2.8179E+001		4.8426E+002
		1806.00*	0.09	6.1093E+002		4.8544E+002
+	Pb-212	74.81*	10.40	1.1520E+001	1.33E+000	3.5075E+002
		77.11*	17.50	6.2804E+000		5.6099E+002
		87.30*	7.81	1.0636E+001		2.8835E+002
		115.18*	0.59	1.1727E+002		5.0874E+002
		238.63*	43.30	1.3317E+000		5.1670E+002
		300.09*	3.28	1.5233E+001		4.8431E+002
+	Bi-214	76.86*	0.43	2.4941E+002	1.79E+000	2.2278E+004
		89.81*	0.24	3.1191E+002		1.4748E+004
		386.77*	0.30	1.6510E+002		3.4891E+002
		454.77*	0.29	1.6212E+002		3.0997E+002
		609.31*	45.49	1.7928E+000		3.4708E+002
		665.45*	1.53	5.6285E+001		3.4078E+002
		703.11*	0.48	1.2503E+002		5.1284E+002
		719.86*	0.39	1.2514E+002		3.1507E+002
		768.36*	4.89	9.5574E+000		3.4798E+002
		786.10*	0.31	1.4853E+002		2.7907E+003
		806.17*	1.26	5.8766E+001		3.5103E+002
		934.06*	3.10	2.1491E+001		3.2854E+002
		964.08*	0.36	1.1373E+002		7.2050E+003
		1051.96*	0.31	2.2188E+002		4.5025E+002
		1120.29*	14.91	7.3842E+000		3.7617E+002

	Nuclide Name	Energy (keV)	Yield (%)	Line MDA (pCi/GWET)	Nuclide MDA (pCi/GWET)	Activity (pCi/GWET)
+	Bi-214	1133.66*	0.25	1.7573E+002	1.79E+000	2.9860E+002
		1155.19*	1.63	5.6743E+001		4.3835E+002
		1207.68*	0.45	1.1991E+002		2.9732E+002
		1238.11*	5.79	1.3931E+001		3.7133E+002
		1280.96*	1.43	3.0353E+001		3.5780E+002
		1377.67*	4.00	2.0153E+001		4.0385E+002
		1385.31*	0.76	9.0139E+001		3.8706E+002
		1401.50*	1.27	3.5715E+001		3.9379E+002
		1407.98*	2.15	2.0870E+001		4.0704E+002
		1509.23*	2.11	2.2547E+001		3.8219E+002
		1538.50*	0.38	1.1797E+002		5.1311E+002
		1543.32*	0.20	2.2192E+002		9.1223E+002
		1583.22*	0.69	6.0603E+001		3.9832E+002
		1594.73	0.25	4.5927E+002		6.9224E+003
		1599.31*	0.23	1.8814E+002		5.0413E+002
		1661.28*	1.15	3.4784E+001		3.3292E+002
		1683.99	0.22	2.9146E+002		5.2626E+002
		1729.59*	2.92	2.1169E+001		4.4359E+002
		1764.49*	15.40	5.1627E+000		4.0165E+002
		1847.42*	2.11	3.1807E+001		4.0495E+002
		1873.16*	0.22	2.6868E+002		4.6080E+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	5.6836E+002	2.97E+000	2.3118E+002
		74.81*	6.44	1.7985E+001		5.4756E+002
		77.11*	10.80	9.8377E+000		8.7873E+002
		87.30*	4.84	1.6591E+001		4.4979E+002
		242.00*	7.43	7.3270E+000		5.6664E+002
		258.87*	0.52	1.0541E+002		4.5641E+002
		274.80*	0.47	1.2268E+002		3.3438E+002
		295.22*	19.30	4.9872E+000		3.9646E+002
		351.93*	37.60	2.9690E+000		4.0369E+002
		462.00*	0.22	3.7737E+002		8.6483E+003
		533.66*	0.19	3.5107E+002		3.5614E+002
		785.96*	1.07	4.3033E+001		8.0853E+002
		839.04*	0.59	7.8702E+001		9.6262E+002
+	Ra-224	81.07*	0.13	7.3599E+002	1.37E+001	3.2580E+003
		83.78*	0.22	4.1037E+002		7.1818E+003
		240.99*	4.10	1.3735E+001		1.0622E+003
+	Ra-226	81.07*	0.20	4.7312E+002	3.41E+001	2.0943E+003
		83.78*	0.33	2.6245E+002		4.5932E+003
		94.90	0.15	7.5998E+002		1.6144E+004
		186.21*	3.59	3.4061E+001		7.6432E+002
+	Ac-228	99.50*	1.26	8.7639E+001	2.67E+000	5.7958E+002
		129.07*	2.50	2.3391E+001		3.1256E+002
		209.25*	3.97	1.4894E+001		4.3122E+002
		270.24*	3.55	1.6450E+001		5.4955E+002
		328.00*	3.04	1.7973E+001		4.7250E+002
		338.32*	11.40	4.6282E+000		4.7616E+002
		409.46*	2.02	2.5835E+001		4.1163E+002

	Nuclide Name	Energy (keV)	Yield (%)	Line MDA (pCi/GWET)	Nuclide MDA (pCi/GWET)	Activity (pCi/GWET)
+	Ac-228	463.00*	4.45	1.9386E+001	2.67E+000	4.4429E+002
		755.31*	1.03	9.6788E+001		4.2869E+002
		772.29*	1.52	3.2080E+001		4.1761E+002
		794.94*	4.31	1.9057E+001		4.0525E+002
		835.70*	1.70	2.8184E+001		4.8866E+002
		911.20*	26.20	3.3306E+000		4.6199E+002
		964.79*	4.99	8.5579E+000		5.4218E+002
		968.96*	15.90	2.6723E+000		4.5687E+002
		1588.20*	3.06	1.4490E+001		5.1903E+002
		1630.62*	1.52	2.6425E+001		5.3375E+002
+	Th-228	84.37*	1.26	7.0675E+001	7.07E+001	1.2369E+003
		131.61*	0.13	4.4603E+002		4.5957E+002
		166.41*	0.10	5.3643E+002		3.8560E+002
		215.98*	0.25	3.9367E+002		4.9727E+002
+	Pa-234m	258.23*	0.07	7.4839E+002	7.06E+001	3.2405E+003
		742.81*	0.09	1.0231E+003		1.4182E+003
		766.36	0.32	3.1223E+002		2.4195E+003
		786.27*	0.05	8.5902E+002		1.6140E+004
		1001.03*	0.85	7.0639E+001		4.0360E+002
		1737.77	0.02	3.3240E+003		1.5784E+003
+	Th-234	63.30*	3.75	5.5702E+001	1.67E+001	2.1497E+002
		92.59*	4.33	1.6653E+001		9.8388E+002
		112.81*	0.22	3.0668E+002		7.0561E+002

+ = 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-S007-0612-01
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	0.980	477.60*	10.44	1.29857E+001	9.80856E-001
Na-22	1.000	1274.54*	99.94	2.02441E-001	5.20960E-002
Mn-54	0.956	834.84*	99.97	8.66626E+000	2.26191E-001
Ru-103	0.820	294.98* @	0.30	4.61864E+004	1.68762E+003
		443.80 @	3.27		
		497.08*	90.90	4.27715E-002	1.64854E-001
		557.04 @	0.87		
		610.33	5.75		
Ce-139	0.941	165.86*	79.89	5.74214E-001	1.01882E-001
Ce-141	0.972	40.82 @	2.67		
		145.44*	48.29	2.00251E+000	2.80283E-001
Eu-152m	0.998	89.85*	69.90	5.17267E+001	1.45246E+000
Eu-155	0.929	45.30	1.31		
		60.01	1.22		
		86.55*	30.70	7.18828E+001	2.09752E+000
		105.31*	21.10	4.46590E+001	1.71431E+000
Lu-177	0.814	112.95*	6.20	8.65734E+002	5.17512E+001
		208.37*	10.38	5.64086E+003	1.81240E+002
Tl-208	0.985	72.80* @	2.02	3.02078E+002	1.14122E+001
		74.97* @	3.41	1.06973E+003	3.27478E+001
		84.90* @	1.51	1.03209E+003	3.03256E+001
		277.36*	6.31	1.59724E+002	5.79854E+000
		510.77* @	22.60	1.75187E+002	5.71357E+000
		583.19*	84.50	1.45930E+002	4.55513E+000
		763.13* @	1.81	1.40159E+002	5.14751E+000
		860.56*	12.42	1.57843E+002	4.11514E+000
TL-208e	0.978	1592.53*	99.16	8.62167E+000	5.39244E-001
Bi-211	0.921	351.03*	13.00	1.17102E+003	4.23287E+001
Pb-211	0.504	74.81* @	0.23	1.53769E+004	8.17658E+002
		77.11* @	0.39	2.45949E+004	1.30623E+003
		87.30* @	0.17	1.26208E+004	6.78991E+002
		404.85*	3.78	2.79763E+001	1.87012E+000
		427.09*	1.76	2.41038E+001	8.55890E+000
		832.01	3.52		
Bi-212	0.958	39.86 @	1.06		
		727.33*	6.74	4.75669E+002	1.49685E+001
		785.37*	1.11	8.06244E+002	2.24417E+001
		1620.74*	1.51	4.84262E+002	1.72657E+001
		1806.00* @	0.09	4.85445E+002	1.71869E+002
Pb-212	0.999	74.81*	10.40	3.50749E+002	1.47534E+001
		77.11*	17.50	5.60986E+002	2.31798E+001

Nuclide Name	Id Confidence	Energy (keV)	Yield (%)	Activity (pCi/GWET)	Activity Uncertainty
Pb-212	0.999	87.30*	7.81	2.88347E+002	1.21675E+001
		115.18* @	0.59	5.08741E+002	1.96533E+001
		238.63*	43.30	5.16705E+002	1.70089E+001
		300.09*	3.28	4.84311E+002	1.66179E+001
Bi-214	0.975	76.86* @	0.43	2.22778E+004	9.50990E+002
		89.81* @	0.24	1.47482E+004	6.71863E+002
		386.77* @	0.30	3.48913E+002	2.39347E+001
		454.77* @	0.29	3.09971E+002	2.26913E+001
		609.31*	45.49	3.47077E+002	1.02689E+001
		665.45* @	1.53	3.40777E+002	1.56762E+001
		703.11* @	0.48	5.12844E+002	2.56391E+001
		719.86* @	0.39	3.15067E+002	1.92434E+001
		768.36*	4.89	3.47978E+002	8.91547E+000
		786.10* @	0.31	2.79074E+003	4.56080E+002
		806.17* @	1.26	3.51027E+002	1.56703E+001
		934.06*	3.10	3.28541E+002	9.18874E+000
		964.08* @	0.36	7.20500E+003	2.92365E+002
		1051.96* @	0.31	4.50247E+002	5.21019E+001
		1120.29*	14.91	3.76175E+002	9.36477E+000
		1133.66* @	0.25	2.98603E+002	4.04491E+001
		1155.19* @	1.63	4.38347E+002	1.68978E+001
		1207.68* @	0.45	2.97319E+002	2.95395E+001
		1238.11*	5.79	3.71326E+002	1.12491E+001
		1280.96* @	1.43	3.57803E+002	1.19549E+001
		1377.67*	4.00	4.03847E+002	1.29141E+001
		1385.31* @	0.76	3.87060E+002	2.43483E+001
		1401.50* @	1.27	3.93794E+002	1.34681E+001
		1407.98* @	2.15	4.07042E+002	1.47438E+001
		1509.23* @	2.11	3.82190E+002	1.29897E+001
		1538.50* @	0.38	5.13114E+002	2.96931E+001
		1543.32* @	0.20	9.12233E+002	2.31772E+002
		1583.22* @	0.69	3.98324E+002	1.66412E+001
		1594.73 @	0.25		
		1599.31* @	0.23	5.04131E+002	1.34684E+002
		1661.28* @	1.15	3.32922E+002	1.43875E+001
		1683.99 @	0.22		
		1729.59* @	2.92	4.43585E+002	1.59499E+001
		1764.49*	15.40	4.01651E+002	1.42446E+001
		1847.42* @	2.11	4.04955E+002	1.87088E+001
		1873.16* @	0.22	4.60804E+002	6.39326E+001
		2118.55 @	1.14		
		2204.21 @	5.08		
Pb-214	0.994	53.28* @	1.20	2.31180E+002	1.35418E+002
		74.81*	6.44	5.47565E+002	2.44908E+001
		77.11*	10.80	8.78735E+002	4.17999E+001
		87.30*	4.84	4.49793E+002	2.08030E+001
		242.00*	7.43	5.66639E+002	1.98621E+001
		258.87* @	0.52	4.56411E+002	2.23793E+001
		274.80* @	0.47	3.34380E+002	1.93363E+001
		295.22*	19.30	3.96458E+002	1.35616E+001

Nuclide Name	Id Confidence	Energy (keV)	Yield (%)	Activity (pCi/GWET)	Activity Uncertainty
Pb-214	0.994	351.93*	37.60	4.03688E+002	1.40199E+001
		462.00* @	0.22	8.64833E+003	4.60728E+002
		533.66* @	0.19	3.56141E+002	7.86012E+001
		785.96* @	1.07	8.08532E+002	6.40918E+001
		839.04* @	0.59	9.62624E+002	3.10050E+001
Rn-220	0.985	549.73*	0.11	5.24000E+002	9.50716E+001
Ra-223	0.696	81.07*	15.30	2.70457E+001	1.12928E+000
		83.78*	25.40	5.94877E+001	2.10392E+000
		94.90	11.50		
		122.32 @	1.21		
		144.24*	3.27	7.55044E+001	3.71973E+000
		154.21*	5.70	7.24384E+001	5.30750E+000
		158.63 @	0.69		
		179.54 @	0.15		
		269.46*	13.90	1.36082E+002	5.91443E+000
		288.18* @	0.16	8.18381E+002	8.58726E+001
		323.87*	3.99	2.14481E+001	1.70517E+000
		328.38* @	0.21	6.66352E+003	3.38732E+002
		338.32*	2.84	1.85315E+003	7.63284E+001
		342.87 @	0.22		
		371.68 @	0.49		
		445.03* @	1.29	1.14519E+001	3.86719E+000
Ra-224	0.940	81.07* @	0.13	3.25800E+003	1.84307E+002
		83.78* @	0.22	7.18181E+003	3.38573E+002
		240.99*	4.10	1.06223E+003	3.61505E+001
Ra-226	0.937	81.07* @	0.20	2.09434E+003	1.14827E+002
		83.78* @	0.33	4.59316E+003	2.15528E+002
		94.90 @	0.15		
		186.21*	3.59	7.64321E+002	2.70280E+001
Ac-228	0.987	99.50* @	1.26	5.79578E+002	3.00290E+001
		129.07* @	2.50	3.12558E+002	1.20001E+001
		209.25*	3.97	4.31215E+002	1.95456E+001
		270.24*	3.55	5.49554E+002	2.36650E+001
		328.00*	3.04	4.72499E+002	2.32832E+001
		338.32*	11.40	4.76156E+002	2.29353E+001
		409.46* @	2.02	4.11634E+002	1.88500E+001
		463.00*	4.45	4.44288E+002	2.84079E+001
		755.31* @	1.03	4.28686E+002	2.90400E+001
		772.29* @	1.52	4.17607E+002	2.01224E+001
		794.94*	4.31	4.05245E+002	1.70051E+001
		835.70* @	1.70	4.88661E+002	2.38230E+001
		911.20*	26.20	4.61986E+002	1.76440E+001
		964.79*	4.99	5.42175E+002	2.24489E+001
		968.96*	15.90	4.56867E+002	1.78255E+001
		1588.20*	3.06	5.19032E+002	2.47315E+001
		1630.62* @	1.52	5.33752E+002	2.62595E+001
Th-228	0.997	84.37*	1.26	1.23687E+003	4.13065E+001
		131.61* @	0.13	4.59566E+002	5.23507E+001
		166.41* @	0.10	3.85601E+002	6.86442E+001
		215.98*	0.25	4.97267E+002	8.64749E+001

Nuclide Name	Id Confidence	Energy (keV)	Yield (%)	Activity (pCi/GWET)	Activity Uncertainty
Pa-234m	0.582	258.23* @	0.07	3.24051E+003	1.47829E+002
		742.81* @	0.09	1.41824E+003	2.28749E+002
		766.36	0.32		
		786.27* @	0.05	1.61398E+004	4.74460E+002
		1001.03*	0.85	4.03602E+002	1.89623E+001
		1737.77 @	0.02		
Th-234	0.973	63.30*	3.75	2.14972E+002	1.44907E+001
		92.59*	4.33	9.83877E+002	5.00427E+001
		112.81* @	0.22	7.05606E+002	8.32249E+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
	Be-7		0.980	1.298572E+001	9.808557E-001
	Na-22		1.000	2.024407E-001	5.209597E-002
	Mn-54		0.956	5.564683E-001	2.378651E-001
	Ru-103	@	0.820	4.306526E-002	1.648535E-001
X	Cd-109		0.907		
	Ce-139		0.941	8.544868E-002	1.157385E-001
	Ce-141	@	0.972	2.002508E+000	2.802827E-001
	Eu-152m		0.998	5.045036E+001	1.382996E+000
	Eu-155		0.929	3.044084E+001	1.060773E+000
X	Tm-170		0.999		
	Lu-177		0.814	3.272089E+002	5.088423E+001
	Tl-208	@	0.985	1.534140E+002	2.555614E+000
	TL-208e		0.978	8.621673E+000	5.392437E-001
	Bi-211		0.921	6.311629E+002	4.812667E+001
	Pb-211	@	0.504	2.765048E+001	1.776788E+000
	Bi-212	@	0.958	4.819292E+002	8.709629E+000
	Pb-212	@	0.999	2.142942E+002	7.380600E+000
	Bi-214	@	0.975	3.639124E+002	3.794236E+000
	Pb-214	@	0.994	1.861068E+002	9.855821E+000
	Rn-220		0.985	5.240003E+002	9.507160E+001
	Ra-223	@	0.696	2.183119E+001	8.820414E-001
	Ra-224	@	0.940	6.403776E+002	3.788168E+001
	Ra-226	@	0.937	7.077616E+002	2.345844E+001
	Ac-228	@	0.987	4.572836E+002	4.150346E+000
	Th-228	@	0.997	3.282201E+002	3.687564E+001
X	Th-231		1.000		
	Pa-234m	@	0.582	4.041147E+002	1.856301E+001
	Th-234	@	0.973	3.939744E+002	1.204337E+001

? = 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: 6/16/2017 3:06:41 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
2	57.64	7.6698E-002	102.44	Tol.	Np-239
m 7	79.42	1.9097E+000	3.83	Tol.	I-131
					Ce-144
m 15	108.82	2.5732E+000	2.11		
m 16	111.03	1.0665E+000	5.08	D-Esc.	
M 24	163.33	5.6306E-001	8.97	Sum	
27	191.19	1.2719E-001	60.01	Sum	
28	199.34	6.7716E-001	13.51	Sum	
M 29	205.24	5.3400E-001	7.60	Sum	
M 32	233.44	4.3534E-001	9.00	Sum	
m 33	235.91	1.6861E+000	2.39	Sum	
M 36	252.54	5.5417E-001	6.23	D-Esc.	
m 37	256.11	8.2875E-001	4.27	Sum	
m 42	281.51	8.7401E-002	37.23	Sum	
m 46	302.43	9.4704E-002	29.22	Sum	
47	314.37	1.0647E-001	78.01	Sum	
M 48	321.44	3.9565E-001	7.25	Sum	
m 51	332.28	8.0420E-001	3.65	Sum	
m 53	340.82	7.4335E-001	3.78	Sum	
m 56	388.70	6.1687E-001	4.45	Sum	
M 57	401.62	5.3621E-001	4.78	Sum	
M 61	440.13	2.0134E-001	11.53	Sum	
M 63	452.59	6.3461E-001	3.94	Sum	
M 66	469.67	1.7944E-001	12.28	Sum	
m 67	473.94	1.6893E-001	12.88	Sum	
m 69	480.18	6.0169E-001	4.23	Sum	
70	486.83	5.8373E-001	9.85	D-Esc.	
72	503.51	2.0890E-001	33.57	Sum	
M 74	519.65	1.1910E-001	18.80	Sum	
m 75	522.93	1.4296E-001	16.21	Sum	
M 77	543.30	1.0273E-001	18.34	Sum	
m 78	546.21	2.7096E-001	7.76	Sum	
m 80	554.98	5.2811E-002	34.88	Sum	
81	562.19	1.1713E+000	3.76	D-Esc.	
82	571.32	5.0550E-001	11.88	D-Esc.	
M 83	579.83	4.2451E-001	4.87	Sum	
M 86	615.87	1.5587E-001	12.02	Sum	
m 87	620.21	1.0767E-001	16.11	Sum	
M 88	648.95	7.1669E-002	22.88	Sum	
m 89	651.22	9.3522E-002	18.66	Sum	
91	682.62	4.6593E-002	87.32	Sum	
m 93	707.16	2.3413E-001	9.30	D-Esc.	
m 95	722.05	1.2024E-001	13.79	Sum	
M102	781.80	6.3373E-001	2.82	Sum	

Peak No.	Energy (keV)	Peak Size in Counts per Second	Peak CPS % Uncertainty	Peak Type	Tol. Nuclide
M106	820.77	1.8183E-001	8.55	Sum	
m107	825.39	1.9249E-001	8.30	D-Esc.	
m108	830.35	6.3828E-001	2.69	Sum	
112	893.04	3.2163E-001	11.08	Sum	
113	903.89	7.8159E-001	5.50	Sum	
M116	943.81	1.5607E-001	7.84	Sum	
m117	947.69	9.9276E-002	10.34	Sum	
m118	951.81	1.2255E-001	6.92	Sum	
m119	958.28	2.3809E-001	4.41	Sum	
122	975.62	6.8785E-002	31.03	Sum	
M123	982.35	6.7794E-002	17.89		
m124	987.95	1.5570E-001	9.15	Sum	
126	1032.96	3.2432E-001	10.48	S-Esc.	
127	1039.94	9.7594E-002	29.32	Sum	
M129	1064.88	2.0093E-001	6.18	Sum	
m130	1069.84	2.0703E-001	6.00	Sum	
131	1078.47	4.9242E-001	5.95	S-Esc.	
132	1093.65	5.3348E-001	7.30	Sum	
M133	1103.88	1.6551E-001	7.19		
m134	1110.36	4.6479E-001	3.24	S-Esc.	
M138	1164.32	7.0913E-002	16.59	Sum	
m139	1168.39	7.5438E-002	15.74	Sum	
140	1181.88	1.3520E-001	23.94	Sum	
M143	1246.76	4.6128E-001	3.42	Sum	
m144	1253.36	2.4815E-001	5.53	S-Esc.	
147	1303.69	7.0572E-002	28.94	Sum	
148	1341.77	1.6911E-002	95.73	Sum	
153	1415.64	3.9907E-002	59.63	Sum	
154	1425.38	3.3144E-002	66.18	Sum	
155	1451.07	6.6322E-003	232.69	Sum	
156	1459.25	6.3025E-001	5.13	Sum	
M157	1496.07	7.2979E-001	2.01	Sum	
m158	1501.73	3.5797E-001	3.36	Sum	
m160	1512.99	2.7808E-001	4.01	Sum	
161	1529.36	4.6080E-002	40.51	Sum	
164	1557.24	1.4694E-001	16.52	Sum	
M165	1580.81	4.7016E-001	2.55	Sum	
m171	1625.46	2.1970E-001	4.29	Sum	
m173	1638.65	3.8079E-001	2.78	Sum	
m175	1666.87	1.2958E-001	6.46	Sum	
M176	1679.33	9.1836E-002	10.18	Sum	
m177	1685.03	2.1421E-001	5.27	Sum	
178	1693.44	1.9832E-001	11.10	Sum	
182	1823.46	2.7691E-002	59.34	Sum	
183	1839.23	1.3311E-001	18.30	Sum	
M186	1887.85	8.3483E-002	10.13	Sum	
m187	1891.23	7.1823E-002	11.40	Sum	
m188	1896.97	1.0748E-001	8.32	Sum	
189	1937.48	1.0423E-001	27.51	Sum	
190	1953.11	4.0036E-002	38.77	Sum	

Peak No.	Energy (keV)	Peak Size in Counts per Second	Peak CPS % Uncertainty	Peak Type	Tol. Nuclide
191	1983.77	6.8358E-003	163.69	Sum	
M192	2011.60	6.8360E-002	11.32	Sum	
m193	2018.20	5.5827E-002	13.30	Sum	

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

Errors quoted at 1.000 sigma