

Health Physics Sample Records

Sample ID: 142469

Type: RLSSS

Type Detail: SAND

Status: APPROVED

Rasterized:

Description: 140530BD 06 STARYARD SURVEY PT 43

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: 06/04/14 08:21

Comments:

Origin

Mat. Size/Volume: 2041 GRAMS

Docmnt/MO/Act #:

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

Description: STARYARD SURVEY PT 43

Collection

Sample Tech: DYNES, WILLIAM J

Sample Date: 05/30/14 12:12

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:

Material Loc:

Health Physics Sample Records

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Rasterized:

Description: 140530BD 06 STARYARD SURVEY PT 43

Analysis

Geometry	MCA ID	Quant.	Units	Method	FP/AP	Lab	Analysis By	Date	Mod ID	Mod Date
A_1L_marinelli_sand_	30337	2041	GR		.000		WOODWARD, BRUCE E	06/04/14 14:48		

Isotope	Mode	Activity	Activity Uncert.	LLD/MDA	% Abund.	Atom. No.	Comments	Mod Id	Mod Date
0	K-40	NT	8.417E-6	1.059E-6	<input type="checkbox"/>	81.657%	40		
0	PB-212	NT	4.389E-7	1.134E-7	<input type="checkbox"/>	4.258%	212		
0	BI-214	NT	3.816E-7	8.84E-8	<input type="checkbox"/>	3.702%	214		
0	PB-214	NT	4.966E-7	1.621E-7	<input type="checkbox"/>	4.818%	214		
0	AC-228	NT	5.737E-7	1.506E-7	<input type="checkbox"/>	5.566%	228		
0	BE-7	AP	3.5296E-7		<input checked="" type="checkbox"/>	0.000%	7		
0	MN-54	AP	8.5103E-8		<input checked="" type="checkbox"/>	0.000%	54		
0	MN-56	AP	1.0191E-7		<input checked="" type="checkbox"/>	0.000%	56		
0	CO-57	AP	5.3774E-8		<input checked="" type="checkbox"/>	0.000%	57		
0	CO-58	AP	8.3085E-8		<input checked="" type="checkbox"/>	0.000%	58		
0	CO-60	AP	9.146E-8		<input checked="" type="checkbox"/>	0.000%	60		
0	SB-124	AP	7.3726E-8		<input checked="" type="checkbox"/>	0.000%	124		
0	SB-125	FP	2.2065E-7		<input checked="" type="checkbox"/>	0.000%	125		
0	CS-134	FP	5.1837E-8		<input checked="" type="checkbox"/>	0.000%	134		
0	CS-137	FP	7.149E-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 13:39

Hp Eng Rvw Req'd: Yes

Rad Mat Present: Yes

HP Notified Name:

Comments:

Health Physics Sample Records

Sample ID: 142469

Type: RLSSS

Type Detail: SAND

Status: APPROVED

Rasterized:

Description: 140530BD 06 STARYARD SURVEY PT 43

Review/Approve

HP Eng Review

Reviewed: COOPER, TERRY L

Date: 06/10/14 13:39

Comments:

Disposition

Disposition: OTHER

Result: Sample contains only natural isotopes

Remarks:

Final Approval

Approved: COOPER, TERRY L

Date: 06/10/14 13:39

Comments:

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*****
*          SONGS                      HEALTH PHYSICS REPORT          4-JUN-2014 14:42  *
*-----*
*                >>>> SAMPLE PARAMETERS <<<<<                *
*-----*
* Title       : 140530BD 06 STARYARD SURVEY PT 43                *
* ID          : 30337                      Acquisition date: 4-JUN-2014 14:39:12. *
* Start Time: 4-JUN-2014 14:39:00.                    *
* Stop Time: 4-JUN-2014 14:39:00.                    Counting System : U2GSP      *
* Quantity   : 2.04100E+03 GR                      IHPS Sample Number: 142469    *
* Geometry   : A_1L_marinelli_sand_1                Analysis Library : HP_NATURAL *
*                               Operator: BRUCE WOODWARD          *
*-----*
*                >>>> A #41-TP11679B PARAMETERS <<<<<                *
*-----*
* Elapsed Live Time : 0 00:03:00.45 Calibration : 3-JUN-2014 20:38: *
* Elapsed Real Time : 0 00:03:00.50 Energy Offset : 2.22491E-01    *
* Deadtime          : 0.0% Energy Slope : 4.99526E-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	77.24	28	48	1.41	154.18	151	7	45.2	2.16E+00	BI-214 PB-212 PB-214
1	238.44	54	44	1.00	476.88	473	9	25.8	5.01E-01	PB-212
1	295.39	23	13	1.06	590.90	587	7	32.7	1.03E+00	PB-214
1	352.17	35	12	1.48	704.56	699	12	26.6	6.36E-01	PB-214
1	609.12	25	2	1.90	1218.98	1214	10	23.2	3.69E-01	BI-214
1	911.10	17	0	1.56	1823.55	1818	10	26.2	4.31E-01	AC-228
1	1460.89	65	0	2.18	2924.26	2918	12	12.6	7.21E-01	K-40

Summary of Nuclide Activity
Sample ID : 30337

Page : 2
Acquisition date : 4-JUN-2014 14:39:12

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	8.417E-06	8.417E-06	1.059E-06	12.59	A
PB-212	10.64H	1.00	4.381E-07	4.389E-07	1.134E-07	25.83	A
BI-214	19.90M	1.06	3.598E-07	3.816E-07	0.884E-07	23.17	A
PB-214	26.80M	1.04	4.753E-07	4.966E-07	1.621E-07	32.65	A
AC-228	6.13H	1.00	5.719E-07	5.737E-07	1.506E-07	26.24	A
Total Activity :			1.026E-05	1.031E-05			

Grand Total Activity : 1.026E-05 1.031E-05

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

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

Unidentified Energy Lines
Sample ID : 30337

Page : 3
Acquisition date : 4-JUN-2014 14:39:12

None

Flags: "T" = Tentatively associated

Interference Report
Sample ID : 30337

Page : 4
Acquisition date : 4-JUN-2014 14:39:12

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	65	10.67*	5.314E-01	8.417E-06	8.417E-06	12.59	
PB-212	74.81	-----	10.50	1.685E+00	-----	Line Not Found	-----	
	77.11	28	17.70	1.788E+00	6.502E-07	6.514E-07	45.23	
	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	54	43.60*	2.083E+00	4.381E-07	4.389E-07	25.83	
	300.03	-----	3.34	1.834E+00	-----	Line Not Found	-----	
	BI-214	76.86	28	0.58	1.788E+00	1.984E-05	2.105E-05	45.23
		79.29	-----	0.97	1.869E+00	-----	Line Not Found	-----
		609.31	25	46.10*	1.084E+00	3.598E-07	3.816E-07	23.17
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	-----		
1764.49	-----	15.90	5.503E-01	-----	Line Not Found	-----		
1847.41	-----	2.12	5.694E-01	-----	Line Not Found	-----		
PB-214	53.17	-----	1.10	5.543E-01	-----	Line Not Found	-----	
	74.81	-----	6.52	1.685E+00	-----	Line Not Found	-----	
	77.11	28	11.00	1.788E+00	1.046E-06	1.093E-06	45.23	
	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	23	19.20*	1.851E+00	4.753E-07	4.966E-07	32.65	
	351.87	35	37.10	1.661E+00	4.154E-07	4.340E-07	26.58	
	785.83	-----	1.09	8.495E-01	-----	Line Not Found	-----	
839.00	-----	0.59	7.964E-01	-----	Line Not Found	-----		
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	-----	

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected uCi/GR	Decay Corr uCi/GR	1-Sigma %Error
	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	17	29.00*	7.349E-01	5.719E-07	5.737E-07	26.24
	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

Minimum Detectable Activity Report
Sample ID : 30337

Page : 7
Acquisition date : 4-JUN-2014 14:39:12

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/GR)
BE-7	1.	477.61	3.5296E-07
MN-54	2.	834.83	8.5103E-08
MN-56	3.	846.81	1.0191E-07
CO-57	8.	122.06	5.3774E-08
CO-58	2.	810.79	8.3085E-08
CO-60	1.	1173.24	9.1460E-08
SB-124	3.	602.73	7.3726E-08
SB-125	5.	427.88	2.2065E-07
CS-134	1.	604.71	5.1837E-08
CS-137	1.	661.66	7.1490E-08