

Health Physics Sample Records

Sample ID: 142446

Type: RLSSS

Type Detail: SAND

Status: APPROVED

Rasterized:

Description: 140528BD 16 STAR 16-20 Dirt Sample

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: 05/30/14 08:44

Comments:

Origin

Mat. Size/Volume: 1982 GRAMS

Docmnt/MO/Act #:

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

Description: STAR 16 SOIL SAMPLE

Collection

Sample Tech: DYNES, WILLIAM J

Sample Date: 05/29/14 07:46

Count Time: 900 (secs.)

Tritium Req: No

Sample Size/Volume: 1982 GRAMS

Instructions:

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: 3" (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: **142446**

Type: RLSSS

Type Detail: SAND

Status: APPROVED

Rasterized: 

Description: 140528BD 16 STAR 16-20 Dirt Sample

Analysis

Geometry	MCA ID	Quant.	Units	Method	FP/AP	Lab	Analysis By	Date	Mod ID	Mod Date
A_1L_marinelli_sand_	30295	1982	GR		.000		PARK, MICHAEL C	06/02/14 09:58		
Isotope	Mode	Activity	Activity Uncert.	LLD/MDA	% Abund.	Atom. No.	Comments	Mod Id	Mod Date	
0 K-40	NT	0.00001337	1.36E-6	<input type="checkbox"/>	87.644%	40				
0 TL-208	NT	2.885E-7	7.16E-8	<input type="checkbox"/>	1.891%	208				
0 PB-212	NT	5.155E-7	1.088E-7	<input type="checkbox"/>	3.379%	212				
0 BI-214	NT	5.936E-7	1.028E-7	<input type="checkbox"/>	3.891%	214				
0 PB-214	NT	4.873E-7	1.036E-7	<input type="checkbox"/>	3.194%	214				
0 BE-7	AP	8.087E-7		<input checked="" type="checkbox"/>	0.000%	7				
0 MN-54	AP	1.1389E-7		<input checked="" type="checkbox"/>	0.000%	54				
0 MN-56	AP	1.2827E-7		<input checked="" type="checkbox"/>	0.000%	56				
0 CO-57	AP	7.067E-8		<input checked="" type="checkbox"/>	0.000%	57				
0 CO-58	AP	6.7497E-8		<input checked="" type="checkbox"/>	0.000%	58				
0 CO-60	AP	1.0153E-7		<input checked="" type="checkbox"/>	0.000%	60				
0 SB-124	AP	7.8882E-8		<input checked="" type="checkbox"/>	0.000%	124				
0 SB-125	FP	2.5157E-7		<input checked="" type="checkbox"/>	0.000%	125				
0 CS-134	FP	6.5141E-8		<input checked="" type="checkbox"/>	0.000%	134				
0 CS-137	FP	8.1994E-8		<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 10:07

Hp Eng Rvw Req'd: Yes

Rad Mat Present: Yes

HP Notified Name:

Comments:

Health Physics Sample Records

Sample ID: 142446

Type: RLSSS

Type Detail: SAND

Status: APPROVED

Rasterized:

Description: 140528BD 16 STAR 16-20 Dirt Sample

Review/Approve

HP Eng Review

Reviewed: COOPER, TERRY L

Date: 06/10/14 10:07

Comments: 338 keV peak is due to Ac-228

Disposition

Disposition: OTHER

Result: Sample contains only natural isotopes

Remarks:

Final Approval

Approved: COOPER, TERRY L

Date: 06/10/14 10:07

Comments:

```

*****
*          SONGS                      HEALTH PHYSICS REPORT          2--JUN-2014 09:54  *
*-----*
*                >>>> SAMPLE PARAMETERS <<<<<                *
*-----*
* Title       : 140528BD 16 STAR 16-20 DIRT SAMPLE                *
*-----*
* ID          : 30295                      Acquisition date: 2-JUN-2014 09:50:56. *
* Start Time: 2-JUN-2014 09:50:00.                    *
* Stop Time:  2-JUN-2014 09:50:00.                    Counting System  : U2GSP          *
* Quantity   : 1.98200E+03 GR                      IHPS Sample Number: 142446        *
* Geometry   : A_1L_marinelli_sand_1                Analysis Library  : HP_NATURAL     *
* Operator   : MICHAEL PARK                          *
*-----*
*                >>>> A #41-TP11679B PARAMETERS <<<<<                *
*-----*
* Elapsed Live Time : 0 00:03:00.40 Calibration       : 1-JUN-2014 20:24:    *
* Elapsed Real Time : 0 00:03:00.46 Energy Offset    : 2.86241E-01          *
* Deadtime          : 0.0%                          Energy Slope      : 4.99400E-01          *
* Activity Mult Factor: 1.00000E+00 Energy Tolerance: 1.00000          *
* Half Life Ratio   : 8.00000                      Sensitivity       : 5.00000          *
*-----*
*****

```

Post-NID Peak Search Report

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides
1	238.41	62	29	1.32	476.82	471	10	21.1	2.28E+00	PB-212
1	277.47	17	3	1.81	555.03	552	7	27.8	5.26E-01	TL-208
1	338.34	23	0	2.33	676.92	673	9	19.9	6.98E-01	
1	351.84	37	8	1.32	703.93	700	8	21.3	2.25E+00	PB-214
1	583.09	22	2	1.75	1166.97	1163	8	24.8	2.00E+00	TL-208
1	609.20	36	0	1.98	1219.26	1214	11	17.3	9.11E-01	BI-214
1	1460.60	100	0	1.79	2923.96	2918	12	10.2	6.85E-01	K-40

Summary of Nuclide Activity
Sample ID : 30295

Page : 2
Acquisition date : 2-JUN-2014 09:50:56

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	1.337E-05	1.337E-05	0.136E-05	10.17	A
TL-208	3.05M	1.71	1.691E-07	2.885E-07	0.716E-07	24.81	A
PB-212	10.64H	1.00	5.142E-07	5.155E-07	1.088E-07	21.11	A
BI-214	19.90M	1.09	5.455E-07	5.936E-07	1.028E-07	17.31	A
PB-214	26.80M	1.06	4.576E-07	4.873E-07	1.036E-07	21.26	KA
Total Activity :			1.505E-05	1.525E-05			

Grand Total Activity : 1.505E-05 1.525E-05

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

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

Unidentified Energy Lines
Sample ID : 30295

Page : 3
Acquisition date : 2-JUN-2014 09:50:56

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	338.34	23	0	2.33	676.92	673	9	1.27E-01	19.9	1.70E+00	T

Flags: "T" = Tentatively associated

Interference Report
Sample ID : 30295

Page : 4
Acquisition date : 2-JUN-2014 09:50:56

No interference correction performed

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected Decay Corr		1-Sigma
					uCi/GR	uCi/GR	
K-40	1460.83	100	10.67*	5.314E-01	1.337E-05	1.337E-05	10.17
TL-208	72.80	-----	2.14	1.594E+00	-----	Line Not Found	-----
	74.97	-----	3.60	1.692E+00	-----	Line Not Found	-----
	84.79	-----	1.27	2.058E+00	-----	Line Not Found	-----
	252.45	-----	0.80	2.021E+00	-----	Line Not Found	-----
	277.28	17	6.80	1.919E+00	9.804E-07	1.673E-06	27.79
	510.61	-----	21.60	1.265E+00	-----	Line Not Found	-----
	583.02	22	86.00*	1.128E+00	1.691E-07	2.885E-07	24.81
	763.06	-----	1.64	8.744E-01	-----	Line Not Found	-----
	860.30	-----	12.00	7.770E-01	-----	Line Not Found	-----
	PB-212	74.81	-----	10.50	1.685E+00	-----	Line Not Found
77.11		-----	17.70	1.782E+00	-----	Line Not Found	-----
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		62	43.60*	2.083E+00	5.142E-07	5.155E-07	21.11
300.03		-----	3.34	1.834E+00	-----	Line Not Found	-----
BI-214		76.86	-----	0.58	1.772E+00	-----	Line Not Found
	79.29	-----	0.97	1.869E+00	-----	Line Not Found	-----
	609.31	36	46.10*	1.084E+00	5.455E-07	5.936E-07	17.31
	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	-----
PB-214	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	-----
	53.17	-----	1.10	5.543E-01	-----	Line Not Found	-----
	74.81	-----	6.52	1.685E+00	-----	Line Not Found	-----
	77.11	-----	11.00	1.782E+00	-----	Line Not Found	-----
	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	-----	19.20*	1.852E+00	-----	Line Not Found	-----
	351.87	37	37.10	1.662E+00	4.576E-07	4.873E-07	21.26
785.83	-----	1.09	8.495E-01	-----	Line Not Found	-----	
839.00	-----	0.59	7.964E-01	-----	Line Not Found	-----	

Nuclide Line Activity Report (continued)
Sample ID : 30295

Page : 6
Acquisition date : 2-JUN-2014 09:50:56

Flag: "*" = Keyline

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/GR)
BE-7	7.	477.61	8.0870E-07
MN-54	4.	834.83	1.1389E-07
MN-56	5.	846.81	1.2827E-07
CO-57	15.	122.06	7.0670E-08
CO-58	1.	810.79	6.7497E-08
CO-60	1.	1332.50	1.0153E-07
SB-124	3.	602.73	7.8882E-08
SB-125	6.	427.88	2.5157E-07
CS-134	2.	604.71	6.5141E-08
CS-137	2.	661.66	8.1994E-08