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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-HOT PILE BAG - CY BOX.CNF

Report Generated On	: 6/30/2017 5:47:13 PM
Sample Title	: HOT PILE BAG - CY BOX
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	: 7.466E+002 GWET
Sample Taken On	: 6/30/2017 3:30:00 PM
Acquisition Started	: 6/30/2017 3:44:30 PM
Live Time	: 7200.0 seconds
Real Time	: 7361.0 seconds
Dead Time	: 2.19 %

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: HOT PILE BAG - CY BOX
Peak Analysis Performed on: 6/30/2017 5:47:13 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	221-	241	231.23	57.67	0.85	4.07E+003	601.59	9.85E+004
M	2	249-	266	253.50	63.24	0.82	1.67E+003	190.57	4.87E+004
m	3	249-	266	261.47	65.23	0.82	1.59E+003	193.53	5.56E+004
M	4	277-	315	292.60	73.01	1.02	5.33E+003	206.27	6.75E+004
m	5	277-	315	300.19	74.91	1.03	4.12E+004	293.66	6.81E+004
m	6	277-	315	309.25	77.17	1.03	6.55E+004	345.15	6.90E+004
M	7	322-	387	326.29	81.43	1.25	1.21E+003	220.14	6.41E+004
m	8	322-	387	338.25	84.42	1.25	1.25E+004	251.22	8.54E+004
m	9	322-	387	349.75	87.29	1.26	3.51E+004	313.81	8.53E+004
m	10	322-	387	360.63	90.01	1.26	3.19E+004	298.28	8.53E+004
m	11	322-	387	373.90	93.33	1.27	4.27E+004	324.94	8.52E+004
	12	389-	408	398.88	99.57	1.17	8.45E+003	621.69	1.08E+005
M	13	408-	442	422.53	105.48	1.41	1.56E+004	305.54	9.44E+004
m	14	408-	442	436.00	108.85	1.41	5.21E+003	255.75	9.04E+004
	15	455-	470	461.83	115.31	0.88	3.85E+003	525.68	9.06E+004
M	16	509-	537	517.17	129.14	1.01	1.91E+004	291.04	8.10E+004
m	17	509-	537	527.28	131.66	1.01	1.39E+003	211.53	8.03E+004
	18	569-	580	575.72	143.77	0.47	5.30E+002	428.04	7.28E+004
	19	610-	624	616.74	154.02	1.22	7.98E+003	506.44	8.62E+004
M	20	651-	677	654.94	163.57	1.05	9.81E+002	214.58	5.98E+004
m	21	651-	677	667.48	166.70	1.06	1.25E+003	229.38	7.01E+004
	22	731-	752	744.94	186.06	1.24	2.13E+004	676.78	1.16E+005
	23	762-	771	766.82	191.53	0.41	1.06E+003	342.40	5.14E+004
	24	791-	804	798.29	199.39	0.89	2.65E+003	446.51	7.13E+004
	25	830-	854	837.90	209.29	1.07	4.02E+004	736.64	1.21E+005
	26	859-	874	864.51	215.94	1.11	3.19E+003	474.07	7.36E+004
M	27	948-	984	955.30	238.63	1.10	4.68E+005	719.66	5.66E+004
m	28	948-	984	965.52	241.19	1.10	5.28E+004	284.77	4.84E+004
M	29	1003-	1050	1011.26	252.62	1.01	1.98E+003	172.42	3.85E+004
m	30	1003-	1050	1026.30	256.38	1.02	7.24E+002	147.59	3.78E+004
m	31	1003-	1050	1035.50	258.68	1.02	1.09E+003	152.58	3.74E+004
M	32	1072-	1123	1081.66	270.22	1.18	3.36E+004	254.88	4.00E+004
m	33	1072-	1123	1099.87	274.77	1.18	6.49E+002	149.81	3.94E+004
m	34	1072-	1123	1110.23	277.35	1.19	2.00E+004	216.50	3.91E+004
	35	1146-	1158	1153.33	288.13	1.11	3.12E+003	294.57	3.18E+004
	36	1174-	1189	1181.60	295.19	1.15	4.67E+004	399.03	3.74E+004
	37	1193-	1210	1201.15	300.08	1.16	3.05E+004	405.91	4.12E+004
	38	1277-	1293	1287.66	321.70	0.71	1.28E+003	337.47	3.60E+004
M	39	1302-	1344	1312.67	327.95	1.16	2.58E+004	228.46	3.16E+004
m	40	1302-	1344	1330.22	332.33	1.17	2.79E+003	142.94	3.14E+004
M	41	1345-	1377	1353.98	338.27	1.17	1.01E+005	355.62	3.09E+004
m	42	1345-	1377	1364.71	340.95	1.17	3.35E+003	139.20	2.77E+004

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	FWHM (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	43	1391-	1418	1408.37	351.86	1.21	8.47E+004	554.66	4.88E+004
M	44	1543-	1566	1548.16	386.80	1.15	5.62E+002	121.67	2.10E+004
m	45	1543-	1566	1556.43	388.87	1.15	7.13E+002	127.20	2.41E+004
	46	1602-	1613	1607.54	401.64	1.02	6.25E+002	219.19	1.89E+004
	47	1629-	1647	1638.50	409.38	1.22	1.45E+004	328.95	2.78E+004
	48	1758-	1772	1762.83	440.45	1.33	8.53E+002	232.33	1.84E+004
	49	1806-	1818	1812.00	452.74	1.12	2.25E+003	211.28	1.61E+004
	50	1836-	1863	1852.66	462.90	1.26	3.11E+004	421.14	3.24E+004
M	51	1905-	1933	1913.89	478.20	1.28	1.44E+003	115.50	1.73E+004
m	52	1905-	1933	1922.55	480.37	1.28	9.28E+002	105.35	1.80E+004
	53	1942-	1955	1949.29	487.05	0.84	5.67E+002	204.78	1.50E+004
	54	2010-	2026	2015.45	503.59	0.81	7.09E+002	239.85	1.81E+004
	55	2026-	2065	2043.65	510.64	1.41	6.48E+004	555.84	4.06E+004
M	56	2075-	2100	2081.60	520.12	1.16	3.55E+002	97.03	1.42E+004
m	57	2075-	2100	2092.98	522.96	1.16	6.66E+002	108.95	1.40E+004
	58	2126-	2144	2135.35	533.55	0.99	4.66E+002	251.84	1.86E+004
M	59	2180-	2207	2186.84	546.42	1.07	9.07E+002	102.07	1.36E+004
m	60	2180-	2207	2199.54	549.59	1.07	6.87E+002	96.22	1.25E+004
	61	2244-	2259	2250.71	562.38	1.17	4.89E+003	226.32	1.54E+004
	62	2277-	2296	2287.19	571.50	3.02	2.10E+003	257.47	1.83E+004
	63	2324-	2343	2333.54	583.08	1.37	1.79E+005	494.67	1.88E+004
	64	2426-	2449	2438.09	609.21	1.36	6.87E+004	379.06	1.87E+004
M	65	2461-	2487	2465.22	615.99	0.66	7.59E+001	119.81	7.21E+003
m	66	2461-	2487	2482.45	620.30	0.66	1.18E+002	186.26	7.03E+003
	67	2557-	2572	2561.18	639.98	0.65	3.50E+002	191.45	1.21E+004
	68	2603-	2616	2607.31	651.50	0.47	4.10E+001	173.13	1.08E+004
	69	2649-	2675	2662.79	665.37	1.31	2.33E+003	302.55	2.04E+004
	70	2694-	2705	2699.63	674.58	1.46	1.22E+002	153.31	9.32E+003
	71	2750-	2762	2754.29	688.24	0.81	3.71E+002	160.74	9.66E+003
M	72	2804-	2841	2810.10	702.19	2.29	1.47E+003	119.65	1.51E+004
m	73	2804-	2841	2830.22	707.21	2.30	1.03E+003	121.52	1.93E+004
	74	2876-	2886	2880.75	719.84	0.98	2.82E+002	135.49	7.57E+003
	75	2898-	2926	2910.19	727.20	1.47	4.11E+004	352.70	1.79E+004
	76	3015-	3040	3022.57	755.29	1.46	4.65E+003	267.98	1.56E+004
M	77	3047-	3101	3054.64	763.30	1.48	2.85E+003	97.87	9.81E+003
m	78	3047-	3101	3074.59	768.29	1.48	6.22E+003	115.73	1.04E+004
m	79	3047-	3101	3090.35	772.23	1.48	7.37E+003	121.32	9.94E+003
M	80	3120-	3156	3129.78	782.08	1.48	2.66E+003	90.13	8.82E+003
m	81	3120-	3156	3143.58	785.53	1.48	6.94E+003	117.68	8.65E+003
	82	3169-	3194	3180.99	794.88	1.46	2.14E+004	264.75	1.15E+004
	83	3218-	3237	3225.79	806.07	1.54	1.44E+003	172.39	8.04E+003
M	84	3262-	3292	3267.76	816.56	0.98	1.79E+001	139.07	4.62E+003
m	85	3262-	3292	3286.88	821.34	0.98	1.31E+001	101.61	4.94E+003
M	86	3316-	3378	3323.41	830.47	1.58	2.83E+003	86.16	6.16E+003
m	87	3316-	3378	3344.14	835.65	1.58	8.33E+003	116.97	7.14E+003
m	88	3316-	3378	3362.50	840.24	1.59	4.99E+003	99.35	7.37E+003
	89	3429-	3459	3443.68	860.53	1.56	2.21E+004	266.18	9.99E+003
	90	3560-	3591	3575.10	893.37	1.36	1.83E+003	220.80	9.36E+003
	91	3608-	3629	3618.41	904.20	1.62	3.17E+003	169.15	6.78E+003
	92	3632-	3659	3646.44	911.20	1.55	1.30E+005	407.69	8.04E+003

Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	FWHM (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
93	3681-	3696	3686.58	921.23	0.36	1.14E+002	108.70	3.89E+003
M 94	3708-	3752	3713.28	927.91	1.63	1.55E+002	53.70	3.84E+003
m 95	3708-	3752	3738.07	934.10	1.63	3.69E+003	87.63	4.59E+003
M 96	3771-	3892	3777.97	944.07	1.57	4.27E+002	56.58	3.98E+003
m 97	3771-	3892	3794.10	948.11	1.57	4.49E+002	61.20	4.66E+003
m 98	3771-	3892	3810.63	952.24	1.57	8.07E+002	67.78	4.63E+003
m 99	3771-	3892	3836.01	958.58	1.57	1.84E+003	87.51	4.60E+003
m100	3771-	3892	3860.92	964.80	1.58	2.22E+004	155.74	4.50E+003
m101	3771-	3892	3877.73	969.01	1.58	8.13E+004	306.64	4.22E+003
M102	3925-	3966	3931.98	982.56	1.74	3.38E+002	54.74	3.62E+003
m103	3925-	3966	3955.07	988.34	1.74	7.78E+002	63.75	4.11E+003
104	3996-	4015	4006.14	1001.10	1.68	1.19E+003	121.07	3.84E+003
105	4125-	4143	4135.10	1033.33	1.78	1.04E+003	108.78	3.20E+003
M106	4196-	4241	4211.27	1052.36	2.15	4.90E+002	62.83	4.44E+003
m107	4196-	4241	4233.89	1058.02	2.15	2.22E+002	53.44	3.57E+003
M108	4255-	4290	4263.05	1065.30	1.28	8.07E+002	57.38	3.00E+003
m109	4255-	4290	4282.94	1070.28	1.28	2.17E+002	43.55	2.81E+003
110	4306-	4326	4317.38	1078.88	1.56	2.22E+003	123.65	3.60E+003
111	4368-	4395	4377.92	1094.01	2.27	2.35E+003	151.68	4.58E+003
112	4430-	4455	4444.83	1110.73	1.87	1.81E+003	138.88	4.11E+003
113	4466-	4506	4483.84	1120.48	1.72	1.71E+004	234.91	6.19E+003
114	4531-	4548	4538.81	1134.22	1.30	3.69E+002	97.13	2.79E+003
115	4603-	4636	4623.68	1155.43	1.90	2.51E+003	173.66	5.26E+003
116	4650-	4667	4660.38	1164.61	1.09	2.51E+002	96.49	2.78E+003
117	4724-	4738	4730.90	1182.23	1.40	3.68E+001	82.00	2.32E+003
118	4827-	4842	4834.08	1208.02	0.78	3.35E+002	88.24	2.47E+003
119	4874-	4886	4880.31	1219.57	0.30	1.10E+002	72.81	1.97E+003
120	4939-	4972	4955.93	1238.47	1.71	5.97E+003	181.49	5.13E+003
121	4975-	5000	4991.53	1247.37	1.49	1.87E+003	144.19	4.45E+003
122	5117-	5139	5127.28	1281.29	1.79	1.36E+003	122.57	3.51E+003
M123	5490-	5524	5500.88	1374.66	1.74	3.57E+002	47.87	3.35E+003
m124	5490-	5524	5515.13	1378.22	1.74	3.97E+003	82.55	3.15E+003
125	5537-	5556	5545.77	1385.88	1.46	7.36E+002	101.58	2.73E+003
M126	5601-	5649	5610.79	1402.13	1.76	1.27E+003	57.81	2.89E+003
m127	5601-	5649	5636.51	1408.56	1.76	2.08E+003	66.57	3.07E+003
128	5662-	5679	5669.25	1416.74	0.46	9.15E+001	87.15	2.30E+003
129	5728-	5739	5733.31	1432.75	0.54	1.46E+002	63.59	1.55E+003
130	5825-	5857	5841.45	1459.78	1.98	3.34E+003	149.36	3.70E+003
M131	5975-	6026	5988.85	1496.62	1.89	3.37E+003	73.42	2.52E+003
m132	5975-	6026	6011.43	1502.26	1.89	1.81E+003	59.66	2.44E+003
M133	6028-	6066	6042.33	1509.98	1.84	1.78E+003	60.05	2.49E+003
m134	6028-	6066	6056.28	1513.47	1.84	1.30E+003	54.35	2.33E+003
M135	6149-	6207	6158.91	1539.12	1.76	4.21E+002	46.42	2.22E+003
m136	6149-	6207	6179.53	1544.27	1.77	3.08E+002	41.83	2.29E+003
m137	6149-	6207	6201.17	1549.68	1.77	1.49E+002	37.37	1.70E+003
138	6222-	6250	6234.55	1558.02	1.31	7.46E+002	113.65	2.63E+003
139	6316-	6335	6327.66	1581.29	1.82	1.66E+003	100.09	2.39E+003
M140	6347-	6411	6358.73	1589.06	1.92	1.13E+004	116.26	2.60E+003
m141	6347-	6411	6376.25	1593.43	1.92	6.28E+003	89.77	2.38E+003
m142	6347-	6411	6402.97	1600.11	1.92	3.10E+002	40.95	1.96E+003

Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	FWHM (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
M143	6474-	6570	6489.20	1621.66	1.92	5.51E+003	84.67	2.03E+003
m144	6474-	6570	6506.03	1625.87	1.92	9.81E+002	46.83	2.03E+003
m145	6474-	6570	6528.89	1631.58	1.93	5.77E+003	86.93	2.03E+003
m146	6474-	6570	6559.43	1639.21	1.93	1.61E+003	54.66	2.03E+003
M147	6641-	6684	6651.63	1662.26	2.00	9.33E+002	50.18	1.92E+003
m148	6641-	6684	6672.46	1667.46	2.00	6.56E+002	46.46	2.18E+003
149	6808-	6825	6817.02	1703.59	1.39	2.24E+002	69.45	1.41E+003
150	6913-	6940	6925.89	1730.80	1.95	2.77E+003	114.90	2.31E+003
151	7053-	7083	7065.77	1765.76	1.97	1.33E+004	161.71	2.58E+003
152	7219-	7246	7231.86	1807.27	1.51	2.96E+002	103.41	2.31E+003
153	7361-	7412	7398.25	1848.85	1.79	1.20E+003	199.63	5.08E+003
154	7547-	7564	7557.05	1888.54	0.64	2.10E+002	72.02	1.53E+003
155	7581-	7606	7592.89	1897.50	1.68	2.43E+002	98.31	2.21E+003
156	8046-	8064	8056.94	2013.47	0.42	9.55E+001	72.40	1.52E+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 *****
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Detector Name: ERT01
Sample Geometry:
Sample Title: HOT PILE BAG - CY BOX
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	5.4095E+000	5.41E+000	2.6727E+001
	Co-60	1173.23	99.85	4.5102E-001	4.51E-001	1.8996E-001
		1332.49	99.98	4.9445E-001		2.2041E-001
>		2505.71	0.10	0.0000E+000		0.0000E+000
	Cs-137	32.06	5.54	4.1358E+004	6.89E-001	1.8721E+003
		661.66	84.99	6.8876E-001		1.1073E-001
+	Tl-208	72.80*	2.02	4.1005E+001	6.36E-001	1.2777E+002
		74.97*	3.41	2.2540E+001		5.4064E+002
		84.90*	1.51	4.2352E+001		2.7571E+002
		277.36*	6.31	6.2191E+000		9.5693E+001
		510.77*	22.60	4.2379E+000		1.1910E+002
		583.19*	84.50	6.3633E-001		9.5133E+001
		763.13*	1.81	1.9388E+001		8.4446E+001
		860.56*	12.42	4.8650E+000		1.0418E+002
+	Bi-212	39.86	1.06	7.6459E+003	1.03E+001	5.3896E+003
		727.33*	6.74	1.0349E+001		3.1601E+002
		785.37*	1.11	3.0329E+001		3.4239E+002
		1620.74*	1.51	1.8595E+001		3.4272E+002
		1806.00	0.09	5.0741E+002		4.9278E+002
+	Pb-212	74.81*	10.40	7.3906E+000	1.01E+000	1.7727E+002
		77.11*	17.50	4.0619E+000		1.5378E+002
		87.30*	7.81	7.6757E+000		1.3999E+002
		115.18*	0.59	9.5337E+001		1.5110E+002
		238.63*	43.30	1.0058E+000		3.0015E+002
		300.09*	3.28	1.6343E+001		2.9186E+002
+	Bi-214	76.86*	0.43	1.6686E+002	1.30E+000	6.3173E+003
		89.81*	0.24	2.3297E+002		3.8665E+003
		386.77*	0.30	1.1579E+002		6.8073E+001
		454.77	0.29	1.9318E+002		4.4377E+002
		609.31*	45.49	1.2959E+000		6.9764E+001
		665.45*	1.53	4.4430E+001		7.4469E+001
		703.11*	0.48	8.5713E+001		1.5509E+002
		719.86*	0.39	8.2290E+001		3.6994E+001
		768.36*	4.89	7.4383E+000		6.8594E+001
		786.10*	0.31	1.0860E+002		1.2260E+003
		806.17*	1.26	3.4728E+001		6.3772E+001
		934.06*	3.10	9.0411E+000		7.4358E+001
		964.08*	0.36	7.8495E+001		3.9311E+003
		1051.96*	0.31	9.6332E+001		1.0698E+002
		1120.29*	14.91	4.4221E+000		8.2807E+001

	Nuclide Name	Energy (keV)	Yield (%)	Line MDA (pCi/GWET)	Nuclide MDA (pCi/GWET)	Activity (pCi/GWET)
+	Bi-214	1133.66*	0.25	1.2829E+002	1.30E+000	1.0613E+002
		1155.19*	1.63	3.5235E+001		1.1380E+002
		1207.68*	0.45	6.8937E+001		5.7138E+001
		1238.11*	5.79	1.0375E+001		8.0880E+001
		1280.96*	1.43	3.0749E+001		7.6658E+001
		1377.67*	4.00	7.8972E+000		8.4285E+001
		1385.31*	0.76	5.1586E+001		8.2860E+001
		1401.50*	1.27	2.4116E+001		8.6155E+001
		1407.98*	2.15	1.4731E+001		8.3400E+001
		1509.23*	2.11	1.4139E+001		7.6351E+001
		1538.50*	0.38	7.5806E+001		1.0215E+002
		1543.32*	0.20	1.4531E+002		1.4087E+002
		1583.22	0.69	1.2157E+002		2.2065E+002
		1594.73	0.25	3.7628E+002		6.0584E+003
		1599.31*	0.23	1.1920E+002		1.2572E+002
		1661.28*	1.15	2.3992E+001		7.6990E+001
		1683.99	0.22	2.1847E+002		4.7661E+002
		1729.59	2.92	1.8990E+001		1.0153E+002
		1764.49	15.40	5.5983E+000		8.4817E+001
		1847.42	2.11	2.5862E+001		2.5249E+000
		1873.16	0.22	2.1919E+002		3.9248E+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	4.0913E+002	2.00E+000	-1.0462E+002
		74.81*	6.44	1.1935E+001		2.8627E+002
		77.11*	10.80	6.5817E+000		2.4918E+002
		87.30*	4.84	1.2386E+001		2.2590E+002
		242.00*	7.43	5.4524E+000		1.9879E+002
		258.87*	0.52	7.0575E+001		6.0422E+001
		274.80*	0.47	8.2748E+001		4.1008E+001
		295.22*	19.30	2.5211E+000		7.5390E+001
		351.93*	37.60	1.9972E+000		7.6926E+001
		462.00*	0.22	3.1790E+002		5.5420E+003
		533.66*	0.19	2.6824E+002		1.0687E+002
		785.96*	1.07	3.1462E+001		3.5518E+002
		839.04	0.59	1.1089E+002		1.2954E+003
+	Ra-224	81.07*	0.13	4.5731E+002	9.88E+000	3.3117E+002
		83.78*	0.22	2.9471E+002		1.9185E+003
		240.99*	4.10	9.8808E+000		3.6025E+002
+	Ra-226	81.07*	0.20	3.0409E+002	2.10E+001	2.2022E+002
		83.78*	0.33	1.9497E+002		1.2692E+003
		94.90	0.15	5.1012E+002		5.5673E+003
		186.21*	3.59	2.1029E+001		1.4522E+002
+	Ac-228	99.50*	1.26	5.8730E+001	1.74E+000	1.7342E+002
		129.07*	2.50	1.6907E+001		1.7238E+002
		209.25*	3.97	2.1574E+001		2.6311E+002
		270.24*	3.55	1.1032E+001		2.8078E+002
		328.00*	3.04	1.2690E+001		2.7983E+002
		338.32*	11.40	3.4008E+000		2.9570E+002
		409.46*	2.02	2.6085E+001		2.6432E+002

	Nuclide Name	Energy (keV)	Yield (%)	Line MDA (pCi/GWET)	Nuclide MDA (pCi/GWET)	Activity (pCi/GWET)
+	Ac-228	463.00*	4.45	1.5788E+001	1.74E+000	2.7524E+002
		755.31*	1.03	6.2489E+001		2.4070E+002
		772.29*	1.52	2.3444E+001		2.6248E+002
		794.94*	4.31	1.3204E+001		2.7415E+002
		835.70*	1.70	1.8837E+001		2.8108E+002
		911.20*	26.20	2.0786E+000		3.0410E+002
		964.79*	4.99	5.7102E+000		2.8597E+002
		968.96*	15.90	1.7400E+000		3.2917E+002
		1588.20*	3.06	1.0265E+001		3.4351E+002
		1630.62*	1.52	1.8522E+001		3.5718E+002
+	Th-228	84.37*	1.26	5.0755E+001	5.08E+001	3.3041E+002
		131.61*	0.13	3.2192E+002		2.3980E+002
		166.41*	0.10	3.9511E+002		2.8249E+002
		215.98*	0.25	2.2757E+002		3.3116E+002
+	Pa-234m	258.23*	0.07	5.0110E+002	4.23E+001	4.2901E+002
		742.81	0.09	6.1502E+002		1.8924E+002
		766.36	0.32	2.0910E+002		2.9749E+000
		786.27*	0.05	6.2808E+002		7.0904E+003
		1001.03*	0.85	4.2328E+001		9.2390E+001
		1737.77	0.02	2.4204E+003		1.2217E+003
+	Th-234	63.30*	3.75	3.2968E+001	1.24E+001	3.7066E+001
		92.59*	4.33	1.2431E+001		2.7532E+002
		112.81	0.22	2.7569E+002		-7.6803E+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: HOT PILE BAG - CY BOX
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	0.944	477.60*		10.44	5.52658E+000	4.79861E-001
Ce-139	0.892	165.86*		79.89	3.66419E-001	6.82010E-002
Eu-152m	0.996	89.85*		69.90	1.34967E+001	3.93997E-001
Eu-155	0.923	45.30		1.31		
		60.01		1.22		
		86.55*		30.70	3.56140E+001	1.07241E+000
		105.31*		21.10	1.81332E+001	7.54963E-001
Tl-208	0.998	72.80*	@	2.02	1.27768E+002	6.29030E+000
		74.97*	@	3.41	5.40644E+002	1.67569E+001
		84.90*	@	1.51	2.75706E+002	9.46235E+000
		277.36*		6.31	9.56931E+001	3.52563E+000
		510.77*	@	22.60	1.19102E+002	3.93851E+000
		583.19*		84.50	9.51333E+001	2.97491E+000
		763.13*	@	1.81	8.44463E+001	3.57017E+000
		860.56*		12.42	1.04176E+002	2.83641E+000
TL-208e	0.878	1592.53*		99.16	5.89205E+000	3.71269E-001
Bi-211	0.895	351.03*		13.00	2.22493E+002	8.15978E+000
Bi-212	0.945	39.86	@	1.06		
		727.33*		6.74	3.16005E+002	1.02085E+001
		785.37*		1.11	3.42387E+002	1.05627E+001
		1620.74*		1.51	3.42720E+002	1.24828E+001
		1806.00	@	0.09		
Pb-212	1.000	74.81*		10.40	1.77269E+002	7.50572E+000
		77.11*		17.50	1.53782E+002	6.39203E+000
		87.30*		7.81	1.39994E+002	5.99839E+000
		115.18*	@	0.59	1.51105E+002	2.10098E+001
		238.63*		43.30	3.00151E+002	9.88562E+000
		300.09*		3.28	2.91856E+002	1.05899E+001
Bi-214	0.757	76.86*	@	0.43	6.31726E+003	2.71174E+002
		89.81*	@	0.24	3.86648E+003	1.78823E+002
		386.77*	@	0.30	6.80732E+001	1.49619E+001
		454.77	@	0.29		
		609.31*		45.49	6.97645E+001	2.09473E+000
		665.45*	@	1.53	7.44687E+001	9.87942E+000
		703.11*	@	0.48	1.55087E+002	1.37530E+001
		719.86*	@	0.39	3.69936E+001	1.78079E+001
		768.36*		4.89	6.85939E+001	2.12221E+000
		786.10*	@	0.31	1.22595E+003	2.01016E+002
		806.17*	@	1.26	6.37717E+001	7.78473E+000
		934.06*		3.10	7.43579E+001	2.46028E+000
		964.08*	@	0.36	3.93106E+003	1.60415E+002

Nuclide Name	Id Confidence	Energy (keV)	Yield (%)	Activity (pCi/GWET)	Activity Uncertainty
Bi-214	0.757	1051.96* @	0.31	1.06981E+002	1.44502E+001
		1120.29*	14.91	8.28067E+001	2.31293E+000
		1133.66* @	0.25	1.06130E+002	2.82894E+001
		1155.19* @	1.63	1.13805E+002	8.37957E+000
		1207.68* @	0.45	5.71384E+001	1.52556E+001
		1238.11*	5.79	8.08800E+001	3.37668E+000
		1280.96* @	1.43	7.66584E+001	7.24541E+000
		1377.67*	4.00	8.42846E+001	3.03079E+000
		1385.31* @	0.76	8.28601E+001	1.17979E+001
		1401.50* @	1.27	8.61552E+001	4.67594E+000
		1407.98* @	2.15	8.33997E+001	3.91076E+000
		1509.23* @	2.11	7.63511E+001	3.51601E+000
		1538.50* @	0.38	1.02149E+002	1.21687E+001
		1543.32* @	0.20	1.40871E+002	4.02387E+001
		1583.22 @	0.69		
		1594.73 @	0.25		
		1599.31* @	0.23	1.25717E+002	3.69009E+001
		1661.28* @	1.15	7.69900E+001	5.06736E+000
		1683.99 @	0.22		
		1729.59 @	2.92		
		1764.49	15.40		
		1847.42 @	2.11		
		1873.16 @	0.22		
		2118.55 @	1.14		
		2204.21 @	5.08		
Pb-214	0.974	53.28 @	1.20		
		74.81*	6.44	2.86270E+002	1.28789E+001
		77.11*	10.80	2.49181E+002	1.19063E+001
		87.30*	4.84	2.25898E+002	1.05819E+001
		242.00*	7.43	1.98792E+002	7.02445E+000
		258.87* @	0.52	6.04221E+001	8.76114E+000
		274.80* @	0.47	4.10084E+001	9.61136E+000
		295.22*	19.30	7.53902E+001	2.64634E+000
		351.93*	37.60	7.69257E+001	2.71382E+000
		462.00* @	0.22	5.54202E+003	2.99231E+002
		533.66* @	0.19	1.06868E+002	5.80931E+001
		785.96* @	1.07	3.55183E+002	2.85488E+001
		839.04 @	0.59		
Rn-220	0.997	549.73*	0.11	2.61394E+002	5.40992E+001
Ra-223	0.585	81.07*	15.30	2.83547E+000	5.23238E-001
		83.78*	25.40	1.63903E+001	6.48481E-001
		94.90	11.50		
		122.32 @	1.21		
		144.24*	3.27	3.60163E+000	2.96241E+000
		154.21*	5.70	3.20664E+001	2.40566E+000
		158.63 @	0.69		
		179.54 @	0.15		
		269.46*	13.90	7.17100E+001	3.13963E+000
		288.18* @	0.16	5.99684E+002	6.26899E+001
		323.87	3.99		

Nuclide Name	Id Confidence	Energy (keV)	Yield (%)	Activity (pCi/GWET)	Activity Uncertainty
Ra-223	0.585	328.38* @	0.21	4.07025E+003	2.08276E+002
		338.32*	2.84	1.18693E+003	4.89573E+001
		342.87 @	0.22		
		371.68 @	0.49		
		445.03 @	1.29		
Ra-224	0.990	81.07* @	0.13	3.31168E+002	6.24051E+001
		83.78* @	0.22	1.91851E+003	9.66330E+001
		240.99*	4.10	3.60253E+002	1.23654E+001
Ra-226	0.937	81.07* @	0.20	2.20216E+002	4.13838E+001
		83.78* @	0.33	1.26924E+003	6.36698E+001
		94.90 @	0.15		
		186.21*	3.59	1.45216E+002	6.75851E+000
Ac-228	0.993	99.50* @	1.26	1.73418E+002	1.45105E+001
		129.07* @	2.50	1.72381E+002	6.84305E+000
		209.25*	3.97	2.63107E+002	1.27591E+001
		270.24*	3.55	2.80782E+002	1.21818E+001
		328.00*	3.04	2.79832E+002	1.38864E+001
		338.32*	11.40	2.95695E+002	1.42577E+001
		409.46* @	2.02	2.64323E+002	1.32147E+001
		463.00*	4.45	2.75236E+002	1.77640E+001
		755.31* @	1.03	2.40695E+002	1.77566E+001
		772.29* @	1.52	2.62477E+002	1.29271E+001
		794.94*	4.31	2.74153E+002	1.15745E+001
		835.70* @	1.70	2.81083E+002	1.38728E+001
		911.20*	26.20	3.04104E+002	1.16248E+001
		964.79*	4.99	2.85970E+002	1.19049E+001
		968.96*	15.90	3.29172E+002	1.28647E+001
		1588.20*	3.06	3.43513E+002	1.64995E+001
		1630.62* @	1.52	3.57176E+002	1.78387E+001
Th-228	0.999	84.37*	1.26	3.30410E+002	1.24939E+001
		131.61* @	0.13	2.39805E+002	3.71025E+001
		166.41* @	0.10	2.82488E+002	5.27379E+001
		215.98*	0.25	3.31162E+002	5.04386E+001
Pa-234m	0.481	258.23* @	0.07	4.29013E+002	6.17265E+001
		742.81 @	0.09		
		766.36	0.32		
		786.27* @	0.05	7.09041E+003	2.28782E+002
		1001.03*	0.85	9.23898E+001	9.72428E+000
		1737.77 @	0.02		
Th-234	0.899	63.30*	3.75	3.70658E+001	4.53196E+000
		92.59*	4.33	2.75322E+002	1.41207E+001
		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		0.944	5.526575E+000	4.798614E-001
X	Mn-54		0.899		
X	Cd-109		0.916		
	Ce-139		0.892	1.866946E-001	7.076395E-002
	Eu-152m		0.996	1.323370E+001	3.765947E-001
	Eu-155		0.923	1.351449E+001	5.075129E-001
X	Tm-170		0.996		
	Tl-208	@	0.998	9.841920E+001	1.676837E+000
	TL-208e		0.878	5.892051E+000	3.712689E-001
	Bi-211		0.895	5.436861E+001	1.026158E+001
	Bi-212	@	0.945	3.069750E+002	5.575041E+000
	Pb-212	@	1.000	1.122803E+002	2.900283E+000
	Bi-214	@	0.757	7.535196E+001	9.793768E-001
	Pb-214	@	0.974	5.812809E+001	2.427419E+000
	Rn-220		0.997	2.613941E+002	5.409916E+001
	Ra-223	@	0.585	2.029000E-001	4.971797E-001
	Ra-224	@	0.990	2.476621E+002	1.233857E+001
	Ra-226	@	0.937	1.419654E+002	6.298855E+000
	Ac-228	@	0.993	2.927704E+002	2.647849E+000
	Th-228	@	0.999	1.385575E+002	1.454942E+001
X	Th-231		0.994		
	Pa-234m	@	0.481	9.034691E+001	9.678059E+000
	Th-234	@	0.899	5.931562E+001	4.315167E+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: 6/30/2017 5:47:13 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	57.67	5.6491E-001	14.79	Tol.	Np-239
m 3	65.23	2.2072E-001	12.18	Tol.	Se-75
m 14	108.85	7.2364E-001	4.91		
M 20	163.57	1.3625E-001	21.87	Sum	
23	191.53	1.4784E-001	32.17	Sum	
24	199.39	3.6824E-001	16.84	Sum	
M 29	252.62	2.7478E-001	8.72	Sum	
m 30	256.38	1.0055E-001	20.39	Sum	
38	321.70	1.7778E-001	26.37	Sum	
m 40	332.33	3.8814E-001	5.11	Sum	
m 42	340.95	4.6542E-001	4.15	Sum	
m 45	388.87	9.9048E-002	17.84	Sum	
46	401.64	8.6776E-002	35.08	Sum	
48	440.45	1.1842E-001	27.25	Tol.	Tl-202
49	452.74	3.1278E-001	9.38	Sum	
m 52	480.37	1.2892E-001	11.35	Sum	
53	487.05	7.8734E-002	36.12	D-Esc.	
54	503.59	9.8505E-002	33.82	Sum	
M 56	520.12	4.9315E-002	27.33	Tol.	Tl-202
m 57	522.96	9.2432E-002	16.37	D-Esc.	
M 59	546.42	1.2595E-001	11.26	Sum	
61	562.38	6.7873E-001	4.63	Sum	
62	571.50	2.9140E-001	12.27	D-Esc.	
M 65	615.99	1.0542E-002	157.85	Sum	
m 66	620.30	1.6394E-002	157.80	Sum	
67	639.98	4.8552E-002	54.77	D-Esc.	
68	651.50	5.6912E-003	422.51	Sum	
70	674.58	1.6973E-002	125.45	Sum	
71	688.24	5.1525E-002	43.33	Sum	
m 73	707.21	1.4315E-001	11.79		
M 80	782.08	3.6945E-001	3.39		
M 84	816.56	2.4831E-003	777.84	Sum	
m 85	821.34	1.8143E-003	777.86	Sum	
M 86	830.47	3.9359E-001	3.04	Sum	
m 88	840.24	6.9302E-001	1.99	Sum	
90	893.37	2.5351E-001	12.10	Sum	
91	904.20	4.3962E-001	5.34	Sum	
93	921.23	1.5883E-002	95.06	Sum	
M 94	927.91	2.1466E-002	34.75		
M 96	944.07	5.9296E-002	13.25	Sum	
m 97	948.11	6.2421E-002	13.62	Sum	
m 98	952.24	1.1203E-001	8.40	Sum	
m 99	958.58	2.5599E-001	4.75	Sum	
M102	982.56	4.6904E-002	16.21		

Peak No.	Energy (keV)	Peak Size in Counts per Second	Peak CPS % Uncertainty	Peak Type	Tol. Nuclide
m103	988.34	1.0805E-001	8.19	Sum	
105	1033.33	1.4421E-001	10.48	S-Esc.	
m107	1058.02	3.0863E-002	24.05	Sum	
M108	1065.30	1.1211E-001	7.11	Sum	
m109	1070.28	3.0196E-002	20.03	Sum	
110	1078.88	3.0824E-001	5.57	S-Esc.	
111	1094.01	3.2590E-001	6.46	Sum	
112	1110.73	2.5084E-001	7.69	S-Esc.	
116	1164.61	3.4808E-002	38.50	Sum	
117	1182.23	5.1046E-003	223.12	Sum	
119	1219.57	1.5297E-002	66.10	Sum	
121	1247.37	2.6011E-001	7.70	Sum	
M123	1374.66	4.9548E-002	13.42	Sum	
128	1416.74	1.2712E-002	95.21	Sum	
129	1432.75	2.0233E-002	43.65	Sum	
130	1459.78	4.6210E-001	4.49	Sum	
M131	1496.62	4.6802E-001	2.18	Sum	
m132	1502.26	2.5194E-001	3.29	Sum	
m134	1513.47	1.8122E-001	4.17	Sum	
m137	1549.68	2.0703E-002	25.07	Sum	
138	1558.02	1.0365E-001	15.23	Sum	
139	1581.29	2.3032E-001	6.04	Sum	
m144	1625.87	1.3622E-001	4.78	Sum	
m146	1639.21	2.2368E-001	3.39	Sum	
m148	1667.46	9.1119E-002	7.08	Sum	
149	1703.59	3.1130E-002	30.98	Sum	
150	1730.80	3.8420E-001	4.15	Sum	
151	1765.76	1.8507E+000	1.21	Sum	
152	1807.27	4.1110E-002	34.94	Sum	
153	1848.85	1.6668E-001	16.63	Sum	
154	1888.54	2.9156E-002	34.31	Sum	
155	1897.50	3.3770E-002	40.43	Sum	
156	2013.47	1.3265E-002	75.81	Sum	

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

Errors quoted at 1.000 sigma