Responses to NRC July 5 Questions and July 7, 2022 Call

Question 1:

General. Is there a procedure for establishing background radiation levels in land survey areas (specifically excavation areas)? How was background established for the survey scans?

LaCrosse*Solutions* Response:

As discussed in the responses to Questions 7 and 16 from the June 6, 2022 call, the process for acquiring background measurements for scanning of excavations or open land areas was not procedurally established at LACBWR. Rather, background measurement collection requirements were denoted in the instructions of each FSS sample plan, with more detailed instruction provided through technician training and field supervisor instruction.

Question 2:

B1-010-004. The November 2020 RAI response (RAI 1e) indicated that the pre- and post-rain event scan data for the WGTV was included in the revised release record, but the pre and post scan data from before and after the rain event that caused intrusion to the WGTV Basement does not seem to be in the revised release record. Please verify that Revision 1 of the release record is the correct revision that is meant to have the pre- and post-rain event scan data.

LaCrosse*Solutions* Response:

Revision 1 of the release record is the correct revision. In revision 1 to the release record for survey unit B1-010-004, pre- and post-rain scan data summaries are provided in section 6. For the pre-rain turnover survey data, the release record states, "The maximum scan reading captured was 10,276 cpm. No alarms were produced during the performance of this survey." For the post-rain surveillance survey data, the release record states, "The maximum scan reading captured during this surveillance survey was 14,383 cpm. No alarms were produced during the performance of this survey."

The Ludlum 2350-1 download reports for the pre- and post-rain scan data are below.

Figure 1 – Pre-Rain Scan Download [1]

Model Nur	Serial Num	Sample Nu	Location C	Location C	Location C	Location C	Location C	Formatted Date	Detector S	Logged Re	Units	Count Tim	Logging M	Status	M2350(-1)	M2350(-1) ID
43-37B	190946	0				BD	PRBKG	9/7/2017 6:42	2	1015	c	60	1	0	216169	TRS2012
43-37B	190946	1				BD		9/7/2017 6:51	2	6477	c	60	1	1	216169	TRS2012
43-37B	190946	2				BD	PRCHK	9/7/2017 6:54	2	7852	c	60	1	1	216169	TRS2012
43-37B	190946	3				BD	PRCHK	9/7/2017 6:55	2	7559	c	60	1	1	216169	TRS2012
43-37B	190946	4	4	FLDBK		BD	PRCHK	9/7/2017 11:04	2	2362	c	60	1	0	216169	TRS2012
43-37B	190946	5	4	FLDBK		BD		9/7/2017 11:06	2	2384	c	60	1	0	216169	TRS2012
43-37B	190946	6	4	FLDBK		BD		9/7/2017 11:07	2	2374	c	60	1	0	216169	TRS2012
43-37B	190946	7	4	FLDBK		BD		9/7/2017 11:09	2	2227	c	60	1	0	216169	TRS2012
43-37B	190946	8	4	FLDBK		BD		9/7/2017 11:10	2	2376	c	60	1	0	216169	TRS2012
43-37B	190946	9	4	L11		BS		9/7/2017 12:40	2	8767	c	0	0	0	216169	TRS2012
43-37B	190946	10	4	L12		BS		9/7/2017 12:45	2	2739	c	0	0	0	216169	TRS2012
43-37B	190946	11	4	L13		BS		9/7/2017 12:49	2	2709	c	0	0	0	216169	TRS2012
43-37B	190946	12	4	L14		BS		9/7/2017 12:54	2	5714	c	0	0	0	216169	TRS2012
43-37B	190946	13	4	L15&L16		BS		9/7/2017 13:01	2	6780	c	0	0	0	216169	TRS2012
43-37B	190946	14	4	L17		BS		9/7/2017 13:04	2	10276	c	0	0	0	216169	TRS2012
43-37B	190946	15	4	L18		BS		9/7/2017 13:07	2	10105	c	0	0	0	216169	TRS2012
43-37B	190946	16	4	L19		BS		9/7/2017 13:09	2	3720	c	0	0	0	216169	TRS2012
43-37B	190946	17				BD	PSBKG	9/7/2017 15:28	2	996	c	60	1	0	216169	TRS2012
43-37B	190946	18				BD	PSCHK	9/7/2017 15:32	2	7380	c	60	1	1	216169	TRS2012
43-37B	190946	19				BD	PSCHK	9/7/2017 15:33	2	7819	c	60	1	1	216169	TRS2012
43-37B	190946	20				BD	PSCHK	9/7/2017 15:35	2	6801	c	60	1	1	216169	TRS2012

Figure 2 – Pre-Rain Scan Download [2]

Model Nur	Serial Num	Sample Nu	Location C	Location C	Location C	Location C	Location C	Formatted Date	Detector S	Logged Re	Units	Count Tim	Logging M	Status	M2350(-1)	M2350(-1) ID
43-37B	093961	0			BD	PRBKG		9/7/2017 6:42	2	1079	c	60	1	0	216185	LC4871
43-37B	093961	1			BD		PRCHK	9/7/2017 6:46	2	7139	c	60	1	1	216185	LC4871
43-37B	093961	2			BD		PRCHK	9/7/2017 6:47	2	7685	c	60	1	1	216185	LC4871
43-37B	093961	3			BD		PRCHK	9/7/2017 6:48	2	6605	c	60	1	1	216185	LC4871
43-37B	093961	4	004	FLDBK	BD			9/7/2017 11:04	2	2462	c	60	1	0	216185	LC4871
43-37B	093961	5	004	FLDBK	BD			9/7/2017 11:05	2	2554	c	60	1	0	216185	LC4871
43-37B	093961	6	004	FLDBK	BD			9/7/2017 11:07	2	2528	c	60	1	0	216185	LC4871
43-37B	093961	7	004	FLDBK	BD			9/7/2017 11:08	2	2485	c	60	1	0	216185	LC4871
43-37B	093961	8	004	FLDBK	BD			9/7/2017 11:10	2	2452	c	60	1	0	216185	LC4871
43-37B	093961	9	004	L01	BS			9/7/2017 12:39	2	2285	c	0	0	0	216185	LC4871
43-37B	093961	10	004	L02	BS			9/7/2017 12:45	2	2259	c	0	0	0	216185	LC4871
43-37B	093961	11	004	L03	BS			9/7/2017 12:49	2	2662	c	0	0	0	216185	LC4871
43-37B	093961	12	004	L04	BS			9/7/2017 12:55	2	3773	c	0	0	0	216185	LC4871
43-37B	093961	13	004	L05	BS			9/7/2017 13:00	2	3581	c	0	0	0	216185	LC4871
43-37B	093961	14	004	L06	BS			9/7/2017 13:04	2	3478	c	0	0	0	216185	LC4871
43-37B	093961	15	004	L07	BS			9/7/2017 13:07	2	3403	c	0	0	0	216185	LC4871
43-37B	093961	16	004	L08	BS			9/7/2017 13:11	2	3522	c	0	0	0	216185	LC4871
43-37B	093961	17	004	L09	BS			9/7/2017 13:14	2	2951	c	0	0	0	216185	LC4871
43-37B	093961	18	004	L10	BS			9/7/2017 13:20	2	3430	c	0	0	0	216185	LC4871
43-37B	093961	19			BD	PSBKG		9/7/2017 15:27	2	1071	c	60	1	0	216185	LC4871
43-37B	093961	20			BD		PSCHK	9/7/2017 15:36	2	7482	c	60	1	1	216185	LC4871
43-37B	093961	21			BD		PSCHK	9/7/2017 15:38	2	7989	c	60	1	1	216185	LC4871
43-37B	093961	22			BD		PSCHK	9/7/2017 15:39	2	6871	c	60	1	1	216185	LC4871

Figure 3 – Post-Rain Scan Download [1]

Model Nur	Serial Num	Sample Nu	Location C	Location C	Location C	Location C	Location C	Formatted Date	Detector S	Logged Re	Units	Count Tim	Logging M	Status	M2350(-1)	M2350(-1) ID
44-10	PR357776	0			BD	PRBKG		11/4/2017 10:32	1	5237	c	60	1	0	325246	TRS2012
44-10	PR357776	1			BD		PRCHK	11/4/2017 10:43	1	38127	c	60	1	1	325246	TRS2012
44-10	PR357776	2	WGTV	FLDBK	BD			11/4/2017 14:26	1	6845	c	60	1	0	325246	TRS2012
44-10	PR357776	3	WGTV	FLDBK	BD			11/4/2017 14:27	1	6713	c	60	1	0	325246	TRS2012
44-10	PR357776	4	WGTV	FLDBK	BD			11/4/2017 14:28	1	6604	c	60	1	0	325246	TRS2012
44-10	PR357776	5	WGTV	FLDBK	BD			11/4/2017 14:30	1	6642	c	60	1	0	325246	TRS2012
44-10	PR357776	6	WGTV	FLDBK	BD			11/4/2017 14:31	1	6557	c	60	1	0	325246	TRS2012
44-10	PR357776	7	WGTV	1&2	BS			11/4/2017 14:44	1	13024	c	0	0	0	325246	TRS2012
44-10	PR357776	8	WGTV	3&4	BS			11/4/2017 14:47	1	14118	c	0	0	0	325246	TRS2012
44-10	PR357776	9	WGTV	5&6	BS			11/4/2017 14:50	1	14383	c	0	0	0	325246	TRS2012
44-10	PR357776	10	WGTV	7&8	BS			11/4/2017 14:52	1	13715	c	0	0	0	325246	TRS2012
44-10	PR357776	11	WGTV	9&10	BS			11/4/2017 14:55	1	13022	c	0	0	0	325246	TRS2012
44-10	PR357776	12	WGTV	11&12	BS			11/4/2017 14:58	1	12120	c	0	0	0	325246	TRS2012
44-10	PR357776	13	WGTV	13&14	BS			11/4/2017 15:00	1	12145	c	0	0	0	325246	TRS2012
44-10	PR357776	14	WGTV	15&16	BS			11/4/2017 15:02	1	13647	c	0	0	0	325246	TRS2012
44-10	PR357776	15	WGTV	17&18	BS			11/4/2017 15:04	1	13416	c	0	0	0	325246	TRS2012
44-10	PR357776	16	WGTV	19	BS			11/4/2017 15:06	1	13165	c	0	0	0	325246	TRS2012
44-10	PR357776	17			BD	PSBKG		11/4/2017 16:17	1	5532	c	60	1	0	325246	TRS2012
44-10	PR357776	18			BD		PSCHK	11/4/2017 16:23	1	38652	c	60	1	1	325246	TRS2012

Figure 4 – Post-Rain Scan Download [2]

Model Num	Serial Num	Sample	Location C	Location C	Location C	Location C	Location C	Formatted Date	Detector	Logged Re	Units	Count Tim	Logging M	Status	M2350(-1)	M2350(-1) ID
43-37B	190946	0			BD	PRBKG		11/4/2017 10:11	2	1046	c	60	1	0	216169	LC4871
43-37B	190946	1			BD		PRCHK	11/4/2017 10:15	2	7400	c	60	1	1	216169	LC4871
43-37B	190946	2			BD		PRCHK	11/4/2017 10:17	2	7793	c	60	1	1	216169	LC4871
43-37B	190946	3			BD		PRCHK	11/4/2017 10:18	2	6666	c	60	1	1	216169	LC4871
43-37B	190946	4	WGTV	FLDBK	BD			11/4/2017 15:27	2	2204	c	60	1	0	216169	LC4871
43-37B	190946	5	WGTV	FLDBK	BD			11/4/2017 15:28	2	2152	c	60	1	0	216169	LC4871
43-37B	190946	6	WGTV	FLDBK	BD			11/4/2017 15:30	2	2219	c	60	1	0	216169	LC4871
43-37B	190946	7	WGTV	FLDBK	BD			11/4/2017 15:31	2	2320	c	60	1	0	216169	LC4871
43-37B	190946	8	WGTV	FLDBK	BD			11/4/2017 15:32	2	2121	c	60	1	0	216169	LC4871
43-37B	190946	9	WGTV	A01	BS			11/4/2017 15:41	2	3707	c	0	0	0	216169	LC4871
43-37B	190946	10	WGTV	A01	BS			11/4/2017 15:41	2	3945	c	0	0	0	216169	LC4871
43-37B	190946	11	WGTV	A02	BS			11/4/2017 15:45	2	8260	c	0	0	0	216169	LC4871
43-37B	190946	12	WGTV	A02	BS			11/4/2017 15:49	2	9796	c	0	0	0	216169	LC4871
43-37B	190946	13	WGTV	A03	BS			11/4/2017 15:54	2	6004	c	0	0	0	216169	LC4871
43-37B	190946	14	WGTV	A03	BS			11/4/2017 15:57	2	7183	c	0	0	0	216169	LC4871
43-37B	190946	15			BD	PSBKG		11/4/2017 16:18	2	1086	c	60	1	0	216169	LC4871
43-37B	190946	16			BD		PSCHK	11/4/2017 16:31	2	7265	c	60	1	1	216169	LC4871
43-37B	190946	17			BD		PSCHK	11/4/2017 16:32	2	7948	c	60	1	1	216169	LC4871
43-37B	190946	18			BD		PSCHK	11/4/2017 16:33	2	7194	c	60	1	1	216169	LC4871

Question 3:

B1-010-004. The maximum insignificant contributor (IC) dose calculated by the licensee for the continuing characterization samples was 0.5042 mrem/yr for the concrete core samples and

0.1437 mrem/yr for the soil samples, which is below the 2.5 mrem/yr limit provided in the LTP for DCGL adjustment. Please provide the detailed calculations for this maximum IC dose.

LaCrosse*Solutions* Response:

The calculation is performed as follows: Radioisotope results are tabulated and negative results are zeroed. Positive results, whether above MDA or not, are then divided by the associated Base Case DCGLs as provided in Table 6-6 for soils or Table 6-16 for concrete in Chapter 6 of the LTP. Concrete results in pCi/g need to be converted to pCi/m^2, or the DCGLs converted to pCi/g to assign a percentage of dose. The conversion from pCi/g to pCi/m^2 is detailed in the response to Question 5. The fractions of the DCGL for the individual radionuclides are then multiplied by 25 to obtain a mrem/yr value for that radioisotope. The IC radionuclide doses (all doses but Co-60, Sr-90, Cs-137, Eu-152 and Eu-154) are then summed to obtain a total mrem/yr value for the IC dose. Below are the calculations for the two samples referenced in the question:

Radionuclide	Base Case DCGL (pCi/m2)	Sample	Activity (pCi/m2)	Remove Negative	Fraction	Dose	IC Dose
H-3	5.91E+09	B1-010-04A-CJFC-009-CV	1.06E+05	1.06E+05	0.0000	0.0005	
C-14	5.33E+08	B1-010-04A-CJFC-009-CV	-2.10E+04	0.00E+00	0.0000	0.0000	
Fe-55	2.32E+10	B1-010-04A-CJFC-009-CV	-8.79E+04	0.00E+00	0.0000	0.0000	
Ni-59	2.09E+11	B1-010-04A-CJFC-009-CV	-6.56E+03	0.00E+00	0.0000	0.0000	
Co-60	6.42E+06	B1-010-04A-CJFC-009-CV	7.45E+02	7.45E+02	0.0001	0.0029	
Ni-63	8.49E+10	B1-010-04A-CJFC-009-CV	2.73E+04	2.73E+04	0.0000	0.0000	
Sr-90	1.18E+07	B1-010-04A-CJFC-009-CV	3.04E+03	3.04E+03	0.0003	0.0064	
Nb-94	1.05E+07	B1-010-04A-CJFC-009-CV	-8.37E+02	0.00E+00	0.0000	0.0000	
Tc-99	1.50E+08	B1-010-04A-CJFC-009-CV	1.96E+03	1.96E+03	0.0000	0.0003	
Cs-137	2.82E+07	B1-010-04A-CJFC-009-CV	1.59E+05	1.59E+05	0.0056	0.1405	
Eu-152	1.51E+07	B1-010-04A-CJFC-009-CV	2.57E+03	2.57E+03	0.0002	0.0043	
Eu-154	1.39E+07	B1-010-04A-CJFC-009-CV	-4.35E+03	0.00E+00	0.0000	0.0000	
Eu-155	5.77E+08	B1-010-04A-CJFC-009-CV	2.00E+03	2.00E+03	0.0000	0.0001	
Np-237	1.51E+05	B1-010-04A-CJFC-009-CV	3.04E+03	3.04E+03	0.0201	0.5032	
Pu-238	1.77E+07	B1-010-04A-CJFC-009-CV	-1.05E+02	0.00E+00	0.0000	0.0000	
Pu-239	1.46E+07	B1-010-04A-CJFC-009-CV	-1.05E+02	0.00E+00	0.0000	0.0000	
Pu-240	1.46E+07	B1-010-04A-CJFC-009-CV	-1.05E+02	0.00E+00	0.0000	0.0000	
Pu-241	7.81E+08	B1-010-04A-CJFC-009-CV	-6.11E+03	0.00E+00	0.0000	0.0000	
Am-241	2.75E+07	B1-010-04A-CJFC-009-CV	-4.47E+02	0.00E+00	0.0000	0.0000	
Am-243	2.16E+07	B1-010-04A-CJFC-009-CV	-1.24E+02	0.00E+00	0.0000	0.0000	
Cm-243	6.66E+07	B1-010-04A-CJFC-009-CV	9.98E+01	9.98E+01	0.0000	0.0000	
Cm-244	1.34E+08	B1-010-04A-CJFC-009-CV	9.98E+01	9.98E+01	0.0000	0.0000	0.5042

Radionuclide	Base Case DCGL (pCi/g)	Sample	Activity (pCi/g)	Remove Negative	Fraction	Dose	IC Dose
H-3	1.75E+04	B1-010-04A-CJFS-004-SB	3.54E+00	3.54E+00	0.0002	0.0051	
C-14	2.45E+05	B1-010-04A-CJFS-004-SB	9.13E-01	9.13E-01	0.0000	0.0001	
Fe-55	1.02E+07	B1-010-04A-CJFS-004-SB	-1.12E+00	0.00E+00	0.0000	0.0000	
Ni-59	2.59E+07	B1-010-04A-CJFS-004-SB	6.67E-01	6.67E-01	0.0000	0.0000	
Co-60	1.28E+01	B1-010-04A-CJFS-004-SB	-1.03E-02	0.00E+00	0.0000	0.0000	
Ni-63	9.48E+06	B1-010-04A-CJFS-004-SB	8.61E-01	8.61E-01	0.0000	0.0000	
Sr-90	6.59E+03	B1-010-04A-CJFS-004-SB	1.20E-01	1.20E-01	0.0000	0.0005	
Nb-94	2.02E+01	B1-010-04A-CJFS-004-SB	2.68E-03	2.68E-03	0.0001	0.0033	
Tc-99	3.56E+02	B1-010-04A-CJFS-004-SB	8.45E-01	8.45E-01	0.0024	0.0593	
Cs-137	5.81E+01	B1-010-04A-CJFS-004-SB	9.21E-03	9.21E-03	0.0002	0.0040	
Eu-152	2.84E+01	B1-010-04A-CJFS-004-SB	-3.22E-02	0.00E+00	0.0000	0.0000	
Eu-154	2.64E+01	B1-010-04A-CJFS-004-SB	8.23E-03	8.23E-03	0.0003	0.0078	
Eu-155	1.12E+03	B1-010-04A-CJFS-004-SB	-4.45E-03	0.00E+00	0.0000	0.0000	
Np-237	7.99E-01	B1-010-04A-CJFS-004-SB	2.39E-03	2.39E-03	0.0030	0.0748	
Pu-238	1.66E+03	B1-010-04A-CJFS-004-SB	2.25E-04	2.25E-04	0.0000	0.0000	
Pu-239	1.49E+03	B1-010-04A-CJFS-004-SB	-2.13E-02	0.00E+00	0.0000	0.0000	
Pu-240	1.50E+03	B1-010-04A-CJFS-004-SB	-2.13E-02	0.00E+00	0.0000	0.0000	
Pu-241	3.64E+04	B1-010-04A-CJFS-004-SB	-2.75E-01	0.00E+00	0.0000	0.0000	
Am-241	1.09E+03	B1-010-04A-CJFS-004-SB	1.33E-02	1.33E-02	0.0000	0.0003	
Am-243	1.87E+02	B1-010-04A-CJFS-004-SB	6.62E-03	6.62E-03	0.0000	0.0009	
Cm-243	2.88E+02	B1-010-04A-CJFS-004-SB	-6.06E-03	0.00E+00	0.0000	0.0000	
Cm-244	2.67E+03	B1-010-04A-CJFS-004-SB	-6.06E-03	0.00E+00	0.0000	0.0000	0.1437

Question 4:

B1-010-004. The licensee's response to RAI 3g states:

No additional remediation took place in the WGTV Basement after the continuing characterization cores were obtained. The ISOCS results from the survey reflect the expectations of the results with the cores. The highest ISOCS result, 1.32E+7 pCi/m2 was obtained from the WGTV sump, which also had the highest Cs-137 concentration of 148 pCi/g. The value of 148 pCi/g when converted to pCi/m2 is 4.42E+6 pCi/m2. The mean and median of the systemic measurements of 5.77E+4 and 3.77E+4 pCi/m2, equate to 1.94 and 1.27 pCi/g of Cs-137. This is in line with the sporadic contamination within the area and the use of a 28.3m2 field of view for the ISOCS measurements.

Please provide the assumptions and/or detailed calculations supporting these conversions from pCi/m2 to pCi/g. Please also provide additional justification as to why additional remediation did not take place in this survey unit given the results of the continuing characterization samples.

LaCrosse*Solutions* Response:

The calculation for converting a pCi/g analytical value to the units of pCi/m2 is as follows:

$$x\frac{\text{pCi}}{\text{g}} * 1.27\text{cm} * 1\text{m}^2 * 1\text{x}10^4\frac{\text{cm}^2}{\text{m}^2} * 2.35\frac{\text{g}}{\text{cm}^3} = y\frac{\text{pCi}}{\text{m2}}$$

The assumptions are that the depth of contamination is 0.5" (1.27cm) and the density of the concrete is 2.35 g/cm3. These are the same parameters as those used for the conversion presented in RS-TD-31319-001, *Radionuclides of Concern During LACBWR Decommissioning*.

Additional remediation did not take place within the WGTV sump due to difficulties in decontaminating a small area and fears of fracturing the base of the sump, which would introduce groundwater intrusion into the WGTV. Additionally, at that point in the project, LACBWR did not have finalized Operational or Base Case DCGLs and the highest ISOCS measurement was below the Base Case DCGL at that time. Surface scans were also performed by NRC Region III, where an elevated area was noted by the sump, but the average was below the DCGL.

Question 5:

L1-SUB-TDS. Two of the eight continuing characterization samples in the Turbine Building Excavation were positive for Tc-99 but they contained no other radionuclides above MDC. Has the licensee calculated the relative dose contribution at this concentration for Tc-99? The average concentration of Tc-99 for soils from characterization was 0.576 pCi/g, and the staff notes that this is not far off from what was assumed to derive the IC dose contribution.

However, if the relative proportion of the radionuclides was assumed to be consistent, the staff believes these samples would also have been positive for Cs-137. Could ES provide the analysis that shows or a discussion that supports that this meets the original IC dose contribution assumptions? The staff notes that the associated RAI path forward (RAI 3) asked for detailed calculations to estimate the actual IC dose for each individual sample result.

LaCrosse*Solutions* Response:

The results for L1-SUB-TDS-FJGS-004-SB and L1-SUB-TDS-FJGS-006-SB were both positive for Tc-99 with respective concentrations of 0.530 and 0.628 pCi/g, respectively. These results indicate a yearly dose of 0.0372 and 0.0441 mrem/yr, respectively due to Tc-99. The total IC dose for these samples indicate 0.0457 and 0.0662 mrem/yr, respectively. The highest IC dose was associated with L1-SUB-TDS-FJGS-010-SB, with a value of 0.1439 mrem/yr. These values are all well below the 2.5 mrem/yr assumption for IC dose contribution for the DCGLs.

Cs-137 was detected in both samples from both the on-site and off-site laboratories. Off-site results for samples L1-SUB-TDS-FJGS-004-SB and L1-SUB-TDS-FJGS-006-SB were 0.103 and 0.189 pCi/g, respectively. Onsite results for the same samples indicate Cs-137 concentrations of 0.0607 and 0.188 pCi/g, respectively.

The following present the calculations for the IC doses for the samples referenced above:

Radionuclide	Base Case DCGL (pCi/g)	Sample	Activity (pCi/g)	Remove Negative	Fraction	Dose	IC Dose
H-3	1.75E+04	L1-SUB-TDS-FJGS-004-SB	-5.28E-01	0.00E+00	0.0000	0.0000	
C-14	2.45E+05	L1-SUB-TDS-FJGS-004-SB	-8.69E-01	0.00E+00	0.0000	0.0000	
Fe-55	1.02E+07	L1-SUB-TDS-FJGS-004-SB	2.34E+00	2.34E+00	0.0000	0.0000	
Ni-59	2.59E+07	L1-SUB-TDS-FJGS-004-SB	-1.24E-01	0.00E+00	0.0000	0.0000	
Co-60	1.28E+01	L1-SUB-TDS-FJGS-004-SB	5.96E-02	5.96E-02	0.0047	0.1163	
Ni-63	9.48E+06	L1-SUB-TDS-FJGS-004-SB	1.98E-01	1.98E-01	0.0000	0.0000	
Sr-90	6.59E+03	L1-SUB-TDS-FJGS-004-SB	2.29E-02	2.29E-02	0.0000	0.0001	
Nb-94	2.02E+01	L1-SUB-TDS-FJGS-004-SB	6.01E-03	6.01E-03	0.0003	0.0074	
Tc-99	3.56E+02	L1-SUB-TDS-FJGS-004-SB	5.30E-01	5.30E-01	0.0015	0.0372	
Cs-137	5.81E+01	L1-SUB-TDS-FJGS-004-SB	1.03E-01	1.03E-01	0.0018	0.0443	
Eu-152	2.84E+01	L1-SUB-TDS-FJGS-004-SB	9.20E-03	9.20E-03	0.0003	0.0081	
Eu-154	2.64E+01	L1-SUB-TDS-FJGS-004-SB	-3.00E-04	0.00E+00	0.0000	0.0000	
Eu-155	1.12E+03	L1-SUB-TDS-FJGS-004-SB	-3.01E-02	0.00E+00	0.0000	0.0000	
Np-237	7.99E-01	L1-SUB-TDS-FJGS-004-SB	0.00E+00	0.00E+00	0.0000	0.0000	
Pu-238	1.66E+03	L1-SUB-TDS-FJGS-004-SB	1.83E-02	1.83E-02	0.0000	0.0003	
Pu-239	1.49E+03	L1-SUB-TDS-FJGS-004-SB	-1.70E-03	0.00E+00	0.0000	0.0000	
Pu-240	1.50E+03	L1-SUB-TDS-FJGS-004-SB	-1.70E-03	0.00E+00	0.0000	0.0000	
Pu-241	3.64E+04	L1-SUB-TDS-FJGS-004-SB	-1.09E+00	0.00E+00	0.0000	0.0000	
Am-241	1.09E+03	L1-SUB-TDS-FJGS-004-SB	1.91E-02	1.91E-02	0.0000	0.0004	
Am-243	1.87E+02	L1-SUB-TDS-FJGS-004-SB	2.60E-03	2.60E-03	0.0000	0.0003	
Cm-243	2.88E+02	L1-SUB-TDS-FJGS-004-SB	-4.50E-03	0.00E+00	0.0000	0.0000	
Cm-244	2.67E+03	L1-SUB-TDS-FJGS-004-SB	-4.50E-03	0.00E+00	0.0000	0.0000	0.0457

Radionuclide	Base Case DCGL (pCi/g)	Sample	Activity (pCi/g)	Remove Negative	Fraction	Dose	IC Dose
H-3	1.75E+04	L1-SUB-TDS-FJGS-006-SB	3.40E-01	3.40E-01	0.0000	0.0005	
C-14	2.45E+05	L1-SUB-TDS-FJGS-006-SB	-1.07E+00	0.00E+00	0.0000	0.0000	
Fe-55	1.02E+07	L1-SUB-TDS-FJGS-006-SB	1.02E+00	1.02E+00	0.0000	0.0000	
Ni-59	2.59E+07	L1-SUB-TDS-FJGS-006-SB	-1.71E+00	0.00E+00	0.0000	0.0000	
Co-60	1.28E+01	L1-SUB-TDS-FJGS-006-SB	4.34E-02	4.34E-02	0.0034	0.0847	
Ni-63	9.48E+06	L1-SUB-TDS-FJGS-006-SB	7.96E-01	7.96E-01	0.0000	0.0000	
Sr-90	6.59E+03	L1-SUB-TDS-FJGS-006-SB	-6.57E-02	0.00E+00	0.0000	0.0000	
Nb-94	2.02E+01	L1-SUB-TDS-FJGS-006-SB	5.40E-03	5.40E-03	0.0003	0.0067	
Tc-99	3.56E+02	L1-SUB-TDS-FJGS-006-SB	6.28E-01	6.28E-01	0.0018	0.0441	
Cs-137	5.81E+01	L1-SUB-TDS-FJGS-006-SB	1.89E-01	1.89E-01	0.0033	0.0813	
Eu-152	2.84E+01	L1-SUB-TDS-FJGS-006-SB	4.90E-03	4.90E-03	0.0002	0.0043	
Eu-154	2.64E+01	L1-SUB-TDS-FJGS-006-SB	-4.90E-03	0.00E+00	0.0000	0.0000	
Eu-155	1.12E+03	L1-SUB-TDS-FJGS-006-SB	3.89E-02	3.89E-02	0.0000	0.0009	
Np-237	7.99E-01	L1-SUB-TDS-FJGS-006-SB	4.00E-04	4.00E-04	0.0005	0.0125	
Pu-238	1.66E+03	L1-SUB-TDS-FJGS-006-SB	-4.20E-03	0.00E+00	0.0000	0.0000	
Pu-239	1.49E+03	L1-SUB-TDS-FJGS-006-SB	-1.15E-02	0.00E+00	0.0000	0.0000	
Pu-240	1.50E+03	L1-SUB-TDS-FJGS-006-SB	-1.15E-02	0.00E+00	0.0000	0.0000	
Pu-241	3.64E+04	L1-SUB-TDS-FJGS-006-SB	-2.80E+00	0.00E+00	0.0000	0.0000	
Am-241	1.09E+03	L1-SUB-TDS-FJGS-006-SB	1.76E-02	1.76E-02	0.0000	0.0004	
Am-243	1.87E+02	L1-SUB-TDS-FJGS-006-SB	9.10E-03	9.10E-03	0.0000	0.0012	
Cm-243	2.88E+02	L1-SUB-TDS-FJGS-006-SB	-9.50E-03	0.00E+00	0.0000	0.0000	
Cm-244	2.67E+03	L1-SUB-TDS-FJGS-006-SB	-9.50E-03	0.00E+00	0.0000	0.0000	0.0662

Radionuclide	Base Case DCGL (pCi/g)	Sample	Activity (pCi/g)	Remove Negative	Fraction	Dose	IC Dose
H-3	1.75E+04	L1-SUB-TDS-FJGS-010-SB	-8.41E-01	0.00E+00	0.0000	0.0000	
C-14	2.45E+05	L1-SUB-TDS-FJGS-010-SB	-1.01E+00	0.00E+00	0.0000	0.0000	
Fe-55	1.02E+07	L1-SUB-TDS-FJGS-010-SB	5.15E-01	5.15E-01	0.0000	0.0000	
Ni-59	2.59E+07	L1-SUB-TDS-FJGS-010-SB	-4.26E-01	0.00E+00	0.0000	0.0000	
Co-60	1.28E+01	L1-SUB-TDS-FJGS-010-SB	-3.20E-03	0.00E+00	0.0000	0.0000	
Ni-63	9.48E+06	L1-SUB-TDS-FJGS-010-SB	-4.08E-01	0.00E+00	0.0000	0.0000	
Sr-90	6.59E+03	L1-SUB-TDS-FJGS-010-SB	-5.03E-02	0.00E+00	0.0000	0.0000	
Nb-94	2.02E+01	L1-SUB-TDS-FJGS-010-SB	1.14E-02	1.14E-02	0.0006	0.0141	
Tc-99	3.56E+02	L1-SUB-TDS-FJGS-010-SB	4.23E-01	4.23E-01	0.0012	0.0297	
Cs-137	5.81E+01	L1-SUB-TDS-FJGS-010-SB	5.63E-02	5.63E-02	0.0010	0.0242	
Eu-152	2.84E+01	L1-SUB-TDS-FJGS-010-SB	1.62E-02	1.62E-02	0.0006	0.0142	
Eu-154	2.64E+01	L1-SUB-TDS-FJGS-010-SB	3.27E-02	3.27E-02	0.0012	0.0310	
Eu-155	1.12E+03	L1-SUB-TDS-FJGS-010-SB	1.32E-02	1.32E-02	0.0000	0.0003	
Np-237	7.99E-01	L1-SUB-TDS-FJGS-010-SB	3.10E-03	3.10E-03	0.0039	0.0970	
Pu-238	1.66E+03	L1-SUB-TDS-FJGS-010-SB	-6.60E-03	0.00E+00	0.0000	0.0000	
Pu-239	1.49E+03	L1-SUB-TDS-FJGS-010-SB	-3.03E-03	0.00E+00	0.0000	0.0000	
Pu-240	1.50E+03	L1-SUB-TDS-FJGS-010-SB	-3.03E-03	0.00E+00	0.0000	0.0000	
Pu-241	3.64E+04	L1-SUB-TDS-FJGS-010-SB	-3.59E-01	0.00E+00	0.0000	0.0000	
Am-241	1.09E+03	L1-SUB-TDS-FJGS-010-SB	-3.40E-03	0.00E+00	0.0000	0.0000	
Am-243	1.87E+02	L1-SUB-TDS-FJGS-010-SB	1.75E-02	1.75E-02	0.0001	0.0023	
Cm-243	2.88E+02	L1-SUB-TDS-FJGS-010-SB	5.20E-03	5.20E-03	0.0000	0.0005	
Cm-244	2.67E+03	L1-SUB-TDS-FJGS-010-SB	5.20E-03	5.20E-03	0.0000	0.0000	0.1439

Question 6:

L1-SUB-TDS. ORISE conducted a confirmatory survey of the Turbine Building Excavation survey unit from January 15-18, 2018. The results of the confirmatory survey concluded that LACBWR's FSS design and implementation were appropriate and reported results were acceptable for demonstrating compliance with the release criteria given that all the radionuclide concentrations in measurements obtained in the confirmatory survey were at least an order of magnitude less than the respective Operational DCGLs.

The ORISE confirmatory survey noted that the physical boundary established by LACBWR for the turbine building excavation did not match the planned boundary established in the GIS files as indicated by the difference in where ORISE performed scans and the blue line at the southern portion of the survey unit in the associated figures. The survey also stated that the post-survey review of the gamma walkover maps showed a discrepancy between the planned survey unit boundary and the physical boundary observed in the field. Please confirm that the boundaries of the survey units surrounding the excavation survey unit of L1-SUB-TDS share physical boundaries such that 100 percent of the soil area was investigated. Please explain the difference in this survey unit boundary and confirm that the portion of the survey unit that was not scanned by ORISE during their confirmatory survey was scanned by the licensee during FSS.

LaCrosse*Solutions* Response:

A review of the FSS field logs for L1-010-102 was performed, and it was confirmed that 100% of L1-SUB-TDS was scanned.

Based on a review of release records for L1-010-102 and L1-SUB-TDS it is not apparent what caused the discrepancy in the survey unit boundary between the ORISE and licensee surveys. A review of the FSS field logs for L1-010-102 was performed, and it was confirmed that the areas not scanned by ORISE were scanned by LaCrosse*Solutions* technicians.

Question 7:

L1-SUB-TDS A. Why was one continuing characterization sample in the Eastern Portion of the Turbine Building, Sump, Pit, and Diesel Excavation survey unit considered adequate? From where in the survey unit was it taken? Was it taken from the highest risk area (sump area)?

LaCrosse*Solutions* Response:

L1-SUB-TDS A covered a small portion of the Turbine Building, with only one location identified within the unit from the removed drain systems. Its location is in the southern portion of the unit, adjacent to L1-SUB-TDS B survey unit. The location is labeled L1-SUB-CJGS-A01 and is adjacent to sample location 15 on Figure 16-1. When taken as a whole, the TDS area had 17 continuing characterization samples taken, when taking into account TDS (8), TDS A (1), and TDS B (8). The 17 samples are considered adequate to appropriately characterize the area.

The highest risk area, the RPGPA sump, was sampled during the L1-SUB-TDS B FSS. Results of the analysis are detailed in the associated L1-SUB-TDS B Release Record. Other sample locations for continuing characterization of the Turbine Building are associated with the suspected broken drain lines, Turbine sump, pit, and the condenser pit.

Question 8:

L1-SUB-TDS B. For the RPGPA Excavation continuing characterization samples and RASS samples, please provide the location of where the samples were taken. Provide a map with the continuing characterization and RASS sample locations (in Figure 16-1 or a new Figure 16-2).

LaCrosse*Solutions* Response:

The two figures below show the sample locations for the RASS performed in L1-SUB-TDS B.

Figure 5 – L1-SUB-TDS B RASS Sample Locations Gamma Measurements

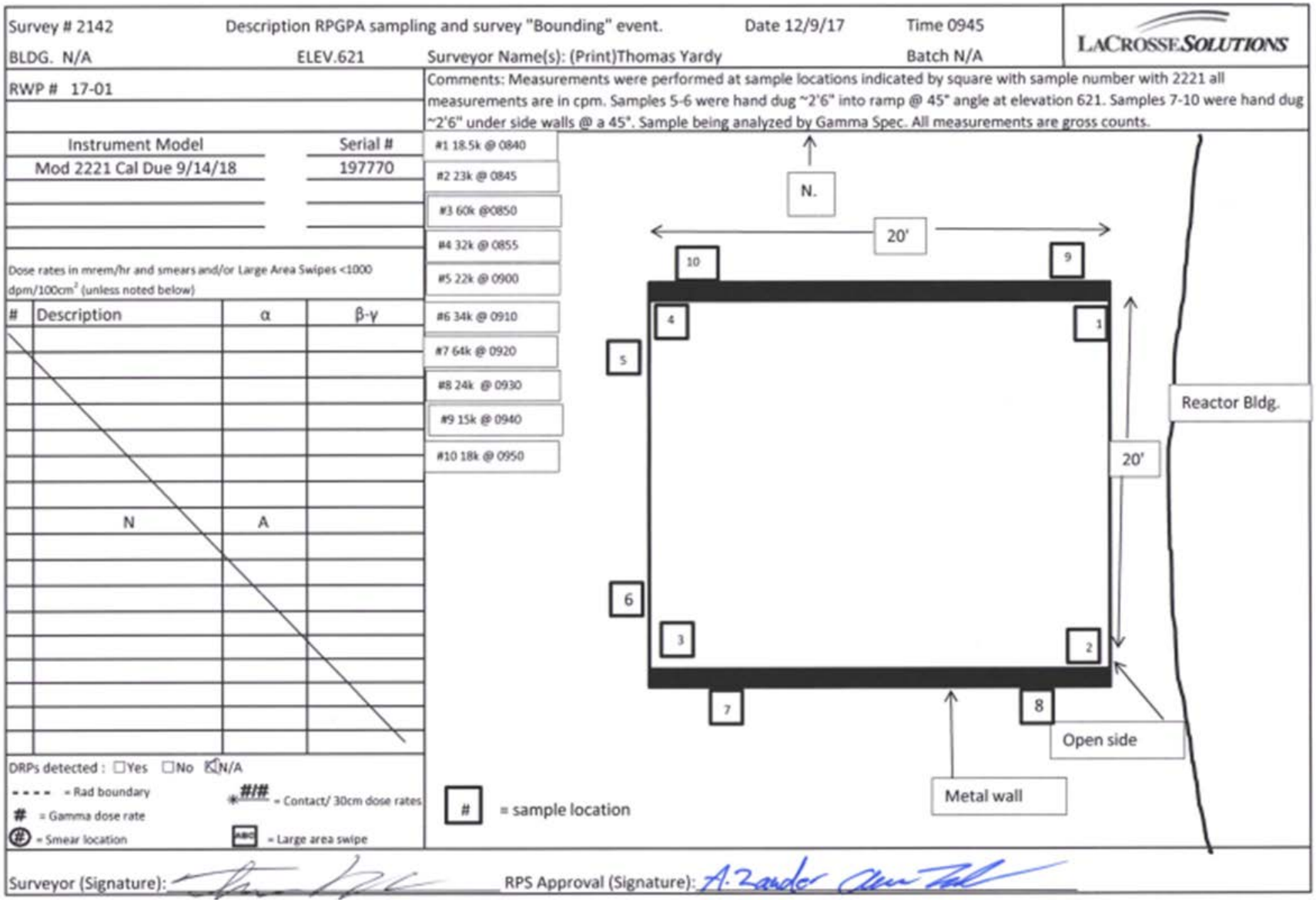
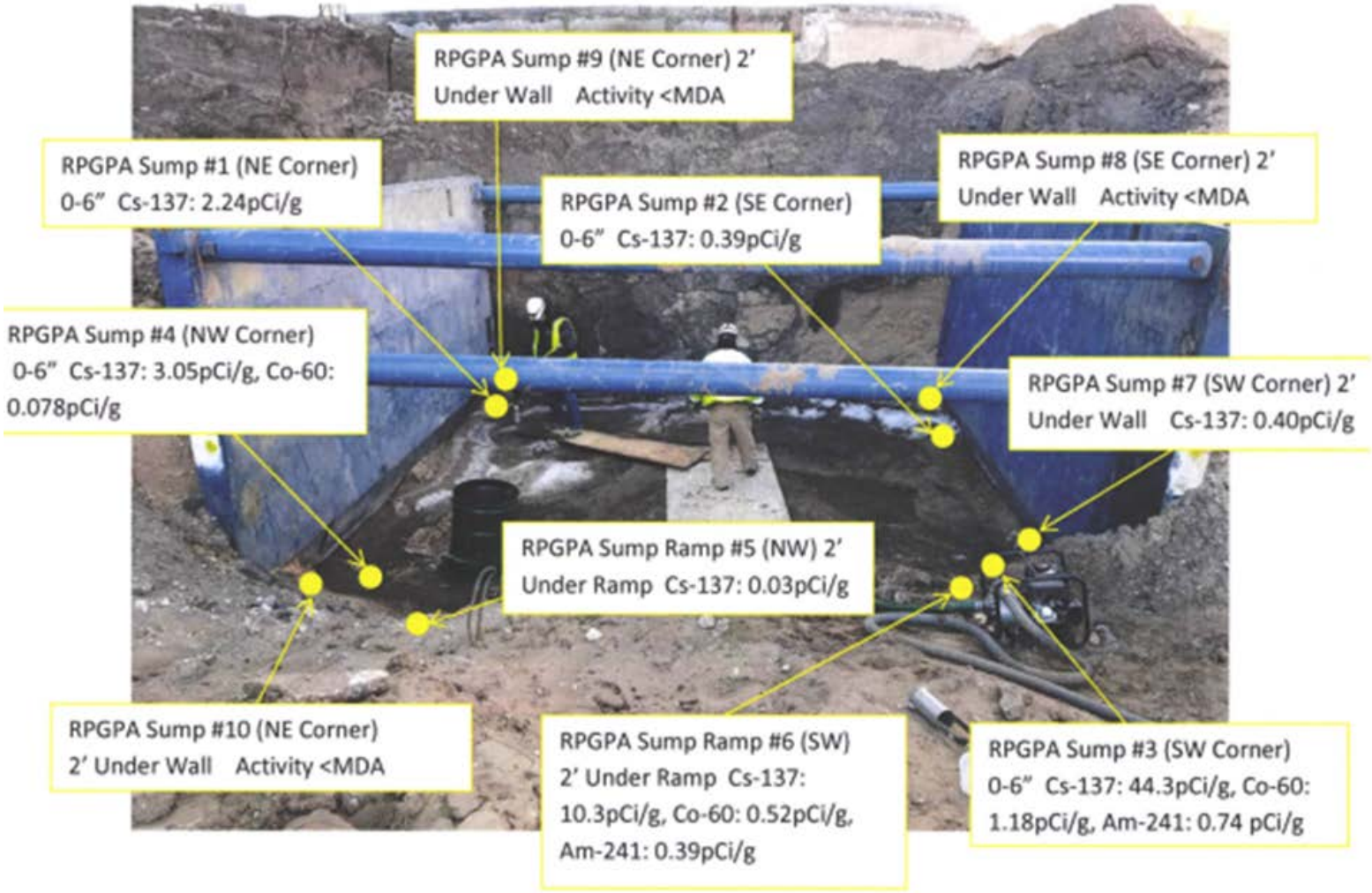
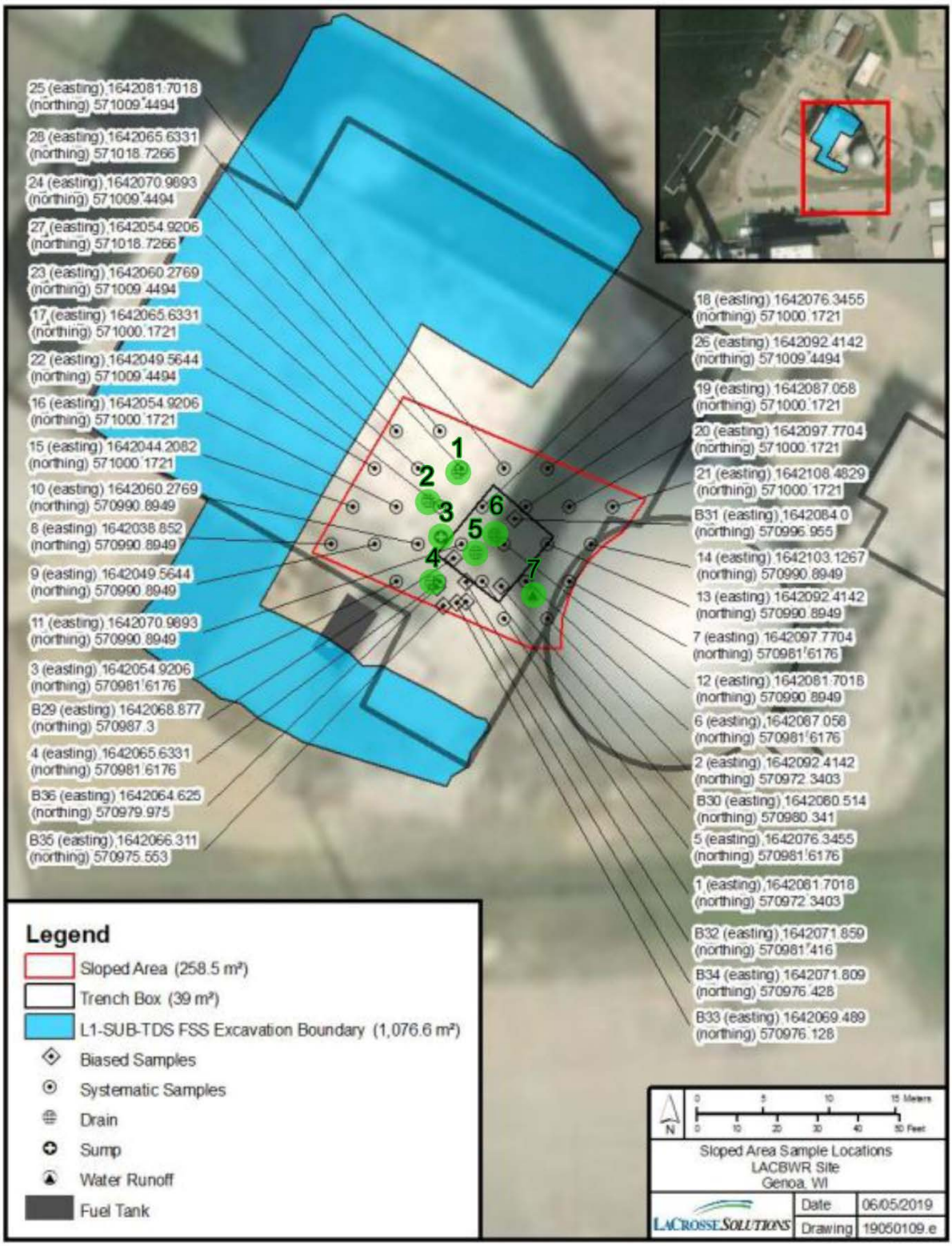


Figure 6 – L1-SUB-TDS B RASS Sample Locations



The figure below shows the locations of the continuing characterization samples.

Figure 7 – L1-SUB-TDS B Continuing Characterization Sample Locations



Question 9:

L1-SUB-TDS B. The release record states that the maximum IC dose in the survey unit was 0.6373 mrem/yr, and then also states that the IC dose from Sump Area #1 is 0.4987 mrem/yr. It is confusing that the IC dose from samples with none of the insignificant radionuclides above MDC would be higher than that for Sump Area #1, which had several insignificant radionuclides above MDC. Could you please provide the detailed calculations? Was the material represented by the Sump Area #1 soil sample removed or left in place?

LaCrosse*Solutions* Response:

The value of 0.4987 mrem/yr is an error. The IC dose for Sump Area #1 is 0.6373 mrem/yr, and the Release Record will be revised to reflect the value. The highest IC dose for the other samples within L1-SUB-TDS B is 0.0956 mrem/yr. The materials represented by Sump Area # 1 were remediated and shipped off-site as waste. The following is the IC calculation for the Sump Area #1 sample:

Radionuclide	Base Case DCGL (pCi/g)	Sample	Activity (pCi/g)	Remove Negative	Fraction	Dose	IC Dose
H-3	1.75E+04	Sump #1	2.46E+00	2.46E+00	0.0001	0.0035	
C-14	2.45E+05	Sump #1	4.46E-01	4.46E-01	0.0000	0.0000	
Fe-55	1.02E+07	Sump #1	-2.63E-01	0.00E+00	0.0000	0.0000	
Ni-59	2.59E+07	Sump #1	1.70E+00	1.70E+00	0.0000	0.0000	
Co-60	1.28E+01	Sump #1	1.23E+01	1.23E+01	0.9602	24.0047	
Ni-63	9.48E+06	Sump #1	1.83E+02	1.83E+02	0.0000	0.0005	
Sr-90	6.59E+03	Sump #1	4.24E+00	4.24E+00	0.0006	0.0161	
Nb-94	2.02E+01	Sump #1	1.58E-03	1.58E-03	0.0001	0.0020	
Tc-99	3.56E+02	Sump #1	2.33E+00	2.33E+00	0.0065	0.1635	
Cs-137	5.81E+01	Sump #1	1.93E+02	1.93E+02	3.3207	83.0179	
Eu-152	2.84E+01	Sump #1	-3.71E-02	0.00E+00	0.0000	0.0000	
Eu-154	2.64E+01	Sump #1	5.57E-01	5.57E-01	0.0211	0.5283	
Eu-155	1.12E+03	Sump #1	9.95E-02	9.95E-02	0.0001	0.0022	
Np-237	7.99E-01	Sump #1	-4.43E-03	0.00E+00	0.0000	0.0000	
Pu-238	1.66E+03	Sump #1	2.55E+00	2.55E+00	0.0015	0.0384	
Pu-239	1.49E+03	Sump #1	2.73E+00	2.73E+00	0.0018	0.0457	
Pu-240	1.50E+03	Sump #1	2.73E+00	2.73E+00	0.0018	0.0456	
Pu-241	3.64E+04	Sump #1	4.10E+01	4.10E+01	0.0011	0.0282	
Am-241	1.09E+03	Sump #1	1.04E+01	1.04E+01	0.0096	0.2388	
Am-243	1.87E+02	Sump #1	4.36E-01	4.36E-01	0.0023	0.0584	
Cm-243	2.88E+02	Sump #1	1.10E-01	1.10E-01	0.0004	0.0095	
Cm-244	2.67E+03	Sump #1	1.10E-01	1.10E-01	0.0000	0.0010	0.6373

Question 10:

L1-010-101 C. Were there any continuing characterization samples taken before backfilling either prior to or during the original FSS of the Waste Treatment Building (WTB) Excavation? If so, may we have the results from those samples? How about the samples collected as part of the NRC inspection activities? Were they analyzed for any other radionuclides?

LaCrosse*Solutions* Response:

A search was performed for continuing characterization samples from the WTB excavation. Both the Chain of Custody logs and reports from GEL during the time period were searched. No additional sample shipments nor results from the off-site laboratory were found.

Question 11:

L1-SUB-DRS. For the Radiologically Controlled Area North Excavation, please explain why continuing characterization was not necessary in this survey unit. Why was the original characterization of the above land survey unit deemed adequate for this survey unit and no samples sent off for analysis for the full suite of initial radionuclides?

LaCrosse*Solutions* Response:

Section 2.4 of the LTP lists the areas designated for continuing characterization:

- WGTV interior structural surfaces
- Underlying concrete in the Reactor Building basement after liner removal
- Soil under the Turbine Building (suspect broken drain line)
- Soil adjacent to and beneath basement structures
- Interior of buried pipe that may remain

The L1-SUB-DRS area was not designated as a continuing characterization area in accordance with Section 2.4 of the LTP. However, an RA was performed in the Class 2 survey unit directly adjacent to L1-SUB-DRS for the sloping of the excavation. This RA was L2-SUB-103, and one sample (L2-SUB-103-AJGS-002-SB) was sent off-site for the full suite of radionuclides. No radionuclides of concern were identified in the sample.

No continuing characterization samples or other samples analyzed for the full suite of radionuclides have prompted an adjustment to the insignificant contributor dose, and it is highly unlikely that, had samples been analyzed for the full suite of radionuclides in this survey unit, the insignificant contributor dose would change.

Question 12:

L1-SUB-LES. There were several alarms during the RASS prior to FSS of the Low Specific Activity (LSA) Building, Eat Shack, and Septic Excavation survey unit, and this area received additional remediation. The Cs-137 concentration was 29 pCi/g, and the Co-60 concentration was 85.7 pCi/g in the samples taken prior to FSS. However, there were no continuing characterization samples taken as per Section 5.3.3.4, “Inaccessible or Not Readily Accessible Areas,” of the LACBWR LTP. What was the process to decide that no continuing characterization samples would be collected given that this was a previously uncharacterized area?

LaCrosse*Solutions* Response:

Similarly, to L1-SUB-DRS, the L1-SUB-LES area was not designated as a continuing characterization area in accordance with Section 2.4 of the LTP.

No continuing characterization samples or other samples analyzed for the full suite of radionuclides have prompted an adjustment to the insignificant contributor dose, and it is highly

unlikely that, had samples been analyzed for the full suite of radionuclides in this survey unit, the insignificant contributor dose would change.

Question 13:

L1-SUB-CDR. In the RPGPA Excavation survey unit, the Cs-137 value measured using gamma spectroscopy on NRC Sample #4 was 1.52 pCi/g compared to the 171 pCi/g measured in the lab. The NRC asked for additional information on the difference between NRC Sample #4 gamma spectroscopy measurements versus the GEL Laboratory results. The licensee responded stating:

Sample NRC-CDR #4 is believed to have been split from a different sample coming from the RPGPA area, which was split from the unit due to necessary remediation. It is believed the split may have been from one of the sump samples. This is supported by the results of the concrete core sampling of the tunnel, which was the structure removed for the unit. Sample results from the concrete cores, B1008101-CJ-FC-002-CV 0-1/2, B1008101-CJ-FC-003-CV 0-1/2, and B1008101-CJ-FC-004-CV 0-1/2 were 16.0, 10.0, and 19.8 pCi/g for Cs-137. These were biased concrete core samples of the source of the remediation (concrete tunnel), which were removed and contained much less activity than NRC-CDR #4.

Please walk through the connection between these concrete core sample results and the Cs-137 concentrations in NRC Sample #4. If the NRC Sample #4 Cs-137 concentrations were really associated with the sump samples that were remediated, this needs to be explicitly stated and supported with some sort of basis. The staff notes that this was not described in the associated release record and is an important aspect of the final status survey.

As the release record reads, the NRC Sample #4 results are presented as an investigational sample with radionuclide concentrations above the DCGLs (both Operational and Base Case) that was not remediated. Please clarify if the soil associated with NRC Sample #4 was remediated and consider updating the release record to clarify this situation and the relationship of the NRC Sample #4 results to the final status of the survey unit.

LaCrosse*Solutions* Response:

The belief that the GEL results for NRC Sample #4 were much higher than the on-site results due to a split from one of the sump samples being sent to GEL is due to the concentration of the sample. The results of the sample, 0.0758 and 1.52 pCi/g of Co-60 and Cs-137, respectively, are consistent with the means of the L1-SUB-CDR systematic sample population, 0.103 and 1.24 pCi/g of Co-60 and Cs-137, respectively. This indicates the sample was obtained from the excavation subjected to FSS, and not the excluded RPGPA excavation where sample results ranged from 2.86 to 18.8 pCi/g for Co-60 and 105 to 200 pCi/g for Cs-137.

A search of the gamma spectroscopy computer was performed for sample results from the time period of the surveys. A result for “NRC #4” was discovered. The results of the analysis are 22.4 pCi/g for Co-60, and 210 pCi/g of Cs-137, which are consistent with the RPGPA excavation at that time. The sample date and time are identical to the sample analyzed by GEL, 09/13/2017, 1345. The sample analysis for the investigational result within the Release Record is labeled

“CDR #4” and subsequent sample identification numbers are “CDR-NRC-5” through “CDR-NRC-9.” These samples were all obtained on 09/15/2017.

Sample "NRC #4" is not a part of the excavation subjected to the L1-SUB-CDR FSS. Materials associated with this sample were remediated and the associated land area was subjected to FSS as survey unit L1-SUB-TDS B. The L1-SUB-CDR Release Record will be revised to change references to “NRC #4” to “CDR #4” and subsequent samples identified as “CDR-NRC-5” through “CDR-NRC-9” to remove the relationship of the “NRC #4” sample results with the L1-SUB-CDR survey unit.

Question 14:

The NRC’s RAI 5 stated that the release record for the WGTV Basement contains information in Table 7-4, “Summary of Replicate ISOCS Measurements for QC,” Section 8, and Attachment 4 on two replicate ISOCS measurements acquired during the FSS of the basement structure. According to Attachment 4 and Section 8 of the release record, both pairs of measurements did not identify any radionuclides in the samples. The licensee stated that their acceptance method could not be utilized for this situation, and since the detectable radioactivity levels were well below the OpDCGL for basements, no further action was deemed necessary.

Based on a review of the survey data in Attachment 6 of the release record, the Cs-137 concentrations in the original and quality control (QC) samples were above the reported MDCs. For sample B1 010-004-QSFC-03-GM, the values are 2.13E+05 pCi/m2 with an MDC of 4.81E+04 pCi/m2; and for sample WGTV-03, the values are 1.93E+05 pCi/m2 with an MDC of 4.72E+04 pCi/m2. For sample B1-010-004-QSWC-10-GM, the values are 2.83E+04 pCi/m2 with an MDC of 2.20E+04 pCi/m2; and for sample WGTV-10, the values are 2.62E+04 pCi/m2 with an MDC of 2.38E+04 pCi/m2. Given that both the QC and original ISOCS measurements have Cs-137 concentrations above the associated MDCs, the licensee should provide the QC analysis or a discussion of why this approach is acceptable. The licensee should also explain why Attachment 4 of the release record does not agree with the raw data, which matches the data summarized in Table 7-4 of the release record.

The RAI response states that “in this case, both pairs of standard and comparison measurements contained insignificant or no detectable radioactivity, and all were well below the OpDCGLB.” However, the staff notes that there is a difference between saying there was nothing above MDA and saying it was slightly above MDA. Please provide clarification on this response.

LaCrosse*Solutions* Response:

The question above states, “according to Attachment 4 and Section 8 of the release record, both pairs of measurements did not identify any radionuclides in the samples.” Attachment 4 and Section 8 do not state that that no radionuclides were identified, rather that there were no *mutually* identified radionuclides, meaning that there were no common radionuclides identified between each standard / comparison pair with which to run the acceptance test.

Further, there were no radionuclides of concern identified, only insignificant radionuclides. Thus, the statement in the release record that “in this case, both pairs of standard and comparison

measurements contained insignificant or no detectable radioactivity" is true. This statement is not intended to imply that nothing was above MDA; the only radionuclides that were identified were insignificant.

The identification of a radionuclide comes from the portion of the gamma spectroscopy report titled "Interference Corrected Report." Although specific radionuclides may be shown in the "Nuclide MDA Report" section as being above MDA, several algorithms and tests are taken into account within the software to show specific radionuclides as being "identified" in the "Interference Corrected Report." The principal calculation, in this case, of the algorithms and tests within the software is the identification confidence. The identification confidence must be a high enough value for a specific energy line for the software to print a specific radionuclide in the "Interference Corrected Report." Thus, it is not uncommon for radionuclides to be above MDA in the "Nuclide MDA Report" and not be reported as identified in the "Interference Corrected Report," especially if the activity is near background.

Considering the above, the conclusions reached in the release record regarding the quality control assessment are valid.