

Health Physics Sample Records

Sample ID: 142468

Type: RLSSS

Type Detail: SAND

Status: APPROVED

Rasterized:

Description: 140530BD 05 STARYARD SURVEY PT 45

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: 06/04/14 08:16

Comments:

Origin

Mat. Size/Volume: 2319 GRAMS

Docmnt/MO/Act #:

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

Description: STARYARD SURVEY PT 45

Collection

Sample Tech: DYNES, WILLIAM J

Sample Date: 05/30/14 12:40

Count Time: 900 (secs.)

Tritium Req: No

Sample Size/Volume: 2319 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:

Material Loc:

Health Physics Sample Records

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Rasterized:

Description: 140530BD 05 STARYARD SURVEY PT 45

Analysis

Geometry	MCA ID	Quant.	Units	Method	FP/AP	Lab	Analysis By	Date	Mod ID	Mod Date
C_1L_marinelli_sand_	30342	2319	GR		.000		PARK, MICHAEL C	06/04/14 15:48		
Isotope	Mode	Activity	Activity Uncert.	LLD/MDA	% Abund.	Atom. No.	Comments	Mod Id	Mod Date	
0 K-40	NT	0.00001137	1.12E-6	<input type="checkbox"/>	74.847%	40				
0 TL-208	NT	2.497E-7	4.9E-8	<input type="checkbox"/>	1.644%	208				
0 PB-212	NT	5.788E-7	8.34E-8	<input type="checkbox"/>	3.810%	212				
0 BI-214	NT	3.295E-7	8.04E-8	<input type="checkbox"/>	2.169%	214				
0 PB-214	NT	3.767E-7	1.543E-7	<input type="checkbox"/>	2.480%	214				
0 RA-224	NT	1.777E-6	7.49E-7	<input type="checkbox"/>	11.698%	224				
0 AC-228	NT	5.092E-7	1.156E-7	<input type="checkbox"/>	3.352%	228				
0 BE-7	AP	5.7064E-7		<input checked="" type="checkbox"/>	0.000%	7				
0 MN-54	AP	9.2526E-8		<input checked="" type="checkbox"/>	0.000%	54				
0 MN-56	AP	4.5197E-8		<input checked="" type="checkbox"/>	0.000%	56				
0 CO-57	AP	6.2038E-8		<input checked="" type="checkbox"/>	0.000%	57				
0 CO-58	AP	6.8657E-8		<input checked="" type="checkbox"/>	0.000%	58				
0 CO-60	AP	7.8697E-8		<input checked="" type="checkbox"/>	0.000%	60				
0 SB-124	AP	5.1748E-8		<input checked="" type="checkbox"/>	0.000%	124				
0 SB-125	FP	1.6637E-7		<input checked="" type="checkbox"/>	0.000%	125				
0 CS-134	FP	4.7757E-8		<input checked="" type="checkbox"/>	0.000%	134				
0 CS-137	FP	6.2288E-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 13:37

Hp Eng Rvw Req'd: Yes

Rad Mat Present: Yes

HP Notified Name:

Comments:

Health Physics Sample Records

Sample ID: 142468

Type: RLSSS

Type Detail: SAND

Status: APPROVED

Rasterized: 

Description: 140530BD 05 STARYARD SURVEY PT 45

Review/Approve

HP Eng Review

Reviewed: COOPER, TERRY L

Date: 06/10/14 13:37

Comments:

Disposition

Disposition: OTHER

Result: Sample contains only natural isotopes

Remarks:

Final Approval

Approved: COOPER, TERRY L

Date: 06/10/14 13:37

Comments:

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*****
*          SONGS                      HEALTH PHYSICS REPORT          4-JUN-2014 15:43  *
*-----*
*                >>>> SAMPLE PARAMETERS <<<<<                *
*
* Title       : 140530BD 05 STARYARD SURVEY PT 45                *
*
* ID          : 30342                      Acquisition date: 4-JUN-2014 15:40:13. *
* Start Time: 4-JUN-2014 15:40:00.                    *
* Stop Time:  4-JUN-2014 15:40:00.                    Counting System  : U2GSP      *
* Quantity   : 2.31900E+03 GR                      IHPS Sample Number: 142468 *
* Geometry   : C_1L_marinelli_sand_1                Analysis Library  : HP_NATURAL *
*                               Operator: MICHAEL PARK *
*-----*
*                >>>> C #41-TP11750A PARAMETERS <<<<<                *
*
* Elapsed Live Time : 0 00:03:00.45 Calibration      : 3-JUN-2014 20:44: *
* Elapsed Real Time : 0 00:03:00.50 Energy Offset   : -9.06479E-02 *
* Deadtime          : 0.0% Energy Slope            : 4.99783E-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	128.41	59	50	6.80	257.11	250	18	30.3	2.35E+00	AC-228
3	238.43	80	15	1.57	477.22	472	19	14.4	1.05E+00	PB-212
3	241.51	22	11	1.57	483.39	472	19	42.1		RA-224 PB-214
1	295.32	20	16	1.47	591.05	586	9	41.0	1.47E+00	PB-214
1	338.17	19	12	1.86	676.77	673	11	40.5	1.12E+00	AC-228
1	352.15	46	7	1.50	704.73	700	10	18.2	8.13E-01	PB-214
1	583.28	26	0	2.23	1167.10	1162	11	19.6	5.18E-01	TL-208
1	609.36	25	5	2.07	1219.28	1214	9	24.4	8.87E-01	BI-214
1	911.24	17	0	2.09	1823.11	1819	8	22.7	3.68E-01	AC-228
1	1460.89	104	0	1.98	2922.34	2915	13	9.9	8.22E-01	K-40

Summary of Nuclide Activity
Sample ID : 30342

Page : 2
Acquisition date : 4-JUN-2014 15:40:13

Total number of lines in spectrum 10
Number of unidentified lines 0
Number of lines tentatively identified by NID 10 100.00%

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	1.137E-05	1.137E-05	0.112E-05	9.86	A
TL-208	3.05M	1.45	1.718E-07	2.497E-07	0.490E-07	19.63	A
PB-212	10.64H	1.00	5.777E-07	5.788E-07	0.834E-07	14.41	A
BI-214	19.90M	1.06	3.103E-07	3.295E-07	0.804E-07	24.41	A
PB-214	26.80M	1.05	3.603E-07	3.767E-07	1.543E-07	40.96	A
RA-224	3.66D	1.00	1.777E-06	1.777E-06	0.749E-06	42.13	A
AC-228	6.13H	1.00	5.076E-07	5.092E-07	1.156E-07	22.70	A
Total Activity :			1.507E-05	1.519E-05			

Grand Total Activity : 1.507E-05 1.519E-05

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

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

Unidentified Energy Lines
Sample ID : 30342

Page : 3
Acquisition date : 4-JUN-2014 15:40:13

None

Flags: "T" = Tentatively associated

Interference Report
Sample ID : 30342

Page : 4
Acquisition date : 4-JUN-2014 15:40:13

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	104	10.67*	5.560E-01	1.137E-05	1.137E-05	9.86
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	26	86.00*	1.157E+00	1.718E-07	2.497E-07	19.63
	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		-----	17.70	1.661E+00	-----	Line Not Found	-----
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		80	43.60*	2.056E+00	5.777E-07	5.788E-07	14.41
300.03		-----	3.34	1.843E+00	-----	Line Not Found	-----
76.86		-----	0.58	1.651E+00	-----	Line Not Found	-----
79.29		-----	0.97	1.741E+00	-----	Line Not Found	-----
BI-214		609.31	25	46.10*	1.112E+00	3.103E-07	3.295E-07
	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	-----
	1847.41	-----	2.12	6.331E-01	-----	Line Not Found	-----
	PB-214	53.17	-----	1.10	5.203E-01	-----	Line Not Found
74.81		-----	6.52	1.570E+00	-----	Line Not Found	-----
77.11		-----	11.00	1.661E+00	-----	Line Not Found	-----
87.19		-----	3.88	1.983E+00	-----	Line Not Found	-----
90.13		-----	1.15	2.055E+00	-----	Line Not Found	-----
241.92		22	7.46	2.044E+00	9.288E-07	9.711E-07	42.13
258.94		-----	0.55	1.981E+00	-----	Line Not Found	-----
295.09		20	19.20*	1.858E+00	3.603E-07	3.767E-07	40.96
351.87		46	37.10	1.685E+00	4.732E-07	4.948E-07	18.23
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 %Error
					uCi/GR	uCi/GR	
RA-224	83.79	-----	0.20	1.887E+00	-----	Line Not Found	-----
	240.76	22	3.90*	2.044E+00	1.777E-06	1.777E-06	42.13
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	59	2.90	2.413E+00	5.463E-06	5.481E-06	30.25
	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	19	12.40	1.726E+00	5.778E-07	5.797E-07	40.55
	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	17	29.00*	7.486E-01	5.076E-07	5.092E-07	22.70
	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	-----

Flag: "*" = Keyline

Minimum Detectable Activity Report
Sample ID : 30342

Page : 7
Acquisition date : 4-JUN-2014 15:40:13

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/GR)
BE-7	4.	477.61	5.7064E-07
MN-54	4.	834.83	9.2526E-08
MN-56	0.	846.81	4.5197E-08
CO-57	13.	122.06	6.2038E-08
CO-58	2.	810.79	6.8657E-08
CO-60	1.	1173.24	7.8697E-08
SB-124	2.	602.73	5.1748E-08
SB-125	3.	427.88	1.6637E-07
CS-134	1.	604.71	4.7757E-08
CS-137	2.	661.66	6.2288E-08