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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 : 4/25/09 4:36:37 AM
Spectral Data File Name : C:\PCNT2K\CAMFILES\1LSOLMDA
 : Cs-137 1.21 E-7
 :
Sample Title : 1-L Solid Releas
Sample Description : soil n of cst 5'
User ID : nc225
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 : 1550.00 grams

Sample Taken On : 4/25/09 4:24:24 AM
Acquisition Started : 4/25/09 4:29:26 AM
Decay Time : 5.04E+000 Minutes

Live Time : 730.0 Seconds
Real Time : 730.1 Seconds
Dead Time : 0.02 %

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

Handwritten: 0-216

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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: 4/25/09 4:36:37 AM

Peak Subtracted No. (keV) Uncert.	Original Area	Orig. Uncert.	Area Background	Ambient Uncert.	Backgr. Area	Subtracted Area
1 1.29E+001	238.61	4.53E+001	12.93			4.53E+001
2 1.15E+001	351.62	4.30E+001	11.47			4.30E+001
3 8.19E+000	583.33	1.81E+001	8.19			1.81E+001
4 6.67E+000	609.24	2.63E+001	6.67			2.63E+001
5 6.57E+000	661.51	2.78E+001	6.57			2.78E+001
6 4.32E+000	911.24	1.04E+001	4.32			1.04E+001
7 6.27E+000	1461.60	3.69E+001	6.27			3.69E+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)	
5.95E-008	CS-134	563.23	8.38	7.20E-007	7.05E-008	-
1.32E-007		569.32	15.43	5.15E-007		
8.18E-009		604.70	97.60	7.05E-008		-
1.94E-008		795.84	85.40	1.31E-007		
2.57E-007		801.93	8.73	8.82E-007		-
7.05E-007		1365.15	3.04	3.31E-006		
1.21E-007	+ CS-137	661.65*	85.12	9.14E-008	9.14E-008	

+ = 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	0.906	1460.81*	10.67	2.62E-006	4.50E-007
CS-137	0.997	661.65*	85.12	1.21E-007	2.88E-008
BI-211	0.585	351.10*	12.20	7.29E-007	1.95E-007
PB-212	0.674	404.80	4.10		
		87.20	6.30		
		89.80	1.75		
		238.63*	44.60	1.49E-007	4.26E-008
BI-214	0.660	300.09	3.41		
		609.31*	46.30	1.96E-007	4.98E-008
		934.06	3.21		
		1764.49	15.80		

* = 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	0.906	2.62E-006	4.50E-007
CS-137	0.997	1.21E-007	2.88E-008
BI-211	0.585	7.29E-007	1.95E-007
PB-212	0.674	1.49E-007	4.26E-008
BI-214	0.660	1.96E-007	4.98E-008
Total Activity		3.82E-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: 4/25/09 4:36:37 AM
Peak Locate From Channel: 100
Peak Locate To Channel: 4096

Peak No.	Energy (keV)	Peak Size in Counts per Second	Peak CPS % Uncertainty
3	583.33	2.48E-002	45.25
6	911.24	1.42E-002	41.68

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

Errors quoted at 1.000 sigma