

Health Physics Sample Records

Sample ID: 142434

Type: RLSSS

Type Detail: SAND

Status: APPROVED

Rasterized:

Description: 140528BD 05 STAR 5-20 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:

Reviewed: DYNES, WILLIAM J

Date: 05/29/14 11:18

Comments:

Origin

Mat. Size/Volume: 1000 ml

Docmnt/MO/Act #:

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

Description: STAR 05 SOIL SAMPLE

Collection

Sample Tech: DYNES, WILLIAM J

Sample Date: 05/28/14 12:56

Count Time: 900 (secs.)

Tritium Req: No

Sample Size/Volume: 1927 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:

Material Loc:

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Analysis

Geometry	MCA ID	Quant.	Units	Method	FP/AP	Lab	Analysis By	Date	Mod ID	Mod Date
A_1L_marinelli_sand_	30271	1927	GR		.000		ABERNATHY, AGNES B	05/29/14 16:18		
Isotope	Mode	Activity	Activity Uncert.	LLD/MDA	% Abund.	Atom. No.	Comments	Mod Id	Mod Date	
0 K-40	NT	9.268E-6	1.138E-6	┌	84.298%	40				
0 TL-208	NT	1.932E-7	6.36E-8	┌	1.757%	208				
0 PB-212	NT	3.617E-7	9.39E-8	┌	3.290%	212				
0 BI-214	NT	3.224E-7	7.17E-8	┌	2.932%	214				
0 PB-214	NT	3.444E-7	1.12E-7	┌	3.133%	214				
0 AC-228	NT	5.046E-7	1.508E-7	┌	4.590%	228				
0 BE-7	AP	7.1888E-7		✓	0.000%	7				
0 MN-54	AP	9.0128E-8		✓	0.000%	54				
0 MN-56	AP	1.2039E-7		✓	0.000%	56				
0 CO-57	AP	8.1742E-8		✓	0.000%	57				
0 CO-58	AP	6.9726E-8		✓	0.000%	58				
0 CO-60	AP	7.4753E-8		✓	0.000%	60				
0 SB-124	AP	7.3167E-8		✓	0.000%	124				
0 SB-125	FP	1.3753E-7		✓	0.000%	125				
0 CS-134	FP	6.769E-8		✓	0.000%	134				
0 CS-137	FP	1.2057E-7		✓	0.000%	137				

Analysis Review

Re-Analyze: No

Lic Rad Mat Present: No

Reviewed: COOPER, TERRY L

Date: 06/10/14 09:36

Hp Eng Rvw Req'd: Yes

Rad Mat Present: Yes

HP Notified Name:

Comments:

Health Physics Sample Records

Sample ID: 142434

Type: RLSSS

Type Detail: SAND

Status: APPROVED

Rasterized: 

Description: 140528BD 05 STAR 5-20 Dirt Sample

Review/Approve

HP Eng Review

Reviewed: COOPER, TERRY L

Date: 06/10/14 09:36

Comments:

Disposition

Disposition: OTHER

Result: Sample contains only natural isotopes

Remarks:

Final Approval

Approved: COOPER, TERRY L

Date: 06/10/14 09:36

Comments:

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*****
*          SONGS                      HEALTH PHYSICS REPORT          29-MAY-2014 16:13  *
*-----*
*                               >>>> SAMPLE PARAMETERS <<<<<      *
*                               *                                     *
* Title       : 140528BD 05 STAR 5-20 DIRT SAMPLE                *
* ID          : 30271                      Acquisition date: 29-MAY-2014 16:10:08 *
* Start Time : 29-MAY-2014 16:10:00                      *
* Stop Time  : 29-MAY-2014 16:10:00                      Counting System   : U2GSP   *
* Quantity   : 1.92700E+03 GR                          IHPS Sample Number: 142434  *
* Geometry   : A_1L_marinelli_sand_1                    Analysis Library   : HP_NATURAL *
*                               Operator: AGNES ABERNATHY        *
*-----*
*                               >>>> A #41-TP11679B PARAMETERS <<<<< *
*                               *                                     *
* Elapsed Live Time : 0 00:03:00.47 Calibration           : 28-MAY-2014 21:10 *
* Elapsed Real Time  : 0 00:03:00.53 Energy Offset        : 2.58874E-01 *
* Deadtime           : 0.0%                               Energy Slope       : 4.99485E-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	77.26	25	20	1.25	154.16	152	6	35.3	5.46E+00	BI-214 PB-212 PB-214
1	238.79	42	23	1.54	477.55	474	9	25.9	6.66E+00	PB-212
1	295.19	15	3	1.39	590.48	587	7	32.5	1.93E+00	PB-214
1	351.72	33	0	1.84	703.66	698	10	18.9	2.12E+00	PB-214
1	583.52	17	5	1.59	1167.73	1162	9	32.9	8.44E-01	TL-208
1	609.38	20	0	2.46	1219.50	1215	8	22.3	1.00E+00	BI-214
1	911.01	14	2	1.68	1823.40	1819	8	29.9	9.47E-02	AC-228
1	1460.91	68	0	2.04	2924.38	2918	12	12.3	5.08E-01	K-40

Summary of Nuclide Activity
Sample ID : 30271

Page : 2
Acquisition date : 29-MAY-2014 16:10:08

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	9.268E-06	9.268E-06	1.138E-06	12.28	A
TL-208	3.05M	1.42	1.358E-07	1.932E-07	0.636E-07	32.94	A
PB-212	10.64H	1.00	3.611E-07	3.617E-07	0.939E-07	25.95	A
BI-214	19.90M	1.06	3.047E-07	3.224E-07	0.717E-07	22.25	A
PB-214	26.80M	1.04	3.302E-07	3.444E-07	1.120E-07	32.51	A
AC-228	6.13H	1.00	5.031E-07	5.046E-07	1.508E-07	29.88	A
Total Activity :			1.090E-05	1.099E-05			

Grand Total Activity : 1.090E-05 1.099E-05

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 30271

Page : 3
Acquisition date : 29-MAY-2014 16:10:08

None

Flags: "T" = Tentatively associated

Interference Report
Sample ID : 30271

Page : 4
Acquisition date : 29-MAY-2014 16:10:08

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*	5.314E-01	9.268E-06	9.268E-06	12.28
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	-----	6.80	1.920E+00	-----	Line Not Found	-----
	510.61	-----	21.60	1.265E+00	-----	Line Not Found	-----
	583.02	17	86.00*	1.127E+00	1.358E-07	1.932E-07	32.94
	763.06	-----	1.64	8.744E-01	-----	Line Not Found	-----
PB-212	860.30	-----	12.00	7.770E-01	-----	Line Not Found	-----
	74.81	-----	10.50	1.685E+00	-----	Line Not Found	-----
	77.11	25	17.70	1.789E+00	6.243E-07	6.254E-07	35.34
	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	42	43.60*	2.081E+00	3.611E-07	3.617E-07	25.95
	300.03	-----	3.34	1.834E+00	-----	Line Not Found	-----
BI-214	76.86	25	0.58	1.789E+00	1.905E-05	2.016E-05	35.34
	79.29	-----	0.97	1.869E+00	-----	Line Not Found	-----
	609.31	20	46.10*	1.084E+00	3.047E-07	3.224E-07	22.25
	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	-----	
PB-214	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	25	11.00	1.789E+00	1.004E-06	1.048E-06	35.34
	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	15	19.20*	1.852E+00	3.302E-07	3.444E-07	32.51
	351.87	33	37.10	1.663E+00	4.110E-07	4.287E-07	18.90
	785.83	-----	1.09	8.495E-01	-----	Line Not Found	-----
839.00	-----	0.59	7.964E-01	-----	Line Not Found	-----	

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected Decay Corr		1-Sigma %Error
					uCi/GR	uCi/GR	
AC-228	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	-----
	270.26	-----	3.80	1.948E+00	-----	Line Not Found	-----
	328.07	-----	3.50	1.738E+00	-----	Line Not Found	-----
	338.42	-----	12.40	1.704E+00	-----	Line Not Found	-----
	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	14	29.00*	7.350E-01	5.031E-07	5.046E-07	29.88
	964.64	-----	5.80	6.962E-01	-----	Line Not Found	-----
	968.97	-----	17.40	6.933E-01	-----	Line Not Found	-----
	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	5.	477.61	7.1888E-07
MN-54	2.	834.83	9.0128E-08
MN-56	4.	846.81	1.2039E-07
CO-57	19.	122.06	8.1742E-08
CO-58	1.	810.79	6.9726E-08
CO-60	0.	1173.24	7.4753E-08
SB-124	3.	602.73	7.3167E-08
SB-125	1.	427.88	1.3753E-07
CS-134	2.	604.71	6.7690E-08
CS-137	5.	661.66	1.2057E-07