

Health Physics Sample Records

Sample ID: 142496

Type: RLSSS

Type Detail: SAND

Status: APPROVED

Rasterized:

Description: 140605BD06 SOUTH LAY DOWN # 14

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: COUNT TO MDA

Reviewed: DYNES, WILLIAM J

Date: 06/06/14 09:52

Comments:

Origin

Mat. Size/Volume: 1970 GRAMS

Docmnt/MO/Act #:

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

Description: SOUTH LAY DOWN #14

Collection

Sample Tech: DYNES, WILLIAM J

Sample Date: 06/05/14 09:05

Count Time: 900 (secs.)

Tritium Req: No

Sample Size/Volume: 1970 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: COUNT TO MDA

Material Loc:

**Health Physics Sample Records**

Sample ID: **142496**

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Status: APPROVED

Rasterized:

Description: 140605BD06 SOUTH LAY DOWN # 14

**Analysis**

Geometry	MCA ID	Quant.	Units	Method	FP/AP	Lab	Analysis By	Date	Mod ID	Mod Date
B_1L_marinelli_sand_	30393	1970	GR		.000		NEEBE, DAVID J	06/06/14 21:13		

Isotope	Mode	Activity	Activity Uncert.	LLD/MDA	% Abund.	Atom. No.	Comments	Mod Id	Mod Date
0	K-40	NT	8.71E-6	1.266E-6	☐	82.671%	40		
0	TL-208	NT	3.702E-7	7.56E-8	☐	3.514%	208		
0	PB-212	NT	3.88E-7	1.234E-7	☐	3.683%	212		
0	BI-214	NT	5.202E-7	1.115E-7	☐	4.937%	214		
0	PB-214	NT	5.474E-7	1.59E-7	☐	5.196%	214		
0	BE-7	AP	7.6477E-7		☑	0.000%	7		
0	MN-54	AP	8.5646E-8		☑	0.000%	54		
0	MN-56	AP	1.4458E-7		☑	0.000%	56		
0	CO-57	AP	8.6914E-8		☑	0.000%	57		
0	CO-58	AP	7.9562E-8		☑	0.000%	58		
0	CO-60	AP	8.6724E-8		☑	0.000%	60		
0	SB-124	AP	7.5097E-8		☑	0.000%	124		
0	SB-125	FP	1.9975E-7		☑	0.000%	125		
0	CS-134	FP	6.4392E-8		☑	0.000%	134		
0	CS-137	FP	1.2974E-7		☑	0.000%	137		

**Analysis Review**

Re-Analyze: No

Lic Rad Mat Present: No

Reviewed: COOPER, TERRY L

Date: 06/11/14 07:03

Hp Eng Rvw Req'd: Yes

Rad Mat Present: Yes

HP Notified Name:

Comments:


Health Physics Sample Records

Sample ID: 142496

Type: RLSSS

Type Detail: SAND

Status: APPROVED

Rasterized: 

Description: 140605BD06 SOUTH LAY DOWN # 14

**Review/Approve**

**HP Eng Review**

Reviewed: COOPER, TERRY L

Date: 06/11/14 07:04

Comments:

**Disposition**

Disposition: OTHER

Result: Sample contains only natural isotopes

Remarks:

**Final Approval**

Approved: COOPER, TERRY L

Date: 06/11/14 07:04

Comments:

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*****
*          SONGS                      HEALTH PHYSICS REPORT          6-JUN-2014 21:07  *
*-----*
*          >>>> SAMPLE PARAMETERS <<<<<          *
*-----*
* Title      : 140605BD06 SOUTH LAY DOWN # 14          *
* ID         : 30393                      Acquisition date: 6-JUN-2014 21:04:29. *
* Start Time: 6-JUN-2014 21:04:00.          Counting System   : U2GSP          *
* Stop Time : 6-JUN-2014 21:04:00.          IHPS Sample Number: 142496         *
* Quantity  : 1.97000E+03 GR                Analysis Library  : HP_NATURAL         *
* Geometry  : B_1L_marinelli_sand_1        Operator: DAVID NEEBE          *
*-----*
*          >>>> B #42-TP11663A PARAMETERS <<<<<          *
*-----*
* Elapsed Live Time : 0 00:03:00.45          Calibration       : 6-JUN-2014 20:09: *
* Elapsed Real Time : 0 00:03:00.49          Energy Offset    : -4.40560E-01         *
* Deadtime          : 0.0%                   Energy Slope     : 5.00074E-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	238.76	40	34	1.23	478.34	475	10	31.8	1.31E+00	PB-212
1	295.44	21	7	1.48	591.68	588	7	29.1	2.51E-01	PB-214
1	583.39	25	0	1.81	1167.50	1162	10	20.4	5.01E-01	TL-208
1	609.26	26	2	2.30	1219.23	1215	9	21.4	5.54E-01	BI-214
1	1460.76	51	0	2.13	2922.04	2916	13	14.5	6.84E-01	K-40

Summary of Nuclide Activity  
Sample ID : 30393

Page : 2  
Acquisition date : 6-JUN-2014 21:04:29

Total number of lines in spectrum 5  
Number of unidentified lines 0  
Number of lines tentatively identified by NID 5 100.00%

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	8.710E-06	8.710E-06	1.266E-06	14.54	A
TL-208	3.05M	1.54	2.403E-07	3.702E-07	0.756E-07	20.41	A
PB-212	10.64H	1.00	3.872E-07	3.880E-07	1.234E-07	31.80	A
BI-214	19.90M	1.07	4.856E-07	5.202E-07	1.115E-07	21.43	A
PB-214	26.80M	1.05	5.201E-07	5.474E-07	1.590E-07	29.05	A
Total Activity :			1.034E-05	1.054E-05			

Grand Total Activity : 1.034E-05 1.054E-05

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

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

Unidentified Energy Lines  
Sample ID : 30393

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Acquisition date : 6-JUN-2014 21:04:29

None

Flags: "T" = Tentatively associated

Interference Report  
Sample ID : 30393

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Acquisition date : 6-JUN-2014 21:04:29

No interference correction performed

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected Decay Corr		1-Sigma %Error
					uCi/GR	uCi/GR	
K-40	1460.83	51	10.67*	4.211E-01	8.710E-06	8.710E-06	14.54
TL-208	72.80	-----	2.14	1.070E+00	-----	Line Not Found	-----
	74.97	-----	3.60	1.156E+00	-----	Line Not Found	-----
	84.79	-----	1.27	1.506E+00	-----	Line Not Found	-----
	252.45	-----	0.80	1.745E+00	-----	Line Not Found	-----
	277.28	-----	6.80	1.645E+00	-----	Line Not Found	-----
	510.61	-----	21.60	1.035E+00	-----	Line Not Found	-----
	583.02	25	86.00*	9.194E-01	2.403E-07	3.702E-07	20.41
	763.06	-----	1.64	7.126E-01	-----	Line Not Found	-----
	860.30	-----	12.00	6.341E-01	-----	Line Not Found	-----
PB-212	74.81	-----	10.50	1.150E+00	-----	Line Not Found	-----
	77.11	-----	17.70	1.239E+00	-----	Line Not Found	-----
	87.19	-----	6.27	1.579E+00	-----	Line Not Found	-----
	90.13	-----	1.86	1.662E+00	-----	Line Not Found	-----
	115.12	-----	0.59	2.085E+00	-----	Line Not Found	-----
	238.58	40	43.60*	1.804E+00	3.872E-07	3.880E-07	31.80
	300.03	-----	3.34	1.562E+00	-----	Line Not Found	-----
BI-214	76.86	-----	0.58	1.229E+00	-----	Line Not Found	-----
	79.29	-----	0.97	1.320E+00	-----	Line Not Found	-----
	609.31	26	46.10*	8.834E-01	4.856E-07	5.202E-07	21.43
	665.44	-----	1.56	8.131E-01	-----	Line Not Found	-----
	768.35	-----	4.88	7.078E-01	-----	Line Not Found	-----
	806.16	-----	1.23	6.754E-01	-----	Line Not Found	-----
	934.04	-----	3.16	5.861E-01	-----	Line Not Found	-----
	1120.27	-----	15.00	4.982E-01	-----	Line Not Found	-----
	1155.18	-----	1.69	4.860E-01	-----	Line Not Found	-----
	1238.11	-----	5.92	4.615E-01	-----	Line Not Found	-----
	1280.95	-----	1.47	4.510E-01	-----	Line Not Found	-----
	1377.66	-----	4.02	4.323E-01	-----	Line Not Found	-----
	1385.30	-----	0.78	4.311E-01	-----	Line Not Found	-----
	1401.48	-----	1.39	4.287E-01	-----	Line Not Found	-----
	1407.97	-----	2.48	4.277E-01	-----	Line Not Found	-----
	1509.22	-----	2.19	4.165E-01	-----	Line Not Found	-----
	1583.22	-----	0.72	4.120E-01	-----	Line Not Found	-----
	1661.26	-----	1.15	4.103E-01	-----	Line Not Found	-----
	1729.58	-----	3.05	4.114E-01	-----	Line Not Found	-----
	1764.49	-----	15.90	4.128E-01	-----	Line Not Found	-----
	1847.41	-----	2.12	4.187E-01	-----	Line Not Found	-----
PB-214	53.17	-----	1.10	2.929E-01	-----	Line Not Found	-----
	74.81	-----	6.52	1.150E+00	-----	Line Not Found	-----
	77.11	-----	11.00	1.239E+00	-----	Line Not Found	-----
	87.19	-----	3.88	1.579E+00	-----	Line Not Found	-----
	90.13	-----	1.15	1.662E+00	-----	Line Not Found	-----
	241.92	-----	7.46	1.790E+00	-----	Line Not Found	-----
	258.94	-----	0.55	1.718E+00	-----	Line Not Found	-----
	295.09	21	19.20*	1.578E+00	5.201E-07	5.474E-07	29.05
	351.87	-----	37.10	1.395E+00	-----	Line Not Found	-----
	785.83	-----	1.09	6.925E-01	-----	Line Not Found	-----
	839.00	-----	0.59	6.497E-01	-----	Line Not Found	-----



Nuclide Line Activity Report (continued)  
Sample ID : 30393

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Flag: "\*" = Keyline

Minimum Detectable Activity Report  
Sample ID : 30393

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Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/GR)
BE-7	4.	477.61	7.6477E-07
MN-54	1.	834.83	8.5646E-08
MN-56	4.	846.81	1.4458E-07
CO-57	15.	122.06	8.6914E-08
CO-58	1.	810.79	7.9562E-08
CO-60	0.	1332.50	8.6724E-08
SB-124	2.	602.73	7.5097E-08
SB-125	2.	427.88	1.9975E-07
CS-134	1.	604.71	6.4392E-08
CS-137	4.	661.66	1.2974E-07