

# Health Physics Sample Records

Sample ID: 142461

Type: RLSSS

Type Detail: SAND

Status: APPROVED

Rasterized: ☐

Description: 140529BD 30 STARYARD SURVEY PT 30

## 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 07:43

Comments:

## Origin

Mat. Size/Volume: 1686 GRAMS

Docmnt/MO/Act #:

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

Description: STARYARD SURVEY PT 30

## Collection

Sample Tech: DYNES, WILLIAM J

Sample Date: 05/29/14 12:25

Count Time: 900 (secs.)

Tritium Req: No

Sample Size/Volume: 1686 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: 142461

Type: RLSSS

















Type Detail: SAND

Status: APPROVED

Rasterized: 

Description: 140529BD 30 STARYARD SURVEY PT 30

## Analysis

Geometry	MCA ID	Quant.	Units	Method	FP/AP	Lab	Analysis By	Date	Mod ID	Mod Date
C_1L_marinelli_sand_	30362	1686	GR		.000		PARK, MICHAEL C	06/05/14 15:43		
Isotope	Mode	Activity	Activity Uncert.	LLD/MDA	% Abund.	Atom. No.	Comments		Mod Id	Mod Date
0 K-40	NT	0.0000101	1.3E-6		79.106%	40				
0 TL-208	NT	3.042E-7	6.71E-8		2.383%	208				
0 PB-212	NT	4.612E-7	1.434E-7		3.612%	212				
0 BI-214	NT	5.794E-7	1.474E-7		4.538%	214				
0 PB-214	NT	6.648E-7	1.961E-7		5.207%	214				
0 AC-228	NT	6.58E-7	2.394E-7		5.154%	228				
0 BE-7	AP	7.4349E-7			0.000%	7				
0 MN-54	AP	8.7942E-8			0.000%	54				
0 MN-56	AP	1.0436E-7			0.000%	56				
0 CO-57	AP	7.1612E-8			0.000%	57				
0 CO-58	AP	1.1425E-7			0.000%	58				
0 CO-60	AP	1.8492E-7			0.000%	60				
0 SB-124	AP	8.6992E-8			0.000%	124				
0 SB-125	FP	1.8879E-7			0.000%	125				
0 CS-134	FP	8.4353E-8			0.000%	134				
0 CS-137	FP	9.4045E-8			0.000%	137				

## Analysis Review

Re-Analyze: No

Lic Rad Mat Present: No

Reviewed: COOPER, TERRY L

Date: 06/10/14 13:29

Hp Eng Rvw Req'd: Yes

Rad Mat Present: Yes

HP Notified Name:

Comments:

## Health Physics Sample Records

Sample ID: **142461**

Type: RLSSS

Type Detail: SAND

Status: APPROVED

Rasterized: 

Description: 140529BD 30 STARYARD SURVEY PT 30

### Review/Approve

#### HP Eng Review

Reviewed: COOPER, TERRY L

Date: 06/10/14 13:30

Comments:

#### Disposition

Disposition: OTHER

Result: Sample contains only natural isotopes

Remarks:

#### Final Approval

Approved: COOPER, TERRY L

Date: 06/10/14 13:30

Comments:

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*****
*          SONGS                      HEALTH PHYSICS REPORT          5-JUN-2014 15:31  *
*-----*
*          >>>> SAMPLE  PARAMETERS <<<<          *
*
* Title      : 140529BD 30 STARYARD SURVEY PT 30          *
*
* ID         : 30362                      Acquisition date: 5-JUN-2014 15:28:12. *
* Start Time: 5-JUN-2014 15:28:00.          *
* Stop Time: 5-JUN-2014 15:28:00.          Counting System   : U2GSP          *
* Quantity  : 1.68600E+03 GR              IHPS Sample Number: 142461          *
* Geometry  : C_1L_marinelli_sand_1      Analysis Library  : HP_NATURAL          *
*          Operator: MICHAEL PARK          *
*-----*
*          >>>> C #41-TP11750A  PARAMETERS <<<<          *
*
* Elapsed Live Time : 0 00:03:00.46      Calibration       : 5-JUN-2014 08:14:  *
* Elapsed Real Time  : 0 00:03:00.50      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	77.47	34	40	1.38	155.28	152	9	37.9	2.29E+00	BI-214 PB-212 PB-214
1	93.19	21	20	1.82	186.73	183	8	42.8	2.62E+00	AC-228
1	238.44	46	44	1.11	477.31	473	11	31.1	2.37E+00	PB-212
1	295.35	26	7	1.50	591.17	586	10	29.5	1.01E+00	PB-214
1	338.46	16	6	1.67	677.40	673	8	36.4	6.31E-01	AC-228
1	351.86	40	7	1.45	704.20	700	9	20.2	1.54E+00	PB-214
1	462.95	12	2	1.57	926.44	923	8	35.1	8.01E-01	AC-228
1	583.37	24	0	1.92	1167.31	1160	13	22.1	6.35E-01	TL-208
1	609.22	32	11	1.00	1219.01	1213	9	25.4	3.35E-01	BI-214
1	1460.93	67	2	1.91	2922.38	2917	10	12.9	2.44E-01	K-40

Summary of Nuclide Activity  
Sample ID : 30362

Page : 2  
Acquisition date : 5-JUN-2014 15:28:12

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	1.010E-05	1.010E-05	0.130E-05	12.87	A
TL-208	3.05M	1.45	2.102E-07	3.042E-07	0.671E-07	22.06	A
PB-212	10.64H	1.00	4.603E-07	4.612E-07	1.434E-07	31.09	A
BI-214	19.90M	1.06	5.461E-07	5.794E-07	1.474E-07	25.45	A
PB-214	26.80M	1.05	6.362E-07	6.648E-07	1.961E-07	29.49	A
AC-228	6.13H	1.00	6.558E-07	6.580E-07	2.394E-07	36.38	KA
Total Activity :			1.261E-05	1.276E-05			

Grand Total Activity : 1.261E-05 1.276E-05

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

Unidentified Energy Lines  
Sample ID : 30362

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Acquisition date : 5-JUN-2014 15:28:12

None

Flags: "T" = Tentatively associated

Interference Report  
Sample ID : 30362

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Acquisition date : 5-JUN-2014 15:28:12

No interference correction performed

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected Decay Corr		1-Sigma
					uCi/GR	uCi/GR	%Error
K-40	1460.83	67	10.67*	5.560E-01	1.010E-05	1.010E-05	12.87
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	24	86.00*	1.157E+00	2.102E-07	3.042E-07	22.06
PB-212	763.06	-----	1.64	8.934E-01	-----	Line Not Found	-----
	860.30	-----	12.00	7.922E-01	-----	Line Not Found	-----
	74.81	-----	10.50	1.570E+00	-----	Line Not Found	-----
	77.11	34	17.70	1.675E+00	1.028E-06	1.030E-06	37.92
	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	-----
BI-214	238.58	46	43.60*	2.056E+00	4.603E-07	4.612E-07	31.09
	300.03	-----	3.34	1.843E+00	-----	Line Not Found	-----
	76.86	34	0.58	1.675E+00	3.137E-05	3.328E-05	37.92
	79.29	-----	0.97	1.741E+00	-----	Line Not Found	-----
	609.31	32	46.10*	1.112E+00	5.461E-07	5.794E-07	25.45
	665.44	-----	1.56	1.023E+00	-----	Line Not Found	-----
	768.35	-----	4.88	8.873E-01	-----	Line Not Found	-----
PB-214	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	-----
	53.17	-----	1.10	5.203E-01	-----	Line Not Found	-----
	74.81	-----	6.52	1.570E+00	-----	Line Not Found	-----
	77.11	34	11.00	1.675E+00	1.654E-06	1.728E-06	37.92
	87.19	-----	3.88	1.983E+00	-----	Line Not Found	-----
	90.13	-----	1.15	2.055E+00	-----	Line Not Found	-----
PB-214	241.92	-----	7.46	2.043E+00	-----	Line Not Found	-----
	258.94	-----	0.55	1.981E+00	-----	Line Not Found	-----
	295.09	26	19.20*	1.858E+00	6.362E-07	6.648E-07	29.49
	351.87	40	37.10	1.686E+00	5.682E-07	5.938E-07	20.18
	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 uCi/GR	Decay Corr uCi/GR	1-Sigma %Error
AC-228	89.96	-----	3.40	2.051E+00	-----	Line Not Found	-----
	93.35	21	5.60	2.120E+00	1.603E-06	1.608E-06	42.77
	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	16	12.40	1.725E+00	6.558E-07	6.580E-07	36.38
	340.94	-----	0.52	1.718E+00	-----	Line Not Found	-----
	409.62	-----	2.20	1.531E+00	-----	Line Not Found	-----
	463.10	12	4.60	1.402E+00	1.666E-06	1.671E-06	35.08
	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	-----	29.00*	7.487E-01	-----	Line Not Found	-----
	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 : 30362

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Acquisition date : 5-JUN-2014 15:28:12

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/GR)
BE-7	4.	477.61	7.4349E-07
MN-54	1.	834.83	8.7942E-08
MN-56	2.	846.81	1.0436E-07
CO-57	9.	122.06	7.1612E-08
CO-58	3.	810.79	1.1425E-07
CO-60	4.	1173.24	1.8492E-07
SB-124	3.	602.73	8.6992E-08
SB-125	2.	427.88	1.8879E-07
CS-134	3.	604.71	8.4353E-08
CS-137	2.	661.66	9.4045E-08