

Health Physics Sample Records

Sample ID: 142475

Type: RLSSS

Type Detail: SAND

Status: APPROVED

Rasterized:

Description: 140603BD 4 CULVERT # 7

Common

Resp Org: P4000 - PROJECT MANAGEMEN

Cross Ref Sample ID:

Priority: N

Contact: COOPER, TERRY L

Survey No:

Reference ID:

Accounting Subcode:

Unknown Mat: NO

Hazardous Mat: NO

Comments:

Reviewed: DYNES, WILLIAM J

Date: 06/05/14 07:14

Comments:

Origin

Mat. Size/Volume: 1675 GRAMS

Docmnt/MO/Act #:

Proposed Ship Date: 00/00/00 00:00

Description: CULVERT # 7

Collection

Sample Tech: DYNES, WILLIAM J

Sample Date: 06/03/14 08:11

Count Time: 900 (secs.)

Tritium Req: No

Sample Size/Volume: 1821 GRAMS

Instructions: COUNT TO MDA

Comments: COUNT TO MDA

RLSSS

Exempt: No

Evaluated: No

Chem Notification: No

State Permit: No

Offsite Analysis: No

Effluent Permit: No

Container Surveyed: No

Cleared For Release: Yes

Container Evaluated: Yes

Form 212 Ready:

Location

Unit: NON-UNIT RE

Area: MS

Elev: 100

Room:

Depth: (in.)

Equip ID:

Stored By: ,

Date: 00/00/00 00:00

Sample Loc:

Other:

Material Loc:

## Health Physics Sample Records

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Rasterized:

Description: 140603BD 4 CULVERT # 7

### Analysis

Geometry	MCA ID	Quant.	Units	Method	FP/AP	Lab	Analysis By	Date	Mod ID	Mod Date
C_1L_marinelli_sand_	30368	1821 GR			.000		PARK, MICHAEL C	06/05/14 15:58		
Isotope	Mode	Activity	Activity Uncert.	LLD/MDA	% Abund.	Atom. No.	Comments	Mod Id	Mod Date	
0 K-40	NT	0.000011	1.38E-6	<input type="checkbox"/>	85.194%	40				
0 TL-208	NT	2.051E-7	6.16E-8	<input type="checkbox"/>	1.588%	208				
0 PB-212	NT	4.561E-7	1.107E-7	<input type="checkbox"/>	3.532%	212				
0 BI-214	NT	4.495E-7	9.81E-8	<input type="checkbox"/>	3.481%	214				
0 PB-214	NT	3.217E-7	6.81E-8	<input type="checkbox"/>	2.492%	214				
0 AC-228	NT	4.793E-7	2.089E-7	<input type="checkbox"/>	3.712%	228				
0 BE-7	AP	7.2411E-7		<input checked="" type="checkbox"/>	0.000%	7				
0 MN-54	AP	1.4203E-7		<input checked="" type="checkbox"/>	0.000%	54				
0 MN-56	AP	1.1021E-7		<input checked="" type="checkbox"/>	0.000%	56				
0 CO-57	AP	6.5355E-8		<input checked="" type="checkbox"/>	0.000%	57				
0 CO-58	AP	8.0406E-8		<input checked="" type="checkbox"/>	0.000%	58				
0 CO-60	AP	3.9305E-8		<input checked="" type="checkbox"/>	0.000%	60				
0 SB-124	AP	6.9481E-8		<input checked="" type="checkbox"/>	0.000%	124				
0 SB-125	FP	2.0265E-7		<input checked="" type="checkbox"/>	0.000%	125				
0 CS-134	FP	8.0955E-8		<input checked="" type="checkbox"/>	0.000%	134				
0 CS-137	FP	1.1972E-7		<input checked="" type="checkbox"/>	0.000%	137				

### Analysis Review

Re-Analyze: No

Lic Rad Mat Present: No

Reviewed: COOPER, TERRY L

Date: 06/10/14 14:36

Hp Eng Rvw Req'd: Yes

Rad Mat Present: Yes

HP Notified Name:

Comments:

Health Physics Sample Records

Sample ID: 142475

Type: RLSSS

Type Detail: SAND

Status: APPROVED

Rasterized:

Description: 140603BD 4 CULVERT # 7

Review/Approve

HP Eng Review

Reviewed: COOPER, TERRY L

Date: 06/10/14 14:36

Comments:

Disposition

Disposition: OTHER

Result: Sample contains only natural isotopes

Remarks:

Final Approval

Approved: COOPER, TERRY L

Date: 06/10/14 14:36

Comments:

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*****
*          SONGS                      HEALTH PHYSICS REPORT          5-JUN-2014 15:54  *
*-----*
*          >>>> SAMPLE PARAMETERS <<<<<          *
*
* Title      : 140603BD 4 CULVERT # 7          *
*
* ID         : 30368                          Acquisition date: 5-JUN-2014 15:51:37. *
* Start Time: 5-JUN-2014 15:51:00.           Counting System   : U2GSP          *
* Stop Time  : 5-JUN-2014 15:51:00.           IHPS Sample Number: 142475         *
* Quantity   : 1.82100E+03 GR                  Analysis Library  : HP_NATURAL      *
* Geometry   : C_1L_marinelli_sand_1          Operator: MICHAEL PARK              *
*-----*
*          >>>> C #41-TP11750A PARAMETERS <<<<<          *
*
* Elapsed Live Time : 0 00:03:00.45           Calibration       : 5-JUN-2014 08:14: *
* Elapsed Real Time : 0 00:03:00.49           Energy Offset    : -1.39807E-01       *
* Deadtime          : 0.0%                     Energy Slope     : 4.99820E-01         *
* Activity Mult Factor: 1.00000E+00           Energy Tolerance: 1.00000          *
* Half Life Ratio   : 8.00000                 Sensitivity      : 5.00000            *
*
*****

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Post-NID Peak Search Report

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides
1	238.67	50	28	1.65	477.76	473	11	24.3	3.53E+00	PB-212
1	338.35	21	0	1.89	677.17	674	7	20.7	2.26E-01	AC-228
1	352.14	23	0	1.18	704.77	701	7	21.2	5.33E-01	PB-214
1	582.94	16	2	1.63	1166.46	1163	8	30.0	1.28E+00	TL-208
1	609.60	26	2	2.45	1219.78	1215	10	21.8	5.22E-01	BI-214
1	910.94	13	6	1.54	1822.50	1817	9	43.6	1.10E+00	AC-228
1	1460.99	79	5	2.07	2922.51	2916	11	12.5	9.35E-01	K-40

Summary of Nuclide Activity  
Sample ID : 30368

Page : 2  
Acquisition date : 5-JUN-2014 15:51:37

Total number of lines in spectrum 7  
Number of unidentified lines 0  
Number of lines tentatively identified by NID 7 100.00%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected uCi/GR	Decay Corr uCi/GR	Decay Corr 1-Sigma Error	1-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.100E-05	1.100E-05	0.138E-05	12.55	A
TL-208	3.05M	1.59	1.290E-07	2.051E-07	0.616E-07	30.04	A
PB-212	10.64H	1.00	4.550E-07	4.561E-07	1.107E-07	24.26	A
BI-214	19.90M	1.08	4.176E-07	4.495E-07	0.981E-07	21.83	A
PB-214	26.80M	1.06	3.046E-07	3.217E-07	0.681E-07	21.16	KA
AC-228	6.13H	1.00	4.773E-07	4.793E-07	2.089E-07	43.59	A
Total Activity :			1.279E-05	1.291E-05			

Grand Total Activity : 1.279E-05 1.291E-05

Flags: "K" = Keyline not found  
"E" = Manually edited

"M" = Manually accepted  
"A" = Nuclide specific abn. limit

Unidentified Energy Lines  
Sample ID : 30368

Page : 3  
Acquisition date : 5-JUN-2014 15:51:37

None

Flags: "T" = Tentatively associated

Interference Report  
Sample ID : 30368

Page : 4  
Acquisition date : 5-JUN-2014 15:51:37

No interference correction performed

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected Decay Corr		1-Sigma
					uCi/GR	uCi/GR	
AC-228	89.96	-----	3.40	2.051E+00	-----	Line Not Found	-----
	93.35	-----	5.60	2.124E+00	-----	Line Not Found	-----
	99.55	-----	1.30	2.229E+00	-----	Line Not Found	-----
	105.36	-----	2.00	2.301E+00	-----	Line Not Found	-----
	108.99	-----	0.67	2.335E+00	-----	Line Not Found	-----
	129.03	-----	2.90	2.414E+00	-----	Line Not Found	-----
	153.89	-----	0.84	2.377E+00	-----	Line Not Found	-----
	209.39	-----	4.10	2.168E+00	-----	Line Not Found	-----
	216.24	-----	0.80	2.141E+00	-----	Line Not Found	-----
	270.26	-----	3.80	1.941E+00	-----	Line Not Found	-----
	328.07	-----	3.50	1.756E+00	-----	Line Not Found	-----
	338.42	21	12.40	1.725E+00	8.097E-07	8.129E-07	20.70
	340.94	-----	0.52	1.718E+00	-----	Line Not Found	-----
	409.62	-----	2.20	1.531E+00	-----	Line Not Found	-----
	463.10	-----	4.60	1.401E+00	-----	Line Not Found	-----
	562.65	-----	1.01	1.195E+00	-----	Line Not Found	-----
	581.52	-----	3.00	1.160E+00	-----	Line Not Found	-----
	726.63	-----	0.87	9.382E-01	-----	Line Not Found	-----
	755.28	-----	1.32	9.027E-01	-----	Line Not Found	-----
	772.28	-----	1.09	8.827E-01	-----	Line Not Found	-----
	782.12	-----	0.59	8.716E-01	-----	Line Not Found	-----
	794.79	-----	4.60	8.576E-01	-----	Line Not Found	-----
	830.59	-----	0.63	8.205E-01	-----	Line Not Found	-----
	835.60	-----	1.71	8.155E-01	-----	Line Not Found	-----
	840.44	-----	0.94	8.108E-01	-----	Line Not Found	-----
	904.29	-----	0.89	7.542E-01	-----	Line Not Found	-----
	911.16	13	29.00*	7.489E-01	4.773E-07	4.793E-07	43.59
	964.64	-----	5.80	7.091E-01	-----	Line Not Found	-----
	968.97	-----	17.40	7.061E-01	-----	Line Not Found	-----
	1246.60	-----	0.57	5.825E-01	-----	Line Not Found	-----
	1459.19	-----	1.06	5.560E-01	-----	Line Not Found	-----
	1496.00	-----	1.05	5.563E-01	-----	Line Not Found	-----
	1501.44	-----	0.58	5.565E-01	-----	Line Not Found	-----
	1580.30	-----	0.71	5.624E-01	-----	Line Not Found	-----
	1588.23	-----	3.60	5.634E-01	-----	Line Not Found	-----
	1630.47	-----	1.95	5.696E-01	-----	Line Not Found	-----
	1638.10	-----	0.54	5.709E-01	-----	Line Not Found	-----

Flag: "\*" = Keyline

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/GR)
BE-7	4.	477.61	7.2411E-07
MN-54	6.	834.83	1.4203E-07
MN-56	3.	846.81	1.1021E-07
CO-57	9.	122.06	6.5355E-08
CO-58	1.	810.79	8.0406E-08
CO-60	0.	1332.50	3.9305E-08
SB-124	2.	602.73	6.9481E-08
SB-125	3.	427.88	2.0265E-07
CS-134	3.	604.71	8.0955E-08
CS-137	5.	661.66	1.1972E-07