Constellation

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Quad Cities Nuclear Power Station, Units 1 and 2
Renewed Facility Operating License Nos. DPR-29 and DPR-30
NRC Docket Nos. 50-254 and 50-265

Subject: Annual Radiological Environmental Operating Report

Pursuant to Technical Specifications Section 5.6.2, enclosed is the 2025 Radiological Environmental Operating Report for Quad Cities Nuclear Power Station. This Report contains the results of the Radiological Environmental Monitoring Program (REMP). In addition, the 2025 Radiological Groundwater Protection Program (RGPP) Report is included at the conclusion of the Annual Radiological Environmental Operating Report.

Should you have any questions concerning this letter, please contact Blake Young at (309) 227-3200.

Respectfully,

Doug Hild
Site Vice President
Quad Cities Nuclear Power Station

Enclosure 1: Annual Radiological Environmental Operating Report

cc: Regional Administrator – NRC Region III
NRC Senior Resident Inspector – Quad Cities Nuclear Power Station

Enclosure 1

Annual Radiological Environmental Operating Report

Annual Radiological Environmental Operating Report 2025

Document Number: 50-254/50-265

TABLE OF CONTENTS

1.0 LIST OF ACRONYMS AND DEFINITIONS 3
2.0 EXECUTIVE SUMMARY 4
2.1 Summary of Conclusions: 5
3.0 INTRODUCTION 6
4.0 SITE DESCRIPTION AND SAMPLE LOCATIONS 7
5.0 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM REQUIREMENTS 8
6.0 MAPS OF COLLECTION SITE 15
7.0 REPORTING LEVELS FOR RADIOACTIVITY CONCENTRATIONS IN ENVIRONMENTAL SAMPLES 17
8.0 SAMPLING PROGRAM, PROGRAM MODIFICATION AND INTEPRETATION OF RESULTS 18
8.1 Environmental Direct Radiation Dosimetry Results 18
8.2 Air Particulate and Radioiodine Sample Results 19
8.3 Waterborne Sample Results 20
8.4 Ingestion Pathway Sample Results 21
9.0 LAND USE CENSUS 22
10.0 SAMPLE DEVIATIONS, ANOMALIES AND UNAVAILABILITY 24
11.0 OTHER SUPPLEMENTAL INFORMATION 25
11.1 NEI 07-07 Onsite Radiological Groundwater Monitoring Program 25
11.2 Independent Spent Fuel Storage Installation (ISFSI) Monitoring Program 25
11.3 Corrections to Previous Reports 25
12.0 BIBLIOGRAPHY 26

TABLES

Table 1, Radiological Environmental Sampling Program – Exposure Pathway – Direct Radiation 8
Table 2, Radiological Environmental Sampling Program – Exposure Pathway - Airborne 9
Table 3, Radiological Environmental Sampling Program – Exposure Pathway - Waterborne 10
Table 4, Radiological Environmental Sampling Program – Exposure Pathway - Ingestion 11
Table 5, REMP Sampling Locations – Direct Radiation 12
Table 6, Reporting Levels for Radioactivity Concentrations in Environmental Samples 17
Table 7, Maximum Values for the Limit of Detection 17
Table 8, Land Use Census – Nearest Receptors within 6.2 miles 23
Table 9: Sample Deviation Summary 24
Table 10, Quad Cities Data Summary Table 28
Table 11, Weekly Air Particulate Gross Beta (E-03 pCi/m^3) 33
Table 12, Quarterly Air Particulate Gamma Isotopic (E-03 pCi/m^3) 36
Table 13, Weekly Air Iodine I-131 (E-03 pCi/m^3) 39
Table 14, Monthly/Bi-Weekly Milk I-131 (pCi/L ± 2 Sigma) 42
Table 15, Monthly/Bi-Weekly Milk Gamma Isotopic (pCi/L ± 2 Sigma) 43
Table 16, Annual Food Products Gamma Isotopic (pCi/kg Wet ± 2 Sigma) 44

Table 17, Monthly Surface Water Gross Beta (pCi/L ± 2 Sigma) 45
Table 18, Monthly Surface Water Gamma Isotopic (pCi/L ± 2 Sigma) 46
Table 19, Quarterly Surface Water Tritium, Iron-55, and Nickel-63 (pCi/L ± 2 Sigma) 48
Table 20, Quarterly Ground Water Tritium (pCi/L ± 2 Sigma) 49
Table 21, Quarterly Ground Water Gamma Isotopic (pCi/L ± 2 Sigma) 50
Table 22, Semi-Annual Fish Gamma Isotopic (pCi/kg Wet ± 2 Sigma) 51
Table 23, Semi-Annual Shoreline Sediment Gamma Isotopic (pCi/kg Dry ± 2 Sigma) 52
Table 24, DOE Mixed Analyte Performance Evaluation Program (MAPEP) 55
Table 25, ERA Environmental Radioactivity Crosscheck Program 56
Table 26: Eckert & Ziegler Analytics Environmental Radioactivity Crosscheck Program 57

FIGURES

Figure 1, Potential exposure pathways to Members of the Public due to Plant Operations [7] 6
Figure 2, Map of Quad Cities REMP Sampling Locations - 2 Mile Radius, 2025 15
Figure 3, Map of Quad Cities Sampling Locations - 9.3 Mile Radius, 2025 16
Figure 4, Air Particulate: Analysis for Gross Beta, Average for All Indicator vs. Control Location 19

ATTACHMENTS

Attachment 1, Data Table Summary 28
Attachment 2, Complete Data Table for All Analysis Results Obtained In 2025 33
Attachment 3, Cross Check Intercomparison Program 53
Attachment 4, Environmental Direct Radiation Dosimetry Results 59
Attachment 5, 2024 Errata Data 63

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. ISFSI: Independent Spent Fuel Storage Installation
15. 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.

16. 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.

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

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

19. Microcurie: 3.7×10^4 disintegrations per second, or 2.22×10^6 disintegrations per minute.

20. N/A: Not Applicable

21. NEI: Nuclear Energy Institute

22. NIST: National Institute of Standards and Technology.

23. NRC: Nuclear Regulatory Commission

24. ODCM: Offsite Dose Calculation Manual

25. OSLD: Optically Stimulated Luminescence Dosimeter

26. pCi/L: picocuries / Liter

27. PWR: Pressurized Water Reactor

28. REMP: Radiological Environmental Monitoring Program

29. TLD: Thermoluminescent Dosimeter

2.0 EXECUTIVE SUMMARY

Quad Cities Nuclear Power Station Units 1 and 2 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 Quad Cities 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 specifications detailed in the Offsite Dose Calculation Manual (ODCM).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 Quad Cities for the reporting period of January 1st through December 31st, 2025. During that time period 1,469 analyses were performed on 1,359 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 Quad Cities, had no adverse radiological impact on the enviroment.

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 Quad Cities. 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 Report No. 160 [1].

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-1302 [4] [5], and the 1979 NRC Branch Technical Position [6].

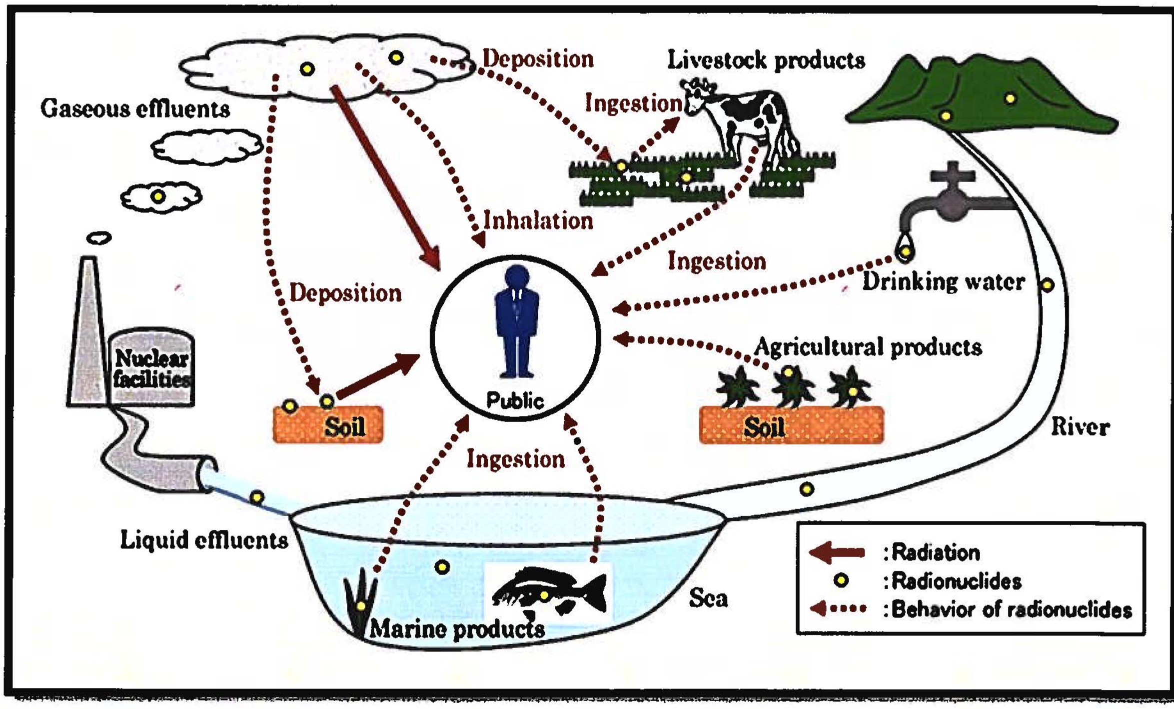


Figure 1, Potential exposure pathways to Members of the Public due to Plant Operations [7]

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 Illinois, Quad Cities 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

The Quad Cities Nuclear Power Station (QCNPS), consisting of two 2,957 MWth boiling water reactors owned and operated by Constellation Energy Corporation, is located in Cordova, Illinois along the Mississippi River. Unit No.1 went critical on 16 March 1972. Unit No. 2 went critical on 02 December 1973. The site is located in northwestern Illinois, approximately 182 miles west of Chicago, Illinois.

Quad Cities 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:

- Figure 1, Potential exposure pathways to Members of the Public due to Plant Operations
- Table 1, Radiological Environmental Sampling Program – Exposure Pathway – Direct Radiation
- Table 2, Radiological Environmental Sampling Program – Exposure Pathway - Airborne
- Table 3, Radiological Environmental Sampling Program – Exposure Pathway - Waterborne
- Table 4, Radiological Environmental Sampling Program – Exposure Pathway - Ingestion
- Table 5, REMP Sampling Locations – Direct Radiation
- Figure 2, Map of Quad Cities REMP Sampling Locations - 2 Mile Radius, 2025
- Figure 3, Map of Quad Cities Sampling Locations - 9.3 Mile Radius, 2025

5.0 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM REQUIREMENTS

Table 1, Radiological Environmental Sampling Program – Exposure Pathway – Direct Radiation

Requirement	Sample Location Description, Distance, and Direction	Sampling Collection/ Frequency	Type and Frequency of Analyses
<u>Direct Radiation</u> Seventy-two OSLD monitoring stations with two or more dosimeters placed as follows: An inner ring of stations, one in each compass sector in the general area of the site boundary. An outer ring of stations, one in each compass sector at approximately 5 miles from the site; and Special interest areas, such as population centers, nearby recreation areas, and control stations	Table 5	Quarterly	Gamma dose/Quarterly

Table 2, Radiological Environmental Sampling Program – Exposure Pathway - Airborne

Requirement	Sample Location Description, Distance, and Direction	Sampling Collection/ Frequency	Type and Frequency of Analyses
Airborne Radioiodine and Particulates Samples from 10 locations: Four locations close to the site boundary in different sectors of the highest calculated annual average ground level D/Q. Five samples from the vicinity of a community having the highest calculated annual average D/Q. One sample from Control Locations between 4 - 8 miles away in the least predominant wind direction.	Q-01 Onsite 1, 0.5 miles N Q-02 Onsite 2, 0.4 miles ENE Q-03 Onsite 3, 0.4 miles S Q-04 Nitrin, 1.7 miles NE Q-13 Princeton, 4.7 miles SW Q-16 Low Moor, 5.7 miles NNW Q-37 Meredosia Rd, 4.4 miles ENE Q-38 Fuller Rd, 4.7 miles E Q-41 Camanche Upstream, 4.3 miles NNE Q-42 LeClaire (C), 9.1 miles SSW	Continuous sampler operation with sample collection weekly	Particulate sampler: Analyze for gross beta radioactivity ≥ 24 hours following filter change weekly. Perform gamma isotopic analysis on each sample when gross beta activity is >10 times the yearly mean of control samples. Perform gamma isotopic analysis on composite sample (by location) quarterly. Radioiodine canister: I-131 analysis weekly.

Table 3, Radiological Environmental Sampling Program – Exposure Pathway - Waterborne

Requirement	Sample Location Description, Distance, and Direction	Sampling Collection/ Frequency	Type and Frequency of Analyses
Surface Water One sample upstream (control) and one sample downstream (indicator)	Q-33 Cordova, 3.1 miles SSW Q-34 Camanche(C), 4.4 miles NNE	Monthly composite sample from weekly grab samples; quarterly composite from weekly grab samples	Gamma isotopic Monthly Gross beta Monthly H-3 Quarterly Fe-55 Quarterly Ni-63 Quarterly
Groundwater Two indicator location down gradient from the plant.	Q-35 McMillan Well, 1.5 miles S Q-36 Cordova Well, 3.3 miles SSW	Quarterly grab samples	Gamma isotopic Quarterly H-3 Quarterly
Sediment from Shoreline One sample upstream (control) and one sample downstream (indicator)	Q-39 Cordova on Mississippi River, 0.8 miles SSW Q-40 North of Albany on Mississippi River(C),8.9 miles NE	Semiannual grab samples	Gamma isotopic Semiannually

Table 4, Radiological Environmental Sampling Program – Exposure Pathway - Ingestion

Requirement	**Sample Location Description, Distance, and Direction**	**Sampling Collection/ Frequency**	**Type and Frequency of Analyses**
Milk One sample from milking animals in three locations within 5km distance having the highest dose potential. If there are none, then one sample from milking animals in each of three areas between 5 to 8 km distant where doses are calculated to be greater than 1 mrem per yr.	Q-26 Bill Stanley Dairy 3.5 miles ESE	Biweekly when animals are on pasture; monthly at other times	Gamma isotopic and I-131 Biweekly when animals are on pasture; monthly at other times.
Fish One sample of each commercially and recreationally important species in vicinity of site discharge. One sample of same species in areas not influenced by plant discharge	Q-24 Pool #14 Mississippi River, 0.5 miles SW Q-29 Mississippi River (C), 1.0 miles N	Semiannually	Gamma isotopic analysis on edible portions, each sample
Food Products Five locations producing vegetables from areas irrigated by water in which liquid plant wastes have been discharged and one sample collected from a control location.	Quadrant 1 Ken DeBaille 2.3 miles ENE Quadrant 2 Kent Wirth 3.0 miles ESE Quadrant 3 Amy Johnston 1.8 miles S Quadrant 4 James Fawcett 4.5 miles NW Control Kenneth Roeder 9.5 miles NE	Annually	Gamma isotopic, each sample

Table 5, REMP Sampling Locations – Direct Radiation

Site #	Location Type	Sector	Distance	Description
Q-01-1	Special Interest	N	0.5 miles	Onsite 1
Q-02-1	Special Interest	ENE	0.4 miles	Onsite 2
Q-03-1	Special Interest	S	0.4 miles	Onsite 3
Q-04-1	Special Interest	NE	1.7 miles	Nitrin
Q-13-1	Special Interest	SW	4.7 miles	Princeton
Q-16-1	Special Interest	NNW	5.7 miles	Low Moor
Q-37-1	Special Interest	ENE	4.4 miles	Meredosia
Q-38-1	Special Interest	E	4.7 miles	Fuller Road
Q-41-1	Special Interest	NNE	4.3 miles	Camanche
Q-42	Control	SSW	9.1 miles	LeClaire
Q-101-1	Inner Ring	N	0.6 miles	
Q-101-2	Inner Ring	N	0.9 miles	
Q-102-1	Inner Ring	NNE	1.3 miles	
Q-102-3	Inner Ring	NNE	1.4 miles	
Q-103-1	Inner Ring	NE	1.2 miles	
Q-103-2	Inner Ring	NE	1.2 miles	
Q-104-1	Inner Ring	ENE	1.1 miles	
Q-104-2	Inner Ring	ENE	0.9 miles	
Q-105-1	Inner Ring	E	0.8 miles	
Q-105-2	Inner Ring	E	0.8 miles	
Q-106-2	Inner Ring	ESE	0.7 miles	
Q-106-3	Inner Ring	ESE	0.7 miles	
Q-107-2	Inner Ring	SE	0.7 miles	
Q-107-3	Inner Ring	SE	0.8 miles	
Q-108-1	Inner Ring	SSE	1.0 miles	
Q-108-2	Inner Ring	SSE	0.9 miles	
Q-109-1	Inner Ring	S	0.9 miles	

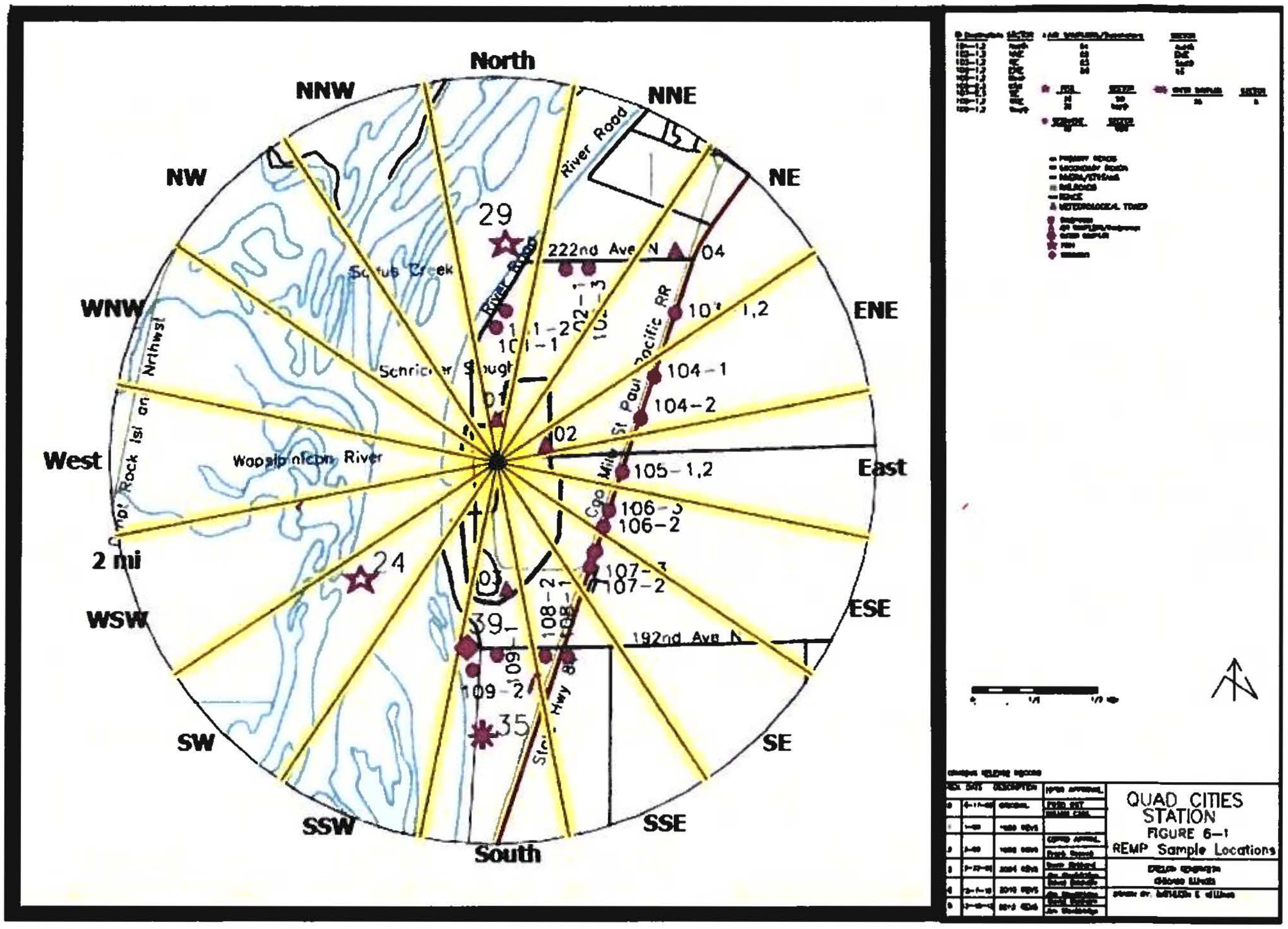
Table 5, REMP Sampling Locations – Direct Radiation

Site #	Location Type	Sector	Distance	Description
Q-109-2	Inner Ring	S	1.2 miles	
Q-111-1	Inner Ring	SW	2.6 miles	
Q-111-2	Inner Ring	SW	2.5 miles	
Q-112-1	Inner Ring	WSW	2.5 miles	
Q-112-2	Inner Ring	WSW	2.2 miles	
Q-113-1	Inner Ring	W	2.5 miles	
Q-113-2	Inner Ring	W	2.5 miles	
Q-114-1	Inner Ring	WNW	2.1 miles	
Q-114-2	Inner Ring	WNW	2.5 miles	
Q-115-1	Inner Ring	NW	2.6 miles	
Q-115-2	Inner Ring	NW	2.3 miles	
Q-116-1	Inner Ring	NNW	2.3 miles	
Q-116-3	Inner Ring	NNW	2.4 miles	
Q-201-1	Outer Ring	N	4.2 miles	
Q-201-2	Outer Ring	NNE	4.2 miles	
Q-202-1	Outer Ring	NNE	4.4 miles	
Q-202-2	Outer Ring	NNE	4.8 miles	
Q-203-1	Outer Ring	NE	4.7 miles	
Q-203-2	Outer Ring	NE	5.0 miles	
Q-204-1	Outer Ring	ENE	4.7 miles	
Q-204-2	Outer Ring	ENE	4.5 miles	
Q-205-1	Outer Ring	E	4.7 miles	
Q-205-4	Outer Ring	E	4.8 miles	
Q-206-1	Outer Ring	ESE	4.8 miles	
Q-206-2	Outer Ring	ESE	4.8 miles	
Q-207-1	Outer Ring	SE	4.7 miles	
Q-207-4	Outer Ring	SE	4.7 miles	

Table 5, REMP Sampling Locations – Direct Radiation

Site #	Location Type	Sector	Distance	Description
Q-208-1	Outer Ring	SSE	4.3 miles	
Q-208-2	Outer Ring	SSE	4.9 miles	
Q-209-1	Outer Ring	S	4.7 miles	
Q-209-4	Outer Ring	S	4.7 miles	
Q-210-1	Outer Ring	SSW	4.1 miles	
Q-210-5	Outer Ring	SSW	3.3 miles	
Q-211-1	Outer Ring	SW	4.5 miles	
Q-211-2	Outer Ring	SW	4.5 miles	
Q-212-1	Outer Ring	WSW	4.9 miles	
Q-212-2	Outer Ring	WSW	4.4 miles	
Q-213-1	Outer Ring	W	4.3 miles	
Q-213-2	Outer Ring	W	4.8 miles	
Q-214-1	Outer Ring	WNW	4.7 miles	
Q-214-2	Outer Ring	WNW	4.4 miles	
Q-215-1	Outer Ring	NW	5.0 miles	
Q-215-2	Outer Ring	NW	4.2 miles	
Q-216-1	Outer Ring	NNW	4.6 miles	
Q-216-2	Outer Ring	NNW	4.3 miles	

6.0 MAPS OF COLLECTION SITE



NOTE: All dosimeter locations contain two dosimeters, ex. numbering convention 102-1 / 102-1A

Figure 2, Map of Quad Cities REMP Sampling Locations - 2 Mile Radius, 2025

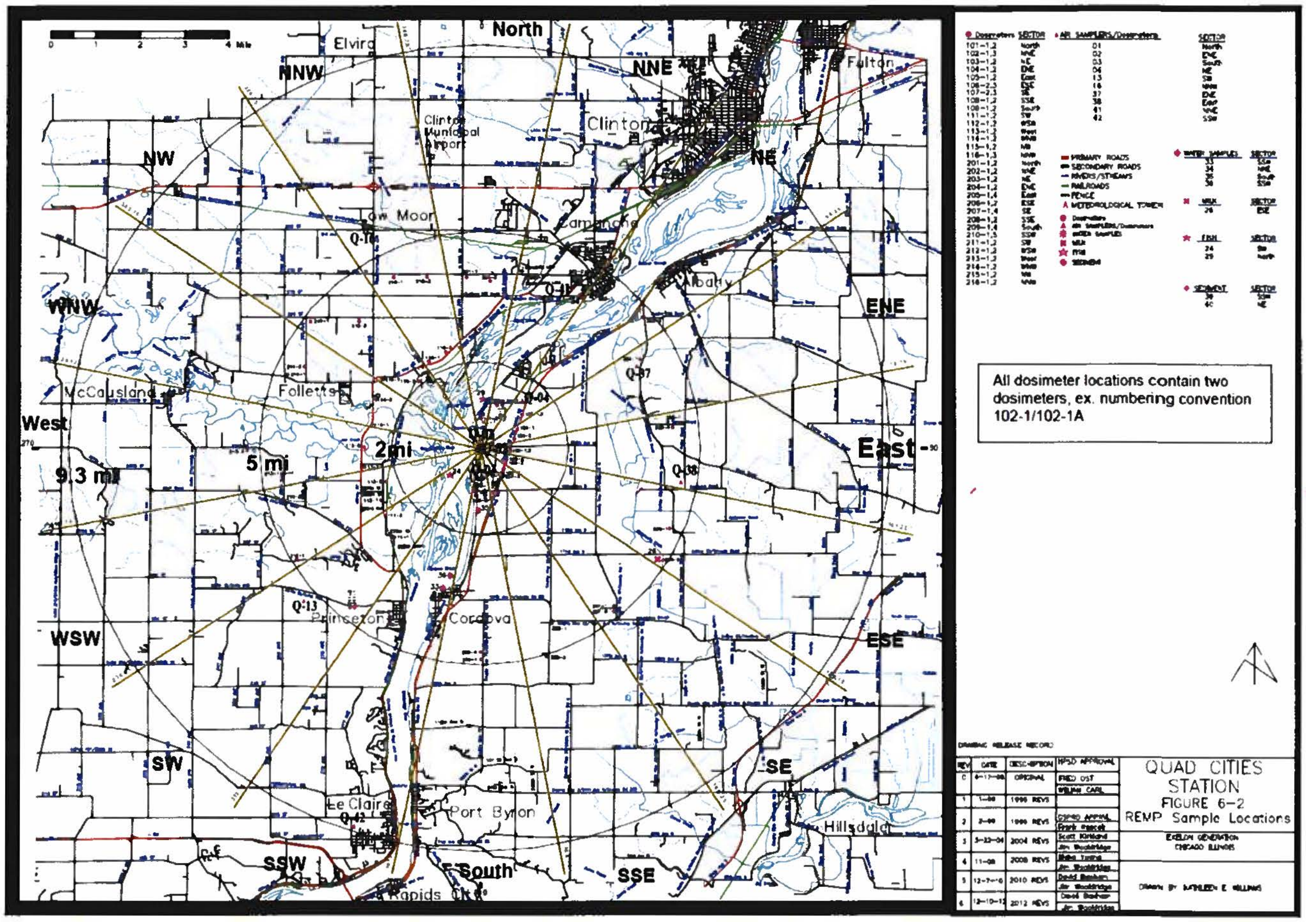


Figure 3, Map of Quad Cities Sampling Locations - 9.3 Mile Radius, 2025

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/kg-wet)	Milk (pCi/L)	Food Products (pCi/Kg-wet)
H-3	20,000 (1)	NA	NA	NA	NA
Mn-54	1,000	NA	30,000	NA	NA
Fe-59	400	NA	10,000	NA	NA
Co-58	1,000	NA	30,000	NA	NA
Co-60	300	NA	10,000	NA	NA
Zn-65	300	NA	20,000	NA	NA
Zr-Nb-95	400	NA	NA	NA	NA
I-131	2 (2)	0.9	NA	3	100
Cs-134	30	10	1,000	60	1,000
Cs-137	50	20	2,000	70	2,000
Ba-La-140	200	NA	NA	300	NA

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	0.01	NA	NA	NA	NA
H-3	2,000	NA	NA	NA	NA	NA
Mn-54	15	NA	130	NA	NA	NA
Fe-59	30	NA	260	NA	NA	NA
Co-58, Co-60	15	NA	130	NA	NA	NA
Zn-65	30	NA	260	NA	NA	NA
Zr-95	30	NA	NA	NA	NA	NA
Nb-95	15	NA	NA	NA	NA	NA
I-131	1 (3)	0.07	NA	1	60	NA
Cs-134	15	0.05	130	15	60	150
Cs-137	18	0.06	150	18	80	180
Ba-140	60	NA	NA	60	NA	NA
La-140	15	NA	NA	15	NA	NA

[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 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, Cs-137 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, and food products 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 91-day quarters. Data is treated and analyzed consistent with ANSI/HPS N13.37-2014, 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 72 locations were monitored and data analyzed in accordance with the requirements in Attachment 4, Environmental Direct Radiation Dosimetry Results, provides the annual direct radiation dosimetry analysis.

There was no direct radiation dose detected from the facility. All TLD/OSLD measurements were analyzed, and none were found to have radiation levels that had increased over normal background radiation levels.

8.2 Air Particulate and Radioiodine Sample Results

Air particulate filters and charcoal canisters were collected from locations specified in Table 2, Radiological Environmental Sampling Program – Exposure Pathway - Airborne. During the calendar year 2025, a total of 498 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 weekly. Gamma isotopic analysis is also performed on the samples collected at each location and is analyzed quarterly. Naturally occurring beryllium-7 was detected on all the control and indicator samples at concentrations consistent with previous years. Radioiodine (I-131) analysis is performed weekly on radioiodine sample cartridges.

All gross beta analyses of air particulate filters detected gross beta activity at levels consistent with previous years. All air particulate quarterly gamma composite samples were below the detection limit except for naturally occurring radionuclides.

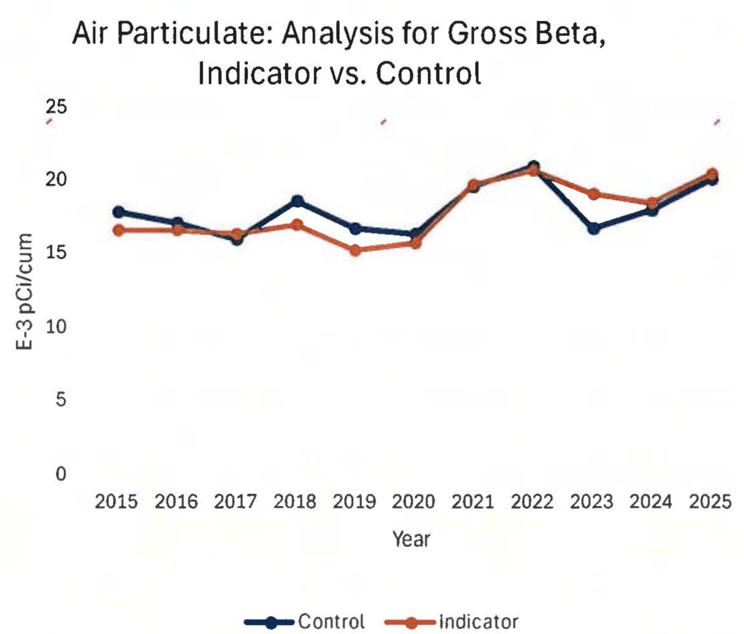


Figure 4, Air Particulate: Analysis for Gross Beta, Average for All Indicator vs. Control Location

Air particulate and radioiodine results from this monitoring period, 2025, were compared to 10-year average as shown in Figure 4, and there were no significant changes.

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 24 surface water samples were collected and analyzed in accordance with the requirements in the ODCM and shown in Table 3, Radiological Environmental Sampling Program – Exposure Pathway - Waterborne. Gross Beta was detected in 16 of the 22 samples with a range of 3 to 7 pCi/L. The required LLD for Gross Beta was met for all samples. Samples from both locations were analyzed for gamma-emitting nuclides. No nuclides were detected and all required LLDs were met. Tritium concentrations in surface water were well below the EPA tritium drinking water limit of 20,000 pCi/L There has been no detectable tritium in any surface water samples in 2025 or the previous 10 years. Therefore, no trend has been established above the detection limit to plot on a trending graph.

8.3.2 REMP Groundwater

Groundwater samples were collected from control location upgradient from the plant and indicator location down gradient from the plant. During the calendar year 2025, a total of 8 groundwater samples were collected from offsite monitoring wells and analyzed in accordance with the requirements in the ODCM and shown in Table 3: Radiological Environmental Sampling Program – Exposure Pathway - Waterborne. A total of 4 indicator samples were collected. These samples were analyzed for tritium and gamma quarterly. All groundwater samples were collected in new containers, which were rinsed with source water prior to collection.

Samples from all locations were analyzed for gamma-emitting nuclides. No nuclides were detected and all required LLDs were met. Tritium concentrations in groundwater were well below the EPA tritium drinking water limit of 20,000 pCi/L. There has been no detectable tritium in any REMP groundwater samples in 2025 or the previous 10 years. Therefore, no trend has been established above the detection limit to plot on a trending graph.

8.3.3 Sediment from Shoreline

Shoreline sediment collections were made in May and October of 2025 and analyzed for gamma-emitting isotopes. Samples are collected at both indicator and control locations. A total of 4 shoreline samples were analyzed in accordance with requirements in the ODCM and shown in Table 3, Radiological Environmental Sampling Program – Exposure Pathway - Waterborne

No nuclides potentially associated with Quad Cities were detected and all required LLDs were met.

8.4 Ingestion Pathway Sample Results

8.4.1 Milk

Milk samples from milking animals were collected at 1 location within 5 km having the highest dose potential. Samples were collected January-December. Samples were analyzed for gamma-emitting isotopes and I-131(Low Level).

No nuclides potentially associated with Quad Cities were detected and all required LLDs were met.

8.4.2 Fish

A total of 8 fish samples were collected in 2025. These samples were analyzed for gamma emitting radionuclides in edible portions, in accordance with requirements of the ODCM and summarized in Table 4, Radiological Environmental Sampling Program – Exposure Pathway - Ingestion. These samples are collected from the indicator and control areas as required by the ODCM.

Naturally occurring potassium-40 was identified in all fish samples with concentrations consistent with previous years.

8.4.3 Food Products

A total of 10 food product type samples were analyzed in 2025, for gamma emitting radionuclides in accordance with requirements of the ODCM, as summarized in Table 4, Radiological Environmental Sampling Program – Exposure Pathway - Ingestion.

Naturally occurring potassium-40 was identified in all food products from indicator and control locations with concentrations consistent with previous years.

9.0 LAND USE CENSUS

An annual 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]. NUREG-1302 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-1302, Broad leaf vegetation sampling of at least 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.

A Land Use Census was conducted during the calendar year, 2025, within the growing season to identify changes in land use, receptor locations, and new exposure pathways. The results for the 2025 Land Use Census are listed in Table 8, Land Use Census – Nearest Receptors within 6.2 miles. In summary, the highest D/Q locations for nearest garden, nearest residence and nearest milk animal did not change following the 2025 census.

Table 8, Land Use Census – Nearest Receptors within 6.2 miles

Sector	Direction	Nearest Residence	Distance (Miles)	Nearest Milk Animal	Distance (Miles)	Livestock	Distance (Miles)
A	N	21116 River Road North, Cordova, IL	0.60				
B	NNE	Sandy Gustafson, 21918 River Road N., Cordova, IL	1.20			Hwy 67 and 37th Ave., Comanche, IA	3.1
C	NE	21421 Hwy 84, Cordova, IL	1.30			Bernard Gabriel, 12010 Meredosia Road, Albany, IL	3.2
D	ENE	Ken Debaille, 21404 266th Street North	2.90			Debaille, 21404 266th Street, Cordova, IL	2.9
E	E	Neumiller, 25432 206th Ave, Cordova, IL	2.00			9317 Fuller Road, Albany, IL	5.5
F	ESE	Jack Ward, 19323 266th Street, Cordova, IL	2.80	Bill Stanley Dairy, 18326 266th Street North, Cordova, IL	3.1	Stanley, 18326 266th Street North, Cordova, IL	3.1
G	SE	18129 250th Street, Cordova, IL	1.70			Werner, 136 Ave. North and 277th St., Cordova, IL	5.3
H	SSE	C & J Morales, 18909 Rt. 84, Cordova, IL	1.10	Julie Depauw, 27004 122nd Avenue, Port Byron, IL	6.6	Near 14225 256th St., 1 mile West from 207-2 on 150th Ave./Hwy N	4.5
J	S	Sonny Moorhusen, 18920 River Road, Cordova, IL	0.8				
K	SSW	Robert VanHorreweghe, 711 N. Main, Cordova, IL	3.20			200 yards from "L" location; Intersection of 285th and Hwy. 67	3.5
L	SW	26545 283rd Ave., Princeton, IA	2.90			285th Ave. and Hwy 67, Princeton, IA; West of intersection	3.3
M	WSW	28202 283rd Ave., Princeton, IA	2.20			27840 Hwy 67; Near 280th Street	2.7
N	W	Annette Hamilton, 28439 Great River Road, Hwy 67, Princeton, IA	2.60			290th Street and 260th Ave., Princeton, IA.	4.3
P	WNW	2971 Hwy 67, Camanche, IA	2.70			Fawcett, 3697 292nd Street, Comanche, IA	3.8
Q	NW	2913 Hwy 67, Camanche, IA	2.60			365th Ave. between 292nd Street and 280th Street	4.7
R	NNW	3930 291st Street, Camanche, IA	2.10			Lorenzen, 2882 and 2884 Hwy 67, Comanche, IA	2.2

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

Sample Type and Analysis	Location	Collection Date or Period	Reason for not conducting REMP sampling as required by ODCM
SW	Q-33	1/3/2025 – 2/21/2025	No sample; river frozen
SW	Q-34	1/3/2025 – 2/21/2025	No sample; river frozen
Sampler	Q-37	2/21/2025	Pump motor burned right after exchange. Old pump 775 reinstalled as a temporary solution. Note: the temporary pump was exchanged on 02/28/2025
AP/AI	Q-04	3/7/2025	The pump stopped working after 92.1 hours. Station informed
AP/AI	Q-04	3/14/2025 – 8/1/2025	No samples due to a power outage at the station
OSLD	Q-209-1A	2nd Qtr. 2025	OSLD missing, possibly dislodged by strong winds. Premise searched and was unsuccessful
Field Check Log	Q-04	4/4/2025	Field check log missing, possibly blown by the wind during the cage repair/inspection. Log replaced.
AP/AI	Q-38	5/30/2025	Hose found disconnected due to vibrations; hose reattached, AP filter appears pale
AP/AI	Q-01	6/20/2025	Timer broke down, run time calculated; new replacement timer broke down, new timers ordered
AP/AI	Q-01	6/26/2025	Run time calculated, new timer installed
OSLD	Q-201-1/1A	3rd Qtr. 2025	OSLDs missing, possibly discarded during road works in the area
AP/AI	Q-03	7/24/2025	Unable to collect samples due to extensive pavement surface works. Samples collected after two weeks run on 08/01/2025
AP/AI	Q-04	8/9/2025	The timer indicates 72.5 hours due to the recent power restoration on 08/06/2025
OSLD	Q-216-1/1A	4th Qtr. 2025	OSLD missing, possibly dislodged by strong winds. Premise searched and was unsuccessful
OSLD	Q-113-2A	4th Qtr. 2025	OSLD accidentally dropped from the bridge into river
SW	Q-33	12/5/2025 – 12/19/2025	No sample; river frozen
SW	Q-34	12/5/2025 – 12/19/2025	No sample; river frozen

11.0 OTHER SUPPLEMENTAL INFORMATION

11.1 NEI 07-07 Onsite Radiological Groundwater Monitoring Program

Quad Cities Nuclear Power Station Units 1 and 2 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 AREOR.

11.2 Independent Spent Fuel Storage Installation (ISFSI) Monitoring Program

Quad Cities commenced use of an independent Spent Fuel Storage Installation (ISFSI) in December 2005. There are no measurable changes in ambient gamma radiation levels as a result of ISFSI operations.

11.3 Corrections to Previous Reports

A correction was made on the 2024 AREOR for Table 12, Quarterly Air particulate Gamma isotopic. The units were listed incorrectly as pCi/m^3, when the units should have been E-03 pCi/m^3.

A correction was made to the 2024 AREOR for Figure 4, Air Particulate: Analysis for Gross Beta, Average for All Indicator vs. Control Location. The averages were inadvertently calculated including the 2-sigma uncertainty value and the result, when the average should have only be calculated using the Gross beta result

Attachment 5, 2024 Errata Data, provides the table and figure where the corrections have been made.

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Attachment 1, Data Table Summary

Table 10, Quad Cities Data Summary Table

Medium or Pathway Sampled (Units)	Type, Total Number of Analyses performed (e.g., I-131, 400)		Lower Limit of Detection (LLD)	Indicator Mean[5]; (f[6]). Range[5]	Location with Highest Annual Mean		Control Mean[5] (f[6]). Range[5]	Number of Nonroutine Reported Measurements
					Name Distance and Direction	Mean[5] (f[6]) Range[5]		
Air Particulates (E-03 pCi/m³)	Gross Beta, 498		10	20.4 (393/394) (4.2/61.8)	Q-04 Indicator NITRIN 1.7 MILES NE	22.2 (31/31) (10.5/50.8)	20 (104/104) (4.6/59.7)	0
	Gamma, 39	Mn-54	N/A	< LLD	< LLD	< LLD	< LLD	0
		Co-58	N/A	< LLD	< LLD	< LLD	< LLD	0
		Fe-59	N/A	< LLD	< LLD	< LLD	< LLD	0
		Co-60	N/A	< LLD	< LLD	< LLD	< LLD	0
		Zn-65	N/A	< LLD	< LLD	< LLD	< LLD	0
		Nb-95	N/A	< LLD	< LLD	< LLD	< LLD	0
		Zr-95	N/A	< LLD	< LLD	< LLD	< LLD	0
		I-131	N/A	< LLD	< LLD	< LLD	< LLD	0
		Cs-134	50	< LLD	< LLD	< LLD	< LLD	0
		Cs-137	60	< LLD	< LLD	< LLD	< LLD	0
		Ba-140	N/A	< LLD	< LLD	< LLD	< LLD	0
		La-140	N/A	< LLD	< LLD	< LLD	< LLD	0
Airborne Radioiodine (E-03 pCi/m³)	Gamma, 498 I-131		70	< LLD	< LLD	< LLD	N/A	0
Direct Radiation (mrem/qtr.)	Gamma Dose, 290		N/A	13.2 (286/286) (7.9/18.1)	Q-42 Control LECLAIRE 8.7 MILES SSW	17.3 (4/4) (16.3/18)	17.3 (4/4) (16.3/18)	0

[5] Mean and range are based on detectable measurements only.

[6] Fraction are based on detectable measurements at specified locations is indicated in parentheses

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Medium or Pathway Sampled (Units)	Type, Total Number of Analyses performed (e.g., I-131, 400)		Lower Limit of Detection (LLD)	Indicator Mean[5]; (f[6]). Range[5]	Location with Highest Annual Mean		Control Mean[5] (f[6]). Range[5]	Number of Nonroutine Reported Measurements
					Name Distance and Direction	Mean[5] (f[6]) Range[5]		
Milk (pCi/L)	I-131(Low Level), 19		1	< LLD	< LLD	< LLD	N/A	0
	Gamma, 19	Mn-54	N/A	< LLD	< LLD	< LLD	N/A	0
		Co-58	N/A	< LLD	< LLD	< LLD	N/A	0
		Fe-59	N/A	< LLD	< LLD	< LLD	N/A	0
		Co-60	N/A	< LLD	< LLD	< LLD	N/A	0
		Zn-65	N/A	< LLD	< LLD	< LLD	N/A	0
		Nb-95	N/A	< LLD	< LLD	< LLD	N/A	0
		Zr-95	N/A	< LLD	< LLD	< LLD	N/A	0
		Cs-134	15	< LLD	< LLD	< LLD	N/A	0
		Cs-137	18	< LLD	< LLD	< LLD	N/A	0
		Ba-140	60	< LLD	< LLD	< LLD	N/A	0
		La-140	15	< LLD	< LLD	< LLD	N/A	0
Food Products (pCi/kg Wet)	Gamma, 10	Mn-54	N/A	< LLD	< LLD	< LLD	< LLD	0
		Co-58	N/A	< LLD	< LLD	< LLD	< LLD	0
		Fe-59	N/A	< LLD	< LLD	< LLD	< LLD	0
		Co-60	N/A	< LLD	< LLD	< LLD	< LLD	0
		Zn-65	N/A	< LLD	< LLD	< LLD	< LLD	0
		Nb-95	N/A	< LLD	< LLD	< LLD	< LLD	0
		Zr-95	N/A	< LLD	< LLD	< LLD	< LLD	0
		I-131	60	< LLD	< LLD	< LLD	< LLD	0
		Cs-134	60	< LLD	< LLD	< LLD	< LLD	0
		Cs-137	80	< LLD	< LLD	< LLD	< LLD	0
		Ba-140	N/A	< LLD	< LLD	< LLD	< LLD	0
		La-140	N/A	< LLD	< LLD	< LLD	< LLD	0

[5] Mean and range are based on detectable measurements only.
[6] Fraction are based on detectable measurements at specified locations is indicated in parentheses

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Table 10: Quad Cities Data Summary Table

Medium or Pathway Sampled (Units)	Type, Total Number of Analyses performed (e.g., I-131, 400)		Lower Limit of Detection (LLD)	Indicator Mean[5]; (f[6]). Range[5]	Location with Highest Annual Mean: Name Distance and Direction	Location with Highest Annual Mean: Mean[5] (f[6]) Range[5]	Control Mean[5] (f[6]). Range[5]	Number of Nonroutine Reported Measurements
Surface Water (pCi/L)	Gross Beta, 22		4	5.1 (6/11) (3.4/6.7)	Q-33 Indicator Cordova 3.1 miles SSW	5.1 (6/11) (3.4/6.7)	5 (10/11) (3.5/6.8)	0
	H-3, 8		2000	< LLD	< LLD	< LLD	< LLD	0
	Fe-55, 8		200	< LLD	< LLD	< LLD	< LLD	0
	Ni-63, 8		5	< LLD	< LLD	< LLD	< LLD	0
	Gamma, 22	Mn-54	15	< LLD	< LLD	< LLD	< LLD	0
		Co-58	15	< LLD	< LLD	< LLD	< LLD	0
		Fe-59	30	< LLD	< LLD	< LLD	< LLD	0
		Co-60	15	< LLD	< LLD	< LLD	< LLD	0
		Zn-65	30	< LLD	< LLD	< LLD	< LLD	0
		Nb-95	15	< LLD	< LLD	< LLD	< LLD	0
		Zr-95	30	< LLD	< LLD	< LLD	< LLD	0
		I-131	1[4]	< LLD	< LLD	< LLD	< LLD	0
		Cs-134	15	< LLD	< LLD	< LLD	< LLD	0
		Cs-137	18	< LLD	< LLD	< LLD	< LLD	0
		Ba-140	60	< LLD	< LLD	< LLD	< LLD	0
		La-140	15	< LLD	< LLD	< LLD	< LLD	0

[4] If no drinking water pathway exists, a value of 15 pCi/l may be used
[5] Mean and range are based on detectable measurements only.
[6] Fraction are based on detectable measurements at specified locations is indicated in parentheses

Attachment 1, Data Table Summary

Table 10: Quad Cities Data Summary Table

Medium or Pathway Sampled (Units)	Type, Total Number of Analyses performed (e.g., I-131, 400)		Lower Limit of Detection (LLD)	Indicator Mean[5]; (f[6]). Range[5]	Location with Highest Annual Mean		Control Mean[5] (f[6]). Range[5]	Number of Nonroutine Reported Measurements
					Name Distance and Direction	Mean[5] (f[6]) Range[5]		
Ground Water (pCi/L)	H-3, 8		2000	< LLD	< LLD	< LLD	N/A	0
	Gamma, 8	Mn-54	15	< LLD	< LLD	< LLD	N/A	0
		Co-58	15	< LLD	< LLD	< LLD	N/A	0
		Fe-59	30	< LLD	< LLD	< LLD	N/A	0
		Co-60	15	< LLD	< LLD	< LLD	N/A	0
		Zn-65	30	< LLD	< LLD	< LLD	N/A	0
		Nb-95	15	< LLD	< LLD	< LLD	N/A	0
		Zr-95	30	< LLD	< LLD	< LLD	N/A	0
		I-131	1[4]	< LLD	< LLD	< LLD	N/A	0
		Cs-134	15	< LLD	< LLD	< LLD	N/A	0
		Cs-137	18	< LLD	< LLD	< LLD	N/A	0
		Ba-140	60	< LLD	< LLD	< LLD	N/A	0
		La-140	15	< LLD	< LLD	< LLD	N/A	0

[4] If no drinking water pathway exists, a value of 15 pCi/l may be used
[5] Mean and range are based on detectable measurements only.
[6] Fraction are based on detectable measurements at specified locations is indicated in parentheses

Attachment 1, Data Table Summary

Table 10: Quad Cities Data Summary Table

Medium or Pathway Sampled (Units)	Type, Total Number of Analyses performed (e.g., I-131, 400)		Lower Limit of Detection (LLD)	Indicator Mean[5]; (f[6]). Range[5]	Location with Highest Annual Mean: Name Distance and Direction	Location with Highest Annual Mean: Mean[5] (f[6]) Range[5]	Control Mean[5] (f[6]). Range[5]	Number of Nonroutine Reported Measurements
Fish (pCi/kg Wet)	Gamma, 8	Mn-54	130	< LLD	< LLD	< LLD	< LLD	0
		Co-58	130	< LLD	< LLD	< LLD	< LLD	0
		Fe-59	260	< LLD	< LLD	< LLD	< LLD	0
		Co-60	130	< LLD	< LLD	< LLD	< LLD	0
		Zn-65	260	< LLD	< LLD	< LLD	< LLD	0
		Nb-95	N/A	< LLD	< LLD	< LLD	< LLD	0
		Zr-95	N/A	< LLD	< LLD	< LLD	< LLD	0
		Cs-134	130	< LLD	< LLD	< LLD	< LLD	0
		Cs-137	150	< LLD	< LLD	< LLD	< LLD	0
		Ba-140	N/A	< LLD	< LLD	< LLD	< LLD	0
		La-140	N/A	< LLD	< LLD	< LLD	< LLD	0
Sediment (pCi/kg Dry)	Gamma, 4	Mn-54	N/A	< LLD	< LLD	< LLD	< LLD	0
		Co-58	N/A	< LLD	< LLD	< LLD	< LLD	0
		Fe-59	N/A	< LLD	< LLD	< LLD	< LLD	0
		Co-60	N/A	< LLD	< LLD	< LLD	< LLD	0
		Zn-65	N/A	< LLD	< LLD	< LLD	< LLD	0
		Nb-95	N/A	< LLD	< LLD	< LLD	< LLD	0
		Zr-95	N/A	< LLD	< LLD	< LLD	< LLD	0
		Cs-134	150	< LLD	< LLD	< LLD	< LLD	0
		Cs-137	180	< LLD	< LLD	< LLD	< LLD	0
		Ba-140	N/A	< LLD	< LLD	< LLD	< LLD	0
		La-140	N/A	< LLD	< LLD	< LLD	< LLD	0

[5] Mean and range are based on detectable measurements only.
[6] Fraction are based on detectable measurements at specified locations is indicated in parentheses

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

Note: Throughout Attachment 2, bold data entries are for the reported concentration

Table 11, Weekly Air Particulate Gross Beta (E-03 pCi/m^3)

Collection Date	Q-01	Q-02	Q-03	Q-04	Q-13	Q-16	Q-37	Q-38	Q-41	Q-42
01/10/2025	**25** ± 4	**21** ± 4	**14** ± 4	**24** ± 5	**22** ± 4	**25** ± 5	**22** ± 4	**21** ± 4	**23** ± 4	**30** ± 5
01/18/2025	**18** ± 4	**22** ± 4	**21** ± 4	**19** ± 4	**20** ± 4	**21** ± 4	**20** ± 4	**24** ± 4	**13** ± 3	**20** ± 4
01/24/2025	**24** ± 5	**19** ± 5	**24** ± 5	**22** ± 5	**21** ± 5	**24** ± 5	**24** ± 5	**30** ± 5	**22** ± 5	**26** ± 5
01/31/2025	**16** ± 4	**20** ± 4	**24** ± 5	**23** ± 5	**21** ± 4	**16** ± 4	**18** ± 4	**24** ± 5	**16** ± 4	**22** ± 5
02/07/2025	**25** ± 4	**19** ± 4	**21** ± 4	**20** ± 4	**11** ± 3	**20** ± 4	**22** ± 4	**21** ± 4	**18** ± 4	**22** ± 4
02/14/2025	**21** ± 4	**23** ± 4	**27** ± 5	**25** ± 5	**26** ± 5	**26** ± 5	**24** ± 4	**28** ± 5	**27** ± 5	**26** ± 5
02/21/2025	**17** ± 4	**22** ± 4	**16** ± 4	**20** ± 4	**21** ± 4	**23** ± 5	**21** ± 4	**23** ± 4	**16** ± 4	**22** ± 4
02/28/2025	**18** ± 4	**20** ± 4	**18** ± 4	**21** ± 4	**18** ± 4	**24** ± 5	**18** ± 4	**24** ± 4	**19** ± 4	**19** ± 4
03/07/2025	**9** ± 4	**13** ± 4	**14** ± 4	**19** ± 7	**31** ± 5	**14** ± 4	**14** ± 4	**16** ± 4	**19** ± 4	**13** ± 4
03/14/2025	**14** ± 4	**14** ± 4	**16** ± 4	*(1)*	**41** ± 6	**17** ± 5	**17** ± 4	**17** ± 4	**16** ± 5	**16** ± 4
03/21/2025	**10** ± 4	**12** ± 4	**10** ± 4	*(1)*	**10** ± 4	**11** ± 4	**13** ± 4	**15** ± 4	**15** ± 4	**10** ± 4
03/28/2025	**14** ± 4	**15** ± 4	**15** ± 4	*(1)*	**16** ± 4	**16** ± 4	**19** ± 4	**20** ± 4	**17** ± 4	**16** ± 4
04/04/2025	**15** ± 4	**12** ± 3	**10** ± 3	*(1)*	**9** ± 3	**13** ± 3	**5** ± 3	**18** ± 4	**9** ± 3	**10** ± 3
04/11/2025	**17** ± 4	**14** ± 4	**16** ± 4	*(1)*	**12** ± 3	**19** ± 4	**17** ± 4	**19** ± 4	**18** ± 4	**16** ± 4
04/18/2025	**18** ± 4	**14** ± 4	**15** ± 4	*(1)*	**14** ± 4	**19** ± 4	**17** ± 4	**19** ± 4	**16** ± 4	**17** ± 4
04/25/2025	**19** ± 4	**19** ± 4	**15** ± 4	*(1)*	**14** ± 4	**18** ± 4	**14** ± 4	**20** ± 4	**17** ± 4	**12** ± 3
05/02/2025	**13** ± 4	**10** ± 4	**9** ± 4	*(1)*	**11** ± 4	**13** ± 4	**12** ± 4	**10** ± 4	**12** ± 4	**12** ± 4
05/09/2025	**8** ± 4	**7** ± 3	**11** ± 4	*(1)*	**9** ± 4	**11** ± 4	**9** ± 4	**8** ± 4	**9** ± 4	**11** ± 4
05/16/2025	**15** ± 4	**18** ± 4	**13** ± 4	*(1)*	**15** ± 4	**17** ± 4	**15** ± 4	**16** ± 4	**15** ± 4	**16** ± 4
05/24/2025	**7** ± 3	**5** ± 3	**7** ± 3	*(1)*	**5** ± 3	**6** ± 3	**7** ± 3	**9** ± 3	**5** ± 3	**5** ± 3
05/30/2025	**15** ± 4	**11** ± 4	**8** ± 4	*(1)*	**10** ± 4	**15** ± 5	**9** ± 4	< 5	**11** ± 4	**11** ± 4

(1) Refer to Sample Deviation Table

Table 11, Weekly Air Particulate Gross Beta (E-03 pCi/m^3) Cont'd

Collection Date	Q-01	Q-02	Q-03	Q-04	Q-13	Q-16	Q-37	Q-38	Q-41	Q-42
06/06/2025	**18** ± 4	**14** ± 4	**13** ± 4	*(1)*	**16** ± 4	**15** ± 4	**13** ± 4	**16** ± 4	**18** ± 4	**13** ± 4
06/13/2025	**18** ± 4	**17** ± 4	**14** ± 4	*(1)*	**16** ± 4	**15** ± 4	**17** ± 4	**10** ± 3	**17** ± 4	**17** ± 4
06/20/2025	**15** ± 4	**14** ± 4	**18** ± 4	*(1)*	**18** ± 4	**17** ± 4	**14** ± 4	**18** ± 4	**20** ± 4	**14** ± 4
06/27/2025	**16** ± 5	**14** ± 4	**14** ± 4	*(1)*	**16** ± 4	**14** ± 4	**21** ± 5	**15** ± 5	**14** ± 4	**15** ± 4
07/03/2025	**15** ± 4	**18** ± 4	**16** ± 4	*(1)*	**16** ± 5	**22** ± 5	**16** ± 4	**16** ± 4	**19** ± 5	**15** ± 4
07/11/2025	**15** ± 3	**18** ± 4	**22** ± 4	*(1)*	**17** ± 4	**21** ± 4	**18** ± 4	**19** ± 4	**17** ± 4	**20** ± 4
07/18/2025	**16** ± 4	**17** ± 4	**22** ± 4	*(1)*	**17** ± 4	**13** ± 4	**21** ± 4	**15** ± 4	**16** ± 4	**17** ± 4
07/24/2025	**16** ± 5	**18** ± 5	**12** ± 2	*(1)*	**15** ± 5	**19** ± 5	**19** ± 5	**17** ± 5	**11** ± 5	**15** ± 5
08/01/2025	**11** ± 4	**11** ± 4	*(2)*	*(1)*	**9** ± 3	**10** ± 4	**13** ± 4	**12** ± 4	**12** ± 4	**12** ± 4
08/09/2025	**19** ± 4	**17** ± 4	**25** ± 5	**24** ± 10	**21** ± 4	**25** ± 5	**26** ± 5	**22** ± 4	**28** ± 5	**23** ± 5
08/15/2025	**15** ± 5	**16** ± 5	**22** ± 5	**19** ± 5	**19** ± 5	**20** ± 5	**25** ± 5	**12** ± 4	**19** ± 5	**17** ± 5
08/22/2025	**18** ± 5	**16** ± 5	**14** ± 4	**11** ± 4	**17** ± 5	**15** ± 5	**11** ± 4	**13** ± 4	**20** ± 5	**12** ± 4
08/29/2025	**16** ± 4	**16** ± 4	**18** ± 4	**15** ± 4	**18** ± 4	**15** ± 4	**18** ± 4	**15** ± 4	**17** ± 4	**15** ± 4
09/05/2025	**18** ± 4	**16** ± 4	**22** ± 5	**17** ± 4	**43** ± 6	**20** ± 5	**18** ± 4	**17** ± 4	**22** ± 5	**18** ± 4
09/12/2025	**23** ± 4	**24** ± 5	**25** ± 5	**21** ± 4	**21** ± 4	**24** ± 5	**19** ± 4	**23** ± 5	**24** ± 5	**25** ± 5
09/19/2025	**53** ± 6	**56** ± 6	**58** ± 6	**51** ± 6	**55** ± 6	**62** ± 7	**47** ± 6	**52** ± 6	**59** ± 6	**50** ± 6
09/26/2025	**22** ± 5	**23** ± 5	**23** ± 5	**22** ± 5	**38** ± 5	**24** ± 5	**20** ± 4	**19** ± 4	**23** ± 5	**19** ± 4
10/03/2025	**53** ± 6	**54** ± 6	**62** ± 6	**49** ± 6	**54** ± 6	**56** ± 6	**38** ± 5	**54** ± 6	**60** ± 7	**44** ± 6
10/10/2025	**20** ± 4	**15** ± 4	**26** ± 5	**23** ± 5	**19** ± 4	**23** ± 5	**18** ± 4	**24** ± 5	**27** ± 5	**20** ± 5
10/17/2025	**29** ± 5	**28** ± 5	**28** ± 5	**26** ± 5	**23** ± 5	**31** ± 5	**29** ± 5	**26** ± 5	**28** ± 5	**29** ± 5
10/24/2025	**19** ± 4	**18** ± 4	**21** ± 4	**21** ± 4	**16** ± 4	**19** ± 4	**18** ± 4	**22** ± 4	**20** ± 4	**15** ± 4

(1) Refer to Table 9: Sample Deviation Summary

(2) During the collection period of 7/18/25 – 7/24/25 the area was inaccessible due to construction. The sample was grabbed during the next collection period, making it a two-week collection period.

Table 11, Weekly Air Particulate Gross Beta (E-03 pCi/m^3) Cont'd

Collection Date	Q-01	Q-02	Q-03	Q-04	Q-13	Q-16	Q-37	Q-38	Q-41	Q-42
10/31/2025	**17** ± 4	**11** ± 4	**18** ± 4	**14** ± 4	**14** ± 4	**13** ± 4	**19** ± 4	**13** ± 4	**10** ± 4	**19** ± 4
11/07/2025	**23** ± 4	**26** ± 4	**30** ± 5	**22** ± 4	**26** ± 4	**30** ± 5	**29** ± 4	**25** ± 4	**29** ± 5	**24** ± 4
11/14/2025	**8** ± 4	**12** ± 4	**10** ± 4	**11** ± 4	**14** ± 4	**13** ± 4	**11** ± 4	**12** ± 4	**10** ± 4	**15** ± 4
11/21/2025	**30** ± 5	**24** ± 5	**31** ± 5	**23** ± 5	**24** ± 5	**26** ± 5	**24** ± 5	**22** ± 5	**24** ± 5	**21** ± 5
11/28/2025	**24** ± 5	**23** ± 5	**26** ± 5	**20** ± 5	**25** ± 5	**27** ± 5	**28** ± 5	**23** ± 5	**24** ± 5	**31** ± 5
12/05/2025	**31** ± 5	**25** ± 4	**26** ± 5	**24** ± 5	**27** ± 5	**30** ± 5	**30** ± 5	**30** ± 5	**27** ± 5	**30** ± 5
12/12/2025	**32** ± 5	**30** ± 5	**33** ± 5	**26** ± 5	**27** ± 5	**33** ± 5	**29** ± 5	**28** ± 5	**33** ± 5	**32** ± 5
12/19/2025	**26** ± 5	**26** ± 5	**34** ± 5	**21** ± 5	**26** ± 5	**33** ± 5	**32** ± 5	**25** ± 5	**27** ± 5	**33** ± 5
12/26/2025	**25** ± 5	**28** ± 5	**33** ± 5	**23** ± 5	**27** ± 5	**30** ± 5	**32** ± 5	**29** ± 5	**31** ± 5	**34** ± 5
01/02/2026	**24** ± 5	**20** ± 5	**19** ± 4	**17** ± 4	**16** ± 4	**20** ± 5	**30** ± 5	**19** ± 4	**17** ± 4	**12** ± 4

Table 12, Quarterly Air Particulate Gamma Isotopic (E-03 pCi/m^3)

Station	Nuclide	Q1	Q2	Q3	Q4
Q-01	Mn-54	< 2	< 2	< 2	< 3
	Co-58	< 3	< 3	< 3	< 3
	Fe-59	< 5	< 9	< 7	< 8
	Co-60	< 2	< 2	< 3	< 4
	Zn-65	< 6	< 6	< 6	< 7
	Nb-96	< 3	< 3	< 4	< 4
	Zr-95	< 5	< 5	< 7	< 5
	Cs-134	< 3	< 2	< 3	< 2
	Cs-137	< 2	< 2	< 2	< 2
	Ba-140	< 19	< 112	< 123	< 34
	La-140	< 9	< 37	< 46	< 14
Q-02	Mn-54	< 2	< 2	< 2	< 2
	Co-58	< 2	< 3	< 4	< 3
	Fe-59	< 5	< 8	< 9	< 6
	Co-60	< 1	< 2	< 2	< 3
	Zn-65	< 5	< 7	< 8	< 5
	Nb-96	< 2	< 3	< 4	< 3
	Zr-95	< 3	< 6	< 6	< 5
	Cs-134	< 2	< 2	< 2	< 3
	Cs-137	< 1	< 2	< 2	< 2
	Ba-140	< 18	< 135	< 180	< 28
	La-140	< 5	< 53	< 72	< 13

Station	Nuclide	Q1	Q2	Q3	Q4
Q-03	Mn-54	< 2	< 2	< 2	< 2
	Co-58	< 3	< 3	< 3	< 2
	Fe-59	< 5	< 8	< 6	< 3
	Co-60	< 3	< 3	< 2	< 3
	Zn-65	< 5	< 6	< 6	< 4
	Nb-96	< 2	< 3	< 3	< 2
	Zr-95	< 4	< 6	< 6	< 4
	Cs-134	< 2	< 2	< 2	< 2
	Cs-137	< 2	< 2	< 2	< 2
	Ba-140	< 14	< 102	< 131	< 27
	La-140	< 9	< 40	< 64	< 11
Q-04	Mn-54	< 3	(1)	< 5	< 4
	Co-58	< 4		< 6	< 4
	Fe-59	< 13		< 17	< 7
	Co-60	< 4		< 3	< 4
	Zn-65	< 7		< 11	< 12
	Nb-96	< 4		< 6	< 4
	Zr-95	< 7		< 11	< 7
	Cs-134	< 4		< 4	< 3
	Cs-137	< 3		< 4	< 3
	Ba-140	< 93		< 301	< 40
	La-140	< 60		< 94	< 14

(1) Refer to Table 9: Sample Deviation Summary

Table 12, Quarterly Air Particulate Gamma Isotopic (E-03 pCi/m^3) Cont'd

Station	Nuclide	Q1	Q2	Q3	Q4
Q-13	Mn-54	< 2	< 2	< 2	< 3
	Co-58	< 1	< 3	< 4	< 3
	Fe-59	< 5	< 7	< 9	< 9
	Co-60	< 3	< 2	< 3	< 3
	Zn-65	< 5	< 4	< 6	< 7
	Nb-96	< 3	< 4	< 3	< 3
	Zr-95	< 4	< 5	< 5	< 5
	Cs-134	< 2	< 2	< 2	< 2
	Cs-137	< 2	< 2	< 2	< 3
	Ba-140	< 15	< 96	< 175	< 31
	La-140	< 7	< 38	< 67	< 15
Q-16	Mn-54	< 3	< 4	< 3	< 1
	Co-58	< 3	< 5	< 4	< 2
	Fe-59	< 5	< 15	< 15	< 6
	Co-60	< 3	< 3	< 2	< 2
	Zn-65	< 6	< 9	< 6	< 4
	Nb-96	< 3	< 6	< 4	< 2
	Zr-95	< 5	< 9	< 7	< 4
	Cs-134	< 3	< 4	< 3	< 2
	Cs-137	< 3	< 3	< 2	< 2
	Ba-140	< 22	< 203	< 178	< 21
	La-140	< 10	< 73	< 72	< 10

Station	Nuclide	Q1	Q2	Q3	Q4
Q-37	Mn-54	< 3	< 2	< 3	< 2
	Co-58	< 3	< 4	< 3	< 2
	Fe-59	< 5	< 9	< 9	< 8
	Co-60	< 3	< 2	< 2	< 3
	Zn-65	< 4	< 7	< 6	< 5
	Nb-96	< 2	< 4	< 4	< 2
	Zr-95	< 5	< 7	< 6	< 4
	Cs-134	< 2	< 2	< 2	< 2
	Cs-137	< 2	< 2	< 1	< 2
	Ba-140	< 15	< 95	< 152	< 27
	La-140	< 6	< 48	< 64	< 14
Q-38	Mn-54	< 3	< 3	< 2	< 2
	Co-58	< 3	< 3	< 2	< 2
	Fe-59	< 5	< 14	< 7	< 5
	Co-60	< 3	< 3	< 3	< 2
	Zn-65	< 6	< 6	< 6	< 5
	Nb-96	< 3	< 4	< 4	< 2
	Zr-95	< 5	< 7	< 7	< 4
	Cs-134	< 3	< 3	< 2	< 2
	Cs-137	< 2	< 2	< 2	< 2
	Ba-140	< 20	< 135	< 158	< 28
	La-140	< 7	< 53	< 77	< 12

Table 12, Quarterly Air Particulate Gamma Isotopic (E-03 pCi/m^3) Cont'd

Station	Nuclide	Q1	Q2	Q3	Q4
Q-41	Mn-54	< 3	< 2	< 2	< 2
	Co-58	< 3	< 3	< 4	< 2
	Fe-59	< 8	< 10	< 10	< 5
	Co-60	< 4	< 3	< 2	< 2
	Zn-65	< 8	< 4	< 5	< 3
	Nb-96	< 3	< 2	< 3	< 2
	Zr-95	< 6	< 5	< 6	< 4
	Cs-134	< 3	< 2	< 2	< 2
	Cs-137	< 3	< 2	< 2	< 2
	Ba-140	< 23	< 101	< 176	< 27
	La-140	< 10	< 23	< 54	< 9
Q-42	Mn-54	< 2	< 2	< 3	< 3
	Co-58	< 2	< 3	< 4	< 2
	Fe-59	< 5	< 7	< 7	< 8
	Co-60	< 2	< 2	< 2	< 3
	Zn-65	< 5	< 5	< 5	< 5
	Nb-96	< 2	< 3	< 3	< 2
	Zr-95	< 4	< 5	< 5	< 5
	Cs-134	< 2	< 1	< 2	< 2
	Cs-137	< 2	< 2	< 2	< 2
	Ba-140	< 19	< 113	< 145	< 31
	La-140	< 6	< 35	< 80	< 15

Table 13, Weekly Air Iodine I-131 (E-03 pCi/m^3)

Collection Date	Q-01	Q-02	Q-03	Q-04	Q-13	Q-16	Q-37	Q-38	Q-41	Q-42
01/10/2025	< 45	< 45	< 24	< 46	< 45	< 37	< 36	< 36	< 36	< 18
01/18/2025	< 32	< 32	< 17	< 33	< 32	< 34	< 33	< 33	< 15	< 34
01/24/2025	< 37	< 37	< 25	< 38	< 37	< 43	< 20	< 42	< 42	< 43
01/31/2025	< 33	< 33	< 16	< 34	< 33	< 30	< 30	< 30	< 29	< 23
02/07/2025	< 64	< 65	< 32	< 67	< 64	< 28	< 53	< 53	< 53	< 53
02/14/2025	< 24	< 24	< 12	< 25	< 24	< 26	< 13	< 25	< 26	< 25
02/21/2025	< 28	< 28	< 14	< 29	< 28	< 18	< 26	< 26	< 27	< 26
02/28/2025	< 37	< 37	< 38	< 18	< 37	< 40	< 39	< 39	< 40	< 26
03/07/2025	< 38	< 38	< 39	< 34	< 37	< 40	< 40	< 40	< 31	< 39
03/14/2025	< 37	< 37	< 39	*(1)*	< 25	< 20	< 41	< 41	< 42	< 41
03/21/2025	< 40	< 40	< 46	*(1)*	< 40	< 41	< 45	< 45	< 46	< 45
03/28/2025	< 39	< 39	< 40	*(1)*	< 39	< 20	< 27	< 27	< 27	< 27
04/04/2025	< 54	< 54	< 56	*(1)*	< 54	< 51	< 50	< 50	< 51	< 23
04/11/2025	< 39	< 39	< 40	*(1)*	< 18	< 40	< 36	< 36	< 37	< 36
04/18/2025	< 46	< 46	< 47	*(1)*	< 45	< 39	< 38	< 38	< 39	< 17
04/25/2025	< 39	< 39	< 40	*(1)*	< 39	< 48	< 46	< 46	< 47	< 22
05/02/2025	< 24	< 50	< 52	*(1)*	< 50	< 52	< 54	< 59	< 55	< 53
05/09/2025	< 35	< 35	< 36	*(1)*	< 35	< 15	< 33	< 33	< 33	< 32
05/16/2025	< 42	< 42	< 44	*(1)*	< 42	< 24	< 55	< 55	< 57	< 55
05/24/2025	< 46	< 46	< 53	*(1)*	< 46	< 26	< 53	< 53	< 55	< 53
05/30/2025	< 63	< 63	< 65	*(1)*	< 63	< 58	< 56	< 56	< 58	< 27

(1) Refer to Sample Deviation Table

Table 13, Weekly Air Iodine I-131 (E-03 pCi/m³) Cont'd

Collection Date	Q-01	Q-02	Q-03	Q-04	Q-13	Q-16	Q-37	Q-38	Q-41	Q-42
06/06/2025	< 61	< 61	< 63	*(1)*	< 61	< 60	< 59	< 28	< 60	< 59
06/13/2025	< 61	< 61	< 61	*(1)*	< 61	< 52	< 50	< 50	< 52	< 26
06/20/2025	< 40	< 40	< 40	*(1)*	< 19	< 42	< 34	< 33	< 34	< 33
06/27/2025	< 68	< 69	< 68	*(1)*	< 53	< 54	< 65	< 65	< 52	< 50
07/03/2025	< 59	< 59	< 59	*(1)*	< 68	< 34	< 55	< 55	< 69	< 64
07/11/2025	< 55	< 55	< 26	*(1)*	< 55	< 57	< 54	< 54	< 55	< 54
07/18/2025	< 55	< 55	< 55	*(1)*	< 55	< 58	< 57	< 57	< 58	< 62
07/24/2025	< 49	< 49	< 12	*(1)*	< 49	< 24	< 49	< 48	< 56	< 49
08/01/2025	< 43	< 43	*(2)*	*(1)*	< 43	< 44	< 47	< 46	< 48	< 46
08/09/2025	< 45	< 46	< 45	< 59	< 45	< 46	< 45	< 45	< 51	< 45
08/15/2025	< 62	< 62	< 32	< 64	< 62	< 61	< 60	< 60	< 68	< 60
08/22/2025	< 65	< 65	< 65	< 49	< 65	< 66	< 64	< 64	< 66	< 48
08/29/2025	< 63	< 63	< 63	< 66	< 63	< 33	< 68	< 68	< 70	< 68
09/05/2025	< 48	< 48	< 48	< 25	< 48	< 51	< 24	< 50	< 51	< 50
09/12/2025	< 55	< 55	< 55	< 56	< 25	< 33	< 67	< 67	< 69	< 67
09/19/2025	< 65	< 65	< 49	< 67	< 65	< 69	< 68	< 68	< 69	< 50
09/26/2025	< 59	< 59	< 59	< 68	< 59	< 50	< 48	< 48	< 23	< 50
10/03/2025	< 62	< 62	< 62	< 32	< 61	< 67	< 65	< 65	< 67	< 66
10/10/2025	< 57	< 57	< 57	< 42	< 56	< 56	< 55	< 55	< 56	< 29
10/17/2025	< 59	< 28	< 59	< 61	< 59	< 61	< 60	< 60	< 61	< 31

(1) Refer to Sample Deviation Table

(2) During the collection period of 7/18/25 – 7/24/25 the area was inaccessible due to construction. The sample was grabbed during the next collection period, making it a two-week collection period.

Table 13, Weekly Air Iodine I-131 (E-03 pCi/m^3) Cont'd

Collection Date	Q-01	Q-02	Q-03	Q-04	Q-13	Q-16	Q-37	Q-38	Q-41	Q-42
10/24/2025	< 30	< 29	< 30	< 34	< 30	< 31	< 31	< 31	< 31	< 16
10/31/2025	< 63	< 62	< 63	< 31	< 65	< 33	< 63	< 63	< 65	< 65
11/07/2025	< 60	< 66	< 60	< 62	< 62	< 64	< 62	< 62	< 64	< 33
11/14/2025	< 67	< 66	< 67	< 37	< 69	< 60	< 59	< 59	< 46	< 60
11/21/2025	< 66	< 65	< 66	< 36	< 68	< 68	< 35	< 66	< 68	< 68
11/28/2025	< 66	< 65	< 66	< 68	< 35	< 61	< 59	< 59	< 61	< 32
12/05/2025	< 67	< 34	< 66	< 68	< 68	< 60	< 58	< 58	< 60	< 47
12/12/2025	< 60	< 31	< 60	< 62	< 62	< 61	< 60	< 60	< 48	< 61
12/19/2025	< 67	< 66	< 67	< 24	< 68	< 64	< 62	< 62	< 34	< 64
12/26/2026	< 66	< 66	< 66	< 24	< 68	< 65	< 30	< 63	< 65	< 65
01/02/2026	< 56	< 56	< 56	< 30	< 58	< 65	< 64	< 64	< 65	< 50

Table 14, Monthly/Bi-Weekly Milk I-131 (pCi/L ± 2 Sigma)

Collection Date	Indicator Farm Q-26
01/03/2025	< 0.9
02/07/2025	< 0.6
03/07/2025	< 0.9
04/04/2025	< 0.8
05/02/2025	< 0.7
05/16/2025	< 0.9
05/30/2025	< 0.7
06/13/2025	< 0.9
06/26/2025	< 0.8
07/11/2025	< 0.9
07/24/2025	< 0.7
08/09/2025	< 0.9
08/22/2025	< 0.7
09/05/2025	< 0.8
09/19/2025	< 0.8
10/03/2025	< 0.9
10/17/2025	< 0.9
11/07/2025	< 1.0
12/05/2025	< 0.9

Table 15, Monthly/Bi-Weekly Milk Gamma Isotopic (pCi/L ± 2 Sigma)

Station	Collection Dates	Mn-54	Co-58	Fe-59	Co-60	Zn-65	Nb-95	Zr-95	Cs-134	Cs-137	Ba-140	La-140
Q-26	01/03/2025	< 6	< 8	< 16	< 8	< 18	< 8	< 13	< 8	< 8	< 33	< 7
	02/07/2025	< 7	< 8	< 16	< 7	< 15	< 7	< 15	< 7	< 7	< 33	< 10
	03/07/2025	< 6	< 6	< 13	< 7	< 13	< 6	< 10	< 7	< 6	< 25	< 7
	04/04/2025	< 5	< 5	< 11	< 5	< 12	< 5	< 9	< 6	< 6	< 25	< 8
	05/02/2025	< 6	< 7	< 16	< 7	< 15	< 7	< 13	< 8	< 7	< 32	< 10
	05/16/2025	< 8	< 9	< 18	< 9	< 19	< 8	< 14	< 9	< 10	< 39	< 11
	05/30/2025	< 5	< 5	< 12	< 5	< 13	< 5	< 9	< 6	< 5	< 28	< 8
	06/13/2025	< 7	< 9	< 17	< 9	< 19	< 8	< 15	< 7	< 6	< 33	< 9
	06/26/2025	< 7	< 8	< 20	< 8	< 21	< 8	< 15	< 8	< 8	< 41	< 12
	07/11/2025	< 8	< 8	< 21	< 9	< 17	< 7	< 15	< 9	< 8	< 40	< 13
	07/24/2025	< 8	< 8	< 15	< 8	< 20	< 7	< 10	< 7	< 8	< 36	< 9
	08/09/2025	< 7	< 9	< 17	< 10	< 18	< 10	< 14	< 8	< 7	< 41	< 13
	08/22/2025	< 7	< 8	< 19	< 9	< 16	< 9	< 13	< 8	< 9	< 41	< 14
	09/05/2025	< 8	< 7	< 15	< 9	< 16	< 8	< 15	< 7	< 8	< 30	< 9
	09/19/2025	< 8	< 9	< 24	< 13	< 21	< 10	< 16	< 10	< 9	< 44	< 12
	10/03/2025	< 7	< 7	< 21	< 7	< 19	< 8	< 14	< 8	< 8	< 42	< 12
	10/17/2025	< 8	< 9	< 19	< 8	< 20	< 8	< 14	< 8	< 8	< 43	< 11
	11/07/2025	< 5	< 5	< 15	< 5	< 13	< 5	< 11	< 6	< 5	< 41	< 12
	12/05/2025	< 7	< 6	< 18	< 8	< 15	< 9	< 11	< 7	< 7	< 47	< 14

Table 16, Annual Food Products Gamma Isotopic (pCi/kg Wet ± 2 Sigma)

Station		Collection Dates	Mn-54	Co-58	Fe-59	Co-60	Zn-65	Nb-95	Zr-95	I-131	Cs-134	Cs-137	Ba-140	La-140
Q-CONTROL	BROCCOLI	07/23/2025	< 38	< 34	< 74	< 43	< 80	< 32	< 54	< 55	< 41	< 38	< 169	< 29
	POTATO	07/23/2025	< 19	< 19	< 43	< 28	< 51	< 23	< 36	< 40	< 22	< 19	< 111	< 37
Q-QUAD 1	CABBAGE	07/23/2025	< 25	< 26	< 57	< 21	< 42	< 21	< 42	< 50	< 23	< 26	< 103	< 32
	POTATO	07/23/2025	< 22	< 26	< 76	< 36	< 68	< 25	< 62	< 53	< 32	< 31	< 147	< 48
Q-QUAD 2	CABBAGE	07/23/2025	< 22	< 18	< 46	< 25	< 48	< 17	< 41	< 43	< 21	< 27	< 108	< 31
	ONIONS	07/23/2025	< 21	< 18	< 33	< 16	< 47	< 18	< 41	< 33	< 17	< 21	< 107	< 34
Q-QUAD 3	HORSERADISH	07/23/2025	< 17	< 14	< 37	< 18	< 34	< 15	< 24	< 29	< 17	< 17	< 74	< 19
	KALE	07/23/2025	< 24	< 25	< 53	< 23	< 49	< 24	< 39	< 44	< 21	< 26	< 106	< 38
Q-QUAD 4	CARROT	07/23/2025	< 13	< 18	< 39	< 18	< 43	< 15	< 33	< 31	< 21	< 22	< 76	< 27
	KALE	07/23/2025	< 24	< 24	< 52	< 27	< 53	< 24	< 47	< 47	< 31	< 28	< 130	< 33

Table 17, Monthly Surface Water Gross Beta (pCi/L ± 2 Sigma)

Collection Date	Q-33	Q-34
02/28/2025	**3** ± 2	**5** ± 2
03/07/2025	< 3	**6** ± 2
04/04/2025	< 3	**3** ± 2
05/02/2025	< 3	< 3
06/06/2025	< 3	**4** ± 2
07/03/2025	**5** ± 2	**4** ± 2
08/01/2025	< 2	**5** ± 3
09/05/2025	**5** ± 3	**7** ± 3
10/03/2025	**7** ± 2	**5** ± 2
11/07/2025	**5** ± 2	**7** ± 3
12/26/2025	**5** ± 3	**4** ± 3

Table 18, Monthly Surface Water Gamma Isotopic (pCi/L ± 2 Sigma)

Station	Collection Dates	Mn-54	Co-58	Fe-59	Co-60	Zn-65	Nb-95	Zr-95	I-131	Cs-134	Cs-137	Ba-140	La-140
Q-33	02/28/2025 - 02/28/2025	< 6	< 5	< 14	< 8	< 9	< 7	< 8	< 8	< 5	< 5	< 23	< 9
	03/07/2025 - 03/28/2025	< 4	< 4	< 6	< 4	< 10	< 5	< 7	< 8	< 4	< 5	< 18	< 6
	04/04/2025 - 04/25/2025	< 6	< 6	< 13	< 8	< 14	< 7	< 9	< 11	< 8	< 7	< 32	< 14
	05/02/2025 - 05/30/2025	< 6	< 8	< 15	< 6	< 11	< 7	< 10	< 11	< 7	< 7	< 32	< 10
	06/06/2025 - 06/26/2025	< 3	< 3	< 7	< 3	< 6	< 3	< 5	< 7	< 3	< 3	< 18	< 6
	07/03/2025 - 07/24/2025	< 4	< 4	< 12	< 5	< 11	< 5	< 10	< 15	< 5	< 4	< 31	< 8
	08/01/2025 - 08/29/2025	< 7	< 7	< 14	< 10	< 11	< 10	< 12	< 15	< 8	< 8	< 32	< 14
	09/05/2025 - 09/26/2025	< 7	< 7	< 13	< 5	< 12	< 6	< 14	< 12	< 10	< 8	< 33	< 11
	10/03/2025 - 10/31/2025	< 6	< 6	< 15	< 6	< 16	< 7	< 12	< 10	< 7	< 7	< 31	< 11
	11/07/2025 - 11/28/2025	< 4	< 5	< 10	< 6	< 11	< 5	< 8	< 13	< 6	< 5	< 27	< 10
	12/26/2025 - 12/26/2025	< 2	< 2	< 5	< 2	< 4	< 2	< 3	< 8	< 2	< 2	< 16	< 5

Table 18, Monthly Surface Water Gamma Isotopic (pCi/L ± 2 Sigma) Cont'd

Station	Collection Dates	Mn-54	Co-58	Fe-59	Co-60	Zn-65	Nb-95	Zr-95	I-131	Cs-134	Cs-137	Ba-140	La-140
Q-34	02/28/2025 - 02/28/2025	< 5	< 5	< 11	< 5	< 14	< 6	< 8	< 8	< 5	< 5	< 24	< 6
	03/07/2025 - 03/28/2025	< 4	< 4	< 11	< 4	< 9	< 4	< 7	< 7	< 4	< 5	< 19	< 7
	04/04/2025 - 04/25/2025	< 6	< 6	< 10	< 5	< 11	< 6	< 10	< 8	< 5	< 6	< 22	< 11
	05/02/2025 - 05/30/2025	< 7	< 7	< 14	< 8	< 14	< 6	< 11	< 12	< 9	< 8	< 33	< 9
	06/06/2025 - 06/27/2025	< 3	< 3	< 7	< 4	< 6	< 3	< 6	< 8	< 3	< 3	< 19	< 6
	07/03/2025 - 07/24/2025	< 6	< 7	< 14	< 6	< 12	< 7	< 12	< 15	< 7	< 7	< 46	< 13
	08/01/2025 - 08/29/2025	< 8	< 8	< 17	< 8	< 17	< 8	< 15	< 13	< 7	< 9	< 42	< 13
	09/05/2025 - 09/26/2025	< 7	< 7	< 14	< 7	< 14	< 8	< 12	< 10	< 8	< 7	< 34	< 8
	10/03/2025 - 10/31/2025	< 7	< 6	< 12	< 8	< 15	< 6	< 13	< 12	< 4	< 7	< 30	< 12
	11/07/2025 - 11/28/2025	< 4	< 5	< 9	< 5	< 9	< 7	< 9	< 11	< 5	< 5	< 24	< 11
	12/26/2025 - 12/26/2025	< 2	< 2	< 4	< 2	< 3	< 2	< 3	< 7	< 2	< 2	< 15	< 5

Table 19, Quarterly Surface Water Tritium, Iron-55, and Nickel-63 (pCi/L ± 2 Sigma)

Station	Collection Dates	H-3	Fe-55	Ni-63
Q-33	02/28/2025 - 03/28/2025	< 193	< 123	< 4
	04/04/2025 - 06/26/2025	< 199	< 76	< 5
	07/03/2025 - 09/26/2025	< 186	< 148	< 3
	10/03/2025 - 12/26/2025	< 187	< 104	< 5
Q-34	02/28/2025 - 03/28/2025	< 186	< 141	< 4
	04/04/2025 - 06/27/2025	< 186	< 71	< 5
	07/03/2025 - 09/26/2025	< 185	< 109	< 3
	10/03/2025 - 12/26/2025	< 183	< 78	< 4

Table 20, Quarterly Ground Water Tritium (pCi/L ± 2 Sigma)

Collection Date	Q-35	Q-36
01/10/2025	< 187	< 184
04/18/2025	< 190	< 195
07/18/2025	< 181	< 184
10/10/2025	< 187	< 185

Table 21, Quarterly Ground Water Gamma Isotopic (pCi/L ± 2 Sigma)

Station	Collection Dates	Mn-54	Co-58	Fe-59	Co-60	Zn-65	Nb-95	Zr-95	I-131	Cs-134	Cs-137	Ba-140	La-140
Q-35	01/10/2025 - 01/10/2025	< 6	< 7	< 12	< 7	< 11	< 7	< 10	< 13	< 7	< 7	< 32	< 8
	04/18/2025 - 04/18/2025	< 7	< 7	< 19	< 9	< 12	< 7	< 12	< 11	< 8	< 6	< 36	< 12
	07/18/2025 - 07/18/2025	< 9	< 8	< 18	< 10	< 16	< 8	< 13	< 13	< 8	< 8	< 32	< 12
	10/10/2025 - 10/10/2025	< 5	< 5	< 11	< 5	< 10	< 5	< 8	< 12	< 6	< 5	< 30	< 11
Q-36	01/10/2025 - 01/10/2025	< 4	< 4	< 8	< 6	< 9	< 5	< 8	< 8	< 4	< 5	< 22	< 10
	04/18/2025 - 04/18/2025	< 8	< 11	< 19	< 12	< 21	< 9	< 16	< 14	< 11	< 10	< 39	< 12
	07/18/2025 - 07/18/2025	< 7	< 6	< 15	< 5	< 14	< 7	< 11	< 12	< 8	< 7	< 29	< 9
	10/10/2025 - 10/10/2025	< 3	< 3	< 7	< 4	< 7	< 3	< 6	< 8	< 4	< 4	< 20	< 7

Table 22, Semi-Annual Fish Gamma Isotopic (pCi/kg Wet ± 2 Sigma)

Station		Collection Dates	Mn-54	Co-58	Fe-59	Co-60	Zn-65	Nb-95	Zr-95	Cs-134	Cs-137	Ba-140	La-140
Q-24	Channel Catfish	05/07/2025	< 79	< 80	< 151	< 70	< 183	< 88	< 136	< 97	< 77	< 540	< 99
	Common Carp	05/07/2025	< 67	< 64	< 170	< 76	< 161	< 76	< 95	< 76	< 56	< 317	< 118
	Common Carp	09/29/2025	< 48	< 65	< 116	< 80	< 106	< 46	< 121	< 58	< 56	< 452	< 107
	River Carpsucker	09/29/2025	< 55	< 63	< 166	< 65	< 131	< 64	< 135	< 72	< 60	< 445	< 165
Q-29	Channel Catfish	05/07/2025	< 62	< 75	< 135	< 71	< 129	< 52	< 111	< 59	< 60	< 377	< 82
	Walleye	05/07/2025	< 53	< 59	< 131	< 68	< 133	< 53	< 98	< 62	< 54	< 290	< 144
	Channel Catfish	09/29/2025	< 86	< 80	< 186	< 71	< 137	< 87	< 131	< 99	< 79	< 570	< 226
	Common Carp	09/29/2025	< 59	< 90	< 138	< 67	< 190	< 87	< 124	< 84	< 72	< 660	< 190

Table 23, Semi-Annual Shoreline Sediment Gamma Isotopic (pCi/kg Dry ± 2 Sigma)

Station	Collection Dates	Mn-54	Co-58	Fe-59	Co-60	Zn-65	Nb-95	Zr-95	Cs-134	Cs-137	Ba-140	La-140
Q-39	05/09/2025	< 63	< 67	< 134	< 68	< 135	< 71	< 135	< 67	< 81	< 314	< 86
	10/10/2025	< 100	< 127	< 294	< 111	< 249	< 155	< 278	< 133	< 108	< 2145	< 307
Q-40	05/09/2025	< 78	< 58	< 160	< 97	< 130	< 68	< 140	< 86	< 83	< 267	< 99
	10/10/2025	< 108	< 121	< 282	< 102	< 267	< 158	< 203	< 144	< 109	< 1955	< 474

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 Inc. (TBE) participated in the following proficiency testing studies provided by Eckert Ziegler Analytics, DOE's Mixed Analyte Performance Evaluation Program (MAPEP), and/or Environmental Resource Associates (ERA) in 2025. The Laboratory's intercomparison program results for 2025 are summarized below.

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:

I. 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.

II. 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.

III. 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.

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

(AS) in Air Particulate (filter).

V. 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.

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

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

Table 24, DOE Mixed Analyte Performance Evaluation Program (MAPEP)

Teledyne Brown Engineering - Environmental Services

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 25, ERA Environmental Radioactivity Crosscheck Program

Teledyne Brown Engineering - Environmental Services

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)

(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 26: Eckert & Ziegler Analytics Environmental Radioactivity Crosscheck Program

Teledyne Brown Engineering - Environmental Services

Month/Year	Identification Number	Matrix	Nuclide	Units	TBE Reported Value	Known Value (a)	Acceptance Ratio (%)	Evaluation (b)
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

Table 26: Eckert & Ziegler Analytics Environmental Radioactivity Crosscheck Program

Teledyne Brown Engineering - Environmental Services

Month/Year	Identification Number	Matrix	Nuclide	Units	TBE Reported Value	Known Value (a)	Acceptance Ratio (%)	Evaluation (b)
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
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)	$B_Q + MDD_Q$ (mrem)	Normalized Quarterly Monitoring Data, M_Q (mrem)				Quarterly Facility Dose, $F_Q=M_Q-B_Q$ (mrem, or "ND" if $F_Q \le MDD_Q$)				Annual Baseline, B_A (mrem)	$B_A + MDD_A$ (mrem)	Annual Monitoring Data, M_A (mrem)	Annual Facility Dose, $F_A=M_A-B_A$ (mrem, or "ND" if $F_A \le MDD_A$)
			1	2	3	4	1	2	3	4				
Q-01	14	19.4	12.1	14	11.5	12.8	ND	ND	ND	ND	57.3	68.2	50.4	ND
Q-02	13.4	18.8	12.7	11.6	10.5	12.1	ND	ND	ND	ND	53.6	64.5	46.9	ND
Q-03	13	18.4	10.5	11.6	11.4	12.1	ND	ND	ND	ND	52.1	63.0	45.6	ND
Q-04	13.6	19.0	11.9	13.4	14.1	10.7	ND	ND	ND	ND	54.4	65.3	50.1	ND
Q-13	13.2	18.6	12.9	14	14.2	16.2	ND	ND	ND	ND	52.8	63.7	57.3	ND
Q-16	15	20.4	13	13.5	12.7	11.9	ND	ND	ND	ND	60.1	71.0	51.1	ND
Q-37	15.4	20.8	13.4	14.8	17	13	ND	ND	ND	ND	61.7	72.6	58.2	ND
Q-38	17.5	22.9	15.8	16.2	17.4	12.7	ND	ND	ND	ND	69.4	80.3	62.1	ND
Q-41	17.3	22.7	13.2	13.6	15.6	15.8	ND	ND	ND	ND	69	79.9	58.2	ND
Q-42	16.5	21.9	16.7	18	18	16.3	ND	ND	ND	ND	66.2	77.1	69	ND
Q-101-1	15	20.4	11.7	12	14.4	10.3	ND	ND	ND	ND	59.9	70.8	48.4	ND
Q-101-2	13.5	18.9	12.1	13.4	14.1	10.9	ND	ND	ND	ND	53.9	64.8	50.5	ND
Q-102-1	15.7	21.1	12.7	14.1	14.4	12.6	ND	ND	ND	ND	62.8	73.7	53.8	ND
Q-102-3	16.8	22.2	12.8	13.9	14.6	10.5	ND	ND	ND	ND	67.3	78.2	51.8	ND
Q-103-1	15.2	20.6	12.6	12.4	13.1	8.6	ND	ND	ND	ND	61	71.9	46.7	ND
Q-103-2	17.1	22.5	12.8	9.1	12.3	9.5	ND	ND	ND	ND	68.2	79.1	43.7	ND
Q-104-1	14	19.4	11.9	14.3	13.3	11.3	ND	ND	ND	ND	56	66.9	50.8	ND
Q-104-2	14.4	19.8	11.1	13.5	12.7	11.4	ND	ND	ND	ND	57.6	68.5	48.7	ND
Q-105-1	15.6	21.0	12.8	13.5	12.2	11.9	ND	ND	ND	ND	62.5	73.4	50.4	ND

MDD_Q = Quarterly Minimum Differential Dose = 5.4 mrem
MDD_A = Annual Minimum Differential Dose = 10.9 mrem
ND = Not Detected, where $M_Q \le (B_Q+MDD_Q)$ or $M_A \le (B_A+MDD_A)$
B_Q = Quarterly Normalized Mean Background for a monitoring location (mrem)
B_A = Annual Normalized Mean Background for a monitoring location (mrem)
M_A = Normalized Annual Dose (mrem)

Attachment 4, Environmental Direct Radiation Dosimetry Results Cont'd

Monitoring Location	Quarterly Baseline, B_Q (mrem)	B_Q + MDD_Q (mrem)	Normalized Quarterly Monitoring Data, M_Q (mrem)				Quarterly Facility Dose, $F_Q=M_Q-B_Q$ (mrem, or "ND" if $F_Q \leq MDD_Q$)				Annual Baseline, B_A (mrem)	B_A + MDD_A (mrem)	Annual Monitoring Data, M_A (mrem)	Annual Facility Dose, $F_A=M_A-B_A$ (mrem, or "ND" if $F_A \leq MDD_A$)
			1	2	3	4	1	2	3	4				
Q-105-2	14.4	19.8	12.6	12	11.5	11.4	ND	ND	ND	ND	57.5	68.4	47.5	ND
Q-106-2	13.5	18.9	12.5	14	13.1	11.8	ND	ND	ND	ND	54.1	65.0	51.4	ND
Q-106-3	13.1	18.5	13.3	13.1	12.5	11.6	ND	ND	ND	ND	52.3	63.2	50.5	ND
Q-107-2	13	18.4	12.4	12.7	12.5	10.7	ND	ND	ND	ND	52	62.9	48.3	ND
Q-107-3	13.4	18.8	10.7	13.1	13	11.3	ND	ND	ND	ND	53.7	64.6	48.1	ND
Q-108-1	13.5	18.9	11.3	12	14.1	11.8	ND	ND	ND	ND	54.1	65.0	49.2	ND
Q-108-2	13.6	19.0	12.3	11.9	12.6	10.2	ND	ND	ND	ND	54.4	65.3	47	ND
Q-109-1	13.7	19.1	12.6	12.1	13.5	10	ND	ND	ND	ND	54.7	65.6	48.2	ND
Q-109-2	13.7	19.1	12.4	13.5	14.1	10.6	ND	ND	ND	ND	54.6	65.5	50.6	ND
Q-111-1	14.2	19.6	11	13.9	12.4	14.1	ND	ND	ND	ND	56.7	67.6	51.4	ND
Q-111-2	13.7	19.1	13.7	14.6	13.1	14.3	ND	ND	ND	ND	54.8	65.7	55.7	ND
Q-112-1	13.8	19.2	11.3	14.5	11.3	13.4	ND	ND	ND	ND	55.2	66.1	50.5	ND
Q-112-2	13.6	19.0	10.5	11.6	11.5	11.7	ND	ND	ND	ND	54.5	65.4	45.3	ND
Q-113-1	13.8	19.2	11.2	13	11.6	11.9	ND	ND	ND	ND	55.3	66.2	47.7	ND
Q-113-2	13.8	19.2	11.6	12.4	10.5	12.3	ND	ND	ND	ND	55.3	66.2	46.8	ND
Q-114-1	14.7	20.1	12.8	12.7	12.3	14.7	ND	ND	ND	ND	58.4	69.3	52.5	ND
Q-114-2	14.3	19.7	11.6	15.7	13.1	12.6	ND	ND	ND	ND	51.6	62.5	53	ND
Q-115-1	13.7	19.1	13.1	15	14	13.5	ND	ND	ND	ND	54.7	65.6	55.6	ND
Q-115-2	13.1	18.5	11.6	13.8	13.4	12.6	ND	ND	ND	ND	52.7	63.6	51.4	ND

MDD_Q = Quarterly Minimum Differential Dose = 5.4 mrem
MDD_A = Annual Minimum Differential Dose = 10.9 mrem
ND = Not Detected, where $M_Q \leq (B_Q+MDD_Q)$ or $M_A \leq (B_A+MDD_A)$
B_Q = Quarterly Normalized Mean Background for a monitoring location (mrem)
B_A = Annual Normalized Mean Background for a monitoring location (mrem)
M_A = Normalized Annual Dose (mrem)

Attachment 4, Environmental Direct Radiation Dosimetry Results Cont'd

Monitoring Location	Quarterly Baseline, B_Q (mrem)	B_Q + MDD_Q (mrem)	Normalized Quarterly Monitoring Data, M_Q (mrem)				Quarterly Facility Dose, $F_Q=M_Q-B_Q$ (mrem, or "ND" if $F_Q \leq MDD_Q$)				Annual Baseline, B_A (mrem)	B_A + MDD_A (mrem)	Annual Monitoring Data, M_A (mrem)	Annual Facility Dose, $F_A=M_A-B_A$ (mrem, or "ND" if $F_A \leq MDD_A$)
			1	2	3	4	1	2	3	4				
Q-116-1	13.5	18.9	13.4	14.4	13.7	13.6	ND	ND	ND	ND	54.1	65.0	55.1	ND
Q-116-3	12.5	17.9	10.8	13.9	12.1	13.5	ND	ND	ND	ND	48.6	59.5	50.3	ND
Q-201-1	14.4	19.8	12.7	13.4	*(1)*	14.5	ND	ND	*(1)*	ND	57.7	68.6	40.6	ND
Q-201-2	13.6	19.0	14.2	14.3	14.8	13.8	ND	ND	ND	ND	54.4	65.3	57.1	ND
Q-202-1	15.8	21.2	12.6	12.3	11.1	13.4	ND	ND	ND	ND	63.2	74.1	49.4	ND
Q-202-2	14.3	19.7	11.6	13.1	12.5	13.3	ND	ND	ND	ND	54.5	65.4	50.5	ND
Q-203-1	15	20.4	12.6	13.9	13.6	14.7	ND	ND	ND	ND	57.2	68.1	54.8	ND
Q-203-2	15.6	21.0	14.5	16.3	18.1	14.9	ND	ND	ND	ND	62.6	73.5	63.8	ND
Q-204-1	14.1	19.5	13.2	15.5	14.4	12.7	ND	ND	ND	ND	56.5	67.4	55.8	ND
Q-204-2	14.3	19.7	16.2	16.9	16.4	14	ND	ND	ND	ND	57.4	68.3	63.5	ND
Q-205-1	15.2	20.6	13.6	14.3	13.9	13.4	ND	ND	ND	ND	60.7	71.6	55.2	ND
Q-205-4	17.6	23.0	13.3	16.4	16.7	13.4	ND	ND	ND	ND	70.3	81.2	59.8	ND
Q-206-1	15.7	21.1	11.9	14.9	13.1	12.4	ND	ND	ND	ND	62.7	73.6	52.3	ND
Q-206-2	17.9	23.3	11.2	12.8	13.7	11.1	ND	ND	ND	ND	71.5	82.4	48.8	ND
Q-207-1	16.1	21.5	12.7	15.1	14.6	12.9	ND	ND	ND	ND	64.4	75.3	55.3	ND
Q-207-4	17.4	22.8	13.7	14.4	13.7	11.5	ND	ND	ND	ND	68.8	79.7	53.3	ND
Q-208-1	15.1	20.5	13.3	14.2	14.3	11.9	ND	ND	ND	ND	60.3	71.2	53.7	ND
Q-208-2	14.1	19.5	15.2	15.9	14.3	14.6	ND	ND	ND	ND	56.6	67.5	60	ND

MDD_Q = Quarterly Minimum Differential Dose = 5.4 mrem
MDD_A = Annual Minimum Differential Dose = 10.9 mrem
ND = Not Detected, where $M_Q \leq (B_Q+MDD_Q)$ or $M_A \leq (B_A+MDD_A)$
B_Q = Quarterly Normalized Mean Background for a monitoring location (mrem)
B_A = Annual Normalized Mean Background for a monitoring location (mrem)
M_A = Normalized Annual Dose (mrem)
(1) Environmental Dosimetry lost for this period - See Table 9: Sample Deviation Summary

Attachment 4, Environmental Direct Radiation Dosimetry Results Cont'd

Monitoring Location	Quarterly Baseline, B_Q (mrem)	B_Q + MDD_Q (mrem)	Normalized Quarterly Monitoring Data, M_Q (mrem)				Quarterly Facility Dose, $F_Q=M_Q-B_Q$ (mrem, or "ND" if $F_Q \le MDD_Q$)				Annual Baseline, B_A (mrem)	B_A + MDD_A (mrem)	Annual Monitoring Data, M_A (mrem)	Annual Facility Dose, $F_A=M_A-B_A$ (mrem, or "ND" if $F_A \le MDD_A$)
			1	2	3	4	1	2	3	4				
Q-209-1	15.3	20.7	14.9	17.2	13.3	14.7	ND	ND	ND	ND	61.1	72.0	58	ND
Q-209-4	15.5	20.9	14.3	13.6	13.1	11.8	ND	ND	ND	ND	62.1	73.0	51.1	ND
Q-210-1	15.3	20.7	13.8	17.2	15.1	14.3	ND	ND	ND	ND	61.1	72.0	60.4	ND
Q-210-4	16.8	22.2	14.4	15.4	15.7	17.2	ND	ND	ND	ND	67.2	78.1	62.7	ND
Q-210-5	16.8	22.2	9.5	9.5	7.9	9.5	ND	ND	ND	ND	66.9	77.8	36.4	ND
Q-211-1	15.6	21.0	14.5	15.7	16	16	ND	ND	ND	ND	62.3	73.2	62.2	ND
Q-211-2	16.7	22.1	16	17.6	15.8	17.9	ND	ND	ND	ND	66.6	77.5	67.3	ND
Q-212-1	17.1	22.5	13.8	14.7	13	14.3	ND	ND	ND	ND	68.2	79.1	55.8	ND
Q-212-2	11.7	17.1	8.9	10.9	11	12.1	ND	ND	ND	ND	46.8	57.7	42.9	ND
Q-213-1	17.9	23.3	12.8	14.6	11.8	13.1	ND	ND	ND	ND	71.7	82.6	52.3	ND
Q-213-2	18.3	23.7	10.4	11.6	10.5	11.9	ND	ND	ND	ND	73	83.9	44.4	ND
Q-214-1	15.2	20.6	12.3	14.1	11.9	16.5	ND	ND	ND	ND	60.8	71.7	54.8	ND
Q-214-2	12.7	18.1	12.9	16.3	14.4	14.1	ND	ND	ND	ND	50.8	61.7	57.7	ND
Q-215-1	13.9	19.3	13.1	13.4	15	16.8	ND	ND	ND	ND	55.8	66.7	58.3	ND
Q-215-2	13.8	19.2	16.8	17.1	15.5	16.9	ND	ND	ND	ND	55.4	66.3	66.3	ND
Q-216-1	15.4	20.8	12.5	16.3	15.3	*(1)*	ND	ND	ND	*(1)*	61.5	72.4	44.1	ND
Q-216-2	16	21.4	15.3	15.4	14.1	14.7	ND	ND	ND	ND	63.9	74.8	59.5	ND

MDD_Q = Quarterly Minimum Differential Dose = 5.4 mrem
MDD_A = Annual Minimum Differential Dose = 10.9 mrem
ND = Not Detected, where $M_Q \le (B_Q+MDD_Q)$ or $M_A \le (B_A+MDD_A)$
B_Q = Quarterly Normalized Mean Background for a monitoring location (mrem)
B_A = Annual Normalized Mean Background for a monitoring location (mrem)
M_A = Normalized Annual Dose (mrem)
(1) Environmental Dosimetry lost for this period - See Table 9: Sample Deviation Summary

Attachment 5, 2024 Errata Data

1.0 Table 12, Quarterly Air Particulate Gamma Isotopic (E-03 pCi/m^3 ± 2 Sigma)

Station	Nuclide	Q1	Q2	Q3	Q4
Q-01	Mn-54	< 2	< 2	< 2	< 2
	Co-58	< 2	< 3	< 3	< 2
	Fe-59	< 5	< 7	< 7	< 5
	Co-60	< 2	< 3	< 3	< 3
	Zn-65	< 5	< 5	< 6	< 7
	Nb-96	< 2	< 3	< 3	< 2
	Zr-95	< 4	< 4	< 5	< 3
	Cs-134	< 2	< 2	< 3	< 2
	Cs-137	< 2	< 2	< 2	< 2
	Ba-140	< 11	< 32	< 29	< 15
	La-140	< 5	< 12	< 13	< 5
Q-02	Mn-54	< 2	< 4	< 2	< 3
	Co-58	< 2	< 6	< 2	< 2
	Fe-59	< 4	< 14	< 5	< 6
	Co-60	< 3	< 4	< 2	< 3
	Zn-65	< 5	< 10	< 5	< 6
	Nb-96	< 2	< 5	< 2	< 3
	Zr-95	< 3	< 9	< 4	< 4
	Cs-134	< 2	< 5	< 2	< 3
	Cs-137	< 3	< 4	< 2	< 3
	Ba-140	< 11	< 61	< 19	< 14
	La-140	< 4	< 32	< 8	< 8
Q-03	Mn-54	< 2	< 2	< 3	< 2
	Co-58	< 2	< 3	< 2	< 2
	Fe-59	< 5	< 6	< 5	< 4
	Co-60	< 2	< 3	< 2	< 2
	Zn-65	< 4	< 6	< 7	< 5
	Nb-96	< 2	< 3	< 3	< 2
	Zr-95	< 3	< 6	< 4	< 3
	Cs-134	< 3	< 2	< 2	< 2
	Cs-137	< 2	< 3	< 2	< 2
	Ba-140	< 15	< 36	< 23	< 15
	La-140	< 7	< 14	< 11	< 5
Q-04	Mn-54	< 2	< 3	< 3	< 1
	Co-58	< 2	< 3	< 3	< 2
	Fe-59	< 6	< 8	< 8	< 4
	Co-60	< 2	< 3	< 3	< 2
	Zn-65	< 5	< 6	< 9	< 5
	Nb-96	< 2	< 3	< 3	< 2
	Zr-95	< 4	< 5	< 6	< 3
	Cs-134	< 2	< 3	< 4	< 2
	Cs-137	< 2	< 2	< 3	< 2
	Ba-140	< 9	< 49	< 33	< 14
	La-140	< 4	< 16	< 17	< 8

Table 12, Quarterly Air Particulate Gamma Isotopic (E-03 pCi/m^3 ± 2 Sigma)

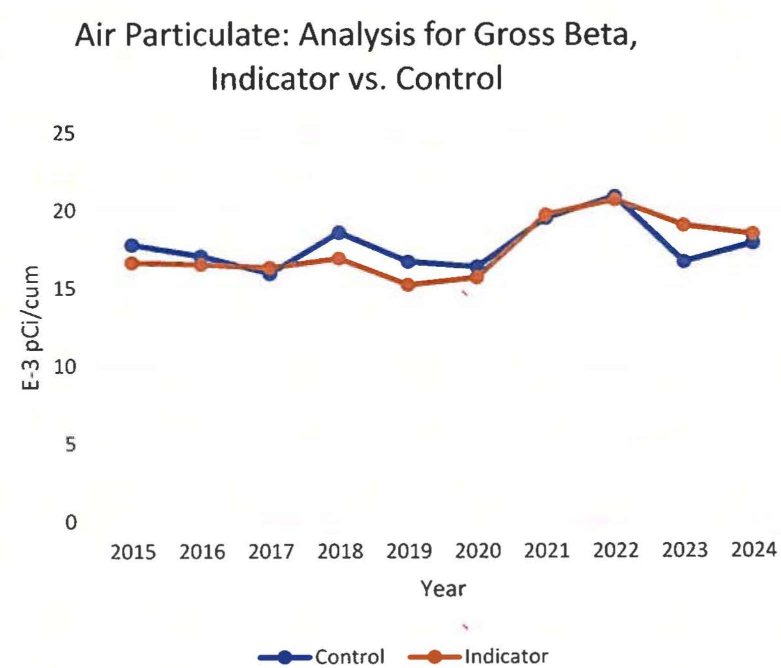
Station	Nuclide	Q1	Q2	Q3	Q4
Q-13	Mn-54	< 2	< 2	< 2	< 2
	Co-58	< 2	< 3	< 2	< 3
	Fe-59	< 4	< 6	< 5	< 6
	Co-60	< 2	< 3	< 3	< 3
	Zn-65	< 4	< 5	< 4	< 7
	Nb-96	< 2	< 3	< 3	< 3
	Zr-95	< 3	< 5	< 4	< 5
	Cs-134	< 2	< 3	< 2	< 3
	Cs-137	< 2	< 2	< 2	< 3
	Ba-140	< 9	< 27	< 19	< 23
	La-140	< 4	< 10	< 14	< 9
Q-16	Mn-54	< 2	< 2	< 2	< 2
	Co-58	< 2	< 2	< 2	< 2
	Fe-59	< 4	< 6	< 5	< 4
	Co-60	< 2	< 3	< 2	< 2
	Zn-65	< 6	< 6	< 4	< 6
	Nb-96	< 2	< 3	< 2	< 3
	Zr-95	< 4	< 5	< 3	< 3
	Cs-134	< 2	< 2	< 2	< 2
	Cs-137	< 2	< 2	< 2	< 2
	Ba-140	< 9	< 27	< 15	< 12
	La-140	< 5	< 17	< 5	< 9

Station	Nuclide	Q1	Q2	Q3	Q4
Q-37	Mn-54	< 2	< 3	< 3	< 1
	Co-58	< 2	< 3	< 5	< 1
	Fe-59	< 6	< 7	< 10	< 4
	Co-60	< 2	< 3	< 3	< 2
	Zn-65	< 7	< 4	< 8	< 3
	Nb-96	< 3	< 3	< 4	< 1
	Zr-95	< 5	< 6	< 5	< 3
	Cs-134	< 3	< 3	< 4	< 2
	Cs-137	< 3	< 2	< 3	< 1
	Ba-140	< 15	< 37	< 42	< 10
	La-140	< 5	< 13	< 16	< 5
Q-38	Mn-54	< 2	< 3	< 2	< 2
	Co-58	< 2	< 5	< 3	< 2
	Fe-59	< 4	< 11	< 6	< 5
	Co-60	< 2	< 3	< 2	< 2
	Zn-65	< 6	< 7	< 7	< 5
	Nb-96	< 2	< 4	< 3	< 2
	Zr-95	< 4	< 7	< 5	< 4
	Cs-134	< 2	< 4	< 2	< 2
	Cs-137	< 2	< 3	< 2	< 2
	Ba-140	< 11	< 53	< 23	< 13
	La-140	< 4	< 18	< 12	< 7

Table 12, Quarterly Air Particulate Gamma Isotopic (E-03 pCi/m^3 ± 2 Sigma)

Station	Nuclide	Q1	Q2	Q3	Q4
Q-41	Mn-54	< 2	< 2	< 2	< 2
	Co-58	< 3	< 3	< 2	< 2
	Fe-59	< 6	< 6	< 6	< 6
	Co-60	< 2	< 3	< 1	< 2
	Zn-65	< 6	< 6	< 5	< 6
	Nb-96	< 3	< 3	< 2	< 2
	Zr-95	< 4	< 4	< 3	< 4
	Cs-134	< 3	< 3	< 2	< 3
	Cs-137	< 2	< 2	< 2	< 2
	Ba-140	< 15	< 35	< 21	< 18
	La-140	< 5	< 14	< 9	< 7
Q-42	Mn-54	< 3	< 4	< 2	< 2
	Co-58	< 2	< 5	< 2	< 2
	Fe-59	< 6	< 11	< 4	< 6
	Co-60	< 1	< 5	< 3	< 2
	Zn-65	< 5	< 11	< 6	< 5
	Nb-96	< 3	< 4	< 3	< 2
	Zr-95	< 4	< 8	< 4	< 4
	Cs-134	< 2	< 5	< 2	< 2
	Cs-137	< 2	< 5	< 2	< 2
	Ba-140	< 12	< 76	< 24	< 16
	La-140	< 4	< 38	< 10	< 3

2.0 Figure 4, Air Particulate: Analysis for Gross Beta, Average for All Indicator vs. Control Location



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Annual Radiological Groundwater Protection Program Report 2025

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TABLE OF CONTENTS

1.0 LIST OF ACRONYMS AND DEFINITIONS 3
2.0 INTRODUCTION 5
2.1 About Nuclear Power 5
2.2 About Radiation Dose 7
2.3 About Dose Calculation 9
3.0 NEI 07-07 ONSITE RADIOLOGICAL GROUNDWATER MONITORING PROGRAM 11
3.1 Voluntary Notification 28
3.2 Status of Remediation Activities 28
1.0 BIBLIOGRAPHY 29

TABLES

Table 1, Groundwater Protection Program Monitoring Well Sampling Locations 11
Table 2, Groundwater Protection Program Monitoring Well Tritium, Strontium, and Gross Alpha in Groundwater Samples (pCi/L ± 2 sigma) 17
Table 3, Groundwater Protection Program Monitoring Well Gamma Isotopic in Groundwater Samples (pCi/L ± 2 sigma) 21
Table 4, Groundwater Protection Program Monitoring Well Hard-To-Detects in Groundwater Samples (pCi/L ± 2 sigma)[5] 22
Table 5, Groundwater Protection Program Monitoring Well Tritium in Groundwater Samples Collected and Analyzed by Quad Cities Station Personnel (pCi/L± 2 sigma) 23

FIGURES

Figure 1, Pressurized Water Reactor (PWR) [1] 5
Figure 2, Boiling Water Reactor (BWR) [2] 6
Figure 3, Sources of Radiation Exposure (NCRP Report No. 160) [3] 7
Figure 4, Potential exposure pathways to Members of the Public due to Plant Operations [6] 9
Figure 5, Sampling Locations Near the Site Boundary of the Quad Cities Nuclear Power Stations, 2025 14
Figure 6, Radwaste Area Well Locations, Quad Cities Nuclear Power Station, 2025 15

1.0 LIST OF ACRONYMS AND DEFINITIONS

1. Alpha Particle (α): A charged particle emitted from the nucleus of an atom having a mass and charge equal in magnitude of a helium nucleus.

2. BWR: Boiling Water Reactor

3. 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.

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

5. Counting Error: An estimate of the two-sigma uncertainty associated with the sample results based on total counts accumulated.

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

7. Direct Radiation Monitoring: The measurement of radiation dose at various distances from the plant is assessed using thermoluminescent dosimeters (TLDs), optically stimulated luminescent dosimeters (OSLDs), and/or pressurized ionization chambers.

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

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

10. 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.

11. ISFSI: Independent Spent Fuel Storage Installation

12. LLD: Lower Limit of Detection. 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.

13. 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 5% probability of falsely concluding that a blank observation represents a true signal.

14. MDC: Minimum Detectable Concentration. Essentially synonymous with MDA for the purposes of radiological monitoring.
15. Mean: The sum of all of the values in a distribution divided by the number of values in the distribution, synonymous with average.
16. Microcurie (µCi): 3.7×10^4 disintegrations per second, or 2.22×10^6 disintegrations per minute.
17. millirem (mrem): 1/1000 rem; a unit of radiation dose equivalent in tissue.
18. Milliroentgen (mR): 1/1000 Roentgen; a unit of exposure to X- or gamma radiation.
19. N/A: Not Applicable
20. NEI: Nuclear Energy Institute
21. NRC: Nuclear Regulatory Commission
22. ODCM: Offsite Dose Calculation Manual
23. OSLD: Optically Stimulated Luminescence Dosimeter
24. Protected Area: A 10 CFR 73 security term is an area encompassed by physical barriers and to which access is controlled for security purposes. The fenced area immediately surrounding the plant and around ISFSI are commonly classified by the licensee as "Protected areas." Access to the protected area requires a security badge or escort.
25. PWR: Pressurized Water Reactor
26. REC: Radiological Effluent Control
27. REMP: Radiological Environmental Monitoring Program
28. Restricted Area: A 10 CFRR 20 defined term where access to which is limited by the licensee for the purpose of protecting individuals against undue risks from exposure to radiation and radioactive materials.
29. TEDE: Total Effective Dose Equivalent (TEDE) means the sum of the effective dose equivalent (for external exposures) and the committed effective dose equivalent (for internal exposures).
30. TLD: Thermoluminescent Dosimeter
31. TRM: Technical Requirements Manual

32. TS: Technical Specification

33. Unrestricted Area: An area, access to which is neither limited nor controlled by the licensee.

2.0 INTRODUCTION

2.1 About Nuclear Power

Commercial nuclear power plants are generally classified as either Boiling Water Reactors (BWRs) or Pressurized Water Reactors (PWRs), based on their design. A BWR includes a single coolant system where water used as reactor coolant boils as it passes through the core and the steam generated is used to turn the turbine generator for power production. A PWR, in contrast, includes two separate water systems: radioactive reactor coolant and a secondary system. Reactor coolant is maintained under high pressure, preventing boiling. The high-pressure coolant is passed through a heat exchanger called a steam generator where the secondary system water is boiled, and the steam is used to turn the turbine generator for power production.

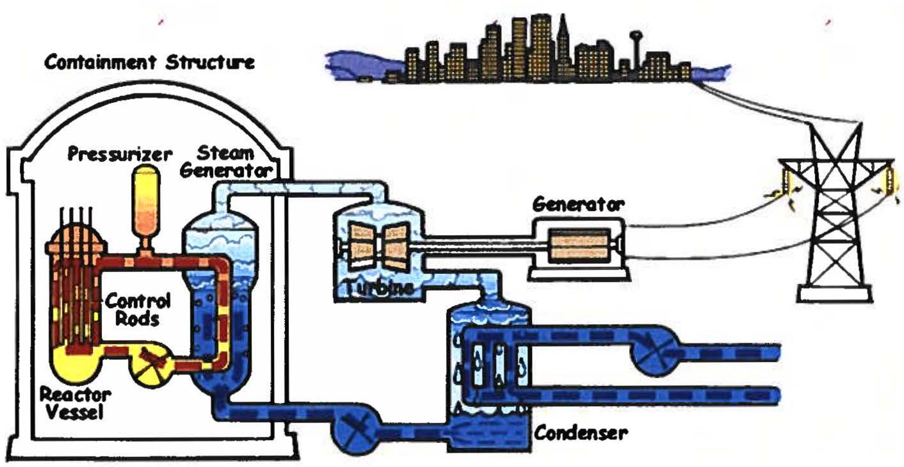

Figure 1, Pressurized Water Reactor (PWR) [1]

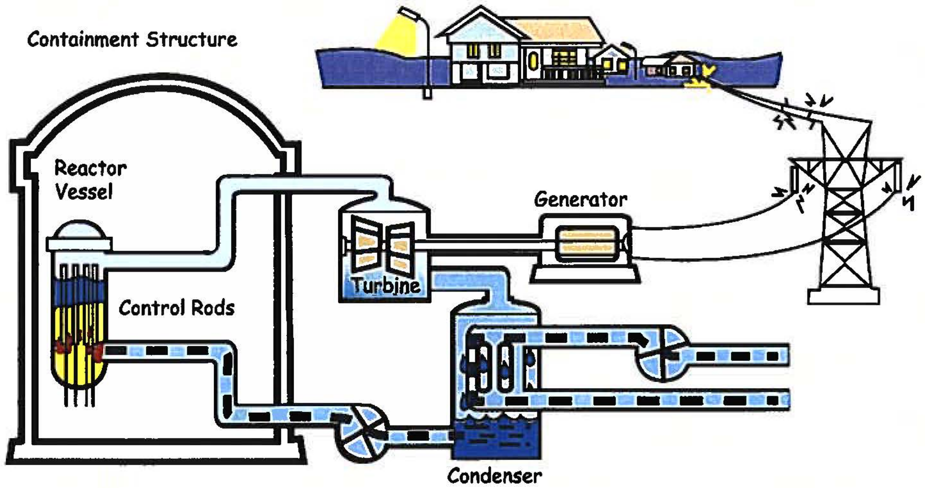

Figure 2, Boiling Water Reactor (BWR) [2]

Electricity is generated by a nuclear power plant similarly to the way that electricity is generated at other conventional types of power plants, such as those powered by coal or natural gas. Water is boiled to generate steam; the steam turns a turbine that is attached to a generator and the steam is condensed back into water to be returned to the boiler. What makes nuclear power different from these other types of power plants is that the heat is generated by fission and decay reactions occurring within and around the core containing fissionable uranium (U-235).

Nuclear fission occurs when certain nuclides (primarily U-233, U-235, or Pu-239) absorb a neutron and break into several smaller nuclides (called fission products) as well as producing some additional neutrons.

Fission results in production of radioactive materials including gases and solids that must be contained to prevent release or treated prior to release. These effluents are generally treated by filtration and/or hold-up prior to release. Releases are generally monitored by sampling and by continuously indicating radiation monitors. The effluent release data is used to calculate doses in order to ensure that dose to the public due to plant operation remains within required limits.

2.2 About Radiation Dose

Ionizing radiation, including alpha, beta, and gamma radiation from radioactive decay, has enough energy to break chemical bonds in tissues and result in damage to tissue or genetic material. The amount of ionization that will be generated by a given exposure to ionizing radiation is quantified as dose. Radiation dose is generally reported in units of millirem (mrem) in the US.

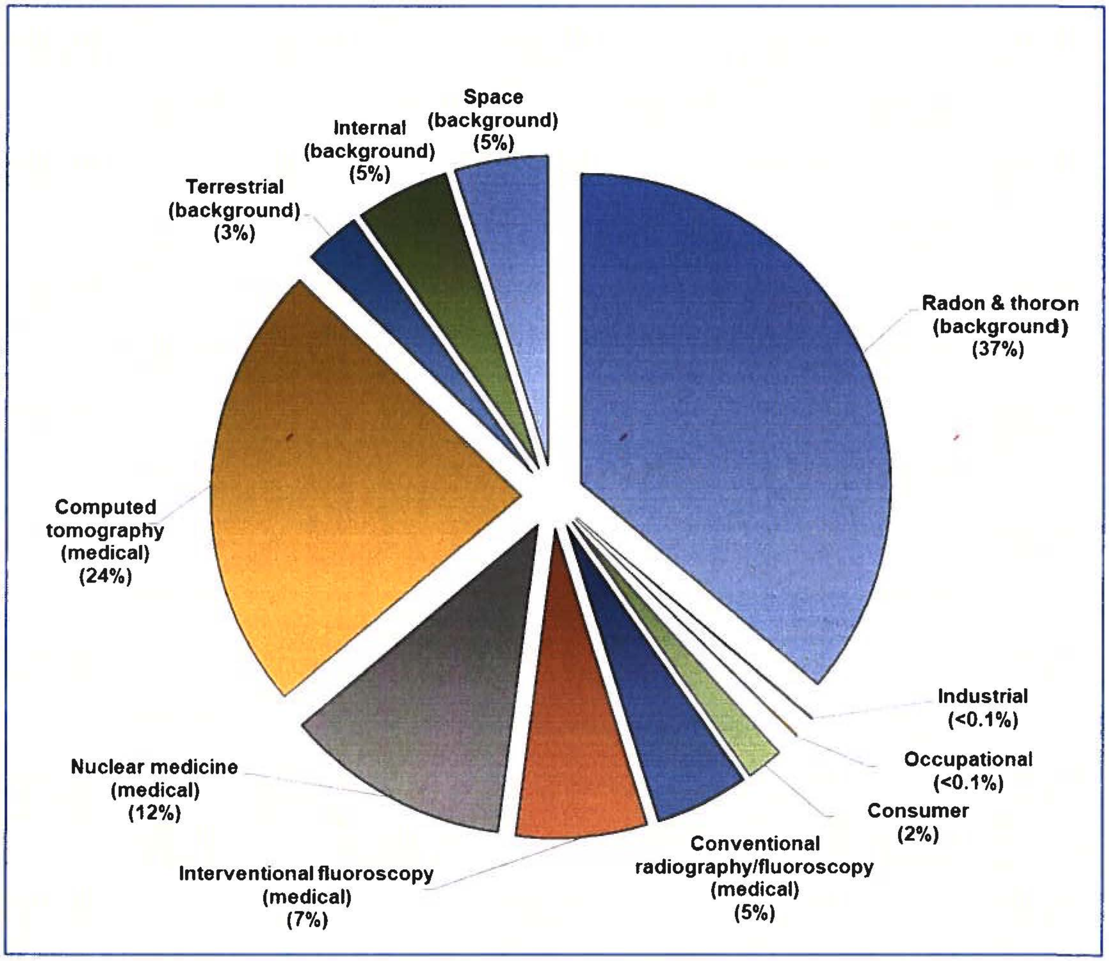

Figure 3, Sources of Radiation Exposure (NCRP Report No. 160) [3]

The National Council on Radiation Protection (NCRP) has evaluated the population dose for the US and determined that the average individual is exposed to approximately 620 mrem per year [3]. There are many sources for radiation dose, ranging from natural background sources to medical procedures, air travel, and industrial processes. Approximately half (310 mrem) of the average exposure is due to natural sources of radiation including exposure to radon, cosmic radiation, and internal radiation and terrestrial due to naturally occurring radionuclides. The remaining 310 mrem of exposure is due to man-made sources of exposure, with the most significant contributors being medical (48% of total mrem per year) due to radiation used in various types of medical scans and treatments. Of the remaining 2% of dose, most is due to consumer activities such as air travel, smoking cigarettes, and building materials. A small fraction of this 2% is due to industrial activities including generation of nuclear power.

Readers that are curious about common sources and effects of radiation dose that they may encounter can find excellent sources of information from the Health Physics Society, including the Radiation Fact Sheets [4], and from the US Nuclear Regulatory Commission website [5].

2.3 About Dose Calculation

Concentrations of radioactive material in the environment resulting from plant operations are very small and it is not possible to determine doses directly using measured activities of environmental samples. To overcome this, dose calculations based on measured activities of effluent streams are used to model the dose impact for Members of the Public due to plant operation and effluents. There are several mechanisms that can result in dose to Members of the Public, including: Ingestion of radionuclides in food or water; Inhalation of radionuclides in air; Immersion in a plume of noble gases; and Direct Radiation from the ground, the plant or from an elevated plume.

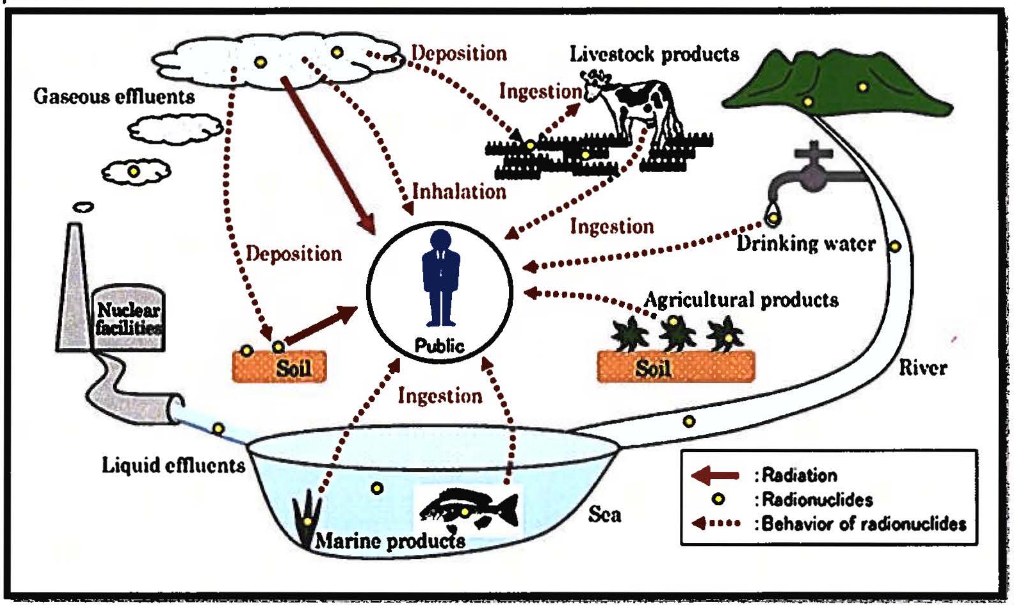

Figure 4, Potential exposure pathways to Members of the Public due to Plant Operations [6]

Each plant has an Offsite Dose Calculation Manual (ODCM) that specifies the methodology used to obtain the doses in the Dose Assessment section of this report. The dose assessment methodology in the ODCM is based on NRC Regulatory Guide 1.109 [7] and NUREG-0133 [8]. Doses are calculated by determining what the nuclide concentration will be in air, water, on the ground, or in food products based on plant effluent releases. Release points are continuously monitored to quantify what concentrations of nuclides are being released. For gaseous releases meteorological data is used to determine how much of the released activity will be present at a given location outside of the plant either deposited onto the ground or in gaseous form. Intake patterns and nuclide bio-concentration factors are used to determine how much activity will be transferred into animal milk or meat. Finally, human ingestion factors and dose factors are used to determine how much activity will be consumed and how much dose the consumer will receive. Inhalation dose is calculated by determining the concentration of nuclides and how much air is breathed by the individual.

For liquid releases, dilution and mixing factors are used to model the environmental concentrations in water. Drinking water pathways are modeled by determining the concentration of nuclides in the water at the point where the drinking water is sourced (e.g., taken from wells, rivers, or lakes). Fish and invertebrate pathways are determined by using concentration at the release point, bioaccumulation factors for the fish or invertebrate and an estimate of the quantity of fish consumed.

Each year a Land Use Census is performed to determine what potential dose pathways currently exist within a five-mile radius around the plant, the area most affected by plant operations. The Annual Land Use Census identifies the locations of vegetable gardens, nearest residences, milk animals and meat animals. The data from the census is used to determine who is the likely to be most exposed to radiation dose as a result of plant operation.

There is significant uncertainty in dose calculation results, due to modeling dispersion of material released and bioaccumulation factors, as well as assumptions associated with consumption and land-use patterns. Even with these sources of uncertainty, the calculations do provide a reasonable estimate of the order of magnitude of the exposure. Conservative assumptions are made in the calculation inputs such as the number of various foods and water consumed, the amount of air inhaled, and the amount of direct radiation exposure from the ground or plume, such that the actual dose received are likely lower than the calculated dose. Even with the built-in conservatism, doses calculated for the maximum exposed individual due to plant operation are a very small fraction of the annual dose that is received due to other sources. The calculated doses due to plant effluents, along with REMP results, serve to provide assurance that radioactive effluents releases are not exceeding safety standards for the environment or people living near the plant.

3.0 NEI 07-07 ONSITE RADIOLOGICAL GROUNDWATER MONITORING PROGRAM

Quad Cities Nuclear Power Station Units 1 and 2 has developed a Groundwater Protection Initiative (GPI) program in accordance with NEI 07-07, Industry Ground Water Protection Initiative – Final Guidance Document [9]. 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. During 2025, Quad Cities Station collected and analyzed groundwater samples in accordance with the requirements of approved procedures following regulatory methods.

This section is included in this report to communicate results of NEI 07-07 Radiological Groundwater Monitoring Program. Monitoring wells installed as part of GPI program are sampled and analyzed as summarized in Table 1, Groundwater Protection Program Monitoring Well Sampling Locations. In addition to reporting results from NEI 07-07 monitoring wells, voluntary communications to offsite governmental agencies for onsite leaks or spills per NEI 07-07 Objective 2.2, are also reported as part of this report. It is important to note, samples and results taken in support of NEI 07-07 groundwater monitoring program are not part of the Radiological Environmental Monitoring Program (REMP) but should be reported as part of ARERR.

Table 1, Groundwater Protection Program Monitoring Well Sampling Locations

Site	Site Type	Well Designation	Minimum Sample Frequency
MW-QC-1	Monitoring Well	Source	Quarterly
MW-QC-2	Monitoring Well	Mid-Field	Semi-Annual
MW-QC-3	Monitoring Well	Source	Quarterly
MW-QC-101I	Monitoring Well	Idle	Not Required
MW-QC-101S	Monitoring Well	Idle	Not Required
MW-QC-102D	Monitoring Well	Perimeter	Annual
MW-QC-102I	Monitoring Well	Mid-Field	Semi-Annual
MW-QC-102S	Monitoring Well	Perimeter	Annual
MW-QC-103I	Monitoring Well	Source	Quarterly
MW-QC-104S	Monitoring Well	Source	Quarterly
MW-QC-105I	Monitoring Well	Source	Quarterly
MW-QC-106I	Monitoring Well	Mid-Field	Semi-Annual

Table 1, Groundwater Protection Program Monitoring Well Sampling Locations Cont'd

Site	Site Type	Well Designation	Minimum Sample Frequency
MW-QC-106S	Monitoring Well	Mid-Field	Semi-Annual
MW-QC-107I	Monitoring Well	Background	Annual
MW-QC-108D	Monitoring Well	Perimeter	Annual
MW-QC-108I	Monitoring Well	Mid-Field	Semi-Annual
MW-QC-108S	Monitoring Well	Perimeter	Annual
MW-QC-109I	Monitoring Well	Mid-Field	Semi-Annual
MW-QC-109S	Monitoring Well	Perimeter	Annual
MW-QC-110I	Monitoring Well	Idle	Not Required
MW-QC-111D1	Monitoring Well	Idle	Not Required
MW-QC-111D2	Monitoring Well	Idle	Not Required
MW-QC-111I	Monitoring Well	Idle	Not Required
MW-QC-112I	Monitoring Well	Perimeter	Annual
MW-QC-113I	Monitoring Well	Idle	Not Required
MW-QC-114I	Monitoring Well	Idle	Not Required
MW-QC-115S	Monitoring Well	Idle	Not Required
MW-QC-116S	Monitoring Well	Idle	Not Required
MW-QC-117S	Monitoring Well	Source	Quarterly
MW-R-2D2	Remediation Well	Mid-Field	Semi-Annual
SURFACE WATER #1	Surface Water	Idle	Not Required
SURFACE WATER #2	Surface Water	Idle	Not Required
WELL #1	Production Well	Idle	Not Required
WELL #5	Production Well	Idle	Not Required
WELL #6 LITTLE FISH	Production Well	Idle	Not Required
WELL #7 BIG FISH WELL	Production Well	Idle	Not Required
WELL #8 FIRE TRAINING WELL	Production Well	Idle	Not Required
WELL #9 Dry Cask Storage	Production Well	Background	Annual
WELL #10 FISH HOUSE WELL	Production Well	Idle	Not Required
WELL #11 SPRAY CANAL WELL	Production Well	Idle	Not Required
STP SAND POINT WELL	Production Well	Idle	Not Required
QC-GP-1	Sentinel Well	Source	Quarterly
QC-GP-2	Sentinel Well	Source	Quarterly
QC-GP-3	Sentinel Well	Idle	Not Required

Table 1, Groundwater Protection Program Monitoring Well Sampling Locations Cont'd

Site	Site Type	Well Designation	Minimum Sample Frequency
QC-GP-4	Sentinel Well	Source	Quarterly
QC-GP-5	Sentinel Well	Source	Quarterly
QC-GP-6	Sentinel Well	Idle	Not Required
QC-GP-7	Sentinel Well	Idle	Not Required
QC-GP-8	Sentinel Well	Idle	Not Required
QC-GP-9	Sentinel Well	Source	Quarterly
QC-GP-10	Sentinel Well	Source	Quarterly
QC-GP-11	Sentinel Well	Idle	Not Required
QC-GP-12	Sentinel Well	Source	Quarterly
QC-GP-13	Sentinel Well	Idle	Not Required
QC-GP-14	Sentinel Well	Mid-Field	Semi-Annual
QC-GP-15	Sentinel Well	Source	Quarterly
QC-GP-16	Sentinel Well	Idle	Not Required
QC-GP-17	Sentinel Well	Source	Quarterly
QC-GP-18	Sentinel Well	Source	Quarterly
QC-GP-19	Monitoring Well	Source	Quarterly
QC-GP-20	Monitoring Well	Idle	Not Required
QC-GP-21	Monitoring Well	Idle	Not Required
QC-GP-22	Monitoring Well	Source	Quarterly
QC-GP-23	Monitoring Well	Idle	Not Required
QC-GP-24	Monitoring Well	Source	Quarterly
QC-RW-1	Remediation Well	Mid-Field	Semi-Annual
QC-RW-2	Remediation Well	Mid-Field	Semi-Annual

MAPS OF COLLECTION SITES

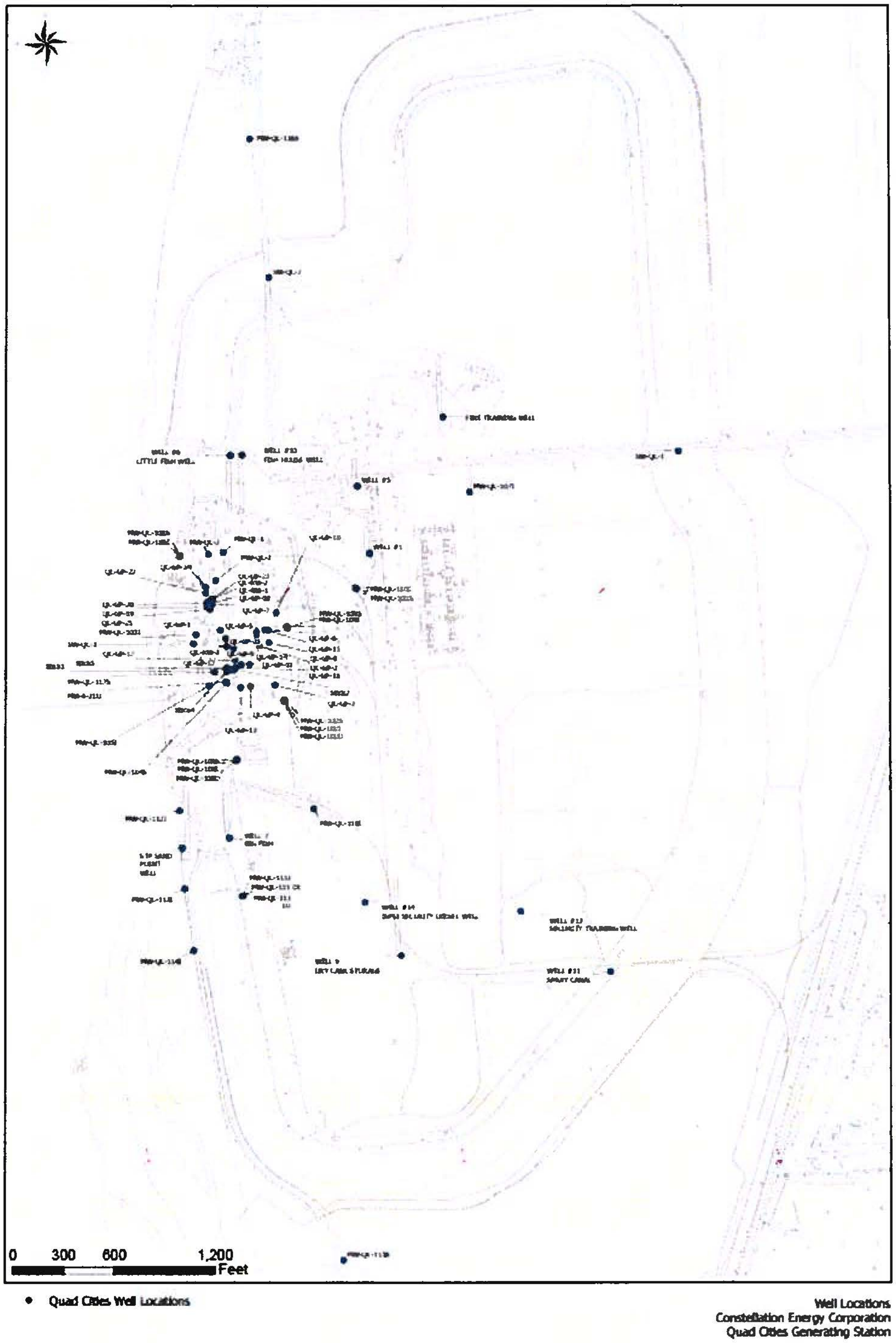

Figure 5, Sampling Locations Near the Site Boundary of the Quad Cities Nuclear Power Stations, 2025

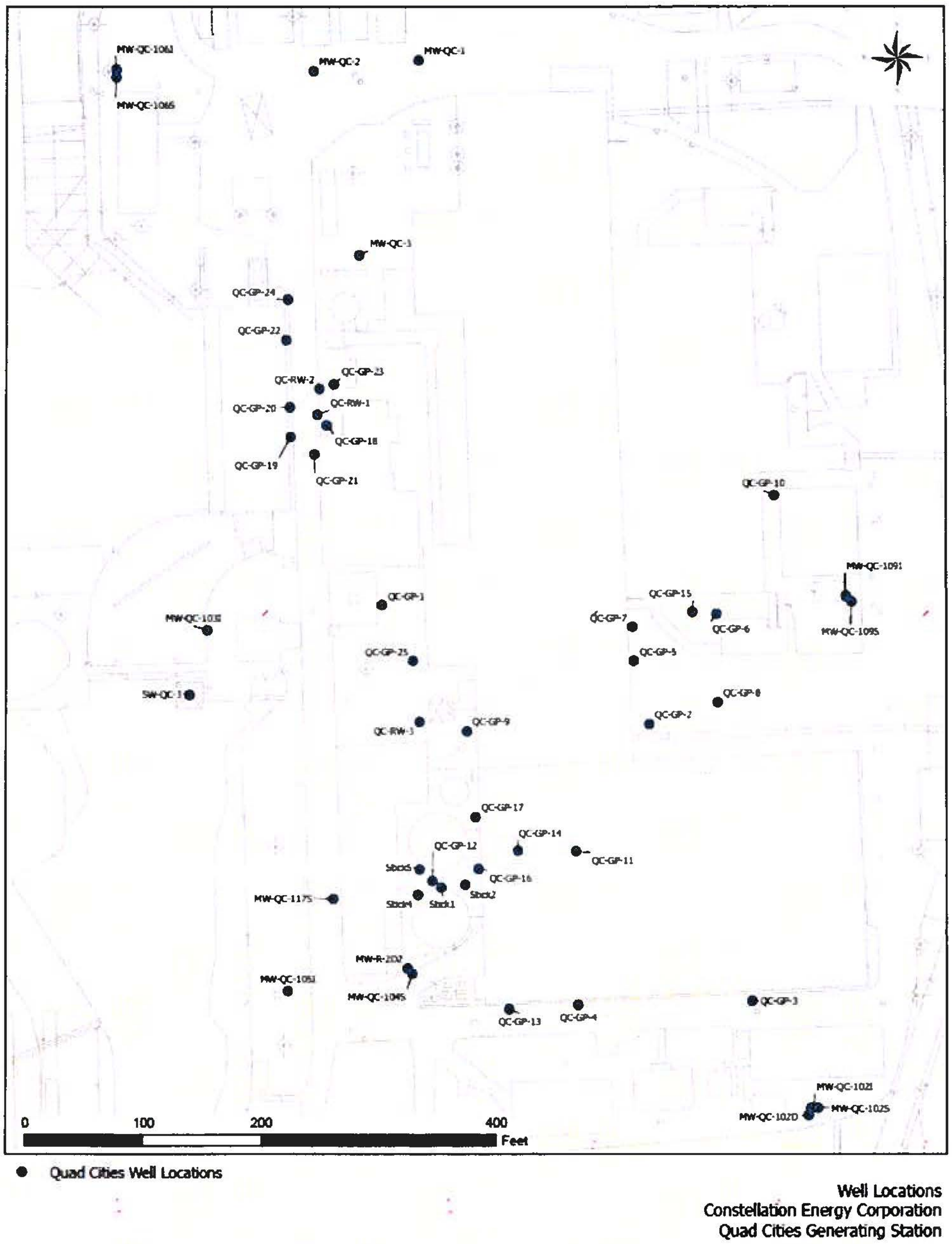

Figure 6, Radwaste Area Well Locations, Quad Cities Nuclear Power Station, 2025

Radiological Groundwater Monitoring Program tritium results are summarized in Table 2, Groundwater Protection Program Monitoring Well Tritium, Strontium, and Gross Alpha in Groundwater Samples (pCi/L ± 2 sigma). Strontium-90 was detected at one location with concentrations ranging from 2.5 – 6.3 pCi/L.

Table 2, Groundwater Protection Program Monitoring Well Tritium, Strontium, and Gross Alpha in Groundwater Samples (pCi/L ± 2 sigma)

Site	Collection Date	H-3	Sr-89	Sr-90	Gr-A(Dis)	Gr-A(Sus)
MW-QC-1	2/26/2025	< 189	< 6.4	< 0.8		
MW-QC-1	5/6/2025	< 183				
MW-QC-1	8/27/2025	< 191				
MW-QC-1	10/21/2025	310 ± 132				
MW-QC-102D	2/27/2025	< 187				
MW-QC-102I	2/27/2025	< 189				
MW-QC-102I	8/28/2025	< 193				
MW-QC-102S	2/27/2025	< 188				
MW-QC-103I	2/26/2025	< 185	< 5.6	< 0.9		
MW-QC-103I	5/6/2025	< 185				
MW-QC-103I	8/28/2025	< 191				
MW-QC-103I	10/21/2025	< 197				
MW-QC-104S	2/27/2025	666 ± 144	< 8.2	< 0.8		
MW-QC-104S	5/6/2025	1740 ± 241				
MW-QC-104S	8/28/2025	< 189				
MW-QC-104S	10/21/2025	< 194				
MW-QC-105I	2/27/2025	< 186	< 5.5	< 0.9		
MW-QC-105I	5/6/2025	< 183				
MW-QC-105I	8/28/2025	< 191				
MW-QC-105I	10/21/2025	< 193				
MW-QC-106I	2/26/2025	< 185				
MW-QC-106I	8/28/2025	< 187				
MW-QC-106S	2/26/2025	< 183				
MW-QC-106S	8/28/2025	< 191				
MW-QC-107I	2/26/2025	< 184				
MW-QC-108D	2/26/2025	< 187				
MW-QC-108I	2/26/2025	< 183				
MW-QC-108I	8/28/2025	< 188				
MW-QC-108S	2/26/2025	< 184				
MW-QC-109I	2/26/2025	< 182				
MW-QC-109I	8/28/2025	< 189				
MW-QC-109S	2/26/2025	< 186				
MW-QC-112I	2/26/2025	< 190				
MW-QC-117S	2/27/2025	< 187	< 9.1	< 0.9		
MW-QC-117S	5/6/2025	< 182				
MW-QC-117S	8/28/2025	< 188				

Table 2, Groundwater Protection Program Monitoring Well Tritium, Strontium, and Gross Alpha in Groundwater Samples (pCi/L ± 2 sigma) Cont'd

Site	Collection Date	H-3	Sr-89	Sr-90	Gr-A(Dis)	Gr-A(Sus)
MW-QC-117S	10/21/2025	< 191				
MW-QC-2	2/26/2025	309 ± 129				
MW-QC-2	8/27/2025	2200 ± 296				
MW-QC-2	10/21/2025	709 ± 156	< 4.1	< 0.9	< 8.2	< 3.6
MW-QC-3	2/26/2025	< 188	< 5.3	< 0.9		
MW-QC-3	5/5/2025	890 ± 176				
MW-QC-3	8/27/2025	332 ± 129				
MW-QC-3	10/21/2025	< 195				
MW-R-2D2	2/24/2025	6770 ± 742				
MW-R-2D2	8/25/2025	763 ± 163				
QC-GP-1	2/25/2025	< 186	< 6.9	< 0.9		
QC-GP-1	5/6/2025	< 191				
QC-GP-1	8/26/2025	< 188				
QC-GP-1	10/21/2025	< 193				
QC-GP-10	2/24/2025	< 186	< 5.0	< 0.8		
QC-GP-10	5/5/2025	< 190				
QC-GP-10	8/25/2025	< 185				
QC-GP-10	10/20/2025	< 190				
QC-GP-12	2/25/2025	264 ± 125	< 9.0	< 1.0		
QC-GP-12	5/6/2025	193 ± 122				
QC-GP-12	8/25/2025	226 ± 125				
QC-GP-12	10/21/2025	195 ± 124				
QC-GP-14	2/25/2025	< 181				
QC-GP-14	8/26/2025	415 ± 133				
QC-GP-15	2/24/2025	< 186	< 10	< 0.9		
QC-GP-15	5/5/2025	< 189				
QC-GP-15	8/25/2025	< 186				
QC-GP-15	10/20/2025	< 186				
QC-GP-17	2/25/2025	< 187	< 5.4	< 0.9		
QC-GP-17	5/6/2025	302 ± 128				
QC-GP-17	8/25/2025	936 ± 169				
QC-GP-17	9/22/2025	328 ± 129				
QC-GP-17	10/21/2025	< 194				
QC-GP-18	5/6/2025	833 ± 171	< 7.5	< 0.9	< 0.5	< 0.4
QC-GP-18 *Reanalysis*	5/6/2025	928 ± 171				
QC-GP-18	8/26/2025	1570 ± 229				

Table 2, Groundwater Protection Program Monitoring Well Tritium, Strontium, and Gross Alpha in Groundwater Samples (pCi/L ± 2 sigma) Cont'd

Site	Collection Date	H-3	Sr-89	Sr-90	Gr-A(Dis)	Gr-A(Sus)
QC-GP-19	2/25/2025	2540 ± 324	< 8.4	< 0.9		
QC-GP-19	5/6/2025	3000 ± 376				
QC-GP-19	8/26/2025	2590 ± 325				
QC-GP-19	10/21/2025	3030 ± 377				
QC-GP-2	2/24/2025	< 187	< 6.8	< 0.9		
QC-GP-2	5/5/2025	< 189				
QC-GP-2	8/25/2025	< 189				
QC-GP-2	9/22/2025	< 188				
QC-GP-2	10/20/2025	202 ± 128				
QC-GP-22	2/25/2025	< 191	< 8.3	< 0.8		
QC-GP-22	5/6/2025	< 192				
QC-GP-22	8/26/2025	300 ± 129				
QC-GP-22	10/21/2025	221 ± 125				
QC-GP-24	2/25/2025	< 188	< 7.5	< 0.8		
QC-GP-24	5/6/2025	< 191				
QC-GP-24	8/26/2025	< 186				
QC-GP-24	10/21/2025	< 189				
QC-GP-25	9/22/2025	430 ± 132	< 9.5	< 0.9	< 1.0	< 0.7
QC-GP-4	2/24/2025	1290 ± 207	< 9.1	< 0.8		
QC-GP-4	5/5/2025	833 ± 171				
QC-GP-4	8/25/2025	789 ± 158				
QC-GP-4	10/20/2025	1070 ± 188				
QC-GP-5	2/24/2025	< 188	< 8.1	3.2 ± 0.7		
QC-GP-5	5/5/2025	< 189	< 6.3	2.5 ± 0.6		
QC-GP-5	8/25/2025	< 190	< 9.0	6.3 ± 0.7		
QC-GP-5	10/20/2025	< 194	< 5.5	2.7 ± 0.3		
QC-GP-9	2/25/2025	196 ± 123	< 9.1	< 0.8		
QC-GP-9	5/6/2025	316 ± 127				
QC-GP-9	8/26/2025	8960 ± 961				
QC-GP-9	8/28/2025	8230 ± 887				
QC-GP-9	8/29/2025	10200 ± 1080	< 6.9	< 0.8	< 2.5	< 1.9
QC-GP-9	9/11/2025	67100 ± 6740				
QC-GP-9 *Reanalysis*	9/11/2025	69900 ± 7030				

Table 2, Groundwater Protection Program Monitoring Well Tritium, Strontium, and Gross Alpha in Groundwater Samples (pCi/L ± 2 sigma) Cont'd

Site	Collection Date	H-3	Sr-89	Sr-90	Gr-A(Dis)	Gr-A(Sus)
QC-GP-9	9/16/2025	6310 ± 693				
QC-GP-9	9/22/2025	412 ± 133				
QC-GP-9	10/21/2025	< 194				
QC-RW-1	2/25/2025	317 ± 130				
QC-RW-1	8/26/2025	< 185				
QC-RW-2	2/25/2025	4470 ± 515				
QC-RW-2	8/26/2025	4470 ± 518				
QC-RW-3	9/22/2025	< 186	< 9.4	< 0.9	< 1.4	< 0.8
WELL #9 DRY CASK STORAGE	2/26/2025	< 184				

Table 3, Groundwater Protection Program Monitoring Well Gamma Isotopic in Groundwater Samples (pCi/L ± 2 sigma)

Site	Collection Date	Be-7	K-40	Mn-54	Co-58	Fe-59	Co-60	Zn-65	Nb-95	Zr-95	I-131	Cs-134	Cs-137	Ba-140	La-140
MW-QC-2	10/21/2025	< 34	< 40	< 4	< 4	< 9	< 4	< 8	< 4	< 7	< 11	< 4	< 4	< 26	< 9
QC-GP-18	5/6/2025	< 19	< 21	< 2	< 2	< 5	< 2	< 4	< 2	< 4	< 6	< 2	< 2	< 14	< 5
QC-GP-25	9/22/2025	< 16	< 19	< 2	< 2	< 4	< 3	< 4	< 2	< 3	< 2	< 2	< 2	< 7	< 2
QC-GP-9	8/29/2025	< 28	< 34	< 3	< 4	< 7	< 4	< 8	< 4	< 6	< 4	< 3	< 3	< 14	< 5
QC-RW-3	9/22/2025	< 15	< 16	< 2	< 2	< 4	< 2	< 4	< 2	< 3	< 2	< 2	< 2	< 7	< 2

Table 4, Groundwater Protection Program Monitoring Well Hard-To-Detects in Groundwater Samples (pCi/L ± 2 sigma)[5]

Site	Collection Date	Fe-55	Ni-63	Am-241	Cm-242	CM-243/244	Pu-238	Pu-239/240	U-234	U-235	U-238
MW-QC-2	10/21/2025	< 69	< 5	< 0.04	< 0.04	< 0.04	< 0.1	< 0.1	2.2 ± 0.9	< 0.1	3.4 ± 1.2
QC-GP-18	5/6/2025	< 88	< 4	< 0.08	< 0.08	< 0.08	< 0.1	< 0.05	0.6 ± 0.3	< 0.2	0.5 ± 0.3
QC-GP-25	9/22/2025	< 173	< 5	< 0.1	< 0.08	< 0.04	< 0.08	< 0.08	1.8 ± 0.8	< 0.1	1.2 ± 0.6
QC-GP-9	8/29/2025	< 96	< 4	< 0.06	< 0.06	< 0.06	< 0.04	< 0.04	< 0.07	< 0.09	< 0.2
QC-RW-3	9/22/2025	< 96	< 5	< 0.2	< 0.1	< 0.2	< 0.09	< 0.1	< 0.2	< 0.2	< 0.08

[5]Strontium 89/90 included in Table 2

Table 5, Groundwater Protection Program Monitoring Well Tritium in Groundwater Samples Collected and Analyzed by Quad Cities Station Personnel (pCi/L± 2 sigma)

SITE	COLLECTION DATE	ACTIVITY	SITE TYPE
QC-GP-1	02/25/25	<2,000	Sentinel Well
QC-GP-1	05/06/25	<2,000	Sentinel Well
QC-GP-1	08/26/25	<2,000	Sentinel Well
QC-GP-1	08/29/25	<2,000	Sentinel Well
QC-GP-1	08/31/25	<2,000	Sentinel Well
QC-GP-1	09/02/25	<2,000	Sentinel Well
QC-GP-1	09/03/25	<2,000	Sentinel Well
QC-GP-1	09/05/25	<2,000	Sentinel Well
QC-GP-1	09/08/25	<2,000	Sentinel Well
QC-GP-1	09/10/25	<2,000	Sentinel Well
QC-GP-1	09/12/25	<2,000	Sentinel Well
QC-GP-1	09/15/25	<2,000	Sentinel Well
QC-GP-1	09/17/25	<2,000	Sentinel Well
QC-GP-1	10/21/25	<2,000	Sentinel Well
QC-GP-2	02/24/25	<2,000	Sentinel Well
QC-GP-2	05/05/25	<2,000	Sentinel Well
QC-GP-2	08/25/25	<2,000	Sentinel Well
QC-GP-2	08/29/25	<2,000	Sentinel Well
QC-GP-2	08/31/25	<2,000	Sentinel Well
QC-GP-2	09/02/25	<2,000	Sentinel Well
QC-GP-2	09/03/25	<2,000	Sentinel Well
QC-GP-2	09/05/25	<2,000	Sentinel Well
QC-GP-2	09/08/25	<2,000	Sentinel Well
QC-GP-2	09/10/25	<2,000	Sentinel Well
QC-GP-2	09/12/25	<2,000	Sentinel Well
QC-GP-2	09/15/25	<2,000	Sentinel Well
QC-GP-2	09/17/25	<2,000	Sentinel Well
QC-GP-2	09/22/25	<200	Sentinel Well
QC-GP-2	10/20/25	<2,000	Sentinel Well
QC-GP-4	02/24/25	<2,000	Sentinel Well
QC-GP-4	05/05/25	<2,000	Sentinel Well
QC-GP-4	08/25/25	<2,000	Sentinel Well
QC-GP-4	10/20/25	<2,000	Sentinel Well
QC-GP-5	02/24/25	<2,000	Sentinel Well
QC-GP-5	05/05/25	<2,000	Sentinel Well
QC-GP-5	08/25/25	<2,000	Sentinel Well
QC-GP-5	10/20/25	<2,000	Sentinel Well
QC-GP-9	02/25/25	<2,000	Sentinel Well
QC-GP-9	05/06/25	<2,000	Sentinel Well
QC-GP-9	08/06/25	10,600	Sentinel Well

Table 5, Groundwater Protection Program Monitoring Well Tritium in Groundwater Samples Collected and Analyzed by Quad Cities Station Personnel (pCi/L± 2 sigma) Cont'd

SITE	COLLECTION DATE	ACTIVITY	SITE TYPE
QC-GP-9	08/28/25	9,850	Sentinel Well
QC-GP-9	08/29/25	11,900	Sentinel Well
QC-GP-9	08/31/25	13,900	Sentinel Well
QC-GP-9	09/02/25	28,600	Sentinel Well
QC-GP-9	09/03/25	31,200	Sentinel Well
QC-GP-9	09/05/25	44,600	Sentinel Well
QC-GP-9	09/08/25	63,700	Sentinel Well
QC-GP-9	09/09/25	59,600	Sentinel Well
QC-GP-9	09/10/25	91,500	Sentinel Well
QC-GP-9	09/11/25	93,100	Sentinel Well
QC-GP-9	09/12/25	55,600	Sentinel Well
QC-GP-9	09/13/25	32,800	Sentinel Well
QC-GP-9	09/14/25	24,500	Sentinel Well
QC-GP-9	09/15/25	20,600	Sentinel Well
QC-GP-9	09/16/25	8,360	Sentinel Well
QC-GP-9	09/17/25	4,100	Sentinel Well
QC-GP-9	09/18/25	2,970	Sentinel Well
QC-GP-9	09/19/25	3,250	Sentinel Well
QC-GP-9	09/20/25	<2,000	Sentinel Well
QC-GP-9	09/21/25	<2,000	Sentinel Well
QC-GP-9	09/22/25	247	Sentinel Well
QC-GP-9	09/23/25	<2,000	Sentinel Well
QC-GP-9	09/24/25	<2,000	Sentinel Well
QC-GP-9	09/25/25	<2,000	Sentinel Well
QC-GP-9	09/26/25	<2,000	Sentinel Well
QC-GP-9	09/29/25	<2,000	Sentinel Well
QC-GP-9	10/06/25	<2,000	Sentinel Well
QC-GP-9	10/21/25	<2,000	Sentinel Well
QC-GP-10	02/24/25	<2,000	Sentinel Well
QC-GP-10	05/05/25	<2,000	Sentinel Well
QC-GP-10	08/25/25	<2,000	Sentinel Well
QC-GP-10	10/20/25	<2,000	Sentinel Well
QC-GP-12	02/24/25	<2,000	Sentinel Well
QC-GP-12	05/06/25	<2,000	Sentinel Well
QC-GP-12	08/25/25	<2,000	Sentinel Well
QC-GP-12	10/21/25	2,410	Sentinel Well
QC-GP-14	02/25/25	<2,000	Sentinel Well
QC-GP-14	08/26/25	<2,000	Sentinel Well
QC-GP-14	09/03/25	<2,000	Sentinel Well
QC-GP-14	09/16/25	<2,000	Sentinel Well

Table 5, Groundwater Protection Program Monitoring Well Tritium in Groundwater Samples Collected and Analyzed by Quad Cities Station Personnel (pCi/L± 2 sigma) Cont'd

SITE	COLLECTION DATE	ACTIVITY	SITE TYPE
QC-GP-15	02/24/25	<2,000	Sentinel Well
QC-GP-15	05/05/25	<2,000	Sentinel Well
QC-GP-15	08/25/25	<2,000	Sentinel Well
QC-GP-15	10/20/25	<2,000	Sentinel Well
QC-GP-17	02/25/25	<2,000	Sentinel Well
QC-GP-17	05/06/25	<2,000	Sentinel Well
QC-GP-17	08/25/25	<2,000	Sentinel Well
QC-GP-17	08/29/25	<2,000	Sentinel Well
QC-GP-17	08/31/25	<2,000	Sentinel Well
QC-GP-17	09/02/25	<2,000	Sentinel Well
QC-GP-17	09/03/25	<2,000	Sentinel Well
QC-GP-17	09/05/25	<2,000	Sentinel Well
QC-GP-17	09/08/25	<2,000	Sentinel Well
QC-GP-17	09/10/25	<2,000	Sentinel Well
QC-GP-17	09/12/25	<2,000	Sentinel Well
QC-GP-17	09/15/25	<2,000	Sentinel Well
QC-GP-17	09/17/25	<2,000	Sentinel Well
QC-GP-17	09/22/25	451	Sentinel Well
QC-GP-17	10/21/25	<2,000	Sentinel Well
QC-GP-18	05/06/25	2,250	Sentinel Well
QC-GP-18	08/26/25	<2,000	Sentinel Well
QC-GP-19	02/25/25	332	Sentinel Well
QC-GP-19	05/06/25	4,020	Sentinel Well
QC-GP-19	08/26/25	2,690	Sentinel Well
QC-GP-19	10/21/25	2,190	Sentinel Well
QC-GP-20	02/25/25	<2,000	Sentinel Well
QC-GP-20	05/06/25	<2,000	Sentinel Well
QC-GP-20	08/26/25	<2,000	Sentinel Well
QC-GP-20	10/21/25	<2,000	Sentinel Well
QC-GP-21	02/25/25	<2,000	Sentinel Well
QC-GP-21	05/06/25	<2,000	Sentinel Well
QC-GP-21	08/26/25	<2,000	Sentinel Well
QC-GP-21	10/21/25	4,040	Sentinel Well
QC-GP-22	02/25/25	< 2000	Sentinel Well
QC-GP-22	05/06/25	< 2000	Sentinel Well
QC-GP-22	08/26/25	< 2000	Sentinel Well
QC-GP-22	10/21/25	< 2000	Sentinel Well
QC-GP-23	02/25/25	< 2000	Sentinel Well
QC-GP-23	05/06/25	2,020	Sentinel Well
QC-GP-23	08/26/25	< 2000	Sentinel Well

Table 5, Groundwater Protection Program Monitoring Well Tritium in Groundwater Samples Collected and Analyzed by Quad Cities Station Personnel (pCi/L± 2 sigma) Cont'd

SITE	COLLECTION DATE	ACTIVITY	SITE TYPE
QC-GP-23	10/21/25	4,920	Sentinel Well
QC-GP-24	02/25/25	< 2000	Sentinel Well
QC-GP-24	05/06/25	< 2000	Sentinel Well
QC-GP-24	08/26/25	< 2000	Sentinel Well
QC-GP-24	10/21/25	< 2000	Sentinel Well
QC-RW-1	02/25/25	< 2000	Sentinel Well
QC-RW-1	05/06/25	< 2000	Sentinel Well
QC-RW-1	08/26/25	< 2000	Sentinel Well
QC-RW-1	10/21/25	< 2000	Sentinel Well
QC-RW-2	01/06/25	5640	Remediation Well
QC-RW-2	01/13/25	5390	Remediation Well
QC-RW-2	01/21/25	5370	Remediation Well
QC-RW-2	01/27/25	4760	Remediation Well
QC-RW-2	02/03/25	5230	Remediation Well
QC-RW-2	02/10/25	5990	Remediation Well
QC-RW-2	02/17/25	5390	Remediation Well
QC-RW-2	02/25/25	5310	Remediation Well
QC-RW-2	03/03/25	6110	Remediation Well
QC-RW-2	03/10/25	6120	Remediation Well
QC-RW-2	03/17/25	6940	Remediation Well
QC-RW-2	03/24/25	5930	Remediation Well
QC-RW-2	03/31/25	7310	Remediation Well
QC-RW-2	04/07/25	9160	Remediation Well
QC-RW-2	04/14/25	8830	Remediation Well
QC-RW-2	04/21/25	9240	Remediation Well
QC-RW-2	04/28/25	9200	Remediation Well
QC-RW-2	05/06/25	7900	Remediation Well
QC-RW-2	05/12/25	6430	Remediation Well
QC-RW-2	05/19/25	4380	Remediation Well
QC-RW-2	05/27/25	9910	Remediation Well
QC-RW-2	06/02/25	4210	Remediation Well
QC-RW-2	06/09/25	5910	Remediation Well
QC-RW-2	06/16/25	4390	Remediation Well
QC-RW-2	06/23/25	6960	Remediation Well
QC-RW-2	07/01/25	7200	Remediation Well
QC-RW-2	07/07/25	7080	Remediation Well
QC-RW-2	07/14/25	9340	Remediation Well
QC-RW-2	07/21/25	7450	Remediation Well
QC-RW-2	07/28/25	5710	Remediation Well
QC-RW-2	08/04/25	5630	Remediation Well

Table 5, Groundwater Protection Program Monitoring Well Tritium in Groundwater Samples Collected and Analyzed by Quad Cities Station Personnel (pCi/L± 2 sigma) Cont'd

SITE	COLLECTION DATE	ACTIVITY	SITE TYPE
QC-RW-2	08/11/25	4540	Remediation Well
QC-RW-2	08/18/25	5580	Remediation Well
QC-RW-2	08/25/25	4340	Remediation Well
QC-RW-2	08/26/25	4790	Remediation Well
QC-RW-2	09/02/25	2450	Remediation Well
QC-RW-2	09/08/25	6070	Remediation Well
QC-RW-2	09/15/25	7090	Remediation Well
QC-RW-2	09/22/25	6750	Remediation Well
QC-RW-2	09/29/25	7610	Remediation Well
QC-RW-2	10/06/25	6140	Remediation Well
QC-RW-2	10/13/25	4400	Remediation Well
QC-RW-2	10/20/25	4300	Remediation Well
QC-RW-2	10/21/25	7280	Remediation Well
QC-RW-2	10/27/25	5980	Remediation Well
QC-RW-2	11/03/25	4890	Remediation Well
QC-RW-2	11/10/25	5500	Remediation Well
QC-RW-2	11/18/25	7080	Remediation Well
QC-RW-2	11/24/25	5730	Remediation Well
QC-RW-2	12/01/25	6160	Remediation Well
QC-RW-2	12/08/25	5030	Remediation Well
QC-RW-2	12/15/25	5960	Remediation Well
QC-RW-2	12/22/25	4300	Remediation Well
QC-RW-2	12/29/25	4200	Remediation Well
MW-R-2D2	02/24/25	6,940	Remediation Well
MW-R-2D2	03/06/25	7,770	Remediation Well
MW-R-2D2	05/06/25	5,440	Remediation Well
MW-R-2D2	08/25/25	<2,000	Remediation Well
MW-R-2D2	10/21/25	<2,000	Remediation Well
MW-QC-104S	03/06/25	6,160	Monitoring Well
MW-QC-2	09/29/25	<2,000	Monitoring Well
MW-QC-2	10/21/25	<2,000	Monitoring Well
Well #9	02/26/25	<200	Production Well
Well #1	04/03/25	<200	Production Well
Well #1	10/22/25	<200	Production Well
Well #10	02/26/25	<200	Production Well
Well #10	08/26/25	<200	Production Well

3.1 Voluntary Notification

During 2025, Quad Cities Nuclear Power Station Units 1 and 2 did make a voluntary NEI 07-07 notification to State/Local officials, NRC, or to other stakeholders required by site procedures.

CCST Abandoned Piping

During the week of August 25, 2025 (third quarter), RGPP sampling was conducted at the Quad Cities Clean Energy Center. One of the site's monitoring wells, QC-GP-9, exhibited an elevated tritium concentration of 10,600 pCi/L, compared to its typical historical levels of less than 2,000 pCi/L. The Chemistry department subsequently re-analyzed the original sample and collected an additional sample from QC-GP-9; both analyses confirmed increased tritium concentrations.

On September 6, Operations personnel switched RCIC suction from the CCST to the Torus and lined up keepfill for both units' RCIC suction, enabling isolation and drainage of the line as part of the station's ongoing investigative efforts. This line remained isolated until September 18. On September 9, a new monitoring well was installed to better delineate the extent of the plume and assess other potential underground sources. The new well showed tritium levels below 2,000 pCi/L. A new recovery well, installed on September 15, also reported tritium concentrations below 2,000 pCi/L. Newly installed wells are not currently apart of the RGPP program.

Between August 26 and September 11, 2025, tritium concentrations in monitoring well QC-GP-9 continued to rise, peaking at 93,100 pCi/L on September 11. Due to the continued increase in tritium concentration, Quad Cities Nuclear Power Station made a voluntary NEI 07-07 notification to State/Local officials, NRC, and other stakeholders required by site procedures. Concentrations began declining on September 12 and have remained below 2,000 pCi/L since September 20. During this period, all adjacent wells maintained tritium levels below 2,000 pCi/L.

On September 16, 2025, water was detected in two abandoned CCST lines previously believed to be dry. These lines were flushed, drained, and abandoned in 2011. When sampled on September 17, 2025, the 1/2A CCST line exhibited a tritium concentration of 66,200 pCi/L, while the 1/2B CCST line measured 117,000 pCi/L. As a corrective action, several abandoned CCST lines in the vicinity were identified and filled with a concrete/foam mixture to prevent recurrence.

3.2 Status of Remediation Activities

Radwaste Building and Piping Vault/Main Stack Piping Areas

Remediation out of recovery well QC-RW-2 continued in 2025. As of the 4th quarter 2025 RGPP sampling round (October 2025), the maximum tritium concentration in monitoring wells near extraction well QC-RW-2 was 4,920 pCi/L. As of December 29, 2025, the tritium concentration in recovery well QC-RW-2 was 4,200 pCi/L.

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