

APPENDIX D

Laboratory Radiological Analysis of Building Samples- Data Validation Report

Thermo Eberline Facility

5981 Airport Road



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ACRONYMS

Am-241	Americium 241
Ba-133	Barium 133
C-14	Carbon 14
Cd-109	Cadmium 109
Ce-144	Cerium 144
Cf-252	Californium 252
Cm-244	Curium 244
Co-57	Cobalt 57
Co-60	Cobalt-60
COC	Chain of Custody
CN	C.N. Associates, Inc.
Company	Thermo Eberline, LLC
CRDL	Contract Required Detection Limit
Cs-137	Cesium 137
DCGLs	Derived Concentration Guideline Level
DQA	Data Quality Assessment
DQI	Data Quality Indicator
DQO	Data Quality Objective
DUP	Laboratory duplicate analysis
Eberline	Eberline Instrument Corporation
EDD	Electronic Data Deliverable

Eu-152	Europium 152
GEL	GEL Laboratories, LLC
H-3	Tritium
Hg-203	Mercury 203
LCS	Laboratory Control Spike Sample
MARLAP	Multi-Agency Radiation Survey and Site Investigation Manual
MB	Method Blank Sample
MDA	Minimum Detectable Activity
MDC	Minimum Detectable Concentration
Mn-54	Manganese 54
MS	Matrix Spike Sample
NA	Not Analyzed
Na-22	Sodium 22
NMED	New Mexico Environment Department
Np-237	Neptunium 237
PAOC	Potential Area of Concern
Pb-210	Lead 210
pCi/g	picoCuries per Gram
Pu-238	Plutonium 238
Pu-239	Plutonium 239
QA/QC	Quality Assurance/Quality Control
Ra	Radium

RAM	Radioactive Material
RCB	Radiation Control Bureau
RER	Replicate Error Ratio
RPD	Relative Percent Difference
Sr-90	Strontium 90
TEDE	Total Effective Dose Equivalent
Th	Thorium
U	Analyte not identified above an MDC
UI	Uncertain Identification
U-234	Uranium 234
U-235	Uranium 235
U-238	Uranium 238
USEPA	United States Environmental Protection Agency
Y-88	Yttrium 88
Zn-65	Zinc 65

EXECUTIVE SUMMARY

This “*Laboratory Radiological Analysis of Building Samples- Data Validation Report*” (DV Report) was prepared as Appendix D to the Building Characterization Report for the Eberline Instrument Corporation (“Eberline”) facility located at the 5981 Airport Road property in Santa Fe, New Mexico (“site” or “facility”). This work was completed by CN Associates, Inc. (CN) on behalf of Thermo Eberline LLC (“Company”) in support of termination of the Radioactive Material (RAM) License # CS067 issued by the New Mexico Environment Department (“NMED”) Radiation Control Bureau (“RCB” or “Bureau”).

This DV Report describes the validation of 1,203 radionuclide analyses completed on 115 building samples collected at the site between August 28, 2020 and October 5, 2020 and an additional 24 samples collected on April 7, 2022. All samples were submitted to GEL Laboratories (GEL) for radiological analysis. A total of 711 laboratory analyses were completed for a series of target radionuclides of interest representative of licensed RAM used and stored at the site. A total of 596 analyses were evaluated against minimum detectable activities(MDAs) set by the Bureau. In this report, minimum detectable concentration (MDC) is numerically equal to MDA. The term MDC is used, preferentially, to express units of activity concentration.

Analysis for uranium (U-234 and U-238) by alpha spectrometry and Am-241 by gamma spectrometry accounted for 115 measurement results for which no required MDC was specified. Twelve (12) additional radionuclides listed on the Company RAM license were also quantified in 41 gamma spectrometry analyses representing an additional 492 measurements and bringing the total number of validated results to 1,203. The validation was performed to ensure that the laboratory data generated were of sufficient quality to meet the requirements of the project, so that any data quality issues could be identified and addressed and that the use of the data be qualified if necessary.

An estimated 95 percent of 596 radionuclide analyses met the MDCs set by the Bureau and communicated to the laboratory as Contract Required Detection Limits (CRDLs) at one significant figure. Of the analyses that did not meet the CRDL, companion samples of the same type, from the same areas, were used to assess the significance of the excursions, where possible.

An estimated 93 percent of the 1,203 analyses evaluated were reported at levels below the sample-specific MDC. All but 11 of the radionuclides measured above the MDC were isotopes of uranium. Results reported at levels greater than the MDC are discussed in Section 3, Results, in the Building Characterization Report.

Four (4) types of Quality Control (QC) samples were processed with the building material samples: 1) method blanks (MB); 2) sample duplicates (DUP); 3) laboratory control spikes (LCS); and 4) matrix spikes (MS). A typical frequency of QC sample analysis for each sample type is 5% or greater of the sample load. In anticipation of analytical challenges and variations presented by the building materials being analyzed, the level of QC for this project was increased as follows: 28% for blanks, 37% for duplicates, 14% for LCS, and 25% for matrix spikes. The spike frequency for non-gamma spectrometry analysis was even higher at 21% for LCS sample analysis and 47% MS sample analysis. QC results indicated:

- 98.5% of 335 method blanks met the criterion of no detectable activity greater than the sample specific MDC. Of the 5 analyses that were detected > MDC, none were detected greater than the CRDL.
- 98.4 % of 123 duplicate pairs met the Replicate Error Ratio (RER) acceptance criterion.
- 100% of 166 LCS samples met the spike recovery criterion of 75% - 125%.
- 94.3% of 297 MS samples met the spike recovery criterion of 75% - 125%.

Radiotracers and gravimetric recoveries were evaluated for all analyses of samples, duplicates, matrix spikes, laboratory control spikes and method blanks except for tritium (H-3), Carbon 14(C-14) and gamma spectrometry analyses, which are not traced. An estimated 99.9% of all radiometric and gravimetric recoveries met the acceptance criterion of 15% - 125%.

Additional uncertainty may be introduced into the results by QC sample failures, missed MDCs, or low tracer/carrier recoveries. CN concludes that due to the low incidence of detection of targeted radionuclides and the low levels of detection achieved relative to the RCB release criteria, any additional uncertainty in the reported results does not materially impact the usability of the data for evaluating licensed radionuclide concentrations in building materials relative to Bureau Volumetric Release Criteria for unrestricted release.

INTRODUCTION

This “*Laboratory Radiological Analysis of Building Samples- Data Validation Report*” (DV Report) was prepared as Appendix D to the Building Characterization Report for the Eberline Instrument Corporation (“Eberline”) facility located at the 5981 Airport Road property in Santa Fe, New Mexico (“site” or “facility”). This work was completed by CN Associates, Inc. (CN) on behalf of Thermo Eberline LLC (“Company”) in support of termination of the Radioactive Material (RAM) License # CS067 issued by the New Mexico Environment Department (“NMED”) Radiation Control Bureau (“RCB” or “Bureau”).

This DV Report describes the validation of 711 radiometric analyses completed on 115 building samples collected at the site between August 28, 2020 and October 5, 2020 and an additional 24 samples collected on April 7, 2022. All samples were submitted to GEL Laboratories LLC (GEL) for radiological analysis. Laboratory analyses were completed for a series of target radionuclides of interest representative of licensed RAM used and stored at the site. An additional 12 radionuclides were quantified in 41 gamma spectrometry analyses also included on the Company RAM license, bringing the total number of validated results to 1,203. The validation was performed to ensure that the laboratory data generated were of sufficient quality to meet the requirements of the project, so that any data quality issues could be identified and addressed and that the use of the data be qualified if necessary.

Data verification and validation supports the overall data quality assessment (DQA) of a data set. This report validates the analysis of volumetric samples of building materials, specifically, concrete, sheetrock, floor tiles, painted block, painted stucco, vinyl ceiling tiles, red brick, carpet, and ceramic tile.

Processing specifications for the samples were communicated to GEL through a Scope of Work (SOW) document. Data quality indicators (DQI) were identified and acceptance criteria for the DQIs were established. For this project, it was determined that GEL’s internal acceptance criteria would be adequate. The typical DQIs, defined by the United States Environmental Protection Agency (USEPA) are precision, bias, accuracy, representativeness, comparability, completeness, and sensitivity (EPA 2002). Quality control (QC) samples were used to quantitatively evaluate precision, bias, and accuracy.

Sensitivity was assessed through evaluating compliance with minimum detectable activities (MDAs) set by the Bureau, and completeness was assessed by ensuring that all requested analyses were completed. In this report, minimum detectable concentration (MDC) is numerically equal to MDA. The term MDC is used, preferentially, to express units of activity as a concentration.

Comparability, a qualitative DQI, was assessed by ensuring that samples in a data set were processed using the same or similar procedures with similar sensitivity and specificity.

Representativeness, a measure of how representative the sampling was relative to field conditions, was determined at the time of sampling through a rigorous sample location selection scheme.

SAMPLE ANALYSIS

A total of 115 building samples were collected between August 28, 2020 and October 5, 2020, and an additional 23 samples were collected on April 7, 2022. All samples were submitted to GEL for 339 analyses of licensed radionuclides of interest as follows:

- 37 alpha spectrometry analyses of neptunium-237 (Np-237)
- 37 alpha spectrometry analyses of plutonium-238 (Pu-238) and plutonium-239 (Pu-239),
- 37 alpha spectrometry analyses of uranium-234 (U-234), uranium-235 (U-235), and uranium-238 (U-238);
- 110 alpha spectrometry analyses of americium-241 (Am-241), californium-252 (Cf-252), and curium-244 (Cu-244);
- 41 analyses for Am-241 and cesium-137 (Cs-137) by gamma spectrometry;
- 25 analyses of strontium-90 (Sr-90) by gas proportional counting;
- 26 analyses of tritium (H-3) by liquid scintillation counting; and
- 26 analyses of carbon-14 (C-14) by liquid scintillation counting.

The contract required detection limits (CRDLs) for target licensed radionuclides and Bureau Volumetric Release Criteria are shown in Table 2-1. CRDLs and release criteria were not set by the NMED RCB for U-234 or U-238. CN calculated comparative release criteria for U-234 at 7.8 picocuries per gram (pCi/g) and U-238 at 8.4 pCi/g by scaling default Derived Concentration Guideline Levels (DCGLs) to a 15 millirem per year (mrem/yr) Total Effective Does Equivalent (TEDE). An additional 12 radionuclides were quantified in 41 gamma spectrometry analyses that were listed on the Company RAM license. These radionuclides are shown in Table 2-2. Am-241 was also quantified as part of the standard gamma spectrometry analysis with no required CRDL. All requested analyses were completed.

Table 2-1: Contract Required Detection Limits (CRDL) & Volumetric Release Criteria

Radionuclide	CRDL (pCi/g)	Volumetric Release Criteria (pCi/g)
Am-241	0.05	1.25
Cf-252	0.05	4.12
C-14	1.0	6.96
Cs-137	1.0	6.60
Cm-244	0.05	2.5
H-3	1.0	64.8
Np-237	0.05	0.6
Pu-238	0.05	1.52
Pu-239	0.05	1.37
Sr-90	0.1	1.03
U-235	0.05	4.82

Table 2-2: Additional Radionuclides Analyzed Measured by Gamma Spectrometry Based on the Company RAM License

Radionuclides	
Ba-133	Y-88
Co-57	Pb-210
Co-60	Ce-144
Hg-203	Mn-54
Eu-152	Na-22
Cd-109	Zn-65

Table 2-3 summarizes the number of analyses performed for each radionuclide, the number of results detected at levels greater than the sample specific MDC, the number of analyses where the CRDL was not met, and the number of results where the measured concentration exceeded the CRDL. In addition, the number of analyses where the measured concentrations were greater than the 95% confidence interval uncertainty (1.96 Sigma), but less than the sample-specific MDC, is given.

Table 2-3: Summary of Radionuclide Detection and Minimum Detectable Concentration Compliance

Radionuclide	Number of Analyses	Number of Results Where the Conc. > MDC	Number of Results Where the Uncertainty < Conc. < MDC	Number of Results Where the MDC > CRDL	Number of Results Where the Conc. > CRDL
Am-241(alpha spec)	110	0	8	12 ^a	0
Am-241(gamma spec)	41	1 ^b	0	N/A	N/A
Cf-252	110	1 ^c	0	6 ^d	0
C-14	26	1 ^e	5	0	1
Cs-137	41	4	2	0	2 ^f
Cm-244	110	0	2	10 ^g	0
H-3	26	4	2	19 ^h	4 ⁱ
Np-237	37	0	0	0	0
Pu-238	37	0	2	0	0
Pu-239	37	0	0	0	0
Sr-90	25	0	1	0	0
U-234	37	29	2	N/A	N/A
U-235	37	17	3	0	5 ^j
U-238	37	33	2	N/A	N/A

^a 3 concrete, 7 sheetrock, and 2 painted block samples did not meet the CRDL for Am-241.

^b Am-241 was measured in concrete sample 5E-W-N-7-M by gamma spectrometry at a concentration that exceeded the MDC. This sample was reanalyzed by alpha spectrometry at a concentration below the MDC. The MDC achieved by alpha spectrometry was a factor of 10 below that achieved for gamma spectrometry.

^c Cf-252 was measured in stucco sample 9-W-S-22-C at a concentration that exceeded the sample specific MDC.

^d 5 sheetrock and 1 painted block samples did not meet the CRDL for Cf-252.

^e One carpet sample 6SE-F-45-C was detected above the MDC for C-14 at 1.1 pCi/g, but below the release criterion of 6.96 pCi/g.

^f Cs-137 concentrations in concrete samples 6-NE-F-7-RS and 6-NE-F-8-RS did not exceed the release criterion of 6.6 pCi/g.

^g 1 concrete, 7 sheetrock and 2 painted block samples did not meet the CRDL for Cm-244.

^h 16 of the 19 MDCs were rounded to the CRDL at one significant figure. The other three values were associated with a carpet sample with an MDC of 1.83 pCi/g and 2 vinyl ceiling tiles with MDCs of 2.54 and 3.01 pCi/g.

ⁱ None of the four H-3 concentrations exceeded the release criterion of 64.8 pCi/g.

^j No concentrations of U-235 exceeded the release criterion of 4.82 pCi/g

N/A is not applicable.

Cf-252, C-14, Cs-137, H-3, U-234, U-235, and U-238 were reported at levels greater than the sample specific MDCs. Am-241 was initially measured greater than the MDC by gamma spectrometry for sample 5E-W-N-7-M, however; a subsequent analysis by alpha spectrometry did not confirm this result. Results of volumetric analyses reported above MDCs are discussed in Section 3 Results in the Building Characterization Report.

2.1

RESULTS DETECTED AT CONCENTRATIONS GREATER THAN THE UNCERTAINTY

Sample concentrations were also evaluated against the 95% confidence level counting uncertainty (1.96 sigma) to evaluate for possible low-level detections. For Am-241, eight (8) of 110 analyses, or 7%, yielded measured concentrations that were greater than the 1.96 standard deviation counting uncertainty. Duplicate analyses performed on five of the eight samples indicated that in four of the five cases, the concentration in the duplicate was not detected greater than the uncertainty. For one of the 110 samples, 7WS-3-C, the Am-241 concentrations in both the sample and duplicate were detected greater than the uncertainty, but well below the CRDL of 0.05 pCi/g.

For C-14, 5 of 26 analyses, or 19%, yielded concentrations greater than the 95% confidence level counting uncertainty. Duplicate analyses performed on four of the five samples indicated that in three of four cases the concentration in the duplicate was not detected greater than the uncertainty. In one of the 26 samples, 9-W-S-21-C, the C-14 concentrations in both the sample and duplicate were detected greater than the uncertainty, but well below the CRDL of 1 pCi/g.

Two of 110 results, or 2%, were detected greater than the uncertainty for Cm-244, two of 37 results, or 5%, were detected greater than the uncertainty for Pu-238, 2 of 41 results, or 5%, were detected greater than the uncertainty for Cs-137, and 1 of 25 results, or 4%, were detected greater than the uncertainty for Sr-90. The results reported greater than the uncertainty are within the expected range for false positive detections. These low-level activity detections are of no significance relative to Bureau Volumetric Release Criteria.

Twelve of the 492 gamma analyses for licensed RAM were reported below the MDC, but above the uncertainty (Table 2). The reported frequency of possible detection at 2.4% is within the statistical expectation for false positive detections.

2.2

CRDL COMPLIANCE

An estimated 95% of 596 analyses met the CRDL for targeted radionuclides at one significant figure. Of the few that did not, companion samples of the same type from the same areas were used to assess the significance of the failures where possible.

Twelve of 110 analyses did not meet the CRDL for Am-241 as shown in Table 2-3. The MDCs for these samples ranged from 0.0511 pCi/g to 0.736 pCi/g. Three of the samples were concrete, 7 were sheetrock, and 2 were painted block. According to the Technical Case Narrative provided by GEL, the sheetrock sample with the highest MDC, 5-W-W-W-24-M, did not meet the detection limit due to the small sample aliquot used. The aliquot was reduced due to the matrix of the samples. The sample was counted for the maximum count time to achieve the lowest possible MDA. The sample aliquot was 0.199 grams and the Am-243 tracer recovery associated with this sample was 11.2%. The duplicate sample had a somewhat lower MDC (0.263) and Am-241 was not detected in the duplicate or the original sample. Three other sheetrock samples from the same area (PAOC 5) did meet the CRDL and no Am-241 was reported at greater than the MDC or the 95% confidence counting uncertainty.

Similar explanations were given in the QC narratives for the other samples. For example, 19 of 26 samples did not meet the CRDL of 1 pCi/g for H-3. In 16 of the 19 samples, the sample specific MDC rounded to the CRDL at 1 significant figure.

This was not the case for vinyl ceiling samples 7-C-4-C (MDC = 3.01 pCi/g), 9-W-N-6-C (MDC = 2.54 pCi/g) and carpet sample 6SE-F-45-C (MDC = 1.83 pCi/g). According to the QC narrative provided by GEL, some samples did not meet the detection limits due to the small sample aliquots used. The aliquots were reduced due to the matrix of the samples. According to the Technical Case Narrative provided by the laboratory, the samples were counted the maximum count time to achieve the lowest possible MDAs.

QUALITY CONTROL (QC) SAMPLE ASSESSMENT

Four types of QC samples were processed with the building material sample set. They consisted of method blanks (MB), sample duplicates (DUP), laboratory control spikes (LCS) and matrix spikes (MS). These QC samples are defined and discussed below. A typical frequency of QC sample analysis for each type is 5% or greater of the sample load.

The Multi Agency Radiological Laboratory Analytical Protocols Manual (MARLAP, 2004) recommends that samples be analyzed in batches, and that method blanks and duplicate samples be attached to the batches at a frequency of one per batch, regardless of the batch size, where a group of samples of the same matrix constitute a batch.

Due to the varying matrices of the samples involved in the building characterization, CN requested a duplicate analysis and a matrix spike for each matrix in each of the PAOCs. Consequently, the level of QC for this project was elevated to the following percentages: 28% for blanks, 37% for duplicates, 14% for LCS, and 25% for matrix spikes. The LCS and MS percentages are even higher when only non-gamma analyses are considered, since only three of 14 gamma-emitting radionuclides are included in the LCS and there are no matrix spikes for gamma spectrometry analyses. The spike frequency for non-gamma spectrometry analyses was 21% for LCS sample analyses and 47% MS sample analyses.

3.1

METHOD BLANKS

A method blank is a sample that is as similar physically to the collected sample as is possible, but where the radionuclides of interest are absent. The MB is processed with the sample set through all steps of the analytical procedure. Blank samples are helpful in determining whether, or not, any radionuclide contamination has been introduced during sample preparation or measurement. The acceptance criterion used for method blanks is no detectable activity of the target analyte in the blank sample at a level greater than the sample specific MDC.

Five of 335 blank analyses did not meet this criterion. The radionuclide identifications and concentrations are as follows:

- U-235, 0.0228 +/- 0.0179 pCi/g
- U-235, 0.0244 +/- 0.0168 pCi/g
- U-238, 0.0211 +/- 0.0153 pCi/g
- Cs-137, 0.0385 +/- 0.032 pCi/g
- Pu-238, 0.00839 +/- 0.00966 pCi/g

Note that in the case of the Pu-238 analysis, the measured concentration did not exceed the two standard deviation counting uncertainty. The Cs-137 concentration was flagged by the laboratory with a UI qualifier for "Uncertain Identity". In addition, one blank concentration of Ce-144 and two blank concentrations of Ba-133, all measured by gamma spec, were detected at concentrations greater than the 95% confidence limit counting uncertainties, but below the sample specific MDCs. CRDLs were met in the blank samples for all analyses except for Am-241(2 instances), Cf-252 (1 instance), Cm-244 (3 instances), and H-3 (4 instances), where the sample specific MDCs were slightly above the CRDLs. Further information concerning these failures may be found in the Technical Case Narrative section provided by the laboratory. Table 3-1 gives the number of blank analyses, the mean concentration and associated standard deviation for each radionuclide in Table 2-1. A concentration of zero pCi/g would fall within one standard deviation of the mean concentration for all analyses except for U-235 and C-14, where it would fall within 2 standard deviations. No significant bias was seen in the blank results.

Table 3-1: Number of Blank Analyses and Mean Concentrations

Radionuclide	Number of Blank Analyses	Mean Concentration pCi/g	Standard Deviation pCi/g
Am-241(α spec)	22	0.0048	0.0116
Am-241(γ spec)	11	-0.0038	0.0369
Cf-252	22	0.0000	0.0028
C-14	6	-0.4183	0.3624
Cs-137	11	0.0078	0.0155
Cm-244	22	-0.0067	0.0087
H-3	6	-0.0253	0.3881
Np-237	16	-0.0029	0.0052
Pu-238	16	-0.0013	0.0048
Pu-239	16	-0.0027	0.0061
Sr-90	7	-0.0174	0.0474
U-235	16	0.0087	0.0076

3.2

LABORATORY DUPLICATES

Method precision was assessed through the performance of laboratory duplicate analyses. Laboratory duplicates, sometimes referred to as laboratory replicates, are two portions of the same sample taken after homogenization. In some cases, such as analysis by gamma spectrometry, the same sample may be counted twice. A primary purpose for measuring duplicate samples is to assess the reproducibility of an analytical method. Duplicate analyses can also be used to resolve the validity based on reproducibility of very low-level analytes detected.

The laboratory uses a Relative Percent Difference (RPD) criterion to evaluate duplicate analyses when the sample concentration is greater than five times the CRDL. An acceptable RPD is 20%. For low activity samples, the Replicate Error Ratio (RER) can be used to assess the sample duplicates. USEPA defines an acceptable RER as less than 2 (USEPA, 2002), whereas GEL considers an RER less than 3 acceptable.

The RPD is calculated as follows:

$$\text{RPD} = |A - B| / ((A + B)/2) \times 100$$

Where,

RPD = Relative Percent Difference

A = Concentration of the first measurement

B = Concentration of the second measurement

The RER, as defined by USEPA, is calculated as follows (USEPA, 2002):

$$\text{RER} = |A - B| / \sqrt{(SA^2 + SB^2)}$$

where;

A and B are defined above.

SA = The uncertainty (one standard deviation) of the first measurement

SB = The uncertainty (one standard deviation) of the second measurement

Only sample/duplicate pairs where the concentration in either the sample or the duplicate exceeded the two standard deviation measurement uncertainty were evaluated. This resulted in the evaluation of 123 pairs. None of these pairs had measured concentrations that exceeded five times the CRDL. Consequently, all were evaluated using the RER criterion. Of the 123 pairs, 8 sample duplicate pairs exceeded the USEPA acceptance criterion of 2(USEPA, 2002), but were below the GEL acceptance criterion of 3.

In addition, one pair of concrete samples, 8-F-9-C, had an RER for C-14 of 3.53, and one pair of carpet samples, 6SE-F-45-C, had an RER for Sr-90 of 3.01.. The number and types of laboratory duplicate analyses performed are given in Table 3-2, below. The data for individual duplicate results are presented in Table 3-12 through 3-21 of the Building Characterization Report and Appendix A of this DV Report.

Table 3-2: Number and Types of Laboratory Duplicate Analyses

Radionuclide	Number of Duplicate Pairs
Am-241(α spec)	42
Am-241(γ spec)	25
Cf-252	42
C-14	24
Cs-137	25
Cm-244	42
H-3	24
Np-237	33
Pu-238	33
Pu-239	33
Sr-90	24
U-235	33

3.3

LABORATORY CONTROL SPIKES (LCS)

LCS were analyzed with each sample batch to assess analytical bias. LCS generally do not contain potential interferences introduced into a sample analysis method by the matrix of the sample. As recommended by MARLAP, the radionuclide spike levels were chosen to reflect the radionuclide concentration range of interest for this project, when possible. The spike recovery represents the ratio of the measured radionuclide concentration to the added concentration expressed as a percent. The spike recovery acceptance limits of 75% to 125%, adopted by GEL, were applied to these analyses.

A total of 166 LCS analyses were performed. There were no LCS failures. However, Cf-252 showed a high bias with an average recovery of 110.1 % for 22 samples, and H-3 shows a low bias with an average recovery of 85.8% for 6 samples. Table 3-3 presents a summary of the LCS evaluations. Note that LCS samples for gamma spectrometry include three radionuclides (Am-241, Cs-137, and Co-60) that span the energy range of interest. As indicated in Table 3-3 the majority of radionuclides exhibited average LCS recoveries of approximately 100% or higher, and thus LCS biases are not judged to adversely impact the data usability with respect to comparison with Bureau Volumetric Release Criteria.

Table 3-3: Laboratory Control Spike Summary

Radionuclide	Number of LCS Analyzed	Average Spike Recovery (%)
Am-241(alpha spec)	22	99.7
Am-241(gamma spec)	11	104.1
Cf-252	22	110.1
C-14	6	101.8
Cs-137	11	102.8
Cm-244	22	96.6
H-3	6	85.8
Np-237	16	105.1
Pu-238	0	N/A
Pu-239	16	103.3
Sr-90	7	95.6
U-235	16	101.8
Co-60	11	101.4

N/A is not applicable.

3.4

MATRIX SPIKES (MS)

Matrix Spikes (MS) were analyzed with each sample batch to assess analytical bias associated with processing a specific matrix. Matrix spikes contain potential interferences introduced into a sample analysis method by the matrix of the sample. The matrix spike is prepared by adding the radionuclides of interest to a separate portion of a sample and analyzing this portion as a separate sample. As recommended by MARLAP, the radionuclide spike levels were chosen to reflect the radionuclide concentration range of interest for this project, when possible. The spike recovery acceptance limits of 75% to 125%, adopted by GEL, were applied to these analyses.

A total of 297 MS analyses were performed. A summary is presented in Table 3-4, below. Cf-252 shows a high bias with an average recovery of 110.2% that is very similar to the bias seen in the LCS samples (110.1 %). This indicates that the bias is not matrix related but may involve a bias in the spike concentration or some other factor related to the analysis technique. If it is technique related, it is in the conservative direction (i.e., high) and thus would not adversely affect the usability of the sample results.

Conversely, the matrix spikes for H-3 show a negative bias of 89.5%, in line with the LCS bias of 85.8%. H-3 is not a traced analysis, and so one could consider an additional uncertainty in the H-3 measured results of 10 to 15%. Given that the highest concentration detected for H-3 is only 4% of the Bureau Volumetric Release Criteria, this bias does not affect data usability.

Eleven MS samples failed the acceptance criterion for Np-237, 9 high and 2 low. The average spike recovery was 118.2%. The failures were seen in 6 different substrates. Although there was a slight high bias in the LCS results (average spike recovery = 105%), there were no failures. This indicates that there may be interferences in the analysis technique caused by the type of building materials analyzed. Np-237 was not detected at a level greater than the uncertainty in any of the building samples. Furthermore, the CRDL was met for all samples, the MBs did not show a bias, and all the LCS samples passed the acceptance criterion. Further information concerning these failures may be found in the Technical Case Narrative section of the data packages provided by the laboratory.

Six MS samples failed the acceptance criterion for Sr-90. All failures were biased low. The average spike recovery was 87.2%. The failures were seen in 4 different matrices. Although there was a slight low bias in the LCS results (95.6%), there were no failures. This indicates that there may have been interferences in the Sr-90 analysis technique caused by the matrices involved. Sr-90 was not detected at a level greater than the sample specific MDC in any of the building samples. The one sample, where the concentration was detected greater than the uncertainty, passed the RER criterion for duplicates, and the duplicate concentration was not greater than the uncertainty. Furthermore, the CRDL was met for all samples, the MBs did not show a bias, and all the LCS samples passed the acceptance criterion. Further information concerning these failures may be found in the Technical Case Narrative section of the data packages provided by the laboratory.

Table 3-4: Matrix Spike Summary

Radionuclide	Number of MS Analyzed	Number of Failures	Average Spike Recovery (%)
Am-241(α spec)	42	0	94.3
Am-241(γ spec)	0 ^a	N/A	N/A
Cf-252	42	0	110.2
C-14	24	0	96.0
Cs-137	0	N/A	N/A
Cm-244	42	0	93.9
H-3	24	0	89.5
Np-237	33	11 ^b	118.2
Pu-238	0	N/A	N/A
Pu-239	33	0	102.3
Sr-90	24	6 ^c	87.2
U-235	33	0	99.9

^a Due to the solid matrix of the samples analyzed by gamma spectrometry, matrix spike preparation was not possible.

^b 9 MS samples failed high and 2 failed the lower threshold. The failures were seen in 6 different matrixies.

^c 6 MS samples failed low. The failures were seen in 4 different matrixies.
N/A is not applicable.

RADIOMETRIC TRACER AND GRAVIMETRIC CARRIER RECOVERIES

When analytical methods require radiochemical separation of the target radionuclide from the sample matrix prior to analysis, either a radioactive tracer or a calibrated stable carrier is often added to the sample. During chemical processing, some of the target radionuclide can be lost due to a number of reasons. Carriers or tracers added at the start of the radiochemical process are used to quantify these losses by the calculation of a radiochemical recovery. Similar to a spike recovery, radiochemical recovery, or yield, is a ratio of the tracer or carrier measured at the completion of the radiochemical process to that which was added at the beginning of the process. This recovery is included in the calculation of the final radionuclide concentration to adjust for any losses of the target analyte.

Radiochemical recoveries were calculated and reported for each applicable method for samples, duplicates, matrix spikes, laboratory control spikes and method blanks. The laboratory acceptable range for radiochemical recovery is 15% - 125%. Gamma spectrometry, H-3, and C-14 analyses are not traced.

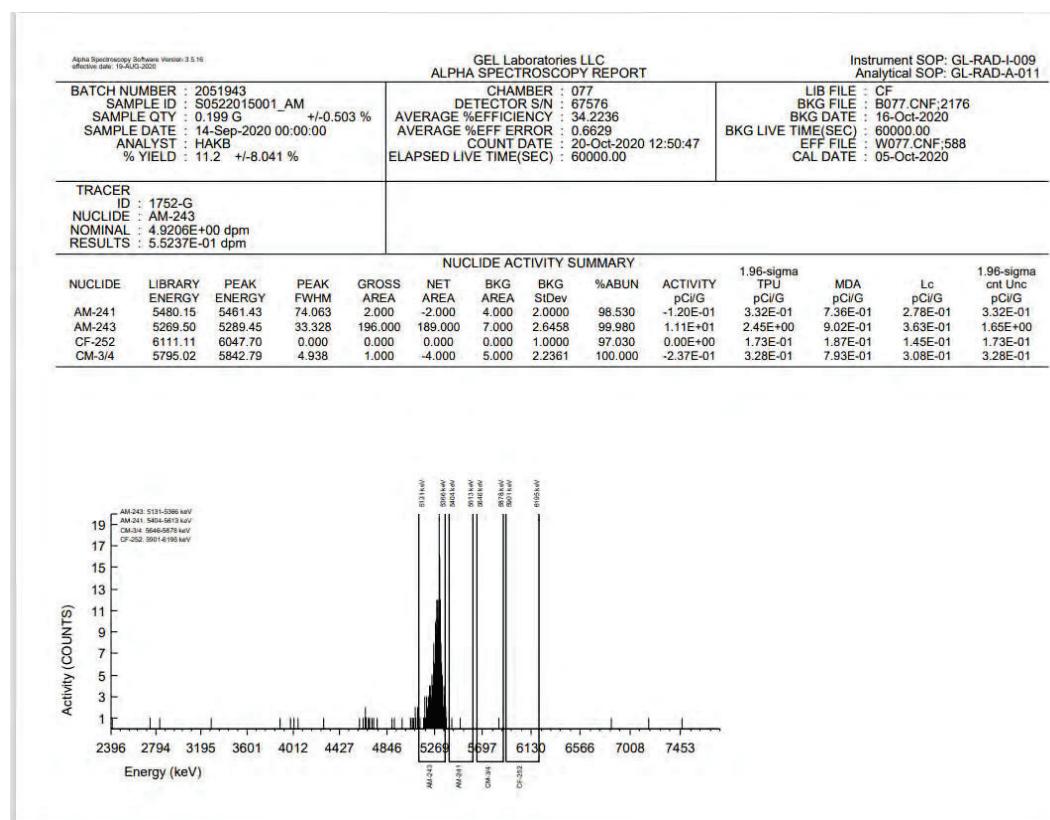
Table 4-1 provides a summary of recoveries for the radionuclides of interest listed in Table 1-1. The tracer or carrier, the number of analyses, the average recoveries, and the number of failures were summarized for each applicable method and each sample type (sample, MB, Dup, LCS, MS).

Only one tracer recovery was outside the laboratory acceptance criterion. The Am-243 tracer recovery for sample 5-W-W-W-24-M was 11.2%. The alpha spectrum for this sample is shown in Figure 4-1. This failure is judged to be of low significance with respect to data usability and has been addressed above in conjunction with non-compliance with the CRDL. Even with a low recovery, the tracer peak is clearly visible; however, the higher than typical counting statistics in the tracer peak introduce additional uncertainty into the sample result. Also, the low recovery adversely affects the sensitivity of this analysis. As discussed in Section 2.2, three other sheetrock samples from PAOC 5 met the CRDL and no Am-241 was reported greater than the MDC or the two standard deviation counting uncertainty in any of those samples.

Table 4-1: Summary of Radiometric Tracer and Gravimetric Carrier Recoveries

Radionuclide(s)	Tracer/ Carrier	Sample Type	Number of Analyses*	Mean Recovery	Number of Failures
Np-237	Np-239 in equilibrium with Am-243	Sample	37	72.1	0
		Dup	33	73.2	0
		MB	16	95.2	0
		LCS	16	96.3	0
		MS	33	73.5	0
Am-241, Cf-252 and Cm-244 by alpha spec	Am-243	Sample	110	65.5	1
		Dup	42	71.6	0
		MB	22	86.0	0
		LCS	22	89.3	0
		MS	42	77.5	0
Pu-238, Pu-239	Pu-242	Sample	37	74.5	0
		Dup	33	76.3	0
		MB	16	74.4	0
		LCS	16	81.1	0
		MS	33	78.6	0
Sr-90	Stable Sr carrier	Sample	25	80.0	0
		Dup	24	79.0	0
		MB	7	90.8	0
		LCS	7	89.0	0
		MS	24	86.6	0
U-235	U-232	Sample	37	85.7	0
		Dup	33	84.0	0
		MB	16	91.4	0
		LCS	16	90.4	0
		MS	33	84.2	0

Figure 4-1: Am-241 Spectrum Showing the Am-243 Tracer for Sample 5-W-W-24-M



COMPARABILITY

All samples were analyzed by GEL with the same radionuclide specific methods applied to all matrices. Am-241, however, was quantified by either alpha spectrometry, gamma spectrometry, or both. Any sample that required Am-241 analysis as part of the analysis plan was analyzed by alpha spectrometry, as it is a much more sensitive method. Only for samples where Am-241 analysis was not required, were results reported by gamma spectrometry, as part of the general analysis.

For a given method, samples were generally analyzed to the same sensitivity. Although, there were some missed MDCs in the data set, the results are deemed comparable for decision purposes.

SUMMARY & CONCLUSIONS

Metrics used to validate the quality of radiochemical analyses of volumetric building samples and make conclusions regarding compliance of building materials with Bureau Volumetric Release Criteria are summarized below:

- Completeness was 100%. All samples were analyzed as requested with no missing samples.
- 93% of 1,203 analyses were measured at levels below the sample specific MDC. All but 11 of the radionuclides measured above the MDC were isotopes of uranium.
- 3.4% of 1,203 analyses, including uranium analyses, were measured at levels below the sample specific MDC, but greater than the two standard deviation counting uncertainty. The number of results reported greater than the uncertainty lie within the expected range for false positive detections.
- 95% of 596 analyses met the CRDL for targeted radionuclides at one significant figure. Of those that did not, companion samples of the same type, from the same areas, were used to assess the significance of the failures and concluded not to be significant.
- 98.5% of 335 method blanks met the criterion of no reported activity greater than the sample specific MDC. Of the 5 analyses that were reported > MDC, none were reported greater than the CRDL. No significant biases were detected by the blank assessment.
- 98.4% of 123 pairs of duplicates met the laboratory criterion of RER < 3. Two sample pairs exceeded this criterion with RERs of 3.53 and 3.01.
- 100% of 166 LCS samples met the spike recovery criterion of 75% - 125%.
- 94.3% of 297 MS samples met the spike recovery criterion of 75% - 125%.
- 99.9% of all radiometric and gravimetric recoveries met the acceptance criterion of 15% - 125%.

In conclusion, the low incidence of targeted radionuclide detection and the low levels of detection reported relative to decision criteria, indicate that additional uncertainty in the analysis results would not be significant with respect to data usability for the intended purpose. CN concludes that the radiochemical data is of sufficient quality for evaluating the presence/absence of target licensed radionuclides in building materials at concentrations meeting a 15 mrem per year release criteria.

REFERENCES

EPA 2005, USEPA 815-R-05-004, Manual for the Certification of Laboratories Analyzing Drinking Water: Criteria and Procedures Quality Assurance, Fifth Edition, January 2005

MARLAP, NUREG 1576, EPA 402-B-04-001A, NTIS PB2004-105421, Multi-Agency Radiological Laboratory Analytical Protocols Manual, July 2004.

USEPA QA/G-5, Guidance for Quality Assurance Project Plans, December 2002.

Appendix A
Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
1-F-31-C	SAMPLE	08/31/20	09/16/20	Americium-241	5	0.0492	0.0771	pCi/g	U	0.15			0	97.3	g
1-F-31-C	SAMPLE	08/31/20	09/16/20	Barium-133	5	0.0128	0.0299	pCi/g	U	0.0581			0	97.3	g
1-F-31-C	SAMPLE	08/31/20	09/16/20	Cadmium-109	5	-0.0494	0.661	pCi/g	U	1.05			0	97.3	g
1-F-31-C	SAMPLE	08/31/20	09/16/20	Cerium-144	5	-0.0181	0.145	pCi/g	U	0.252			0	97.3	g
1-F-31-C	SAMPLE	08/31/20	09/16/20	Cesium-137	5	-0.0163	0.0339	pCi/g	U	0.0583	1		0	97.3	g
1-F-31-C	SAMPLE	08/31/20	09/16/20	Cobalt-57	5	0.0162	0.021	pCi/g	U	0.04			0	97.3	g
1-F-31-C	SAMPLE	08/31/20	09/16/20	Cobalt-60	5	-0.0282	0.0292	pCi/g	U	0.0412			0	97.3	g
1-F-31-C	SAMPLE	08/31/20	09/16/20	Europium-152	5	-0.00258	0.0732	pCi/g	U	0.141			0	97.3	g
1-F-31-C	SAMPLE	08/31/20	09/16/20	Lead-210	5	0.559	1.61	pCi/g	U	3.05			0	97.3	g
1-F-31-C	SAMPLE	08/31/20	09/16/20	Manganese-54	5	0.018	0.0272	pCi/g	U	0.0639			0	97.3	g
1-F-31-C	SAMPLE	08/31/20	09/16/20	Mercury-203	5	-0.005	0.029	pCi/g	U	0.0546			0	97.3	g
1-F-31-C	SAMPLE	08/31/20	09/16/20	Sodium-22	5	-0.0105	0.0301	pCi/g	U	0.0584			0	97.3	g
1-F-31-C	SAMPLE	08/31/20	09/16/20	Yttrium-88	5	0.00638	0.0359	pCi/g	U	0.084			0	97.3	g
1-F-31-C	SAMPLE	08/31/20	09/16/20	Zinc-65	5	-0.0491	0.083	pCi/g	U	0.121			0	97.3	g
1-F-31-C	DUP	08/31/20	09/16/20	Americium-241	5	-0.0858	0.257	pCi/g	U	0.462			0	97.3	g
1-F-31-C	DUP	08/31/20	09/16/20	Barium-133	5	0.0156	0.0512	pCi/g	U	0.0952			0	97.3	g
1-F-31-C	DUP	08/31/20	09/16/20	Cadmium-109	5	-0.0918	0.855	pCi/g	U	1.43			0	97.3	g
1-F-31-C	DUP	08/31/20	09/16/20	Cerium-144	5	-0.0962	0.209	pCi/g	U	0.354			0	97.3	g
1-F-31-C	DUP	08/31/20	09/16/20	Cesium-137	5	0.0195	0.0335	pCi/g	U	0.074	1		0	97.3	g
1-F-31-C	DUP	08/31/20	09/16/20	Cobalt-57	5	0.00957	0.0281	pCi/g	U	0.0529			0	97.3	g
1-F-31-C	DUP	08/31/20	09/16/20	Cobalt-60	5	-0.00728	0.0267	pCi/g	U	0.0593			0	97.3	g
1-F-31-C	DUP	08/31/20	09/16/20	Europium-152	5	0.0425	0.0901	pCi/g	U	0.193			0	97.3	g
1-F-31-C	DUP	08/31/20	09/16/20	Lead-210	5	-5.86	12	pCi/g	U	19.3			0	97.3	g
1-F-31-C	DUP	08/31/20	09/16/20	Manganese-54	5	-0.0142	0.0219	pCi/g	U	0.0349			0	97.3	g
1-F-31-C	DUP	08/31/20	09/16/20	Mercury-203	5	0.0238	0.0381	pCi/g	U	0.0811			0	97.3	g
1-F-31-C	DUP	08/31/20	09/16/20	Sodium-22	5	0.0294	0.0511	pCi/g	U	0.12			0	97.3	g
1-F-31-C	DUP	08/31/20	09/16/20	Yttrium-88	5	-0.00054	0.0318	pCi/g	U	0.0815			0	97.3	g
1-F-31-C	DUP	08/31/20	09/16/20	Zinc-65	5	0.00577	0.0748	pCi/g	U	0.169			0	97.3	g
1-W-N-4-B-C	SAMPLE	08/28/20	09/16/20	Americium-241	5	0.0746	0.099	pCi/g	U	0.194		1.11	142	g	
1-W-N-4-B-C	SAMPLE	08/28/20	09/16/20	Barium-133	5	0.0214	0.0448	pCi/g	U	0.0617		1.11	142	g	
1-W-N-4-B-C	SAMPLE	08/28/20	09/16/20	Cadmium-109	5	0	1.01	pCi/g	UI	0.824		1.11	142	g	
1-W-N-4-B-C	SAMPLE	08/28/20	09/16/20	Cerium-144	5	-0.0238	0.147	pCi/g	U	0.271		1.11	142	g	
1-W-N-4-B-C	SAMPLE	08/28/20	09/16/20	Cesium-137	5	-0.0235	0.027	pCi/g	U	0.0453	1		1.11	142	g
1-W-N-4-B-C	SAMPLE	08/28/20	09/16/20	Cobalt-57	5	0.0147	0.0179	pCi/g	U	0.0363			1.11	142	g
1-W-N-4-B-C	SAMPLE	08/28/20	09/16/20	Cobalt-60	5	0.00927	0.0317	pCi/g	U	0.0682			1.11	142	g
1-W-N-4-B-C	SAMPLE	08/28/20	09/16/20	Europium-152	5	0.031	0.0668	pCi/g	U	0.135			1.11	142	g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
1-W-N-4-B-C	SAMPLE	08/28/20	09/16/20	Lead-210	5	0.34	1.81	pCi/g	U	3.72			1.11	142	g
1-W-N-4-B-C	SAMPLE	08/28/20	09/16/20	Manganese-54	5	-0.00115	0.0303	pCi/g	U	0.0576			1.11	142	g
1-W-N-4-B-C	SAMPLE	08/28/20	09/16/20	Mercury-203	5	-0.00658	0.0297	pCi/g	U	0.0524			1.11	142	g
1-W-N-4-B-C	SAMPLE	08/28/20	09/16/20	Sodium-22	5	0.0193	0.03	pCi/g	U	0.0686			1.11	142	g
1-W-N-4-B-C	SAMPLE	08/28/20	09/16/20	Yttrium-88	5	-0.0166	0.024	pCi/g	U	0.0395			1.11	142	g
1-W-N-4-B-C	SAMPLE	08/28/20	09/16/20	Zinc-65	5	0.0496	0.0679	pCi/g	U	0.138			1.11	142	g
1-W-N-4-B-C	DUP	08/28/20	09/16/20	Americium-241	5	-0.0735	0.145	pCi/g	U	0.289			0	142	g
1-W-N-4-B-C	DUP	08/28/20	09/16/20	Barium-133	5	0.0287	0.038	pCi/g	U	0.0759			0	142	g
1-W-N-4-B-C	DUP	08/28/20	09/16/20	Cadmium-109	5	-0.176	0.666	pCi/g	U	1.3			0	142	g
1-W-N-4-B-C	DUP	08/28/20	09/16/20	Cerium-144	5	0.0702	0.145	pCi/g	U	0.296			0	142	g
1-W-N-4-B-C	DUP	08/28/20	09/16/20	Cesium-137	5	0.033	0.0353	pCi/g	U	0.0771	1		0	142	g
1-W-N-4-B-C	DUP	08/28/20	09/16/20	Cobalt-57	5	-0.0066	0.0186	pCi/g	U	0.0354			0	142	g
1-W-N-4-B-C	DUP	08/28/20	09/16/20	Cobalt-60	5	-0.0188	0.0376	pCi/g	U	0.0663			0	142	g
1-W-N-4-B-C	DUP	08/28/20	09/16/20	Europium-152	5	0.0151	0.086	pCi/g	U	0.16			0	142	g
1-W-N-4-B-C	DUP	08/28/20	09/16/20	Lead-210	5	-2.51	5.33	pCi/g	U	8.89			0	142	g
1-W-N-4-B-C	DUP	08/28/20	09/16/20	Manganese-54	5	-0.00355	0.0305	pCi/g	U	0.0616			0	142	g
1-W-N-4-B-C	DUP	08/28/20	09/16/20	Mercury-203	5	-0.0243	0.0402	pCi/g	U	0.0674			0	142	g
1-W-N-4-B-C	DUP	08/28/20	09/16/20	Sodium-22	5	-0.0258	0.0441	pCi/g	U	0.0761			0	142	g
1-W-N-4-B-C	DUP	08/28/20	09/16/20	Yttrium-88	5	0.0103	0.0385	pCi/g	U	0.0901			0	142	g
1-W-N-4-B-C	DUP	08/28/20	09/16/20	Zinc-65	5	-0.00465	0.101	pCi/g	U	0.171			0	142	g
1-W-W-45	SAMPLE	08/28/20	09/16/20	Americium-241	5	0.471	0.483	pCi/g	U	0.862		13.5	37.6	g	
1-W-W-45	SAMPLE	08/28/20	09/16/20	Barium-133	5	-0.00834	0.0815	pCi/g	U	0.146		13.5	37.6	g	
1-W-W-45	SAMPLE	08/28/20	09/16/20	Cadmium-109	5	-1.39	1.98	pCi/g	U	2.53		13.5	37.6	g	
1-W-W-45	SAMPLE	08/28/20	09/16/20	Cerium-144	5	-0.16	0.401	pCi/g	U	0.674		13.5	37.6	g	
1-W-W-45	SAMPLE	08/28/20	09/16/20	Cesium-137	5	-0.0623	0.0785	pCi/g	U	0.128	1	13.5	37.6	g	
1-W-W-45	SAMPLE	08/28/20	09/16/20	Cobalt-57	5	0.00835	0.043	pCi/g	U	0.0795		13.5	37.6	g	
1-W-W-45	SAMPLE	08/28/20	09/16/20	Cobalt-60	5	0.0207	0.0738	pCi/g	U	0.182		13.5	37.6	g	
1-W-W-45	SAMPLE	08/28/20	09/16/20	Europium-152	5	0.108	0.226	pCi/g	U	0.432		13.5	37.6	g	
1-W-W-45	SAMPLE	08/28/20	09/16/20	Lead-210	5	-5.15	16	pCi/g	U	24.6		13.5	37.6	g	
1-W-W-45	SAMPLE	08/28/20	09/16/20	Manganese-54	5	0.0179	0.0776	pCi/g	U	0.164		13.5	37.6	g	
1-W-W-45	SAMPLE	08/28/20	09/16/20	Mercury-203	5	0.0612	0.0856	pCi/g	U	0.168		13.5	37.6	g	
1-W-W-45	SAMPLE	08/28/20	09/16/20	Sodium-22	5	0.0429	0.115	pCi/g	U	0.246		13.5	37.6	g	
1-W-W-45	SAMPLE	08/28/20	09/16/20	Yttrium-88	5	-0.0255	0.0829	pCi/g	U	0.174		13.5	37.6	g	
1-W-W-45	SAMPLE	08/28/20	09/16/20	Zinc-65	5	-0.125	0.161	pCi/g	U	0.24		13.5	37.6	g	
1-W-W-45	DUP	08/28/20	09/16/20	Americium-241	5	-0.338	0.485	pCi/g	U	0.656		0	37.6	g	

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

6-EPA 906.0 Mod.

5-DOE HASL 300, 4.5.2.3/Ga-01-R

7-EPA EERF C-01 Mod.

*Key
 1-DOE EML HASL-300, Am-05-RC Mod.
 2-ASTM C 1475-00 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

Appendix A
Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
1-W-W-45	DUP	08/28/20	09/16/20	Barium-133	5	0.0696	0.102 pCi/g	U	0.153				0	37.6 g	
1-W-W-45	DUP	08/28/20	09/16/20	Cadmium-109	5	-0.129	1.65 pCi/g	U	2.61				0	37.6 g	
1-W-W-45	DUP	08/28/20	09/16/20	Cerium-144	5	-0.0203	0.374 pCi/g	U	0.594				0	37.6 g	
1-W-W-45	DUP	08/28/20	09/16/20	Cesium-137	5	0.0386	0.0747 pCi/g	U	0.147	1			0	37.6 g	
1-W-W-45	DUP	08/28/20	09/16/20	Cobalt-57	5	0.0209	0.05 pCi/g	U	0.0843				0	37.6 g	
1-W-W-45	DUP	08/28/20	09/16/20	Cobalt-60	5	-0.00083	0.0568 pCi/g	U	0.119				0	37.6 g	
1-W-W-45	DUP	08/28/20	09/16/20	Europium-152	5	-0.0025	0.162 pCi/g	U	0.285				0	37.6 g	
1-W-W-45	DUP	08/28/20	09/16/20	Lead-210	5	-5.19	16.8 pCi/g	U	26.2				0	37.6 g	
1-W-W-45	DUP	08/28/20	09/16/20	Manganese-54	5	0.0342	0.0748 pCi/g	U	0.147				0	37.6 g	
1-W-W-45	DUP	08/28/20	09/16/20	Mercury-203	5	-0.0631	0.0733 pCi/g	U	0.113				0	37.6 g	
1-W-W-45	DUP	08/28/20	09/16/20	Sodium-22	5	-0.0382	0.0776 pCi/g	U	0.137				0	37.6 g	
1-W-W-45	DUP	08/28/20	09/16/20	Yttrium-88	5	0.0376	0.0586 pCi/g	U	0.159				0	37.6 g	
1-W-W-45	DUP	08/28/20	09/16/20	Zinc-65	5	0.00968	0.139 pCi/g	U	0.281				0	37.6 g	
3-F-79-C	SAMPLE	08/31/20	09/16/20	Americium-241	5	0.00895	0.166 pCi/g	U	0.31				0.346	104 g	
3-F-79-C	SAMPLE	08/31/20	09/16/20	Barium-133	5	-0.00542	0.0393 pCi/g	U	0.0674				0.346	104 g	
3-F-79-C	SAMPLE	08/31/20	09/16/20	Cadmium-109	5	-0.599	0.771 pCi/g	U	1.27				0.346	104 g	
3-F-79-C	SAMPLE	08/31/20	09/16/20	Cerium-144	5	0.00807	0.166 pCi/g	U	0.301				0.346	104 g	
3-F-79-C	SAMPLE	08/31/20	09/16/20	Cesium-137	5	0.039	0.0388 pCi/g	U	0.0865	1			0.346	104 g	
3-F-79-C	SAMPLE	08/31/20	09/16/20	Cobalt-57	5	0.00143	0.0218 pCi/g	U	0.0397				0.346	104 g	
3-F-79-C	SAMPLE	08/31/20	09/16/20	Cobalt-60	5	-0.0114	0.0177 pCi/g	U	0.0281				0.346	104 g	
3-F-79-C	SAMPLE	08/31/20	09/16/20	Europium-152	5	0.0654	0.094 pCi/g	U	0.197				0.346	104 g	
3-F-79-C	SAMPLE	08/31/20	09/16/20	Lead-210	5	0.668	5.89 pCi/g	U	11.1				0.346	104 g	
3-F-79-C	SAMPLE	08/31/20	09/16/20	Manganese-54	5	-0.0015	0.0255 pCi/g	U	0.0516				0.346	104 g	
3-F-79-C	SAMPLE	08/31/20	09/16/20	Mercury-203	5	-0.00496	0.0279 pCi/g	U	0.0542				0.346	104 g	
3-F-79-C	SAMPLE	08/31/20	09/16/20	Sodium-22	5	-0.00234	0.0147 pCi/g	U	0.038				0.346	104 g	
3-F-79-C	SAMPLE	08/31/20	09/16/20	Yttrium-88	5	-0.00997	0.0308 pCi/g	U	0.063				0.346	104 g	
3-F-79-C	SAMPLE	08/31/20	09/16/20	Zinc-65	5	0.0916	0.0568 pCi/g	U	0.154				0.346	104 g	
3-F-79-C	DUP	08/31/20	09/16/20	Americium-241	5	-0.0251	0.0817 pCi/g	U	0.131				0	104 g	
3-F-79-C	DUP	08/31/20	09/16/20	Barium-133	5	-0.0293	0.0376 pCi/g	U	0.0543				0	104 g	
3-F-79-C	DUP	08/31/20	09/16/20	Cadmium-109	5	-0.12	0.571 pCi/g	U	0.904				0	104 g	
3-F-79-C	DUP	08/31/20	09/16/20	Cerium-144	5	0.00847	0.145 pCi/g	U	0.259				0	104 g	
3-F-79-C	DUP	08/31/20	09/16/20	Cesium-137	5	-0.0229	0.0333 pCi/g	U	0.0545	1			0	104 g	
3-F-79-C	DUP	08/31/20	09/16/20	Cobalt-57	5	-0.012	0.0186 pCi/g	U	0.03				0	104 g	
3-F-79-C	DUP	08/31/20	09/16/20	Cobalt-60	5	-0.00523	0.0231 pCi/g	U	0.0487				0	104 g	
3-F-79-C	DUP	08/31/20	09/16/20	Europium-152	5	0.0271	0.0715 pCi/g	U	0.146				0	104 g	

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
3-F-79-C	DUP	08/31/20	09/16/20	Lead-210	5	2.01	1.97	pCi/g	U	2.36			0	104	g
3-F-79-C	DUP	08/31/20	09/16/20	Manganese-54	5	0.00796	0.0212	pCi/g	U	0.0471			0	104	g
3-F-79-C	DUP	08/31/20	09/16/20	Mercury-203	5	-0.00828	0.0206	pCi/g	U	0.0386			0	104	g
3-F-79-C	DUP	08/31/20	09/16/20	Sodium-22	5	-0.00605	0.0258	pCi/g	U	0.053			0	104	g
3-F-79-C	DUP	08/31/20	09/16/20	Yttrium-88	5	-0.0193	0.037	pCi/g	U	0.0649			0	104	g
3-F-79-C	DUP	08/31/20	09/16/20	Zinc-65	5	0.0199	0.0507	pCi/g	U	0.121			0	104	g
4-F-1-C	SAMPLE	09/01/20	09/16/20	Americium-241	5	0.0224	0.166	pCi/g	U	0.306			1.22	158	g
4-F-1-C	SAMPLE	09/01/20	09/16/20	Barium-133	5	0.00463	0.0299	pCi/g	U	0.0515			1.22	158	g
4-F-1-C	SAMPLE	09/01/20	09/16/20	Cadmium-109	5	0.661	1.01	pCi/g	U	1.31			1.22	158	g
4-F-1-C	SAMPLE	09/01/20	09/16/20	Cerium-144	5	-0.121	0.155	pCi/g	U	0.266			1.22	158	g
4-F-1-C	SAMPLE	09/01/20	09/16/20	Cesium-137	5	0.0129	0.0297	pCi/g	U	0.0531	1		1.22	158	g
4-F-1-C	SAMPLE	09/01/20	09/16/20	Cobalt-57	5	-0.00365	0.0189	pCi/g	U	0.0345			1.22	158	g
4-F-1-C	SAMPLE	09/01/20	09/16/20	Cobalt-60	5	0.0216	0.0257	pCi/g	U	0.0566			1.22	158	g
4-F-1-C	SAMPLE	09/01/20	09/16/20	Europium-152	5	0.00615	0.0692	pCi/g	U	0.119			1.22	158	g
4-F-1-C	SAMPLE	09/01/20	09/16/20	Lead-210	5	-0.958	5	pCi/g	U	9.89			1.22	158	g
4-F-1-C	SAMPLE	09/01/20	09/16/20	Manganese-54	5	-0.00417	0.0264	pCi/g	U	0.0487			1.22	158	g
4-F-1-C	SAMPLE	09/01/20	09/16/20	Mercury-203	5	0.00672	0.0281	pCi/g	U	0.0547			1.22	158	g
4-F-1-C	SAMPLE	09/01/20	09/16/20	Sodium-22	5	0.0128	0.0354	pCi/g	U	0.0696			1.22	158	g
4-F-1-C	SAMPLE	09/01/20	09/16/20	Yttrium-88	5	-0.00714	0.0256	pCi/g	U	0.0497			1.22	158	g
4-F-1-C	SAMPLE	09/01/20	09/16/20	Zinc-65	5	0.0589	0.0641	pCi/g	U	0.125			1.22	158	g
4-F-1-C	DUP	09/01/20	09/16/20	Americium-241	5	0.0702	0.183	pCi/g	U	0.385			0	158	g
4-F-1-C	DUP	09/01/20	09/16/20	Barium-133	5	0.0122	0.0257	pCi/g	U	0.0534			0	158	g
4-F-1-C	DUP	09/01/20	09/16/20	Cadmium-109	5	0	1.38	pCi/g	U	1.24			0	158	g
4-F-1-C	DUP	09/01/20	09/16/20	Cerium-144	5	-0.158	0.176	pCi/g	U	0.312			0	158	g
4-F-1-C	DUP	09/01/20	09/16/20	Cesium-137	5	0.00774	0.0319	pCi/g	U	0.065	1		0	158	g
4-F-1-C	DUP	09/01/20	09/16/20	Cobalt-57	5	0.00852	0.0218	pCi/g	U	0.0436			0	158	g
4-F-1-C	DUP	09/01/20	09/16/20	Cobalt-60	5	0.0534	0.0302	pCi/g	U	0.0833			0	158	g
4-F-1-C	DUP	09/01/20	09/16/20	Europium-152	5	-0.0119	0.071	pCi/g	U	0.143			0	158	g
4-F-1-C	DUP	09/01/20	09/16/20	Lead-210	5	2.48	7.39	pCi/g	U	15.6			0	158	g
4-F-1-C	DUP	09/01/20	09/16/20	Manganese-54	5	0.00527	0.0244	pCi/g	U	0.0517			0	158	g
4-F-1-C	DUP	09/01/20	09/16/20	Mercury-203	5	-0.00539	0.0324	pCi/g	U	0.0588			0	158	g
4-F-1-C	DUP	09/01/20	09/16/20	Sodium-22	5	0.00233	0.0383	pCi/g	U	0.0794			0	158	g
4-F-1-C	DUP	09/01/20	09/16/20	Yttrium-88	5	0.00577	0.0272	pCi/g	U	0.0663			0	158	g
4-F-1-C	DUP	09/01/20	09/16/20	Zinc-65	5	0.0342	0.0955	pCi/g	U	0.182			0	158	g
LCS	LCS	09/16/20	09/16/20	Americium-241	5	510	5.48	pCi/g		2.38	105		0	115	g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

6-EPA 906.0 Mod.

5-DOE HASL 300, 4.5.2.3/Ga-01-R

7-EPA EERF C-01 Mod.

1-DOE EML HASL-300, Am-05-RC Mod.
2-ASTM C 1475-00 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

Appendix A
Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
LCS	LCS	09/16/20	09/16/20	Cesium-137	5	163	3.94	pCi/g		1	1	99.9	0	115	g
LCS	LCS	09/16/20	09/16/20	Cobalt-60	5	91.3	3.43	pCi/g		0.446		95.8	0	115	g
MB	MB	09/16/20	09/16/20	Americium-241	5	-0.0188	0.0745	pCi/g	U	0.163			0	158	g
MB	MB	09/16/20	09/16/20	Barium-133	5	-0.00257	0.0186	pCi/g	U	0.0394			0	158	g
MB	MB	09/16/20	09/16/20	Cadmium-109	5	-0.0915	0.292	pCi/g	U	0.559			0	158	g
MB	MB	09/16/20	09/16/20	Cerium-144	5	0.0238	0.0726	pCi/g	U	0.161			0	158	g
MB	MB	09/16/20	09/16/20	Cesium-137	5	0.0121	0.0161	pCi/g	U	0.0406	1		0	158	g
MB	MB	09/16/20	09/16/20	Cobalt-57	5	-0.00238	0.00974	pCi/g	U	0.0199			0	158	g
MB	MB	09/16/20	09/16/20	Cobalt-60	5	0.00984	0.0229	pCi/g	U	0.0565			0	158	g
MB	MB	09/16/20	09/16/20	Europium-152	5	0.0433	0.049	pCi/g	U	0.117			0	158	g
MB	MB	09/16/20	09/16/20	Lead-210	5	-4.16	3.57	pCi/g	U	5.17			0	158	g
MB	MB	09/16/20	09/16/20	Manganese-54	5	-0.0031	0.0188	pCi/g	U	0.04			0	158	g
MB	MB	09/16/20	09/16/20	Mercury-203	5	0.00126	0.0165	pCi/g	U	0.0325			0	158	g
MB	MB	09/16/20	09/16/20	Sodium-22	5	0.00337	0.0231	pCi/g	U	0.0526			0	158	g
MB	MB	09/16/20	09/16/20	Yttrium-88	5	-0.0173	0.0195	pCi/g	U	0.0156			0	158	g
MB	MB	09/16/20	09/16/20	Zinc-65	5	-0.0504	0.0411	pCi/g	U	0.045			0	158	g
1-F-16-C	SAMPLE	08/31/20	09/23/20	Americium-243 Tracer	2	48.9		pCi/g				91.3	0.873	4.07	g
1-F-16-C	SAMPLE	08/31/20	09/23/20	Neptunium-237	2	0.00155	0.0084	pCi/g	U	0.0161	0.05		0.873	4.07	g
1-F-16-C	DUP	08/31/20	09/23/20	Americium-243 Tracer	2	48.4		pCi/g				89.4	0	4.03	g
1-F-16-C	DUP	08/31/20	09/23/20	Neptunium-237	2	0.00765	0.0114	pCi/g	U	0.0147	0.05		0	4.03	g
1-F-16-C	MS	08/31/20	09/23/20	Neptunium-237	2	1.07	0.111	pCi/g		0.0152	0.05	98.3	0	4.02	g
1-F-16-C	MS	08/31/20	09/23/20	Americium-243 Tracer	2	51.5		pCi/g				94.8	0	4.02	g
LCS	LCS	09/23/20	09/23/20	Neptunium-237	2	1.21	0.115	pCi/g		0.0153	0.05	113	0	4.07	g
LCS	LCS	09/23/20	09/23/20	Americium-243 Tracer	2	52.9		pCi/g				98.7	0	4.07	g
MB	MB	09/23/20	09/23/20	Americium-243 Tracer	2	54.6		pCi/g				102	0	4.07	g
MB	MB	09/23/20	09/23/20	Neptunium-237	2	0.00168	0.00738	pCi/g	U	0.0134	0.05		0	4.07	g
1-F-16-C	SAMPLE	08/31/20	09/22/20	Plutonium-242 Tracer	3	0.562	0.0455	pCi/g		0.00778		73.7	0.873	2.52	g
1-F-16-C	SAMPLE	08/31/20	09/22/20	Plutonium-238	3	-0.0007	0.00498	pCi/g	U	0.0101	0.05		0.873	2.52	g
1-F-16-C	SAMPLE	08/31/20	09/22/20	Plutonium-239/240	3	0.000704	0.00414	pCi/g	U	0.00778	0.05		0.873	2.52	g
1-F-16-C	DUP	08/31/20	09/22/20	Plutonium-242 Tracer	3	0.552	0.0471	pCi/g		0.00829		72.3	0	2.52	g
1-F-16-C	DUP	08/31/20	09/22/20	Plutonium-238	3	0.0015	0.00416	pCi/g	U	0.00719	0.05		0	2.52	g
1-F-16-C	DUP	08/31/20	09/22/20	Plutonium-239/240	3	-0.003	0.0036	pCi/g	U	0.00923	0.05		0	2.52	g
1-F-16-C	MS	08/31/20	09/22/20	Plutonium-239/240	3	0.746	0.0441	pCi/g		0.00648	0.05	93.1	0	2.51	g
1-F-16-C	MS	08/31/20	09/22/20	Plutonium-242 Tracer	3	0.616	0.0449	pCi/g		0.00906		80.3	0	2.51	g
LCS	LCS	09/22/20	09/22/20	Plutonium-239/240	3	0.767	0.0443	pCi/g		0.00947	0.05	96.5	0	2.52	g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Appendix A
Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
LCS	LCS	09/22/20	09/22/20	Plutonium-242 Tracer	3	0.611	0.044	pCi/g		0.00727		80.1	0	2.52	g
MB	MB	09/22/20	09/22/20	Plutonium-242 Tracer	3	0.547	0.0452	pCi/g		0.00764		71.7	0	2.52	g
MB	MB	09/22/20	09/22/20	Plutonium-238	3	-0.00208	0.0045	pCi/g	U	0.00996	0.05		0	2.52	g
MB	MB	09/22/20	09/22/20	Plutonium-239/240	3	0.00138	0.00542	pCi/g	U	0.00996	0.05		0	2.52	g
1-F-16-C	SAMPLE	08/31/20	09/24/20	Uranium-232 Tracer	4	2.63	0.162	pCi/g		0.0473		97.8	0.873	0.758	g
1-F-16-C	SAMPLE	08/31/20	09/24/20	Uranium-233/234	4	0.355	0.063	pCi/g		0.0469	1		0.873	0.758	g
1-F-16-C	SAMPLE	08/31/20	09/24/20	Uranium-235/236	4	0.0153	0.018	pCi/g	U	0.0234	0.05		0.873	0.758	g
1-F-16-C	SAMPLE	08/31/20	09/24/20	Uranium-238	4	0.346	0.059	pCi/g		0.0274	1		0.873	0.758	g
1-F-16-C	DUP	08/31/20	09/23/20	Uranium-232 Tracer	4	2.35	0.157	pCi/g		0.0549		87.2	0	0.757	g
1-F-16-C	DUP	08/31/20	09/23/20	Uranium-233/234	4	0.346	0.0585	pCi/g		0.0371	1		0	0.757	g
1-F-16-C	DUP	08/31/20	09/23/20	Uranium-235/236	4	0.00693	0.0136	pCi/g	U	0.0221	0.05		0	0.757	g
1-F-16-C	DUP	08/31/20	09/23/20	Uranium-238	4	0.345	0.0564	pCi/g		0.0221	1		0	0.757	g
1-F-16-C	MS	08/31/20	09/23/20	Uranium-235/236	4	0.851	0.0872	pCi/g		0.0252	0.05	105	0	0.754	g
1-F-16-C	MS	08/31/20	09/23/20	Uranium-232 Tracer	4	2.35	0.156	pCi/g		0.0463		86.9	0	0.754	g
LCS	LCS	09/23/20	09/23/20	Uranium-235/236	4	0.861	0.0971	pCi/g		0.034	0.05	108	0	0.758	g
LCS	LCS	09/23/20	09/23/20	Uranium-232 Tracer	4	1.91	0.173	pCi/g		0.0736		70.9	0	0.758	g
MB	MB	09/23/20	09/23/20	Uranium-232 Tracer	4	2.47	0.149	pCi/g		0.0531		91.8	0	0.758	g
MB	MB	09/23/20	09/23/20	Uranium-233/234	4	-0.00266	0.0166	pCi/g	U	0.0335	1		0	0.758	g
MB	MB	09/23/20	09/23/20	Uranium-235/236	4	0.00825	0.014	pCi/g	U	0.0228	0.05		0	0.758	g
MB	MB	09/23/20	09/23/20	Uranium-238	4	0.00206	0.0121	pCi/g	U	0.0227	1		0	0.758	g
1-W-E-37	SAMPLE	08/28/20	09/27/20	Americium-243 Tracer	2	36		pCi/g				66.4	12.2	4.02	g
1-W-E-37	SAMPLE	08/28/20	09/27/20	Neptunium-237	2	-0.00125	0.00865	pCi/g	U	0.0211	0.05		12.2	4.02	g
1-W-E-37	DUP	08/28/20	09/27/20	Americium-243 Tracer	2	37.7		pCi/g				69.4	0	4.02	g
1-W-E-37	DUP	08/28/20	09/27/20	Neptunium-237	2	0.00141	0.00782	pCi/g	U	0.015	0.05		0	4.02	g
1-W-E-37	MS	08/28/20	09/28/20	Neptunium-237	2	1.17	0.0952	pCi/g		0.0149	0.05	107	0	4.02	g
1-W-E-37	MS	08/28/20	09/28/20	Americium-243 Tracer	2	51.1		pCi/g				94.3	0	4.02	g
LCS	LCS	09/27/20	09/27/20	Neptunium-237	2	1.3	0.102	pCi/g		0.0166	0.05	120	0	4.02	g
LCS	LCS	09/27/20	09/27/20	Americium-243 Tracer	2	53.4		pCi/g				98.5	0	4.02	g
MB	MB	09/27/20	09/27/20	Americium-243 Tracer	2	51.3		pCi/g				94.6	0	4.02	g
MB	MB	09/27/20	09/27/20	Neptunium-237	2	0.00483	0.00768	pCi/g	U	0.0106	0.05		0	4.02	g
1-W-E-37	SAMPLE	08/28/20	09/27/20	Plutonium-242 Tracer	3	0.627	0.091	pCi/g		0.0217		82.3	12.2	2.52	g
1-W-E-37	SAMPLE	08/28/20	09/27/20	Plutonium-238	3	0.000112	0.00831	pCi/g	U	0.0185	0.05		12.2	2.52	g
1-W-E-37	SAMPLE	08/28/20	09/27/20	Plutonium-239/240	3	-0.00325	0.00881	pCi/g	U	0.0235	0.05		12.2	2.52	g
1-W-E-37	DUP	08/28/20	09/27/20	Plutonium-242 Tracer	3	0.648	0.0921	pCi/g		0.0189		85.1	0	2.52	g
1-W-E-37	DUP	08/28/20	09/27/20	Plutonium-238	3	-0.00138	0.00611	pCi/g	U	0.0159	0.05		0	2.52	g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

6-EPA 906.0 Mod.

5-DOE HASL 300, 4.5.2.3/Ga-01-R

7-EPA EERF C-01 Mod.

*Key
1-DOE EML HASL-300, Am-05-RC Mod.
2-ASTM C 1475-00 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
1-W-E-37	DUP	08/28/20	09/27/20	Plutonium-239/240	3	0.00299	0.0102	pCi/g	U	0.019	0.05			0	2.52 g
1-W-E-37	MS	08/28/20	09/27/20	Plutonium-239/240	3	0.841	0.0906	pCi/g		0.0203	0.05	106		0	2.52 g
1-W-E-37	MS	08/28/20	09/27/20	Plutonium-242 Tracer	3	0.642	0.0865	pCi/g		0.0238		84.2		0	2.52 g
LCS	LCS	09/27/20	09/27/20	Plutonium-239/240	3	0.726	0.0883	pCi/g		0.0214	0.05	91.4		0	2.52 g
LCS	LCS	09/27/20	09/27/20	Plutonium-242 Tracer	3	0.637	0.0908	pCi/g		0.0268		83.6		0	2.52 g
MB	MB	09/27/20	09/27/20	Plutonium-242 Tracer	3	0.575	0.0915	pCi/g		0.0266		75.5		0	2.52 g
MB	MB	09/27/20	09/27/20	Plutonium-238	3	-0.00405	0.00654	pCi/g	U	0.0208	0.05			0	2.52 g
MB	MB	09/27/20	09/27/20	Plutonium-239/240	3	0.00732	0.0142	pCi/g	U	0.0244	0.05			0	2.52 g
1-W-E-37	SAMPLE	08/28/20	09/26/20	Uranium-232 Tracer	4	2.64	0.158	pCi/g		0.0229		98	12.2	0.757	g
1-W-E-37	SAMPLE	08/28/20	09/26/20	Uranium-233/234	4	0.0317	0.026	pCi/g	U	0.0382	1		12.2	0.757	g
1-W-E-37	SAMPLE	08/28/20	09/26/20	Uranium-235/236	4	0	0.00937	pCi/g	U	0.0183	0.05		12.2	0.757	g
1-W-E-37	SAMPLE	08/28/20	09/26/20	Uranium-238	4	0.0739	0.0268	pCi/g		0.00715	1		12.2	0.757	g
1-W-E-37	DUP	08/28/20	09/26/20	Uranium-232 Tracer	4	2.53	0.159	pCi/g		0.0185		93.8		0	0.757 g
1-W-E-37	DUP	08/28/20	09/26/20	Uranium-233/234	4	0.0372	0.0247	pCi/g		0.032	1			0	0.757 g
1-W-E-37	DUP	08/28/20	09/26/20	Uranium-235/236	4	0.0121	0.0126	pCi/g		0.00728	0.05			0	0.757 g
1-W-E-37	DUP	08/28/20	09/26/20	Uranium-238	4	0.0436	0.0232	pCi/g		0.0232	1			0	0.757 g
1-W-E-37	MS	08/28/20	09/26/20	Uranium-235/236	4	0.82	0.0877	pCi/g		0.00728	0.05	103		0	0.757 g
1-W-E-37	MS	08/28/20	09/26/20	Uranium-232 Tracer	4	2.53	0.159	pCi/g		0.0298		93.9		0	0.757 g
LCS	LCS	09/26/20	09/26/20	Uranium-235/236	4	0.802	0.0881	pCi/g		0.00751	0.05	101		0	0.757 g
LCS	LCS	09/26/20	09/26/20	Uranium-232 Tracer	4	2.48	0.161	pCi/g		0.0276		92.1		0	0.757 g
MB	MB	09/26/20	09/26/20	Uranium-232 Tracer	4	2.7	0.16	pCi/g		0.0392		100		0	0.757 g
MB	MB	09/26/20	09/26/20	Uranium-233/234	4	-0.00884	0.0251	pCi/g	U	0.0507	1			0	0.757 g
MB	MB	09/26/20	09/26/20	Uranium-235/236	4	0.017	0.0184	pCi/g	U	0.0269	0.05			0	0.757 g
MB	MB	09/26/20	09/26/20	Uranium-238	4	0.00727	0.0142	pCi/g	U	0.0232	1			0	0.757 g
1-W-W-51-B-C	SAMPLE	08/28/20	10/05/20	Americium-243 Tracer	1	0.634	0.0715	pCi/g		0.0233		73.5	15.8	2.57 g	
1-W-W-51-B-C	SAMPLE	08/28/20	10/05/20	Americium-241	1	0.00302	0.00748	pCi/g	U	0.0133	0.05		15.8	2.57 g	
1-W-W-51-B-C	SAMPLE	08/28/20	10/05/20	Californium-252	1	-0.00161	0.00414	pCi/g	U	0.0112	0.05		15.8	2.57 g	
1-W-W-51-B-C	SAMPLE	08/28/20	10/05/20	Curium-243/244	1	0.00298	0.0074	pCi/g	U	0.0132	0.05		15.8	2.57 g	
1-W-W-51-B-C	DUP	08/28/20	10/05/20	Americium-243 Tracer	1	0.604	0.0785	pCi/g		0.0161		70	0	2.57 g	
1-W-W-51-B-C	DUP	08/28/20	10/05/20	Americium-241	1	-5.61E-05	0.00882	pCi/g	U	0.0188	0.05			0	2.57 g
1-W-W-51-B-C	DUP	08/28/20	10/05/20	Californium-252	1	0	0.00429	pCi/g	U	0.00586	0.05			0	2.57 g
1-W-W-51-B-C	DUP	08/28/20	10/05/20	Curium-243/244	1	-0.00654	0.00632	pCi/g	U	0.0196	0.05			0	2.57 g
1-W-W-51-B-C	MS	08/28/20	10/05/20	Americium-241	1	0.786	0.0685	pCi/g		0.0154	0.05	102		0	2.57 g
1-W-W-51-B-C	MS	08/28/20	10/05/20	Californium-252	1	0.224	0.0375	pCi/g		0.00943	0.05	115		0	2.57 g
1-W-W-51-B-C	MS	08/28/20	10/05/20	Curium-243/244	1	0.908	0.0731	pCi/g		0.0121	0.05	104		0	2.57 g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
1-W-W-51-B-C	MS	08/28/20	10/05/20	Americium-243 Tracer	1	0.617	0.0714	pCi/g		0.0183		71.5	0	2.57	g
LCS	LCS	10/05/20	10/05/20	Americium-241	1	0.822	0.0831	pCi/g		0.00654	0.05	107	0	2.57	g
LCS	LCS	10/05/20	10/05/20	Californium-252	1	0.202	0.0418	pCi/g		0.00666	0.05	105	0	2.57	g
LCS	LCS	10/05/20	10/05/20	Curium-243/244	1	0.891	0.0867	pCi/g		0.0269	0.05	103	0	2.57	g
LCS	LCS	10/05/20	10/05/20	Americium-243 Tracer	1	0.433	0.0857	pCi/g		0.0303		50.2	0	2.57	g
MB	MB	10/05/20	10/05/20	Americium-243 Tracer	1	0.739	0.0642	pCi/g		0.0149		85.7	0	2.57	g
MB	MB	10/05/20	10/05/20	Americium-241	1	-1.25E-05	0.00407	pCi/g	U	0.00881	0.05		0	2.57	g
MB	MB	10/05/20	10/05/20	Californium-252	1	0.000629	0.00395	pCi/g	U	0.00746	0.05		0	2.57	g
MB	MB	10/05/20	10/05/20	Curium-243/244	1	-0.00126	0.00437	pCi/g	U	0.0108	0.05		0	2.57	g
1-W-W-18-B-M	SAMPLE	08/28/20	10/05/20	Americium-243 Tracer	2	29.5		pCi/g				52.5	1.24	3.88	g
1-W-W-18-B-M	SAMPLE	08/28/20	10/05/20	Neptunium-237	2	0.00185	0.00701	pCi/g	U	0.0134	0.05		1.24	3.88	g
1-W-W-18-B-M	DUP	08/28/20	10/05/20	Americium-243 Tracer	2	47.3		pCi/g				84.1	0	3.88	g
1-W-W-18-B-M	DUP	08/28/20	10/05/20	Neptunium-237	2	0.00263	0.00472	pCi/g	U	0.00805	0.05		0	3.88	g
1-W-W-18-B-M	MS	08/28/20	10/05/20	Neptunium-237	2	1.28	0.0715	pCi/g		0.0125	0.05	113	0	3.88	g
1-W-W-18-B-M	MS	08/28/20	10/05/20	Americium-243 Tracer	2	42.6		pCi/g				75.7	0	3.88	g
LCS	LCS	10/05/20	10/05/20	Neptunium-237	2	1.16	0.0578	pCi/g		0.00225	0.05	103	0	3.88	g
LCS	LCS	10/05/20	10/05/20	Americium-243 Tracer	2	55.3		pCi/g				98.3	0	3.88	g
MB	MB	10/05/20	10/05/20	Americium-243 Tracer	2	55.1		pCi/g				98	0	3.88	g
MB	MB	10/05/20	10/05/20	Neptunium-237	2	-0.00035	0.00229	pCi/g	U	0.00535	0.05		0	3.88	g
1-W-W-18-B-M	SAMPLE	08/28/20	10/05/20	Plutonium-242 Tracer	3	0.236	0.107	pCi/g		0.0506		29.9	1.24	2.43	g
1-W-W-18-B-M	SAMPLE	08/28/20	10/05/20	Plutonium-238	3	-0.00726	0.0106	pCi/g	U	0.0314	0.05		1.24	2.43	g
1-W-W-18-B-M	SAMPLE	08/28/20	10/05/20	Plutonium-239/240	3	-0.00911	0.0142	pCi/g	U	0.038	0.05		1.24	2.43	g
1-W-W-18-B-M	DUP	08/28/20	10/06/20	Plutonium-242 Tracer	3	0.169	0.0972	pCi/g		0.0388		21.3	0	2.43	g
1-W-W-18-B-M	DUP	08/28/20	10/06/20	Plutonium-238	3	-0.00155	0.0141	pCi/g	U	0.0302	0.05		0	2.43	g
1-W-W-18-B-M	DUP	08/28/20	10/06/20	Plutonium-239/240	3	0.0129	0.0177	pCi/g	U	0.0262	0.05		0	2.43	g
1-W-W-18-B-M	MS	08/28/20	10/06/20	Plutonium-239/240	3	0.999	0.106	pCi/g		0.0289	0.05	121	0	2.43	g
1-W-W-18-B-M	MS	08/28/20	10/06/20	Plutonium-242 Tracer	3	0.175	0.0939	pCi/g		0.0203		22.1	0	2.43	g
LCS	LCS	10/05/20	10/05/20	Plutonium-239/240	3	0.902	0.068	pCi/g		0.0133	0.05	109	0	2.43	g
LCS	LCS	10/05/20	10/05/20	Plutonium-242 Tracer	3	0.655	0.0636	pCi/g		0.0115		82.8	0	2.43	g
MB	MB	10/05/20	10/05/20	Plutonium-242 Tracer	3	0.6	0.0687	pCi/g		0.0197		75.8	0	2.43	g
MB	MB	10/05/20	10/05/20	Plutonium-238	3	-0.00234	0.0067	pCi/g	U	0.0161	0.05		0	2.43	g
MB	MB	10/05/20	10/05/20	Plutonium-239/240	3	-0.00231	0.00424	pCi/g	U	0.0121	0.05		0	2.43	g
1-W-W-18-B-M	SAMPLE	08/28/20	10/05/20	Uranium-232 Tracer	4	2.4	0.19	pCi/g		0.0744		85.8	1.24	0.728	g
1-W-W-18-B-M	SAMPLE	08/28/20	10/05/20	Uranium-233/234	4	0.622	0.0908	pCi/g		0.0479	1		1.24	0.728	g
1-W-W-18-B-M	SAMPLE	08/28/20	10/05/20	Uranium-235/236	4	0.0374	0.0247	pCi/g		0.0256	0.05		1.24	0.728	g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

6-EPA 906.0 Mod.

5-DOE HASL 300, 4.5.2.3/Ga-01-R

7-EPA EERF C-01 Mod.

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
1-W-W-18-B-M	SAMPLE	08/28/20	10/05/20	Uranium-238	4	0.653	0.0913	pCi/g		0.0348	1		1.24	0.728	g
1-W-W-18-B-M	DUP	08/28/20	10/05/20	Uranium-232 Tracer	4	2.42	0.2	pCi/g		0.0644		86.4	0	0.728	g
1-W-W-18-B-M	DUP	08/28/20	10/05/20	Uranium-233/234	4	0.653	0.0963	pCi/g		0.0335	1		0	0.728	g
1-W-W-18-B-M	DUP	08/28/20	10/05/20	Uranium-235/236	4	0.03	0.0233	pCi/g		0.0235	0.05		0	0.728	g
1-W-W-18-B-M	DUP	08/28/20	10/05/20	Uranium-238	4	0.661	0.0977	pCi/g		0.0417	1		0	0.728	g
1-W-W-18-B-M	MS	08/28/20	10/05/20	Uranium-235/236	4	0.915	0.119	pCi/g	<i>U</i>	0.0555	0.05	106	0	0.728	g
1-W-W-18-B-M	MS	08/28/20	10/05/20	Uranium-232 Tracer	4	2.3	0.205	pCi/g		0.0693		82.3	0	0.728	g
LCS	LCS	10/05/20	10/05/20	Uranium-235/236	4	0.862	0.102	pCi/g		0.0393	0.05	104	0	0.728	g
LCS	LCS	10/05/20	10/05/20	Uranium-232 Tracer	4	2.78	0.184	pCi/g		0.0645		99.3	0	0.728	g
MB	MB	10/05/20	10/05/20	Uranium-232 Tracer	4	2.45	0.194	pCi/g		0.0624		87.6	0	0.728	g
MB	MB	10/05/20	10/05/20	Uranium-233/234	4	0.011	0.0252	pCi/g	<i>U</i>	0.0448	1		0	0.728	g
MB	MB	10/05/20	10/05/20	Uranium-235/236	4	0.0135	0.0199	pCi/g	<i>U</i>	0.031	0.05		0	0.728	g
MB	MB	10/05/20	10/05/20	Uranium-238	4	-0.00122	0.0123	pCi/g	<i>U</i>	0.0271	1		0	0.728	g
3-F-12-C	SAMPLE	08/31/20	10/01/20	Americium-243 Tracer	1	0.381	0.128	pCi/g		0.0483		43.8	1.96	2.55	g
3-F-12-C	SAMPLE	08/31/20	10/01/20	Americium-241	1	-0.0139	0.0125	pCi/g	<i>U</i>	0.0444	0.05		1.96	2.55	g
3-F-12-C	SAMPLE	08/31/20	10/01/20	Californium-252	1	-0.0012	0.0104	pCi/g	<i>U</i>	0.024	0.05		1.96	2.55	g
3-F-12-C	SAMPLE	08/31/20	10/01/20	Curium-243/244	1	-0.00457	0.0106	pCi/g	<i>U</i>	0.0314	0.05		1.96	2.55	g
3-F-3-C	SAMPLE	08/31/20	10/01/20	Americium-243 Tracer	1	0.535	0.106	pCi/g		0.03		61.9	0.593	2.57	g
3-F-3-C	SAMPLE	08/31/20	10/01/20	Americium-241	1	-0.00123	0.0147	pCi/g	<i>U</i>	0.0331	0.05		0.593	2.57	g
3-F-3-C	SAMPLE	08/31/20	10/01/20	Californium-252	1	0	0.00713	pCi/g	<i>U</i>	0.0106	0.05		0.593	2.57	g
3-F-3-C	SAMPLE	08/31/20	10/01/20	Curium-243/244	1	0.00175	0.00972	pCi/g	<i>U</i>	0.0186	0.05		0.593	2.57	g
3-F-3-C	DUP	08/31/20	10/01/20	Americium-243 Tracer	1	0.581	0.106	pCi/g		0.0292		67.3	0	2.57	g
3-F-3-C	DUP	08/31/20	10/01/20	Americium-241	1	0.0138	0.0168	pCi/g	<i>U</i>	0.0225	0.05		0	2.57	g
3-F-3-C	DUP	08/31/20	10/01/20	Californium-252	1	-0.00085	0.00734	pCi/g	<i>U</i>	0.017	0.05		0	2.57	g
3-F-3-C	DUP	08/31/20	10/01/20	Curium-243/244	1	-0.00081	0.00699	pCi/g	<i>U</i>	0.0162	0.05		0	2.57	g
3-F-3-C	MS	08/31/20	10/01/20	Americium-241	1	0.74	0.102	pCi/g		0.0289	0.05	96.3	0	2.57	g
3-F-3-C	MS	08/31/20	10/01/20	Californium-252	1	0.223	0.0569	pCi/g		0.0111	0.05	114	0	2.57	g
3-F-3-C	MS	08/31/20	10/01/20	Curium-243/244	1	0.732	0.1	pCi/g		0.0216	0.05	83.8	0	2.57	g
3-F-3-C	MS	08/31/20	10/01/20	Americium-243 Tracer	1	0.512	0.109	pCi/g		0.0325		59.3	0	2.57	g
3-F-44-B-C	SAMPLE	08/31/20	10/04/20	Americium-243 Tracer	1	0.358	0.106	pCi/g		0.042		41.2	0.746	2.55	g
3-F-44-B-C	SAMPLE	08/31/20	10/04/20	Americium-241	1	-0.00166	0.00793	pCi/g	<i>U</i>	0.0193	0.05		0.746	2.55	g
3-F-44-B-C	SAMPLE	08/31/20	10/04/20	Californium-252	1	-0.00346	0.00892	pCi/g	<i>U</i>	0.0242	0.05		0.746	2.55	g
3-F-44-B-C	SAMPLE	08/31/20	10/04/20	Curium-243/244	1	0.00326	0.00958	pCi/g	<i>U</i>	0.00977	0.05		0.746	2.55	g
3-W-E-11-C-C	SAMPLE	08/31/20	10/03/20	Americium-243 Tracer	1	0.158	0.102	pCi/g		0.0599		18.5	4.14	2.6	g
3-W-E-11-C-C	SAMPLE	08/31/20	10/03/20	Americium-241	1	0.00578	0.0196	pCi/g	<i>U</i>	0.0356	0.05		4.14	2.6	g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Appendix A
Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
3-W-E-11-C-C	SAMPLE	08/31/20	10/03/20	Californium-252	1	0	0.0118	pCi/g	U	0.023	0.05		4.14	2.6 g	
3-W-E-11-C-C	SAMPLE	08/31/20	10/03/20	Curium-243/244	1	0	0.0112	pCi/g	U	0.0219	0.05		4.14	2.6 g	
3-W-W-1-M	SAMPLE	09/02/20	10/04/20	Americium-243 Tracer	1	0.302	0.111	pCi/g		0.0442		34.7	7.6	2.55 g	
3-W-W-1-M	SAMPLE	09/02/20	10/04/20	Americium-241	1	0.0231	0.0268	pCi/g	U	0.0416	0.05		7.6	2.55 g	
3-W-W-1-M	SAMPLE	09/02/20	10/04/20	Californium-252	1	0	0.00818	pCi/g	U	0.0112	0.05		7.6	2.55 g	
3-W-W-1-M	SAMPLE	09/02/20	10/04/20	Curium-243/244	1	0.00172	0.0139	pCi/g	U	0.0282	0.05		7.6	2.55 g	
LCS	LCS	10/01/20	10/01/20	Americium-241	1	0.766	0.0963	pCi/g		0.0173	0.05	101	0	2.6 g	
LCS	LCS	10/01/20	10/01/20	Californium-252	1	0.201	0.05	pCi/g		0.00955	0.05	106	0	2.6 g	
LCS	LCS	10/01/20	10/01/20	Curium-243/244	1	0.793	0.0972	pCi/g		0.0148	0.05	92.4	0	2.6 g	
LCS	LCS	10/01/20	10/01/20	Americium-243 Tracer	1	0.655	0.101	pCi/g		0.0203		76.9	0	2.6 g	
MB	MB	10/01/20	10/01/20	Americium-243 Tracer	1	0.757	0.0953	pCi/g		0.0271		88.8	0	2.6 g	
MB	MB	10/01/20	10/01/20	Americium-241	1	0.000775	0.0081	pCi/g	U	0.0169	0.05		0	2.6 g	
MB	MB	10/01/20	10/01/20	Californium-252	1	0.00495	0.00973	pCi/g	U	0.0135	0.05		0	2.6 g	
MB	MB	10/01/20	10/01/20	Curium-243/244	1	-0.00262	0.00607	pCi/g	U	0.018	0.05		0	2.6 g	
3-F-79-C	SAMPLE	08/31/20	10/01/20	Americium-243 Tracer	2	30.5		pCi/g				57.8	0.346	4.13 g	
3-F-79-C	SAMPLE	08/31/20	10/01/20	Neptunium-237	2	0.0108	0.0211	pCi/g	U	0.029	0.05		0.346	4.13 g	
3-F-79-C	DUP	08/31/20	10/01/20	Americium-243 Tracer	2	38		pCi/g				72	0	4.13 g	
3-F-79-C	DUP	08/31/20	10/01/20	Neptunium-237	2	0.00144	0.0146	pCi/g	U	0.0306	0.05		0	4.13 g	
3-F-79-C	MS	08/31/20	10/03/20	Neptunium-237	2	1.42	0.0956	pCi/g		0.0221	0.05	134	0	4.13 g	
3-F-79-C	MS	08/31/20	10/03/20	Americium-243 Tracer	2	26.7		pCi/g				50.6	0	4.13 g	
LCS	LCS	10/01/20	10/01/20	Neptunium-237	2	1.04	0.131	pCi/g		0.023	0.05	98.7	0	4.13 g	
LCS	LCS	10/01/20	10/01/20	Americium-243 Tracer	2	47.3		pCi/g				89.6	0	4.13 g	
MB	MB	10/01/20	10/01/20	Americium-243 Tracer	2	48.5		pCi/g				91.8	0	4.13 g	
MB	MB	10/01/20	10/01/20	Neptunium-237	2	-0.00096	0.00801	pCi/g	U	0.0188	0.05		0	4.13 g	
3-F-79-C	SAMPLE	08/31/20	10/01/20	Plutonium-242 Tracer	3	0.691	0.0833	pCi/g		0.0217		93.8	0.346	2.61 g	
3-F-79-C	SAMPLE	08/31/20	10/01/20	Plutonium-238	3	-0.00349	0.00563	pCi/g	U	0.0179	0.05		0.346	2.61 g	
3-F-79-C	SAMPLE	08/31/20	10/01/20	Plutonium-239/240	3	-0.00291	0.00551	pCi/g	U	0.017	0.05		0.346	2.61 g	
3-F-79-C	DUP	08/31/20	10/01/20	Plutonium-242 Tracer	3	0.56	0.0896	pCi/g		0.0226		76.1	0	2.61 g	
3-F-79-C	DUP	08/31/20	10/01/20	Plutonium-238	3	0.000112	0.00831	pCi/g	U	0.0185	0.05		0	2.61 g	
3-F-79-C	DUP	08/31/20	10/01/20	Plutonium-239/240	3	-0.00392	0.00891	pCi/g	U	0.0243	0.05		0	2.61 g	
3-F-79-C	MS	08/31/20	10/01/20	Plutonium-239/240	3	0.709	0.0807	pCi/g		0.00714	0.05	92.4	0	2.61 g	
3-F-79-C	MS	08/31/20	10/01/20	Plutonium-242 Tracer	3	0.674	0.0822	pCi/g		0.0114		91.5	0	2.61 g	
LCS	LCS	10/01/20	10/01/20	Plutonium-239/240	3	0.707	0.0923	pCi/g		0.0229	0.05	92.1	0	2.61 g	
LCS	LCS	10/01/20	10/01/20	Plutonium-242 Tracer	3	0.574	0.0939	pCi/g		0.0189		77.9	0	2.61 g	
MB	MB	10/01/20	10/01/20	Plutonium-242 Tracer	3	0.548	0.0908	pCi/g		0.019		74.4	0	2.61 g	

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

6-EPA 906.0 Mod.

5-DOE HASL 300, 4.5.2.3/Ga-01-R

7-EPA EERF C-01 Mod.

*Key
1-DOE EML HASL-300, Am-05-RC Mod.
2-ASTM C 1475-00 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
MB	MB	10/01/20	10/01/20	Plutonium-238	3	-0.00278	0.00643	pCi/g	U	0.0191	0.05			0	2.61 g
MB	MB	10/01/20	10/01/20	Plutonium-239/240	3	0.0015	0.00835	pCi/g	U	0.016	0.05			0	2.61 g
3-F-79-C	SAMPLE	08/31/20	10/01/20	Uranium-232 Tracer	4	2.26	0.248	pCi/g		0.09		96.6		0.346	0.87 g
3-F-79-C	SAMPLE	08/31/20	10/01/20	Uranium-233/234	4	0.16	0.0705	pCi/g		0.0656	1			0.346	0.87 g
3-F-79-C	SAMPLE	08/31/20	10/01/20	Uranium-235/236	4	0.0233	0.0295	pCi/g	U	0.0367	0.05			0.346	0.87 g
3-F-79-C	SAMPLE	08/31/20	10/01/20	Uranium-238	4	0.232	0.0803	pCi/g		0.0533	1			0.346	0.87 g
3-F-79-C	DUP	08/31/20	10/03/20	Uranium-232 Tracer	4	1.95	0.138	pCi/g		0.0475		83.2		0	0.87 g
3-F-79-C	DUP	08/31/20	10/03/20	Uranium-233/234	4	0.202	0.0432	pCi/g		0.0327	1			0	0.87 g
3-F-79-C	DUP	08/31/20	10/03/20	Uranium-235/236	4	0.0225	0.0175	pCi/g	U	0.0226	0.05			0	0.87 g
3-F-79-C	DUP	08/31/20	10/03/20	Uranium-238	4	0.19	0.0397	pCi/g		0.0195	1			0	0.87 g
3-F-79-C	MS	08/31/20	10/01/20	Uranium-235/236	4	0.656	0.14	pCi/g		0.042	0.05	91.4		0	0.87 g
3-F-79-C	MS	08/31/20	10/01/20	Uranium-232 Tracer	4	2.08	0.266	pCi/g		0.106		88.9		0	0.87 g
LCS	LCS	10/01/20	10/01/20	Uranium-235/236	4	0.687	0.144	pCi/g		0.0425	0.05	99.3		0	0.87 g
LCS	LCS	10/01/20	10/01/20	Uranium-232 Tracer	4	2.1	0.266	pCi/g		0.0916		89.7		0	0.87 g
MB	MB	10/01/20	10/01/20	Uranium-232 Tracer	4	2.36	0.272	pCi/g		0.102		101		0	0.87 g
MB	MB	10/01/20	10/01/20	Uranium-233/234	4	-0.0249	0.0195	pCi/g	U	0.0737	1			0	0.87 g
MB	MB	10/01/20	10/01/20	Uranium-235/236	4	0.00223	0.0233	pCi/g	U	0.0487	0.05			0	0.87 g
MB	MB	10/01/20	10/01/20	Uranium-238	4	0.0108	0.0371	pCi/g	U	0.0711	1			0	0.87 g
3-W-E-73-A-C	SAMPLE	09/01/20	09/29/20	Americium-243 Tracer	1	0.348	0.141	pCi/g		0.048		39.3		5.68	2.5 g
3-W-E-73-A-C	SAMPLE	09/01/20	09/29/20	Americium-241	1	-0.00139	0.012	pCi/g	U	0.0279	0.05			5.68	2.5 g
3-W-E-73-A-C	SAMPLE	09/01/20	09/29/20	Californium-252	1	-0.00145	0.0125	pCi/g	U	0.0289	0.05			5.68	2.5 g
3-W-E-73-A-C	SAMPLE	09/01/20	09/29/20	Curium-243/244	1	-0.00965	0.0136	pCi/g	U	0.0445	0.05			5.68	2.5 g
3-W-E-73-B-C	SAMPLE	09/01/20	09/29/20	Americium-243 Tracer	1	0.623	0.108	pCi/g		0.0327		70		9.89	2.49 g
3-W-E-73-B-C	SAMPLE	09/01/20	09/29/20	Americium-241	1	0.00437	0.012	pCi/g	U	0.0209	0.05			9.89	2.49 g
3-W-E-73-B-C	SAMPLE	09/01/20	09/29/20	Californium-252	1	0	0.00713	pCi/g	U	0.0106	0.05			9.89	2.49 g
3-W-E-73-B-C	SAMPLE	09/01/20	09/29/20	Curium-243/244	1	0.000135	0.01	pCi/g	U	0.0222	0.05			9.89	2.49 g
3-W-E-73-B-C	DUP	09/01/20	09/29/20	Americium-243 Tracer	1	0.499	0.124	pCi/g		0.0368		56		0	2.49 g
3-W-E-73-B-C	DUP	09/01/20	09/29/20	Americium-241	1	0.00802	0.0182	pCi/g	U	0.0312	0.05			0	2.49 g
3-W-E-73-B-C	DUP	09/01/20	09/29/20	Californium-252	1	0	0.0093	pCi/g	U	0.0138	0.05			0	2.49 g
3-W-E-73-B-C	DUP	09/01/20	09/29/20	Curium-243/244	1	0.00687	0.0181	pCi/g	U	0.0325	0.05			0	2.49 g
3-W-E-73-B-C	MS	09/01/20	09/29/20	Americium-241	1	0.703	0.0502	pCi/g		0.0102	0.05	88.2		0	2.49 g
3-W-E-73-B-C	MS	09/01/20	09/29/20	Californium-252	1	0.218	0.0284	pCi/g		0.00287	0.05	108		0	2.49 g
3-W-E-73-B-C	MS	09/01/20	09/29/20	Curium-243/244	1	0.79	0.0527	pCi/g		0.00697	0.05	87.9		0	2.49 g
3-W-E-73-B-C	MS	09/01/20	09/29/20	Americium-243 Tracer	1	0.51	0.056	pCi/g		0.0112		57.3		0	2.49 g
3-W-S-88-B-C	SAMPLE	09/02/20	09/29/20	Americium-243 Tracer	1	0.297	0.154	pCi/g		0.0555		33.7		13.3	2.52 g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
3-W-S-88-B-C	SAMPLE	09/02/20	09/29/20	Americium-241	1	0.00362	0.0201	pCi/g	U	0.0386	0.05			13.3	2.52 g
3-W-S-88-B-C	SAMPLE	09/02/20	09/29/20	Californium-252	1	0	0.0145	pCi/g	U	0.0217	0.05			13.3	2.52 g
3-W-S-88-B-C	SAMPLE	09/02/20	09/29/20	Curium-243/244	1	-0.00992	0.016	pCi/g	U	0.0509	0.05			13.3	2.52 g
3-W-W-23-M	SAMPLE	09/02/20	10/01/20	Americium-243 Tracer	1	0.164	0.129	pCi/g	U	0.0589		18.5		5.54	2.5 g
3-W-W-23-M	SAMPLE	09/02/20	10/01/20	Americium-241	1	0.0134	0.0262	pCi/g	U	0.044	0.05			5.54	2.5 g
3-W-W-23-M	SAMPLE	09/02/20	10/01/20	Californium-252	1	-0.00352	0.0137	pCi/g	U	0.0326	0.05			5.54	2.5 g
3-W-W-23-M	SAMPLE	09/02/20	10/01/20	Curium-243/244	1	0.00596	0.0183	pCi/g	U	0.031	0.05			5.54	2.5 g
LCS	LCS	09/29/20	09/29/20	Americium-241	1	0.78	0.0405	pCi/g		0.00601	0.05	99.6	0	2.52 g	
LCS	LCS	09/29/20	09/29/20	Californium-252	1	0.212	0.0213	pCi/g		0.00166	0.05	108	0	2.52 g	
LCS	LCS	09/29/20	09/29/20	Curium-243/244	1	0.883	0.0427	pCi/g		0.0041	0.05	99.7	0	2.52 g	
LCS	LCS	09/29/20	09/29/20	Americium-243 Tracer	1	0.857	0.0427	pCi/g		0.00771		97.4	0	2.52 g	
MB	MB	09/29/20	09/29/20	Americium-243 Tracer	1	0.764	0.105	pCi/g		0.0297		86.8	0	2.52 g	
MB	MB	09/29/20	09/29/20	Americium-241	1	-0.00549	0.00774	pCi/g	U	0.0253	0.05			0	2.52 g
MB	MB	09/29/20	09/29/20	Californium-252	1	-0.00159	0.00705	pCi/g	U	0.0184	0.05			0	2.52 g
MB	MB	09/29/20	09/29/20	Curium-243/244	1	-0.00464	0.00748	pCi/g	U	0.0238	0.05			0	2.52 g
3-W-E-73-B-C	SAMPLE	09/01/20	09/30/20	Americium-243 Tracer	2	75.2		pCi/g				68.9	9.89	2 g	
3-W-E-73-B-C	SAMPLE	09/01/20	09/30/20	Neptunium-237	2	-0.00654	0.0128	pCi/g	U	0.0357	0.05			9.89	2 g
3-W-E-73-B-C	DUP	09/01/20	09/30/20	Americium-243 Tracer	2	71.8		pCi/g				65.8	0	2 g	
3-W-E-73-B-C	DUP	09/01/20	09/30/20	Neptunium-237	2	-0.00511	0.00969	pCi/g	U	0.0299	0.05			0	2 g
3-W-E-73-B-C	MS	09/01/20	10/01/20	Neptunium-237	2	1.37	0.11	pCi/g		0.0251	0.05	62.7	0	2 g	
3-W-E-73-B-C	MS	09/01/20	10/01/20	Americium-243 Tracer	2	83.2		pCi/g				76.3	0	2 g	
LCS	LCS	09/30/20	09/30/20	Neptunium-237	2	1.11	0.119	pCi/g		0.0233	0.05	102	0	2 g	
LCS	LCS	09/30/20	09/30/20	Americium-243 Tracer	2	93.4		pCi/g				85.6	0	2 g	
MB	MB	09/30/20	09/30/20	Americium-243 Tracer	2	98		pCi/g				89.8	0	2 g	
MB	MB	09/30/20	09/30/20	Neptunium-237	2	-0.0103	0.00869	pCi/g	U	0.0312	0.05			0	2 g
3-W-E-73-B-C	SAMPLE	09/01/20	09/30/20	Plutonium-242 Tracer	3	0.493	0.11	pCi/g		0.0425		63.9	9.89	2.49 g	
3-W-E-73-B-C	SAMPLE	09/01/20	09/30/20	Plutonium-238	3	-0.00079	0.0118	pCi/g	U	0.0276	0.05			9.89	2.49 g
3-W-E-73-B-C	SAMPLE	09/01/20	09/30/20	Plutonium-239/240	3	0.000472	0.0168	pCi/g	U	0.0363	0.05			9.89	2.49 g
3-W-E-73-B-C	DUP	09/01/20	09/30/20	Plutonium-242 Tracer	3	0.425	0.119	pCi/g		0.038		55.1	0	2.49 g	
3-W-E-73-B-C	DUP	09/01/20	09/30/20	Plutonium-238	3	-0.00339	0.0102	pCi/g	U	0.0288	0.05			0	2.49 g
3-W-E-73-B-C	DUP	09/01/20	09/30/20	Plutonium-239/240	3	-0.0032	0.0145	pCi/g	U	0.0365	0.05			0	2.49 g
3-W-E-73-B-C	MS	09/01/20	10/01/20	Plutonium-239/240	3	0.959	0.105	pCi/g		0.0176	0.05	119	0	2.49 g	
3-W-E-73-B-C	MS	09/01/20	10/01/20	Plutonium-242 Tracer	3	0.359	0.0947	pCi/g		0.0176		46.5	0	2.49 g	
LCS	LCS	09/30/20	09/30/20	Plutonium-239/240	3	0.794	0.0873	pCi/g		0.027	0.05	98.6	0	2.49 g	
LCS	LCS	09/30/20	09/30/20	Plutonium-242 Tracer	3	0.711	0.0862	pCi/g		0.0279		92.1	0	2.49 g	

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Appendix A
Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
MB	MB	09/30/20	09/30/20	Plutonium-242 Tracer	3	0.588	0.0961	pCi/g		0.0289		76.1	0	2.49	g
MB	MB	09/30/20	09/30/20	Plutonium-238	3	-0.00367	0.00695	pCi/g	U	0.0214	0.05		0	2.49	g
MB	MB	09/30/20	09/30/20	Plutonium-239/240	3	-0.00355	0.00961	pCi/g	U	0.0256	0.05		0	2.49	g
3-W-E-73-B-C	SAMPLE	09/01/20	09/29/20	Uranium-232 Tracer	4	2	0.178	pCi/g		0.0565		76	9.89	0.776	g
3-W-E-73-B-C	SAMPLE	09/01/20	09/29/20	Uranium-233/234	4	0.0649	0.0306	pCi/g		0.0261	1		9.89	0.776	g
3-W-E-73-B-C	SAMPLE	09/01/20	09/29/20	Uranium-235/236	4	-0.00307	0.0135	pCi/g	U	0.0294	0.05		9.89	0.776	g
3-W-E-73-B-C	SAMPLE	09/01/20	09/29/20	Uranium-238	4	0.0643	0.0312	pCi/g		0.0294	1		9.89	0.776	g
3-W-E-73-B-C	DUP	09/01/20	09/29/20	Uranium-232 Tracer	4	2.48	0.137	pCi/g		0.0404		94.4	0	0.776	g
3-W-E-73-B-C	DUP	09/01/20	09/29/20	Uranium-233/234	4	0.0423	0.0267	pCi/g		0.0386	1		0	0.776	g
3-W-E-73-B-C	DUP	09/01/20	09/29/20	Uranium-235/236	4	0.00365	0.0124	pCi/g	U	0.0224	0.05		0	0.776	g
3-W-E-73-B-C	DUP	09/01/20	09/29/20	Uranium-238	4	0.0891	0.0287	pCi/g		0.0278	1		0	0.776	g
3-W-E-73-B-C	MS	09/01/20	09/29/20	Uranium-235/236	4	0.8	0.0825	pCi/g		0.0265	0.05	103	0	0.776	g
3-W-E-73-B-C	MS	09/01/20	09/29/20	Uranium-232 Tracer	4	2.66	0.152	pCi/g		0.0648		101	0	0.776	g
LCS	LCS	09/29/20	09/29/20	Uranium-235/236	4	0.755	0.0852	pCi/g		0.0415	0.05	97.2	0	0.776	g
LCS	LCS	09/29/20	09/29/20	Uranium-232 Tracer	4	2.34	0.157	pCi/g		0.0645		89.2	0	0.776	g
MB	MB	09/29/20	09/29/20	Uranium-232 Tracer	4	2.68	0.153	pCi/g		0.0221		102	0	0.776	g
MB	MB	09/29/20	09/29/20	Uranium-233/234	4	-0.00171	0.0163	pCi/g	U	0.0329	1		0	0.776	g
MB	MB	09/29/20	09/29/20	Uranium-235/236	4	0.00694	0.012	pCi/g	U	0.0177	0.05		0	0.776	g
MB	MB	09/29/20	09/29/20	Uranium-238	4	0.00231	0.015	pCi/g	U	0.0284	1		0	0.776	g
3-W-S-85-A-C	SAMPLE	09/03/20	09/26/20	Americium-243 Tracer	2	44.4		pCi/g				81.6	0.892	4.01	g
3-W-S-85-A-C	SAMPLE	09/03/20	09/26/20	Neptunium-237	2	-0.00185	0.00654	pCi/g	U	0.0126	0.05		0.892	4.01	g
3-W-S-85-A-C	DUP	09/03/20	09/28/20	Americium-243 Tracer	2	48.9		pCi/g				89.8	0	4.01	g
3-W-S-85-A-C	DUP	09/03/20	09/28/20	Neptunium-237	2	0.000655	0.00746	pCi/g	U	0.0159	0.05		0	4.01	g
3-W-S-85-A-C	MS	09/03/20	09/26/20	Neptunium-237	2	1.26	0.042	pCi/g		0.00799	0.05	116	0	4.01	g
3-W-S-85-A-C	MS	09/03/20	09/26/20	Americium-243 Tracer	2	46.8		pCi/g				85.9	0	4.01	g
3-W-S-C-73-C	SAMPLE	09/01/20	09/26/20	Americium-243 Tracer	2	49.7		pCi/g				92	1.51	4.03	g
3-W-S-C-73-C	SAMPLE	09/01/20	09/26/20	Neptunium-237	2	-0.00456	0.00421	pCi/g	U	0.00923	0.05		1.51	4.03	g
LCS	LCS	09/26/20	09/26/20	Neptunium-237	2	1.13	0.0391	pCi/g		0.00643	0.05	105	0	4.03	g
LCS	LCS	09/26/20	09/26/20	Americium-243 Tracer	2	53		pCi/g				97.9	0	4.03	g
MB	MB	09/26/20	09/26/20	Americium-243 Tracer	2	62.1		pCi/g				115	0	4.03	g
MB	MB	09/26/20	09/26/20	Neptunium-237	2	-0.00098	0.00476	pCi/g	U	0.00904	0.05		0	4.03	g
3-W-S-85-A-C	SAMPLE	09/03/20	09/27/20	Plutonium-242 Tracer	3	0.621	0.0923	pCi/g		0.0204		82.4	0.892	2.55	g
3-W-S-85-A-C	SAMPLE	09/03/20	09/27/20	Plutonium-238	3	-0.0035	0.00664	pCi/g	U	0.0205	0.05		0.892	2.55	g
3-W-S-85-A-C	SAMPLE	09/03/20	09/27/20	Plutonium-239/240	3	0.00385	0.0121	pCi/g	U	0.0226	0.05		0.892	2.55	g
3-W-S-85-A-C	DUP	09/03/20	09/27/20	Plutonium-242 Tracer	3	0.654	0.0866	pCi/g		0.0157		86.7	0	2.55	g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Appendix A
Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
3-W-S-85-A-C	DUP	09/03/20	09/27/20	Plutonium-238	3	0.00196	0.00734	pCi/g	U	0.0123	0.05		0	2.55	g
3-W-S-85-A-C	DUP	09/03/20	09/27/20	Plutonium-239/240	3	0.000721	0.00754	pCi/g	U	0.0157	0.05		0	2.55	g
3-W-S-85-A-C	MS	09/03/20	09/27/20	Plutonium-239/240	3	0.792	0.0886	pCi/g		0.0198	0.05	100	0	2.55	g
3-W-S-85-A-C	MS	09/03/20	09/27/20	Plutonium-242 Tracer	3	0.658	0.0863	pCi/g		0.0179		87.2	0	2.55	g
3-W-S-C-73-C	SAMPLE	09/01/20	09/28/20	Plutonium-242 Tracer	3	0.268	0.11	pCi/g		0.0321		35.1	1.51	2.52	g
3-W-S-C-73-C	SAMPLE	09/01/20	09/28/20	Plutonium-238	3	-4.03E-05	0.0131	pCi/g	U	0.0284	0.05		1.51	2.52	g
3-W-S-C-73-C	SAMPLE	09/01/20	09/28/20	Plutonium-239/240	3	0.00199	0.0125	pCi/g	U	0.0236	0.05		1.51	2.52	g
LCS	LCS	09/27/20	09/27/20	Plutonium-239/240	3	0.786	0.0882	pCi/g		0.0257	0.05	100	0	2.55	g
LCS	LCS	09/27/20	09/27/20	Plutonium-242 Tracer	3	0.648	0.0859	pCi/g		0.0177		86	0	2.55	g
MB	MB	09/27/20	09/27/20	Plutonium-242 Tracer	3	0.535	0.0918	pCi/g		0.0202		70.9	0	2.55	g
MB	MB	09/27/20	09/27/20	Plutonium-238	3	-0.00346	0.00656	pCi/g	U	0.0202	0.05		0	2.55	g
MB	MB	09/27/20	09/27/20	Plutonium-239/240	3	-0.00058	0.00866	pCi/g	U	0.0202	0.05		0	2.55	g
3-W-S-85-A-C	SAMPLE	09/03/20	09/26/20	Uranium-232 Tracer	4	2.16	0.174	pCi/g		0.0352		79.7	0.892	0.752	g
3-W-S-85-A-C	SAMPLE	09/03/20	09/26/20	Uranium-233/234	4	0.917	0.103	pCi/g		0.0426	1		0.892	0.752	g
3-W-S-85-A-C	SAMPLE	09/03/20	09/26/20	Uranium-235/236	4	0.0487	0.0258	pCi/g		0.0219	0.05		0.892	0.752	g
3-W-S-85-A-C	SAMPLE	09/03/20	09/26/20	Uranium-238	4	1.03	0.107	pCi/g		0.0219	1		0.892	0.752	g
3-W-S-85-A-C	DUP	09/03/20	09/26/20	Uranium-232 Tracer	4	2.53	0.162	pCi/g		0.0275		93.5	0	0.752	g
3-W-S-85-A-C	DUP	09/03/20	09/26/20	Uranium-233/234	4	0.889	0.0933	pCi/g		0.03	1		0	0.752	g
3-W-S-85-A-C	DUP	09/03/20	09/26/20	Uranium-235/236	4	0.0349	0.0207	pCi/g		0.0191	0.05		0	0.752	g
3-W-S-85-A-C	DUP	09/03/20	09/26/20	Uranium-238	4	0.982	0.0973	pCi/g		0.019	1		0	0.752	g
3-W-S-85-A-C	MS	09/03/20	09/26/20	Uranium-235/236	4	0.841	0.101	pCi/g		0.00948	0.05	98.9	0	0.752	g
3-W-S-85-A-C	MS	09/03/20	09/26/20	Uranium-232 Tracer	4	2.05	0.182	pCi/g		0.0388		75.4	0	0.752	g
3-W-S-C-73-C	SAMPLE	09/01/20	09/26/20	Uranium-232 Tracer	4	2.73	0.158	pCi/g		0.0181		99.9	1.51	0.746	g
3-W-S-C-73-C	SAMPLE	09/01/20	09/26/20	Uranium-233/234	4	0.831	0.0875	pCi/g		0.0222	1		1.51	0.746	g
3-W-S-C-73-C	SAMPLE	09/01/20	09/26/20	Uranium-235/236	4	0.0331	0.0207	pCi/g		0.0227	0.05		1.51	0.746	g
3-W-S-C-73-C	SAMPLE	09/01/20	09/26/20	Uranium-238	4	0.833	0.0876	pCi/g		0.0226	1		1.51	0.746	g
LCS	LCS	09/26/20	09/26/20	Uranium-235/236	4	0.713	0.0945	pCi/g		0.0528	0.05	89	0	0.752	g
LCS	LCS	09/26/20	09/26/20	Uranium-232 Tracer	4	1.96	0.182	pCi/g		0.0822		72.3	0	0.752	g
MB	MB	09/26/20	09/26/20	Uranium-232 Tracer	4	2.77	0.157	pCi/g		0.018		102	0	0.752	g
MB	MB	09/26/20	09/26/20	Uranium-233/234	4	-0.00421	0.0113	pCi/g	U	0.0256	1		0	0.752	g
MB	MB	09/26/20	09/26/20	Uranium-235/236	4	0.00471	0.00923	pCi/g	U	0.00707	0.05		0	0.752	g
MB	MB	09/26/20	09/26/20	Uranium-238	4	0.0211	0.0153	pCi/g		0.00704	1		0	0.752	g
4-F-1-C	SAMPLE	09/01/20	09/29/20	Americium-243 Tracer	1	0.779	0.0991	pCi/g		0.0283		88.3	1.22	2.51	g
4-F-1-C	SAMPLE	09/01/20	09/29/20	Americium-241	1	0.000808	0.00845	pCi/g	U	0.0176	0.05		1.22	2.51	g
4-F-1-C	SAMPLE	09/01/20	09/29/20	Californium-252	1	-0.00072	0.00619	pCi/g	U	0.0143	0.05		1.22	2.51	g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

6-EPA 906.0 Mod.

5-DOE HASL 300, 4.5.2.3/Ga-01-R

7-EPA EERF C-01 Mod.

*Key
1-DOE EML HASL-300, Am-05-RC Mod.
2-ASTM C 1475-00 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
4-F-1-C	SAMPLE	09/01/20	09/29/20	Curium-243/244	1	0.000114	0.00846	pCi/g	U	0.0188	0.05		1.22	2.51	g
4-F-1-C	DUP	09/01/20	09/29/20	Americium-243 Tracer	1	0.723	0.101	pCi/g		0.0198		81.9	0	2.51	g
4-F-1-C	DUP	09/01/20	09/29/20	Americium-241	1	0.00158	0.00881	pCi/g	U	0.0169	0.05		0	2.51	g
4-F-1-C	DUP	09/01/20	09/29/20	Californium-252	1	0	0.00637	pCi/g	U	0.00948	0.05		0	2.51	g
4-F-1-C	DUP	09/01/20	09/29/20	Curium-243/244	1	0.00229	0.00858	pCi/g	U	0.0144	0.05		0	2.51	g
4-F-1-C	MS	09/01/20	09/29/20	Americium-241	1	0.713	0.0448	pCi/g		0.0104	0.05	90.6	0	2.51	g
4-F-1-C	MS	09/01/20	09/29/20	Californium-252	1	0.206	0.0246	pCi/g		0.00718	0.05	103	0	2.51	g
4-F-1-C	MS	09/01/20	09/29/20	Curium-243/244	1	0.835	0.0479	pCi/g		0.00547	0.05	93.6	0	2.51	g
4-F-1-C	MS	09/01/20	09/29/20	Americium-243 Tracer	1	0.673	0.0497	pCi/g		0.0136		76.2	0	2.51	g
4-F-4-1-R	SAMPLE	09/04/20	09/29/20	Americium-243 Tracer	1	0.448	0.126	pCi/g		0.0396		50.8	0.974	2.51	g
4-F-4-1-R	SAMPLE	09/04/20	09/29/20	Americium-241	1	0.0187	0.0228	pCi/g	U	0.0305	0.05		0.974	2.51	g
4-F-4-1-R	SAMPLE	09/04/20	09/29/20	Californium-252	1	0.00843	0.0166	pCi/g	U	0.023	0.05		0.974	2.51	g
4-F-4-1-R	SAMPLE	09/04/20	09/29/20	Curium-243/244	1	0.00348	0.013	pCi/g	U	0.0219	0.05		0.974	2.51	g
4-F-4-2-R	SAMPLE	09/04/20	09/29/20	Americium-243 Tracer	1	0.443	0.121	pCi/g		0.039		50.4	0.935	2.52	g
4-F-4-2-R	SAMPLE	09/04/20	09/29/20	Americium-241	1	0.000343	0.0158	pCi/g	U	0.0346	0.05		0.935	2.52	g
4-F-4-2-R	SAMPLE	09/04/20	09/29/20	Californium-252	1	0.00444	0.0125	pCi/g	U	0.0133	0.05		0.935	2.52	g
4-F-4-2-R	SAMPLE	09/04/20	09/29/20	Curium-243/244	1	-0.00305	0.00921	pCi/g	U	0.0259	0.05		0.935	2.52	g
LCS	LCS	09/29/20	09/29/20	Americium-241	1	0.766	0.0511	pCi/g		0.0117	0.05	97.8	0	2.52	g
LCS	LCS	09/29/20	09/29/20	Californium-252	1	0.217	0.0274	pCi/g		0.00267	0.05	111	0	2.52	g
LCS	LCS	09/29/20	09/29/20	Curium-243/244	1	0.864	0.0539	pCi/g		0.0124	0.05	97.6	0	2.52	g
LCS	LCS	09/29/20	09/29/20	Americium-243 Tracer	1	0.739	0.0544	pCi/g		0.0124		84	0	2.52	g
MB	MB	09/29/20	09/29/20	Americium-243 Tracer	1	0.909	0.0939	pCi/g		0.0158		103	0	2.52	g
MB	MB	09/29/20	09/29/20	Americium-241	1	0.000105	0.0078	pCi/g	U	0.0173	0.05		0	2.52	g
MB	MB	09/29/20	09/29/20	Californium-252	1	-0.00064	0.00554	pCi/g	U	0.0128	0.05		0	2.52	g
MB	MB	09/29/20	09/29/20	Curium-243/244	1	-0.00187	0.00564	pCi/g	U	0.0158	0.05		0	2.52	g
4-F-1-C	SAMPLE	09/01/20	09/30/20	Americium-243 Tracer	2	48.9		pCi/g				90.3	1.22	4.03	g
4-F-1-C	SAMPLE	09/01/20	09/30/20	Neptunium-237	2	-0.00242	0.00551	pCi/g	U	0.015	0.05		1.22	4.03	g
4-F-1-C	DUP	09/01/20	09/30/20	Americium-243 Tracer	2	50.2		pCi/g				92.8	0	4.03	g
4-F-1-C	DUP	09/01/20	09/30/20	Neptunium-237	2	-0.00229	0.00556	pCi/g	U	0.0143	0.05		0	4.03	g
4-F-1-C	MS	09/01/20	09/30/20	Neptunium-237	2	1.33	0.204	pCi/g		0.0593	0.05	123	0	4.03	g
4-F-1-C	MS	09/01/20	09/30/20	Americium-243 Tracer	2	10.3		pCi/g				19.1	0	4.03	g
LCS	LCS	09/30/20	09/30/20	Neptunium-237	2	1.13	0.0752	pCi/g		0.0135	0.05	104	0	4.03	g
LCS	LCS	09/30/20	09/30/20	Americium-243 Tracer	2	55.4		pCi/g				102	0	4.03	g
MB	MB	09/30/20	09/30/20	Americium-243 Tracer	2	54.1		pCi/g				99.9	0	4.03	g
MB	MB	09/30/20	09/30/20	Neptunium-237	2	-0.00243	0.00342	pCi/g	U	0.0112	0.05		0	4.03	g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

6-EPA 906.0 Mod.

5-DOE HASL 300, 4.5.2.3/Ga-01-R

7-EPA EERF C-01 Mod.

1-DOE EML HASL-300, Am-05-RC Mod.
2-ASTM C 1475-00 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

Appendix A
Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	%	%	Sample Aliquot	Aliquot Units
												Recovery	Moisture		
4-F-1-C	SAMPLE	09/01/20	09/29/20	Plutonium-242 Tracer	3	0.535	0.0968	pCi/g		0.0221		69.9	1.22	2.51	g
4-F-1-C	SAMPLE	09/01/20	09/29/20	Plutonium-238	3	-0.00594	0.0103	pCi/g	U	0.0291	0.05		1.22	2.51	g
4-F-1-C	SAMPLE	09/01/20	09/29/20	Plutonium-239/240	3	-0.00897	0.0107	pCi/g	U	0.0321	0.05		1.22	2.51	g
4-F-1-C	DUP	09/01/20	09/29/20	Plutonium-242 Tracer	3	0.713	0.0843	pCi/g		0.0158		93.1	0	2.51	g
4-F-1-C	DUP	09/01/20	09/29/20	Plutonium-238	3	0.0025	0.00855	pCi/g	U	0.0158	0.05		0	2.51	g
4-F-1-C	DUP	09/01/20	09/29/20	Plutonium-239/240	3	0.00125	0.00694	pCi/g	U	0.0133	0.05		0	2.51	g
4-F-1-C	MS	09/01/20	09/29/20	Plutonium-239/240	3	0.784	0.0847	pCi/g		0.0204	0.05	98.2	0	2.51	g
4-F-1-C	MS	09/01/20	09/29/20	Plutonium-242 Tracer	3	0.722	0.0836	pCi/g		0.019		94.3	0	2.51	g
LCS	LCS	09/29/20	09/29/20	Plutonium-239/240	3	0.738	0.0921	pCi/g		0.0219	0.05	92.4	0	2.51	g
LCS	LCS	09/29/20	09/29/20	Plutonium-242 Tracer	3	0.65	0.0936	pCi/g		0.018		84.8	0	2.51	g
MB	MB	09/29/20	09/29/20	Plutonium-242 Tracer	3	0.497	0.105	pCi/g		0.0326		64.8	0	2.51	g
MB	MB	09/29/20	09/29/20	Plutonium-238	3	-0.00525	0.00846	pCi/g	U	0.027	0.05		0	2.51	g
MB	MB	09/29/20	09/29/20	Plutonium-239/240	3	0.00292	0.0131	pCi/g	U	0.0256	0.05		0	2.51	g
4-F-1-C	SAMPLE	09/01/20	09/29/20	Uranium-232 Tracer	4	2.47	0.148	pCi/g		0.0536		92.2	1.22	0.762	g
4-F-1-C	SAMPLE	09/01/20	09/29/20	Uranium-233/234	4	0.599	0.0699	pCi/g		0.0277	1		1.22	0.762	g
4-F-1-C	SAMPLE	09/01/20	09/29/20	Uranium-235/236	4	0.0409	0.0204	pCi/g		0.0196	0.05		1.22	0.762	g
4-F-1-C	SAMPLE	09/01/20	09/29/20	Uranium-238	4	0.575	0.0683	pCi/g		0.0251	1		1.22	0.762	g
4-F-1-C	DUP	09/01/20	09/29/20	Uranium-232 Tracer	4	2.46	0.151	pCi/g		0.0732		92	0	0.762	g
4-F-1-C	DUP	09/01/20	09/29/20	Uranium-233/234	4	0.575	0.0705	pCi/g		0.0395	1		0	0.762	g
4-F-1-C	DUP	09/01/20	09/29/20	Uranium-235/236	4	0.0433	0.0232	pCi/g		0.0277	0.05		0	0.762	g
4-F-1-C	DUP	09/01/20	09/29/20	Uranium-238	4	0.658	0.0728	pCi/g		0.0197	1		0	0.762	g
4-F-1-C	MS	09/01/20	09/29/20	Uranium-235/236	4	0.851	0.0822	pCi/g		0.0288	0.05	102	0	0.762	g
4-F-1-C	MS	09/01/20	09/29/20	Uranium-232 Tracer	4	2.66	0.147	pCi/g		0.0633		99.5	0	0.762	g
LCS	LCS	09/29/20	09/29/20	Uranium-235/236	4	0.848	0.0753	pCi/g		0.0258	0.05	107	0	0.762	g
LCS	LCS	09/29/20	09/29/20	Uranium-232 Tracer	4	2.7	0.135	pCi/g		0.057		101	0	0.762	g
MB	MB	09/29/20	09/29/20	Uranium-232 Tracer	4	2.9	0.139	pCi/g		0.0547		108	0	0.762	g
MB	MB	09/29/20	09/29/20	Uranium-233/234	4	-0.016	0.0165	pCi/g	U	0.0371	1		0	0.762	g
MB	MB	09/29/20	09/29/20	Uranium-235/236	4	0.0018	0.0136	pCi/g	U	0.0259	0.05		0	0.762	g
MB	MB	09/29/20	09/29/20	Uranium-238	4	-0.00358	0.0122	pCi/g	U	0.0258	1		0	0.762	g
4-CF-2-C	SAMPLE	09/01/20	10/03/20	Americium-243 Tracer	1	0.52	0.246	pCi/g		0.027		29.8	2.19	1.27	g
4-CF-2-C	SAMPLE	09/01/20	10/03/20	Americium-241	1	0.00912	0.0268	PCI/G	U	0.0274	0.05		2.19	1.27	g
4-CF-2-C	SAMPLE	09/01/20	10/03/20	Californium-252	1	0	0.0208	PCI/G	U	0.0284	0.05		2.19	1.27	g
4-CF-2-C	SAMPLE	09/01/20	10/03/20	Curium-243/244	1	0	0.0198	PCI/G	U	0.027	0.05		2.19	1.27	g
4-CF-2-C	DUP	09/01/20	10/06/20	Americium-243 Tracer	1	0.43	0.191	pCi/g		0.0723		24.7	0	1.27	g
4-CF-2-C	DUP	09/01/20	10/06/20	Americium-241	1	0.0209	0.0336	PCI/G	U	0.0523	0.05		0	1.27	g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

6-EPA 906.0 Mod.

5-DOE HASL 300, 4.5.2.3/Ga-01-R

7-EPA EERF C-01 Mod.

*Key
1-DOE EML HASL-300, Am-05-RC Mod.
2-ASTM C 1475-00 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

Appendix A
Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
4-CF-2-C	DUP	09/01/20	10/06/20	Californium-252	1	0.00557	0.0192	PCI/G	U	0.0167	0.05			0	1.27 g
4-CF-2-C	DUP	09/01/20	10/06/20	Curium-243/244	1	-0.00044	0.0259	PCI/G	U	0.0517	0.05			0	1.27 g
4-CF-2-C	MS	09/01/20	10/03/20	Americium-241	1	76.2	0.137	%		0.0564	0.05	76.2		0	1.27 g
4-CF-2-C	MS	09/01/20	10/03/20	Californium-252	1	89.5	0.109	%		0.0487	0.05	89.5		0	1.27 g
4-CF-2-C	MS	09/01/20	10/03/20	Curium-243/244	1	100	0.168	%		0.0792	0.05	100		0	1.27 g
4-CF-2-C	MS	09/01/20	10/03/20	Americium-243 Tracer	1	0.603	0.231	pCi/g		0.0462	34.6	0		1.27	g
4-CF-5-C	SAMPLE	09/01/20	10/05/20	Americium-243 Tracer	1	0.397	0.167	pCi/g		0.0703	22.1	1.5		1.23	g
4-CF-5-C	SAMPLE	09/01/20	10/05/20	Americium-241	1	0.0373	0.0357	PCI/G	U	0.0494	0.05			1.5	1.23 g
4-CF-5-C	SAMPLE	09/01/20	10/05/20	Californium-252	1	0	0.0153	PCI/G	U	0.012	0.05			1.5	1.23 g
4-CF-5-C	SAMPLE	09/01/20	10/05/20	Curium-243/244	1	-0.00126	0.0262	PCI/G	U	0.0488	0.05			1.5	1.23 g
LCS	LCS	10/03/20	10/03/20	Americium-241	1	103	0.112	%		0.0285	0.05	103		0	1.27 g
LCS	LCS	10/03/20	10/03/20	Californium-252	1	108	0.0823	%		0.0241	0.05	108		0	1.27 g
LCS	LCS	10/03/20	10/03/20	Curium-243/244	1	93.7	0.113	%		0.0375	0.05	93.7		0	1.27 g
LCS	LCS	10/03/20	10/03/20	Americium-243 Tracer	1	1.22	0.164	pCi/g		0.0348	70			0	1.27 g
MB	MB	10/05/20	10/05/20	Americium-243 Tracer	1	0.596	0.146	pCi/g		0.0579	34.2	0		1.27	g
MB	MB	10/05/20	10/05/20	Americium-241	1	0.0215	0.0248	PCI/G	U	0.0378	0.05			0	1.27 g
MB	MB	10/05/20	10/05/20	Californium-252	1	0.00625	0.015	PCI/G	U	0.0239	0.05			0	1.27 g
MB	MB	10/05/20	10/05/20	Curium-243/244	1	-0.00303	0.0133	PCI/G	U	0.029	0.05			0	1.27 g
4-CF-2-C	SAMPLE	09/01/20	10/03/20	Americium-243 Tracer	2	96.8		pCi/g			86.4	2.19		1.95	g
4-CF-2-C	SAMPLE	09/01/20	10/03/20	Neptunium-237	2	-0.0121	0.0118	PCI/G	U	0.0367	0.05			2.19	1.95 g
4-CF-2-C	DUP	09/01/20	10/03/20	Americium-243 Tracer	2	93.2		pCi/g			83.2		0	1.95 g	
4-CF-2-C	DUP	09/01/20	10/03/20	Neptunium-237	2	0.00133	0.0152	PCI/G	U	0.0323	0.05			0	1.95 g
4-CF-2-C	MS	09/01/20	10/03/20	Neptunium-237	2	107	0.176	%		0.0338	0.05	107		0	1.95 g
4-CF-2-C	MS	09/01/20	10/03/20	Americium-243 Tracer	2	97.4		pCi/g			86.9	0		1.95	g
LCS	LCS	10/03/20	10/03/20	Neptunium-237	2	113	0.194	%		0.0407	0.05	113		0	1.95 g
LCS	LCS	10/03/20	10/03/20	Americium-243 Tracer	2	106		pCi/g			94.3		0	1.95 g	
MB	MB	10/03/20	10/03/20	Americium-243 Tracer	2	92.3		pCi/g			82.4	0		1.95	g
MB	MB	10/03/20	10/03/20	Neptunium-237	2	-0.0125	0.00996	PCI/G	U	0.0362	0.05			0	1.95 g
4-CF-2-C	SAMPLE	09/01/20	10/03/20	Plutonium-242 Tracer	3	1.1	0.139	pCi/g		0.0432	72.7	2.19		1.27	g
4-CF-2-C	SAMPLE	09/01/20	10/03/20	Plutonium-238	3	-0.00656	0.0096	PCI/G	U	0.0284	0.05			2.19	1.27 g
4-CF-2-C	SAMPLE	09/01/20	10/03/20	Plutonium-239/240	3	-0.00819	0.0101	PCI/G	U	0.0305	0.05			2.19	1.27 g
4-CF-2-C	DUP	09/01/20	10/03/20	Plutonium-242 Tracer	3	0.921	0.14	pCi/g		0.0412	60.9			0	1.27 g
4-CF-2-C	DUP	09/01/20	10/03/20	Plutonium-238	3	-0.00679	0.0186	PCI/G	U	0.0426	0.05			0	1.27 g
4-CF-2-C	DUP	09/01/20	10/03/20	Plutonium-239/240	3	-0.0184	0.0189	PCI/G	U	0.0488	0.05			0	1.27 g
4-CF-2-C	MS	09/01/20	10/03/20	Plutonium-239/240	3	96.5	0.104	%		0.0343	0.05	96.5		0	1.27 g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

6-EPA 906.0 Mod.

5-DOE HASL 300, 4.5.2.3/Ga-01-R

7-EPA EERF C-01 Mod.

*Key
1-DOE EML HASL-300, Am-05-RC Mod.
2-ASTM C 1475-00 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
4-CF-2-C	MS	09/01/20	10/03/20	Plutonium-242 Tracer	3	0.958	0.147	pCi/g		0.0405	63.3	0	1.27	g	
LCS	LCS	10/03/20	10/03/20	Plutonium-239/240	3	114	0.0928	%		0.0273	0.05	114	0	1.27	g
LCS	LCS	10/03/20	10/03/20	Plutonium-242 Tracer	3	1.23	0.121	pCi/g		0.0355		81.6	0	1.27	g
MB	MB	10/03/20	10/03/20	Plutonium-242 Tracer	3	0.94	0.143	pCi/g		0.0305	62.2	0		1.27	g
MB	MB	10/03/20	10/03/20	Plutonium-238	3	0.00163	0.0182	PCI/G	U	0.037	0.05		0	1.27	g
MB	MB	10/03/20	10/03/20	Plutonium-239/240	3	-0.0054	0.0175	PCI/G	U	0.0406	0.05		0	1.27	g
4-CF-2-C	SAMPLE	09/01/20	10/03/20	Uranium-232 Tracer	4	2.14	0.168	pCi/g		0.0593	78.6	2.19	0.749	g	
4-CF-2-C	SAMPLE	09/01/20	10/03/20	Uranium-233/234	4	0.0145	0.0184	pCi/g	U	0.0278	1		2.19	0.749	g
4-CF-2-C	SAMPLE	09/01/20	10/03/20	Uranium-235/236	4	0.0131	0.0154	PCI/G	U	0.02	0.05		2.19	0.749	g
4-CF-2-C	SAMPLE	09/01/20	10/03/20	Uranium-238	4	0.0287	0.0256	pCi/g	U	0.0375	1		2.19	0.749	g
4-CF-2-C	DUP	09/01/20	10/03/20	Uranium-232 Tracer	4	2.29	0.175	pCi/g		0.0321		84.2	0	0.749	g
4-CF-2-C	DUP	09/01/20	10/03/20	Uranium-233/234	4	0.0287	0.0247	pCi/g	U	0.0341	1		0	0.749	g
4-CF-2-C	DUP	09/01/20	10/03/20	Uranium-235/236	4	0.0029	0.0151	PCI/G	U	0.0278	0.05		0	0.749	g
4-CF-2-C	DUP	09/01/20	10/03/20	Uranium-238	4	0.0348	0.0241	pCi/g		0.0277	1		0	0.749	g
4-CF-2-C	MS	09/01/20	10/03/20	Uranium-235/236	4	108	0.104	%		0.0298	0.05	108	0	0.749	g
4-CF-2-C	MS	09/01/20	10/03/20	Uranium-232 Tracer	4	2.11	0.181	pCi/g		0.0344	77.7	0		0.749	g
LCS	LCS	10/03/20	10/03/20	Uranium-235/236	4	107	0.0915	%		0.0192	0.05	107	0	0.749	g
LCS	LCS	10/03/20	10/03/20	Uranium-232 Tracer	4	2.62	0.162	pCi/g		0.0334		96.2	0	0.749	g
MB	MB	10/03/20	10/03/20	Uranium-232 Tracer	4	2.35	0.155	pCi/g		0.0504	86.2	0		0.749	g
MB	MB	10/03/20	10/03/20	Uranium-233/234	4	-0.0156	0.013	pCi/g	U	0.034	1		0	0.749	g
MB	MB	10/03/20	10/03/20	Uranium-235/236	4	0.00222	0.0115	PCI/G	U	0.0213	0.05		0	0.749	g
MB	MB	10/03/20	10/03/20	Uranium-238	4	-0.00222	0.0144	pCi/g	U	0.0297	1		0	0.749	g
4-W-N-1-R	SAMPLE	09/03/20	09/29/20	Americium-243 Tracer	1	0.712	0.0935	pCi/g		0.0144		81.9	0.338	2.55	g
4-W-N-1-R	SAMPLE	09/03/20	09/29/20	Americium-241	1	0.00222	0.0111	pCi/g	U	0.0222	0.05		0.338	2.55	g
4-W-N-1-R	SAMPLE	09/03/20	09/29/20	Californium-252	1	-0.00066	0.00567	pCi/g	U	0.0131	0.05		0.338	2.55	g
4-W-N-1-R	SAMPLE	09/03/20	09/29/20	Curium-243/244	1	-0.00063	0.00541	pCi/g	U	0.0125	0.05		0.338	2.55	g
4-W-N-2-R	SAMPLE	09/03/20	09/29/20	Americium-243 Tracer	1	0.729	0.0933	pCi/g		0.0205		82.3	0.424	2.5	g
4-W-N-2-R	SAMPLE	09/03/20	09/29/20	Americium-241	1	0.00144	0.00929	pCi/g	U	0.019	0.05		0.424	2.5	g
4-W-N-2-R	SAMPLE	09/03/20	09/29/20	Californium-252	1	0	0.00536	pCi/g	U	0.00798	0.05		0.424	2.5	g
4-W-N-2-R	SAMPLE	09/03/20	09/29/20	Curium-243/244	1	0.000711	0.00743	pCi/g	U	0.0155	0.05		0.424	2.5	g
4-W-N-2-R	DUP	09/03/20	09/29/20	Americium-243 Tracer	1	0.53	0.114	pCi/g		0.0281		59.8	0	2.5	g
4-W-N-2-R	DUP	09/03/20	09/29/20	Americium-241	1	-0.00462	0.00876	pCi/g	U	0.027	0.05		0	2.5	g
4-W-N-2-R	DUP	09/03/20	09/29/20	Californium-252	1	0	0.00804	pCi/g	U	0.012	0.05		0	2.5	g
4-W-N-2-R	DUP	09/03/20	09/29/20	Curium-243/244	1	-0.00365	0.00847	pCi/g	U	0.0251	0.05		0	2.5	g
4-W-N-2-R	MS	09/03/20	09/29/20	Americium-241	1	0.676	0.0458	pCi/g		0.00981	0.05	85.4	0	2.5	g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
4-W-N-2-R	MS	09/03/20	09/29/20	Californium-252	1	0.209	0.0258	pCi/g		0.00247	0.05	104	0	2.5	g
4-W-N-2-R	MS	09/03/20	09/29/20	Curium-243/244	1	0.803	0.0494	pCi/g		0.00754	0.05	89.6	0	2.5	g
4-W-N-2-R	MS	09/03/20	09/29/20	Americium-243 Tracer	1	0.611	0.0522	pCi/g		0.0133		68.9	0	2.5	g
LCS	LCS	09/29/20	09/29/20	Americium-241	1	0.766	0.0381	pCi/g		0.00472	0.05	99	0	2.55	g
LCS	LCS	09/29/20	09/29/20	Californium-252	1	0.224	0.0208	pCi/g		0.0015	0.05	115	0	2.55	g
LCS	LCS	09/29/20	09/29/20	Curium-243/244	1	0.804	0.0388	pCi/g		0.00536	0.05	91.9	0	2.55	g
LCS	LCS	09/29/20	09/29/20	Americium-243 Tracer	1	0.926	0.0404	pCi/g		0.0065		107	0	2.55	g
MB	MB	09/29/20	09/29/20	Americium-243 Tracer	1	0.857	0.0871	pCi/g		0.0125		98.6	0	2.55	g
MB	MB	09/29/20	09/29/20	Americium-241	1	0.00862	0.0102	pCi/g	U	0.011	0.05		0	2.55	g
MB	MB	09/29/20	09/29/20	Californium-252	1	-0.00056	0.00483	pCi/g	U	0.0112	0.05		0	2.55	g
MB	MB	09/29/20	09/29/20	Curium-243/244	1	-0.00163	0.00491	pCi/g	U	0.0138	0.05		0	2.55	g
4-W-N-1-R	SAMPLE	09/03/20	09/30/20	Americium-243 Tracer	2	44.3		pCi/g				81.3	0.338	4	g
4-W-N-1-R	SAMPLE	09/03/20	09/30/20	Neptunium-237	2	0.000542	0.00566	pCi/g	U	0.0118	0.05		0.338	4	g
4-W-N-1-R	DUP	09/03/20	09/30/20	Americium-243 Tracer	2	41.4		pCi/g				76	0	4	g
4-W-N-1-R	DUP	09/03/20	09/30/20	Neptunium-237	2	-0.00377	0.0043	pCi/g	U	0.0146	0.05		0	4	g
4-W-N-1-R	MS	09/03/20	10/01/20	Neptunium-237	2	1.42	0.0791	pCi/g		0.0114	0.05	130	0	4	g
4-W-N-1-R	MS	09/03/20	10/01/20	Americium-243 Tracer	2	43.1		pCi/g				79.1	0	4	g
LCS	LCS	09/30/20	09/30/20	Neptunium-237	2	1.16	0.0839	pCi/g		0.0192	0.05	107	0	4	g
LCS	LCS	09/30/20	09/30/20	Americium-243 Tracer	2	56.1		pCi/g				103	0	4	g
MB	MB	09/30/20	09/30/20	Americium-243 Tracer	2	52.7		pCi/g				96.7	0	4	g
MB	MB	09/30/20	09/30/20	Neptunium-237	2	0.00215	0.00567	pCi/g	U	0.0102	0.05		0	4	g
4-W-N-1-R	SAMPLE	09/03/20	09/30/20	Plutonium-242 Tracer	3	0.754	0.083	pCi/g		0.0233		100	0.338	2.55	g
4-W-N-1-R	SAMPLE	09/03/20	09/30/20	Plutonium-238	3	-0.00169	0.00509	pCi/g	U	0.0143	0.05		0.338	2.55	g
4-W-N-1-R	SAMPLE	09/03/20	09/30/20	Plutonium-239/240	3	-0.00562	0.00586	pCi/g	U	0.0203	0.05		0.338	2.55	g
4-W-N-1-R	DUP	09/03/20	09/30/20	Plutonium-242 Tracer	3	0.569	0.0929	pCi/g		0.029		75.5	0	2.55	g
4-W-N-1-R	DUP	09/03/20	09/30/20	Plutonium-238	3	0.00222	0.00833	pCi/g	U	0.014	0.05		0	2.55	g
4-W-N-1-R	DUP	09/03/20	09/30/20	Plutonium-239/240	3	-0.0035	0.00664	pCi/g	U	0.0205	0.05		0	2.55	g
4-W-N-1-R	MS	09/03/20	10/01/20	Plutonium-239/240	3	0.819	0.0722	pCi/g		0.00495	0.05	104	0	2.55	g
4-W-N-1-R	MS	09/03/20	10/01/20	Plutonium-242 Tracer	3	0.643	0.0693	pCi/g		0.0116		85.3	0	2.55	g
LCS	LCS	09/30/20	09/30/20	Plutonium-239/240	3	0.806	0.0914	pCi/g		0.027	0.05	102	0	2.55	g
LCS	LCS	09/30/20	09/30/20	Plutonium-242 Tracer	3	0.655	0.0885	pCi/g		0.0275		86.9	0	2.55	g
MB	MB	09/30/20	09/30/20	Plutonium-242 Tracer	3	0.696	0.092	pCi/g		0.0272		92.3	0	2.55	g
MB	MB	09/30/20	09/30/20	Plutonium-238	3	0.000804	0.0084	pCi/g	U	0.0175	0.05		0	2.55	g
MB	MB	09/30/20	09/30/20	Plutonium-239/240	3	0.00287	0.00807	pCi/g	U	0.00861	0.05		0	2.55	g
4-W-N-1-R	SAMPLE	09/03/20	09/29/20	Uranium-232 Tracer	4	2.85	0.146	pCi/g		0.0542		105	0.338	0.752	g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

6-EPA 906.0 Mod.

5-DOE HASL 300, 4.5.2.3/Ga-01-R

7-EPA EERF C-01 Mod.

*Key
1-DOE EML HASL-300, Am-05-RC Mod.
2-ASTM C 1475-00 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

Appendix A
Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	%	%	Sample Aliquot	Aliquot Units
												Recovery	Moisture		
4-W-N-1-R	SAMPLE	09/03/20	09/29/20	Uranium-233/234	4	0.299	0.0522	pCi/g		0.0415	1		0.338	0.752	g
4-W-N-1-R	SAMPLE	09/03/20	09/29/20	Uranium-235/236	4	0.0236	0.0181	pCi/g	U	0.0242	0.05		0.338	0.752	g
4-W-N-1-R	SAMPLE	09/03/20	09/29/20	Uranium-238	4	0.278	0.0473	pCi/g		0.0241	1		0.338	0.752	g
4-W-N-1-R	DUP	09/03/20	09/29/20	Uranium-232 Tracer	4	2.52	0.162	pCi/g		0.0681		93	0	0.752	g
4-W-N-1-R	DUP	09/03/20	09/29/20	Uranium-233/234	4	0.27	0.0548	pCi/g		0.0438	1		0	0.752	g
4-W-N-1-R	DUP	09/03/20	09/29/20	Uranium-235/236	4	0.0263	0.0205	pCi/g	U	0.0265	0.05		0	0.752	g
4-W-N-1-R	DUP	09/03/20	09/29/20	Uranium-238	4	0.267	0.0546	pCi/g		0.044	1		0	0.752	g
4-W-N-1-R	MS	09/03/20	09/29/20	Uranium-235/236	4	0.823	0.0865	pCi/g		0.0256	0.05	99.9	0	0.752	g
4-W-N-1-R	MS	09/03/20	09/29/20	Uranium-232 Tracer	4	2.66	0.158	pCi/g		0.0549		98.1	0	0.752	g
LCS	LCS	09/29/20	09/29/20	Uranium-233/236	4	0.888	0.0791	pCi/g		0.0173	0.05	111	0	0.752	g
LCS	LCS	09/29/20	09/29/20	Uranium-232 Tracer	4	2.8	0.141	pCi/g		0.0572		103	0	0.752	g
MB	MB	09/29/20	09/29/20	Uranium-232 Tracer	4	2.38	0.149	pCi/g		0.0616		87.7	0	0.752	g
MB	MB	09/29/20	09/29/20	Uranium-233/234	4	-0.0129	0.0186	pCi/g	U	0.0402	1		0	0.752	g
MB	MB	09/29/20	09/29/20	Uranium-235/236	4	0.0101	0.0132	pCi/g	U	0.0194	0.05		0	0.752	g
MB	MB	09/29/20	09/29/20	Uranium-238	4	-0.00202	0.0163	pCi/g	U	0.0326	1		0	0.752	g
1-W-N-4-B-C	SAMPLE	08/28/20	09/29/20	Strontium Carrier	8	3.9	mg					84.8	1.11	3.03	g
1-W-N-4-B-C	SAMPLE	08/28/20	09/29/20	Strontium-90	8	0.0148	0.0549	pCi/g	U	0.0977	0.1		1.11	3.03	g
1-W-N-4-B-C	DUP	08/28/20	09/29/20	Strontium Carrier	8	4.3	mg					93.5	0	3.01	g
1-W-N-4-B-C	DUP	08/28/20	09/29/20	Strontium-90	8	-0.0314	0.0505	pCi/g	U	0.0966	0.1		0	3.01	g
1-W-N-4-B-C	MS	08/28/20	09/30/20	Strontium-90	8	4.63	0.301	pCi/g		0.154	0.1	68.1	0	3.22	g
1-W-N-4-B-C	MS	08/28/20	09/30/20	Strontium Carrier	8	4.3	mg					93.5	0	3.22	g
1-W-W-45	SAMPLE	08/28/20	09/29/20	Strontium Carrier	8	2.6	mg					56.5	13.5	3.06	g
1-W-W-45	SAMPLE	08/28/20	09/29/20	Strontium-90	8	-0.0197	0.0529	pCi/g	U	0.0947	0.1		13.5	3.06	g
1-W-W-45	DUP	08/28/20	09/29/20	Strontium Carrier	8	2.4	mg					52.2	0	3.13	g
1-W-W-45	DUP	08/28/20	09/29/20	Strontium-90	8	0.0106	0.0547	pCi/g	U	0.0943	0.1		0	3.13	g
1-W-W-45	MS	08/28/20	09/30/20	Strontium-90	8	1.07	0.213	pCi/g		0.224	0.1	15	0	3.08	g
1-W-W-45	MS	08/28/20	09/30/20	Strontium Carrier	8	2.8	mg					60.9	0	3.08	g
3-F-79-C	SAMPLE	08/31/20	09/29/20	Strontium Carrier	8	4.3	mg					93.5	0.346	3.07	g
3-F-79-C	SAMPLE	08/31/20	09/29/20	Strontium-90	8	-0.0728	0.0482	pCi/g	U	0.0962	0.1		0.346	3.07	g
3-F-79-C	DUP	08/31/20	09/29/20	Strontium Carrier	8	4.3	mg					93.5	0	3.18	g
3-F-79-C	DUP	08/31/20	09/29/20	Strontium-90	8	0.0562	0.058	pCi/g	U	0.0968	0.1		0	3.18	g
3-F-79-C	MS	08/31/20	09/30/20	Strontium-90	8	4.53	0.311	pCi/g		0.171	0.1	62.9	0	3.04	g
3-F-79-C	MS	08/31/20	09/30/20	Strontium Carrier	8	4.2	mg					91.3	0	3.04	g
4-F-1-C	SAMPLE	09/01/20	09/29/20	Strontium Carrier	8	4.3	mg					93.5	1.22	3.22	g
4-F-1-C	SAMPLE	09/01/20	09/29/20	Strontium-90	8	-0.00559	0.0541	pCi/g	U	0.0969	0.1		1.22	3.22	g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Appendix A
Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
4-F-1-C	DUP	09/01/20	09/30/20	Strontium Carrier	8	4.2		mg				91.3	0	3.11	g
4-F-1-C	DUP	09/01/20	09/30/20	Strontium-90	8	-0.0665	0.0414	pCi/g	U	0.0951	0.1		0	3.11	g
4-F-1-C	MS	09/01/20	09/30/20	Strontium-90	8	4.65	0.297	pCi/g		0.154	0.1	65.3	0	3.07	g
4-F-1-C	MS	09/01/20	09/30/20	Strontium Carrier	8	4.8		mg				104	0	3.07	g
LCS	LCS	09/29/20	09/29/20	Strontium-90	8	6.01	0.383	pCi/g		0.209	0.1	88.6	0	3.22	g
LCS	LCS	09/29/20	09/29/20	Strontium Carrier	8	4.3		mg				93.5	0	3.22	g
MB	MB	09/29/20	09/29/20	Strontium Carrier	8	4		mg				87	0	3.22	g
MB	MB	09/29/20	09/29/20	Strontium-90	8	0.0252	0.0551	pCi/g	U	0.0963	0.1		0	3.22	g
1-F-31-C	SAMPLE	08/31/20	10/03/20	Tritium	6	0.08	0.349	pCi/g	U	0.62	1		0	20.1	g
1-F-31-C	DUP	08/31/20	10/03/20	Tritium	6	0.176	0.345	pCi/g	U	0.598	1		0	20.2	g
1-F-31-C	MS	08/31/20	10/04/20	Tritium	6	46	6.6	pCi/g		2.96	1	90.3	0	10.1	g
1-W-N-4-B-C	SAMPLE	08/28/20	10/03/20	Tritium	6	0.205	0.299	pCi/g	U	0.511	1		1.11	20	g
1-W-N-4-B-C	DUP	08/28/20	10/04/20	Tritium	6	0.318	0.326	pCi/g	U	0.543	1		0	20	g
1-W-N-4-B-C	MS	08/28/20	10/04/20	Tritium	6	51.2	6.96	pCi/g		2.97	1	100	0	10.1	g
1-W-W-45	SAMPLE	08/28/20	10/03/20	Tritium	6	0.501	0.686	pCi/g	U	1.17	1		13.5	10	g
1-W-W-45	DUP	08/28/20	10/03/20	Tritium	6	0.448	0.67	pCi/g	U	1.14	1		0	10	g
1-W-W-45	MS	08/28/20	10/04/20	Tritium	6	92.6	13.1	pCi/g		5.78	1	92.2	0	5.13	g
3-F-79-C	SAMPLE	08/31/20	10/03/20	Tritium	6	0.328	0.33	pCi/g	U	0.549	1		0.346	20	g
3-F-79-C	DUP	08/31/20	10/04/20	Tritium	6	0.382	0.349	pCi/g	U	0.576	1		0	20.1	g
3-F-79-C	DUP	08/31/20	10/04/20	Tritium	6	0.382	0.349	pCi/g	U	0.576	1		0	20.1	g
3-F-79-C	MS	08/31/20	10/04/20	Tritium	6	50.9	6.8	pCi/g		2.8	1	99.6	0	10.1	g
4-F-1-C	SAMPLE	09/01/20	10/03/20	Tritium	6	0.151	0.296	pCi/g	U	0.515	1		1.22	20	g
4-F-1-C	DUP	09/01/20	10/04/20	Tritium	6	0.162	0.363	pCi/g	U	0.634	1		0	20	g
4-F-1-C	MS	09/01/20	10/04/20	Tritium	6	49.7	6.79	pCi/g		2.88	1	97.5	0	10.1	g
LCS	LCS	10/04/20	10/04/20	Tritium	6	24.9	3.49	pCi/g		1.55	1	98.1	0	20.2	g
MB	MB	10/03/20	10/03/20	Tritium	6	0.133	0.334	pCi/g	U	0.586	1		0	20.2	g
1-F-31-C	SAMPLE	08/31/20	10/02/20	Carbon-14	7	-0.208	0.555	pCi/g	U	0.953	1		0	2.25	g
1-F-31-C	DUP	08/31/20	10/03/20	Carbon-14	7	0.327	0.562	pCi/g	U	0.949	1		0	2.28	g
1-F-31-C	MS	08/31/20	10/03/20	Carbon-14	7	30.9	1.79	pCi/g		1.56	1	91.2	0	2.23	g
1-W-N-4-B-C	SAMPLE	08/28/20	10/02/20	Carbon-14	7	-0.62	0.548	pCi/g	U	0.953	1		1.11	2.25	g
1-W-N-4-B-C	DUP	08/28/20	10/03/20	Carbon-14	7	-0.627	0.548	pCi/g	U	0.954	1		0	2.25	g
1-W-N-4-B-C	MS	08/28/20	10/03/20	Carbon-14	7	32	1.82	pCi/g		1.56	1	95.3	0	2.25	g
1-W-W-45	SAMPLE	08/28/20	10/02/20	Carbon-14	7	-0.266	0.551	pCi/g	U	0.947	1		13.5	2.27	g
1-W-W-45	DUP	08/28/20	10/03/20	Carbon-14	7	-0.438	0.549	pCi/g	U	0.949	1		0	2.26	g
1-W-W-45	MS	08/28/20	10/03/20	Carbon-14	7	25.4	1.66	pCi/g		1.55	1	75.6	0	2.25	g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Appendix A
Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
3-F-79-C	SAMPLE	08/31/20	10/02/20	Carbon-14	7	-0.757	0.557 pCi/g	U	0.972	1		0.346	2.21 g		
3-F-79-C	DUP	08/31/20	10/03/20	Carbon-14	7	-0.226	0.564 pCi/g	U	0.969	1		0	2.23 g		
3-F-79-C	MS	08/31/20	10/03/20	Carbon-14	7	35.2	2.02 pCi/g		1.73	1	94.8	0	2.04 g		
4-F-1-C	SAMPLE	09/01/20	10/02/20	Carbon-14	7	0.312	0.564 pCi/g	U	0.952	1		1.22	2.26 g		
4-F-1-C	DUP	09/01/20	10/03/20	Carbon-14	7	0.373	0.573 pCi/g	U	0.967	1		0	2.24 g		
4-F-1-C	MS	09/01/20	10/03/20	Carbon-14	7	31.2	1.81 pCi/g		1.56	1	93.1	0	2.25 g		
LCS	LCS	10/03/20	10/03/20	Carbon-14	7	32.5	1.8 pCi/g		1.53	1	97.8	0	2.28 g		
MB	MB	10/03/20	10/03/20	Carbon-14	7	-0.784	0.54 pCi/g	U	0.945	1		0	2.28 g		
MB	MB	10/03/20	10/03/20	Carbon-14	7	-0.784	0.54 pCi/g	U	0.945	1		0	2.28 g		
5E-W-S-67-B-M	SAMPLE	09/14/20	09/23/20	Americium-241	5	0.00234	0.123 pCi/g	U	0.187			13.9	58.6 g		
5E-W-S-67-B-M	SAMPLE	09/14/20	09/23/20	Barium-133	5	0.0222	0.0685 pCi/g	U	0.12			13.9	58.6 g		
5E-W-S-67-B-M	SAMPLE	09/14/20	09/23/20	Cadmium-109	5	-0.885	0.864 pCi/g	U	1.31			13.9	58.6 g		
5E-W-S-67-B-M	SAMPLE	09/14/20	09/23/20	Cerium-144	5	-0.083	0.24 pCi/g	U	0.399			13.9	58.6 g		
5E-W-S-67-B-M	SAMPLE	09/14/20	09/23/20	Cesium-137	5	0.0599	0.0838 pCi/g	U	0.111	1		13.9	58.6 g		
5E-W-S-67-B-M	SAMPLE	09/14/20	09/23/20	Cobalt-57	5	0.00197	0.0305 pCi/g	U	0.0527			13.9	58.6 g		
5E-W-S-67-B-M	SAMPLE	09/14/20	09/23/20	Cobalt-60	5	0.01	0.0674 pCi/g	U	0.138			13.9	58.6 g		
5E-W-S-67-B-M	SAMPLE	09/14/20	09/23/20	Europium-152	5	-0.0356	0.143 pCi/g	U	0.233			13.9	58.6 g		
5E-W-S-67-B-M	SAMPLE	09/14/20	09/23/20	Lead-210	5	0.0945	1.04 pCi/g	U	1.63			13.9	58.6 g		
5E-W-S-67-B-M	SAMPLE	09/14/20	09/23/20	Manganese-54	5	-0.0158	0.0539 pCi/g	U	0.095			13.9	58.6 g		
5E-W-S-67-B-M	SAMPLE	09/14/20	09/23/20	Mercury-203	5	-0.00255	0.0481 pCi/g	U	0.081			13.9	58.6 g		
5E-W-S-67-B-M	SAMPLE	09/14/20	09/23/20	Sodium-22	5	0.0429	0.0614 pCi/g	U	0.14			13.9	58.6 g		
5E-W-S-67-B-M	SAMPLE	09/14/20	09/23/20	Yttrium-88	5	-0.0339	0.0705 pCi/g	U	0.138			13.9	58.6 g		
5E-W-S-67-B-M	SAMPLE	09/14/20	09/23/20	Zinc-65	5	0.0364	0.123 pCi/g	U	0.258			13.9	58.6 g		
5E-W-S-67-B-M	DUP	09/14/20	09/23/20	Americium-241	5	-0.0208	0.222 pCi/g	U	0.326			0	58.6 g		
5E-W-S-67-B-M	DUP	09/14/20	09/23/20	Barium-133	5	0.0582	0.0607 pCi/g	U	0.0818			0	58.6 g		
5E-W-S-67-B-M	DUP	09/14/20	09/23/20	Cadmium-109	5	-0.206	0.93 pCi/g	U	1.31			0	58.6 g		
5E-W-S-67-B-M	DUP	09/14/20	09/23/20	Cerium-144	5	-0.0703	0.218 pCi/g	U	0.364			0	58.6 g		
5E-W-S-67-B-M	DUP	09/14/20	09/23/20	Cesium-137	5	0.0126	0.0383 pCi/g	U	0.0683	1		0	58.6 g		
5E-W-S-67-B-M	DUP	09/14/20	09/23/20	Cobalt-57	5	0.00573	0.0269 pCi/g	U	0.0466			0	58.6 g		
5E-W-S-67-B-M	DUP	09/14/20	09/23/20	Cobalt-60	5	-0.0119	0.0724 pCi/g	U	0.0805			0	58.6 g		
5E-W-S-67-B-M	DUP	09/14/20	09/23/20	Europium-152	5	0.109	0.104 pCi/g	U	0.186			0	58.6 g		
5E-W-S-67-B-M	DUP	09/14/20	09/23/20	Lead-210	5	-5.37	8.03 pCi/g	U	11.9			0	58.6 g		
5E-W-S-67-B-M	DUP	09/14/20	09/23/20	Manganese-54	5	-0.00284	0.0408 pCi/g	U	0.0722			0	58.6 g		
5E-W-S-67-B-M	DUP	09/14/20	09/23/20	Mercury-203	5	-0.00998	0.0404 pCi/g	U	0.0654			0	58.6 g		
5E-W-S-67-B-M	DUP	09/14/20	09/23/20	Sodium-22	5	0.0137	0.039 pCi/g	U	0.0764			0	58.6 g		

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

6-EPA 906.0 Mod.

5-DOE HASL 300, 4.5.2.3/Ga-01-R

7-EPA EERF C-01 Mod.

*Key
1-DOE EML HASL-300, Am-05-RC Mod.
2-ASTM C 1475-00 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
5E-W-S-67-B-M	DUP	09/14/20	09/23/20	Yttrium-88	5	0.0286	0.0358	pCi/g	U	0.08			0	58.6	g
5E-W-S-67-B-M	DUP	09/14/20	09/23/20	Zinc-65	5	-0.0859	0.0909	pCi/g	U	0.142			0	58.6	g
5E-W-W-33-M	SAMPLE	09/16/20	09/23/20	Americium-241	5	-0.138	0.19	pCi/g	U	0.321			0.983	102	g
5E-W-W-33-M	SAMPLE	09/16/20	09/23/20	Barium-133	5	-0.0112	0.0388	pCi/g	U	0.0587			0.983	102	g
5E-W-W-33-M	SAMPLE	09/16/20	09/23/20	Cadmium-109	5	0	1.41	pCi/g	UI	1.13			0.983	102	g
5E-W-W-33-M	SAMPLE	09/16/20	09/23/20	Cerium-144	5	0.1	0.172	pCi/g	U	0.276			0.983	102	g
5E-W-W-33-M	SAMPLE	09/16/20	09/23/20	Cesium-137	5	0.00643	0.0306	pCi/g	U	0.0556	1		0.983	102	g
5E-W-W-33-M	SAMPLE	09/16/20	09/23/20	Cobalt-57	5	0.0219	0.0221	pCi/g	U	0.0391			0.983	102	g
5E-W-W-33-M	SAMPLE	09/16/20	09/23/20	Cobalt-60	5	0.0166	0.0263	pCi/g	U	0.0525			0.983	102	g
5E-W-W-33-M	SAMPLE	09/16/20	09/23/20	Europium-152	5	-0.101	0.0937	pCi/g	U	0.132			0.983	102	g
5E-W-W-33-M	SAMPLE	09/16/20	09/23/20	Lead-210	5	-0.0181	6.33	pCi/g	U	11.3			0.983	102	g
5E-W-W-33-M	SAMPLE	09/16/20	09/23/20	Manganese-54	5	-0.00081	0.0348	pCi/g	U	0.0535			0.983	102	g
5E-W-W-33-M	SAMPLE	09/16/20	09/23/20	Mercury-203	5	0.0286	0.0477	pCi/g	U	0.0406			0.983	102	g
5E-W-W-33-M	SAMPLE	09/16/20	09/23/20	Sodium-22	5	-0.0219	0.033	pCi/g	U	0.0561			0.983	102	g
5E-W-W-33-M	SAMPLE	09/16/20	09/23/20	Yttrium-88	5	-0.0242	0.0245	pCi/g	U	0.0383			0.983	102	g
5E-W-W-33-M	SAMPLE	09/16/20	09/23/20	Zinc-65	5	-0.0253	0.0777	pCi/g	U	0.118			0.983	102	g
5E-W-W-33-M	DUP	09/16/20	09/23/20	Americium-241	5	-0.0433	0.085	pCi/g	U	0.138			0	102	g
5E-W-W-33-M	DUP	09/16/20	09/23/20	Barium-133	5	0.0298	0.06	pCi/g	U	0.0993			0	102	g
5E-W-W-33-M	DUP	09/16/20	09/23/20	Cadmium-109	5	0	1.24	pCi/g	UI	1.17			0	102	g
5E-W-W-33-M	DUP	09/16/20	09/23/20	Cerium-144	5	-0.148	0.21	pCi/g	U	0.358			0	102	g
5E-W-W-33-M	DUP	09/16/20	09/23/20	Cesium-137	5	0.0141	0.0488	pCi/g	U	0.0927	1		0	102	g
5E-W-W-33-M	DUP	09/16/20	09/23/20	Cobalt-57	5	0.0267	0.0257	pCi/g	U	0.0488			0	102	g
5E-W-W-33-M	DUP	09/16/20	09/23/20	Cobalt-60	5	0.0514	0.0502	pCi/g	U	0.112			0	102	g
5E-W-W-33-M	DUP	09/16/20	09/23/20	Europium-152	5	-0.111	0.121	pCi/g	U	0.187			0	102	g
5E-W-W-33-M	DUP	09/16/20	09/23/20	Lead-210	5	2.34	1.19	pCi/g		1.09			0	102	g
5E-W-W-33-M	DUP	09/16/20	09/23/20	Manganese-54	5	0.0346	0.0611	pCi/g	U	0.106			0	102	g
5E-W-W-33-M	DUP	09/16/20	09/23/20	Mercury-203	5	-0.0409	0.0431	pCi/g	U	0.0679			0	102	g
5E-W-W-33-M	DUP	09/16/20	09/23/20	Sodium-22	5	0.00895	0.0487	pCi/g	U	0.0976			0	102	g
5E-W-W-33-M	DUP	09/16/20	09/23/20	Yttrium-88	5	-0.00535	0.0396	pCi/g	U	0.0864			0	102	g
5E-W-W-33-M	DUP	09/16/20	09/23/20	Zinc-65	5	-0.0267	0.109	pCi/g	U	0.178			0	102	g
LCS	LCS	09/24/20	09/24/20	Americium-241	5	496	11.6	pCi/g		5.78		102	0	115	g
LCS	LCS	09/24/20	09/24/20	Cesium-137	5	164	3.29	pCi/g		0.914	1	100	0	115	g
LCS	LCS	09/24/20	09/24/20	Cobalt-60	5	89.1	2.89	pCi/g		0.609		93.6	0	115	g
MB	MB	09/23/20	09/23/20	Americium-241	5	0.00703	0.114	pCi/g	U	0.201			0	102	g
MB	MB	09/23/20	09/23/20	Barium-133	5	0.000397	0.0273	pCi/g	U	0.05			0	102	g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Appendix A
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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
MB	MB	09/23/20	09/23/20	Cadmium-109	5	-0.0314	0.48	pCi/g	U	0.809				0	102 g
MB	MB	09/23/20	09/23/20	Cerium-144	5	0.0632	0.112	pCi/g	U	0.211				0	102 g
MB	MB	09/23/20	09/23/20	Cesium-137	5	0.0151	0.0213	pCi/g	U	0.0408	1			0	102 g
MB	MB	09/23/20	09/23/20	Cobalt-57	5	0.00777	0.0156	pCi/g	U	0.0269				0	102 g
MB	MB	09/23/20	09/23/20	Cobalt-60	5	0.0165	0.02	pCi/g	U	0.0431				0	102 g
MB	MB	09/23/20	09/23/20	Europium-152	5	0.00441	0.0657	pCi/g	U	0.121				0	102 g
MB	MB	09/23/20	09/23/20	Lead-210	5	-0.741	4.58	pCi/g	U	7.72				0	102 g
MB	MB	09/23/20	09/23/20	Manganese-54	5	0.0147	0.021	pCi/g	U	0.0414				0	102 g
MB	MB	09/23/20	09/23/20	Mercury-203	5	-0.00371	0.0206	pCi/g	U	0.0352				0	102 g
MB	MB	09/23/20	09/23/20	Sodium-22	5	-0.0159	0.0232	pCi/g	U	0.04				0	102 g
MB	MB	09/23/20	09/23/20	Yttrium-88	5	0.0222	0.0239	pCi/g	U	0.0523				0	102 g
MB	MB	09/23/20	09/23/20	Zinc-65	5	-0.0191	0.0473	pCi/g	U	0.0814				0	102 g
1-F-10-C	SAMPLE	08/31/20	10/03/20	Americium-243 Tracer	1	0.618	0.154	pCi/g		0.0761		34.9	0.674	1.25 g	
1-F-10-C	SAMPLE	08/31/20	10/03/20	Americium-241	1	-0.00664	0.0184	pCi/g	U	0.0408	0.05		0.674	1.25 g	
1-F-10-C	SAMPLE	08/31/20	10/03/20	Californium-252	1	0.0173	0.0224	pCi/g	U	0.0331	0.05		0.674	1.25 g	
1-F-10-C	SAMPLE	08/31/20	10/03/20	Curium-243/244	1	0.0197	0.0257	pCi/g	U	0.0404	0.05		0.674	1.25 g	
1-F-16-C	SAMPLE	08/31/20	10/03/20	Americium-243 Tracer	1	1.24	0.114	pCi/g		0.0315		69.9	0.873	1.25 g	
1-F-16-C	SAMPLE	08/31/20	10/03/20	Americium-241	1	0.00189	0.0212	pCi/g	U	0.0396	0.05		0.873	1.25 g	
1-F-16-C	SAMPLE	08/31/20	10/03/20	Californium-252	1	0.00392	0.0109	pCi/g	U	0.0188	0.05		0.873	1.25 g	
1-F-16-C	SAMPLE	08/31/20	10/03/20	Curium-243/244	1	0.00373	0.0127	pCi/g	U	0.0229	0.05		0.873	1.25 g	
1-F-19-C	SAMPLE	08/31/20	10/01/20	Americium-243 Tracer	1	1.32	0.157	pCi/g		0.0459		75.1	1.32	1.26 g	
1-F-19-C	SAMPLE	08/31/20	10/01/20	Americium-241	1	0.00167	0.0187	pCi/g	U	0.0381	0.05		1.32	1.26 g	
1-F-19-C	SAMPLE	08/31/20	10/01/20	Californium-252	1	0.0187	0.0204	pCi/g	U	0.0264	0.05		1.32	1.26 g	
1-F-19-C	SAMPLE	08/31/20	10/01/20	Curium-243/244	1	0.00701	0.0195	pCi/g	U	0.0357	0.05		1.32	1.26 g	
1-F-19-C	DUP	08/31/20	10/03/20	Americium-243 Tracer	1	1.04	0.128	pCi/g		0.0448		58.7	0	1.25 g	
1-F-19-C	DUP	08/31/20	10/03/20	Americium-241	1	0.00951	0.0132	pCi/g	U	0.0182	0.05		0	1.25 g	
1-F-19-C	DUP	08/31/20	10/03/20	Californium-252	1	0.0124	0.0161	pCi/g	U	0.0237	0.05		0	1.25 g	
1-F-19-C	DUP	08/31/20	10/03/20	Curium-243/244	1	0.0188	0.0146	pCi/g		0.00705	0.05		0	1.25 g	
1-F-19-C	MS	08/31/20	10/01/20	Americium-241	1	0.8	0.12	pCi/g		0.0427	0.05	102	0	1.26 g	
1-F-19-C	MS	08/31/20	10/01/20	Californium-252	1	0.457	0.0915	pCi/g		0.0141	0.05	110	0	1.26 g	
1-F-19-C	MS	08/31/20	10/01/20	Curium-243/244	1	0.955	0.13	pCi/g		0.0449	0.05	106	0	1.26 g	
1-F-19-C	MS	08/31/20	10/01/20	Americium-243 Tracer	1	1.14	0.175	pCi/g		0.0448		64.5	0	1.26 g	
1-F-33-C	SAMPLE	08/31/20	10/03/20	Americium-243 Tracer	1	0.588	0.151	pCi/g		0.0574		33.2	0.712	1.25 g	
1-F-33-C	SAMPLE	08/31/20	10/03/20	Americium-241	1	0.00658	0.0182	pCi/g	U	0.0315	0.05		0.712	1.25 g	
1-F-33-C	SAMPLE	08/31/20	10/03/20	Californium-252	1	0.0205	0.0212	pCi/g	U	0.0262	0.05		0.712	1.25 g	

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

6-EPA 906.0 Mod.

5-DOE HASL 300, 4.5.2.3/Ga-01-R

7-EPA EERF C-01 Mod.

*Key
1-DOE EML HASL-300, Am-05-RC Mod.
2-ASTM C 1475-00 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

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Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
1-F-33-C	SAMPLE	08/31/20	10/03/20	Curium-243/244	1	-0.00325	0.0191	pCi/g	U	0.04	0.05			0.712	1.25 g
1-F-5-C	SAMPLE	08/31/20	10/03/20	Americium-243 Tracer	1	0.868	0.126	pCi/g		0.0402		49.3		1.71	1.26 g
1-F-5-C	SAMPLE	08/31/20	10/03/20	Americium-241	1	0.0115	0.0197	pCi/g	U	0.0331	0.05			1.71	1.26 g
1-F-5-C	SAMPLE	08/31/20	10/03/20	Californium-252	1	0.00719	0.0124	pCi/g	U	0.0183	0.05			1.71	1.26 g
1-F-5-C	SAMPLE	08/31/20	10/03/20	Curium-243/244	1	0.0114	0.0161	pCi/g	U	0.0252	0.05			1.71	1.26 g
LCS	LCS	09/30/20	09/30/20	Americium-241	1	0.794	0.0786	pCi/g		0.0285	0.05	101		0	1.26 g
LCS	LCS	09/30/20	09/30/20	Californium-252	1	0.478	0.0611	pCi/g		0.0163	0.05	122		0	1.26 g
LCS	LCS	09/30/20	09/30/20	Curium-243/244	1	0.918	0.0829	pCi/g		0.018	0.05	104		0	1.26 g
LCS	LCS	09/30/20	09/30/20	Americium-243 Tracer	1	1.46	0.115	pCi/g		0.0331		82.9		0	1.26 g
MB	MB	09/30/20	09/30/20	Americium-243 Tracer	1	1.38	0.111	pCi/g		0.0289		78.6		0	1.26 g
MB	MB	09/30/20	09/30/20	Americium-241	1	-0.0149	0.0134	pCi/g	U	0.0328	0.05			0	1.26 g
MB	MB	09/30/20	09/30/20	Californium-252	1	0.000518	0.00632	pCi/g	U	0.0123	0.05			0	1.26 g
MB	MB	09/30/20	09/30/20	Curium-243/244	1	-0.00386	0.00614	pCi/g	U	0.0167	0.05			0	1.26 g
5W-W-W-1-C	SAMPLE	09/16/20	10/11/20	Americium-243 Tracer	2	71.6		pCi/g				63.3		2.55	1.93 g
5W-W-W-1-C	SAMPLE	09/16/20	10/11/20	Neptunium-237	2	-6.09E-05	0.00957	pCi/g	U	0.0204	0.05			2.55	1.93 g
5W-W-W-1-C	DUP	09/16/20	10/11/20	Americium-243 Tracer	2	78.1		pCi/g				69.1		0	1.93 g
5W-W-W-1-C	DUP	09/16/20	10/11/20	Neptunium-237	2	-0.00242	0.0136	pCi/g	U	0.0295	0.05			0	1.93 g
5W-W-W-1-C	MS	09/16/20	10/11/20	Neptunium-237	2	1.41	0.119	pCi/g		0.0242	0.05	125		0	1.93 g
5W-W-W-1-C	MS	09/16/20	10/11/20	Americium-243 Tracer	2	78.4		pCi/g				69.4		0	1.93 g
5-W-W-W-24-M	SAMPLE	09/14/20	10/11/20	Americium-243 Tracer	2	38.1		pCi/g				34.7		15.4	1.99 g
5-W-W-W-24-M	SAMPLE	09/14/20	10/11/20	Neptunium-237	2	-0.00011	0.0175	pCi/g	U	0.0373	0.05			15.4	1.99 g
5-W-W-W-24-M	DUP	09/14/20	10/11/20	Americium-243 Tracer	2	23.9		pCi/g				21.8		0	1.99 g
5-W-W-W-24-M	DUP	09/14/20	10/11/20	Neptunium-237	2	0.00874	0.0259	pCi/g	U	0.0469	0.05			0	1.99 g
5-W-W-W-24-M	MS	09/14/20	10/17/20	Neptunium-237	2	1.43	0.164	pCi/g		0.0146	0.05	130		0	1.99 g
5-W-W-W-24-M	MS	09/14/20	10/17/20	Americium-243 Tracer	2	40.7		pCi/g				37.1		0	1.99 g
LCS	LCS	10/11/20	10/11/20	Neptunium-237	2	1.07	0.0848	pCi/g		0.0123	0.05	97.2		0	1.99 g
LCS	LCS	10/11/20	10/11/20	Americium-243 Tracer	2	107		pCi/g				97.6		0	1.99 g
MB	MB	10/11/20	10/11/20	Americium-243 Tracer	2	100		pCi/g				91.6		0	1.99 g
MB	MB	10/11/20	10/11/20	Neptunium-237	2	-0.00478	0.00639	pCi/g	U	0.0175	0.05			0	1.99 g
5W-W-W-1-C	SAMPLE	09/16/20	10/15/20	Plutonium-242 Tracer	3	0.361	0.166	pCi/g		0.0648		23.7		2.55	1.26 g
5W-W-W-1-C	SAMPLE	09/16/20	10/15/20	Plutonium-238	3	0.0225	0.0319	pCi/g	U	0.0499	0.05			2.55	1.26 g
5W-W-W-1-C	SAMPLE	09/16/20	10/15/20	Plutonium-239/240	3	-0.00901	0.0216	pCi/g	U	0.0498	0.05			2.55	1.26 g
5W-W-W-1-C	DUP	09/16/20	10/11/20	Plutonium-242 Tracer	3	0.531	0.182	pCi/g		0.052		34.8		0	1.26 g
5W-W-W-1-C	DUP	09/16/20	10/11/20	Plutonium-238	3	0.00714	0.022	pCi/g	U	0.0372	0.05			0	1.26 g
5W-W-W-1-C	DUP	09/16/20	10/11/20	Plutonium-239/240	3	0.0087	0.0258	pCi/g	U	0.0456	0.05			0	1.26 g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

6-EPA 906.0 Mod.

5-DOE HASL 300, 4.5.2.3/Ga-01-R

7-EPA EERF C-01 Mod.

*Key
1-DOE EML HASL-300, Am-05-RC Mod.
2-ASTM C 1475-00 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

Appendix A
Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	%	%	Sample Aliquot	Aliquot Units
												Recovery	Moisture		
5W-W-W-1-C	MS	09/16/20	10/11/20	Plutonium-239/240	3	1.74	0.202	pCi/g		0.0401	0.05	109	0	1.26	g
5W-W-W-1-C	MS	09/16/20	10/11/20	Plutonium-242 Tracer	3	0.504	0.191	pCi/g		0.072		33	0	1.26	g
5-W-W-W-24-M	SAMPLE	09/14/20	10/10/20	Plutonium-242 Tracer	3	0.872	0.115	pCi/g		0.0378		54	15.4	1.19	g
5-W-W-W-24-M	SAMPLE	09/14/20	10/10/20	Plutonium-238	3	-0.00205	0.0121	pCi/g	U	0.0253	0.05		15.4	1.19	g
5-W-W-W-24-M	SAMPLE	09/14/20	10/10/20	Plutonium-239/240	3	0.00205	0.0175	pCi/g	U	0.0332	0.05		15.4	1.19	g
5-W-W-W-24-M	DUP	09/14/20	10/11/20	Plutonium-242 Tracer	3	1.06	0.139	pCi/g		0.0287		65.4	0	1.19	g
5-W-W-W-24-M	DUP	09/14/20	10/11/20	Plutonium-238	3	0.00258	0.0149	pCi/g	U	0.0287	0.05		0	1.19	g
5-W-W-W-24-M	DUP	09/14/20	10/11/20	Plutonium-239/240	3	-0.00135	0.0114	pCi/g	U	0.0251	0.05		0	1.19	g
5-W-W-W-24-M	MS	09/14/20	10/11/20	Plutonium-239/240	3	1.9	0.152	pCi/g		0.021	0.05	112	0	1.19	g
5-W-W-W-24-M	MS	09/14/20	10/11/20	Plutonium-242 Tracer	3	1.05	0.14	pCi/g		0.0257		64.8	0	1.19	g
LCS	LCS	10/11/20	10/11/20	Plutonium-239/240	3	1.65	0.118	pCi/g		0.0146	0.05	103	0	1.26	g
LCS	LCS	10/11/20	10/11/20	Plutonium-242 Tracer	3	1.39	0.114	pCi/g		0.0204		90.9	0	1.26	g
MB	MB	10/11/20	10/11/20	Plutonium-242 Tracer	3	0.95	0.138	pCi/g		0.0299		62.2	0	1.26	g
MB	MB	10/11/20	10/11/20	Plutonium-238	3	-0.00602	0.0135	pCi/g	U	0.0331	0.05		0	1.26	g
MB	MB	10/11/20	10/11/20	Plutonium-239/240	3	-0.00141	0.0118	pCi/g	U	0.0262	0.05		0	1.26	g
5W-W-W-1-C	SAMPLE	09/16/20	10/10/20	Uranium-232 Tracer	4	2.23	0.183	pCi/g		0.034		78.8	2.55	0.722	g
5W-W-W-1-C	SAMPLE	09/16/20	10/10/20	Uranium-233/234	4	1.46	0.132	pCi/g		0.036	1		2.55	0.722	g
5W-W-W-1-C	SAMPLE	09/16/20	10/10/20	Uranium-235/236	4	0.102	0.0367	pCi/g		0.0236	0.05		2.55	0.722	g
5W-W-W-1-C	SAMPLE	09/16/20	10/10/20	Uranium-238	4	1.66	0.14	pCi/g		0.00921	1		2.55	0.722	g
5W-W-W-1-C	DUP	09/16/20	10/10/20	Uranium-232 Tracer	4	2.2	0.186	pCi/g		0.0388		77.8	0	0.722	g
5W-W-W-1-C	DUP	09/16/20	10/10/20	Uranium-233/234	4	1.58	0.14	pCi/g		0.0437	1		0	0.722	g
5W-W-W-1-C	DUP	09/16/20	10/10/20	Uranium-235/236	4	0.104	0.0366	pCi/g		0.00948	0.05		0	0.722	g
5W-W-W-1-C	DUP	09/16/20	10/10/20	Uranium-238	4	1.61	0.14	pCi/g		0.0241	1		0	0.722	g
5W-W-W-1-C	MS	09/16/20	10/10/20	Uranium-235/236	4	0.978	0.11	pCi/g		0.00959	0.05	105	0	0.722	g
5W-W-W-1-C	MS	09/16/20	10/10/20	Uranium-232 Tracer	4	2.14	0.187	pCi/g		0.0353		75.7	0	0.722	g
5-W-W-W-24-M	SAMPLE	09/14/20	10/17/20	Uranium-232 Tracer	4	2.24	0.162	pCi/g		0.0481		87.4	15.4	0.795	g
5-W-W-W-24-M	SAMPLE	09/14/20	10/17/20	Uranium-233/234	4	0.0698	0.0315	pCi/g		0.0339	1		15.4	0.795	g
5-W-W-W-24-M	SAMPLE	09/14/20	10/17/20	Uranium-235/236	4	0.0314	0.0205	pCi/g		0.02	0.05		15.4	0.795	g
5-W-W-W-24-M	SAMPLE	09/14/20	10/17/20	Uranium-238	4	0.073	0.0298	pCi/g		0.025	1		15.4	0.795	g
5-W-W-W-24-M	DUP	09/14/20	10/17/20	Uranium-232 Tracer	4	2.11	0.163	pCi/g		0.0256		82.2	0	0.795	g
5-W-W-W-24-M	DUP	09/14/20	10/17/20	Uranium-233/234	4	0.0716	0.0377	pCi/g		0.0502	1		0	0.795	g
5-W-W-W-24-M	DUP	09/14/20	10/17/20	Uranium-235/236	4	0.0321	0.0234	pCi/g		0.0296	0.05		0	0.795	g
5-W-W-W-24-M	DUP	09/14/20	10/17/20	Uranium-238	4	0.101	0.0362	pCi/g		0.0328	1		0	0.795	g
5-W-W-W-24-M	MS	09/14/20	10/10/20	Uranium-235/236	4	0.739	0.0885	pCi/g		0.00821	0.05	93.4	0	0.795	g
5-W-W-W-24-M	MS	09/14/20	10/10/20	Uranium-232 Tracer	4	2.03	0.165	pCi/g		0.0336		79.3	0	0.795	g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
LCS	LCS	10/10/20	10/10/20	Uranium-235/236	4	0.808	0.0941	pCi/g		0.0268	0.05	107	0	0.795	g
LCS	LCS	10/10/20	10/10/20	Uranium-232 Tracer	4	1.98	0.166	pCi/g		0.0308		77.3	0	0.795	g
MB	MB	10/15/20	10/15/20	Uranium-232 Tracer	4	2.22	0.159	pCi/g		0.0387		86.8	0	0.795	g
MB	MB	10/15/20	10/15/20	Uranium-233/234	4	0.0245	0.0267	pCi/g	U	0.0422	1		0	0.795	g
MB	MB	10/15/20	10/15/20	Uranium-235/236	4	0.0228	0.0179	pCi/g		0.0194	0.05		0	0.795	g
MB	MB	10/15/20	10/15/20	Uranium-238	4	0.0126	0.0192	pCi/g	U	0.0311	1		0	0.795	g
SE-W-N-11-M	SAMPLE	09/16/20	09/30/20	Americium-241	5	-0.00928	0.145	pCi/g	U	0.269			0	36.5	g
SE-W-N-11-M	SAMPLE	09/16/20	09/30/20	Barium-133	5	-0.00416	0.0923	pCi/g	U	0.155			0	36.5	g
SE-W-N-11-M	SAMPLE	09/16/20	09/30/20	Cadmium-109	5	0.487	1.24	pCi/g	U	2.35			0	36.5	g
SE-W-N-11-M	SAMPLE	09/16/20	09/30/20	Cerium-144	5	-0.142	0.352	pCi/g	U	0.629			0	36.5	g
SE-W-N-11-M	SAMPLE	09/16/20	09/30/20	Cesium-137	5	-0.00215	0.0919	pCi/g	U	0.183	1		0	36.5	g
SE-W-N-11-M	SAMPLE	09/16/20	09/30/20	Cobalt-57	5	0.0135	0.0406	pCi/g	U	0.0796			0	36.5	g
SE-W-N-11-M	SAMPLE	09/16/20	09/30/20	Cobalt-60	5	0.0742	0.101	pCi/g	U	0.259			0	36.5	g
SE-W-N-11-M	SAMPLE	09/16/20	09/30/20	Europium-152	5	-0.127	0.214	pCi/g	U	0.346			0	36.5	g
SE-W-N-11-M	SAMPLE	09/16/20	09/30/20	Lead-210	5	0.502	1.78	pCi/g	U	2.17			0	36.5	g
SE-W-N-11-M	SAMPLE	09/16/20	09/30/20	Manganese-54	5	0.0428	0.0984	pCi/g	U	0.212			0	36.5	g
SE-W-N-11-M	SAMPLE	09/16/20	09/30/20	Mercury-203	5	-0.0524	0.0872	pCi/g	U	0.143			0	36.5	g
SE-W-N-11-M	SAMPLE	09/16/20	09/30/20	Sodium-22	5	-0.00379	0.093	pCi/g	U	0.204			0	36.5	g
SE-W-N-11-M	SAMPLE	09/16/20	09/30/20	Yttrium-88	5	-0.061	0.113	pCi/g	U	0.199			0	36.5	g
SE-W-N-11-M	SAMPLE	09/16/20	09/30/20	Zinc-65	5	-0.192	0.208	pCi/g	U	0.343			0	36.5	g
SE-W-N-1-M	SAMPLE	09/16/20	09/30/20	Americium-241	5	0.00453	0.072	pCi/g	U	0.136			0	39.3	g
SE-W-N-1-M	SAMPLE	09/16/20	09/30/20	Barium-133	5	0.00488	0.066	pCi/g	U	0.12			0	39.3	g
SE-W-N-1-M	SAMPLE	09/16/20	09/30/20	Cadmium-109	5	0.45	1.31	pCi/g	U	1.68			0	39.3	g
SE-W-N-1-M	SAMPLE	09/16/20	09/30/20	Cerium-144	5	0.197	0.224	pCi/g	U	0.46			0	39.3	g
SE-W-N-1-M	SAMPLE	09/16/20	09/30/20	Cesium-137	5	0.00692	0.0522	pCi/g	U	0.1	1		0	39.3	g
SE-W-N-1-M	SAMPLE	09/16/20	09/30/20	Cobalt-57	5	-0.00201	0.0255	pCi/g	U	0.0477			0	39.3	g
SE-W-N-1-M	SAMPLE	09/16/20	09/30/20	Cobalt-60	5	-0.0522	0.0732	pCi/g	U	0.128			0	39.3	g
SE-W-N-1-M	SAMPLE	09/16/20	09/30/20	Europium-152	5	-0.03	0.142	pCi/g	U	0.248			0	39.3	g
SE-W-N-1-M	SAMPLE	09/16/20	09/30/20	Lead-210	5	0.398	1.04	pCi/g	U	1.09			0	39.3	g
SE-W-N-1-M	SAMPLE	09/16/20	09/30/20	Manganese-54	5	0.0388	0.067	pCi/g	U	0.136			0	39.3	g
SE-W-N-1-M	SAMPLE	09/16/20	09/30/20	Mercury-203	5	0	0.124	pCi/g	UI	0.0961			0	39.3	g
SE-W-N-1-M	SAMPLE	09/16/20	09/30/20	Sodium-22	5	-0.0327	0.0571	pCi/g	U	0.106			0	39.3	g
SE-W-N-1-M	SAMPLE	09/16/20	09/30/20	Yttrium-88	5	-0.0507	0.0726	pCi/g	U	0.118			0	39.3	g
SE-W-N-1-M	SAMPLE	09/16/20	09/30/20	Zinc-65	5	0.00373	0.183	pCi/g	U	0.334			0	39.3	g
SE-W-N-4-M	SAMPLE	09/16/20	09/30/20	Americium-241	5	-0.0576	0.307	pCi/g	U	0.545			0	40.1	g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

6-EPA 906.0 Mod.

5-DOE HASL 300, 4.5.2.3/Ga-01-R

7-EPA EERF C-01 Mod.

*Key
1-DOE EML HASL-300, Am-05-RC Mod.
2-ASTM C 1475-00 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
SE-W-N-4-M	SAMPLE	09/16/20	09/30/20	Barium-133	5	0.0366	0.0612 pCi/g	U	0.11				0	40.1 g	
SE-W-N-4-M	SAMPLE	09/16/20	09/30/20	Cadmium-109	5	1.54	1.64 pCi/g	U	1.85				0	40.1 g	
SE-W-N-4-M	SAMPLE	09/16/20	09/30/20	Cerium-144	5	-0.149	0.278 pCi/g	U	0.454				0	40.1 g	
SE-W-N-4-M	SAMPLE	09/16/20	09/30/20	Cesium-137	5	0.0359	0.0505 pCi/g	U	0.105		1		0	40.1 g	
SE-W-N-4-M	SAMPLE	09/16/20	09/30/20	Cobalt-57	5	-0.00217	0.0333 pCi/g	U	0.0578				0	40.1 g	
SE-W-N-4-M	SAMPLE	09/16/20	09/30/20	Cobalt-60	5	-0.00264	0.0764 pCi/g	U	0.128				0	40.1 g	
SE-W-N-4-M	SAMPLE	09/16/20	09/30/20	Europium-152	5	-0.0835	0.127 pCi/g	U	0.214				0	40.1 g	
SE-W-N-4-M	SAMPLE	09/16/20	09/30/20	Lead-210	5	1.38	11.5 pCi/g	U	19.8				0	40.1 g	
SE-W-N-4-M	SAMPLE	09/16/20	09/30/20	Manganese-54	5	-0.0206	0.0512 pCi/g	U	0.0905				0	40.1 g	
SE-W-N-4-M	SAMPLE	09/16/20	09/30/20	Mercury-203	5	-0.0278	0.0448 pCi/g	U	0.0774				0	40.1 g	
SE-W-N-4-M	SAMPLE	09/16/20	09/30/20	Sodium-22	5	-0.027	0.0599 pCi/g	U	0.109				0	40.1 g	
SE-W-N-4-M	SAMPLE	09/16/20	09/30/20	Yttrium-88	5	0.0415	0.0545 pCi/g	U	0.135				0	40.1 g	
SE-W-N-4-M	SAMPLE	09/16/20	09/30/20	Zinc-65	5	-0.0815	0.143 pCi/g	U	0.213				0	40.1 g	
SE-W-N-4-M	DUP	09/16/20	09/30/20	Americium-241	5	0.0462	0.153 pCi/g	U	0.253				0	40.1 g	
SE-W-N-4-M	DUP	09/16/20	09/30/20	Barium-133	5	0.073	0.0543 pCi/g	U	0.116				0	40.1 g	
SE-W-N-4-M	DUP	09/16/20	09/30/20	Cadmium-109	5	0.534	1.51 pCi/g	U	1.77				0	40.1 g	
SE-W-N-4-M	DUP	09/16/20	09/30/20	Cerium-144	5	-0.37	0.228 pCi/g	U	0.335				0	40.1 g	
SE-W-N-4-M	DUP	09/16/20	09/30/20	Cesium-137	5	0.0106	0.0636 pCi/g	U	0.13	1			0	40.1 g	
SE-W-N-4-M	DUP	09/16/20	09/30/20	Cobalt-57	5	0.00754	0.0288 pCi/g	U	0.0541				0	40.1 g	
SE-W-N-4-M	DUP	09/16/20	09/30/20	Cobalt-60	5	-0.0614	0.0664 pCi/g	U	0.104				0	40.1 g	
SE-W-N-4-M	DUP	09/16/20	09/30/20	Europium-152	5	-0.172	0.142 pCi/g	U	0.195				0	40.1 g	
SE-W-N-4-M	DUP	09/16/20	09/30/20	Lead-210	5	0.369	3.46 pCi/g	U	6.59				0	40.1 g	
SE-W-N-4-M	DUP	09/16/20	09/30/20	Manganese-54	5	0.029	0.0515 pCi/g	U	0.111				0	40.1 g	
SE-W-N-4-M	DUP	09/16/20	09/30/20	Mercury-203	5	0.00111	0.0546 pCi/g	U	0.0957				0	40.1 g	
SE-W-N-4-M	DUP	09/16/20	09/30/20	Sodium-22	5	0.021	0.0655 pCi/g	U	0.143				0	40.1 g	
SE-W-N-4-M	DUP	09/16/20	09/30/20	Yttrium-88	5	0.00226	0.0479 pCi/g	U	0.119				0	40.1 g	
SE-W-N-4-M	DUP	09/16/20	09/30/20	Zinc-65	5	-0.253	0.167 pCi/g	U	0.282				0	40.1 g	
SE-W-N-7-M	SAMPLE	09/16/20	09/30/20	Americium-241	5	0.518	0.389 pCi/g	U	0.326				0	40 g	
SE-W-N-7-M	SAMPLE	09/16/20	09/30/20	Barium-133	5	-0.0966	0.0994 pCi/g	U	0.127				0	40 g	
SE-W-N-7-M	SAMPLE	09/16/20	09/30/20	Cadmium-109	5	1.58	1.85 pCi/g	U	1.84				0	40 g	
SE-W-N-7-M	SAMPLE	09/16/20	09/30/20	Cerium-144	5	-0.0535	0.309 pCi/g	U	0.566				0	40 g	
SE-W-N-7-M	SAMPLE	09/16/20	09/30/20	Cesium-137	5	-0.00884	0.0639 pCi/g	U	0.13	1			0	40 g	
SE-W-N-7-M	SAMPLE	09/16/20	09/30/20	Cobalt-57	5	0.0245	0.0375 pCi/g	U	0.0755				0	40 g	
SE-W-N-7-M	SAMPLE	09/16/20	09/30/20	Cobalt-60	5	0.0828	0.11 pCi/g	U	0.271				0	40 g	
SE-W-N-7-M	SAMPLE	09/16/20	09/30/20	Europium-152	5	-0.0251	0.212 pCi/g	U	0.351				0	40 g	

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
5E-W-N-7-M	SAMPLE	09/16/20	09/30/20	Lead-210	5	-3.74	5.65	pCi/g	U	10.3			0	40 g	
5E-W-N-7-M	SAMPLE	09/16/20	09/30/20	Manganese-54	5	0.0118	0.0753	pCi/g	U	0.16			0	40 g	
5E-W-N-7-M	SAMPLE	09/16/20	09/30/20	Mercury-203	5	-0.285	0.0714	pCi/g	U	0.122			0	40 g	
5E-W-N-7-M	SAMPLE	09/16/20	09/30/20	Sodium-22	5	-0.0424	0.105	pCi/g	U	0.202			0	40 g	
5E-W-N-7-M	SAMPLE	09/16/20	09/30/20	Yttrium-88	5	0.0759	0.0859	pCi/g	U	0.272			0	40 g	
5E-W-N-7-M	SAMPLE	09/16/20	09/30/20	Zinc-65	5	0.000462	0.201	pCi/g	U	0.427			0	40 g	
5W-F-30-C	SAMPLE	09/14/20	09/30/20	Americium-241	5	0.0124	0.17	pCi/g	U	0.34			0	45.2 g	
5W-F-30-C	SAMPLE	09/14/20	09/30/20	Barium-133	5	-0.00952	0.0447	pCi/g	U	0.0772			0	45.2 g	
5W-F-30-C	SAMPLE	09/14/20	09/30/20	Cadmium-109	5	0.703	1.2	pCi/g	U	1.29			0	45.2 g	
5W-F-30-C	SAMPLE	09/14/20	09/30/20	Cerium-144	5	0.0547	0.168	pCi/g	U	0.33			0	45.2 g	
5W-F-30-C	SAMPLE	09/14/20	09/30/20	Cesium-137	5	-0.0278	0.0395	pCi/g	U	0.0646	1		0	45.2 g	
5W-F-30-C	SAMPLE	09/14/20	09/30/20	Cobalt-57	5	-0.00293	0.025	pCi/g	U	0.0457			0	45.2 g	
5W-F-30-C	SAMPLE	09/14/20	09/30/20	Cobalt-60	5	-0.00162	0.0389	pCi/g	U	0.0898			0	45.2 g	
5W-F-30-C	SAMPLE	09/14/20	09/30/20	Europium-152	5	-0.0259	0.107	pCi/g	U	0.205			0	45.2 g	
5W-F-30-C	SAMPLE	09/14/20	09/30/20	Lead-210	5	6.41	8.1	pCi/g	U	17.4			0	45.2 g	
5W-F-30-C	SAMPLE	09/14/20	09/30/20	Manganese-54	5	-0.0285	0.039	pCi/g	U	0.0693			0	45.2 g	
5W-F-30-C	SAMPLE	09/14/20	09/30/20	Mercury-203	5	0.0161	0.0343	pCi/g	U	0.0696			0	45.2 g	
5W-F-30-C	SAMPLE	09/14/20	09/30/20	Sodium-22	5	0.0471	0.0492	pCi/g	U	0.133			0	45.2 g	
5W-F-30-C	SAMPLE	09/14/20	09/30/20	Yttrium-88	5	0.0165	0.0698	pCi/g	U	0.166			0	45.2 g	
5W-F-30-C	SAMPLE	09/14/20	09/30/20	Zinc-65	5	0.00458	0.0933	pCi/g	U	0.206			0	45.2 g	
5W-F-30-C	DUP	09/14/20	09/30/20	Americium-241	5	0.0203	0.0408	pCi/g	U	0.0826			0	45.2 g	
5W-F-30-C	DUP	09/14/20	09/30/20	Barium-133	5	-0.0184	0.0542	pCi/g	U	0.0836			0	45.2 g	
5W-F-30-C	DUP	09/14/20	09/30/20	Cadmium-109	5	0.0723	0.443	pCi/g	U	0.875			0	45.2 g	
5W-F-30-C	DUP	09/14/20	09/30/20	Cerium-144	5	-0.0129	0.168	pCi/g	U	0.318			0	45.2 g	
5W-F-30-C	DUP	09/14/20	09/30/20	Cesium-137	5	0.0628	0.0744	pCi/g	U	0.0783	1		0	45.2 g	
5W-F-30-C	DUP	09/14/20	09/30/20	Cobalt-57	5	0.00743	0.0178	pCi/g	U	0.0368			0	45.2 g	
5W-F-30-C	DUP	09/14/20	09/30/20	Cobalt-60	5	0.00747	0.0387	pCi/g	U	0.0957			0	45.2 g	
5W-F-30-C	DUP	09/14/20	09/30/20	Europium-152	5	0.0215	0.111	pCi/g	U	0.21			0	45.2 g	
5W-F-30-C	DUP	09/14/20	09/30/20	Lead-210	5	0.268	1.02	pCi/g	U	0.819			0	45.2 g	
5W-F-30-C	DUP	09/14/20	09/30/20	Manganese-54	5	-0.0244	0.0549	pCi/g	U	0.0966			0	45.2 g	
5W-F-30-C	DUP	09/14/20	09/30/20	Mercury-203	5	-0.00989	0.0356	pCi/g	U	0.0634			0	45.2 g	
5W-F-30-C	DUP	09/14/20	09/30/20	Sodium-22	5	0.00125	0.0416	pCi/g	U	0.0956			0	45.2 g	
5W-F-30-C	DUP	09/14/20	09/30/20	Yttrium-88	5	-0.00372	0.0664	pCi/g	U	0.142			0	45.2 g	
5W-F-30-C	DUP	09/14/20	09/30/20	Zinc-65	5	-0.0101	0.0789	pCi/g	U	0.173			0	45.2 g	
6NE-F-56-C	SAMPLE	09/17/20	09/30/20	Americium-241	5	0.184	0.232	pCi/g	U	0.455			0	36.6 g	

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Appendix A
Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
6NE-F-56-C	SAMPLE	09/17/20	09/30/20	Barium-133	5	0.00837	0.0584	pCi/g	U	0.117				0	36.6 g
6NE-F-56-C	SAMPLE	09/17/20	09/30/20	Cadmium-109	5	0.555	1.12	pCi/g	U	2.05				0	36.6 g
6NE-F-56-C	SAMPLE	09/17/20	09/30/20	Cerium-144	5	0.133	0.235	pCi/g	U	0.48				0	36.6 g
6NE-F-56-C	SAMPLE	09/17/20	09/30/20	Cesium-137	5	0.0067	0.0569	pCi/g	U	0.117	1			0	36.6 g
6NE-F-56-C	SAMPLE	09/17/20	09/30/20	Cobalt-57	5	-0.0334	0.0311	pCi/g	U	0.0439				0	36.6 g
6NE-F-56-C	SAMPLE	09/17/20	09/30/20	Cobalt-60	5	-0.0469	0.0799	pCi/g	U	0.133				0	36.6 g
6NE-F-56-C	SAMPLE	09/17/20	09/30/20	Europium-152	5	-0.0845	0.111	pCi/g	U	0.189				0	36.6 g
6NE-F-56-C	SAMPLE	09/17/20	09/30/20	Lead-210	5	5.41	7.39	pCi/g	U	7.74				0	36.6 g
6NE-F-56-C	SAMPLE	09/17/20	09/30/20	Manganese-54	5	-0.0148	0.0418	pCi/g	U	0.08				0	36.6 g
6NE-F-56-C	SAMPLE	09/17/20	09/30/20	Mercury-203	5	-0.0282	0.049	pCi/g	U	0.087				0	36.6 g
6NE-F-56-C	SAMPLE	09/17/20	09/30/20	Sodium-22	5	-0.00027	0.0512	pCi/g	U	0.115				0	36.6 g
6NE-F-56-C	SAMPLE	09/17/20	09/30/20	Yttrium-88	5	-0.0155	0.0853	pCi/g	U	0.184				0	36.6 g
6NE-F-56-C	SAMPLE	09/17/20	09/30/20	Zinc-65	5	0.0528	0.144	pCi/g	U	0.317				0	36.6 g
6NE-F-56-C	DUP	09/17/20	09/30/20	Americium-241	5	-0.0248	0.0895	pCi/g	U	0.162				0	36.6 g
6NE-F-56-C	DUP	09/17/20	09/30/20	Barium-133	5	0.00637	0.0624	pCi/g	U	0.108				0	36.6 g
6NE-F-56-C	DUP	09/17/20	09/30/20	Cadmium-109	5	0.151	0.639	pCi/g	U	1.12				0	36.6 g
6NE-F-56-C	DUP	09/17/20	09/30/20	Cerium-144	5	0.181	0.325	pCi/g	U	0.313				0	36.6 g
6NE-F-56-C	DUP	09/17/20	09/30/20	Cesium-137	5	-0.0129	0.0512	pCi/g	U	0.0987	1			0	36.6 g
6NE-F-56-C	DUP	09/17/20	09/30/20	Cobalt-57	5	-0.0128	0.0257	pCi/g	U	0.0434				0	36.6 g
6NE-F-56-C	DUP	09/17/20	09/30/20	Cobalt-60	5	-0.00366	0.0552	pCi/g	U	0.117				0	36.6 g
6NE-F-56-C	DUP	09/17/20	09/30/20	Europium-152	5	0.0572	0.106	pCi/g	U	0.222				0	36.6 g
6NE-F-56-C	DUP	09/17/20	09/30/20	Lead-210	5	1.38	3.55	pCi/g	U	2.97				0	36.6 g
6NE-F-56-C	DUP	09/17/20	09/30/20	Manganese-54	5	-0.0011	0.0548	pCi/g	U	0.0968				0	36.6 g
6NE-F-56-C	DUP	09/17/20	09/30/20	Mercury-203	5	-0.0155	0.0473	pCi/g	U	0.0852				0	36.6 g
6NE-F-56-C	DUP	09/17/20	09/30/20	Sodium-22	5	0.0235	0.0589	pCi/g	U	0.131				0	36.6 g
6NE-F-56-C	DUP	09/17/20	09/30/20	Yttrium-88	5	0.0197	0.0754	pCi/g	U	0.17				0	36.6 g
6NE-F-56-C	DUP	09/17/20	09/30/20	Zinc-65	5	-0.0195	0.0941	pCi/g	U	0.186				0	36.6 g
LCS	LCS	09/30/20	09/30/20	Americium-241	5	636	12.9	pCi/g		5.27		95.7	0	45.2 g	
LCS	LCS	09/30/20	09/30/20	Cesium-137	5	179	3.85	pCi/g		0.962	1	90.1	0	45.2 g	
LCS	LCS	09/30/20	09/30/20	Cobalt-60	5	75.1	3.23	pCi/g		0.765		93.5	0	45.2 g	
MB	MB	09/30/20	09/30/20	Americium-241	5	0.039	0.208	pCi/g	U	0.389			0	45.2 g	
MB	MB	09/30/20	09/30/20	Barium-133	5	-0.0417	0.0476	pCi/g	U	0.0767			0	45.2 g	
MB	MB	09/30/20	09/30/20	Cadmium-109	5	-0.193	0.729	pCi/g	U	1.15			0	45.2 g	
MB	MB	09/30/20	09/30/20	Cerium-144	5	0.2	0.138	pCi/g	U	0.321			0	45.2 g	
MB	MB	09/30/20	09/30/20	Cesium-137	5	0.0222	0.0463	pCi/g	U	0.102	1		0	45.2 g	

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

6-EPA 906.0 Mod.

5-DOE HASL 300, 4.5.2.3/Ga-01-R

7-EPA EERF C-01 Mod.

*Key
1-DOE EML HASL-300, Am-05-RC Mod.
2-ASTM C 1475-00 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
MB	MB	09/30/20	09/30/20	Cobalt-57	5	-0.0108	0.0189	pCi/g	U	0.0348			0	45.2 g	
MB	MB	09/30/20	09/30/20	Cobalt-60	5	-3.40E-05	0.0492	pCi/g	U	0.11			0	45.2 g	
MB	MB	09/30/20	09/30/20	Europium-152	5	0.00824	0.106	pCi/g	U	0.207			0	45.2 g	
MB	MB	09/30/20	09/30/20	Lead-210	5	-2.78	7.21	pCi/g	U	12.6			0	45.2 g	
MB	MB	09/30/20	09/30/20	Manganese-54	5	0.000401	0.0327	pCi/g	U	0.0715			0	45.2 g	
MB	MB	09/30/20	09/30/20	Mercury-203	5	0.0303	0.0364	pCi/g	U	0.0763			0	45.2 g	
MB	MB	09/30/20	09/30/20	Sodium-22	5	0.007	0.0421	pCi/g	U	0.0986			0	45.2 g	
MB	MB	09/30/20	09/30/20	Yttrium-88	5	0.049	0.0582	pCi/g	U	0.159			0	45.2 g	
MB	MB	09/30/20	09/30/20	Zinc-65	5	0.0124	0.0849	pCi/g	U	0.191			0	45.2 g	
1-W-E-37	SAMPLE	08/28/20	10/03/20	Americium-243 Tracer	1	1.09	0.106	pCi/g		0.0204		62.3	12.2	1.26 g	
1-W-E-37	SAMPLE	08/28/20	10/03/20	Americium-241	1	0.0101	0.0124	pCi/g	U	0.0186	0.05		12.2	1.26 g	
1-W-E-37	SAMPLE	08/28/20	10/03/20	Californium-252	1	0	0.00487	pCi/g	U	0.00527	0.05		12.2	1.26 g	
1-W-E-37	SAMPLE	08/28/20	10/03/20	Curium-243/244	1	2.78E-10	0.00654	pCi/g	U	0.0128	0.05		12.2	1.26 g	
1-W-E-54	SAMPLE	08/28/20	10/03/20	Americium-243 Tracer	1	0.345	0.188	pCi/g		0.0404		20.1	12.9	1.29 g	
1-W-E-54	SAMPLE	08/28/20	10/03/20	Americium-241	1	-0.00536	0.0315	pCi/g	U	0.0659	0.05		12.9	1.29 g	
1-W-E-54	SAMPLE	08/28/20	10/03/20	Californium-252	1	-0.0112	0.0219	pCi/g	U	0.0535	0.05		12.9	1.29 g	
1-W-E-54	SAMPLE	08/28/20	10/03/20	Curium-243/244	1	-0.0053	0.0232	pCi/g	U	0.0508	0.05		12.9	1.29 g	
1-W-N-47	SAMPLE	08/28/20	10/03/20	Americium-243 Tracer	1	0.413	0.169	pCi/g		0.0694		23.9	15	1.28 g	
1-W-N-47	SAMPLE	08/28/20	10/03/20	Americium-241	1	2.77E-09	0.0258	pCi/g	U	0.0511	0.05		15	1.28 g	
1-W-N-47	SAMPLE	08/28/20	10/03/20	Californium-252	1	0.00866	0.017	pCi/g	U	0.013	0.05		15	1.28 g	
1-W-N-47	SAMPLE	08/28/20	10/03/20	Curium-243/244	1	0.00411	0.0213	pCi/g	U	0.0394	0.05		15	1.28 g	
1-W-W-40	SAMPLE	08/28/20	10/02/20	Americium-243 Tracer	1	1.45	0.167	pCi/g		0.0462		84.6	17	1.29 g	
1-W-W-40	SAMPLE	08/28/20	10/02/20	Americium-241	1	0.00526	0.0179	pCi/g	U	0.0338	0.05		17	1.29 g	
1-W-W-40	SAMPLE	08/28/20	10/02/20	Californium-252	1	-0.00306	0.01	pCi/g	U	0.0271	0.05		17	1.29 g	
1-W-W-40	SAMPLE	08/28/20	10/02/20	Curium-243/244	1	-0.00291	0.00952	pCi/g	U	0.0257	0.05		17	1.29 g	
1-W-W-40	DUP	08/28/20	10/02/20	Americium-243 Tracer	1	1	0.192	pCi/g		0.0618		58.4	0	1.29 g	
1-W-W-40	DUP	08/28/20	10/02/20	Americium-241	1	0.0109	0.0229	pCi/g	U	0.0379	0.05		0	1.29 g	
1-W-W-40	DUP	08/28/20	10/02/20	Californium-252	1	0.00575	0.0164	pCi/g	U	0.0172	0.05		0	1.29 g	
1-W-W-40	DUP	08/28/20	10/02/20	Curium-243/244	1	-0.00205	0.0172	pCi/g	U	0.0408	0.05		0	1.29 g	
1-W-W-40	MS	08/28/20	10/02/20	Americium-241	1	0.794	0.108	pCi/g		0.0323	0.05	103	0	1.29 g	
1-W-W-40	MS	08/28/20	10/02/20	Californium-252	1	0.444	0.0825	pCi/g		0.0207	0.05	114	0	1.29 g	
1-W-W-40	MS	08/28/20	10/02/20	Curium-243/244	1	0.848	0.111	pCi/g		0.0197	0.05	97.6	0	1.29 g	
1-W-W-40	MS	08/28/20	10/02/20	Americium-243 Tracer	1	1.46	0.158	pCi/g		0.0416		84.7	0	1.29 g	
3-W-E-17-B-C	SAMPLE	09/01/20	10/03/20	Americium-243 Tracer	1	0.596	0.146	pCi/g		0.0742		34.6	1.01	1.29 g	
3-W-E-17-B-C	SAMPLE	09/01/20	10/03/20	Americium-241	1	-0.0152	0.0309	pCi/g	U	0.0638	0.05		1.01	1.29 g	

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

6-EPA 906.0 Mod.

5-DOE HASL 300, 4.5.2.3/Ga-01-R

7-EPA EERF C-01 Mod.

1-DOE EML HASL-300, Am-05-RC Mod.
2-ASTM C 1475-00 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	%	%	Sample Aliquot	Aliquot Units	
												Recovery	Moisture			
3-W-E-17-B-C	SAMPLE	09/01/20	10/03/20	Californium-252	1	0.00631	0.0124	pCi/g	U	0.00946	0.05		1.01	1.29	g	
3-W-E-17-B-C	SAMPLE	09/01/20	10/03/20	Curium-243/244	1	-0.015	0.0176	pCi/g	U	0.0432	0.05		1.01	1.29	g	
3-W-E-17-B-C	DUP	09/01/20	10/06/20	Americium-243 Tracer	1	0.661	0.153	pCi/g		0.0248		38.3		0	1.29	g
3-W-E-17-B-C	DUP	09/01/20	10/06/20	Americium-241	1	0.00527	0.0195	pCi/g	U	0.0359	0.05		0	1.29	g	
3-W-E-17-B-C	DUP	09/01/20	10/06/20	Californium-252	1	-0.00311	0.0113	pCi/g	U	0.0263	0.05		0	1.29	g	
3-W-E-17-B-C	DUP	09/01/20	10/06/20	Curium-243/244	1	0.0076	0.016	pCi/g	U	0.0249	0.05		0	1.29	g	
3-W-E-17-B-C	MS	09/01/20	10/02/20	Americium-241	1	0.594	0.0945	pCi/g		0.0289	0.05	77.3	0	1.29	g	
3-W-E-17-B-C	MS	09/01/20	10/02/20	Californium-252	1	0.409	0.0798	pCi/g		0.021	0.05	103	0	1.29	g	
3-W-E-17-B-C	MS	09/01/20	10/02/20	Curium-243/244	1	0.815	0.109	pCi/g		0.02	0.05	93.5	0	1.29	g	
3-W-E-17-B-C	MS	09/01/20	10/02/20	Americium-243 Tracer	1	1.37	0.159	pCi/g		0.0262		79.2	0	1.29	g	
3-W-S-85-A-C	SAMPLE	09/03/20	10/02/20	Americium-243 Tracer	1	1.43	0.153	pCi/g		0.035		86.4	0.892	1.34	g	
3-W-S-85-A-C	SAMPLE	09/03/20	10/02/20	Americium-241	1	-0.00378	0.00871	pCi/g	U	0.0252	0.05		0.892	1.34	g	
3-W-S-85-A-C	SAMPLE	09/03/20	10/02/20	Californium-252	1	0	0.00787	pCi/g	U	0.0114	0.05		0.892	1.34	g	
3-W-S-85-A-C	SAMPLE	09/03/20	10/02/20	Curium-243/244	1	-0.0026	0.0117	pCi/g	U	0.029	0.05		0.892	1.34	g	
3-W-S-C-73-C	SAMPLE	09/01/20	10/02/20	Americium-243 Tracer	1	1.21	0.166	pCi/g		0.0405		71.7	1.51	1.31	g	
3-W-S-C-73-C	SAMPLE	09/01/20	10/02/20	Americium-241	1	-0.00146	0.00924	pCi/g	U	0.0222	0.05		1.51	1.31	g	
3-W-S-C-73-C	SAMPLE	09/01/20	10/02/20	Californium-252	1	-0.00151	0.00959	pCi/g	U	0.023	0.05		1.51	1.31	g	
3-W-S-C-73-C	SAMPLE	09/01/20	10/02/20	Curium-243/244	1	-0.0101	0.0115	pCi/g	U	0.0373	0.05		1.51	1.31	g	
LCS	LCS	10/03/20	10/03/20	Americium-241	1	0.749	0.0658	pCi/g		0.00449	0.05	101	0	1.34	g	
LCS	LCS	10/03/20	10/03/20	Californium-252	1	0.416	0.0495	pCi/g		0.00457	0.05	113	0	1.34	g	
LCS	LCS	10/03/20	10/03/20	Curium-243/244	1	0.757	0.0656	pCi/g		0.00443	0.05	90.6	0	1.34	g	
LCS	LCS	10/03/20	10/03/20	Americium-243 Tracer	1	1.46	0.0972	pCi/g		0.0113		87.7	0	1.34	g	
MB	MB	10/02/20	10/02/20	Americium-243 Tracer	1	1.47	0.165	pCi/g		0.0448		88.3	0	1.34	g	
MB	MB	10/02/20	10/02/20	Americium-241	1	-0.00596	0.0142	pCi/g	U	0.0378	0.05		0	1.34	g	
MB	MB	10/02/20	10/02/20	Californium-252	1	-0.00296	0.00982	pCi/g	U	0.0265	0.05		0	1.34	g	
MB	MB	10/02/20	10/02/20	Curium-243/244	1	-0.00861	0.0111	pCi/g	U	0.0354	0.05		0	1.34	g	
5W-W-E-52-A-M	SAMPLE	09/17/20	10/05/20	Americium-241	5	0.0249	0.147	pCi/g	U	0.26			0	34.9	g	
5W-W-E-52-A-M	SAMPLE	09/17/20	10/05/20	Barium-133	5	0.00937	0.0698	pCi/g	U	0.118			0	34.9	g	
5W-W-E-52-A-M	SAMPLE	09/17/20	10/05/20	Cadmium-109	5	1.23	1.68	pCi/g	U	2.39			0	34.9	g	
5W-W-E-52-A-M	SAMPLE	09/17/20	10/05/20	Cerium-144	5	-0.00533	0.306	pCi/g	U	0.569			0	34.9	g	
5W-W-E-52-A-M	SAMPLE	09/17/20	10/05/20	Cesium-137	5	0.0984	0.133	pCi/g	U	0.136	1		0	34.9	g	
5W-W-E-52-A-M	SAMPLE	09/17/20	10/05/20	Cobalt-57	5	0.0211	0.0348	pCi/g	U	0.0686			0	34.9	g	
5W-W-E-52-A-M	SAMPLE	09/17/20	10/05/20	Cobalt-60	5	0.021	0.0711	pCi/g	U	0.152			0	34.9	g	
5W-W-E-52-A-M	SAMPLE	09/17/20	10/05/20	Europium-152	5	-0.059	0.174	pCi/g	U	0.289			0	34.9	g	
5W-W-E-52-A-M	SAMPLE	09/17/20	10/05/20	Lead-210	5	-1.39	2.78	pCi/g	U	4.67			0	34.9	g	

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

6-EPA 906.0 Mod.

5-DOE HASL 300, 4.5.2.3/Ga-01-R

7-EPA EERF C-01 Mod.

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

Appendix A
Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
5W-W-E-52-A-M	SAMPLE	09/17/20	10/05/20	Manganese-54	5	-0.00658	0.0673	pCi/g	U	0.129				0	34.9 g
5W-W-E-52-A-M	SAMPLE	09/17/20	10/05/20	Mercury-203	5	-0.0186	0.074	pCi/g	U	0.132				0	34.9 g
5W-W-E-52-A-M	SAMPLE	09/17/20	10/05/20	Sodium-22	5	-0.00146	0.0835	pCi/g	U	0.162				0	34.9 g
5W-W-E-52-A-M	SAMPLE	09/17/20	10/05/20	Yttrium-88	5	-0.0279	0.0585	pCi/g	U	0.128				0	34.9 g
5W-W-E-52-A-M	SAMPLE	09/17/20	10/05/20	Zinc-65	5	0.00387	0.184	pCi/g	U	0.351				0	34.9 g
5W-W-E-52-A-M	DUP	09/17/20	10/02/20	Americium-241	5	0.00393	0.191	pCi/g	U	0.333				0	34.9 g
5W-W-E-52-A-M	DUP	09/17/20	10/02/20	Barium-133	5	0.0183	0.0594	pCi/g	U	0.111				0	34.9 g
5W-W-E-52-A-M	DUP	09/17/20	10/02/20	Cadmium-109	5	0.0512	1.64	pCi/g	U	1.81				0	34.9 g
5W-W-E-52-A-M	DUP	09/17/20	10/02/20	Cerium-144	5	0.147	0.254	pCi/g	U	0.492				0	34.9 g
5W-W-E-52-A-M	DUP	09/17/20	10/02/20	Cesium-137	5	0.0908	0.119	pCi/g	U	0.106	1			0	34.9 g
5W-W-E-52-A-M	DUP	09/17/20	10/02/20	Cobalt-57	5	0.0197	0.0317	pCi/g	U	0.062				0	34.9 g
5W-W-E-52-A-M	DUP	09/17/20	10/02/20	Cobalt-60	5	0.0427	0.0721	pCi/g	U	0.168				0	34.9 g
5W-W-E-52-A-M	DUP	09/17/20	10/02/20	Europium-152	5	-0.0586	0.159	pCi/g	U	0.262				0	34.9 g
5W-W-E-52-A-M	DUP	09/17/20	10/02/20	Lead-210	5	-2	3.76	pCi/g	U	6.79				0	34.9 g
5W-W-E-52-A-M	DUP	09/17/20	10/02/20	Manganese-54	5	0.00332	0.0601	pCi/g	U	0.117				0	34.9 g
5W-W-E-52-A-M	DUP	09/17/20	10/02/20	Mercury-203	5	0.00782	0.0626	pCi/g	U	0.112				0	34.9 g
5W-W-E-52-A-M	DUP	09/17/20	10/02/20	Sodium-22	5	-0.0242	0.0677	pCi/g	U	0.129				0	34.9 g
5W-W-E-52-A-M	DUP	09/17/20	10/02/20	Yttrium-88	5	0.0722	0.0746	pCi/g	U	0.205				0	34.9 g
5W-W-E-52-A-M	DUP	09/17/20	10/02/20	Zinc-65	5	-0.0728	0.139	pCi/g	U	0.21				0	34.9 g
LCS	LCS	10/02/20	10/02/20	Americium-241	5	813	17.7	pCi/g		10.6		94.5		0	34.9 g
LCS	LCS	10/02/20	10/02/20	Cesium-137	5	284	6	pCi/g		1.51	1	110		0	34.9 g
LCS	LCS	10/02/20	10/02/20	Cobalt-60	5	111	4.74	pCi/g		1.08		107		0	34.9 g
MB	MB	10/02/20	10/02/20	Americium-241	5	-0.0457	0.0848	pCi/g	U	0.136				0	34.9 g
MB	MB	10/02/20	10/02/20	Barium-133	5	0.00648	0.0575	pCi/g	U	0.109				0	34.9 g
MB	MB	10/02/20	10/02/20	Cadmium-109	5	0.355	0.61	pCi/g	U	1.2				0	34.9 g
MB	MB	10/02/20	10/02/20	Cerium-144	5	-0.272	0.231	pCi/g	U	0.348				0	34.9 g
MB	MB	10/02/20	10/02/20	Cesium-137	5	0.00127	0.049	pCi/g	U	0.1	1			0	34.9 g
MB	MB	10/02/20	10/02/20	Cobalt-57	5	-0.0174	0.0245	pCi/g	U	0.0399				0	34.9 g
MB	MB	10/02/20	10/02/20	Cobalt-60	5	-0.0383	0.0456	pCi/g	U	0.0753				0	34.9 g
MB	MB	10/02/20	10/02/20	Europium-152	5	-0.00987	0.106	pCi/g	U	0.203				0	34.9 g
MB	MB	10/02/20	10/02/20	Lead-210	5	0.0957	2.9	pCi/g	U	3.16				0	34.9 g
MB	MB	10/02/20	10/02/20	Manganese-54	5	-0.00225	0.0612	pCi/g	U	0.119				0	34.9 g
MB	MB	10/02/20	10/02/20	Mercury-203	5	-0.00672	0.0433	pCi/g	U	0.0795				0	34.9 g
MB	MB	10/02/20	10/02/20	Sodium-22	5	0.0176	0.0528	pCi/g	U	0.12				0	34.9 g
MB	MB	10/02/20	10/02/20	Yttrium-88	5	0.0292	0.0596	pCi/g	U	0.149				0	34.9 g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

6-EPA 906.0 Mod.

5-DOE HASL 300, 4.5.2.3/Ga-01-R

7-EPA EERF C-01 Mod.

*Key
1-DOE EML HASL-300, Am-05-RC Mod.
2-ASTM C 1475-00 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	%	Sample Aliquot	Aliquot Units
													Moisture		
MB	MB	10/02/20	10/02/20	Zinc-65	5	-0.0368	0.1 pCi/g	U	0.188				0	34.9 g	
3-W-S-87-A-M	SAMPLE	08/31/20	10/05/20	Americium-243 Tracer	1	8.47	0.575 pCi/g	U	0.0982		0.0895	0.05	79.1	12.3	0.207 g
3-W-S-87-A-M	SAMPLE	08/31/20	10/05/20	Americium-241	1	-0.0081	0.042 pCi/g	U		0.0895	0.05			12.3	0.207 g
3-W-S-87-A-M	SAMPLE	08/31/20	10/05/20	Californium-252	1	0	0.0234 pCi/g	U	0.0253	0.05			12.3	0.207 g	
3-W-S-87-A-M	SAMPLE	08/31/20	10/05/20	Curium-243/244	1	0.00801	0.0351 pCi/g	U		0.0613	0.05			12.3	0.207 g
3-W-W-74-C	SAMPLE	09/02/20	10/05/20	Americium-243 Tracer	1	24.4	1.59 pCi/g		0.304				84.5	10.3	0.0767 g
3-W-W-74-C	SAMPLE	09/02/20	10/05/20	Americium-241	1	0.046	0.156 pCi/g	U		0.283	0.05			10.3	0.0767 g
3-W-W-74-C	SAMPLE	09/02/20	10/05/20	Californium-252	1	0.0239	0.0813 pCi/g	U		0.0718	0.05			10.3	0.0767 g
3-W-W-74-C	SAMPLE	09/02/20	10/05/20	Curium-243/244	1	0.0455	0.167 pCi/g	U		0.305	0.05			10.3	0.0767 g
3-W-W-74-C	DUP	09/02/20	10/05/20	Americium-243 Tracer	1	27.8	1.43 pCi/g		0.447				96.2	0	0.0767 g
3-W-W-74-C	DUP	09/02/20	10/05/20	Americium-241	1	0.0183	0.206 PCI/G	U		0.384	0.05			0	0.0767 g
3-W-W-74-C	DUP	09/02/20	10/05/20	Californium-252	1	0.057	0.0833 PCI/G			0.057	0.05			0	0.0767 g
3-W-W-74-C	DUP	09/02/20	10/05/20	Curium-243/244	1	-0.0542	0.117 pCi/g	U		0.26	0.05			0	0.0767 g
3-W-W-74-C	MS	09/02/20	10/05/20	Americium-241	1	12.8	1.24 pCi/g			0.464	0.05		98.8	0	0.0767 g
3-W-W-74-C	MS	09/02/20	10/05/20	Californium-252	1	7	0.929 pCi/g			0.241	0.05		107	0	0.0767 g
3-W-W-74-C	MS	09/02/20	10/05/20	Curium-243/244	1	17.2	1.42 pCi/g			0.331	0.05		117	0	0.0767 g
3-W-W-74-C	MS	09/02/20	10/05/20	Americium-243 Tracer	1	22.1	1.84 pCi/g			0.482			76.3	0	0.0767 g
4-CF-3-C	SAMPLE	09/01/20	10/05/20	Americium-243 Tracer	1	2.46	0.196 pCi/g		0.0478		70.2	2.02		0.632 g	
4-CF-3-C	SAMPLE	09/01/20	10/05/20	Americium-241	1	-0.00572	0.0158 PCI/G	U		0.0352	0.05			2.02	0.632 g
4-CF-3-C	SAMPLE	09/01/20	10/05/20	Californium-252	1	0	0.00825 PCI/G	U		0.00893	0.05			2.02	0.632 g
4-CF-3-C	SAMPLE	09/01/20	10/05/20	Curium-243/244	1	9.42E-10	0.0136 PCI/G	U		0.0271	0.05			2.02	0.632 g
4-CF-4-C	SAMPLE	09/01/20	10/05/20	Americium-243 Tracer	1	2.61	0.203 pCi/g		0.0229		73.2	1.76		0.622 g	
4-CF-4-C	SAMPLE	09/01/20	10/05/20	Americium-241	1	2.03E-09	0.0189 PCI/G	U		0.0374	0.05			1.76	0.622 g
4-CF-4-C	SAMPLE	09/01/20	10/05/20	Californium-252	1	-0.00633	0.0124 PCI/G	U		0.0303	0.05			1.76	0.622 g
4-CF-4-C	SAMPLE	09/01/20	10/05/20	Curium-243/244	1	1.00E-09	0.0144 PCI/G	U		0.0288	0.05			1.76	0.622 g
LCS	LCS	10/05/20	10/05/20	Americium-241	1	12.4	1.06 pCi/g			0.255	0.05		96.7	0	0.0767 g
LCS	LCS	10/05/20	10/05/20	Californium-252	1	7.31	0.814 pCi/g			0.0703	0.05		114	0	0.0767 g
LCS	LCS	10/05/20	10/05/20	Californium-252	1	114	0.814 %			0.0703	0.05		114	0	0.0767 g
LCS	LCS	10/05/20	10/05/20	Curium-243/244	1	15.1	1.15 pCi/g			0.218	0.05		104	0	0.0767 g
LCS	LCS	10/05/20	10/05/20	Curium-243/244	1	104	1.15 %			0.218	0.05		104	0	0.0767 g
LCS	LCS	10/05/20	10/05/20	Americium-243 Tracer	1	28.6	1.59 pCi/g			0.218			98.8	0	0.0767 g
MB	MB	10/05/20	10/05/20	Americium-243 Tracer	1	3.44	0.172 pCi/g			0.0243			98.1	0	0.632 g
MB	MB	10/05/20	10/05/20	Americium-241	1	1.48E-09	0.0138 PCI/G	U		0.0274	0.05			0	0.632 g
MB	MB	10/05/20	10/05/20	Californium-252	1	0	0.00627 PCI/G	U		0.00679	0.05			0	0.632 g
MB	MB	10/05/20	10/05/20	Curium-243/244	1	-0.00219	0.00745 pCi/g	U		0.0168	0.05			0	0.632 g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

6-EPA 906.0 Mod.

5-DOE HASL 300, 4.5.2.3/Ga-01-R

7-EPA EERF C-01 Mod.

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

Appendix A
Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
5E-W-N-4-M	SAMPLE	09/16/20	10/14/20	Tritium	6	0.708	0.802 pCi/g	U	1.35	1			0	15.1 g	
5E-W-N-4-M	DUP	09/16/20	10/15/20	Tritium	6	0.525	0.774 pCi/g	U	1.31	1			0	15 g	
5E-W-N-4-M	MS	09/16/20	10/19/20	Tritium	6	31.1	4.04 pCi/g		3.14	1	93.2		0	15.4 g	
5E-W-S-67-B-M	SAMPLE	09/14/20	10/14/20	Tritium	6	1.45	0.843 pCi/g		1.38	1			13.9	15.1 g	
5E-W-S-67-B-M	DUP	09/14/20	10/15/20	Tritium	6	1.53	0.833 pCi/g		1.35	1			0	15.1 g	
5E-W-S-67-B-M	MS	09/14/20	10/15/20	Tritium	6	34.6	4.25 pCi/g		3.2	1	97.7		0	15.2 g	
5E-W-W-33-M	SAMPLE	09/16/20	10/18/20	Tritium	6	1.59	0.876 pCi/g		1.43	1			0.983	15 g	
5E-W-W-33-M	DUP	09/16/20	10/19/20	Tritium	6	2.59	0.888 pCi/g		1.39	1			0	15.1 g	
5E-W-W-33-M	MS	09/16/20	10/15/20	Tritium	6	27.9	3.89 pCi/g		3.2	1	77.7		0	15.1 g	
5W-F-30-C	SAMPLE	09/14/20	10/17/20	Tritium	6	1.02	0.828 pCi/g	U	1.38	1			0	15.5 g	
5W-F-30-C	DUP	09/14/20	10/17/20	Tritium	6	1.63	0.789 pCi/g		1.27	1			0	15.6 g	
5W-F-30-C	MS	09/14/20	10/15/20	Tritium	6	30.9	3.99 pCi/g		3.1	1	92.8		0	15.4 g	
5W-W-E-52-A-M	SAMPLE	09/17/20	10/15/20	Tritium	6	2.58	0.837 pCi/g		1.3	1			0	15 g	
5W-W-E-52-A-M	DUP	09/17/20	10/15/20	Tritium	6	2.11	0.866 pCi/g		1.38	1			0	15.1 g	
5W-W-E-52-A-M	MS	09/17/20	10/17/20	Tritium	6	31.1	4.07 pCi/g		3.2	1	84		0	15.1 g	
6NE-F-56-C	SAMPLE	09/17/20	10/17/20	Tritium	6	1.64	0.829 pCi/g		1.34	1			0	15.2 g	
6NE-F-56-C	DUP	09/17/20	10/15/20	Tritium	6	1.32	0.815 pCi/g	U	1.34	1			0	15.4 g	
6NE-F-56-C	MS	09/17/20	10/19/20	Tritium	6	27.3	3.9 pCi/g		3.25	1	75.3		0	15.1 g	
LCS	LCS	10/17/20	10/17/20	Tritium	6	26.3	3.68 pCi/g		3.03	1	80.3		0	15.6 g	
MB	MB	10/19/20	10/19/20	Tritium	6	-0.274	0.907 pCi/g	U	1.58	1			0	15.6 g	
5E-W-N-4-M	SAMPLE	09/16/20	10/17/20	Carbon-14	7	0.545	0.466 pCi/g	U	0.778	1			0	2.25 g	
5E-W-N-4-M	DUP	09/16/20	10/17/20	Carbon-14	7	0.232	0.48 pCi/g	U	0.812	1			0	2.13 g	
5E-W-N-4-M	MS	09/16/20	10/17/20	Carbon-14	7	33.4	1.77 pCi/g		1.29	1	98.6		0	2.23 g	
5E-W-S-67-B-M	SAMPLE	09/14/20	10/16/20	Carbon-14	7	0.494	0.436 pCi/g	U	0.728	1			13.9	2.4 g	
5E-W-S-67-B-M	DUP	09/14/20	10/17/20	Carbon-14	7	0.0844	0.494 pCi/g	U	0.843	1			0	2.08 g	
5E-W-S-67-B-M	MS	09/14/20	10/17/20	Carbon-14	7	34.4	1.87 pCi/g		1.38	1	96		0	2.11 g	
5E-W-W-33-M	SAMPLE	09/16/20	10/17/20	Carbon-14	7	-0.126	0.489 pCi/g	U	0.84	1			0.983	2.04 g	
5E-W-W-33-M	DUP	09/16/20	10/17/20	Carbon-14	7	0.444	0.481 pCi/g	U	0.808	1			0	2.15 g	
5E-W-W-33-M	MS	09/16/20	10/17/20	Carbon-14	7	36	1.92 pCi/g		1.41	1	97.7		0	2.05 g	
5W-F-30-C	SAMPLE	09/14/20	10/16/20	Carbon-14	7	-0.0865	0.476 pCi/g	U	0.818	1			0	2.09 g	
5W-F-30-C	DUP	09/14/20	10/17/20	Carbon-14	7	-0.35	0.483 pCi/g	U	0.838	1			0	2.05 g	
5W-F-30-C	MS	09/14/20	10/17/20	Carbon-14	7	35.4	1.95 pCi/g		1.45	1	94.5		0	2.02 g	
5W-W-E-52-A-M	SAMPLE	09/17/20	10/17/20	Carbon-14	7	-0.307	0.449 pCi/g	U	0.778	1			0	2.19 g	
5W-W-E-52-A-M	DUP	09/17/20	10/17/20	Carbon-14	7	-0.475	0.462 pCi/g	U	0.805	1			0	2.12 g	
5W-W-E-52-A-M	MS	09/17/20	10/17/20	Carbon-14	7	34.7	1.88 pCi/g		1.39	1	95.2		0	2.07 g	

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	%	%	Sample Aliquot	Aliquot Units
												Recovery	Moisture		
6NE-F-56-C	SAMPLE	09/17/20	10/17/20	Carbon-14	7	-0.128	0.494	pCi/g	U	0.85	1			0	2.03 g
6NE-F-56-C	DUP	09/17/20	10/17/20	Carbon-14	7	-0.0389	0.512	pCi/g	U	0.878	1			0	2.01 g
6NE-F-56-C	MS	09/17/20	10/17/20	Carbon-14	7	37.9	1.98	pCi/g		1.42	1	103		0	2.05 g
LCS	LCS	10/17/20	10/17/20	Carbon-14	7	32.1	1.68	pCi/g		1.21	1	102		0	2.4 g
MB	MB	10/17/20	10/17/20	Carbon-14	7	-0.287	0.409	pCi/g	U	0.71	1			0	2.4 g
1-W-W-18-B-M	SAMPLE	08/28/20	10/06/20	Americium-243 Tracer	1	3.67	0.267	pCi/g		0.0677		80.5	1.24	0.486 g	
1-W-W-18-B-M	SAMPLE	08/28/20	10/06/20	Americium-241	1	-1.01E-08	0.0449	pCi/g	U	0.0851	0.05		1.24	0.486 g	
1-W-W-18-B-M	SAMPLE	08/28/20	10/06/20	Californium-252	1	-0.00423	0.0185	pCi/g	U	0.0405	0.05		1.24	0.486 g	
1-W-W-18-B-M	SAMPLE	08/28/20	10/06/20	Curium-243/244	1	-0.016	0.0192	pCi/g	U	0.0493	0.05		1.24	0.486 g	
1-W-W-18-B-M	DUP	08/28/20	10/06/20	Americium-243 Tracer	1	3.55	0.255	pCi/g		0.053		77.9	0	0.486 g	
1-W-W-18-B-M	DUP	08/28/20	10/06/20	Americium-241	1	0.0224	0.0254	pCi/g	U	0.0358	0.05		0	0.486 g	
1-W-W-18-B-M	DUP	08/28/20	10/06/20	Californium-252	1	0	0.0108	pCi/g	U	0.0117	0.05		0	0.486 g	
1-W-W-18-B-M	DUP	08/28/20	10/06/20	Curium-243/244	1	0.0074	0.0178	pCi/g	U	0.0283	0.05		0	0.486 g	
1-W-W-18-B-M	MS	08/28/20	10/06/20	Americium-241	1	1.77	0.154	pCi/g		0.0545	0.05	87.1	0	0.486 g	
1-W-W-18-B-M	MS	08/28/20	10/06/20	Californium-252	1	1.19	0.127	pCi/g		0.0106	0.05	115	0	0.486 g	
1-W-W-18-B-M	MS	08/28/20	10/06/20	Curium-243/244	1	1.89	0.158	pCi/g		0.0566	0.05	82	0	0.486 g	
1-W-W-18-B-M	MS	08/28/20	10/06/20	Americium-243 Tracer	1	4.55	0.243	pCi/g		0.0479		99.8	0	0.486 g	
LCS	LCS	10/06/20	10/06/20	Americium-241	1	2.3	0.171	pCi/g		0.0544	0.05	113	0	0.486 g	
LCS	LCS	10/06/20	10/06/20	Californium-252	1	1.26	0.126	pCi/g		0.00978	0.05	125	0	0.486 g	
LCS	LCS	10/06/20	10/06/20	Curium-243/244	1	2.36	0.17	pCi/g		0.0349	0.05	103	0	0.486 g	
LCS	LCS	10/06/20	10/06/20	Americium-243 Tracer	1	4.58	0.237	pCi/g		0.0583		100	0	0.486 g	
MB	MB	10/06/20	10/06/20	Americium-243 Tracer	1	4.33	0.229	pCi/g		0.0616		95	0	0.486 g	
MB	MB	10/06/20	10/06/20	Americium-241	1	0.0179	0.0233	pCi/g	U	0.0366	0.05		0	0.486 g	
MB	MB	10/06/20	10/06/20	Californium-252	1	-0.00302	0.0103	pCi/g	U	0.0231	0.05		0	0.486 g	
MB	MB	10/06/20	10/06/20	Curium-243/244	1	-0.00293	0.00996	pCi/g	U	0.0224	0.05		0	0.486 g	
SE-F-4-C	SAMPLE	09/16/20	10/13/20	Americium-243 Tracer	1	1.46	0.129	pCi/g		0.034		89.3	0	1.36 g	
SE-F-4-C	SAMPLE	09/16/20	10/13/20	Americium-241	1	-8.00E-05	0.0126	pCi/g	U	0.0267	0.05		0	1.36 g	
SE-F-4-C	SAMPLE	09/16/20	10/13/20	Californium-252	1	0.00137	0.00858	pCi/g	U	0.0162	0.05		0	1.36 g	
SE-F-4-C	SAMPLE	09/16/20	10/13/20	Curium-243/244	1	-0.00532	0.00779	pCi/g	U	0.023	0.05		0	1.36 g	
SE-F-4-C	DUP	09/16/20	10/13/20	Americium-243 Tracer	1	1.15	0.133	pCi/g		0.0297		70.4	0	1.36 g	
SE-F-4-C	DUP	09/16/20	10/13/20	Americium-241	1	0.00135	0.0131	pCi/g	U	0.0268	0.05		0	1.36 g	
SE-F-4-C	DUP	09/16/20	10/13/20	Californium-252	1	0	0.00647	pCi/g	U	0.00884	0.05		0	1.36 g	
SE-F-4-C	DUP	09/16/20	10/13/20	Curium-243/244	1	0	0.00617	pCi/g	U	0.00843	0.05		0	1.36 g	
SE-F-4-C	MS	09/16/20	10/14/20	Americium-241	1	0.705	0.0838	pCi/g		0.0268	0.05	97.2	0	1.36 g	
SE-F-4-C	MS	09/16/20	10/14/20	Californium-252	1	0.379	0.0622	pCi/g		0.0154	0.05	103	0	1.36 g	

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Appendix A
Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
5E-F-4-C	MS	09/16/20	10/14/20	Curium-243/244	1	0.915	0.0945	pCi/g		0.0251	0.05	111	0	1.36	g
5E-F-4-C	MS	09/16/20	10/14/20	Americium-243 Tracer	1	1.47	0.126	pCi/g		0.0264		90	0	1.36	g
5E-W-E-32-A-M	SAMPLE	09/16/20	10/14/20	Americium-243 Tracer	1	0.423	0.179	pCi/g		0.101		24.8	0	1.3	g
5E-W-E-32-A-M	SAMPLE	09/16/20	10/14/20	Americium-241	1	0.0225	0.0318	pCi/g	U	0.0498	0.05		0	1.3	g
5E-W-E-32-A-M	SAMPLE	09/16/20	10/14/20	Californium-252	1	-7.79E-10	0.0183	pCi/g	U	0.0357	0.05		0	1.3	g
5E-W-E-32-A-M	SAMPLE	09/16/20	10/14/20	Curium-243/244	1	0.0223	0.0315	pCi/g	U	0.0492	0.05		0	1.3	g
5E-W-E-53-A-M	SAMPLE	09/16/20	10/13/20	Americium-243 Tracer	1	0.813	0.177	pCi/g		0.0459		46.6	0	1.27	g
5E-W-E-53-A-M	SAMPLE	09/16/20	10/13/20	Americium-241	1	-4.65E-05	0.0152	pCi/g	U	0.0328	0.05		0	1.27	g
5E-W-E-53-A-M	SAMPLE	09/16/20	10/13/20	Californium-252	1	0.00482	0.0142	pCi/g	U	0.0144	0.05		0	1.27	g
5E-W-E-53-A-M	SAMPLE	09/16/20	10/13/20	Curium-243/244	1	-0.00241	0.0192	pCi/g	U	0.0432	0.05		0	1.27	g
5E-W-N-2-M	SAMPLE	09/16/20	10/13/20	Americium-243 Tracer	1	0.929	0.163	pCi/g		0.0489		53.6	0	1.28	g
5E-W-N-2-M	SAMPLE	09/16/20	10/13/20	Americium-241	1	-0.00012	0.0187	pCi/g	U	0.0397	0.05		0	1.28	g
5E-W-N-2-M	SAMPLE	09/16/20	10/13/20	Californium-252	1	0	0.00901	pCi/g	U	0.0123	0.05		0	1.28	g
5E-W-N-2-M	SAMPLE	09/16/20	10/13/20	Curium-243/244	1	-0.00791	0.0116	pCi/g	U	0.0342	0.05		0	1.28	g
5E-W-N-5-M	SAMPLE	09/16/20	10/14/20	Americium-243 Tracer	1	0.7	0.142	pCi/g		0.0665		39.8	0	1.26	g
5E-W-N-5-M	SAMPLE	09/16/20	10/14/20	Americium-241	1	0.00567	0.0236	pCi/g	U	0.0434	0.05		0	1.26	g
5E-W-N-5-M	SAMPLE	09/16/20	10/14/20	Californium-252	1	-0.00588	0.0115	pCi/g	U	0.0281	0.05		0	1.26	g
5E-W-N-5-M	SAMPLE	09/16/20	10/14/20	Curium-243/244	1	-1.87E-09	0.0174	pCi/g	U	0.0345	0.05		0	1.26	g
5E-W-N-9-M	SAMPLE	09/16/20	10/13/20	Americium-243 Tracer	1	1.33	0.129	pCi/g		0.0393		80.9	0	1.35	g
5E-W-N-9-M	SAMPLE	09/16/20	10/13/20	Americium-241	1	0.00654	0.0127	pCi/g	U	0.021	0.05		0	1.35	g
5E-W-N-9-M	SAMPLE	09/16/20	10/13/20	Californium-252	1	0.00408	0.01	pCi/g	U	0.016	0.05		0	1.35	g
5E-W-N-9-M	SAMPLE	09/16/20	10/13/20	Curium-243/244	1	0.00126	0.0102	pCi/g	U	0.0207	0.05		0	1.35	g
5E-W-N-9-M	DUP	09/16/20	10/13/20	Americium-243 Tracer	1	1.49	0.117	pCi/g		0.019		90.5	0	1.35	g
5E-W-N-9-M	DUP	09/16/20	10/13/20	Americium-241	1	0.0132	0.0116	pCi/g		0.00661	0.05		0	1.35	g
5E-W-N-9-M	DUP	09/16/20	10/13/20	Californium-252	1	0	0.00501	pCi/g	U	0.00685	0.05		0	1.35	g
5E-W-N-9-M	DUP	09/16/20	10/13/20	Curium-243/244	1	-0.00332	0.00802	pCi/g	U	0.0205	0.05		0	1.35	g
5E-W-N-9-M	MS	09/16/20	10/14/20	Americium-241	1	0.747	0.0925	pCi/g		0.0293	0.05	101	0	1.35	g
5E-W-N-9-M	MS	09/16/20	10/14/20	Californium-252	1	0.44	0.072	pCi/g		0.0177	0.05	118	0	1.35	g
5E-W-N-9-M	MS	09/16/20	10/14/20	Curium-243/244	1	0.793	0.0945	pCi/g		0.0252	0.05	95.7	0	1.35	g
5E-W-N-9-M	MS	09/16/20	10/14/20	Americium-243 Tracer	1	1.35	0.136	pCi/g		0.0372		82.2	0	1.35	g
5W-F-24-C	SAMPLE	09/14/20	10/14/20	Americium-243 Tracer	1	0.734	0.132	pCi/g		0.0471		42.7	0	1.29	g
5W-F-24-C	SAMPLE	09/14/20	10/14/20	Americium-241	1	0.00259	0.0244	pCi/g	U	0.0459	0.05		0	1.29	g
5W-F-24-C	SAMPLE	09/14/20	10/14/20	Californium-252	1	-0.00538	0.0129	pCi/g	U	0.0297	0.05		0	1.29	g
5W-F-24-C	SAMPLE	09/14/20	10/14/20	Curium-243/244	1	-0.00768	0.0151	pCi/g	U	0.0343	0.05		0	1.29	g
5W-F-53-C	SAMPLE	09/14/20	10/13/20	Americium-243 Tracer	1	1.49	0.123	pCi/g		0.0256		92.3	0	1.37	g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

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Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot	Units
5W-F-53-C	SAMPLE	09/14/20	10/13/20	Americium-241	1	-0.00622	0.00966	pCi/g	U	0.026	0.05			0	1.37	g
5W-F-53-C	SAMPLE	09/14/20	10/13/20	Californium-252	1	0.00126	0.0079	pCi/g	U	0.0149	0.05			0	1.37	g
5W-F-53-C	SAMPLE	09/14/20	10/13/20	Curium-243/244	1	-0.00734	0.00793	pCi/g	U	0.0243	0.05			0	1.37	g
5W-F-53-C	DUP	09/14/20	10/13/20	Americium-243 Tracer	1	1.21	0.132	pCi/g		0.0366		74.5		0	1.37	g
5W-F-53-C	DUP	09/14/20	10/13/20	Americium-241	1	-2.79E-05	0.00908	pCi/g	U	0.0197	0.05			0	1.37	g
5W-F-53-C	DUP	09/14/20	10/13/20	Californium-252	1	-0.00292	0.00752	pCi/g	U	0.0204	0.05			0	1.37	g
5W-F-53-C	DUP	09/14/20	10/13/20	Curium-243/244	1	-0.0042	0.0101	pCi/g	U	0.0259	0.05			0	1.37	g
5W-F-53-C	MS	09/14/20	10/14/20	Americium-241	1	0.734	0.0862	pCi/g		0.0338	0.05	102		0	1.37	g
5W-F-53-C	MS	09/14/20	10/14/20	Californium-252	1	0.492	0.0711	pCi/g		0.0186	0.05	135		0	1.37	g
5W-F-53-C	MS	09/14/20	10/14/20	Curium-243/244	1	0.791	0.0877	pCi/g		0.02	0.05	96.9		0	1.37	g
5W-F-53-C	MS	09/14/20	10/14/20	Americium-243 Tracer	1	1.46	0.126	pCi/g		0.0313		90.3		0	1.37	g
5W-W-E-35-B-C	SAMPLE	09/17/20	10/13/20	Americium-243 Tracer	1	1.46	0.133	pCi/g		0.0344		89.2		0	1.35	g
5W-W-E-35-B-C	SAMPLE	09/17/20	10/13/20	Americium-241	1	0.00274	0.0126	pCi/g	U	0.0244	0.05			0	1.35	g
5W-W-E-35-B-C	SAMPLE	09/17/20	10/13/20	Californium-252	1	-0.00146	0.00696	pCi/g	U	0.017	0.05			0	1.35	g
5W-W-E-35-B-C	SAMPLE	09/17/20	10/13/20	Curium-243/244	1	0.00134	0.0108	pCi/g	U	0.022	0.05			0	1.35	g
5W-W-E-35-B-C	DUP	09/17/20	10/13/20	Americium-243 Tracer	1	1.55	0.115	pCi/g		0.022		94.5		0	1.35	g
5W-W-E-35-B-C	DUP	09/17/20	10/13/20	Americium-241	1	-0.00111	0.00882	pCi/g	U	0.0199	0.05			0	1.35	g
5W-W-E-35-B-C	DUP	09/17/20	10/13/20	Californium-252	1	0	0.0048	pCi/g	U	0.00656	0.05			0	1.35	g
5W-W-E-35-B-C	DUP	09/17/20	10/13/20	Curium-243/244	1	-0.00424	0.00796	pCi/g	U	0.0209	0.05			0	1.35	g
5W-W-E-35-B-C	MS	09/17/20	10/14/20	Americium-241	1	0.727	0.0862	pCi/g		0.0261	0.05	99.1		0	1.35	g
5W-W-E-35-B-C	MS	09/17/20	10/14/20	Californium-252	1	0.397	0.0644	pCi/g		0.0081	0.05	108		0	1.35	g
5W-W-E-35-B-C	MS	09/17/20	10/14/20	Curium-243/244	1	0.87	0.0934	pCi/g		0.0225	0.05	105		0	1.35	g
5W-W-E-35-B-C	MS	09/17/20	10/14/20	Americium-243 Tracer	1	1.27	0.128	pCi/g		0.0321		77.4		0	1.35	g
5W-W-S-55-C	SAMPLE	09/17/20	10/13/20	Americium-243 Tracer	1	0.985	0.161	pCi/g		0.0479		56.9		0	1.28	g
5W-W-S-55-C	SAMPLE	09/17/20	10/13/20	Americium-241	1	-0.0118	0.0183	pCi/g	U	0.0469	0.05			0	1.28	g
5W-W-S-55-C	SAMPLE	09/17/20	10/13/20	Californium-252	1	0.00195	0.0158	pCi/g	U	0.032	0.05			0	1.28	g
5W-W-S-55-C	SAMPLE	09/17/20	10/13/20	Curium-243/244	1	0.00182	0.0177	pCi/g	U	0.0361	0.05			0	1.28	g
6SW-F-12-C	SAMPLE	09/17/20	10/13/20	Americium-243 Tracer	1	1.15	0.135	pCi/g		0.0451		71.1		0	1.37	g
6SW-F-12-C	SAMPLE	09/17/20	10/13/20	Americium-241	1	0.00424	0.0161	pCi/g	U	0.0306	0.05			0	1.37	g
6SW-F-12-C	SAMPLE	09/17/20	10/13/20	Californium-252	1	-0.00302	0.00779	pCi/g	U	0.0211	0.05			0	1.37	g
6SW-F-12-C	SAMPLE	09/17/20	10/13/20	Curium-243/244	1	-0.00291	0.0101	pCi/g	U	0.025	0.05			0	1.37	g
6SW-F-12-C	DUP	09/17/20	10/13/20	Americium-243 Tracer	1	1.22	0.134	pCi/g		0.0288		75.6		0	1.37	g
6SW-F-12-C	DUP	09/17/20	10/13/20	Americium-241	1	-0.00147	0.00702	pCi/g	U	0.0171	0.05			0	1.37	g
6SW-F-12-C	DUP	09/17/20	10/13/20	Californium-252	1	0	0.00663	pCi/g	U	0.00906	0.05			0	1.37	g
6SW-F-12-C	DUP	09/17/20	10/13/20	Curium-243/244	1	-2.88E-05	0.00939	pCi/g	U	0.0203	0.05			0	1.37	g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Appendix A
Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
6SW-F-12-C	MS	09/17/20	10/14/20	Americium-241	1	0.727	0.0811	pCi/g		0.0203	0.05	100	0	1.37	g
6SW-F-12-C	MS	09/17/20	10/14/20	Californium-252	1	0.4	0.061	pCi/g		0.00722	0.05	110	0	1.37	g
6SW-F-12-C	MS	09/17/20	10/14/20	Curium-243/244	1	0.793	0.0845	pCi/g		0.0243	0.05	97.3	0	1.37	g
6SW-F-12-C	MS	09/17/20	10/14/20	Americium-243 Tracer	1	1.42	0.12	pCi/g		0.0323		88	0	1.37	g
LCS	LCS	10/13/20	10/13/20	Americium-241	1	0.74	0.0522	pCi/g		0.0178	0.05	103	0	1.37	g
LCS	LCS	10/13/20	10/13/20	Californium-252	1	0.378	0.0371	pCi/g		0.00284	0.05	106	0	1.37	g
LCS	LCS	10/13/20	10/13/20	Curium-243/244	1	0.791	0.0532	pCi/g		0.014	0.05	97.2	0	1.37	g
LCS	LCS	10/13/20	10/13/20	Americium-243 Tracer	1	1.63	0.0762	pCi/g		0.0203		101	0	1.37	g
MB	MB	10/13/20	10/13/20	Americium-243 Tracer	1	1.38	0.118	pCi/g		0.0224		85	0	1.37	g
MB	MB	10/13/20	10/13/20	Americium-241	1	0.00333	0.0126	pCi/g	U	0.024	0.05		0	1.37	g
MB	MB	10/13/20	10/13/20	Californium-252	1	-0.00117	0.00556	pCi/g	U	0.0135	0.05		0	1.37	g
MB	MB	10/13/20	10/13/20	Curium-243/244	1	-0.00339	0.00623	pCi/g	U	0.0178	0.05		0	1.37	g
SE-F-4-C	SAMPLE	09/16/20	10/14/20	Americium-243 Tracer	2	99		pCi/g				88.9	0	1.96	g
SE-F-4-C	SAMPLE	09/16/20	10/14/20	Neptunium-237	2	-0.00323	0.0139	pCi/g	U	0.0338	0.05		0	1.96	g
SE-F-4-C	DUP	09/16/20	10/14/20	Americium-243 Tracer	2	99.9		pCi/g				89.7	0	1.96	g
SE-F-4-C	DUP	09/16/20	10/14/20	Neptunium-237	2	-0.0072	0.00752	pCi/g	U	0.026	0.05		0	1.96	g
SE-F-4-C	MS	09/16/20	10/14/20	Neptunium-237	2	1.22	0.12	pCi/g		0.0302	0.05	110	0	1.96	g
SE-F-4-C	MS	09/16/20	10/14/20	Americium-243 Tracer	2	107		pCi/g				96.1	0	1.96	g
SE-W-N-9-M	SAMPLE	09/16/20	10/14/20	Americium-243 Tracer	2	98.4		pCi/g				87.9	0	1.95	g
SE-W-N-9-M	SAMPLE	09/16/20	10/14/20	Neptunium-237	2	-0.00324	0.0109	pCi/g	U	0.0284	0.05		0	1.95	g
SE-W-N-9-M	DUP	09/16/20	10/14/20	Americium-243 Tracer	2	111		pCi/g				98.8	0	1.95	g
SE-W-N-9-M	DUP	09/16/20	10/14/20	Neptunium-237	2	-0.00447	0.00877	pCi/g	U	0.0244	0.05		0	1.95	g
SE-W-N-9-M	MS	09/16/20	10/14/20	Neptunium-237	2	1.21	0.114	pCi/g		0.0242	0.05	108	0	1.95	g
SE-W-N-9-M	MS	09/16/20	10/14/20	Americium-243 Tracer	2	112		pCi/g				101	0	1.95	g
5W-F-53-C	SAMPLE	09/14/20	10/14/20	Americium-243 Tracer	2	47.3		pCi/g				42.7	0	1.97	g
5W-F-53-C	SAMPLE	09/14/20	10/14/20	Neptunium-237	2	-0.0046	0.0139	pCi/g	U	0.0391	0.05		0	1.97	g
5W-F-53-C	DUP	09/14/20	10/14/20	Americium-243 Tracer	2	55.7		pCi/g				50.3	0	1.97	g
5W-F-53-C	DUP	09/14/20	10/14/20	Neptunium-237	2	-0.0024	0.0166	pCi/g	U	0.0404	0.05		0	1.97	g
5W-F-53-C	MS	09/14/20	10/15/20	Neptunium-237	2	1.33	0.196	pCi/g		0.0674	0.05	120	0	1.97	g
5W-F-53-C	MS	09/14/20	10/15/20	Americium-243 Tracer	2	45.8		pCi/g				41.4	0	1.97	g
5W-W-E-35-B-C	SAMPLE	09/17/20	10/14/20	Americium-243 Tracer	2	103		pCi/g				91.7	0	1.95	g
5W-W-E-35-B-C	SAMPLE	09/17/20	10/14/20	Neptunium-237	2	0.00195	0.0126	pCi/g	U	0.0258	0.05		0	1.95	g
5W-W-E-35-B-C	DUP	09/17/20	10/14/20	Americium-243 Tracer	2	92.9		pCi/g				83.1	0	1.95	g
5W-W-E-35-B-C	DUP	09/17/20	10/14/20	Neptunium-237	2	0.00027	0.0124	pCi/g	U	0.0273	0.05		0	1.95	g
5W-W-E-35-B-C	MS	09/17/20	10/14/20	Neptunium-237	2	1.28	0.133	pCi/g		0.0436	0.05	114	0	1.95	g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

6-EPA 906.0 Mod.

5-DOE HASL 300, 4.5.2.3/Ga-01-R

7-EPA EERF C-01 Mod.

*Key
1-DOE EML HASL-300, Am-05-RC Mod.
2-ASTM C 1475-00 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

Appendix A
Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
5W-W-E-35-B-C	MS	09/17/20	10/14/20	Americium-243 Tracer	2	93.2		pCi/g				83.3	0	1.95 g	
6SW-F-12-C	SAMPLE	09/17/20	10/14/20	Americium-243 Tracer	2	52.6		pCi/g				47.7	0	1.98 g	
6SW-F-12-C	SAMPLE	09/17/20	10/14/20	Neptunium-237	2	-0.00796	0.0128	pCi/g	U	0.0409	0.05			0	1.98 g
6SW-F-12-C	DUP	09/17/20	10/14/20	Americium-243 Tracer	2	46.1		pCi/g				41.8	0	1.98 g	
6SW-F-12-C	DUP	09/17/20	10/14/20	Neptunium-237	2	0.015	0.0266	pCi/g	U	0.0402	0.05			0	1.98 g
6SW-F-12-C	MS	09/17/20	10/14/20	Neptunium-237	2	1.36	0.162	pCi/g		0.0277	0.05	123	0	1.98 g	
6SW-F-12-C	MS	09/17/20	10/14/20	Americium-243 Tracer	2	63.6		pCi/g				57.8	0	1.98 g	
LCS	LCS	10/15/20	10/15/20	Neptunium-237	2	1.03	0.12	pCi/g		0.0218	0.05	93.8	0	1.98 g	
LCS	LCS	10/15/20	10/15/20	Americium-243 Tracer	2	105		pCi/g				95.6	0	1.98 g	
MB	MB	10/14/20	10/14/20	Americium-243 Tracer	2	103		pCi/g				93	0	1.98 g	
MB	MB	10/14/20	10/14/20	Neptunium-237	2	-0.00437	0.00705	pCi/g	U	0.0225	0.05			0	1.98 g
5E-F-4-C	SAMPLE	09/16/20	10/13/20	Plutonium-242 Tracer	3	1.21	0.115	pCi/g		0.039		85.7	0	1.36 g	
5E-F-4-C	SAMPLE	09/16/20	10/13/20	Plutonium-238	3	-0.00485	0.0107	pCi/g	U	0.0264	0.05			0	1.36 g
5E-F-4-C	SAMPLE	09/16/20	10/13/20	Plutonium-239/240	3	-0.00842	0.00993	pCi/g	U	0.0276	0.05			0	1.36 g
5E-F-4-C	DUP	09/16/20	10/13/20	Plutonium-242 Tracer	3	1.13	0.113	pCi/g		0.0269		80.1	0	1.36 g	
5E-F-4-C	DUP	09/16/20	10/13/20	Plutonium-238	3	-0.00588	0.00914	pCi/g	U	0.0246	0.05			0	1.36 g
5E-F-4-C	DUP	09/16/20	10/13/20	Plutonium-239/240	3	-0.0106	0.0116	pCi/g	U	0.0309	0.05			0	1.36 g
5E-F-4-C	MS	09/16/20	10/13/20	Plutonium-239/240	3	0.737	0.0797	pCi/g		0.0244	0.05	100	0	1.36 g	
5E-F-4-C	MS	09/16/20	10/13/20	Plutonium-242 Tracer	3	1.23	0.109	pCi/g		0.0191		87.3	0	1.36 g	
5E-W-N-9-M	SAMPLE	09/16/20	10/13/20	Plutonium-242 Tracer	3	1.23	0.113	pCi/g		0.0445		86.5	0	1.35 g	
5E-W-N-9-M	SAMPLE	09/16/20	10/13/20	Plutonium-238	3	0.00103	0.0129	pCi/g	U	0.0262	0.05			0	1.35 g
5E-W-N-9-M	SAMPLE	09/16/20	10/13/20	Plutonium-239/240	3	-0.00237	0.0124	pCi/g	U	0.0272	0.05			0	1.35 g
5E-W-N-9-M	DUP	09/16/20	10/13/20	Plutonium-242 Tracer	3	1.38	0.111	pCi/g		0.0211		96.9	0	1.35 g	
5E-W-N-9-M	DUP	09/16/20	10/13/20	Plutonium-238	3	-0.00455	0.00855	pCi/g	U	0.0225	0.05			0	1.35 g
5E-W-N-9-M	DUP	09/16/20	10/13/20	Plutonium-239/240	3	0.00219	0.0101	pCi/g	U	0.0196	0.05			0	1.35 g
5E-W-N-9-M	MS	09/16/20	10/13/20	Plutonium-239/240	3	0.698	0.0777	pCi/g		0.0233	0.05	94	0	1.35 g	
5E-W-N-9-M	MS	09/16/20	10/13/20	Plutonium-242 Tracer	3	1.3	0.111	pCi/g		0.0276		91.3	0	1.35 g	
5W-F-53-C	SAMPLE	09/14/20	10/13/20	Plutonium-242 Tracer	3	0.918	0.138	pCi/g		0.0547		65.4	0	1.37 g	
5W-F-53-C	SAMPLE	09/14/20	10/13/20	Plutonium-238	3	-0.00353	0.0167	pCi/g	U	0.0377	0.05			0	1.37 g
5W-F-53-C	SAMPLE	09/14/20	10/13/20	Plutonium-239/240	3	-0.0052	0.0149	pCi/g	U	0.0359	0.05			0	1.37 g
5W-F-53-C	DUP	09/14/20	10/13/20	Plutonium-242 Tracer	3	1.15	0.116	pCi/g		0.0308		81.6	0	1.37 g	
5W-F-53-C	DUP	09/14/20	10/13/20	Plutonium-238	3	0.00362	0.0137	pCi/g	U	0.0261	0.05			0	1.37 g
5W-F-53-C	DUP	09/14/20	10/13/20	Plutonium-239/240	3	0.00486	0.0135	pCi/g	U	0.0247	0.05			0	1.37 g
5W-F-53-C	MS	09/14/20	10/13/20	Plutonium-239/240	3	0.713	0.079	pCi/g		0.016	0.05	97.4	0	1.37 g	
5W-F-53-C	MS	09/14/20	10/13/20	Plutonium-242 Tracer	3	1.13	0.111	pCi/g		0.0292		80.6	0	1.37 g	

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
5W-W-E-35-B-C	SAMPLE	09/17/20	10/13/20	Plutonium-242 Tracer	3	1.39	0.113	pCi/g		0.023		97.4		0	1.35 g
5W-W-E-35-B-C	SAMPLE	09/17/20	10/13/20	Plutonium-238	3	-0.00235	0.00816	pCi/g	U	0.0201	0.05			0	1.35 g
5W-W-E-35-B-C	SAMPLE	09/17/20	10/13/20	Plutonium-239/240	3	-0.00235	0.00816	pCi/g	U	0.0201	0.05			0	1.35 g
5W-W-E-35-B-C	DUP	09/17/20	10/13/20	Plutonium-242 Tracer	3	1.17	0.113	pCi/g		0.0401		82.1		0	1.35 g
5W-W-E-35-B-C	DUP	09/17/20	10/13/20	Plutonium-238	3	0.00566	0.011	pCi/g	U	0.0182	0.05			0	1.35 g
5W-W-E-35-B-C	DUP	09/17/20	10/13/20	Plutonium-239/240	3	-0.00925	0.0112	pCi/g	U	0.0295	0.05			0	1.35 g
5W-W-E-35-B-C	MS	09/17/20	10/13/20	Plutonium-239/240	3	0.798	0.0862	pCi/g		0.0264	0.05	107		0	1.35 g
5W-W-E-35-B-C	MS	09/17/20	10/13/20	Plutonium-242 Tracer	3	1.16	0.115	pCi/g		0.0297		81.2		0	1.35 g
6SW-F-12-C	SAMPLE	09/17/20	10/13/20	Plutonium-242 Tracer	3	1.04	0.122	pCi/g		0.03		74.5		0	1.37 g
6SW-F-12-C	SAMPLE	09/17/20	10/13/20	Plutonium-238	3	-0.0151	0.0141	pCi/g	U	0.0382	0.05			0	1.37 g
6SW-F-12-C	SAMPLE	09/17/20	10/13/20	Plutonium-239/240	3	-0.0082	0.00885	pCi/g	U	0.0271	0.05			0	1.37 g
6SW-F-12-C	DUP	09/17/20	10/13/20	Plutonium-242 Tracer	3	1.19	0.114	pCi/g		0.0251		84.9		0	1.37 g
6SW-F-12-C	DUP	09/17/20	10/13/20	Plutonium-238	3	-0.00127	0.0114	pCi/g	U	0.0252	0.05			0	1.37 g
6SW-F-12-C	DUP	09/17/20	10/13/20	Plutonium-239/240	3	-0.0072	0.00777	pCi/g	U	0.0238	0.05			0	1.37 g
6SW-F-12-C	MS	09/17/20	10/13/20	Plutonium-239/240	3	0.794	0.0895	pCi/g		0.0308	0.05	108		0	1.37 g
6SW-F-12-C	MS	09/17/20	10/13/20	Plutonium-242 Tracer	3	1.1	0.119	pCi/g		0.0442		78.1		0	1.37 g
LCS	LCS	10/13/20	10/13/20	Plutonium-239/240	3	0.779	0.112	pCi/g		0.0613	0.05	106		0	1.37 g
LCS	LCS	10/13/20	10/13/20	Plutonium-242 Tracer	3	0.95	0.148	pCi/g		0.06		67.7		0	1.37 g
MB	MB	10/13/20	10/13/20	Plutonium-242 Tracer	3	1.19	0.119	pCi/g		0.0351		85		0	1.37 g
MB	MB	10/13/20	10/13/20	Plutonium-238	3	0.00127	0.00795	pCi/g	U	0.015	0.05			0	1.37 g
MB	MB	10/13/20	10/13/20	Plutonium-239/240	3	-0.00907	0.0107	pCi/g	U	0.0297	0.05			0	1.37 g
5E-F-4-C	SAMPLE	09/16/20	10/14/20	Uranium-232 Tracer	4	2.42	0.168	pCi/g		0.0509		89.7		0	0.755 g
5E-F-4-C	SAMPLE	09/16/20	10/14/20	Uranium-233/234	4	0.331	0.0612	pCi/g		0.0374	1			0	0.755 g
5E-F-4-C	SAMPLE	09/16/20	10/14/20	Uranium-235/236	4	0.0507	0.0239	pCi/g		0.008	0.05			0	0.755 g
5E-F-4-C	SAMPLE	09/16/20	10/14/20	Uranium-238	4	0.372	0.0625	pCi/g		0.0203	1			0	0.755 g
5E-F-4-C	DUP	09/16/20	10/14/20	Uranium-232 Tracer	4	2.36	0.169	pCi/g		0.0756		87.5		0	0.755 g
5E-F-4-C	DUP	09/16/20	10/14/20	Uranium-233/234	4	0.244	0.0558	pCi/g		0.0505	1			0	0.755 g
5E-F-4-C	DUP	09/16/20	10/14/20	Uranium-235/236	4	0.0181	0.0183	pCi/g	U	0.0248	0.05			0	0.755 g
5E-F-4-C	DUP	09/16/20	10/14/20	Uranium-238	4	0.33	0.061	pCi/g		0.0416	1			0	0.755 g
5E-F-4-C	MS	09/16/20	10/15/20	Uranium-235/236	4	0.804	0.0873	pCi/g		0.0319	0.05	94.5		0	0.755 g
5E-F-4-C	MS	09/16/20	10/15/20	Uranium-232 Tracer	4	2.1	0.162	pCi/g		0.0734		77.6		0	0.755 g
5E-W-N-9-M	SAMPLE	09/16/20	10/14/20	Uranium-232 Tracer	4	2.47	0.167	pCi/g		0.0326		91		0	0.751 g
5E-W-N-9-M	SAMPLE	09/16/20	10/14/20	Uranium-233/234	4	0.483	0.0722	pCi/g		0.0346	1			0	0.751 g
5E-W-N-9-M	SAMPLE	09/16/20	10/14/20	Uranium-235/236	4	0.0504	0.0238	pCi/g		0.00795	0.05			0	0.751 g
5E-W-N-9-M	SAMPLE	09/16/20	10/14/20	Uranium-238	4	0.51	0.0727	pCi/g		0.0202	1			0	0.751 g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Appendix A
Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
5E-W-N-9-M	DUP	09/16/20	10/15/20	Uranium-232 Tracer	4	2.2	0.155	pCi/g		0.0443		81.1		0	0.751 g
5E-W-N-9-M	DUP	09/16/20	10/15/20	Uranium-233/234	4	0.405	0.0657	pCi/g		0.0544	1			0	0.751 g
5E-W-N-9-M	DUP	09/16/20	10/15/20	Uranium-235/236	4	0.0292	0.0192	pCi/g		0.0215	0.05			0	0.751 g
5E-W-N-9-M	DUP	09/16/20	10/15/20	Uranium-238	4	0.512	0.07	pCi/g		0.0427	1			0	0.751 g
5E-W-N-9-M	MS	09/16/20	10/15/20	Uranium-235/236	4	0.877	0.0948	pCi/g		0.0251	0.05	103		0	0.751 g
5E-W-N-9-M	MS	09/16/20	10/15/20	Uranium-232 Tracer	4	2.36	0.17	pCi/g		0.0766		86.8		0	0.751 g
5W-F-53-C	SAMPLE	09/14/20	10/14/20	Uranium-232 Tracer	4	2.36	0.17	pCi/g		0.0505		88		0	0.759 g
5W-F-53-C	SAMPLE	09/14/20	10/14/20	Uranium-233/234	4	-0.00062	0.0279	pCi/g	U	0.0534	1			0	0.759 g
5W-F-53-C	SAMPLE	09/14/20	10/14/20	Uranium-235/236	4	0	0.0152	pCi/g	U	0.0303	0.05			0	0.759 g
5W-F-53-C	SAMPLE	09/14/20	10/14/20	Uranium-238	4	0.052	0.0257	pCi/g		0.0209	1			0	0.759 g
5W-F-53-C	DUP	09/14/20	10/14/20	Uranium-232 Tracer	4	2.38	0.155	pCi/g		0.0524		88.7		0	0.759 g
5W-F-53-C	DUP	09/14/20	10/14/20	Uranium-233/234	4	0.0204	0.0282	pCi/g	U	0.0472	1			0	0.759 g
5W-F-53-C	DUP	09/14/20	10/14/20	Uranium-235/236	4	0.0248	0.0171	pCi/g		0.0173	0.05			0	0.759 g
5W-F-53-C	DUP	09/14/20	10/14/20	Uranium-238	4	0.0202	0.0192	pCi/g	U	0.0277	1			0	0.759 g
5W-F-53-C	MS	09/14/20	10/15/20	Uranium-235/236	4	0.746	0.0811	pCi/g		0.0174	0.05	94		0	0.759 g
5W-F-53-C	MS	09/14/20	10/15/20	Uranium-232 Tracer	4	2.37	0.155	pCi/g		0.0527		88.3		0	0.759 g
5W-W-E-35-B-C	SAMPLE	09/17/20	10/14/20	Uranium-232 Tracer	4	2.05	0.16	pCi/g		0.0474		75.5		0	0.752 g
5W-W-E-35-B-C	SAMPLE	09/17/20	10/14/20	Uranium-233/234	4	0.3	0.0611	pCi/g		0.0581	1			0	0.752 g
5W-W-E-35-B-C	SAMPLE	09/17/20	10/14/20	Uranium-235/236	4	0.0337	0.0211	pCi/g		0.023	0.05			0	0.752 g
5W-W-E-35-B-C	SAMPLE	09/17/20	10/14/20	Uranium-238	4	0.384	0.0641	pCi/g		0.0458	1			0	0.752 g
5W-W-E-35-B-C	DUP	09/17/20	10/15/20	Uranium-232 Tracer	4	2.61	0.161	pCi/g		0.071		96.3		0	0.752 g
5W-W-E-35-B-C	DUP	09/17/20	10/15/20	Uranium-233/234	4	0.309	0.0574	pCi/g		0.0432	1			0	0.752 g
5W-W-E-35-B-C	DUP	09/17/20	10/15/20	Uranium-235/236	4	0.00472	0.0173	pCi/g	U	0.0316	0.05			0	0.752 g
5W-W-E-35-B-C	DUP	09/17/20	10/15/20	Uranium-238	4	0.334	0.0572	pCi/g		0.0315	1			0	0.752 g
5W-W-E-35-B-C	MS	09/17/20	10/15/20	Uranium-235/236	4	0.739	0.0885	pCi/g		0.0296	0.05	88.1		0	0.752 g
5W-W-E-35-B-C	MS	09/17/20	10/15/20	Uranium-232 Tracer	4	2.45	0.167	pCi/g		0.0205		90.2		0	0.752 g
6SW-F-12-C	SAMPLE	09/17/20	10/14/20	Uranium-232 Tracer	4	2.09	0.179	pCi/g		0.087		77.8		0	0.76 g
6SW-F-12-C	SAMPLE	09/17/20	10/14/20	Uranium-233/234	4	-0.00304	0.0265	pCi/g	U	0.0522	1			0	0.76 g
6SW-F-12-C	SAMPLE	09/17/20	10/14/20	Uranium-235/236	4	0.00579	0.0212	pCi/g	U	0.0388	0.05			0	0.76 g
6SW-F-12-C	SAMPLE	09/17/20	10/14/20	Uranium-238	4	0.0144	0.0233	pCi/g	U	0.0387	1			0	0.76 g
6SW-F-12-C	DUP	09/17/20	10/15/20	Uranium-232 Tracer	4	1.73	0.193	pCi/g		0.102		64.5		0	0.76 g
6SW-F-12-C	DUP	09/17/20	10/15/20	Uranium-233/234	4	-0.0155	0.038	pCi/g	U	0.0763	1			0	0.76 g
6SW-F-12-C	DUP	09/17/20	10/15/20	Uranium-235/236	4	-3.90E-09	0.0262	pCi/g	U	0.0511	0.05			0	0.76 g
6SW-F-12-C	DUP	09/17/20	10/15/20	Uranium-238	4	0.0166	0.0284	pCi/g	U	0.0479	1			0	0.76 g
6SW-F-12-C	MS	09/17/20	10/15/20	Uranium-235/236	4	0.886	0.106	pCi/g		0.00977	0.05	111		0	0.76 g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
6SW-F-12-C	MS	09/17/20	10/15/20	Uranium-232 Tracer	4	1.89	0.183	pCi/g		0.00975		70.5	0	0.76	g
LCS	LCS	10/15/20	10/15/20	Uranium-235/236	4	0.854	0.0952	pCi/g		0.00824	0.05	108	0	0.76	g
LCS	LCS	10/15/20	10/15/20	Uranium-232 Tracer	4	2.36	0.17	pCi/g		0.0523		88.1	0	0.76	g
MB	MB	10/14/20	10/14/20	Uranium-232 Tracer	4	1.76	0.192	pCi/g		0.1		65.5	0	0.76	g
MB	MB	10/14/20	10/14/20	Uranium-233/234	4	-0.0121	0.038	pCi/g	U	0.0752	1		0	0.76	g
MB	MB	10/14/20	10/14/20	Uranium-235/236	4	-3.84E-09	0.0258	pCi/g	U	0.0504	0.05		0	0.76	g
MB	MB	10/14/20	10/14/20	Uranium-238	4	0.0164	0.028	pCi/g	U	0.0472	1		0	0.76	g
1-W-N-8	SAMPLE	08/28/20	10/07/20	Americium-243 Tracer	1	12.3	0.501	pCi/g		0.135		118	7.95	0.211	g
1-W-N-8	SAMPLE	08/28/20	10/07/20	Americium-241	1	0.0248	0.0454	pCi/g	U	0.0762	0.05		7.95	0.211	g
1-W-N-8	SAMPLE	08/28/20	10/07/20	Californium-252	1	0	0.0311	pCi/g	U	0.062	0.05		7.95	0.211	g
1-W-N-8	SAMPLE	08/28/20	10/07/20	Curium-243/244	1	0.00613	0.0318	pCi/g	U	0.0587	0.05		7.95	0.211	g
3-W-E-74-M	SAMPLE	09/01/20	10/07/20	Americium-243 Tracer	1	23.4	1.63	pCi/g		0.409		80	0.801	0.0756	g
3-W-E-74-M	SAMPLE	09/01/20	10/07/20	Americium-241	1	0.14	0.215	pCi/g	U	0.358	0.05		0.801	0.0756	g
3-W-E-74-M	SAMPLE	09/01/20	10/07/20	Californium-252	1	0	0.117	pCi/g	U	0.234	0.05		0.801	0.0756	g
3-W-E-74-M	SAMPLE	09/01/20	10/07/20	Curium-243/244	1	0.0695	0.136	pCi/g	U	0.222	0.05		0.801	0.0756	g
3-W-E-74-M	DUP	09/01/20	10/07/20	Americium-243 Tracer	1	29	1.5	pCi/g		0.32		98.9	0	0.0756	g
3-W-E-74-M	DUP	09/01/20	10/07/20	Americium-241	1	0.0402	0.112	pCi/g	U	0.193	0.05		0	0.0756	g
3-W-E-74-M	DUP	09/01/20	10/07/20	Californium-252	1	0.021	0.0919	pCi/g	U	0.161	0.05		0	0.0756	g
3-W-E-74-M	DUP	09/01/20	10/07/20	Curium-243/244	1	-0.0597	0.0872	pCi/g	U	0.22	0.05		0	0.0756	g
3-W-E-74-M	MS	09/01/20	10/07/20	Americium-241	1	11.3	0.949	pCi/g		0.367	0.05	85.4	0	0.0756	g
3-W-E-74-M	MS	09/01/20	10/07/20	Californium-252	1	9.18	0.862	pCi/g		0.199	0.05	138	0	0.0756	g
3-W-E-74-M	MS	09/01/20	10/07/20	Curium-243/244	1	13.5	1.02	pCi/g		0.243	0.05	90.7	0	0.0756	g
3-W-E-74-M	MS	09/01/20	10/07/20	Americium-243 Tracer	1	25.4	1.5	pCi/g		0.333		86.5	0	0.0756	g
LCS	LCS	10/07/20	10/07/20	Americium-241	1	4.4	0.335	pCi/g		0.0935	0.05	94.1	0	0.211	g
LCS	LCS	10/07/20	10/07/20	Californium-252	1	2.51	0.253	pCi/g		0.0198	0.05	108	0	0.211	g
LCS	LCS	10/07/20	10/07/20	Curium-243/244	1	5.33	0.363	pCi/g		0.0613	0.05	101	0	0.211	g
LCS	LCS	10/07/20	10/07/20	Americium-243 Tracer	1	10.9	0.513	pCi/g		0.131		104	0	0.211	g
MB	MB	10/07/20	10/07/20	Americium-243 Tracer	1	9.58	0.524	pCi/g		0.132		91.2	0	0.211	g
MB	MB	10/07/20	10/07/20	Americium-241	1	-0.0136	0.0652	pCi/g	U	0.13	0.05		0	0.211	g
MB	MB	10/07/20	10/07/20	Californium-252	1	0	0.027	pCi/g	U	0.0528	0.05		0	0.211	g
MB	MB	10/07/20	10/07/20	Curium-243/244	1	-0.0335	0.0435	pCi/g	U	0.102	0.05		0	0.211	g
6-C-C-123	SAMPLE	09/18/20	10/24/20	Americium-243 Tracer	1	1.65	0.0907	pCi/g		0.0183		93.3	1.31	1.25	g
6-C-C-123	SAMPLE	09/18/20	10/24/20	Americium-241	1	0.0109	0.00921	pCi/g	U	0.0116	0.05		1.31	1.25	g
6-C-C-123	SAMPLE	09/18/20	10/24/20	Californium-252	1	0.00127	0.0043	pCi/g	U	0.0038	0.05		1.31	1.25	g
6-C-C-123	SAMPLE	09/18/20	10/24/20	Curium-243/244	1	0.0012	0.00526	pCi/g	U	0.00918	0.05		1.31	1.25	g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

6-EPA 906.0 Mod.

5-DOE HASL 300, 4.5.2.3/Ga-01-R

7-EPA EERF C-01 Mod.

1-DOE EML HASL-300, Am-05-RC Mod.
2-ASTM C 1475-00 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

Appendix A
Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
6-C-C-123	DUP	09/18/20	10/24/20	Americium-243 Tracer	1	1.49	0.105	pCi/g		0.0295		83.8		0	1.25 g
6-C-C-123	DUP	09/18/20	10/24/20	Americium-241	1	0.00325	0.0101	pCi/g	U	0.0179	0.05			0	1.25 g
6-C-C-123	DUP	09/18/20	10/24/20	Californium-252	1	-0.00169	0.00574	pCi/g	U	0.0129	0.05			0	1.25 g
6-C-C-123	DUP	09/18/20	10/24/20	Curium-243/244	1	0.00481	0.0104	pCi/g	U	0.0177	0.05			0	1.25 g
6-C-C-123	MS	09/18/20	10/24/20	Americium-241	1	0.783	0.0673	pCi/g		0.0256	0.05	97.9		0	1.25 g
6-C-C-123	MS	09/18/20	10/24/20	Californium-252	1	0.485	0.0532	pCi/g		0.00453	0.05	122		0	1.25 g
6-C-C-123	MS	09/18/20	10/24/20	Curium-243/244	1	0.812	0.0679	pCi/g		0.0231	0.05	90.7		0	1.25 g
6-C-C-123	MS	09/18/20	10/24/20	Americium-243 Tracer	1	1.52	0.1	pCi/g		0.0316		86		0	1.25 g
6NW-F-2-C	SAMPLE	09/17/20	10/24/20	Americium-243 Tracer	1	1.71	0.0882	pCi/g		0.0207		96.3	0.555	1.25 g	
6NW-F-2-C	SAMPLE	09/17/20	10/24/20	Americium-241	1	0.00799	0.00807	pCi/g	U	0.0109	0.05		0.555	1.25 g	
6NW-F-2-C	SAMPLE	09/17/20	10/24/20	Californium-252	1	-0.00119	0.00522	pCi/g	U	0.0114	0.05		0.555	1.25 g	
6NW-F-2-C	SAMPLE	09/17/20	10/24/20	Curium-243/244	1	-0.00113	0.00586	pCi/g	U	0.0125	0.05		0.555	1.25 g	
6NW-F-2-C	DUP	09/17/20	10/24/20	Americium-243 Tracer	1	1.74	0.0883	pCi/g		0.0254		98		0	1.25 g
6NW-F-2-C	DUP	09/17/20	10/24/20	Americium-241	1	0.00907	0.00942	pCi/g	U	0.0139	0.05			0	1.25 g
6NW-F-2-C	DUP	09/17/20	10/24/20	Californium-252	1	-0.00236	0.00463	pCi/g	U	0.0113	0.05			0	1.25 g
6NW-F-2-C	DUP	09/17/20	10/24/20	Curium-243/244	1	-0.00112	0.00729	pCi/g	U	0.015	0.05			0	1.25 g
6NW-F-2-C	MS	09/17/20	10/24/20	Americium-241	1	0.782	0.0605	pCi/g		0.0172	0.05	98.1		0	1.25 g
6NW-F-2-C	MS	09/17/20	10/24/20	Californium-252	1	0.465	0.0474	pCi/g		0.00953	0.05	117		0	1.25 g
6NW-F-2-C	MS	09/17/20	10/24/20	Curium-243/244	1	0.874	0.0639	pCi/g		0.0209	0.05	97.8		0	1.25 g
6NW-F-2-C	MS	09/17/20	10/24/20	Americium-243 Tracer	1	1.69	0.0913	pCi/g		0.0335		95.2		0	1.25 g
8-F-6-C	SAMPLE	09/21/20	10/26/20	Americium-243 Tracer	1	1.7	0.102	pCi/g		0.0188		95.9	0.986	1.25 g	
8-F-6-C	SAMPLE	09/21/20	10/26/20	Americium-241	1	0.00464	0.0132	pCi/g	U	0.0237	0.05		0.986	1.25 g	
8-F-6-C	SAMPLE	09/21/20	10/26/20	Californium-252	1	0.00161	0.00706	pCi/g	U	0.0123	0.05		0.986	1.25 g	
8-F-6-C	SAMPLE	09/21/20	10/26/20	Curium-243/244	1	0.00153	0.009	pCi/g	U	0.0169	0.05		0.986	1.25 g	
8-F-6-C	DUP	09/21/20	10/24/20	Americium-243 Tracer	1	1.68	0.0908	pCi/g		0.0219		94.6		0	1.25 g
8-F-6-C	DUP	09/21/20	10/24/20	Americium-241	1	0.0193	0.0125	pCi/g		0.0162	0.05			0	1.25 g
8-F-6-C	DUP	09/21/20	10/24/20	Californium-252	1	0.00126	0.00551	pCi/g	U	0.00962	0.05			0	1.25 g
8-F-6-C	DUP	09/21/20	10/24/20	Curium-243/244	1	-0.00716	0.011	pCi/g	U	0.0236	0.05			0	1.25 g
8-F-6-C	MS	09/21/20	10/24/20	Americium-241	1	0.751	0.0589	pCi/g		0.0158	0.05	94.6		0	1.25 g
8-F-6-C	MS	09/21/20	10/24/20	Californium-252	1	0.49	0.0482	pCi/g		0.00369	0.05	123		0	1.25 g
8-F-6-C	MS	09/21/20	10/24/20	Curium-243/244	1	0.725	0.0574	pCi/g		0.0129	0.05	81		0	1.25 g
8-F-6-C	MS	09/21/20	10/24/20	Americium-243 Tracer	1	1.7	0.0894	pCi/g		0.0156		95.6		0	1.25 g
LCS	LCS	10/24/20	10/24/20	Americium-241	1	0.801	0.0637	pCi/g		0.0186	0.05	101		0	1.25 g
LCS	LCS	10/24/20	10/24/20	Californium-252	1	0.415	0.0461	pCi/g		0.0101	0.05	106		0	1.25 g
LCS	LCS	10/24/20	10/24/20	Curium-243/244	1	0.826	0.064	pCi/g		0.0141	0.05	92.8		0	1.25 g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Appendix A
Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
LCS	LCS	10/24/20	10/24/20	Americium-243 Tracer	1	1.48	0.0944	pCi/g		0.0296		83.6	0	1.25	g
MB	MB	10/24/20	10/24/20	Americium-243 Tracer	1	1.65	0.0984	pCi/g		0.0237		92.9	0	1.25	g
MB	MB	10/24/20	10/24/20	Americium-241	1	7.09E-10	0.00787	pCi/g	U	0.0157	0.05		0	1.25	g
MB	MB	10/24/20	10/24/20	Californium-252	1	0	0.004	pCi/g	U	0.00433	0.05		0	1.25	g
MB	MB	10/24/20	10/24/20	Curium-243/244	1	9.32E-10	0.00867	pCi/g	U	0.0172	0.05		0	1.25	g
6-C-C-123	SAMPLE	09/18/20	10/24/20	Americium-243 Tracer	2	99.6		pCi/g				92.2	1.31	2.02	g
6-C-C-123	SAMPLE	09/18/20	10/24/20	Neptunium-237	2	-0.00512	0.0124	pCi/g	U	0.0319	0.05		1.31	2.02	g
6-C-C-123	DUP	09/18/20	10/24/20	Americium-243 Tracer	2	95		pCi/g				88	0	2.02	g
6-C-C-123	DUP	09/18/20	10/24/20	Neptunium-237	2	-0.0151	0.0108	pCi/g	U	0.0399	0.05		0	2.02	g
6-C-C-123	MS	09/18/20	10/24/20	Neptunium-237	2	1.17	0.141	pCi/g		0.0541	0.05	108	0	2.02	g
6-C-C-123	MS	09/18/20	10/24/20	Americium-243 Tracer	2	84.1		pCi/g				77.9	0	2.02	g
6NW-F-2-C	SAMPLE	09/17/20	10/24/20	Americium-243 Tracer	2	79.6		pCi/g				73.7	0.555	2.02	g
6NW-F-2-C	SAMPLE	09/17/20	10/24/20	Neptunium-237	2	-0.00507	0.0137	pCi/g	U	0.0366	0.05		0.555	2.02	g
6NW-F-2-C	DUP	09/17/20	10/24/20	Americium-243 Tracer	2	79.8		pCi/g				73.9	0	2.02	g
6NW-F-2-C	DUP	09/17/20	10/24/20	Neptunium-237	2	-0.0125	0.0156	pCi/g	U	0.0436	0.05		0	2.02	g
6NW-F-2-C	MS	09/17/20	10/24/20	Neptunium-237	2	1.22	0.143	pCi/g		0.0525	0.05	113	0	2.02	g
6NW-F-2-C	MS	09/17/20	10/24/20	Americium-243 Tracer	2	74.3		pCi/g				68.8	0	2.02	g
8-F-6-C	SAMPLE	09/21/20	10/24/20	Americium-243 Tracer	2	86.2		pCi/g				79.8	0.986	2.02	g
8-F-6-C	SAMPLE	09/21/20	10/24/20	Neptunium-237	2	-0.0159	0.0166	pCi/g	U	0.0477	0.05		0.986	2.02	g
8-F-6-C	DUP	09/21/20	10/24/20	Americium-243 Tracer	2	89.4		pCi/g				82.8	0	2.02	g
8-F-6-C	DUP	09/21/20	10/24/20	Neptunium-237	2	-0.0156	0.0166	pCi/g	U	0.0455	0.05		0	2.02	g
8-F-6-C	MS	09/21/20	10/26/20	Neptunium-237	2	1.32	0.148	pCi/g		0.0261	0.05	122	0	2.02	g
8-F-6-C	MS	09/21/20	10/26/20	Americium-243 Tracer	2	95.5		pCi/g				88.4	0	2.02	g
LCS	LCS	10/24/20	10/24/20	Neptunium-237	2	1.03	0.179	pCi/g		0.0783	0.05	95.7	0	2.02	g
LCS	LCS	10/24/20	10/24/20	Americium-243 Tracer	2	105		pCi/g				96.8	0	2.02	g
MB	MB	10/24/20	10/24/20	Americium-243 Tracer	2	102		pCi/g				94.6	0	2.02	g
MB	MB	10/24/20	10/24/20	Neptunium-237	2	-0.00241	0.0109	pCi/g	U	0.0274	0.05		0	2.02	g
6-C-C-123	SAMPLE	09/18/20	10/25/20	Plutonium-242 Tracer	3	1.24	0.0959	pCi/g		0.0259		80.5	1.31	1.25	g
6-C-C-123	SAMPLE	09/18/20	10/25/20	Plutonium-238	3	-0.00764	0.0161	pCi/g	U	0.033	0.05		1.31	1.25	g
6-C-C-123	SAMPLE	09/18/20	10/25/20	Plutonium-239/240	3	0.00611	0.014	pCi/g	U	0.0247	0.05		1.31	1.25	g
6-C-C-123	DUP	09/18/20	10/25/20	Plutonium-242 Tracer	3	1.07	0.0972	pCi/g		0.038		69.6	0	1.25	g
6-C-C-123	DUP	09/18/20	10/25/20	Plutonium-238	3	0.00459	0.0124	pCi/g	U	0.0221	0.05		0	1.25	g
6-C-C-123	DUP	09/18/20	10/25/20	Plutonium-239/240	3	-0.0122	0.0153	pCi/g	U	0.0331	0.05		0	1.25	g
6-C-C-123	MS	09/18/20	10/25/20	Plutonium-239/240	3	1.7	0.0934	pCi/g		0.0232	0.05	106	0	1.25	g
6-C-C-123	MS	09/18/20	10/25/20	Plutonium-242 Tracer	3	1.41	0.0888	pCi/g		0.0222		91.7	0	1.25	g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

6-EPA 906.0 Mod.

5-DOE HASL 300, 4.5.2.3/Ga-01-R

7-EPA EERF C-01 Mod.

*Key
1-DOE EML HASL-300, Am-05-RC Mod.
2-ASTM C 1475-00 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

Appendix A
Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
6NW-F-2-C	SAMPLE	09/17/20	10/25/20	Plutonium-242 Tracer	3	1.15	0.0894	pCi/g		0.0193		75	0.555	1.25	g
6NW-F-2-C	SAMPLE	09/17/20	10/25/20	Plutonium-238	3	0.00536	0.0144	pCi/g	U	0.0256	0.05		0.555	1.25	g
6NW-F-2-C	SAMPLE	09/17/20	10/25/20	Plutonium-239/240	3	0.00402	0.0087	pCi/g	U	0.0148	0.05		0.555	1.25	g
6NW-F-2-C	DUP	09/17/20	10/25/20	Plutonium-242 Tracer	3	1.19	0.0941	pCi/g		0.0357		77.4	0	1.25	g
6NW-F-2-C	DUP	09/17/20	10/25/20	Plutonium-238	3	-1.20E-09	0.00978	pCi/g	U	0.0193	0.05		0	1.25	g
6NW-F-2-C	DUP	09/17/20	10/25/20	Plutonium-239/240	3	-0.00576	0.00798	pCi/g	U	0.0193	0.05		0	1.25	g
6NW-F-2-C	MS	09/17/20	10/25/20	Plutonium-239/240	3	1.59	0.0902	pCi/g		0.019	0.05	98.6	0	1.25	g
6NW-F-2-C	MS	09/17/20	10/25/20	Plutonium-242 Tracer	3	1.3	0.089	pCi/g		0.0223		84.6	0	1.25	g
8-F-6-C	SAMPLE	09/21/20	10/25/20	Plutonium-242 Tracer	3	1.08	0.0994	pCi/g		0.0237		70.3	0.986	1.25	g
8-F-6-C	SAMPLE	09/21/20	10/25/20	Plutonium-238	3	0	0.0102	pCi/g	U	0.0203	0.05		0.986	1.25	g
8-F-6-C	SAMPLE	09/21/20	10/25/20	Plutonium-239/240	3	0.00659	0.0121	pCi/g	U	0.0203	0.05		0.986	1.25	g
8-F-6-C	DUP	09/21/20	10/25/20	Plutonium-242 Tracer	3	1.34	0.0913	pCi/g		0.0172		87.2	0	1.25	g
8-F-6-C	DUP	09/21/20	10/25/20	Plutonium-238	3	0.0014	0.00824	pCi/g	U	0.0155	0.05		0	1.25	g
8-F-6-C	DUP	09/21/20	10/25/20	Plutonium-239/240	3	0.0056	0.00868	pCi/g	U	0.0134	0.05		0	1.25	g
8-F-6-C	MS	09/21/20	10/25/20	Plutonium-239/240	3	1.56	0.0949	pCi/g		0.0214	0.05	96.9	0	1.25	g
8-F-6-C	MS	09/21/20	10/25/20	Plutonium-242 Tracer	3	1.16	0.0944	pCi/g		0.0239		75.1	0	1.25	g
LCS	LCS	10/25/20	10/25/20	Plutonium-239/240	3	1.61	0.0978	pCi/g		0.0323	0.05	101	0	1.25	g
LCS	LCS	10/25/20	10/25/20	Plutonium-242 Tracer	3	1.05	0.0964	pCi/g		0.0399		68.2	0	1.25	g
MB	MB	10/25/20	10/25/20	Plutonium-242 Tracer	3	1.07	0.105	pCi/g		0.0478		69.7	0	1.25	g
MB	MB	10/25/20	10/25/20	Plutonium-238	3	-0.00881	0.0124	pCi/g	U	0.0285	0.05		0	1.25	g
MB	MB	10/25/20	10/25/20	Plutonium-239/240	3	-0.0176	0.0183	pCi/g	U	0.0401	0.05		0	1.25	g
6-C-C-123	SAMPLE	09/18/20	10/24/20	Uranium-232 Tracer	4	2.4	0.14	pCi/g		0.0373		90.7	1.31	0.769	g
6-C-C-123	SAMPLE	09/18/20	10/24/20	Uranium-233/234	4	0.521	0.0643	pCi/g		0.0364	1		1.31	0.769	g
6-C-C-123	SAMPLE	09/18/20	10/24/20	Uranium-235/236	4	0.0397	0.02	pCi/g		0.0209	0.05		1.31	0.769	g
6-C-C-123	SAMPLE	09/18/20	10/24/20	Uranium-238	4	0.552	0.0643	pCi/g		0.0232	1		1.31	0.769	g
6-C-C-123	DUP	09/18/20	10/24/20	Uranium-232 Tracer	4	2.19	0.172	pCi/g		0.041		82.5	0	0.769	g
6-C-C-123	DUP	09/18/20	10/24/20	Uranium-233/234	4	0.515	0.0784	pCi/g		0.0448	1		0	0.769	g
6-C-C-123	DUP	09/18/20	10/24/20	Uranium-235/236	4	0.0342	0.0224	pCi/g		0.0218	0.05		0	0.769	g
6-C-C-123	DUP	09/18/20	10/24/20	Uranium-238	4	0.617	0.0836	pCi/g		0.0315	1		0	0.769	g
6-C-C-123	MS	09/18/20	10/24/20	Uranium-235/236	4	0.755	0.0957	pCi/g		0.0094	0.05	91.3	0	0.769	g
6-C-C-123	MS	09/18/20	10/24/20	Uranium-232 Tracer	4	1.99	0.18	pCi/g		0.0419		75	0	0.769	g
6NW-F-2-C	SAMPLE	09/17/20	10/24/20	Uranium-232 Tracer	4	2.31	0.151	pCi/g		0.0652		87.4	0.555	0.771	g
6NW-F-2-C	SAMPLE	09/17/20	10/24/20	Uranium-233/234	4	0.0882	0.033	pCi/g		0.0374	1		0.555	0.771	g
6NW-F-2-C	SAMPLE	09/17/20	10/24/20	Uranium-235/236	4	0.0127	0.0194	pCi/g	U	0.0323	0.05		0.555	0.771	g
6NW-F-2-C	SAMPLE	09/17/20	10/24/20	Uranium-238	4	0.0821	0.0301	pCi/g		0.0303	1		0.555	0.771	g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

6-EPA 906.0 Mod.

5-DOE HASL 300, 4.5.2.3/Ga-01-R

7-EPA EERF C-01 Mod.

*Key
1-DOE EML HASL-300, Am-05-RC Mod.
2-ASTM C 1475-00 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
6NW-F-2-C	DUP	09/17/20	10/24/20	Uranium-232 Tracer	4	1.88	0.17	pCi/g		0.0674		71.2	0	0.771	g
6NW-F-2-C	DUP	09/17/20	10/24/20	Uranium-233/234	4	0.0673	0.0361	pCi/g		0.0473	1		0	0.771	g
6NW-F-2-C	DUP	09/17/20	10/24/20	Uranium-235/236	4	0.0136	0.0192	pCi/g	U	0.0301	0.05		0	0.771	g
6NW-F-2-C	DUP	09/17/20	10/24/20	Uranium-238	4	0.0624	0.0315	pCi/g		0.0364	1		0	0.771	g
6NW-F-2-C	MS	09/17/20	10/24/20	Uranium-235/236	4	0.758	0.0883	pCi/g		0.0345	0.05	95.4	0	0.771	g
6NW-F-2-C	MS	09/17/20	10/24/20	Uranium-232 Tracer	4	2.41	0.163	pCi/g		0.0416		91.2	0	0.771	g
8-F-6-C	SAMPLE	09/21/20	10/24/20	Uranium-232 Tracer	4	2.2	0.156	pCi/g		0.056		83.2	0.986	0.77	g
8-F-6-C	SAMPLE	09/21/20	10/24/20	Uranium-233/234	4	0.645	0.0766	pCi/g		0.0251	1		0.986	0.77	g
8-F-6-C	SAMPLE	09/21/20	10/24/20	Uranium-235/236	4	0.0531	0.0252	pCi/g		0.0255	0.05		0.986	0.77	g
8-F-6-C	SAMPLE	09/21/20	10/24/20	Uranium-238	4	0.585	0.073	pCi/g		0.0255	1		0.986	0.77	g
8-F-6-C	DUP	09/21/20	10/24/20	Uranium-232 Tracer	4	2.26	0.168	pCi/g		0.0338		85.5	0	0.77	g
8-F-6-C	DUP	09/21/20	10/24/20	Uranium-233/234	4	0.571	0.0822	pCi/g		0.0517	1		0	0.77	g
8-F-6-C	DUP	09/21/20	10/24/20	Uranium-235/236	4	0.0413	0.0247	pCi/g		0.0264	0.05		0	0.77	g
8-F-6-C	DUP	09/21/20	10/24/20	Uranium-238	4	0.552	0.0774	pCi/g		0.0263	1		0	0.77	g
8-F-6-C	MS	09/21/20	10/24/20	Uranium-235/236	4	0.804	0.0879	pCi/g		0.00746	0.05	96	0	0.77	g
8-F-6-C	MS	09/21/20	10/24/20	Uranium-232 Tracer	4	2.46	0.16	pCi/g		0.0306		92.9	0	0.77	g
LCS	LCS	10/24/20	10/24/20	Uranium-235/236	4	0.789	0.0883	pCi/g		0.0194	0.05	101	0	0.771	g
LCS	LCS	10/24/20	10/24/20	Uranium-232 Tracer	4	2.48	0.162	pCi/g		0.0409		93.8	0	0.771	g
MB	MB	10/24/20	10/24/20	Uranium-232 Tracer	4	2.13	0.162	pCi/g		0.0624		80.8	0	0.771	g
MB	MB	10/24/20	10/24/20	Uranium-233/234	4	-0.0185	0.0167	pCi/g	U	0.0414	1		0	0.771	g
MB	MB	10/24/20	10/24/20	Uranium-235/236	4	0.00247	0.0161	pCi/g	U	0.0304	0.05		0	0.771	g
MB	MB	10/24/20	10/24/20	Uranium-238	4	0.0123	0.0187	pCi/g	U	0.0303	1		0	0.771	g
6-C-C-254	SAMPLE	09/18/20	10/21/20	Strontium Carrier	8	4	mg					99	1.49	6	g
6-C-C-254	SAMPLE	09/18/20	10/21/20	Strontium-90	8	-0.0298	0.0319	pCi/g	U	0.0708	0.1		1.49	6	g
6-C-C-254	DUP	09/18/20	10/21/20	Strontium Carrier	8	4.2	mg					104	0	6.19	g
6-C-C-254	DUP	09/18/20	10/21/20	Strontium-90	8	0.0338	0.0341	pCi/g	U	0.056	0.1		0	6.19	g
6-C-C-254	MS	09/18/20	10/21/20	Strontium-90	8	18.8	1.2	pCi/g		0.483	0.1	90.7	0	1.05	g
6-C-C-254	MS	09/18/20	10/21/20	Strontium Carrier	8	3.5	mg					86.6	0	1.05	g
6-NE-F-16-RS	SAMPLE	09/18/20	10/21/20	Strontium Carrier	8	4.2	mg					104	1.81	6.01	g
6-NE-F-16-RS	SAMPLE	09/18/20	10/21/20	Strontium-90	8	0.0342	0.0427	pCi/g	U	0.0724	0.1		1.81	6.01	g
6-NE-F-16-RS	DUP	09/18/20	10/21/20	Strontium Carrier	8	4.2	mg					104	0	6.02	g
6-NE-F-16-RS	DUP	09/18/20	10/21/20	Strontium-90	8	-0.00419	0.0386	pCi/g	U	0.0719	0.1		0	6.02	g
6-NE-F-16-RS	MS	09/18/20	10/21/20	Strontium-90	8	3.36	0.203	pCi/g		0.0914	0.1	94.4	0	6.14	g
6-NE-F-16-RS	MS	09/18/20	10/21/20	Strontium Carrier	8	3.8	mg					94.1	0	6.14	g
6SE-F-45-C	SAMPLE	09/17/20	10/21/20	Strontium Carrier	8	3.2	mg					79.2	2.11	6.48	g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

6-EPA 906.0 Mod.

5-DOE HASL 300, 4.5.2.3/Ga-01-R

7-EPA EERF C-01 Mod.

1-DOE EML HASL-300, Am-05-RC Mod.
2-ASTM C 1475-00 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

Appendix A
Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
6SE-F-45-C	SAMPLE	09/17/20	10/21/20	Strontium-90	8	0.063	0.0556	pCi/g	U	0.0916	0.1			2.11	6.48 g
6SE-F-45-C	DUP	09/17/20	10/21/20	Strontium Carrier	8	3.8		mg				94.1		0	6.15 g
6SE-F-45-C	DUP	09/17/20	10/21/20	Strontium-90	8	-0.0385	0.0359	pCi/g	U	0.0762	0.1			0	6.15 g
6SE-F-45-C	MS	09/17/20	10/21/20	Strontium-90	8	3.09	0.197	pCi/g		0.113	0.1	86.5		0	6.12 g
6SE-F-45-C	MS	09/17/20	10/21/20	Strontium Carrier	8	4		mg				99		0	6.12 g
8-F-9-C	SAMPLE	09/21/20	10/21/20	Strontium Carrier	8	4		mg				99		1.01	6 g
8-F-9-C	SAMPLE	09/21/20	10/21/20	Strontium-90	8	-0.00589	0.0432	pCi/g	U	0.0777	0.1			1.01	6 g
8-F-9-C	DUP	09/21/20	10/22/20	Strontium Carrier	8	3.9		mg				96.5		0	6.07 g
8-F-9-C	DUP	09/21/20	10/22/20	Strontium-90	8	0.00772	0.0265	pCi/g	U	0.0495	0.1			0	6.07 g
8-F-9-C	MS	09/21/20	10/21/20	Strontium-90	8	24.9	1.43	pCi/g		0.52	0.1	118		0	1.04 g
8-F-9-C	MS	09/21/20	10/21/20	Strontium Carrier	8	3.4		mg				84.2		0	1.04 g
LCS	LCS	10/22/20	10/22/20	Strontium-90	8	3.86	0.208	pCi/g		0.0744	0.1	115		0	6.48 g
LCS	LCS	10/22/20	10/22/20	Strontium Carrier	8	3.2		mg				79.2		0	6.48 g
MB	MB	09/17/20	10/21/20	Strontium Carrier	8	3.2		mg				79.2		0	6.48 g
MB	MB	09/17/20	10/21/20	Strontium-90	8	-0.0432	0.0485	pCi/g	U	0.0906	0.1			0	6.48 g
6-C-C-254	SAMPLE	09/18/20	10/08/20	Americium-241	5	0.117	0.157	pCi/g	U	0.301				1.49	142 g
6-C-C-254	SAMPLE	09/18/20	10/08/20	Barium-133	5	-0.00027	0.0336	pCi/g	U	0.0596				1.49	142 g
6-C-C-254	SAMPLE	09/18/20	10/08/20	Cadmium-109	5	0.748	0.776	pCi/g	U	1.52				1.49	142 g
6-C-C-254	SAMPLE	09/18/20	10/08/20	Cerium-144	5	0.167	0.164	pCi/g	U	0.328				1.49	142 g
6-C-C-254	SAMPLE	09/18/20	10/08/20	Cesium-137	5	0.395	0.0871	pCi/g		0.0542	1			1.49	142 g
6-C-C-254	SAMPLE	09/18/20	10/08/20	Cobalt-57	5	-0.0103	0.0238	pCi/g	U	0.0385				1.49	142 g
6-C-C-254	SAMPLE	09/18/20	10/08/20	Cobalt-60	5	-0.00708	0.0282	pCi/g	U	0.0565				1.49	142 g
6-C-C-254	SAMPLE	09/18/20	10/08/20	Europium-152	5	-0.028	0.0698	pCi/g	U	0.132				1.49	142 g
6-C-C-254	SAMPLE	09/18/20	10/08/20	Lead-210	5	-3.54	4.68	pCi/g	U	8.47				1.49	142 g
6-C-C-254	SAMPLE	09/18/20	10/08/20	Manganese-54	5	0.0181	0.0296	pCi/g	U	0.0629				1.49	142 g
6-C-C-254	SAMPLE	09/18/20	10/08/20	Mercury-203	5	0.0209	0.0339	pCi/g	U	0.0698				1.49	142 g
6-C-C-254	SAMPLE	09/18/20	10/08/20	Sodium-22	5	-0.0194	0.0371	pCi/g	U	0.0679				1.49	142 g
6-C-C-254	SAMPLE	09/18/20	10/08/20	Yttrium-88	5	-0.0199	0.0368	pCi/g	U	0.0653				1.49	142 g
6-C-C-254	SAMPLE	09/18/20	10/08/20	Zinc-65	5	-0.0115	0.0817	pCi/g	U	0.141				1.49	142 g
6-C-C-254	DUP	09/18/20	10/08/20	Americium-241	5	-0.0505	0.166	pCi/g	U	0.312				0	142 g
6-C-C-254	DUP	09/18/20	10/08/20	Barium-133	5	-0.0093	0.0419	pCi/g	U	0.0705				0	142 g
6-C-C-254	DUP	09/18/20	10/08/20	Cadmium-109	5	-0.342	0.988	pCi/g	U	1.69				0	142 g
6-C-C-254	DUP	09/18/20	10/08/20	Cerium-144	5	0.012	0.197	pCi/g	U	0.386				0	142 g
6-C-C-254	DUP	09/18/20	10/08/20	Cesium-137	5	0.461	0.107	pCi/g		0.0466	1			0	142 g
6-C-C-254	DUP	09/18/20	10/08/20	Cobalt-57	5	0.00569	0.027	pCi/g	U	0.0534				0	142 g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Appendix A
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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
6-C-C-254	DUP	09/18/20	10/08/20	Cobalt-60	5	0.0115	0.0341 pCi/g	U	0.0746				0	142 g	
6-C-C-254	DUP	09/18/20	10/08/20	Europium-152	5	-0.0331	0.103 pCi/g	U	0.169				0	142 g	
6-C-C-254	DUP	09/18/20	10/08/20	Lead-210	5	3.52	4 pCi/g	U	7.97				0	142 g	
6-C-C-254	DUP	09/18/20	10/08/20	Manganese-54	5	0.0205	0.0464 pCi/g	U	0.0742				0	142 g	
6-C-C-254	DUP	09/18/20	10/08/20	Mercury-203	5	-0.00408	0.0393 pCi/g	U	0.0749				0	142 g	
6-C-C-254	DUP	09/18/20	10/08/20	Sodium-22	5	0.0357	0.0419 pCi/g	U	0.0949				0	142 g	
6-C-C-254	DUP	09/18/20	10/08/20	Yttrium-88	5	-0.00558	0.0306 pCi/g	U	0.0679				0	142 g	
6-C-C-254	DUP	09/18/20	10/08/20	Zinc-65	5	0.0238	0.0701 pCi/g	U	0.14				0	142 g	
6SE-F-45-C	SAMPLE	09/17/20	10/08/20	Americium-241	5	-0.213	0.924 pCi/g	U	1.29				2.11	23.3 g	
6SE-F-45-C	SAMPLE	09/17/20	10/08/20	Barium-133	5	0.0766	0.163 pCi/g	U	0.283				2.11	23.3 g	
6SE-F-45-C	SAMPLE	09/17/20	10/08/20	Cadmium-109	5	1.86	3.11 pCi/g	U	5.16				2.11	23.3 g	
6SE-F-45-C	SAMPLE	09/17/20	10/08/20	Cerium-144	5	0.00421	0.688 pCi/g	U	1.04				2.11	23.3 g	
6SE-F-45-C	SAMPLE	09/17/20	10/08/20	Cesium-137	5	0.00786	0.172 pCi/g	U	0.327			1	2.11	23.3 g	
6SE-F-45-C	SAMPLE	09/17/20	10/08/20	Cobalt-57	5	-0.0133	0.0872 pCi/g	U	0.142				2.11	23.3 g	
6SE-F-45-C	SAMPLE	09/17/20	10/08/20	Cobalt-60	5	0.115	0.136 pCi/g	U	0.358				2.11	23.3 g	
6SE-F-45-C	SAMPLE	09/17/20	10/08/20	Europium-152	5	-0.227	0.333 pCi/g	U	0.506				2.11	23.3 g	
6SE-F-45-C	SAMPLE	09/17/20	10/08/20	Lead-210	5	-3.45	28.9 pCi/g	U	45.3				2.11	23.3 g	
6SE-F-45-C	SAMPLE	09/17/20	10/08/20	Manganese-54	5	-0.0175	0.141 pCi/g	U	0.277				2.11	23.3 g	
6SE-F-45-C	SAMPLE	09/17/20	10/08/20	Mercury-203	5	-0.121	0.157 pCi/g	U	0.235				2.11	23.3 g	
6SE-F-45-C	SAMPLE	09/17/20	10/08/20	Sodium-22	5	-0.0822	0.178 pCi/g	U	0.316				2.11	23.3 g	
6SE-F-45-C	SAMPLE	09/17/20	10/08/20	Yttrium-88	5	0.049	0.164 pCi/g	U	0.455				2.11	23.3 g	
6SE-F-45-C	SAMPLE	09/17/20	10/08/20	Zinc-65	5	0.0657	0.224 pCi/g	U	0.535				2.11	23.3 g	
6SE-F-45-C	DUP	09/17/20	10/08/20	Americium-241	5	-0.292	0.38 pCi/g	U	0.573				0	23.3 g	
6SE-F-45-C	DUP	09/17/20	10/08/20	Barium-133	5	-0.134	0.252 pCi/g	U	0.335				0	23.3 g	
6SE-F-45-C	DUP	09/17/20	10/08/20	Cadmium-109	5	1.09	2.77 pCi/g	U	4.67				0	23.3 g	
6SE-F-45-C	DUP	09/17/20	10/08/20	Cerium-144	5	0.0666	0.807 pCi/g	U	1.37				0	23.3 g	
6SE-F-45-C	DUP	09/17/20	10/08/20	Cesium-137	5	0.0986	0.214 pCi/g	U	0.444			1	0	23.3 g	
6SE-F-45-C	DUP	09/17/20	10/08/20	Cobalt-57	5	-0.018	0.112 pCi/g	U	0.183				0	23.3 g	
6SE-F-45-C	DUP	09/17/20	10/08/20	Cobalt-60	5	-0.0798	0.202 pCi/g	U	0.386				0	23.3 g	
6SE-F-45-C	DUP	09/17/20	10/08/20	Europium-152	5	-0.453	0.54 pCi/g	U	0.795				0	23.3 g	
6SE-F-45-C	DUP	09/17/20	10/08/20	Lead-210	5	0.372	3.4 pCi/g	U	5.17				0	23.3 g	
6SE-F-45-C	DUP	09/17/20	10/08/20	Manganese-54	5	-0.0453	0.224 pCi/g	U	0.406				0	23.3 g	
6SE-F-45-C	DUP	09/17/20	10/08/20	Mercury-203	5	-0.00561	0.225 pCi/g	U	0.374				0	23.3 g	
6SE-F-45-C	DUP	09/17/20	10/08/20	Sodium-22	5	0.133	0.184 pCi/g	U	0.49				0	23.3 g	
6SE-F-45-C	DUP	09/17/20	10/08/20	Yttrium-88	5	-0.144	0.267 pCi/g	U	0.459				0	23.3 g	

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Appendix A
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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
6SE-F-45-C	DUP	09/17/20	10/08/20	Zinc-65	5	-0.163	0.435	pCi/g	U	0.828			0	23.3	g
8-F-9-C	SAMPLE	09/21/20	10/08/20	Americium-241	5	0.0487	0.138	pCi/g	U	0.264			1.01	150	g
8-F-9-C	SAMPLE	09/21/20	10/08/20	Barium-133	5	0.014	0.0349	pCi/g	U	0.0655			1.01	150	g
8-F-9-C	SAMPLE	09/21/20	10/08/20	Cadmium-109	5	0.0829	1.34	pCi/g	U	1.3			1.01	150	g
8-F-9-C	SAMPLE	09/21/20	10/08/20	Cerium-144	5	0.0587	0.16	pCi/g	U	0.31			1.01	150	g
8-F-9-C	SAMPLE	09/21/20	10/08/20	Cesium-137	5	0.0173	0.0331	pCi/g	U	0.0669	1		1.01	150	g
8-F-9-C	SAMPLE	09/21/20	10/08/20	Cobalt-57	5	-0.00641	0.0208	pCi/g	U	0.0385			1.01	150	g
8-F-9-C	SAMPLE	09/21/20	10/08/20	Cobalt-60	5	-0.00343	0.0384	pCi/g	U	0.0741			1.01	150	g
8-F-9-C	SAMPLE	09/21/20	10/08/20	Europium-152	5	0.0719	0.0781	pCi/g	U	0.167			1.01	150	g
8-F-9-C	SAMPLE	09/21/20	10/08/20	Lead-210	5	1.78	3.74	pCi/g	U	7.83			1.01	150	g
8-F-9-C	SAMPLE	09/21/20	10/08/20	Manganese-54	5	0.0142	0.0322	pCi/g	U	0.0677			1.01	150	g
8-F-9-C	SAMPLE	09/21/20	10/08/20	Mercury-203	5	-0.00822	0.0362	pCi/g	U	0.063			1.01	150	g
8-F-9-C	SAMPLE	09/21/20	10/08/20	Sodium-22	5	-0.00737	0.0399	pCi/g	U	0.0661			1.01	150	g
8-F-9-C	SAMPLE	09/21/20	10/08/20	Yttrium-88	5	0.0151	0.0271	pCi/g	U	0.0698			1.01	150	g
8-F-9-C	SAMPLE	09/21/20	10/08/20	Zinc-65	5	0.0375	0.105	pCi/g	U	0.191			1.01	150	g
8-F-9-C	DUP	09/21/20	10/08/20	Americium-241	5	-0.0343	0.232	pCi/g	U	0.397			0	150	g
8-F-9-C	DUP	09/21/20	10/08/20	Barium-133	5	0.0323	0.0419	pCi/g	U	0.079			0	150	g
8-F-9-C	DUP	09/21/20	10/08/20	Cadmium-109	5	1.4	2.04	pCi/g	U	1.56			0	150	g
8-F-9-C	DUP	09/21/20	10/08/20	Cerium-144	5	0.0123	0.209	pCi/g	U	0.374			0	150	g
8-F-9-C	DUP	09/21/20	10/08/20	Cesium-137	5	0.0156	0.0348	pCi/g	U	0.0724	1		0	150	g
8-F-9-C	DUP	09/21/20	10/08/20	Cobalt-57	5	-0.00652	0.024	pCi/g	U	0.0469			0	150	g
8-F-9-C	DUP	09/21/20	10/08/20	Cobalt-60	5	0.00953	0.0378	pCi/g	U	0.0808			0	150	g
8-F-9-C	DUP	09/21/20	10/08/20	Europium-152	5	-0.0603	0.0926	pCi/g	U	0.163			0	150	g
8-F-9-C	DUP	09/21/20	10/08/20	Lead-210	5	2.53	6.81	pCi/g	U	13.5			0	150	g
8-F-9-C	DUP	09/21/20	10/08/20	Manganese-54	5	0.0182	0.0362	pCi/g	U	0.075			0	150	g
8-F-9-C	DUP	09/21/20	10/08/20	Mercury-203	5	-0.00793	0.0353	pCi/g	U	0.0662			0	150	g
8-F-9-C	DUP	09/21/20	10/08/20	Sodium-22	5	-0.0033	0.0437	pCi/g	U	0.0824			0	150	g
8-F-9-C	DUP	09/21/20	10/08/20	Yttrium-88	5	0.0119	0.0166	pCi/g	U	0.0558			0	150	g
8-F-9-C	DUP	09/21/20	10/08/20	Zinc-65	5	-0.0458	0.102	pCi/g	U	0.152			0	150	g
LCS	LCS	10/08/20	10/08/20	Americium-241	5	523	15.9	pCi/g		8.3		108	0	115	g
LCS	LCS	10/08/20	10/08/20	Cesium-137	5	158	3.48	pCi/g		0.946	1	97	0	115	g
LCS	LCS	10/08/20	10/08/20	Cobalt-60	5	92.3	3.18	pCi/g		0.75		97.5	0	115	g
MB	MB	10/08/20	10/08/20	Americium-241	5	-0.00058	0.115	pCi/g	U	0.229			0	150	g
MB	MB	10/08/20	10/08/20	Barium-133	5	0.00335	0.0218	pCi/g	U	0.0429			0	150	g
MB	MB	10/08/20	10/08/20	Cadmium-109	5	0.0164	0.356	pCi/g	U	0.711			0	150	g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

6-EPA 906.0 Mod.

5-DOE HASL 300, 4.5.2.3/Ga-01-R

7-EPA EERF C-01 Mod.

*Key
1-DOE EML HASL-300, Am-05-RC Mod.
2-ASTM C 1475-00 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
MB	MB	10/08/20	10/08/20	Cerium-144	5	0.034	0.0826	pCi/g	U	0.167				0	150 g
MB	MB	10/08/20	10/08/20	Cesium-137	5	-0.0116	0.0182	pCi/g	U	0.0307	1			0	150 g
MB	MB	10/08/20	10/08/20	Cobalt-57	5	0.00311	0.0133	pCi/g	U	0.0257				0	150 g
MB	MB	10/08/20	10/08/20	Cobalt-60	5	-0.00257	0.0194	pCi/g	U	0.0388				0	150 g
MB	MB	10/08/20	10/08/20	Europium-152	5	-0.0338	0.047	pCi/g	U	0.082				0	150 g
MB	MB	10/08/20	10/08/20	Lead-210	5	-0.762	3.92	pCi/g	U	7.8				0	150 g
MB	MB	10/08/20	10/08/20	Manganese-54	5	0.00117	0.018	pCi/g	U	0.0356				0	150 g
MB	MB	10/08/20	10/08/20	Mercury-203	5	-0.00018	0.016	pCi/g	U	0.0304				0	150 g
MB	MB	10/08/20	10/08/20	Sodium-22	5	0.0102	0.0204	pCi/g	U	0.0453				0	150 g
MB	MB	10/08/20	10/08/20	Yttrium-88	5	0.00265	0.0175	pCi/g	U	0.0397				0	150 g
MB	MB	10/08/20	10/08/20	Zinc-65	5	0.0253	0.0434	pCi/g	U	0.0879				0	150 g
5E-W-S-67-B-M	SAMPLE	09/14/20	10/14/20	Strontium Carrier	8	5	mg					109	13.9	5.23 g	
5E-W-S-67-B-M	SAMPLE	09/14/20	10/14/20	Strontium-90	8	0.0161	0.0482	pCi/g	U	0.0859	0.1			13.9	5.23 g
5E-W-S-67-B-M	DUP	09/14/20	10/13/20	Strontium Carrier	8	4.3	mg					93.5	0	5.24 g	
5E-W-S-67-B-M	DUP	09/14/20	10/13/20	Strontium-90	8	0.049	0.0541	pCi/g	U	0.0904	0.1			0	5.24 g
5E-W-S-67-B-M	MS	09/14/20	10/14/20	Strontium-90	8	1.12	0.139	pCi/g		0.0878	0.1	26.6	0	5.21 g	
5E-W-S-67-B-M	MS	09/14/20	10/14/20	Strontium Carrier	8	3.2	mg					69.6	0	5.21 g	
5E-W-W-33-M	SAMPLE	09/16/20	10/13/20	Strontium Carrier	8	4.7	mg					102	0.983	6.2 g	
5E-W-W-33-M	SAMPLE	09/16/20	10/13/20	Strontium-90	8	-0.0239	0.0284	pCi/g	U	0.0634	0.1			0.983	6.2 g
5E-W-W-33-M	DUP	09/16/20	10/13/20	Strontium Carrier	8	4	mg					87	0	6.01 g	
5E-W-W-33-M	DUP	09/16/20	10/13/20	Strontium-90	8	0.0129	0.0438	pCi/g	U	0.0805	0.1			0	6.01 g
5E-W-W-33-M	MS	09/16/20	10/14/20	Strontium-90	8	2.13	0.147	pCi/g		0.0886	0.1	59.3	0	6.1 g	
5E-W-W-33-M	MS	09/16/20	10/14/20	Strontium Carrier	8	4.7	mg					102	0	6.1 g	
LCS	LCS	10/13/20	10/13/20	Strontium-90	8	3.13	0.192	pCi/g		0.0804	0.1	89.1	0	6.2 g	
LCS	LCS	10/13/20	10/13/20	Strontium Carrier	8	4.5	mg					97.8	0	6.2 g	
MB	MB	10/13/20	10/13/20	Strontium Carrier	8	4.7	mg					102	0	6.2 g	
MB	MB	10/13/20	10/13/20	Strontium-90	8	0.000724	0.0427	pCi/g	U	0.0798	0.1			0	6.2 g
6-NE-F-12-C	SAMPLE	09/18/20	10/24/20	Americium-243 Tracer	1	0.993	0.112	pCi/g		0.0426		56.5	0	1.26 g	
6-NE-F-12-C	SAMPLE	09/18/20	10/24/20	Americium-241	1	0.00545	0.0171	pCi/g	U	0.0308	0.05			0	1.26 g
6-NE-F-12-C	SAMPLE	09/18/20	10/24/20	Californium-252	1	0.0019	0.00643	pCi/g	U	0.00569	0.05			0	1.26 g
6-NE-F-12-C	SAMPLE	09/18/20	10/24/20	Curium-243/244	1	0.0162	0.0136	pCi/g	U	0.0172	0.05			0	1.26 g
6-NE-F-27-C	SAMPLE	09/18/20	10/24/20	Americium-243 Tracer	1	1.31	0.103	pCi/g		0.0237		75.2	0	1.27 g	
6-NE-F-27-C	SAMPLE	09/18/20	10/24/20	Americium-241	1	0.00629	0.00871	pCi/g	U	0.012	0.05			0	1.27 g
6-NE-F-27-C	SAMPLE	09/18/20	10/24/20	Californium-252	1	0	0.00454	pCi/g	U	0.00492	0.05			0	1.27 g
6-NE-F-27-C	SAMPLE	09/18/20	10/24/20	Curium-243/244	1	0.00155	0.00806	pCi/g	U	0.0149	0.05			0	1.27 g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Appendix A
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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
6-NE-F-28-C	SAMPLE	09/18/20	10/27/20	Americium-243 Tracer	1	1.26	0.105	pCi/g		0.0332		68.6		0	1.21 g
6-NE-F-28-C	SAMPLE	09/18/20	10/27/20	Americium-241	1	-2.34E-09	0.0136	pCi/g	U	0.0264	0.05			0	1.21 g
6-NE-F-28-C	SAMPLE	09/18/20	10/27/20	Californium-252	1	0	0.00451	pCi/g	U	0.00488	0.05			0	1.21 g
6-NE-F-28-C	SAMPLE	09/18/20	10/27/20	Curium-243/244	1	0.00154	0.00799	pCi/g	U	0.0148	0.05			0	1.21 g
6-NE-F-28-C	DUP	09/18/20	10/24/20	Americium-243 Tracer	1	1.74	0.106	pCi/g		0.0309		94.9		0	1.21 g
6-NE-F-28-C	DUP	09/18/20	10/24/20	Americium-241	1	0.00635	0.0116	pCi/g	U	0.0195	0.05			0	1.21 g
6-NE-F-28-C	DUP	09/18/20	10/24/20	Californium-252	1	0	0.00459	pCi/g	U	0.00497	0.05			0	1.21 g
6-NE-F-28-C	DUP	09/18/20	10/24/20	Curium-243/244	1	-0.00628	0.00754	pCi/g	U	0.0193	0.05			0	1.21 g
6-NE-F-28-C	MS	09/18/20	10/25/20	Americium-241	1	0.814	0.151	pCi/g		0.04	0.05	99.8		0	1.21 g
6-NE-F-28-C	MS	09/18/20	10/25/20	Californium-252	1	0.353	0.103	pCi/g		0.0362	0.05	85.9		0	1.21 g
6-NE-F-28-C	MS	09/18/20	10/25/20	Curium-243/244	1	1.04	0.171	pCi/g		0.06	0.05	113		0	1.21 g
6-NE-F-28-C	MS	09/18/20	10/25/20	Americium-243 Tracer	1	1.19	0.226	pCi/g		0.0657		64.9		0	1.21 g
6-NE-F-36-C	SAMPLE	09/18/20	10/27/20	Americium-243 Tracer	1	0.918	0.126	pCi/g		0.035		51.8		0	1.25 g
6-NE-F-36-C	SAMPLE	09/18/20	10/27/20	Americium-241	1	0.00696	0.012	pCi/g	U	0.0177	0.05			0	1.25 g
6-NE-F-36-C	SAMPLE	09/18/20	10/27/20	Californium-252	1	0.00485	0.0095	pCi/g	U	0.00727	0.05			0	1.25 g
6-NE-F-36-C	SAMPLE	09/18/20	10/27/20	Curium-243/244	1	0.00459	0.0127	pCi/g	U	0.022	0.05			0	1.25 g
6-NE-F-38-C	SAMPLE	09/18/20	10/28/20	Americium-243 Tracer	1	0.681	0.131	pCi/g		0.0617		40		0	1.3 g
6-NE-F-38-C	SAMPLE	09/18/20	10/28/20	Americium-241	1	-0.00743	0.0222	pCi/g	U	0.0456	0.05			0	1.3 g
6-NE-F-38-C	SAMPLE	09/18/20	10/28/20	Californium-252	1	-0.00259	0.0113	pCi/g	U	0.0248	0.05			0	1.3 g
6-NE-F-38-C	SAMPLE	09/18/20	10/28/20	Curium-243/244	1	0.00245	0.0159	pCi/g	U	0.0301	0.05			0	1.3 g
6-NE-W-E-53-M	SAMPLE	09/18/20	10/24/20	Americium-243 Tracer	1	1.76	0.108	pCi/g		0.0316		95.2		1.04	1.2 g
6-NE-W-E-53-M	SAMPLE	09/18/20	10/24/20	Americium-241	1	0.00486	0.0084	pCi/g	U	0.0124	0.05			1.04	1.2 g
6-NE-W-E-53-M	SAMPLE	09/18/20	10/24/20	Californium-252	1	-0.00338	0.00662	pCi/g	U	0.0162	0.05			1.04	1.2 g
6-NE-W-E-53-M	SAMPLE	09/18/20	10/24/20	Curium-243/244	1	0.0032	0.00888	pCi/g	U	0.0153	0.05			1.04	1.2 g
6-NE-W-E-53-M	DUP	09/18/20	10/24/20	Americium-243 Tracer	1	1.63	0.113	pCi/g		0.041		88		0	1.2 g
6-NE-W-E-53-M	DUP	09/18/20	10/24/20	Americium-241	1	-0.00175	0.023	pCi/g	U	0.0434	0.05			0	1.2 g
6-NE-W-E-53-M	DUP	09/18/20	10/24/20	Californium-252	1	0.00729	0.0175	pCi/g	U	0.0309	0.05			0	1.2 g
6-NE-W-E-53-M	DUP	09/18/20	10/24/20	Curium-243/244	1	0.00346	0.0159	pCi/g	U	0.0293	0.05			0	1.2 g
6-NE-W-E-53-M	MS	09/18/20	10/25/20	Americium-241	1	0.669	0.125	pCi/g		0.029	0.05	80.6		0	1.2 g
6-NE-W-E-53-M	MS	09/18/20	10/25/20	Californium-252	1	0.504	0.111	pCi/g		0.0189	0.05	121		0	1.2 g
6-NE-W-E-53-M	MS	09/18/20	10/25/20	Curium-243/244	1	0.799	0.137	pCi/g		0.0501	0.05	85.4		0	1.2 g
6-NE-W-E-53-M	MS	09/18/20	10/25/20	Americium-243 Tracer	1	1.63	0.206	pCi/g		0.0392		87.9		0	1.2 g
6NE-W-E-56-C	SAMPLE	09/17/20	10/22/20	Americium-243 Tracer	1	1.63	0.106	pCi/g		0.0159		94.7		0	1.29 g
6NE-W-E-56-C	SAMPLE	09/17/20	10/22/20	Americium-241	1	-0.00304	0.0105	pCi/g	U	0.023	0.05			0	1.29 g
6NE-W-E-56-C	SAMPLE	09/17/20	10/22/20	Californium-252	1	-0.00129	0.00503	pCi/g	U	0.012	0.05			0	1.29 g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

6-EPA 906.0 Mod.

5-DOE HASL 300, 4.5.2.3/Ga-01-R

7-EPA EERF C-01 Mod.

*Key
1-DOE EML HASL-300, Am-05-RC Mod.
2-ASTM C 1475-00 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

Appendix A
Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
6NE-W-E-56-C	SAMPLE	09/17/20	10/22/20	Curium-243/244	1	-0.00075	0.0063	pCi/g	U	0.014	0.05			0	1.29 g
6NE-W-W-3-M	SAMPLE	09/17/20	10/22/20	Americium-243 Tracer	1	1.21	0.124	pCi/g		0.0492		69.6		0	1.27 g
6NE-W-W-3-M	SAMPLE	09/17/20	10/22/20	Americium-241	1	0.00152	0.0136	pCi/g	U	0.0267	0.05			0	1.27 g
6NE-W-W-3-M	SAMPLE	09/17/20	10/22/20	Californium-252	1	-0.00503	0.008	pCi/g	U	0.0217	0.05			0	1.27 g
6NE-W-W-3-M	SAMPLE	09/17/20	10/22/20	Curium-243/244	1	-0.0109	0.0138	pCi/g	U	0.0335	0.05			0	1.27 g
6NW-W-E-2-M	SAMPLE	09/17/20	10/22/20	Americium-243 Tracer	1	1.73	0.0986	pCi/g		0.0185		101		0	1.29 g
6NW-W-E-2-M	SAMPLE	09/17/20	10/22/20	Americium-241	1	0.00611	0.00946	pCi/g	U	0.0153	0.05			0	1.29 g
6NW-W-E-2-M	SAMPLE	09/17/20	10/22/20	Californium-252	1	-0.00222	0.00484	pCi/g	U	0.0126	0.05			0	1.29 g
6NW-W-E-2-M	SAMPLE	09/17/20	10/22/20	Curium-243/244	1	-0.00633	0.00618	pCi/g	U	0.0175	0.05			0	1.29 g
6NW-W-N-49-C	SAMPLE	09/18/20	10/24/20	Americium-243 Tracer	1	1.59	0.098	pCi/g		0.0165		86.3		0	1.2 g
6NW-W-N-49-C	SAMPLE	09/18/20	10/24/20	Americium-241	1	0.00273	0.0136	pCi/g	U	0.0251	0.05			0	1.2 g
6NW-W-N-49-C	SAMPLE	09/18/20	10/24/20	Californium-252	1	0	0.00394	pCi/g	U	0.00427	0.05			0	1.2 g
6NW-W-N-49-C	SAMPLE	09/18/20	10/24/20	Curium-243/244	1	0.0054	0.0106	pCi/g	U	0.0181	0.05			0	1.2 g
6NW-W-N-49-C	DUP	09/18/20	10/24/20	Americium-243 Tracer	1	1.84	0.103	pCi/g		0.0307		99.6		0	1.2 g
6NW-W-N-49-C	DUP	09/18/20	10/24/20	Americium-241	1	0.0104	0.00873	pCi/g		0.00445	0.05			0	1.2 g
6NW-W-N-49-C	DUP	09/18/20	10/24/20	Californium-252	1	0.00155	0.00525	pCi/g	U	0.00464	0.05			0	1.2 g
6NW-W-N-49-C	DUP	09/18/20	10/24/20	Curium-243/244	1	0.0044	0.00761	pCi/g	U	0.0112	0.05			0	1.2 g
6NW-W-N-49-C	MS	09/18/20	10/25/20	Americium-241	1	0.786	0.129	pCi/g		0.0355	0.05	95.3		0	1.2 g
6NW-W-N-49-C	MS	09/18/20	10/25/20	Californium-252	1	0.371	0.0902	pCi/g		0.0169	0.05	89.5		0	1.2 g
6NW-W-N-49-C	MS	09/18/20	10/25/20	Curium-243/244	1	0.784	0.128	pCi/g		0.0325	0.05	83.7		0	1.2 g
6NW-W-N-49-C	MS	09/18/20	10/25/20	Americium-243 Tracer	1	1.62	0.195	pCi/g		0.0429		87.6		0	1.2 g
6NW-W-W-22-C	SAMPLE	09/17/20	10/22/20	Americium-243 Tracer	1	1.6	0.124	pCi/g		0.0289		87.9		0	1.22 g
6NW-W-W-22-C	SAMPLE	09/17/20	10/22/20	Americium-241	1	0.00906	0.014	pCi/g	U	0.0227	0.05			0	1.22 g
6NW-W-W-22-C	SAMPLE	09/17/20	10/22/20	Californium-252	1	-0.0033	0.00718	pCi/g	U	0.0187	0.05			0	1.22 g
6NW-W-W-22-C	SAMPLE	09/17/20	10/22/20	Curium-243/244	1	-0.00444	0.0122	pCi/g	U	0.0276	0.05			0	1.22 g
6NW-W-W-22-C	DUP	09/17/20	10/24/20	Americium-243 Tracer	1	1.79	0.102	pCi/g		0.025		98.5		0	1.22 g
6NW-W-W-22-C	DUP	09/17/20	10/24/20	Americium-241	1	-0.0015	0.0114	pCi/g	U	0.0229	0.05			0	1.22 g
6NW-W-W-22-C	DUP	09/17/20	10/24/20	Californium-252	1	-0.00156	0.0053	pCi/g	U	0.0119	0.05			0	1.22 g
6NW-W-W-22-C	DUP	09/17/20	10/24/20	Curium-243/244	1	0.00148	0.00649	pCi/g	U	0.0113	0.05			0	1.22 g
6NW-W-W-22-C	MS	09/17/20	10/24/20	Americium-241	1	0.788	0.0671	pCi/g		0.0221	0.05	96.3		0	1.22 g
6NW-W-W-22-C	MS	09/17/20	10/24/20	Californium-252	1	0.44	0.0508	pCi/g		0.0115	0.05	108		0	1.22 g
6NW-W-W-22-C	MS	09/17/20	10/24/20	Curium-243/244	1	0.918	0.0714	pCi/g		0.0158	0.05	100		0	1.22 g
6NW-W-W-22-C	MS	09/17/20	10/24/20	Americium-243 Tracer	1	1.91	0.1	pCi/g		0.0175		105		0	1.22 g
6SE-W-E-48-B-M	SAMPLE	09/17/20	10/24/20	Americium-243 Tracer	1	1.58	0.0905	pCi/g		0.0174		90.7		0	1.27 g
6SE-W-E-48-B-M	SAMPLE	09/17/20	10/24/20	Americium-241	1	0.0135	0.0138	pCi/g	U	0.0217	0.05			0	1.27 g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Appendix A
Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
6SE-W-E-48-B-M	SAMPLE	09/17/20	10/24/20	Californium-252	1	0.00128	0.00435	pCi/g	U	0.00384	0.05			0	1.27 g
6SE-W-E-48-B-M	SAMPLE	09/17/20	10/24/20	Curium-243/244	1	0.00121	0.00412	pCi/g	U	0.00364	0.05			0	1.27 g
6SE-W-S-37-C	SAMPLE	09/17/20	10/24/20	Americium-243 Tracer	1	1.76	0.0921	pCi/g		0.0294		99.5		0	1.25 g
6SE-W-S-37-C	SAMPLE	09/17/20	10/24/20	Americium-241	1	0	0.0068	pCi/g	U	0.0136	0.05			0	1.25 g
6SE-W-S-37-C	SAMPLE	09/17/20	10/24/20	Californium-252	1	0.00128	0.00664	pCi/g	U	0.0123	0.05			0	1.25 g
6SE-W-S-37-C	SAMPLE	09/17/20	10/24/20	Curium-243/244	1	0	0.00752	pCi/g	U	0.0149	0.05			0	1.25 g
6SW-W-W-N-39-M	SAMPLE	09/17/20	10/22/20	Americium-243 Tracer	1	1.5	0.106	pCi/g		0.0237		87		0	1.29 g
6SW-W-W-N-39-M	SAMPLE	09/17/20	10/22/20	Americium-241	1	0.00117	0.0105	pCi/g	U	0.0206	0.05			0	1.29 g
6SW-W-W-N-39-M	SAMPLE	09/17/20	10/22/20	Californium-252	1	-0.00129	0.00502	pCi/g	U	0.012	0.05			0	1.29 g
6SW-W-W-N-39-M	SAMPLE	09/17/20	10/22/20	Curium-243/244	1	-0.00245	0.00534	pCi/g	U	0.0139	0.05			0	1.29 g
LCS	LCS	10/25/20	10/25/20	Americium-241	1	0.806	0.0551	pCi/g		0.00931	0.05	106		0	1.3 g
LCS	LCS	10/25/20	10/25/20	Californium-252	1	0.434	0.0408	pCi/g		0.00298	0.05	115		0	1.3 g
LCS	LCS	10/25/20	10/25/20	Curium-243/244	1	0.844	0.0558	pCi/g		0.00287	0.05	98.5		0	1.3 g
LCS	LCS	10/25/20	10/25/20	Americium-243 Tracer	1	1.77	0.0793	pCi/g		0.00917		104		0	1.3 g
MB	MB	10/24/20	10/24/20	Americium-243 Tracer	1	1.47	0.102	pCi/g		0.0275		86.3		0	1.3 g
MB	MB	10/24/20	10/24/20	Americium-241	1	0.00945	0.0145	pCi/g	U	0.0241	0.05			0	1.3 g
MB	MB	10/24/20	10/24/20	Californium-252	1	0	0.00446	pCi/g	U	0.00483	0.05			0	1.3 g
MB	MB	10/24/20	10/24/20	Curium-243/244	1	-0.00155	0.00913	pCi/g	U	0.0191	0.05			0	1.3 g
6-NE-F-28-C	SAMPLE	09/18/20	10/23/20	Americium-243 Tracer	2	79.3		pCi/g				71.3		0	1.96 g
6-NE-F-28-C	SAMPLE	09/18/20	10/23/20	Neptunium-237	2	-0.00747	0.012	pCi/g	U	0.0384	0.05			0	1.96 g
6-NE-F-28-C	DUP	09/18/20	10/23/20	Americium-243 Tracer	2	97.8		pCi/g				87.9		0	1.96 g
6-NE-F-28-C	DUP	09/18/20	10/23/20	Neptunium-237	2	0.00125	0.013	pCi/g	U	0.0272	0.05			0	1.96 g
6-NE-F-28-C	MS	09/18/20	10/23/20	Neptunium-237	2	1.3	0.146	pCi/g		0.026	0.05	117		0	1.96 g
6-NE-F-28-C	MS	09/18/20	10/23/20	Americium-243 Tracer	2	97.7		pCi/g				87.8		0	1.96 g
6-NE-W-E-53-M	SAMPLE	09/18/20	10/23/20	Americium-243 Tracer	2	89.8		pCi/g				80.3	1.04	1.95 g	
6-NE-W-E-53-M	SAMPLE	09/18/20	10/23/20	Neptunium-237	2	0.00593	0.0163	pCi/g	U	0.0283	0.05			1.04	1.95 g
6-NE-W-E-53-M	DUP	09/18/20	10/23/20	Americium-243 Tracer	2	99.9		pCi/g				89.3		0	1.95 g
6-NE-W-E-53-M	DUP	09/18/20	10/23/20	Neptunium-237	2	-0.00174	0.0162	pCi/g	U	0.0377	0.05			0	1.95 g
6-NE-W-E-53-M	MS	09/18/20	10/24/20	Neptunium-237	2	1.32	0.148	pCi/g		0.0457	0.05	117		0	1.95 g
6-NE-W-E-53-M	MS	09/18/20	10/24/20	Americium-243 Tracer	2	98.5		pCi/g				88		0	1.95 g
6NW-W-N-49-C	SAMPLE	09/18/20	10/23/20	Americium-243 Tracer	2	103		pCi/g				91.9		0	1.95 g
6NW-W-N-49-C	SAMPLE	09/18/20	10/23/20	Neptunium-237	2	0.00531	0.0146	pCi/g	U	0.0253	0.05			0	1.95 g
6NW-W-N-49-C	DUP	09/18/20	10/24/20	Americium-243 Tracer	2	46.5		pCi/g				41.5		0	1.95 g
6NW-W-N-49-C	DUP	09/18/20	10/24/20	Neptunium-237	2	0.0234	0.0272	pCi/g	U	0.0403	0.05			0	1.95 g
6NW-W-N-49-C	MS	09/18/20	10/23/20	Neptunium-237	2	1.39	0.156	pCi/g		0.0351	0.05	123		0	1.95 g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

6-EPA 906.0 Mod.

5-DOE HASL 300, 4.5.2.3/Ga-01-R

7-EPA EERF C-01 Mod.

*Key
1-DOE EML HASL-300, Am-05-RC Mod.
2-ASTM C 1475-00 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

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Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
6NW-W-N-49-C	MS	09/18/20	10/23/20	Americium-243 Tracer	2	95.9		pCi/g				85.7	0	1.95 g	
6NW-W-W-22-C	SAMPLE	09/17/20	10/23/20	Americium-243 Tracer	2	106		pCi/g				99.3	0	2.04 g	
6NW-W-W-22-C	SAMPLE	09/17/20	10/23/20	Neptunium-237	2	-0.00499	0.00946	pCi/g	U	0.0292	0.05			0	2.04 g
6NW-W-W-22-C	DUP	09/17/20	10/23/20	Americium-243 Tracer	2	100		pCi/g				93.5	0	2.04 g	
6NW-W-W-22-C	DUP	09/17/20	10/23/20	Neptunium-237	2	0.00376	0.0106	pCi/g	U	0.0113	0.05			0	2.04 g
6NW-W-W-22-C	MS	09/17/20	10/23/20	Neptunium-237	2	1.22	0.136	pCi/g		0.0217	0.05	114	0	2.04 g	
6NW-W-W-22-C	MS	09/17/20	10/23/20	Americium-243 Tracer	2	97		pCi/g				90.7	0	2.04 g	
LCS	LCS	10/23/20	10/23/20	Neptunium-237	2	1.11	0.126	pCi/g		0.0347	0.05	103	0	2.04 g	
LCS	LCS	10/23/20	10/23/20	Americium-243 Tracer	2	103		pCi/g				96.1	0	2.04 g	
MB	MB	10/23/20	10/23/20	Americium-243 Tracer	2	108		pCi/g				101	0	2.04 g	
MB	MB	10/23/20	10/23/20	Neptunium-237	2	0.00295	0.0147	pCi/g	U	0.0295	0.05			0	2.04 g
6-NE-F-28-C	SAMPLE	09/18/20	10/22/20	Plutonium-242 Tracer	3	1.3	0.12	pCi/g		0.0481		82	0	1.21 g	
6-NE-F-28-C	SAMPLE	09/18/20	10/22/20	Plutonium-238	3	-0.00335	0.0148	pCi/g	U	0.0316	0.05			0	1.21 g
6-NE-F-28-C	SAMPLE	09/18/20	10/22/20	Plutonium-239/240	3	0.0047	0.0184	pCi/g	U	0.0342	0.05			0	1.21 g
6-NE-F-28-C	DUP	09/18/20	10/22/20	Plutonium-242 Tracer	3	1.42	0.107	pCi/g		0.0399		89.2	0	1.21 g	
6-NE-F-28-C	DUP	09/18/20	10/22/20	Plutonium-238	3	0.00827	0.0104	pCi/g	U	0.0148	0.05			0	1.21 g
6-NE-F-28-C	DUP	09/18/20	10/22/20	Plutonium-239/240	3	0.0103	0.0136	pCi/g	U	0.0217	0.05			0	1.21 g
6-NE-F-28-C	MS	09/18/20	10/22/20	Plutonium-239/240	3	0.816	0.0728	pCi/g		0.0272	0.05	98	0	1.21 g	
6-NE-F-28-C	MS	09/18/20	10/22/20	Plutonium-242 Tracer	3	1.42	0.1	pCi/g		0.0237		89.5	0	1.21 g	
6-NE-W-E-53-M	SAMPLE	09/18/20	10/22/20	Plutonium-242 Tracer	3	1.21	0.116	pCi/g		0.0458		75.6	1.04	1.2 g	
6-NE-W-E-53-M	SAMPLE	09/18/20	10/22/20	Plutonium-238	3	-0.00516	0.013	pCi/g	U	0.0291	0.05		1.04	1.2 g	
6-NE-W-E-53-M	SAMPLE	09/18/20	10/22/20	Plutonium-239/240	3	-0.00691	0.00967	pCi/g	U	0.0249	0.05		1.04	1.2 g	
6-NE-W-E-53-M	DUP	09/18/20	10/22/20	Plutonium-242 Tracer	3	1.31	0.108	pCi/g		0.0174		81.4	0	1.2 g	
6-NE-W-E-53-M	DUP	09/18/20	10/22/20	Plutonium-238	3	0.000748	0.0104	pCi/g	U	0.0209	0.05		0	1.2 g	
6-NE-W-E-53-M	DUP	09/18/20	10/22/20	Plutonium-239/240	3	0.000224	0.00941	pCi/g	U	0.0193	0.05		0	1.2 g	
6-NE-W-E-53-M	MS	09/18/20	10/22/20	Plutonium-239/240	3	0.917	0.11	pCi/g		0.0103	0.05	110	0	1.2 g	
6-NE-W-E-53-M	MS	09/18/20	10/22/20	Plutonium-242 Tracer	3	1.36	0.146	pCi/g		0.0272		84.7	0	1.2 g	
6NW-W-N-49-C	SAMPLE	09/18/20	10/22/20	Plutonium-242 Tracer	3	1.23	0.122	pCi/g		0.0411		76.7	0	1.2 g	
6NW-W-N-49-C	SAMPLE	09/18/20	10/22/20	Plutonium-238	3	0.0242	0.0194	pCi/g	U	0.0261	0.05		0	1.2 g	
6NW-W-N-49-C	SAMPLE	09/18/20	10/22/20	Plutonium-239/240	3	0.00587	0.0178	pCi/g	U	0.0326	0.05		0	1.2 g	
6NW-W-N-49-C	DUP	09/18/20	10/22/20	Plutonium-242 Tracer	3	1.39	0.116	pCi/g		0.0243		86.6	0	1.2 g	
6NW-W-N-49-C	DUP	09/18/20	10/22/20	Plutonium-238	3	0.0093	0.0113	pCi/g	U	0.0145	0.05		0	1.2 g	
6NW-W-N-49-C	DUP	09/18/20	10/22/20	Plutonium-239/240	3	-0.00938	0.00916	pCi/g	U	0.026	0.05		0	1.2 g	
6NW-W-N-49-C	MS	09/18/20	10/22/20	Plutonium-239/240	3	0.852	0.0757	pCi/g		0.0179	0.05	101	0	1.2 g	
6NW-W-N-49-C	MS	09/18/20	10/22/20	Plutonium-242 Tracer	3	1.44	0.103	pCi/g		0.0161		89.9	0	1.2 g	

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
6NW-W-W-22-C	SAMPLE	09/17/20	10/22/20	Plutonium-242 Tracer	3	1.21	0.119	pCi/g		0.0322		77.1		0	1.22 g
6NW-W-W-22-C	SAMPLE	09/17/20	10/22/20	Plutonium-238	3	-0.0124	0.0158	pCi/g	U	0.0374	0.05			0	1.22 g
6NW-W-W-22-C	SAMPLE	09/17/20	10/22/20	Plutonium-239/240	3	-0.0024	0.0137	pCi/g	U	0.0293	0.05			0	1.22 g
6NW-W-W-22-C	DUP	09/17/20	10/22/20	Plutonium-242 Tracer	3	1.36	0.108	pCi/g		0.0349		86.5		0	1.22 g
6NW-W-W-22-C	DUP	09/17/20	10/22/20	Plutonium-238	3	-0.00355	0.00792	pCi/g	U	0.0195	0.05			0	1.22 g
6NW-W-W-22-C	DUP	09/17/20	10/22/20	Plutonium-239/240	3	0.00234	0.0131	pCi/g	U	0.0252	0.05			0	1.22 g
6NW-W-W-22-C	MS	09/17/20	10/22/20	Plutonium-239/240	3	0.803	0.0733	pCi/g		0.0192	0.05	97.7		0	1.22 g
6NW-W-W-22-C	MS	09/17/20	10/22/20	Plutonium-242 Tracer	3	1.32	0.102	pCi/g		0.0205		84		0	1.22 g
LCS	LCS	10/24/20	10/24/20	Plutonium-239/240	3	1.01	0.103	pCi/g		0.0299	0.05	123		0	1.22 g
LCS	LCS	10/24/20	10/24/20	Plutonium-242 Tracer	3	1.22	0.128	pCi/g		0.0339		77.7		0	1.22 g
MB	MB	10/22/20	10/22/20	Plutonium-242 Tracer	3	1.19	0.114	pCi/g		0.0317		75.7		0	1.22 g
MB	MB	10/22/20	10/22/20	Plutonium-238	3	0.00839	0.00966	pCi/g		0.00629	0.05			0	1.22 g
MB	MB	10/22/20	10/22/20	Plutonium-239/240	3	-0.00579	0.0121	pCi/g	U	0.028	0.05			0	1.22 g
6-NE-F-28-C	SAMPLE	09/18/20	10/22/20	Uranium-232 Tracer	4	2.78	0.144	pCi/g		0.0474		103		0	0.755 g
6-NE-F-28-C	SAMPLE	09/18/20	10/22/20	Uranium-233/234	4	0.332	0.055	pCi/g		0.0435	1			0	0.755 g
6-NE-F-28-C	SAMPLE	09/18/20	10/22/20	Uranium-235/236	4	0.0254	0.0176	pCi/g		0.0216	0.05			0	0.755 g
6-NE-F-28-C	SAMPLE	09/18/20	10/22/20	Uranium-238	4	0.409	0.0572	pCi/g		0.0281	1			0	0.755 g
6-NE-F-28-C	DUP	09/18/20	10/22/20	Uranium-232 Tracer	4	2.55	0.15	pCi/g		0.0569		94.4		0	0.755 g
6-NE-F-28-C	DUP	09/18/20	10/22/20	Uranium-233/234	4	0.39	0.0587	pCi/g		0.034	1			0	0.755 g
6-NE-F-28-C	DUP	09/18/20	10/22/20	Uranium-235/236	4	0.0336	0.0184	pCi/g		0.016	0.05			0	0.755 g
6-NE-F-28-C	DUP	09/18/20	10/22/20	Uranium-238	4	0.322	0.0525	pCi/g		0.0257	1			0	0.755 g
6-NE-F-28-C	MS	09/18/20	10/22/20	Uranium-235/236	4	0.78	0.0856	pCi/g		0.00729	0.05	94.6		0	0.755 g
6-NE-F-28-C	MS	09/18/20	10/22/20	Uranium-232 Tracer	4	2.57	0.159	pCi/g		0.0232		95.2		0	0.755 g
6-NE-W-E-53-M	SAMPLE	09/18/20	10/26/20	Uranium-232 Tracer	4	2.76	0.158	pCi/g		0.0318		101	1.04	0.749 g	
6-NE-W-E-53-M	SAMPLE	09/18/20	10/26/20	Uranium-233/234	4	0.358	0.0593	pCi/g		0.0315	1			1.04	0.749 g
6-NE-W-E-53-M	SAMPLE	09/18/20	10/26/20	Uranium-235/236	4	0.0214	0.0155	pCi/g		0.00713	0.05			1.04	0.749 g
6-NE-W-E-53-M	SAMPLE	09/18/20	10/26/20	Uranium-238	4	0.379	0.0609	pCi/g		0.0318	1			1.04	0.749 g
6-NE-W-E-53-M	DUP	09/18/20	10/22/20	Uranium-232 Tracer	4	2.6	0.153	pCi/g		0.0663		95.5		0	0.749 g
6-NE-W-E-53-M	DUP	09/18/20	10/22/20	Uranium-233/234	4	0.391	0.062	pCi/g		0.0483	1			0	0.749 g
6-NE-W-E-53-M	DUP	09/18/20	10/22/20	Uranium-235/236	4	-3.89E-09	0.0204	pCi/g	U	0.0391	0.05			0	0.749 g
6-NE-W-E-53-M	DUP	09/18/20	10/22/20	Uranium-238	4	0.409	0.0603	pCi/g		0.0342	1			0	0.749 g
6-NE-W-E-53-M	MS	09/18/20	10/22/20	Uranium-235/236	4	0.875	0.0949	pCi/g		0.0202	0.05	106		0	0.749 g
6-NE-W-E-53-M	MS	09/18/20	10/22/20	Uranium-232 Tracer	4	2.54	0.168	pCi/g		0.0426		93.2		0	0.749 g
6NW-W-N-49-C	SAMPLE	09/18/20	10/22/20	Uranium-232 Tracer	4	2.45	0.165	pCi/g		0.0636		90.4		0	0.751 g
6NW-W-N-49-C	SAMPLE	09/18/20	10/22/20	Uranium-233/234	4	0.882	0.0953	pCi/g		0.0459	1			0	0.751 g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

6-EPA 906.0 Mod.

5-DOE HASL 300, 4.5.2.3/Ga-01-R

7-EPA EERF C-01 Mod.

1-DOE EML HASL-300, Am-05-RC Mod.
2-ASTM C 1475-00 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
6NW-W-N-49-C	SAMPLE	09/18/20	10/22/20	Uranium-235/236	4	0.0302	0.0197	pCi/g		0.0193	0.05			0	0.751 g
6NW-W-N-49-C	SAMPLE	09/18/20	10/22/20	Uranium-238	4	0.962	0.0971	pCi/g		0.0241	1			0	0.751 g
6NW-W-N-49-C	DUP	09/18/20	10/22/20	Uranium-232 Tracer	4	2.54	0.15	pCi/g		0.0455		93.4		0	0.751 g
6NW-W-N-49-C	DUP	09/18/20	10/22/20	Uranium-233/234	4	1	0.0919	pCi/g		0.0374	1			0	0.751 g
6NW-W-N-49-C	DUP	09/18/20	10/22/20	Uranium-235/236	4	0.0569	0.0244	pCi/g		0.0233	0.05			0	0.751 g
6NW-W-N-49-C	DUP	09/18/20	10/22/20	Uranium-238	4	0.977	0.0898	pCi/g		0.0259	1			0	0.751 g
6NW-W-N-49-C	MS	09/18/20	10/22/20	Uranium-235/236	4	0.923	0.0978	pCi/g		0.0292	0.05	111		0	0.751 g
6NW-W-N-49-C	MS	09/18/20	10/22/20	Uranium-232 Tracer	4	2.49	0.168	pCi/g		0.0569		91.8		0	0.751 g
6NW-W-W-22-C	SAMPLE	09/17/20	10/22/20	Uranium-232 Tracer	4	2.32	0.133	pCi/g		0.0367		92.9		0	0.815 g
6NW-W-W-22-C	SAMPLE	09/17/20	10/22/20	Uranium-233/234	4	-0.0154	0.0199	pCi/g	U	0.0421	1			0	0.815 g
6NW-W-W-22-C	SAMPLE	09/17/20	10/22/20	Uranium-235/236	4	0.00901	0.0127	pCi/g	U	0.0199	0.05			0	0.815 g
6NW-W-W-22-C	SAMPLE	09/17/20	10/22/20	Uranium-238	4	0.0108	0.0173	pCi/g	U	0.029	1			0	0.815 g
6NW-W-W-22-C	DUP	09/17/20	10/22/20	Uranium-232 Tracer	4	2.06	0.139	pCi/g		0.0387		82.5		0	0.815 g
6NW-W-W-22-C	DUP	09/17/20	10/22/20	Uranium-233/234	4	-0.0121	0.0171	pCi/g	U	0.0375	1			0	0.815 g
6NW-W-W-22-C	DUP	09/17/20	10/22/20	Uranium-235/236	4	0.00392	0.0144	pCi/g	U	0.0263	0.05			0	0.815 g
6NW-W-W-22-C	DUP	09/17/20	10/22/20	Uranium-238	4	-0.00978	0.0184	pCi/g	U	0.0387	1			0	0.815 g
6NW-W-W-22-C	MS	09/17/20	10/22/20	Uranium-235/236	4	0.773	0.0769	pCi/g		0.0188	0.05	103		0	0.815 g
6NW-W-W-22-C	MS	09/17/20	10/22/20	Uranium-232 Tracer	4	2.41	0.14	pCi/g		0.0476		96.4		0	0.815 g
LCS	LCS	10/22/20	10/22/20	Uranium-235/236	4	0.726	0.0831	pCi/g		0.00738	0.05	98.2		0	0.815 g
LCS	LCS	10/22/20	10/22/20	Uranium-232 Tracer	4	2.18	0.154	pCi/g		0.0235		87		0	0.815 g
MB	MB	10/22/20	10/22/20	Uranium-232 Tracer	4	2.38	0.149	pCi/g		0.0596		95.2		0	0.815 g
MB	MB	10/22/20	10/22/20	Uranium-233/234	4	-0.0126	0.0219	pCi/g	U	0.0459	1			0	0.815 g
MB	MB	10/22/20	10/22/20	Uranium-235/236	4	0.0066	0.0143	pCi/g	U	0.0243	0.05			0	0.815 g
MB	MB	10/22/20	10/22/20	Uranium-238	4	0	0.0136	pCi/g	U	0.027	1			0	0.815 g
6-NE-F-7-RS	SAMPLE	09/18/20	10/12/20	Americium-241	5	-0.0654	0.0831	pCi/g	U	0.147				0	47.9 g
6-NE-F-7-RS	SAMPLE	09/18/20	10/12/20	Barium-133	5	-0.0183	0.072	pCi/g	U	0.11				0	47.9 g
6-NE-F-7-RS	SAMPLE	09/18/20	10/12/20	Cadmium-109	5	0.702	1.1	pCi/g	U	1.36				0	47.9 g
6-NE-F-7-RS	SAMPLE	09/18/20	10/12/20	Cerium-144	5	0.0306	0.228	pCi/g	U	0.386				0	47.9 g
6-NE-F-7-RS	SAMPLE	09/18/20	10/12/20	Cesium-137	5	4.2	0.286	pCi/g		0.108	1			0	47.9 g
6-NE-F-7-RS	SAMPLE	09/18/20	10/12/20	Cobalt-57	5	-0.00634	0.0275	pCi/g	U	0.049				0	47.9 g
6-NE-F-7-RS	SAMPLE	09/18/20	10/12/20	Cobalt-60	5	-0.0393	0.0537	pCi/g	U	0.0922				0	47.9 g
6-NE-F-7-RS	SAMPLE	09/18/20	10/12/20	Europium-152	5	0.0886	0.152	pCi/g	U	0.277				0	47.9 g
6-NE-F-7-RS	SAMPLE	09/18/20	10/12/20	Lead-210	5	0.665	1.25	pCi/g	U	1.21				0	47.9 g
6-NE-F-7-RS	SAMPLE	09/18/20	10/12/20	Manganese-54	5	0.0681	0.0528	pCi/g	U	0.118				0	47.9 g
6-NE-F-7-RS	SAMPLE	09/18/20	10/12/20	Mercury-203	5	0.00408	0.0585	pCi/g	U	0.103				0	47.9 g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

6-EPA 906.0 Mod.

5-DOE HASL 300, 4.5.2.3/Ga-01-R

7-EPA EERF C-01 Mod.

1-DOE EML HASL-300, Am-05-RC Mod.
2-ASTM C 1475-00 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

Appendix A
Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
6-NE-F-7-RS	SAMPLE	09/18/20	10/12/20	Sodium-22	5	-0.0315	0.0641	pCi/g	U	0.117			0	47.9	g
6-NE-F-7-RS	SAMPLE	09/18/20	10/12/20	Yttrium-88	5	-0.0469	0.0732	pCi/g	U	0.123			0	47.9	g
6-NE-F-7-RS	SAMPLE	09/18/20	10/12/20	Zinc-65	5	0.0533	0.147	pCi/g	U	0.275			0	47.9	g
6NE-W-E-8-C	SAMPLE	09/17/20	10/12/20	Americium-241	5	0.213	0.576	pCi/g	U	0.965			0	13.1	g
6NE-W-E-8-C	SAMPLE	09/17/20	10/12/20	Barium-133	5	0.0364	0.137	pCi/g	U	0.228			0	13.1	g
6NE-W-E-8-C	SAMPLE	09/17/20	10/12/20	Cadmium-109	5	0.124	2.39	pCi/g	U	3.9			0	13.1	g
6NE-W-E-8-C	SAMPLE	09/17/20	10/12/20	Cerium-144	5	0.15	0.572	pCi/g	U	1.06			0	13.1	g
6NE-W-E-8-C	SAMPLE	09/17/20	10/12/20	Cesium-137	5	-0.143	0.104	pCi/g	U	0.155	1		0	13.1	g
6NE-W-E-8-C	SAMPLE	09/17/20	10/12/20	Cobalt-57	5	-0.0209	0.0766	pCi/g	U	0.138			0	13.1	g
6NE-W-E-8-C	SAMPLE	09/17/20	10/12/20	Cobalt-60	5	-0.0933	0.129	pCi/g	U	0.222			0	13.1	g
6NE-W-E-8-C	SAMPLE	09/17/20	10/12/20	Europium-152	5	-0.0392	0.281	pCi/g	U	0.513			0	13.1	g
6NE-W-E-8-C	SAMPLE	09/17/20	10/12/20	Lead-210	5	-16.7	22.8	pCi/g	U	36.8			0	13.1	g
6NE-W-E-8-C	SAMPLE	09/17/20	10/12/20	Manganese-54	5	-0.052	0.119	pCi/g	U	0.18			0	13.1	g
6NE-W-E-8-C	SAMPLE	09/17/20	10/12/20	Mercury-203	5	0.108	0.14	pCi/g	U	0.255			0	13.1	g
6NE-W-E-8-C	SAMPLE	09/17/20	10/12/20	Sodium-22	5	-0.0336	0.118	pCi/g	U	0.208			0	13.1	g
6NE-W-E-8-C	SAMPLE	09/17/20	10/12/20	Yttrium-88	5	-0.0173	0.112	pCi/g	U	0.222			0	13.1	g
6NE-W-E-8-C	SAMPLE	09/17/20	10/12/20	Zinc-65	5	-0.174	0.27	pCi/g	U	0.452			0	13.1	g
6NE-W-N-8-C	SAMPLE	09/17/20	10/12/20	Americium-241	5	0.0845	0.287	pCi/g	U	0.55			0	14.7	g
6NE-W-N-8-C	SAMPLE	09/17/20	10/12/20	Barium-133	5	-0.0266	0.0921	pCi/g	U	0.169			0	14.7	g
6NE-W-N-8-C	SAMPLE	09/17/20	10/12/20	Cadmium-109	5	-0.63	1.3	pCi/g	U	2.08			0	14.7	g
6NE-W-N-8-C	SAMPLE	09/17/20	10/12/20	Cerium-144	5	-0.348	0.39	pCi/g	U	0.635			0	14.7	g
6NE-W-N-8-C	SAMPLE	09/17/20	10/12/20	Cesium-137	5	-0.00361	0.0786	pCi/g	U	0.15	1		0	14.7	g
6NE-W-N-8-C	SAMPLE	09/17/20	10/12/20	Cobalt-57	5	-0.00445	0.0454	pCi/g	U	0.0813			0	14.7	g
6NE-W-N-8-C	SAMPLE	09/17/20	10/12/20	Cobalt-60	5	0.0825	0.0933	pCi/g	U	0.206			0	14.7	g
6NE-W-N-8-C	SAMPLE	09/17/20	10/12/20	Europium-152	5	0.0351	0.193	pCi/g	U	0.377			0	14.7	g
6NE-W-N-8-C	SAMPLE	09/17/20	10/12/20	Lead-210	5	2.21	8.43	pCi/g	U	16.3			0	14.7	g
6NE-W-N-8-C	SAMPLE	09/17/20	10/12/20	Manganese-54	5	-0.0105	0.0839	pCi/g	U	0.165			0	14.7	g
6NE-W-N-8-C	SAMPLE	09/17/20	10/12/20	Mercury-203	5	-0.0505	0.0817	pCi/g	U	0.147			0	14.7	g
6NE-W-N-8-C	SAMPLE	09/17/20	10/12/20	Sodium-22	5	0.0377	0.0808	pCi/g	U	0.186			0	14.7	g
6NE-W-N-8-C	SAMPLE	09/17/20	10/12/20	Yttrium-88	5	0.0324	0.13	pCi/g	U	0.288			0	14.7	g
6NE-W-N-8-C	SAMPLE	09/17/20	10/12/20	Zinc-65	5	0.077	0.169	pCi/g	U	0.377			0	14.7	g
6NW-W-W-17-M	SAMPLE	09/18/20	10/12/20	Americium-241	5	-0.0816	0.211	pCi/g	U	0.347			0	23.3	g
6NW-W-W-17-M	SAMPLE	09/18/20	10/12/20	Barium-133	5	-0.0493	0.069	pCi/g	U	0.106			0	23.3	g
6NW-W-W-17-M	SAMPLE	09/18/20	10/12/20	Cadmium-109	5	0.839	1.28	pCi/g	U	1.72			0	23.3	g
6NW-W-W-17-M	SAMPLE	09/18/20	10/12/20	Cerium-144	5	-0.108	0.247	pCi/g	U	0.424			0	23.3	g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

6-EPA 906.0 Mod.

5-DOE HASL 300, 4.5.2.3/Ga-01-R

7-EPA EERF C-01 Mod.

*Key
1-DOE EML HASL-300, Am-05-RC Mod.
2-ASTM C 1475-00 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
6NW-W-W-17-M	SAMPLE	09/18/20	10/12/20	Cesium-137	5	-0.0283	0.0608	pCi/g	U	0.0926	1		0	23.3 g	
6NW-W-W-17-M	SAMPLE	09/18/20	10/12/20	Cobalt-57	5	-0.00314	0.0293	pCi/g	U	0.0524			0	23.3 g	
6NW-W-W-17-M	SAMPLE	09/18/20	10/12/20	Cobalt-60	5	-0.0109	0.0584	pCi/g	U	0.116			0	23.3 g	
6NW-W-W-17-M	SAMPLE	09/18/20	10/12/20	Europium-152	5	0.00615	0.138	pCi/g	U	0.264			0	23.3 g	
6NW-W-W-17-M	SAMPLE	09/18/20	10/12/20	Lead-210	5	-1.05	5.93	pCi/g	U	10.4			0	23.3 g	
6NW-W-W-17-M	SAMPLE	09/18/20	10/12/20	Manganese-54	5	0.048	0.0418	pCi/g	U	0.102			0	23.3 g	
6NW-W-W-17-M	SAMPLE	09/18/20	10/12/20	Mercury-203	5	0.00763	0.0666	pCi/g	U	0.117			0	23.3 g	
6NW-W-W-17-M	SAMPLE	09/18/20	10/12/20	Sodium-22	5	0.0405	0.05	pCi/g	U	0.124			0	23.3 g	
6NW-W-W-17-M	SAMPLE	09/18/20	10/12/20	Yttrium-88	5	-0.0711	0.0875	pCi/g	U	0.138			0	23.3 g	
6NW-W-W-17-M	SAMPLE	09/18/20	10/12/20	Zinc-65	5	-0.0978	0.15	pCi/g	U	0.222			0	23.3 g	
6NW-W-W-17-M	DUP	09/18/20	10/12/20	Americium-241	5	0.0823	0.437	pCi/g	U	0.757			0	23.3 g	
6NW-W-W-17-M	DUP	09/18/20	10/12/20	Barium-133	5	-0.0208	0.0861	pCi/g	U	0.136			0	23.3 g	
6NW-W-W-17-M	DUP	09/18/20	10/12/20	Cadmium-109	5	0.491	2.96	pCi/g	U	3.22			0	23.3 g	
6NW-W-W-17-M	DUP	09/18/20	10/12/20	Cerium-144	5	-0.143	0.385	pCi/g	U	0.683			0	23.3 g	
6NW-W-W-17-M	DUP	09/18/20	10/12/20	Cesium-137	5	-0.0205	0.0808	pCi/g	U	0.138	1		0	23.3 g	
6NW-W-W-17-M	DUP	09/18/20	10/12/20	Cobalt-57	5	0.0273	0.0489	pCi/g	U	0.0911			0	23.3 g	
6NW-W-W-17-M	DUP	09/18/20	10/12/20	Cobalt-60	5	0.00104	0.0866	pCi/g	U	0.162			0	23.3 g	
6NW-W-W-17-M	DUP	09/18/20	10/12/20	Europium-152	5	-0.0191	0.199	pCi/g	U	0.359			0	23.3 g	
6NW-W-W-17-M	DUP	09/18/20	10/12/20	Lead-210	5	0	27.4	pCi/g	UI	16.8			0	23.3 g	
6NW-W-W-17-M	DUP	09/18/20	10/12/20	Manganese-54	5	0.0929	0.0788	pCi/g	U	0.144			0	23.3 g	
6NW-W-W-17-M	DUP	09/18/20	10/12/20	Mercury-203	5	0.0806	0.156	pCi/g	U	0.141			0	23.3 g	
6NW-W-W-17-M	DUP	09/18/20	10/12/20	Sodium-22	5	0.0168	0.0887	pCi/g	U	0.158			0	23.3 g	
6NW-W-W-17-M	DUP	09/18/20	10/12/20	Yttrium-88	5	-0.0606	0.0786	pCi/g	U	0.135			0	23.3 g	
6NW-W-W-17-M	DUP	09/18/20	10/12/20	Zinc-65	5	-0.0463	0.225	pCi/g	U	0.335			0	23.3 g	
6NW-W-W-9-M	SAMPLE	09/18/20	10/12/20	Americium-241	5	0.126	0.142	pCi/g	U	0.249			0	25.1 g	
6NW-W-W-9-M	SAMPLE	09/18/20	10/12/20	Barium-133	5	0.0695	0.0666	pCi/g	U	0.122			0	25.1 g	
6NW-W-W-9-M	SAMPLE	09/18/20	10/12/20	Cadmium-109	5	0	1.63	pCi/g	UI	1.67			0	25.1 g	
6NW-W-W-9-M	SAMPLE	09/18/20	10/12/20	Cerium-144	5	-0.0556	0.311	pCi/g	U	0.482			0	25.1 g	
6NW-W-W-9-M	SAMPLE	09/18/20	10/12/20	Cesium-137	5	-9.73E-05	0.0621	pCi/g	U	0.118	1		0	25.1 g	
6NW-W-W-9-M	SAMPLE	09/18/20	10/12/20	Cobalt-57	5	0.0198	0.0355	pCi/g	U	0.0599			0	25.1 g	
6NW-W-W-9-M	SAMPLE	09/18/20	10/12/20	Cobalt-60	5	-0.00045	0.0607	pCi/g	U	0.122			0	25.1 g	
6NW-W-W-9-M	SAMPLE	09/18/20	10/12/20	Europium-152	5	0.0576	0.173	pCi/g	U	0.302			0	25.1 g	
6NW-W-W-9-M	SAMPLE	09/18/20	10/12/20	Lead-210	5	0.719	4.5	pCi/g	U	3.83			0	25.1 g	
6NW-W-W-9-M	SAMPLE	09/18/20	10/12/20	Manganese-54	5	-0.0166	0.069	pCi/g	U	0.125			0	25.1 g	
6NW-W-W-9-M	SAMPLE	09/18/20	10/12/20	Mercury-203	5	-0.0237	0.0669	pCi/g	U	0.119			0	25.1 g	

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Appendix A
Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	%	Sample Aliquot	Aliquot Units
												Moisture			
6NW-W-W-9-M	SAMPLE	09/18/20	10/12/20	Sodium-22	5	0.0522	0.087	pCi/g	U	0.164				0	25.1 g
6NW-W-W-9-M	SAMPLE	09/18/20	10/12/20	Yttrium-88	5	-0.0335	0.0777	pCi/g	U	0.142				0	25.1 g
6NW-W-W-9-M	SAMPLE	09/18/20	10/12/20	Zinc-65	5	0.0751	0.179	pCi/g	U	0.312				0	25.1 g
LCS	LCS	10/12/20	10/12/20	Americium-241	5	663	9.83	pCi/g		4.19		106		0	47.9 g
LCS	LCS	10/12/20	10/12/20	Cesium-137	5	202	3.84	pCi/g		0.784	1	108		0	47.9 g
LCS	LCS	10/12/20	10/12/20	Cobalt-60	5	81	3.04	pCi/g		0.595		107		0	47.9 g
MB	MB	10/12/20	10/12/20	Americium-241	5	0.034	0.137	pCi/g	U	0.245				0	47.9 g
MB	MB	10/12/20	10/12/20	Barium-133	5	0.0493	0.0297	pCi/g	U	0.0534				0	47.9 g
MB	MB	10/12/20	10/12/20	Cadmium-109	5	-0.607	0.506	pCi/g	U	0.775				0	47.9 g
MB	MB	10/12/20	10/12/20	Cerium-144	5	0.0113	0.101	pCi/g	U	0.179				0	47.9 g
MB	MB	10/12/20	10/12/20	Cesium-137	5	0.0145	0.0214	pCi/g	U	0.0456	1			0	47.9 g
MB	MB	10/12/20	10/12/20	Cobalt-57	5	-0.00439	0.0129	pCi/g	U	0.0217				0	47.9 g
MB	MB	10/12/20	10/12/20	Cobalt-60	5	0.00528	0.0385	pCi/g	U	0.0704				0	47.9 g
MB	MB	10/12/20	10/12/20	Europium-152	5	0.00707	0.0612	pCi/g	U	0.115				0	47.9 g
MB	MB	10/12/20	10/12/20	Lead-210	5	-1.48	4.51	pCi/g	U	7.43				0	47.9 g
MB	MB	10/12/20	10/12/20	Manganese-54	5	-0.0139	0.0317	pCi/g	U	0.0468				0	47.9 g
MB	MB	10/12/20	10/12/20	Mercury-203	5	0.000783	0.0172	pCi/g	U	0.0324				0	47.9 g
MB	MB	10/12/20	10/12/20	Sodium-22	5	0.0031	0.0275	pCi/g	U	0.0591				0	47.9 g
MB	MB	10/12/20	10/12/20	Yttrium-88	5	0.000458	0.0233	pCi/g	U	0.0561				0	47.9 g
MB	MB	10/12/20	10/12/20	Zinc-65	5	-0.0449	0.068	pCi/g	U	0.113				0	47.9 g
10-W-W-13-C	SAMPLE	09/21/20	10/15/20	Strontium Carrier	8	3.6	mg					78.3		0	6.38 g
10-W-W-13-C	SAMPLE	09/21/20	10/15/20	Strontium-90	8	-0.038	0.0333	pCi/g	U	0.0775	0.1			0	6.38 g
10-W-W-13-C	DUP	09/21/20	10/15/20	Strontium Carrier	8	3.3	mg					71.7		0	6.75 g
10-W-W-13-C	DUP	09/21/20	10/15/20	Strontium-90	8	0.0186	0.0504	pCi/g	U	0.0909	0.1			0	6.75 g
10-W-W-13-C	MS	09/21/20	10/15/20	Strontium-90	8	14.8	0.882	pCi/g		0.398	0.1	112		0	1.65 g
10-W-W-13-C	MS	09/21/20	10/15/20	Strontium Carrier	8	3.7	mg					80.4		0	1.65 g
9-F-17-C	SAMPLE	09/21/20	10/15/20	Strontium Carrier	8	4	mg					87		0	6.34 g
9-F-17-C	SAMPLE	09/21/20	10/15/20	Strontium-90	8	0.0373	0.0468	pCi/g	U	0.0795	0.1			0	6.34 g
9-F-17-C	DUP	09/21/20	10/20/20	Strontium Carrier	8	3.9	mg					84.8		0	6.85 g
9-F-17-C	DUP	09/21/20	10/20/20	Strontium-90	8	0.0121	0.0272	pCi/g	U	0.0481	0.1			0	6.85 g
9-F-17-C	MS	09/21/20	10/15/20	Strontium-90	8	13	0.773	pCi/g		0.364	0.1	112		0	1.88 g
9-F-17-C	MS	09/21/20	10/15/20	Strontium Carrier	8	3.8	mg					82.6		0	1.88 g
9-W-N-6-C	SAMPLE	09/21/20	10/15/20	Strontium Carrier	8	2.6	mg					56.5		0	6.14 g
9-W-N-6-C	SAMPLE	09/21/20	10/15/20	Strontium-90	8	-0.0112	0.0475	pCi/g	U	0.0978	0.1			0	6.14 g
9-W-N-6-C	DUP	09/21/20	10/15/20	Strontium Carrier	8	3	mg					65.2		0	6.71 g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Appendix A
Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
9-W-N-6-C	DUP	09/21/20	10/15/20	Strontium-90	8	-0.00286	0.0452 pCi/g	U	0.0882	0.1				0	6.71 g
9-W-N-6-C	MS	09/21/20	10/15/20	Strontium-90	8	17.2	1.1 pCi/g		0.59	0.1	98.3			0	1.25 g
9-W-N-6-C	MS	09/21/20	10/15/20	Strontium Carrier	8	3.7	mg				80.4			0	1.25 g
9-W-S-21-C	SAMPLE	09/21/20	10/20/20	Strontium Carrier	8	3.6	mg				78.3			0	6.38 g
9-W-S-21-C	SAMPLE	09/21/20	10/20/20	Strontium-90	8	0.0136	0.0331 pCi/g	U	0.0585	0.1				0	6.38 g
9-W-S-21-C	DUP	09/21/20	10/15/20	Strontium Carrier	8	2.6	mg				56.5			0	6.23 g
9-W-S-21-C	DUP	09/21/20	10/15/20	Strontium-90	8	-0.0547	0.0405 pCi/g	U	0.096	0.1				0	6.23 g
9-W-S-21-C	MS	09/21/20	10/15/20	Strontium-90	8	16.2	0.963 pCi/g		0.514	0.1	98.2			0	1.32 g
9-W-S-21-C	MS	09/21/20	10/15/20	Strontium Carrier	8	4.3	mg				93.5			0	1.32 g
LCS	LCS	09/21/20	10/15/20	Strontium-90	8	2.8	0.179 pCi/g		0.0831	0.1	87.9			0	6.85 g
LCS	LCS	09/21/20	10/15/20	Strontium Carrier	8	4.1	mg				89.1			0	6.85 g
MB	MB	09/21/20	10/15/20	Strontium Carrier	8	4.1	mg				89.1			0	6.85 g
MB	MB	09/21/20	10/15/20	Strontium-90	8	-0.00834	0.0384 pCi/g	U	0.0746	0.1				0	6.85 g
6-NE-F-16-RS	SAMPLE	09/18/20	10/14/20	Americium-241	5	0.0349	0.143 pCi/g	U	0.242					1.81	128 g
6-NE-F-16-RS	SAMPLE	09/18/20	10/14/20	Barium-133	5	-0.0241	0.0328 pCi/g	U	0.0505					1.81	128 g
6-NE-F-16-RS	SAMPLE	09/18/20	10/14/20	Cadmium-109	5	0	1.03 pCi/g	U	0.909					1.81	128 g
6-NE-F-16-RS	SAMPLE	09/18/20	10/14/20	Cerium-144	5	-0.117	0.142 pCi/g	U	0.254					1.81	128 g
6-NE-F-16-RS	SAMPLE	09/18/20	10/14/20	Cesium-137	5	0.0107	0.028 pCi/g	U	0.0504	1				1.81	128 g
6-NE-F-16-RS	SAMPLE	09/18/20	10/14/20	Cobalt-57	5	-0.0024	0.0178 pCi/g	U	0.0332					1.81	128 g
6-NE-F-16-RS	SAMPLE	09/18/20	10/14/20	Cobalt-60	5	0.00329	0.0219 pCi/g	U	0.042					1.81	128 g
6-NE-F-16-RS	SAMPLE	09/18/20	10/14/20	Europium-152	5	-0.0146	0.0627 pCi/g	U	0.111					1.81	128 g
6-NE-F-16-RS	SAMPLE	09/18/20	10/14/20	Lead-210	5	3.71	9.3 pCi/g	U	8.15					1.81	128 g
6-NE-F-16-RS	SAMPLE	09/18/20	10/14/20	Manganese-54	5	-0.0232	0.0253 pCi/g	U	0.0429					1.81	128 g
6-NE-F-16-RS	SAMPLE	09/18/20	10/14/20	Mercury-203	5	-0.0009	0.0342 pCi/g	U	0.0598					1.81	128 g
6-NE-F-16-RS	SAMPLE	09/18/20	10/14/20	Sodium-22	5	-0.00611	0.0303 pCi/g	U	0.0471					1.81	128 g
6-NE-F-16-RS	SAMPLE	09/18/20	10/14/20	Yttrium-88	5	0.00369	0.0184 pCi/g	U	0.0381					1.81	128 g
6-NE-F-16-RS	SAMPLE	09/18/20	10/14/20	Zinc-65	5	-0.0812	0.0837 pCi/g	U	0.113					1.81	128 g
6-NE-F-8-RS	SAMPLE	09/18/20	10/14/20	Americium-241	5	-0.0448	0.138 pCi/g	U	0.256					0	144 g
6-NE-F-8-RS	SAMPLE	09/18/20	10/14/20	Barium-133	5	-0.00417	0.0295 pCi/g	U	0.0469					0	144 g
6-NE-F-8-RS	SAMPLE	09/18/20	10/14/20	Cadmium-109	5	0.748	1.41 pCi/g	U	0.992					0	144 g
6-NE-F-8-RS	SAMPLE	09/18/20	10/14/20	Cerium-144	5	0.0254	0.141 pCi/g	U	0.25					0	144 g
6-NE-F-8-RS	SAMPLE	09/18/20	10/14/20	Cesium-137	5	4.98	0.14 pCi/g		0.0399	1				0	144 g
6-NE-F-8-RS	SAMPLE	09/18/20	10/14/20	Cobalt-57	5	0.00306	0.0184 pCi/g	U	0.0328					0	144 g
6-NE-F-8-RS	SAMPLE	09/18/20	10/14/20	Cobalt-60	5	-0.00426	0.0228 pCi/g	U	0.0414					0	144 g
6-NE-F-8-RS	SAMPLE	09/18/20	10/14/20	Europium-152	5	-0.0248	0.0761 pCi/g	U	0.119					0	144 g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
6-NE-F-8-RS	SAMPLE	09/18/20	10/14/20	Lead-210	5	-0.488	4.73	pCi/g	U	9				0	144 g
6-NE-F-8-RS	SAMPLE	09/18/20	10/14/20	Manganese-54	5	-0.0131	0.0208	pCi/g	U	0.0357				0	144 g
6-NE-F-8-RS	SAMPLE	09/18/20	10/14/20	Mercury-203	5	-0.0238	0.0316	pCi/g	U	0.0557				0	144 g
6-NE-F-8-RS	SAMPLE	09/18/20	10/14/20	Sodium-22	5	-0.0103	0.0259	pCi/g	U	0.0459				0	144 g
6-NE-F-8-RS	SAMPLE	09/18/20	10/14/20	Yttrium-88	5	0.0124	0.0198	pCi/g	U	0.0392				0	144 g
6-NE-F-8-RS	SAMPLE	09/18/20	10/14/20	Zinc-65	5	0.0645	0.0748	pCi/g	U	0.0916				0	144 g
LCS	LCS	10/14/20	10/14/20	Americium-241	5	558	11.8	pCi/g		5.73		115		0	115 g
LCS	LCS	10/14/20	10/14/20	Cesium-137	5	165	2.54	pCi/g		0.692	1	101		0	115 g
LCS	LCS	10/14/20	10/14/20	Cobalt-60	5	92.3	2.27	pCi/g		0.481		97.7		0	115 g
MB	MB	10/14/20	10/14/20	Americium-241	5	-0.0189	0.0434	pCi/g	U	0.0843				0	144 g
MB	MB	10/14/20	10/14/20	Barium-133	5	0.0153	0.0264	pCi/g	U	0.0495				0	144 g
MB	MB	10/14/20	10/14/20	Cadmium-109	5	-0.26	0.272	pCi/g	U	0.5				0	144 g
MB	MB	10/14/20	10/14/20	Cerium-144	5	0.034	0.0905	pCi/g	U	0.182				0	144 g
MB	MB	10/14/20	10/14/20	Cesium-137	5	-0.0122	0.0243	pCi/g	U	0.0439	1			0	144 g
MB	MB	10/14/20	10/14/20	Cobalt-57	5	-0.00106	0.0125	pCi/g	U	0.0241				0	144 g
MB	MB	10/14/20	10/14/20	Cobalt-60	5	0.012	0.0307	pCi/g	U	0.066				0	144 g
MB	MB	10/14/20	10/14/20	Europium-152	5	0.00811	0.0626	pCi/g	U	0.117				0	144 g
MB	MB	10/14/20	10/14/20	Lead-210	5	-0.117	0.413	pCi/g	U	0.778				0	144 g
MB	MB	10/14/20	10/14/20	Manganese-54	5	-0.00453	0.023	pCi/g	U	0.0432				0	144 g
MB	MB	10/14/20	10/14/20	Mercury-203	5	0.00183	0.0188	pCi/g	U	0.0353				0	144 g
MB	MB	10/14/20	10/14/20	Sodium-22	5	-0.00371	0.0242	pCi/g	U	0.049				0	144 g
MB	MB	10/14/20	10/14/20	Yttrium-88	5	-0.00459	0.0167	pCi/g	U	0.0351				0	144 g
MB	MB	10/14/20	10/14/20	Zinc-65	5	0.077	0.0836	pCi/g	U	0.081				0	144 g
10-W-W-13-C	SAMPLE	09/21/20	10/12/20	Americium-241	5	-0.12	0.223	pCi/g	U	0.345				0	45.2 g
10-W-W-13-C	SAMPLE	09/21/20	10/12/20	Barium-133	5	0.0113	0.0437	pCi/g	U	0.0754				0	45.2 g
10-W-W-13-C	SAMPLE	09/21/20	10/12/20	Cadmium-109	5	0	1.67	pCi/g	U	1.34				0	45.2 g
10-W-W-13-C	SAMPLE	09/21/20	10/12/20	Cerium-144	5	0.0516	0.199	pCi/g	U	0.347				0	45.2 g
10-W-W-13-C	SAMPLE	09/21/20	10/12/20	Cesium-137	5	0.0133	0.0426	pCi/g	U	0.0803	1			0	45.2 g
10-W-W-13-C	SAMPLE	09/21/20	10/12/20	Cobalt-57	5	-0.00106	0.0254	pCi/g	U	0.0436				0	45.2 g
10-W-W-13-C	SAMPLE	09/21/20	10/12/20	Cobalt-60	5	0.0326	0.0241	pCi/g	U	0.0698				0	45.2 g
10-W-W-13-C	SAMPLE	09/21/20	10/12/20	Europium-152	5	0.00855	0.1	pCi/g	U	0.17				0	45.2 g
10-W-W-13-C	SAMPLE	09/21/20	10/12/20	Lead-210	5	-1.77	7.51	pCi/g	U	12.4				0	45.2 g
10-W-W-13-C	SAMPLE	09/21/20	10/12/20	Manganese-54	5	0.0261	0.0472	pCi/g	U	0.0905				0	45.2 g
10-W-W-13-C	SAMPLE	09/21/20	10/12/20	Mercury-203	5	-0.00354	0.0406	pCi/g	U	0.0749				0	45.2 g
10-W-W-13-C	SAMPLE	09/21/20	10/12/20	Sodium-22	5	0.00386	0.0477	pCi/g	U	0.094				0	45.2 g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Appendix A
Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
10-W-W-13-C	SAMPLE	09/21/20	10/12/20	Yttrium-88	5	-0.0193	0.0376	pCi/g	U	0.067			0	45.2 g	
10-W-W-13-C	SAMPLE	09/21/20	10/12/20	Zinc-65	5	-0.0802	0.112	pCi/g	U	0.195			0	45.2 g	
10-W-W-13-C	DUP	09/21/20	10/12/20	Americium-241	5	0.0299	0.358	pCi/g	U	0.58			0	45.2 g	
10-W-W-13-C	DUP	09/21/20	10/12/20	Barium-133	5	0.0177	0.0692	pCi/g	U	0.117			0	45.2 g	
10-W-W-13-C	DUP	09/21/20	10/12/20	Cadmium-109	5	0.987	2.51	pCi/g	U	2.49			0	45.2 g	
10-W-W-13-C	DUP	09/21/20	10/12/20	Cerium-144	5	-0.099	0.289	pCi/g	U	0.519			0	45.2 g	
10-W-W-13-C	DUP	09/21/20	10/12/20	Cesium-137	5	0.00228	0.0568	pCi/g	U	0.0909	1		0	45.2 g	
10-W-W-13-C	DUP	09/21/20	10/12/20	Cobalt-57	5	-0.0233	0.0384	pCi/g	U	0.0679			0	45.2 g	
10-W-W-13-C	DUP	09/21/20	10/12/20	Cobalt-60	5	0.0261	0.0518	pCi/g	U	0.112			0	45.2 g	
10-W-W-13-C	DUP	09/21/20	10/12/20	Europium-152	5	-0.0429	0.171	pCi/g	U	0.273			0	45.2 g	
10-W-W-13-C	DUP	09/21/20	10/12/20	Lead-210	5	-1.68	12.1	pCi/g	U	20.1			0	45.2 g	
10-W-W-13-C	DUP	09/21/20	10/12/20	Manganese-54	5	0.0316	0.0595	pCi/g	U	0.117			0	45.2 g	
10-W-W-13-C	DUP	09/21/20	10/12/20	Mercury-203	5	0.00565	0.0691	pCi/g	U	0.121			0	45.2 g	
10-W-W-13-C	DUP	09/21/20	10/12/20	Sodium-22	5	-0.0541	0.0699	pCi/g	U	0.12			0	45.2 g	
10-W-W-13-C	DUP	09/21/20	10/12/20	Yttrium-88	5	0.0398	0.0405	pCi/g	U	0.111			0	45.2 g	
10-W-W-13-C	DUP	09/21/20	10/12/20	Zinc-65	5	0.137	0.164	pCi/g	U	0.298			0	45.2 g	
9-F-17-C	SAMPLE	09/21/20	10/12/20	Americium-241	5	-0.0989	0.131	pCi/g	U	0.234			0	46.5 g	
9-F-17-C	SAMPLE	09/21/20	10/12/20	Barium-133	5	-0.00866	0.0523	pCi/g	U	0.0823			0	46.5 g	
9-F-17-C	SAMPLE	09/21/20	10/12/20	Cadmium-109	5	0.413	1.15	pCi/g	U	1.33			0	46.5 g	
9-F-17-C	SAMPLE	09/21/20	10/12/20	Cerium-144	5	0.137	0.183	pCi/g	U	0.353			0	46.5 g	
9-F-17-C	SAMPLE	09/21/20	10/12/20	Cesium-137	5	0.0174	0.0497	pCi/g	U	0.0995	1		0	46.5 g	
9-F-17-C	SAMPLE	09/21/20	10/12/20	Cobalt-57	5	-0.00764	0.0251	pCi/g	U	0.0428			0	46.5 g	
9-F-17-C	SAMPLE	09/21/20	10/12/20	Cobalt-60	5	0.00916	0.0433	pCi/g	U	0.0989			0	46.5 g	
9-F-17-C	SAMPLE	09/21/20	10/12/20	Europium-152	5	0.00892	0.102	pCi/g	U	0.183			0	46.5 g	
9-F-17-C	SAMPLE	09/21/20	10/12/20	Lead-210	5	-2.8	4.03	pCi/g	U	6.87			0	46.5 g	
9-F-17-C	SAMPLE	09/21/20	10/12/20	Manganese-54	5	-0.0209	0.0545	pCi/g	U	0.0963			0	46.5 g	
9-F-17-C	SAMPLE	09/21/20	10/12/20	Mercury-203	5	0.00486	0.0495	pCi/g	U	0.0878			0	46.5 g	
9-F-17-C	SAMPLE	09/21/20	10/12/20	Sodium-22	5	0.0151	0.0609	pCi/g	U	0.129			0	46.5 g	
9-F-17-C	SAMPLE	09/21/20	10/12/20	Yttrium-88	5	-0.032	0.0638	pCi/g	U	0.115			0	46.5 g	
9-F-17-C	SAMPLE	09/21/20	10/12/20	Zinc-65	5	0.0869	0.116	pCi/g	U	0.249			0	46.5 g	
9-F-17-C	DUP	09/21/20	10/12/20	Americium-241	5	-0.0635	0.118	pCi/g	U	0.213			0	46.5 g	
9-F-17-C	DUP	09/21/20	10/12/20	Barium-133	5	-0.0306	0.078	pCi/g	U	0.119			0	46.5 g	
9-F-17-C	DUP	09/21/20	10/12/20	Cadmium-109	5	0.881	1.44	pCi/g	U	1.8			0	46.5 g	
9-F-17-C	DUP	09/21/20	10/12/20	Cerium-144	5	-0.031	0.328	pCi/g	U	0.599			0	46.5 g	
9-F-17-C	DUP	09/21/20	10/12/20	Cesium-137	5	0.114	0.126	pCi/g	U	0.164	1		0	46.5 g	

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

6-EPA 906.0 Mod.

5-DOE HASL 300, 4.5.2.3/Ga-01-R

7-EPA EERF C-01 Mod.

*Key
1-DOE EML HASL-300, Am-05-RC Mod.
2-ASTM C 1475-00 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
9-F-17-C	DUP	09/21/20	10/12/20	Cobalt-57	5	0.0243	0.0363	pCi/g	U	0.0725			0	46.5 g	
9-F-17-C	DUP	09/21/20	10/12/20	Cobalt-60	5	0.00479	0.0695	pCi/g	U	0.16			0	46.5 g	
9-F-17-C	DUP	09/21/20	10/12/20	Europium-152	5	-0.184	0.175	pCi/g	U	0.251			0	46.5 g	
9-F-17-C	DUP	09/21/20	10/12/20	Lead-210	5	0.376	1.49	pCi/g	U	1.75			0	46.5 g	
9-F-17-C	DUP	09/21/20	10/12/20	Manganese-54	5	0.0145	0.0791	pCi/g	U	0.162			0	46.5 g	
9-F-17-C	DUP	09/21/20	10/12/20	Mercury-203	5	-0.0644	0.0793	pCi/g	U	0.125			0	46.5 g	
9-F-17-C	DUP	09/21/20	10/12/20	Sodium-22	5	0.0398	0.0953	pCi/g	U	0.217			0	46.5 g	
9-F-17-C	DUP	09/21/20	10/12/20	Yttrium-88	5	-0.052	0.113	pCi/g	U	0.207			0	46.5 g	
9-F-17-C	DUP	09/21/20	10/12/20	Zinc-65	5	0.039	0.198	pCi/g	U	0.39			0	46.5 g	
9-W-N-6-C	SAMPLE	09/21/20	10/12/20	Americium-241	5	0.0663	1.27	pCi/g	U	2.23			0	5.3 g	
9-W-N-6-C	SAMPLE	09/21/20	10/12/20	Barium-133	5	-0.0902	0.258	pCi/g	U	0.451			0	5.3 g	
9-W-N-6-C	SAMPLE	09/21/20	10/12/20	Cadmium-109	5	-6.15	4.7	pCi/g	U	7.09			0	5.3 g	
9-W-N-6-C	SAMPLE	09/21/20	10/12/20	Cerium-144	5	-0.322	1.13	pCi/g	U	1.88			0	5.3 g	
9-W-N-6-C	SAMPLE	09/21/20	10/12/20	Cesium-137	5	-0.0819	0.281	pCi/g	U	0.498	1		0	5.3 g	
9-W-N-6-C	SAMPLE	09/21/20	10/12/20	Cobalt-57	5	-0.0562	0.146	pCi/g	U	0.241			0	5.3 g	
9-W-N-6-C	SAMPLE	09/21/20	10/12/20	Cobalt-60	5	-0.107	0.372	pCi/g	U	0.691			0	5.3 g	
9-W-N-6-C	SAMPLE	09/21/20	10/12/20	Europium-152	5	-0.409	0.634	pCi/g	U	1.06			0	5.3 g	
9-W-N-6-C	SAMPLE	09/21/20	10/12/20	Lead-210	5	-36.4	40.2	pCi/g	U	61.3			0	5.3 g	
9-W-N-6-C	SAMPLE	09/21/20	10/12/20	Manganese-54	5	-0.0989	0.342	pCi/g	U	0.526			0	5.3 g	
9-W-N-6-C	SAMPLE	09/21/20	10/12/20	Mercury-203	5	0.214	0.262	pCi/g	U	0.516			0	5.3 g	
9-W-N-6-C	SAMPLE	09/21/20	10/12/20	Sodium-22	5	-0.167	0.24	pCi/g	U	0.407			0	5.3 g	
9-W-N-6-C	SAMPLE	09/21/20	10/12/20	Yttrium-88	5	0.00464	0.236	pCi/g	U	0.569			0	5.3 g	
9-W-N-6-C	SAMPLE	09/21/20	10/12/20	Zinc-65	5	-0.05	0.641	pCi/g	U	1.21			0	5.3 g	
9-W-N-6-C	DUP	09/21/20	10/12/20	Americium-241	5	-0.244	1.83	pCi/g	U	3.32			0	5.3 g	
9-W-N-6-C	DUP	09/21/20	10/12/20	Barium-133	5	-0.154	0.372	pCi/g	U	0.568			0	5.3 g	
9-W-N-6-C	DUP	09/21/20	10/12/20	Cadmium-109	5	3.59	5.9	pCi/g	U	10.9			0	5.3 g	
9-W-N-6-C	DUP	09/21/20	10/12/20	Cerium-144	5	-0.648	1.75	pCi/g	U	2.93			0	5.3 g	
9-W-N-6-C	DUP	09/21/20	10/12/20	Cesium-137	5	0.0472	0.326	pCi/g	U	0.648	1		0	5.3 g	
9-W-N-6-C	DUP	09/21/20	10/12/20	Cobalt-57	5	-0.166	0.209	pCi/g	U	0.331			0	5.3 g	
9-W-N-6-C	DUP	09/21/20	10/12/20	Cobalt-60	5	-0.107	0.364	pCi/g	U	0.698			0	5.3 g	
9-W-N-6-C	DUP	09/21/20	10/12/20	Europium-152	5	0.218	0.727	pCi/g	U	1.43			0	5.3 g	
9-W-N-6-C	DUP	09/21/20	10/12/20	Lead-210	5	-44.2	77.4	pCi/g	U	135			0	5.3 g	
9-W-N-6-C	DUP	09/21/20	10/12/20	Manganese-54	5	-0.0292	0.282	pCi/g	U	0.545			0	5.3 g	
9-W-N-6-C	DUP	09/21/20	10/12/20	Mercury-203	5	0.179	0.31	pCi/g	U	0.629			0	5.3 g	
9-W-N-6-C	DUP	09/21/20	10/12/20	Sodium-22	5	-0.0882	0.399	pCi/g	U	0.769			0	5.3 g	

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

6-EPA 906.0 Mod.

5-DOE HASL 300, 4.5.2.3/Ga-01-R

7-EPA EERF C-01 Mod.

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

Appendix A
Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
9-W-N-6-C	DUP	09/21/20	10/12/20	Yttrium-88	5	-0.0528	0.345 pCi/g	U	0.74				0	5.3 g	
9-W-N-6-C	DUP	09/21/20	10/12/20	Zinc-65	5	-0.281	0.71 pCi/g	U	1.34				0	5.3 g	
9-W-S-21-C	SAMPLE	09/21/20	10/12/20	Americium-241	5	0.0575	0.159 pCi/g	U	0.305				0	44.2 g	
9-W-S-21-C	SAMPLE	09/21/20	10/12/20	Barium-133	5	-0.0187	0.0391 pCi/g	U	0.0621				0	44.2 g	
9-W-S-21-C	SAMPLE	09/21/20	10/12/20	Cadmium-109	5	0.95	1.34 pCi/g	U	1.12				0	44.2 g	
9-W-S-21-C	SAMPLE	09/21/20	10/12/20	Cerium-144	5	-0.00472	0.156 pCi/g	U	0.257				0	44.2 g	
9-W-S-21-C	SAMPLE	09/21/20	10/12/20	Cesium-137	5	0.068	0.0459 pCi/g		0.0676	1			0	44.2 g	
9-W-S-21-C	SAMPLE	09/21/20	10/12/20	Cobalt-57	5	-0.0014	0.019 pCi/g	U	0.0339				0	44.2 g	
9-W-S-21-C	SAMPLE	09/21/20	10/12/20	Cobalt-60	5	0.00344	0.0471 pCi/g	U	0.0838				0	44.2 g	
9-W-S-21-C	SAMPLE	09/21/20	10/12/20	Europium-152	5	0.0147	0.0835 pCi/g	U	0.147				0	44.2 g	
9-W-S-21-C	SAMPLE	09/21/20	10/12/20	Lead-210	5	-4.18	6.66 pCi/g	U	11.9				0	44.2 g	
9-W-S-21-C	SAMPLE	09/21/20	10/12/20	Manganese-54	5	0.000279	0.0388 pCi/g	U	0.0757				0	44.2 g	
9-W-S-21-C	SAMPLE	09/21/20	10/12/20	Mercury-203	5	0.0049	0.034 pCi/g	U	0.0654				0	44.2 g	
9-W-S-21-C	SAMPLE	09/21/20	10/12/20	Sodium-22	5	-0.0401	0.0473 pCi/g	U	0.0726				0	44.2 g	
9-W-S-21-C	SAMPLE	09/21/20	10/12/20	Yttrium-88	5	-0.0522	0.0432 pCi/g	U	0.0579				0	44.2 g	
9-W-S-21-C	SAMPLE	09/21/20	10/12/20	Zinc-65	5	0.0251	0.095 pCi/g	U	0.174				0	44.2 g	
9-W-S-21-C	DUP	09/21/20	10/12/20	Americium-241	5	0.3	0.283 pCi/g	U	0.519				0	44.2 g	
9-W-S-21-C	DUP	09/21/20	10/12/20	Barium-133	5	-0.0534	0.0692 pCi/g	U	0.103				0	44.2 g	
9-W-S-21-C	DUP	09/21/20	10/12/20	Cadmium-109	5	0.889	1.56 pCi/g	U	1.92				0	44.2 g	
9-W-S-21-C	DUP	09/21/20	10/12/20	Cerium-144	5	0.165	0.281 pCi/g	U	0.536				0	44.2 g	
9-W-S-21-C	DUP	09/21/20	10/12/20	Cesium-137	5	0.0213	0.0558 pCi/g	U	0.105	1			0	44.2 g	
9-W-S-21-C	DUP	09/21/20	10/12/20	Cobalt-57	5	-0.00258	0.0338 pCi/g	U	0.0624				0	44.2 g	
9-W-S-21-C	DUP	09/21/20	10/12/20	Cobalt-60	5	0.0305	0.049 pCi/g	U	0.109				0	44.2 g	
9-W-S-21-C	DUP	09/21/20	10/12/20	Europium-152	5	0.0372	0.144 pCi/g	U	0.266				0	44.2 g	
9-W-S-21-C	DUP	09/21/20	10/12/20	Lead-210	5	-3.64	9.66 pCi/g	U	17.1				0	44.2 g	
9-W-S-21-C	DUP	09/21/20	10/12/20	Manganese-54	5	0.0207	0.048 pCi/g	U	0.0969				0	44.2 g	
9-W-S-21-C	DUP	09/21/20	10/12/20	Mercury-203	5	0.00307	0.0609 pCi/g	U	0.108				0	44.2 g	
9-W-S-21-C	DUP	09/21/20	10/12/20	Sodium-22	5	0.0911	0.0647 pCi/g	U	0.132				0	44.2 g	
9-W-S-21-C	DUP	09/21/20	10/12/20	Yttrium-88	5	0.0507	0.0619 pCi/g	U	0.146				0	44.2 g	
9-W-S-21-C	DUP	09/21/20	10/12/20	Zinc-65	5	0.0521	0.143 pCi/g	U	0.249				0	44.2 g	
LCS	LCS	10/12/20	10/12/20	Americium-241	5	685	12.9 pCi/g		6.39		106	0	46.5 g		
LCS	LCS	10/12/20	10/12/20	Cesium-137	5	213	3.57 pCi/g		0.775	1	110	0	46.5 g		
LCS	LCS	10/12/20	10/12/20	Cobalt-60	5	88	2.88 pCi/g		0.544		113	0	46.5 g		
MB	MB	10/12/20	10/12/20	Americium-241	5	0.00388	0.0265 pCi/g	U	0.0508			0	46.5 g		
MB	MB	10/12/20	10/12/20	Barium-133	5	0.0542	0.0394 pCi/g	U	0.0639			0	46.5 g		

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

6-EPA 906.0 Mod.

5-DOE HASL 300, 4.5.2.3/Ga-01-R

7-EPA EERF C-01 Mod.

*Key
1-DOE EML HASL-300, Am-05-RC Mod.
2-ASTM C 1475-00 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
MB	MB	10/12/20	10/12/20	Cadmium-109	5	0.105	0.413 pCi/g	U	0.479				0	46.5 g	
MB	MB	10/12/20	10/12/20	Cerium-144	5	-0.0581	0.136 pCi/g	U	0.223				0	46.5 g	
MB	MB	10/12/20	10/12/20	Cesium-137	5	0.00922	0.0358 pCi/g	U	0.0668	1			0	46.5 g	
MB	MB	10/12/20	10/12/20	Cobalt-57	5	-0.00198	0.0127 pCi/g	U	0.0231				0	46.5 g	
MB	MB	10/12/20	10/12/20	Cobalt-60	5	0.0165	0.0299 pCi/g	U	0.0709				0	46.5 g	
MB	MB	10/12/20	10/12/20	Europium-152	5	0.0576	0.0643 pCi/g	U	0.131				0	46.5 g	
MB	MB	10/12/20	10/12/20	Lead-210	5	0.273	0.425 pCi/g	U	0.315				0	46.5 g	
MB	MB	10/12/20	10/12/20	Manganese-54	5	0.00878	0.0261 pCi/g	U	0.051				0	46.5 g	
MB	MB	10/12/20	10/12/20	Mercury-203	5	0.00504	0.0206 pCi/g	U	0.0385				0	46.5 g	
MB	MB	10/12/20	10/12/20	Sodium-22	5	-0.00267	0.0276 pCi/g	U	0.0581				0	46.5 g	
MB	MB	10/12/20	10/12/20	Yttrium-88	5	-0.0124	0.0367 pCi/g	U	0.0707				0	46.5 g	
MB	MB	10/12/20	10/12/20	Zinc-65	5	0.0159	0.067 pCi/g	U	0.131				0	46.5 g	
7C-4-C	SAMPLE	09/21/20	10/12/20	Americium-241	5	0.00332	0.533 pCi/g	U	0.903				0	4.41 g	
7C-4-C	SAMPLE	09/21/20	10/12/20	Barium-133	5	-0.14	0.288 pCi/g	U	0.506				0	4.41 g	
7C-4-C	SAMPLE	09/21/20	10/12/20	Cadmium-109	5	-0.708	4.09 pCi/g	U	6.58				0	4.41 g	
7C-4-C	SAMPLE	09/21/20	10/12/20	Cerium-144	5	0.15	1.16 pCi/g	U	2.06				0	4.41 g	
7C-4-C	SAMPLE	09/21/20	10/12/20	Cesium-137	5	0.0124	0.307 pCi/g	U	0.592	1			0	4.41 g	
7C-4-C	SAMPLE	09/21/20	10/12/20	Cobalt-57	5	-0.071	0.161 pCi/g	U	0.241				0	4.41 g	
7C-4-C	SAMPLE	09/21/20	10/12/20	Cobalt-60	5	0.142	0.306 pCi/g	U	0.676				0	4.41 g	
7C-4-C	SAMPLE	09/21/20	10/12/20	Europium-152	5	-0.126	0.78 pCi/g	U	1.31				0	4.41 g	
7C-4-C	SAMPLE	09/21/20	10/12/20	Lead-210	5	-3.66	13 pCi/g	U	21.7				0	4.41 g	
7C-4-C	SAMPLE	09/21/20	10/12/20	Manganese-54	5	-0.0217	0.311 pCi/g	U	0.522				0	4.41 g	
7C-4-C	SAMPLE	09/21/20	10/12/20	Mercury-203	5	-0.13	0.285 pCi/g	U	0.509				0	4.41 g	
7C-4-C	SAMPLE	09/21/20	10/12/20	Sodium-22	5	0.0801	0.285 pCi/g	U	0.598				0	4.41 g	
7C-4-C	SAMPLE	09/21/20	10/12/20	Yttrium-88	5	0.0516	0.28 pCi/g	U	0.645				0	4.41 g	
7C-4-C	SAMPLE	09/21/20	10/12/20	Zinc-65	5	-0.00401	0.759 pCi/g	U	1.43				0	4.41 g	
7C-4-C	DUP	09/21/20	10/12/20	Americium-241	5	2.88	1.91 pCi/g	U	4.32				0	4.41 g	
7C-4-C	DUP	09/21/20	10/12/20	Barium-133	5	0.249	0.541 pCi/g	U	0.954				0	4.41 g	
7C-4-C	DUP	09/21/20	10/12/20	Cadmium-109	5	3.64	9.2 pCi/g	U	16.4				0	4.41 g	
7C-4-C	DUP	09/21/20	10/12/20	Cerium-144	5	-0.765	2.34 pCi/g	U	4.22				0	4.41 g	
7C-4-C	DUP	09/21/20	10/12/20	Cesium-137	5	-0.215	0.408 pCi/g	U	0.692	1			0	4.41 g	
7C-4-C	DUP	09/21/20	10/12/20	Cobalt-57	5	-0.193	0.311 pCi/g	U	0.553				0	4.41 g	
7C-4-C	DUP	09/21/20	10/12/20	Cobalt-60	5	-0.0324	0.473 pCi/g	U	0.935				0	4.41 g	
7C-4-C	DUP	09/21/20	10/12/20	Europium-152	5	-0.177	1.14 pCi/g	U	2.12				0	4.41 g	
7C-4-C	DUP	09/21/20	10/12/20	Lead-210	5	-98.9	84.4 pCi/g	U	137				0	4.41 g	

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

6-EPA 906.0 Mod.

5-DOE HASL 300, 4.5.2.3/Ga-01-R

7-EPA EERF C-01 Mod.

1-DOE EML HASL-300, Am-05-RC Mod.
2-ASTM C 1475-00 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

Appendix A
Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
7C-4-C	DUP	09/21/20	10/12/20	Manganese-54	5	0.168	0.395 pCi/g	U	0.812				0	4.41 g	
7C-4-C	DUP	09/21/20	10/12/20	Mercury-203	5	0.439	0.541 pCi/g	U	1.02				0	4.41 g	
7C-4-C	DUP	09/21/20	10/12/20	Sodium-22	5	-0.288	0.438 pCi/g	U	0.772				0	4.41 g	
7C-4-C	DUP	09/21/20	10/12/20	Yttrium-88	5	-0.327	0.542 pCi/g	U	0.975				0	4.41 g	
7C-4-C	DUP	09/21/20	10/12/20	Zinc-65	5	-0.427	1.22 pCi/g	U	2.15				0	4.41 g	
7-F-4-C	SAMPLE	09/21/20	10/12/20	Americium-241	5	0.0341	0.0854 pCi/g	U	0.137				0	49.6 g	
7-F-4-C	SAMPLE	09/21/20	10/12/20	Barium-133	5	-0.00712	0.0376 pCi/g	U	0.0585				0	49.6 g	
7-F-4-C	SAMPLE	09/21/20	10/12/20	Cadmium-109	5	1.04	0.823 pCi/g	U	1.06				0	49.6 g	
7-F-4-C	SAMPLE	09/21/20	10/12/20	Cerium-144	5	0.0434	0.141 pCi/g	U	0.262				0	49.6 g	
7-F-4-C	SAMPLE	09/21/20	10/12/20	Cesium-137	5	0.0386	0.0347 pCi/g	U	0.0713	1			0	49.6 g	
7-F-4-C	SAMPLE	09/21/20	10/12/20	Cobalt-57	5	0.00913	0.0178 pCi/g	U	0.0337				0	49.6 g	
7-F-4-C	SAMPLE	09/21/20	10/12/20	Cobalt-60	5	0.0134	0.0336 pCi/g	U	0.0689				0	49.6 g	
7-F-4-C	SAMPLE	09/21/20	10/12/20	Europium-152	5	0.0352	0.0777 pCi/g	U	0.144				0	49.6 g	
7-F-4-C	SAMPLE	09/21/20	10/12/20	Lead-210	5	0.55	2.09 pCi/g	U	2.27				0	49.6 g	
7-F-4-C	SAMPLE	09/21/20	10/12/20	Manganese-54	5	0	0.0379 pCi/g	U	0.0563				0	49.6 g	
7-F-4-C	SAMPLE	09/21/20	10/12/20	Mercury-203	5	-0.00076	0.0332 pCi/g	U	0.0593				0	49.6 g	
7-F-4-C	SAMPLE	09/21/20	10/12/20	Sodium-22	5	-0.0173	0.0438 pCi/g	U	0.0762				0	49.6 g	
7-F-4-C	SAMPLE	09/21/20	10/12/20	Yttrium-88	5	-0.0114	0.0351 pCi/g	U	0.0674				0	49.6 g	
7-F-4-C	SAMPLE	09/21/20	10/12/20	Zinc-65	5	0.0377	0.0952 pCi/g	U	0.165				0	49.6 g	
7-F-4-C	DUP	09/21/20	10/12/20	Americium-241	5	0.0344	0.242 pCi/g	U	0.443				0	49.6 g	
7-F-4-C	DUP	09/21/20	10/12/20	Barium-133	5	0.031	0.0443 pCi/g	U	0.0814				0	49.6 g	
7-F-4-C	DUP	09/21/20	10/12/20	Cadmium-109	5	0.795	1.42 pCi/g	U	1.84				0	49.6 g	
7-F-4-C	DUP	09/21/20	10/12/20	Cerium-144	5	0.0992	0.213 pCi/g	U	0.387				0	49.6 g	
7-F-4-C	DUP	09/21/20	10/12/20	Cesium-137	5	-0.0099	0.0493 pCi/g	U	0.079	1			0	49.6 g	
7-F-4-C	DUP	09/21/20	10/12/20	Cobalt-57	5	-0.015	0.0276 pCi/g	U	0.0453				0	49.6 g	
7-F-4-C	DUP	09/21/20	10/12/20	Cobalt-60	5	0.0732	0.0817 pCi/g	U	0.119				0	49.6 g	
7-F-4-C	DUP	09/21/20	10/12/20	Europium-152	5	0.0608	0.1 pCi/g	U	0.196				0	49.6 g	
7-F-4-C	DUP	09/21/20	10/12/20	Lead-210	5	7.09	9.28 pCi/g	U	18				0	49.6 g	
7-F-4-C	DUP	09/21/20	10/12/20	Manganese-54	5	0.0465	0.0534 pCi/g	U	0.108				0	49.6 g	
7-F-4-C	DUP	09/21/20	10/12/20	Mercury-203	5	-0.0555	0.0441 pCi/g	U	0.0703				0	49.6 g	
7-F-4-C	DUP	09/21/20	10/12/20	Sodium-22	5	0.0208	0.0471 pCi/g	U	0.1				0	49.6 g	
7-F-4-C	DUP	09/21/20	10/12/20	Yttrium-88	5	-0.0264	0.0437 pCi/g	U	0.0791				0	49.6 g	
7-F-4-C	DUP	09/21/20	10/12/20	Zinc-65	5	0.0257	0.132 pCi/g	U	0.229				0	49.6 g	
7W-N-2-C	SAMPLE	09/21/20	10/12/20	Americium-241	5	0.0482	0.109 pCi/g	U	0.196				0	44.1 g	
7W-N-2-C	SAMPLE	09/21/20	10/12/20	Barium-133	5	-0.0233	0.0395 pCi/g	U	0.0621				0	44.1 g	

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
7W-N-2-C	SAMPLE	09/21/20	10/12/20	Cadmium-109	5	-0.579	0.601	pCi/g	U	1			0	44.1	g
7W-N-2-C	SAMPLE	09/21/20	10/12/20	Cerium-144	5	0.016	0.131	pCi/g	U	0.238			0	44.1	g
7W-N-2-C	SAMPLE	09/21/20	10/12/20	Cesium-137	5	0.0222	0.034	pCi/g	U	0.0686	1		0	44.1	g
7W-N-2-C	SAMPLE	09/21/20	10/12/20	Cobalt-57	5	0.0146	0.0195	pCi/g	U	0.0368			0	44.1	g
7W-N-2-C	SAMPLE	09/21/20	10/12/20	Cobalt-60	5	0.0168	0.0345	pCi/g	U	0.0759			0	44.1	g
7W-N-2-C	SAMPLE	09/21/20	10/12/20	Europium-152	5	0.0146	0.0712	pCi/g	U	0.139			0	44.1	g
7W-N-2-C	SAMPLE	09/21/20	10/12/20	Lead-210	5	-0.603	3.41	pCi/g	U	6.01			0	44.1	g
7W-N-2-C	SAMPLE	09/21/20	10/12/20	Manganese-54	5	-0.0148	0.0312	pCi/g	U	0.0537			0	44.1	g
7W-N-2-C	SAMPLE	09/21/20	10/12/20	Mercury-203	5	0.00736	0.0399	pCi/g	U	0.0693			0	44.1	g
7W-N-2-C	SAMPLE	09/21/20	10/12/20	Sodium-22	5	0.0103	0.0385	pCi/g	U	0.0797			0	44.1	g
7W-N-2-C	SAMPLE	09/21/20	10/12/20	Yttrium-88	5	0.0192	0.0333	pCi/g	U	0.0825			0	44.1	g
7W-N-2-C	SAMPLE	09/21/20	10/12/20	Zinc-65	5	-0.015	0.0767	pCi/g	U	0.147			0	44.1	g
7W-N-2-C	DUP	09/21/20	10/12/20	Americium-241	5	0.00764	0.117	pCi/g	U	0.204			0	44.1	g
7W-N-2-C	DUP	09/21/20	10/12/20	Barium-133	5	0.0256	0.076	pCi/g	U	0.14			0	44.1	g
7W-N-2-C	DUP	09/21/20	10/12/20	Cadmium-109	5	0.515	1.43	pCi/g	U	1.79			0	44.1	g
7W-N-2-C	DUP	09/21/20	10/12/20	Cerium-144	5	-0.114	0.278	pCi/g	U	0.457			0	44.1	g
7W-N-2-C	DUP	09/21/20	10/12/20	Cesium-137	5	0	0.136	pCi/g	UI	0.153	1		0	44.1	g
7W-N-2-C	DUP	09/21/20	10/12/20	Cobalt-57	5	0.0323	0.0385	pCi/g	U	0.078			0	44.1	g
7W-N-2-C	DUP	09/21/20	10/12/20	Cobalt-60	5	0.027	0.0704	pCi/g	U	0.178			0	44.1	g
7W-N-2-C	DUP	09/21/20	10/12/20	Europium-152	5	-0.091	0.172	pCi/g	U	0.282			0	44.1	g
7W-N-2-C	DUP	09/21/20	10/12/20	Lead-210	5	0.429	1.06	pCi/g	U	2.02			0	44.1	g
7W-N-2-C	DUP	09/21/20	10/12/20	Manganese-54	5	0.0584	0.0707	pCi/g	U	0.17			0	44.1	g
7W-N-2-C	DUP	09/21/20	10/12/20	Mercury-203	5	-0.00035	0.0783	pCi/g	U	0.142			0	44.1	g
7W-N-2-C	DUP	09/21/20	10/12/20	Sodium-22	5	0.0171	0.0748	pCi/g	U	0.177			0	44.1	g
7W-N-2-C	DUP	09/21/20	10/12/20	Yttrium-88	5	-0.0173	0.113	pCi/g	U	0.236			0	44.1	g
7W-N-2-C	DUP	09/21/20	10/12/20	Zinc-65	5	0.142	0.25	pCi/g	U	0.546			0	44.1	g
LCS	LCS	10/12/20	10/12/20	Americium-241	5	637	12	pCi/g		6.08		105	0	49.6	g
LCS	LCS	10/12/20	10/12/20	Cesium-137	5	198	3.3	pCi/g		0.695	1	109	0	49.6	g
LCS	LCS	10/12/20	10/12/20	Cobalt-60	5	79.1	2.71	pCi/g		0.52		108	0	49.6	g
MB	MB	10/12/20	10/12/20	Americium-241	5	0.0298	0.071	pCi/g	U	0.133			0	49.6	g
MB	MB	10/12/20	10/12/20	Barium-133	5	-0.0104	0.0512	pCi/g	U	0.087			0	49.6	g
MB	MB	10/12/20	10/12/20	Cadmium-109	5	0.374	0.518	pCi/g	U	0.94			0	49.6	g
MB	MB	10/12/20	10/12/20	Cerium-144	5	-0.0417	0.167	pCi/g	U	0.299			0	49.6	g
MB	MB	10/12/20	10/12/20	Cesium-137	5	0.00611	0.045	pCi/g	U	0.0807	1		0	49.6	g
MB	MB	10/12/20	10/12/20	Cobalt-57	5	0.000795	0.0201	pCi/g	U	0.0371			0	49.6	g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

6-EPA 906.0 Mod.

5-DOE HASL 300, 4.5.2.3/Ga-01-R

7-EPA EERF C-01 Mod.

1-DOE EML HASL-300, Am-05-RC Mod.
2-ASTM C 1475-00 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

Appendix A
Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
MB	MB	10/12/20	10/12/20	Cobalt-60	5	0.03	0.0525	pCi/g	U	0.119				0	49.6 g
MB	MB	10/12/20	10/12/20	Europium-152	5	-0.0179	0.103	pCi/g	U	0.179				0	49.6 g
MB	MB	10/12/20	10/12/20	Lead-210	5	-0.507	0.647	pCi/g	U	1.1				0	49.6 g
MB	MB	10/12/20	10/12/20	Manganese-54	5	0	0.0882	pCi/g	UI	0.0592				0	49.6 g
MB	MB	10/12/20	10/12/20	Mercury-203	5	0.0109	0.0308	pCi/g	U	0.0578				0	49.6 g
MB	MB	10/12/20	10/12/20	Sodium-22	5	0.0231	0.0342	pCi/g	U	0.088				0	49.6 g
MB	MB	10/12/20	10/12/20	Yttrium-88	5	-0.0647	0.0547	pCi/g	U	0.061				0	49.6 g
MB	MB	10/12/20	10/12/20	Zinc-65	5	0.0368	0.0966	pCi/g	U	0.21				0	49.6 g
10-W-E-4-C	SAMPLE	09/21/20	10/19/20	Americium-243 Tracer	1	1.49	0.0993	pCi/g		0.0244		81.1		0	1.21 g
10-W-E-4-C	SAMPLE	09/21/20	10/19/20	Americium-241	1	0.0084	0.0134	pCi/g	U	0.0226	0.05			0	1.21 g
10-W-E-4-C	SAMPLE	09/21/20	10/19/20	Californium-252	1	0	0.00402	pCi/g	U	0.00435	0.05			0	1.21 g
10-W-E-4-C	SAMPLE	09/21/20	10/19/20	Curium-243/244	1	-0.00553	0.0101	pCi/g	U	0.0224	0.05			0	1.21 g
10-W-E-4-C	DUP	09/21/20	10/19/20	Americium-243 Tracer	1	1.17	0.11	pCi/g		0.0261		63.7		0	1.21 g
10-W-E-4-C	DUP	09/21/20	10/19/20	Americium-241	1	0.00347	0.0118	pCi/g	U	0.0213	0.05			0	1.21 g
10-W-E-4-C	DUP	09/21/20	10/19/20	Californium-252	1	0	0.00498	pCi/g	U	0.00539	0.05			0	1.21 g
10-W-E-4-C	DUP	09/21/20	10/19/20	Curium-243/244	1	-0.00685	0.00949	pCi/g	U	0.0229	0.05			0	1.21 g
10-W-E-4-C	MS	09/21/20	10/20/20	Americium-241	1	0.836	0.0753	pCi/g		0.0134	0.05	101		0	1.21 g
10-W-E-4-C	MS	09/21/20	10/20/20	Californium-252	1	0.458	0.0568	pCi/g		0.00545	0.05	112		0	1.21 g
10-W-E-4-C	MS	09/21/20	10/20/20	Curium-243/244	1	0.715	0.0708	pCi/g		0.0307	0.05	77.5		0	1.21 g
10-W-E-4-C	MS	09/21/20	10/20/20	Americium-243 Tracer	1	1.23	0.111	pCi/g		0.0279		67.3		0	1.21 g
7-F-4-C	SAMPLE	09/21/20	10/19/20	Americium-243 Tracer	1	0.666	0.161	pCi/g		0.0602		36.3		0	1.21 g
7-F-4-C	SAMPLE	09/21/20	10/19/20	Americium-241	1	0.0252	0.0406	pCi/g	U	0.0689	0.05			0	1.21 g
7-F-4-C	SAMPLE	09/21/20	10/19/20	Californium-252	1	-0.00373	0.0127	pCi/g	U	0.0286	0.05			0	1.21 g
7-F-4-C	SAMPLE	09/21/20	10/19/20	Curium-243/244	1	-0.0178	0.0252	pCi/g	U	0.0575	0.05			0	1.21 g
7-F-4-C	DUP	09/21/20	10/19/20	Americium-243 Tracer	1	0.713	0.161	pCi/g		0.0575		38.9		0	1.21 g
7-F-4-C	DUP	09/21/20	10/19/20	Americium-241	1	0.0289	0.03	pCi/g	U	0.0444	0.05			0	1.21 g
7-F-4-C	DUP	09/21/20	10/19/20	Californium-252	1	0.00748	0.0207	pCi/g	U	0.0358	0.05			0	1.21 g
7-F-4-C	DUP	09/21/20	10/19/20	Curium-243/244	1	-0.0143	0.0242	pCi/g	U	0.0546	0.05			0	1.21 g
7-F-4-C	MS	09/21/20	10/19/20	Americium-241	1	0.835	0.0952	pCi/g		0.0337	0.05	99.3		0	1.21 g
7-F-4-C	MS	09/21/20	10/19/20	Californium-252	1	0.343	0.0627	pCi/g		0.0272	0.05	83.8		0	1.21 g
7-F-4-C	MS	09/21/20	10/19/20	Curium-243/244	1	0.86	0.0966	pCi/g		0.0389	0.05	93.2		0	1.21 g
7-F-4-C	MS	09/21/20	10/19/20	Americium-243 Tracer	1	0.753	0.139	pCi/g		0.0413		41.1		0	1.21 g
7W-N-1-C	SAMPLE	09/21/20	10/19/20	Americium-243 Tracer	1	1.14	0.122	pCi/g		0.0434		63.4		0	1.23 g
7W-N-1-C	SAMPLE	09/21/20	10/19/20	Americium-241	1	0.0126	0.021	pCi/g	U	0.0356	0.05			0	1.23 g
7W-N-1-C	SAMPLE	09/21/20	10/19/20	Californium-252	1	-0.0087	0.0121	pCi/g	U	0.0291	0.05			0	1.23 g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Appendix A

Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
7W-N-1-C	SAMPLE	09/21/20	10/19/20	Curium-243/244	1	-0.00829	0.0141	pCi/g	U	0.0317	0.05			0	1.23 g
7W-N-1-C	DUP	09/21/20	10/19/20	Americium-243 Tracer	1	0.99	0.124	pCi/g		0.0573		54.9		0	1.23 g
7W-N-1-C	DUP	09/21/20	10/19/20	Americium-241	1	0.0231	0.0206	pCi/g	U	0.0303	0.05			0	1.23 g
7W-N-1-C	DUP	09/21/20	10/19/20	Californium-252	1	-0.00654	0.00956	pCi/g	U	0.0241	0.05			0	1.23 g
7W-N-1-C	DUP	09/21/20	10/19/20	Curium-243/244	1	-0.0125	0.0173	pCi/g	U	0.0383	0.05			0	1.23 g
7W-N-1-C	MS	09/21/20	10/19/20	Americium-241	1	0.777	0.0692	pCi/g		0.0152	0.05	95.4		0	1.23 g
7W-N-1-C	MS	09/21/20	10/19/20	Californium-252	1	0.41	0.0515	pCi/g		0.0157	0.05	102		0	1.23 g
7W-N-1-C	MS	09/21/20	10/19/20	Curium-243/244	1	0.767	0.068	pCi/g		0.00469	0.05	84.4		0	1.23 g
7W-N-1-C	MS	09/21/20	10/19/20	Americium-243 Tracer	1	1.22	0.104	pCi/g		0.00468		67.7		0	1.23 g
7W-S-3-C	SAMPLE	09/21/20	10/19/20	Americium-243 Tracer	1	1.02	0.126	pCi/g		0.0425		56.4		0	1.23 g
7W-S-3-C	SAMPLE	09/21/20	10/19/20	Americium-241	1	0.0271	0.0217	pCi/g	U	0.0302	0.05			0	1.23 g
7W-S-3-C	SAMPLE	09/21/20	10/19/20	Californium-252	1	-0.00935	0.0112	pCi/g	U	0.0288	0.05			0	1.23 g
7W-S-3-C	SAMPLE	09/21/20	10/19/20	Curium-243/244	1	0.00668	0.0131	pCi/g	U	0.0213	0.05			0	1.23 g
7W-S-3-C	DUP	09/21/20	10/19/20	Americium-243 Tracer	1	1.14	0.113	pCi/g		0.0292		63.3		0	1.23 g
7W-S-3-C	DUP	09/21/20	10/19/20	Americium-241	1	0.0183	0.0135	pCi/g		0.014	0.05			0	1.23 g
7W-S-3-C	DUP	09/21/20	10/19/20	Californium-252	1	0.0019	0.00646	pCi/g	U	0.0057	0.05			0	1.23 g
7W-S-3-C	DUP	09/21/20	10/19/20	Curium-243/244	1	-0.0109	0.0142	pCi/g	U	0.0321	0.05			0	1.23 g
7W-S-3-C	MS	09/21/20	10/19/20	Americium-241	1	0.686	0.0661	pCi/g		0.018	0.05	82.1		0	1.23 g
7W-S-3-C	MS	09/21/20	10/19/20	Californium-252	1	0.378	0.0497	pCi/g		0.00506	0.05	93.7		0	1.23 g
7W-S-3-C	MS	09/21/20	10/19/20	Curium-243/244	1	0.76	0.069	pCi/g		0.0154	0.05	82.9		0	1.23 g
7W-S-3-C	MS	09/21/20	10/19/20	Americium-243 Tracer	1	1.37	0.107	pCi/g		0.0337		76.2		0	1.23 g
9-F-11-C	SAMPLE	09/21/20	10/20/20	Americium-243 Tracer	1	0.998	0.135	pCi/g		0.0411		54.5		0	1.21 g
9-F-11-C	SAMPLE	09/21/20	10/20/20	Americium-241	1	0.0155	0.0202	pCi/g	U	0.0317	0.05			0	1.21 g
9-F-11-C	SAMPLE	09/21/20	10/20/20	Californium-252	1	0.00535	0.0148	pCi/g	U	0.0256	0.05			0	1.21 g
9-F-11-C	SAMPLE	09/21/20	10/20/20	Curium-243/244	1	-0.0051	0.0187	pCi/g	U	0.039	0.05			0	1.21 g
9-F-11-C	DUP	09/21/20	10/19/20	Americium-243 Tracer	1	0.967	0.126	pCi/g		0.0358		52.8		0	1.21 g
9-F-11-C	DUP	09/21/20	10/19/20	Americium-241	1	0.0157	0.0237	pCi/g	U	0.0398	0.05			0	1.21 g
9-F-11-C	DUP	09/21/20	10/19/20	Californium-252	1	0	0.00646	pCi/g	U	0.00699	0.05			0	1.21 g
9-F-11-C	DUP	09/21/20	10/19/20	Curium-243/244	1	-0.00222	0.00974	pCi/g	U	0.0213	0.05			0	1.21 g
9-F-11-C	MS	09/21/20	10/19/20	Americium-241	1	0.79	0.0768	pCi/g		0.0406	0.05	95		0	1.21 g
9-F-11-C	MS	09/21/20	10/19/20	Californium-252	1	0.456	0.0572	pCi/g		0.00556	0.05	110		0	1.21 g
9-F-11-C	MS	09/21/20	10/19/20	Curium-243/244	1	0.86	0.077	pCi/g		0.0195	0.05	93.2		0	1.21 g
9-F-11-C	MS	09/21/20	10/19/20	Americium-243 Tracer	1	1.08	0.112	pCi/g		0.0299		58.8		0	1.21 g
9-W-E-18-C	SAMPLE	09/21/20	10/19/20	Americium-243 Tracer	1	1.14	0.111	pCi/g		0.0315		64.3		0	1.25 g
9-W-E-18-C	SAMPLE	09/21/20	10/19/20	Americium-241	1	0.00542	0.0128	pCi/g	U	0.0222	0.05			0	1.25 g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
9-W-E-18-C	SAMPLE	09/21/20	10/19/20	Californium-252	1	0.00187	0.00636	pCi/g	U	0.00562	0.05			0	1.25 g
9-W-E-18-C	SAMPLE	09/21/20	10/19/20	Curium-243/244	1	-0.00714	0.0121	pCi/g	U	0.0273	0.05			0	1.25 g
9-W-E-18-C	DUP	09/21/20	10/19/20	Americium-243 Tracer	1	0.962	0.118	pCi/g		0.0323		54.3		0	1.25 g
9-W-E-18-C	DUP	09/21/20	10/19/20	Americium-241	1	0	0.0149	pCi/g	U	0.0292	0.05			0	1.25 g
9-W-E-18-C	DUP	09/21/20	10/19/20	Californium-252	1	0.0021	0.00714	pCi/g	U	0.00631	0.05			0	1.25 g
9-W-E-18-C	DUP	09/21/20	10/19/20	Curium-243/244	1	-0.00802	0.0124	pCi/g	U	0.0289	0.05			0	1.25 g
9-W-E-18-C	MS	09/21/20	10/19/20	Americium-241	1	0.829	0.0863	pCi/g		0.0343	0.05	104		0	1.25 g
9-W-E-18-C	MS	09/21/20	10/19/20	Californium-252	1	0.455	0.0641	pCi/g		0.00697	0.05	114		0	1.25 g
9-W-E-18-C	MS	09/21/20	10/19/20	Curium-243/244	1	0.837	0.0848	pCi/g		0.0169	0.05	93.7		0	1.25 g
9-W-E-18-C	MS	09/21/20	10/19/20	Americium-243 Tracer	1	0.986	0.124	pCi/g		0.0391		55.6		0	1.25 g
9-W-S-22-C	SAMPLE	09/21/20	10/22/20	Americium-243 Tracer	1	0.624	0.149	pCi/g		0.0542		34.1		0	1.21 g
9-W-S-22-C	SAMPLE	09/21/20	10/22/20	Americium-241	1	0.00931	0.0161	pCi/g	U	0.0238	0.05			0	1.21 g
9-W-S-22-C	SAMPLE	09/21/20	10/22/20	Californium-252	1	0.029	0.0228	pCi/g		0.0247	0.05			0	1.21 g
9-W-S-22-C	SAMPLE	09/21/20	10/22/20	Curium-243/244	1	0.0215	0.0199	pCi/g	U	0.0235	0.05			0	1.21 g
9-W-S-22-C	DUP	09/21/20	10/22/20	Americium-243 Tracer	1	1.02	0.135	pCi/g		0.0198		55.6		0	1.21 g
9-W-S-22-C	DUP	09/21/20	10/22/20	Americium-241	1	0.0262	0.0192	pCi/g		0.0201	0.05			0	1.21 g
9-W-S-22-C	DUP	09/21/20	10/22/20	Californium-252	1	0.0218	0.02	pCi/g	U	0.0261	0.05			0	1.21 g
9-W-S-22-C	DUP	09/21/20	10/22/20	Curium-243/244	1	0.0389	0.0244	pCi/g		0.0287	0.05			0	1.21 g
9-W-S-22-C	MS	09/21/20	10/19/20	Americium-241	1	0.782	0.0724	pCi/g		0.0132	0.05	94.7		0	1.21 g
9-W-S-22-C	MS	09/21/20	10/19/20	Californium-252	1	0.471	0.0574	pCi/g		0.0137	0.05	108		0	1.21 g
9-W-S-22-C	MS	09/21/20	10/19/20	Curium-243/244	1	0.825	0.0742	pCi/g		0.0189	0.05	87.1		0	1.21 g
9-W-S-22-C	MS	09/21/20	10/19/20	Americium-243 Tracer	1	1.29	0.11	pCi/g		0.0188		70.2		0	1.21 g
LCS	LCS	10/20/20	10/20/20	Americium-241	1	0.804	0.066	pCi/g		0.0199	0.05	102		0	1.25 g
LCS	LCS	10/20/20	10/20/20	Californium-252	1	0.412	0.0478	pCi/g		0.0155	0.05	105		0	1.25 g
LCS	LCS	10/20/20	10/20/20	Curium-243/244	1	0.939	0.0712	pCi/g		0.0251	0.05	105		0	1.25 g
LCS	LCS	10/20/20	10/20/20	Americium-243 Tracer	1	1.46	0.0983	pCi/g		0.0375		82.5		0	1.25 g
MB	MB	10/19/20	10/19/20	Americium-243 Tracer	1	1.3	0.102	pCi/g		0.0229		73.3		0	1.25 g
MB	MB	10/19/20	10/19/20	Americium-241	1	0.00606	0.0111	pCi/g	U	0.0187	0.05			0	1.25 g
MB	MB	10/19/20	10/19/20	Californium-252	1	-0.00154	0.00677	pCi/g	U	0.0148	0.05			0	1.25 g
MB	MB	10/19/20	10/19/20	Curium-243/244	1	-0.00896	0.00828	pCi/g	U	0.0215	0.05			0	1.25 g
10-W-E-4-C	SAMPLE	09/21/20	10/19/20	Americium-243 Tracer	2	77.5		pCi/g				69.6		0	1.96 g
10-W-E-4-C	SAMPLE	09/21/20	10/19/20	Neptunium-237	2	-0.00598	0.00771	pCi/g	U	0.0214	0.05			0	1.96 g
10-W-E-4-C	DUP	09/21/20	10/19/20	Americium-243 Tracer	2	71.9		pCi/g				64.6		0	1.96 g
10-W-E-4-C	DUP	09/21/20	10/19/20	Neptunium-237	2	-0.00031	0.0085	pCi/g	U	0.018	0.05			0	1.96 g
10-W-E-4-C	MS	09/21/20	10/19/20	Neptunium-237	2	1.6	0.168	pCi/g		0.0395	0.05	143		0	1.96 g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Appendix A
Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
10-W-E-4-C	MS	09/21/20	10/19/20	Americium-243 Tracer	2	65.8		pCi/g				59.2	0	1.96 g	
7-F-4-C	SAMPLE	09/21/20	10/19/20	Americium-243 Tracer	2	82.5		pCi/g				74.5	0	1.97 g	
7-F-4-C	SAMPLE	09/21/20	10/19/20	Neptunium-237	2	-0.0129	0.00972	pCi/g	U	0.0356	0.05			0	1.97 g
7-F-4-C	DUP	09/21/20	10/19/20	Americium-243 Tracer	2	77.9		pCi/g				70.4	0	1.97 g	
7-F-4-C	DUP	09/21/20	10/19/20	Neptunium-237	2	-0.0071	0.0177	pCi/g	U	0.0435	0.05			0	1.97 g
7-F-4-C	MS	09/21/20	10/19/20	Neptunium-237	2	1.28	0.131	pCi/g		0.0256	0.05	116	0	1.97 g	
7-F-4-C	MS	09/21/20	10/19/20	Americium-243 Tracer	2	85.4		pCi/g				77.1	0	1.97 g	
7W-N-1-C	SAMPLE	09/21/20	10/19/20	Americium-243 Tracer	2	73.2		pCi/g				66.7	0	1.99 g	
7W-N-1-C	SAMPLE	09/21/20	10/19/20	Neptunium-237	2	-0.00544	0.00926	pCi/g	U	0.0234	0.05			0	1.99 g
7W-N-1-C	DUP	09/21/20	10/19/20	Americium-243 Tracer	2	85.1		pCi/g				77.6	0	1.99 g	
7W-N-1-C	DUP	09/21/20	10/19/20	Neptunium-237	2	-0.00274	0.0124	pCi/g	U	0.0313	0.05			0	1.99 g
7W-N-1-C	MS	09/21/20	10/19/20	Neptunium-237	2	1.53	0.157	pCi/g		0.0334	0.05	139	0	1.99 g	
7W-N-1-C	MS	09/21/20	10/19/20	Americium-243 Tracer	2	76.2		pCi/g				69.5	0	1.99 g	
7W-S-3-C	SAMPLE	09/21/20	10/19/20	Americium-243 Tracer	2	92.6		pCi/g				84.9	0	2 g	
7W-S-3-C	SAMPLE	09/21/20	10/19/20	Neptunium-237	2	-0.00606	0.0105	pCi/g	U	0.0297	0.05			0	2 g
7W-S-3-C	DUP	09/21/20	10/19/20	Americium-243 Tracer	2	88.7		pCi/g				81.3	0	2 g	
7W-S-3-C	DUP	09/21/20	10/19/20	Neptunium-237	2	-0.0177	0.0129	pCi/g	U	0.0423	0.05			0	2 g
7W-S-3-C	MS	09/21/20	10/19/20	Neptunium-237	2	1.16	0.117	pCi/g		0.0201	0.05	106	0	2 g	
7W-S-3-C	MS	09/21/20	10/19/20	Americium-243 Tracer	2	99.9		pCi/g				91.6	0	2 g	
9-F-11-C	SAMPLE	09/21/20	10/19/20	Americium-243 Tracer	2	70.7		pCi/g				63.5	0	1.96 g	
9-F-11-C	SAMPLE	09/21/20	10/19/20	Neptunium-237	2	-0.0183	0.0141	pCi/g	U	0.0358	0.05			0	1.96 g
9-F-11-C	DUP	09/21/20	10/19/20	Americium-243 Tracer	2	76.2		pCi/g				68.4	0	1.96 g	
9-F-11-C	DUP	09/21/20	10/19/20	Neptunium-237	2	-0.00262	0.0057	pCi/g	U	0.0149	0.05			0	1.96 g
9-F-11-C	MS	09/21/20	10/19/20	Neptunium-237	2	1.71	0.178	pCi/g		0.0538	0.05	154	0	1.96 g	
9-F-11-C	MS	09/21/20	10/19/20	Americium-243 Tracer	2	76.9		pCi/g				69.1	0	1.96 g	
9-W-E-18-C	SAMPLE	09/21/20	10/19/20	Americium-243 Tracer	2	56.3		pCi/g				52.4	0	2.03 g	
9-W-E-18-C	SAMPLE	09/21/20	10/19/20	Neptunium-237	2	-0.0144	0.0149	pCi/g	U	0.0368	0.05			0	2.03 g
9-W-E-18-C	DUP	09/21/20	10/19/20	Americium-243 Tracer	2	55.8		pCi/g				52	0	2.03 g	
9-W-E-18-C	DUP	09/21/20	10/19/20	Neptunium-237	2	0.00318	0.00978	pCi/g	U	0.0165	0.05			0	2.03 g
9-W-E-18-C	MS	09/21/20	10/19/20	Neptunium-237	2	1.55	0.214	pCi/g		0.0711	0.05	145	0	2.03 g	
9-W-E-18-C	MS	09/21/20	10/19/20	Americium-243 Tracer	2	40.8		pCi/g				38	0	2.03 g	
9-W-S-22-C	SAMPLE	09/21/20	10/19/20	Americium-243 Tracer	2	73.3		pCi/g				66.2	0	1.97 g	
9-W-S-22-C	SAMPLE	09/21/20	10/19/20	Neptunium-237	2	-0.00345	0.00771	pCi/g	U	0.0189	0.05			0	1.97 g
9-W-S-22-C	DUP	09/21/20	10/19/20	Americium-243 Tracer	2	71		pCi/g				64.1	0	1.97 g	
9-W-S-22-C	DUP	09/21/20	10/19/20	Neptunium-237	2	-0.00415	0.00961	pCi/g	U	0.0285	0.05			0	1.97 g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

6-EPA 906.0 Mod.

5-DOE HASL 300, 4.5.2.3/Ga-01-R

7-EPA EERF C-01 Mod.

*Key
1-DOE EML HASL-300, Am-05-RC Mod.
2-ASTM C 1475-00 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
9-W-S-22-C	MS	09/21/20	10/19/20	Neptunium-237	2	1.69	0.166	pCi/g		0.0481	0.05	152	0	1.97	g
9-W-S-22-C	MS	09/21/20	10/19/20	Americium-243 Tracer	2	75.1		pCi/g				67.8	0	1.97	g
LCS	LCS	10/19/20	10/19/20	Neptunium-237	2	1.15	0.124	pCi/g		0.0328	0.05	107	0	2.03	g
LCS	LCS	10/19/20	10/19/20	Americium-243 Tracer	2	97.2		pCi/g				90.4	0	2.03	g
MB	MB	10/19/20	10/19/20	Americium-243 Tracer	2	104		pCi/g				96.5	0	2.03	g
MB	MB	10/19/20	10/19/20	Neptunium-237	2	-0.0118	0.0103	pCi/g	U	0.0327	0.05		0	2.03	g
10-W-E-4-C	SAMPLE	09/21/20	10/19/20	Plutonium-242 Tracer	3	1.26	0.137	pCi/g		0.0265		79.6	0	1.21	g
10-W-E-4-C	SAMPLE	09/21/20	10/19/20	Plutonium-238	3	0.00145	0.014	pCi/g	U	0.0286	0.05		0	1.21	g
10-W-E-4-C	SAMPLE	09/21/20	10/19/20	Plutonium-239/240	3	0.00452	0.0134	pCi/g	U	0.0242	0.05		0	1.21	g
10-W-E-4-C	DUP	09/21/20	10/19/20	Plutonium-242 Tracer	3	1.14	0.146	pCi/g		0.0396		71.7	0	1.21	g
10-W-E-4-C	DUP	09/21/20	10/19/20	Plutonium-238	3	-0.00017	0.0199	pCi/g	U	0.0413	0.05		0	1.21	g
10-W-E-4-C	DUP	09/21/20	10/19/20	Plutonium-239/240	3	0.0205	0.0198	pCi/g	U	0.0241	0.05		0	1.21	g
10-W-E-4-C	MS	09/21/20	10/19/20	Plutonium-239/240	3	0.798	0.106	pCi/g		0.011	0.05	95.8	0	1.21	g
10-W-E-4-C	MS	09/21/20	10/19/20	Plutonium-242 Tracer	3	1.24	0.15	pCi/g		0.0293		78	0	1.21	g
7-F-4-C	SAMPLE	09/21/20	10/19/20	Plutonium-242 Tracer	3	1.49	0.128	pCi/g		0.0351		93.6	0	1.21	g
7-F-4-C	SAMPLE	09/21/20	10/19/20	Plutonium-238	3	0.00125	0.0121	pCi/g	U	0.0248	0.05		0	1.21	g
7-F-4-C	SAMPLE	09/21/20	10/19/20	Plutonium-239/240	3	-0.012	0.00972	pCi/g	U	0.0305	0.05		0	1.21	g
7-F-4-C	DUP	09/21/20	10/19/20	Plutonium-242 Tracer	3	1.21	0.136	pCi/g		0.0427		76	0	1.21	g
7-F-4-C	DUP	09/21/20	10/19/20	Plutonium-238	3	-0.00155	0.0123	pCi/g	U	0.0278	0.05		0	1.21	g
7-F-4-C	DUP	09/21/20	10/19/20	Plutonium-239/240	3	-0.00305	0.0127	pCi/g	U	0.0296	0.05		0	1.21	g
7-F-4-C	MS	09/21/20	10/19/20	Plutonium-239/240	3	0.952	0.104	pCi/g		0.0349	0.05	115	0	1.21	g
7-F-4-C	MS	09/21/20	10/19/20	Plutonium-242 Tracer	3	1.23	0.134	pCi/g		0.0306		77.6	0	1.21	g
7W-N-1-C	SAMPLE	09/21/20	10/19/20	Plutonium-242 Tracer	3	1.26	0.125	pCi/g		0.0409		80.9	0	1.23	g
7W-N-1-C	SAMPLE	09/21/20	10/19/20	Plutonium-238	3	-7.62E-05	0.012	pCi/g	U	0.0255	0.05		0	1.23	g
7W-N-1-C	SAMPLE	09/21/20	10/19/20	Plutonium-239/240	3	0.00108	0.018	pCi/g	U	0.0358	0.05		0	1.23	g
7W-N-1-C	DUP	09/21/20	10/19/20	Plutonium-242 Tracer	3	1.19	0.135	pCi/g		0.0496		76.2	0	1.23	g
7W-N-1-C	DUP	09/21/20	10/19/20	Plutonium-238	3	-0.0103	0.0122	pCi/g	U	0.0338	0.05		0	1.23	g
7W-N-1-C	DUP	09/21/20	10/19/20	Plutonium-239/240	3	-0.00597	0.0149	pCi/g	U	0.0352	0.05		0	1.23	g
7W-N-1-C	MS	09/21/20	10/19/20	Plutonium-239/240	3	0.662	0.0788	pCi/g		0.0296	0.05	81.2	0	1.23	g
7W-N-1-C	MS	09/21/20	10/19/20	Plutonium-242 Tracer	3	1.63	0.121	pCi/g		0.0381		105	0	1.23	g
7W-S-3-C	SAMPLE	09/21/20	10/19/20	Plutonium-242 Tracer	3	1.09	0.14	pCi/g		0.0304		69.4	0	1.23	g
7W-S-3-C	SAMPLE	09/21/20	10/19/20	Plutonium-238	3	0.00144	0.0201	pCi/g	U	0.0404	0.05		0	1.23	g
7W-S-3-C	SAMPLE	09/21/20	10/19/20	Plutonium-239/240	3	0.00953	0.0217	pCi/g	U	0.039	0.05		0	1.23	g
7W-S-3-C	DUP	09/21/20	10/20/20	Plutonium-242 Tracer	3	1.15	0.131	pCi/g		0.0199		73.5	0	1.23	g
7W-S-3-C	DUP	09/21/20	10/20/20	Plutonium-238	3	0.00561	0.0139	pCi/g	U	0.0247	0.05		0	1.23	g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
7W-S-3-C	DUP	09/21/20	10/20/20	Plutonium-239/240	3	0.00706	0.0118	pCi/g	U	0.0166	0.05			0	1.23 g
7W-S-3-C	MS	09/21/20	10/19/20	Plutonium-239/240	3	0.864	0.0993	pCi/g		0.0393	0.05	105		0	1.23 g
7W-S-3-C	MS	09/21/20	10/19/20	Plutonium-242 Tracer	3	1.12	0.132	pCi/g		0.0345		71.4		0	1.23 g
9-F-11-C	SAMPLE	09/21/20	10/19/20	Plutonium-242 Tracer	3	1.26	0.128	pCi/g		0.0406		79.6		0	1.21 g
9-F-11-C	SAMPLE	09/21/20	10/19/20	Plutonium-238	3	-0.0186	0.0129	pCi/g	U	0.038	0.05			0	1.21 g
9-F-11-C	SAMPLE	09/21/20	10/19/20	Plutonium-239/240	3	-0.012	0.0159	pCi/g	U	0.0389	0.05			0	1.21 g
9-F-11-C	DUP	09/21/20	10/19/20	Plutonium-242 Tracer	3	1.39	0.123	pCi/g		0.0195		87.6		0	1.21 g
9-F-11-C	DUP	09/21/20	10/19/20	Plutonium-238	3	0.00361	0.0123	pCi/g	U	0.0231	0.05			0	1.21 g
9-F-11-C	DUP	09/21/20	10/19/20	Plutonium-239/240	3	0.0024	0.011	pCi/g	U	0.0214	0.05			0	1.21 g
9-F-11-C	MS	09/21/20	10/19/20	Plutonium-239/240	3	0.85	0.105	pCi/g		0.0197	0.05	103		0	1.21 g
9-F-11-C	MS	09/21/20	10/19/20	Plutonium-242 Tracer	3	1.41	0.143	pCi/g		0.0267		88.6		0	1.21 g
9-W-E-18-C	SAMPLE	09/21/20	10/19/20	Plutonium-242 Tracer	3	1.18	0.132	pCi/g		0.0385		76.6		0	1.25 g
9-W-E-18-C	SAMPLE	09/21/20	10/19/20	Plutonium-238	3	-0.00297	0.0124	pCi/g	U	0.029	0.05			0	1.25 g
9-W-E-18-C	SAMPLE	09/21/20	10/19/20	Plutonium-239/240	3	0.0072	0.012	pCi/g	U	0.0169	0.05			0	1.25 g
9-W-E-18-C	DUP	09/21/20	10/19/20	Plutonium-242 Tracer	3	1.2	0.123	pCi/g		0.0256		78.3		0	1.25 g
9-W-E-18-C	DUP	09/21/20	10/19/20	Plutonium-238	3	-0.00522	0.0115	pCi/g	U	0.0284	0.05			0	1.25 g
9-W-E-18-C	DUP	09/21/20	10/19/20	Plutonium-239/240	3	0.00889	0.0146	pCi/g	U	0.0241	0.05			0	1.25 g
9-W-E-18-C	MS	09/21/20	10/19/20	Plutonium-239/240	3	0.76	0.104	pCi/g		0.0111	0.05	93.9		0	1.25 g
9-W-E-18-C	MS	09/21/20	10/19/20	Plutonium-242 Tracer	3	1.15	0.149	pCi/g		0.043		74.5		0	1.25 g
9-W-S-22-C	SAMPLE	09/21/20	10/19/20	Plutonium-242 Tracer	3	1.01	0.142	pCi/g		0.0432		63.7		0	1.21 g
9-W-S-22-C	SAMPLE	09/21/20	10/19/20	Plutonium-238	3	0.00485	0.0119	pCi/g	U	0.019	0.05			0	1.21 g
9-W-S-22-C	SAMPLE	09/21/20	10/19/20	Plutonium-239/240	3	0.00157	0.0127	pCi/g	U	0.0258	0.05			0	1.21 g
9-W-S-22-C	DUP	09/21/20	10/19/20	Plutonium-242 Tracer	3	1.22	0.133	pCi/g		0.0228		76.8		0	1.21 g
9-W-S-22-C	DUP	09/21/20	10/19/20	Plutonium-238	3	-0.00148	0.00976	pCi/g	U	0.0228	0.05			0	1.21 g
9-W-S-22-C	DUP	09/21/20	10/19/20	Plutonium-239/240	3	0.0114	0.0161	pCi/g	U	0.025	0.05			0	1.21 g
9-W-S-22-C	MS	09/21/20	10/19/20	Plutonium-239/240	3	0.789	0.103	pCi/g		0.0203	0.05	95.1		0	1.21 g
9-W-S-22-C	MS	09/21/20	10/19/20	Plutonium-242 Tracer	3	1.47	0.146	pCi/g		0.0325		92.8		0	1.21 g
LCS	LCS	10/19/20	10/19/20	Plutonium-239/240	3	0.921	0.118	pCi/g		0.0228	0.05	115		0	1.25 g
LCS	LCS	10/19/20	10/19/20	Plutonium-242 Tracer	3	1.12	0.152	pCi/g		0.0273		72.7		0	1.25 g
MB	MB	10/19/20	10/19/20	Plutonium-242 Tracer	3	1.11	0.132	pCi/g		0.036		72.3		0	1.25 g
MB	MB	10/19/20	10/19/20	Plutonium-238	3	-0.00585	0.011	pCi/g	U	0.0289	0.05			0	1.25 g
MB	MB	10/19/20	10/19/20	Plutonium-239/240	3	-0.00585	0.011	pCi/g	U	0.0289	0.05			0	1.25 g
10-W-E-4-C	SAMPLE	09/21/20	10/19/20	Uranium-232 Tracer	4	2.7	0.148	pCi/g		0.0496		100		0	0.754 g
10-W-E-4-C	SAMPLE	09/21/20	10/19/20	Uranium-233/234	4	0.397	0.0589	pCi/g		0.0364	1			0	0.754 g
10-W-E-4-C	SAMPLE	09/21/20	10/19/20	Uranium-235/236	4	0.0245	0.017	pCi/g		0.0196	0.05			0	0.754 g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Appendix A

Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
10-W-E-4-C	SAMPLE	09/21/20	10/19/20	Uranium-238	4	0.467	0.0623	pCi/g		0.0293	1			0	0.754 g
10-W-E-4-C	DUP	09/21/20	10/19/20	Uranium-232 Tracer	4	1.99	0.181	pCi/g		0.0299		73.5		0	0.754 g
10-W-E-4-C	DUP	09/21/20	10/19/20	Uranium-233/234	4	0.363	0.0706	pCi/g		0.0489	1			0	0.754 g
10-W-E-4-C	DUP	09/21/20	10/19/20	Uranium-235/236	4	0.0157	0.0162	pCi/g		0.0094	0.05			0	0.754 g
10-W-E-4-C	DUP	09/21/20	10/19/20	Uranium-238	4	0.44	0.0737	pCi/g		0.0239	1			0	0.754 g
10-W-E-4-C	MS	09/21/20	10/19/20	Uranium-235/236	4	0.799	0.087	pCi/g		0.00736	0.05	97		0	0.754 g
10-W-E-4-C	MS	09/21/20	10/19/20	Uranium-232 Tracer	4	2.56	0.16	pCi/g		0.0328		94.8		0	0.754 g
7-F-4-C	SAMPLE	09/21/20	10/19/20	Uranium-232 Tracer	4	1.77	0.168	pCi/g		0.0524		65.6		0	0.757 g
7-F-4-C	SAMPLE	09/21/20	10/19/20	Uranium-233/234	4	0.566	0.0802	pCi/g		0.05	1			0	0.757 g
7-F-4-C	SAMPLE	09/21/20	10/19/20	Uranium-235/236	4	0.0106	0.0208	pCi/g	U	0.0356	0.05			0	0.757 g
7-F-4-C	SAMPLE	09/21/20	10/19/20	Uranium-238	4	0.487	0.0756	pCi/g		0.0524	1			0	0.757 g
7-F-4-C	DUP	09/21/20	10/19/20	Uranium-232 Tracer	4	2.06	0.183	pCi/g		0.0511		76.4		0	0.757 g
7-F-4-C	DUP	09/21/20	10/19/20	Uranium-233/234	4	0.661	0.0915	pCi/g		0.0366	1			0	0.757 g
7-F-4-C	DUP	09/21/20	10/19/20	Uranium-235/236	4	0.0412	0.0256	pCi/g		0.0243	0.05			0	0.757 g
7-F-4-C	DUP	09/21/20	10/19/20	Uranium-238	4	0.547	0.0843	pCi/g		0.0424	1			0	0.757 g
7-F-4-C	MS	09/21/20	10/19/20	Uranium-235/236	4	0.896	0.113	pCi/g		0.0281	0.05	111		0	0.757 g
7-F-4-C	MS	09/21/20	10/19/20	Uranium-232 Tracer	4	1.79	0.197	pCi/g		0.0592		66.4		0	0.757 g
7W-N-1-C	SAMPLE	09/21/20	10/19/20	Uranium-232 Tracer	4	1.93	0.171	pCi/g		0.0612		72.6		0	0.767 g
7W-N-1-C	SAMPLE	09/21/20	10/19/20	Uranium-233/234	4	0.273	0.0587	pCi/g		0.0459	1			0	0.767 g
7W-N-1-C	SAMPLE	09/21/20	10/19/20	Uranium-235/236	4	0.0304	0.0195	pCi/g		0.0083	0.05			0	0.767 g
7W-N-1-C	SAMPLE	09/21/20	10/19/20	Uranium-238	4	0.292	0.0587	pCi/g		0.037	1			0	0.767 g
7W-N-1-C	DUP	09/21/20	10/19/20	Uranium-232 Tracer	4	2.16	0.173	pCi/g		0.0467		81.3		0	0.767 g
7W-N-1-C	DUP	09/21/20	10/19/20	Uranium-233/234	4	0.289	0.0597	pCi/g		0.0372	1			0	0.767 g
7W-N-1-C	DUP	09/21/20	10/19/20	Uranium-235/236	4	0.0203	0.017	pCi/g		0.00869	0.05			0	0.767 g
7W-N-1-C	DUP	09/21/20	10/19/20	Uranium-238	4	0.321	0.0607	pCi/g		0.0221	1			0	0.767 g
7W-N-1-C	MS	09/21/20	10/19/20	Uranium-235/236	4	0.794	0.0913	pCi/g		0.00815	0.05	97.2		0	0.767 g
7W-N-1-C	MS	09/21/20	10/19/20	Uranium-232 Tracer	4	2.22	0.167	pCi/g		0.026		83.6		0	0.767 g
7W-S-3-C	SAMPLE	09/21/20	10/19/20	Uranium-232 Tracer	4	1.84	0.17	pCi/g		0.0596		69.5		0	0.77 g
7W-S-3-C	SAMPLE	09/21/20	10/19/20	Uranium-233/234	4	0.209	0.0532	pCi/g		0.048	1			0	0.77 g
7W-S-3-C	SAMPLE	09/21/20	10/19/20	Uranium-235/236	4	0.0194	0.021	pCi/g	U	0.0306	0.05			0	0.77 g
7W-S-3-C	SAMPLE	09/21/20	10/19/20	Uranium-238	4	0.21	0.0501	pCi/g		0.0339	1			0	0.77 g
7W-S-3-C	DUP	09/21/20	10/19/20	Uranium-232 Tracer	4	1.67	0.208	pCi/g		0.0666		62.9		0	0.77 g
7W-S-3-C	DUP	09/21/20	10/19/20	Uranium-233/234	4	0.21	0.062	pCi/g		0.0459	1			0	0.77 g
7W-S-3-C	DUP	09/21/20	10/19/20	Uranium-235/236	4	-0.00413	0.0214	pCi/g	U	0.0457	0.05			0	0.77 g
7W-S-3-C	DUP	09/21/20	10/19/20	Uranium-238	4	0.173	0.0548	pCi/g		0.0315	1			0	0.77 g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
7W-S-3-C	MS	09/21/20	10/19/20	Uranium-235/236	4	0.804	0.106	pCi/g		0.0387	0.05	100	0	0.77	g
7W-S-3-C	MS	09/21/20	10/19/20	Uranium-232 Tracer	4	1.78	0.192	pCi/g		0.0754		67.3	0	0	0.77 g
9-F-11-C	SAMPLE	09/21/20	10/19/20	Uranium-232 Tracer	4	2.29	0.159	pCi/g		0.0633		84.8	0	0.754	g
9-F-11-C	SAMPLE	09/21/20	10/19/20	Uranium-233/234	4	0.478	0.0682	pCi/g		0.0374	1		0	0.754	g
9-F-11-C	SAMPLE	09/21/20	10/19/20	Uranium-235/236	4	0.0537	0.0238	pCi/g		0.0179	0.05		0	0.754	g
9-F-11-C	SAMPLE	09/21/20	10/19/20	Uranium-238	4	0.524	0.07	pCi/g		0.0287	1		0	0.754	g
9-F-11-C	DUP	09/21/20	10/19/20	Uranium-232 Tracer	4	2.24	0.171	pCi/g		0.0375		83	0	0.754	g
9-F-11-C	DUP	09/21/20	10/19/20	Uranium-233/234	4	0.432	0.0722	pCi/g		0.0465	1		0	0.754	g
9-F-11-C	DUP	09/21/20	10/19/20	Uranium-235/236	4	0.0224	0.022	pCi/g	U	0.031	0.05		0	0.754	g
9-F-11-C	DUP	09/21/20	10/19/20	Uranium-238	4	0.542	0.078	pCi/g		0.0374	1		0	0.754	g
9-F-11-C	MS	09/21/20	10/19/20	Uranium-235/236	4	0.838	0.103	pCi/g		0.00974	0.05	98.2	0	0.754	g
9-F-11-C	MS	09/21/20	10/19/20	Uranium-232 Tracer	4	2	0.185	pCi/g		0.0467		73.8	0	0.754	g
9-W-E-18-C	SAMPLE	09/21/20	10/19/20	Uranium-232 Tracer	4	2	0.176	pCi/g		0.0488		76.5	0	0.781	g
9-W-E-18-C	SAMPLE	09/21/20	10/19/20	Uranium-233/234	4	0.0186	0.0329	pCi/g	U	0.0565	1		0	0.781	g
9-W-E-18-C	SAMPLE	09/21/20	10/19/20	Uranium-235/236	4	0.00605	0.0188	pCi/g	U	0.0335	0.05		0	0.781	g
9-W-E-18-C	SAMPLE	09/21/20	10/19/20	Uranium-238	4	0.0302	0.0251	pCi/g	U	0.0334	1		0	0.781	g
9-W-E-18-C	DUP	09/21/20	10/19/20	Uranium-232 Tracer	4	2.22	0.162	pCi/g		0.0371		85.1	0	0.781	g
9-W-E-18-C	DUP	09/21/20	10/19/20	Uranium-233/234	4	0.0583	0.0267	pCi/g		0.0232	1		0	0.781	g
9-W-E-18-C	DUP	09/21/20	10/19/20	Uranium-235/236	4	0.0206	0.016	pCi/g		0.00774	0.05		0	0.781	g
9-W-E-18-C	DUP	09/21/20	10/19/20	Uranium-238	4	0.054	0.029	pCi/g		0.0345	1		0	0.781	g
9-W-E-18-C	MS	09/21/20	10/19/20	Uranium-235/236	4	0.905	0.115	pCi/g		0.0358	0.05	117	0	0.781	g
9-W-E-18-C	MS	09/21/20	10/19/20	Uranium-232 Tracer	4	1.56	0.195	pCi/g		0.0413		59.8	0	0.781	g
9-W-S-22-C	SAMPLE	09/21/20	10/19/20	Uranium-232 Tracer	4	1.97	0.185	pCi/g		0.0436		73.2	0	0.758	g
9-W-S-22-C	SAMPLE	09/21/20	10/19/20	Uranium-233/234	4	0.332	0.0671	pCi/g		0.0375	1		0	0.758	g
9-W-S-22-C	SAMPLE	09/21/20	10/19/20	Uranium-235/236	4	0.0228	0.0212	pCi/g	U	0.0249	0.05		0	0.758	g
9-W-S-22-C	SAMPLE	09/21/20	10/19/20	Uranium-238	4	0.348	0.0689	pCi/g		0.04	1		0	0.758	g
9-W-S-22-C	DUP	09/21/20	10/19/20	Uranium-232 Tracer	4	2.12	0.176	pCi/g		0.0475		79	0	0.758	g
9-W-S-22-C	DUP	09/21/20	10/19/20	Uranium-233/234	4	0.447	0.0726	pCi/g		0.0305	1		0	0.758	g
9-W-S-22-C	DUP	09/21/20	10/19/20	Uranium-235/236	4	0.0265	0.0238	pCi/g	U	0.0326	0.05		0	0.758	g
9-W-S-22-C	DUP	09/21/20	10/19/20	Uranium-238	4	0.406	0.0696	pCi/g		0.0325	1		0	0.758	g
9-W-S-22-C	MS	09/21/20	10/19/20	Uranium-235/236	4	0.672	0.086	pCi/g		0.00851	0.05	81.8	0	0.758	g
9-W-S-22-C	MS	09/21/20	10/19/20	Uranium-232 Tracer	4	2.15	0.171	pCi/g		0.0217		79.9	0	0.758	g
LCS	LCS	10/19/20	10/19/20	Uranium-235/236	4	0.772	0.0865	pCi/g		0.0237	0.05	100	0	0.781	g
LCS	LCS	10/19/20	10/19/20	Uranium-232 Tracer	4	2.38	0.159	pCi/g		0.0399		91.2	0	0.781	g
MB	MB	10/19/20	10/19/20	Uranium-232 Tracer	4	2.08	0.169	pCi/g		0.0475		79.6	0	0.781	g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
MB	MB	10/19/20	10/19/20	Uranium-233/234	4	0.00262	0.0205	pCi/g	U	0.039	1			0	0.781 g
MB	MB	10/19/20	10/19/20	Uranium-235/236	4	0.00281	0.00953	pCi/g	U	0.00842	0.05			0	0.781 g
MB	MB	10/19/20	10/19/20	Uranium-238	4	-0.0028	0.0123	pCi/g	U	0.0268	1			0	0.781 g
2-W-S-1-B-R	SAMPLE	10/05/20	10/28/20	Americium-243 Tracer	1	1.77	0.192	pCi/g		0.0408		103		15.6	1.29 g
2-W-S-1-B-R	SAMPLE	10/05/20	10/28/20	Americium-241	1	0.00157	0.0164	pCi/g	U	0.0342	0.05			15.6	1.29 g
2-W-S-1-B-R	SAMPLE	10/05/20	10/28/20	Californium-252	1	-0.00139	0.012	pCi/g	U	0.0277	0.05			15.6	1.29 g
2-W-S-1-B-R	SAMPLE	10/05/20	10/28/20	Curium-243/244	1	0.00707	0.0195	pCi/g	U	0.0338	0.05			15.6	1.29 g
2-W-S-2-B-R	SAMPLE	10/05/20	10/28/20	Americium-243 Tracer	1	1.86	0.206	pCi/g		0.0424		103		15.6	1.23 g
2-W-S-2-B-R	SAMPLE	10/05/20	10/28/20	Americium-241	1	0.00933	0.0214	pCi/g	U	0.034	0.05			15.6	1.23 g
2-W-S-2-B-R	SAMPLE	10/05/20	10/28/20	Californium-252	1	0.00482	0.0181	pCi/g	U	0.0304	0.05			15.6	1.23 g
2-W-S-2-B-R	SAMPLE	10/05/20	10/28/20	Curium-243/244	1	0.00776	0.0214	pCi/g	U	0.037	0.05			15.6	1.23 g
2-W-S-4-B-R	SAMPLE	10/05/20	10/25/20	Americium-243 Tracer	1	1.82	0.099	pCi/g		0.019		102		16.5	1.24 g
2-W-S-4-B-R	SAMPLE	10/05/20	10/25/20	Americium-241	1	0.0115	0.0126	pCi/g	U	0.0192	0.05			16.5	1.24 g
2-W-S-4-B-R	SAMPLE	10/05/20	10/25/20	Californium-252	1	0.00148	0.00648	pCi/g	U	0.0113	0.05			16.5	1.24 g
2-W-S-4-B-R	SAMPLE	10/05/20	10/25/20	Curium-243/244	1	0	0.00786	pCi/g	U	0.0157	0.05			16.5	1.24 g
2-W-W-5-R	SAMPLE	10/05/20	10/25/20	Americium-243 Tracer	1	1.42	0.0883	pCi/g		0.0126		92.2		15.6	1.44 g
2-W-W-5-R	SAMPLE	10/05/20	10/25/20	Americium-241	1	0.00931	0.0101	pCi/g	U	0.0147	0.05			15.6	1.44 g
2-W-W-5-R	SAMPLE	10/05/20	10/25/20	Californium-252	1	0.00411	0.00806	pCi/g	U	0.0131	0.05			15.6	1.44 g
2-W-W-5-R	SAMPLE	10/05/20	10/25/20	Curium-243/244	1	0	0.00728	pCi/g	U	0.0145	0.05			15.6	1.44 g
2-W-W-5-R	DUP	10/05/20	10/25/20	Americium-243 Tracer	1	1.4	0.0937	pCi/g		0.0141		90.9		0	1.44 g
2-W-W-5-R	DUP	10/05/20	10/25/20	Americium-241	1	0.00599	0.0125	pCi/g	U	0.0216	0.05			0	1.44 g
2-W-W-5-R	DUP	10/05/20	10/25/20	Californium-252	1	0	0.00605	pCi/g	U	0.0118	0.05			0	1.44 g
2-W-W-5-R	DUP	10/05/20	10/25/20	Curium-243/244	1	0	0.00917	pCi/g	U	0.0182	0.05			0	1.44 g
2-W-W-5-R	MS	10/05/20	10/25/20	Americium-241	1	0.604	0.0566	pCi/g		0.0193	0.05	86.9		0	1.44 g
2-W-W-5-R	MS	10/05/20	10/25/20	Californium-252	1	0.325	0.0427	pCi/g		0.0198	0.05	93.9		0	1.44 g
2-W-W-5-R	MS	10/05/20	10/25/20	Curium-243/244	1	0.656	0.0598	pCi/g		0.0293	0.05	84.8		0	1.44 g
2-W-W-5-R	MS	10/05/20	10/25/20	Americium-243 Tracer	1	1.46	0.0887	pCi/g		0.0177		95.2		0	1.44 g
LCS	LCS	10/25/20	10/25/20	Americium-241	1	0.671	0.0665	pCi/g		0.0277	0.05	97.9		0	1.44 g
LCS	LCS	10/25/20	10/25/20	Californium-252	1	0.391	0.0507	pCi/g		0.016	0.05	115		0	1.44 g
LCS	LCS	10/25/20	10/25/20	Curium-243/244	1	0.771	0.0702	pCi/g		0.0247	0.05	99.7		0	1.44 g
LCS	LCS	10/25/20	10/25/20	Americium-243 Tracer	1	1.34	0.0982	pCi/g		0.0216		87.1		0	1.44 g
MB	MB	10/25/20	10/25/20	Americium-243 Tracer	1	1.24	0.0948	pCi/g		0.0167		80.8		0	1.44 g
MB	MB	10/25/20	10/25/20	Americium-241	1	0.0107	0.015	pCi/g	U	0.0247	0.05			0	1.44 g
MB	MB	10/25/20	10/25/20	Californium-252	1	-0.00156	0.00683	pCi/g	U	0.0149	0.05			0	1.44 g
MB	MB	10/25/20	10/25/20	Curium-243/244	1	-0.00302	0.00836	pCi/g	U	0.0186	0.05			0	1.44 g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

6-EPA 906.0 Mod.

5-DOE HASL 300, 4.5.2.3/Ga-01-R

7-EPA EERF C-01 Mod.

1-DOE EML HASL-300, Am-05-RC Mod.
2-ASTM C 1475-00 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
2-W-E-3-R	SAMPLE	10/05/20	10/23/20	Americium-243 Tracer	2	86.4		pCi/g				76.4	14.9	1.93	g
2-W-E-3-R	SAMPLE	10/05/20	10/23/20	Neptunium-237	2	-0.00752	0.013	pCi/g	U	0.0369	0.05		14.9	1.93	g
2-W-S-1-B-R	SAMPLE	10/05/20	10/23/20	Americium-243 Tracer	2	106		pCi/g				93.8	15.6	1.93	g
2-W-S-1-B-R	SAMPLE	10/05/20	10/23/20	Neptunium-237	2	-0.00655	0.00746	pCi/g	U	0.0254	0.05		15.6	1.93	g
2-W-W-5-R	SAMPLE	10/05/20	10/23/20	Americium-243 Tracer	2	67.1		pCi/g				59.1	15.6	1.92	g
2-W-W-5-R	SAMPLE	10/05/20	10/23/20	Neptunium-237	2	-0.0131	0.0127	pCi/g	U	0.0446	0.05		15.6	1.92	g
2-W-W-5-R	DUP	10/05/20	10/23/20	Americium-243 Tracer	2	97.8		pCi/g				86.1	0	1.92	g
2-W-W-5-R	DUP	10/05/20	10/23/20	Neptunium-237	2	-0.0023	0.0104	pCi/g	U	0.0262	0.05		0	1.92	g
2-W-W-5-R	MS	10/05/20	10/24/20	Neptunium-237	2	1.39		pCi/g		0.0301	0.05	61.1	0	1.92	g
2-W-W-5-R	MS	10/05/20	10/24/20	Americium-243 Tracer	2	101		pCi/g				88.6	0	1.92	g
LCS	LCS	10/23/20	10/23/20	Neptunium-237	2	1.29	0.141	pCi/g		0.051	0.05	114	0	1.93	g
LCS	LCS	10/23/20	10/23/20	Americium-243 Tracer	2	114		pCi/g				101	0	1.93	g
MB	MB	10/23/20	10/23/20	Americium-243 Tracer	2	106		pCi/g				93.5	0	1.93	g
MB	MB	10/23/20	10/23/20	Neptunium-237	2	-0.00062	0.00928	pCi/g	U	0.0217	0.05		0	1.93	g
2-W-E-3-R	SAMPLE	10/05/20	10/25/20	Plutonium-242 Tracer	3	1.1	0.106	pCi/g		0.0149		73.8	14.9	1.29	g
2-W-E-3-R	SAMPLE	10/05/20	10/25/20	Plutonium-238	3	0.00583	0.0114	pCi/g	U	0.0186	0.05		14.9	1.29	g
2-W-E-3-R	SAMPLE	10/05/20	10/25/20	Plutonium-239/240	3	-0.00194	0.00851	pCi/g	U	0.0186	0.05		14.9	1.29	g
2-W-S-1-B-R	SAMPLE	10/05/20	10/25/20	Plutonium-242 Tracer	3	1.26	0.0977	pCi/g		0.0159		84.2	15.6	1.29	g
2-W-S-1-B-R	SAMPLE	10/05/20	10/25/20	Plutonium-238	3	0.0083	0.00976	pCi/g	U	0.0127	0.05		15.6	1.29	g
2-W-S-1-B-R	SAMPLE	10/05/20	10/25/20	Plutonium-239/240	3	0.00498	0.00861	pCi/g	U	0.0127	0.05		15.6	1.29	g
2-W-W-5-R	SAMPLE	10/05/20	10/25/20	Plutonium-242 Tracer	3	1.29	0.0801	pCi/g		0.0166		96.9	15.6	1.44	g
2-W-W-5-R	SAMPLE	10/05/20	10/25/20	Plutonium-238	3	0.0111	0.0106	pCi/g	U	0.0152	0.05		15.6	1.44	g
2-W-W-5-R	SAMPLE	10/05/20	10/25/20	Plutonium-239/240	3	0.00495	0.00686	pCi/g	U	0.00947	0.05		15.6	1.44	g
2-W-W-5-R	DUP	10/05/20	10/25/20	Plutonium-242 Tracer	3	1.09	0.0892	pCi/g		0.017		81.5	0	1.44	g
2-W-W-5-R	DUP	10/05/20	10/25/20	Plutonium-238	3	0.00154	0.00906	pCi/g	U	0.017	0.05		0	1.44	g
2-W-W-5-R	DUP	10/05/20	10/25/20	Plutonium-239/240	3	0.00154	0.00675	pCi/g	U	0.0118	0.05		0	1.44	g
2-W-W-5-R	MS	10/05/20	10/25/20	Plutonium-239/240	3	0.781	0.0762	pCi/g		0.0233	0.05	111	0	1.44	g
2-W-W-5-R	MS	10/05/20	10/25/20	Plutonium-242 Tracer	3	0.887	0.0997	pCi/g		0.0305		66.4	0	1.44	g
LCS	LCS	10/25/20	10/25/20	Plutonium-239/240	3	0.69	0.0621	pCi/g		0.0159	0.05	99.1	0	1.44	g
LCS	LCS	10/25/20	10/25/20	Plutonium-242 Tracer	3	1.13	0.086	pCi/g		0.0137		84.6	0	1.44	g
MB	MB	10/25/20	10/25/20	Plutonium-242 Tracer	3	0.983	0.0929	pCi/g		0.016		73.7	0	1.44	g
MB	MB	10/25/20	10/25/20	Plutonium-238	3	0.00668	0.0113	pCi/g	U	0.0185	0.05		0	1.44	g
MB	MB	10/25/20	10/25/20	Plutonium-239/240	3	0.00167	0.00866	pCi/g	U	0.016	0.05		0	1.44	g
2-W-E-3-R	SAMPLE	10/05/20	10/24/20	Uranium-232 Tracer	4	1.59	0.185	pCi/g		0.0497		62.8	14.9	0.805	g
2-W-E-3-R	SAMPLE	10/05/20	10/24/20	Uranium-233/234	4	0.0365	0.0279	pCi/g		0.0342	1		14.9	0.805	g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units	
2-W-E-3-R	SAMPLE	10/05/20	10/24/20	Uranium-235/236	4	0.0104	0.0179	pCi/g	U	0.0265	0.05		14.9	0.805	g	
2-W-E-3-R	SAMPLE	10/05/20	10/24/20	Uranium-238	4	0.0621	0.0317	pCi/g		0.0264	1		14.9	0.805	g	
2-W-S-1-B-R	SAMPLE	10/05/20	10/24/20	Uranium-232 Tracer	4	2.41	0.149	pCi/g		0.028		95.2		15.6	0.806	g
2-W-S-1-B-R	SAMPLE	10/05/20	10/24/20	Uranium-233/234	4	0.0212	0.024	pCi/g	U	0.0382	1		15.6	0.806	g	
2-W-S-1-B-R	SAMPLE	10/05/20	10/24/20	Uranium-235/236	4	0.0137	0.0155	pCi/g	U	0.0218	0.05		15.6	0.806	g	
2-W-S-1-B-R	SAMPLE	10/05/20	10/24/20	Uranium-238	4	0.0318	0.0199	pCi/g		0.0218	1		15.6	0.806	g	
2-W-W-5-R	SAMPLE	10/05/20	10/24/20	Uranium-232 Tracer	4	2.02	0.127	pCi/g		0.0241		95.2		15.6	0.962	g
2-W-W-5-R	SAMPLE	10/05/20	10/24/20	Uranium-233/234	4	0.0205	0.0196	pCi/g	U	0.0296	1		15.6	0.962	g	
2-W-W-5-R	SAMPLE	10/05/20	10/24/20	Uranium-235/236	4	0.0137	0.0139	pCi/g	U	0.0188	0.05		15.6	0.962	g	
2-W-W-5-R	SAMPLE	10/05/20	10/24/20	Uranium-238	4	0.0235	0.0144	pCi/g		0.00587	1		15.6	0.962	g	
2-W-W-5-R	DUP	10/05/20	10/24/20	Uranium-232 Tracer	4	1.63	0.141	pCi/g		0.0348		77.1	0	0.962	g	
2-W-W-5-R	DUP	10/05/20	10/24/20	Uranium-233/234	4	0.0244	0.0206	pCi/g	U	0.0281	1		0	0.962	g	
2-W-W-5-R	DUP	10/05/20	10/24/20	Uranium-235/236	4	0.00484	0.0116	pCi/g	U	0.0185	0.05		0	0.962	g	
2-W-W-5-R	DUP	10/05/20	10/24/20	Uranium-238	4	0.029	0.0201	pCi/g		0.0231	1		0	0.962	g	
2-W-W-5-R	MS	10/05/20	10/24/20	Uranium-235/236	4	0.674	0.0693	pCi/g		0.0141	0.05	105	0	0.962	g	
2-W-W-5-R	MS	10/05/20	10/24/20	Uranium-232 Tracer	4	1.64	0.124	pCi/g		0.0455		77.3	0	0.962	g	
LCS	LCS	10/24/20	10/24/20	Uranium-235/236	4	0.571	0.0647	pCi/g		0.0292	0.05	91.2	0	0.962	g	
LCS	LCS	10/24/20	10/24/20	Uranium-232 Tracer	4	2.08	0.124	pCi/g		0.0465		98.4	0	0.962	g	
MB	MB	10/24/20	10/24/20	Uranium-232 Tracer	4	1.83	0.131	pCi/g		0.0259		86.6	0	0.962	g	
MB	MB	10/24/20	10/24/20	Uranium-233/234	4	0.012	0.017	pCi/g	U	0.0274	1		0	0.962	g	
MB	MB	10/24/20	10/24/20	Uranium-235/236	4	0.0126	0.0131	pCi/g	U	0.0161	0.05		0	0.962	g	
MB	MB	10/24/20	10/24/20	Uranium-238	4	0.0147	0.0149	pCi/g	U	0.0201	1		0	0.962	g	
6NW-W-W-17-M	SAMPLE	09/18/20	10/15/20	Strontium Carrier	8	4.3	mg					93.5	0	6.03	g	
6NW-W-W-17-M	SAMPLE	09/18/20	10/15/20	Strontium-90	8	-0.00484	0.0352	pCi/g	U	0.0697	0.1		0	6.03	g	
6NW-W-W-17-M	DUP	09/18/20	10/15/20	Strontium Carrier	8	3.3	mg					71.7	0	6.35	g	
6NW-W-W-17-M	DUP	09/18/20	10/15/20	Strontium-90	8	-0.0237	0.0412	pCi/g	U	0.0875	0.1		0	6.35	g	
6NW-W-W-17-M	MS	09/18/20	10/15/20	Strontium-90	8	10.8	0.656	pCi/g		0.276	0.1	92.6	0	1.88	g	
6NW-W-W-17-M	MS	09/18/20	10/15/20	Strontium Carrier	8	4.3	mg					93.5	0	1.88	g	
7C-4-C	SAMPLE	09/21/20	10/16/20	Strontium-90	8	2.8	mg					60.9	0	6.78	g	
7C-4-C	SAMPLE	09/21/20	10/16/20	Strontium Carrier	8	0.0254	0.0551	pCi/g	U	0.0963	0.1		0	6.78	g	
7C-4-C	DUP	09/21/20	10/15/20	Strontium Carrier	8	2.1	mg					45.7	0	6.63	g	
7C-4-C	DUP	09/21/20	10/15/20	Strontium-90	8	0.0352	0.0539	pCi/g	U	0.0936	0.1		0	6.63	g	
7C-4-C	MS	09/21/20	10/15/20	Strontium-90	8	13.1	1	pCi/g		0.58	0.1	99	0	1.64	g	
7C-4-C	MS	09/21/20	10/15/20	Strontium Carrier	8	2.8	mg					60.9	0	1.64	g	
7-F-4-C	SAMPLE	09/21/20	10/15/20	Strontium Carrier	8	4	mg					87	0	6.58	g	

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Appendix A
Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
7-F-4-C	SAMPLE	09/21/20	10/15/20	Strontium-90	8	-0.0154	0.0332	pCi/g	U	0.0688	0.1			0	6.58 g
7-F-4-C	DUP	09/21/20	10/15/20	Strontium Carrier	8	4.9		mg				107		0	6.26 g
7-F-4-C	DUP	09/21/20	10/15/20	Strontium-90	8	0.00575	0.0364	pCi/g	U	0.0675	0.1			0	6.26 g
7-F-4-C	MS	09/21/20	10/15/20	Strontium-90	8	11.7	0.747	pCi/g		0.357	0.1	92		0	1.71 g
7-F-4-C	MS	09/21/20	10/15/20	Strontium Carrier	8	4.1		mg				89.1		0	1.71 g
7W-N-2-C	SAMPLE	09/21/20	10/15/20	Strontium Carrier	8	5		mg				109		0	6.31 g
7W-N-2-C	SAMPLE	09/21/20	10/15/20	Strontium-90	8	-0.0248	0.0311	pCi/g	U	0.0659	0.1			0	6.31 g
7W-N-2-C	DUP	09/21/20	10/15/20	Strontium Carrier	8	4.8		mg				104		0	6.02 g
7W-N-2-C	DUP	09/21/20	10/15/20	Strontium-90	8	-0.0205	0.0326	pCi/g	U	0.068	0.1			0	6.02 g
7W-N-2-C	MS	09/21/20	10/15/20	Strontium-90	8	17.8	1.09	pCi/g		0.556	0.1	87.3		0	1.07 g
7W-N-2-C	MS	09/21/20	10/15/20	Strontium Carrier	8	4.7		mg				102		0	1.07 g
LCS	LCS	10/15/20	10/15/20	Strontium-90	8	2.97	0.183	pCi/g		0.101	0.1	92.3		0	6.78 g
LCS	LCS	10/15/20	10/15/20	Strontium Carrier	8	4.4		mg				95.7		0	6.78 g
MB	MB	10/15/20	10/15/20	Strontium Carrier	8	4.5		mg				97.8		0	6.78 g
MB	MB	10/15/20	10/15/20	Strontium-90	8	-0.0193	0.0348	pCi/g	U	0.0707	0.1			0	6.78 g
2-W-E-3-R	SAMPLE	10/05/20	10/14/20	Americium-241	5	0.0742	0.432	pCi/g	U	0.681				14.9	48.5 g
2-W-E-3-R	SAMPLE	10/05/20	10/14/20	Barium-133	5	-0.0289	0.0903	pCi/g	U	0.151				14.9	48.5 g
2-W-E-3-R	SAMPLE	10/05/20	10/14/20	Cadmium-109	5	-0.45	1.46	pCi/g	U	2.41				14.9	48.5 g
2-W-E-3-R	SAMPLE	10/05/20	10/14/20	Cerium-144	5	-0.0224	0.294	pCi/g	U	0.51				14.9	48.5 g
2-W-E-3-R	SAMPLE	10/05/20	10/14/20	Cesium-137	5	0.0129	0.0688	pCi/g	U	0.14	1			14.9	48.5 g
2-W-E-3-R	SAMPLE	10/05/20	10/14/20	Cobalt-57	5	0.0308	0.0424	pCi/g	U	0.0798				14.9	48.5 g
2-W-E-3-R	SAMPLE	10/05/20	10/14/20	Cobalt-60	5	-0.00027	0.0529	pCi/g	U	0.121				14.9	48.5 g
2-W-E-3-R	SAMPLE	10/05/20	10/14/20	Europium-152	5	-0.155	0.19	pCi/g	U	0.29				14.9	48.5 g
2-W-E-3-R	SAMPLE	10/05/20	10/14/20	Lead-210	5	8.53	13.7	pCi/g	U	23				14.9	48.5 g
2-W-E-3-R	SAMPLE	10/05/20	10/14/20	Manganese-54	5	0.0297	0.0623	pCi/g	U	0.138				14.9	48.5 g
2-W-E-3-R	SAMPLE	10/05/20	10/14/20	Mercury-203	5	-0.0194	0.0584	pCi/g	U	0.0981				14.9	48.5 g
2-W-E-3-R	SAMPLE	10/05/20	10/14/20	Sodium-22	5	-0.0261	0.0624	pCi/g	U	0.117				14.9	48.5 g
2-W-E-3-R	SAMPLE	10/05/20	10/14/20	Yttrium-88	5	0.0343	0.0715	pCi/g	U	0.188				14.9	48.5 g
2-W-E-3-R	SAMPLE	10/05/20	10/14/20	Zinc-65	5	-0.111	0.174	pCi/g	U	0.296				14.9	48.5 g
2-W-S-1-B-R	SAMPLE	10/05/20	10/14/20	Americium-241	5	0.0931	0.321	pCi/g	U	0.574				15.6	33.5 g
2-W-S-1-B-R	SAMPLE	10/05/20	10/14/20	Barium-133	5	-0.0822	0.104	pCi/g	U	0.168				15.6	33.5 g
2-W-S-1-B-R	SAMPLE	10/05/20	10/14/20	Cadmium-109	5	1.24	1.58	pCi/g	U	2.93				15.6	33.5 g
2-W-S-1-B-R	SAMPLE	10/05/20	10/14/20	Cerium-144	5	-0.277	0.359	pCi/g	U	0.534				15.6	33.5 g
2-W-S-1-B-R	SAMPLE	10/05/20	10/14/20	Cesium-137	5	0.0575	0.0851	pCi/g	U	0.192	1			15.6	33.5 g
2-W-S-1-B-R	SAMPLE	10/05/20	10/14/20	Cobalt-57	5	-0.0219	0.0587	pCi/g	U	0.0934				15.6	33.5 g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Appendix A
Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
2-W-S-1-B-R	SAMPLE	10/05/20	10/14/20	Cobalt-60	5	0.0201	0.0947	pCi/g	U	0.223			15.6	33.5 g	
2-W-S-1-B-R	SAMPLE	10/05/20	10/14/20	Europium-152	5	-0.0764	0.278	pCi/g	U	0.436			15.6	33.5 g	
2-W-S-1-B-R	SAMPLE	10/05/20	10/14/20	Lead-210	5	4.71	10.8	pCi/g	U	19.2			15.6	33.5 g	
2-W-S-1-B-R	SAMPLE	10/05/20	10/14/20	Manganese-54	5	-0.1	0.111	pCi/g	U	0.16			15.6	33.5 g	
2-W-S-1-B-R	SAMPLE	10/05/20	10/14/20	Mercury-203	5	0.0981	0.0826	pCi/g	U	0.168			15.6	33.5 g	
2-W-S-1-B-R	SAMPLE	10/05/20	10/14/20	Sodium-22	5	-0.0209	0.0409	pCi/g	U	0.054			15.6	33.5 g	
2-W-S-1-B-R	SAMPLE	10/05/20	10/14/20	Yttrium-88	5	0.00203	0.0754	pCi/g	U	0.203			15.6	33.5 g	
2-W-S-1-B-R	SAMPLE	10/05/20	10/14/20	Zinc-65	5	0.0289	0.251	pCi/g	U	0.517			15.6	33.5 g	
2-W-S-2-B-R	SAMPLE	10/05/20	10/14/20	Americium-241	5	0.0285	0.221	pCi/g	U	0.36			15.6	32.3 g	
2-W-S-2-B-R	SAMPLE	10/05/20	10/14/20	Barium-133	5	0.0246	0.0867	pCi/g	U	0.169			15.6	32.3 g	
2-W-S-2-B-R	SAMPLE	10/05/20	10/14/20	Cadmium-109	5	0.821	0.96	pCi/g	U	1.99			15.6	32.3 g	
2-W-S-2-B-R	SAMPLE	10/05/20	10/14/20	Cerium-144	5	0.101	0.426	pCi/g	U	0.724			15.6	32.3 g	
2-W-S-2-B-R	SAMPLE	10/05/20	10/14/20	Cesium-137	5	0.022	0.113	pCi/g	U	0.224	1		15.6	32.3 g	
2-W-S-2-B-R	SAMPLE	10/05/20	10/14/20	Cobalt-57	5	-0.0303	0.0552	pCi/g	U	0.0848			15.6	32.3 g	
2-W-S-2-B-R	SAMPLE	10/05/20	10/14/20	Cobalt-60	5	-0.0365	0.0861	pCi/g	U	0.16			15.6	32.3 g	
2-W-S-2-B-R	SAMPLE	10/05/20	10/14/20	Europium-152	5	0.0545	0.196	pCi/g	U	0.382			15.6	32.3 g	
2-W-S-2-B-R	SAMPLE	10/05/20	10/14/20	Lead-210	5	1.24	6.37	pCi/g	U	10.8			15.6	32.3 g	
2-W-S-2-B-R	SAMPLE	10/05/20	10/14/20	Manganese-54	5	-0.0548	0.104	pCi/g	U	0.169			15.6	32.3 g	
2-W-S-2-B-R	SAMPLE	10/05/20	10/14/20	Mercury-203	5	-0.0319	0.0806	pCi/g	U	0.124			15.6	32.3 g	
2-W-S-2-B-R	SAMPLE	10/05/20	10/14/20	Sodium-22	5	-0.017	0.0889	pCi/g	U	0.179			15.6	32.3 g	
2-W-S-2-B-R	SAMPLE	10/05/20	10/14/20	Yttrium-88	5	0.00832	0.125	pCi/g	U	0.276			15.6	32.3 g	
2-W-S-2-B-R	SAMPLE	10/05/20	10/14/20	Zinc-65	5	-0.0249	0.155	pCi/g	U	0.318			15.6	32.3 g	
2-W-S-4-B-R	SAMPLE	10/05/20	10/14/20	Americium-241	5	-0.0209	0.155	pCi/g	U	0.248			16.5	46.4 g	
2-W-S-4-B-R	SAMPLE	10/05/20	10/14/20	Barium-133	5	0.0385	0.0687	pCi/g	U	0.127			16.5	46.4 g	
2-W-S-4-B-R	SAMPLE	10/05/20	10/14/20	Cadmium-109	5	0.599	1.06	pCi/g	U	1.71			16.5	46.4 g	
2-W-S-4-B-R	SAMPLE	10/05/20	10/14/20	Cerium-144	5	0.127	0.285	pCi/g	U	0.495			16.5	46.4 g	
2-W-S-4-B-R	SAMPLE	10/05/20	10/14/20	Cesium-137	5	0.0461	0.0532	pCi/g	U	0.122	1		16.5	46.4 g	
2-W-S-4-B-R	SAMPLE	10/05/20	10/14/20	Cobalt-57	5	0.0107	0.0332	pCi/g	U	0.0576			16.5	46.4 g	
2-W-S-4-B-R	SAMPLE	10/05/20	10/14/20	Cobalt-60	5	0.013	0.0522	pCi/g	U	0.125			16.5	46.4 g	
2-W-S-4-B-R	SAMPLE	10/05/20	10/14/20	Europium-152	5	0.00689	0.151	pCi/g	U	0.278			16.5	46.4 g	
2-W-S-4-B-R	SAMPLE	10/05/20	10/14/20	Lead-210	5	-0.135	2.89	pCi/g	U	4.81			16.5	46.4 g	
2-W-S-4-B-R	SAMPLE	10/05/20	10/14/20	Manganese-54	5	0.0197	0.047	pCi/g	U	0.108			16.5	46.4 g	
2-W-S-4-B-R	SAMPLE	10/05/20	10/14/20	Mercury-203	5	-0.00313	0.0531	pCi/g	U	0.0958			16.5	46.4 g	
2-W-S-4-B-R	SAMPLE	10/05/20	10/14/20	Sodium-22	5	0.000523	0.0544	pCi/g	U	0.119			16.5	46.4 g	
2-W-S-4-B-R	SAMPLE	10/05/20	10/14/20	Yttrium-88	5	0.0143	0.0553	pCi/g	U	0.143			16.5	46.4 g	

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Appendix A
Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
2-W-S-4-B-R	SAMPLE	10/05/20	10/14/20	Zinc-65	5	0.0327	0.12	pCi/g	U	0.268			16.5	46.4	g
2-W-W-5-R	SAMPLE	10/05/20	10/14/20	Americium-241	5	0.068	0.116	pCi/g	U	0.199			15.6	52.2	g
2-W-W-5-R	SAMPLE	10/05/20	10/14/20	Barium-133	5	-0.0049	0.0539	pCi/g	U	0.0978			15.6	52.2	g
2-W-W-5-R	SAMPLE	10/05/20	10/14/20	Cadmium-109	5	-0.396	0.776	pCi/g	U	1.22			15.6	52.2	g
2-W-W-5-R	SAMPLE	10/05/20	10/14/20	Cerium-144	5	0.0339	0.245	pCi/g	U	0.416			15.6	52.2	g
2-W-W-5-R	SAMPLE	10/05/20	10/14/20	Cesium-137	5	0.00816	0.0577	pCi/g	U	0.114	1		15.6	52.2	g
2-W-W-5-R	SAMPLE	10/05/20	10/14/20	Cobalt-57	5	0.0209	0.033	pCi/g	U	0.0576			15.6	52.2	g
2-W-W-5-R	SAMPLE	10/05/20	10/14/20	Cobalt-60	5	0.0291	0.0734	pCi/g	U	0.159			15.6	52.2	g
2-W-W-5-R	SAMPLE	10/05/20	10/14/20	Europium-152	5	0.0119	0.133	pCi/g	U	0.247			15.6	52.2	g
2-W-W-5-R	SAMPLE	10/05/20	10/14/20	Lead-210	5	1.34	2.63	pCi/g	U	3.2			15.6	52.2	g
2-W-W-5-R	SAMPLE	10/05/20	10/14/20	Manganese-54	5	0.049	0.0524	pCi/g	U	0.119			15.6	52.2	g
2-W-W-5-R	SAMPLE	10/05/20	10/14/20	Mercury-203	5	0.0209	0.0484	pCi/g	U	0.0923			15.6	52.2	g
2-W-W-5-R	SAMPLE	10/05/20	10/14/20	Sodium-22	5	0.0155	0.0461	pCi/g	U	0.108			15.6	52.2	g
2-W-W-5-R	SAMPLE	10/05/20	10/14/20	Yttrium-88	5	0.0256	0.0354	pCi/g	U	0.117			15.6	52.2	g
2-W-W-5-R	SAMPLE	10/05/20	10/14/20	Zinc-65	5	0.0119	0.112	pCi/g	U	0.23			15.6	52.2	g
2-W-W-5-R	DUP	10/05/20	10/14/20	Americium-241	5	-0.106	0.126	pCi/g	U	0.181			0	52.2	g
2-W-W-5-R	DUP	10/05/20	10/14/20	Barium-133	5	0.0108	0.0454	pCi/g	U	0.0805			0	52.2	g
2-W-W-5-R	DUP	10/05/20	10/14/20	Cadmium-109	5	0.185	0.575	pCi/g	U	0.935			0	52.2	g
2-W-W-5-R	DUP	10/05/20	10/14/20	Cerium-144	5	-0.206	0.181	pCi/g	U	0.267			0	52.2	g
2-W-W-5-R	DUP	10/05/20	10/14/20	Cesium-137	5	0.0115	0.0601	pCi/g	U	0.103	1		0	52.2	g
2-W-W-5-R	DUP	10/05/20	10/14/20	Cobalt-57	5	0.00717	0.0227	pCi/g	U	0.039			0	52.2	g
2-W-W-5-R	DUP	10/05/20	10/14/20	Cobalt-60	5	-0.00171	0.0431	pCi/g	U	0.0839			0	52.2	g
2-W-W-5-R	DUP	10/05/20	10/14/20	Europium-152	5	0.0251	0.0827	pCi/g	U	0.157			0	52.2	g
2-W-W-5-R	DUP	10/05/20	10/14/20	Lead-210	5	1.65	2.32	pCi/g	U	3.61			0	52.2	g
2-W-W-5-R	DUP	10/05/20	10/14/20	Manganese-54	5	0.0213	0.0327	pCi/g	U	0.0682			0	52.2	g
2-W-W-5-R	DUP	10/05/20	10/14/20	Mercury-203	5	0.0249	0.0382	pCi/g	U	0.0669			0	52.2	g
2-W-W-5-R	DUP	10/05/20	10/14/20	Sodium-22	5	0.00358	0.0494	pCi/g	U	0.096			0	52.2	g
2-W-W-5-R	DUP	10/05/20	10/14/20	Yttrium-88	5	0.00983	0.0411	pCi/g	U	0.0934			0	52.2	g
2-W-W-5-R	DUP	10/05/20	10/14/20	Zinc-65	5	0.0475	0.083	pCi/g	U	0.177			0	52.2	g
LCS	LCS	10/14/20	10/14/20	Americium-241	5	516	10	pCi/g		4.84		106	0	115	g
LCS	LCS	10/14/20	10/14/20	Cesium-137	5	160	3.85	pCi/g		1.04	1	97.9	0	115	g
LCS	LCS	10/14/20	10/14/20	Cobalt-60	5	89.8	3.71	pCi/g		0.764		95.1	0	115	g
MB	MB	10/14/20	10/14/20	Americium-241	5	-0.0846	0.317	pCi/g	U	0.515			0	52.2	g
MB	MB	10/14/20	10/14/20	Barium-133	5	0.00961	0.0562	pCi/g	U	0.103			0	52.2	g
MB	MB	10/14/20	10/14/20	Cadmium-109	5	-0.201	1.27	pCi/g	U	1.9			0	52.2	g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

6-EPA 906.0 Mod.

5-DOE HASL 300, 4.5.2.3/Ga-01-R

7-EPA EERF C-01 Mod.

*Key
1-DOE EML HASL-300, Am-05-RC Mod.
2-ASTM C 1475-00 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	%	%	Sample Aliquot	Aliquot Units
												Recovery	Moisture		
MB	MB	10/14/20	10/14/20	Cerium-144	5	-0.037	0.291	pCi/g	U	0.479				0	52.2 g
MB	MB	10/14/20	10/14/20	Cesium-137	5	-0.00949	0.0534	pCi/g	U	0.1	1			0	52.2 g
MB	MB	10/14/20	10/14/20	Cobalt-57	5	-0.0341	0.0389	pCi/g	U	0.0564				0	52.2 g
MB	MB	10/14/20	10/14/20	Cobalt-60	5	-0.0121	0.054	pCi/g	U	0.113				0	52.2 g
MB	MB	10/14/20	10/14/20	Europium-152	5	0.0524	0.16	pCi/g	U	0.312				0	52.2 g
MB	MB	10/14/20	10/14/20	Lead-210	5	-0.108	10	pCi/g	U	15.3				0	52.2 g
MB	MB	10/14/20	10/14/20	Manganese-54	5	-0.0328	0.0582	pCi/g	U	0.0949				0	52.2 g
MB	MB	10/14/20	10/14/20	Mercury-203	5	-0.0169	0.0479	pCi/g	U	0.0849				0	52.2 g
MB	MB	10/14/20	10/14/20	Sodium-22	5	0.000428	0.0329	pCi/g	U	0.0865				0	52.2 g
MB	MB	10/14/20	10/14/20	Yttrium-88	5	0.0376	0.0932	pCi/g	U	0.212				0	52.2 g
MB	MB	10/14/20	10/14/20	Zinc-65	5	0.0167	0.13	pCi/g	U	0.279				0	52.2 g
10-W-W-13-C	SAMPLE	09/21/20	10/26/20	Tritium	6	-0.716	0.808	pCi/g	U	1.44	1			0	15.3 g
10-W-W-13-C	DUP	09/21/20	10/26/20	Tritium	6	-0.86	0.795	pCi/g	U	1.42	1			0	15.5 g
10-W-W-13-C	MS	09/21/20	10/27/20	Tritium	6	24.7	3.68	pCi/g		3.3	1	76.9	0	16 g	
9-F-17-C	SAMPLE	09/21/20	10/26/20	Tritium	6	-0.898	0.839	pCi/g	U	1.5	1			0	15.3 g
9-F-17-C	DUP	09/21/20	10/26/20	Tritium	6	-0.888	0.804	pCi/g	U	1.44	1			0	15.6 g
9-F-17-C	MS	09/21/20	10/27/20	Tritium	6	28.5	3.97	pCi/g		3.42	1	86.5	0	15.5 g	
9-W-N-6-C	SAMPLE	09/21/20	10/26/20	Tritium	6	-0.817	1.44	pCi/g	U	2.54	1			0	8.62 g
9-W-N-6-C	DUP	09/21/20	10/26/20	Tritium	6	-1.47	1.5	pCi/g	U	2.67	1			0	8.57 g
9-W-N-6-C	MS	09/21/20	10/27/20	Tritium	6	41.1	6.02	pCi/g		5.33	1	77.7	0	9.7 g	
9-W-S-21-C	SAMPLE	09/21/20	10/26/20	Tritium	6	-0.044	0.826	pCi/g	U	1.43	1			0	15.4 g
9-W-S-21-C	DUP	09/21/20	10/27/20	Tritium	6	-1.03	0.842	pCi/g	U	1.51	1			0	15.2 g
9-W-S-21-C	MS	09/21/20	10/27/20	Tritium	6	30.7	4.63	pCi/g		4.87	1	93.1	0	15.6 g	
LCS	LCS	10/27/20	10/27/20	Tritium	6	26	3.67	pCi/g		3.17	1	81.1	0	16 g	
MB	MB	10/26/20	10/26/20	Tritium	6	-0.663	0.772	pCi/g	U	1.37	1			0	16 g
6NW-W-W-17-M	SAMPLE	09/18/20	10/19/20	Tritium	6	-0.237	0.846	pCi/g	U	1.48	1			0	15.4 g
6NW-W-W-17-M	DUP	09/18/20	10/20/20	Tritium	6	-0.08	0.819	pCi/g	U	1.42	1			0	15.4 g
6NW-W-W-17-M	MS	09/18/20	10/20/20	Tritium	6	31.9	4.34	pCi/g		3.53	1	95.3	0	15.3 g	
7C-4-C	SAMPLE	09/21/20	10/19/20	Tritium	6	1.69	1.79	pCi/g	U	3.01	1			0	7.66 g
7C-4-C	DUP	09/21/20	10/20/20	Tritium	6	1.23	1.46	pCi/g	U	2.46	1			0	9.09 g
7C-4-C	MS	09/21/20	10/20/20	Tritium	6	70.2	9.43	pCi/g		7.59	1	96.7	0	7.07 g	
7-F-4-C	SAMPLE	09/21/20	10/19/20	Tritium	6	0.212	0.83	pCi/g	U	1.42	1			0	15.8 g
7-F-4-C	DUP	09/21/20	10/19/20	Tritium	6	0.359	0.83	pCi/g	U	1.42	1			0	15.3 g
7-F-4-C	MS	09/21/20	10/20/20	Tritium	6	27.9	4.08	pCi/g		3.47	1	83.5	0	15.3 g	
7W-N-2-C	SAMPLE	09/21/20	10/19/20	Tritium	6	0.944	0.844	pCi/g	U	1.41	1			0	15.3 g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Appendix A
Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
7W-N-2-C	DUP	09/21/20	10/20/20	Tritium	6	0.338	0.83 pCi/g	U		1.42	1			0	15.1 g
7W-N-2-C	MS	09/21/20	10/20/20	Tritium	6	32.4	4.36 pCi/g			3.52	1	95		0	15.1 g
LCS	LCS	10/20/20	10/20/20	Tritium	6	28.1	3.98 pCi/g			3.31	1	86.9		0	15.8 g
MB	MB	10/19/20	10/19/20	Tritium	6	0.44	0.811 pCi/g	U		1.38	1			0	15.8 g
6-C-C-254	SAMPLE	09/18/20	10/24/20	Tritium	6	0.278	0.562 pCi/g	U		0.956	1			1.49	20.1 g
6-C-C-254	DUP	09/18/20	10/25/20	Tritium	6	0.321	0.507 pCi/g	U		0.858	1			0	20.1 g
6-C-C-254	MS	09/18/20	10/25/20	Tritium	6	45.6	5.74 pCi/g			4.41	1	94.6		0	10.6 g
6-NE-F-16-RS	SAMPLE	09/18/20	10/24/20	Tritium	6	-0.108	0.485 pCi/g	U		0.843	1			1.81	22.3 g
6-NE-F-16-RS	DUP	09/18/20	10/24/20	Tritium	6	0.416	0.517 pCi/g	U		0.871	1			0	20.6 g
6-NE-F-16-RS	MS	09/18/20	10/25/20	Tritium	6	25.1	3.46 pCi/g			2.84	1	83.4		0	17.1 g
6SE-F-45-C	SAMPLE	09/17/20	10/24/20	Tritium	6	-0.00183	1.06 pCi/g	U		1.83	1			2.11	10.1 g
6SE-F-45-C	DUP	09/17/20	10/25/20	Tritium	6	0.235	1.17 pCi/g	U		2	1			0	9.23 g
6SE-F-45-C	MS	09/17/20	10/25/20	Tritium	6	118	16.3 pCi/g			13.5	1	86.8		0	3.78 g
8-F-9-C	SAMPLE	09/21/20	10/24/20	Tritium	6	0.289	0.568 pCi/g	U		0.966	1			1.01	20 g
8-F-9-C	DUP	09/21/20	10/25/20	Tritium	6	0.0549	0.511 pCi/g	U		0.879	1			0	20.1 g
8-F-9-C	MS	09/21/20	10/25/20	Tritium	6	41.3	5.68 pCi/g			4.66	1	83.7		0	10.4 g
LCS	LCS	10/25/20	10/25/20	Tritium	6	20.8	2.74 pCi/g			2.19	1	90.6		0	22.3 g
MB	MB	10/24/20	10/24/20	Tritium	6	0.172	0.462 pCi/g	U		0.788	1			0	22.3 g
6NW-W-W-17-M	SAMPLE	09/18/20	10/20/20	Carbon-14	7	0.156	0.456 pCi/g	U		0.774	1			0	2.22 g
6NW-W-W-17-M	DUP	09/18/20	10/21/20	Carbon-14	7	0.327	0.475 pCi/g	U		0.801	1			0	2.16 g
6NW-W-W-17-M	MS	09/18/20	10/21/20	Carbon-14	7	32	1.68 pCi/g			1.21	1	102		0	2.4 g
7C-4-C	SAMPLE	09/21/20	10/21/20	Carbon-14	7	-0.162	0.462 pCi/g	U		0.795	1			0	2.12 g
7C-4-C	DUP	09/21/20	10/20/20	Carbon-14	7	-0.0304	0.372 pCi/g	U		0.637	1			0	2.7 g
7C-4-C	MS	09/21/20	10/21/20	Carbon-14	7	28.4	1.51 pCi/g			1.11	1	97.3		0	2.59 g
7-F-4-C	SAMPLE	09/21/20	10/20/20	Carbon-14	7	-0.644	0.422 pCi/g	U		0.744	1			0	2.31 g
7-F-4-C	DUP	09/21/20	10/20/20	Carbon-14	7	-0.123	0.451 pCi/g	U		0.776	1			0	2.23 g
7-F-4-C	MS	09/21/20	10/21/20	Carbon-14	7	28.3	1.54 pCi/g			1.13	1	96.6		0	2.57 g
7W-N-2-C	SAMPLE	09/21/20	10/21/20	Carbon-14	7	-0.0309	0.405 pCi/g	U		0.694	1			0	2.43 g
7W-N-2-C	DUP	09/21/20	10/22/20	Carbon-14	7	-0.345	0.471 pCi/g	U		0.818	1			0	2.06 g
7W-N-2-C	MS	09/21/20	10/21/20	Carbon-14	7	34.5	1.85 pCi/g			1.35	1	97.5		0	2.14 g
LCS	LCS	10/21/20	10/21/20	Carbon-14	7	28.6	1.48 pCi/g			1.06	1	102		0	2.7 g
MB	MB	10/20/20	10/20/20	Carbon-14	7	-0.366	0.363 pCi/g	U		0.633	1			0	2.7 g
10-W-W-13-C	SAMPLE	09/21/20	10/26/20	Carbon-14	7	-0.0856	0.304 pCi/g	U		0.528	1			0	2.56 g
10-W-W-13-C	DUP	09/21/20	10/26/20	Carbon-14	7	-0.117	0.352 pCi/g	U		0.613	1			0	2.2 g
10-W-W-13-C	MS	09/21/20	10/27/20	Carbon-14	7	33.5	1.7 pCi/g			0.961	1	102		0	2.31 g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Appendix A
Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
9-F-17-C	SAMPLE	09/21/20	10/28/20	Carbon-14	7	0.106	0.45	pCi/g	U	0.774	1			0	2.27 g
9-F-17-C	DUP	09/21/20	10/28/20	Carbon-14	7	0.28	0.408	pCi/g	U	0.69	1			0	2.5 g
9-F-17-C	MS	09/21/20	10/27/20	Carbon-14	7	34.1	1.78	pCi/g		0.991	1	102		0	2.26 g
9-W-N-6-C	SAMPLE	09/21/20	10/26/20	Carbon-14	7	-0.085	0.347	pCi/g	U	0.603	1			0	2.24 g
9-W-N-6-C	DUP	09/21/20	10/27/20	Carbon-14	7	-0.198	0.359	pCi/g	U	0.629	1			0	2.15 g
9-W-N-6-C	MS	09/21/20	10/27/20	Carbon-14	7	30	1.56	pCi/g		0.905	1	97.5		0	2.45 g
9-W-S-21-C	SAMPLE	09/21/20	10/28/20	Carbon-14	7	0.52	0.48	pCi/g	U	0.801	1			0	2.22 g
9-W-S-21-C	DUP	09/21/20	10/28/20	Carbon-14	7	0.594	0.487	pCi/g	U	0.808	1			0	2.34 g
9-W-S-21-C	MS	09/21/20	10/27/20	Carbon-14	7	23.8	1.41	pCi/g		0.847	1	86.7		0	2.75 g
LCS	LCS	10/27/20	10/27/20	Carbon-14	7	29	1.44	pCi/g		0.807	1	106		0	2.75 g
MB	MB	10/26/20	10/26/20	Carbon-14	7	-0.106	0.281	pCi/g	U	0.49	1			0	2.75 g
6-C-C-254	SAMPLE	09/18/20	10/25/20	Carbon-14	7	0.0684	0.319	pCi/g	U	0.541	1			1.49	2.72 g
6-C-C-254	DUP	09/18/20	10/25/20	Carbon-14	7	0.454	0.325	pCi/g	U	0.543	1			0	2.73 g
6-C-C-254	MS	09/18/20	10/24/20	Carbon-14	7	33.2	1.79	pCi/g		1.11	1	98.6		0	2.24 g
6-NE-F-16-RS	SAMPLE	09/18/20	10/23/20	Carbon-14	7	0.318	0.28	pCi/g	U	0.468	1			1.81	2.35 g
6-NE-F-16-RS	DUP	09/18/20	10/24/20	Carbon-14	7	0.0298	0.272	pCi/g	U	0.463	1			0	2.37 g
6-NE-F-16-RS	MS	09/18/20	10/24/20	Carbon-14	7	54	2.86	pCi/g		1.77	1	98.8		0	1.38 g
6SE-F-45-C	SAMPLE	09/17/20	10/23/20	Carbon-14	7	1.1	0.413	pCi/g		0.673	1			2.11	1.64 g
6SE-F-45-C	DUP	09/17/20	10/24/20	Carbon-14	7	1.11	0.381	pCi/g		0.617	1			0	1.83 g
6SE-F-45-C	MS	09/17/20	10/24/20	Carbon-14	7	69.7	3.68	pCi/g		2.24	1	101		0	1.11 g
8-F-9-C	SAMPLE	09/21/20	10/25/20	Carbon-14	7	-0.392	0.317	pCi/g	U	0.548	1			1.01	2.68 g
8-F-9-C	DUP	09/21/20	10/25/20	Carbon-14	7	0.419	0.319	pCi/g	U	0.533	1			0	2.77 g
8-F-9-C	MS	09/21/20	10/24/20	Carbon-14	7	28.1	1.48	pCi/g		0.914	1	99.1		0	2.67 g
LCS	LCS	10/24/20	10/24/20	Carbon-14	7	28.6	1.47	pCi/g		0.885	1	105		0	2.77 g
MB	MB	10/24/20	10/24/20	Carbon-14	7	-0.038	0.231	pCi/g	U	0.396	1			0	2.77 g
5E-W-N-4-M	SAMPLE	09/16/20	10/19/20	Strontium Carrier	8	4.4		mg					95.7	0	6.08 g
5E-W-N-4-M	SAMPLE	09/16/20	10/19/20	Strontium-90	8	0.00313	0.0312	pCi/g	U	0.0607	0.1			0	6.08 g
5E-W-N-4-M	DUP	09/16/20	10/19/20	Strontium Carrier	8	4.4		mg				95.7	0	6.08 g	
5E-W-N-4-M	DUP	09/16/20	10/19/20	Strontium-90	8	0.0207	0.0461	pCi/g	U	0.0821	0.1			0	6.08 g
5E-W-N-4-M	MS	09/16/20	10/19/20	Strontium-90	8	17.5	1.12	pCi/g		0.571	0.1	90.9		0	1.13 g
5E-W-N-4-M	MS	09/16/20	10/19/20	Strontium Carrier	8	4.3		mg				93.5	0	1.13 g	
5W-F-30-C	SAMPLE	09/14/20	10/19/20	Strontium Carrier	8	1.8		mg				39.1	0	6.12 g	
5W-F-30-C	SAMPLE	09/14/20	10/19/20	Strontium-90	8	0.00974	0.0402	pCi/g	U	0.0694	0.1			0	6.12 g
5W-F-30-C	DUP	09/14/20	10/19/20	Strontium Carrier	8	1.4		mg				30.4	0	6.09 g	
5W-F-30-C	DUP	09/14/20	10/19/20	Strontium-90	8	-0.0209	0.0486	pCi/g	U	0.0863	0.1			0	6.09 g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

6-EPA 906.0 Mod.

5-DOE HASL 300, 4.5.2.3/Ga-01-R

7-EPA EERF C-01 Mod.

*Key
1-DOE EML HASL-300, Am-05-RC Mod.
2-ASTM C 1475-00 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
5W-F-30-C	MS	09/14/20	10/19/20	Strontium-90	8	22.6	1.3	pCi/g		0.598	0.1	120	0	1.17 g	
5W-F-30-C	MS	09/14/20	10/19/20	Strontium Carrier	8	4		mg				87	0	1.17 g	
5W-W-E-52-A-M	SAMPLE	09/17/20	10/19/20	Strontium Carrier	8	4.2		mg				91.3	0	6.12 g	
5W-W-E-52-A-M	SAMPLE	09/17/20	10/19/20	Strontium-90	8	-0.0401	0.0278	pCi/g	U	0.0696	0.1		0	6.12 g	
5W-W-E-52-A-M	DUP	09/17/20	10/19/20	Strontium Carrier	8	3.8		mg				82.6	0	6.13 g	
5W-W-E-52-A-M	DUP	09/17/20	10/19/20	Strontium-90	8	-0.0538	0.0444	pCi/g	U	0.0927	0.1		0	6.13 g	
5W-W-E-52-A-M	MS	09/17/20	10/19/20	Strontium-90	8	20.1	1.22	pCi/g		0.399	0.1	97	0	1.05 g	
5W-W-E-52-A-M	MS	09/17/20	10/19/20	Strontium Carrier	8	4.2		mg				91.3	0	1.05 g	
6NE-F-56-C	SAMPLE	09/17/20	10/19/20	Strontium Carrier	8	1.8		mg				39.1	0	6.12 g	
6NE-F-56-C	SAMPLE	09/17/20	10/19/20	Strontium-90	8	-0.0353	0.0305	pCi/g	U	0.0568	0.1		0	6.12 g	
6NE-F-56-C	DUP	09/17/20	10/19/20	Strontium Carrier	8	1.6		mg				34.8	0	6.08 g	
6NE-F-56-C	DUP	09/17/20	10/19/20	Strontium-90	8	-0.00859	0.0469	pCi/g	U	0.0821	0.1		0	6.08 g	
6NE-F-56-C	MS	09/17/20	10/19/20	Strontium-90	8	21.2	1.4	pCi/g		0.518	0.1	101	0	1.04 g	
6NE-F-56-C	MS	09/17/20	10/19/20	Strontium Carrier	8	3.5		mg				76.1	0	1.04 g	
LCS	LCS	09/14/20	10/19/20	Strontium-90	8	4.06	0.254	pCi/g		0.141	0.1	114	0	6.13 g	
LCS	LCS	09/14/20	10/19/20	Strontium Carrier	8	3.6		mg				78.3	0	6.13 g	
MB	MB	09/14/20	10/19/20	Strontium Carrier	8	4.1		mg				89.1	0	6.13 g	
MB	MB	09/14/20	10/19/20	Strontium-90	8	-0.108	0.0316	pCi/g	U	0.0867	0.1		0	6.13 g	
2-F-1-R	SAMPLE	10/05/20	10/16/20	Americium-241	5	0.0587	0.151	pCi/g	U	0.259			0	29.7 g	
2-F-1-R	SAMPLE	10/05/20	10/16/20	Barium-133	5	0.0456	0.0337	pCi/g	U	0.064			0	29.7 g	
2-F-1-R	SAMPLE	10/05/20	10/16/20	Cadmium-109	5	0.481	0.703	pCi/g	U	1.21			0	29.7 g	
2-F-1-R	SAMPLE	10/05/20	10/16/20	Cerium-144	5	0.18	0.152	pCi/g	U	0.294			0	29.7 g	
2-F-1-R	SAMPLE	10/05/20	10/16/20	Cesium-137	5	-0.0158	0.0399	pCi/g	U	0.0622		1	0	29.7 g	
2-F-1-R	SAMPLE	10/05/20	10/16/20	Cobalt-57	5	0.0139	0.021	pCi/g	U	0.0395			0	29.7 g	
2-F-1-R	SAMPLE	10/05/20	10/16/20	Cobalt-60	5	-0.00041	0.0393	pCi/g	U	0.0663			0	29.7 g	
2-F-1-R	SAMPLE	10/05/20	10/16/20	Europium-152	5	-0.0271	0.0733	pCi/g	U	0.13			0	29.7 g	
2-F-1-R	SAMPLE	10/05/20	10/16/20	Lead-210	5	4.07	4.3	pCi/g	U	4.58			0	29.7 g	
2-F-1-R	SAMPLE	10/05/20	10/16/20	Manganese-54	5	-0.00498	0.0345	pCi/g	U	0.0623			0	29.7 g	
2-F-1-R	SAMPLE	10/05/20	10/16/20	Mercury-203	5	-0.026	0.0304	pCi/g	U	0.0517			0	29.7 g	
2-F-1-R	SAMPLE	10/05/20	10/16/20	Sodium-22	5	-0.0149	0.0359	pCi/g	U	0.0622			0	29.7 g	
2-F-1-R	SAMPLE	10/05/20	10/16/20	Yttrium-88	5	0.0103	0.0369	pCi/g	U	0.0819			0	29.7 g	
2-F-1-R	SAMPLE	10/05/20	10/16/20	Zinc-65	5	-0.00199	0.0805	pCi/g	U	0.133			0	29.7 g	
2-F-1-R	DUP	10/05/20	10/16/20	Americium-241	5	0.191	0.362	pCi/g	U	0.694			0	29.7 g	
2-F-1-R	DUP	10/05/20	10/16/20	Barium-133	5	0.0097	0.0822	pCi/g	U	0.144			0	29.7 g	
2-F-1-R	DUP	10/05/20	10/16/20	Cadmium-109	5	-0.877	1.28	pCi/g	U	2.06			0	29.7 g	

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

6-EPA 906.0 Mod.

5-DOE HASL 300, 4.5.2.3/Ga-01-R

7-EPA EERF C-01 Mod.

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

Appendix A
Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
2-F-1-R	DUP	10/05/20	10/16/20	Cerium-144	5	0.171	0.289	pCi/g	U	0.597				0	29.7 g
2-F-1-R	DUP	10/05/20	10/16/20	Cesium-137	5	-0.00239	0.0654	pCi/g	U	0.134	1			0	29.7 g
2-F-1-R	DUP	10/05/20	10/16/20	Cobalt-57	5	0.0177	0.0338	pCi/g	U	0.0706				0	29.7 g
2-F-1-R	DUP	10/05/20	10/16/20	Cobalt-60	5	-0.0569	0.0621	pCi/g	U	0.0929				0	29.7 g
2-F-1-R	DUP	10/05/20	10/16/20	Europium-152	5	-0.00163	0.182	pCi/g	U	0.344				0	29.7 g
2-F-1-R	DUP	10/05/20	10/16/20	Lead-210	5	-7.4	13.7	pCi/g	U	23.1				0	29.7 g
2-F-1-R	DUP	10/05/20	10/16/20	Manganese-54	5	-0.0211	0.0708	pCi/g	U	0.135				0	29.7 g
2-F-1-R	DUP	10/05/20	10/16/20	Mercury-203	5	0.00871	0.0608	pCi/g	U	0.118				0	29.7 g
2-F-1-R	DUP	10/05/20	10/16/20	Sodium-22	5	0.0279	0.0829	pCi/g	U	0.189				0	29.7 g
2-F-1-R	DUP	10/05/20	10/16/20	Yttrium-88	5	0.0389	0.0942	pCi/g	U	0.235				0	29.7 g
2-F-1-R	DUP	10/05/20	10/16/20	Zinc-65	5	-0.00096	0.162	pCi/g	U	0.334				0	29.7 g
2-F-2-R	SAMPLE	10/05/20	10/16/20	Americium-241	5	-0.043	0.142	pCi/g	U	0.22				0	40.8 g
2-F-2-R	SAMPLE	10/05/20	10/16/20	Barium-133	5	-0.0135	0.0322	pCi/g	U	0.0497				0	40.8 g
2-F-2-R	SAMPLE	10/05/20	10/16/20	Cadmium-109	5	0.329	0.811	pCi/g	U	0.902				0	40.8 g
2-F-2-R	SAMPLE	10/05/20	10/16/20	Cerium-144	5	0.0703	0.122	pCi/g	U	0.225				0	40.8 g
2-F-2-R	SAMPLE	10/05/20	10/16/20	Cesium-137	5	0.0202	0.0241	pCi/g	U	0.0447	1			0	40.8 g
2-F-2-R	SAMPLE	10/05/20	10/16/20	Cobalt-57	5	-0.00823	0.016	pCi/g	U	0.0282				0	40.8 g
2-F-2-R	SAMPLE	10/05/20	10/16/20	Cobalt-60	5	-0.00599	0.0309	pCi/g	U	0.0479				0	40.8 g
2-F-2-R	SAMPLE	10/05/20	10/16/20	Europium-152	5	-0.0538	0.0726	pCi/g	U	0.11				0	40.8 g
2-F-2-R	SAMPLE	10/05/20	10/16/20	Lead-210	5	-2.12	5.92	pCi/g	U	8.91				0	40.8 g
2-F-2-R	SAMPLE	10/05/20	10/16/20	Manganese-54	5	0.0162	0.0247	pCi/g	U	0.0423				0	40.8 g
2-F-2-R	SAMPLE	10/05/20	10/16/20	Mercury-203	5	-0.0074	0.0261	pCi/g	U	0.0438				0	40.8 g
2-F-2-R	SAMPLE	10/05/20	10/16/20	Sodium-22	5	0.00247	0.0258	pCi/g	U	0.0484				0	40.8 g
2-F-2-R	SAMPLE	10/05/20	10/16/20	Yttrium-88	5	0.0283	0.0262	pCi/g	U	0.0565				0	40.8 g
2-F-2-R	SAMPLE	10/05/20	10/16/20	Zinc-65	5	0.0287	0.0632	pCi/g	U	0.103				0	40.8 g
2-F-3-R	SAMPLE	10/05/20	10/16/20	Americium-241	5	0.0356	0.0515	pCi/g	U	0.0845				0	41.8 g
2-F-3-R	SAMPLE	10/05/20	10/16/20	Barium-133	5	-0.0144	0.0268	pCi/g	U	0.0399				0	41.8 g
2-F-3-R	SAMPLE	10/05/20	10/16/20	Cadmium-109	5	0.0618	0.366	pCi/g	U	0.564				0	41.8 g
2-F-3-R	SAMPLE	10/05/20	10/16/20	Cerium-144	5	0.042	0.0932	pCi/g	U	0.174				0	41.8 g
2-F-3-R	SAMPLE	10/05/20	10/16/20	Cesium-137	5	-0.00382	0.0215	pCi/g	U	0.0395	1			0	41.8 g
2-F-3-R	SAMPLE	10/05/20	10/16/20	Cobalt-57	5	0.00554	0.0116	pCi/g	U	0.0218				0	41.8 g
2-F-3-R	SAMPLE	10/05/20	10/16/20	Cobalt-60	5	0.0206	0.0253	pCi/g	U	0.0523				0	41.8 g
2-F-3-R	SAMPLE	10/05/20	10/16/20	Europium-152	5	0.0137	0.0538	pCi/g	U	0.097				0	41.8 g
2-F-3-R	SAMPLE	10/05/20	10/16/20	Lead-210	5	1.8	1.69	pCi/g	UI	1.41				0	41.8 g
2-F-3-R	SAMPLE	10/05/20	10/16/20	Manganese-54	5	-0.0225	0.0222	pCi/g	U	0.0367				0	41.8 g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

6-EPA 906.0 Mod.

5-DOE HASL 300, 4.5.2.3/Ga-01-R

7-EPA EERF C-01 Mod.

*Key
1-DOE EML HASL-300, Am-05-RC Mod.
2-ASTM C 1475-00 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
2-F-3-R	SAMPLE	10/05/20	10/16/20	Mercury-203	5	0.00194	0.0202	pCi/g	U	0.036			0	41.8 g	
2-F-3-R	SAMPLE	10/05/20	10/16/20	Sodium-22	5	0.000593	0.0226	pCi/g	U	0.0425			0	41.8 g	
2-F-3-R	SAMPLE	10/05/20	10/16/20	Yttrium-88	5	0.00564	0.027	pCi/g	U	0.0549			0	41.8 g	
2-F-3-R	SAMPLE	10/05/20	10/16/20	Zinc-65	5	-0.0138	0.0543	pCi/g	U	0.084			0	41.8 g	
2-F-4-R	SAMPLE	10/05/20	10/16/20	Americium-241	5	0.00368	0.0741	pCi/g	U	0.122			0	41 g	
2-F-4-R	SAMPLE	10/05/20	10/16/20	Barium-133	5	0.00619	0.0227	pCi/g	U	0.0393			0	41 g	
2-F-4-R	SAMPLE	10/05/20	10/16/20	Cadmium-109	5	0.1	0.421	pCi/g	U	0.529			0	41 g	
2-F-4-R	SAMPLE	10/05/20	10/16/20	Cerium-144	5	-0.0165	0.103	pCi/g	U	0.175			0	41 g	
2-F-4-R	SAMPLE	10/05/20	10/16/20	Cesium-137	5	-0.0138	0.0227	pCi/g	U	0.0391	1		0	41 g	
2-F-4-R	SAMPLE	10/05/20	10/16/20	Cobalt-57	5	0.00963	0.0125	pCi/g	U	0.0227			0	41 g	
2-F-4-R	SAMPLE	10/05/20	10/16/20	Cobalt-60	5	-0.00925	0.0247	pCi/g	U	0.0399			0	41 g	
2-F-4-R	SAMPLE	10/05/20	10/16/20	Europium-152	5	0.0133	0.0524	pCi/g	U	0.0989			0	41 g	
2-F-4-R	SAMPLE	10/05/20	10/16/20	Lead-210	5	3.99	4.28	pCi/g	UI	3.06			0	41 g	
2-F-4-R	SAMPLE	10/05/20	10/16/20	Manganese-54	5	-0.00609	0.0212	pCi/g	U	0.0374			0	41 g	
2-F-4-R	SAMPLE	10/05/20	10/16/20	Mercury-203	5	-0.0138	0.0204	pCi/g	U	0.0323			0	41 g	
2-F-4-R	SAMPLE	10/05/20	10/16/20	Sodium-22	5	0.00583	0.0206	pCi/g	U	0.0428			0	41 g	
2-F-4-R	SAMPLE	10/05/20	10/16/20	Yttrium-88	5	0.00786	0.0269	pCi/g	U	0.0555			0	41 g	
2-F-4-R	SAMPLE	10/05/20	10/16/20	Zinc-65	5	0.00533	0.0563	pCi/g	U	0.0925			0	41 g	
2-F-5-R	SAMPLE	10/05/20	10/16/20	Americium-241	5	-0.0055	0.0651	pCi/g	U	0.108			0	33.6 g	
2-F-5-R	SAMPLE	10/05/20	10/16/20	Barium-133	5	-0.0127	0.0309	pCi/g	U	0.0386			0	33.6 g	
2-F-5-R	SAMPLE	10/05/20	10/16/20	Cadmium-109	5	-0.25	0.359	pCi/g	U	0.604			0	33.6 g	
2-F-5-R	SAMPLE	10/05/20	10/16/20	Cerium-144	5	0.0049	0.102	pCi/g	U	0.179			0	33.6 g	
2-F-5-R	SAMPLE	10/05/20	10/16/20	Cesium-137	5	0.00675	0.0243	pCi/g	U	0.046	1		0	33.6 g	
2-F-5-R	SAMPLE	10/05/20	10/16/20	Cobalt-57	5	-0.00091	0.0129	pCi/g	U	0.0225			0	33.6 g	
2-F-5-R	SAMPLE	10/05/20	10/16/20	Cobalt-60	5	0.0161	0.0254	pCi/g	U	0.055			0	33.6 g	
2-F-5-R	SAMPLE	10/05/20	10/16/20	Europium-152	5	-0.0186	0.0556	pCi/g	U	0.101			0	33.6 g	
2-F-5-R	SAMPLE	10/05/20	10/16/20	Lead-210	5	-0.409	1.55	pCi/g	U	2.76			0	33.6 g	
2-F-5-R	SAMPLE	10/05/20	10/16/20	Manganese-54	5	-0.00176	0.0253	pCi/g	U	0.0457			0	33.6 g	
2-F-5-R	SAMPLE	10/05/20	10/16/20	Mercury-203	5	-0.00689	0.0214	pCi/g	U	0.0353			0	33.6 g	
2-F-5-R	SAMPLE	10/05/20	10/16/20	Sodium-22	5	-0.0188	0.0275	pCi/g	U	0.0438			0	33.6 g	
2-F-5-R	SAMPLE	10/05/20	10/16/20	Yttrium-88	5	-0.0298	0.0292	pCi/g	U	0.0447			0	33.6 g	
2-F-5-R	SAMPLE	10/05/20	10/16/20	Zinc-65	5	0.0477	0.0423	pCi/g	U	0.0944			0	33.6 g	
2-F-5-R	DUP	10/05/20	10/16/20	Americium-241	5	0.0453	0.252	pCi/g	U	0.457			0	33.6 g	
2-F-5-R	DUP	10/05/20	10/16/20	Barium-133	5	-0.0308	0.0769	pCi/g	U	0.122			0	33.6 g	
2-F-5-R	DUP	10/05/20	10/16/20	Cadmium-109	5	-0.142	1.31	pCi/g	U	2.22			0	33.6 g	

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

6-EPA 906.0 Mod.

5-DOE HASL 300, 4.5.2.3/Ga-01-R

7-EPA EERF C-01 Mod.

1-DOE EML HASL-300, Am-05-RC Mod.
2-ASTM C 1475-00 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
2-F-5-R	DUP	10/05/20	10/16/20	Cerium-144	5	-0.125	0.316	pCi/g	U	0.512				0	33.6 g
2-F-5-R	DUP	10/05/20	10/16/20	Cesium-137	5	-0.0144	0.0576	pCi/g	U	0.103	1			0	33.6 g
2-F-5-R	DUP	10/05/20	10/16/20	Cobalt-57	5	-0.0245	0.0349	pCi/g	U	0.0617				0	33.6 g
2-F-5-R	DUP	10/05/20	10/16/20	Cobalt-60	5	0.0798	0.0638	pCi/g	U	0.187				0	33.6 g
2-F-5-R	DUP	10/05/20	10/16/20	Europium-152	5	0.123	0.161	pCi/g	U	0.342				0	33.6 g
2-F-5-R	DUP	10/05/20	10/16/20	Lead-210	5	2.25	6.63	pCi/g	U	11.6				0	33.6 g
2-F-5-R	DUP	10/05/20	10/16/20	Manganese-54	5	-0.00035	0.0622	pCi/g	U	0.126				0	33.6 g
2-F-5-R	DUP	10/05/20	10/16/20	Mercury-203	5	-0.0207	0.0491	pCi/g	U	0.0897				0	33.6 g
2-F-5-R	DUP	10/05/20	10/16/20	Sodium-22	5	0.0365	0.058	pCi/g	U	0.154				0	33.6 g
2-F-5-R	DUP	10/05/20	10/16/20	Yttrium-88	5	0.0494	0.0916	pCi/g	U	0.236				0	33.6 g
2-F-5-R	DUP	10/05/20	10/16/20	Zinc-65	5	0.0543	0.138	pCi/g	U	0.317				0	33.6 g
LCS	LCS	10/16/20	10/16/20	Americium-241	5	732	13.3	pCi/g		6.6		102		0	41.8 g
LCS	LCS	10/16/20	10/16/20	Cesium-137	5	231	4.92	pCi/g		1.14	1	108		0	41.8 g
LCS	LCS	10/16/20	10/16/20	Cobalt-60	5	92.7	4.02	pCi/g		0.849		107		0	41.8 g
MB	MB	10/16/20	10/16/20	Americium-241	5	0.0132	0.097	pCi/g	U	0.162				0	41.8 g
MB	MB	10/16/20	10/16/20	Barium-133	5	-0.0321	0.0229	pCi/g	U	0.0369				0	41.8 g
MB	MB	10/16/20	10/16/20	Cadmium-109	5	0.312	0.404	pCi/g	U	0.691				0	41.8 g
MB	MB	10/16/20	10/16/20	Cerium-144	5	0.0355	0.09	pCi/g	U	0.16				0	41.8 g
MB	MB	10/16/20	10/16/20	Cesium-137	5	0.0385	0.032	pCi/g	U	0.0378	1			0	41.8 g
MB	MB	10/16/20	10/16/20	Cobalt-57	5	0.00172	0.0129	pCi/g	U	0.0224				0	41.8 g
MB	MB	10/16/20	10/16/20	Cobalt-60	5	-0.00074	0.0224	pCi/g	U	0.0442				0	41.8 g
MB	MB	10/16/20	10/16/20	Europium-152	5	-0.00419	0.0552	pCi/g	U	0.101				0	41.8 g
MB	MB	10/16/20	10/16/20	Lead-210	5	2.11	5.99	pCi/g	U	6.76				0	41.8 g
MB	MB	10/16/20	10/16/20	Manganese-54	5	0.00674	0.0158	pCi/g	U	0.0322				0	41.8 g
MB	MB	10/16/20	10/16/20	Mercury-203	5	0.0141	0.0169	pCi/g	U	0.0331				0	41.8 g
MB	MB	10/16/20	10/16/20	Sodium-22	5	0.0129	0.0265	pCi/g	U	0.0549				0	41.8 g
MB	MB	10/16/20	10/16/20	Yttrium-88	5	0.00224	0.0252	pCi/g	U	0.0509				0	41.8 g
MB	MB	10/16/20	10/16/20	Zinc-65	5	-0.0262	0.0503	pCi/g	U	0.0771				0	41.8 g
5W-W-W-1-C	SAMPLE	09/16/20	10/20/20	Americium-243 Tracer	1	8.58	0.475	pCi/g		0.102		93.3	2.55	0.241 g	
5W-W-W-1-C	SAMPLE	09/16/20	10/20/20	Americium-241	1	-0.0192	0.0546	pCi/g	U	0.113	0.05		2.55	0.241 g	
5W-W-W-1-C	SAMPLE	09/16/20	10/20/20	Californium-252	1	0.00665	0.0226	pCi/g	U	0.02	0.05		2.55	0.241 g	
5W-W-W-1-C	SAMPLE	09/16/20	10/20/20	Curium-243/244	1	0.0253	0.0392	pCi/g	U	0.0605	0.05		2.55	0.241 g	
5W-W-W-1-C	DUP	09/16/20	10/20/20	Americium-243 Tracer	1	8.55	0.462	pCi/g		0.0917		92.9	0	0.241 g	
5W-W-W-1-C	DUP	09/16/20	10/20/20	Americium-241	1	0.0182	0.043	pCi/g	U	0.0748	0.05		0	0.241 g	
5W-W-W-1-C	DUP	09/16/20	10/20/20	Californium-252	1	0	0.0304	pCi/g	U	0.0606	0.05		0	0.241 g	

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
5W-W-W-1-C	DUP	09/16/20	10/20/20	Curium-243/244	1	-0.024	0.0373	pCi/g	U	0.0866	0.05			0	0.241 g
5W-W-W-1-C	MS	09/16/20	10/20/20	Americium-241	1	3.88	0.313	pCi/g		0.0795	0.05	94.7		0	0.241 g
5W-W-W-1-C	MS	09/16/20	10/20/20	Californium-252	1	2.5	0.255	pCi/g		0.0202	0.05	121		0	0.241 g
5W-W-W-1-C	MS	09/16/20	10/20/20	Curium-243/244	1	4.12	0.322	pCi/g		0.0978	0.05	88.4		0	0.241 g
5W-W-W-1-C	MS	09/16/20	10/20/20	Americium-243 Tracer	1	8.58	0.478	pCi/g		0.113		93.3		0	0.241 g
5-W-W-W-24-M	SAMPLE	09/14/20	10/20/20	Americium-243 Tracer	1	1.25	1.65	pCi/g		0.902		11.2		15.4	0.199 g
5-W-W-W-24-M	SAMPLE	09/14/20	10/20/20	Americium-241	1	-0.12	0.332	pCi/g	U	0.736	0.05			15.4	0.199 g
5-W-W-W-24-M	SAMPLE	09/14/20	10/20/20	Californium-252	1	0	0.173	pCi/g	U	0.187	0.05			15.4	0.199 g
5-W-W-W-24-M	SAMPLE	09/14/20	10/20/20	Curium-243/244	1	-0.237	0.328	pCi/g	U	0.793	0.05			15.4	0.199 g
5-W-W-W-24-M	DUP	09/14/20	10/20/20	Americium-243 Tracer	1	4.17	0.904	pCi/g		0.409		37.4		0	0.199 g
5-W-W-W-24-M	DUP	09/14/20	10/20/20	Americium-241	1	-0.0365	0.124	pCi/g	U	0.263	0.05			0	0.199 g
5-W-W-W-24-M	DUP	09/14/20	10/20/20	Californium-252	1	0.019	0.0646	pCi/g	U	0.0571	0.05			0	0.199 g
5-W-W-W-24-M	DUP	09/14/20	10/20/20	Curium-243/244	1	-0.0542	0.117	pCi/g	U	0.26	0.05			0	0.199 g
5-W-W-W-24-M	MS	09/14/20	10/20/20	Americium-241	1	5.04	0.488	pCi/g		0.133	0.05	102		0	0.199 g
5-W-W-W-24-M	MS	09/14/20	10/20/20	Californium-252	1	3.79	0.429	pCi/g		0.0376	0.05	151		0	0.199 g
5-W-W-W-24-M	MS	09/14/20	10/20/20	Curium-243/244	1	4.99	0.481	pCi/g		0.114	0.05	88.8		0	0.199 g
5-W-W-W-24-M	MS	09/14/20	10/20/20	Americium-243 Tracer	1	7.09	0.724	pCi/g		0.249		63.7		0	0.199 g
LCS	LCS	10/20/20	10/20/20	Americium-241	1	3.96	0.324	pCi/g		0.0524	0.05	96.8		0	0.241 g
LCS	LCS	10/20/20	10/20/20	Californium-252	1	2.28	0.248	pCi/g		0.0209	0.05	112		0	0.241 g
LCS	LCS	10/20/20	10/20/20	Curium-243/244	1	4.57	0.346	pCi/g		0.0747	0.05	98.8		0	0.241 g
LCS	LCS	10/20/20	10/20/20	Americium-243 Tracer	1	9.18	0.491	pCi/g		0.0972		99.8		0	0.241 g
MB	MB	10/20/20	10/20/20	Americium-243 Tracer	1	8.72	0.461	pCi/g		0.0959		94.8		0	0.241 g
MB	MB	10/20/20	10/20/20	Americium-241	1	0.0361	0.0528	pCi/g	U	0.0867	0.05			0	0.241 g
MB	MB	10/20/20	10/20/20	Californium-252	1	0.00614	0.0208	pCi/g	U	0.0184	0.05			0	0.241 g
MB	MB	10/20/20	10/20/20	Curium-243/244	1	-0.0238	0.0368	pCi/g	U	0.0855	0.05			0	0.241 g
2-F-1-R	SAMPLE	10/05/20	10/26/20	Americium-243 Tracer	1	1.69	0.105	pCi/g		0.0149		92.2		0	1.21 g
2-F-1-R	SAMPLE	10/05/20	10/26/20	Americium-241	1	0.0142	0.012	pCi/g	U	0.0152	0.05			0	1.21 g
2-F-1-R	SAMPLE	10/05/20	10/26/20	Californium-252	1	0	0.0064	pCi/g	U	0.0125	0.05			0	1.21 g
2-F-1-R	SAMPLE	10/05/20	10/26/20	Curium-243/244	1	-0.00156	0.0081	pCi/g	U	0.0173	0.05			0	1.21 g
2-F-1-R	DUP	10/05/20	10/26/20	Americium-243 Tracer	1	1.67	0.106	pCi/g		0.0176		91		0	1.21 g
2-F-1-R	DUP	10/05/20	10/26/20	Americium-241	1	0.00647	0.0149	pCi/g	U	0.0261	0.05			0	1.21 g
2-F-1-R	DUP	10/05/20	10/26/20	Californium-252	1	-0.00167	0.00731	pCi/g	U	0.016	0.05			0	1.21 g
2-F-1-R	DUP	10/05/20	10/26/20	Curium-243/244	1	-0.0016	0.00939	pCi/g	U	0.0197	0.05			0	1.21 g
2-F-1-R	DUP	10/05/20	10/26/20	Americium-243	1	1.83	0.106	pCi/g		0.0176				0	1.21 g
2-F-1-R	MS	10/05/20	10/26/20	Americium-241	1	0.876	0.0749	pCi/g		0.0356	0.05	106		0	1.21 g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

6-EPA 906.0 Mod.

5-DOE HASL 300, 4.5.2.3/Ga-01-R

7-EPA EERF C-01 Mod.

1-DOE EML HASL-300, Am-05-RC Mod.
2-ASTM C 1475-00 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
2-F-1-R	MS	10/05/20	10/26/20	Californium-252	1	0.489	0.0559	pCi/g		0.0198	0.05	120	0	1.21	g
2-F-1-R	MS	10/05/20	10/26/20	Curium-243/244	1	0.983	0.0773	pCi/g		0.0236	0.05	107	0	1.21	g
2-F-1-R	MS	10/05/20	10/26/20	Americium-243 Tracer	1	1.79	0.105	pCi/g		0.0249		97.5	0	1.21	g
2-F-2-R	SAMPLE	10/05/20	10/26/20	Americium-243 Tracer	1	1.44	0.103	pCi/g		0.0154		83.7	0	1.29	g
2-F-2-R	SAMPLE	10/05/20	10/26/20	Americium-241	1	0.00654	0.0111	pCi/g	U	0.0181	0.05		0	1.29	g
2-F-2-R	SAMPLE	10/05/20	10/26/20	Californium-252	1	0.00337	0.00935	pCi/g	U	0.0162	0.05		0	1.29	g
2-F-2-R	SAMPLE	10/05/20	10/26/20	Curium-243/244	1	0.00646	0.011	pCi/g	U	0.0179	0.05		0	1.29	g
2-F-3-R	SAMPLE	10/05/20	10/26/20	Americium-243 Tracer	1	1.47	0.112	pCi/g		0.0255		81.2	0	1.22	g
2-F-3-R	SAMPLE	10/05/20	10/26/20	Americium-241	1	0.0198	0.0154	pCi/g	U	0.0199	0.05		0	1.22	g
2-F-3-R	SAMPLE	10/05/20	10/26/20	Californium-252	1	0	0.00728	pCi/g	U	0.0142	0.05		0	1.22	g
2-F-3-R	SAMPLE	10/05/20	10/26/20	Curium-243/244	1	0.00533	0.0116	pCi/g	U	0.0197	0.05		0	1.22	g
2-F-4-R	SAMPLE	10/05/20	10/26/20	Americium-243 Tracer	1	1.61	0.106	pCi/g		0.0217		91	0	1.25	g
2-F-4-R	SAMPLE	10/05/20	10/26/20	Americium-241	1	0.0148	0.0125	pCi/g	U	0.0157	0.05		0	1.25	g
2-F-4-R	SAMPLE	10/05/20	10/26/20	Californium-252	1	0	0.00664	pCi/g	U	0.013	0.05		0	1.25	g
2-F-4-R	SAMPLE	10/05/20	10/26/20	Curium-243/244	1	-0.00325	0.00779	pCi/g	U	0.0179	0.05		0	1.25	g
2-F-5-R	SAMPLE	10/05/20	10/26/20	Americium-243 Tracer	1	1.58	0.109	pCi/g		0.0161		86.2	0	1.21	g
2-F-5-R	SAMPLE	10/05/20	10/26/20	Americium-241	1	0.0153	0.0146	pCi/g	U	0.021	0.05		0	1.21	g
2-F-5-R	SAMPLE	10/05/20	10/26/20	Californium-252	1	0.00176	0.0077	pCi/g	U	0.0134	0.05		0	1.21	g
2-F-5-R	SAMPLE	10/05/20	10/26/20	Curium-243/244	1	-0.00168	0.0109	pCi/g	U	0.0226	0.05		0	1.21	g
2-F-5-R	DUP	10/05/20	10/26/20	Americium-243 Tracer	1	1.64	0.113	pCi/g		0.0171		89.3	0	1.21	g
2-F-5-R	DUP	10/05/20	10/26/20	Americium-241	1	0.00545	0.0147	pCi/g	U	0.0261	0.05		0	1.21	g
2-F-5-R	DUP	10/05/20	10/26/20	Californium-252	1	0	0.00734	pCi/g	U	0.0143	0.05		0	1.21	g
2-F-5-R	DUP	10/05/20	10/26/20	Curium-243/244	1	0.00717	0.0131	pCi/g	U	0.0221	0.05		0	1.21	g
2-F-5-R	DUP	10/05/20	10/26/20	Americium-243	1	1.83	0.113	pCi/g		0.0171			0	1.21	g
2-F-5-R	MS	10/05/20	10/26/20	Americium-241	1	0.79	0.0722	pCi/g		0.0207	0.05	95	0	1.21	g
2-F-5-R	MS	10/05/20	10/26/20	Californium-252	1	0.477	0.0565	pCi/g		0.0052	0.05	117	0	1.21	g
2-F-5-R	MS	10/05/20	10/26/20	Curium-243/244	1	0.868	0.075	pCi/g		0.0184	0.05	94.2	0	1.21	g
2-F-5-R	MS	10/05/20	10/26/20	Americium-243 Tracer	1	1.64	0.108	pCi/g		0.0204		89.4	0	1.21	g
5E-MZ-W-S-53-M	SAMPLE	09/14/20	10/26/20	Americium-243 Tracer	1	1.98	0.111	pCi/g		0.0317		95.5	16.3	1.07	g
5E-MZ-W-S-53-M	SAMPLE	09/14/20	10/26/20	Americium-241	1	0.0122	0.0159	pCi/g	U	0.0259	0.05		16.3	1.07	g
5E-MZ-W-S-53-M	SAMPLE	09/14/20	10/26/20	Californium-252	1	-0.0032	0.00628	pCi/g	U	0.0153	0.05		16.3	1.07	g
5E-MZ-W-S-53-M	SAMPLE	09/14/20	10/26/20	Curium-243/244	1	-0.00606	0.00938	pCi/g	U	0.0218	0.05		16.3	1.07	g
5E-MZ-W-S-66-B-M	SAMPLE	09/14/20	10/26/20	Americium-243 Tracer	1	1.69	0.13	pCi/g		0.0459		78.9	17.1	1.04	g
5E-MZ-W-S-66-B-M	SAMPLE	09/14/20	10/26/20	Americium-241	1	-0.012	0.0175	pCi/g	U	0.0382	0.05		17.1	1.04	g
5E-MZ-W-S-66-B-M	SAMPLE	09/14/20	10/26/20	Californium-252	1	-0.00209	0.0123	pCi/g	U	0.0258	0.05		17.1	1.04	g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Appendix A
Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
5E-MZ-W-S-66-B-M	SAMPLE	09/14/20	10/26/20	Curium-243/244	1	-0.00396	0.011 pCi/g	U	0.0244	0.05			17.1	1.04 g	
5E-MZ-W-S-68-A-M	SAMPLE	09/14/20	10/26/20	Americium-243 Tracer	1	1.8	0.109 pCi/g		0.0271			86.4	17.4	1.07 g	
5E-MZ-W-S-68-A-M	SAMPLE	09/14/20	10/26/20	Americium-241	1	0.00746	0.0097 pCi/g	U	0.0143	0.05			17.4	1.07 g	
5E-MZ-W-S-68-A-M	SAMPLE	09/14/20	10/26/20	Californium-252	1	-0.00156	0.00685 pCi/g	U	0.015	0.05			17.4	1.07 g	
5E-MZ-W-S-68-A-M	SAMPLE	09/14/20	10/26/20	Curium-243/244	1	-0.00295	0.00709 pCi/g	U	0.0163	0.05			17.4	1.07 g	
LCS	LCS	10/26/20	10/26/20	Americium-241	1	0.872	0.0635 pCi/g		0.0115	0.05	114	0		1.29 g	
LCS	LCS	10/26/20	10/26/20	Californium-252	1	0.414	0.0441 pCi/g		0.00365	0.05	109	0		1.29 g	
LCS	LCS	10/26/20	10/26/20	Curium-243/244	1	0.776	0.0594 pCi/g		0.00902	0.05	89.9	0		1.29 g	
LCS	LCS	10/26/20	10/26/20	Americium-243 Tracer	1	1.58	0.0887 pCi/g		0.018		91.7	0		1.29 g	
MB	MB	10/26/20	10/26/20	Americium-243 Tracer	1	1.67	0.0975 pCi/g		0.0158		97.1	0		1.29 g	
MB	MB	10/26/20	10/26/20	Americium-241	1	0.0058	0.0106 pCi/g	U	0.0178	0.05			0	1.29 g	
MB	MB	10/26/20	10/26/20	Californium-252	1	-0.00148	0.00501 pCi/g	U	0.0113	0.05			0	1.29 g	
MB	MB	10/26/20	10/26/20	Curium-243/244	1	-0.00286	0.00886 pCi/g	U	0.0192	0.05			0	1.29 g	
MB	MB	10/26/20	10/26/20	Americium-243	1	1.72	0.0975 pCi/g		0.0158				0	1.29 g	
2-F-1-R	SAMPLE	10/05/20	10/27/20	Americium-243 Tracer	2	74	pCi/g				66.5	0		1.96 g	
2-F-1-R	SAMPLE	10/05/20	10/27/20	Neptunium-237	2	0.0105	0.0239 pCi/g	U	0.041	0.05			0	1.96 g	
2-F-1-R	DUP	10/05/20	10/27/20	Americium-243 Tracer	2	71.4	pCi/g				64.1	0		1.96 g	
2-F-1-R	DUP	10/05/20	10/27/20	Neptunium-237	2	-0.00427	0.0099 pCi/g	U	0.0293	0.05			0	1.96 g	
2-F-1-R	MS	10/05/20	10/27/20	Neptunium-237	2	1.28	0.142 pCi/g		0.0361	0.05	114	0		1.96 g	
2-F-1-R	MS	10/05/20	10/27/20	Americium-243 Tracer	2	74.4	pCi/g				66.8	0		1.96 g	
2-F-3-R	SAMPLE	10/05/20	10/27/20	Americium-243 Tracer	2	58.6	pCi/g				54.8	0		2.04 g	
2-F-3-R	SAMPLE	10/05/20	10/27/20	Neptunium-237	2	0.0172	0.0279 pCi/g	U	0.0451	0.05			0	2.04 g	
2-F-5-R	SAMPLE	10/05/20	10/27/20	Americium-243 Tracer	2	69.1	pCi/g				62.4	0		1.97 g	
2-F-5-R	SAMPLE	10/05/20	10/27/20	Neptunium-237	2	-0.00195	0.0135 pCi/g	U	0.0328	0.05			0	1.97 g	
2-F-5-R	DUP	10/05/20	10/27/20	Americium-243 Tracer	2	57.8	pCi/g				52.2	0		1.97 g	
2-F-5-R	DUP	10/05/20	10/27/20	Neptunium-237	2	-0.00489	0.0211 pCi/g	U	0.0513	0.05			0	1.97 g	
2-F-5-R	MS	10/05/20	10/27/20	Neptunium-237	2	1.5	0.175 pCi/g		0.0408	0.05	135	0		1.97 g	
2-F-5-R	MS	10/05/20	10/27/20	Americium-243 Tracer	2	68.2	pCi/g				61.6	0		1.97 g	
LCS	LCS	10/27/20	10/27/20	Neptunium-237	2	1.12	0.127 pCi/g		0.0322	0.05	105	0		2.04 g	
LCS	LCS	10/27/20	10/27/20	Americium-243 Tracer	2	103	pCi/g				96.1	0		2.04 g	
MB	MB	10/27/20	10/27/20	Americium-243 Tracer	2	89.2	pCi/g				83.4	0		2.04 g	
MB	MB	10/27/20	10/27/20	Neptunium-237	2	-0.00594	0.00747 pCi/g	U	0.025	0.05			0	2.04 g	
2-F-1-R	SAMPLE	10/05/20	10/26/20	Plutonium-242 Tracer	3	1.17	0.141 pCi/g		0.0436		73.8	0		1.21 g	
2-F-1-R	SAMPLE	10/05/20	10/26/20	Plutonium-238	3	-0.00013	0.0168 pCi/g	U	0.0353	0.05			0	1.21 g	
2-F-1-R	SAMPLE	10/05/20	10/26/20	Plutonium-239/240	3	-0.00651	0.0162 pCi/g	U	0.0383	0.05			0	1.21 g	

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Appendix A
Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	%	%	Sample Aliquot	Aliquot Units
												Recovery	Moisture		
2-F-1-R	DUP	10/05/20	10/26/20	Plutonium-242 Tracer	3	1.13	0.144	pCi/g		0.057		71.1		0	1.21 g
2-F-1-R	DUP	10/05/20	10/26/20	Plutonium-238	3	0.00314	0.0165	pCi/g	U	0.0325	0.05			0	1.21 g
2-F-1-R	DUP	10/05/20	10/26/20	Plutonium-239/240	3	0.00147	0.0186	pCi/g	U	0.0376	0.05			0	1.21 g
2-F-1-R	MS	10/05/20	10/26/20	Plutonium-239/240	3	0.903	0.0926	pCi/g		0.0195	0.05	109		0	1.21 g
2-F-1-R	MS	10/05/20	10/26/20	Plutonium-242 Tracer	3	1.38	0.123	pCi/g		0.0245		86.8		0	1.21 g
2-F-3-R	SAMPLE	10/05/20	10/26/20	Plutonium-242 Tracer	3	1.23	0.144	pCi/g		0.0295		78		0	1.22 g
2-F-3-R	SAMPLE	10/05/20	10/26/20	Plutonium-238	3	-0.00513	0.00943	pCi/g	U	0.027	0.05			0	1.22 g
2-F-3-R	SAMPLE	10/05/20	10/26/20	Plutonium-239/240	3	-6.77E-05	0.0137	pCi/g	U	0.0296	0.05			0	1.22 g
2-F-5-R	SAMPLE	10/05/20	10/26/20	Plutonium-242 Tracer	3	1.23	0.135	pCi/g		0.0467		77.4		0	1.21 g
2-F-5-R	SAMPLE	10/05/20	10/26/20	Plutonium-238	3	-0.00295	0.0103	pCi/g	U	0.0253	0.05			0	1.21 g
2-F-5-R	SAMPLE	10/05/20	10/26/20	Plutonium-239/240	3	-0.0118	0.0143	pCi/g	U	0.0374	0.05			0	1.21 g
2-F-5-R	DUP	10/05/20	10/26/20	Plutonium-242 Tracer	3	1.49	0.124	pCi/g		0.043		94		0	1.21 g
2-F-5-R	DUP	10/05/20	10/26/20	Plutonium-238	3	0.00237	0.0125	pCi/g	U	0.0245	0.05			0	1.21 g
2-F-5-R	DUP	10/05/20	10/26/20	Plutonium-239/240	3	-0.0185	0.0136	pCi/g	U	0.0378	0.05			0	1.21 g
2-F-5-R	MS	10/05/20	10/26/20	Plutonium-239/240	3	0.839	0.0905	pCi/g		0.0178	0.05	101		0	1.21 g
2-F-5-R	MS	10/05/20	10/26/20	Plutonium-242 Tracer	3	1.33	0.125	pCi/g		0.0266		83.9		0	1.21 g
LCS	LCS	10/26/20	10/26/20	Plutonium-239/240	3	0.905	0.0947	pCi/g		0.0203	0.05	110		0	1.22 g
LCS	LCS	10/26/20	10/26/20	Plutonium-242 Tracer	3	1.26	0.125	pCi/g		0.0256		79.8		0	1.22 g
MB	MB	10/26/20	10/26/20	Plutonium-242 Tracer	3	1.39	0.138	pCi/g		0.041		88.4		0	1.22 g
MB	MB	10/26/20	10/26/20	Plutonium-238	3	0.00454	0.0154	pCi/g	U	0.029	0.05			0	1.22 g
MB	MB	10/26/20	10/26/20	Plutonium-239/240	3	-0.00942	0.0163	pCi/g	U	0.0398	0.05			0	1.22 g
2-F-1-R	SAMPLE	10/05/20	10/27/20	Uranium-232 Tracer	4	2.2	0.158	pCi/g		0.0531		81.4		0	0.755 g
2-F-1-R	SAMPLE	10/05/20	10/27/20	Uranium-233/234	4	0.164	0.0414	pCi/g		0.031	1			0	0.755 g
2-F-1-R	SAMPLE	10/05/20	10/27/20	Uranium-235/236	4	0.0304	0.0189	pCi/g		0.0179	0.05			0	0.755 g
2-F-1-R	SAMPLE	10/05/20	10/27/20	Uranium-238	4	0.135	0.0371	pCi/g		0.0258	1			0	0.755 g
2-F-1-R	DUP	10/05/20	10/27/20	Uranium-232 Tracer	4	2.32	0.173	pCi/g		0.0457		85.8		0	0.755 g
2-F-1-R	DUP	10/05/20	10/27/20	Uranium-233/234	4	0.132	0.0414	pCi/g		0.0333	1			0	0.755 g
2-F-1-R	DUP	10/05/20	10/27/20	Uranium-235/236	4	0.0227	0.0192	pCi/g		0.0217	0.05			0	0.755 g
2-F-1-R	DUP	10/05/20	10/27/20	Uranium-238	4	0.147	0.0422	pCi/g		0.0271	1			0	0.755 g
2-F-1-R	MS	10/05/20	10/27/20	Uranium-235/236	4	0.739	0.0885	pCi/g		0.00821	0.05	88.9		0	0.755 g
2-F-1-R	MS	10/05/20	10/27/20	Uranium-232 Tracer	4	2.32	0.169	pCi/g		0.0336		86.1		0	0.755 g
2-F-3-R	SAMPLE	10/05/20	10/27/20	Uranium-232 Tracer	4	1.48	0.181	pCi/g		0.108		59.5		0	0.816 g
2-F-3-R	SAMPLE	10/05/20	10/27/20	Uranium-233/234	4	0.175	0.0516	pCi/g		0.0477	1			0	0.816 g
2-F-3-R	SAMPLE	10/05/20	10/27/20	Uranium-235/236	4	0.0092	0.0262	pCi/g	U	0.047	0.05			0	0.816 g
2-F-3-R	SAMPLE	10/05/20	10/27/20	Uranium-238	4	0.196	0.0543	pCi/g		0.0494	1			0	0.816 g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

6-EPA 906.0 Mod.

5-DOE HASL 300, 4.5.2.3/Ga-01-R

7-EPA EERF C-01 Mod.

*Key
1-DOE EML HASL-300, Am-05-RC Mod.
2-ASTM C 1475-00 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

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Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
2-F-5-R	SAMPLE	10/05/20	10/27/20	Uranium-232 Tracer	4	2.36	0.155	pCi/g		0.0542		87.5		0	0.757 g
2-F-5-R	SAMPLE	10/05/20	10/27/20	Uranium-233/234	4	0.129	0.0355	pCi/g		0.0246	1			0	0.757 g
2-F-5-R	SAMPLE	10/05/20	10/27/20	Uranium-235/236	4	0.0246	0.0191	pCi/g	U	0.0247	0.05			0	0.757 g
2-F-5-R	SAMPLE	10/05/20	10/27/20	Uranium-238	4	0.147	0.0375	pCi/g		0.0246	1			0	0.757 g
2-F-5-R	DUP	10/05/20	10/27/20	Uranium-232 Tracer	4	2.12	0.18	pCi/g		0.0446		78.8		0	0.757 g
2-F-5-R	DUP	10/05/20	10/27/20	Uranium-233/234	4	0.152	0.0454	pCi/g		0.0317	1			0	0.757 g
2-F-5-R	DUP	10/05/20	10/27/20	Uranium-235/236	4	0.0155	0.0202	pCi/g	U	0.0297	0.05			0	0.757 g
2-F-5-R	DUP	10/05/20	10/27/20	Uranium-238	4	0.115	0.0407	pCi/g		0.0342	1			0	0.757 g
2-F-5-R	MS	10/05/20	10/27/20	Uranium-235/236	4	0.81	0.0933	pCi/g		0.00833	0.05	98.8		0	0.757 g
2-F-5-R	MS	10/05/20	10/27/20	Uranium-232 Tracer	4	2.22	0.17	pCi/g		0.0371		82.3		0	0.757 g
LCS	LCS	10/27/20	10/27/20	Uranium-235/236	4	0.735	0.08	pCi/g		0.00676	0.05	99.6		0	0.816 g
LCS	LCS	10/27/20	10/27/20	Uranium-232 Tracer	4	2.41	0.148	pCi/g		0.0301		96.5		0	0.816 g
MB	MB	10/27/20	10/27/20	Uranium-232 Tracer	4	2.52	0.137	pCi/g		0.0516		101		0	0.816 g
MB	MB	10/27/20	10/27/20	Uranium-233/234	4	-0.00074	0.0164	pCi/g	U	0.032	1			0	0.816 g
MB	MB	10/27/20	10/27/20	Uranium-235/236	4	0.0244	0.0168	pCi/g		0.0207	0.05			0	0.816 g
MB	MB	10/27/20	10/27/20	Uranium-238	4	-0.00187	0.016	pCi/g	U	0.0317	1			0	0.816 g
2-F-1-R	SAMPLE	10/05/20	10/30/20	Strontium Carrier	8	2.1		mg				52		0	6.11 g
2-F-1-R	SAMPLE	10/05/20	10/30/20	Strontium-90	8	0.0102	0.0495	pCi/g	U	0.0924	0.1			0	6.11 g
2-F-1-R	DUP	10/05/20	10/30/20	Strontium Carrier	8	1.8		mg				44.6		0	6.13 g
2-F-1-R	DUP	10/05/20	10/30/20	Strontium-90	8	0.019	0.0532	pCi/g	U	0.0967	0.1			0	6.13 g
2-F-1-R	MS	10/05/20	10/30/20	Strontium-90	8	20.8	1.19	pCi/g		0.586	0.1	98		0	1.03 g
2-F-1-R	MS	10/05/20	10/30/20	Strontium Carrier	8	3.7		mg				91.6		0	1.03 g
2-F-3-R	SAMPLE	10/05/20	10/30/20	Strontium Carrier	8	2.3		mg				56.9		0	6.35 g
2-F-3-R	SAMPLE	10/05/20	10/30/20	Strontium-90	8	-0.0338	0.0441	pCi/g	U	0.0929	0.1			0	6.35 g
2-F-5-R	SAMPLE	10/05/20	10/30/20	Strontium Carrier	8	2.2		mg				54.5		0	6.03 g
2-F-5-R	SAMPLE	10/05/20	10/30/20	Strontium-90	8	-0.0412	0.0456	pCi/g	U	0.0987	0.1			0	6.03 g
2-F-5-R	DUP	10/05/20	10/30/20	Strontium Carrier	8	3.7		mg				91.6		0	6.01 g
2-F-5-R	DUP	10/05/20	10/30/20	Strontium-90	8	0.0154	0.0382	pCi/g	U	0.0686	0.1			0	6.01 g
2-F-5-R	MS	10/05/20	10/30/20	Strontium-90	8	19.5	1.17	pCi/g		0.572	0.1	107		0	1.2 g
2-F-5-R	MS	10/05/20	10/30/20	Strontium Carrier	8	2.9		mg				71.8		0	1.2 g
LCS	LCS	10/05/20	10/30/20	Strontium-90	8	2.83	0.175	pCi/g		0.0861	0.1	82.6		0	6.35 g
LCS	LCS	10/05/20	10/30/20	Strontium Carrier	8	3.6		mg				89.1		0	6.35 g
MB	MB	10/05/20	10/30/20	Strontium Carrier	8	3.7		mg				91.6		0	6.35 g
MB	MB	10/05/20	10/30/20	Strontium-90	8	0.0313	0.0387	pCi/g	U	0.0655	0.1			0	6.35 g
2-F-1-R	SAMPLE	10/05/20	11/02/20	Tritium	6	-0.705	0.662	pCi/g	U	1.18	1			0	15.2 g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

6-EPA 906.0 Mod.

5-DOE HASL 300, 4.5.2.3/Ga-01-R

7-EPA EERF C-01 Mod.

*Key
1-DOE EML HASL-300, Am-05-RC Mod.
2-ASTM C 1475-00 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
2-F-1-R	DUP	10/05/20	11/03/20	Tritium	6	-0.34	0.635	pCi/g	U	1.11	1			0	15.1 g
2-F-1-R	MS	10/05/20	11/03/20	Tritium	6	32.5	3.59	pCi/g		2.69	1	95.5		0	15 g
2-F-3-R	SAMPLE	10/05/20	11/02/20	Tritium	6	-0.18	0.67	pCi/g	U	1.17	1			0	15.2 g
2-F-5-R	SAMPLE	10/05/20	11/02/20	Tritium	6	0.131	0.683	pCi/g	U	1.17	1			0	15.2 g
LCS	LCS	11/03/20	11/03/20	Tritium	6	26	3.22	pCi/g		2.62	1	77.7		0	15.2 g
MB	MB	11/03/20	11/03/20	Tritium	6	0.04	0.675	pCi/g	U	1.16	1			0	15.2 g
2-F-1-R	SAMPLE	10/05/20	11/04/20	Carbon-14	7	0.142	0.474	pCi/g	U	0.805	1			0	2.08 g
2-F-1-R	DUP	10/05/20	11/05/20	Carbon-14	7	0.291	0.469	pCi/g	U	0.792	1			0	2.12 g
2-F-1-R	MS	10/05/20	11/05/20	Carbon-14	7	32.9	1.8	pCi/g		1.38	1	90		0	2.07 g
2-F-3-R	SAMPLE	10/05/20	11/05/20	Carbon-14	7	0.553	0.485	pCi/g	U	0.811	1			0	2.13 g
2-F-5-R	SAMPLE	10/05/20	11/05/20	Carbon-14	7	0.415	0.485	pCi/g	U	0.815	1			0	2.07 g
LCS	LCS	11/05/20	11/05/20	Carbon-14	7	34.8	1.75	pCi/g		1.31	1	98.1		0	2.13 g
MB	MB	11/05/20	11/05/20	Carbon-14	7	-0.929	0.441	pCi/g	U	0.781	1			0	2.13 g
2-W-E-3-R	SAMPLE	10/05/20	10/31/20	Americium-243 Tracer	1	3.46	0.488	pCi/g		0.191		50.3	14.9	0.322 g	
2-W-E-3-R	SAMPLE	10/05/20	10/31/20	Americium-241	1	0.0699	0.0641	pCi/g	U	0.0838	0.05			14.9	0.322 g
2-W-E-3-R	SAMPLE	10/05/20	10/31/20	Californium-252	1	-0.0272	0.0397	pCi/g	U	0.1	0.05			14.9	0.322 g
2-W-E-3-R	SAMPLE	10/05/20	10/31/20	Curium-243/244	1	-0.0346	0.0535	pCi/g	U	0.124	0.05			14.9	0.322 g
2-W-E-3-R	DUP	10/05/20	10/31/20	Americium-243 Tracer	1	6.11	0.39	pCi/g		0.0818		88.8		0	0.322 g
2-W-E-3-R	DUP	10/05/20	10/31/20	Americium-241	1	0.00576	0.0299	pCi/g	U	0.0552	0.05			0	0.322 g
2-W-E-3-R	DUP	10/05/20	10/31/20	Californium-252	1	-0.0179	0.0261	pCi/g	U	0.066	0.05			0	0.322 g
2-W-E-3-R	DUP	10/05/20	10/31/20	Curium-243/244	1	-0.0114	0.0273	pCi/g	U	0.063	0.05			0	0.322 g
2-W-E-3-R	MS	10/05/20	10/31/20	Americium-241	1	2.8	0.213	pCi/g		0.0595	0.05	89.1		0	0.322 g
2-W-E-3-R	MS	10/05/20	10/31/20	Californium-252	1	1.77	0.171	pCi/g		0.0128	0.05	116		0	0.322 g
2-W-E-3-R	MS	10/05/20	10/31/20	Curium-243/244	1	3.38	0.231	pCi/g		0.0391	0.05	97.6		0	0.322 g
2-W-E-3-R	MS	10/05/20	10/31/20	Americium-243 Tracer	1	7.18	0.33	pCi/g		0.0658		104		0	0.322 g
LCS	LCS	10/31/20	10/31/20	Americium-241	1	2.98	0.272	pCi/g		0.109	0.05	97.3		0	0.322 g
LCS	LCS	10/31/20	10/31/20	Californium-252	1	1.76	0.208	pCi/g		0.0601	0.05	117		0	0.322 g
LCS	LCS	10/31/20	10/31/20	Curium-243/244	1	3.23	0.278	pCi/g		0.0815	0.05	93.5		0	0.322 g
LCS	LCS	10/31/20	10/31/20	Americium-243 Tracer	1	5.89	0.409	pCi/g		0.154		85.5		0	0.322 g
MB	MB	10/31/20	10/31/20	Americium-243 Tracer	1	6.63	0.355	pCi/g		0.115		96.3		0	0.322 g
MB	MB	10/31/20	10/31/20	Americium-241	1	0.0187	0.026	pCi/g	U	0.0359	0.05			0	0.322 g
MB	MB	10/31/20	10/31/20	Californium-252	1	-0.00476	0.0162	pCi/g	U	0.0365	0.05			0	0.322 g
MB	MB	10/31/20	10/31/20	Curium-243/244	1	-0.0231	0.0271	pCi/g	U	0.0665	0.05			0	0.322 g
SE-W-N-7-M	SAMPLE	09/16/20	11/12/20	Americium-243 Tracer	1	0.778	0.125	pCi/g		0.0435		45		0	1.28 g
SE-W-N-7-M	SAMPLE	09/16/20	11/12/20	Americium-241	1	0.00694	0.0187	pCi/g	U	0.0333	0.05			0	1.28 g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

6-EPA 906.0 Mod.

5-DOE HASL 300, 4.5.2.3/Ga-01-R

7-EPA EERF C-01 Mod.

1-DOE EML HASL-300, Am-05-RC Mod.
2-ASTM C 1475-00 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

Appendix A
Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
SE-W-N-7-M	SAMPLE	09/16/20	11/12/20	Californium-252	1	0	0.00678	pCi/g	U	0.00734	0.05			0	1.28 g
SE-W-N-7-M	SAMPLE	09/16/20	11/12/20	Curium-243/244	1	0.00229	0.0119	pCi/g	U	0.022	0.05			0	1.28 g
SE-W-N-7-M	DUP	09/16/20	11/12/20	Americium-243 Tracer	1	0.828	0.124	pCi/g		0.0538		48.3		0	1.29 g
SE-W-N-7-M	DUP	09/16/20	11/12/20	Americium-241	1	0.018	0.0206	pCi/g	U	0.0323	0.05			0	1.29 g
SE-W-N-7-M	DUP	09/16/20	11/12/20	Californium-252	1	0.00475	0.00931	pCi/g	U	0.00713	0.05			0	1.29 g
SE-W-N-7-M	DUP	09/16/20	11/12/20	Curium-243/244	1	0.00222	0.0115	pCi/g	U	0.0213	0.05			0	1.29 g
SE-W-N-7-M	MS	09/16/20	11/14/20	Americium-241	1	0.782	0.068	pCi/g		0.0146	0.05	101		0	1.28 g
SE-W-N-7-M	MS	09/16/20	11/14/20	Californium-252	1	0.424	0.0517	pCi/g		0.0123	0.05	109		0	1.28 g
SE-W-N-7-M	MS	09/16/20	11/14/20	Curium-243/244	1	0.855	0.072	pCi/g		0.0288	0.05	98		0	1.28 g
SE-W-N-7-M	MS	09/16/20	11/14/20	Americium-243 Tracer	1	1.32	0.101	pCi/g		0.0297		76.5		0	1.28 g
LCS	LCS	11/11/20	11/11/20	Americium-241	1	0.683	0.0879	pCi/g		0.0253	0.05	89.5		0	1.29 g
LCS	LCS	11/11/20	11/11/20	Californium-252	1	0.365	0.0646	pCi/g		0.00883	0.05	97.6		0	1.29 g
LCS	LCS	11/11/20	11/11/20	Curium-243/244	1	0.756	0.0917	pCi/g		0.0249	0.05	87.9		0	1.29 g
LCS	LCS	11/11/20	11/11/20	Americium-243 Tracer	1	1.57	0.137	pCi/g		0.0167		91.4		0	1.29 g
MB	MB	11/11/20	11/11/20	Americium-243 Tracer	1	1.39	0.146	pCi/g		0.00966		80.9		0	1.29 g
MB	MB	11/11/20	11/11/20	Americium-241	1	0.00158	0.0128	pCi/g	U	0.026	0.05			0	1.29 g
MB	MB	11/11/20	11/11/20	Californium-252	1	0.00158	0.0153	pCi/g	U	0.0313	0.05			0	1.29 g
MB	MB	11/11/20	11/11/20	Curium-243/244	1	-0.00338	0.0176	pCi/g	U	0.0389	0.05			0	1.29 g
4CF-1-C	SAMPLE	04/07/22	05/21/22	Americium-243 Tracer	1	1.15	0.101	pCi/g		0.027		74.4		0	1.34 g
4CF-1-C	SAMPLE	04/07/22	05/21/22	Americium-241	1	-0.00849	0.00881	pCi/g	U	0.0228	0.05			0	1.34 g
4CF-1-C	SAMPLE	04/07/22	05/21/22	Californium-252	1	0	0.00698	pCi/g	U	0.0136	0.05			0	1.34 g
4CF-1-C	SAMPLE	04/07/22	05/21/22	Curium-243/244	1	-0.0118	0.0151	pCi/g	U	0.0332	0.05			0	1.34 g
4CF-6-C	SAMPLE	04/07/22	05/21/22	Americium-243 Tracer	1	1.18	0.0983	pCi/g		0.0244		76.3		0	1.34 g
4CF-6-C	SAMPLE	04/07/22	05/21/22	Americium-241	1	-0.00324	0.0119	pCi/g	U	0.0248	0.05			0	1.34 g
4CF-6-C	SAMPLE	04/07/22	05/21/22	Californium-252	1	0	0.00666	pCi/g	U	0.013	0.05			0	1.34 g
4CF-6-C	SAMPLE	04/07/22	05/21/22	Curium-243/244	1	-0.00641	0.00993	pCi/g	U	0.0231	0.05			0	1.34 g
7CS-1-V	SAMPLE	04/07/22	05/21/22	Americium-243 Tracer	1	0.899	0.125	pCi/g		0.0393		55		0	1.27 g
7CS-1-V	SAMPLE	04/07/22	05/21/22	Americium-241	1	0.0148	0.0237	pCi/g	U	0.0399	0.05			0	1.27 g
7CS-1-V	SAMPLE	04/07/22	05/21/22	Californium-252	1	0.00259	0.00879	pCi/g	U	0.00777	0.05			0	1.27 g
7CS-1-V	SAMPLE	04/07/22	05/21/22	Curium-243/244	1	-0.00489	0.0151	pCi/g	U	0.0328	0.05			0	1.27 g
7CS-2-V	SAMPLE	04/07/22	05/21/22	Americium-243 Tracer	1	0.842	0.132	pCi/g		0.049		51.1		0	1.26 g
7CS-2-V	SAMPLE	04/07/22	05/21/22	Americium-241	1	-0.0135	0.023	pCi/g	U	0.0497	0.05			0	1.26 g
7CS-2-V	SAMPLE	04/07/22	05/21/22	Californium-252	1	0.00283	0.0124	pCi/g	U	0.0216	0.05			0	1.26 g
7CS-2-V	SAMPLE	04/07/22	05/21/22	Curium-243/244	1	0.0107	0.0209	pCi/g	U	0.0358	0.05			0	1.26 g
7CS-3-V	SAMPLE	04/07/22	05/24/22	Americium-243 Tracer	1	0.471	0.152	pCi/g		0.0515		29		0	1.28 g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Appendix A
Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
7CS-3-V	SAMPLE	04/07/22	05/24/22	Americium-241	1	-0.0109	0.0214	pCi/g	U	0.0487	0.05			0	1.28 g
7CS-3-V	SAMPLE	04/07/22	05/24/22	Californium-252	1	0	0.0106	pCi/g	U	0.0115	0.05			0	1.28 g
7CS-3-V	SAMPLE	04/07/22	05/24/22	Curium-243/244	1	-0.0036	0.0158	pCi/g	U	0.0345	0.05			0	1.28 g
7W-N-1-R	SAMPLE	04/07/22	05/21/22	Americium-243 Tracer	1	1.19	0.0997	pCi/g		0.0127		77.1		0	1.34 g
7W-N-1-R	SAMPLE	04/07/22	05/21/22	Americium-241	1	0	0.00661	pCi/g	U	0.0129	0.05			0	1.34 g
7W-N-1-R	SAMPLE	04/07/22	05/21/22	Californium-252	1	0	0.0049	pCi/g	U	0.00531	0.05			0	1.34 g
7W-N-1-R	SAMPLE	04/07/22	05/21/22	Curium-243/244	1	-0.00167	0.00567	pCi/g	U	0.0128	0.05			0	1.34 g
7W-N-1-R	DUP	04/07/22	05/21/22	Americium-243 Tracer	1	1.07	0.11	pCi/g		0.038		67.4		0	1.31 g
7W-N-1-R	DUP	04/07/22	05/21/22	Americium-241	1	-0.00585	0.0148	pCi/g	U	0.0315	0.05			0	1.31 g
7W-N-1-R	DUP	04/07/22	05/21/22	Californium-252	1	0	0.00567	pCi/g	U	0.00613	0.05			0	1.31 g
7W-N-1-R	DUP	04/07/22	05/21/22	Curium-243/244	1	-0.00772	0.0131	pCi/g	U	0.0295	0.05			0	1.31 g
7W-N-1-R	MS	04/07/22	05/21/22	Americium-241	1	1.3	0.0948	pCi/g		0.0254	0.05	89.9		0	1.36 g
7W-N-1-R	MS	04/07/22	05/21/22	Californium-252	1	0.659	0.0688	pCi/g		0.0142	0.05	116		0	1.36 g
7W-N-1-R	MS	04/07/22	05/21/22	Curium-243/244	1	1.27	0.0933	pCi/g		0.0251	0.05	82.2		0	1.36 g
7W-N-1-R	MS	04/07/22	05/21/22	Americium-243 Tracer	1	1.12	0.102	pCi/g		0.0308		73.3		0	1.36 g
7W-N-2-R	SAMPLE	04/07/22	05/21/22	Americium-243 Tracer	1	0.783	0.129	pCi/g		0.0297		49		0	1.3 g
7W-N-2-R	SAMPLE	04/07/22	05/21/22	Americium-241	1	0.0109	0.0169	pCi/g	U	0.0261	0.05			0	1.3 g
7W-N-2-R	SAMPLE	04/07/22	05/21/22	Californium-252	1	0.00286	0.00971	pCi/g	U	0.00858	0.05			0	1.3 g
7W-N-2-R	SAMPLE	04/07/22	05/21/22	Curium-243/244	1	0.0054	0.015	pCi/g	U	0.0259	0.05			0	1.3 g
LCS	LCS	05/21/22	05/21/22	Americium-241	1	1.27	0.0949	pCi/g		0.0141	0.05	87.6		0	1.36 g
LCS	LCS	05/21/22	05/21/22	Californium-252	1	0.576	0.0647	pCi/g		0.0143	0.05	103		0	1.36 g
LCS	LCS	05/21/22	05/21/22	Curium-243/244	1	1.46	0.102	pCi/g		0.0243	0.05	94.7		0	1.36 g
LCS	LCS	05/21/22	05/21/22	Americium-243 Tracer	1	1.12	0.105	pCi/g		0.037		73.7		0	1.36 g
MB	MB	05/21/22	05/21/22	Americium-243 Tracer	1	1.05	0.106	pCi/g		0.0482		68.8		0	1.36 g
MB	MB	05/21/22	05/21/22	Americium-241	1	-0.00183	0.00949	pCi/g	U	0.0202	0.05			0	1.36 g
MB	MB	05/21/22	05/21/22	Californium-252	1	-0.00186	0.00632	pCi/g	U	0.0142	0.05			0	1.36 g
MB	MB	05/21/22	05/21/22	Curium-243/244	1	-0.00722	0.0123	pCi/g	U	0.0276	0.05			0	1.36 g
4F-2-C	SAMPLE	04/07/22	06/20/22	Americium-243 Tracer	1	0.699	0.134	pCi/g		0.0421		42.2	1.4	1.25 g	
4F-2-C	SAMPLE	04/07/22	06/20/22	Americium-241	1	-0.00867	0.0155	pCi/g	U	0.0364	0.05		1.4	1.25 g	
4F-2-C	SAMPLE	04/07/22	06/20/22	Californium-252	1	0	0.00765	pCi/g	U	0.0089	0.05		1.4	1.25 g	
4F-2-C	SAMPLE	04/07/22	06/20/22	Curium-243/244	1	-0.0306	0.0181	pCi/g	U	0.0493	0.05		1.4	1.25 g	
4F-2-C	DUP	04/07/22	06/20/22	Americium-243 Tracer	1	0.746	0.178	pCi/g		0.0465		45.4	0	1.26 g	
4F-2-C	DUP	04/07/22	06/20/22	Americium-241	1	0.00571	0.0187	pCi/g	U	0.0337	0.05		0	1.26 g	
4F-2-C	DUP	04/07/22	06/20/22	Californium-252	1	0.00541	0.0157	pCi/g	U	0.0162	0.05		0	1.26 g	
4F-2-C	DUP	04/07/22	06/20/22	Curium-243/244	1	0.0035	0.019	pCi/g	U	0.0375	0.05		0	1.26 g	

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
4F-2-C	MS	04/07/22	06/18/22	Americium-241	1	1.4	0.0941	pCi/g		0.0248	0.05	90.7	0	1.28	g
4F-2-C	MS	04/07/22	06/18/22	Californium-252	1	0.568	0.0622	pCi/g		0.0192	0.05	93.8	0	1.28	g
4F-2-C	MS	04/07/22	06/18/22	Curium-243/244	1	1.62	0.101	pCi/g		0.0231	0.05	98.2	0	1.28	g
4F-2-C	MS	04/07/22	06/18/22	Americium-243 Tracer	1	1.11	0.101	pCi/g		0.0283		68.1	0	1.28	g
4F-4-C	SAMPLE	04/07/22	06/20/22	Americium-243 Tracer	1	1.12	0.108	pCi/g		0.024		67.4	1.89	1.25	g
4F-4-C	SAMPLE	04/07/22	06/20/22	Americium-241	1	-0.00051	0.0111	pCi/g	U	0.0227	0.05		1.89	1.25	g
4F-4-C	SAMPLE	04/07/22	06/20/22	Californium-252	1	0.00425	0.00907	pCi/g	U	0.0141	0.05		1.89	1.25	g
4F-4-C	SAMPLE	04/07/22	06/20/22	Curium-243/244	1	-0.00077	0.00995	pCi/g	U	0.0207	0.05		1.89	1.25	g
7F-1-C	SAMPLE	04/07/22	06/20/22	Americium-243 Tracer	1	0.877	0.122	pCi/g		0.0339		53.1	2.89	1.26	g
7F-1-C	SAMPLE	04/07/22	06/20/22	Americium-241	1	0.0097	0.0125	pCi/g	U	0.0167	0.05		2.89	1.26	g
7F-1-C	SAMPLE	04/07/22	06/20/22	Californium-252	1	0.00251	0.00812	pCi/g	U	0.00752	0.05		2.89	1.26	g
7F-1-C	SAMPLE	04/07/22	06/20/22	Curium-243/244	1	-0.00761	0.0115	pCi/g	U	0.0285	0.05		2.89	1.26	g
7F-2-C	SAMPLE	04/07/22	06/20/22	Americium-243 Tracer	1	1.18	0.104	pCi/g		0.0223		71.9	3.87	1.26	g
7F-2-C	SAMPLE	04/07/22	06/20/22	Americium-241	1	-0.00244	0.00869	pCi/g	U	0.0194	0.05		3.87	1.26	g
7F-2-C	SAMPLE	04/07/22	06/20/22	Californium-252	1	-0.00131	0.00739	pCi/g	U	0.0163	0.05		3.87	1.26	g
7F-2-C	SAMPLE	04/07/22	06/20/22	Curium-243/244	1	-0.00584	0.00722	pCi/g	U	0.0193	0.05		3.87	1.26	g
7F-3-C	SAMPLE	04/07/22	06/20/22	Americium-243 Tracer	1	1.06	0.109	pCi/g		0.03		65.2	2.81	1.27	g
7F-3-C	SAMPLE	04/07/22	06/20/22	Americium-241	1	-0.00537	0.0126	pCi/g	U	0.0278	0.05		2.81	1.27	g
7F-3-C	SAMPLE	04/07/22	06/20/22	Californium-252	1	-0.00173	0.00623	pCi/g	U	0.0145	0.05		2.81	1.27	g
7F-3-C	SAMPLE	04/07/22	06/20/22	Curium-243/244	1	-0.00454	0.00874	pCi/g	U	0.0212	0.05		2.81	1.27	g
8F-1-C	SAMPLE	04/07/22	06/20/22	Americium-243 Tracer	1	0.844	0.124	pCi/g		0.0383		51.4	1.72	1.27	g
8F-1-C	SAMPLE	04/07/22	06/20/22	Americium-241	1	0.00517	0.0111	pCi/g	U	0.0172	0.05		1.72	1.27	g
8F-1-C	SAMPLE	04/07/22	06/20/22	Californium-252	1	-0.00221	0.00795	pCi/g	U	0.0185	0.05		1.72	1.27	g
8F-1-C	SAMPLE	04/07/22	06/20/22	Curium-243/244	1	-0.0123	0.0116	pCi/g	U	0.0315	0.05		1.72	1.27	g
8F-1-C-R	SAMPLE	04/07/22	06/20/22	Americium-243 Tracer	1	1.01	0.126	pCi/g		0.0321		62	1.01	1.27	g
8F-1-C-R	SAMPLE	04/07/22	06/20/22	Americium-241	1	0.00492	0.0158	pCi/g	U	0.0292	0.05		1.01	1.27	g
8F-1-C-R	SAMPLE	04/07/22	06/20/22	Californium-252	1	-0.00183	0.00733	pCi/g	U	0.0176	0.05		1.01	1.27	g
8F-1-C-R	SAMPLE	04/07/22	06/20/22	Curium-243/244	1	-0.00846	0.00949	pCi/g	U	0.0271	0.05		1.01	1.27	g
8F-2-C	SAMPLE	04/07/22	06/20/22	Americium-243 Tracer	1	0.972	0.135	pCi/g		0.0382		59.5	1.43	1.27	g
8F-2-C	SAMPLE	04/07/22	06/20/22	Americium-241	1	-0.0097	0.0109	pCi/g	U	0.0311	0.05		1.43	1.27	g
8F-2-C	SAMPLE	04/07/22	06/20/22	Californium-252	1	-0.00208	0.00834	pCi/g	U	0.02	0.05		1.43	1.27	g
8F-2-C	SAMPLE	04/07/22	06/20/22	Curium-243/244	1	0.00656	0.0161	pCi/g	U	0.0285	0.05		1.43	1.27	g
8F-2-C	DUP	04/07/22	06/20/22	Americium-243 Tracer	1	1.27	0.142	pCi/g		0.0341		77.4	0	1.27	g
8F-2-C	DUP	04/07/22	06/20/22	Americium-241	1	-0.00193	0.0131	pCi/g	U	0.03	0.05		0	1.27	g
8F-2-C	DUP	04/07/22	06/20/22	Californium-252	1	0.00194	0.0104	pCi/g	U	0.0192	0.05		0	1.27	g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
8F-2-C	DUP	04/07/22	06/20/22	Curium-243/244	1	-0.00414	0.00826	pCi/g	U	0.0238	0.05			0	1.27 g
8F-2-C	MS	04/07/22	06/18/22	Americium-241	1	1.32	0.0856	pCi/g		0.0176	0.05	85.2		0	1.27 g
8F-2-C	MS	04/07/22	06/18/22	Californium-252	1	0.61	0.0606	pCi/g		0.0188	0.05	100		0	1.27 g
8F-2-C	MS	04/07/22	06/18/22	Curium-243/244	1	1.53	0.0917	pCi/g		0.0136	0.05	92.2		0	1.27 g
8F-2-C	MS	04/07/22	06/18/22	Americium-243 Tracer	1	1.28	0.0947	pCi/g		0.0216		78.4		0	1.27 g
8F-2-C-R	SAMPLE	04/07/22	06/20/22	Americium-243 Tracer	1	0.973	0.129	pCi/g		0.032		59.9		1.09	1.28 g
8F-2-C-R	SAMPLE	04/07/22	06/20/22	Americium-241	1	-0.00544	0.0129	pCi/g	U	0.0307	0.05			1.09	1.28 g
8F-2-C-R	SAMPLE	04/07/22	06/20/22	Californium-252	1	-0.000924	0.00951	pCi/g	U	0.0185	0.05			1.09	1.28 g
8F-2-C-R	SAMPLE	04/07/22	06/20/22	Curium-243/244	1	-0.00633	0.0147	pCi/g	U	0.034	0.05			1.09	1.28 g
8F-3-C	SAMPLE	04/07/22	06/20/22	Americium-243 Tracer	1	1.07	0.118	pCi/g		0.0255		65.8		1.62	1.27 g
8F-3-C	SAMPLE	04/07/22	06/20/22	Americium-241	1	0.00296	0.00867	pCi/g	U	0.0145	0.05			1.62	1.27 g
8F-3-C	SAMPLE	04/07/22	06/20/22	Californium-252	1	0.0024	0.00736	pCi/g	U	0.00719	0.05			1.62	1.27 g
8F-3-C	SAMPLE	04/07/22	06/20/22	Curium-243/244	1	-0.00605	0.0112	pCi/g	U	0.0272	0.05			1.62	1.27 g
8F-4-C	SAMPLE	04/07/22	06/20/22	Americium-243 Tracer	1	0.797	0.148	pCi/g		0.0417		48.4		1.28	1.26 g
8F-4-C	SAMPLE	04/07/22	06/20/22	Americium-241	1	-0.00248	0.0156	pCi/g	U	0.0345	0.05			1.28	1.26 g
8F-4-C	SAMPLE	04/07/22	06/20/22	Californium-252	1	-0.00634	0.0105	pCi/g	U	0.037	0.05			1.28	1.26 g
8F-4-C	SAMPLE	04/07/22	06/20/22	Curium-243/244	1	0.00561	0.0156	pCi/g	U	0.0273	0.05			1.28	1.26 g
8F-4-C-R	SAMPLE	04/07/22	06/20/22	Americium-243 Tracer	1	0.625	0.157	pCi/g		0.0513		37.8		1.25	1.26 g
8F-4-C-R	SAMPLE	04/07/22	06/20/22	Americium-241	1	0.014	0.0205	pCi/g	U	0.0307	0.05			1.25	1.26 g
8F-4-C-R	SAMPLE	04/07/22	06/20/22	Californium-252	1	-0.0028	0.0112	pCi/g	U	0.0268	0.05			1.25	1.26 g
8F-4-C-R	SAMPLE	04/07/22	06/20/22	Curium-243/244	1	0.00748	0.0196	pCi/g	U	0.0347	0.05			1.25	1.26 g
8F-5-C	SAMPLE	04/07/22	06/20/22	Americium-243 Tracer	1	0.881	0.137	pCi/g		0.0359		53.9		1.37	1.27 g
8F-5-C	SAMPLE	04/07/22	06/20/22	Americium-241	1	0.00154	0.0221	pCi/g	U	0.0434	0.05			1.37	1.27 g
8F-5-C	SAMPLE	04/07/22	06/20/22	Californium-252	1	0.00317	0.00976	pCi/g	U	0.00952	0.05			1.37	1.27 g
8F-5-C	SAMPLE	04/07/22	06/20/22	Curium-243/244	1	-0.00212	0.0133	pCi/g	U	0.0295	0.05			1.37	1.27 g
8F-5-C-R	SAMPLE	04/07/22	06/20/22	Americium-243 Tracer	1	0.754	0.138	pCi/g		0.0326		46.2		2.37	1.27 g
8F-5-C-R	SAMPLE	04/07/22	06/20/22	Americium-241	1	0.0121	0.0178	pCi/g	U	0.0277	0.05			2.37	1.27 g
8F-5-C-R	SAMPLE	04/07/22	06/20/22	Californium-252	1	0.00431	0.0127	pCi/g	U	0.0213	0.05			2.37	1.27 g
8F-5-C-R	SAMPLE	04/07/22	06/20/22	Curium-243/244	1	-0.00012	0.0131	pCi/g	U	0.0275	0.05			2.37	1.27 g
8F-5-C-R	DUP	04/07/22	06/20/22	Americium-243 Tracer	1	0.742	0.183	pCi/g		0.0599		45.2		0	1.26 g
8F-5-C-R	DUP	04/07/22	06/20/22	Americium-241	1	0.0142	0.0279	pCi/g	U	0.0476	0.05			0	1.26 g
8F-5-C-R	DUP	04/07/22	06/20/22	Californium-252	1	-0.0052	0.0142	pCi/g	U	0.0385	0.05			0	1.26 g
8F-5-C-R	DUP	04/07/22	06/20/22	Curium-243/244	1	-0.00723	0.0139	pCi/g	U	0.0402	0.05			0	1.26 g
8F-5-C-R	MS	04/07/22	06/18/22	Americium-241	1	1.49	0.0955	pCi/g		0.0286	0.05	94.1		0	1.25 g
8F-5-C-R	MS	04/07/22	06/18/22	Californium-252	1	0.67	0.0656	pCi/g		0.00499	0.05	108		0	1.25 g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

5-DOE HASL 300, 4.5.2.3/Ga-01-R

6-EPA 906.0 Mod.

7-EPA EERF C-01 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

Appendix A
Volumetric Building Sample Results with QC Data

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Sample_No	Sample_Type	Coll_date	Anal_date	Parameter	Method*	Lab Result	Uncert. 1.96 σ	Units	Qual	MDC	CRDL	% Recovery	% Moisture	Sample Aliquot	Aliquot Units
8F-5-C-R	MS	04/07/22	06/18/22	Curium-243/244	1	1.63	0.0989	pCi/g		0.019	0.05	97.2	0	1.25	g
8F-5-C-R	MS	04/07/22	06/18/22	Americium-243 Tracer	1	1.17	0.0995	pCi/g		0.0234		70.8	0	1.25	g
8F-7-C	SAMPLE	04/07/22	06/21/22	Americium-243 Tracer	1	1.03	0.0976	pCi/g		0.0309		63	1.21	1.27	g
8F-7-C	SAMPLE	04/07/22	06/21/22	Americium-241	1	-0.00747	0.0113	pCi/g	U	0.0253	0.05		1.21	1.27	g
8F-7-C	SAMPLE	04/07/22	06/21/22	Californium-252	1	-0.0016	0.00543	pCi/g	U	0.0122	0.05		1.21	1.27	g
8F-7-C	SAMPLE	04/07/22	06/21/22	Curium-243/244	1	-0.00296	0.0116	pCi/g	U	0.024	0.05		1.21	1.27	g
8F-8-C	SAMPLE	04/07/22	06/20/22	Americium-243 Tracer	1	1.08	0.122	pCi/g		0.0374		66.3	1.37	1.27	g
8F-8-C	SAMPLE	04/07/22	06/20/22	Americium-241	1	0.00216	0.014	pCi/g	U	0.0273	0.05		1.37	1.27	g
8F-8-C	SAMPLE	04/07/22	06/20/22	Californium-252	1	0.00504	0.00919	pCi/g	U	0.00756	0.05		1.37	1.27	g
8F-8-C	SAMPLE	04/07/22	06/20/22	Curium-243/244	1	0.00299	0.0124	pCi/g	U	0.0234	0.05		1.37	1.27	g
LCS	LCS	06/18/22	06/18/22	Americium-241	1	1.3	0.0681	pCi/g		0.00884	0.05	84.6	0	1.28	g
LCS	LCS	06/18/22	06/18/22	Californium-252	1	0.592	0.0464	pCi/g		0.00719	0.05	101	0	1.28	g
LCS	LCS	06/18/22	06/18/22	Curium-243/244	1	1.42	0.0706	pCi/g		0.0101	0.05	86.8	0	1.28	g
LCS	LCS	06/18/22	06/18/22	Americium-243 Tracer	1	1.71	0.0758	pCi/g		0.0154		105	0	1.28	g
MB	MB	06/18/22	06/18/22	Americium-243 Tracer	1	1.43	0.0813	pCi/g		0.0199		88.2	0	1.28	g
MB	MB	06/18/22	06/18/22	Americium-241	1	0.00634	0.00971	pCi/g	U	0.0162	0.05		0	1.28	g
MB	MB	06/18/22	06/18/22	Californium-252	1	0.00108	0.00365	pCi/g	U	0.00323	0.05		0	1.28	g
MB	MB	06/18/22	06/18/22	Curium-243/244	1	-0.00312	0.00456	pCi/g	U	0.0115	0.05		0	1.28	g

3-DOE EML HASL-300, Pu-11-RC Mod.

4-DOE EML HASL-300, U-02-RC

6-EPA 906.0 Mod.

5-DOE HASL 300, 4.5.2.3/Ga-01-R

7-EPA EERF C-01 Mod.

*Key

1-DOE EML HASL-300, Am-05-RC Mod.

2-ASTM C 1475-00 Mod.

8-EPA 905.0 Mod./DOE RP501 Rev. 1