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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 : 4/18/09 11:16:54 AM
Spectral Data File Name : C:\PCNT2K\CAMFILES\1LSOLMDA
\2000054.CNF

Co-60 1.28 t-6

Sample Title : 1-L Solid Releas
Sample Description : Soil sample near CST; 4'
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 : 916.00 grams

Sample Taken On : 4/17/09 11:00:17 PM
Acquisition Started : 4/18/09 10:54:19 AM
Decay Time : 7.14E+002 Minutes

Live Time : 1653.0 Seconds
Real Time : 1653.3 Seconds
Dead Time : 0.02 %

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

A-10

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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: 4/18/09 11:16:54 AM

Peak Subtracted No.	Energy (keV)	Original Area	Orig. Uncert.	Area Background	Ambient Uncert.	Backgr. Uncert.	Subtracted Area
1	238.30	6.55E+001	17.24				6.55E+001
1.72E+001							
2	351.63	4.93E+001	13.38				4.93E+001
1.34E+001							
3	1173.63	2.90E+002	18.27				2.90E+002
1.83E+001							
4	1332.90	2.32E+002	15.76				2.32E+002
1.58E+001							
5	1461.17	4.35E+001	7.29				4.35E+001
7.29E+000							

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)
1.02E-007	CS-134	563.23	8.38	1.07E-006	9.67E-008
2.04E-007		569.32	15.43	4.68E-007	-
1.40E-008		604.70	97.60	9.67E-008	-
2.88E-008		795.84	85.40	1.32E-007	-
1.99E-007		801.93	8.73	1.13E-006	-
1.76E-007		1365.15	3.04	2.11E-006	-
1.21E-007	CS-137	661.65	85.12	1.62E-007	1.62E-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	0.980	1460.81*	10.67	2.31E-006	3.91E-007
CO-60	0.973	1173.22* 1332.49*	100.00 100.00	1.35E-006 1.21E-006	8.86E-008 8.59E-008
BI-211	0.584	351.10* 404.80	12.20 4.10	6.25E-007	1.70E-007
PB-212	0.661	87.20 89.80 238.63* 300.09	6.30 1.75 44.60 3.41	1.60E-007	4.24E-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	0.980	2.31E-006	3.91E-007
CO-60	0.973	1.28E-006	6.17E-008
BI-211	0.584	6.25E-007	1.70E-007
PB-212	0.661	1.60E-007	4.24E-008

Total Activity 4.38E-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: 4/18/09 11:16:54 AM
Peak Locate From Channel: 100
Peak Locate To Channel: 4096

Peak No.	Energy (keV)	Peak Size in Counts per Second	Peak CPS % Uncertainty
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All peaks were identified.

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

Errors quoted at 1.000 sigma