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

James A. FitzPatrick Nuclear Power Plant
Renewed Facility Operating License No. DPR-59
Docket No. 50-333

Subject: 2025 Annual Radiological Environmental Operating Report

This letter transmits the James A. FitzPatrick Nuclear Power Plant's (JAF) Annual Radiological Environmental Operating Report, for the period of January 1, 2025, through December 31, 2025. This document is submitted in accordance with the Reporting Requirements of the Technical Specifications Section 5.6.2, and Appendix H of the Technical Requirements Manual "Offsite Dose Calculation Manual (ODCM)", Part 1, Section 6.1 Annual Radiological Environmental Operating Report.

There are no new regulatory commitments contained in this letter. If you have any questions concerning the enclosed report, please contact Mr. Joseph Szczebak, Chemistry Supervisor, at (315) 349-6259.

Sincerely,



Mark R. Hawes
Regulatory Assurance

MRH/JS/CS

Enclosure: 2025 Annual Radiological Environmental Operating Report

cc:
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JAFP-26-0024

Enclosure

2025 Annual Radiological Environmental Operating Report

(87 Pages)



2025 Annual Radiological Environmental Operating Report

James A. FitzPatrick Nuclear Power Plant
Facility Operating License No. DPR-59, Docket No. 50-333

Nine Mile Point Nuclear Station Unit 1
Facility Operating License No. DPR-63, Docket No. 50-220

Nine Mile Point Nuclear Station Unit 2
Facility Operating License No. NPF-69, Docket No. 50-410

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1.0 LIST OF ACRONYMS AND DEFINITIONS

1. Airborne Activity Sampling: Continuous sampling of air through the collection of particulates and radionuclides on filter media.
2. ARERR: Annual Radioactive Effluent Release Report
3. AREOR: Annual Radiological Environmental Operating Report
4. BWR: Boiling Water Reactor
5. Composite Sample: A series of single collected portions (aliquots) analyzed as one sample. The aliquots making up the sample are collected at time intervals that are very short compared to the composite period.
6. Control: A sampling station in a location not likely to be affected by plant effluents due to its distance and/or direction from the station.
7. Curie (Ci): A measure of radioactivity; equal to 3.7×10^{10} disintegrations per second, or 2.22×10^{12} disintegrations per minute.
8. Direct Radiation Monitoring: The measurement of radiation dose at various distances from the plant is assessed using Thermoluminescent Dosimeters (TLD), Optically Stimulated Luminescence Dosimeters (OSLD) and pressurized ionization chambers.
9. EPA: Environmental Protection Agency
10. GPI: Groundwater Protection Initiative
11. Grab Sample: A single discrete sample drawn at one point in time.
12. Indicator: A sampling location that is likely to be affected by plant effluents due to its proximity and/or direction from the plant.
13. Ingestion Pathway: The ingestion pathway includes milk, fish, drinking water and garden produce. Also sampled (under special circumstances) are other media such as vegetation or animal products when additional information about particular radionuclides is needed.
14. 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.

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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

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2.0 EXECUTIVE SUMMARY

The Annual Radiological Environmental Operating Report is published in accordance with the James A. FitzPatrick Nuclear Power Plant (JAFNPP) Offsite Dose Calculation Manual (ODCM), Part I, Section 6.1., Section 6.6.2 Nine Mile Point 1 (NMP1) Technical Specifications and Section 5.6.2 of the Nine Mile Point Unit 2 (NMP2) Technical Specifications. The ODCM requires that the results from the annual Radiological Environmental Monitoring Program (REMP) be provided to the Nuclear Regulatory Commission by May 15th of each year.

This report describes the Radiological Environmental Monitoring Program (REMP), the implementation of the program, and the results obtained as required by the ODCM. The report also contains the analytical results tables, data evaluation, dose assessment, and data trends for each environmental sample media. Also included are results of the land use census, historical data, and the Environmental Laboratory’s performance in the Quality Assurance Interlaboratory Comparison Program.

The REMP is a comprehensive surveillance program, which is implemented to assess the impact of site operations on the environment and compliance with 10 CFR 20, 40 CFR 190 and 10 CFR 72. Samples are collected from the aquatic and terrestrial pathways applicable to the site. The aquatic pathways include Lake Ontario fish, surface water and lakeshore sediment. The terrestrial pathways include airborne particulate and radioiodine, milk, food products and direct radiation.

During 2025 there were 2084 analyses performed on environmental media collected as part of the REMP. These results demonstrated that there is no significant or measurable radiological impact from the operation of the James A. FitzPatrick Nuclear Power Plant, Nine Mile Point Nuclear Station Unit 1 or Nine Mile Point Nuclear Station Unit 2. The 2025 results for all pathways sampled are consistent with the previous five-year historical results and exhibited no adverse trends.

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 JAFNPP, NMP1, and NMP2. The program continues to demonstrate that the dose to a member of the public, as a result of the operation of all sites, remains significantly below the federally required dose limits specified in 10 CFR 20, 40 CFR 190 and 10 CFR 72.

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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 1301/1302 [4] [5], and the 1979 NRC Branch Technical Position [6].

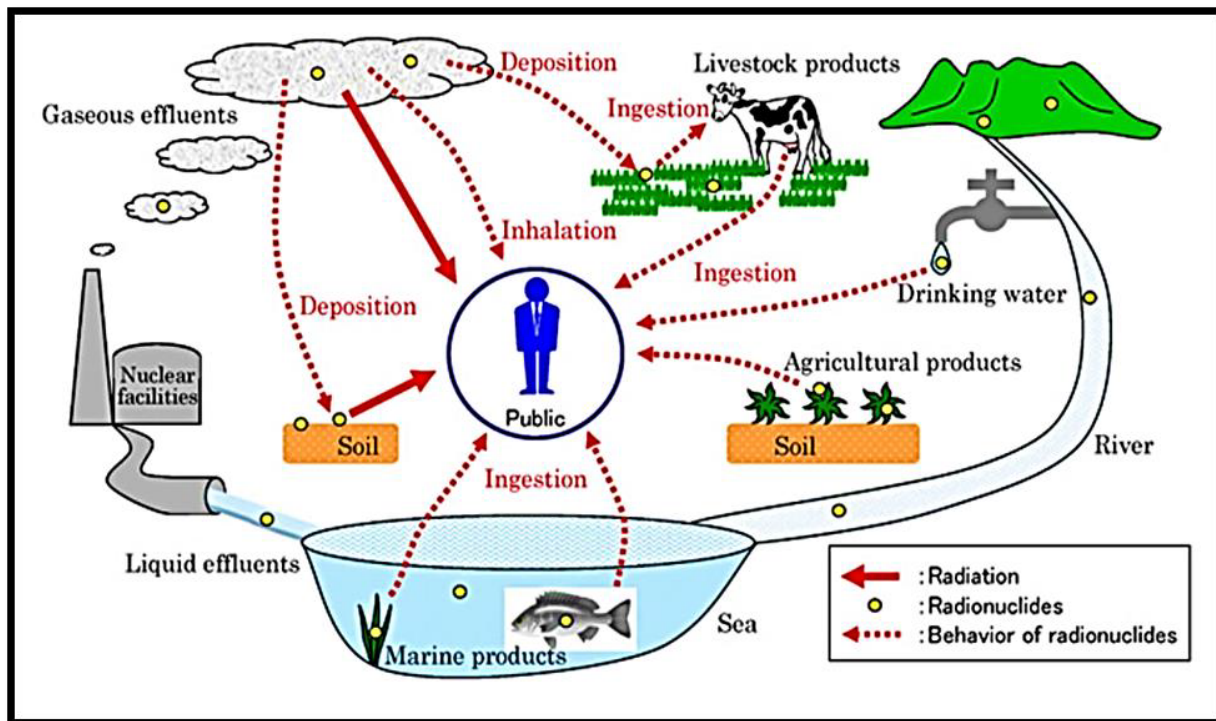


Figure 1: Potential exposure pathways to Members of the Public due to Plant Operations

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 New York, JAF & NMP 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.

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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 PROGRAM OVERVIEW

4.1 Program History

The James A. FitzPatrick Nuclear Power Plant, owned by Constellation, and Nine Mile Point Unit 1 and Nine Mile Point Unit 2, owned by Constellation are operated by the Nuclear Regulatory Commission (NRC) licensee, Constellation Energy Corporation. This report is submitted in accordance with James A. FitzPatrick Nuclear Power Plant’s Offsite Dose Calculation Manual, Part 1, Section 6.1 to License DPR-59 Docket No. 50-333, Appendix A (Technical Specifications) Section 6.6.2 to License DPR-63, Docket No. 50-220 for Nine Mile Point Nuclear Station Unit 1, and Appendix A (Technical Specifications) Section 5.6.2 to License NPF-69, Docket No. 50-410 for Nine Mile Point Nuclear Station, Unit 2. This report covers the calendar year 2025. James A. FitzPatrick Nuclear Power Plant (JAFNPP), Nine Mile Point Unit 1 (NMP1) and Nine Mile Point Unit 2 (NMP2) Radiological Environmental Monitoring Program (REMP) requirements reside within each unit’s Offsite Dose Calculation Manual (ODCM). Throughout this report, references will be made to the ODCM.

Environmental monitoring at the Nine Mile Point site has been ongoing since 1964. The program includes five years of pre-operational data, which was conducted prior to any reactor operations. In 1968, the Niagara Mohawk Power Company began the required pre-operational environmental site testing program. This pre-operational data serves as a reference point to compare later data obtained during reactor operation. In 1969, the Nine Mile Point Unit 1 Reactor, a 628 megawatt electric (MWe) Boiling Water Reactor (BWR) began full power operation. In 1975, the James A. FitzPatrick Nuclear Power Plant, owned and operated at that time by the New York Power Authority, began full power operation. The FitzPatrick plant, an 892 MWe (rated) BWR, occupies the east sector of the Nine Mile Point site, approximately 0.57 miles east of Nine Mile Point Unit 1. In 1988, the Nine Mile Point Unit 2 Reactor also owned and operated by Nine Mile Point Nuclear Station, LLC, began full power operation. This 1363 MWe BWR is located between the Nine Mile Point Unit 1 and FitzPatrick sites.

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In 1985, the individual Plant Effluent Technical Specifications were standardized to the generic Radiological Effluent Technical Specifications, much of which was common to the two reactors, and subsequently Nine Mile Point Unit 2. Subsequent Technical Specification amendments relocated the REMP requirements to the ODCM for all three plants. Data generated by the Radiological Environmental Monitoring Program (REMP) is shared between each unit. On November 21, 2000, the ownership and operation of the James A. FitzPatrick Nuclear Power Plant was transferred from the New York Power Authority to Entergy Nuclear FitzPatrick, LLC and Entergy Nuclear Operations, Inc. The Facility Operating License No. DPR-59 and Docket No. 50-333 remained the same and in March 2017, ownership and operation of the James A. FitzPatrick Nuclear Power Plant was transferred to Exelon Generation Company, LLC. On November 7, 2001, the ownership of the Nine Mile Point Unit 1 and 2 facilities was transferred to Constellation Energy Nuclear Group (CENG). Nine Mile Point Nuclear Station, LLC, operates the two facilities. In March 2012 Constellation Energy merged with Exelon Generation and prior to March 25, 2014, Exelon Generation was an intermediate 50.01 percent parent company of CENG, which is the parent company owner of Nine Mile Point Nuclear Station, LLC. Following the transfer, Exelon Generation remained an intermediate parent company and became the co-licensee of Nine Mile Point Nuclear Station, LLC and the operator of NMP1 and NMP2. Exelon Generation Company, LLC took over ownership and operation of the Nine Mile Point Unit 1 and 2 facilities in 2014. In February 2022, a newly-formed company, Constellation Energy Corporation, separated from Exelon Generation Company and become the stand-alone owners of James A. FitzPatrick, Nine Mile Point Unit 1 and Nine Mile Point Unit 2.

In summary, three Boiling Water Reactors, which together generate 2883 MWe, have operated collectively at the Nine Mile Point site since 1988. A large database of environmental results from the exposure pathways have been collected and analyzed to evaluate the potential impact from reactor operations.

4.2 Site Description

The Nine Mile Point (NMP) site is located on the southeast shore of Lake Ontario in the town of Scriba, approximately 6.2 miles northeast of the city of Oswego. The nearest metropolitan area is located approximately 36 miles southeast of the site. The reactors and support buildings occupy a small shoreline portion of the 1600-acre site. The land, soil of glacier deposits, rises gently from the lake in all directions. Oswego County is a rural environment, with about 15% of the land devoted to agriculture.

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4.3 Program Objectives

The objectives of the Radiological Environmental Monitoring Program (REMP) are to:

- a. Measure and evaluate the effects of plant operation on the environs, and to verify the effectiveness of the controls on radioactive material sources,
- b. Monitor natural radiation levels in the environs of the NMP nuclear site,
- c. Demonstrate compliance with the requirements of applicable federal regulatory agencies, site Technical Specifications, and Offsite Dose Calculation Manual

4.4 Program Description

To achieve the objectives listed in Section 4.3, an extensive sampling and analysis program is conducted every year. The James A. FitzPatrick Nuclear Power Plant (JAFNPP), Nine Mile Point Unit 1 and Nine Mile Point Unit 2 Radiological Environmental Monitoring Program (REMP) consists of sampling and analysis of various media that include:

- Air
- Fish
- Food Products
- Milk
- Shoreline Sediment
- Surface Waters

In addition, direct radiation measurements are performed using thermoluminescent dosimeters (TLDs). The REMP sampling locations are selected based on local meteorology, receptor locations, and water usage around the plant, and are verified by an annual Land Use Census. The accuracy and precision of the program is assured by participation in an Interlaboratory Comparison Quality Assurance Program (ICQAP). In addition to NMPNS's participation in the ICQAP, sample splits are provided to the New York State Department of Health for cross-checking purposes.

Sample collections for the radiological program are accomplished via a coordinated effort between site Chemistry and site Environmental. The site staff is assisted by a contracted environmental company, EA Science and Technology, Inc. (EA).

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Sampling and analysis requirements and the locations from which samples were collected are captured in the following tables and figures:

- Table 1: Radiological Environmental Monitoring Program – Direct Radiation
- Table 2: Radiological Environmental Monitoring Program – Airborne
- Table 3: Radiological Environmental Monitoring Program – Waterborne
- Table 4: Radiological Environmental Monitoring Program – Ingestion
- Table 5: REMP Sampling Locations – Direct Radiation
- Figure 3: On-Site Environmental Stations and TLD Locations
- Figure 4: Off-Site Environmental Stations and TLD Locations
- Figure 5: Food Product, Fish, and Shoreline Sediment Locations

Degrees and distance listed for sample locations throughout this report are based on the Nine Mile Point Unit 2 Reactor Centerline and are rounded to the nearest 1/10 of a mile. Tables 1 through 4 list the requirements, sampling and collection frequencies, and type and frequency of analyses from the Nine Mile Point Unit 2 ODCM.

5.0 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM REQUIREMENTS

Table 1: Radiological Environmental Monitoring Program – Direct Radiation

Requirement	Sample Locations ^(a)	Sampling and Collection Frequency ^(a)	Type and Frequency of Analyses
<p><u>Direct Radiation</u> 32 routine monitoring stations^(b), placed as follows:</p> <ul style="list-style-type: none"> a. An inner ring of stations, one in each meteorological sector in the general area of the site boundary b. An outer ring of stations, one in each land-based meteorological sector in the 4 to 5 mile^(c) range from the site c. The balance of the stations should be placed in special interest areas such as population centers, nearby residences, schools, and in one or two areas to serve as control stations^(d) 	See Table 5	Once per 3 months	Gamma dose per 3 months

Table 2: Radiological Environmental Monitoring Program – Airborne

Requirement	Sample Locations ^(a)	Sampling and Collection Frequency ^(a)	Type and Frequency of Analyses
<p><u>Airborne Radioiodine and Particulates</u></p> <p>a. Three samples from offsite locations close to the site boundary (within one mile) in different sectors^(e)</p> <p>b. One sample from the vicinity of an established year-round community^(e)</p> <p>c. One sample from a control location, at least 10 miles distant and in a least prevalent wind direction^(d)</p>	<p>R1: Nine Mile Point Road North 92° E @ 1.8 miles</p> <p>R2: Co. Rt. 29 & Lake Road 107° ESE @ 1.1 miles</p> <p>R3: Co. Rt. 29 133° SE @ 1.4 miles</p> <p>R4: Village of Lycoming, NY 145° SE @ 1.8 miles</p> <p>R5: Montario Point Road 42° NE @ 16.2 miles</p>	<p>Continuous sampler operation with sample collection weekly</p>	<p>Radioiodine canister: Analyze weekly for I-131</p> <p>Particulate sampler:</p> <ol style="list-style-type: none"> (1) Analyze for gross beta radioactivity ≥24 hours following filter change^(f) (2) Perform gamma isotopic analysis on each sample^(g) in which gross beta activity is >10 times the previous yearly mean of control samples, and (3) Gamma isotopic analysis^(g) of composite sample (by location) once per 3 months

Table 3: Radiological Environmental Monitoring Program – Waterborne

Requirement	Sample Locations^(a)	Sampling and Collection Frequency^(a)	Type and Frequency of Analyses
<p>Surface Water</p> <p>a. One sample upstream^{(d)(h)}</p> <p>b. One sample from the site's downstream cooling water intake^(h)</p>	<p>08: Oswego Steam Station (OSS) Inlet Canal 236° SW @ 7.6 miles</p> <p>03: JAFNPP Inlet Canal 71° ENE @ 0.5 miles</p>	Composite sample over one month period ⁽ⁱ⁾	<p>(1) Gamma isotopic analysis^(g) once per month</p> <p>(2) Tritium analysis of each composite once per 3 months</p>
<p>Ground Water</p> <p>Samples from one or two sources if likely to be affected^(l)</p>	As required	Grab sample once per three months	Gamma isotopic ^(g) and tritium analysis one per three months
<p>Drinking Water*</p> <p>One sample each of one to three of the nearest water supplies that could be affected by its discharge^(k)</p>	As required	When I-131 analysis is performed, a composite sample over a two week period ⁽ⁱ⁾ ; otherwise, a composite sample monthly	<p>(1) I-131 analysis on each composite when the dose calculated for the consumption of the water is greater than 1 mrem per year^(l)</p> <p>(2) Composite for gross beta and gamma isotopic analyses^(g) monthly</p> <p>(3) Composite for tritium analysis once per three months</p>
<p>Sediment from Shoreline</p> <p>One sample from a downstream area with existing or potential recreational value</p>	05: Sunset Bay 84° ENE @ 1.2 miles	Twice per year	Gamma isotopic analysis ^(g)

*Requirement listed in NMP2 ODCM only.

Table 4: Radiological Environmental Monitoring Program – Ingestion

Requirement	Sample Locations^(a)	Sampling and Collection Frequency^(a)	Type and Frequency of Analyses
<p>Milk</p> <p>a. Samples from Milk Sampling Locations in three locations within 3.5 miles^(e)</p> <p>b. If there are none, then one sample from Milk Sampling Locations in each of three areas 3.5 – 5.0 miles^(e)</p> <p>c. One sample from a Milk Sample Location at a control location 9-20 miles distant and in a least prevalent wind direction^(d)</p>	<p>No locations identified by the Land Use Census this year</p> <p>No locations identified by the Land Use Census this year</p> <p>77: Summerville 190° S @ 16.0 miles</p>	<p>Twice per Month, April-December^(m)</p>	<p>(1) Gamma isotopic^(g) and I-131 analysis of each sample twice per month April through December</p> <p>(2) Gamma isotopic^(g) and I-131 analysis of each sample once per month January through March if required^(m)</p>
<p>Fish</p> <p>a. One sample of each of two commercially or recreationally important species in vicinity of a plant discharge area⁽ⁿ⁾</p> <p>b. One sample of the same species in areas not influenced by station discharge^(d)</p>	<p>02: NMP Transect 290° WNW @ 0.4 miles</p> <p>03: JAF Transect 62° ENE @ 0.8 miles</p> <p>00: Oswego Transect 237° WSW @ 5.9 miles</p>	<p>Twice per year</p>	<p>Gamma isotopic analysis^(g) on edible portions twice per year</p>

Table 4: Radiological Environmental Monitoring Program – Ingestion

Requirement	Sample Locations ^(a)	Sampling and Collection Frequency ^(a)	Type and Frequency of Analyses
Food Products			
a. One sample of each principal class of food products from any area that is irrigated by water in which liquid plant wastes have been discharged ^(o)	No locations identified by the Land Use Census this year	At time of harvest ^(p)	Gamma isotopic ^(g) and I-131 analysis of each sample of edible portions
b. Samples of three different kinds of broad leaf vegetation (such as vegetables) grown nearest to each of two different offsite locations of highest calculated site average ground level D/Q (based on all licensed reactors) ^(e)	633 JAF Indicator: Onsite Garden 90° E @ 0.66 miles 634 JAF Indicator: Onsite Garden 109° ESE @ 0.64 miles 635 JAF Indicator: Onsite Garden 131° SE @ 0.62 miles	Once per year during harvest season	
c. One sample of each of the similar broad leaf vegetation grown at least 9.3 miles distant in a least prevalent wind direction.	632: Summerville (Control) 190° SSW @ 16.0 miles		

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Notes for Tables 1 through 4

- (a) Specific parameters of distance and direction sector from the centerline of one reactor, and additional descriptions where pertinent, shall be provided for each and every sample location. Refer to NUREG-0133, "Preparation of Radiological Effluent Technical Specifications for Nuclear Power Plants," October 1978, and to Radiological Assessment Branch Technical Position on Environmental Monitoring, Revision 1, November 1979. Deviations are permitted from the required sampling schedule if specimens are unobtainable because of such circumstances as hazardous conditions, seasonal unavailability (which includes theft and uncooperative residents), or malfunction of automatic sampling equipment.
- (b) One or more instruments, such as a pressurized ion chamber, for measuring and recording dose rate continuously, may be used in place of, or in addition to, integrating dosimeters. Each of the 32 routine monitoring stations shall be equipped with two or more dosimeters or with one instrument for measuring and recording dose rate continuously. For the purpose of this table, a thermoluminescent dosimeter (TLD) is considered to be one phosphor, two or more phosphors in a packet are considered as two or more dosimeters. Film badges shall not be used as dosimeters for measuring direct radiation.
- (c) At this distance, eight wind rose sectors, (W, WNW, NW, NNW, N, NNE, NE, and ENE) are over Lake Ontario.
- (d) The purpose of these samples is to obtain background information. If it is not practical to establish control locations in accordance with the distance and wind direction criteria, other sites, which provide valid background data, may be substituted.
- (e) Having the highest calculated annual site average ground-level D/Q based on all site licensed reactors.
- (f) Airborne particulate sample filters shall be analyzed for gross beta activity 24 hours or more after sampling to allow for radon and thoron daughter decay.
- (g) Gamma isotopic analysis means the identification and quantification of gamma –emitting radionuclides that may be attributable to the effluents from the facility.
- (h) The upstream sample shall be taken at a distance beyond significant influence of the discharge. The downstream sample shall be taken in an area beyond but near the mixing zone.
- (i) In this program, representative composite sample aliquots shall be collected at time intervals that are very short (e.g., hourly) relative to the compositing period (e.g., monthly) in order to assure obtaining a representative sample.
- (j) Groundwater samples shall be taken when this source is tapped for drinking or irrigation purposes in areas where the hydraulic gradient or recharge properties are suitable for contamination.
- (k) Drinking water samples shall be taken only when drinking water is a dose pathway.
- (l) Analysis for I-131 may be accomplished by Ge-Li analysis provided that the lower limit of detection (LLD) for I-131 in water samples found on NMP2 ODCM Table D 3.5.1-2 can be met. Doses shall be calculated for the maximum organ and age group.
- (m) Samples will be collected January through March if I-131 is detected in November and December of the preceding year.
- (n) In the event 2 commercially or recreationally important species are not available, after 3 attempts of collection, then 2 samples of one species or other species not necessarily commercially or recreationally important may be utilized.
- (o) Applicable only to major irrigation projects within 9 miles of the site in the general downcurrent direction.
- (p) If harvest occurs more than once/year, sampling shall be performed during each discrete harvest. If harvest occurs continuously, sampling shall be taken monthly. Attention should be paid to including samples of tuberous and root food products.

Table 5: REMP Sampling Locations – Direct Radiation

Site #	Location Type	Sector*	Distance (miles)*	Description
7	Inner Ring	WSW	0.7	Site Meteorological Tower, (G Onsite Station)
8	Control	NE	16.2	Montario Point Road (R5 Offsite Station – Control)
14	Control	SW	12.5	SW Oswego - Control
15	Special Interest	WSW	0.9	West Site Boundary, Bible Camp
18	Inner Ring	W	0.4	Energy Information Center
23	Inner Ring	ENE	0.8	North Shoreline Area (H Onsite Station)
49	Control	SSE	19.7	Phoenix, NY - Control
56	Special Interest	SE	5.2	New Haven Elementary School
58	Special Interest	SW	3.0	Alcan Aluminum, Rt. 1A
75	Inner Ring	N	0.1	North Fence, NMP-2
76	Inner Ring	NNE	0.1	North Fence, NMP-2
77	Inner Ring	NE	0.2	North Fence, NMP-2
78	Inner Ring	E	1.0	East Boundary, JAFNPP
79	Inner Ring	ESE	1.2	Co. Rt. 29
80	Inner Ring	SE	1.5	Co. Rt. 29
81	Inner Ring	SSE	1.6	Miner Road
82	Inner Ring	S	1.6	Miner Road
83	Inner Ring	SSW	1.2	Lakeview Road
84	Inner Ring	SW	1.1	Lakeview Road
85	Inner Ring	WNW	0.2	North Fence, NMP-1
86	Inner Ring	NW	0.1	North Fence, NMP-1

Table 5: REMP Sampling Locations – Direct Radiation

Site #	Location Type	Sector*	Distance (miles)*	Description
87	Inner Ring	NNW	0.1	North Fence, NMP-1
88	Outer Ring-Offsite	E	4.5	Hickory Grove Road
89	Outer Ring-Offsite	ESE	4.3	Leavitt Road
90	Outer Ring-Offsite	SE	4.2	Rt. 104 and Keefe Road
91	Outer Ring-Offsite	SSE	4.9	Co. Rt. 53
92	Outer Ring-Offsite	S	4.4	Maiden Lane Road
93	Outer Ring-Offsite	SSW	4.4	Co. Rt. 53
94	Outer Ring-Offsite	SW	4.4	Co. Rt. 1 and Kocher Road
95	Outer Ring-Offsite	WSW	3.7	Lake Shore, Alcan West Access Road
96	Special Interest	SSW	3.6	Creamery Road
97	Special Interest	SE	1.8	Co. Rt. 29

*Sector and Distance based on Nine Mile Point Unit 2 Reactor Centerline rounded to the nearest 1/10 of a mile.

6.0 MAPS

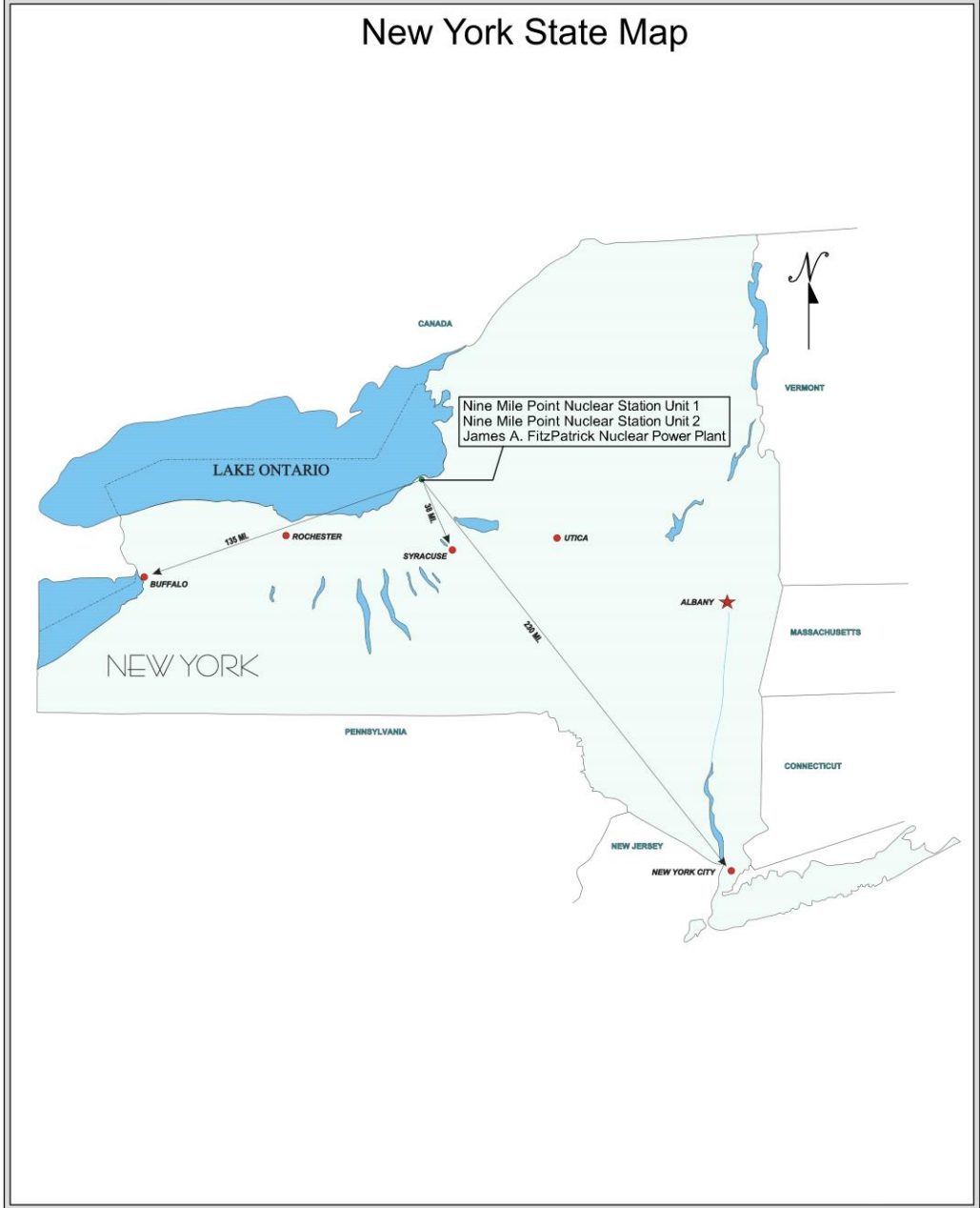


Figure 2: James A. FitzPatrick and Nine Mile Point Nuclear Station Locations

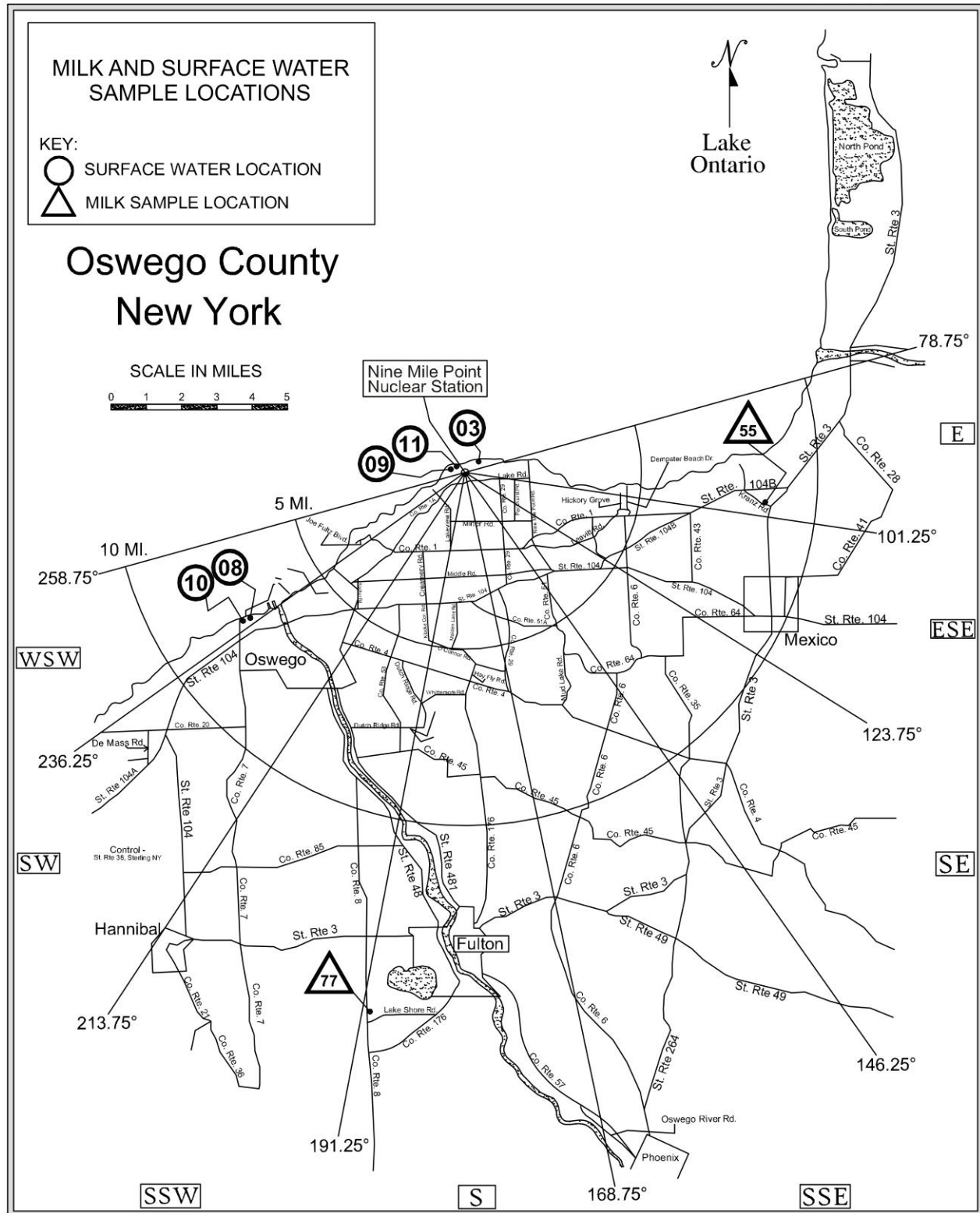


Figure 6: Milk and Surface Water Sample Locations

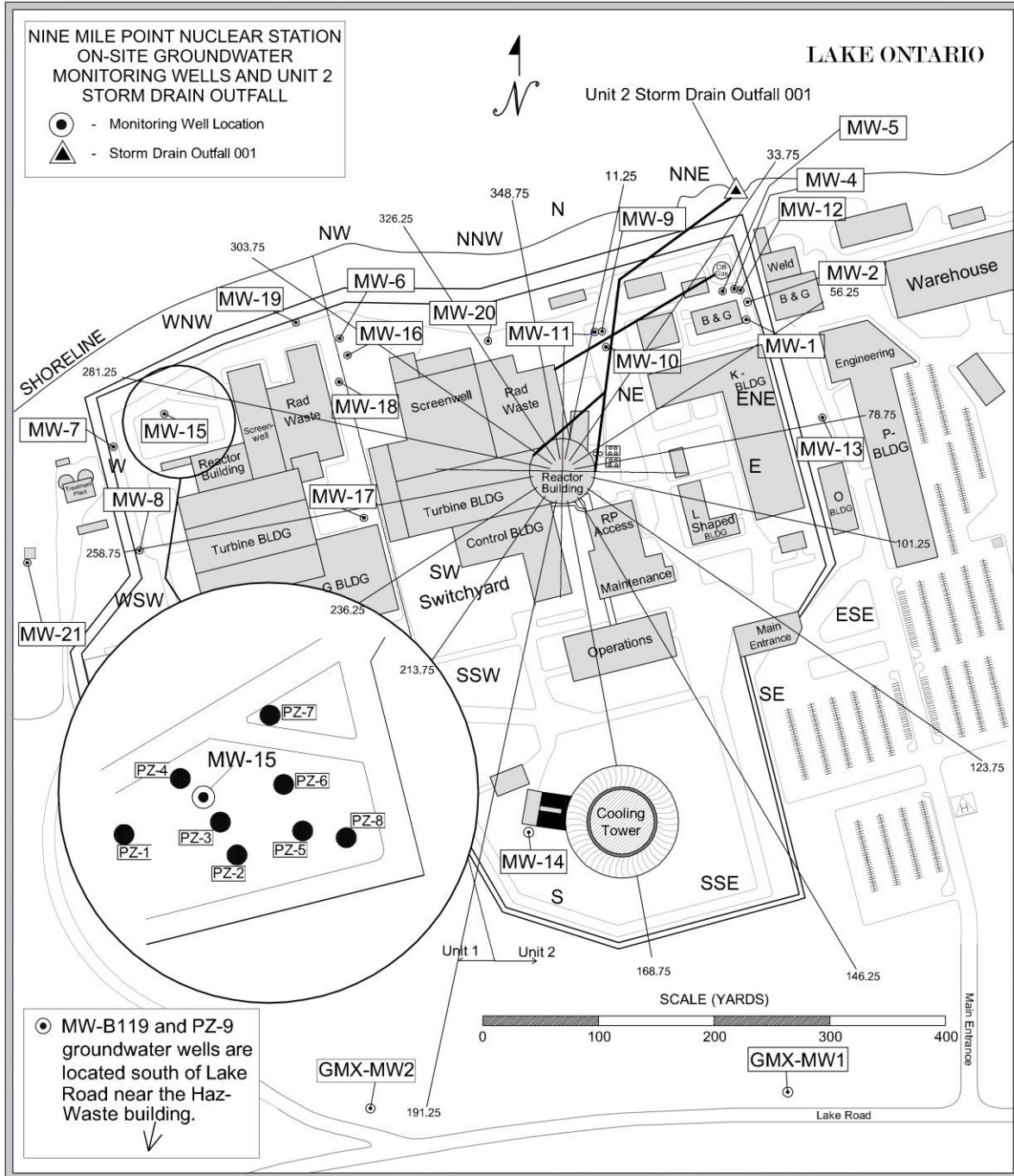
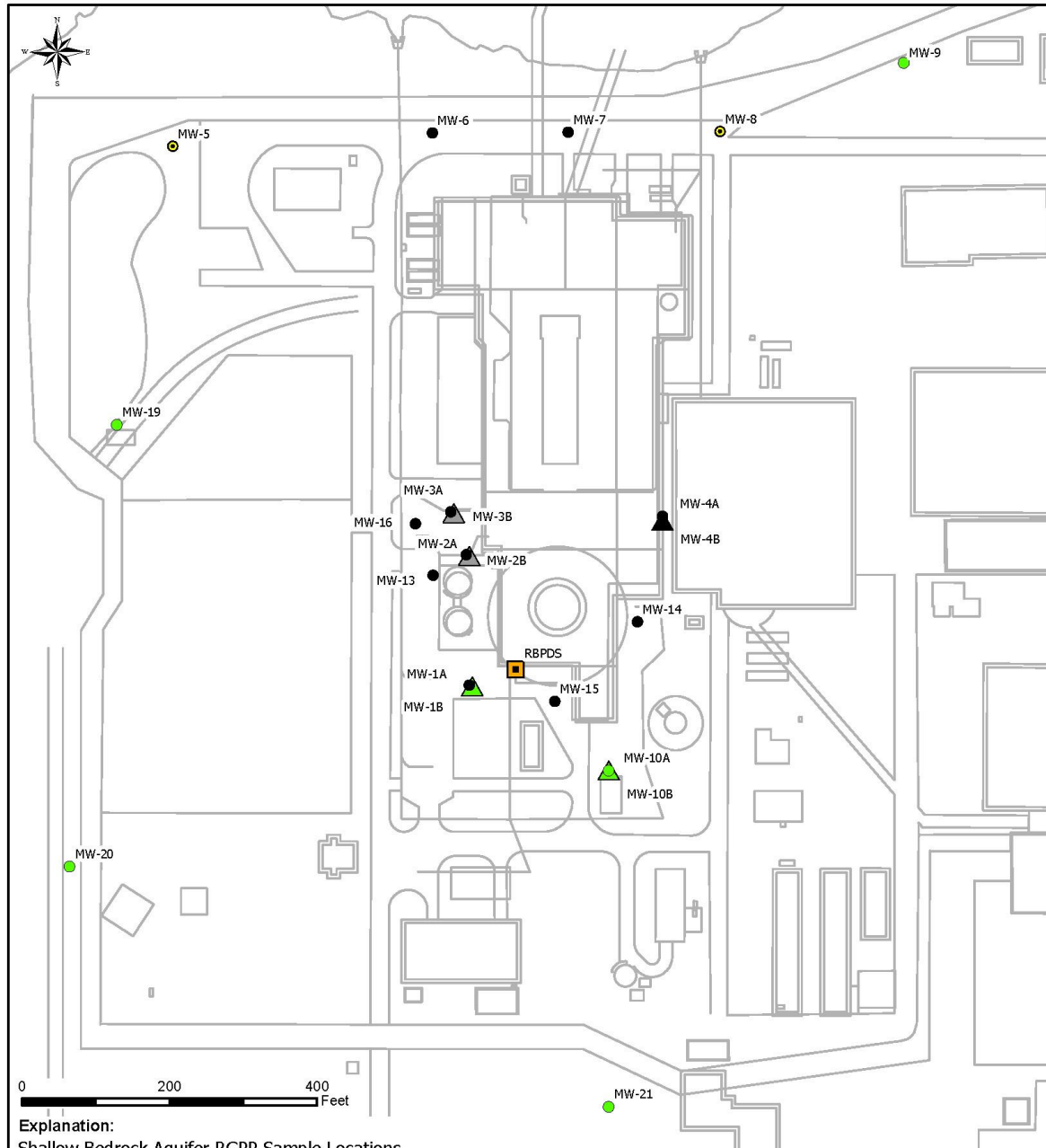


Figure 7: NMPNS On-Site Radiological Groundwater Protection Program Locations



Explanation:

Shallow Bedrock Aquifer RGPP Sample Locations

- Background
- ⊙ Perimeter
- Source

Deep Bedrock Aquifer RGPP Sample Locations

- ▲ Background
- ▲ Mid-Field
- ▲ Source
- RBPDS Sump

RGPP Sample Locations
 Shallow and Deep Bedrock Aquifers
 Constellation Energy Corporation
 JA FitzPatrick Nuclear Power Station

Figure 8: JAFNPP On-Site Radiological Groundwater Protection Program Locations

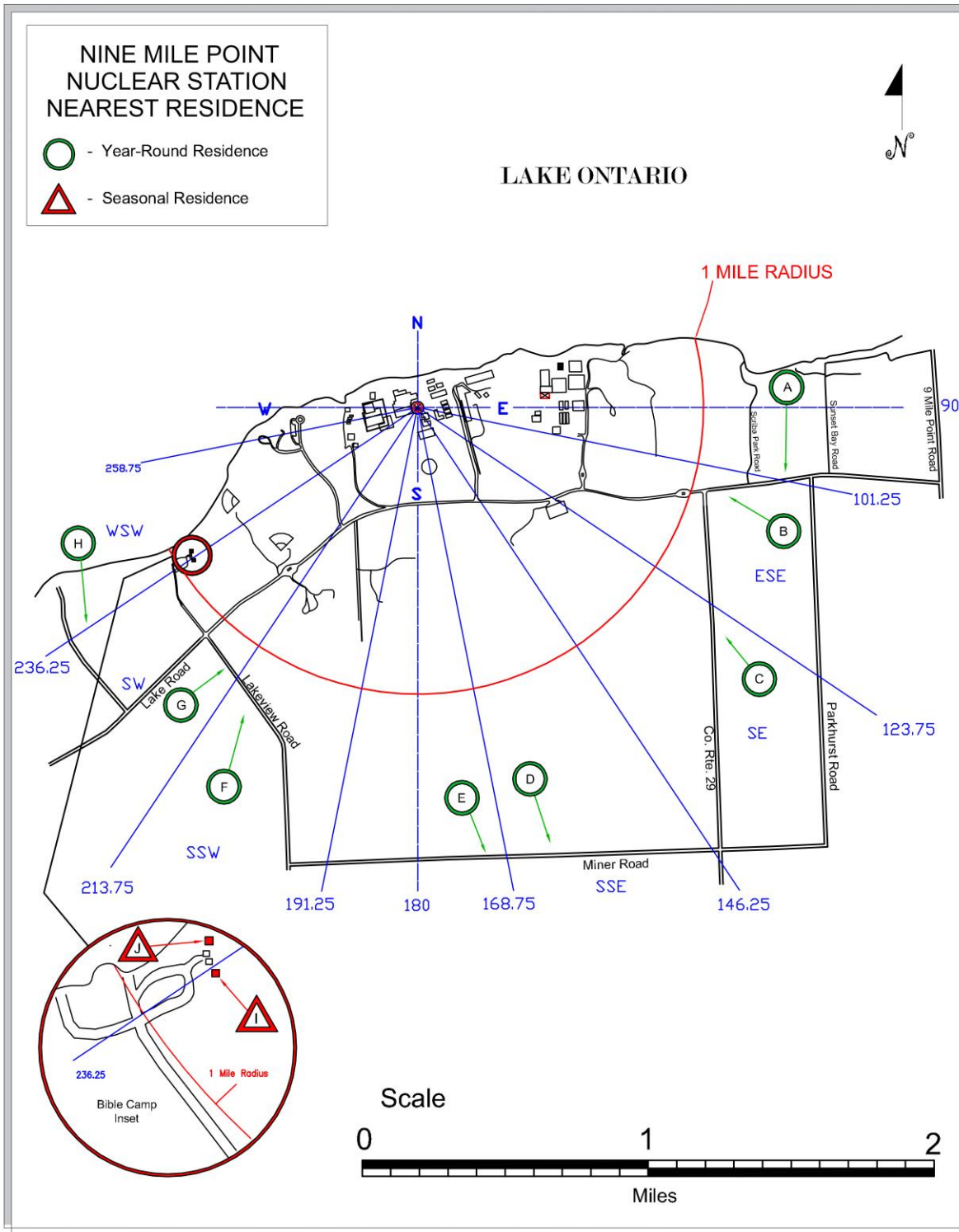


Figure 9: Nine Mile Point Nuclear Station Nearest Residence

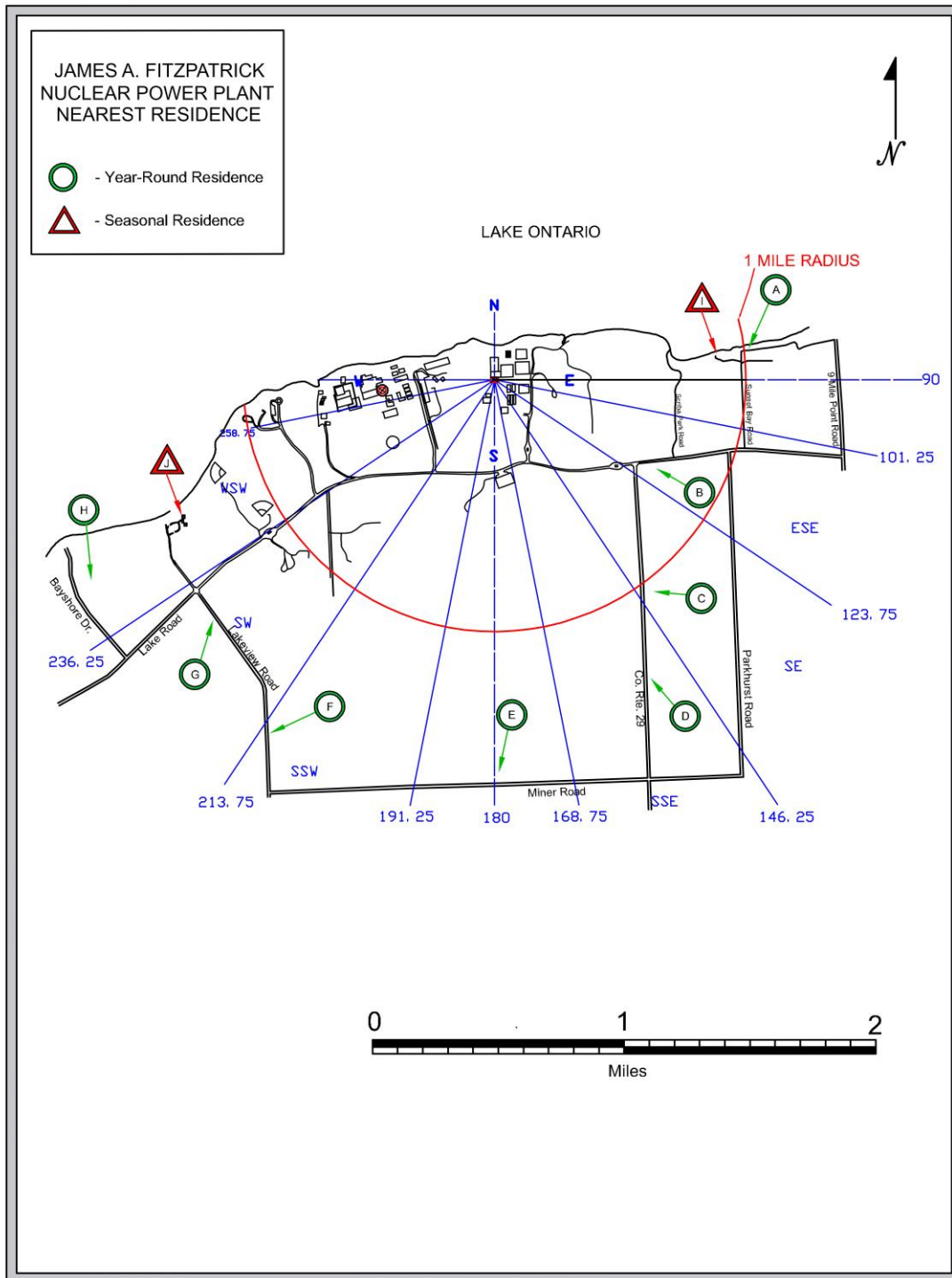


Figure 10: James A. FitzPatrick Nuclear Power Plant Nearest Residence

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	30,000 ⁽¹⁾				
Mn-54	1,000		30,000		
Fe-59	400		10,000		
Co-58	1,000		30,000		
Co-60	300		10,000		
Zn-65	300		20,000		
Zr-Nb-95	400				
I-131	20 ⁽¹⁾	0.9		3	100
Cs-134	30	10	1,000	60	1,000
Cs-137	50	20	2,000	70	2,000
Ba-La-140	200			300	

Table 7: Lower Limits of Detection 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)	Sediment (pCi/Kg-dry)
Gross Beta	4	0.01				
H-3	3,000 ⁽¹⁾					
Mn-54	15		130			
Fe-59	30		260			
Co-58, Co-60	15		130			
Zn-65	30		260			
Zr-Nb-95	15					
I-131	15 ⁽¹⁾	0.07		1	60	
Cs-134	15	0.05	130	15	60	150
Cs-137	18	0.06	150	18	80	180
Ba-La-140	15			15		

¹ No drinking water pathway exists at the Nine Mile Point site under normal operating conditions due to the direction and distance of the nearest drinking water intake. Therefore, the LLD value of 3,000 pCi/liter is used for H-3 and the LLD value of 15 pCi/liter is used for I-131, and the reporting value of 30,000 pCi/liter is used for H-3 and the reporting value of 20 pCi/liter is used for I-131.

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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 result 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 90-day quarters and a 1 sigma uncertainty. Thermoluminescent dosimeters (TLDs) are used to measure direct radiation (gamma dose) in the environment. As part of the 2025 environmental monitoring program, TLDs were placed at a total of 72 different locations (32 required by the ODCM and 40 optional locations). These TLDs were placed, collected, and read each quarter of 2025. The results presented in this report are the average of the two TLD readings obtained for each given 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.

The following geographic categories are used to analyze the TLDs which were placed as part of the 2025 monitoring program, in accordance with the requirements listed in Table 1: Radiological Environmental Monitoring Program – Direct Radiation:

- Site Boundary (area of the site boundary in each of the 16 meteorological sectors: Only TLD results that are not affected by radwaste building direct shine, includes TLD #s 7, 18, 78, 79, 80, 81, 82, 83, 84; TLD #s: 23, 75, 76, 77, 85, 86, 87 are excluded)
- Offsite Sector (area four to five miles from the site in each of the eight-land based meteorological sectors, includes TLD #s: 88, 89, 90, 91, 92, 93, 94, 95)
- Special Interest (areas of high population density, includes TLD #s 15, 56, 58, 96, 97, 98*)
- Control (areas beyond significant influence of the site, includes TLD #s 8, 14, 49)

**TLD applicable to NMP1 and NMP2 ODCMs*

A summary of the 2025 dose rates for each of these geographic categories is as follows:

2025 DOSE IN MREM PER STANDARD MONTH

Geographic Category	Minimum	Maximum	Mean
Site Boundary (Inner Ring)	4.2	6.0	4.9
Offsite Sectors (Outer Ring)	3.9	5.4	4.7
Special Interest	3.9	5.3	4.8
Control Locations	4.4	5.9	5.1

The analysis of offsite doses from direct radiation measurements, presented here and in Attachment 4 of this report, concludes that there is no significant difference in annual dose to the public at or beyond the site boundary. The measured annual dose rate at the nearest residence to the site was consistent with the dose rates measured at the site boundary and the offsite control locations. The results for the Site Boundary, Offsite Sectors, and Special Interest (offsite) were well within expected normal variation when compared to the Control Location TLD results.

The use of Hydrogen Water Chemistry (HWC) at both JAFNPP and NMPNS and the two Independent Spent Fuel Storage Installations (ISFSIs) on the NMP/JAF site did not measurably increase the ambient radiation exposure rate beyond the site boundary.

8.2 **Air Particulate and Radioiodine Sample Results**

Air particulate filters and charcoal canisters were collected from locations specified in Table 2: Radiological Environmental Monitoring Program – Airborne. During the calendar year 2025, a total of 773 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. Radioiodine (I-131) analysis is performed weekly on radioiodine sample cartridges.

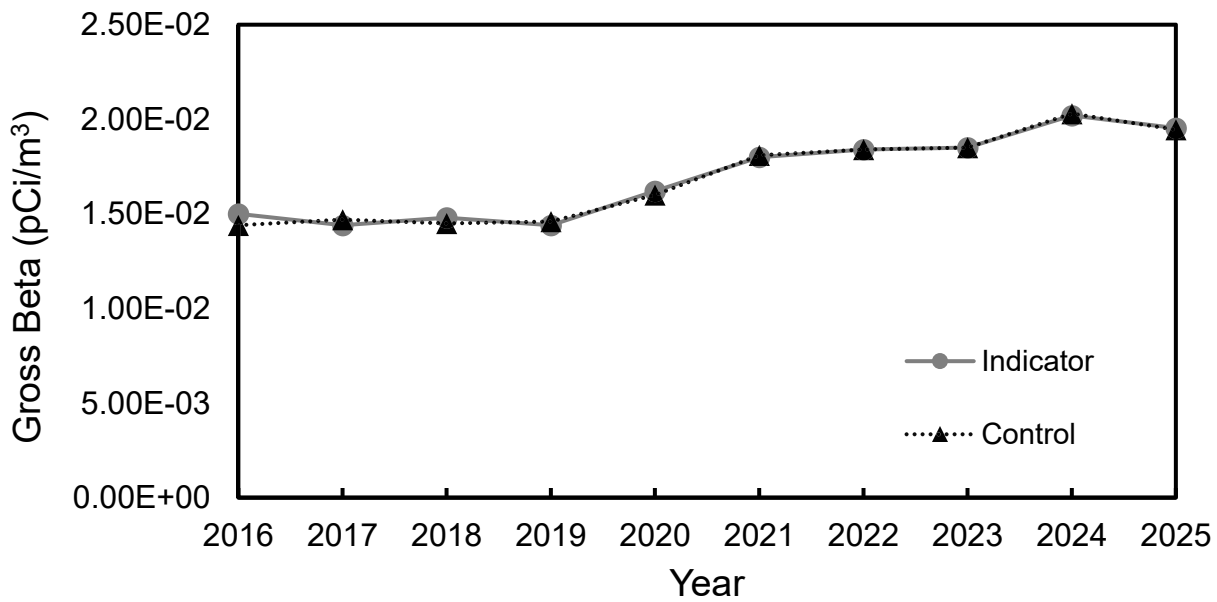
The air monitoring system consists of 15 sample locations, five required by the ODCM and 10 optional locations. The optional offsite locations are designated as D2, E, F and G-OFF. The optional onsite locations are designated as D1, G-ON, H, I, J and K. The mean gross beta concentration for samples collected from the control location (R5) in 2025 was 1.94E-02 pCi/m³. The mean gross beta concentration for the samples collected from the indicator locations (R1, R2, R3 and R4) in 2025 was 1.95E-02 pCi/m³. The consistency between the indicator and control mean values demonstrates that there are no increased airborne radioactivity levels in the general vicinity of the site from plant effluents.

All radioiodine samples were below detection limit.

Gamma spectrometric analyses of all quarterly composited air particulate weekly samples exhibited no detectable concentrations of any plant-related radionuclides in any of these samples. Naturally occurring radionuclides, such as Be-7, were detected in nearly all samples.

Air particulate and radioiodine results from this monitoring period, 2025, were compared to the last 10-years' annual averages. As shown in Figure 11, there were no significant changes in the baseline beta emitters in air particulate filters. Air particulate results in 2025 of the ODCM required Indicator group and Control were also compared to the optional groups, Onsite and Offsite.

Figure 11: Gross Beta in Air Particulates - 10 Year Trend

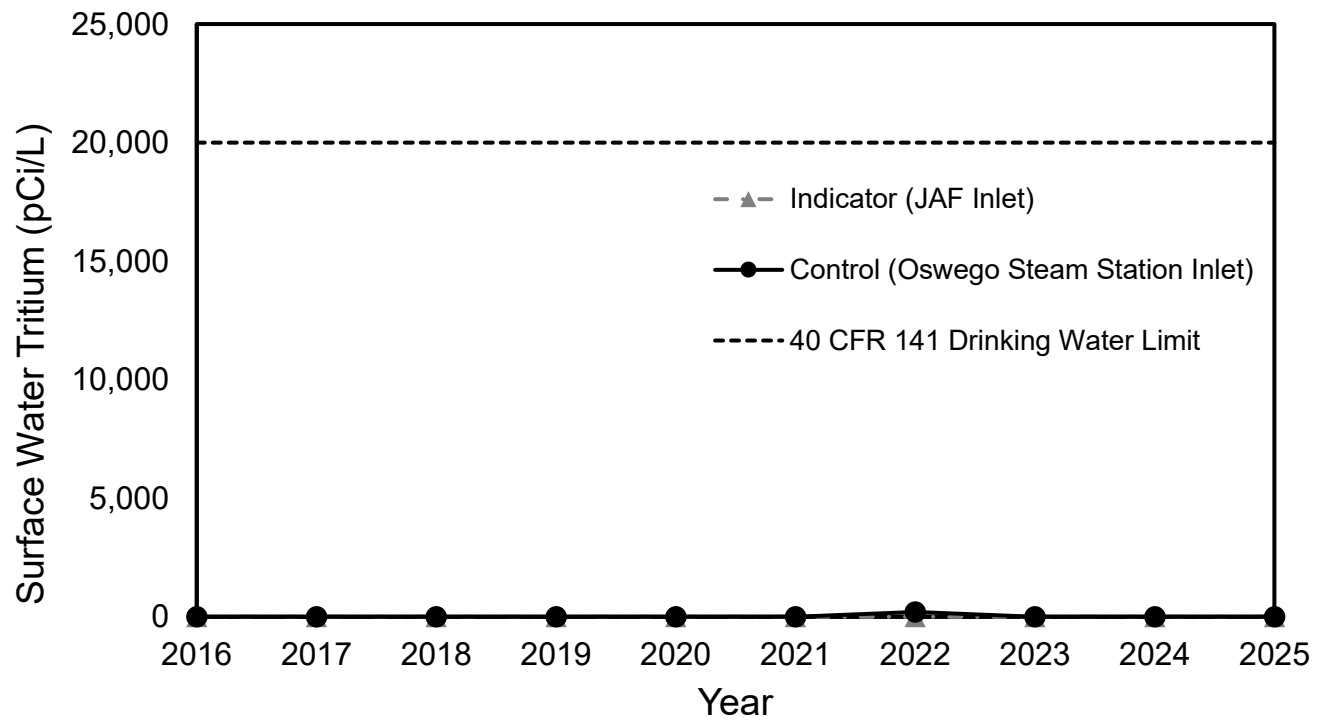


8.3 Waterborne Sample Results

8.3.1 Surface Water

Composite water samples are collected monthly at the upstream control location, Oswego Steam Station Inlet (#8), and at the downstream indicator location, JAF Inlet (#03). Optional surface water composite samples are also collected from the upstream Oswego City Water Supply (#10), as well as the NMP1 Inlet (#9) and NMP2 Inlet (#11). 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 60 surface water samples were collected and analyzed in accordance with the requirements in the ODCM and shown in Table 3: Radiological Environmental Monitoring Program – Waterborne. Gamma spectrometric analyses of all monthly composited water samples exhibited no detectable concentrations of any plant-related radionuclides in any of these samples. There was no detectable Tritium in the quarterly composited samples in 2025. Tritium concentrations in surface water for the last 10 years were well below the EPA tritium drinking water limit of 20,000 pCi/L.

Figure 12: Tritium in Surface Water - 10 Year Trend



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8.3.2 REMP Groundwater

Groundwater monitoring is not a requirement of the NMP/JAF REMP program as there is no waterborne pathway to exposure. Groundwater samples were collected for the Radiological Groundwater Protection Program in compliance with NEI 07-07 discussed in Section 11.1 and data provided in Attachment 5 of this report.

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8.3.3 Sediment from Shoreline

Shoreline sediment collections were made in April and October 2025 and analyzed for gamma-emitting isotopes. Samples are collected at one optional offsite control location (Lang’s Beach located near Oswego Harbor) and at one indicator location (Sunset Bay) which is an area east of the site considered to have recreational value. A total of 4 shoreline samples were analyzed in accordance with requirements in the ODCM and shown in Table 3: Radiological Environmental Monitoring Program – Waterborne.

No plant-related radionuclides were detected in the 2025 shoreline sediment samples. Naturally occurring isotopes were the only radionuclides detected in the sediment samples. Cesium-137 discussed in the introduction has not been detected at the control or indicator locations from 2008 through 2025.

8.4 Ingestion Pathway Sample Results

8.4.1 Milk

Based on the milk animal census, there were no adequate milk sample locations within five miles of the site in 2025. Samples were collected from two farms located beyond the five-mile requirement to ensure the continued monitoring of this important pathway. Milk samples from milking animals were collected at 2 locations, one approximately 8.7 miles having the highest dose potential, Indicator #55, and a control location, #77, 16 miles in the least prevalent wind direction. A total of 36 samples were collected and analyzed for Gamma isotopic and low level I-131 analysis semi-monthly when animals are on pasture (April-December); monthly at other times (January – March) if required. Gamma spectrometric analyses of these samples exhibited naturally occurring radionuclides like Potassium-40, but no detectable concentration of any plant-related radionuclides.

There were no program modifications and no changes in the environs that may impact the results based on the observations in the Land Use Census.

8.4.2 Fish

A total of 19 fish samples were collected in 2025. Fish collections were made utilizing gill nets at one control location greater than five miles from the site (Oswego Harbor area) and at two indicator locations in the vicinity of the lake discharges for the NMPNS and the JAFNPP facilities. 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 Monitoring Program – Ingestion. These samples are collected from the indicator and control areas as required by the ODCM. Only the edible portions are analyzed excluding head, tail, bones and results are reported as pCi/kg wet.

The spring fish collection was made up of 10 individual samples representing 4 separate species. Brown Trout, Lake Trout, Smallmouth Bass, Chinook Salmon, were collected.

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The fall fish collection was comprised of 9 individual samples representing 3 individual species. Chinook Salmon, Brown Trout, and Smallmouth Bass were collected.

Gamma spectrometric analyses of these samples exhibited naturally occurring radionuclides and no detectable concentration of any plant-related radionuclides.

8.4.3 Food Products (Vegetation)

In accordance with the ODCM and as described in Table 4: Radiological Environmental Monitoring Program – Ingestion, 16 broad leaf vegetation samples were collected during the 2025 growing season. 12 samples were collected from 3 growing locations, nearest site boundary in areas of highest predicted annual average ground level D/Q. Gardens are identified as JAF-E (#633), JAF-ESE (#634), and JAF-SE (#635). 4 samples were collected from a control location 16.0 miles away in a predominately upwind direction, identified as Summerville (#632). Samples are collected and analyzed for gamma isotopic and I-131 from the indicator and control locations monthly during growing season. It is common to detect Cs-137 in broad leaf samples at both indicator and control locations. Cs-137 can be attributed to offsite sources such as weapons testing, Chernobyl, and Fukushima events. While Cs-137 is periodically found in vegetation samples, the historical relationship between the indicator and control locations demonstrate that the plant is not the source of activity detected.

Gamma spectrometric analyses of these samples exhibited only naturally occurring radionuclides, and no detectable concentration of any plant-related radionuclides.

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]. 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 10 miles, and locations of the nearest residents to NMP and JAF are shown in Figure(s) 8 and 9. 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 10 miles

Sector	JAF Nearest Residence (Miles)	NMP Nearest Residence (Miles)	Nearest Milk Animal (Miles)
E	1.04	1.29	Location #55 within 10 miles (50 milking cows)
ESE	0.70	1.11	*
SE	1.07	1.35	*
SSE	1.29	1.59	*
S	1.57	1.57	Location #77 outside 10 miles (37 milking cows)
SSW	1.65	1.18	*
SW	1.45	1.11	*
WSW	1.81	1.38	*
W	0.90**	0.95**	*
WNW	1.34**	0.92**	*
* No locations identified in applicable sector within 10 miles by census ** Seasonal residences			

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10.0 DEVIATIONS AND EXCEPTIONS TO THE PROGRAM

The noted exceptions to the 2025 sample program address only those samples or monitoring requirements which are required by the ODCM. This section satisfies the reporting requirements of Part I, Section 5.1.3 of the JAFNPP ODCM, Section D 6.9.1.d of the NMP1 ODCM and Section D 4.1.2 of the NMP2 ODCM. All incidents were documented in the Station's Corrective Action Program (CAP).

The following are deviations from the program specified by the ODCMs in 2025:

At optional offsite air station G, no particulate filter sampling occurred between 1/14/25 and 1/21/25 due to loss of the filter.

Weekly sample changeouts did not occur at optional offsite air stations D2 and F between 2/4/25 – 2/25/25 and 2/11/25 – 3/11/25 respectively due to excessive snow buildup which prevented safe access by Station Personnel.

Offsite air station R2 had a loss of continuous sampling for 114 hours between 6/21/25 – 6/24/25 due to a faulty breaker. The breaker was replaced by Station Personnel following discovery of the issue. The required lower limits of detection (LLDs) of 1.0E-02 pCi/m³ for Gross Beta and 7.0E-02 pCi/m³ for I-131 were still met for this sample.

No sampling occurred at optional offsite air station E2 from 9/12/25 through 9/30/25 due to work being performed in the area by National Grid that required de-energizing the power supply.

No results are reported for TLD #49 (Oswego River Rd, Phoenix, NY) during 3rd quarter, as the telephone pole it was attached to was replaced and the TLD was not returned.

While performing rounds on 10/27/25, a Technician identified a lower than expected sample volume was collected by the composite sampler at the NMP1 Service Water Intake (Surface Water Location 09, NMP1 Inlet) over the prior weekend. The composite sampler was restarted and verified to have resumed collection at an acceptable flow rate. No further issues were observed.

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11.0 OTHER SUPPLEMENTAL INFORMATION

11.1 NEI 07-07 Onsite Radiological Groundwater Monitoring Program

James A. FitzPatrick and Nine Mile Point Nuclear 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). No groundwater samples were collected in 2025 as part of the REMP. The results of the GPI for NMP and JAF are included in each site’s Annual Radioactive Effluent Release Report (ARERR), which can be found on the NRC’s website using the URL below:

<https://www.nrc.gov/reactors/operating/ops-experience/tritium/plant-info>

11.2 Independent Spent Fuel Storage Installation (ISFSI) Monitoring Program

11.2.1 JAFNPP ISFSI

In order to provide adequate spent fuel storage capacity at JAFNPP, Entergy constructed an onsite Independent Spent Fuel Storage Installation (ISFSI). On April 25, 2002, the ISFSI facility was placed in service. TLDs are used to monitor direct radiation levels in the vicinity of the ISFSI facility. Twelve TLD locations were established around the ISFSI pad on the perimeter fence. Six additional TLD locations are located at varying distances from the pad to determine dose rates at points of interest relative to the storage area and are designated as optional locations. Background data was collected starting in October 2000 at eight of the TLD locations on the perimeter fence. The remaining locations were established in October 2001. Two dosimeters are placed at each TLD monitoring location. The TLDs are sealed in polyethylene packages to ensure dosimeter integrity and placed in the field using a supporting structure such as a fence or other immovable object.

There were no casks moved to the JAF ISFSI in 2025. The total number of casks on the pad remained at 38.

JAF has an array of eighteen TLD locations are in place around the perimeter of the ISFSI pad. TLDs were placed at these locations prior to loading the first storage casks for baseline dose rate determination in the general area of the pad.

The use of hydrogen injection and the implementation of the Independent Spent Fuel Storage Installation (ISFSI) at the FitzPatrick plant did not measurably increase the ambient radiation exposure rate at or beyond the site boundary. The lack of a dose rate increase at or beyond the site boundary is consistent with design calculations performed to evaluate compliance with 10 CFR 72.104(a).

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The measured results of the 2025 TLD monitoring program demonstrate compliance with the offsite dose limits to members of the public specified in 40 CFR 190 and 10 CFR 72.104(a)

Table 9-1: JAF Independent Spent Fuel Storage Installation

Site #	Description	Quarter 1 (mrem/90 day)		Quarter 2 (mrem/90 day)		Quarter 3 (mrem/90 day)		Quarter 4 (mrem/90 day)	
		mrem	±1σ	mrem	±1σ	mrem	±1σ	mrem	±1σ
I-1**	West Fence, South	397.27	12.58	388.26	14.68	378.06	8.63	396.96	14.81
I-2**	West Fence, Center	598.93	19.88	577.66	22.05	549.14	11.61	569.09	23.58
I-3**	West Fence, North	101.24	5.07	95.89	4.98	96.47	3.56	104.11	4.84
I-4**	North Fence, West	92.05	3.28	83.53	3.60	86.45	2.06	95.58	3.54
I-5**	North Fence, Center	139.32	5.41	127.83	5.10	128.27	3.87	139.34	6.61
I-6**	North Fence, East	110.48	3.75	102.33	3.53	105.26	3.35	109.57	4.85
I-7**	East Fence, North	83.14	4.45	81.36	2.73	82.15	2.15	85.32	3.48
I-8**	East Fence, Center	90.75	2.99	92.36	3.10	93.55	3.86	99.69	3.75
I-9**	East Fence, South	76.39	2.47	74.01	2.64	73.77	1.69	80.74	3.36
I-10**	South Fence, East	92.09	2.60	86.96	3.14	88.87	4.01	96.08	4.47
I-11**	South Fence, Center	111.39	3.78	104.54	3.50	107.26	2.97	112.37	4.53
I-12**	South Fence, West	250.28	8.01	230.78	8.03	231.48	7.06	236.91	9.92
I-13**	ISFSI Building and Grounds Garage, East of Pad	27.49	0.85	28.47	2.31	26.29	0.77	28.93	1.37
I-14**	ISFSI Tree – 100 yards South of Pad	15.12	0.59	13.82	0.53	15.79	0.52	17.08	1.06
I-15**	ISFSI Transmission Line Tower South of Pad at East /West Access Road	13.37	0.42	13.48	0.54	14.82	0.49	16.30	0.93
I-16**	ISFSI Perimeter Fence – 100 yards West of Pad on Pad Centerline	62.28	1.85	56.57	2.46	58.44	1.23	66.71	2.62

Table 9-1: JAF Independent Spent Fuel Storage Installation

Site #	Description	Quarter 1 (mrem/90 day)		Quarter 2 (mrem/90 day)		Quarter 3 (mrem/90 day)		Quarter 4 (mrem/90 day)	
		mrem	$\pm 1\sigma$	mrem	$\pm 1\sigma$	mrem	$\pm 1\sigma$	mrem	$\pm 1\sigma$
I-17**	ISFSI North Fence of Main Switch Yard on Pad Centerline	269.45	10.71	221.76	8.77	230.92	6.71	283.90	11.42
I-18**	ISFSI North Inner Perimeter Fence at Lake Shore on Pad Centerline	78.45	3.87	62.61	3.11	66.62	2.18	80.89	3.79

**Independent Spent Fuel Storage Installation, ISFSI, locations are immediate perimeter of the pad.

11.2.2 NMPNS ISFSI

In order to provide adequate spent fuel storage capacity at NMP1 and NMP2, NMPNS constructed an ISFSI onsite west of NMP1. During 2012 the NMPNS ISFSI facility was placed into service. TLDs are used to monitor direct radiation levels in the vicinity of the ISFSI facility. Background data has been collected from the initiation of the NMPNS REMP TLD program in 1985. In addition, 14 Optically Stimulated Luminescence Dosimeters (OSLDs) are located around the ISFSI and in areas where personnel are assigned routine work activities. These locations are designated as optional locations. Background data was collected starting in June 2011.

During 2025, six casks were moved to the ISFSI pad. The total number of casks in storage is 60.

An array of 10 OSLDs was established around the perimeter of the ISFSI pad and four OSLD locations were placed in specific areas of interest 12 months prior to facility usage. These pre-operational OSLDs were used for baseline dose rate determination. The OSLDs are placed, collected, and analyzed semi-annually. Two dosimeters are placed at each location and the average of the two dosimeters is reported. The semi-annual results are compared to baseline data to assess the contribution to ambient dose rates in the vicinity of the storage facility from casks as they are placed on the storage pad within the licensee-controlled area. The following table presents the pre-operation dose rate data and the operational dose rate data for 2025:

OSLD Number	Sector	Pre-Operation	2025
		mrem/Std month	mrem/Std month
233	WNW	3.5	36.1
234	WSW	2.9	14.3
235	S	4.2	5.8
236	SSE	3.8	4.5
237	SE	3.0	4.3
238	ESE	3.5	7.2
239	E	4.0	8.2
240	NE	3.6	10.6
241	N	5.1	9.4
242	NE	6.3	5.9
243	NNW	4.8	9.3
244	NE	4.6	5.0
245	NE	4.0	6.3
246	ENE	4.8	8.8

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An evaluation of Site Boundary TLDs and Control TLDs results for 2025 shows that there is no increase in dose rate at or beyond the site boundary. A detailed discussion of this evaluation is found in Section 8.1. The Environmental TLD results for this period show no significant difference in control and site boundary dose rates compared to 2025 and preoperational data gathered in 2012. The implementation of the ISFSI at the NMPNS plant did not measurably increase the ambient radiation exposure rate at or beyond the site boundary. The lack of a dose rate increase at or beyond the site boundary is consistent with design calculations performed to evaluate compliance with 10 CFR 72.104(a). The measured results of the 2025 TLD monitoring program demonstrate compliance with the offsite dose limits to members of the public specified in 40 CFR 190 and 10 CFR 72.104(a).

11.3 Corrections to Previous Reports

Table 8, Land Use Census, of the 2024 AREOR erroneously shows the nearest garden in the SSW sector as 4.03 miles, whereas the correct value was 2.42 miles. The corrected page is included at the end of this report in its entirety.

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12.0 BIBLIOGRAPHY

- [1] NCRP, "Report No. 160, Ionizing Radiation Exposure of the Population of the United States," National Council on Radiation Protection, Bethesda, 2009.
- [2] "10 CFR 50, "Domestic Licensing of Production and Utilization Facilities"," US Nuclear Regulatory Commission, Washington, DC.
- [3] "Regulatory Guide 4.1, "Radiological Environmental Monitoring for Nuclear Power Plants", Revision 2," Nuclear Regulatory Commission, 2009.
- [4] "NUREG-1301, "Offsite Dose Calculation Manual Guidance: Standard Radiological Effluent Controls for Pressurized Water Reactors," .," Nuclear Regulatory Commission, April 1991.
- [5] "NUREG-1302, "Offsite Dose Calculation Manual Guidance: Standard Radiological Effluent Controls for Boiling Water Reactors,"," Nuclear Regulatory Commission, April 1991.
- [6] "Branch Technical Position, Revision 1," NRC000096, Submitted March 30, 2012, November 1979.
- [7] "Japan Atomic Energy Agency," 06 November 2020. [Online]. Available: https://www.jaea.go.jp/english/04/ntokai/houkan/houkan_02.html.
- [8] "Regulatory Guide 4.15, Quality Assurance for Radiological Monitoring Programs (Inception through Normal Operations to License Termination) -- Effluent Streams and the Environment," Nuclear Regulatory Commission, July, 2007.
- [9] "Regulatory Guide 4.13, Performance, Testing, and Procedural Specifications for Thermoluminescence Dosimetry: Environmental Applications, Revision 2," Nuclear Regulatory Commission, June, 2019.
- [10] "NUREG/CR-2919, "XOQDOQ Computer Program for the Meteorological Evaluation of Routine Effluent Releases at Nuclear Power Stations,"," Nuclear Regulatory Commission, September, 1982.
- [11] "Measurements of Radionuclides in the environment Sampling and Analysis of plutonium in soil," Nuclear Regulatory Commission, 1974.
- [12] "Ionizing Radiation Exposure of the Population of the United States," Bethesda, MD, 2009.
- [13] Nuclear Regulatory Commission, 30 June 2015. [Online]. Available: <http://www.nrc.gov/reading-rm/basic-ref/students/animated-pwr.html>. [Accessed October 2020].
- [14] "ICRP Publication 60, "ICRP Publication 60: 1990 Recommendations of the International Commission on Radiological Protection, 60," Annals of the ICRP Volume 21/1-3,," International Commission on Radiation Protection, October, 1991.
- [15] "NRC Resource Page," [Online]. Available: <http://www.nrc.gov/about-nrc/radiation.html>. [Accessed 10 November 2020].
- [16] "NUREG-0133, Preparation of Effluent Technical Specifications for Nuclear Power Plants," Nuclear Regulatory Commission, 1987.
- [17] "Regulatory Guide 1.109, "Calculation of Annual Doses to Man from Routine Releases of Reactor Effluents for the Purpose of Demonstrating Compliance with 10 CFR Part 50, Appendix I,," Nuclear Regulatory Commission, Ocotober, 1977.
- [18] [Online]. Available: <http://hps.org/hpspublications/radiationfactsheets.html>. [Accessed 2020].
- [19] "NEI 07-07, "Industry Ground Water Protection Initiative—Final Guidance Document,"," Nuclear Energy Institute, Washington, D.C..

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- [20] "ANSI N545-1975, American National Standard Performance, Testing, and Procedural Specifications for Thermoluminescence Dosimetry (Environmental Applications)," American National Standards Institute, Inc, August 1975.
- [21] "40 CFR Part 141, "National Primary Drinking Water Regulations,"," US Environmental Protection Agency, Washington, DC..
- [22] Nuclear Regulatory Commission, 25 June 2015. [Online]. Available: <http://www.nrc.gov/reading-rm/basic-ref/students/animated-bwr.html>. [Accessed October 2020].
- [23] "NEI 07-07, "Industry Ground Water Protection Initiative—Final Guidance Document," Rev. 1," Nuclear Energy Institute, Washington, D.C., 2019.
- [24] Nuclear Regulatory Commission, 25 June 2015. [Online]. Available: <http://www.nrc.gov/reading-rm/basic-ref/students/animated-bwr.html>. [Accessed October 2020].
- [25] [Online]. Available: <http://hps.org/hpspublications/radiationfactsheets.html>. [Accessed 2020].
- [26] "Japan Atomic Energy Agency," 06 November 2020. [Online]. Available: https://www.jaea.go.jp/english/04/ntokai/houkan/houkan_02.html.
- [27] "NRC Resource Page," [Online]. Available: <http://www.nrc.gov/about-nrc/radiation.html>. [Accessed 10 November 2020].
- [28] "NUREG-0133, Preparation of Effluent Technical Specifications for Nuclear Power Plants," Nuclear Regulatory Commission, 1987.
- [29] Nuclear Regulatory Commission, 30 June 2015. [Online]. Available: <http://www.nrc.gov/reading-rm/basic-ref/students/animated-pwr.html>. [Accessed October 2020].
- [30] "Regulatory Guide 4.13, Performance, Testing, and Procedural Specifications for Thermoluminescence Dosimetry: Environmental Applications, Revision 2," Nuclear Regulatory Commission, June, 2019.
- [31] "Regulatory Guide 4.15, Quality Assurance for Radiological Monitoring Programs (Inception through Normal Operations to License Termination) -- Effluent Streams and the Environment," Nuclear Regulatory Commission, July, 2007.
- [32] "10 CFR 50 - Domestic Licensing of Production and Utilization Facilities," US Nuclear Regulatory Commission, Washington, DC.
- [33] "40 CFR 190 - Environmental Radiation Protection Standards for Nuclear Power Operation," US Environmental Protection Agency, Washington, DC.
- [34] "NUREG-0324 - XOQDOQ, Program for the Meteorological Evaluation of Routine Effluent Releases at Nuclear Power Stations," Nuclear Regulatory Commission, September, 1977.
- [35] "NCRP Report No. 160 - Ionizing Radiation Exposure of the Population of the United States," National Council on Radiation Protection and Measurements, Bethesda, MD, 2009.
- [36] "Regulatory Guide 1.109 - Calculation of Annual Doses to Man from Routine Releases of Reactor Effluents for the Purpose of Demonstrating Compliance with 10 CFR Part 50, Appendix I," Nuclear Regulatory Commission, October, 1977.
- [37] "40 CFR 141 - National Primary Drinking Water Regulations," US Environmental Protection Agency, Washington, DC..
- [38] "10 CFR 20 - Standards for Protection Against Radiation," US Nuclear Regulatory Commission, Washington, DC.
- [39] Teledyne Brown Engineering Environmental Services. "4th Quarter 2025 Quality Assurance Report", January - December 2025.

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[40] GEL 2025 Annual Quality Assurance Report for the Radiological Environmental Monitoring Program (REMP) Rev.1.

[41] AMO Environmental Decisions, "2025 Annual RGPP Monitoring Report Summary of Results and Conclusions Nine Mile Point Nuclear Station Oswego, New York"

[42] Environmental Dosimetry Company, "Annual Quality Assurance Status Report January - December 2025"

[43] AMO Environmental Decisions, "2025 Annual RGPP Monitoring Report Summary of Results and Conclusions James A. FitzPatrick Nuclear Power Plant Oswego, New York"

Attachment 1, Data Table Summary

Medium or Pathway Sampled (Units)	Type and Total Number of Analyses performed	Lower Limit of Detection ² (LLD)	All Indicator Locations Mean (f) ¹ Range	Location with Highest Annual Mean		Control Mean (f) ¹ Range	Number of Nonroutine Reported Measurements
				Name Distance and Direction	Mean (f) ¹ Range		
Air Radioiodines & Particulates (pCi/m ³)	<u>Gross Beta (260)</u>	0.01	1.95 E-2 (208/208) (7.49E-3 – 3.69E-2)	R-4 Station 1.8 miles, 145° SE	2.02 E-2 (52/52) (9.01E-3 – 3.69E-2)	1.94 E-2 (52/52) (7.90E-3 – 3.21E-2)	0
	<u>I-131 (260)</u>	0.07	<LLD	<LLD	<LLD	<LLD	0
	<u>GSA³ (20)</u>						
	Cs-134 Cs-137	0.05 0.06	<LLD <LLD	<LLD <LLD	<LLD <LLD	<LLD <LLD	0 0
Direct Radiation (mrem/qtr.)	Gamma Dose (128)	N/A	16.37 (120/120) (11.75 – 27.70)	TLD #87 0.1 miles, 333° NNW	25.96 (4/4) (25.02 – 26.67)	14.29 (7/7) (13.29 – 15.95)	0
Shoreline Sediment (pCi/kg-dry)	<u>GSA³ (4)</u>						
	Cs-134 Cs-137	150 180	<LLD <LLD	<LLD <LLD	<LLD <LLD	<LLD <LLD	0 0
Fish (pCi/kg-wet)	<u>GSA³ (19)</u>						
	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
	Cs-134 Cs-137	130 150	<LLD <LLD	<LLD <LLD	<LLD <LLD	<LLD <LLD	0 0

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Medium or Pathway Sampled (Units)	Type and Total Number of Analyses performed	Lower Limit of Detection ² (LLD)	All Indicator Locations Mean (f) ¹ Range	Location with Highest Annual Mean		Control Mean (f) ¹ Range	Number of Nonroutine Reported Measurements
				Name Distance and Direction	Mean (f) ¹ Range		
Food Products (pCi/kg-wet)	<u>GSA³ (16)</u>						
	I-131	60	<LLD	<LLD	<LLD	<LLD	0
	Cs-134	60	<LLD	<LLD	<LLD	<LLD	0
	Cs-137	80	<LLD	<LLD	<LLD	<LLD	0
Surface Water (pCi/L)	<u>H-3 (20)</u>	3000	<LLD	<LLD	<LLD	<LLD	0
	<u>GSA³ (60)</u>						
	Mn-54	15	<LLD	<LLD	<LLD	<LLD	0
	Fe-59	30	<LLD	<LLD	<LLD	<LLD	0
	Co-58	15	<LLD	<LLD	<LLD	<LLD	0
	Co-60	15	<LLD	<LLD	<LLD	<LLD	0
	Zn-65	30	<LLD	<LLD	<LLD	<LLD	0
	Zr/Nb-95	15	<LLD	<LLD	<LLD	<LLD	0
	I-131	15	<LLD	<LLD	<LLD	<LLD	0
	Cs-134	15	<LLD	<LLD	<LLD	<LLD	0
	Cs-137	18	<LLD	<LLD	<LLD	<LLD	0
	Ba/La-140	15	<LLD	<LLD	<LLD	<LLD	0
	Milk (pCi/L)	<u>GSA³ (36)</u>					
Cs-134		15	<LLD	<LLD	<LLD	<LLD	0
Cs-137		18	<LLD	<LLD	<LLD	<LLD	0
Ba/La-140		15	<LLD	<LLD	<LLD	<LLD	0
<u>Low-Level I-131 (36)</u>		1	<LLD	<LLD	<LLD	<LLD	0

(1) Mean and range are based on detectable measurements only. Fraction of detectable measurements at specified locations is indicated in parentheses (f)

(2) See Table 7, Lower Limits of Detection in Environmental Samples

(3) Gamma Spectrum Analysis

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Attachment 2
Complete Data Tables for All REMP Analysis Results Obtained In 2025

Table 10: Monthly Radionuclides in Surface Water (pCi/L)

03, JAF Inlet ¹		08, Oswego Steam Station (Control) ¹		09, NMP1 Inlet		10, Oswego City Water		11, NMP2 Inlet	
Collection Date	Gamma Emitters	Collection Date	Gamma Emitters	Collection Date	Gamma Emitters	Collection Date	Gamma Emitters	Collection Date	Gamma Emitters
1/31/2025	*	1/31/2025	*	1/31/2025	*	1/31/2025	*	1/31/2025	*
2/28/2025	*	2/28/2025	*	2/28/2025	*	2/28/2025	*	2/28/2025	*
3/31/2025	*	3/28/2025	*	3/28/2025	*	3/28/2025	*	3/28/2025	*
4/30/2025	*	5/2/2025	*	5/2/2025	*	5/2/2025	*	5/2/2025	*
5/29/2025	*	5/30/2025	*	5/30/2025	*	5/30/2025	*	5/30/2025	*
7/1/2025	*	7/3/2025	*	7/3/2025	*	7/3/2025	*	7/3/2025	*
7/31/2025	*	7/31/2025	*	7/31/2025	*	7/31/2025	*	7/31/2025	*
9/1/2025	*	8/28/2025	*	8/28/2025	*	8/28/2025	*	8/28/2025	*
9/30/2025	*	10/3/2025	*	10/3/2025	*	10/3/2025	*	10/3/2025	*
10/31/2025	*	10/31/2025	*	10/31/2025	*	10/31/2025	*	10/31/2025	*
12/1/2025	*	11/28/2025	*	11/28/2025	*	11/28/2025	*	11/28/2025	*
12/31/2025	*	1/2/2026	*	1/2/2026	*	1/2/2026	*	1/2/2026	*

* All Non-Natural Radionuclides <MDA

¹ ODCM Required Location

Table 11: Monthly Radionuclides in Milk (pCi/L)

Collection Date	55 (Indicator) Walthert	77 (Control) Summerville ¹
4/7/2025	*	*
4/21/2025	*	*
5/5/2025	*	*
5/20/2025	*	*
6/9/2025	*	*
6/23/2025	*	*
7/7/2025	*	*
7/21/2025	*	*
8/5/2025	*	*
8/19/2025	*	*
9/8/2025	*	*
9/22/2025	*	*
10/6/2025	*	*
10/20/2025	*	*
11/3/2025	*	*
11/17/2025	*	*
12/1/2025	*	*
12/16/2025	*	*

* All Non-Natural Radionuclides <MDA
¹ ODCM Required Sample Location

Table 12: Radionuclides in Vegetation (pCi/kg-wet)

(633) JAF-E (Indicator)			(634) JAF-ESE (Indicator)			(635) JAF-SE (Indicator)			(632) JAF-SSW (Control)		
Collection Date	Produce	Gamma Emitters	Collection Date	Produce	Gamma Emitters	Collection Date	Produce	Gamma Emitters	Collection Date	Produce	Gamma Emitters
7/7/2025	Lettuce	*	6/30/2025	Lettuce	*	6/30/2025	Lettuce	*	6/30/2025	Lettuce	*
7/14/2025	Swiss Chard	*	7/14/2025	Cabbage	*	7/16/2025	Cabbage	*	7/14/2025	Cabbage	*
8/11/2025	Collard Greens	*	7/14/2025	Swiss Chard	*	7/29/2025	Collard Greens	*	7/29/2025	Swiss Chard	*
8/25/2025	Cabbage	*	8/11/2025	Collard Greens	*	7/29/2025	Swiss Chard	*	8/11/2025	Collard Greens	*
* All Non-Natural Radionuclides <MDA											

**Table 13: Weekly Offsite Air Particulate Samples
Gross Beta Activity ± 2 Standard Deviations (pCi/m³)**

Collection Period	R1	R2	R3	R4	R5
12/30/2024 - 1/6/2025	1.72E-02 ± 1.31E-03	1.63E-02 ± 1.29E-03	1.78E-02 ± 1.31E-03	1.75E-02 ± 1.33E-03	1.71E-02 ± 1.32E-03
1/06/2025 - 1/13/2025	2.07E-02 ± 1.41E-03	1.95E-02 ± 1.40E-03	2.06E-02 ± 1.40E-03	2.18E-02 ± 1.45E-03	2.04E-02 ± 1.44E-03
1/13/2025 - 1/20/2025	2.16E-02 ± 1.43E-03	2.07E-02 ± 1.44E-03	2.35E-02 ± 1.47E-03	2.28E-02 ± 1.47E-03	2.47E-02 ± 1.57E-03
1/20/2025 - 1/27/2025	2.29E-02 ± 1.51E-03	2.01E-02 ± 1.48E-03	2.25E-02 ± 1.47E-03	2.32E-02 ± 1.51E-03	2.19E-02 ± 1.53E-03
1/27/2025 - 2/03/2025	1.63E-02 ± 1.29E-03	1.46E-02 ± 1.27E-03	1.61E-02 ± 1.27E-03	1.60E-02 ± 1.28E-03	1.76E-02 ± 1.36E-03
2/03/2025 - 2/10/2025	2.00E-02 ± 1.40E-03	1.63E-02 ± 1.29E-03	1.81E-02 ± 1.32E-03	1.98E-02 ± 1.39E-03	1.98E-02 ± 1.43E-03
2/10/2025 - 2/17/2025	1.78E-02 ± 1.25E-03	1.71E-02 ± 1.31E-03	1.86E-02 ± 1.26E-03	1.86E-02 ± 1.27E-03	2.08E-02 ± 1.35E-03
2/17/2025 - 2/24/2025	2.08E-02 ± 1.56E-03	2.03E-02 ± 1.49E-03	2.10E-02 ± 1.55E-03	2.14E-02 ± 1.58E-03	2.19E-02 ± 1.62E-03
2/24/2025 - 3/03/2025	2.18E-02 ± 1.47E-03	1.97E-02 ± 1.36E-03	2.13E-02 ± 1.44E-03	2.29E-02 ± 1.50E-03	2.24E-02 ± 1.50E-03
3/03/2025 - 3/10/2025	1.76E-02 ± 1.34E-03	1.75E-02 ± 1.30E-03	1.72E-02 ± 1.32E-03	1.89E-02 ± 1.37E-03	1.77E-02 ± 1.36E-03
3/10/2025 - 3/17/2025	2.02E-02 ± 1.42E-03	2.27E-02 ± 1.44E-03	1.85E-02 ± 1.36E-03	1.96E-02 ± 1.40E-03	1.98E-02 ± 1.42E-03
3/17/2025 - 3/24/2025	2.24E-02 ± 1.58E-03	2.21E-02 ± 1.53E-03	2.21E-02 ± 1.56E-03	2.31E-02 ± 1.61E-03	2.46E-02 ± 1.67E-03
3/24/2025 - 3/31/2025	1.49E-02 ± 1.16E-03	1.35E-02 ± 1.09E-03	1.53E-02 ± 1.16E-03	1.59E-02 ± 1.19E-03	1.57E-02 ± 1.20E-03
3/31/2025 - 4/07/2025	2.01E-02 ± 1.40E-03	1.90E-02 ± 1.33E-03	1.92E-02 ± 1.36E-03	2.03E-02 ± 1.41E-03	1.98E-02 ± 1.41E-03
4/07/2025 - 4/14/2025	2.22E-02 ± 1.48E-03	2.07E-02 ± 1.39E-03	2.01E-02 ± 1.40E-03	2.46E-02 ± 1.54E-03	2.39E-02 ± 1.54E-03
4/14/2025 - 4/21/2025	2.00E-02 ± 1.41E-03	1.91E-02 ± 1.33E-03	1.96E-02 ± 1.37E-03	1.89E-02 ± 1.37E-03	2.03E-02 ± 1.43E-03
4/21/2025 - 4/28/2025	1.96E-02 ± 1.54E-03	1.84E-02 ± 1.46E-03	1.87E-02 ± 1.49E-03	1.99E-02 ± 1.56E-03	1.87E-02 ± 1.54E-03
4/28/2025 - 5/05/2025	1.24E-02 ± 1.07E-03	1.18E-02 ± 1.02E-03	1.10E-02 ± 1.01E-03	1.34E-02 ± 1.10E-03	1.27E-02 ± 1.06E-03
5/05/2025 - 5/12/2025	1.52E-02 ± 1.27E-03	1.52E-02 ± 1.26E-03	1.50E-02 ± 1.26E-03	1.55E-02 ± 1.30E-03	1.41E-02 ± 1.23E-03
5/12/2025 - 5/19/2025	1.62E-02 ± 1.27E-03	1.48E-02 ± 1.22E-03	1.52E-02 ± 1.24E-03	1.63E-02 ± 1.31E-03	1.62E-02 ± 1.27E-03
5/19/2025 - 5/26/2025	8.63E-03 ± 9.65E-04	7.49E-03 ± 9.03E-04	8.26E-03 ± 9.52E-04	9.01E-03 ± 9.99E-04	7.90E-03 ± 9.45E-04
5/26/2025 - 6/02/2025	1.46E-02 ± 1.39E-03	1.29E-02 ± 1.30E-03	1.47E-02 ± 1.39E-03	1.55E-02 ± 1.44E-03	1.56E-02 ± 1.41E-03
6/02/2025 - 6/09/2025	1.99E-02 ± 1.41E-03	1.76E-02 ± 1.33E-03	1.95E-02 ± 1.40E-03	1.94E-02 ± 1.42E-03	1.96E-02 ± 1.40E-03
6/09/2025 - 6/16/2025	1.60E-02 ± 1.31E-03	1.42E-02 ± 1.27E-03	1.38E-02 ± 1.18E-03	1.59E-02 ± 1.27E-03	1.38E-02 ± 1.19E-03
6/16/2025 - 6/23/2025	2.08E-02 ± 1.46E-03	2.25E-02 ± 3.15E-03 (1)	1.93E-02 ± 1.38E-03	2.11E-02 ± 1.47E-03	2.08E-02 ± 1.41E-03

**Table 13: Weekly Offsite Air Particulate Samples
Gross Beta Activity ± 2 Standard Deviations (pCi/m³)**

Collection Period	R1	R2	R3	R4	R5
6/23/2025 - 6/30/2025	1.73E-02 ± 1.24E-03	1.76E-02 ± 1.32E-03	1.73E-02 ± 1.30E-03	1.82E-02 ± 1.34E-03	1.76E-02 ± 1.30E-03
6/30/2025 - 7/07/2025	2.24E-02 ± 1.42E-03	2.33E-02 ± 1.50E-03	2.35E-02 ± 1.50E-03	2.52E-02 ± 1.57E-03	2.10E-02 ± 1.42E-03
7/07/2025 - 7/14/2025	2.42E-02 ± 1.47E-03	2.21E-02 ± 1.47E-03	2.31E-02 ± 1.49E-03	2.45E-02 ± 1.54E-03	2.06E-02 ± 1.41E-03
7/14/2025 - 7/21/2025	2.01E-02 ± 1.39E-03	1.89E-02 ± 1.41E-03	2.07E-02 ± 1.46E-03	2.02E-02 ± 1.45E-03	2.01E-02 ± 1.42E-03
7/21/2025 - 7/28/2025	2.08E-02 ± 1.39E-03	2.17E-02 ± 1.47E-03	2.25E-02 ± 1.48E-03	2.33E-02 ± 1.51E-03	2.24E-02 ± 1.45E-03
7/28/2025 - 8/04/2025	2.17E-02 ± 1.41E-03	2.16E-02 ± 1.48E-03	2.05E-02 ± 1.45E-03	2.18E-02 ± 1.51E-03	1.85E-02 ± 1.38E-03
8/04/2025 - 8/11/2025	3.28E-02 ± 1.55E-03	3.32E-02 ± 1.60E-03	3.22E-02 ± 1.57E-03	3.40E-02 ± 1.63E-03	3.09E-02 ± 1.47E-03
8/11/2025 - 8/18/2025	2.14E-02 ± 1.53E-03	2.15E-02 ± 1.61E-03	2.03E-02 ± 1.57E-03	2.00E-02 ± 1.58E-03	1.87E-02 ± 1.47E-03
8/18/2025 - 8/25/2025	1.78E-02 ± 1.30E-03	1.57E-02 ± 1.29E-03	1.73E-02 ± 1.34E-03	1.82E-02 ± 1.38E-03	1.77E-02 ± 1.30E-03
8/25/2025 - 9/01/2025	2.33E-02 ± 1.32E-03	1.75E-02 ± 1.23E-03	2.06E-02 ± 1.31E-03	2.16E-02 ± 1.35E-03	1.99E-02 ± 1.25E-03
9/01/2025 - 9/08/2025	1.87E-02 ± 1.49E-03	1.91E-02 ± 1.51E-03	1.69E-02 ± 1.45E-03	1.90E-02 ± 1.53E-03	1.76E-02 ± 1.42E-03
9/08/2025 - 9/15/2025	3.34E-02 ± 1.73E-03	3.23E-02 ± 1.71E-03	3.37E-02 ± 1.75E-03	3.69E-02 ± 1.83E-03	3.21E-02 ± 1.65E-03
9/15/2025 - 9/22/2025	2.47E-02 ± 1.57E-03	2.73E-02 ± 1.63E-03	2.58E-02 ± 1.60E-03	2.72E-02 ± 1.65E-03	2.36E-02 ± 1.48E-03
9/22/2025 - 9/29/2025	2.81E-02 ± 1.65E-03	2.86E-02 ± 1.68E-03	2.89E-02 ± 1.69E-03	2.95E-02 ± 1.71E-03	2.68E-02 ± 1.57E-03
9/29/2025 - 10/06/2025	3.21E-02 ± 1.72E-03	3.29E-02 ± 1.74E-03	3.41E-02 ± 1.76E-03	3.42E-02 ± 1.78E-03	3.10E-02 ± 1.64E-03
10/06/2025 - 10/13/2025	2.16E-02 ± 1.45E-03	2.08E-02 ± 1.43E-03	2.00E-02 ± 1.41E-03	2.15E-02 ± 1.46E-03	2.03E-02 ± 1.37E-03
10/13/2025 - 10/20/2025	2.05E-02 ± 1.42E-03	2.19E-02 ± 1.48E-03	2.21E-02 ± 1.45E-03	2.18E-02 ± 1.44E-03	2.29E-02 ± 1.45E-03
10/20/2025 - 10/27/2025	1.24E-02 ± 1.21E-03	1.22E-02 ± 1.21E-03	1.21E-02 ± 1.17E-03	1.22E-02 ± 1.17E-03	1.13E-02 ± 1.13E-03
10/27/2025 - 11/03/2025	1.33E-02 ± 1.20E-03	1.38E-02 ± 1.25E-03	1.37E-02 ± 1.19E-03	1.30E-02 ± 1.17E-03	1.27E-02 ± 1.15E-03
11/03/2025 - 11/10/2025	1.44E-02 ± 1.36E-03	1.42E-02 ± 1.39E-03	1.50E-02 ± 1.36E-03	1.49E-02 ± 1.36E-03	1.47E-02 ± 1.34E-03
11/10/2025 - 11/17/2025	1.22E-02 ± 1.11E-03	1.09E-02 ± 1.06E-03	1.16E-02 ± 1.08E-03	1.28E-02 ± 1.11E-03	1.12E-02 ± 1.05E-03
11/17/2025 - 11/24/2025	1.96E-02 ± 1.39E-03	1.73E-02 ± 1.32E-03	1.97E-02 ± 1.38E-03	2.03E-02 ± 1.40E-03	1.99E-02 ± 1.37E-03
11/24/2025 - 12/01/2025	1.47E-02 ± 1.25E-03	1.12E-02 ± 1.13E-03	1.53E-02 ± 1.26E-03	1.48E-02 ± 1.25E-03	1.21E-02 ± 1.14E-03
12/01/2025 - 12/08/2025	1.98E-02 ± 1.44E-03	1.73E-02 ± 1.34E-03	1.89E-02 ± 1.39E-03	2.06E-02 ± 1.44E-03	2.13E-02 ± 1.44E-03
12/08/2025 - 12/15/2025	1.80E-02 ± 1.37E-03	1.53E-02 ± 1.25E-03	1.64E-02 ± 1.29E-03	1.70E-02 ± 1.32E-03	1.82E-02 ± 1.33E-03

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**Table 13: Weekly Offsite Air Particulate Samples
Gross Beta Activity ± 2 Standard Deviations (pCi/m³)**

Collection Period	R1	R2	R3	R4	R5
12/15/2025 - 12/22/2025	2.34E-02 ± 1.53E-03	2.07E-02 ± 1.43E-03	2.29E-02 ± 1.48E-03	2.29E-02 ± 1.50E-03	2.39E-02 ± 1.50E-03
12/22/2025 - 12/29/2025	1.69E-02 ± 1.35E-03	1.52E-02 ± 1.29E-03	1.55E-02 ± 1.29E-03	1.46E-02 ± 1.28E-03	1.63E-02 ± 1.31E-03

**Table 14: Weekly Supplemental Offsite Air Particulate Samples
Gross Beta Activity ± 2 Standard Deviations (pCi/m³)**

Collection Period	D2	E	F	G Offsite	D1
12/30/2024 - 1/6/2025	1.86E-02 ± 1.34E-03	1.92E-02 ± 1.36E-03	1.90E-02 ± 1.38E-03	1.80E-02 ± 1.33E-03	1.59E-02 ± 1.27E-03
1/06/2025 - 1/13/2025	2.14E-02 ± 1.44E-03	2.29E-02 ± 1.51E-03	1.99E-02 ± 1.36E-03	2.25E-02 ± 1.48E-03	1.99E-02 ± 1.41E-03
1/13/2025 - 1/20/2025	2.35E-02 ± 1.49E-03	2.60E-02 ± 1.56E-03	2.55E-02 ± 1.51E-03	(1)	2.43E-02 ± 1.53E-03
1/20/2025 - 1/27/2025	2.24E-02 ± 1.50E-03	2.16E-02 ± 1.51E-03	2.39E-02 ± 1.57E-03	2.31E-02 ± 1.53E-03	2.34E-02 ± 1.43E-03
1/27/2025 - 2/03/2025	1.66E-02 ± 1.30E-03	1.76E-02 ± 1.37E-03	1.70E-02 ± 1.33E-03	1.85E-02 ± 1.39E-03	1.68E-02 ± 1.46E-03
2/03/2025 - 2/10/2025	(1)	1.96E-02 ± 1.40E-03	1.87E-02 ± 1.37E-03	2.00E-02 ± 1.42E-03	1.96E-02 ± 1.43E-03
2/10/2025 - 2/17/2025	(1)	1.90E-02 ± 1.26E-03	(1)	1.86E-02 ± 1.30E-03	1.91E-02 ± 1.21E-03
2/17/2025 - 2/24/2025	1.66E-02 ± 6.86E-04	2.29E-02 ± 1.73E-03	(1)	2.23E-02 ± 1.64E-03	1.94E-02 ± 1.80E-03
2/24/2025 - 3/03/2025	2.23E-02 ± 1.47E-03	2.21E-02 ± 1.48E-03	(1)	2.37E-02 ± 1.54E-03	2.41E-02 ± 1.56E-03
3/03/2025 - 3/10/2025	1.75E-02 ± 1.32E-03	1.80E-02 ± 1.36E-03	1.70E-02 ± 6.01E-04	1.80E-02 ± 1.37E-03	1.84E-02 ± 1.28E-03
3/10/2025 - 3/17/2025	1.83E-02 ± 1.34E-03	1.86E-02 ± 1.39E-03	1.98E-02 ± 1.42E-03	2.08E-02 ± 1.45E-03	2.18E-02 ± 1.61E-03
3/17/2025 - 3/24/2025	2.25E-02 ± 1.55E-03	2.25E-02 ± 1.60E-03	2.47E-02 ± 1.65E-03	2.45E-02 ± 1.67E-03	2.03E-02 ± 1.41E-03
3/24/2025 - 3/31/2025	1.20E-02 ± 1.05E-03	1.56E-02 ± 1.20E-03	1.43E-02 ± 1.15E-03	1.61E-02 ± 1.21E-03	1.52E-02 ± 1.28E-03
3/31/2025 - 4/07/2025	1.89E-02 ± 1.34E-03	1.95E-02 ± 1.40E-03	1.94E-02 ± 1.38E-03	2.11E-02 ± 1.45E-03	1.91E-02 ± 1.39E-03
4/07/2025 - 4/14/2025	2.07E-02 ± 1.40E-03	2.29E-02 ± 1.51E-03	2.28E-02 ± 1.50E-03	2.17E-02 ± 1.48E-03	2.19E-02 ± 1.48E-03
4/14/2025 - 4/21/2025	1.87E-02 ± 1.34E-03	1.91E-02 ± 1.40E-03	1.94E-02 ± 1.39E-03	2.15E-02 ± 1.45E-03	1.78E-02 ± 1.34E-03
4/21/2025 - 4/28/2025	1.84E-02 ± 1.51E-03	2.02E-02 ± 1.49E-03	2.17E-02 ± 1.61E-03	1.93E-02 ± 1.54E-03	1.73E-02 ± 1.24E-03
4/28/2025 - 5/05/2025	1.35E-02 ± 7.36E-04	1.16E-02 ± 9.91E-04	1.22E-02 ± 1.08E-03	1.31E-02 ± 1.10E-03	1.18E-02 ± 1.15E-03
5/05/2025 - 5/12/2025	1.49E-02 ± 1.26E-03	1.57E-02 ± 1.24E-03	1.53E-02 ± 1.31E-03	1.47E-02 ± 1.28E-03	1.38E-02 ± 1.37E-03
5/12/2025 - 5/19/2025	1.46E-02 ± 1.24E-03	1.36E-02 ± 1.16E-03	1.51E-02 ± 1.29E-03	1.62E-02 ± 1.30E-03	1.84E-02 ± 1.34E-03
5/19/2025 - 5/26/2025	6.36E-03 ± 8.98E-04	8.42E-03 ± 9.60E-04	8.32E-03 ± 9.43E-04	9.50E-03 ± 1.03E-03	7.31E-03 ± 9.45E-04
5/26/2025 - 6/02/2025	1.36E-02 ± 1.37E-03	1.47E-02 ± 1.39E-03	1.49E-02 ± 1.38E-03	1.52E-02 ± 1.44E-03	1.52E-02 ± 1.43E-03
6/02/2025 - 6/09/2025	1.17E-02 ± 1.19E-03	2.02E-02 ± 1.42E-03	2.01E-02 ± 1.41E-03	1.97E-02 ± 1.43E-03	2.15E-02 ± 1.42E-03
6/09/2025 - 6/16/2025	1.56E-02 ± 1.27E-03	1.49E-02 ± 1.24E-03	1.60E-02 ± 1.24E-03	1.57E-02 ± 1.28E-03	1.42E-02 ± 1.20E-03
6/16/2025 - 6/23/2025	1.96E-02 ± 1.41E-03	2.29E-02 ± 1.48E-03	2.08E-02 ± 1.41E-03	2.09E-02 ± 1.45E-03	1.85E-02 ± 1.34E-03

**Table 14: Weekly Supplemental Offsite Air Particulate Samples
Gross Beta Activity ± 2 Standard Deviations (pCi/m³)**

Collection Period	D2	E	F	G Offsite	D1
6/23/2025 - 6/30/2025	1.68E-02 ± 1.31E-03	1.66E-02 ± 1.28E-03	1.78E-02 ± 1.31E-03	1.70E-02 ± 1.31E-03	1.94E-02 ± 1.33E-03
6/30/2025 - 7/07/2025	2.15E-02 ± 1.47E-03	2.38E-02 ± 1.51E-03	2.33E-02 ± 1.48E-03	2.37E-02 ± 1.53E-03	2.25E-02 ± 1.45E-03
7/07/2025 - 7/14/2025	2.12E-02 ± 1.45E-03	2.26E-02 ± 1.48E-03	2.32E-02 ± 1.49E-03	2.38E-02 ± 1.53E-03	2.16E-02 ± 1.43E-03
7/14/2025 - 7/21/2025	1.93E-02 ± 1.42E-03	1.95E-02 ± 1.42E-03	1.98E-02 ± 1.42E-03	1.54E-02 ± 1.33E-03	2.26E-02 ± 1.47E-03
7/21/2025 - 7/28/2025	2.13E-02 ± 1.45E-03	2.36E-02 ± 1.51E-03	2.31E-02 ± 1.49E-03	2.36E-02 ± 1.51E-03	1.91E-02 ± 1.36E-03
7/28/2025 - 8/04/2025	1.97E-02 ± 1.42E-03	2.05E-02 ± 1.41E-03	2.16E-02 ± 1.47E-03	2.12E-02 ± 1.47E-03	2.13E-02 ± 1.43E-03
8/04/2025 - 8/11/2025	3.04E-02 ± 1.54E-03	3.49E-02 ± 1.66E-03	3.34E-02 ± 1.59E-03	3.23E-02 ± 1.59E-03	3.22E-02 ± 1.67E-03
8/11/2025 - 8/18/2025	1.99E-02 ± 1.55E-03	2.06E-02 ± 1.57E-03	2.12E-02 ± 1.58E-03	2.17E-02 ± 1.60E-03	2.42E-02 ± 1.50E-03
8/18/2025 - 8/25/2025	1.73E-02 ± 1.34E-03	1.68E-02 ± 1.32E-03	1.74E-02 ± 1.33E-03	1.81E-02 ± 1.37E-03	1.73E-02 ± 1.29E-03
8/25/2025 - 9/01/2025	2.06E-02 ± 1.31E-03	2.20E-02 ± 1.35E-03	2.17E-02 ± 1.33E-03	2.24E-02 ± 1.36E-03	1.73E-02 ± 1.18E-03
9/01/2025 - 9/08/2025	1.72E-02 ± 1.46E-03	1.81E-02 ± 1.48E-03	1.69E-02 ± 1.44E-03	1.86E-02 ± 1.51E-03	2.06E-02 ± 1.51E-03
9/08/2025 - 9/15/2025	3.20E-02 ± 1.71E-03	3.69E-02 ± 1.97E-03	3.38E-02 ± 1.74E-03	3.47E-02 ± 1.77E-03	3.12E-02 ± 1.64E-03
9/15/2025 - 9/22/2025	2.49E-02 ± 1.57E-03	(1)	2.59E-02 ± 1.59E-03	2.75E-02 ± 1.65E-03	2.41E-02 ± 1.51E-03
9/22/2025 - 9/29/2025	2.69E-02 ± 1.64E-03	(1)	2.87E-02 ± 1.67E-03	2.91E-02 ± 1.70E-03	2.98E-02 ± 1.65E-03
9/29/2025 - 10/06/2025	3.20E-02 ± 1.72E-03	3.39E-02 ± 1.77E-03	3.17E-02 ± 1.69E-03	3.24E-02 ± 1.75E-03	2.96E-02 ± 1.62E-03
10/06/2025 - 10/13/2025	2.05E-02 ± 1.43E-03	2.25E-02 ± 1.47E-03	2.03E-02 ± 1.40E-03	2.28E-02 ± 1.50E-03	2.49E-02 ± 1.49E-03
10/13/2025 - 10/20/2025	2.07E-02 ± 1.44E-03	1.99E-02 ± 1.38E-03	2.19E-02 ± 1.46E-03	2.09E-02 ± 1.46E-03	2.26E-02 ± 1.45E-03
10/20/2025 - 10/27/2025	1.22E-02 ± 1.19E-03	1.14E-02 ± 1.13E-03	1.15E-02 ± 1.17E-03	1.38E-02 ± 1.28E-03	1.25E-02 ± 1.17E-03
10/27/2025 - 11/03/2025	1.25E-02 ± 1.17E-03	1.25E-02 ± 1.15E-03	1.31E-02 ± 1.20E-03	1.47E-02 ± 1.28E-03	1.08E-02 ± 1.09E-03
11/03/2025 - 11/10/2025	1.37E-02 ± 1.31E-03	1.49E-02 ± 1.40E-03	1.58E-02 ± 1.41E-03	1.71E-02 ± 1.45E-03	1.63E-02 ± 1.28E-03
11/10/2025 - 11/17/2025	1.26E-02 ± 1.09E-03	1.23E-02 ± 1.07E-03	1.23E-02 ± 1.10E-03	1.19E-02 ± 1.10E-03	1.31E-02 ± 1.20E-03
11/17/2025 - 11/24/2025	2.02E-02 ± 1.34E-03	1.98E-02 ± 1.39E-03	2.15E-02 ± 1.44E-03	2.09E-02 ± 1.44E-03	2.08E-02 ± 1.42E-03
11/24/2025 - 12/01/2025	1.36E-02 ± 1.11E-03	1.41E-02 ± 1.22E-03	1.42E-02 ± 1.24E-03	1.46E-02 ± 1.25E-03	1.37E-02 ± 1.20E-03
12/01/2025 - 12/08/2025	2.30E-02 ± 1.46E-03	1.95E-02 ± 1.42E-03	2.25E-02 ± 1.51E-03	2.06E-02 ± 1.46E-03	1.67E-02 ± 1.32E-03
12/08/2025 - 12/15/2025	1.87E-02 ± 1.32E-03	1.89E-02 ± 1.38E-03	1.85E-02 ± 1.37E-03	1.87E-02 ± 1.38E-03	1.41E-02 ± 1.21E-03

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**Table 14: Weekly Supplemental Offsite Air Particulate Samples
Gross Beta Activity ± 2 Standard Deviations (pCi/m³)**

Collection Period	D2	E	F	G Offsite	D1
12/15/2025 - 12/22/2025	2.12E-02 ± 1.40E-03	2.42E-02 ± 1.54E-03	2.28E-02 ± 1.50E-03	2.49E-02 ± 1.57E-03	2.25E-02 ± 1.46E-03
12/22/2025 - 12/29/2025	1.62E-02 ± 1.27E-03	1.48E-02 ± 1.29E-03	1.71E-02 ± 1.35E-03	1.56E-02 ± 1.31E-03	1.87E-02 ± 1.37E-03
<i>(1) See Section 10.0, Deviations and Exceptions to the Program</i>					

**Table 15: Weekly Supplemental Onsite Air Particulate Samples
Gross Beta Activity ± 2 Standard Deviations (pCi/m³)**

Collection Period	G Onsite	H	I	J	K
12/30/2024 - 1/6/2025	1.78E-02 ± 1.31E-03	1.56E-02 ± 1.15E-03	1.70E-02 ± 1.18E-03	1.68E-02 ± 1.31E-03	1.72E-02 ± 1.28E-03
1/06/2025 - 1/13/2025	2.06E-02 ± 1.42E-03	2.27E-02 ± 1.64E-03	2.25E-02 ± 1.60E-03	1.87E-02 ± 1.34E-03	2.02E-02 ± 1.40E-03
1/13/2025 - 1/20/2025	2.53E-02 ± 1.53E-03	2.47E-02 ± 1.56E-03	2.57E-02 ± 1.54E-03	2.37E-02 ± 1.48E-03	2.50E-02 ± 1.52E-03
1/20/2025 - 1/27/2025	2.31E-02 ± 1.52E-03	2.51E-02 ± 1.55E-03	2.59E-02 ± 1.55E-03	2.59E-02 ± 1.55E-03	2.53E-02 ± 1.56E-03
1/27/2025 - 2/03/2025	1.65E-02 ± 1.30E-03	1.42E-02 ± 1.25E-03	1.83E-02 ± 1.35E-03	1.61E-02 ± 1.30E-03	1.71E-02 ± 1.32E-03
2/03/2025 - 2/10/2025	1.96E-02 ± 1.39E-03	1.87E-02 ± 1.35E-03	1.75E-02 ± 1.32E-03	1.99E-02 ± 1.40E-03	1.78E-02 ± 1.33E-03
2/10/2025 - 2/17/2025	1.84E-02 ± 1.16E-03	1.84E-02 ± 1.14E-03	1.89E-02 ± 1.14E-03	1.72E-02 ± 1.13E-03	1.77E-02 ± 1.16E-03
2/17/2025 - 2/24/2025	1.90E-02 ± 1.75E-03	2.35E-02 ± 2.10E-03	2.38E-02 ± 2.04E-03	1.94E-02 ± 1.75E-03	1.93E-02 ± 1.77E-03
2/24/2025 - 3/03/2025	2.47E-02 ± 1.54E-03	2.27E-02 ± 1.54E-03	2.47E-02 ± 1.57E-03	2.56E-02 ± 1.57E-03	2.37E-02 ± 1.53E-03
3/03/2025 - 3/10/2025	1.85E-02 ± 1.27E-03	1.91E-02 ± 1.30E-03	1.75E-02 ± 1.24E-03	1.68E-02 ± 1.24E-03	1.88E-02 ± 1.31E-03
3/10/2025 - 3/17/2025	2.14E-02 ± 1.61E-03	2.29E-02 ± 1.65E-03	2.29E-02 ± 1.67E-03	2.09E-02 ± 1.60E-03	2.17E-02 ± 1.65E-03
3/17/2025 - 3/24/2025	2.12E-02 ± 1.43E-03	2.20E-02 ± 1.46E-03	2.20E-02 ± 1.47E-03	2.29E-02 ± 1.49E-03	2.04E-02 ± 1.38E-03
3/24/2025 - 3/31/2025	1.57E-02 ± 1.30E-03	1.63E-02 ± 1.32E-03	1.61E-02 ± 1.33E-03	1.62E-02 ± 1.32E-03	1.56E-02 ± 1.27E-03
3/31/2025 - 4/07/2025	1.87E-02 ± 1.38E-03	1.98E-02 ± 1.40E-03	1.95E-02 ± 1.41E-03	1.95E-02 ± 1.38E-03	1.87E-02 ± 1.36E-03
4/07/2025 - 4/14/2025	2.24E-02 ± 1.49E-03	2.23E-02 ± 1.49E-03	2.22E-02 ± 1.49E-03	2.16E-02 ± 1.46E-03	2.22E-02 ± 1.47E-03
4/14/2025 - 4/21/2025	1.86E-02 ± 1.37E-03	1.88E-02 ± 1.38E-03	1.96E-02 ± 1.41E-03	2.00E-02 ± 1.40E-03	1.85E-02 ± 1.41E-03
4/21/2025 - 4/28/2025	1.78E-02 ± 1.26E-03	1.86E-02 ± 1.21E-03	1.93E-02 ± 1.22E-03	1.84E-02 ± 1.27E-03	1.76E-02 ± 1.22E-03
4/28/2025 - 5/05/2025	1.11E-02 ± 1.12E-03	1.14E-02 ± 1.28E-03	1.12E-02 ± 1.26E-03	1.17E-02 ± 1.15E-03	1.17E-02 ± 1.11E-03
5/05/2025 - 5/12/2025	3.03E-02 ± 2.39E-03	1.42E-02 ± 1.41E-03	1.52E-02 ± 1.43E-03	1.39E-02 ± 1.37E-03	1.37E-02 ± 1.31E-03
5/12/2025 - 5/19/2025	1.90E-02 ± 1.35E-03	2.03E-02 ± 1.48E-03	1.76E-02 ± 1.34E-03	1.81E-02 ± 1.37E-03	1.82E-02 ± 1.29E-03
5/19/2025 - 5/26/2025	6.45E-03 ± 8.69E-04	7.67E-03 ± 9.52E-04	7.56E-03 ± 9.61E-04	6.38E-03 ± 9.16E-04	6.95E-03 ± 8.68E-04
5/26/2025 - 6/02/2025	1.49E-02 ± 1.35E-03	1.63E-02 ± 1.47E-03	1.48E-02 ± 1.39E-03	1.49E-02 ± 1.42E-03	1.43E-02 ± 1.31E-03
6/02/2025 - 6/09/2025	2.28E-02 ± 1.45E-03	2.12E-02 ± 1.48E-03	1.94E-02 ± 1.40E-03	2.20E-02 ± 1.51E-03	2.10E-02 ± 1.37E-03
6/09/2025 - 6/16/2025	1.46E-02 ± 1.21E-03	1.63E-02 ± 1.30E-03	1.60E-02 ± 1.27E-03	1.50E-02 ± 1.26E-03	1.40E-02 ± 1.13E-03
6/16/2025 - 6/23/2025	1.79E-02 ± 1.32E-03	1.95E-02 ± 1.44E-03	1.93E-02 ± 1.41E-03	1.76E-02 ± 1.37E-03	1.78E-02 ± 1.28E-03

**Table 15: Weekly Supplemental Onsite Air Particulate Samples
Gross Beta Activity ± 2 Standard Deviations (pCi/m³)**

Collection Period	G Onsite	H	I	J	K
6/23/2025 - 6/30/2025	1.96E-02 ± 1.33E-03	2.09E-02 ± 1.34E-03	1.92E-02 ± 1.36E-03	2.14E-02 ± 1.45E-03	1.96E-02 ± 1.31E-03
6/30/2025 - 7/07/2025	2.37E-02 ± 1.47E-03	2.29E-02 ± 1.40E-03	2.25E-02 ± 1.46E-03	2.60E-02 ± 1.60E-03	2.31E-02 ± 1.43E-03
7/07/2025 - 7/14/2025	2.48E-02 ± 1.52E-03	2.27E-02 ± 1.40E-03	2.29E-02 ± 1.48E-03	2.41E-02 ± 1.51E-03	2.10E-02 ± 1.37E-03
7/14/2025 - 7/21/2025	2.17E-02 ± 1.44E-03	2.24E-02 ± 1.41E-03	2.21E-02 ± 1.44E-03	2.23E-02 ± 1.47E-03	2.25E-02 ± 1.43E-03
7/21/2025 - 7/28/2025	1.98E-02 ± 1.38E-03	2.01E-02 ± 1.36E-03	1.95E-02 ± 1.34E-03	2.04E-02 ± 1.39E-03	1.95E-02 ± 1.33E-03
7/28/2025 - 8/04/2025	2.21E-02 ± 1.45E-03	2.18E-02 ± 1.42E-03	2.11E-02 ± 1.40E-03	2.17E-02 ± 1.45E-03	2.14E-02 ± 1.39E-03
8/04/2025 - 8/11/2025	3.42E-02 ± 1.71E-03	3.27E-02 ± 1.65E-03	3.25E-02 ± 1.64E-03	3.41E-02 ± 1.71E-03	3.26E-02 ± 1.63E-03
8/11/2025 - 8/18/2025	2.51E-02 ± 1.50E-03	2.67E-02 ± 1.53E-03	2.69E-02 ± 1.53E-03	2.38E-02 ± 1.49E-03	2.52E-02 ± 1.48E-03
8/18/2025 - 8/25/2025	1.71E-02 ± 1.29E-03	1.81E-02 ± 1.31E-03	1.67E-02 ± 1.26E-03	1.84E-02 ± 1.34E-03	1.77E-02 ± 1.28E-03
8/25/2025 - 9/01/2025	1.74E-02 ± 1.19E-03	1.78E-02 ± 1.19E-03	1.84E-02 ± 1.19E-03	1.81E-02 ± 1.21E-03	1.72E-02 ± 1.15E-03
9/01/2025 - 9/08/2025	2.11E-02 ± 1.53E-03	1.91E-02 ± 1.32E-03	1.90E-02 ± 1.30E-03	1.94E-02 ± 1.49E-03	1.94E-02 ± 1.45E-03
9/08/2025 - 9/15/2025	3.02E-02 ± 1.61E-03	3.60E-02 ± 1.94E-03	3.43E-02 ± 1.87E-03	3.12E-02 ± 1.63E-03	2.86E-02 ± 1.54E-03
9/15/2025 - 9/22/2025	2.55E-02 ± 1.55E-03	2.78E-02 ± 1.56E-03	2.61E-02 ± 1.50E-03	2.66E-02 ± 1.57E-03	2.57E-02 ± 1.51E-03
9/22/2025 - 9/29/2025	3.13E-02 ± 1.71E-03	3.19E-02 ± 1.74E-03	3.06E-02 ± 1.69E-03	3.06E-02 ± 1.68E-03	3.03E-02 ± 1.62E-03
9/29/2025 - 10/06/2025	2.94E-02 ± 1.62E-03	3.10E-02 ± 1.65E-03	2.90E-02 ± 1.59E-03	3.10E-02 ± 1.65E-03	3.05E-02 ± 1.60E-03
10/06/2025 - 10/13/2025	2.37E-02 ± 1.47E-03	2.53E-02 ± 1.48E-03	2.39E-02 ± 1.43E-03	2.35E-02 ± 1.46E-03	2.40E-02 ± 1.44E-03
10/13/2025 - 10/20/2025	2.53E-02 ± 1.53E-03	2.25E-02 ± 1.49E-03	2.46E-02 ± 1.52E-03	2.48E-02 ± 1.51E-03	2.43E-02 ± 1.45E-03
10/20/2025 - 10/27/2025	1.19E-02 ± 1.17E-03	1.36E-02 ± 1.21E-03	1.23E-02 ± 1.16E-03	1.21E-02 ± 1.17E-03	1.22E-02 ± 1.18E-03
10/27/2025 - 11/03/2025	1.23E-02 ± 1.14E-03	1.23E-02 ± 1.14E-03	1.15E-02 ± 1.11E-03	1.15E-02 ± 1.11E-03	1.15E-02 ± 1.10E-03
11/03/2025 - 11/10/2025	1.66E-02 ± 1.29E-03	1.67E-02 ± 1.29E-03	1.75E-02 ± 1.31E-03	1.59E-02 ± 1.28E-03	1.52E-02 ± 1.26E-03
11/10/2025 - 11/17/2025	1.35E-02 ± 1.22E-03	1.37E-02 ± 1.21E-03	1.37E-02 ± 1.22E-03	1.17E-02 ± 1.16E-03	1.46E-02 ± 1.26E-03
11/17/2025 - 11/24/2025	2.06E-02 ± 1.40E-03	1.91E-02 ± 1.35E-03	2.02E-02 ± 1.40E-03	2.00E-02 ± 1.40E-03	1.93E-02 ± 1.40E-03
11/24/2025 - 12/01/2025	1.44E-02 ± 1.21E-03	1.34E-02 ± 1.18E-03	1.49E-02 ± 1.24E-03	1.31E-02 ± 1.18E-03	1.50E-02 ± 1.26E-03
12/01/2025 - 12/08/2025	2.17E-02 ± 1.44E-03	2.11E-02 ± 1.41E-03	2.03E-02 ± 1.41E-03	2.05E-02 ± 1.41E-03	2.03E-02 ± 1.45E-03
12/08/2025 - 12/15/2025	1.88E-02 ± 1.34E-03	1.76E-02 ± 1.29E-03	1.76E-02 ± 1.31E-03	1.81E-02 ± 1.32E-03	1.71E-02 ± 1.33E-03

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**Table 15: Weekly Supplemental Onsite Air Particulate Samples
Gross Beta Activity ± 2 Standard Deviations (pCi/m³)**

Collection Period	G Onsite	H	I	J	K
12/15/2025 - 12/22/2025	2.40E-02 ± 1.49E-03	2.54E-02 ± 1.51E-03	2.35E-02 ± 1.49E-03	2.02E-02 ± 1.42E-03	2.44E-02 ± 1.55E-03
12/22/2025 - 12/29/2025	1.83E-02 ± 1.37E-03	1.77E-02 ± 1.33E-03	1.78E-02 ± 1.35E-03	1.81E-02 ± 1.37E-03	1.90E-02 ± 1.44E-03

**Table 16: Weekly Offsite Air Charcoal Cartridge Samples
I-131 Activity ± 2 Standard Deviations (pCi/m³)**

Collection Period	R1 [†]	R2 [†]	R3 [†]	R4 [†]	R5 (Control) [†]	D2 ^{**}	E ^{**}	F ^{**}	G Offsite ^{**}
11/17/2025 - 11/24/2025	*	*	*	*	*	*	*	*	*
11/24/2025 - 12/01/2025	*	*	*	*	*	*	*	*	*
12/01/2025 - 12/08/2025	*	*	*	*	*	*	*	*	*
12/08/2025 - 12/15/2025	*	*	*	*	*	*	*	*	*
12/15/2025 - 12/22/2025	*	*	*	*	*	*	*	*	*
12/22/2025 - 12/29/2025	*	*	*	*	*	*	*	*	*

* <MDA, Minimum Detectable Activity
 ** Optional sample location
 † Sample required by the ODCM
 (1) See Section 10.0, Deviations and Exceptions to the Program

**Table 17: Weekly Onsite Air Charcoal Cartridge Samples
I-131 Activity ± 2 Standard Deviations (pCi/m³)**

Collection Period	D1**	G Onsite**	H**	I**	J**	K**
12/30/2024 - 1/6/2025	*	*	*	*	*	*
1/06/2025 - 1/13/2025	*	*	*	*	*	*
1/13/2025 - 1/20/2025	*	*	*	*	*	*
1/20/2025 - 1/27/2025	*	*	*	*	*	*
1/27/2025 - 2/03/2025	*	*	*	*	*	*
2/03/2025 - 2/10/2025	*	*	*	*	*	*
2/10/2025 - 2/17/2025	*	*	*	*	*	*
2/17/2025 - 2/24/2025	*	*	*	*	*	*
2/24/2025 - 3/03/2025	*	*	*	*	*	*
3/03/2025 - 3/10/2025	*	*	*	*	*	*
3/10/2025 - 3/17/2025	*	*	*	*	*	*
3/17/2025 - 3/24/2025	*	*	*	*	*	*
3/24/2025 - 3/31/2025	*	*	*	*	*	*
3/31/2025 - 4/07/2025	*	*	*	*	*	*
4/07/2025 - 4/14/2025	*	*	*	*	*	*
4/14/2025 - 4/21/2025	*	*	*	*	*	*
4/21/2025 - 4/28/2025	*	*	*	*	*	*
4/28/2025 - 5/05/2025	*	*	*	*	*	*

**Table 17: Weekly Onsite Air Charcoal Cartridge Samples
I-131 Activity ± 2 Standard Deviations (pCi/m³)**

Collection Period	D1**	G Onsite**	H**	I**	J**	K**
5/05/2025 - 5/12/2025	*	*	*	*	*	*
5/12/2025 - 5/19/2025	*	*	*	*	*	*
5/19/2025 - 5/26/2025	*	*	*	*	*	*
5/26/2025 - 6/02/2025	*	*	*	*	*	*
6/02/2025 - 6/09/2025	*	*	*	*	*	*
6/09/2025 - 6/16/2025	*	*	*	*	*	*
6/16/2025 - 6/23/2025	*	*	*	*	*	*
6/23/2025 - 6/30/2025	*	*	*	*	*	*
6/30/2025 - 7/07/2025	*	*	*	*	*	*
7/07/2025 - 7/14/2025	*	*	*	*	*	*
7/14/2025 - 7/21/2025	*	*	*	*	*	*
7/21/2025 - 7/28/2025	*	*	*	*	*	*
7/28/2025 - 8/04/2025	*	*	*	*	*	*
8/04/2025 - 8/11/2025	*	*	*	*	*	*
8/11/2025 - 8/18/2025	*	*	*	*	*	*
8/18/2025 - 8/25/2025	*	*	*	*	*	*
8/25/2025 - 9/01/2025	*	*	*	*	*	*
9/01/2025 - 9/08/2025	*	*	*	*	*	*

**Table 17: Weekly Onsite Air Charcoal Cartridge Samples
I-131 Activity ± 2 Standard Deviations (pCi/m³)**

Collection Period	D1**	G Onsite**	H**	I**	J**	K**
9/08/2025 - 9/15/2025	*	*	*	*	*	*
9/15/2025 - 9/22/2025	*	*	*	*	*	*
9/22/2025 - 9/29/2025	*	*	*	*	*	*
9/29/2025 - 10/06/2025	*	*	*	*	*	*
10/06/2025 - 10/13/2025	*	*	*	*	*	*
10/13/2025 - 10/20/2025	*	*	*	*	*	*
10/20/2025 - 10/27/2025	*	*	*	*	*	*
10/27/2025 - 11/03/2025	*	*	*	*	*	*
11/03/2025 - 11/10/2025	*	*	*	*	*	*
11/10/2025 - 11/17/2025	*	*	*	*	*	*
11/17/2025 - 11/24/2025	*	*	*	*	*	*
11/24/2025 - 12/01/2025	*	*	*	*	*	*
12/01/2025 - 12/08/2025	*	*	*	*	*	*
12/08/2025 - 12/15/2025	*	*	*	*	*	*
12/15/2025 - 12/22/2025	*	*	*	*	*	*
12/22/2025 - 12/29/2025	*	*	*	*	*	*

* <MDA, Minimum Detectable Activity
** Optional sample location

Table 18: Quarterly Water Composite for Tritium (pCi/L)

Location	Q1	Q2	Q3	Q4
03, JAF Inlet ¹	<MDA	<MDA	<MDA	<MDA
08, Oswego Steam Station (Control) ¹	<MDA	<MDA	<MDA	<MDA
09, NMP1 Inlet	<MDA	<MDA	<MDA	<MDA
10, Oswego City Water	<MDA	<MDA	<MDA	<MDA
11, NMP2 Inlet	<MDA	<MDA	<MDA	<MDA
<p><i>NOTE: <MDA denotes laboratory analysis detected No Tritium at or above the ODCM required Minimum Detectable Activity of 200pCi/L</i></p> <p><i>¹ ODCM required sample location</i></p>				

Table 19: Quarterly Air Filter Composites for Gamma Emitters (pCi/m³)

Location	Q1	Q2	Q3	Q4
R1 ¹	<MDA	<MDA	<MDA	<MDA
R2 ¹	<MDA	<MDA	<MDA	<MDA
R3 ¹	<MDA	<MDA	<MDA	<MDA
R4 ¹	<MDA	<MDA	<MDA	<MDA
R5 ¹	<MDA	<MDA	<MDA	<MDA
D2	<MDA	<MDA	<MDA	<MDA
E	<MDA	<MDA	<MDA	<MDA
F	<MDA	<MDA	<MDA	<MDA
G-Offsite	<MDA	<MDA	<MDA	<MDA
D1	<MDA	<MDA	<MDA	<MDA
G-Onsite	<MDA	<MDA	<MDA	<MDA
H	<MDA	<MDA	<MDA	<MDA
I	<MDA	<MDA	<MDA	<MDA
J	<MDA	<MDA	<MDA	<MDA
K	<MDA	<MDA	<MDA	<MDA

NOTE: <MDA denotes laboratory analysis detected No non-natural radionuclides at or above the ODCM required Minimum Detectable Activity
¹ ODCM required sample location

Table 20: Semi-Annual Fish, and Shoreline Sediment

Radionuclides in Semi-Annual Samples of Recreational Fish (pCi/kg wet)			
Sample Code	Sample Date	Sample Type	Gamma Emitters
00 (Control) - Oswego Transect ¹	5/13/2025	Brown Trout	<MDA
	5/13/2025	Lake Trout	<MDA
	5/13/2025	Smallmouth Bass	<MDA
	5/13/2025	Chinook Salmon	<MDA
	9/10/2025	Chinook Salmon	<MDA
	9/10/2025	Brown Trout	<MDA
	9/10/2025	Smallmouth Bass	<MDA
02 - NMP Transect ¹	5/13/2025	Chinook Salmon	<MDA
	5/13/2025	Smallmouth Bass	<MDA
	5/13/2025	Brown Trout	<MDA
	9/10/2025	Chinook Salmon	<MDA
	9/10/2025	Smallmouth Bass	<MDA
	9/10/2025	Brown Trout	<MDA
03 - JAF Transect ¹	5/13/2025	Chinook Salmon	<MDA
	5/13/2025	Brown Trout	<MDA
	5/13/2025	Smallmouth Bass	<MDA
	9/10/2025	Chinook Salmon	<MDA
	9/10/2025	Brown Trout	<MDA
	9/10/2025	Smallmouth Bass	<MDA

¹ ODCM required samples
NOTE: <MDA denotes laboratory analysis detected No non-natural radionuclides at or above the ODCM required Minimum Detectable Activity

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Table 21: Radionuclides in Semi-Annual Samples of Shoreline Sediment (pCi/kg dry)

Sample Code	Sample Date	Gamma Emitters
05 - Sunset Bay ¹	04/28/2025	<MDA
	10/17/2025	<MDA
06 (Control) - Lang's Beach	04/28/2025	<MDA
	10/17/2025	<MDA

¹ **ODCM required samples**

NOTE: <MDA denotes laboratory analysis detected No non-natural radionuclides at or above the ODCM required Minimum Detectable Activity

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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.

Constellation Generation Solutions Laboratory participated in the following proficiency testing studies provided by Environmental Resource Associates (ERA) and Eckert Ziegler Analytics (EZA) in 2025. The Laboratory's intercomparison program results for 2025 are summarized below.

Attachment 3 is a summary of Constellation Generation Solutions (CGS) laboratory's quality assurance program. It consists of Table 22 which is a compilation of the results of the CGS laboratory's participation in an interlaboratory comparison program with Environmental Resource Associates (ERA) located in Arvada, Colorado and Eckert and Ziegler Analytics, Inc. (EZA) located in Atlanta, Georgia.

The CGS laboratory's intercomparison crosscheck results, are in full agreement when they were evaluated using designated acceptance ranges and the Resolution Test Criteria in accordance with the Constellation Radiochemistry Quality Control procedure. The CGS laboratory's split sample results are provided with their analytical uncertainties of 2 sigma. When evaluating with the Resolution Test a one sigma uncertainty is used to determine Pass or Fail and noted accordingly.

The vendor laboratories used by CGS for subcontracting and interlaboratory comparison samples, GEL Laboratories (GEL), and Teledyne Brown Engineering (TBE), also participate in the ERA and EZA interlaboratory comparison program. A presentation of their full data report is provided in their Annual Environmental Quality Assurance Program Reports, (Ref 39,40). In summary TBE reported results met vendor and laboratory acceptance ranges for relevant media types. In summary Gel reported results met vendor and laboratory acceptance ranges with the following exceptions described here.

For the GEL Laboratory, the following study reported data that did not meet the specified acceptance criteria and was addressed through GEL's internal nonconformance system. A summary is found below:

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GEL crosscheck MRAD-42 failed low for Tritium in water, 2nd quarter 2025. The laboratory reviewed the data and counting process for this sample and no errors were noted. It was noted that the duplicate met acceptance criteria in the original preparation. The sample was prepared again in duplicate, and the results were within the acceptance criteria of the PT. The laboratory will scrutinize dilutions to determine the most appropriate level to lessen the impact on the detection limits and non-detected results. The lab will continue to monitor the recoveries of these parameters to ensure that there are no continued issues. During the analysis time period for MRAD-42, the laboratory successfully completed the analysis of other uranium isotopes in water and filters as well as Tritium in water in PT study MAPEP-52. In which, the samples were prepared and analyzed by the same processes and procedures.

Table 22: CGS Cross Check Intercomparison Results

Study Date	Study ID	Units	Radionuclide	Reported Value	Assigned Value	Acceptance		Performance Evaluation
						Lower Limit	Upper Limit	
03/13/2025	E14262 Milk	pCi/L	Ce-141	80.8	75.8	53.1	98.5	Pass
		pCi/L	Co-58	114	105	73.5	137	Pass
		pCi/L	Co-60	197	193	135	251	Pass
		pCi/L	Cr-51	264	291	204	378	Pass
		pCi/L	Cs-134	140	142	99.4	185	Pass
		pCi/L	Cs-137	173	168	118	218	Pass
		pCi/L	Fe-59	138	135	94.5	176	Pass
		pCi/L	I-131	84.0	94.7	66.3	123	Pass
		pCi/L	Mn-54	198	189	132	246	Pass
		pCi/L	Zn-65	231	251	176	326	Pass
03/13/2025	E14262 Milk	pCi/L	Ce-141	74.3	75.8	53.1	98.5	Pass
		pCi/L	Co-58	97.9	105	73.5	137	Pass
		pCi/L	Co-60	197	193	135	251	Pass
		pCi/L	Cr-51	286	291	204	378	Pass
		pCi/L	Cs-134	146	142	99.4	185	Pass
03/13/2025	E14262 Milk	pCi/L	Cs-137	181	168	118	218	Pass
		pCi/L	Fe-59	141	135	94.5	176	Pass
		pCi/L	I-131	96.3	94.7	66.3	123	Pass
		pCi/L	Mn-54	192	189	132	246	Pass
		pCi/L	Zn-65	225	251	176	326	Pass
03/13/2025	E14262 Milk	pCi/L	Ce-141	86.2	75.8	53.1	98.5	Pass
		pCi/L	Co-58	117	105	73.5	137	Pass

Table 22: CGS Cross Check Intercomparison Results

Study Date	Study ID	Units	Radionuclide	Reported Value	Assigned Value	Acceptance		Performance Evaluation
						Lower Limit	Upper Limit	
(continued)	(continued)	pCi/L	Co-60	193	193	135	251	Pass
		pCi/L	Cs-134	141	142	99.4	185	Pass
		pCi/L	Cs-137	176	168	118	218	Pass
		pCi/L	Fe-59	124	135	94.5	176	Pass
		pCi/L	I-131	89.3	94.7	66.3	123	Pass
		pCi/L	Mn-54	201	189	132	246	Pass
		pCi/L	Zn-65	236	251	176	326	Pass
03/13/2025	E14263 Water	pCi/L	Beta Cs-137	247	243	170	316	Pass
03/13/2025	E14264 Cartridge	pCi	I-131	61.4	66.1	46.3	85.9	Pass
03/13/2025	E14264 Cartridge	pCi	I-131	63.7	66.1	46.3	85.9	Pass
03/13/2025	E14264 Cartridge	pCi	I-131	61.5	66.1	46.3	85.9	Pass
03/13/2025	E14264 Cartridge	pCi	I-131	59.0	66.1	46.3	85.9	Pass
04/07/2025	RAD-141 Water	pCi/L	Cs-134	17.3	16.5	5.65	27.4	Pass
		pCi/L	Cs-137	49.1	50.8	27.3	74.3	Pass
		pCi/L	Co-60	109	104	84.4	124	Pass
		pCi/L	Zn-65	338	341	279	403	Pass
04/07/2025	RAD-141 Water	pCi/L	Cs-134	18.3	16.5	5.65	27.4	Pass
		pCi/L	Cs-137	54.0	50.8	27.3	74.3	Pass
		pCi/L	Co-60	116	104	84.4	124	Pass
		pCi/L	Zn-65	330	341	279	403	Pass

Table 22: CGS Cross Check Intercomparison Results

Study Date	Study ID	Units	Radionuclide	Reported Value	Assigned Value	Acceptance		Performance Evaluation
						Lower Limit	Upper Limit	
04/07/2025	RAD-141 Water	pCi/L	Beta Cs-137	20.2	22.9	15.0	30.8	Pass
04/07/2025	RAD-141 Water	pCi/L	I-131	28.0	26.8	23.2	30.4	Pass
04/07/2025	RAD-141 Water	pCi/L	I-131	27.5	26.8	23.2	30.4	Pass
04/07/2025	RAD-141 Water	pCi/L	I-131	27.2	26.8	23.2	30.4	Pass
06/12/2025	E14258 Soil	pCi/g	Cs-134	0.322	0.347	0.243	0.451	Pass
		pCi/g	Cs-137	0.314	0.319	0.223	0.415	Pass
06/12/2025	E14258 Soil	pCi/g	Cs-134	0.318	0.347	0.243	0.451	Pass
		pCi/g	Cs-137	0.333	0.319	0.223	0.415	Pass
06/12/2025	E14258 Soil	pCi/g	Cs-134	0.301	0.347	0.243	0.451	Pass
		pCi/g	Cs-137	0.282	0.319	0.223	0.415	Pass
06/12/2025	E14258 Soil	pCi/g	Cs-134	0.312	0.347	0.243	0.451	Pass
		pCi/g	Cs-137	0.309	0.319	0.223	0.415	Pass
06/12/2025	E14265 Water	pCi/L	Beta Cs-137	201	204	143	265	Pass
06/12/2025	E14266 Water	pCi/L	Ce-141	140	138	96.6	179	Pass
		pCi/L	Co-58	155	160	112	208	Pass
		pCi/L	Co-60	229	211	148	274	Pass
		pCi/L	Cr-51	320	283	198	368	Pass

Table 22: CGS Cross Check Intercomparison Results

Study Date	Study ID	Units	Radionuclide	Reported Value	Assigned Value	Acceptance		Performance Evaluation
						Lower Limit	Upper Limit	
(continued)	(continued)	pCi/L	Cs-134	194	204	143	265	Pass
		pCi/L	Cs-137	152	149	104	194	Pass
		pCi/L	Fe-59	159	135	94.5	176	Pass
		pCi/L	I-131	73.8	62.5	43.8	81.3	Pass
		pCi/L	Mn-54	157	150	105	195	Pass
		pCi/L	Zn-65	286	282	197	367	Pass
06/12/2025	E14266 Water	pCi/L	Ce-141	128	138	96.6	179	Pass
		pCi/L	Co-58	156	160	112	208	Pass
		pCi/L	Co-60	211	211	148	274	Pass
		pCi/L	Cr-51	261	283	198	368	Pass
		pCi/L	Cs-134	203	204	143	265	Pass
		pCi/L	Cs-137	147	149	104	194	Pass
		pCi/L	Fe-59	151	135	94.5	176	Pass
		pCi/L	I-131	60.8	62.5	43.8	81.3	Pass
		pCi/L	Mn-54	164	150	105	195	Pass
		pCi/L	Zn-65	285	282	197	367	Pass
06/12/2025	E14267 Filter	pCi	Ce-141	88.4	89.9	62.9	117	Pass
		pCi	Co-58	105	104	72.8	135	Pass
		pCi	Co-60	139	137	95.9	178	Pass
		pCi	Cr-51	198	184	128.80	239	Pass
		pCi	Cs-134	108	133	93.1	173	Pass
		pCi	Cs-137	100	96.8	67.8	126	Pass

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Table 22: CGS Cross Check Intercomparison Results

Study Date	Study ID	Units	Radionuclide	Reported Value	Assigned Value	Acceptance		Performance Evaluation
						Lower Limit	Upper Limit	
09/22/2025	MRAD43 Filter	pCi	Cs-134	293	341	221	418	Pass
		pCi	Cs-137	376	379	311	497	Pass
		pCi	Co-60	307	322	274	409	Pass
		pCi	Zn-65	194	193	158	295	Pass
09/22/2025	MRAD43 Filter	pCi	Cs-134	282	341	221	418	Pass
		pCi	Cs-137	356	379	311	497	Pass
		pCi	Co-60	322	322	274	409	Pass
		pCi	Zn-65	197	193	158	295	Pass
09/22/2025	MRAD43 Filter	pCi	Cs-134	296	341	221	418	Pass
		pCi	Cs-137	357	379	311	497	Pass
		pCi	Co-60	342	322	274	409	Pass
		pCi	Zn-65	225	193	158	295	Pass
10/03/2025	RAD143 Water	pCi/L	Cs-134	59.8	58.0	43.0	73.0	Pass
		pCi/L	Cs-137	182	178	142	214	Pass
		pCi/L	Co-60	55.4	55.0	40.3	69.7	Pass
		pCi/L	Zn-65	34.4	36.8	5.51	68.1	Pass
10/03/2025	RAD143 Water	pCi/L	Cs-134	57.7	58.0	43.0	73.0	Pass
		pCi/L	Cs-137	181	178	142	214	Pass
		pCi/L	Co-60	58.5	55.0	40.3	69.7	Pass
		pCi/L	Zn-65	34.3	36.8	5.51	68.1	Pass

Table 22: CGS Cross Check Intercomparison Results

Study Date	Study ID	Units	Radionuclide	Reported Value	Assigned Value	Acceptance		Performance Evaluation
						Lower Limit	Upper Limit	
10/03/2025	RAD143 Water	pCi/L	I-131	23.2	24.3	20.9	27.7	Pass
10/03/2025	RAD143 Water	pCi/L	I-131	24.8	24.3	20.9	27.7	Pass
12/04/2025	E14271 Water	pCi/L	Beta Cs-137	278	257	180	334	Pass
12/04/2025	E14272 Charcoal	pCi	I-131	78.2	88.8	62.2	115	Pass
12/04/2025	E14272 Charcoal	pCi	I-131	77.8	88.8	62.2	115	Pass
12/04/2025	E14273	pCi/L	Ce-141	155	143	100	186	Pass
		pCi/L	Co-58	171	169	118	220	Pass
		pCi/L	Co-60	236	217	152	282	Pass
		pCi/L	Cr-51	298	299	209	389	Pass
		pCi/L	Cs-134	142	139	97.3	181	Pass
		pCi/L	Cs-137	177	168	118	218	Pass
		pCi/L	Fe-59	161	134	93.8	174	Pass
		pCi/L	I-131	80.6	86	60.2	112	Pass
		pCi/L	Mn-54	212	187	131	243	Pass
		pCi/L	Zn-65	259	244	171	317	Pass

¹ See Discussion at the beginning of Attachment 3

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**Attachment 4, Environmental Direct Radiation Dosimetry Results
(Results in mrem/std. Quarter $\pm 1\sigma$)**

Site Location No.	Description	Jan – Mar	Apr – Jun	Jul – Sep	Oct – Dec	Degrees & Distance
3	D1 Onsite	40.88 \pm 1.35	38.66 \pm 1.28	40.98 \pm 1.55	47.50 \pm 2.16	71° at 0.3 miles
4	D2 Onsite	14.41 \pm 0.69	15.28 \pm 0.58	16.77 \pm 0.68	17.05 \pm 0.62	143° at 0.4 miles
5	E Onsite	14.48 \pm 0.63	15.23 \pm 0.63	16.65 \pm 0.65	16.69 \pm 0.77	180° at 0.3 miles
6	F Onsite	12.90 \pm 0.45	14.10 \pm 0.53	15.26 \pm 0.58	15.52 \pm 0.62	213° at 0.5 miles
7*	G Onsite	12.70 \pm 0.50	13.61 \pm 0.56	14.90 \pm 0.77	15.39 \pm 0.53	245° at 0.7 miles
8*	R5 Offsite Control	15.26 \pm 0.56	16.25 \pm 1.47	17.33 \pm 0.62	17.84 \pm 0.76	42° at 16.2 miles
9	D1 Offsite - State Route 3	12.80 \pm 0.48	13.58 \pm 0.59	14.75 \pm 0.54	15.32 \pm 0.63	80° at 11.4 miles
10	D2 Offsite	12.41 \pm 0.71	13.48 \pm 0.42	13.87 \pm 0.56	14.57 \pm 0.46	118° at 9.0 miles
11	E Offsite	12.28 \pm 0.41	12.67 \pm 0.48	13.85 \pm 0.69	14.12 \pm 0.52	162° at 7.1 miles
12	F Offsite	12.09 \pm 0.50	12.93 \pm 0.61	13.87 \pm 0.58	14.58 \pm 0.73	192° at 7.6 miles
13	G Offsite	13.64 \pm 0.60	13.48 \pm 0.45	14.37 \pm 0.69	15.68 \pm 0.55	226° at 5.4 miles
14*	DeMass Rd., SW Oswego - Control	13.52 \pm 0.57	14.20 \pm 0.68	15.95 \pm 0.69	15.19 \pm 0.61	227° at 12.5 miles
15*	Pole 66, W. Boundary - Bible Camp	13.80 \pm 0.52	14.86 \pm 0.58	15.51 \pm 0.70	15.21 \pm 0.63	240° at 0.9 miles
18*	Energy Info. Center - Lamp Post, SW	15.52 \pm 0.66	15.70 \pm 0.58	17.44 \pm 0.69	17.31 \pm 0.89	268° at 0.4 miles
19	East Boundary - JAF, Pole 9	14.47 \pm 0.66	15.46 \pm 0.54	16.39 \pm 0.64	16.95 \pm 0.68	83° at 1.4 miles
23*	H Onsite	16.08 \pm 0.57	16.54 \pm 0.75	17.88 \pm 0.87	18.00 \pm 0.53	73° at 0.8 miles
24	I Onsite	13.92 \pm 0.50	14.31 \pm 0.45	14.71 \pm 0.67	15.53 \pm 0.64	95° at 0.8 miles
25	J Onsite	13.49 \pm 0.47	14.00 \pm 0.52	15.35 \pm 0.69	15.09 \pm 0.47	109° at 0.9 miles
26	K Onsite	13.81 \pm 0.59	14.85 \pm 0.59	15.91 \pm 0.75	16.64 \pm 0.61	132° at 0.5 miles
27	N. Fence, N. of Switchyard, JAF	67.19 \pm 3.18	61.82 \pm 4.73	61.82 \pm 3.32	77.46 \pm 4.63	60° at 0.4 miles
28	N. Light Pole, N. of Screenhouse, JAF	79.23 \pm 5.60	71.94 \pm 5.72	70.08 \pm 5.18	85.00 \pm 6.21	68° at 0.5 miles
29	N. Fence, N. of W. Side	77.60 \pm 5.64	69.83 \pm 6.50	69.79 \pm 4.17	81.81 \pm 6.72	65° at 0.5 miles
30	N. Fence, (NW) JAF	39.60 \pm 1.71	36.17 \pm 1.95	37.31 \pm 2.36	42.77 \pm 2.87	57° at 0.4 miles
31	N. Fence, (NW) NMP-1	19.88 \pm 0.74	22.73 \pm 0.89	21.76 \pm 0.88	22.76 \pm 0.99	279° at 0.2 miles

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Site Location No.	Description	Jan – Mar	Apr – Jun	Jul – Sep	Oct – Dec	Degrees & Distance
39	N. Fence, Rad. Waste-NMP-1	31.01 ± 1.36	32.62 ± 1.16	33.77 ± 1.30	33.65 ± 1.63	298° at 0.2 miles
47	N. Fence, (NE) JAF	21.97 ± 1.13	21.88 ± 0.94	21.82 ± 0.93	24.06 ± 1.43	69° at 0.6 miles
49*	Phoenix, NY - Control	13.29 ± 0.58	13.80 ± 0.55	(1)	14.10 ± 0.51	168° at 19.7 miles
51	Liberty & Bronson Sts., E. of OSS	13.90 ± 0.47	14.15 ± 0.42	14.77 ± 0.55	15.65 ± 0.52	234° at 7.3 miles
52	E. 12th & Cayuga Sts., Oswego School	13.50 ± 0.58	14.23 ± 0.68	14.25 ± 0.58	14.91 ± 0.48	227° at 5.9 miles
53	Broadwell & Chestnut Sts., Fulton H.S.	13.78 ± 0.65	15.16 ± 0.63	15.44 ± 0.57	15.52 ± 0.63	183° at 13.7 miles
54	Mexico High School	13.13 ± 0.73	14.12 ± 0.78	14.40 ± 0.92	14.76 ± 0.53	115° at 9.4 miles
55	Gas Substation Co. Rt. 5-Pulaski	12.48 ± 0.53	13.60 ± 0.57	14.21 ± 0.51	14.25 ± 0.55	75° at 13.0 miles
56*	Rt. 104-New Haven Sch. (SE Corner)	11.75 ± 0.34	14.01 ± 0.49	14.54 ± 0.64	14.85 ± 0.43	124° at 5.2 miles
58*	Co. Rt. 1A-Novelis (E. of E. Entrance Rd.)	13.78 ± 0.66	14.98 ± 0.55	15.51 ± 0.58	15.84 ± 0.47	222° at 3.0 miles
75*	Unit 2, N. Fence, N. of Reactor Bldg.	23.72 ± 1.15	23.58 ± 1.07	24.11 ± 1.02	25.01 ± 1.34	354° at 0.1 miles
76*	Unit 2, N. Fence, N. of Change House	18.83 ± 0.65	19.79 ± 0.86	19.51 ± 0.89	20.42 ± 0.56	25° at 0.1 miles
77*	Unit 2, N. Fence, N. of Pipe Bldg.	20.85 ± 0.77	22.52 ± 0.88	21.89 ± 0.80	23.75 ± 0.91	36° at 0.2 miles
78*	JAF. E. of E. Old Lay Down Area	14.78 ± 0.80	16.41 ± 0.71	17.28 ± 0.67	18.07 ± 1.21	85° at 1.0 miles
79*	Co. Rt. 29, Pole #63, 0.2 mi. S. of Lake Rd.	12.57 ± 0.53	13.58 ± 0.52	14.42 ± 0.60	14.67 ± 0.57	120° at 1.2 miles
80*	Co. Rt. 29, Pole #54, 0.7 mi. S. of Lake Rd.	12.81 ± 0.42	14.24 ± 0.56	14.82 ± 0.61	15.26 ± 1.28	136° at 1.5 miles
81*	Miner Rd., Pole # 16, 0.5 mi. W. of Rt. 29	12.99 ± 0.49	14.29 ± 0.48	14.47 ± 0.50	14.95 ± 0.62	159° at 1.6 miles
82*	Miner Rd., Pole # 1-1/2, 1.1 mi. W. of Rt. 29	12.93 ± 0.39	14.34 ± 0.68	14.58 ± 0.59	14.58 ± 0.56	180° at 1.6 miles
83*	Lakeview Rd., Tree 0.45 mi. N. of Miner Rd.	13.73 ± 0.54	14.54 ± 0.45	16.03 ± 0.68	15.82 ± 0.83	203° at 1.2 miles
84*	Lakeview Rd., N., Pole #6117, 200ft. N. of Lake Rd.	13.29 ± 0.51	14.62 ± 0.60	15.21 ± 0.56	15.35 ± 0.66	226° at 1.1 miles
85*	Unit 1, N. Fence, N. of W. Side of Screen House	23.61 ± 0.83	27.70 ± 1.54	24.63 ± 1.15	25.34 ± 1.14	292° at 0.2 miles
86*	Unit 2, N. Fence, N. of W. Side of Screen House	24.32 ± 1.25	26.49 ± 1.12	25.37 ± 1.03	26.61 ± 1.70	311° at 0.1 miles
87*	Unit 2, N. Fence, N. of E. Side of Screen House	25.02 ± 1.27	26.38 ± 1.19	25.76 ± 1.34	26.67 ± 1.38	333° at 0.1 miles
88*	Hickory Grove Rd., Pole #2, 0.6 mi. N. of Rt. 1	12.79 ± 0.42	14.11 ± 0.52	14.97 ± 0.70	14.55 ± 0.43	97° at 4.5 miles
89*	Leavitt Rd., Pole #16, 0.4 mi. S. of Rt. 1	13.40 ± 0.46	14.42 ± 0.72	15.53 ± 0.63	15.38 ± 0.64	112° at 4.3 miles
90*	Rt. 104, Pole #300, 150 ft. E. of Keefe Rd.	12.60 ± 0.53	14.81 ± 0.47	14.81 ± 0.60	14.18 ± 0.50	135° at 4.2 miles
91*	Rt. 51A, Pole #59, 0.8 mi. W. of Rt. 51	11.80 ± 0.41	13.58 ± 0.48	13.97 ± 0.53	14.29 ± 1.00	157° at 4.9 miles

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Site Location No.	Description	Jan – Mar	Apr – Jun	Jul – Sep	Oct – Dec	Degrees & Distance
92*	Maiden Lane Rd., Power Pole, 0.6 mi. S. of Rt. 104	13.04 ± 0.53	15.81 ± 0.73	16.15 ± 0.82	16.02 ± 0.87	183° at 4.4 miles
93*	Rt. 53 Pole 1-1, 120ft. S. of Rt. 104	12.79 ± 0.41	14.05 ± 0.51	14.57 ± 0.62	14.86 ± 0.84	206° at 4.4 miles
94*	Rt. 1, Pole #82, 250ft. E. of Kocher Rd. (Co. Rt. 63)	12.55 ± 0.43	13.27 ± 0.61	13.39 ± 0.52	14.86 ± 0.42	224° at 4.4 miles
95*	Novelis W. access Rd., Joe Fultz Blvd., Pole #21	12.05 ± 0.41	12.77 ± 0.37	12.57 ± 0.60	13.85 ± 0.56	239° at 3.7 miles
96*	Creamery Rd., 0.3 mi. S. of Middle Rd., Pole 1-1/2	12.45 ± 0.48	14.25 ± 0.53	14.00 ± 0.49	14.65 ± 0.71	199° at 3.6 miles
97*	Rt. 29, Pole #50, 200ft. N. of Miner Rd.	12.14 ± 0.62	14.25 ± 0.45	14.43 ± 0.75	14.55 ± 0.52	145° at 1.8 miles
98	Lake Rd., Pole #145, 0.15 mi. E. of Rt. 29	12.68 ± 0.38	14.40 ± 0.64	15.29 ± 0.71	15.15 ± 0.46	102° at 1.2 miles
99	NMP Rd., 0.4 mi. N. of Lake Rd., Env. Station R1	12.57 ± 0.49	13.42 ± 0.57	13.72 ± 0.60	14.02 ± 0.51	92° at 1.8 miles
100	Rt. 29 & Lake Rd. Env. Station R2	13.26 ± 0.62	14.31 ± 0.50	14.70 ± 0.58	15.19 ± 0.78	107° at 1.1 miles
101	Rt. 29, 0.7 mi. S. of Lake Rd. Env. Station R3	11.72 ± 0.38	13.31 ± 0.59	13.69 ± 0.54	14.21 ± 0.66	133° at 1.4 miles
102	EOF/Env. Lab, Rt. 176, E. Driveway, Lamp Post	12.77 ± 0.47	13.89 ± 0.63	13.94 ± 0.50	14.60 ± 0.53	175° at 11.9 miles
103	EIC, East Garage Rd., Lamp Post	15.17 ± 0.48	16.34 ± 0.76	16.85 ± 0.63	16.42 ± 0.57	268° at 0.4 miles
104	Parkhurst Rd., Pole #23, 0.1 mi. S. of Lake Rd.	12.64 ± 0.40	14.60 ± 0.47	14.91 ± 0.69	14.77 ± 0.46	102° at 1.4 miles
105	Lakeview Rd., Pole #36, 0.5 mi. S. of Lake Rd.	12.74 ± 0.46	14.05 ± 0.52	14.66 ± 0.69	14.49 ± 0.53	199° at 1.4 miles
106	Shoreline Cove, W. of NMP-1, Tree on W. Edge	15.99 ± 0.55	17.57 ± 0.68	18.08 ± 0.70	18.49 ± 0.80	274° at 0.3 miles
107	Shoreline Cove, W. of NMP-1, 30ft. SSW of #106	14.74 ± 0.44	16.90 ± 0.67	17.59 ± 0.72	17.69 ± 0.82	273° at 0.3 miles
108	Lake Rd., Pole #142, 300 ft. E. of Rt. 29 S.	12.78 ± 0.46	14.63 ± 0.52	14.74 ± 0.58	15.19 ± 0.78	105° at 1.1 miles
109	Tree North of Lake Rd., 300 ft. E. of Rt. 29 N.	13.81 ± 0.46	14.60 ± 0.54	15.24 ± 0.70	15.10 ± 0.73	104° at 1.1 miles
111	Control, State Route 38, Sterling, NY	12.29 ± 0.48	13.48 ± 0.49	13.25 ± 0.50	13.97 ± 0.68	214° at 21.8 miles
112	EOF/Env. Lab, Oswego County Airport	12.94 ± 0.50	13.60 ± 0.60	13.55 ± 0.52	13.63 ± 0.50	175° at 11.9 miles
113	Control, Baldwinsville, NY	12.74 ± 0.41	13.56 ± 0.41	13.74 ± 0.51	13.81 ± 0.51	178° at 24.7 miles

(1) See Section 10.0, Deviations and Exceptions to the Program

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Attachment 5
Corrections to Previous Reports

Table 8: Land Use Census – Nearest Receptors within 10 miles

Sector	JAF Nearest Residence (Miles)	NMP Nearest Residence (Miles)	Nearest Milk Animal (Miles)	Nearest Garden (Miles)
E	1.04	1.29	Location #55 within 10 miles (50 milking cows)	0.66
ESE	0.70	1.11	*	0.64
SE	1.07	1.35	*	0.62
SSE	1.29	1.59	*	2.23
S	1.57	1.57	Location #77 outside 10 miles (37 milking cows)	2.30
SSW	1.65	1.18	*	2.42
SW	1.45	1.11	*	1.14
WSW	1.81	1.38	*	1.48
W	0.90**	0.95**	*	*
WNW	1.34**	0.92**	*	*
* No locations identified in applicable sector within 10 miles by census ** Seasonal residences				