[redacted]

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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 1:54:41 PM
Spectral Data File Name \2000057.CNF	:	C:\PCNT2K\CAMFILES\1LSOLMDA
	:	C_o-60 2.17 E-6
	:	C_s-137 1.39 E-7
Sample Title	:	1-L Solid Releas
Sample Description	:	Soil near CST; 3' depth
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 6:00:39 PM
Acquisition Started	:	4/18/09 1:17:41 PM
Decay Time	:	1.16E+003 Minutes
Live Time	:	2518.0 Seconds
Real Time	:	2518.6 Seconds
Dead Time	:	0.02 %

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

F-13

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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 1:54:41 PM

Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
1	238.55	8.93E+001	25.79			8.93E+001	2.58E+001
2	351.79	6.56E+001	20.27			6.56E+001	2.03E+001
3	583.11	4.83E+001	11.95			4.83E+001	1.20E+001
4	609.35	3.25E+001	13.39			3.25E+001	1.34E+001
5	661.44	6.48E+001	14.37			6.48E+001	1.44E+001
6	969.71	1.87E+001	11.00			1.87E+001	1.10E+001
7	1173.52	7.12E+002	28.31			7.12E+002	2.83E+001
8	1332.95	6.31E+002	26.51			6.31E+002	2.65E+001
9	1461.43	4.56E+001	7.94			4.56E+001	7.94E+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

	Nuclide Name	Energy (keV)	Yield (%)	Line MDA (uCi/gram)	Nuclide MDA Activity (uCi/gram)	
	CS-134	563.23	8.38	9.67E-007	8.14E-008	6.52E-008
		569.32	15.43	4.87E-007		3.54E-008
		604.70	97.60	8.14E-008		3.96E-008
		795.84	85.40	1.45E-007		7.24E-008
		801.93	8.73	1.20E-006		3.30E-007
		1365.15	3.04	2.32E-006		3.17E-007
+	CS-137	661.65*	85.12	1.24E-007	1.24E-007	1.39E-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	0.940	1460.81*	10.67	1.59E-006	2.79E-007
CO-60	0.976	1173.22*	100.00	2.18E-006	9.51E-008
		1332.49*	100.00	2.16E-006	1.01E-007
CS-137	0.993	661.65*	85.12	1.39E-007	3.09E-008
BI-211	0.562	351.10*	12.20	5.46E-007	1.69E-007
		404.80	4.10		
PB-212	0.673	87.20	6.30		
		89.80	1.75		
		238.63*	44.60	1.44E-007	4.16E-008
		300.09	3.41		
BI-214	0.661	609.31*	46.30	1.19E-007	4.90E-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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***** 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 (uCi/gram)	Wt mean Activity Uncertainty
K-40	0.940	1.59E-006	2.79E-007
CO-60	0.976	2.17E-006	6.92E-008
CS-137	0.993	1.39E-007	3.09E-008
BI-211	0.562	5.46E-007	1.69E-007
PB-212	0.673	1.44E-007	4.16E-008
BI-214	0.661	1.19E-007	4.90E-008
Total Activity		4.71E-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

********** U N I D E N T I F I E D P E A K S **********

Peak Locate Performed on: 4/18/09 1:54:41 PM
Peak Locate From Channel: 100
Peak Locate To Channel: 4096

Peak No.	Energy (keV)	Peak Size in Counts per Second	Peak CPS % Uncertainty
3	583.11	1.92E-002	24.75
6	969.71	7.42E-003	58.89

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

Errors quoted at 1.000 sigma