[redacted]

****
*
***** G A M M A S P E C T R U M A N A L Y S I S
*****
****
*

OYSTER CREEK NUCLEAR GENERATING STATION CHEMISTRY DEPARTMENT

Detector Name	:	DET01
Report Generated On	:	4/18/09 1:36:19 PM
Spectral Data File Name \2000056.CNF	:	C:\PCNT2K\CAMFILES\1LSOLMDA
	:	Co-60 1.13 E-6
	:	Cs-137 1.46 E-7
Sample Title	:	1-L Solid Releas
Sample Description	:	Soil near CST; 2' 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	:	940.00 grams
Sample Taken On	:	4/17/09 8:00:18 PM
Acquisition Started	:	4/18/09 1:11:20 PM
Decay Time	:	1.03E+003 Minutes
Live Time	:	1796.0 Seconds
Real Time	:	1797.1 Seconds
Dead Time	:	0.06 %

Energy Calibration Used Done On	:	1/8/09
Efficiency Calibration Used Done On	:	1/8/09

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

Detector Name: DET01
Sample Title: 1-L Solid Releas
Peak Analysis Performed on: 4/18/09 1:36:19 PM

Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
1	238.55	7.17E+001	17.15			7.17E+001	1.72E+001
2	582.92	1.50E+001	8.71			1.50E+001	8.71E+000
3	661.33	3.15E+001	8.75			3.15E+001	8.75E+000
4	1172.72	1.89E+002	16.16			1.89E+002	1.62E+001
5	1332.20	1.38E+002	12.43			1.38E+002	1.24E+001
6	1460.20	3.25E+001	6.03			3.25E+001	6.03E+000

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: DET01
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 (uCi/gram)	Activity (uCi/gram)
	CS-134	563.23	8.38	1.14E-006	1.14E-007	- 4.73E-007
		569.32	15.43	8.02E-007		7.60E-008
		604.70	97.60	1.14E-007		- 5.15E-008
		795.84	85.40	2.16E-007		8.11E-009
		801.93	8.73	1.96E-006		- 2.08E-008
		1365.15	3.04	3.53E-006		7.51E-007
+	CS-137	661.65*	85.12	1.57E-007	1.57E-007	1.46E-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

****
*
***** 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
*****
****
*

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	0.942	1460.81*	10.67	2.46E-006	4.60E-007
CO-60	0.975	1173.22*	100.00	1.25E-006	1.10E-007
		1332.49*	100.00	1.03E-006	9.48E-008
CS-137	0.984	661.65*	85.12	1.46E-007	4.07E-008
PB-212	0.709	87.20	6.30		
		89.80	1.75		
		238.63*	44.60	2.30E-007	5.52E-008
		300.09	3.41		

* = 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

****
*
***** 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
*****
****
*

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (uCi/gram)	Wt mean Activity Uncertainty
K-40	0.942	2.46E-006	4.60E-007
CO-60	0.975	1.13E-006	7.18E-008
CS-137	0.984	1.46E-007	4.07E-008
PB-212	0.709	2.30E-007	5.52E-008
Total Activity		3.96E-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 1:36:19 PM
Peak Locate From Channel: 100
Peak Locate To Channel: 4096

Peak No.	Energy (keV)	Peak Size in Counts per Second	Peak CPS % Uncertainty
2	582.92	8.35E-003	58.07

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

Errors quoted at 1.000 sigma