

Health Physics Sample Records

Sample ID: 142516

Type: RLSSS      Type Detail: SAND      Status: APPROVED      Rasterized:

Description: 140523BD02 BACKGROUND SECURITY # 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: COUNT TO MDA

Reviewed: DYNES, WILLIAM J      Date: 06/10/14 13:15

Comments: COUNT TO MDA

Origin

Mat. Size/Volume: 1764 GRAMS      Docmnt/MO/Act #:      Proposed Ship Date: 00/00/00 00:00

Description: BACKGROUND SECURITY # 2

Collection

Sample Tech: DYNES, WILLIAM J      Sample Date: 05/23/14 11:20      Count Time: 900 (secs.)

Tritium Req: No      Sample Size/Volume: 1764 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:	<input checked="" type="checkbox"/>

Location

Unit: NON-UNIT RE      Area: MS      Elev: 100      Room:      Depth: 3" (in.)      Equip ID:

Stored By: ,      Date: 00/00/00 00:00

Sample Loc:

Other: COUNT TO MDA

Material Loc:

**Health Physics Sample Records**

Sample ID: **142516**

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Status: APPROVED

Rasterized:

Description: 140523BD02 BACKGROUND SECURITY # 2

**Analysis**

Geometry	MCA ID	Quant.	Units	Method	FP/AP	Lab	Analysis By	Date	Mod ID	Mod Date
A_1L_marinelli_sand_	1011	1764	GR		.000		DYNES, WILLIAM J	06/10/14 13:43		

Isotope	Mode	Activity	Activity Uncert.	LLD/MDA	% Abund.	Atom. No.	Comments	Mod Id	Mod Date
0	K-40	NT	0.00001431	1.69E-6					
					72.765%	40			
0	TL-208	NT	3.184E-7	1.245E-7					
					1.619%	208			
0	PB-212	NT	6.544E-7	1.171E-7					
					3.328%	212			
0	BI-214	NT	3.869E-7	1.238E-7					
					1.967%	214			
0	PB-214	NT	5.384E-7	2.302E-7					
					2.738%	214			
0	RA-226	NT	2.717E-6	1.142E-6					
					13.816%	226			
0	AC-228	NT	5.727E-7	1.808E-7					
					2.912%	228			
0	U-235	NT	1.682E-7	7.4E-8					
					0.855%	235			
0	BE-7	AP	1.0196E-6						
					0.000%	7			
0	MN-54	AP	1.3763E-7						
					0.000%	54			
0	MN-56	AP	1.5907E-7						
					0.000%	56			
0	CO-57	AP	1.0102E-7						
					0.000%	57			
0	CO-58	AP	1.2632E-7						
					0.000%	58			
0	CO-60	AP	4.8612E-8						
					0.000%	60			
0	SB-124	AP	8.3534E-8						
					0.000%	124			
0	SB-125	FP	2.963E-7						
					0.000%	125			
0	CS-134	FP	8.3958E-8						
					0.000%	134			
0	CS-137	FP	1.0464E-7						
					0.000%	137			

**Analysis Review**

Re-Analyze: No

Lic Rad Mat Present: No

Reviewed: COOPER, TERRY L

Date: 06/11/14 08:17

Hp Eng Rvw Req'd: Yes

Rad Mat Present: Yes

HP Notified Name:

Comments: COUNT TO MDA

## Health Physics Sample Records


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Sample ID: 142516

Type: RLSSS

Type Detail: SAND

Status: APPROVED

Rasterized: 

Description: 140523BD02 BACKGROUND SECURITY # 2

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### Review/Approve

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#### HP Eng Review

Reviewed: COOPER, TERRY L

Date: 06/11/14 08:18

Comments: U-235 is likely a mis-ID off the Ra-226 energy peak

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#### Disposition

Disposition: OTHER

Result: Sample contains only natural isotopes

Remarks:

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#### Final Approval

Approved: COOPER, TERRY L

Date: 06/11/14 08:18

Comments:

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*****
*          SONGS                      HEALTH PHYSICS REPORT          10-JUN-2014 13:31  *
*-----*
*                >>>> SAMPLE PARAMETERS <<<<<                *
*
* Title       : 140523BD02 BACKGROUND SECURITY # 2                *
*
* ID          : 1011                      Acquisition date: 10-JUN-2014 13:28:47 *
* Start Time: 10-JUN-2014 13:28:00                *
* Stop Time  : 10-JUN-2014 13:28:00                Counting System   : U1GSP      *
* Quantity   : 1.76400E+03 GR                    IHPS Sample Number: 142516 *
* Geometry   : A_1L_marinelli_sand_1              Analysis Library  : HP_NATURAL *
*                               Operator: BILL DYNES                *
*-----*
*                >>>> A -1922924 PARAMETERS <<<<<                *
*
* Elapsed Live Time : 0 00:03:00.26 Calibration      : 10-JUN-2014 00:04 *
* Elapsed Real Time : 0 00:03:00.33 Energy Offset   : -1.04456E-01 *
* Deadtime          : 0.0% Energy Slope           : 4.99840E-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	186.08	23	21	1.48	372.47	367	9	41.9	1.80E+00	U-235 RA-226
1	238.63	65	17	1.33	477.61	472	10	17.4	3.95E-01	PB-212
1	295.17	20	14	1.89	590.70	586	11	42.6	4.97E-01	PB-214
1	352.25	41	9	1.66	704.90	700	9	20.1	1.46E+00	PB-214
1	583.04	19	7	0.79	1166.54	1158	14	38.7	7.88E+00	TL-208
1	609.30	19	5	1.73	1219.07	1214	10	31.7	3.77E-01	BI-214
1	911.45	13	0	1.26	1823.40	1817	10	29.6	6.16E-01	AC-228
1	1460.84	81	0	2.18	2922.05	2916	12	11.2	5.08E-01	K-40

Unidentified Energy Lines  
Sample ID : 1011

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Acquisition date : 10-JUN-2014 13:28:47

None

Flags: "T" = Tentatively associated

Interference Report  
Sample ID : 1011

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Acquisition date : 10-JUN-2014 13:28:47

No interference correction performed

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected Decay Corr		1-Sigma
					uCi/GR	uCi/GR	
K-40	1460.83	81	10.67*	4.482E-01	1.431E-05	1.431E-05	11.80
TL-208	72.80	-----	2.14	1.155E+00	-----	Line Not Found	-----
	74.97	-----	3.60	1.239E+00	-----	Line Not Found	-----
	84.79	-----	1.27	1.578E+00	-----	Line Not Found	-----
	252.45	-----	0.80	1.887E+00	-----	Line Not Found	-----
	277.28	-----	6.80	1.783E+00	-----	Line Not Found	-----
	510.61	-----	21.60	1.121E+00	-----	Line Not Found	-----
	583.02	19	86.00*	9.954E-01	1.929E-07	3.184E-07	39.12
	763.06	-----	1.64	7.714E-01	-----	Line Not Found	-----
PB-212	860.30	-----	12.00	6.870E-01	-----	Line Not Found	-----
	74.81	-----	10.50	1.233E+00	-----	Line Not Found	-----
	77.11	-----	17.70	1.319E+00	-----	Line Not Found	-----
	87.19	-----	6.27	1.650E+00	-----	Line Not Found	-----
	90.13	-----	1.86	1.730E+00	-----	Line Not Found	-----
	115.12	-----	0.59	2.162E+00	-----	Line Not Found	-----
	238.58	65	43.60*	1.948E+00	6.527E-07	6.544E-07	17.90
	300.03	-----	3.34	1.694E+00	-----	Line Not Found	-----
BI-214	76.86	-----	0.58	1.310E+00	-----	Line Not Found	-----
	79.29	-----	0.97	1.397E+00	-----	Line Not Found	-----
	609.31	19	46.10*	9.557E-01	3.574E-07	3.869E-07	31.99
	665.44	-----	1.56	8.797E-01	-----	Line Not Found	-----
	768.35	-----	4.88	7.663E-01	-----	Line Not Found	-----
	806.16	-----	1.23	7.315E-01	-----	Line Not Found	-----
	934.04	-----	3.16	6.352E-01	-----	Line Not Found	-----
	1120.27	-----	15.00	5.391E-01	-----	Line Not Found	-----
	1155.18	-----	1.69	5.255E-01	-----	Line Not Found	-----
	1238.11	-----	5.92	4.976E-01	-----	Line Not Found	-----
	1280.95	-----	1.47	4.855E-01	-----	Line Not Found	-----
	1377.66	-----	4.02	4.629E-01	-----	Line Not Found	-----
	1385.30	-----	0.78	4.614E-01	-----	Line Not Found	-----
	1401.48	-----	1.39	4.583E-01	-----	Line Not Found	-----
	1407.97	-----	2.48	4.571E-01	-----	Line Not Found	-----
	1509.22	-----	2.19	4.415E-01	-----	Line Not Found	-----
PB-214	1583.22	-----	0.72	4.336E-01	-----	Line Not Found	-----
	1661.26	-----	1.15	4.280E-01	-----	Line Not Found	-----
	1729.58	-----	3.05	4.255E-01	-----	Line Not Found	-----
	1764.49	-----	15.90	4.249E-01	-----	Line Not Found	-----
	1847.41	-----	2.12	4.256E-01	-----	Line Not Found	-----
	53.17	-----	1.10	3.707E-01	-----	Line Not Found	-----
	74.81	-----	6.52	1.233E+00	-----	Line Not Found	-----
	77.11	-----	11.00	1.319E+00	-----	Line Not Found	-----
	87.19	-----	3.88	1.650E+00	-----	Line Not Found	-----
	90.13	-----	1.15	1.730E+00	-----	Line Not Found	-----
	241.92	-----	7.46	1.933E+00	-----	Line Not Found	-----
	258.94	-----	0.55	1.859E+00	-----	Line Not Found	-----
	295.09	20	19.20*	1.713E+00	5.075E-07	5.384E-07	42.75
	351.87	41	37.10	1.514E+00	6.179E-07	6.555E-07	20.57
785.83	-----	1.09	7.498E-01	-----	Line Not Found	-----	
839.00	-----	0.59	7.038E-01	-----	Line Not Found	-----	

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected Decay Corr		1-Sigma %Error
					uCi/GR	uCi/GR	
RA-226	81.07	-----	0.18	1.459E+00	-----	Line Not Found	-----
	186.11	23	3.28*	2.179E+00	2.717E-06	2.717E-06	42.04
AC-228	89.96	-----	3.40	1.726E+00	-----	Line Not Found	-----
	93.35	-----	5.60	1.811E+00	-----	Line Not Found	-----
	99.55	-----	1.30	1.943E+00	-----	Line Not Found	-----
	105.36	-----	2.00	2.042E+00	-----	Line Not Found	-----
	108.99	-----	0.67	2.093E+00	-----	Line Not Found	-----
	129.03	-----	2.90	2.254E+00	-----	Line Not Found	-----
	153.89	-----	0.84	2.276E+00	-----	Line Not Found	-----
	209.39	-----	4.10	2.079E+00	-----	Line Not Found	-----
	216.24	-----	0.80	2.048E+00	-----	Line Not Found	-----
	270.26	-----	3.80	1.812E+00	-----	Line Not Found	-----
	328.07	-----	3.50	1.593E+00	-----	Line Not Found	-----
	338.42	-----	12.40	1.558E+00	-----	Line Not Found	-----
	340.94	-----	0.52	1.550E+00	-----	Line Not Found	-----
	409.62	-----	2.20	1.348E+00	-----	Line Not Found	-----
	463.10	-----	4.60	1.219E+00	-----	Line Not Found	-----
	562.65	-----	1.01	1.028E+00	-----	Line Not Found	-----
	581.52	-----	3.00	9.978E-01	-----	Line Not Found	-----
	726.63	-----	0.87	8.087E-01	-----	Line Not Found	-----
	755.28	-----	1.32	7.791E-01	-----	Line Not Found	-----
	772.28	-----	1.09	7.625E-01	-----	Line Not Found	-----
	782.12	-----	0.59	7.532E-01	-----	Line Not Found	-----
	794.79	-----	4.60	7.416E-01	-----	Line Not Found	-----
	830.59	-----	0.63	7.107E-01	-----	Line Not Found	-----
	835.60	-----	1.71	7.065E-01	-----	Line Not Found	-----
	840.44	-----	0.94	7.026E-01	-----	Line Not Found	-----
	904.29	-----	0.89	6.549E-01	-----	Line Not Found	-----
	911.16	13	29.00*	6.501E-01	5.702E-07	5.727E-07	31.57
	964.64	-----	5.80	6.162E-01	-----	Line Not Found	-----
	968.97	-----	17.40	6.137E-01	-----	Line Not Found	-----
	1246.60	-----	0.57	4.951E-01	-----	Line Not Found	-----
	1459.19	-----	1.06	4.485E-01	-----	Line Not Found	-----
	1496.00	-----	1.05	4.432E-01	-----	Line Not Found	-----
	1501.44	-----	0.58	4.425E-01	-----	Line Not Found	-----
	1580.30	-----	0.71	4.338E-01	-----	Line Not Found	-----
	1588.23	-----	3.60	4.331E-01	-----	Line Not Found	-----
	1630.47	-----	1.95	4.299E-01	-----	Line Not Found	-----
	1638.10	-----	0.54	4.294E-01	-----	Line Not Found	-----
U-235	89.96	-----	3.36	1.726E+00	-----	Line Not Found	-----
	93.35	-----	5.50	1.811E+00	-----	Line Not Found	-----
	105.36	-----	1.98	2.042E+00	-----	Line Not Found	-----
	109.18	-----	1.50	2.096E+00	-----	Line Not Found	-----
	143.79	-----	10.50	2.283E+00	-----	Line Not Found	-----
	163.38	-----	4.70	2.256E+00	-----	Line Not Found	-----
	185.74	23	53.00*	2.179E+00	1.682E-07	1.682E-07	44.01
	194.96	-----	0.59	2.142E+00	-----	Line Not Found	-----
	202.13	-----	1.00	2.111E+00	-----	Line Not Found	-----
	205.33	-----	4.70	2.097E+00	-----	Line Not Found	-----



Nuclide Line Activity Report (continued)  
Sample ID : 1011

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Flag: "\*" = Keyline

Minimum Detectable Activity Report  
Sample ID : 1011

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Acquisition date : 10-JUN-2014 13:28:47

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/GR)
BE-7	7.	477.61	1.0196E-06
MN-54	4.	834.83	1.3763E-07
MN-56	5.	846.81	1.5907E-07
CO-57	18.	122.06	1.0102E-07
CO-58	3.	810.79	1.2632E-07
CO-60	0.	1332.50	4.8612E-08
SB-124	2.	602.73	8.3534E-08
SB-125	5.	427.88	2.9630E-07
CS-134	2.	604.71	8.3958E-08
CS-137	2.	661.66	1.0464E-07