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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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OYSTER CREEK NUCLEAR GENERATING STATION CHEMISTRY DEPARTMENT

Detector Name : DET02
Report Generated On : 4/17/09 2:26:17 PM
Spectral Data File Name : C:\PCNT2K\CAMFILES\1LSOLMDA
 : Co-60 3.47 E-6
 : Cs-137 2.18E-7
 : Cs-137 2.18E-7
Sample Title : 1-L Solid Releas
Sample Description : dirt #2 near cst
User ID : kg
Sample Type : 20
Sample Geometry : 1-L Marinelli
Peak Locate Threshold : 3.00
Peak Locate Range (in channels) : 1 - 4096
Peak Area Range (in channels) : 100 - 4096
Identification Energy Tolerance : 1.000 keV
Sample Size : 1066.00 grams
Sample Taken On : 4/17/09 1:10:15 PM
Acquisition Started : 4/17/09 1:53:17 PM
Decay Time : 4.30E+001 Minutes
Live Time : 2278.0 Seconds
Real Time : 2278.9 Seconds
Dead Time : 0.04 %

Energy Calibration Used Done On : 3/21/08
Efficiency Calibration Used Done On : 3/21/08

CS

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B A C K G R O U N D S U B T R A C T R E P O R T

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Detector Name: DET02
Sample Title: 1-L Solid Releas
Peak Analysis Performed on: 4/17/09 2:26:17 PM

Peak Subtracted	Energy (keV)	Original Area	Orig. Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area
1	238.45	1.66E+002	32.31			1.66E+002
3.23E+001						
2	295.01	8.98E+001	24.76			8.98E+001
2.48E+001						
3	351.76	1.13E+002	23.40			1.13E+002
2.34E+001						
4	583.20	6.08E+001	17.77			6.08E+001
1.78E+001						
5	609.17	7.55E+001	15.77			7.55E+001
1.58E+001						
6	661.66	1.07E+002	17.70			1.07E+002
1.77E+001						
7	1173.48	1.21E+003	37.13			1.21E+003
3.71E+001						
8	1332.86	1.05E+003	33.25			1.05E+003
3.33E+001						
9	1461.12	1.32E+002	12.76			1.32E+002
1.28E+001						

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: DET02
Sample Geometry: 1-L Marinelli
Sample Title: 1-L Solid Releas
Nuclide Library Used: C:\GENIE2K\CAMFILES\AnSolMDA.NLB

Activity (uCi/gram)	Nuclide Name	Energy (keV)	Yield (%)	Line MDA (uCi/gram)	Nuclide MDA (uCi/gram)
3.27E-008	CS-134	563.23	8.38	1.00E-006	9.62E-008
2.14E-007		569.32	15.43	5.98E-007	
2.06E-008		604.70	97.60	9.62E-008	
3.31E-008		795.84	85.40	1.57E-007	
3.97E-007		801.93	8.73	1.60E-006	
6.67E-007		1365.15	3.04	2.68E-006	
2.18E-007	+ CS-137	661.65*	85.12	1.41E-007	1.41E-007

+ = Nuclide identified during the nuclide identification
* = Energy line found in the spectrum
> = MDA value not 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: 1-L Solid Releas
Nuclide Library Used: C:\GENIE2K\CAMFILES\AnSolMDA.NLB

IDENTIFIED NUCLIDES

Nuclide Name	Id Confidence	Energy (keV)	Yield (%)	Activity (uCi/gram)	Activity Uncertainty
K-40	0.984	1460.81*	10.67	4.38E-006	4.34E-007
CO-60	0.984	1173.22*	100.00	3.53E-006	1.25E-007
		1332.49*	100.00	3.41E-006	1.28E-007
CS-137	1.000	661.65*	85.12	2.18E-007	3.63E-008
PB-212	0.670	87.20	6.30		
		89.80	1.75		
		238.63*	44.60	2.53E-007	4.97E-008
		300.09	3.41		
BI-214	0.659	609.31*	46.30	2.62E-007	5.50E-008
		934.06	3.21		
		1764.49	15.80		
PB-214	0.673	87.20	3.70		
		89.80	1.03		
		241.98	7.49		
		295.21*	19.20	3.83E-007	1.06E-007
		351.92*	37.20	2.92E-007	6.09E-008

* = Energy line found in the spectrum.
@ = Energy line not used for Weighted Mean Activity
Energy Tolerance : 1.000 keV
Nuclide confidence index threshold = 0.30
Errors quoted at 1.000 sigma

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***** INTERFERENCE CORRECTED REPORT *****

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	Nuclide Name	Nuclide Id Confidence	Wt mean Activity (uCi/gram)	Wt mean Activity Uncertainty
	K-40	0.984	4.38E-006	4.34E-007
	CO-60	0.984	3.47E-006	8.96E-008
	CS-137	1.000	2.18E-007	3.63E-008
X	BI-211	0.567		
	PB-212	0.670	2.53E-007	4.97E-008
	BI-214	0.659	2.62E-007	5.50E-008
	PB-214	0.673	3.14E-007	5.28E-008
Total Activity			8.90E-006	

? = 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

***** UNIDENTIFIED PEAKS *****

Peak Locate Performed on: 4/17/09 2:26:17 PM
Peak Locate From Channel: 100
Peak Locate To Channel: 4096

Peak No.	Energy (keV)	Peak Size in Counts per Second	Peak CPS % Uncertainty
4	583.20	2.67E-002	29.22

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

Errors quoted at 1.000 sigma