

Health Physics Sample Records

Sample ID: 142465

Type: RLSSS

Type Detail: SAND

Status: APPROVED

Rasterized:

Description: 140529BD 02 STARYARD SURVEY PT 35

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 08:01

Comments:

Origin

Mat. Size/Volume: 2060 GRAMS

Docmnt/MO/Act #:

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

Description: STARYARD SURVEY PT 35

Collection

Sample Tech: DYNES, WILLIAM J

Sample Date: 05/30/14 07:45

Count Time: 900 (secs.)

Tritium Req: No

Sample Size/Volume: 2060 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

Sample ID: **142465**

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Status: APPROVED

Rasterized:

Description: 140529BD 02 STARYARD SURVEY PT 35

Analysis

Geometry	MCA ID	Quant.	Units	Method	FP/AP	Lab	Analysis By	Date	Mod ID	Mod Date
C_1L_marinelli_sand_	30356	2060	GR		.000		PARK, MICHAEL C	06/05/14 14:33		
Isotope	Mode	Activity	Activity Uncert.	LLD/MDA	% Abund.	Atom. No.	Comments	Mod Id	Mod Date	
0 K-40	NT	8.856E-6	1.061E-6	<input type="checkbox"/>	80.295%	40				
0 TL-208	NT	2.663E-7	5.18E-8	<input type="checkbox"/>	2.414%	208				
0 PB-212	NT	5.598E-7	7.62E-8	<input type="checkbox"/>	5.076%	212				
0 BI-214	NT	3.173E-7	7.17E-8	<input type="checkbox"/>	2.877%	214				
0 PB-214	NT	4.915E-7	1.511E-7	<input type="checkbox"/>	4.456%	214				
0 AC-228	NT	5.384E-7	1.577E-7	<input type="checkbox"/>	4.882%	228				
0 BE-7	AP	5.4377E-7		<input checked="" type="checkbox"/>	0.000%	7				
0 MN-54	AP	1.0564E-7		<input checked="" type="checkbox"/>	0.000%	54				
0 MN-56	AP	1.1039E-7		<input checked="" type="checkbox"/>	0.000%	56				
0 CO-57	AP	7.3047E-8		<input checked="" type="checkbox"/>	0.000%	57				
0 CO-58	AP	6.3912E-8		<input checked="" type="checkbox"/>	0.000%	58				
0 CO-60	AP	3.2562E-8		<input checked="" type="checkbox"/>	0.000%	60				
0 SB-124	AP	6.8643E-8		<input checked="" type="checkbox"/>	0.000%	124				
0 SB-125	FP	1.8795E-7		<input checked="" type="checkbox"/>	0.000%	125				
0 CS-134	FP	6.549E-8		<input checked="" type="checkbox"/>	0.000%	134				
0 CS-137	FP	1.143E-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 13:34

Hp Eng Rvw Req'd: Yes

Rad Mat Present: Yes

HP Notified Name:

Comments:

Health Physics Sample Records

Sample ID: 142465

Type: RLSSS

Type Detail: SAND

Status: APPROVED

Rasterized:

Description: 140529BD 02 STARYARD SURVEY PT 35

Review/Approve

HP Eng Review

Reviewed: COOPER, TERRY L

Date: 06/10/14 13:34

Comments:

Disposition

Disposition: OTHER

Result: Sample contains only natural isotopes

Remarks:

Final Approval

Approved: COOPER, TERRY L

Date: 06/10/14 13:35

Comments:

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*****
*          SONGS                      HEALTH PHYSICS REPORT          5-JUN-2014 14:30  *
*-----*
*                >>>> SAMPLE PARAMETERS <<<<<                *
*-----*
* Title       : 140529BD 02 STARYARD SURVEY PT 35                *
* ID          : 30356                      Acquisition date: 5-JUN-2014 14:27:02. *
* Start Time: 5-JUN-2014 14:27:00.                      *
* Stop Time: 5-JUN-2014 14:27:00.                      Counting System : U2GSP *
* Quantity   : 2.06000E+03 GR                      IHPS Sample Number: 142465 *
* Geometry   : C_1L_marinelli_sand_1                Analysis Library : HP_NATURAL *
*                               Operator: MICHAEL PARK *
*-----*
*                >>>> C #41-TP11750A PARAMETERS <<<<<                *
*-----*
* Elapsed Live Time : 0 00:03:00.47 Calibration : 5-JUN-2014 08:14: *
* Elapsed Real Time : 0 00:03:00.52 Energy Offset : -1.39807E-01 *
* Deadtime          : 0.0% Energy Slope : 4.99820E-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	238.61	69	6	1.19	477.65	474	8	13.6	5.86E-01	PB-212
1	242.22	25	5	1.83	484.87	482	7	24.3	4.81E-01	PB-214
1	295.59	23	8	1.79	591.63	586	10	30.7	8.28E-01	PB-214
1	351.77	49	6	1.45	704.02	700	9	17.3	4.78E-01	PB-214
1	583.17	26	0	2.09	1166.92	1163	8	19.5	1.57E+00	TL-208
1	609.30	21	0	1.49	1219.17	1215	9	22.6	7.08E-01	BI-214
1	911.22	16	2	1.77	1823.07	1819	9	29.3	6.21E-01	AC-228
1	1460.96	72	0	1.76	2922.44	2917	11	12.0	8.76E-01	K-40

Summary of Nuclide Activity
Sample ID : 30356

Page : 2
Acquisition date : 5-JUN-2014 14:27:02

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	8.856E-06	8.856E-06	1.061E-06	11.98	A
TL-208	3.05M	1.39	1.914E-07	2.663E-07	0.518E-07	19.46	A
PB-212	10.64H	1.00	5.589E-07	5.598E-07	0.762E-07	13.62	A
BI-214	19.90M	1.05	3.009E-07	3.173E-07	0.717E-07	22.61	A
PB-214	26.80M	1.04	4.724E-07	4.915E-07	1.511E-07	30.75	A
AC-228	6.13H	1.00	5.368E-07	5.384E-07	1.577E-07	29.30	A
Total Activity :			1.092E-05	1.103E-05			

Grand Total Activity : 1.092E-05 1.103E-05

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

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

Unidentified Energy Lines
Sample ID : 30356

Page : 3
Acquisition date : 5-JUN-2014 14:27:02

None

Flags: "T" = Tentatively associated

Interference Report
Sample ID : 30356

Page : 4
Acquisition date : 5-JUN-2014 14:27:02

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	72	10.67*	5.560E-01	8.856E-06	8.856E-06	11.98	
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	1.914E-07	2.663E-07	19.46	
	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		69	43.60*	2.055E+00	5.589E-07	5.598E-07	13.62	
300.03		-----	3.34	1.843E+00	-----	Line Not Found	-----	
BI-214		76.86	-----	0.58	1.651E+00	-----	Line Not Found	-----
		79.29	-----	0.97	1.741E+00	-----	Line Not Found	-----
		609.31	21	46.10*	1.112E+00	3.009E-07	3.173E-07	22.61
	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	25	7.46	2.042E+00	1.184E-06	1.232E-06	24.25	
	258.94	-----	0.55	1.981E+00	-----	Line Not Found	-----	
	295.09	23	19.20*	1.857E+00	4.724E-07	4.915E-07	30.75	
	351.87	49	37.10	1.686E+00	5.674E-07	5.903E-07	17.28	
	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
					uCi/GR	uCi/GR	
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	-----	2.90	2.414E+00	-----	Line Not Found	-----
	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	-----	12.40	1.725E+00	-----	Line Not Found	-----
	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	16	29.00*	7.486E-01	5.368E-07	5.384E-07	29.30
	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 : 30356

Page : 7
Acquisition date : 5-JUN-2014 14:27:02

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/GR)
BE-7	3.	477.61	5.4377E-07
MN-54	4.	834.83	1.0564E-07
MN-56	4.	846.81	1.1039E-07
CO-57	15.	122.06	7.3047E-08
CO-58	1.	810.79	6.3912E-08
CO-60	0.	1173.24	3.2562E-08
SB-124	3.	602.73	6.8643E-08
SB-125	3.	427.88	1.8795E-07
CS-134	2.	604.71	6.5490E-08
CS-137	6.	661.66	1.1430E-07