

Health Physics Sample Records

Sample ID: 142509

Type: RLSSS

Type Detail: SAND

Status: APPROVED

Rasterized:

Description: 14060614BD 09 NORTH LAYDOWN # 19

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: 06/09/14 09:01

Comments: COUNT TO MDA

Origin

Mat. Size/Volume: 1995 GRAMS

Docmnt/MO/Act #:

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

Description: NORTH LAYDOWN # 19

Collection

Sample Tech: DYNES, WILLIAM J

Sample Date: 06/06/14 12:05

Count Time: 900 (secs.)

Tritium Req: No

Sample Size/Volume: 1995 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

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Description: 14060614BD 09 NORTH LAYDOWN # 19

Analysis

Geometry	MCA ID	Quant.	Units	Method	FP/AP	Lab	Analysis By	Date	Mod ID	Mod Date
A_1L_marinelli_sand_	30423	1995	GR		.000		NEEBE, DAVID J	06/09/14 20:43		
Isotope	Mode	Activity	Activity Uncert.	LLD/MDA	% Abund.	Atom. No.	Comments	Mod Id	Mod Date	
0 K-40	NT	9.459E-6	1.124E-6	☐	78.575%	40				
0 PB-212	NT	4.986E-7	9.46E-8	☐	4.142%	212				
0 BI-214	NT	6.355E-7	1.112E-7	☐	5.279%	214				
0 PB-214	NT	6.374E-7	1.576E-7	☐	5.295%	214				
0 AC-228	NT	8.077E-7	3.55E-7	☐	6.709%	228				
0 BE-7	AP	5.8235E-7		☑	0.000%	7				
0 MN-54	AP	1.3172E-7		☑	0.000%	54				
0 MN-56	AP	2.6287E-8		☑	0.000%	56				
0 CO-57	AP	7.6836E-8		☑	0.000%	57				
0 CO-58	AP	6.7365E-8		☑	0.000%	58				
0 CO-60	AP	1.0085E-7		☑	0.000%	60				
0 SB-124	AP	5.168E-8		☑	0.000%	124				
0 SB-125	FP	1.9471E-7		☑	0.000%	125				
0 CS-134	FP	4.0754E-8		☑	0.000%	134				
0 CS-137	FP	1.0646E-7		☑	0.000%	137				

Analysis Review

Re-Analyze: No

Lic Rad Mat Present: No

Reviewed: COOPER, TERRY L

Date: 06/11/14 08:13

Hp Eng Rvw Req'd: Yes

Rad Mat Present: Yes

HP Notified Name:

Comments:

Health Physics Sample Records

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Status: APPROVED

Rasterized:

Description: 14060614BD 09 NORTH LAYDOWN # 19

Review/Approve

HP Eng Review

Reviewed: COOPER, TERRY L

Date: 06/11/14 08:14

Comments:

Disposition

Disposition: OTHER

Result: Sample contains only natural isotopes

Remarks:

Final Approval

Approved: COOPER, TERRY L

Date: 06/11/14 08:14

Comments:

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*****
*          SONGS                      HEALTH PHYSICS REPORT          9-JUN-2014 20:38  *
*-----*
*                >>>> SAMPLE PARAMETERS <<<<<                *
*
* Title       : 14060614BD 09 NORTH LAYDOWN # 19                *
*
* ID         : 30423                      Acquisition date: 9-JUN-2014 20:34:56. *
* Start Time: 9-JUN-2014 20:34:00.
* Stop Time: 9-JUN-2014 20:34:00.      Counting System   : U2GSP          *
* Quantity  : 1.99500E+03 GR             IHPS Sample Number: 142509        *
* Geometry  : A_1L_marinelli_sand_1     Analysis Library  : HP_NATURAL    *
*                                         Operator: DAVID NEEBE          *
*-----*
*                >>>> A #41-TP11679B  PARAMETERS <<<<<                *
*
* Elapsed Live Time : 0 00:03:00.43   Calibration       : 9-JUN-2014 19:32:   *
* Elapsed Real Time  : 0 00:03:00.47   Energy Offset     : 2.30553E-01      *
* Deadtime           : 0.0%             Energy Slope      : 4.99505E-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	76.98	19	42	1.24	153.65	153	5	57.1	3.24E+00	BI-214 PB-212 PB-214
1	238.67	60	22	1.16	477.35	473	8	19.0	1.59E+00	PB-212
1	295.22	28	5	1.31	590.57	585	11	24.7	4.39E-01	PB-214
1	337.99	40	10	2.06	676.20	672	12	21.6	1.72E+00	AC-228
1	352.04	35	12	1.77	704.34	700	10	24.4	8.11E-01	PB-214
1	609.24	39	3	1.58	1219.27	1214	10	17.5	2.65E-01	BI-214
1	969.65	13	7	1.40	1940.86	1935	9	43.9	3.58E-01	AC-228
1	1460.55	71	0	1.77	2923.75	2918	12	11.9	2.34E-01	K-40

Summary of Nuclide Activity
Sample ID : 30423

Page : 2
Acquisition date : 9-JUN-2014 20:34:56

Total number of lines in spectrum 8
Number of unidentified lines 0
Number of lines tentatively identified by NID 8 100.00%

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	9.459E-06	9.459E-06	1.124E-06	11.88	A
PB-212	10.64H	1.00	4.973E-07	4.986E-07	0.946E-07	18.96	A
BI-214	19.90M	1.09	5.839E-07	6.355E-07	1.112E-07	17.50	A
PB-214	26.80M	1.06	5.986E-07	6.374E-07	1.576E-07	24.73	A
AC-228	6.13H	1.00	8.039E-07	8.077E-07	3.550E-07	43.95	KA
Total Activity :			1.194E-05	1.204E-05			

Grand Total Activity : 1.194E-05 1.204E-05

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

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

Unidentified Energy Lines
Sample ID : 30423

Page : 3
Acquisition date : 9-JUN-2014 20:34:56

None

Flags: "T" = Tentatively associated

Interference Report
Sample ID : 30423

Page : 4
Acquisition date : 9-JUN-2014 20:34:56

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	71	10.67*	5.314E-01	9.459E-06	9.459E-06	11.88
PB-212	74.81	-----	10.50	1.685E+00	-----	Line Not Found	-----
	77.11	19	17.70	1.777E+00	4.529E-07	4.541E-07	57.07
	87.19	-----	6.27	2.129E+00	-----	Line Not Found	-----
	90.13	-----	1.86	2.206E+00	-----	Line Not Found	-----
	115.12	-----	0.59	2.535E+00	-----	Line Not Found	-----
	238.58	60	43.60*	2.082E+00	4.973E-07	4.986E-07	18.96
	300.03	-----	3.34	1.834E+00	-----	Line Not Found	-----
	76.86	19	0.58	1.777E+00	1.382E-05	1.504E-05	57.07
	79.29	-----	0.97	1.869E+00	-----	Line Not Found	-----
	609.31	39	46.10*	1.084E+00	5.839E-07	6.355E-07	17.50
BI-214	665.44	-----	1.56	9.985E-01	-----	Line Not Found	-----
	768.35	-----	4.88	8.685E-01	-----	Line Not Found	-----
	806.16	-----	1.23	8.283E-01	-----	Line Not Found	-----
	934.04	-----	3.16	7.177E-01	-----	Line Not Found	-----
	1120.27	-----	15.00	6.114E-01	-----	Line Not Found	-----
	1155.18	-----	1.69	5.973E-01	-----	Line Not Found	-----
	1238.11	-----	5.92	5.697E-01	-----	Line Not Found	-----
	1280.95	-----	1.47	5.585E-01	-----	Line Not Found	-----
	1377.66	-----	4.02	5.401E-01	-----	Line Not Found	-----
	1385.30	-----	0.78	5.391E-01	-----	Line Not Found	-----
	1401.48	-----	1.39	5.370E-01	-----	Line Not Found	-----
	1407.97	-----	2.48	5.362E-01	-----	Line Not Found	-----
	1509.22	-----	2.19	5.292E-01	-----	Line Not Found	-----
	1583.22	-----	0.72	5.296E-01	-----	Line Not Found	-----
	1661.26	-----	1.15	5.351E-01	-----	Line Not Found	-----
	1729.58	-----	3.05	5.442E-01	-----	Line Not Found	-----
	1764.49	-----	15.90	5.503E-01	-----	Line Not Found	-----
	1847.41	-----	2.12	5.694E-01	-----	Line Not Found	-----
PB-214	53.17	-----	1.10	5.543E-01	-----	Line Not Found	-----
	74.81	-----	6.52	1.685E+00	-----	Line Not Found	-----
	77.11	19	11.00	1.777E+00	7.288E-07	7.761E-07	57.07
	87.19	-----	3.88	2.129E+00	-----	Line Not Found	-----
	90.13	-----	1.15	2.206E+00	-----	Line Not Found	-----
	241.92	-----	7.46	2.067E+00	-----	Line Not Found	-----
	258.94	-----	0.55	1.994E+00	-----	Line Not Found	-----
	295.09	28	19.20*	1.852E+00	5.986E-07	6.374E-07	24.73
	351.87	35	37.10	1.662E+00	4.213E-07	4.487E-07	24.40
	785.83	-----	1.09	8.495E-01	-----	Line Not Found	-----
AC-228	839.00	-----	0.59	7.964E-01	-----	Line Not Found	-----
	89.96	-----	3.40	2.201E+00	-----	Line Not Found	-----
	93.35	-----	5.60	2.279E+00	-----	Line Not Found	-----
	99.55	-----	1.30	2.389E+00	-----	Line Not Found	-----
	105.36	-----	2.00	2.463E+00	-----	Line Not Found	-----
	108.99	-----	0.67	2.496E+00	-----	Line Not Found	-----
	129.03	-----	2.90	2.562E+00	-----	Line Not Found	-----
	153.89	-----	0.84	2.496E+00	-----	Line Not Found	-----
	209.39	-----	4.10	2.221E+00	-----	Line Not Found	-----
	216.24	-----	0.80	2.187E+00	-----	Line Not Found	-----

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected Decay Corr		1-Sigma %Error
					uCi/GR	uCi/GR	
	270.26	-----	3.80	1.948E+00	-----	Line Not Found	-----
	328.07	-----	3.50	1.738E+00	-----	Line Not Found	-----
	338.42	40	12.40	1.705E+00	1.432E-06	1.438E-06	21.62
	340.94	-----	0.52	1.696E+00	-----	Line Not Found	-----
	409.62	-----	2.20	1.499E+00	-----	Line Not Found	-----
	463.10	-----	4.60	1.368E+00	-----	Line Not Found	-----
	562.65	-----	1.01	1.164E+00	-----	Line Not Found	-----
	581.52	-----	3.00	1.131E+00	-----	Line Not Found	-----
	726.63	-----	0.87	9.173E-01	-----	Line Not Found	-----
	755.28	-----	1.32	8.833E-01	-----	Line Not Found	-----
	772.28	-----	1.09	8.641E-01	-----	Line Not Found	-----
	782.12	-----	0.59	8.534E-01	-----	Line Not Found	-----
	794.79	-----	4.60	8.400E-01	-----	Line Not Found	-----
	830.59	-----	0.63	8.043E-01	-----	Line Not Found	-----
	835.60	-----	1.71	7.996E-01	-----	Line Not Found	-----
	840.44	-----	0.94	7.951E-01	-----	Line Not Found	-----
	904.29	-----	0.89	7.403E-01	-----	Line Not Found	-----
	911.16	-----	29.00*	7.349E-01	-----	Line Not Found	-----
	964.64	-----	5.80	6.962E-01	-----	Line Not Found	-----
	968.97	13	17.40	6.929E-01	8.039E-07	8.077E-07	43.95
	1246.60	-----	0.57	5.673E-01	-----	Line Not Found	-----
	1459.19	-----	1.06	5.315E-01	-----	Line Not Found	-----
	1496.00	-----	1.05	5.296E-01	-----	Line Not Found	-----
	1501.44	-----	0.58	5.294E-01	-----	Line Not Found	-----
	1580.30	-----	0.71	5.295E-01	-----	Line Not Found	-----
	1588.23	-----	3.60	5.298E-01	-----	Line Not Found	-----
	1630.47	-----	1.95	5.324E-01	-----	Line Not Found	-----
	1638.10	-----	0.54	5.330E-01	-----	Line Not Found	-----

Flag: "*" = Keyline

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/GR)
BE-7	3.	477.61	5.8235E-07
MN-54	6.	834.83	1.3172E-07
MN-56	0.	846.81	2.6287E-08
CO-57	18.	122.06	7.6836E-08
CO-58	1.	810.79	6.7365E-08
CO-60	1.	1332.50	1.0085E-07
SB-124	1.	602.73	5.1680E-08
SB-125	3.	427.88	1.9471E-07
CS-134	0.	604.71	4.0754E-08
CS-137	4.	661.66	1.0646E-07