

## Health Physics Sample Records

**Sample ID:** 142482

**Type:** RLSSS

**Type Detail:** SAND

**Status:** APPROVED

**Rasterized:** ☒

**Description:** 140603BD 11 CAMP MESA 10

### 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 MESA

**Reviewed:** DYNES, WILLIAM J

**Date:** 06/05/14 09:47

**Comments:**

### Origin

**Mat. Size/Volume:** 1261 GRAMS

**Docmnt/MO/Act #:**

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

**Description:** CAMP MESA # 10

### Collection

**Sample Tech:** DYNES, WILLIAM J

**Sample Date:** 06/03/14 13:00

**Count Time:** 900 (secs.)

**Tritium Req:** No

**Sample Size/Volume:** 1261 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: 142482

Type: RLSSS

















Type Detail: SAND

Status: APPROVED

Rasterized: 

Description: 140603BD 11 CAMP MESA 10

## Analysis

Geometry	MCA ID	Quant.	Units	Method	FP/AP	Lab	Analysis By	Date	Mod ID	Mod Date
B_1L_marinelli_sand_	30358	1261 GR			.000		PARK, MICHAEL C	06/05/14 15:13		
Isotope	Mode	Activity	Activity Uncert.	LLD/MDA	% Abund.	Atom. No.	Comments		Mod Id	Mod Date
0 K-40	NT	0.0000108	1.98E-6		62.357%	40				
0 TL-208	NT	4.37E-7	1.044E-7		2.523%	208				
0 PB-212	NT	8.948E-7	1.331E-7		5.166%	212				
0 BI-214	NT	7.567E-7	1.487E-7		4.369%	214				
0 PB-214	NT	1.1E-6	2.25E-7		6.351%	214				
0 RA-224	NT	3.331E-6	1.006E-6		19.233%	224				
0 BE-7	AP	1.1903E-6			0.000%	7				
0 MN-54	AP	1.9573E-7			0.000%	54				
0 MN-56	AP	2.1043E-7			0.000%	56				
0 CO-57	AP	1.1501E-7			0.000%	57				
0 CO-58	AP	1.649E-7			0.000%	58				
0 CO-60	AP	1.7557E-7			0.000%	60				
0 SB-124	AP	1.1645E-7			0.000%	124				
0 SB-125	FP	3.9252E-7			0.000%	125				
0 CS-134	FP	1.0059E-7			0.000%	134				
0 CS-137	FP	1.5332E-7			0.000%	137				

## Analysis Review

Re-Analyze: No

Lic Rad Mat Present: No

Reviewed: COOPER, TERRY L

Date: 06/10/14 14:56

Hp Eng Rvw Req'd: Yes

Rad Mat Present: Yes

HP Notified Name:

Comments:

## Health Physics Sample Records

Sample ID: **142482**

Type: RLSSS

Type Detail: SAND

Status: APPROVED

Rasterized: 

Description: 140603BD 11 CAMP MESA 10

**Review/Approve**

### HP Eng Review

Reviewed: COOPER, TERRY L

Date: 06/10/14 14:56

Comments:

### Disposition

Disposition: OTHER

Result: Sample contains only natural isotopes

Remarks:

### Final Approval

Approved: COOPER, TERRY L

Date: 06/10/14 14:56

Comments:

```

*****
*          SONGS                      HEALTH PHYSICS REPORT          5-JUN-2014 15:03      *
*-----*
*          >>>> SAMPLE  PARAMETERS <<<<          *
*
* Title      : 140603BD 11 CAMP MESA 10          *
*
* ID         : 30358                      Acquisition date: 5-JUN-2014 14:59:52. *
* Start Time: 5-JUN-2014 14:59:00.          *
* Stop Time: 5-JUN-2014 14:59:00.          Counting System   : U2GSP          *
* Quantity   : 1.26100E+03 GR              IHPS Sample Number: 142482          *
* Geometry   : B_1L_marinelli_sand_1      Analysis Library  : HP_NATURAL          *
*          Operator: MICHAEL PARK          *
*-----*
*          >>>> B #42-TP11663A  PARAMETERS <<<<          *
*
* Elapsed Live Time : 0 00:03:00.46      Calibration       : 5-JUN-2014 08:35:          *
* Elapsed Real Time  : 0 00:03:00.49      Energy Offset    : -4.96372E-01          *
* Deadtime           : 0.0%              Energy Slope     : 5.00067E-01          *
* Activity Mult Factor: 1.00000E+00      Energy Tolerance: 1.00000          *
* Half Life Ratio    : 8.00000          Sensitivity       : 5.00000          *
*
*****

```

Post-NID Peak Search Report

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides
1	238.33	59	5	2.48	477.60	472	10	14.9	2.45E+00	PB-212
1	241.71	20	4	1.40	484.34	482	8	30.2	1.53E+00	RA-224
										PB-214
1	295.27	26	2	1.67	591.46	588	7	20.4	2.21E-01	PB-214
1	351.74	30	2	1.86	704.39	700	8	19.4	3.43E-01	PB-214
1	583.01	17	0	2.16	1166.87	1162	9	23.9	5.96E-01	TL-208
1	609.55	24	0	1.77	1219.94	1215	9	19.6	1.42E-01	BI-214
1	1460.90	41	3	2.09	2922.49	2917	12	18.3	2.00E+00	K-40

Summary of Nuclide Activity  
Sample ID : 30358

Page : 2  
Acquisition date : 5-JUN-2014 14:59:52

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	1.080E-05	1.080E-05	0.198E-05	18.32	A
TL-208	3.05M	1.69	2.592E-07	4.370E-07	1.044E-07	23.88	A
PB-212	10.64H	1.00	8.925E-07	8.948E-07	1.331E-07	14.88	A
BI-214	19.90M	1.09	6.966E-07	7.567E-07	1.487E-07	19.65	A
PB-214	26.80M	1.06	1.034E-06	1.100E-06	0.225E-06	20.43	A
RA-224	3.66D	1.00	3.330E-06	3.331E-06	1.006E-06	30.21	A
Total Activity :			1.701E-05	1.732E-05			

Grand Total Activity : 1.701E-05 1.732E-05

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

Unidentified Energy Lines  
Sample ID : 30358

Page : 3  
Acquisition date : 5-JUN-2014 14:59:52

None

Flags: "T" = Tentatively associated

Interference Report  
Sample ID : 30358

Page : 4  
Acquisition date : 5-JUN-2014 14:59:52

No interference correction performed

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected uCi/GR	Decay Corr uCi/GR	1-Sigma %Error
K-40	1460.83	41	10.67*	4.211E-01	1.080E-05	1.080E-05	18.32
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	17	86.00*	9.199E-01	2.592E-07	4.370E-07	23.88
	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	59	43.60*	1.806E+00	8.925E-07	8.948E-07	14.88
	300.03	-----	3.34	1.562E+00	-----	Line Not Found	-----
BI-214	76.86	-----	0.58	1.229E+00	-----	Line Not Found	-----
	79.29	-----	0.97	1.320E+00	-----	Line Not Found	-----
	609.31	24	46.10*	8.830E-01	6.966E-07	7.567E-07	19.65
	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	-----
	1847.41	-----	2.12	4.187E-01	-----	Line Not Found	-----
PB-214	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	20	7.46	1.791E+00	1.741E-06	1.851E-06	30.21
	258.94	-----	0.55	1.718E+00	-----	Line Not Found	-----
	295.09	26	19.20*	1.579E+00	1.034E-06	1.100E-06	20.43
	351.87	30	37.10	1.396E+00	6.800E-07	7.231E-07	19.38
	785.83	-----	1.09	6.925E-01	-----	Line Not Found	-----
	839.00	-----	0.59	6.497E-01	-----	Line Not Found	-----



Nuclide Line Activity Report (continued)  
Sample ID : 30358

Page : 6  
Acquisition date : 5-JUN-2014 14:59:52

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected uCi/GR	Decay Corr uCi/GR	1-Sigma %Error
RA-224	83.79	-----	0.20	1.474E+00	-----	Line Not Found	-----
	240.76	20	3.90*	1.791E+00	3.330E-06	3.331E-06	30.21

Flag: "\*" = Keyline

Minimum Detectable Activity Report  
Sample ID : 30358

Page : 7  
Acquisition date : 5-JUN-2014 14:59:52

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/GR)
BE-7	4.	477.61	1.1903E-06
MN-54	3.	834.83	1.9573E-07
MN-56	3.	846.81	2.1043E-07
CO-57	10.	122.06	1.1501E-07
CO-58	2.	810.79	1.6490E-07
CO-60	1.	1332.50	1.7557E-07
SB-124	2.	602.73	1.1645E-07
SB-125	4.	427.88	3.9252E-07
CS-134	1.	604.71	1.0059E-07
CS-137	2.	661.66	1.5332E-07