

Health Physics Sample Records

Sample ID: 142505

Type: RLSSS

Type Detail: SAND

Status: APPROVED

Rasterized:

Description: 14060614BD 05 NORTH LAYDOWN # 9

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 08:27

Comments: COUNT TO MDA

Origin

Mat. Size/Volume: 2041 GRAMS

Docmnt/MO/Act #:

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

Description: NORTH LAYDOWN #9

Collection

Sample Tech: DYNES, WILLIAM J

Sample Date: 06/06/14 10:00

Count Time: 900 (secs.)

Tritium Req: No

Sample Size/Volume: 2041 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: 142505

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Status: APPROVED

Rasterized:

Description: 14060614BD 05 NORTH LAYDOWN # 9

Analysis

Geometry	MCA ID	Quant.	Units	Method	FP/AP	Lab	Analysis By	Date	Mod ID	Mod Date
C_1L_marinelli_sand_	30425	2041	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	8.416E-6	1.028E-6		59.933%	40		
0	TL-208	NT	1.965E-7	6.11E-8		1.399%	208		
0	PB-212	NT	7.808E-7	9.71E-8		5.560%	212		
0	BI-214	NT	3.825E-7	8.18E-8		2.724%	214		
0	PB-214	NT	7.435E-7	1.821E-7		5.295%	214		
0	RA-226	NT	2.861E-6	1.147E-6		20.374%	226		
0	AC-228	NT	4.851E-7	1.735E-7		3.455%	228		
0	U-235	NT	1.77E-7	7.1E-8		1.260%	235		
0	BE-7	AP	5.4378E-7			0.000%	7		
0	MN-54	AP	4.9818E-8			0.000%	54		
0	MN-56	AP	2.517E-8			0.000%	56		
0	CO-57	AP	8.0595E-8			0.000%	57		
0	CO-58	AP	8.7156E-8			0.000%	58		
0	CO-60	AP	8.9426E-8			0.000%	60		
0	SB-124	AP	6.5107E-8			0.000%	124		
0	SB-125	FP	9.8885E-8			0.000%	125		
0	CS-134	FP	6.7602E-8			0.000%	134		
0	CS-137	FP	9.0076E-8			0.000%	137		

Analysis Review

Re-Analyze: No

Lic Rad Mat Present: No

Reviewed: COOPER, TERRY L

Date: 06/11/14 08:01

Hp Eng Rvw Req'd: Yes

Rad Mat Present: Yes

HP Notified Name:

Comments:


Health Physics Sample Records

Sample ID: **142505**

Type: RLSSS

Type Detail: SAND

Status: APPROVED

Rasterized: 

Description: 14060614BD 05 NORTH LAYDOWN # 9

Review/Approve

HP Eng Review

Reviewed: COOPER, TERRY L

Date: 06/11/14 08:02

Comments: U-235 is likely mis-ID'd off the Ra-226 energy peak

Disposition

Disposition: OTHER

Result: Sample contains only natural isotopes

Remarks:

Final Approval

Approved: COOPER, TERRY L

Date: 06/11/14 08:02

Comments:

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*****
*          SONGS                      HEALTH PHYSICS REPORT          9-JUN-2014 20:39  *
*-----*
*                >>>> SAMPLE PARAMETERS <<<<<                *
*-----*
* Title       : 14060614BD 05 NORTH LAYDOWN # 9                    *
* ID          : 30425                      Acquisition date: 9-JUN-2014 20:36:41. *
* Start Time: 9-JUN-2014 20:36:00.                      *
* Stop Time: 9-JUN-2014 20:36:00.                      Counting System : U2GSP *
* Quantity   : 2.04100E+03 GR                      IHPS Sample Number: 142505 *
* Geometry   : C_1L_marinelli_sand_1                Analysis Library : HP_NATURAL *
*                               Operator: DAVID NEEBE *
*-----*
*                >>>> C #41-TP11750A PARAMETERS <<<<<                *
*-----*
* Elapsed Live Time : 0 00:03:00.43 Calibration : 9-JUN-2014 19:38: *
* Elapsed Real Time : 0 00:03:00.48 Energy Offset : -1.08890E-01 *
* Deadtime          : 0.0% Energy Slope : 4.99807E-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
										PB-214
1	186.32	29	31	1.94	372.98	368	10	40.1	4.42E+00	U-235
										RA-226
1	238.49	95	17	1.17	477.36	474	8	12.4	7.98E-01	PB-212
1	295.07	34	10	1.33	590.55	586	10	24.5	7.29E-01	PB-214
1	351.91	47	11	1.73	704.26	700	9	19.2	3.29E-01	PB-214
1	583.37	16	2	1.40	1167.26	1162	10	31.1	8.84E-01	TL-208
1	609.62	25	0	1.51	1219.76	1215	9	21.4	1.30E+00	BI-214
1	911.21	14	4	1.99	1822.97	1818	9	35.8	1.45E+00	AC-228
1	1461.06	68	0	1.75	2922.52	2917	12	12.2	3.16E-01	K-40

Summary of Nuclide Activity
Sample ID : 30425

Page : 2
Acquisition date : 9-JUN-2014 20:36:41

Total number of lines in spectrum 9
Number of unidentified lines 0
Number of lines tentatively identified by NID 9 100.00%

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	8.416E-06	8.416E-06	1.028E-06	12.21	A
TL-208	3.05M	1.62	1.216E-07	1.965E-07	0.611E-07	31.08	A
PB-212	10.64H	1.00	7.789E-07	7.808E-07	0.971E-07	12.44	A
BI-214	19.90M	1.08	3.545E-07	3.825E-07	0.818E-07	21.38	A
PB-214	26.80M	1.06	7.026E-07	7.435E-07	1.821E-07	24.49	A
RA-226	1600.00Y	1.00	2.861E-06	2.861E-06	1.147E-06	40.10	A
AC-228	6.13H	1.00	4.830E-07	4.851E-07	1.735E-07	35.77	A
U-235	7.04E+08Y	1.00	1.770E-07	1.770E-07	0.710E-07	40.10	A
Total Activity :			1.389E-05	1.404E-05			

Grand Total Activity : 1.389E-05 1.404E-05

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

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

Unidentified Energy Lines
Sample ID : 30425

Page : 3
Acquisition date : 9-JUN-2014 20:36:41

None

Flags: "T" = Tentatively associated

Interference Report
Sample ID : 30425

Page : 4
Acquisition date : 9-JUN-2014 20:36:41

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	68	10.67*	5.560E-01	8.416E-06	8.416E-06	12.21
TL-208	72.80	-----	2.14	1.486E+00	-----	Line Not Found	-----
	74.97	-----	3.60	1.577E+00	-----	Line Not Found	-----
	84.79	-----	1.27	1.917E+00	-----	Line Not Found	-----
	252.45	-----	0.80	2.004E+00	-----	Line Not Found	-----
	277.28	-----	6.80	1.917E+00	-----	Line Not Found	-----
	510.61	-----	21.60	1.298E+00	-----	Line Not Found	-----
	583.02	16	86.00*	1.157E+00	1.216E-07	1.965E-07	31.08
	763.06	-----	1.64	8.934E-01	-----	Line Not Found	-----
	860.30	-----	12.00	7.922E-01	-----	Line Not Found	-----
	PB-212	74.81	-----	10.50	1.570E+00	-----	Line Not Found
77.11		0	17.70	1.690E+00	0.000E+00	0.000E+00	0.00
87.19		-----	6.27	1.983E+00	-----	Line Not Found	-----
90.13		-----	1.86	2.055E+00	-----	Line Not Found	-----
115.12		-----	0.59	2.376E+00	-----	Line Not Found	-----
238.58		95	43.60*	2.055E+00	7.789E-07	7.808E-07	12.44
300.03		-----	3.34	1.843E+00	-----	Line Not Found	-----
BI-214	76.86	-----	0.58	1.651E+00	-----	Line Not Found	-----
	79.29	-----	0.97	1.741E+00	-----	Line Not Found	-----
	609.31	25	46.10*	1.111E+00	3.545E-07	3.825E-07	21.38
	665.44	-----	1.56	1.023E+00	-----	Line Not Found	-----
	768.35	-----	4.88	8.873E-01	-----	Line Not Found	-----
	806.16	-----	1.23	8.454E-01	-----	Line Not Found	-----
	934.04	-----	3.16	7.310E-01	-----	Line Not Found	-----
	1120.27	-----	15.00	6.242E-01	-----	Line Not Found	-----
	1155.18	-----	1.69	6.105E-01	-----	Line Not Found	-----
	1238.11	-----	5.92	5.846E-01	-----	Line Not Found	-----
	1280.95	-----	1.47	5.747E-01	-----	Line Not Found	-----
	1377.66	-----	4.02	5.602E-01	-----	Line Not Found	-----
	1385.30	-----	0.78	5.595E-01	-----	Line Not Found	-----
	1401.48	-----	1.39	5.583E-01	-----	Line Not Found	-----
	1407.97	-----	2.48	5.578E-01	-----	Line Not Found	-----
	1509.22	-----	2.19	5.568E-01	-----	Line Not Found	-----
	1583.22	-----	0.72	5.628E-01	-----	Line Not Found	-----
	1661.26	-----	1.15	5.753E-01	-----	Line Not Found	-----
	1729.58	-----	3.05	5.918E-01	-----	Line Not Found	-----
	1764.49	-----	15.90	6.023E-01	-----	Line Not Found	-----
PB-214	1847.41	-----	2.12	6.331E-01	-----	Line Not Found	-----
	53.17	-----	1.10	5.203E-01	-----	Line Not Found	-----
	74.81	-----	6.52	1.570E+00	-----	Line Not Found	-----
	77.11	0	11.00	1.690E+00	0.000E+00	0.000E+00	0.00
	87.19	-----	3.88	1.983E+00	-----	Line Not Found	-----
	90.13	-----	1.15	2.055E+00	-----	Line Not Found	-----
	241.92	-----	7.46	2.043E+00	-----	Line Not Found	-----
	258.94	-----	0.55	1.981E+00	-----	Line Not Found	-----
	295.09	34	19.20*	1.859E+00	7.026E-07	7.435E-07	24.49
	351.87	47	37.10	1.686E+00	5.481E-07	5.800E-07	19.19
	785.83	-----	1.09	8.674E-01	-----	Line Not Found	-----
839.00	-----	0.59	8.122E-01	-----	Line Not Found	-----	

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected Decay Corr		1-Sigma
					uCi/GR	uCi/GR	
RA-226	81.07	-----	0.18	1.802E+00	-----	Line Not Found	-----
	186.11	29	3.28*	2.260E+00	2.861E-06	2.861E-06	40.10
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	-----	12.40	1.725E+00	-----	Line Not Found	-----
	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	14	29.00*	7.486E-01	4.830E-07	4.851E-07	35.77	
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	-----	
U-235	89.96	-----	3.36	2.051E+00	-----	Line Not Found	-----
	93.35	-----	5.50	2.124E+00	-----	Line Not Found	-----
	105.36	-----	1.98	2.301E+00	-----	Line Not Found	-----
	109.18	-----	1.50	2.336E+00	-----	Line Not Found	-----
	143.79	-----	10.50	2.402E+00	-----	Line Not Found	-----
	163.38	-----	4.70	2.347E+00	-----	Line Not Found	-----
	185.74	29	53.00*	2.260E+00	1.770E-07	1.770E-07	40.10
	194.96	-----	0.59	2.226E+00	-----	Line Not Found	-----
	202.13	-----	1.00	2.197E+00	-----	Line Not Found	-----
	205.33	-----	4.70	2.184E+00	-----	Line Not Found	-----

Nuclide Line Activity Report (continued)
Sample ID : 30425

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Acquisition date : 9-JUN-2014 20:36:41

Flag: "*" = Keyline

Minimum Detectable Activity Report
Sample ID : 30425

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Acquisition date : 9-JUN-2014 20:36:41

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/GR)
BE-7	3.	477.61	5.4378E-07
MN-54	0.	834.83	4.9818E-08
MN-56	0.	846.81	2.5170E-08
CO-57	18.	122.06	8.0595E-08
CO-58	2.	810.79	8.7156E-08
CO-60	1.	1173.24	8.9426E-08
SB-124	2.	602.73	6.5107E-08
SB-125	0.	600.50	9.8885E-08
CS-134	3.	604.71	6.7602E-08
CS-137	3.	661.66	9.0076E-08