

Health Physics Sample Records

Sample ID: 142442

Type: RLSSS

Type Detail: SAND

Status: APPROVED

Rasterized:

Description: 140528BD 12 STAR 12-20 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 08:07

Comments:

Origin

Mat. Size/Volume: 1589 GRAMS

Docmnt/MO/Act #:

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

Description: STAR 12 SOIL SAMPLE

Collection

Sample Tech: DYNES, WILLIAM J

Sample Date: 05/29/14 07:17

Count Time: 900 (secs.)

Tritium Req: No

Sample Size/Volume: 1589 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:

Health Physics Sample Records

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Status: APPROVED

Rasterized:

Description: 140528BD 12 STAR 12-20 Dirt Sample

Analysis

Geometry	MCA ID	Quant.	Units	Method	FP/AP	Lab	Analysis By	Date	Mod ID	Mod Date
B_1L_marinelli_sand_	30279	1589	GR		.000		HENDERSON, JOE C	05/30/14 12:48		
Isotope	Mode	Activity	Activity Uncert.	LLD/MDA	% Abund.	Atom. No.	Comments	Mod Id	Mod Date	
0 K-40	NT	0.00001095	1.51E-6	<input type="checkbox"/>	77.728%	40				
0 TL-208	NT	4.293E-7	9.79E-8	<input type="checkbox"/>	3.047%	208				
0 PB-212	NT	5.279E-7	1.277E-7	<input type="checkbox"/>	3.747%	212				
0 BI-214	NT	6.829E-7	1.45E-7	<input type="checkbox"/>	4.848%	214				
0 PB-214	NT	6.208E-7	2.207E-7	<input type="checkbox"/>	4.407%	214				
0 AC-228	NT	8.766E-7	2.176E-7	<input type="checkbox"/>	6.223%	228				
0 BE-7	AP	7.6781E-7		<input checked="" type="checkbox"/>	0.000%	7				
0 MN-54	AP	3.9031E-8		<input checked="" type="checkbox"/>	0.000%	54				
0 MN-56	AP	1.0994E-7		<input checked="" type="checkbox"/>	0.000%	56				
0 CO-57	AP	8.2734E-8		<input checked="" type="checkbox"/>	0.000%	57				
0 CO-58	AP	1.9876E-7		<input checked="" type="checkbox"/>	0.000%	58				
0 CO-60	AP	5.7877E-8		<input checked="" type="checkbox"/>	0.000%	60				
0 SB-124	AP	2.9197E-8		<input checked="" type="checkbox"/>	0.000%	124				
0 SB-125	FP	2.4783E-7		<input checked="" type="checkbox"/>	0.000%	125				
0 CS-134	FP	7.0915E-8		<input checked="" type="checkbox"/>	0.000%	134				
0 CS-137	FP	1.4556E-7		<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 09:58

Hp Eng Rvw Req'd: Yes

Rad Mat Present: Yes

HP Notified Name:

Comments:

Health Physics Sample Records

Sample ID: 142442

Type: RLSSS

Type Detail: SAND

Status: APPROVED

Rasterized:

Description: 140528BD 12 STAR 12-20 Dirt Sample

Review/Approve

HP Eng Review

Reviewed: COOPER, TERRY L

Date: 06/10/14 09:58

Comments:

Disposition

Disposition: OTHER

Result: Sample contains only natural isotopes

Remarks:

Final Approval

Approved: COOPER, TERRY L

Date: 06/10/14 09:58

Comments:

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*****
*          SONGS                      HEALTH PHYSICS REPORT          30-MAY-2014 12:46  *
*-----*
*                               >>>> SAMPLE PARAMETERS <<<<<      *
*                               *                                     *
* Title       : 140528BD 12 STAR 12-20 DIRT SAMPLE                *
*                               *                                     *
* ID          : 30279                      Acquisition date: 30-MAY-2014 12:43:46 *
* Start Time: 30-MAY-2014 12:43:00                               *
* Stop Time:  30-MAY-2014 12:43:00                               *
* Quantity   : 1.58900E+03 GR                      Counting System   : U2GSP      *
* Geometry   : B_1L_marinelli_sand_1              IHPS Sample Number: 142442   *
*                               Analysis Library    : HP_NATURAL     *
*                               Operator: JOE HENDERSON             *
*-----*
*                               >>>> B #42-TP11663A PARAMETERS <<<<< *
*                               *                                     *
* Elapsed Live Time : 0 00:03:00.45 Calibration      : 29-MAY-2014 21:44  *
* Elapsed Real Time  : 0 00:03:00.48 Energy Offset   : -1.81343E-02      *
* Deadtime           : 0.0%                          Energy Slope     : 4.99764E-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	238.65	44	22	1.39	477.58	473	10	24.2	3.55E+00	PB-212
1	241.78	16	1	1.20	483.83	482	6	26.9	4.11E-01	PB-214
1	295.54	19	8	2.12	591.41	585	10	35.6	5.33E-01	PB-214
1	351.98	35	6	1.79	704.34	699	12	23.0	1.03E+00	PB-214
1	583.08	22	0	1.87	1166.76	1160	11	22.8	1.07E+00	TL-208
1	609.08	27	3	2.66	1218.79	1214	11	21.2	7.79E-01	BI-214
1	911.08	16	0	1.80	1823.12	1817	10	24.8	4.48E-01	AC-228
1	1460.64	52	0	2.51	2922.84	2916	12	13.8	1.47E+00	K-40

Summary of Nuclide Activity
Sample ID : 30279

Page : 2
Acquisition date : 30-MAY-2014 12:43:46

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	1.095E-05	1.095E-05	0.151E-05	13.81	A
TL-208	3.05M	1.64	2.612E-07	4.293E-07	0.979E-07	22.81	A
PB-212	10.64H	1.00	5.266E-07	5.279E-07	1.277E-07	24.18	A
BI-214	19.90M	1.08	6.312E-07	6.829E-07	1.450E-07	21.24	A
PB-214	26.80M	1.06	5.855E-07	6.208E-07	2.207E-07	35.56	A
AC-228	6.13H	1.00	8.728E-07	8.766E-07	2.176E-07	24.82	A
Total Activity :			1.383E-05	1.409E-05			

Grand Total Activity : 1.383E-05 1.409E-05

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

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

Unidentified Energy Lines
Sample ID : 30279

Page : 3
Acquisition date : 30-MAY-2014 12:43:46

None

Flags: "T" = Tentatively associated

Interference Report
Sample ID : 30279

Page : 4
Acquisition date : 30-MAY-2014 12:43:46

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	52	10.67*	4.212E-01	1.095E-05	1.095E-05	13.81
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	22	86.00*	9.198E-01	2.612E-07	4.293E-07	22.81
	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		44	43.60*	1.804E+00	5.266E-07	5.279E-07	24.18
BI-214	300.03	-----	3.34	1.562E+00	-----	Line Not Found	-----
	76.86	-----	0.58	1.229E+00	-----	Line Not Found	-----
	79.29	-----	0.97	1.320E+00	-----	Line Not Found	-----
	609.31	27	46.10*	8.836E-01	6.312E-07	6.829E-07	21.24
	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	-----	
PB-214	1847.41	-----	2.12	4.187E-01	-----	Line Not Found	-----
	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	16	7.46	1.791E+00	1.123E-06	1.190E-06	26.85
	258.94	-----	0.55	1.718E+00	-----	Line Not Found	-----
	295.09	19	19.20*	1.578E+00	5.855E-07	6.208E-07	35.56
	351.87	35	37.10	1.395E+00	6.397E-07	6.783E-07	22.95
785.83	-----	1.09	6.925E-01	-----	Line Not Found	-----	
839.00	-----	0.59	6.497E-01	-----	Line Not Found	-----	

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected uCi/GR	Decay Corr uCi/GR	1-Sigma %Error
AC-228	89.96	-----	3.40	1.657E+00	-----	Line Not Found	-----
	93.35	-----	5.60	1.743E+00	-----	Line Not Found	-----
	99.55	-----	1.30	1.876E+00	-----	Line Not Found	-----
	105.36	-----	2.00	1.973E+00	-----	Line Not Found	-----
	108.99	-----	0.67	2.021E+00	-----	Line Not Found	-----
	129.03	-----	2.90	2.163E+00	-----	Line Not Found	-----
	153.89	-----	0.84	2.160E+00	-----	Line Not Found	-----
	209.39	-----	4.10	1.937E+00	-----	Line Not Found	-----
	216.24	-----	0.80	1.905E+00	-----	Line Not Found	-----
	270.26	-----	3.80	1.673E+00	-----	Line Not Found	-----
	328.07	-----	3.50	1.468E+00	-----	Line Not Found	-----
	338.42	-----	12.40	1.435E+00	-----	Line Not Found	-----
	340.94	-----	0.52	1.428E+00	-----	Line Not Found	-----
	409.62	-----	2.20	1.243E+00	-----	Line Not Found	-----
	463.10	-----	4.60	1.125E+00	-----	Line Not Found	-----
	562.65	-----	1.01	9.501E-01	-----	Line Not Found	-----
	581.52	-----	3.00	9.221E-01	-----	Line Not Found	-----
	726.63	-----	0.87	7.472E-01	-----	Line Not Found	-----
	755.28	-----	1.32	7.197E-01	-----	Line Not Found	-----
	772.28	-----	1.09	7.043E-01	-----	Line Not Found	-----
	782.12	-----	0.59	6.956E-01	-----	Line Not Found	-----
	794.79	-----	4.60	6.848E-01	-----	Line Not Found	-----
	830.59	-----	0.63	6.561E-01	-----	Line Not Found	-----
	835.60	-----	1.71	6.523E-01	-----	Line Not Found	-----
	840.44	-----	0.94	6.486E-01	-----	Line Not Found	-----
	904.29	-----	0.89	6.044E-01	-----	Line Not Found	-----
	911.16	16	29.00*	6.001E-01	8.728E-07	8.766E-07	24.82
	964.64	-----	5.80	5.686E-01	-----	Line Not Found	-----
	968.97	-----	17.40	5.663E-01	-----	Line Not Found	-----
	1246.60	-----	0.57	4.593E-01	-----	Line Not Found	-----
	1459.19	-----	1.06	4.213E-01	-----	Line Not Found	-----
	1496.00	-----	1.05	4.176E-01	-----	Line Not Found	-----
	1501.44	-----	0.58	4.172E-01	-----	Line Not Found	-----
	1580.30	-----	0.71	4.121E-01	-----	Line Not Found	-----
	1588.23	-----	3.60	4.118E-01	-----	Line Not Found	-----
	1630.47	-----	1.95	4.106E-01	-----	Line Not Found	-----
	1638.10	-----	0.54	4.105E-01	-----	Line Not Found	-----

Flag: "*" = Keyline

Minimum Detectable Activity Report
Sample ID : 30279

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Acquisition date : 30-MAY-2014 12:43:46

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/GR)
BE-7	2.	477.61	7.6781E-07
MN-54	0.	834.83	3.9031E-08
MN-56	1.	846.81	1.0994E-07
CO-57	8.	122.06	8.2734E-08
CO-58	6.	810.79	1.9876E-07
CO-60	0.	1332.50	5.7877E-08
SB-124	0.	602.73	2.9197E-08
SB-125	2.	427.88	2.4783E-07
CS-134	1.	604.71	7.0915E-08
CS-137	3.	661.66	1.4556E-07