

## Health Physics Sample Records

Sample ID: **142495**

Type: RLSSS

Type Detail: SAND

Status: APPROVED

Rasterized: ☒

Description: 140605BD06 SOUTH LAY DOWN # 12

### Common

Resp Org: P4000 - PROJECT MANAGEMENT

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: 06/06/14 09:38

Comments:

### Origin

Mat. Size/Volume: 1883 GRAMS

Docmnt/MO/Act #:

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

Description: SOUTH LAY DOWN #12

### Collection

Sample Tech: DYNES, WILLIAM J

Sample Date: 06/05/14 09:20

Count Time: 900 (secs.)

Tritium Req: No

Sample Size/Volume: 1883 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: COUNT TO MDA

Material Loc:

# Health Physics Sample Records

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Type: RLSSS















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Status: APPROVED

Rasterized: 

Description: 140605BD06 SOUTH LAY DOWN # 12

## Analysis

Geometry	MCA ID	Quant.	Units	Method	FP/AP	Lab	Analysis By	Date	Mod ID	Mod Date
B_1L_marinelli_sand_	30392	1883 GR			.000		NEEBE, DAVID J	06/06/14 20:58		
Isotope	Mode	Activity	Activity Uncert.	LLD/MDA	% Abund.	Atom. No.	Comments		Mod Id	Mod Date
0 K-40	NT	0.00001181	1.45E-6		85.779%	40				
0 PB-212	NT	5.708E-7	1.346E-7		4.146%	212				
0 BI-214	NT	6.045E-7	1.45E-7		4.391%	214				
0 PB-214	NT	7.827E-7	1.777E-7		5.685%	214				
0 BE-7	AP	8.8749E-7			0.000%	7				
0 MN-54	AP	1.2811E-7			0.000%	54				
0 MN-56	AP	9.2536E-8			0.000%	56				
0 CO-57	AP	7.8648E-8			0.000%	57				
0 CO-58	AP	1.5594E-7			0.000%	58				
0 CO-60	AP	4.8849E-8			0.000%	60				
0 SB-124	AP	1.2513E-7			0.000%	124				
0 SB-125	FP	3.9241E-7			0.000%	125				
0 CS-134	FP	1.0923E-7			0.000%	134				
0 CS-137	FP	1.2077E-7			0.000%	137				

## Analysis Review

Re-Analyze: No

Lic Rad Mat Present: No

Reviewed: COOPER, TERRY L

Date: 06/11/14 06:48

Hp Eng Rvw Req'd: Yes

Rad Mat Present: Yes

HP Notified Name:

Comments:


## Health Physics Sample Records

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Status: APPROVED

Rasterized: 

Description: 140605BD06 SOUTH LAY DOWN # 12

Review/Approve

### HP Eng Review

Reviewed: COOPER, TERRY L

Date: 06/11/14 06:49

Comments:

### Disposition

Disposition: OTHER

Result: Sample contains only natural isotopes

Remarks:

### Final Approval

Approved: COOPER, TERRY L

Date: 06/11/14 06:49

Comments:

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*****
*          SONGS                      HEALTH PHYSICS REPORT          6-JUN-2014 20:56  *
*-----*
*          >>>> SAMPLE  PARAMETERS <<<<          *
*
* Title      : 140605BD06 SOUTH LAY DOWN # 12          *
*
* ID         : 30392          Acquisition date: 6-JUN-2014 20:53:09. *
* Start Time: 6-JUN-2014 20:53:00.          *
* Stop Time: 6-JUN-2014 20:53:00.          Counting System   : U2GSP          *
* Quantity  : 1.88300E+03 GR          IHPS Sample Number: 142495          *
* Geometry  : B_1L_marinelli_sand_1          Analysis Library : HP_NATURAL          *
*          Operator: DAVID NEEBE          *
*-----*
*          >>>> B #42-TP11663A  PARAMETERS <<<<          *
*
* Elapsed Live Time : 0 00:03:00.42          Calibration      : 6-JUN-2014 20:09:          *
* Elapsed Real Time : 0 00:03:00.46          Energy Offset   : -4.40560E-01          *
* Deadtime         : 0.0%          Energy Slope      : 5.00074E-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	238.40	56	35	1.93	477.61	475	11	23.6	3.96E+00	PB-212
1	295.24	29	5	1.61	591.27	586	9	22.7	1.32E+00	PB-214
1	351.76	45	6	3.13	704.30	699	15	19.3	8.10E-01	PB-214
1	609.40	29	6	1.83	1219.52	1214	11	24.0	2.32E-01	BI-214
1	1460.86	67	0	2.49	2922.24	2915	13	12.3	6.37E-01	K-40

Summary of Nuclide Activity  
Sample ID : 30392

Page : 2  
Acquisition date : 6-JUN-2014 20:53:09

Total number of lines in spectrum 5  
Number of unidentified lines 0  
Number of lines tentatively identified by NID 5 100.00%

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	1.181E-05	1.181E-05	0.145E-05	12.27	A
PB-212	10.64H	1.00	5.697E-07	5.708E-07	1.346E-07	23.58	A
BI-214	19.90M	1.06	5.709E-07	6.045E-07	1.450E-07	23.99	A
PB-214	26.80M	1.04	7.500E-07	7.827E-07	1.777E-07	22.71	A
Total Activity :			1.370E-05	1.377E-05			

Grand Total Activity : 1.370E-05 1.377E-05

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

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

Unidentified Energy Lines  
Sample ID : 30392

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Acquisition date : 6-JUN-2014 20:53:09

None

Flags: "T" = Tentatively associated

Interference Report  
Sample ID : 30392

Page : 4  
Acquisition date : 6-JUN-2014 20:53:09

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	67	10.67*	4.211E-01	1.181E-05	1.181E-05	12.27
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	56	43.60*	1.806E+00	5.697E-07	5.708E-07	23.58
	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	29	46.10*	8.832E-01	5.709E-07	6.045E-07	23.99
	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	-----	7.46	1.790E+00	-----	Line Not Found	-----
	258.94	-----	0.55	1.718E+00	-----	Line Not Found	-----
	295.09	29	19.20*	1.579E+00	7.500E-07	7.827E-07	22.71
	351.87	45	37.10	1.396E+00	6.988E-07	7.292E-07	19.31
	785.83	-----	1.09	6.925E-01	-----	Line Not Found	-----
	839.00	-----	0.59	6.497E-01	-----	Line Not Found	-----

Flag: "\*" = Keyline



Minimum Detectable Activity Report  
Sample ID : 30392

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Acquisition date : 6-JUN-2014 20:53:09

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/GR)
BE-7	5.	477.61	8.8749E-07
MN-54	3.	834.83	1.2811E-07
MN-56	1.	846.81	9.2536E-08
CO-57	11.	122.06	7.8648E-08
CO-58	5.	810.79	1.5594E-07
CO-60	0.	1332.50	4.8849E-08
SB-124	6.	602.73	1.2513E-07
SB-125	10.	427.88	3.9241E-07
CS-134	4.	604.71	1.0923E-07
CS-137	3.	661.66	1.2077E-07