

OYSTER CREEK NUCLEAR GENERATING STATION CHEMISTRY DEPARTMENT



Detector Name : DET02
Report Generated On : 4/26/09 12:01:08 AM
Spectral Data File Name : C:\PCNT2K\CAMFILES\1LSOLMDA\2000080.CNF

Sample Title : 1-L Solid Releas
Sample Description : CST Pit 5'
User ID : n4283
Sample Type : 20
Sample Geometry : 1-L Marinelli

soil N. of CST 5'
Cs-137 9.73E-8

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 : 1998.52 grams
Sample Taken On : 4/25/09 9:45:00 PM
Acquisition Started : 4/25/09 11:44:27 PM
Decay Time : 1.19E+002 Minutes
Live Time : 1000.0 Seconds
Real Time : 1000.2 Seconds
Dead Time : 0.02 %

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

2009

***** 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: DET02

Sample Title: 1-L Solid Releas

Peak Analysis Performed on: 4/26/09 12:01:08 AM

Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
1	238.37	8.97E+001	18.25			8.97E+001	1.82E+001
2	249.61	1.74E+002	17.32			1.74E+002	1.73E+001
3	351.78	3.92E+001	10.75			3.92E+001	1.08E+001
4	609.31	3.99E+001	7.75			3.99E+001	7.75E+000
5	661.64	3.94E+001	8.27			3.94E+001	8.27E+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: 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 (uCi/gram)	Activity (uCi/gram)
CS-134	563.23	8.38	5.09E-007	4.23E-008	5.49E-008
	569.32	15.43	2.07E-007		-8.32E-008
	604.70	97.60	4.23E-008		-2.32E-009
	795.84	85.40	6.21E-008		9.22E-009
	801.93	8.73	5.00E-007		-1.53E-008
	1365.15	3.04	1.24E-006		-2.00E-007
+ CS-137	661.65*	85.12	6.86E-008	6.86E-008	9.73E-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

 ***** 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
XE-135	0.961	249.79*	89.90	1.95E-007	2.00E-008
		608.18	2.89		
CS-137	1.000	661.65*	85.12	9.73E-008	2.05E-008
BI-211	0.563	351.10*	12.20	3.76E-007	1.04E-007
		404.80	4.10		
PB-212	0.666	87.20	6.30	1.67E-007	3.41E-008
		89.80	1.75		
		238.63*	44.60		
BI-214	0.661	300.09	3.41	1.68E-007	3.29E-008
		609.31*	46.30		
		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

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

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (uCi/gram)	Wt mean Activity Uncertainty
XE-135	0.961	1.95E-007	2.00E-008
CS-137	1.000	9.73E-008	2.05E-008
BI-211	0.563	3.76E-007	1.04E-007
PB-212	0.666	1.67E-007	3.41E-008
BI-214	0.661	1.68E-007	3.29E-008
Total Activity		1.00E-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: 4/26/09 12:01:08 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