

THERMO EBERLINE LLC
BUILDING CHARACTERIZATION - VOLUMETRIC LABORATORY ANALYSES
Table 3-16: PAOC-5

Sample ID				5W-F-30-C				5W-F-24-C				5W-F-30-C				5W-F-30-C			
GEL Laboratory ID				1204660080				522014001				522014003				1204655859			
Collection Date				09/14/20				09/14/20				09/14/20				09/14/20			
Substrate				Vinyl Tile				Vinyl Tile				Vinyl Tile				Vinyl Tile			
Building Surface				Floor				Floor				Floor				Floor			
QC Code				Duplicate				Normal				Normal				Duplicate			
Analysis Method	Analyte	NMED RCB Required MDC	NMED RCB Volumetric Release Criterion ¹	Result	Uncertainty	Qualifier	MDC	Result	Uncertainty	Qualifier	MDC	Result	Uncertainty	Qualifier	MDC	Result	Uncertainty	Qualifier	MDC
Alpha Spectroscopy																			
ASTM C 1475-00 Modified	Np-237	0.05	0.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DOE EML	Am-241	0.05	1.25	NA	NA	NA	NA	0.003	0.024	U	0.046	NA	NA	NA	NA	NA	NA	NA	NA
HASL 300 Am-05-RC Mod	CF252	0.05	4.12	NA	NA	NA	NA	-0.005	0.013	U	0.030	NA	NA	NA	NA	NA	NA	NA	NA
	Cm-243/244	0.05	2.5	NA	NA	NA	NA	-0.008	0.015	U	0.034	NA	NA	NA	NA	NA	NA	NA	NA
DOE EML	Pu-238	0.05	1.52	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HASL 300 Pu-	Pu-239/240	0.05	1.37	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DOE EML HASL 300 U-02-RC Mod	U-233/234		7.8 ²	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	U-235/236	0.05	4.82	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	U-238		8.4 ²	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gamma Spectroscopy																			
DOE HASL	Am-241	0.05	1.25	NA	NA	NA	NA	NA	NA	NA	NA	0.012	0.170	U	0.340	0.020	0.041	U	0.083
300, 4.5.2.3/Ga-	Cs-137	1	6.6	NA	NA	NA	NA	NA	NA	NA	NA	-0.028	0.040	U	0.065	0.063	0.074	U	0.078
Gas Flow Proportional Counting																			
EPA 905.0 Modified/DOE RP501 Rev. 1 Modified	Sr-90	0.1	1.03	NA	NA	NA	NA	NA	NA	NA	NA	0.010	0.040	U	0.069	NA	NA	NA	NA
Liquid Scintillation Counting																			
EPA 906.0 Modified	Tritium	1	64.8	NA	NA	NA	NA	NA	NA	NA	NA	1.020	0.828	U	1.380	NA	NA	NA	NA
EPA EERF C-01 Modified	C-14	1	6.96	-0.350	0.483	U	0.838	NA	NA	NA	NA	-0.087	0.476	U	0.818	NA	NA	NA	NA

Notes:

All values are reported in picoCuries per gram (pCi/g)

Table summarizes lab results following quality assurance (QA)/quality control (QC) evaluation of data- see QA/QC Evaluation (Appendix D)/Laboratory Reports (Appendix E) for additional details

NA = Not Analyzed

U = Analyte Not Identified >MDC

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Table 3-16: PAOC-5

Sample ID				5W-F-53-C				5W-F-53-C				5-W-W-24-M				5E-W-S-67-B-M			
GEL Laboratory ID				522014002				1204660598				522015001				1204649943			
Collection Date				09/14/20				09/14/20				09/14/20				09/14/20			
Substrate				Vinyl Tile				Vinyl Tile				Sheetrock				Sheetrock			
Building Surface				Floor				Floor				Wall				Wall			
QC Code				Normal				Duplicate				Normal				Duplicate			
Analysis Method	Analyte	NMED RCB Required MDC	NMED RCB Volumetric Release Criterion ¹	Result	Uncertainty	Qualifier	MDC	Result	Uncertainty	Qualifier	MDC	Result	Uncertainty	Qualifier	MDC	Result	Uncertainty	Qualifier	MDC
Alpha Spectroscopy																			
ASTM C 1475-00 Modified	Np-237	0.05	0.6	-0.005	0.014	U	0.039	NA	NA	NA	NA	0.000	0.018	U	0.037	NA	NA	NA	NA
DOE EML	Am-241	0.05	1.25	-0.006	0.010	U	0.026	0.000	0.009	U	0.020	-0.120	0.332	U	0.736	NA	NA	NA	NA
HASL 300 Am-05-RC Mod	Cf-252	0.05	4.12	0.001	0.008	U	0.015	-0.003	0.008	U	0.020	0.000	0.173	U	0.187	NA	NA	NA	NA
	Cm-243/244	0.05	2.5	-0.007	0.008	U	0.024	-0.004	0.010	U	0.026	-0.237	0.328	U	0.793	NA	NA	NA	NA
DOE EML	Pu-238	0.05	1.52	-0.004	0.017	U	0.038	NA	NA	NA	NA	-0.002	0.012	U	0.025	NA	NA	NA	NA
HASL 300 Pu-	Pu-239/240	0.05	1.37	-0.005	0.015	U	0.036	NA	NA	NA	NA	0.002	0.018	U	0.033	NA	NA	NA	NA
DOE EML HASL 300 U-02-RC Mod	U-233/234		7.8 ²	-0.001	0.028	U	0.053	NA	NA	NA	NA	0.070	0.032		0.034	NA	NA	NA	NA
	U-235/236	0.05	4.82	0.000	0.015	U	0.030	NA	NA	NA	NA	0.031	0.021		0.020	NA	NA	NA	NA
	U-238		8.4 ²	0.052	0.026		0.021	NA	NA	NA	NA	0.073	0.030		0.025	NA	NA	NA	NA
Gamma Spectroscopy																			
DOE HASL	Am-241	0.05	1.25	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	-0.021	0.222	U	0.326
300, 4.5.2.3/Ga-	Cs-137	1	6.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.013	0.038	U	0.068
Gas Flow Proportional Counting																			
EPA 905.0 Modified/DOE RP501 Rev. 1 Modified	Sr-90	0.1	1.03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Liquid Scintillation Counting																			
EPA 906.0 Modified	Tritium	1	64.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPA EERF C-01 Modified	C-14	1	6.96	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

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Table 3-16: PAOC-5

Sample ID				5E-W-S-67-B-M				5E-W-S-67-B-M				5E-MZ-W-S-68-A-M				5-W-W-W-24-M			
GEL Laboratory ID				522015005				1204660081				522015004				1204669291			
Collection Date				09/14/20				09/14/20				09/14/20				09/14/20			
Substrate				Sheetrock				Sheetrock				Sheetrock				Sheetrock			
Building Surface				Wall				Wall				Wall				Wall			
QC Code				Duplicate				Duplicate				Normal				Duplicate			
Analysis Method	Analyte	NMED RCB Required MDC	NMED RCB Volumetric Release Criterion ¹	Result	Uncertainty	Qualifier	MDC	Result	Uncertainty	Qualifier	MDC	Result	Uncertainty	Qualifier	MDC	Result	Uncertainty	Qualifier	MDC
Alpha Spectroscopy																			
ASTM C 1475-00 Modified	Np-237	0.05	0.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DOE EML	Am-241	0.05	1.25	NA	NA	NA	NA	NA	NA	NA	NA	0.007	0.010	U	0.014	-0.037	0.124	U	0.263
HASL 300 Am-05-RC Mod	CF-252	0.05	4.12	NA	NA	NA	NA	NA	NA	NA	NA	-0.002	0.007	U	0.015	0.019	0.065	U	0.057
	Cm-243/244	0.05	2.5	NA	NA	NA	NA	NA	NA	NA	NA	-0.003	0.007	U	0.016	-0.054	0.117	U	0.260
DOE EML	Pu-238	0.05	1.52	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HASL 300 Pu-	Pu-239/240	0.05	1.37	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DOE EML HASL 300 U-02-RC Mod	U-233/234		7.8 ²	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	U-235/236	0.05	4.82	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	U-238		8.4 ²	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gamma Spectroscopy																			
DOE HASL	Am-241	0.05	1.25	0.002	0.123	U	0.187	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
300, 4.5.2.3/Ga-	Cs-137	1	6.6	0.060	0.084	U	0.111	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gas Flow Proportional Counting																			
EPA 905.0 Modified/DOE RP501 Rev. 1 Modified	Sr-90	0.1	1.03	0.016	0.048	U	0.086	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Liquid Scintillation Counting																			
EPA 906.0 Modified	Tritium	1	64.8	1.450	0.843		1.380	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPA EERF C-01 Modified	C-14	1	6.96	0.494	0.436	U	0.728	0.084	0.494	U	0.843	NA	NA	NA	NA	NA	NA	NA	NA

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Table 3-16: PAOC-5

Sample ID				5E-MZ-W-S-53-M				5E-MZ-W-S-66-B-M				5E-W-W-33-M				5W-W-W-1-C			
GEL Laboratory ID				522015002				522015003				1204660082				522016001			
Collection Date				09/14/20				09/14/20				09/16/20				09/16/20			
Substrate				Sheetrock				Sheetrock				Painted Block				Painted Block			
Building Surface				Wall				Wall				Wall				Wall			
QC Code				Normal				Normal				Duplicate				Normal			
Analysis Method	Analyte	NMED RCB Required MDC	NMED RCB Volumetric Release Criterion ¹	Result	Uncertainty	Qualifier	MDC	Result	Uncertainty	Qualifier	MDC	Result	Uncertainty	Qualifier	MDC	Result	Uncertainty	Qualifier	MDC
Alpha Spectroscopy																			
ASTM C 1475-00 Modified	Np-237	0.05	0.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.000	0.010	U	0.020
DOE EML	Am-241	0.05	1.25	0.012	0.016	U	0.026	-0.012	0.018	U	0.038	NA	NA	NA	NA	-0.019	0.055	U	0.113
HASL 300 Am-05-RC Mod	CF-252	0.05	4.12	-0.003	0.006	U	0.015	-0.002	0.012	U	0.026	NA	NA	NA	NA	0.007	0.023	U	0.020
	Cm-243/244	0.05	2.5	-0.006	0.009	U	0.022	-0.004	0.011	U	0.024	NA	NA	NA	NA	0.025	0.039	U	0.061
DOE EML	Pu-238	0.05	1.52	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.023	0.032	U	0.050
HASL 300 Pu-	Pu-239/240	0.05	1.37	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	-0.009	0.022	U	0.050
DOE EML	U-233/234		7.8 ²	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.460	0.132		0.036
HASL 300 U-02-RC Mod	U-235/236	0.05	4.82	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.102	0.037		0.024
	U-238		8.4 ²	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.660	0.140		0.009
Gamma Spectroscopy																			
DOE HASL	Am-241	0.05	1.25	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
300, 4.5.2.3/Ga-	Cs-137	1	6.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gas Flow Proportional Counting																			
EPA 905.0 Modified/DOE RP501 Rev. 1 Modified	Sr-90	0.1	1.03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Liquid Scintillation Counting																			
EPA 906.0 Modified	Tritium	1	64.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPA EERF C-01 Modified	C-14	1	6.96	NA	NA	NA	NA	NA	NA	NA	NA	0.444	0.481	U	0.808	NA	NA	NA	NA

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Table 3-16: PAOC-5

Sample ID				5E-W-W-33-M				5W-W-W-1-C				5E-W-W-33-M				5E-W-N-7-M			
GEL Laboratory ID				522016002				1204669292				1204649944				1204687050			
Collection Date				09/16/20				09/16/20				09/16/20				09/16/20			
Substrate				Painted Block				Painted Block				Painted Block				Concrete			
Building Surface				Wall				Wall				Wall				Wall			
QC Code				Normal				Duplicate				Duplicate				Duplicate			
Analysis Method	Analyte	NMED RCB Required MDC	NMED RCB Volumetric Release Criterion ¹	Result	Uncertainty	Qualifier	MDC	Result	Uncertainty	Qualifier	MDC	Result	Uncertainty	Qualifier	MDC	Result	Uncertainty	Qualifier	MDC
Alpha Spectroscopy																			
ASTM C 1475-00 Modified	Np-237	0.05	0.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DOE EML	Am-241	0.05	1.25	NA	NA	NA	NA	0.018	0.043	U	0.075	NA	NA	NA	NA	0.018	0.021	U	0.032
HASL 300 Am-05-RC Mod	CF252	0.05	4.12	NA	NA	NA	NA	0.000	0.030	U	0.061	NA	NA	NA	NA	0.005	0.009	U	0.007
DOE EML	Cm-243/244	0.05	2.5	NA	NA	NA	NA	-0.024	0.037	U	0.087	NA	NA	NA	NA	0.002	0.012	U	0.021
DOE EML	Pu-238	0.05	1.52	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HASL 300 Pu-	Pu-239/240	0.05	1.37	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DOE EML	U-233/234		7.8 ²	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HASL 300 U-02-RC Mod	U-235/236	0.05	4.82	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	U-238		8.4 ²	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gamma Spectroscopy																			
DOE HASL	Am-241	0.05	1.25	-0.138	0.190	U	0.321	NA	NA	NA	NA	-0.043	0.085	U	0.138	NA	NA	NA	NA
300, 4.5.2.3/Ga-	Cs-137	1	6.6	0.006	0.031	U	0.056	NA	NA	NA	NA	0.014	0.049	U	0.093	NA	NA	NA	NA
Gas Flow Proportional Counting																			
EPA 905.0 Modified/DOE RP501 Rev. 1 Modified	Sr-90	0.1	1.03	-0.024	0.028	U	0.063	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Liquid Scintillation Counting																			
EPA 906.0 Modified	Tritium	1	64.8	1.590	0.876		1.430	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPA EERF C-01 Modified	C-14	1	6.96	-0.126	0.489	U	0.840	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Sample ID				5E-W-N-1-M				5E-W-N-2-M				5E-W-N-4-M				5E-W-N-4-M			
GEL Laboratory ID				522018007				522018002				522018008				1204655860			
Collection Date				09/16/20				09/16/20				09/16/20				09/16/20			
Substrate				Concrete				Concrete				Concrete				Concrete			
Building Surface				Wall				Wall				Wall				Wall			
QC Code				Normal				Normal				Normal				Duplicate			
Analysis Method	Analyte	NMED RCB Required MDC	NMED RCB Volumetric Release Criterion ¹	Result	Uncertainty	Qualifier	MDC	Result	Uncertainty	Qualifier	MDC	Result	Uncertainty	Qualifier	MDC	Result	Uncertainty	Qualifier	MDC
Alpha Spectroscopy																			
ASTM C 1475-00 Modified	Np-237	0.05	0.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DOE EML	Am-241	0.05	1.25	NA	NA	NA	NA	0.000	0.019	U	0.040	NA	NA	NA	NA	NA	NA	NA	NA
HASL 300 Am-05-RC Mod	CF252	0.05	4.12	NA	NA	NA	NA	0.000	0.009	U	0.012	NA	NA	NA	NA	NA	NA	NA	NA
	Cm-243/244	0.05	2.5	NA	NA	NA	NA	-0.008	0.012	U	0.034	NA	NA	NA	NA	NA	NA	NA	NA
DOE EML	Pu-238	0.05	1.52	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HASL 300 Pu-	Pu-239/240	0.05	1.37	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DOE EML HASL 300 U-02-RC Mod	U-233/234		7.8 ²	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	U-235/236	0.05	4.82	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	U-238		8.4 ²	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gamma Spectroscopy																			
DOE HASL	Am-241	0.05	1.25	0.005	0.072	U	0.136	NA	NA	NA	NA	-0.058	0.307	U	0.545	0.046	0.153	U	0.253
300, 4.5.2.3/Ga-	Cs-137	1	6.6	0.007	0.052	U	0.100	NA	NA	NA	NA	0.036	0.051	U	0.105	0.011	0.064	U	0.130
Gas Flow Proportional Counting																			
EPA 905.0 Modified/DOE RP501 Rev. 1 Modified	Sr-90	0.1	1.03	NA	NA	NA	NA	NA	NA	NA	NA	0.003	0.031	U	0.061	NA	NA	NA	NA
Liquid Scintillation Counting																			
EPA 906.0 Modified	Tritium	1	64.8	NA	NA	NA	NA	NA	NA	NA	NA	0.708	0.802	U	1.350	NA	NA	NA	NA
EPA EERF C-01 Modified	C-14	1	6.96	NA	NA	NA	NA	NA	NA	NA	NA	0.545	0.466	U	0.778	NA	NA	NA	NA

Notes:

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THERMO EBERLINE LLC
BUILDING CHARACTERIZATION - VOLUMETRIC LABORATORY ANALYSES
Table 3-16: PAOC-5

Sample ID				5E-W-N-4-M				5E-W-N-5-M				5E-W-N-7-M				5E-W-N-7-M			
GEL Laboratory ID				1204660083				522018003				526389001				522018009			
Collection Date				09/16/20				09/16/20				09/16/20				09/16/20			
Substrate				Concrete				Concrete				Concrete				Concrete			
Building Surface				Wall				Wall				Wall				Wall			
QC Code				Duplicate				Normal				Normal				Normal			
Analysis Method	Analyte	NMED RCB Required MDC	NMED RCB Volumetric Release Criterion ¹	Result	Uncertainty	Qualifier	MDC	Result	Uncertainty	Qualifier	MDC	Result	Uncertainty	Qualifier	MDC	Result	Uncertainty	Qualifier	MDC
Alpha Spectroscopy																			
ASTM C 1475-00 Modified	Np-237	0.05	0.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DOE EML	Am-241	0.05	1.25	NA	NA	NA	NA	0.006	0.024	U	0.043	0.007	0.019	U	0.033	NA	NA	NA	NA
HASL 300 Am-05-RC Mod	CF252	0.05	4.12	NA	NA	NA	NA	-0.006	0.012	U	0.028	0.000	0.007	U	0.007	NA	NA	NA	NA
DOE EML	Cm-243/244	0.05	2.5	NA	NA	NA	NA	0.000	0.017	U	0.035	0.002	0.012	U	0.022	NA	NA	NA	NA
HASL 300 Pu-	Pu-238	0.05	1.52	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Pu-239/240	0.05	1.37	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DOE EML	U-233/234		7.8 ²	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HASL 300 U-02-RC Mod	U-235/236	0.05	4.82	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	U-238		8.4 ²	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gamma Spectroscopy																			
DOE HASL	Am-241	0.05	1.25	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.518	0.389		0.326
300, 4.5.2.3/Ga-	Cs-137	1	6.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	-0.009	0.064	U	0.130
Gas Flow Proportional Counting																			
EPA 905.0 Modified/DOE RP501 Rev. 1 Modified	Sr-90	0.1	1.03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Liquid Scintillation Counting																			
EPA 906.0 Modified	Tritium	1	64.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPA EERF C-01 Modified	C-14	1	6.96	0.232	0.480	U	0.812	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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THERMO EBERLINE LLC
BUILDING CHARACTERIZATION - VOLUMETRIC LABORATORY ANALYSES
Table 3-16: PAOC-5

Sample ID				5E-W-N-9-M				5E-W-E-32-A-M				5E-W-E-53-A-M				5E-W-N-11-M			
GEL Laboratory ID				1204660600				522018005				522018006				522018010			
Collection Date				09/16/20				09/16/20				09/16/20				09/16/20			
Substrate				Concrete				Concrete				Concrete				Concrete			
Building Surface				Wall				Wall				Wall				Wall			
QC Code				Duplicate				Normal				Normal				Normal			
Analysis Method	Analyte	NMED RCB Required MDC	NMED RCB Volumetric Release Criterion ¹	Result	Uncertainty	Qualifier	MDC	Result	Uncertainty	Qualifier	MDC	Result	Uncertainty	Qualifier	MDC	Result	Uncertainty	Qualifier	MDC
Alpha Spectroscopy																			
ASTM C 1475-00 Modified	Np-237	0.05	0.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DOE EML	Am-241	0.05	1.25	0.013	0.012		0.007	0.023	0.032	U	0.050	0.000	0.015	U	0.033	NA	NA	NA	NA
HASL 300 Am-05-RC Mod	Cf-252	0.05	4.12	0.000	0.005	U	0.007	0.000	0.018	U	0.036	0.005	0.014	U	0.014	NA	NA	NA	NA
	Cm-243/244	0.05	2.5	-0.003	0.008	U	0.021	0.022	0.032	U	0.049	-0.002	0.019	U	0.043	NA	NA	NA	NA
DOE EML	Pu-238	0.05	1.52	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HASL 300 Pu-	Pu-239/240	0.05	1.37	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DOE EML HASL 300 U-02-RC Mod	U-233/234		7.8 ²	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	U-235/236	0.05	4.82	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	U-238		8.4 ²	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gamma Spectroscopy																			
DOE HASL	Am-241	0.05	1.25	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	-0.009	0.145	U	0.269
300, 4.5.2.3/Ga-	Cs-137	1	6.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	-0.002	0.092	U	0.183
Gas Flow Proportional Counting																			
EPA 905.0 Modified/DOE RP501 Rev. 1 Modified	Sr-90	0.1	1.03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Liquid Scintillation Counting																			
EPA 906.0 Modified	Tritium	1	64.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPA EERF C-01 Modified	C-14	1	6.96	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

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THERMO EBERLINE LLC
BUILDING CHARACTERIZATION - VOLUMETRIC LABORATORY ANALYSES
Table 3-16: PAOC-5

Sample ID				5E-F-4-C				5E-F-4-C				5E-W-N-9-M				5W-W-E-35-B-C			
GEL Laboratory ID				522018001				1204660599				522018004				522021001			
Collection Date				09/16/20				09/16/20				09/16/20				09/17/20			
Substrate				Concrete				Concrete				Concrete				Red Brick			
Building Surface				Floor				Floor				Wall				Wall			
QC Code				Normal				Duplicate				Normal				Normal			
Analysis Method	Analyte	NMED RCB Required MDC	NMED RCB Volumetric Release Criterion ¹	Result	Uncertainty	Qualifier	MDC	Result	Uncertainty	Qualifier	MDC	Result	Uncertainty	Qualifier	MDC	Result	Uncertainty	Qualifier	MDC
Alpha Spectroscopy																			
ASTM C 1475-00 Modified	Np-237	0.05	0.6	-0.003	0.014	U	0.034	NA	NA	NA	NA	-0.003	0.011	U	0.028	0.002	0.013	U	0.026
DOE EML	Am-241	0.05	1.25	0.000	0.013	U	0.027	0.001	0.013	U	0.027	0.007	0.013	U	0.021	0.003	0.013	U	0.024
HASL 300 Am-05-RC Mod	Cf-252	0.05	4.12	0.001	0.009	U	0.016	0.000	0.006	U	0.009	0.004	0.010	U	0.016	-0.001	0.007	U	0.017
DOE EML	Cm-243/244	0.05	2.5	-0.005	0.008	U	0.023	0.000	0.006	U	0.008	0.001	0.010	U	0.021	0.001	0.011	U	0.022
HASL 300 Pu-	Pu-238	0.05	1.52	-0.005	0.011	U	0.026	NA	NA	NA	NA	0.001	0.013	U	0.026	-0.002	0.008	U	0.020
	Pu-239/240	0.05	1.37	-0.008	0.010	U	0.028	NA	NA	NA	NA	-0.002	0.012	U	0.027	-0.002	0.008	U	0.020
DOE EML	U-233/234		7.8 ²	0.331	0.061		0.037	NA	NA	NA	NA	0.483	0.072		0.035	0.300	0.061		0.058
HASL 300 U-02-RC Mod	U-235/236	0.05	4.82	0.051	0.024		0.008	NA	NA	NA	NA	0.050	0.024		0.008	0.034	0.021		0.023
	U-238		8.4 ²	0.372	0.063		0.020	NA	NA	NA	NA	0.510	0.073		0.020	0.384	0.064		0.046
Gamma Spectroscopy																			
DOE HASL	Am-241	0.05	1.25	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
300, 4.5.2.3/Ga-	Cs-137	1	6.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gas Flow Proportional Counting																			
EPA 905.0 Modified/DOE RP501 Rev. 1 Modified	Sr-90	0.1	1.03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Liquid Scintillation Counting																			
EPA 906.0 Modified	Tritium	1	64.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPA EERF C-01 Modified	C-14	1	6.96	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Table 3-16: PAOC-5

Sample ID				5W-W-E-35-B-C				5W-W-E-52-A-M				5W-W-E-52-A-M				5W-W-E-52-A-M			
GEL Laboratory ID				1204660601				522021003				1204658174				1204660084			
Collection Date				09/17/20				09/17/20				09/17/20				09/17/20			
Substrate				Red Brick				Red Brick				Red Brick				Red Brick			
Building Surface				Wall				Wall				Wall				Wall			
QC Code				Duplicate				Normal				Duplicate				Duplicate			
Analysis Method	Analyte	NMED RCB Required MDC	NMED RCB Volumetric Release Criterion ¹	Result	Uncertainty	Qualifier	MDC	Result	Uncertainty	Qualifier	MDC	Result	Uncertainty	Qualifier	MDC	Result	Uncertainty	Qualifier	MDC
Alpha Spectroscopy																			
ASTM C 1475-00 Modified	Np-237	0.05	0.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DOE EML	Am-241	0.05	1.25	-0.001	0.009	U	0.020	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HASL 300 Am-05-RC Mod	Cf-252	0.05	4.12	0.000	0.005	U	0.007	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Cm-243/244	0.05	2.5	-0.004	0.008	U	0.021	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DOE EML	Pu-238	0.05	1.52	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HASL 300 Pu-	Pu-239/240	0.05	1.37	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DOE EML HASL 300 U-02-RC Mod	U-233/234		7.8 ²	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	U-235/236	0.05	4.82	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	U-238		8.4 ²	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gamma Spectroscopy																			
DOE HASL	Am-241	0.05	1.25	NA	NA	NA	NA	0.025	0.147	U	0.260	0.004	0.191	U	0.333	NA	NA	NA	NA
300, 4.5.2.3/Ga-	Cs-137	1	6.6	NA	NA	NA	NA	0.098	0.133	U	0.136	0.091	0.119	U	0.106	NA	NA	NA	NA
Gas Flow Proportional Counting																			
EPA 905.0 Modified/DOE RP501 Rev. 1 Modified	Sr-90	0.1	1.03	NA	NA	NA	NA	-0.040	0.028	U	0.070	NA	NA	NA	NA	NA	NA	NA	NA
Liquid Scintillation Counting																			
EPA 906.0 Modified	Tritium	1	64.8	NA	NA	NA	NA	2.580	0.837		1.300	NA	NA	NA	NA	NA	NA	NA	NA
EPA EERF C-01 Modified	C-14	1	6.96	NA	NA	NA	NA	-0.307	0.449	U	0.778	NA	NA	NA	NA	-0.475	0.462	U	0.805

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Table 3-16: PAOC-5

Sample ID				5W-W-S-55-C			
GEL Laboratory ID				522021002			
Collection Date				09/17/20			
Substrate				Red Brick			
Building Surface				Wall			
QC Code				Normal			
Analysis Method	Analyte	NMED RCB Required MDC	NMED RCB Volumetric Release Criterion ¹	Result	Uncertainty	Qualifier	MDC
Alpha Spectroscopy							
ASTM C 1475-00 Modified	Np-237	0.05	0.6	NA	NA	NA	NA
DOE EML	Am-241	0.05	1.25	-0.012	0.018	U	0.047
HASL 300 Am-05-RC Mod	Cf-252	0.05	4.12	0.002	0.016	U	0.032
DOE EML	Cm-243/244	0.05	2.5	0.002	0.018	U	0.036
HASL 300 Pu-	Pu-238	0.05	1.52	NA	NA	NA	NA
	Pu-239/240	0.05	1.37	NA	NA	NA	NA
DOE EML HASL 300 U-02-RC Mod	U-233/234		7.8 ²	NA	NA	NA	NA
	U-235/236	0.05	4.82	NA	NA	NA	NA
	U-238		8.4 ²	NA	NA	NA	NA
Gamma Spectroscopy							
DOE HASL	Am-241	0.05	1.25	NA	NA	NA	NA
300, 4.5.2.3/Ga-	Cs-137	1	6.6	NA	NA	NA	NA
Gas Flow Proportional Counting							
EPA 905.0 Modified/DOE RP501 Rev. 1 Modified	Sr-90	0.1	1.03	NA	NA	NA	NA
Liquid Scintillation Counting							
EPA 906.0 Modified	Tritium	1	64.8	NA	NA	NA	NA
EPA EERF C-01 Modified	C-14	1	6.96	NA	NA	NA	NA

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