John Twarog
Manager, Regulatory and
Emergency Preparedness
504-739-6747

W3F1-2026-00021

April 23, 2026

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Subject: Annual Radiological Environmental Operating Report (AREOR) – 2025

Waterford Steam Electric Station, Unit 3
Docket No. 50-382
Renewed Facility Operating License No. NPF-38

Attached is the Annual Radiological Environmental Operating Report for the period of January 1 through December 31, 2025. This report is submitted pursuant to the requirements of Waterford 3 Technical Specification Section 6.9.1.7.

There are no commitments contained in this submittal.

If you have any questions, please contact John Twarog, Regulatory and Emergency Preparedness Manager, at 504-739-6747.

Respectfully,

John R. Twarog

Digitally signed by John R. Twarog
DN: cn=John R. Twarog, c=US, o=Waterford 3 Regulatory and Emergency Preparedness Manager, ou=Waterford 3 Regulatory and Emergency Preparedness Manager, email=jtwarog@entergy.com
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John Twarog

JT/cm

Enclosure: Annual Radiological Environmental Operating Report – 2025

cc: NRC Region IV Regional Administrator
NRC Senior Resident Inspector – Waterford Steam Electric Station, Unit 3
NRC Project Manager – Waterford Steam Electric Station, Unit 3
Entergy Legal, General Sr Counsel

Enclosure to

W3F1-2026-00021

Annual Radiological Environmental Operating Report – 2025

(58) pages follow)

2025 Annual Radiological Environmental Operating Report
Waterford 3
Document Number: 50-382

Author: _____ Date: 04/21/26
Emily Corson
Teledyne Brown Engineering Project Manager

Author: _____ Date: 4/21/26
Zachery Moore
REMP Technician

Reviewer: _____ Date: 4/21/26
Douglas Wahl
Radiological Solutions Consultant

Reviewer: _____ Date: 4-21-26
Catherine Danos
Chemistry Superintendent

Approver: _____ Date: 4-22-2026
Melody Gibson
Chemistry/Radiation Protection Manager

entergy

Waterford 3

2025 Annual Radiological Environmental Operating Report

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1.0 LIST OF ACRONYMS AND DEFINITIONS

1. Airborne Activity Sampling: Continuous sampling of air through the collection of particulates and radionuclides on filter media.

2. ARERR: Annual Radioactive Effluent Release Report

3. AREOR: Annual Radiological Environmental Operating Report

4. BWR: Boiling Water Reactor

5. Composite Sample: A series of single collected portions (aliquots) analyzed as one sample. The aliquots making up the sample are collected at time intervals that are very short compared to the composite period.

6. Control: A sampling station in a location not likely to be affected by plant effluents due to its distance and/or direction from the station.

7. Curie (Ci): A measure of radioactivity; equal to 3.7×10^{10} disintegrations per second, or 2.22×10^{12} disintegrations per minute.

8. Direct Radiation Monitoring: The measurement of radiation dose at various distances from the plant is assessed using Thermoluminescent Dosimeters (TLD), Optically Stimulated Luminescence Dosimeters (OSLD) and pressurized ionization chambers.

9. EPA: Environmental Protection Agency

10. GPI: Groundwater Protection Initiative

11. Grab Sample: A single discrete sample drawn at one point in time.

12. Indicator: A sampling location that is likely to be affected by plant effluents due to its proximity and/or direction from the plant.

13. Ingestion Pathway: The ingestion pathway includes milk, fish, drinking water and garden produce. Also sampled (under special circumstances) are other media such as vegetation or animal products when additional information about particular radionuclides is needed.

14. Lower Limit of Detection (LLD): An *a priori* measure of the detection capability of a radiochemistry measurement based on instrument setup, calibration, background, decay time, and sample volume. An LLD is expressed as an activity concentration. The MDA is used for reporting results. LLD are specified by a regulator, such as the NRC and are typically listed in the ODCM.

15. MDA: Minimum Detectable Activity. For radiochemistry instruments, the MDA is the *a posteriori* minimum concentration that a counting system detects. The smallest concentration or activity of radioactive material in a sample that will yield a net count above instrument background and that is detected with 95% probability, with only five % probability of falsely concluding that a blank observation represents a true signal.

16. MDC: Minimum Detectable Concentration. Essentially synonymous with MDA for the purposes of radiological monitoring.

17. Mean: The sum of all of the values in a distribution divided by the number of values in the distribution, synonymous with average.

18. Microcurie: 3.7 x 10^4 disintegrations per second, or 2.22 x10^6 disintegrations per minute.

19. N/A: Not Applicable

20. NEI: Nuclear Energy Institute

21. NIST: National Institute of Standards and Technology.

22. NRC: Nuclear Regulatory Commission

23. ODCM: Offsite Dose Calculation Manual

24. OSLD: Optically Stimulated Luminescence Dosimeter

25. pCi/L: picocuries / Liter

26. PWR: Pressurized Water Reactor

27. REMP: Radiological Environmental Monitoring Program

28. TLD: Thermoluminescent Dosimeter

2.0 EXECUTIVE SUMMARY

Waterford 3 (WF3) Radiological Environmental Monitoring Program (REMP) was established prior to the station becoming operational to provide information on background radiation present in the area. The goal of WF3 REMP is to evaluate the impact of the station on the environment. Environmental samples from different media are monitored as part of the program in accordance with the WF3 Technical Specifications. This report fulfills the requirements of Waterford 3 Technical Specifications, Section 6.9.1.7. The program compares data from Indicator locations near the plant, to Control locations farther away from the site to assess operation impacts.

The Annual Radiological Environmental Operating Report (AREOR) provides data obtained through analyses of environmental samples collected at WF3 for the reporting period of January 1st through December 31st, 2025. During that time period 522 analyses were performed on 462 samples. In assessing all the data gathered for this report and comparing these results with preoperational data and/or 10-year average values, it was concluded that the operation of WF3, did not result in detection of plant related radionuclides in the environment.

2.1 Summary of Conclusions:

No measurable activities above background levels were detected. All values were consistent with historical results which indicate no adverse radiological environmental impacts associated with the operation of WF3. Naturally occurring radionuclides are present in the Earth's crust and atmosphere and exists in detectable quantities throughout the world. It is common to detect naturally occurring radionuclides in many of the samples collected for REMP. Some examples of naturally occurring radionuclides that are frequently seen in samples are potassium-40, beryllium-7, actinium-228 (present as a decay product of radium-228), and radium-226. Additionally, some relatively long-lived anthropogenic radioisotopes, such as strontium-90 and cesium-137, are also seen in some REMP samples; these radionuclides exist in measurable quantities throughout the world as a result of fallout from historic atmospheric nuclear weapons testing. Detailed information on the exposure of the U.S. population to ionizing radiation can be found in NCRP (National Council on Radiation Protection and Measurements) Report No. 160 [1].

All required lower limit of detection (LLD) capabilities were achieved in all sample analyses during 2025, as required by the WF3 Technical Requirement Manual (TRM) Table 4.12-1. No measurable levels of radiation above baseline levels attributable to WF3 operation were detected in the vicinity of WF3. The 2025 Radiological Environmental Monitoring Program thus substantiated the adequacy of source control and effluent monitoring at WF3 with no observed impact of plant operations on the environment.

In 2025, environmental samples were collected for radiological analysis. The results of indicator locations were compared with control locations and previous studies. It was concluded that no significant relationship exists between WF3 operation and effect on the area around the plant. The review of 2025 data showed radioactivity levels in the environment were undetectable in many locations and near background levels in significant pathways.

3.0 INTRODUCTION

The Radiological Environmental Monitoring Program (REMP) provides data on measurable levels of radiation and radioactive materials in the environment. This program also evaluates the relationship between quantities of radioactive materials released from the plant and resultant doses to individuals from principal pathways of exposure. In this capacity, REMP provides a check on the effluent release program and dispersion modeling to ensure that concentrations in the environment due to radioactive effluents conform to the "As Low as Is Reasonably Achievable" (ALARA) design objectives of 10 CFR 50, Appendix I [2], and implements the requirements of Section IV.B.2 and IV.B.3 of Appendix I. REMP is designed to conform to the Nuclear Regulatory Commission (NRC) Regulatory Guide 4.1 [3], NUREG 1301/1302 [4] [5], and the 1979 NRC Branch Technical Position [6].

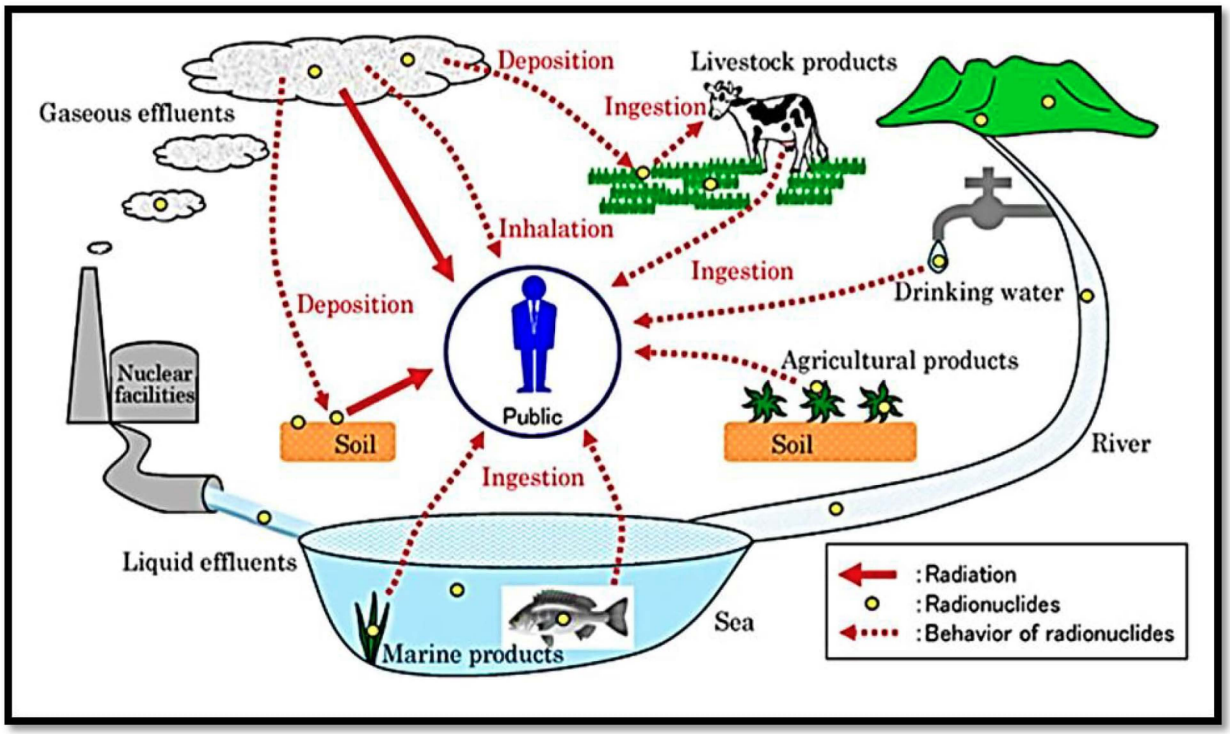

Figure 1, Potential exposure pathways to Members of the Public due to Plant Operations [7]

Quality assurance aspects of the sampling program and TLD/OSLD data collection are conducted in accordance with Regulatory Guides 4.15 [8] and 4.13 [9]. REMP also adheres to the requirements of Louisiana, WF3 Technical Specifications, and Offsite Dose Calculation Manual (ODCM). These governing documents dictate the environmental sampling, sample analysis protocols, data reporting and quality assurance requirements for the environmental monitoring program.

The Annual Radiological Environmental Operating Report provides summaries of the environmental data from exposure pathways, interpretations of the data, and analyses of trends of the results. Routinely monitored pathways include ingestion, inhalation, and direct radiation. Routes of exposure are based on site specific information such as meteorology, receptor locations, and water usage around the plant.

4.0 SITE DESCRIPTION AND SAMPLE LOCATIONS

Waterford 3 is a commercial nuclear power plant that achieved initial criticality in 1985. WF3 is located on a 3,560-acre site in Killona, Louisiana in St. Charles Parish, approximately 25 miles west of New Orleans, Louisiana. The REMP includes sampling indicator and control locations within an approximate 20-mile radius of the plant.

WF3 sampling media are selected based on site specific information such as meteorology, receptor locations, and water usage around the plant. Sampling and analysis frequencies are documented in the Offsite Dose Calculation Manual and site procedures. Required sampling, analysis frequencies and location of sample collected are captured in the following tables and figures:

- Table 1, Radiological Environmental Monitoring Program – Direct Radiation
- Table 2, Radiological Environmental Monitoring Program – Airborne
- Table 3, Radiological Environmental Monitoring Program – Waterborne
- Table 4, Radiological Environmental Monitoring Program – Ingestion
- Table 5, REMP Direct Radiation Sampling Locations
- Figure 2, REMP Sample Locations (Within 2 Miles of Waterford 3)
- Figure 3, REMP Sample Locations (Within 2 to 10 Miles of Waterford 3)
- Figure 4, REMP Sample Locations (Within 10 to 50 Miles of Waterford 3)

5.0 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM REQUIREMENTS

Table 1, Radiological Environmental Monitoring Program – Direct Radiation

Requirement	Sample Location Description, Distance, and Direction	Sampling Collection/ Frequency	Type and Frequency of Analyses
Direct Radiation An inner ring of stations, one in each meteorological sector in the general area of the SITE BOUNDARY. An outer ring of stations, one in ten of the meteorological sectors in the 6 to 8 km ranges from the site. The balance of the stations (five) to be placed in special interest areas such as population centers, nearby residences, schools, and in one or two areas to serve as control locations.	See Table **5,** REMP Direct Radiation Sampling Locations	Quarterly	Gamma dose quarterly.

Table 2, Radiological Environmental Monitoring Program – Airborne

Requirement	Sample Location Description, Distance, and Direction	Sampling Collection/ Frequency	Type and Frequency of Analyses
Airborne Radioiodine and Particulates Three samples from close to the three SITE BOUNDARY locations, in different sectors, in or near sectors having the highest calculated annual average ground level D/Q.	**APQ-1 (NW, 0.81 Miles)** – (West bank) Located in soybean/sugarcane field off LA 18 east of LA 18/3141 intersection. **APF-1 (ESE, 0.35 Miles)** – (West bank) Located on north side of Secondary Meteorological Tower. **APC-1 (NE, 0.67 Miles)** – (East bank) Located inside Little Gypsy Cooling Water Intake Structure fence.	Continuous sampler operation with sample collection bi-weekly, or more frequently if required by dust loading.	• Radioiodine Canisters – I-131 analysis biweekly. • Air Particulate – Gross beta radioactivity analysis following filter change. Gamma isotopic analysis of composite (by location) quarterly.
Airborne Radioiodine and Particulates One sample from the vicinity of a community having the highest calculated annual average ground level D/Q.	**APP-1 (WNW, 0.84 Miles)** – (West bank) Located in soybean/sugarcane field on Short St. in Killona.	Continuous sampler operation with sample collection bi-weekly, or more frequently if required by dust loading.	• Radioiodine Canisters – I-131 analysis biweekly. • Air Particulate – Gross beta radioactivity analysis following filter change. Gamma isotopic analysis of composite (by location) quarterly.
Airborne Radioiodine and Particulates One sample from a control location, as for example 15 - 30 km distance and in the least prevalent wind direction.	**APE-26 (E, 25.8 Miles)** – (West bank) Located at Entergy office on Virgil Street in Gretna. (Control)	Continuous sampler operation with sample collection bi-weekly, or more frequently if required by dust loading.	• Radioiodine Canisters – I-131 analysis biweekly. • Air Particulate – Gross beta radioactivity analysis following filter change. Gamma isotopic analysis of composite (by location) quarterly.

Table 3, Radiological Environmental Monitoring Program – Waterborne

Requirement	Sample Location Description, Distance, and Direction	Sampling Collection/ Frequency	Type and Frequency of Analyses
SURFACE WATER One sample upstream and one sample downstream.	**SWP-7 (WNW, 7.37 Miles)** - (West bank) Located at St. John Parish Waterworks in Edgard. (Control) **SWF-2 (ESE, 1.51 Miles)** - (West bank) Located at Dow Chemical Plant drinking water canal. **SWE-5 (E, 4.59 Miles)** - (East bank) Located at St. Charles Parish Waterworks in New Sarpy. **SWK-1 (SSW, 0.49 Miles)** - (West bank) Located at 40 Arpent Canal south of the plant.	Composite sample over one quarter period.	• Gamma isotopic analysis and tritium analysis quarterly.
DRINKING WATER One sample upstream and one sample downstream.	**DWP-7 (WNW, 7.37 Miles)** - (West bank) Located at St. John Parish Waterworks in Edgard. (Control) **DWF-2 (ESE, 1.51 Miles)** - (West bank) Located at Dow Chemical Plant drinking water canal. **DWE-5 (E, 4.59 Miles)** - (East bank) Located at St. Charles Parish Waterworks in New Sarpy.	Composite sample over one month period when I-131 analysis is performed, quarterly composite otherwise.	• I-131 analysis on each composite when the dose calculated for the consumption of the water is greater than one mrem per year. • Composite for gross beta and gamma isotopic analyses quarterly. • Composite for tritium analysis quarterly.
SEDIMENT FROM SHORELINE One sample upstream and one sample downstream.	**SHWQ-6 (NW, 5.99 Miles)** – (East bank) Located on LA 628 east of Reserve ferry landing. (Control) **SHWE-3 (E, 2.99 Miles)** – (West bank) Located at Foot Ferry landing on LA 18. **SHWK-1 (SSW, 0.49 Miles)** – (West bank) Located at 40 Arpent Canal south of plant.	Annually	• Gamma isotopic analysis annually.

Table 4, Radiological Environmental Monitoring Program – Ingestion

Requirement	Sample Location Description, Distance, and Direction	Sampling Collection/ Frequency	Type and Frequency of Analyses
MILK Samples from milking animals in the three locations within 5 km distance having the highest dose potential. If there are none, then, one sample from milking animals in each of the three areas between 5 to 8 km distant where doses are calculated to be greater than 1 mrem per year. One sample from milking animals at a control location 15 – 30 km distant and in the least prevalent wind direction.	Milk samples were unavailable in 2025. These samples have been removed from the ODCM.	Quarterly (When Available).	• Gamma isotopic and I-131 analysis quarterly.
FISH AND INVERTEBRATES One sample of a commercially and/or recreationally important species in vicinity of plant discharge area. One sample of similar species in area not influenced by plant discharge.	**FH-2 (Distance/Direction Not Applicable)** – Downstream of the plant discharge structure. **FH-3 (Distance/Direction Not Applicable)** - (Westbank) Waterways downstream of plant discharge directed to 40 Arpent Canal. **FH-1 (Distance/Direction Not Applicable)** – Upstream of the plant intake structure. (Control)	Sample in season, or annually if they are not seasonal.	• Gamma isotopic analysis on edible portions annually.
BROAD LEAF VEGETATION Samples of one to three different types of broad leaf vegetation grown nearest each of the two different off-site locations of highest predicted annual average ground level D/Q if milk sampling is not performed. One sample of each of the similar broad leaf vegetation grown 15 – 30 km distant in the least prevalent wind direction if milk sampling is not performed.	**BLQ-1 (NW, 0.83 Miles)** – (West bank) Located near air sample station APQ-1. **BLB-1 (NNE, 0.81 Miles)** – (East bank) Located west of Little Gypsy on LA 628 **BLE-20 (E, 19.7 Miles)** – (West bank) Located on property of Nine Mile Point in Westwego. (Control)	Quarterly during the growing season.	• Gamma isotopic and I-131 analysis quarterly.

Table 5, REMP Direct Radiation Sampling Locations

Site #	Location Type	Sector	Distance	Description
A-2	Inner	N	1.27 miles	(East bank) Located on pole on LA 628 at Zephrin L. Perriloux Fire House.
B-1	Inner	NNE	0.75 miles	(East bank) Located on fence west of Little Gypsy.
C-1	Inner	NE	0.67 miles	(East bank) Located on fence at Little Gypsy Cooling Water Intake structure.
D-2	Inner	ENE	1.24 miles	(East bank) Located on pole on levee at west entrance to Bonnet Carre Spillway.
E-1	Inner	E	0.41 miles	(West bank) Located on pole on LA 18 east of Waterford 3 plant entrance.
F-2	Inner	ESE	1.15 miles	(West bank) Located on fence on LA 3142 south of LA 18.
G-2	Inner	SE	1.26 miles	(West bank) Located on fence on LA 3142 north of railroad overpass.
H-2	Inner	SSE	1.54 miles	(West bank) Located on fence on LA 3142 north of LA 3127/3142 intersection.
J-2	Inner	S	1.38 miles	(West bank) Located on fence south of LA 3127 west of LA 3127/3142 intersection.
K-1	Inner	SSW	1.06 miles	(West bank) Located on stop sign at entrance to Entergy Education Center on LA 3127.
L-1	Inner	SW	1.06 miles	(West bank) Located on gate on LA 3127 west of LA 3127/3142 intersection.
M-1	Inner	WSW	0.76 miles	(West bank) Located on south gate of Waterford 1 and 2.
N-1	Inner	W	0.98 miles	(West bank) Located on pole at corner of Railroad Avenue and School House Road.
P-1	Inner	WNW	0.84 miles	(West bank) Located on fence enclosing air sample station APP-1.
Q-1	Inner	NW	0.81 miles	(West bank) Located on fence enclosing air sample station APQ-1.
R-1	Inner	NNW	0.51 miles	(West bank) Located at Waterford 1 and 2 Cooling Water Intake Structure.

Table 5, REMP Direct Radiation Sampling Locations

Site #	Location Type	Sector	Distance	Description
A-5	Outer	N	4.59 miles	(East bank) Located on pole at intersection of Oswald Avenue and US 61.
B-4	Outer	NNE	3.75 miles	(East bank) Located on pole near weigh station on US 61.
D-5	Outer	ENE	4.09 miles	(East bank) Located on gate on shell road north of US 61/LA 48 intersection.
E-5	Outer	E	3.90 miles	(East bank) Located on fence on Wesco Street off LA 48.
F-4	Outer	ESE	3.53 miles	(West bank) Located on pole behind house at 646 Aquarius St. in Hahnville.
G-4	Outer	SE	3.30 miles	(West bank) Located on pole on LA 3160 north of railroad track.
H-8	Outer	SSE	8.13 miles	(West bank) Located on pole in front of Hahnville High School.
P-6	Outer	WNW	5.58 miles	(West bank) Located on fence at LA 640/railroad track intersection.
Q-5	Outer	NW	5.01 miles	(West bank) Located on pole on LA 18 across from Mississippi River marker 137.
R-6	Outer	NNW	5.52 miles	(East bank) Located on fence on LA 3223 near railroad crossing.
E-15	Special Interest	E	11.7 miles	(East bank) Located on fence on Alliance Avenue.
F-9	Special Interest	ESE	8.18 miles	(East bank) Located on fence north of railroad tracks on Jonathan Street.
G-8	Special Interest	SE	7.74 miles	(West bank) Located on back fence of Luling Entergy Office.
J-15	Special Interest	S	11.7 miles	(West bank) Located on pole near LA 631/Hwy 90 intersection in Des Allemands.
E-26	Control	E	25.8 miles	(West bank) Located at Entergy office on Virgil Street in Gretna. (Control)

6.0 MAPS OF COLLECTION SITES

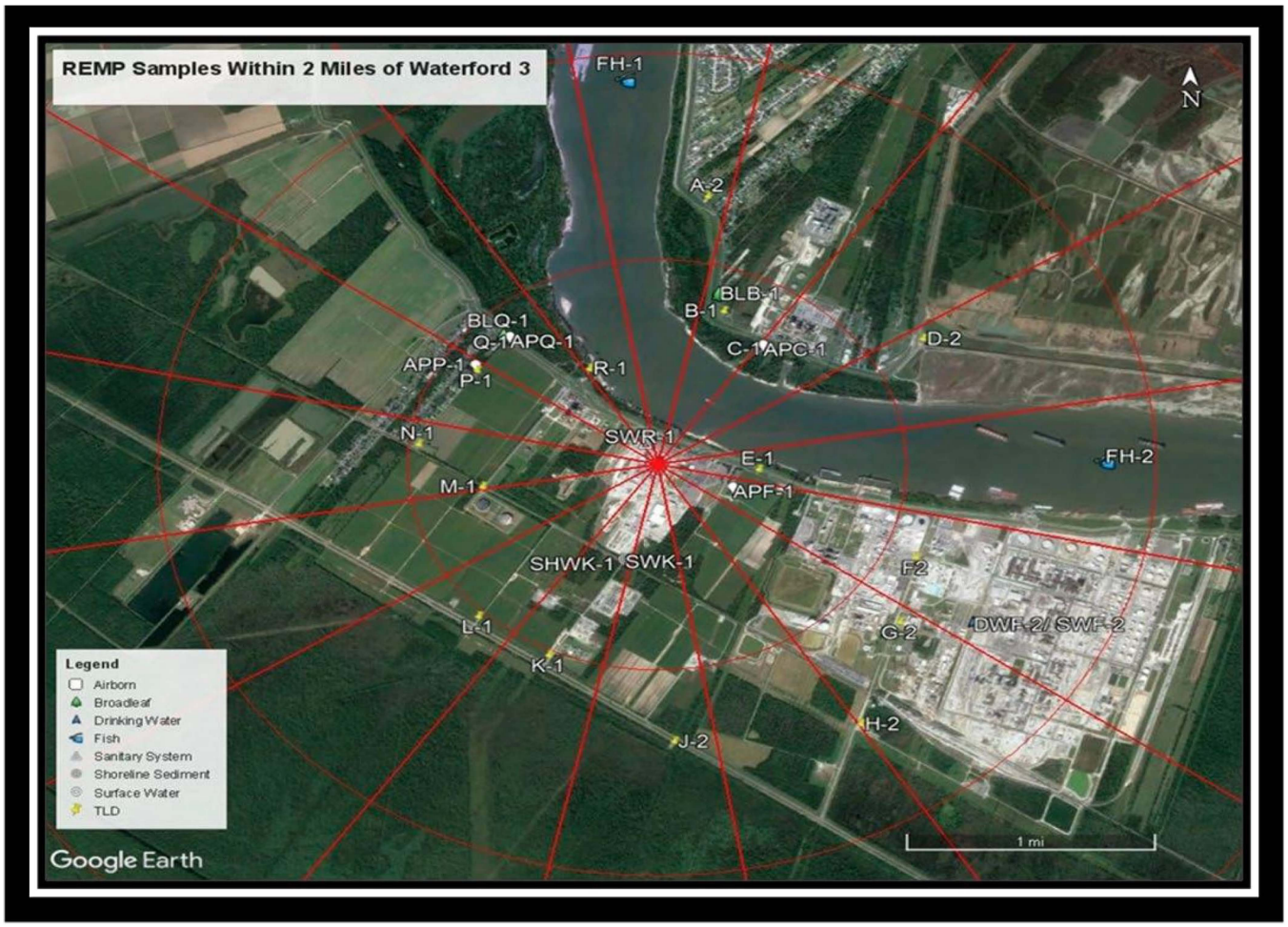

Figure 2, REMP Sample Locations (Within 2 Miles of Waterford 3)

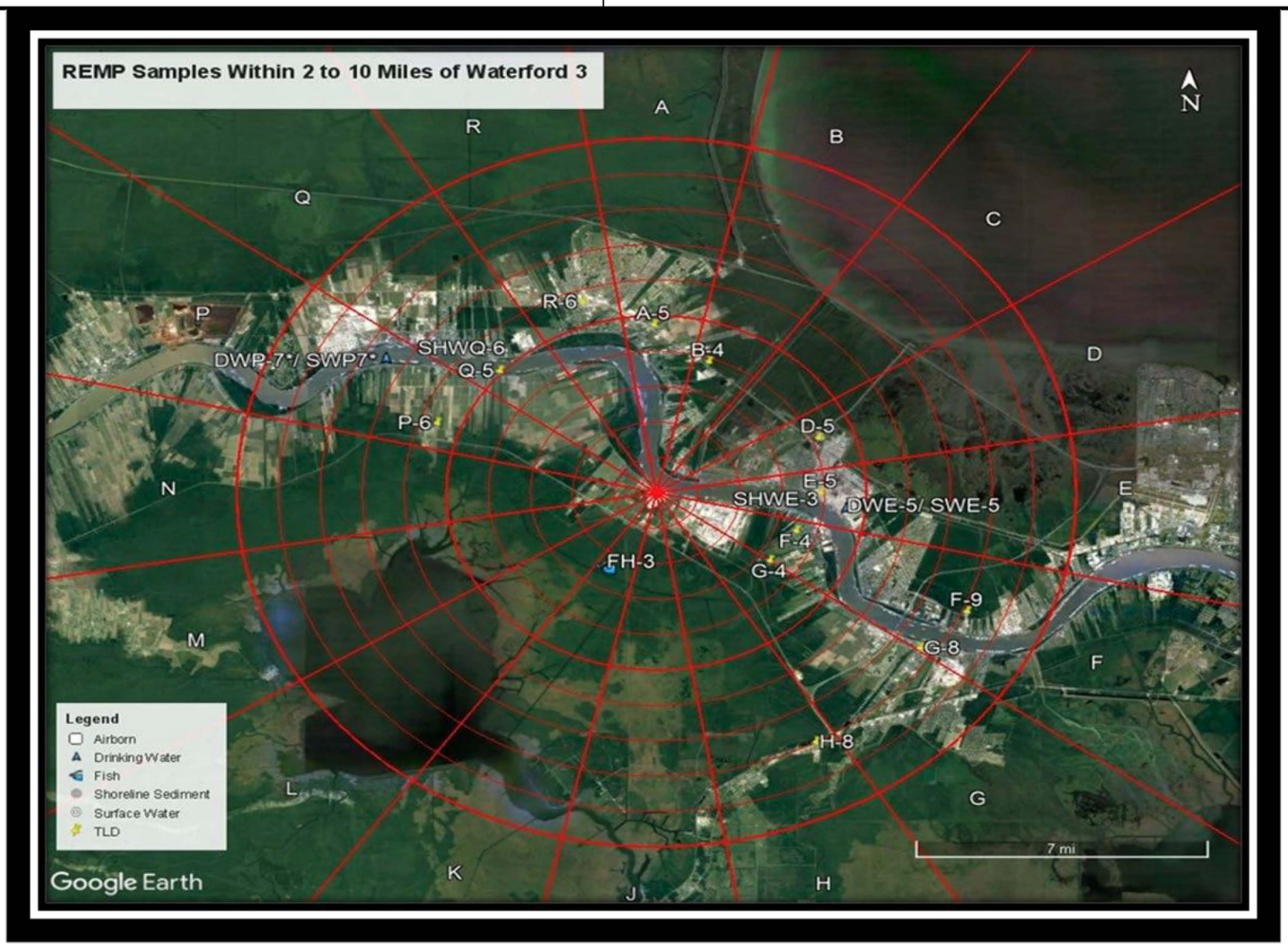

Figure 3, REMP Sample Locations (Within 2 to 10 Miles of Waterford 3)

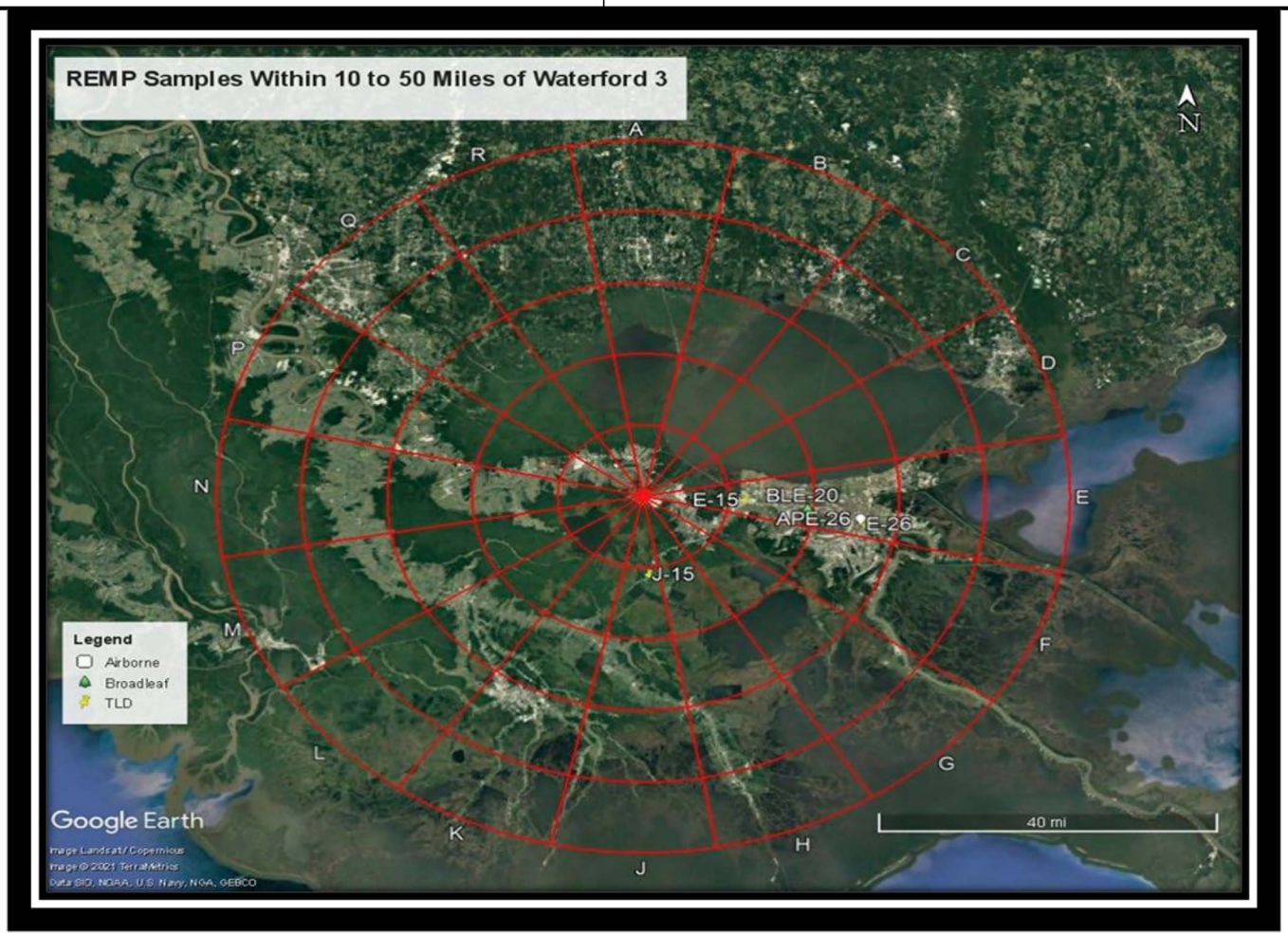

Figure 4, REMP Sample Locations (Within 10 to 50 Miles of Waterford 3)

7.0 REPORTING LEVELS FOR RADIOACTIVITY CONCENTRATIONS IN ENVIRONMENTAL SAMPLES

Table 6, Reporting Levels for Radioactivity Concentrations in Environmental Samples

Radionuclide	Water (pCi/L)	Air Particulates or Gases (pCi/m^3)	Fish (pCi/Kgwet)	Milk (pCi/L)	Food Products (pCi/Kg-wet)
H-3	20,000 [1]				
Mn-54	1,000		30,000		
Fe-59	400		10,000		
Co-58	1,000		30,000		
Co-60	300		10,000		
Zn-65	300		20,000		
Nb-95	400				
Zr-95	400				
I-131	2 ([23])	0.9		3	100
Cs-134	30	10	1,000	60	1,000
Cs-137	50	20	2,000	70	2,000
Ba-140	200			300	
La-140	200			300	

Table 7, Maximum Values for the Limit of Detection

Radionuclide	Water (pCi/L)	Air Particulates or Gases (pCi/m^3)	Fish (pCi/Kg-wet)	Milk (pCi/L)	Food Products (pCi/Kg-wet)	Sediment (pCi/Kg-dry)
Gross Beta	4.0	0.01				
H-3	2,000 [3]					
Mn-54	15		130			
Fe-59	30		260			
Co-58, Co-60	15		130			
Zn-65	30		260			
Nb-95	15					
Zr-95	15					
I-131	1 (4)	0.07		1	60	
Cs-134	15	0.05	130	15	60	150
Cs-137	18	0.06	150	18	80	180
Ba-140	15			15		
La-140	15			15		

[1] **For** drinking water samples: **If** no drinking water pathway exists, a value **of 30,000 pCi/L** may be used.
[2] **If** no drinking water pathway exists, a value of 20 pCi/l may be used
[3] **If** no drinking water pathway exists, a value **of 3,000 pCi/L** may be used. Some states may require a lower LLD for drinking water sources- per 40 CFR 141 Safe drinking water ACT. [4] **If** no drinking water pathway exists, a value of 15 pCi/l may be used

8.0 SAMPLING PROGRAM, PROGRAM MODIFICATION AND INTEPRETATION OF RESULTS

At most nuclear stations, data was collected prior to plant operation to determine background radioactivity levels in the environment. Annual data is routinely compared to preoperational and/or 10-year average values to determine if changes in the environs are present. Strict comparison is difficult to make due to fallout from historical nuclear weapon testing. Cesium-137 can be routinely found in environmental samples as a results of above ground nuclear weapons testing. It is important to note, levels of Cs-137 in environment are observed to fluctuate, for example as silt distributions shift due to natural erosion and transport processes, Cs137 may or may not be observed in sediment samples. Results from samples collected and analyzed during the year, 2025, are described below.

In the following sections, results from direct radiation, air, water, sediment, fish and vegetation analyzed as part of REMP in 2025 will be discussed. Sampling program descriptions and deviations will also be discussed.

8.1 Environmental Direct Radiation Dosimetry Results

Dose is measured as net exposure (field reading less transit reading) normalized to 92-day quarters. Data is treated and analyzed consistent with ANSI/HPS N13.372014, which compares the measured dose for each location to the baseline background dose for that location. Environmental dose rates vary by location, depending on geological and land use considerations, and remain relatively constant for any given location (unless land use changes). Some facilities observe seasonal variation in environmental doses. Baseline Background Doses have been determined for both quarterly and annual measurements at each location using historical field measurements.

ANSI/HPS N13.37-2014 uses the concept of minimum differential dose (MDD), which is the minimum facility-related dose that can be detected above background. Due to natural background variations and measurement sensitivities and uncertainties, minimum differential dose is not zero. MDD is calculated based on statistical performance of the dosimetry system in the environment and is site specific.

Normalized doses that exceed the Minimum Differential Dose value above the Baseline Background Dose are considered to indicate Facility-Related Dose; a quality assurance review is performed to verify that any results indicating Facility-Related Dose are accurate.

During the calendar year 2025, a total of 30 indicator and one control location were monitored and data analyzed in accordance with the requirements in Table 1, Radiological Environmental Monitoring Program – Direct Radiation. Attachment 4, Environmental Direct Radiation Dosimetry Results, provides the annual direct radiation dosimetry analysis.

Waterford 3 reports measured dose as net exposure (field reading less transit reading) normalized to 92 days and relies on comparison of the thirty indicator locations to the

one control as a measure of plant impact. Waterford 3's comparison of the inner ring, outer ring, and special interest area, identified no noticeable trend that would indicate that the ambient radiation levels are being affected by plant operations. In addition, the average indicator value of 11.0 millirem (mrem) the 2025 concentration is comparable to historic results. Overall, WF3 concluded that the ambient radiation levels are not being affected by plant operations.

The average exposure rates during 2025 are consistent with those from the preoperational program and the previous five years of operation. In particular, the preoperational survey indicates that exposure rates ranged between 11 and 33 mrem/standard quarter with an average of 20 mrem/standard quarter.

8.2 Air Particulate and Radioiodine Sample Results

Air particulate filters and charcoal canisters were collected from locations specified in Table 2, Radiological Environmental Monitoring Program – Airborne. During the calendar year 2025, a total of 130 samples were collected and analyzed for gross beta, gamma emitters and iodine. Particulate samplers are used to continuously collect airborne particulates on a filter. The samples are analyzed for gross beta activity following filter changeout which occurs bi-weekly. Gamma isotopic analysis is also performed on the samples collected at each location and is analyzed quarterly. Radioiodine (I-131) analysis is performed bi-weekly on radioiodine sample cartridges.

Indicator gross beta air particulate results for 2025 were comparable to results obtained from 2014-2024 of the operation REMP. In the absence of plant-related gamma emitters, gross beta activity is attributed to naturally occurring radionuclides. Also, the 2025 gross beta annual average was less than the average for preoperational levels and shown in Figure 5, Air Particulate: Analysis for Gross Beta, Average for All Indicator vs. Control Location.

Waterford 3 did not detect any gamma emitters in the quarterly air particulate composites or bi-weekly iodine-131 in the radioiodine cartridges during the reporting period as has been the case in previous years.

The operation of WF3 had no definable impact on this airborne pathway during 2025.

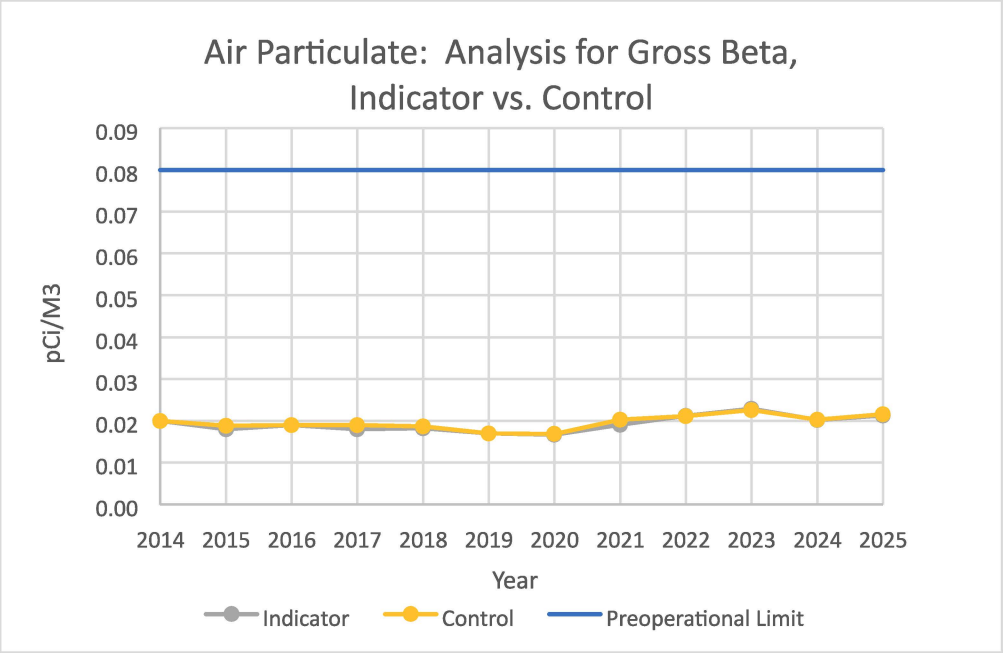

Figure 5, Air Particulate: Analysis for Gross Beta, Average for All Indicator vs. Control Location

8.3 Waterborne Sample Results

8.3.1 Surface Water (i.e., Bay, Lake etc.)

Composite water samples are collected monthly at the upstream control location and at the downstream indicator locations. Monthly composite samples are analyzed for gamma emitters. Aliquots from the monthly composites are combined to form a quarterly composite which is then analyzed for tritium. During the calendar year 2025, a total of 13 surface water samples were collected and analyzed in accordance with the requirements in the ODCM and shown in Table 3, Radiological Environmental Monitoring Program – Waterborne.

Gamma radionuclides were below detectable limits for the monthly samples, which is consistent with results seen in previous operational years. Tritium was not detected in any of the quarterly samples. The operation of WF3 had no definable impact on this waterborne pathway during 2025.

8.3.2 Drinking/Surface Water

Drinking water samples also serve as surface water samples for WF3. Therefore, monthly and quarterly gamma spectroscopy and tritium analysis of drinking water also satisfy the surface water sampling requirement.

Samples are collected from two indicators and one control location and analyzed for gamma emitters, gross beta, iodine-131 and tritium. During the calendar year 2025, a total of 39 drinking/surface water samples were collected and analyzed in accordance with the requirements in the ODCM and shown in Table 3, Radiological Environmental Monitoring Program – Waterborne.

Gamma emitters, iodine-131 and tritium were below detectable limits which is consistent with results seen in previous operational years.

Gross beta was detected in both indicator and control locations. Indicator gross beta results were comparable to results obtained from 2014-2024 of the operational REMP. Also, the 2025 gross beta annual average was less than the average for preoperational levels as shown in Figure 6: REMP Surface Water Gross Beta Sample Results

The operation of WF3 had no definable impact on this waterborne pathway during 2025.

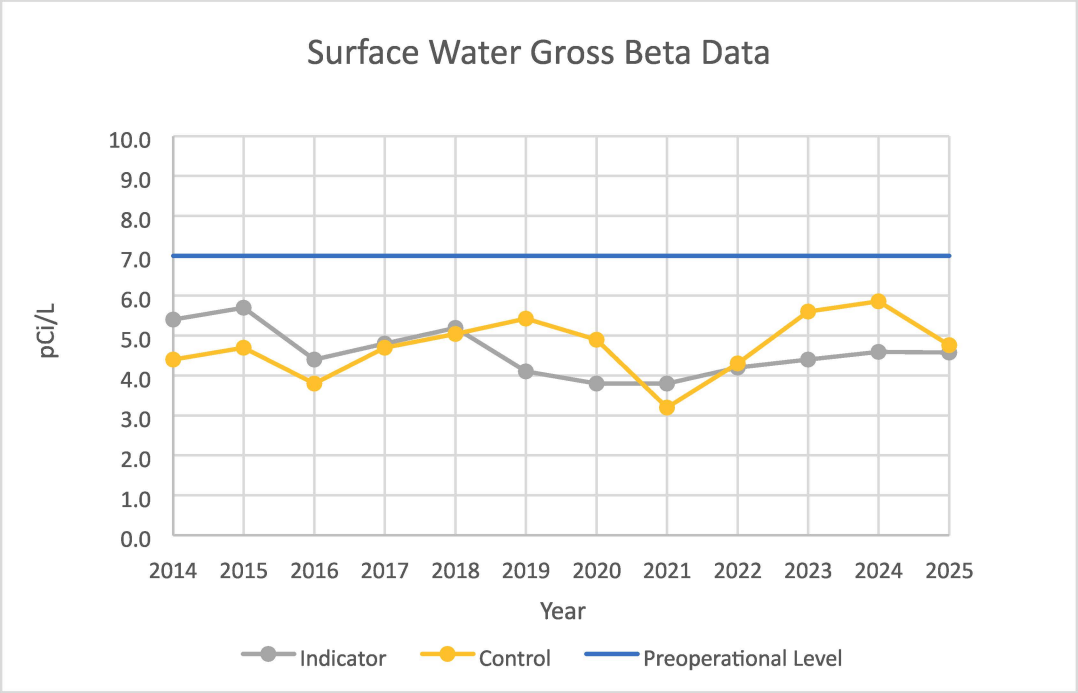

Figure 6: REMP Surface Water Gross Beta Sample Results

8.3.3 Sediment from Shoreline

Sediment samples are collected annually from two indicators and one control location and analyzed for gamma emitters. During the calendar year 2025, a total of three sediment samples were collected and analyzed in accordance with the requirements in the ODCM and shown in Table 3, Radiological Environmental Monitoring Program – Waterborne.

Gamma radionuclides were below detectable limits which is consistent with results seen in previous operational years. Therefore, the operation of WF3 had no definable impact on this waterborne pathway during 2025.

8.4 Ingestion Pathway Sample Results

8.4.1 Milk

Milk sampling from the indicator and control locations is not possible due to the unavailability of milk-producing animals used for human consumption. Waterford 3 Technical Requirements Manual requires a collection of milk samples if available commercially within 8 km (5 miles) of the plant. Waterford 3 personnel collected broad leaf vegetation samples to monitor the ingestion pathway, as specified in WF3 Station Technical Requirements Manual Table 3.12.1. Broad leaf sample results are in Section 8.4.3.

8.4.2 Fish and Invertebrates

Fish samples are collected annually from two indicators and one control location and analyzed for gamma emitters. During the calendar year 2025, a total of 12 fish samples were collected and analyzed in accordance with the requirements of the ODCM and summarized in Table 4, Radiological Environmental Monitoring Program – Ingestion. Only the edible portions are analyzed excluding head, tail, bones, and shell fragments.

Gamma radionuclides were below detectable limits which is consistent with results seen in previous operational years. Therefore, the operation of WF3 had no definable impact on this ingestion pathway during 2025.

8.4.3 Broad Leaf Vegetation

In accordance with the ODCM and as described in Table 4, Radiological Environmental Monitoring Program – Ingestion, 12 broad leaf vegetation samples were collected from growing locations nearest site boundary in areas of highest predicted annual average ground level D/Q. Samples are collected and analyzed for gamma isotopic and iodine-131 from the indicator and control locations annually during

growing season. It is common to detect Cs-137 in broad leaf samples at both indicator and control locations throughout the industry. Cs-137 can be attributed to offsite sources such as weapons testing, Chernobyl, and Fukushima events.

Gamma radionuclides which included iodine-131 were below detectable limits which is consistent with results seen in previous operational years. Therefore, the operation of WF3 had no definable impact on this ingestion pathway during 2025.

9.0 LAND USE CENSUS

A biennial land use census is required by the Offsite Dose Calculation Manual and is performed to ensure that changes in the use of areas at or beyond the site boundary are identified and modifications to REMP are made if required by changes in land use. The land use census satisfies the requirements of Section IV.B.3 of Appendix I to 10 CFR 50 [2] (Domestic Licensing of Production and Title Utilization Facilities). NUREG-1301/1302 (Offsite Dose Calculation Manual Guidance: Standard Radiological Effluent Controls for Pressurized/Boiling Water Reactors) Control 3.12.2 specifies that "a Land Use Census shall be conducted and shall identify within a distance of 8 km (5 mi.) the location in each of the 16 meteorological sectors of the nearest milk animal, the nearest residence and the nearest garden of greater than 50 m^2 (500 ft^2) producing broad leaf vegetation. Note, per NUREG-1301/1302, broad leaf vegetation sampling of one to three different kinds of vegetation may be performed at the SITE BOUNDARY in each of two different direction sectors with the highest predicted D/Qs in lieu of the garden census.

The most recent Land Use Census was conducted in 2024 in accordance with procedure, Land Use Census EN-CY-127 Rev 2, as required by Technical Requirements Manual (TRM) TR 3.12.2 within the growing season to identify changes in land use, receptor locations, and new exposure pathways. The results for the 2024 Land Use Census are listed in Table 8, Land Use Census Results. In summary, the highest D/Q locations for nearest garden, nearest residence and nearest milk animal did not change following the 2024 census.

Table 8, Land Use Census Results						
Sector	**Direction**	**Nearest Residence (miles)**	**Nearest Garden (miles)**	**Nearest Milk Cow (miles)**	**Nearest Beef Cow (miles)**	**Nearest Goat (miles)**
A	N	1.3	1.3	^	3.6	*3.8
B	NNE	1.0	1.3	^	1.9	^
C	NE	0.9	1.1	^	^	^
D	ENE	0.9	0.9	^	^	^
E	E	2.3	2.3	^	2.3	^
F	ESE	3.2	2.3	^	2.3	^
G	SE	4.0	4.0	^	2.5	^
H	SSE	^	^	^	^	^
J	S	^	^	^	^	^
K	SSW	^	^	^	^	^
L	SW	^	^	^	^	^
M	WSW	^	^	^	^	^
N	W	0.9	1.0	^	^	^
P	WNW	0.9	1.0	^	^	^
Q	NW	0.9	0.9	^	^	^
R	NNW	3.1	3.1	^	5.0	^

Symbol	Comment
^	Nothing was located within a five-mile radius of WF3.
*	Animals were located at this distance from WF3, but the milk is not used for human consumption.

10.0 SAMPLE DEVIATIONS, ANOMALIES AND UNAVAILABILITY

Sampling and analysis are performed for media types addressed in the Offsite Dose Calculation Manual. Sampling and analysis challenges may be experienced due to a multitude of reasons including environmental factors, loss of TLDs/OSLDs, contamination of samples, etc. To aid classification of sampling and analysis challenges experienced in 2025, the following three terms are used to describe the issues: Sample Anomalies, Sample Deviation, and Unavailable Samples.

Media that experienced downtime (i.e., air samplers or water samplers) during a surveillance period are classified a “Sample Deviation”. “Sample Anomalies” are defined as errors that were introduced to a sample once it arrived in the laboratory, errors that prevents the sample from being analyzed as it normally would, or may have altered the outcome of the analysis (i.e., cross contamination, human error).

“Sample Unavailability” is defined as sample collection with no available sample (i.e., food crop, TLD).

All required samples were collected and analyzed as scheduled except for the following:

Table 9, Sample Deviation Summary

Comment No.	Sample Media Affected	Sample Location	Date	Problem	Evaluation / Actions
1	Milk	None	2025	Sample Unavailable	Milk samples from indicator and control stations were unavailable for all four quarters of 2025 due to there being no indicator milk animals within 8 km of the plant. Broad Leaf vegetation sampling was performed in place of the milk indicator sampling.
2	Air Sample	APQ-1	5/27/25	Air Pump Failure CR-WF3-2025-02599	During Radiological Environmental Monitoring Sampling (REMP), air sample pump APQ-1 was found not working on 05/27/2025. This resulted in a lower than normal sample volume for that sample.
3	TLD	D-2	7/14/25	TLD Missing CR-WF3-2025-03440	While completing Thermoluminescent Dosimeter (TLD) exchanges, the TLD at the D-2 location by the Bonnet Carre Spillway was missing.
4	TLD	F-9	7/14/25	TLD Damaged by Water CR-WF3-2025-03803	While performing TLD exchange, it was noticed that the Station F-9 TLDs (#s 3683 and 3679) had water inside the container. Due to the water damage to TLD# 3683, it was removed from the station dose calculation. Station F-9 dose will be calculated using TLD 3679 which falls in line with historical data.
5	Air Sample	APF-1	11/10/25	Air Pump Failure CR-WF3-2025-05110	During Radiological Environmental Monitoring Sampling (REMP), air sample pump APF-1 was found not working on 11/10/2025. This resulted in a lower than normal sample volume for that sample.

Table 9, Sample Deviation Summary					
Comment No.	**Sample Media Affected**	**Sample Location**	**Date**	**Problem**	**Evaluation / Actions**
6	TLD	D-2	11/24/25	TLD Missing CR-WF3-2025-05301	While doing REMP bi-weekly air sampling, it was found that the TLD at the REMP site D2 was missing. TLD replaced on 11/26/25.
7	Air Sample	APF-1	12/1/25	Sample analyzed after TRM late date CR-WF3-2025-05364	The TRM late date for the analysis was 11/30/2025 1649. Due to the Thanksgiving holiday, the sample did not arrive at Teledyne Brown Engineering to be analyzed until 12/1/2025 at 0716, one day after the required analysis. Teledyne Brown Engineering ran the sample on 12/1/2025 with the report timestamp of 1611 eastern time and noted on the report that the air iodine samples were counted one day past the analysis due date. All results were consistent with historical data and no abnormalities were found in the results.
8	Air Sample	APQ-1	12/1/25	Sample analyzed after TRM late date CR-WF3-2025-05364	The TRM late date for the analysis was 11/30/2025 1649. Due to the Thanksgiving holiday, the sample did not arrive at Teledyne Brown Engineering to be analyzed until 12/1/2025 at 0716, one day after the required analysis. Teledyne Brown Engineering ran the sample on 12/1/2025 with the report timestamp of 1611 eastern time and noted on the report that the air iodine samples were counted one day past the analysis due date. All results were consistent with historical data and no abnormalities were found in the results.
9	Air Sample	APP-1	12/1/25	Sample analyzed after TRM late date CR-WF3-2025-05364	The TRM late date for the analysis was 11/30/2025 1649. Due to the Thanksgiving holiday, the sample did not arrive at Teledyne Brown Engineering to be analyzed until 12/1/2025 at 0716, one day after the required analysis. Teledyne Brown Engineering ran the sample on 12/1/2025 with the report timestamp of 1611 eastern time and noted on the report that the air iodine samples were counted one day past the analysis due date. All results were consistent with historical data and no abnormalities were found in the results.

Table 9, Sample Deviation Summary					
Comment No.	**Sample Media Affected**	**Sample Location**	**Date**	**Problem**	**Evaluation / Actions**
10	Air Sample	APC-1	12/1/25	Sample analyzed after TRM late date CR-WF3-2025-05364	The TRM late date for the analysis was 11/30/2025 1649. Due to the Thanksgiving holiday, the sample did not arrive at Teledyne Brown Engineering to be analyzed until 12/1/2025 at 0716, one day after the required analysis. Teledyne Brown Engineering ran the sample on 12/1/2025 with the report timestamp of 1611 eastern time and noted on the report that the air iodine samples were counted one day past the analysis due date. All results were consistent with historical data and no abnormalities were found in the results.
11	Air Sample	APE-26	12/1/25	Sample analyzed after TRM late date CR-WF3-2025-05364	The TRM late date for the analysis was 11/30/2025 1649. Due to the Thanksgiving holiday, the sample did not arrive at Teledyne Brown Engineering to be analyzed until 12/1/2025 at 0716, one day after the required analysis. Teledyne Brown Engineering ran the sample on 12/1/2025 with the report timestamp of 1611 eastern time and noted on the report that the air iodine samples were counted one day past the analysis due date. All results were consistent with historical data and no abnormalities were found in the results.

11.0 OTHER SUPPLEMENTAL INFORMATION

11.1 NEI 07-07 Onsite Radiological Groundwater Monitoring Program

Waterford 3 has developed a Groundwater Protection Initiative (GPI) program in accordance with NEI 07-07, Industry Ground Water Protection Initiative – Final Guidance Document. The purpose of the GPI is to ensure timely detection and an effective response to situations involving inadvertent radiological releases to groundwater in order to prevent migration of licensed radioactive material off-site and to quantify impacts on decommissioning. It is important to note, samples and results taken in support of NEI 07-07 on-site groundwater monitoring program are separate from the Radiological Environmental Monitoring Program (REMP). Results of the NEI 07-07 Radiological Groundwater Monitoring Program for onsite groundwater wells are provided in the ARERR.

11.2 Corrections to Previous Reports

The 2024 AREOR quarterly surface water results presented in Table 14 had an error on the 4th collection date for station SWK-1. The date presented was 11/20/2204 and was corrected to 11/20/2024.

The 2024 AREOR Environmental Direct Radiation Dosimetry Results Attachment 4 had an error in the Quarterly Facility Dose Header, the F_A has been corrected to F_Q.

The affected data can be seen in Attachment 5, Errata Data 2024 AREOR.

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Attachment 1, Data Table Summary

Sample Type (Units)	Type / Number of Analyses[1]	LLD [2]	Indicator Locations Mean (F)[3] [Range]	Location[4] with Highest Annual Mean		Control Locations Mean (F)[3] [Range]	Number of Non Routine Results[5]
				Name Distance and Direction	Mean (F)[3] [Range]		
Air Particulate (pCi/m^3)	GB / 130	0.01	0.0213 (104 / 104) [0.013 - 0.033]	APP-1 (119°- 0.84 mi)	0.0217 (26 / 26) [0.013 - 0.033]	0.0216 (26 / 26) [0.015 - 0.032]	0
	GS / 20						
	Cs-134	0.05	< LLD	N/A	N/A	< LLD	0
	Cs-137	0.06	< LLD	N/A	N/A	< LLD	0
Airborne Iodine (pCi/m^3)	I-131 / 130	0.07	< LLD	N/A	N/A	< LLD	0
Inner Ring TLD (mR/Qtr)	Gamma / 63	(6)	10.6 (63 / 63) [8.6 - 13.4]	B-1 (200°- 0.75 mi)	12.9 (4 / 4) [12.3 - 13.4]	N/A	0
Outer Ring TLD (mR/Qtr)	Gamma / 40	(6)	12 (40 / 40) [9.5 - 13.8]	P-6 (107°- 5.58 mi)	13.5 (4 / 4) [13.2- 13.8]	N/A	0
Special Interest TLD (mR/Qtr)	Gamma / 16	(6)	10 (16 / 16) [8.9 - 11]	G-8 (305°- 7.74 mi)	10.8 (4 / 4) [10.6-11.0]	N/A	0
Control TLD (mR/Qtr)	Gamma / 4	(6)	N/A	N/A	N/A	8.6 (4 / 4) [8.4 - 8.9]	0
Surface Water (pCi/L)	H-3 / 4	2000	< LLD	N/A	N/A	N/A	0
	GS / 13						
	Mn-54	15	< LLD	N/A	N/A	N/A	0
	Co-58	15	< LLD	N/A	N/A	N/A	0
	Fe-59	30	< LLD	N/A	N/A	N/A	0
	Co-60	15	< LLD	N/A	N/A	N/A	0
	Zn-65	30	< LLD	N/A	N/A	N/A	0

Attachment 1, Data Table Summary

	Type / Number of Analyses[1]	LLD [2]	Indicator Locations Mean (F)[3] [Range]	Location[4] with Highest Annual Mean		Control Locations Mean (F)[3] [Range]	Number of Non Routine Results[5]
				Name Distance and Direction	Mean (F)[3] [Range]		
Surface Water (pCi/L) (continued)	Nb-95	15	< LLD	N/A	N/A	N/A	0
	Zr-95	15	< LLD	N/A	N/A	N/A	0
	I-131	15	< LLD	N/A	N/A	N/A	0
	Cs-134	15	< LLD	N/A	N/A	N/A	0
	Cs-137	18	< LLD	N/A	N/A	N/A	0
	Ba-140	15	< LLD	N/A	N/A	N/A	0
	La-140	15	< LLD	N/A	N/A	N/A	0
Drinking/Surface Water (pCi/L)	GB / 12	4	4.6 (6/8) [3.5- 5.7]	DWE-5 (2.77°- 4.59 mi)	4.8 (3/4) [3.9 - 5.5]	4.8 (2 / 4) [3.2-6.3]	0
	I-131 / 39	1	< LLD	N/A	N/A	< LLD	0
	H-3 / 12	2000	< LLD	N/A	N/A	< LLD	0
	GS / 12					< LLD <	0 0
	Mn-54	15 15	< LLD <	N/A N/A	N/A N/A	LLD	0
	Co-58	30	LLD	N/A	N/A	< LLD	
	Fe-59		< LLD				
	Co-60	15	< LLD	N/A	N/A	< LLD	0
	Zn-65	30	< LLD	N/A	N/A	< LLD	0
	Nb-95	15	< LLD	N/A	N/A	< LLD	0
	Zr-95	15	< LLD	N/A	N/A	< LLD	0
	Cs-134	15	< LLD	N/A	N/A	< LLD	0
	Cs-137	18	< LLD	N/A	N/A	< LLD	0
	Ba-140	15	< LLD	N/A	N/A	< LLD	0
	La-140	15	< LLD	N/A	N/A	< LLD	0
Sediment (pCi/kg dry)	GS / 3						
	Cs-134	150	< LLD	N/A	N/A	< LLD	0
	Cs-137	180	< LLD	N/A	N/A	< LLD	0

Attachment 1, Data Table Summary

Sample Type (Units)	Type / Number of Analyses[1]	LLD [2]	Indicator Locations Mean (F)[3] [Range]	Location[4] with Highest Annual Mean		Control Locations Mean (F)[3] [Range]	Number of Non Routine Results[5]
				Name Distance and Direction	Mean (F)[3] [Range]		
Fish (pCi/kg wet)	GS / 12						
	Mn-54	130 130	< LLD <	N/A N/A	N/A N/A	< LLD <	0 0
	Co-58	260	LLD	N/A	N/A	LLD	0
	Fe-59		< LLD			< LLD	
	Co-60	130	< LLD	N/A	N/A	< LLD	0
	Zn-65	260	< LLD	N/A	N/A	< LLD	0
	Cs-134	130	< LLD	N/A	N/A	< LLD	0
	Cs-137	150	< LLD	N/A	N/A	< LLD	0
Broad Leaf (pCi/kg wet)	GS / 12 I-131						
	Cs-134	60 60	< LLD < LLD	N/A N/A	N/A N/A	N/A N/A	0 0
	Cs-137	80	< LLD	N/A	N/A	N/A	0
Milk (pCi/L) *Milk samples were unavailable in 2025.	I-131 / 0	1	N/A	N/A	N/A	N/A	0
	GS / 0						
	Cs-134 Cs-137	15 18	N/A N/A	N/A N/A	N/A N/A	N/A N/A	0 0
	Ba-140	15	N/A	N/A	N/A	N/A	0
	La-140	15	N/A	N/A	N/A	N/A	0

(1) - GB = Gross beta; I-131 = Iodine-131; H-3 = Tritium; GS = Gamma scan.

(2) - LLD = Required lower limit of detection based on WF3 TRM.

(3) - Mean and range based upon detectable measurements only. Fraction of detectable measurements at specified locations is indicated in parenthesis (F).

(4) - Locations are specified (1) by name and (2) direction relative to reactor site.

(5) - Non-routine results are those which exceed ten times the control station value. If no control station value is available, the result is considered non-routine if it exceeds ten times the preoperational value for the location.

(6) - LLD is not defined in WF3 TRM.

Attachment 2, Complete Data Table for All Analysis Results Obtained In 2025

Table 10, Bi-Weekly Air Particulate Gross Beta (pCi/m^3)

Start Date	End Date	APF-1 (Indicator)	APQ-1(Indicator)	APP-1 (Indicator)	APC-1 (Indicator)	APE-26 (Control)
01/06/2025	01/20/2025	2.46E-02 ± 4.40E-03	2.41E-02 ± 4.67E-03	2.50E-02 ± 4.34E-03	2.51E-02 ± 4.32E-03	2.35E-02 ± 4.62E-03
01/20/2025	02/03/2025	2.47E-02 ± 4.34E-03	2.36E-02 ± 4.56E-03	2.50E-02 ± 4.38E-03	2.17E-02 ± 4.05E-03	2.84E-02 ± 5.03E-03
02/03/2025	02/17/2025	1.83E-02 ± 3.92E-03	2.19E-02 ± 4.47E-03	2.22E-02 ± 4.14E-03	1.94E-02 ± 4.04E-03	1.89E-02 ± 4.23E-03
02/17/2025	03/04/2025	2.13E-02 ± 4.01E-03	2.12E-02 ± 4.28E-03	2.45E-02 ± 4.52E-03	2.12E-02 ± 3.87E-03	2.22E-02 ± 4.34E-03
03/04/2025	03/18/2025	2.00E-02 ± 4.01E-03	1.79E-02 ± 3.98E-03	1.90E-02 ± 3.68E-03	1.76E-02 ± 3.75E-03	1.83E-02 ± 4.10E-03
03/18/2025	04/01/2025	1.36E-02 ± 3.38E-03	1.31E-02 ± 3.72E-03	1.56E-02 ± 3.51E-03	1.45E-02 ± 3.47E-03	1.50E-02 ± 3.71E-03
04/01/2025	04/15/2025	1.37E-02 ± 3.39E-03	1.59E-02 ± 3.75E-03	1.58E-02 ± 3.59E-03	1.45E-02 ± 3.44E-03	1.79E-02 ± 3.98E-03
04/15/2025	04/29/2025	2.20E-02 ± 4.23E-03	1.81E-02 ± 4.13E-03	2.20E-02 ± 4.25E-03	2.01E-02 ± 4.05E-03	1.87E-02 ± 4.20E-03
04/29/2025	05/13/2025	1.56E-02 ± 3.68E-03	1.58E-02 ± 3.87E-03	1.65E-02 ± 3.78E-03	1.57E-02 ± 3.62E-03	1.59E-02 ± 3.90E-03
05/13/2025	05/27/2025	1.91E-02 ± 3.89E-03	2.94E-02 ± 1.07E-02	1.66E-02 ± 3.62E-03	1.54E-02 ± 3.51E-03	2.00E-02 ± 4.11E-03
05/27/2025	06/10/2025	1.83E-02 ± 3.66E-03	2.10E-02 ± 4.22E-03	2.02E-02 ± 3.93E-03	1.97E-02 ± 3.75E-03	1.82E-02 ± 3.99E-03
06/10/2025	06/22/2025	1.74E-02 ± 4.11E-03	1.93E-02 ± 4.56E-03	1.56E-02 ± 4.13E-03	1.73E-02 ± 4.07E-03	2.12E-02 ± 4.73E-03
06/22/2025	07/08/2025	2.54E-02 ± 4.07E-03	1.93E-02 ± 3.72E-03	2.47E-02 ± 3.96E-03	2.22E-02 ± 3.81E-03	2.12E-02 ± 3.95E-03
07/08/2025	07/22/2025	1.31E-02 ± 3.38E-03	1.34E-02 ± 3.47E-03	1.63E-02 ± 3.63E-03	1.53E-02 ± 3.53E-03	1.53E-02 ± 3.80E-03
07/22/2025	08/05/2025	1.83E-02 ± 3.66E-03	1.56E-02 ± 3.78E-03	1.82E-02 ± 3.78E-03	1.92E-02 ± 3.90E-03	2.00E-02 ± 4.02E-03
08/05/2025	08/19/2025	1.93E-02 ± 3.86E-03	1.75E-02 ± 3.90E-03	1.32E-02 ± 3.24E-03	1.68E-02 ± 3.60E-03	1.67E-02 ± 3.90E-03
08/19/2025	09/02/2025	2.54E-02 ± 4.32E-03	2.84E-02 ± 4.73E-03	2.35E-02 ± 4.28E-03	2.59E-02 ± 4.31E-03	2.65E-02 ± 4.59E-03
09/02/2025	09/16/2025	3.08E-02 ± 4.83E-03	3.06E-02 ± 4.95E-03	3.18E-02 ± 4.94E-03	3.11E-02 ± 4.70E-03	3.18E-02 ± 5.13E-03
09/16/2025	09/30/2025	2.81E-02 ± 4.67E-03	2.91E-02 ± 4.85E-03	3.34E-02 ± 4.97E-03	3.08E-02 ± 4.76E-03	2.93E-02 ± 4.97E-03
09/30/2025	10/13/2025	2.36E-02 ± 4.40E-03	1.81E-02 ± 4.07E-03	2.04E-02 ± 4.16E-03	2.35E-02 ± 4.34E-03	2.21E-02 ± 4.49E-03
10/13/2025	10/28/2025	2.70E-02 ± 4.38E-03	2.75E-02 ± 4.55E-03	2.82E-02 ± 4.35E-03	2.26E-02 ± 4.05E-03	2.43E-02 ± 4.38E-03
10/28/2025	11/10/2025	2.52E-02 ± 6.38E-03[4]	2.32E-02 ± 4.68E-03	2.18E-02 ± 4.32E-03	2.11E-02 ± 4.40E-03	2.28E-02 ± 4.55E-03
11/10/2025	11/24/2025	2.18E-02 ± 4.17E-03[6]	2.31E-02 ± 4.47E-03[7]	2.47E-02 ± 4.46E-03[8]	2.48E-02 ± 4.35E-03[9]	2.81E-02 ± 5.49E-03[10]
11/24/2025	12/08/2025	1.83E-02 ± 3.74E-03	2.03E-02 ± 4.07E-03	1.90E-02 ± 4.02E-03	2.03E-02 ± 3.98E-03	1.58E-02 ± 3.56E-03
12/08/2025	12/22/2025	2.49E-02 ± 4.34E-03	2.61E-02 ± 4.64E-03	2.72E-02 ± 4.70E-03	2.64E-02 ± 4.44E-03	2.73E-02 ± 4.76E-03
12/22/2025	01/05/2026	2.30E-02 ± 4.10E-03	2.59E-02 ± 4.59E-03	2.38E-02 ± 4.19E-03	2.06E-02 ± 4.25E-03	2.19E-02 ± 4.28E-03

[4]: See Table 9, Sample Deviation Summary, comment #4
[6]: See Table 9, Sample Deviation Summary, comment #6
[7]: See Table 9, Sample Deviation Summary, comment #7
[8]: See Table 9, Sample Deviation Summary, comment #8
[9]: See Table 9, Sample Deviation Summary, comment #9
[10]: See Table 9, Sample Deviation Summary, comment #10

Table 11, Bi-Weekly Charcoal Iodine-131 (pCi/m^3)

Start Date	End Date	APF-1 (Indicator)	APQ-1 (Indicator)	APP-1 (Indicator)	APC-1 (Indicator)	APE-26 (Control)
01/06/2025	01/20/2025	< 1.24E-02	< 1.40E-02	< 1.20E-02	< 1.21E-02	< 9.55E-03
01/20/2025	02/03/2025	< 1.60E-02	< 1.81E-02	< 1.59E-02	< 1.55E-02	< 1.41E-02
02/03/2025	02/17/2025	< 1.02E-02	< 1.15E-02	< 1.02E-02	< 7.61E-03	< 1.14E-02
02/17/2025	03/04/2025	< 1.26E-02	< 7.26E-03	< 1.38E-02	< 1.24E-02	< 1.42E-02
03/04/2025	03/18/2025	< 1.43E-02	< 1.54E-02	< 1.32E-02	< 1.41E-02	< 1.21E-02
03/18/2025	04/01/2025	< 1.49E-02	< 1.76E-02	< 1.49E-02	< 1.47E-02	< 1.65E-02
04/01/2025	04/15/2025	< 2.38E-02	< 2.54E-02	< 2.37E-02	< 2.36E-02	< 1.90E-02
04/15/2025	04/29/2025	< 1.34E-02	< 1.45E-02	< 1.35E-02	< 1.47E-02	< 1.48E-02
04/29/2025	05/13/2025	< 1.95E-02	< 2.08E-02	< 1.95E-02	< 1.94E-02	< 1.55E-02
05/13/2025	05/27/2025	< 1.15E-02	< 3.42E-02	< 1.15E-02	< 1.13E-02	< 1.26E-02
05/27/2025	06/10/2025	< 1.42E-02	< 1.53E-02	< 1.43E-02	< 1.41E-02	< 1.19E-02
06/10/2025	06/22/2025	< 1.49E-02	< 1.61E-02	< 1.50E-02	< 1.48E-02	< 1.25E-02
06/22/2025	07/08/2025	< 1.25E-02	< 1.32E-02	< 1.26E-02	< 9.39E-03	< 1.37E-02
07/08/2025	07/22/2025	< 2.06E-02	< 2.19E-02	< 2.07E-02	< 2.04E-02	< 1.64E-02
07/22/2025	08/05/2025	< 1.15E-02	< 1.23E-02	< 1.16E-02	< 1.16E-02	< 9.79E-03
08/05/2025	08/19/2025	< 1.38E-02	< 1.11E-02	< 1.39E-02	< 1.36E-02	< 1.51E-02
08/19/2025	09/02/2025	< 1.41E-02	< 1.49E-02	< 1.41E-02	< 1.38E-02	< 1.17E-02
09/02/2025	09/16/2025	< 1.43E-02	< 1.50E-02	< 1.43E-02	< 1.41E-02	< 7.97E-03
09/16/2025	09/30/2025	< 1.53E-02	< 1.62E-02	< 1.53E-02	< 1.51E-02	< 1.27E-02
09/30/2025	10/13/2025	< 1.46E-02	< 1.53E-02	< 1.46E-02	< 1.43E-02	< 1.21E-02
10/13/2025	10/28/2025	< 1.46E-02	< 1.53E-02	< 1.46E-02	< 1.44E-02	< 1.15E-02
10/28/2025	11/10/2025	< 2.20E-02[4]	< 1.95E-02	< 1.85E-02	< 1.85E-02	< 2.06E-02
11/10/2025	11/24/2025	< 2.53E-02[6]	< 2.73E-02[7]	< 2.59E-02[8]	< 2.53E-02[9]	< 1.67E-02[10]
11/24/2025	12/08/2025	< 1.57E-02	< 8.02E-03	< 1.61E-02	< 1.60E-02	< 7.21E-03
12/08/2025	12/22/2025	< 1.65E-02	< 1.78E-02	< 1.69E-02	< 1.65E-02	< 9.48E-03
12/22/2025	01/05/2026	< 1.17E-02	< 1.68E-02	< 1.59E-02	< 1.57E-02	< 1.75E-02

[4]: See Table 9, Sample Deviation Summary, comment #4
[6]: See Table 9, Sample Deviation Summary, comment #6
[7]: See Table 9, Sample Deviation Summary, comment #7
[8]: See Table 9, Sample Deviation Summary, comment #8
[9]: See Table 9, Sample Deviation Summary, comment #9
[10]: See Table 9, Sample Deviation Summary, comment #10

Table 12, Quarterly Air Particulate Gamma Isotopic (pCi/m^3)

Location	Collection Date	Cs-134	Cs-137
APF-1 (Indicator)	12/9/2024 - 3/4/2025	< 3.23E-03	< 2.05E-03
APQ-1 (Indicator)		< 4.32E-03	< 4.36E-03
APP-1 (Indicator)		< 3.02E-03	< 2.36E-03
APC-1 (Indicator)		< 1.83E-03	< 2.24E-03
APE-26 (Control)		< 2.07E-03	< 2.22E-03
APF-1 (Indicator)	3/4/2025 - 5/27/2025	< 2.33E-03	< 2.09E-03
APQ-1 (Indicator)		< 2.47E-03	< 2.58E-03
APP-1 (Indicator)		< 2.74E-03	< 2.57E-03
APC-1 (Indicator)		< 2.79E-03	< 2.06E-03
APE-26 (Control)		< 3.04E-03	< 2.83E-03
APF-1 (Indicator)	5/27/2025 - 9/2/2025	< 2.11E-03	< 1.55E-03
APQ-1 (Indicator)		< 3.10E-03	< 2.56E-03
APP-1 (Indicator)		< 2.38E-03	< 2.56E-03
APC-1 (Indicator)		< 3.44E-03	< 3.14E-03
APE-26 (Control)		< 2.90E-03	< 2.77E-03
APF-1 (Indicator)	9/2/2025 - 12/8/2025	< 3.44E-03	< 2.84E-03
APQ-1 (Indicator)		< 2.70E-03	< 2.18E-03
APP-1 (Indicator)		< 3.34E-03	< 3.26E-03
APC-1 (Indicator)		< 2.84E-03	< 2.45E-03
APE-26 (Control)		< 2.63E-03	< 2.13E-03

Table 13, Monthly Surface Water Gamma Isotopic (pCi/L)													
Location	**End Date**	**Mn-54**	**Co-58**	**Fe-59**	**Co-60**	**Zn-65**	**Nb-95**	**I-131**	**Zr-95**	**Cs-134**	**Cs-137**	**Ba-140**	**La-140**
SWK-1 (Indicator)	01/20/2025	< 3.75E+00	< 4.34E+00	< 8.68E+00	< 5.99E+00	< 9.49E+00	< 4.64E+00	< 5.25E+00	< 7.13E+00	< 4.15E+00	< 4.46E+00	< 1.41E+01	< 4.82E+00
	02/18/2025	< 1.19E+00	< 1.32E+00	< 2.77E+00	< 1.64E+00	< 3.24E+00	< 1.42E+00	< 1.86E+00	< 2.22E+00	< 1.43E+00	< 1.48E+00	< 5.23E+00	< 1.84E+00
	03/17/2025	< 1.32E+00	< 1.33E+00	< 2.94E+00	< 1.67E+00	< 2.67E+00	< 1.39E+00	< 2.94E+00	< 2.41E+00	< 1.45E+00	< 1.25E+00	< 7.47E+00	< 2.73E+00
	04/15/2025	< 1.68E+00	< 1.70E+00	< 3.41E+00	< 2.09E+00	< 3.72E+00	< 1.73E+00	< 1.98E+00	< 3.09E+00	< 1.94E+00	< 1.93E+00	< 6.75E+00	< 2.25E+00
	05/13/2025	< 2.08E+00	< 1.93E+00	< 4.12E+00	< 2.34E+00	< 4.28E+00	< 1.98E+00	< 2.13E+00	< 3.23E+00	< 2.15E+00	< 1.89E+00	< 7.48E+00	< 2.64E+00
	06/10/2025	< 2.02E+00	< 1.79E+00	< 3.87E+00	< 2.19E+00	< 4.15E+00	< 2.00E+00	< 2.22E+00	< 3.19E+00	< 2.07E+00	< 2.11E+00	< 6.94E+00	< 2.40E+00
	07/14/2025	< 2.34E+00	< 2.56E+00	< 4.32E+00	< 2.70E+00	< 5.05E+00	< 2.25E+00	< 2.86E+00	< 4.08E+00	< 2.75E+00	< 2.68E+00	< 9.32E+00	< 3.86E+00
	08/05/2025	< 2.18E+00	< 2.14E+00	< 4.48E+00	< 2.74E+00	< 4.42E+00	< 2.26E+00	< 2.68E+00	< 3.88E+00	< 2.57E+00	< 2.30E+00	< 8.50E+00	< 2.84E+00
	09/05/2025	< 2.13E+00	< 2.01E+00	< 4.30E+00	< 2.53E+00	< 4.16E+00	< 2.07E+00	< 2.75E+00	< 3.74E+00	< 2.33E+00	< 2.16E+00	< 8.39E+00	< 3.00E+00
	10/07/2025	< 2.63E+00	< 2.56E+00	< 4.99E+00	< 3.01E+00	< 5.14E+00	< 2.84E+00	< 3.83E+00	< 4.70E+00	< 3.01E+00	< 2.75E+00	< 1.14E+01	< 3.45E+00
	11/10/2025	< 2.08E+00	< 1.92E+00	< 4.40E+00	< 2.25E+00	< 3.66E+00	< 2.18E+00	< 2.87E+00	< 3.44E+00	< 2.17E+00	< 2.06E+00	< 8.45E+00	< 2.71E+00
	12/08/2025	< 2.33E+00	< 2.42E+00	< 4.71E+00	< 2.62E+00	< 4.96E+00	< 2.56E+00	< 3.23E+00	< 3.99E+00	< 2.84E+00	< 2.56E+00	< 9.78E+00	< 2.79E+00
	01/06/2026	< 1.84E+00	< 1.94E+00	< 3.59E+00	< 2.21E+00	< 4.20E+00	< 1.81E+00	< 2.53E+00	< 3.19E+00	< 2.10E+00	< 1.98E+00	< 7.98E+00	< 2.57E+00

Table 14, Quarterly Surface Water Tritium (pCi/L)

Location	End Date	H-3
SWK-1 (Indicator)	02/18/2025	< 5.47E+02
SWK-1 (Indicator)	05/13/2025	< 4.96E+02
SWK-1 (Indicator)	08/05/2025	< 5.40E+02
SWK-1 (Indicator)	11/10/2025	< 5.58E+02

Table 15, Quarterly Drinking/Surface Water Gamma Isotopic and Gross Beta (pCi/L)

Location	End Date	Gross Beta	Mn-54	Co-58	Fe-59	Co-60	Zn-65	Nb-95	Zr-95	Cs-134	Cs-137	Ba-140	La-140
DWF/SWF-2 (Indicator)	2/18/2025	3.51E+00 ± 2.97E+00	< 1.97E+00	< 1.72E+00	< 3.98E+00	< 1.89E+00	< 3.71E+00	< 1.77E+00	< 3.17E+00	< 2.05E+00	< 1.89E+00	< 8.83E+00	< 2.92E+00
DWE/SWE-5 (Indicator)	2/19/2025	4.96E+00 ± 3.03E+00	< 2.18E+00	< 2.17E+00	< 4.12E+00	< 2.46E+00	< 4.89E+00	< 2.24E+00	< 3.93E+00	< 2.35E+00	< 2.41E+00	< 9.50E+00	< 3.53E+00
DWP/SWP-7 (Control)	2/18/2025	3.24E+00 ± 2.75E+00	< 1.87E+00	< 1.86E+00	< 4.08E+00	< 2.21E+00	< 3.88E+00	< 1.92E+00	< 3.04E+00	< 2.09E+00	< 1.99E+00	< 8.82E+00	< 2.85E+00
DWF/SWF-2 (Indicator)	05/13/2025	< 2.53E+00	< 1.97E+00	< 1.86E+00	< 4.10E+00	< 2.57E+00	< 4.62E+00	< 1.96E+00	< 3.43E+00	< 2.26E+00	< 1.97E+00	< 7.80E+00	< 2.91E+00
DWE/SWE-5 (Indicator)	05/13/2025	< 2.68E+00	< 1.82E+00	< 1.75E+00	< 3.95E+00	< 1.77E+00	< 3.73E+00	< 1.80E+00	< 3.08E+00	< 1.99E+00	< 1.83E+00	< 7.32E+00	< 2.54E+00
DWP/SWP-7 (Control)	05/13/2025	< 2.61E+00	< 1.87E+00	< 1.74E+00	< 4.04E+00	< 2.11E+00	< 3.74E+00	< 1.88E+00	< 3.01E+00	< 2.10E+00	< 2.03E+00	< 7.03E+00	< 2.76E+00
DWF/SWF-2 (Indicator)	08/05/2025	3.85E+00 ± 3.56E+00	< 1.96E+00	< 2.08E+00	< 4.03E+00	< 2.51E+00	< 4.36E+00	< 2.09E+00	< 3.56E+00	< 2.07E+00	< 2.06E+00	< 1.00E+01	< 3.73E+00
DWE/SWE-5 (Indicator)	08/05/2025	3.94E+00 ± 3.41E+00	< 1.88E+00	< 1.96E+00	< 4.38E+00	< 2.26E+00	< 4.09E+00	< 2.04E+00	< 3.44E+00	< 2.13E+00	< 2.04E+00	< 1.03E+01	< 3.19E+00
DWP/SWP-7 (Control)	08/05/2025	< 3.48E+00	< 1.21E+00	< 1.26E+00	< 2.90E+00	< 2.23E+00	< 2.52E+00	< 1.47E+00	< 2.34E+00	< 1.60E+00	< 1.28E+00	< 6.45E+00	< 2.12E+00
DWF/SWF-2 (Indicator)	11/10/2025	5.72E+00 ± 3.44E+00	< 2.17E+00	< 2.31E+00	< 4.90E+00	< 2.70E+00	< 4.62E+00	< 2.45E+00	< 4.19E+00	< 2.51E+00	< 2.30E+00	< 1.02E+01	< 3.17E+00
DWE/SWE-5 (Indicator)	11/10/2025	5.50E+00 ± 3.74E+00	< 2.18E+00	< 2.39E+00	< 4.67E+00	< 2.57E+00	< 4.54E+00	< 2.25E+00	< 4.04E+00	< 2.47E+00	< 2.28E+00	< 9.81E+00	< 2.79E+00
DWP/SWP-7 (Control)	11/10/2025	6.27E+00 ± 4.34E+00	< 1.56E+00	< 1.56E+00	< 2.97E+00	< 1.75E+00	< 3.28E+00	< 1.76E+00	< 2.72E+00	< 1.80E+00	< 1.73E+00	< 7.75E+00	< 2.53E+00

Table 16, Monthly Drinking/Surface Water Iodine-131 (pCi/L)		
Location	**End Date**	**I-131**
DWF/SWF-2 (Indicator)	01/20/2025	< 7.64E-01
DWE/SWE-5 (Indicator)	01/20/2025	< 8.44E-01
DWP/SWP-7 (Control)	01/20/2025	< 8.08E-01
DWF/SWF-2 (Indicator)	02/18/2025	< 8.40E-01
DWE/SWE-5 (Indicator)	02/19/2025	< 6.75E-01
DWP/SWP-7 (Control)	02/18/2025	< 4.24E-01
DWF/SWF-2 (Indicator)	03/17/2025	< 6.63E-01
DWE/SWE-5 (Indicator)	03/17/2025	< 5.76E-01
DWP/SWP-7 (Control)	03/17/2025	< 5.48E-01
DWF/SWF-2 (Indicator)	04/15/2025	< 8.36E-01
DWE/SWE-5 (Indicator)	04/15/2025	< 5.18E-01
DWP/SWP-7 (Control)	04/15/2025	< 6.65E-01
DWF/SWF-2 (Indicator)	05/13/2025	< 8.09E-01
DWE/SWE-5 (Indicator)	05/13/2025	< 8.05E-01
DWP/SWP-7 (Control)	05/13/2025	< 8.19E-01
DWF/SWF-2 (Indicator)	06/10/2025	< 5.70E-01
DWE/SWE-5 (Indicator)	06/10/2025	< 8.47E-01
DWP/SWP-7 (Control)	06/10/2025	< 7.60E-01
DWF/SWF-2 (Indicator)	07/14/2025	< 5.76E-01
DWE/SWE-5 (Indicator)	07/14/2025	< 5.85E-01
DWP/SWP-7 (Control)	07/14/2025	< 5.67E-01
DWF/SWF-2 (Indicator)	08/05/2025	< 7.76E-01
DWE/SWE-5 (Indicator)	08/05/2025	< 7.66E-01
DWP/SWP-7 (Control)	08/05/2025	< 8.31E-01
DWF/SWF-2 (Indicator)	09/05/2025	< 5.46E-01
DWE/SWE-5 (Indicator)	09/05/2025	< 4.14E-01
DWP/SWP-7 (Control)	09/05/2025	< 7.94E-01
DWF/SWF-2 (Indicator)	10/07/2025	< 7.89E-01
DWE/SWE-5 (Indicator)	10/07/2025	< 8.28E-01
DWP/SWP-7 (Control)	10/07/2025	< 6.91E-01
DWF/SWF-2 (Indicator)	11/10/2025	< 7.57E-01
DWE/SWE-5 (Indicator)	11/10/2025	< 8.26E-01
DWP/SWP-7 (Control)	11/10/2025	< 7.06E-01
DWF/SWF-2 (Indicator)	12/08/2025	< 8.97E-01
DWE/SWE-5 (Indicator)	12/08/2025	< 7.66E-01
DWP/SWP-7 (Control)	12/08/2025	< 6.41E-01
DWF/SWF-2 (Indicator)	01/06/2026	< 7.96E-01
DWE/SWE-5 (Indicator)	01/06/2026	< 7.01E-01
DWP/SWP-7 (Control)	01/06/2026	< 7.44E-01

Table 17, Quarterly Drinking/Surface Water Tritium (pCi/L)		
Location	**End Date**	**H-3**
DWF/SWF-2 (Indicator)	02/18/2025	< 5.43E+02
DWE/SWE-5 (Indicator)	02/19/2025	< 5.25E+02
DWP/SWP-7 (Control)	02/18/2025	< 5.54E+02
DWF/SWF-2 (Indicator)	05/13/2025	< 5.04E+02
DWE/SWE-5 (Indicator)	05/13/2025	< 5.00E+02
DWP/SWP-7 (Control)	05/13/2025	< 5.07E+02
DWF/SWF-2 (Indicator)	08/05/2025	< 5.43E+02
DWE/SWE-5 (Indicator)	08/05/2025	< 5.29E+02
DWP/SWP-7 (Control)	08/05/2025	< 5.44E+02
DWF/SWF-2 (Indicator)	11/10/2025	< 5.64E+02
DWE/SWE-5 (Indicator)	11/10/2025	< 5.59E+02
DWP/SWP-7 (Control)	11/10/2025	< 5.49E+02

Table 18, Annual Sediment Gamma Isotopic (pCi/kg dry)			
Location	**Collection Date**	**Cs-134**	**Cs-137**
SHWK-1 (Indicator)	08/12/2025	< 8.86E+01	< 8.49E+01
SHWE-3 (Indicator)	08/12/2025	< 1.32E+02	< 9.37E+01
SHWQ-6 (Control)	08/12/2025	< 1.16E+02	< 9.70E+01

Table 19, Quarterly Milk Gamma Isotopic and Iodine-131 (pCi/L)						
Location	**Collection Date**	**I-131**	**Cs-134**	**Cs-137**	**Ba-140**	**La-140**
Milk (Indicator)	N/A	(1)	(1)	(1)	(1)	(1)
Milk (Control)	N/A	(1)	(1)	(1)	(1)	(1)
Milk (Indicator)	N/A	(1)	(1)	(1)	(1)	(1)
Milk (Control)	N/A	(1)	(1)	(1)	(1)	(1)
Milk (Indicator)	N/A	(1)	(1)	(1)	(1)	(1)
Milk (Control)	N/A	(1)	(1)	(1)	(1)	(1)
Milk (Indicator)	N/A	(1)	(1)	(1)	(1)	(1)
Milk (Control)	N/A	(1)	(1)	(1)	(1)	(1)

(1) See Attachment 1, Table 9, Samples Deviations Table Comment #1

Table 20, Annual Fish Gamma Isotopic (pCi/kg wet)

Location	Collection Date	Species	Mn-54	Co-58	Fe-59	Co-60	Zn-65	Cs-134	Cs-137
FH-1 (Control)	10/27/2025	CATFISH	< 6.72E+01	< 8.65E+01	< 1.99E+02	< 6.97E+01	< 1.18E+02	< 6.39E+01	< 6.76E+01
FH-2 (Indicator)	10/27/2025	CATFISH	< 7.52E+01	< 9.62E+01	< 2.16E+02	< 7.57E+01	< 2.03E+02	< 1.03E+02	< 8.82E+01
FH-3 (Indicator)	10/13/2025	CATFISH	< 6.63E+01	< 7.82E+01	< 2.42E+02	< 6.95E+01	< 1.67E+02	< 4.83E+01	< 6.59E+01
FH-1 (Control)	10/27/2025	BUFFALO	< 6.86E+01	< 6.75E+01	< 1.63E+02	< 5.77E+01	< 1.22E+02	< 6.14E+01	< 4.71E+01
FH-2 (Indicator)	10/27/2025	BUFFALO	< 8.31E+01	< 7.32E+01	< 2.20E+02	< 9.10E+01	< 1.73E+02	< 7.63E+01	< 7.64E+01
FH-3 (Indicator)	10/13/2025	BUFFALO	< 5.83E+01	< 7.73E+01	< 2.57E+02	< 5.63E+01	< 1.17E+02	< 5.84E+01	< 6.13E+01
FH-1 (Control)	10/27/2025	MULLET	< 8.32E+01	< 9.27E+01	< 2.32E+02	< 8.93E+01	< 1.55E+02	< 1.07E+02	< 5.80E+01
FH-2 (Indicator)	10/27/2025	MULLET	< 7.97E+01	< 7.61E+01	< 2.04E+02	< 6.86E+01	< 1.41E+02	< 8.54E+01	< 7.62E+01
FH-3 (Indicator)	10/13/2025	MULLET	< 7.05E+01	< 9.59E+01	< 2.48E+02	< 7.65E+01	< 1.46E+02	< 6.94E+01	< 5.99E+01
FH-1 (Control)	10/27/2025	CARP	< 6.93E+01	< 6.14E+01	< 1.53E+02	< 6.50E+01	< 1.59E+02	< 6.97E+01	< 5.33E+01
FH-2 (Indicator)	10/27/2025	CARP	< 5.76E+01	< 6.89E+01	< 1.29E+02	< 6.12E+01	< 1.09E+02	< 5.77E+01	< 6.13E+01
FH-3 (Indicator)	10/13/2025	CARP	< 6.36E+01	< 1.03E+02	< 2.45E+02	< 6.48E+01	< 1.73E+02	< 7.68E+01	< 6.05E+01

Table 21, Quarterly Vegetation Gamma Isotopic (pCi/kg wet)				
Location	**Collection Date**	**I-131**	**Cs-134**	**Cs-137**
BLQ-1 (Indicator)	03/17/2025	< 3.89E+01	< 3.37E+01	< 4.26E+01
BLB-1 (Indicator)	03/17/2025	< 3.80E+01	< 2.95E+01	< 3.19E+01
BLE-20 (Control)	03/17/2025	< 3.91E+01	< 4.09E+01	< 4.48E+01
BLQ-1 (Indicator)	06/03/2025	< 4.88E+01	< 3.17E+01	< 3.53E+01
BLB-1 (Indicator)	06/03/2025	< 4.54E+01	< 3.31E+01	< 3.11E+01
BLE-20 (Control)	06/03/2025	< 4.99E+01	< 3.31E+01	< 3.16E+01
BLQ-1 (Indicator)	08/13/2025	< 5.19E+01	< 4.03E+01	< 3.81E+01
BLB-1 (Indicator)	08/13/2025	< 5.15E+01	< 4.74E+01	< 4.50E+01
BLE-20 (Control)	08/13/2025	< 5.39E+01	< 3.70E+01	< 3.75E+01
BLQ-1 (Indicator)	11/24/2025	< 5.35E+01	< 2.31E+01	< 2.87E+01
BLB-1 (Indicator)	11/24/2025	< 5.40E+01	< 2.89E+01	< 2.51E+01
BLE-20 (Control)	11/24/2025	< 5.17E+01	< 3.12E+01	< 2.74E+01

Attachment 3, Cross Check Intercomparison Program

Participation in cross check intercomparison studies is mandatory for laboratories performing analyses of REMP samples satisfying the requirements in the Offsite Site Dose Calculation Manual. Intercomparison studies provide a consistent and effective means to evaluate the accuracy and precision of analyses performed by a laboratory. Study results should fall within specified control limits and results that fall outside the control limits are investigated and corrected.

Teledyne Brown Engineering Environmental Services (TBE-ES) participated in the following proficiency testing studies provided by Eckert & Ziegler (E&Z) Analytics Inc., Environmental Resource Associates (ERA), and Department of Energy (DOE) Mixed Analyte Performance Evaluation Program (MAPEP) in 2025. TBE-ES laboratory analyzed Performance Evaluation (PE) samples of air particulate (AP), milk, soil, vegetation, and water matrices that represent test and matrix combinations available for REMP programs. The Laboratory's intercomparison program results for 2025 are summarized below.

Summary of Results: Inter-Laboratory Comparison Program

The Inter-Laboratory Comparison Program provides evidence of "in control" counting systems and methods, and that the laboratories are producing accurate and reliable data. For the TBE laboratory, 157 out of 164 analyses performed met the specified acceptance criteria. Seven analyses did not meet the specified acceptance criteria and were addressed through the TBE Corrective Action Program. A summary is found below:

A. NCR 25-04: MAPEP 25, RdV52 vegetation study for Sr-90 evaluated as "Not Acceptable." Possible sample interference issue. Study results stated 8 out of 18 participants passed the study. All internal data reviewed and deemed accurate with internal quality control measures for sample also passing. The laboratory performed testing with Sr-85 spike with successful outcomes. The following provider study, RdV53, returned with passing results.

B. NCR 25-05: Interlaboratory crosscheck failure: MAPEP 25-MaS52 Ni-63 in soil. A manual data-entry error in the carrier volume for one nuclide/matrix led to an incorrect LIMS value. Manual verification showed that the crosscheck would have passed with the correct volume. The procedure has been revised with more prominent notation to assist technicians. No recurrence identified and the following crosscheck study did not result in repeated error supporting effectiveness of corrective action.

C. NCR 25-06: Interlaboratory crosscheck failure: ERA RAD141 Gr-A in water. The provider's acceptance range was 10.0–21.2, and their reported value of 15.6 fell within this interval. TBE-ES obtained 22.2 ± 3.76, which satisfied internal QC criteria and would have aligned with the acceptance range if error margins had been considered. The QC duplicate result of 17.8 met internal requirements, and the 22% RPD demonstrated internal consistency. The provider's Gr-A samples have historically been the lowest spiked. No internal failures identified so no corrective action deemed necessary. The following ERA RAD143 study's performance evaluation results returned acceptable/passing.

D. NCR 25-10: *IN-PROGRESS* Interlaboratory crosscheck failure: ERA MRAD 43, PU-239/240

(AS) in Air Particulate (filter).

E. NCR 25-11: Interlaboratory crosscheck failure: ERA RAD-143 crosscheck failure of Uranium in water. Provider acceptance range: 48.0 – 60.0. TBE-ES result of 47.1 with internal acceptance ratio of 87.2 and no prior failures. No corrective action deemed necessary.

F. NCR 25-12: *IN-PROGRESS* Interlaboratory crosscheck failure: MAPEP Series 53, Ni-63 in Soil.

G. NCR 25-13: *IN-PROGRESS* Interlaboratory crosscheck failure: MAPEP Series 53, Th-232 in Soil.

Table 22, DOE Mixed Analyte Performance Evaluation Program (MAPEP)

Month/Year	Identification Number	Matrix	Nuclide	Units	TBE Reported Value	Known Value (a)	Acceptance Range	Acceptance Ratio (%)	Evaluation (b)
Mar 2025	25-MaS52	Soil	Ni-63	Bq/kg	964	1560	1092-2028	61.8	N(1)
Mar 2025	25-MaS52	Soil	Tc-99	Bq/kg	659	725	508-943	90.9	A
Mar 2025	25-MaS52	Soil	Th-228	Bq/kg	44.3	44.4	31.1-57.7	99.8	A
Mar 2025	25-MaS52	Soil	Th-230	Bq/kg	46.4	47	32.9-61.1	98.7	A
Mar 2025	25-MaS52	Soil	Th-232	Bq/kg	39.9	41.4	29.0-53.8	96.4	A
Mar 2025	25-MaSU52	Urine	Cs-134	Bq/L	-0.0104	False Positive		N/A	A
Mar 2025	25-MaSU52	Urine	Cs-137	Bq/L	0.497	0.608	0.426-0.490	81.7	A
Mar 2025	25-MaSU52	Urine	Co-57	Bq/L	0.0472	False Positive		N/A	A
Mar 2025	25-MaSU52	Urine	Co-60	Bq/L	0.104	0.0765	Sensitivity Eval	N/A	A
Mar 2025	25-MaSU52	Urine	Mn-54	Bq/L	0.0365	False Positive		N/A	A
Mar 2025	25-MaSU52	Urine	U-234	Bq/L	0.0963	0.105	0.074-0.137	91.7	A
Mar 2025	25-MaSU52	Urine	U-238	Bq/L	0.108	0.109	0.076-0.142	99.1	A
Mar 2025	25-MaSU52	Urine	Zn-65	Bq/L	-0.278	False Positive		N/A	A
Mar 2025	25-MaW52	Water	Ni-63	Bq/L	37.3	38.9	27.2-50.6	95.9	A
Mar 2025	25-MaW52	Water	Tc-99	Bq/L	6.64	6.34	4.44-8.24	104.7	A
Mar 2025	25-RdV52	Vegetation	Cs-134	Bq/sample	0.0452	False Positive		N/A	A
Mar 2025	25-RdV52	Vegetation	Cs-137	Bq/sample	0.558	0.707	0.495-0.919	78.9	W
Mar 2025	25-RdV52	Vegetation	Co-57	Bq/sample	2.86	3.40	2.38-4.42	84.1	A
Mar 2025	25-RdV52	Vegetation	Co-60	Bq/sample	0.0284	False Positive		N/A	A
Mar 2025	25-RdV52	Vegetation	Mn-54	Bq/sample	2.22	2.72	1.90-3.54	81.6	A
Mar 2025	25-RdV52	Vegetation	Sr-90	Bq/sample	0.222	0.370	0.259-0.481	60.0	N(2)
Mar 2025	25-RdV52	Vegetation	Zn-65	Bq/sample	1.5	1.87	1.31-2.43	80.2	A
Mar 2025	25-RdV52 (R)	Vegetation	Sr-90	Bq/sample	0.356	0.370	0.259-0.481	96.2	A
Mar 2025	25-RdV52 (R)	Vegetation	Sr-90	Bq/sample	0.4	0.370	0.259-0.481	108.1	A
Sep 2025	25-MaS53	Soil	Ni-63	Bq/kg	865	1474	1032-1916	58.7	N(3)
Sep 2025	25-MaS53	Soil	Tc-99	Bq/kg	314	370	259-481	84.9	A
Sep 2025	25-MaS53	Soil	Th-228	Bq/kg	51.2	41.7	29.2-54.2	123	W
Sep 2025	25-MaS53	Soil	Th-230	Bq/kg	54.8	45.6	31.9-59.3	120	W
Sep 2025	25-MaS53	Soil	Th-232	Bq/kg	50.4	38.7	27.1-50.3	130	N(4)
Sep 2025	25-MaW53	Water	Ni-63	Bq/L	23.0	25.0	17.5-32.5	92	A
Sep 2025	25-MaW53	Water	Tc-99	Bq/L	0.17	*False Pos*		N/A	A
Sep 2025	25-RdV53	Vegetation	Cs-134	Bq/sample	0.1051	*False Pos*		N/A	A
Sep 2025	25-RdV53	Vegetation	Cs-137	Bq/sample	0.9581	0.986	0.69-1.282	97	A
Sep 2025	25-RdV53	Vegetation	Co-57	Bq/sample	4.54	4.47	3.13-5.81	102	A
Sep 2025	25-RdV53	Vegetation	Co-60	Bq/sample	2.08	2.3	1.61-2.99	90	A
Sep 2025	25-RdV53	Vegetation	Mn-54	Bq/sample	2.64	3.1	2.17-4.03	85	A
Sep 2025	25-RdV53	Vegetation	Sr-90	Bq/sample	1.5	1.43	1.00-1.86	105	A
Sep 2025	25-RdV53	Vegetation	Zn-65	Bq/sample	8.39	9.29	6.50-12.08	90	A

(a) The MAPEP known value is equal to 100% of the parameter present in the standard as determined by gravimetric and/or volumetric measurements made during standard preparation.

(b) DOE/MAPEP evaluation:
A = Acceptable - reported result falls within ratio limits of 0.80-1.20
W = Acceptable with warning - reported result falls within 0.70-0.80 or 1.20-1.30
N = Not Acceptable - reported result falls outside the ratio limits of < 0.70 and > 1.30 **Results**

Flags:
A = Result acceptable. |Bias| <= 20%
W = Result acceptable with warning. 20% < |Bias| <= 30%
N = Result not acceptable. |Bias| > 30%
RW = Report Warning NR = Not Reported **Uncertainty**

Flags:
NOT ACCEPTABLE. RP < 2%
ACCEPTABLE. 2% <= RP <= 15%
ACCEPTABLE WITH WARNING. 15% < RP <= 30%
NOT ACCEPTABLE. RP > 30%
Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

N(1) = NCR 25-05
N(2) = NCR 25-04 (R)= Additional Study for N(2) failure
N(3) = NCR 25-12
N(4) = NCR 25-13

Table 23, ERA Environmental Radioactivity Crosscheck Program

Month Year	Identification Number	Matrix	Nuclide	Units	TBE Reported Value	Known Value (a)	Acceptance Range	Acceptance Ratio (%)	Evaluation (b)
Mar 2025	MRAD-42	Soil	Am-241	pCi/kg	955	1060	572-1500	90.1	A
Mar 2025	MRAD-42	Soil	Pu-238	pCi/kg	1010	1070	534-1630	94.4	A
Mar 2025	MRAD-42	Soil	Pu-239	pCi/kg	1020	1150	627-1650	88.7	A
Mar 2025	MRAD-42	Soil	Sr-90	pCi/kg	3540	5710	1780-8890	62.0	A
Mar 2025	MRAD-42	Soil	U-234	pCi/kg	3598	3500	1640-4590	103	A
Mar 2025	MRAD-42	Soil	U-238	pCi/kg	3857	3470	1900-4660	111	A
Mar 2025	MRAD-42	AP	Am-241	pCi/Filter	73.5	67.7	48.3-90.3	109	A
Mar 2025	MRAD-42	AP	Fe-55	pCi/Filter	224	181	66.1-289	124	A
Mar 2025	MRAD-42	AP	Pu-238	pCi/Filter	41.7	40.2	30.4-49.4	104	A
Mar 2025	MRAD-42	AP	Pu-239	pCi/Filter	64.5	62.3	46.6-75.2	104	A
Mar 2025	MRAD-42	AP	U-234	pCi/Filter	30.8	34.2	25.4-40.1	90.1	A
Mar 2025	MRAD-42	AP	U-238	pCi/Filter	29.4	33.9	25.6-40.4	86.7	A
Mar 2025	MRAD-42	AP	Gr-A (Th-230)	pCi/Filter	44.8	39.5	20.6-65.1	113	A
Mar 2025	MRAD-42	AP	Gr-B (CS-137)	pCi/Filter	62.6	55.2	33.5-83.4	113	A
Mar 2025	MRAD-42	Water	Am-241	pCi/L	40.5	39.5	27.1-50.5	103	A
Mar 2025	MRAD-42	Water	Fe-55	pCi/L	892.6	1460	858-2120	61.1	A
Mar 2025	MRAD-42	Water	Pu-238	pCi/L	74.9	77.2	46.4-100	97.0	A
Mar 2025	MRAD-42	Water	Pu-239	pCi/L	59.2	58.4	36.1-72.0	101	A
Apr 2025	RAD-141	Water	Ba-133	pCi/L	42.7	48.3	34.3-62.3	88.4	A
Apr 2025	RAD-141	Water	Cs-134	pCi/L	19.5	16.5	5.65-27.4	118	A
Apr 2025	RAD-141	Water	Cs-137	pCi/L	47.3	50.8	27.3-74.3	93.1	A
Apr 2025	RAD-141	Water	Co-60	pCi/L	99.2	104	84.4-124	95.4	A
Apr 2025	RAD-141	Water	Zn-65	pCi/L	317	341	279-403	93.0	A
Apr 2025	RAD-141	Water	GR-A	pCi/L	22.2	15.6	10.0-21.2	142.3	N(1)
Apr 2025	RAD-141	Water	GR-B	pCi/L	21.6	22.9	15.0-30.8	94.3	A
Apr 2025	RAD-141	Water	H-3	pCi/L	19900	21200	18200-24200	93.9	A
Apr 2025	RAD-141	Water	I-131 (Low Level)	pCi/L	26.1	26.8	23.2-30.4	97.4	A
Apr 2025	RAD-141	Water	Sr-89	pCi/L	70.8	67.1	51.2-83.0	106	A
Apr 2025	RAD-141	Water	Sr-90	pCi/L	22.5	23.9	19.7-28.1	94.1	A
Apr 2025	RAD-141	Water	U (Total)	pCi/L	48.0	49.6	44.0-55.2	96.8	A
Sept 2025	MRAD-43	Soil	Sr-90	pCi/kg	6790	9490	2950-14800	71.5	A
Sept 2025	MRAD-43	AP	Am-241	pCi/Filter	40.2	39.8	28.4-53.1	101	A
Sept 2025	MRAD-43	AP	Fe-55	pCi/Filter	125	166	60.6-265	75.3	A
Sept 2025	MRAD-43	AP	Pu-238	pCi/Filter	26	15.1	11.4-18.6	172	N(3)
Sept 2025	MRAD-43	AP	U-234	pCi/Filter	57.7	63.4	47.0-74.3	91.0	A
Sept 2025	MRAD-43	AP	U-238	pCi/Filter	63.1	62.9	47.5-75.0	100	A
Sept 2025	MRAD-43	AP	Gr-A (Th-230)	pCi/Filter	28.2	22	11.5-36.2	128	A
Sept 2025	MRAD-43	AP	Gr-B (CS-137)	pCi/Filter	38.6	40.5	24.6-61.2	95.3	A
Sept 2025	MRAD-43	Water	Am-241	pCi/L	69.2	68.6	47.1-87.7	101	A
Sept 2025	MRAD-43	Water	Fe-55	pCi/L	304	399	234-580	76.2	A
Sept 2025	MRAD-43	Water	Pu-238	pCi/L	104	115	56.7-122	90.4	A
Sept 2025	MRAD-43	Water	Pu-239	pCi/L	37.8	39.8	24.6-49.0	95.0	A
Oct 2025	RAD	Water	Ba-133	pCi/L	21.3	17.5	6.55-28.5	122	A
Oct 2025	RAD	Water	Cs-134	pCi/L	53.8	58	43.0-73.0	92.8	A
Oct 2025	RAD	Water	Cs-137	pCi/L	179.5	178	142-214	101	A

Oct 2025	RAD	Water	Co-60	pCi/L	58.3	55	40.3-69.7	106	A
Oct 2025	RAD	Water	Zn-65	pCi/L	37.04	36.8	5.51-68.1	101	A
Oct 2025	RAD	Water	GR-A	pCi/L	64.8	59.9	45.5-74.3	108	A
Oct 2025	RAD	Water	GR-B	pCi/L	19.3	19.3	12.2-26.4	100	A
Oct 2025	RAD	Water	H-3	pCi/L	18400	21200	18200-24200	86.8	A
Oct 2025	RAD	Water	I-131 (Low Level)	pCi/L	23.9	24.3	20.9-27.7	98.4	A
Oct 2025	RAD	Water	Sr-89	pCi/L	69.7	64.2	48.6-79.8	109	A
Oct 2025	RAD	Water	Sr-90	pCi/L	39.8	43.8	37.6-50.0	90.9	A
Oct 2025	RAD	Water	U (Total)	pCi/L	47.1	54	48.0-60.0	87.2	N(2)

Table 21, ERA Environmental Radioactivity Crosscheck Program (continued)

(a) The ERA known value is equal to 100% of the parameter present in the standard as determined by gravimetric and/or volumetric measurements made during standard preparation.

(b) ERA evaluation:

A = Acceptable - Reported value falls within the Acceptance Limits

N = Not Acceptable - Reported value falls outside of the Acceptance Limits

N(1) = NCR 25-06

N(2) = NCR 25-11

N(3) = NCR 25-10

Table 24, Eckert & Ziegler Analytics Environmental Radioactivity Crosscheck Program

Month/Year	Identification	Matrix	Nuclide	Units	TBE	Known Value	Acceptance Ratio	Evaluation
March 2025	E14230	Milk	Ce-141	pCi/L	68.1	75.8	90	A
March 2025	E14230	Milk	Cs-134	pCi/L	121	142	85	A
March 2025	E14230	Milk	Cs-137	pCi/L	154	168	92	A
March 2025	E14230	Milk	Cr-51	pCi/L	278	291	96	A
March 2025	E14230	Milk	Co-58	pCi/L	95.4	105	91	A
March 2025	E14230	Milk	Co-60	pCi/L	169	193	88	A
March 2025	E14230	Milk	Fe-59	pCi/L	125	135	93	A
March 2025	E14230	Milk	Mn-54	pCi/L	172	189	91	A
March 2025	E14230	Milk	Zn-65	pCi/L	229	251	91	A
March 2025	E14230	Milk	I-131 (Low Level)	pCi/L	88.4	94.7	93	A
March 2025	E14229	Milk	Sr-89	pCi/L	84.9	91.9	92	A
March 2025	E14229	Milk	Sr-90	pCi/L	11.1	15.6	71	W
March 2025	E14323	AP	Ce-141	pCi	55.9	54.2	103	A
March 2025	E14323	AP	Cs-134	pCi	93.0	102	91	A
March 2025	E14323	AP	Cs-137	pCi	107	120	89	A
March 2025	E14323	AP	Cr-51	pCi	194	208	93	A
March 2025	E14323	AP	Co-58	pCi	68.4	75.2	91	A
March 2025	E14323	AP	Co-60	pCi	142	138	103	A
March 2025	E14323	AP	Fe-59	pCi	95.0	96.3	99	A
March 2025	E14323	AP	Mn-54	pCi	123	135	91	A
March 2025	E14234	AP	Zn-65	pCi	181	179	101	A
March 2025	E14336	AP	Ni-63	pCi/Total	81.5	87.4	93	A
March 2025	E14234	AP	Sr-89	pCi	81.6	88.5	92	A
March 2025	E14234	AP	Sr-90	pCi	13.6	15	90	A
March 2025	E14231	Charcoal	I-131	pCi	70.3	66.3	106	A
March 2025	E14233	Soil	Ce-141	pCi/g	0.124	0.129	96	A
March 2025	E14233	Soil	Cs-134	pCi/g	0.283	0.242	117	A
March 2025	E14233	Soil	Cs-137	pCi/g	0.333	0.351	95	A
March 2025	E14233	Soil	Cr-51	pCi/g	0.495	0.494	100	A
March 2025	E14233	Soil	Co-58	pCi/g	0.193	0.179	108	A
March 2025	E14233	Soil	Co-60	pCi/g	0.323	0.327	99	A
March 2025	E14233	Soil	Fe-59	pCi/g	0.231	0.229	101	A
March 2025	E14233	Soil	Mn-54	pCi/g	0.325	0.321	101	A
March 2025	E14233	Soil	Zn-65	pCi/g	0.446	0.426	105	A
March 2025	E14235	Water	Gr-A (Am-241)	pCi/L	79.6	89.4	89	A
March 2025	E14235	Water	Gr-B (Cs-137)	pCi/L	242	285	85	A
Sept 2025	E14237	Milk	Ce-141	pCi/L	91.6	89.5	102	A
Sept 2025	E14237	Milk	Cs-134	pCi/L	121	142	85	A
Sept 2025	E14237	Milk	Cs-137	pCi/L	115	126	91	A
Sept 2025	E14237	Milk	Cr-51	pCi/L	280	260	108	A
Sept 2025	E14237	Milk	Co-58	pCi/L	104	105	99	A
Sept 2025	E14237	Milk	Co-60	pCi/L	145	150	97	A
Sept 2025	E14237	Milk	Fe-59	pCi/L	91.4	98.6	93	A
Sept 2025	E14237	Milk	Mn-54	pCi/L	159	161	99	A
Sept 2025	E14237	Milk	Zn-65	pCi/L	205	196	105	A
Sept 2025	E14237	Milk	I-131 (Low Level)	pCi/L	79.5	76.3	104	A
Sept 2025	E14236	Milk	Sr-89	pCi/L	109	89.8	121	W
Sept 2025	E14236	Milk	Sr-90	pCi/L	10.9	13.1	83	A
Sept 2025	E14239	AP	Ce-141	pCi	67.5	68.1	99	A
Sept 2025	E14239	AP	Cs-134	pCi	103	108	95	A
Sept 2025	E14239	AP	Cs-137	pCi	98.4	96.1	102	A
Sept 2025	E14239	AP	Cr-51	pCi	227	197	115	A
Sept 2025	E14239	AP	Co-58	pCi	79.6	79.9	100	A
Sept 2025	E14239	AP	Co-60	pCi	131	114	115	A
Sept 2025	E14239	AP	Fe-59	pCi	74.7	75	100	A
Sept 2025	E14239	AP	Mn-54	pCi	120	123	98	A

Table 24, Eckert & Ziegler Analytics Environmental Radioactivity Crosscheck Program

Sept 2025	E14239	AP	Zn-65	pCi	133	149	89	A
Sept 2025	E14337	AP	Ni-63	pCi/Total	71.4	85.1	84	A
Sept 2025	E14241	AP	Sr-89	pCi	78.2	84.2	93	A
Sept 2025	E14241	AP	Sr-90	pCi	13.7	12.2	112	A
Sept 2025	E14238	Charcoal	I-131	pCi	80.8	79	102	A
Sept 2025	E14240	Soil	Ce-141	pCi/g	0.133	0.149	89	A
Sept 2025	E14240	Soil	Cs-134	pCi/g	0.166	0.236	70	W
Sept 2025	E14240	Soil	Cs-137	pCi/g	0.22	0.276	80	A
Sept 2025	E14240	Soil	Cr-51	pCi/g	0.486	0.432	112	A
Sept 2025	E14240	Soil	Co-58	pCi/g	0.16	0.175	91	A
Sept 2025	E14240	Soil	Co-60	pCi/g	0.234	0.251	93	A
Sept 2025	E14240	Soil	Fe-59	pCi/g	0.154	0.164	94	A
Sept 2025	E14240	Soil	Mn-54	pCi/g	0.241	0.269	90	A
Sept 2025	E14240	Soil	Zn-65	pCi/g	0.308	0.326	94	A
Sept 2025	E14242	Water	Gr-A (Am-241)	pCi/L	97.2	99.7	97	A
Sept 2025	E14242	Water	Gr-B (Cs-137)	pCi/L	200	201	100	A

(a) The Analytics known value is equal to 100% of the parameter present in the standard as determined by gravimetric and/or volumetric measurements made during standard preparation. (b) Analytics evaluation based on TBE internal QC limits:

A = Acceptable - reported result falls within ratio limits of 0.80-1.20
W = Acceptable with warning - reported result falls within 0.70-0.80 or 1.20-1.30
N = Not Acceptable - reported result falls outside the ratio limits of < 0.70 and > 1.30

Attachment 4, Environmental Direct Radiation Dosimetry Results

Monitoring Location	Quarterly Baseline B_Q (mrem)	Minimum Differential Dose B_Q+5 (mrem)	Normalized Quarterly Monitoring Data, M_Q (mrem)				Quarterly Facility Dose, $F_Q = M_Q - B_Q$ (mrem)				Annual Baseline B_A (mrem)	Minimum Differential Dose B_A+10.0 (mrem)	Annual Monitoring Data, MA (mrem)	Annual Facility Dose $F_A - M_A - B_A$ (mrem)
			QTR 1	QTR 2	QTR 3	QTR 4	QTR 1	QTR 2	QTR 3	QTR 4				
A-2	12.2	17.2	10.9	11.7	11.2	11.1	ND	ND	ND	ND	48.7	58.7	44.9	ND
A-5	12.4	17.4	10.1	10.7	10.5	10.4	ND	ND	ND	ND	49.8	59.8	41.7	ND
B-1	12.9	17.9	12.3	13.4	12.9	12.8	ND	ND	ND	ND	51.6	61.6	51.4	ND
B-4	13.5	18.5	12.3	13.6	13.5	12.8	ND	ND	ND	ND	54.0	64.0	52.2	ND
C-1	9.1	14.1	8.6	8.7	9.0	8.6	ND	ND	ND	ND	36.5	46.5	34.9	ND
D-2	12.3	17.3	11.4	(2)	12.3	10.5(5)	ND	(2)	ND	ND	49.4	59.4	45.6	ND
D-5	11.8	16.8	11.7	12.3	12.4	11.8	ND	ND	ND	ND	47.3	57.3	48.2	ND
E-1	11.6	16.6	10.8	11.4	11.2	10.9	ND	ND	ND	ND	46.5	56.5	44.3	ND
E-15	10.1	15.1	9.5	10.0	10.1	9.3	ND	ND	ND	ND	40.7	50.7	38.9	ND
E-26	9.2	14.2	8.4	8.6	8.9	8.4	ND	ND	ND	ND	36.8	46.8	34.3	ND
E-5	12.7	17.7	12.0	12.5	13.1	11.9	ND	ND	ND	ND	50.9	60.9	49.5	ND
F-2	11.2	16.2	10.7	10.9	11.3	10.4	ND	ND	ND	ND	44.6	54.6	43.3	ND
F-4	13.6	18.6	12.6	13.2	13.0	13.3	ND	ND	ND	ND	54.5	64.5	52.1	ND
F-9	10.7	15.7	9.8	10.9(3)	10.0	9.7	ND	ND	ND	ND	43.0	53.0	40.4	ND
G-2	9.9	14.9	9.7	10.3	9.8	9.7	ND	ND	ND	ND	39.7	49.7	39.5	ND
G-4	10.7	15.7	10.1	10.6	10.8	10.4	ND	ND	ND	ND	42.6	52.6	41.9	ND
G-8	10.8	15.8	10.6	11.0	11.0	10.5	ND	ND	ND	ND	43.0	53.0	43.1	ND
H-2	10.5	15.5	10.2	10.4	10.6	11.5	ND	ND	ND	ND	42.2	52.2	42.7	ND
H-8	13.1	18.1	12.3	12.9	12.6	12.7	ND	ND	ND	ND	52.4	62.4	50.5	ND
J-15	10.4	15.4	8.9	9.9	9.4	9.0	ND	ND	ND	ND	41.6	51.6	37.2	ND
J-2	10.1	15.1	9.5	9.7	9.6	9.5	ND	ND	ND	ND	40.4	50.4	38.3	ND
K-1	11.2	16.2	10.3	11.3	10.9	10.7	ND	ND	ND	ND	44.6	54.6	43.2	ND
L-1	12.9	17.9	11.6	12.2	12.2	12.1	ND	ND	ND	ND	51.5	61.5	48.1	ND

Monitoring Location	Quarterly Baseline B_Q (mrem)	Minimum Differential Dose B_Q+5 (mrem)	Normalized Quarter Monitoring Data M_Q (mrem)				Quarterly Facility Dose $F_Q = M_Q - B_Q$ (mrem)				Annual Baseline B_A (mrem)	Minimum Differential Dose B_A+10.0 (mrem)	Annual Monitoring Data, MA (mrem)	Annual Facility Dose $F_A - M_A - B_A$ (mrem)
			QTR 1	QTR 2	QTR 3	QTR 4	QTR 1	QTR 2	QTR 3	QTR 4				
M-1	10.0	15.0	9.2	9.6	9.7	9.2	ND	ND	ND	ND	40.1	50.1	37.7	ND
N-1	9.6	14.6	9.5	10.4	10.4	9.6	ND	ND	ND	ND	38.5	48.5	39.9	ND
P-1	10.4	15.4	9.7	10.3	10.8	9.8	ND	ND	ND	ND	41.8	51.8	40.6	ND
P-6	13.8	18.8	13.3	13.7	13.8	13.2	ND	ND	ND	ND	55.1	65.1	54.0	ND
Q-1	12.2	17.2	11.7	12.5	12.2	11.6	ND	ND	ND	ND	48.9	58.9	48.0	ND
Q-5	11.3	16.3	11.6	12.2	12.6	11.8	ND	ND	ND	ND	45.3	55.3	48.2	ND
R-1	9.2	14.2	8.9	8.8	9.2	8.7	ND	ND	ND	ND	36.8	46.8	35.6	ND
R-6	9.7	14.7	9.5	9.8	10.0	9.8	ND	ND	ND	ND	38.6	48.6	39.1	ND

MDD_Q = Quarterly Minimum Differential Dose = 5.0 mrem
MDD_A = Annual Minimum Differential Dose = 10.0 mrem ND = Not Detected, where $M_Q \leq (B_Q + MDD_Q)$ or $M_A \leq (B_A + MDD_A)$

(2): See Table 9, Sample Deviation Summary, Comment #2
(3): See Table 9, Sample Deviation Summary, Comment #3
(5): See Table 9, Sample Deviation Summary, Comment #5

Attachment 5, Errata Data 2024 AREOR

Attachment 4, Environmental Direct Radiation Dosimetry Results

Monitoring Location	Quarterly Baseline B_Q (mrem)	Minimum Differential Dose B_Q+MDD (mrem)	Normalized Quarterly Monitoring Data M_Q (mrem)				Quarterly Facility Dose $F_Q = M_Q - B_Q$ (mrem)				Annual Baseline B_A (mrem)	Minimum Differential Dose B_A+10.0 (mrem)	Annual Monitoring Data, MA (mrem)	Annual Facility Dose, $F_A = M_A - B_A$ (mrem, or "ND" if $F_A \leq MDD_A$)
			QTR 1	QTR 2	QTR 3	QTR 4	QTR 1	QTR 2	QTR 3	QTR 4				
A-2	12.2	17.2	12.5	11.4	11.5	12.5	ND	ND	ND	ND	48.7	58.7	47.9	ND

Monitoring Location	Quarterly Baseline B_Q (mrem)	Minimum Differential Dose B_Q+MDD (mrem)	Normalized Quarterly Monitoring Data M_Q (mrem)				Quarterly Facility Dose $F_Q = M_Q - B_Q$ (mrem)				Annual Baseline B_A (mrem)	Minimum Differential Dose B_A+10.0 (mrem)	Annual Monitoring Data, MA (mrem)	Annual Facility Dose, $F_A = M_A - B_A$ (mrem, or "ND" if $F_A \leq MDD_A$)
			QTR 1	QTR 2	QTR 3	QTR 4	QTR 1	QTR 2	QTR 3	QTR 4				
M-1	10.0	15.0	9.5	9.3	8.8	10.6	ND	ND	ND	ND	40.1	50.1	38.2	ND

Attachment 2, Complete Data Table for All Analysis Results Obtained In 2024

Table 14, Quarterly Surface Water Tritium (pCi/L)

Location	Date	H-3
SWK-1 (Indicator)	03/12/2024	<5.92E+02
	06/04/2024	<5.67E+02
	08/27/2024	<5.45E+02
	11/20/2024	<5.68E+02