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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: C:\GENIE2K\CAMFILES\SMP-N002-A05-S002-0006-01.CNF,C:\GENIE2K\

Report Generated On	: 10/19/2016 6:45:22 PM
Sample Title	: N002-A05-S002-0006-01
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	: 8.257E+002 GWET
Sample Taken On	: 10/12/2016 2:10:00 PM
Acquisition Started	: 10/19/2016 1:10:35 PM
Live Time	: 7200.0 seconds
Real Time	: 7314.8 seconds
Dead Time	: 1.57 %

Energy Calibration Used Done On	: 10/12/2016
Efficiency Calibration Used Done On	: 9/27/2016
Efficiency ID	: ERT0101

****
***** 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: N002-A05-S002-0006-01
Peak Analysis Performed on: 10/19/2016 6:45:22 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	242-	258	253.65	63.46	0.60	2.48E+002	441.97	6.22E+004
M	2	276-	315	292.26	73.12	1.03	4.58E+003	184.33	5.30E+004
m	3	276-	315	299.85	75.02	1.04	3.23E+004	260.82	5.76E+004
m	4	276-	315	308.89	77.28	1.04	5.04E+004	304.68	5.85E+004
M	5	322-	387	337.88	84.53	1.26	1.03E+004	224.60	6.68E+004
m	6	322-	387	349.32	87.40	1.26	2.73E+004	272.92	6.66E+004
m	7	322-	387	360.22	90.12	1.27	2.36E+004	263.34	6.63E+004
m	8	322-	387	373.46	93.43	1.27	3.15E+004	280.93	7.01E+004
	9	388-	408	398.61	99.73	1.08	6.71E+003	566.31	8.65E+004
M	10	410-	448	422.18	105.62	1.40	1.06E+004	263.06	7.62E+004
m	11	410-	448	435.41	108.93	1.40	3.85E+003	219.25	7.27E+004
	12	457-	470	461.18	115.38	1.02	2.97E+003	409.31	5.96E+004
M	13	509-	531	516.63	129.25	1.02	1.49E+004	251.85	5.96E+004
m	14	509-	531	526.50	131.72	1.02	9.13E+002	184.04	5.43E+004
M	15	572-	594	575.74	144.04	0.91	1.28E+003	186.63	4.36E+004
m	16	572-	594	583.44	145.97	0.92	1.01E+003	180.29	5.20E+004
	17	608-	624	616.21	154.16	1.09	5.97E+003	477.14	7.08E+004
	18	734-	755	743.98	186.13	1.26	1.38E+004	569.74	8.27E+004
	19	792-	804	797.59	199.54	0.95	1.32E+003	352.78	4.67E+004
	20	831-	843	836.92	209.38	1.06	2.82E+004	383.17	4.50E+004
	21	853-	870	863.61	216.06	1.22	2.49E+003	439.97	5.87E+004
M	22	947-	979	954.23	238.73	1.10	3.38E+005	610.62	3.90E+004
m	23	947-	979	964.35	241.26	1.11	3.73E+004	239.40	3.15E+004
M	24	1006-	1028	1009.86	252.64	0.86	7.99E+002	377.66	2.04E+004
m	25	1006-	1028	1024.52	256.31	0.87	1.07E+002	51.30	2.04E+004
	26	1072-	1090	1080.48	270.31	1.16	2.45E+004	379.20	3.52E+004
	27	1103-	1122	1108.92	277.43	1.10	1.44E+004	378.84	3.64E+004
	28	1145-	1160	1151.94	288.19	1.03	2.17E+003	290.03	2.72E+004
	29	1167-	1190	1180.25	295.27	1.16	3.01E+004	435.19	3.98E+004
	30	1191-	1209	1199.88	300.18	1.11	2.15E+004	352.39	3.04E+004
	31	1278-	1291	1285.65	321.64	1.02	7.32E+002	240.07	2.06E+004
M	32	1300-	1335	1311.17	328.03	1.17	1.89E+004	191.81	2.15E+004
m	33	1300-	1335	1328.53	332.37	1.17	2.43E+003	121.80	2.13E+004
M	34	1343-	1374	1352.45	338.35	1.16	7.21E+004	299.74	1.99E+004
m	35	1343-	1374	1363.17	341.03	1.16	2.19E+003	114.64	1.91E+004
	36	1398-	1419	1406.81	351.95	1.22	5.42E+004	393.30	2.64E+004
	37	1552-	1570	1555.40	389.12	0.80	3.09E+002	268.30	2.12E+004
	38	1603-	1613	1607.29	402.11	0.94	1.97E+002	170.57	1.21E+004
	39	1629-	1648	1636.66	409.45	1.27	1.05E+004	283.35	1.98E+004
	40	1730-	1738	1734.84	434.01	0.43	7.73E+001	129.79	7.84E+003
	41	1755-	1768	1760.39	440.41	0.53	6.76E+002	181.83	1.17E+004
	42	1802-	1815	1809.97	452.81	1.03	1.64E+003	184.34	1.17E+004

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	FWHM (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
	43	1840-	1859	1850.60	462.98	1.33	2.19E+004	277.94	1.58E+004
	44	1906-	1916	1911.13	478.12	0.95	5.42E+002	145.29	8.62E+003
	45	1937-	1954	1946.65	487.00	0.50	5.89E+002	209.61	1.33E+004
	46	2006-	2024	2013.67	503.77	1.14	9.30E+002	214.94	1.34E+004
	47	2024-	2054	2041.39	510.70	1.36	4.27E+004	394.12	2.31E+004
M	48	2075-	2100	2079.35	520.20	1.28	3.56E+002	82.47	8.89E+003
m	49	2075-	2100	2090.86	523.08	1.29	5.53E+002	92.59	1.09E+004
M	50	2176-	2208	2184.17	546.43	1.42	8.22E+002	96.11	1.13E+004
m	51	2176-	2208	2197.60	549.79	1.42	6.75E+002	91.40	1.17E+004
	52	2234-	2257	2248.29	562.47	1.39	4.01E+003	255.85	1.54E+004
	53	2271-	2293	2281.82	570.85	1.57	1.30E+003	241.49	1.47E+004
	54	2321-	2342	2330.91	583.14	1.33	1.27E+005	426.24	1.46E+004
	55	2422-	2445	2435.37	609.27	1.38	4.48E+004	310.96	1.29E+004
	56	2457-	2469	2464.21	616.48	0.59	4.42E+002	135.45	6.80E+003
	57	2651-	2673	2660.31	665.54	1.53	1.30E+003	219.98	1.21E+004
	58	2747-	2756	2751.06	688.25	0.40	1.02E+002	109.33	5.23E+003
M	59	2798-	2832	2806.39	702.09	1.78	8.38E+002	98.84	1.05E+004
m	60	2798-	2832	2828.04	707.50	1.79	4.87E+002	85.37	8.41E+003
	61	2898-	2916	2906.93	727.24	1.47	2.86E+004	238.25	8.34E+003
	62	3012-	3028	3018.99	755.28	1.40	3.39E+003	159.87	7.06E+003
M	63	3035-	3100	3051.26	763.35	1.48	2.28E+003	81.78	7.21E+003
m	64	3035-	3100	3071.10	768.31	1.48	4.22E+003	93.32	6.53E+003
m	65	3035-	3100	3086.89	772.26	1.48	5.29E+003	101.38	6.25E+003
M	66	3117-	3150	3126.22	782.10	1.48	1.87E+003	74.59	5.96E+003
m	67	3117-	3150	3139.95	785.54	1.48	4.96E+003	98.45	5.56E+003
	68	3165-	3190	3177.44	794.92	1.45	1.53E+004	218.05	7.60E+003
	69	3212-	3231	3222.50	806.19	1.44	9.33E+002	142.80	5.55E+003
M	70	3309-	3372	3319.73	830.51	1.53	1.77E+003	69.83	4.83E+003
m	71	3309-	3372	3340.34	835.67	1.54	5.85E+003	98.16	4.63E+003
m	72	3309-	3372	3358.70	840.26	1.54	3.47E+003	81.40	4.43E+003
	73	3428-	3452	3439.79	860.55	1.48	1.55E+004	192.64	5.22E+003
	74	3560-	3578	3571.47	893.49	1.27	1.36E+003	117.23	3.67E+003
	75	3606-	3623	3614.45	904.24	1.41	2.24E+003	120.39	3.76E+003
	76	3631-	3665	3642.32	911.21	1.53	9.21E+004	357.72	6.25E+003
	77	3703-	3715	3707.91	927.63	0.47	9.14E+001	76.13	2.17E+003
	78	3721-	3746	3733.92	934.13	1.51	2.19E+003	142.00	4.23E+003
M	79	3765-	3816	3774.46	944.27	1.75	4.08E+002	50.73	3.10E+003
m	80	3765-	3816	3789.30	947.99	1.76	3.59E+002	48.46	3.32E+003
m	81	3765-	3816	3805.95	952.15	1.76	6.36E+002	54.64	3.22E+003
	82	3819-	3843	3831.99	958.67	1.90	1.08E+003	127.99	3.71E+003
M	83	3847-	3887	3856.53	964.80	1.57	1.68E+004	138.45	2.80E+003
m	84	3847-	3887	3873.38	969.02	1.57	5.45E+004	239.01	2.79E+003
	85	3893-	3905	3900.78	975.87	0.70	1.62E+002	68.50	1.72E+003
M	86	3915-	3961	3928.57	982.83	1.67	2.11E+002	43.52	2.73E+003
m	87	3915-	3961	3950.52	988.32	1.68	4.50E+002	51.56	2.76E+003
	88	3995-	4010	4001.76	1001.14	1.49	6.85E+002	85.71	2.21E+003
	89	4115-	4138	4130.20	1033.27	1.52	6.23E+002	109.87	2.86E+003
	90	4152-	4173	4158.29	1040.30	0.81	1.62E+002	100.87	2.66E+003
M	91	4239-	4285	4258.32	1065.32	1.71	7.69E+002	52.08	2.39E+003
m	92	4239-	4285	4277.58	1070.14	1.71	2.83E+002	42.29	2.15E+003

Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	FWHM (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
93	4304-	4321	4312.58	1078.90	1.47	1.46E+003	91.04	2.10E+003
94	4360-	4392	4373.46	1094.13	1.63	1.55E+003	141.78	3.61E+003
95	4429-	4451	4440.05	1110.79	1.84	1.19E+003	106.32	2.61E+003
96	4456-	4495	4478.77	1120.47	1.60	1.04E+004	194.40	4.54E+003
97	4601-	4632	4618.22	1155.36	2.58	1.39E+003	137.47	3.50E+003
98	4693-	4705	4698.80	1175.52	0.50	6.49E+001	60.98	1.39E+003
99	4819-	4843	4828.10	1207.87	1.35	2.73E+002	104.41	2.57E+003
100	4940-	4961	4950.31	1238.44	1.63	3.49E+003	113.00	2.47E+003
101	4969-	5003	4986.29	1247.44	1.66	1.69E+003	147.43	3.72E+003
102	5111-	5134	5121.55	1281.28	1.77	9.96E+002	104.13	2.46E+003
103	5500-	5520	5508.95	1378.20	1.79	2.33E+003	103.08	2.28E+003
104	5530-	5553	5538.54	1385.60	1.77	4.57E+002	98.60	2.31E+003
M105	5592-	5641	5603.94	1401.96	1.75	8.05E+002	46.63	2.02E+003
m106	5592-	5641	5630.09	1408.50	1.75	1.35E+003	54.24	1.99E+003
M107	5681-	5711	5696.65	1425.16	0.71	6.74E+001	24.64	7.36E+002
m108	5681-	5711	5706.11	1427.52	0.71	7.61E+001	25.06	8.27E+002
109	5795-	5809	5802.64	1451.67	1.31	1.43E+002	58.74	1.15E+003
110	5826-	5853	5835.15	1459.80	2.10	2.55E+003	116.34	2.40E+003
M111	5970-	6019	5982.14	1496.58	1.79	2.27E+003	60.59	1.64E+003
m112	5970-	6019	6004.75	1502.23	1.79	1.12E+003	47.71	1.64E+003
M113	6022-	6060	6035.51	1509.93	1.77	1.29E+003	50.47	1.74E+003
m114	6022-	6060	6049.55	1513.44	1.77	8.20E+002	44.00	1.73E+003
M115	6139-	6205	6152.63	1539.23	2.07	4.53E+002	41.52	1.60E+003
m116	6139-	6205	6171.92	1544.05	2.07	2.58E+002	35.74	1.61E+003
m117	6139-	6205	6191.55	1548.96	2.07	1.55E+002	33.69	1.56E+003
118	6217-	6249	6226.68	1557.75	1.08	5.41E+002	103.84	1.98E+003
119	6305-	6339	6320.61	1581.25	1.50	1.73E+003	121.30	2.41E+003
M120	6339-	6405	6351.59	1589.00	1.87	7.87E+003	97.02	1.76E+003
m121	6339-	6405	6369.05	1593.37	1.87	4.48E+003	75.25	1.61E+003
m122	6339-	6405	6395.63	1600.02	1.87	1.87E+002	32.57	1.36E+003
M123	6470-	6539	6481.92	1621.61	1.89	3.70E+003	70.23	1.57E+003
m124	6470-	6539	6499.20	1625.93	1.89	6.35E+002	39.35	1.56E+003
m125	6470-	6539	6521.52	1631.51	1.89	3.95E+003	72.03	1.47E+003
126	6539-	6570	6552.15	1639.18	1.68	1.17E+003	103.37	1.89E+003
M127	6633-	6673	6644.25	1662.22	1.86	6.19E+002	40.49	1.29E+003
m128	6633-	6673	6664.76	1667.35	1.87	4.48E+002	36.97	1.19E+003
129	6730-	6756	6744.22	1687.23	1.19	4.47E+002	81.71	1.42E+003
130	6908-	6929	6917.85	1730.67	2.06	1.73E+003	79.61	1.22E+003
131	7042-	7076	7057.85	1765.69	1.98	8.72E+003	137.74	1.90E+003
132	7209-	7233	7224.30	1807.33	1.20	2.54E+002	77.23	1.38E+003
133	7285-	7300	7292.54	1824.40	0.74	1.19E+002	52.16	8.66E+002
134	7381-	7406	7389.66	1848.70	2.05	1.11E+003	86.71	1.49E+003
135	7537-	7555	7548.40	1888.41	0.41	1.40E+002	63.75	1.16E+003
136	7710-	7729	7720.14	1931.38	0.72	3.46E+001	65.55	1.22E+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: N002-A05-S002-0006-01
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	4.0531E+000	4.05E+000	2.0864E+001
	Co-60	1173.23	99.85	3.1785E-001	3.18E-001	2.3015E-001
		1332.49	99.98	3.3564E-001		-2.5783E-002
>		2505.71	0.10	0.0000E+000		0.0000E+000
	Cs-137	32.06	5.54	7.4929E+003	5.19E-001	1.7005E+003
		661.66	84.99	5.1882E-001		-1.7236E-002
+	Tl-208	72.80*	2.02	3.4136E+001	5.40E-001	1.0318E+002
		74.97*	3.41	1.9210E+001		3.9292E+002
		84.90*	1.51	3.2765E+001		1.9849E+002
		277.36*	6.31	6.6295E+000		5.7219E+001
		510.77*	22.60	2.6268E+000		7.1313E+001
		583.19*	84.50	5.3968E-001		6.2693E+001
		763.13*	1.81	1.5691E+001		6.3657E+001
		860.56*	12.42	3.0393E+000		6.8779E+001
+	Bi-212	39.86	1.06	4.2203E+003	5.69E+000	8.4425E+002
		727.33*	6.74	5.6888E+000		2.0729E+002
		785.37*	1.11	2.2949E+001		2.3096E+002
		1620.74*	1.51	1.4829E+001		2.0823E+002
		1806.00	0.09	3.8329E+002		1.9056E+002
+	Pb-212	74.81*	10.40	6.2986E+000	6.93E-001	1.2883E+002
		77.11*	17.50	3.4104E+000		1.0794E+002
		87.30*	7.81	5.8613E+000		9.4269E+001
		115.18*	0.59	6.7729E+001		1.0636E+002
		238.63*	43.30	6.9316E-001		1.7985E+002
		300.09*	3.28	1.1931E+001		1.7220E+002
+	Bi-214	76.86*	0.43	1.3914E+002	1.00E+000	4.4036E+003
		89.81*	0.24	1.7494E+002		2.4346E+003
		386.77	0.30	1.3709E+002		-3.9973E+001
		454.77	0.29	1.3840E+002		2.8360E+002
		609.31*	45.49	9.9984E-001		4.2150E+001
		665.45*	1.53	3.0172E+001		3.8689E+001
		703.11	0.48	9.6258E+001		2.6621E+000
		719.86	0.39	1.0980E+002		-8.1589E+000
		768.36*	4.89	5.5154E+000		4.3590E+001
		786.10*	0.31	8.1606E+001		8.2129E+002
		806.17*	1.26	2.6959E+001		3.8627E+001
		934.06*	3.10	1.1677E+001		4.0934E+001
		964.08*	0.36	5.7152E+001		2.7398E+003
		1051.96	0.31	9.7067E+001		-6.5709E+000
		1120.29*	14.91	3.3916E+000		4.5423E+001

	Nuclide Name	Energy (keV)	Yield (%)	Line MDA (pCi/GWET)	Nuclide MDA (pCi/GWET)	Activity (pCi/GWET)
+	Bi-214	1133.66	0.25	1.2109E+002	1.00E+000	-5.7187E+000
		1155.19*	1.63	2.5245E+001		5.6879E+001
		1207.68*	0.45	7.3570E+001		4.1711E+001
		1238.11*	5.79	5.4489E+000		4.2161E+001
		1280.96*	1.43	2.3253E+001		4.9884E+001
		1377.67*	4.00	8.0227E+000		4.3854E+001
		1385.31*	0.76	4.4949E+001		4.5590E+001
		1401.50*	1.27	1.7894E+001		4.8289E+001
		1407.98*	2.15	1.0524E+001		4.8063E+001
		1509.23*	2.11	1.0518E+001		4.9029E+001
		1538.50*	0.38	5.7449E+001		9.7989E+001
		1543.32*	0.20	1.0857E+002		1.0513E+002
		1583.22	0.69	8.3369E+001		2.2022E+002
		1594.73	0.25	2.6806E+002		2.3537E+003
		1599.31*	0.23	8.9003E+001		6.7895E+001
		1661.28*	1.15	1.7839E+001		4.6209E+001
		1683.99	0.22	1.5704E+002		6.9229E+001
		1729.59	2.92	1.3593E+001		5.3463E+001
		1764.49	15.40	4.1578E+000		5.0565E+001
		1847.42	2.11	1.9002E+001		2.6636E+001
		1873.16	0.22	1.6351E+002		2.0201E+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	3.5459E+002	1.13E+000	-3.0998E+002
		74.81*	6.44	1.0102E+001		2.0662E+002
		77.11*	10.80	5.4881E+000		1.7370E+002
		87.30*	4.84	9.3929E+000		1.5107E+002
		242.00*	7.43	3.6252E+000		1.1566E+002
		258.87	0.52	7.4865E+001		1.2626E+001
		274.80	0.47	9.3920E+001		-8.9571E+001
		295.22*	19.30	2.4822E+000		4.0183E+001
		351.93*	37.60	1.1348E+000		4.1675E+001
		462.00*	0.22	1.7414E+002		3.4722E+003
		533.66	0.19	2.1252E+002		-4.8392E+001
		785.96*	1.07	2.3643E+001		2.3794E+002
		839.04	0.59	8.3701E+001		8.9261E+002
+	Ra-224	81.07	0.13	5.4215E+002	6.62E+000	-4.0143E+002
		83.78*	0.22	2.2799E+002		1.3812E+003
		240.99*	4.10	6.6151E+000		2.1105E+002
+	Ra-226	81.07	0.20	3.5804E+002	1.51E+001	-2.6511E+002
		83.78*	0.33	1.4980E+002		9.0748E+002
		94.90	0.15	3.7674E+002		3.1914E+003
		186.21*	3.59	1.5051E+001		8.0035E+001
+	Ac-228	99.50*	1.26	4.5608E+001	1.31E+000	1.1725E+002
		129.07*	2.50	1.3444E+001		1.2421E+002
		209.25*	3.97	8.7972E+000		1.5464E+002
		270.24*	3.55	1.1162E+001		1.6963E+002
		328.00*	3.04	8.8331E+000		1.7270E+002
		338.32*	11.40	2.3148E+000		1.7930E+002
		409.46*	2.02	1.9711E+001		1.6782E+002

	Nuclide Name	Energy (keV)	Yield (%)	Line MDA (pCi/GWET)	Nuclide MDA (pCi/GWET)	Activity (pCi/GWET)
+	Ac-228	463.00*	4.45	8.7079E+000	1.31E+000	1.7363E+002
		755.31*	1.03	3.3905E+001		1.6556E+002
		772.29*	1.52	1.7542E+001		1.7774E+002
		794.94*	4.31	1.0127E+001		1.8459E+002
		835.70*	1.70	1.4280E+001		1.8555E+002
		911.20*	26.20	1.9288E+000		2.0132E+002
		964.79*	4.99	4.1863E+000		2.0068E+002
		968.96*	15.90	1.3146E+000		2.0466E+002
		1588.20*	3.06	7.6305E+000		2.1540E+002
		1630.62*	1.52	1.4308E+001		2.2171E+002
+	Th-228	84.37*	1.26	3.9265E+001	3.93E+001	2.3787E+002
		131.61*	0.13	2.4467E+002		1.4538E+002
		166.41	0.10	4.4093E+002		3.2541E+002
		215.98*	0.25	1.7662E+002		2.1641E+002
	Pa-234m	258.23	0.07	5.3162E+002	3.87E+001	2.1143E+002
		742.81	0.09	4.5582E+002		-2.1114E+002
		766.36	0.32	1.5403E+002		-1.1154E+003
		786.27	0.05	8.8115E+002		6.0494E+001
		1001.03	0.85	3.8671E+001		9.4156E+001
		1737.77	0.02	1.5569E+003		1.0090E+003
+	Th-234	63.30*	3.75	4.6198E+001	9.54E+000	4.8181E+000
		92.59*	4.33	9.5431E+000		1.7210E+002
		112.81	0.22	2.1327E+002		-6.5711E+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: N002-A05-S002-0006-01
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	0.958	477.60*	10.44	2.04251E+000	5.52148E-001
Ce-141	0.950	40.82 @	2.67		
		145.44*	48.29	4.94199E-001	8.94772E-002
Eu-152m	0.988	89.85*	69.90	8.50686E+000	2.98801E-001
Eu-155	0.907	45.30	1.31		
		60.01	1.22		
		86.55*	30.70	2.38830E+001	8.58552E-001
		105.31*	21.10	1.05821E+001	4.95555E-001
Tl-208	0.999	72.80* @	2.02	1.03183E+002	5.45902E+000
		74.97* @	3.41	3.92924E+002	1.39936E+001
		84.90* @	1.51	1.98487E+002	8.00471E+000
		277.36*	6.31	5.72191E+001	2.92201E+000
		510.77* @	22.60	7.13135E+001	2.51321E+000
		583.19*	84.50	6.26931E+001	2.04391E+000
		763.13* @	1.81	6.36570E+001	2.78763E+000
		860.56*	12.42	6.87794E+001	1.90791E+000
TL-208e	0.894	1592.53*	99.16	3.79231E+000	2.40619E-001
Bi-211	0.873	351.03*	13.00	1.20610E+002	4.99155E+000
Bi-212	0.944	39.86 @	1.06		
		727.33*	6.74	2.07290E+002	6.76078E+000
		785.37*	1.11	2.30957E+002	7.57639E+000
		1620.74*	1.51	2.08229E+002	7.87859E+000
		1806.00 @	0.09		
Pb-212	0.997	74.81*	10.40	1.28834E+002	5.90455E+000
		77.11*	17.50	1.07937E+002	4.90764E+000
		87.30*	7.81	9.42692E+001	4.44311E+000
		115.18* @	0.59	1.06364E+002	1.50975E+001
		238.63*	43.30	1.79853E+002	8.09893E+000
		300.09*	3.28	1.72202E+002	7.62019E+000
Bi-214	0.735	76.86* @	0.43	4.40356E+003	2.05709E+002
		89.81* @	0.24	2.43465E+003	1.22233E+002
		386.77 @	0.30		
		454.77 @	0.29		
		609.31*	45.49	4.21496E+001	1.32285E+000
		665.45* @	1.53	3.86890E+001	6.65176E+000
		703.11 @	0.48		
		719.86 @	0.39		
		768.36*	4.89	4.35902E+001	1.45859E+000
		786.10* @	0.31	8.21289E+002	1.34975E+002
		806.17* @	1.26	3.86271E+001	5.98632E+000
		934.06*	3.10	4.09339E+001	2.81801E+000

Nuclide Name	Id Confidence	Energy (keV)		Yield (%)	Activity (pCi/GWET)	Activity Uncertainty
Bi-214	0.735	964.08*	@	0.36	2.73976E+003	1.13215E+002
		1051.96	@	0.31		
		1120.29*		14.91	4.54233E+001	1.40505E+000
		1133.66	@	0.25		
		1155.19*	@	1.63	5.68788E+001	5.79428E+000
		1207.68*	@	0.45	4.17114E+001	1.60359E+001
		1238.11*		5.79	4.21609E+001	1.82020E+000
		1280.96*	@	1.43	4.98838E+001	5.40829E+000
		1377.67*		4.00	4.38536E+001	2.31678E+000
		1385.31*	@	0.76	4.55898E+001	9.96531E+000
		1401.50*	@	1.27	4.82893E+001	3.13193E+000
		1407.98*	@	2.15	4.80630E+001	2.52170E+000
		1509.23*	@	2.11	4.90295E+001	2.44674E+000
		1538.50*	@	0.38	9.79885E+001	9.98677E+000
		1543.32*	@	0.20	1.05128E+002	3.01574E+001
		1583.22	@	0.69		
		1594.73	@	0.25		
		1599.31*	@	0.23	6.78954E+001	2.13697E+001
		1661.28*	@	1.15	4.62092E+001	3.48901E+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	0.953	53.28	@	1.20		
		74.81*		6.44	2.06624E+002	9.97736E+000
		77.11*		10.80	1.73696E+002	8.89538E+000
		87.30*		4.84	1.51070E+002	7.67325E+000
		242.00*		7.43	1.15661E+002	5.40699E+000
		258.87	@	0.52		
		274.80	@	0.47		
		295.22*		19.30	4.01829E+001	1.77212E+000
		351.93*		37.60	4.16752E+001	1.67344E+000
		462.00*	@	0.22	3.47219E+003	1.92515E+002
		533.66	@	0.19		
		785.96*	@	1.07	2.37943E+002	1.93086E+001
		839.04	@	0.59		
Rn-219	0.842	76.86*	@	0.56	3.35186E+003	5.51582E+002
		79.29	@	0.93		
		89.80*	@	0.42	1.41526E+003	2.40752E+002
		130.60	@	0.13		
		271.23*		10.80	5.54084E+001	4.36178E+000
		401.81*		6.60	9.48005E-001	8.23739E-001
Rn-220	0.999	549.73*		0.11	2.37082E+002	4.83668E+001
Ra-224	0.944	81.07	@	0.13		
		83.78*	@	0.22	1.38118E+003	7.54675E+001
		240.99*		4.10	2.11052E+002	9.70601E+000
Ra-226	0.877	81.07	@	0.20		

Nuclide Name	Id Confidence	Energy (keV)		Yield (%)	Activity (pCi/GWET)	Activity Uncertainty
Ra-226	0.877	83.78*	@	0.33	9.07485E+002	4.94132E+001
		94.90	@	0.15		
		186.21*		3.59	8.00347E+001	5.00723E+000
Ac-228	0.994	99.50*	@	1.26	1.17246E+002	1.11007E+001
		129.07*	@	2.50	1.24211E+002	5.51249E+000
		209.25*		3.97	1.54644E+002	8.87959E+000
		270.24*		3.55	1.69631E+002	8.95912E+000
		328.00*		3.04	1.72696E+002	9.33143E+000
		338.32*		11.40	1.79305E+002	9.36403E+000
		409.46*	@	2.02	1.67823E+002	9.12727E+000
		463.00*		4.45	1.73632E+002	1.14181E+001
		755.31*	@	1.03	1.65560E+002	1.09370E+001
		772.29*	@	1.52	1.77744E+002	8.95949E+000
		794.94*		4.31	1.84590E+002	7.94229E+000
		835.70*	@	1.70	1.85549E+002	9.35005E+000
		911.20*		26.20	2.01316E+002	7.76735E+000
		964.79*		4.99	2.00684E+002	8.45597E+000
		968.96*		15.90	2.04659E+002	8.07339E+000
		1588.20*		3.06	2.15401E+002	1.03994E+001
		1630.62*	@	1.52	2.21705E+002	1.12641E+001
Th-228	0.889	84.37*		1.26	2.37870E+002	1.03092E+001
		131.61*	@	0.13	1.45384E+002	2.97004E+001
		166.41	@	0.10		
		215.98*		0.25	2.16407E+002	3.94891E+001
Th-234	0.884	63.30*		3.75	4.81814E+000	9.92895E+000
		92.59*		4.33	1.72099E+002	9.36582E+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		0.958	2.042508E+000	5.521483E-001
X	Mn-54		0.895		
X	Cd-109		0.937		
	Ce-141	@	0.950	4.941990E-001	8.947718E-002
	Eu-152m		0.988	8.354383E+000	2.897887E-001
	Eu-155		0.907	8.255271E+000	3.689245E-001
X	Tm-170		0.988		
	Tl-208	@	0.999	6.436751E+001	1.205766E+000
	TL-208e		0.894	3.792308E+000	2.406190E-001
	Bi-211		0.873	2.397778E+001	6.706691E+000
	Bi-212	@	0.944	2.021261E+002	3.744366E+000
	Pb-212	@	0.997	8.129040E+001	2.279304E+000
	Bi-214	@	0.735	4.326738E+001	6.694371E-001
	Pb-214	@	0.953	3.338992E+001	1.663305E+000
	Rn-219	@	0.842	2.154427E-001	7.812156E-001
	Rn-220		0.999	2.370823E+002	4.836680E+001
	Ra-224	@	0.944	1.491862E+002	9.829906E+000
	Ra-226	@	0.877	7.965531E+001	4.822919E+000
	Ac-228	@	0.994	1.895805E+002	1.855714E+000
	Th-228	@	0.889	1.198789E+002	9.628319E+000
X	Th-231		0.826		
	Th-234	@	0.884	9.333652E+001	6.813019E+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: 10/19/2016 6:45:22 PM
Peak Locate From Channel: 100
Peak Locate To Channel: 8192

Peak No.	Energy (keV)	Peak Size in Counts per Second	Peak CPS % Uncertainty	Peak Type	Tol. Nuclide
m 11	108.93	5.3487E-001	5.69	Tol.	Cs-136
M 15	144.04	1.7691E-001	14.65	Tol.	Ra-223
17	154.16	8.2856E-001	8.00	Sum	
19	199.54	1.8298E-001	26.78	Sum	
M 24	252.64	1.1091E-001	47.29	Tol.	Sb-127
m 25	256.31	1.4878E-002	47.89	Tol.	Th-227 Pa-231
28	288.19	3.0154E-001	13.36	Sum	
31	321.64	1.0161E-001	32.82	Sum	
m 33	332.37	3.3693E-001	5.02	Sum	
m 35	341.03	3.0446E-001	5.23	Sum	
37	389.12	4.2959E-002	86.74	Sum	
40	434.01	1.0741E-002	167.82	Sum	
41	440.41	9.3846E-002	26.91	Sum	
42	452.81	2.2735E-001	11.26	Sum	
45	487.00	8.1801E-002	35.59	D-Esc.	
46	503.77	1.2911E-001	23.12	Sum	
M 48	520.20	4.9409E-002	23.18	Tol.	Tl-202
m 49	523.08	7.6767E-002	16.75		
M 50	546.43	1.1422E-001	11.69		
52	562.47	5.5654E-001	6.38	Sum	
53	570.85	1.7988E-001	18.65	D-Esc.	
56	616.48	6.1416E-002	30.63	Sum	
58	688.25	1.4156E-002	107.26	Sum	
M 59	702.09	1.1644E-001	11.79	Sum	
m 60	707.50	6.7582E-002	17.54		
M 66	782.10	2.5986E-001	3.99	Tol.	Sb-127
M 70	830.51	2.4601E-001	3.94	Sum	
m 72	840.26	4.8253E-001	2.34	Sum	
74	893.49	1.8879E-001	8.62	Sum	
75	904.24	3.1082E-001	5.38	Sum	
77	927.63	1.2696E-002	83.28	Sum	
M 79	944.27	5.6684E-002	12.43	Sum	
m 80	947.99	4.9903E-002	13.49	Sum	
m 81	952.15	8.8309E-002	8.59	Sum	
82	958.67	1.4979E-001	11.87	Sum	
85	975.87	2.2519E-002	42.25	Sum	
M 86	982.83	2.9357E-002	20.59		
m 87	988.32	6.2471E-002	11.46	Sum	
88	1001.14	9.4567E-002	12.59	Sum	
89	1033.27	8.6548E-002	17.63	S-Esc.	
90	1040.30	2.2464E-002	62.37	Sum	
M 91	1065.32	1.0684E-001	6.77	Sum	
m 92	1070.14	3.9353E-002	14.93	Sum	

Peak No.	Energy (keV)	Peak Size in Counts per Second	Peak CPS % Uncertainty	Peak Type	Tol. Nuclide
93	1078.90	2.0264E-001	6.24	S-Esc.	
94	1094.13	2.1594E-001	9.12	Sum	
95	1110.79	1.6520E-001	8.94	S-Esc.	
98	1175.52	9.0104E-003	93.99	Sum	
101	1247.44	2.3421E-001	8.74	Sum	
M107	1425.16	9.3620E-003	36.56	Sum	
m108	1427.52	1.0572E-002	32.92	Sum	
109	1451.67	1.9792E-002	41.22	Sum	
110	1459.80	3.5209E-001	4.59	Sum	
M111	1496.58	3.1492E-001	2.67	Sum	
m112	1502.23	1.5608E-001	4.25	Sum	
m114	1513.44	1.1386E-001	5.37	Sum	
m117	1548.96	2.1465E-002	21.80	Sum	
118	1557.75	7.5166E-002	19.19	Sum	
119	1581.25	2.4009E-001	7.02	Sum	
m124	1625.93	8.8250E-002	6.19	Sum	
126	1639.18	1.6269E-001	8.82	Sum	
m128	1667.35	6.2212E-002	8.25	Sum	
129	1687.23	6.2078E-002	18.28	Sum	
130	1730.67	2.4021E-001	4.60	Sum	
131	1765.69	1.2101E+000	1.58		
132	1807.33	3.5227E-002	30.45	Sum	
133	1824.40	1.6517E-002	43.86	Sum	
134	1848.70	1.5436E-001	7.80	Sum	
135	1888.41	1.9485E-002	45.44	Sum	
136	1931.38	4.8029E-003	189.56	Sum	

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

Errors quoted at 1.000 sigma