

Health Physics Sample Records

Sample ID: 142478

Type: RLSSS

Type Detail: SAND

Status: APPROVED

Rasterized:

Description: 140603BD 7 CAMP MESA # 2

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: 06/05/14 09:25

Comments:

Origin

Mat. Size/Volume: 1611 GRAMS

Docmnt/MO/Act #:

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

Description: CAMP MESA # 2

Collection

Sample Tech: DYNES, WILLIAM J

Sample Date: 06/03/14 12:30

Count Time: 900 (secs.)

Tritium Req: No

Sample Size/Volume: 1611 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: 140603BD 7 CAMP MESA # 2

Analysis

Geometry	MCA ID	Quant.	Units	Method	FP/AP	Lab	Analysis By	Date	Mod ID	Mod Date
A_1L_marinelli_sand_	30357	1611 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	0.00001237	1.43E-6	┌	83.859%	40				
0 TL-208	NT	3.643E-7	6.97E-8	┌	2.470%	208				
0 PB-212	NT	6.257E-7	9.59E-8	┌	4.242%	212				
0 BI-214	NT	7.037E-7	1.209E-7	┌	4.771%	214				
0 PB-214	NT	6.873E-7	1.985E-7	┌	4.659%	214				
0 BE-7	AP	7.5113E-7		√	0.000%	7				
0 MN-54	AP	1.0782E-7		√	0.000%	54				
0 MN-56	AP	3.2475E-8		√	0.000%	56				
0 CO-57	AP	6.5814E-8		√	0.000%	57				
0 CO-58	AP	1.0143E-7		√	0.000%	58				
0 CO-60	AP	4.5904E-8		√	0.000%	60				
0 SB-124	AP	6.1358E-8		√	0.000%	124				
0 SB-125	FP	2.233E-7		√	0.000%	125				
0 CS-134	FP	8.0981E-8		√	0.000%	134				
0 CS-137	FP	7.9919E-8		√	0.000%	137				

Analysis Review

Re-Analyze: No

Lic Rad Mat Present: No

Reviewed: COOPER, TERRY L

Date: 06/10/14 14:40

Hp Eng Rvw Req'd: Yes

Rad Mat Present: Yes

HP Notified Name:

Comments:

Health Physics Sample Records

Sample ID: 142478

Type: RLSSS

Type Detail: SAND

Status: APPROVED

Rasterized:

Description: 140603BD 7 CAMP MESA # 2

Review/Approve

HP Eng Review

Reviewed: COOPER, TERRY L

Date: 06/10/14 14:40

Comments:

Disposition

Disposition: OTHER

Result: Sample contains only natural isotopes

Remarks:

Final Approval

Approved: COOPER, TERRY L

Date: 06/10/14 14:40

Comments:

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*****
*          SONGS                      HEALTH PHYSICS REPORT          5-JUN-2014 15:02  *
*-----*
*                >>>> SAMPLE PARAMETERS <<<<<                *
*
* Title       : 140603BD 7 CAMP MESA # 2                          *
*
* ID          : 30357                      Acquisition date: 5-JUN-2014 14:59:24. *
* Start Time : 5-JUN-2014 14:59:00.                               *
* Stop Time  : 5-JUN-2014 14:59:00.                               *
* Quantity   : 1.61100E+03 GR                      Counting System   : U2GSP          *
* Geometry   : A_1L_marinelli_sand_1              IHPS Sample Number: 142478       *
* Operator   : MICHAEL PARK                        Analysis Library  : HP_NATURAL    *
*-----*
*                >>>> A #41-TP11679B PARAMETERS <<<<<                *
*
* Elapsed Live Time : 0 00:03:00.44  Calibration       : 5-JUN-2014 08:09: *
* Elapsed Real Time  : 0 00:03:00.49  Energy Offset     : 2.12659E-01      *
* Deadtime           : 0.0%           Energy Slope      : 4.99528E-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	77.31	32	26	1.34	154.35	152	8	34.1	3.31E+00	BI-214 PB-212 PB-214
1	238.46	61	9	1.00	476.95	473	7	15.3	3.03E+00	PB-212
1	295.02	25	9	1.40	590.16	586	9	28.9	9.96E-01	PB-214
1	351.75	32	8	1.32	703.74	698	9	23.5	5.05E-01	PB-214
1	583.12	25	0	2.53	1166.92	1162	9	19.1	4.95E-01	TL-208
1	609.19	35	0	1.89	1219.11	1213	11	17.2	5.04E-01	BI-214
1	1460.95	75	0	2.35	2924.25	2917	13	11.6	4.95E-01	K-40

Summary of Nuclide Activity
Sample ID : 30357

Page : 2
Acquisition date : 5-JUN-2014 14:59:24

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	1.237E-05	1.237E-05	0.143E-05	11.56	A
TL-208	3.05M	1.52	2.402E-07	3.643E-07	0.697E-07	19.14	A
PB-212	10.64H	1.00	6.244E-07	6.257E-07	0.959E-07	15.32	A
BI-214	19.90M	1.07	6.584E-07	7.037E-07	1.209E-07	17.18	A
PB-214	26.80M	1.05	6.542E-07	6.873E-07	1.985E-07	28.88	A
Total Activity :			1.454E-05	1.475E-05			

Grand Total Activity : 1.454E-05 1.475E-05

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

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

Unidentified Energy Lines
Sample ID : 30357

Page : 3
Acquisition date : 5-JUN-2014 14:59:24

None

Flags: "T" = Tentatively associated

Interference Report
Sample ID : 30357

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Acquisition date : 5-JUN-2014 14:59:24

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	75	10.67*	5.314E-01	1.237E-05	1.237E-05	11.56
TL-208	72.80	-----	2.14	1.594E+00	-----	Line Not Found	-----
	74.97	-----	3.60	1.692E+00	-----	Line Not Found	-----
	84.79	-----	1.27	2.058E+00	-----	Line Not Found	-----
	252.45	-----	0.80	2.021E+00	-----	Line Not Found	-----
	277.28	-----	6.80	1.920E+00	-----	Line Not Found	-----
	510.61	-----	21.60	1.265E+00	-----	Line Not Found	-----
	583.02	25	86.00*	1.128E+00	2.402E-07	3.643E-07	19.14
	763.06	-----	1.64	8.744E-01	-----	Line Not Found	-----
	860.30	-----	12.00	7.770E-01	-----	Line Not Found	-----
	PB-212	74.81	-----	10.50	1.685E+00	-----	Line Not Found
77.11		32	17.70	1.791E+00	9.337E-07	9.357E-07	34.12
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		61	43.60*	2.083E+00	6.244E-07	6.257E-07	15.32
300.03		-----	3.34	1.834E+00	-----	Line Not Found	-----
BI-214	76.86	32	0.58	1.791E+00	2.850E-05	3.045E-05	34.12
	79.29	-----	0.97	1.869E+00	-----	Line Not Found	-----
	609.31	35	46.10*	1.084E+00	6.584E-07	7.037E-07	17.18
	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	32	11.00	1.791E+00	1.502E-06	1.579E-06	34.12
	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	25	19.20*	1.853E+00	6.542E-07	6.873E-07	28.88
	351.87	32	37.10	1.662E+00	4.898E-07	5.146E-07	23.49
	785.83	-----	1.09	8.495E-01	-----	Line Not Found	-----
839.00	-----	0.59	7.964E-01	-----	Line Not Found	-----	

Nuclide Line Activity Report (continued)
Sample ID : 30357

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Acquisition date : 5-JUN-2014 14:59:24

Flag: "*" = Keyline

Minimum Detectable Activity Report
Sample ID : 30357

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Acquisition date : 5-JUN-2014 14:59:24

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/GR)
BE-7	3.	477.61	7.5113E-07
MN-54	2.	834.83	1.0782E-07
MN-56	0.	846.81	3.2475E-08
CO-57	8.	122.06	6.5814E-08
CO-58	2.	810.79	1.0143E-07
CO-60	0.	1332.50	4.5904E-08
SB-124	1.	602.73	6.1358E-08
SB-125	3.	427.88	2.2330E-07
CS-134	2.	604.71	8.0981E-08
CS-137	1.	661.66	7.9919E-08