

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

April 29, 2026

United States Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555-0001

Serial No. 26-121
S&L/SJB R0
Docket Nos. 50-280
50-281
72-2
72-55
License Nos. DPR-32
DPR-37
SNM-2501

VIRGINIA ELECTRIC AND POWER COMPANY
SURRY POWER STATION UNITS 1 AND 2
2025 ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT

Surry Units 1 and 2 Technical Specification 6.6.B.2 requires the submittal of an Annual Radiological Environmental Operating Report (AREOR) for Surry Power Station. Surry Independent Spent Fuel Storage Installation (ISFSI) Technical Specification Appendix C, Item 1.3.1 requires that the Surry ISFSI be included in the environmental monitoring for Surry Power Station. Accordingly, enclosed is the Surry Power Station AREOR for the period of January 1, 2025 through December 31, 2025, which includes environmental monitoring for the Surry ISFSI and both units.

If you have any further questions, please contact William Terry at 757-365-2010.

Sincerely,



Geoffrey R. Hill
Director Nuclear Plant Support
Surry Power Station

Attachment

Commitments made in this letter: None

Serial No. 26-121
Docket Nos.: 50-280
50-281
72-2
72-55

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50-281
72-2
72-55

ATTACHMENT 1

2025 Annual Radiological Environmental Operating Report

**SURRY POWER STATION UNITS 1 AND 2
VIRGINIA ELECTRIC AND POWER COMPANY**



2025 Annual Radiological Environmental Operating Report

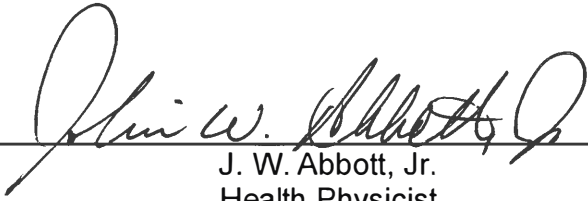
Surry Power Station




Dominion Energy
Surry Power Station
Radiological Environmental Monitoring Program
January 1, 2025 to December 31, 2025

**Annual Radiological Environmental Operating Report
Surry Power Station**

January 1, 2025 to December 31, 2025

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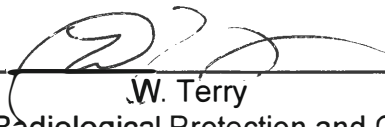
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PREFACE

This report is submitted as required by Technical Specification 6.6.B.2, Annual Radiological Environment Operating Report, for Surry, Units 1 and 2, Virginia Electric and Power Company Docket Nos. 50-280 and 50-281, and the Surry Independent Spent Fuel Storage Installation (ISFSI) Technical Specifications, Appendix C, Item 1.3.1.

1. EXECUTIVE SUMMARY

This document is a detailed report of the 2025 Surry Power Station Radiological Environmental Monitoring Program (REMP). Radioactivity levels from January 1 through December 31, in air, water, silt, shoreline sediment, milk, aquatic biota, food products and direct exposure pathways have been analyzed, evaluated, and summarized. The REMP is designed to confirm that radiological effluent releases are As Low As (is) Reasonably Achievable (ALARA), no undue environmental effects occur, and the health and safety of the public are protected. The program also detects any unexpected environmental processes that could allow radiation accumulations in the environment or food pathway chains.

Radiation and radioactivity in the environment are monitored within a 20-mile radius of the station. Surry Power Station personnel collect a variety of samples within this area. Several sampling locations for each medium are selected using available meteorological, land use, and water use data. Two types of samples are obtained. The first type, control samples, is collected from areas that are beyond the measurable influence of Surry Power Station or any other nuclear facility. These samples represent normal background radiation levels. Background radiation levels can be compared to the environment surrounding the station. Indicator samples are the second sample type obtained. These samples show how much radiation is contributed to the environment by the station.

Prior to station operation, samples were collected and analyzed to determine the amount of radioactivity present in the area. The resulting values are used as a "pre-operational baseline." Analysis results from the indicator samples are compared to control sample values and the pre-operational baseline to determine if changes in radioactivity levels are attributable to station operations, or natural variation, or other causes such as the Chernobyl and Fukushima Daiichi accidents that released radioactive material to the environment.

During 2025, as in previous years, the operation of Surry Power Station has created no adverse environmental effects or health hazards. The maximum total body dose calculated for a hypothetical individual at the station site boundary due to liquid and gaseous effluents released from the station during 2025 was 0.153 millirem. For reference, this dose may be compared to the 620 millirem average annual exposure to every person in the United States from natural and man-made sources. Natural sources in the environment provide approximately 50% of radiation exposure to man, while nuclear power contributes less than 0.1%. These results demonstrate compliance with federal and state regulations and demonstrate the adequacy of radioactive effluent controls at Surry Power Station.

Analytical results are reported for all possible radiation exposure pathways to man. These pathways include airborne, aquatic, terrestrial and direct radiation exposure. The airborne exposure pathway includes radioactive airborne iodine and particulates. The 2025 airborne results were comparable to previous years. No station related radioactivity was detected. Natural radioactivity levels remain consistent with historical values.

Aquatic exposure pathway samples include well and river water, silt and shoreline sediments, crabs, fish, clams, and oysters. Naturally occurring radionuclides such as beryllium-7, potassium-40, radium-226, actinium-228, thorium-228, and thorium-232 were detected at average environmental levels.

No man-made radionuclides were detected in well water. This trend is consistent throughout the operational environmental monitoring program.

No man-made radionuclides were detected in river water and silt samples. Naturally occurring beryllium-7, potassium-40, radium-226, actinium-228, thorium-228, and thorium-232 were detected at average environmental levels.

Shoreline sediment, which may provide a direct exposure pathway, contained no station related radionuclides. Naturally occurring potassium-40, radium-226, actinium-228, thorium-228, and thorium-232 were detected at average environmental levels.

The terrestrial exposure pathway includes milk and food products. Iodine-131 was not detected in any 2025 milk samples and has not been detected in milk prior to or since the 1986 Chernobyl accident. Strontium-90 was detected in milk and this activity is attributable to past atmospheric nuclear weapons testing. No other man-made radionuclides were detected in milk samples. Consistent with historical data, naturally occurring potassium-40 was detected in milk.

No man-made radionuclides were detected in food product samples. Only naturally occurring potassium-40 was detected.

Environmental radiation dose is measured in the direct exposure pathway using TLDs. The TLD results are reported in accordance with ANSI/HPS N13.37-2014 methodology. These results have remained relatively constant over the years. No annual facility related dose is attributable to station operations.

2. PROGRAM DESCRIPTION

2.1 Introduction

This report documents the 2025 Surry Power Station Operational Radiological Environmental Monitoring Program (REMP). Dominion Energy's Surry Power Station is located on the Gravel Neck peninsula adjacent to the James River, approximately 25 miles upstream of the Chesapeake Bay. The site consists of two units, each with a pressurized water reactor (PWR) nuclear steam supply system and turbine generator furnished by Westinghouse Electric Corporation. Each unit was designed with a nominal gross electrical output of 910 megawatts electric (MWe). Unit 1 achieved commercial operation on December 22, 1972, and Unit 2 on May 1, 1973.

The United States Nuclear Regulatory Commission regulations (10CFR50.34a) require that nuclear power plants be designed, constructed, and operated to keep levels of radioactive material in effluents to unrestricted areas As Low As (is) Reasonably Achievable. To ensure these criteria are met, the operating license for Surry Power Station includes Technical Specifications that address the release of radioactive effluents. In-plant monitoring is used to ensure that these release limits are not exceeded. As a precaution against unexpected or undefined environmental processes, which might allow undue accumulation of radioactivity in the environment, a program for monitoring the station environs is also included in Surry Power Station Technical Specifications.

Dominion personnel are responsible for collecting the various indicator and control environmental samples. Radiation Detection Company is responsible for processing the TLDs. Teledyne Brown Engineering is responsible for sample analyses. The results of the analyses are used to determine if changes in radioactivity levels may be attributable to station operations. Measured values are compared with control values, which vary with time due to external events, such as cosmic ray bombardment, nuclear weapons test fallout and seasonal variations of naturally occurring radionuclides. Data collected prior to station operation is used to indicate the degree of natural variation to be expected. This pre-operational data is compared with data collected during the operational phase to assist in evaluating any radiological impact of station operation.

Occasionally, samples of environmental media may show the presence of man-made radionuclides. As a method of referencing the measured radionuclide concentrations in the sample media to a dose consequence to man, the data is compared to the reporting level concentrations listed in the USNRC Regulatory Guide 4.8, "Environmental Technical Specifications for Nuclear Power Plants", (December, 1975) and VPAP-2103S, Offsite Dose Calculation Manual (Surry). These concentrations are based upon the annual dose commitment recommended by 10CFR50, Appendix I, to meet the criterion of "As Low As (is) Reasonably Achievable."

This report documents the results of the REMP for and satisfies the following objectives of the program:

- To provide measurements of radiation and of radioactive materials in those exposure pathways and for those radionuclides that lead to the highest potential radiation exposure of the maximum exposed member of the public resulting from station operations.
- To supplement the radiological effluent monitoring program by verifying radioactive effluents are within allowable limits.
- To identify changes in radioactivity in the environment.
- To verify that station operations have no detrimental effect on the health and safety of the public.

2.2 Sampling and Analysis Program

Table 2-1 summarizes the 2025 sampling program for Surry Power Station. All samples listed in Table 2-1 are taken at indicator locations except those labeled "control location." Dominion Energy personnel collect all samples listed in Table 2-1.

Table 2-2 summarizes the analysis program conducted by Teledyne Brown Engineering and Radiation Detection Company for Surry Power Station. All samples, except for the environmental TLDs, are shipped to Teledyne Brown Engineering, located in Knoxville, TN, for analysis. The environmental TLDs are shipped to Radiation Detection Company, located in Georgetown, TX, for processing.

The Surry Radiological Monitoring Locations map (Figures 1 – 5) denote sample locations for Surry Power Station. The locations are color coded to designate sample types.

Table 2-1
SURRY - 2025
RADIOLOGICAL SAMPLING STATIONS
DISTANCE AND DIRECTION FROM UNIT NO. 1

Pg. 1 of 3

| Sample Media | Location | Station | Distance | | Degrees | Collection | | Remarks |
|-----------------------|-------------------------|---------|----------|-----------|---------|------------|---|---------|
| | | | Miles | Direction | | Frequency | | |
| Environmental TLDs | Control | (00) | - | - | - | Quarterly | Onsite (Stored in lead shield outside the protected area) | |
| | West North West | (02) | 0.2 | WNW | 293° | Quarterly | Site Boundary | |
| | Surry Station Discharge | (03) | 0.4 | NW | 321° | Quarterly | Site Boundary | |
| | North North West | (04) | 0.2 | NNW | 329° | Quarterly | Site Boundary | |
| | North | (05) | 0.3 | N | 4° | Quarterly | Site Boundary | |
| | North North East | (06) | 0.3 | NNE | 28° | Quarterly | Site Boundary | |
| | North East | (07) | 0.3 | NE | 44° | Quarterly | Site Boundary | |
| | East North East | (08) | 0.4 | ENE | 67° | Quarterly | Site Boundary | |
| | East | (09) | 0.3 | E | 89° | Quarterly | Site Boundary | |
| | West | (10) | 0.1 | W | 271° | Quarterly | Site Boundary | |
| | West South West | (11) | 0.4 | WSW | 252° | Quarterly | Site Boundary | |
| | South West | (12) | 0.3 | SW | 228° | Quarterly | Site Boundary | |
| | South South West | (13) | 0.3 | SSW | 201° | Quarterly | Site Boundary | |
| | South | (14) | 0.4 | S | 182° | Quarterly | Site Boundary | |
| | South South East | (15) | 0.6 | SSE | 157° | Quarterly | Site Boundary | |
| | South East | (16) | 0.9 | SE | 135° | Quarterly | Site Boundary | |
| | Station Intake | (18) | 1.6 | ESE | 115° | Quarterly | Site Boundary | |
| | Hog Island Reserve | (19) | 2.0 | NNE | 26° | Quarterly | Near Resident | |
| | Bacon's Castle | (20) | 4.5 | SSW | 202° | Quarterly | Apx. 5 miles | |
| | Route 633 | (21) | 4.9 | SW | 227° | Quarterly | Apx. 5 miles | |
| | Alliance | (22) | 5.1 | WSW | 247° | Quarterly | Apx. 5 miles | |
| | Surry | (23) | 7.7 | WSW | 256° | Quarterly | Population Center | |
| | Route 636 and 637 | (24) | 4.0 | W | 270° | Quarterly | Apx. 5 miles | |
| | Scotland Wharf | (25) | 5.0 | WNW | 284° | Quarterly | Apx. 5 miles | |
| | Jamestown | (26) | 6.3 | NW | 308° | Quarterly | Apx. 5 miles | |
| | Colonial Parkway | (27) | 3.8 | NNW | 333° | Quarterly | Apx. 5 miles | |
| | Route 617 and 618 | (28) | 4.9 | NNW | 340° | Quarterly | Apx. 5 miles | |
| | Kingsmill | (29) | 4.6 | N | 2° | Quarterly | Apx. 5 miles | |
| | Williamsburg | (30) | 7.8 | N | 0° | Quarterly | Population Center | |
| | Kingsmill North | (31) | 5.5 | NNE | 12° | Quarterly | Apx. 5 miles | |
| | Budweiser | (32) | 5.8 | NNE | 27° | Quarterly | Population Center | |
| | Water Plant | (33) | 5.0 | NE | 46° | Quarterly | Apx. 5 miles | |

Table 2-1
 SURRY - 2023
 RADIOLOGICAL SAMPLING STATIONS
 DISTANCE AND DIRECTION FROM UNIT NO. 1

| Sample Media | Location | Station | Distance | | | Collection Frequency | Remarks |
|-------------------------------------|-------------------------|---------|----------|-----------|-----------|----------------------|---|
| | | | Miles | Direction | Degrees | | |
| Environmental TLDs | BASF | (34) | 5.1 | ENE | 70° | Quarterly | Apx. 5 miles |
| | Lee Hall | (35) | 7.1 | ENE | 75° | Quarterly | Population Center |
| | Goose Island | (36) | 5.1 | E | 90° | Quarterly | Apx. 5 miles |
| | Fort Eustis | (37) | 4.9 | ESE | 104° | Quarterly | Apx. 5 miles |
| | Newport News | (38) | 19.3 | SE | 130° | Quarterly | Population Center |
| | James River Bridge | (39) | 17.1 | SE | 142° | Quarterly | Control Location |
| | Benn's Church | (40) | 17.0 | SSE | 159° | Quarterly | Control Location |
| | Smithfield | (41) | 13.4 | SSE | 167° | Quarterly | Control Location |
| | Rushmere | (42) | 5.3 | SSE | 156° | Quarterly | Apx. 5 miles |
| Route 628 | (43) | 5.1 | S | 177° | Quarterly | Apx. 5 miles | |
| Air Charcoal and Particulate | Surry Station | (SS) | 0.3 | NNE | 18° | Weekly | Site boundary location with highest D/Q |
| | Hog Island Reserve | (HIR) | 2.0 | NNE | 26° | Weekly | |
| | Bacon's Castle | (BC) | 4.5 | SSW | 202° | Weekly | |
| | Alliance | (ALL) | 5.1 | WSW | 247° | Weekly | |
| | Colonial Parkway | (CP) | 3.8 | NNW | 333° | Weekly | |
| | BASF | (BASF) | 5.1 | ENE | 70° | Weekly | |
| | Fort Eustis | (FE) | 4.9 | ESE | 104° | Weekly | |
| | Newport News | (NN) | 19.3 | SE | 130° | Weekly | |
| River Water | Surry Station Discharge | (SD) | 0.4 | NW | 323° | Monthly | Control Location |
| | Scotland Wharf | (SW) | 4.9 | WNW | 284° | Monthly | |
| Well Water | Surry Station | (SS) | 0.1 | SW | 227° | Quarterly | Onsite |
| | Hog Island Reserve | (HIR) | 2.0 | NNE | 28° | Quarterly | |
| | Construction Site | (CS) | 0.3 | E | 87° | Quarterly | |
| Shoreline Sediment | Hog Island Reserve | (HIR) | 0.6 | N | 7° | Semi-Annually | Control Location |
| | Chickahominy River | (CHIC) | 11.2 | WNW | 301° | Semi-Annually | |
| Silt | Chickahominy River | (CHIC) | 11.2 | WNW | 300° | Semi-Annually | Control Location |
| | Surry Station Discharge | (SD) | 0.5 | NW | 315° | Semi-Annually | |
| | Surry Station Intake | (SI) | 1.8 | ESE | 112° | Semi-Annually | |

Table 2-1
SURRY - 2025
RADIOLOGICAL SAMPLING STATIONS
DISTANCE AND DIRECTION FROM UNIT NO. 1

| Sample Media | Location | Station | Distance | | | Collection | Remarks |
|--|-------------------------|---------|----------|-----------|---------|---------------|------------------|
| | | | Miles | Direction | Degrees | Frequency | |
| Milk | Colonial Parkway | (CP) | 3.7 | NNW | 336° | Monthly | |
| | Beachy Farm | (BF) | 12.0 | SW | 220° | Monthly | Control Location |
| Oysters | Point of Shoals | (POS) | 6.4 | SSE | 157° | Semi-Annually | |
| | Mulberry Point | (MP) | 4.9 | ESE | 124° | Semi-Annually | |
| | Swash Hole Island | (SHI) | 6.8 | SE | 128° | Semi-Annually | |
| Clams | Chickahominy River | (CHIC) | 11.2 | WNW | 300° | Semi-Annually | Control Location |
| | Surry Station Discharge | (SD) | 1.3 | NNW | 341° | Semi-Annually | |
| | Jamestown Island | (JI) | 3.9 | NW | 324° | Semi-Annually | |
| Fish | Surry Station Discharge | (SD) | 1.3 | NNW | 341° | Semi-Annually | |
| Crabs | Surry Station Discharge | (SD) | 1.3 | NNW | 341° | Annually | |
| Crops (Corn, Peanuts, Soybeans) | Brock's Farm | (BROCK) | 3.8 | S | 183° | Annually | |
| | Slade's Farm | (SLADE) | 3.2 | S | 179° | Annually | |

Table 2-2
SURRY - 2025
SAMPLE ANALYSIS PROGRAM

Pg. 1 of 3

| SAMPLE MEDIA | FREQUENCY | ANALYSIS | LLD* | REPORT UNITS |
|--|---------------------------------------|-----------------|-------------|---------------------|
| Thermoluminescent Dosimetry (TLD) | Quarterly | Gamma Dose | 6 | mR/Std. Quarter |
| Air Iodine | Weekly | I-131 | 0.07 | pCi/m ³ |
| Air Particulate | Weekly | Gross Beta | 0.01 | pCi/m ³ |
| | Quarterly (a) | Gamma Isotopic | | pCi/m ³ |
| | | Cs-134 | 0.05 | |
| | | Cs-137 | 0.06 | |
| River Water | Quarterly Composite of monthly sample | Tritium (H-3) | 2000 | pCi/L |
| | Monthly | I-131 | 10 | pCi/L |
| | | Gamma Isotopic | | pCi/L |
| | | Mn-54 | 15 | |
| | | Fe-59 | 30 | |
| | | Co-58 | 15 | |
| | | Co-60 | 15 | |
| | | Zn-65 | 30 | |
| | | Zr-95 | 30 | |
| | | Nb-95 | 15 | |
| | | Cs-134 | 15 | |
| | | Cs-137 | 18 | |
| | | Ba-140 | 60 | |
| | | La-140 | 15 | |
| Well Water | Quarterly | Tritium (H-3) | 2000 | pCi/L |
| | | I-131 | 1 | |
| | | Gamma Isotopic | | pCi/L |
| | | Mn-54 | 15 | |
| | | Fe-59 | 30 | |
| | | Co-58 | 15 | |
| | | Co-60 | 15 | |
| | | Zn-65 | 30 | |
| | | Zr-95 | 30 | |
| | | Nb-95 | 15 | |
| | | Cs-134 | 15 | |
| | | Cs-137 | 18 | |
| | | Ba-140 | 60 | |
| | | La-140 | 15 | |

Footnotes located at end of table.

Table 2-2
SURRY - 2025
SAMPLE ANALYSIS PROGRAM

Pg. 2 of 3

| SAMPLE MEDIA | FREQUENCY | ANALYSIS | LLD* | REPORT UNITS |
|---------------------------|--|-----------------|-------------|---------------------|
| Shoreline Sediment | Semi-Annually | Gamma Isotopic | | pCi/kg - dry |
| | | Cs-134 | 150 | |
| | | Cs-137 | 180 | |
| Silt | Semi-Annually | Gamma Isotopic | | pCi/kg - dry |
| | | Cs-134 | 150 | |
| | | Cs-137 | 180 | |
| Milk | Monthly | I-131 | 1 | pCi/L |
| | | Gamma Isotopic | | pCi/L |
| | | Cs-134 | 15 | |
| | | Cs-137 | 18 | |
| | | Ba-140 | 60 | |
| | La-140 | 15 | | |
| | Quarterly Composite of CP monthly sample | Sr-89 | NA | pCi/L |
| | | Sr-90 | NA | |
| Oysters | Semi-Annually | Gamma Isotopic | | pCi/kg - wet |
| | | Mn-54 | 130 | |
| | | Fe-59 | 260 | |
| | | Co-58 | 130 | |
| | | Co-60 | 130 | |
| | | Zn-65 | 260 | |
| | | Cs-134 | 130 | |
| | | Cs-137 | 150 | |
| Clams | Semi-Annually | Gamma Isotopic | | pCi/kg - wet |
| | | Mn-54 | 130 | |
| | | Fe-59 | 260 | |
| | | Co-58 | 130 | |
| | | Co-60 | 130 | |
| | | Zn-65 | 260 | |
| | | Cs-134 | 130 | |
| | | Cs-137 | 150 | |
| Crabs | Annually | Gamma Isotopic | | pCi/kg - wet |
| | | Mn-54 | 130 | |
| | | Fe-59 | 260 | |
| | | Co-58 | 130 | |
| | | Co-60 | 130 | |
| | | Zn-65 | 260 | |
| | | Cs-134 | 130 | |
| | | Cs-137 | 150 | |

Footnotes located at end of table.

Table 2-2
 SURRY - 2025
 SAMPLE ANALYSIS PROGRAM

Pg. 3 of 3

| SAMPLE MEDIA | FREQUENCY | ANALYSIS | LLD* | REPORT UNITS |
|----------------------|------------------|-----------------|-------------|---------------------|
| Fish | Semi-Annually | Gamma Isotopic | | pCi/kg - wet |
| | | Mn-54 | 130 | |
| | | Fe-59 | 260 | |
| | | Co-58 | 130 | |
| | | Co-60 | 130 | |
| | | Zn-65 | 260 | |
| | | Cs-134 | 130 | |
| | | Cs-137 | 150 | |
| Food Products | Annually | Gamma Isotopic | | pCi/kg - wet |
| | | I-131 | 60 | |
| | | Cs-134 | 60 | |
| | | Cs-137 | 80 | |

Note: This table is not a complete listing of nuclides that can be detected and reported. Other peaks that are measurable and identifiable, together with the above nuclides, are also identified and reported.

* LLD is the Lower Limit of Detection as defined and required in the USNRC Branch Technical Position on an Acceptable Radiological Environmental Monitoring Program, Revision 1, November 1979.

LLDs indicate those concentrations to which environmental samples are required to be analyzed. Actual analysis of samples may be lower than these listed values.

- (a) Quarterly composites of each location's weekly air particulate samples are analyzed for gamma emitters. NA None assigned.

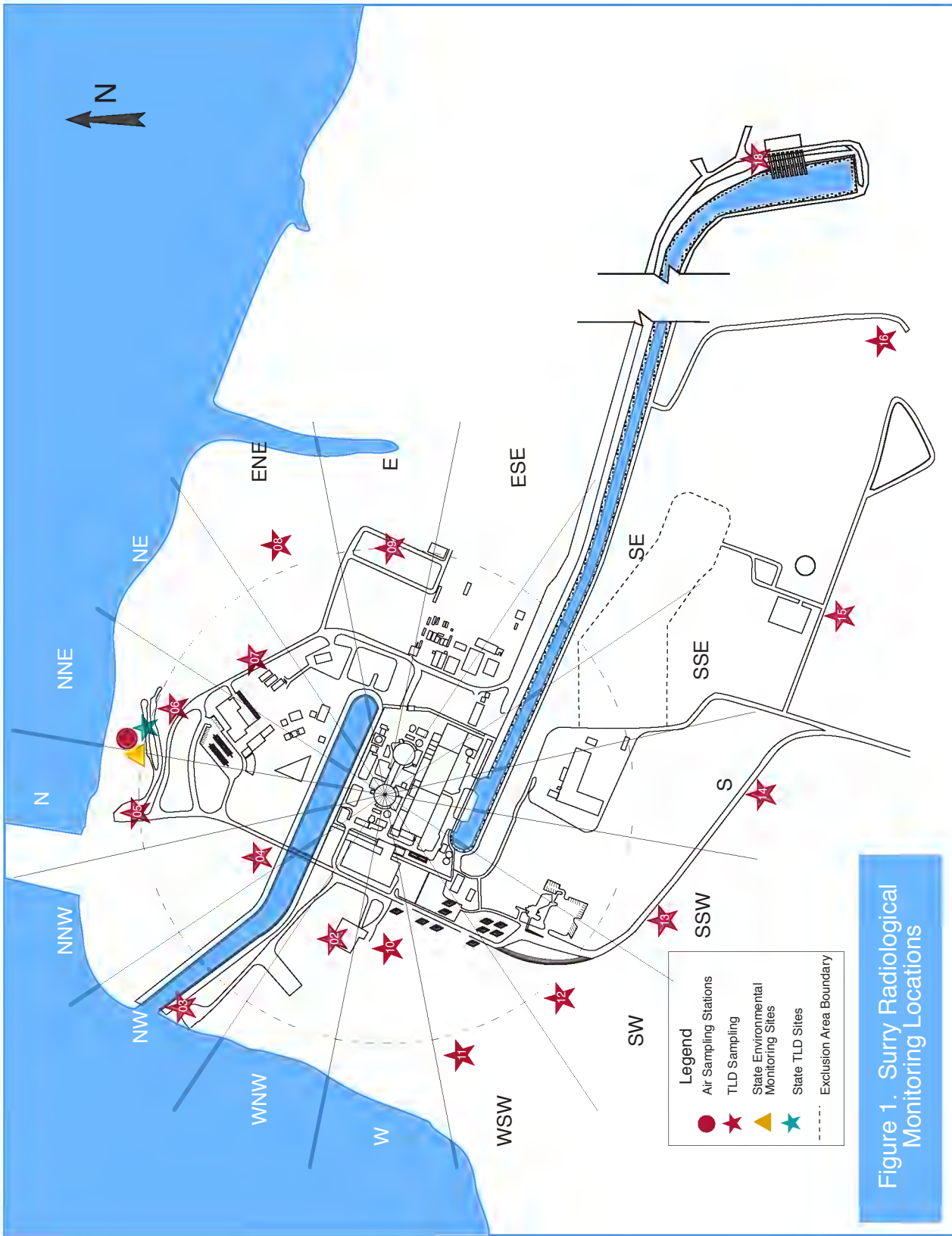
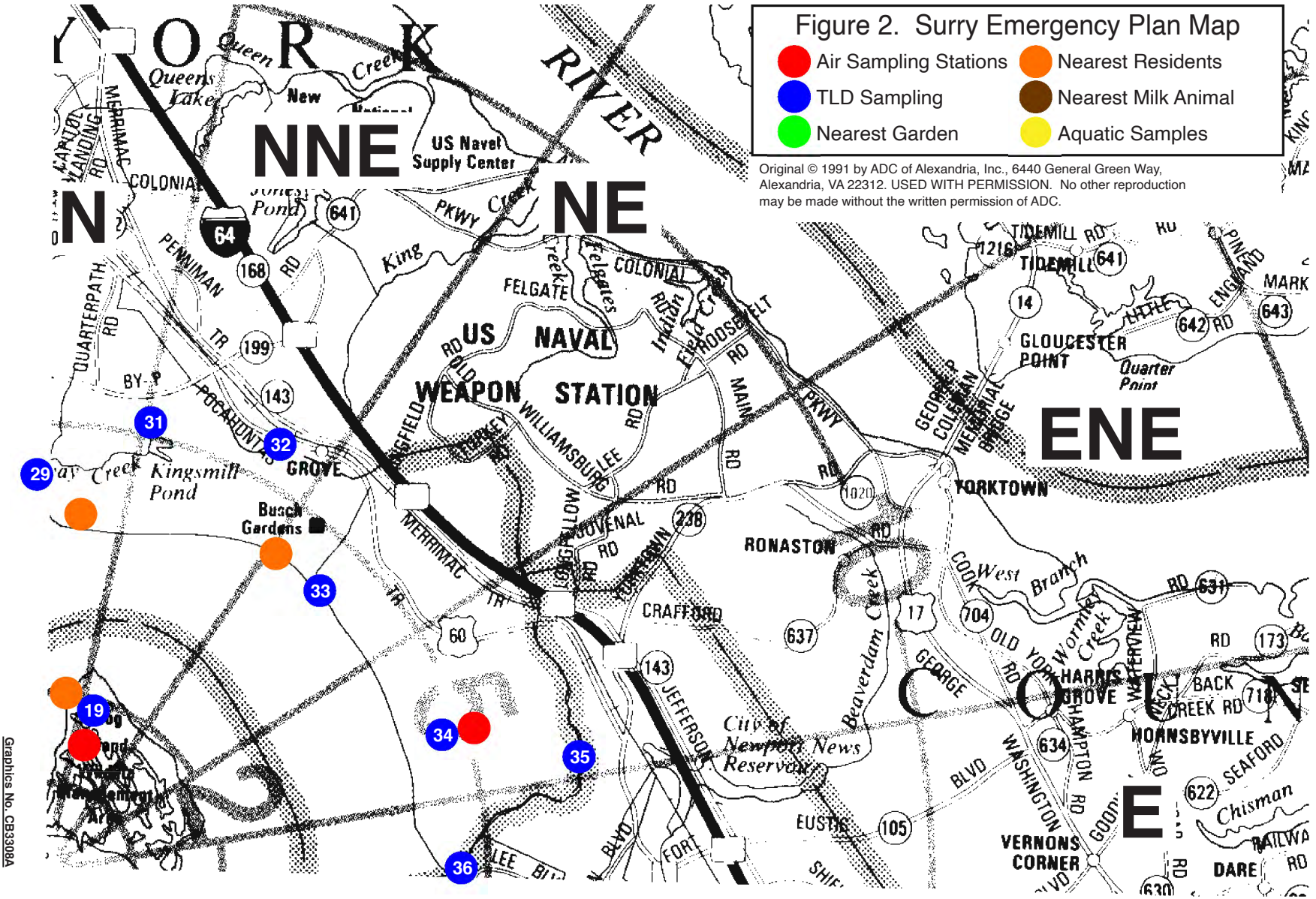
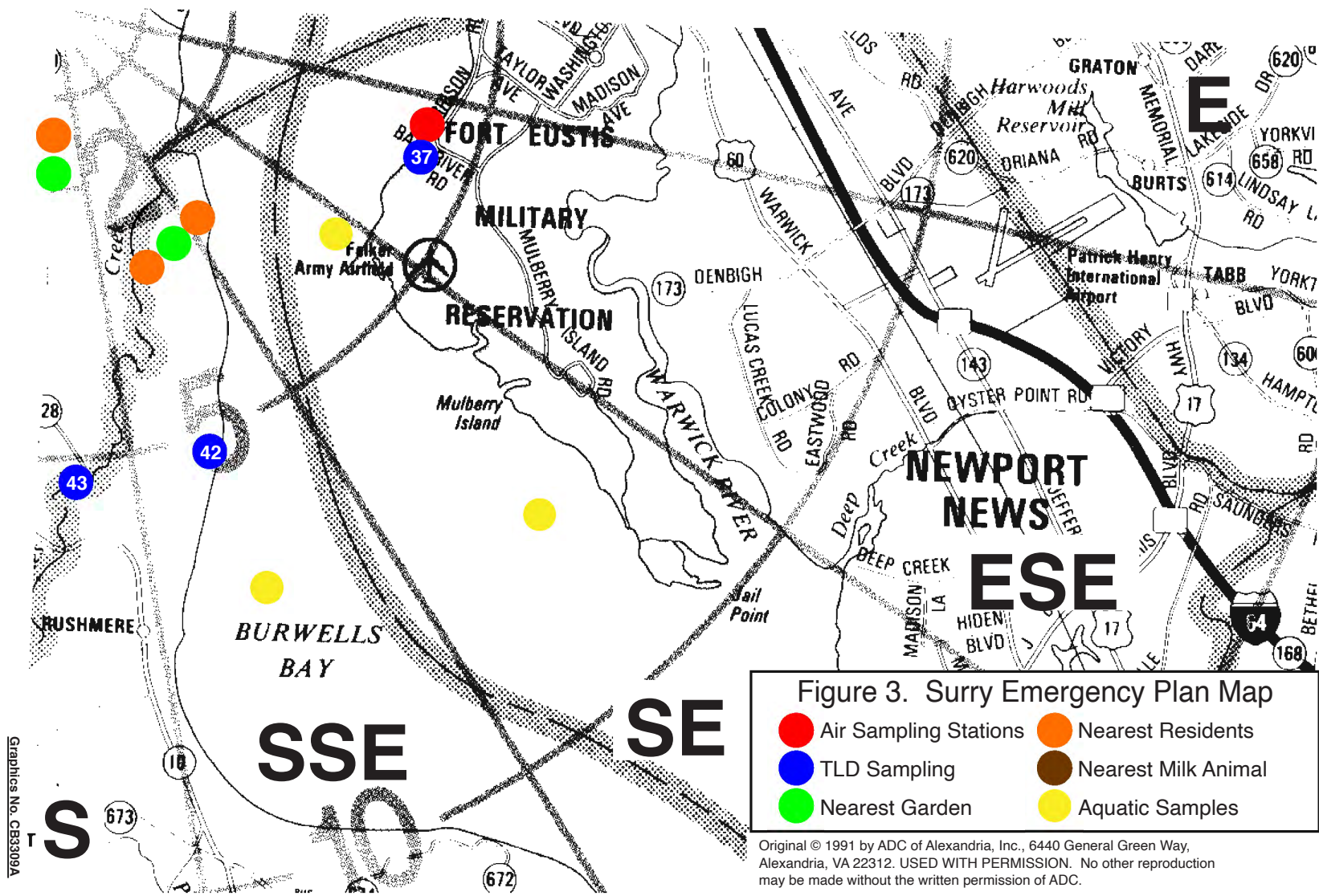
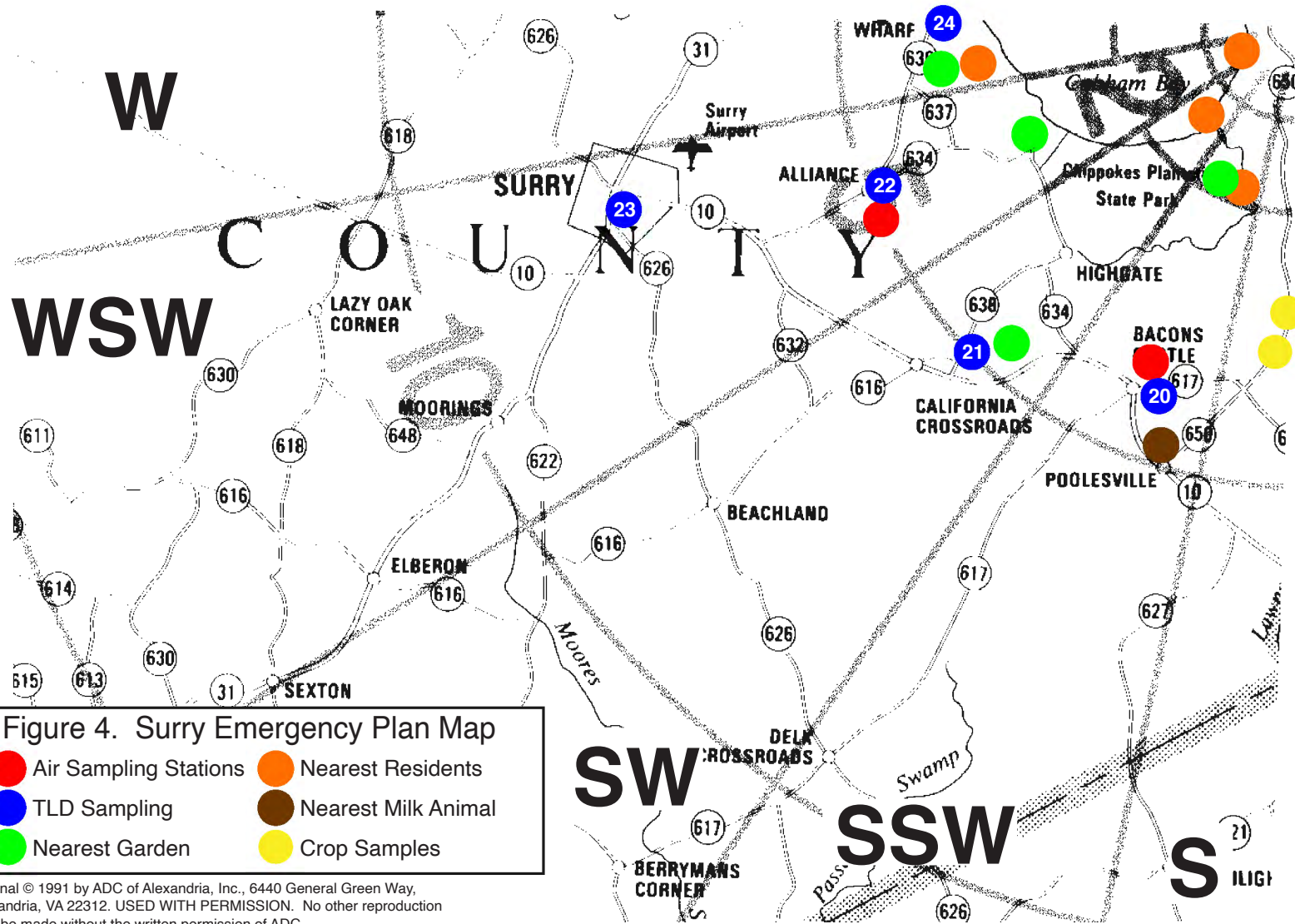


Figure 1. Surry Radiological Monitoring Locations

Graphics No. SV645F







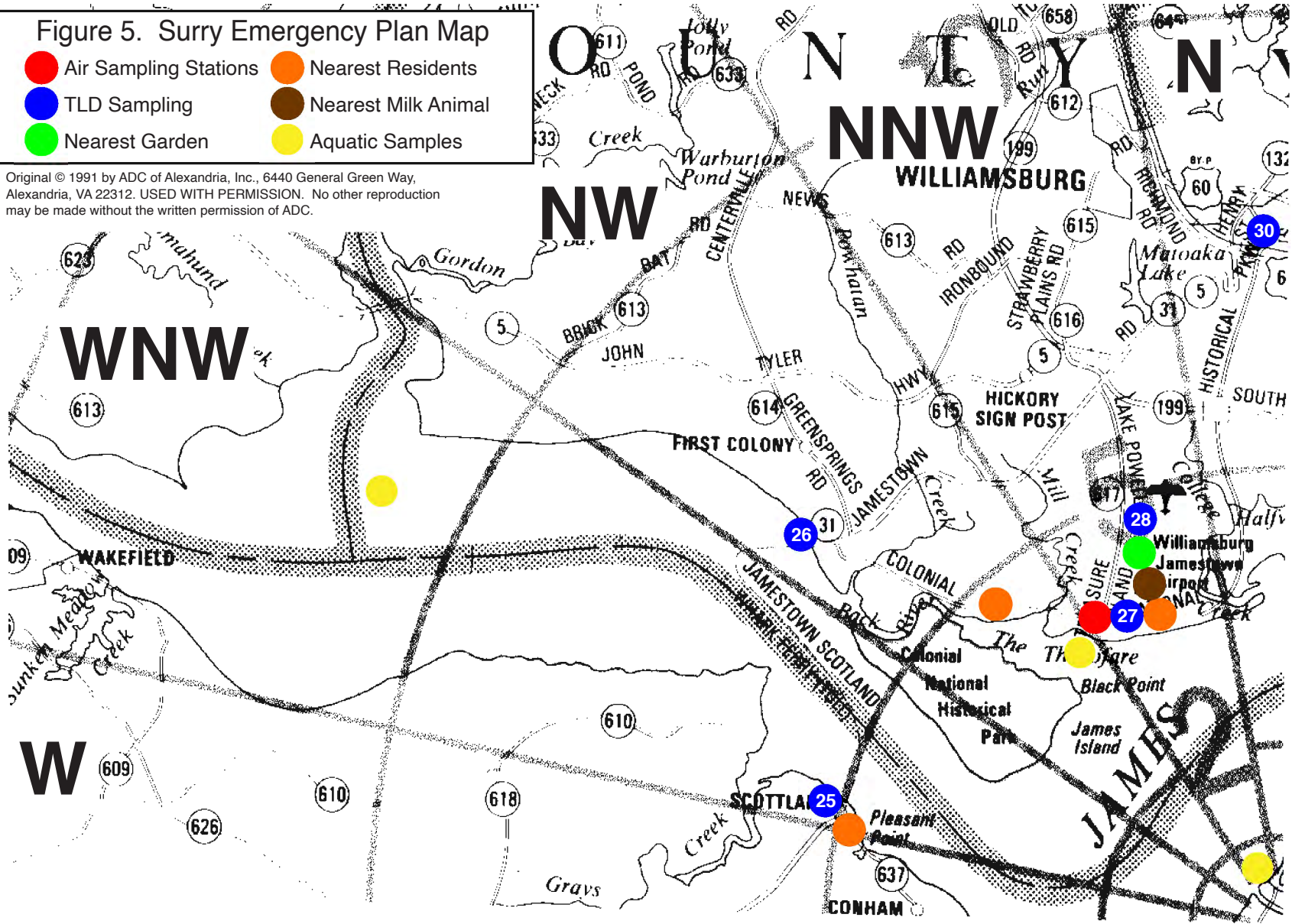
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Graphics No. CB8310A

Figure 5. Surry Emergency Plan Map

- | | |
|--|--|
| ● Air Sampling Stations | ● Nearest Residents |
| ● TLD Sampling | ● Nearest Milk Animal |
| ● Nearest Garden | ● Aquatic Samples |

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3. ANALYTICAL RESULTS

3.1 Summary of Results

In accordance with the Surry Offsite Dose Calculation Manual (ODCM), a summary table of the analytical results has been prepared and is presented in Table 3-1. This data is presented in accordance with the format of the USNRC Branch Technical Position, "Acceptable Radiological Environmental Monitoring Program", Revision 1, November 1979. A more detailed analysis of the data is provided in Section 4.

TABLE 3-1: RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY
 SURRY NUCLEAR POWER STATION
 Docket No. 50-280-281

| Medium or Pathway Sampled (Units) | Analysis Type | Total Number | LLD | Indicator Locations | Location with Highest Mean | | | Control Locations | Number of Nonroutine Reported Measurements |
|---|--|-------------------|-----|---|---|------------------------------|--|---|--|
| | | | | Mean (Range) | Number | Distance Direction | Mean (Range) | Mean (Range) | |
| Direct Radiation <i>TLD (mR/Std. Month)</i> | Gamma Dose | 164 | 2 | 18.6 (152/152) (12.2-26.0) | STA-9 | 0.3 mi E | 25.4 (4/4) (24.7-26.0) | 19.8 (12/12) (16.7-25.0) | 0 |
| | Air Particulate <i>(1E⁻³ pCi/m³)</i> | Gross Beta | 416 | 10 | 14.3 (364/364) (4.47-31.2) | FE | 4.9 mi. ESE | 17.7 (52/52) (8.04-31.2) | 16 (52/52) (5.91-31.1) |
| | GAMMA | 32 | | | | | | | |
| | Cs-134 | 32 | 50 | <LLD | N/A | | <LLD | <LLD | 0 |
| | Cs-137 | 32 | 60 | <LLD | N/A | | <LLD | <LLD | 0 |
| | Be-7 | 32 | | 101 (28/28) (62.8-127) | BASF | 5.1 mi. ENE | 116 (4/4) (99.1-127) | 114 (4/4) (98.6-131) | 0 |
| Air Iodine <i>(1E⁻³ pCi/m³)</i> | I-131 | 416 | 70 | <LLD | N/A | | <LLD | <LLD | 0 |
| Milk <i>(pCi/Liter)</i> | Sr-89 | 4 | 5 | <LLD | N/A | | <LLD | N/A | 0 |
| | Sr-90 | 4 | 1 | 2.65 (3/4) (1.89-3.21) | CP | 3.7 mi. NNW | 2.65 (3/4) (1.89-3.21) | N/A | 0 |
| | GAMMA | 24 | | | | | | | |
| | Cs-134 | 24 | 15 | <LLD | N/A | | <LLD | <LLD | 0 |
| | Cs-137 | 24 | 18 | <LLD | N/A | | <LLD | <LLD | 0 |
| | Ba-140 | 24 | 60 | <LLD | N/A | | <LLD | <LLD | 0 |
| | La-140 | 24 | 15 | <LLD | N/A | | <LLD | <LLD | 0 |
| | I-131 | 24 | 1 | <LLD | N/A | | <LLD | <LLD | 0 |
| | K-40 | 24 | | 1283 (12/12) (939-1436) | CP | 3.7 mi. NNW | 1283 (12/12) (939-1436) | 1233 (12/12) (1024-1406) | 0 |

TABLE 3-1: RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY
 SURRY NUCLEAR POWER STATION
 Docket No. 50-280-281

| Medium or Pathway Sampled (Units) | Analysis Type | Total Number | LLD | Indicator Locations | Location with Highest Mean | | | Control Locations | Number of Nonroutine Reported Measurements |
|--------------------------------------|---------------|--------------|------|--|----------------------------|----------------------------|--|-------------------|--|
| | | | | Mean (Range) | Number | Distance Direction | Mean (Range) | Mean (Range) | |
| Food Products (pCi/kg wet) | GAMMA | 3 | | | | | | | |
| | Cs-134 | 3 | 60 | <LLD | N/A | | <LLD | N/A | 0 |
| | Cs-137 | 3 | 80 | <LLD | N/A | | <LLD | N/A | 0 |
| | I-131 | 3 | 60 | <LLD | N/A | | <LLD | N/A | 0 |
| | K-40 | 3 | | 6883 (3/3) (2202-13890) | SLADE | 3.2 mi. S | 13890 (1/1) (13890-13890) | N/A | 0 |
| Well Water (pCi/Liter) | H-3 | 12 | 2000 | <LLD | N/A | | <LLD | N/A | 0 |
| | GAMMA | 12 | | | | | | | |
| | Mn-54 | 12 | 15 | <LLD | N/A | | <LLD | N/A | 0 |
| | Co-58 | 12 | 15 | <LLD | N/A | | <LLD | N/A | 0 |
| | Fe-59 | 12 | 30 | <LLD | N/A | | <LLD | N/A | 0 |
| | Co-60 | 12 | 15 | <LLD | N/A | | <LLD | N/A | 0 |
| | Zn-65 | 12 | 30 | <LLD | N/A | | <LLD | N/A | 0 |
| | Nb-95 | 12 | 15 | <LLD | N/A | | <LLD | N/A | 0 |
| | Zr-95 | 12 | 30 | <LLD | N/A | | <LLD | N/A | 0 |
| | I-131 | 12 | 1 | <LLD | N/A | | <LLD | N/A | 0 |
| | Cs-134 | 12 | 15 | <LLD | N/A | | <LLD | N/A | 0 |
| | Cs-137 | 12 | 18 | <LLD | N/A | | <LLD | N/A | 0 |
| | Ba-140 | 12 | 60 | <LLD | N/A | | <LLD | N/A | 0 |
| | La-140 | 12 | 15 | <LLD | N/A | | <LLD | N/A | 0 |
| | Th-228 | 12 | | 8.73 (1/4) (8.73-8.73) | CS | 0.3 mi. E | 8.73 (1/4) (8.73-8.73) | N/A | 0 |

TABLE 3-1: RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY
 SURRY NUCLEAR POWER STATION
 Docket No. 50-280-281

| Medium or Pathway Sampled (Units) | Analysis Type | Total Number | LLD | Indicator Locations | Location with Highest Mean | | | Control Locations | Number of Nonroutine Reported Measurements |
|--|---------------|--------------|------|---------------------------------|----------------------------|-----------------------|---------------------------------|----------------------------------|--|
| | | | | Mean (Range) | Number | Distance Direction | Mean (Range) | Mean (Range) | |
| River Water <i>(pCi/Liter)</i> | H-3 | 8 | 2000 | <LLD | N/A | | <LLD | <LLD | 0 |
| <hr/> | | | | | | | | | |
| | GAMMA | 24 | | | | | | | |
| | Mn-54 | 24 | 15 | <LLD | N/A | | <LLD | <LLD | 0 |
| | Co-58 | 24 | 15 | <LLD | N/A | | <LLD | <LLD | 0 |
| | Fe-59 | 24 | 30 | <LLD | N/A | | <LLD | <LLD | 0 |
| | Co-60 | 24 | 15 | <LLD | N/A | | <LLD | <LLD | 0 |
| | Zn-65 | 24 | 30 | <LLD | N/A | | <LLD | <LLD | 0 |
| | Nb-95 | 24 | 15 | <LLD | N/A | | <LLD | <LLD | 0 |
| | Zr-95 | 24 | 30 | <LLD | N/A | | <LLD | <LLD | 0 |
| | I-131 | 24 | 10 | <LLD | N/A | | <LLD | <LLD | 0 |
| | Cs-134 | 24 | 15 | <LLD | N/A | | <LLD | <LLD | 0 |
| | Cs-137 | 24 | 18 | <LLD | N/A | | <LLD | <LLD | 0 |
| | Ba-140 | 24 | 60 | <LLD | N/A | | <LLD | <LLD | 0 |
| | La-140 | 24 | 15 | <LLD | N/A | | <LLD | <LLD | 0 |
| | K-40 | 24 | | 128 (1/12) (128-128) | SD | 0.4 mi. NW | 128 (1/12) (128-128) | 108 (2/12) (81.1-136) | 0 |

TABLE 3-1: RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY
 SURRY NUCLEAR POWER STATION
 Docket No. 50-280-281

| Medium or Pathway Sampled (Units) | Analysis Type | Total Number | LLD | Indicator Locations | Location with Highest Mean | | | Control Locations | Number of Nonroutine Reported Measurements |
|---|---------------|--------------|-----|--|----------------------------|-------------------------------|--|--|--|
| | | | | Mean (Range) | Number | Distance Direction | Mean (Range) | Mean (Range) | |
| Sediment Silt (pCi/kg dry) | GAMMA | 6 | | | | | | | |
| | Cs-134 | 6 | 150 | <LLD | N/A | | <LLD | <LLD | 0 |
| | Cs-137 | 6 | 180 | <LLD | N/A | | <LLD | <LLD | 0 |
| | K-40 | 6 | | 14535 (4/4) (12250-16660) | CHIC | 11.2 mi. WNW | 16170 (2/2) (13230-19110) | 16170 (2/2) (13230-19110) | 0 |
| | Ra-226 | 6 | | 2869 (3/4) (2288-3811) | SI | 1.8 mi. ESE | 3160 (2/2) (2509-3811) | 2816 (2/2) (2813-2819) | 0 |
| | Ac-228 | 6 | | 1226 (3/4) (1022-1333) | SI | 1.8 mi. ESE | 1323 (1/2) (1323-1323) | <LLD | 0 |
| | Th-228 | 6 | | 1172 (4/4) (967-1343) | CHIC | 11.2 mi. WNW | 1625 (2/2) (1499-1751) | 1625 (2/2) (1499-1751) | 0 |
| | Th-232 | 6 | | 956 (3/4) (912-1027) | CHIC | 11.2 mi. WNW | 1276 (1/2) (1276-1276) | 1276 (1/2) (1276-1276) | 0 |
| | Be-7 | 6 | | 1089 (1/4) (1089-1089) | SD | 0.5 mi. NW | 1089 (1/2) (1089-1089) | <LLD | 0 |
| Shoreline Sediment (pCi/kg dry) | GAMMA | 4 | | | | | | | |
| | Cs-134 | 4 | 150 | <LLD | N/A | | <LLD | <LLD | 0 |
| | Cs-137 | 4 | 180 | <LLD | N/A | | <LLD | <LLD | 0 |
| | K-40 | 4 | | 6314 (2/2) (6095-6532) | HIR | 0.6 mi. N | 6314 (2/2) (6095-6532) | 1566 (2/2) (1428-1704) | 0 |
| | Ra-226 | 4 | | <LLD | CHIC | 11.2 mi. WNW | 4779 (2/2) (3471-6086) | 4779 (2/2) (3471-6086) | 0 |
| | Ac-228 | 4 | | <LLD | CHIC | 11.2 mi. WNW | 2432 (2/2) (1571-3293) | 2432 (2/2) (1571-3293) | 0 |
| | Th-228 | 4 | | 383 (1/2) (383-383) | CHIC | 11.2 mi. WNW | 2272 (2/2) (1407-3137) | 2272 (2/2) (1407-3137) | 0 |
| | Th-232 | 4 | | <LLD | CHIC | 11.2 mi. WNW | 1199 (1/2) (1199-1199) | 1199 (1/2) (1199-1199) | 0 |

TABLE 3-1: RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY
 SURRY NUCLEAR POWER STATION
 Docket No. 50-280-281

| Medium or Pathway Sampled (Units) | Analysis Type | Total Number | LLD | Indicator Locations | Location with Highest Mean | | | Control Locations | Number of Nonroutine Reported Measurements |
|-----------------------------------|---------------|--------------|---|---|------------------------------|---|---|-------------------|--|
| | | | | Mean (Range) | Number | Distance Direction | Mean (Range) | Mean (Range) | |
| Fish (pCi/kg wet) | GAMMA | 4 | | | | | | | |
| | Mn-54 | 4 | 130 | <LLD | N/A | | <LLD | N/A | 0 |
| | Co-58 | 4 | 130 | <LLD | N/A | | <LLD | N/A | 0 |
| | Fe-59 | 4 | 260 | <LLD | N/A | | <LLD | N/A | 0 |
| | Co-60 | 4 | 130 | <LLD | N/A | | <LLD | N/A | 0 |
| | Zn-65 | 4 | 260 | <LLD | N/A | | <LLD | N/A | 0 |
| | Cs-134 | 4 | 130 | <LLD | N/A | | <LLD | N/A | 0 |
| | Cs-137 | 4 | 150 | <LLD | N/A | | <LLD | N/A | 0 |
| | K-40 | 4 | | 1779 (4/4) (1095-3009) | SD | 1.3 mi. NNW | 1779 (4/4) (1095-3009) | N/A | 0 |
| Th-228 | 4 | | 96.1 (1/4) (96.1-96.1) | SD | 1.3 mi. NNW | 96.1 (1/4) (96.1-96.1) | N/A | 0 | |
| Oysters (pCi/kg wet) | GAMMA | 6 | | | | | | | |
| | Mn-54 | 6 | 130 | <LLD | N/A | | <LLD | N/A | 0 |
| | Co-58 | 6 | 130 | <LLD | N/A | | <LLD | N/A | 0 |
| | Fe-59 | 6 | 260 | <LLD | N/A | | <LLD | N/A | 0 |
| | Co-60 | 6 | 130 | <LLD | N/A | | <LLD | N/A | 0 |
| | Zn-65 | 6 | 260 | <LLD | N/A | | <LLD | N/A | 0 |
| | Cs-134 | 6 | 130 | <LLD | N/A | | <LLD | N/A | 0 |
| | Cs-137 | 6 | 150 | <LLD | N/A | | <LLD | N/A | 0 |
| | K-40 | 6 | | 714 (5/6) (552-1106) | SHI | 6.8 mi. SE | 829 (2/2) (552-1106) | N/A | 0 |

TABLE 3-1: RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY
 SURRY NUCLEAR POWER STATION
 Docket No. 50-280-281

| Medium or Pathway Sampled (Units) | Analysis Type | Total Number | LLD | Indicator Locations | Location with Highest Mean | | | Control Locations | Number of Nonroutine Reported Measurements |
|-----------------------------------|---------------|--------------|-------------------------------|---------------------|----------------------------|-------------------------------|----------------------------|-------------------|--|
| | | | | Mean (Range) | Number | Distance Direction | Mean (Range) | Mean (Range) | |
| Clams (pCi/kg wet) | GAMMA | 6 | | | | | | | |
| | Mn-54 | 6 | 130 | <LLD | N/A | | <LLD | <LLD | 0 |
| | Co-58 | 6 | 130 | <LLD | N/A | | <LLD | <LLD | 0 |
| | Fe-59 | 6 | 260 | <LLD | N/A | | <LLD | <LLD | 0 |
| | Co-60 | 6 | 130 | <LLD | N/A | | <LLD | <LLD | 0 |
| | Zn-65 | 6 | 260 | <LLD | N/A | | <LLD | <LLD | 0 |
| | Cs-134 | 6 | 130 | <LLD | N/A | | <LLD | <LLD | 0 |
| | Cs-137 | 6 | 150 | <LLD | N/A | | <LLD | <LLD | 0 |
| K-40 | 6 | | <LLD | CHIC | 11.2 mi. WNW | 390 (1/2) (390-390) | 390 (1/2) (390-390) | 0 | |
| Crabs (pCi/kg wet) | GAMMA | 1 | | | | | | | |
| | Mn-54 | 1 | 130 | <LLD | N/A | | <LLD | N/A | 0 |
| | Co-58 | 1 | 130 | <LLD | N/A | | <LLD | N/A | 0 |
| | Fe-59 | 1 | 260 | <LLD | N/A | | <LLD | N/A | 0 |
| | Co-60 | 1 | 130 | <LLD | N/A | | <LLD | N/A | 0 |
| | Zn-65 | 1 | 260 | <LLD | N/A | | <LLD | N/A | 0 |
| | Cs-134 | 1 | 130 | <LLD | N/A | | <LLD | N/A | 0 |
| | Cs-137 | 1 | 150 | <LLD | N/A | | <LLD | N/A | 0 |
| K-40 | 1 | | 2011 (1/1) (2011-2011) | SD | 1.3 mi. NNW | 2011 (1/1) (2011-2011) | N/A | 0 | |

3.2 Analytical Results of 2025 REMP Samples

Radiological analyses of environmental media characteristically approach and frequently fall below the detection limits of state-of-the-art measurement methods. The reported error is two times the standard deviation (2σ) of the net activity. Unless otherwise noted, the overall error (counting, sample size, chemistry, errors, etc.) is estimated to be 2 to 5 times that listed. Results are considered positive when the measured value exceeds 2σ uncertainty, unless otherwise noted. MDC is noted in the footnote in several tables. The term <MDC means the value is less than its Minimum Detectable Concentration and is therefore, not considered a positive value or result. Positive values or results are indicated by **bold** text.

Teledyne Brown Engineering analytical methods meet the Lower Limit of Detection (LLD) requirements given in Table 2 of the USNRC Branch Technical Position, "An Acceptable Radiological Environmental Monitoring Program", (November 1979, Revision 1) and the Surry ODCM.

Data are given according to sample type as indicated below.

1. Gamma Exposure Rate
2. Air Particulates, Weekly Gross Beta Radioactivity
3. Air Particulates, Weekly I-131
4. Air Particulates, Quarterly Gamma Spectroscopy
5. Animal Milk
6. Food Products
7. Well Water
8. River Water
9. Silt
10. Shoreline Sediment
11. Fish
12. Oysters
13. Clams
14. Crabs

TABLE 3-2
GAMMA EXPOSURE RATE
(mR/Std. Month) ± 2 Sigma

$MDD_Q = 3 \times \sigma_Q = 3 \times 1.0 = 3$ (5)
 $MDD_A = 3 \times \sigma_A = 3 \times 2.8 = 8.8$ (10)

Note: If $MDD_Q < 5$ mR, THEN MDD_Q rounded to 5 mR (ANSI N13.37)
 Note: If $MDD_A < 10$ mR, THEN MDD_A rounded to 10 mR (ANSI N13.37)

| Monitoring Location | Quarterly Baseline, B_Q (mrem) | Normalized Quarterly Monitoring Data, M_Q (mrem per standard quarter) | | | | Quarterly Facility Dose ^a $F_Q = M_Q - B_Q$ (mrem) | | | | Annual Baseline B_A (mrem) | Annual Monitoring Data M_A (mrem) | Annual Facility Dose ^b $F_A = M_A - B_A$ (mrem) |
|---------------------|----------------------------------|---|------|------|------|---|----|----|----|------------------------------|-------------------------------------|--|
| | | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | | | |
| 2 | 19.8 | 21.8 | 21.9 | 22.8 | 22.4 | ND | ND | ND | ND | 79.2 | 89.0 | ND |
| 3 | 19.2 | 20.3 | 20.6 | 21.8 | 19.7 | ND | ND | ND | ND | 76.9 | 82.3 | ND |
| 4 | 17.9 | 20.7 | 20.2 | 22.1 | 16.8 | ND | ND | ND | ND | 71.7 | 79.8 | ND |
| 5 | 19.0 | 21.6 | 20.9 | 21.8 | 21.5 | ND | ND | ND | ND | 76.0 | 85.7 | ND |
| 6 | 18.4 | 20.3 | 20.8 | 20.1 | 20.9 | ND | ND | ND | ND | 73.8 | 82.0 | ND |
| 7 | 18.7 | 19.4 | 21.8 | 22.6 | 20.5 | ND | ND | ND | ND | 74.6 | 84.2 | ND |
| 8 | 17.0 | 18.7 | 19.2 | 19.5 | 16.6 | ND | ND | ND | ND | 68.4 | 74.0 | ND |
| 9 | 23.2 | 24.9 | 25.7 | 24.7 | 26.0 | ND | ND | ND | ND | 92.8 | 101.4 | ND |
| 10 | 18.1 | 20.0 | 21.4 | 19.9 | 20.5 | ND | ND | ND | ND | 72.5 | 81.9 | ND |
| 11 | 16.1 | 18.7 | 18.3 | 19.2 | 17.0 | ND | ND | ND | ND | 64.2 | 73.2 | ND |
| 12 | 16.6 | 19.2 | 19.1 | 20.3 | 17.1 | ND | ND | ND | ND | 66.4 | 75.7 | ND |
| 13 | 18.6 | 20.2 | 21.0 | 23.1 | 18.8 | ND | ND | ND | ND | 74.5 | 83.2 | ND |
| 14 | 17.9 | 20.2 | 19.7 | 20.9 | 20.4 | ND | ND | ND | ND | 71.6 | 81.3 | ND |
| 15 | 18.5 | 20.8 | 21.0 | 20.3 | 20.4 | ND | ND | ND | ND | 74.1 | 82.6 | ND |
| 16 | 17.0 | 19.3 | 20.2 | 14.1 | 21.1 | ND | ND | ND | ND | 67.7 | 74.7 | ND |
| 18 | 14.5 | 15.7 | 16.4 | 17.1 | 16.0 | ND | ND | ND | ND | 58.0 | 65.2 | ND |
| 19 | 15.5 | 18.0 | 16.6 | 18.1 | 17.3 | ND | ND | ND | ND | 62.1 | 69.9 | ND |
| 20 | 14.3 | 15.6 | 15.3 | 16.3 | 15.1 | ND | ND | ND | ND | 57.4 | 62.3 | ND |
| 21 | 15.1 | 16.6 | 16.7 | 19.2 | 17.5 | ND | ND | ND | ND | 60.5 | 70.0 | ND |
| 22 | 13.2 | 14.4 | 14.7 | 15.5 | 12.2 | ND | ND | ND | ND | 52.7 | 56.8 | ND |
| 23 | 18.1 | 19.7 | 20.8 | 21.7 | 18.7 | ND | ND | ND | ND | 72.3 | 80.9 | ND |
| 24 | 14.8 | 15.6 | 16.0 | 18.1 | 14.5 | ND | ND | ND | ND | 59.2 | 64.1 | ND |
| 25 | 18.1 | 20.6 | 20.1 | 20.5 | 19.2 | ND | ND | ND | ND | 72.3 | 80.3 | ND |
| 26 | 15.7 | 16.2 | 17.5 | 17.9 | 16.0 | ND | ND | ND | ND | 62.9 | 67.6 | ND |
| 27 | 14.7 | 15.5 | 16.6 | 17.4 | 15.2 | ND | ND | ND | ND | 58.7 | 64.7 | ND |
| 28 | 14.2 | 15.9 | 16.0 | 16.4 | 16.7 | ND | ND | ND | ND | 56.8 | 65.0 | ND |
| 29 | 13.2 | 14.6 | 15.4 | 15.5 | 16.0 | ND | ND | ND | ND | 52.9 | 61.5 | ND |
| 30 | 14.4 | 15.6 | 16.9 | 17.7 | 16.3 | ND | ND | ND | ND | 57.7 | 66.5 | ND |
| 31 | 12.3 | 14.7 | 14.2 | 14.9 | 12.5 | ND | ND | ND | ND | 49.2 | 56.3 | ND |
| 32 | 15.2 | 16.0 | 15.9 | 16.9 | 15.5 | ND | ND | ND | ND | 60.7 | 64.2 | ND |
| 33 | 14.2 | 16.5 | 16.6 | 16.8 | 16.9 | ND | ND | ND | ND | 57.1 | 66.8 | ND |
| 34 | 16.0 | 18.0 | 18.1 | 19.7 | 18.2 | ND | ND | ND | ND | 64.1 | 74.0 | ND |
| 35 | 18.6 | 20.5 | 21.0 | 21.6 | 19.0 | ND | ND | ND | ND | 74.4 | 82.2 | ND |
| 36 | 18.6 | 19.4 | 21.8 | 21.7 | 21.1 | ND | ND | ND | ND | 74.4 | 83.9 | ND |
| 37 | 15.4 | 16.4 | 18.2 | 18.5 | 16.6 | ND | ND | ND | ND | 61.7 | 69.7 | ND |
| 38 | 20.9 | 19.5 | 20.3 | 21.2 | 20.2 | ND | ND | ND | ND | 83.6 | 81.2 | ND |
| 39C | 14.9 | 17.0 | 17.2 | 18.0 | 16.9 | ND | ND | ND | ND | 59.7 | 69.1 | ND |
| 40C | 16.2 | 17.3 | 18.6 | 18.7 | 16.7 | ND | ND | ND | ND | 64.7 | 71.3 | ND |
| 41C | 21.8 | 23.1 | 24.6 | 25.0 | 24.5 | ND | ND | ND | ND | 87.3 | 97.1 | ND |
| 42 | 16.4 | 18.6 | 18.9 | 19.9 | 17.5 | ND | ND | ND | ND | 65.5 | 75.0 | ND |
| 43 | 14.3 | 15.5 | 16.3 | 16.8 | 15.5 | ND | ND | ND | ND | 57.3 | 64.1 | ND |

^aND = Not detected, where $M_Q < (B_Q + MDD_Q)$

^bND = Not detected, where $M_A < (B_A + MDD_A)$

d = Damaged TLDs; m = Missing TLDs; v = Vendor reports TLD not received.

N/A = Missing or Damaged TLD Reading Not Available for Calculation.

Note: Table formatted in accordance with ANSI/HPS N13.37-2014, Environmental Dosimetry Criteria for System Design and Implementation.

TABLE 3-3
AIR PARTICULATES
GROSS BETA RADIOACTIVITY
(1.0E⁻³ pCi/m³ ± 2 Sigma)

| SAMPLING LOCATIONS | | | | | | | | |
|---------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| COLLECTION DATE | SS | HIR | BC | ALL | CP | BASF | FE | NN-C |
| January 7 | 15.0 ± 2.75 | 13.5 ± 2.67 | 14.0 ± 2.69 | 12.2 ± 2.55 | 14.4 ± 2.66 | 16.4 ± 2.82 | 16.8 ± 2.74 | 15.8 ± 2.75 |
| January 14 | 17.7 ± 2.97 | 12.9 ± 2.72 | 14.6 ± 2.81 | 17.2 ± 3.00 | 17.8 ± 2.99 | 17.2 ± 3.01 | 21.6 ± 3.12 | 17.7 ± 2.99 |
| January 21 | 17.9 ± 2.91 | 14.0 ± 2.70 | 15.6 ± 2.79 | 13.2 ± 2.70 | 19.4 ± 3.02 | 20.2 ± 3.11 | 22.5 ± 3.13 | 20.7 ± 3.11 |
| January 28 | 26.3 ± 3.22 | 20.6 ± 2.95 | 23.2 ± 3.07 | 28.1 ± 3.35 | 30.0 ± 3.41 | 28.0 ± 3.36 | 31.2 ± 3.40 | 31.1 ± 3.46 |
| February 4 | 13.5 ± 2.79 | 13.3 ± 2.78 | 15.3 ± 2.89 | 13.7 ± 2.87 | 15.1 ± 2.90 | 17.8 ± 3.09 | 19.6 ± 3.07 | 17.8 ± 3.05 |
| February 11 | 13.8 ± 2.74 | 15.0 ± 2.81 | 15.2 ± 2.82 | 15.9 ± 2.92 | 12.9 ± 2.72 | 17.6 ± 3.01 | 17.7 ± 2.93 | 17.5 ± 2.99 |
| February 18 | 9.64 ± 2.50 | 9.19 ± 2.48 | 8.00 ± 2.40 | 7.83 ± 2.45 | 10.2 ± 2.57 | 13.2 ± 2.78 | 10.9 ± 2.55 | 12.7 ± 2.71 |
| February 25 | 12.6 ± 2.55 | 10.4 ± 2.41 | 12.5 ± 2.56 | 18.6 ± 2.95 | 16.4 ± 2.79 | 13.3 ± 2.64 | 17.7 ± 2.81 | 15.5 ± 2.74 |
| March 4 | 17.3 ± 2.93 | 15.8 ± 2.85 | 16.8 ± 2.90 | 22.8 ± 3.25 | 18.3 ± 2.99 | 21.4 ± 3.18 | 22.8 ± 3.14 | 23.4 ± 3.27 |
| March 11 | 8.97 ± 2.52 | 8.97 ± 2.52 | 10.5 ± 2.60 | 11.8 ± 2.74 | 8.28 ± 2.49 | 10.2 ± 2.67 | 12.3 ± 2.72 | 11.7 ± 2.70 |
| March 18 | 11.9 ± 2.64 | 10.7 ± 2.57 | 9.66 ± 2.51 | 13.5 ± 2.79 | 10.0 ± 2.54 | 11.1 ± 2.64 | 10.1 ± 3.14 | 13.5 ± 2.78 |
| March 26 | 13.0 ± 2.33 | 11.5 ± 2.24 | 12.6 ± 2.31 | 15.8 ± 2.54 | 12.8 ± 2.33 | 14.3 ± 2.44 | 17.4 ± 2.55 | 15.3 ± 2.48 |
| Qtr. Avg. ± 2 s.d. | 14.8 ± 9.27 | 13.0 ± 6.49 | 14.0 ± 7.86 | 15.9 ± 10.8 | 15.5 ± 11.5 | 16.7 ± 9.9 | 18.4 ± 11.7 | 17.7 ± 10.7 |
| April 1 | 11.5 ± 2.64 | 10.9 ± 2.6 | 13.2 ± 2.74 | 13.9 ± 2.84 | 12.5 ± 2.71 | 11.9 ± 2.7 | 15.7 ± 2.86 | 14.5 ± 2.86 |
| April 8 | 7.40 ± 2.19 | 8.15 ± 2.24 | 10.4 ± 2.38 | 10.6 ± 2.44 | 8.03 ± 2.24 | 9.84 ± 2.38 | 9.24 ± 2.26 | 11.3 ± 2.46 |
| April 15 | 12.6 ± 2.55 | 12.3 ± 2.53 | 8.61 ± 2.37 | 11.5 ± 2.60 | 13.0 ± 2.67 | 14.0 ± 2.76 | 16.5 ± 2.81 | 17.2 ± 2.91 |
| April 22 | 13.0 ± 2.84 | 12.3 ± 2.78 | 14.3 ± 2.82 | 14.8 ± 2.91 | 14.4 ± 2.85 | 12.1 ± 2.76 | 14.2 ± 2.79 | 16.6 ± 2.98 |
| April 29 | 12.5 ± 2.60 | 12.1 ± 2.58 | 12.5 ± 2.60 | 13.7 ± 2.72 | 11.1 ± 2.54 | 13.0 ± 2.70 | 14.8 ± 2.70 | 14.6 ± 2.75 |
| May 6 | 13.5 ± 2.64 | 11.7 ± 2.54 | 14.1 ± 2.67 | 19.0 ± 2.99 | 14.3 ± 2.69 | 17.0 ± 2.88 | 18.2 ± 2.85 | 16.1 ± 2.82 |
| May 13 | 13.7 ± 2.71 | 11.6 ± 2.59 | 11.8 ± 2.61 | 14.0 ± 2.79 | 12.0 ± 2.64 | 13.2 ± 2.75 | 14.0 ± 2.71 | 15.1 ± 2.82 |
| May 20 | 8.54 ± 2.40 | 7.56 ± 2.34 | 9.80 ± 2.49 | 11.7 ± 2.66 | 9.15 ± 2.44 | 10.9 ± 2.59 | 13.8 ± 2.67 | 13.3 ± 2.69 |
| May 27 | 5.95 ± 2.22 | 4.47 ± 2.12 | 6.79 ± 2.30 | 7.30 ± 2.37 | 6.27 ± 2.24 | 5.43 ± 2.23 | 8.04 ± 2.32 | 5.91 ± 2.25 |
| June 3 | 8.24 ± 2.43 | 6.74 ± 2.34 | 8.30 ± 2.45 | 8.21 ± 2.48 | 5.90 ± 2.3 | 9.09 ± 2.54 | 13.0 ± 2.68 | 10.5 ± 2.60 |
| June 9 | 6.87 ± 2.95 | 7.47 ± 2.98 | 11.1 ± 3.13 | 9.65 ± 3.08 | 9.82 ± 3.11 | 8.64 ± 3.11 | 11.6 ± 3.17 | 9.11 ± 3.19 |
| June 17 | 7.32 ± 2.02 | 9.91 ± 2.18 | 9.85 ± 2.24 | 11.6 ± 2.35 | 10.0 ± 2.22 | 11.6 ± 2.34 | 12.0 ± 2.28 | 9.94 ± 2.19 |
| June 24 | 11.2 ± 2.70 | 11.2 ± 2.70 | 13.6 ± 2.86 | 12.8 ± 2.85 | 12.3 ± 2.78 | 13.1 ± 2.94 | 20.7 ± 3.14 | 14.6 ± 2.92 |
| Qtr. Avg. ± 2 s.d. | 10.2 ± 5.67 | 9.72 ± 5.12 | 11.1 ± 4.79 | 12.2 ± 6.11 | 10.7 ± 5.57 | 11.5 ± 5.74 | 14.0 ± 6.86 | 13.0 ± 6.73 |

TABLE 3-3
AIR PARTICULATES
GROSS BETA RADIOACTIVITY
(1.0E⁻³ pCi/m³ ± 2 Sigma)

| SAMPLING LOCATIONS | | | | | | | | |
|---------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| COLLECTION DATE | SS | HIR | BC | ALL | CP | BASF | FE | NN-C |
| July 1 | 19.1 ± 3.02 | 19.3 ± 3.03 | 22.9 ± 3.25 | 23.5 ± 3.29 | 21.3 ± 3.15 | 21.8 ± 3.22 | 29.3 ± 3.44 | 23.3 ± 3.26 |
| July 8 | 11.7 ± 2.58 | 10.4 ± 2.51 | 10.2 ± 2.53 | 13.5 ± 2.75 | 10.4 ± 2.52 | 14.3 ± 2.79 | 17.7 ± 2.86 | 12.2 ± 2.63 |
| July 15 | 11.0 ± 2.65 | 10.2 ± 2.60 | 13.3 ± 2.81 | 14.4 ± 2.92 | 10.5 ± 2.65 | 13.5 ± 2.88 | 17.2 ± 2.96 | 10.8 ± 2.69 |
| July 23 | 11.7 ± 2.42 | 9.88 ± 2.31 | 10.2 ± 2.36 | 12.2 ± 2.51 | 11.7 ± 2.43 | 12.5 ± 2.52 | 13.6 ± 2.49 | 13.1 ± 2.52 |
| July 29 | 15.1 ± 3.38 | 12.3 ± 3.22 | 14.4 ± 3.37 | 16.1 ± 3.52 | 13.6 ± 3.31 | 14.9 ± 3.45 | 21.7 ± 3.65 | 16.7 ± 3.50 |
| August 5 | 13.6 ± 2.65 | 14.2 ± 2.68 | 16.7 ± 2.85 | 17.7 ± 2.93 | 16.7 ± 2.83 | 17.9 ± 2.93 | 22.0 ± 3.03 | 17.7 ± 2.90 |
| August 12 | 11.1 ± 2.63 | 10.7 ± 2.61 | 13.0 ± 2.78 | 14.6 ± 2.90 | 12.1 ± 2.71 | 13.2 ± 2.82 | 17.3 ± 2.95 | 11.3 ± 2.68 |
| August 19 | 11.4 ± 2.72 | 5.84 ± 2.38 | 7.98 ± 2.56 | 11.0 ± 2.76 | 9.24 ± 2.64 | 11.6 ± 2.77 | 14.5 ± 2.86 | 10.0 ± 2.62 |
| August 26 | 9.49 ± 2.60 | 6.98 ± 2.44 | 9.93 ± 2.66 | 11.9 ± 2.81 | 8.72 ± 2.57 | 8.31 ± 2.58 | 13.5 ± 2.78 | 11.0 ± 2.73 |
| September 2 | 17.2 ± 2.91 | 10.2 ± 2.52 | 14.3 ± 2.79 | 19.7 ± 3.11 | 14.8 ± 2.81 | 18.3 ± 3.03 | 18.5 ± 2.94 | 17.2 ± 2.94 |
| September 9 | 20.3 ± 3.14 | 13.9 ± 2.82 | 18.3 ± 3.08 | 18.9 ± 3.16 | 18.1 ± 3.07 | 24.1 ± 3.41 | 15.2 ± 2.86 | 25.9 ± 3.44 |
| September 16 | 19.9 ± 3.11 | 13.7 ± 2.78 | 17.6 ± 3.08 | 20.5 ± 3.26 | 18.6 ± 3.12 | 20.5 ± 3.26 | 28.6 ± 3.51 | 21.4 ± 3.27 |
| September 23 | 14.4 ± 2.95 | 13.3 ± 2.87 | 15.2 ± 2.95 | 18.2 ± 3.15 | 13.4 ± 2.84 | 15.9 ± 3.01 | 18.3 ± 3.02 | 15.0 ± 2.94 |
| September 30 | 17.6 ± 2.95 | 13.8 ± 2.72 | 16.6 ± 2.91 | 18.6 ± 3.05 | 19.5 ± 3.05 | 20.8 ± 3.16 | 22.8 ± 3.15 | 16.9 ± 2.93 |
| Qtr. Avg. ± 2 s.d. | 14.5 ± 7.36 | 11.8 ± 6.73 | 14.3 ± 8.00 | 16.5 ± 7.38 | 14.2 ± 8.12 | 16.3 ± 8.93 | 19.3 ± 10.1 | 15.9 ± 9.93 |
| October 7 | 15.3 ± 2.85 | 13.5 ± 2.74 | 14.8 ± 2.84 | 16.0 ± 2.94 | 16.7 ± 2.93 | 17.9 ± 3.05 | 16.4 ± 2.85 | 17.0 ± 2.96 |
| October 14 | 9.49 ± 2.56 | 8.03 ± 2.45 | 9.42 ± 2.58 | 12.0 ± 3.30 | 9.85 ± 2.59 | 9.82 ± 2.64 | 12.1 ± 2.65 | 12.1 ± 2.73 |
| October 21 | 15.3 ± 2.66 | 9.92 ± 2.33 | 14.8 ± 2.65 | 13.0 ± 2.58 | 16.8 ± 2.76 | 17.0 ± 2.78 | 23.0 ± 3.02 | 16.9 ± 2.77 |
| October 28 | 13.3 ± 2.78 | 8.97 ± 2.520 | 15.4 ± 2.92 | 11.0 ± 2.64 | 14.8 ± 2.89 | 12.3 ± 2.73 | 15.6 ± 2.87 | 17.2 ± 3.00 |
| November 4 | 12.6 ± 2.83 | 8.74 ± 2.52 | 12.3 ± 2.76 | 11.8 ± 2.69 | 14.4 ± 2.87 | 14.7 ± 2.90 | 18.8 ± 3.01 | 14.3 ± 2.85 |
| November 11 | 17.9 ± 2.97 | 11.8 ± 2.64 | 17.6 ± 2.97 | 13.6 ± 2.74 | 21.9 ± 3.21 | 20.0 ± 3.14 | 23.3 ± 3.22 | 22.6 ± 3.22 |
| November 18 | 16.0 ± 2.88 | 13.5 ± 2.77 | 15.8 ± 2.90 | 15.8 ± 2.87 | 18.4 ± 3.01 | 16.4 ± 2.94 | 23.0 ± 3.18 | 20.6 ± 3.13 |
| November 26 | 19.7 ± 2.78 | 12.3 ± 2.49 | 22.0 ± 2.91 | 20.3 ± 2.80 | 21.0 ± 2.90 | 23.2 ± 3.01 | 26.8 ± 3.08 | 24.0 ± 3.03 |
| December 3 | 12.1 ± 2.53 | 9.40 ± 2.36 | 12.6 ± 2.59 | 13.9 ± 2.62 | 16.2 ± 2.78 | 12.8 ± 2.61 | 15.5 ± 2.68 | 13.8 ± 2.64 |
| December 10 | 16.5 ± 2.76 | 11.4 ± 2.47 | 14.5 ± 2.76 | 11.5 ± 2.57 | 15.7 ± 2.83 | 16.2 ± 2.90 | 18.4 ± 2.92 | 18.3 ± 2.98 |
| December 16 | 13.0 ± 3.08 | 8.21 ± 2.79 | 15.2 ± 3.13 | 12.4 ± 2.94 | 14.5 ± 3.10 | 11.3 ± 2.95 | 16.3 ± 3.13 | 16.1 ± 3.21 |
| December 23 | 16.3 ± 2.98 | 11.6 ± 2.73 | 16.0 ± 2.99 | 14.3 ± 2.87 | 17.0 ± 3.04 | 17.3 ± 3.08 | 18.9 ± 3.06 | 17.9 ± 3.07 |
| December 30 | 15.6 ± 2.88 | 9.44 ± 2.54 | 16.8 ± 2.96 | 13.3 ± 2.76 | 14.8 ± 2.87 | 15.7 ± 2.95 | 18.3 ± 2.98 | 16.2 ± 2.95 |
| Qtr. Avg. ± 2 s.d. | 14.9 ± 5.00 | 10.5 ± 3.85 | 15.2 ± 5.92 | 13.8 ± 4.99 | 16.3 ± 6.11 | 15.7 ± 7.29 | 19.0 ± 8.12 | 17.5 ± 6.74 |
| Ann. Avg. ± 2 s.d. | 13.6 ± 7.91 | 11.2 ± 6.03 | 13.7 ± 7.27 | 14.6 ± 8.09 | 14.1 ± 8.96 | 15.1 ± 8.89 | 17.7 ± 10.1 | 16.0 ± 9.24 |

TABLE 3-4
AIRBORNE IODINE
(1.0E⁻³ pCi/m³ ± 2 Sigma)

| Sampling Stations | | | | | | | | |
|-------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| COLLECTION DATE | SS | HIR | BC | ALL | CP | BASF | FE | NN-C |
| January 7 | -0.86 ± 15.7 | -0.86 ± 15.7 | -0.85 ± 15.6 | -0.83 ± 15.3 | 1.66 ± 19.3 | 1.70 ± 19.7 | 1.61 ± 18.7 | 1.66 ± 19.3 |
| January 14 | -1.63 ± 12.8 | -1.63 ± 12.8 | -1.62 ± 12.8 | -1.66 ± 13.1 | 11.0 ± 14.2 | 11.2 ± 14.5 | 10.7 ± 13.8 | 11.0 ± 14.2 |
| January 21 | 3.81 ± 14.7 | 3.81 ± 14.7 | 3.81 ± 14.7 | 3.88 ± 15.0 | -6.33 ± 14.8 | -6.45 ± 15.1 | -3.15 ± 7.36 | -6.35 ± 14.9 |
| January 28 | -7.21 ± 20.1 | -7.23 ± 20.1 | -7.20 ± 20.0 | -7.37 ± 20.5 | -1.50 ± 18.9 | -1.52 ± 19.2 | -0.97 ± 12.2 | -1.49 ± 18.8 |
| February 4 | 1.93 ± 12.5 | 1.93 ± 12.5 | 1.93 ± 12.5 | 1.99 ± 12.9 | 3.64 ± 11.9 | 3.72 ± 12.2 | 3.53 ± 11.5 | 3.63 ± 11.9 |
| February 11 | 6.30 ± 11.3 | 6.32 ± 11.4 | 6.30 ± 11.3 | 6.49 ± 11.7 | -0.35 ± 11.7 | -0.36 ± 12.0 | -0.35 ± 11.5 | -0.35 ± 11.8 |
| February 18 | -2.58 ± 16.4 | -2.58 ± 16.4 | -2.58 ± 16.4 | -2.65 ± 16.8 | 5.57 ± 18.2 | 5.65 ± 18.5 | 5.39 ± 17.6 | 5.50 ± 18.0 |
| February 25 | -7.08 ± 12.1 | -7.08 ± 12.0 | -7.15 ± 12.2 | -7.34 ± 12.5 | 4.12 ± 10.2 | 4.16 ± 10.3 | 4.43 ± 11.0 | 4.08 ± 10.1 |
| March 4 | -4.14 ± 11.8 | -4.13 ± 11.8 | -4.13 ± 11.8 | -4.23 ± 12.0 | -10.1 ± 13.0 | -10.2 ± 13.2 | -9.73 ± 12.5 | -10.1 ± 13.0 |
| March 11 | 3.51 ± 11.2 | 3.51 ± 11.2 | 3.49 ± 11.2 | 3.60 ± 11.5 | -0.76 ± 3.8 | -0.78 ± 3.9 | -0.75 ± 3.76 | -0.75 ± 3.79 |
| March 18 | 5.40 ± 11.6 | 5.36 ± 11.5 | 5.37 ± 11.6 | 5.54 ± 11.9 | -4.66 ± 13.0 | -4.74 ± 13.2 | -6.06 ± 16.9 | -4.70 ± 13.1 |
| March 26 | 1.63 ± 17.4 | 1.62 ± 17.3 | 1.62 ± 17.3 | 1.68 ± 18.0 | -5.61 ± 16.4 | -5.70 ± 16.6 | -5.50 ± 16.0 | -5.60 ± 16.4 |
| April 1 | 1.67 ± 14.8 | 1.67 ± 14.8 | 1.67 ± 14.8 | 1.70 ± 15.1 | -10.5 ± 18.4 | -10.7 ± 18.7 | -5.20 ± 9.12 | -10.5 ± 18.5 |
| April 8 | 3.81 ± 19.3 | 3.81 ± 19.3 | 3.80 ± 19.2 | 3.90 ± 19.8 | -9.76 ± 20.7 | -9.87 ± 20.9 | -6.80 ± 14.4 | -9.75 ± 20.7 |
| April 15 | -6.75 ± 13.5 | -6.75 ± 13.5 | -7.00 ± 14.0 | -7.22 ± 14.4 | -2.44 ± 14.4 | -2.48 ± 14.6 | -2.37 ± 14.0 | -2.44 ± 14.4 |
| April 22 | 6.51 ± 11.9 | 6.47 ± 11.8 | 6.28 ± 11.5 | 6.48 ± 11.9 | 5.86 ± 10.8 | 5.93 ± 11.0 | 5.68 ± 10.5 | 5.84 ± 10.8 |
| April 29 | 0.24 ± 11.7 | 0.24 ± 11.7 | 0.24 ± 11.7 | 0.25 ± 12.0 | 11.2 ± 13.2 | 11.5 ± 13.5 | 4.63 ± 5.42 | 11.2 ± 13.2 |
| May 6 | -12.4 ± 16.3 | -12.4 ± 16.3 | -12.4 ± 16.2 | -12.7 ± 16.6 | -3.65 ± 19.0 | -3.72 ± 19.4 | -3.54 ± 18.5 | -3.67 ± 19.1 |
| May 13 | 0.25 ± 9.69 | 0.25 ± 9.69 | 0.25 ± 9.69 | 0.26 ± 10.0 | 1.14 ± 10.8 | 1.17 ± 11.0 | 1.11 ± 10.5 | 1.14 ± 10.8 |
| May 20 | -0.34 ± 11.3 | -0.34 ± 11.3 | -0.34 ± 11.4 | -0.35 ± 11.7 | -5.64 ± 15.1 | -5.76 ± 15.4 | -5.51 ± 14.7 | -5.61 ± 15.0 |
| May 27 | -4.28 ± 18.0 | -4.29 ± 18.0 | -4.33 ± 18.2 | -4.41 ± 18.5 | 1.06 ± 14.2 | 1.08 ± 14.6 | 1.03 ± 13.9 | 1.06 ± 14.3 |
| June 3 | 0.65 ± 12.5 | 0.65 ± 12.5 | 0.66 ± 12.6 | 0.67 ± 12.8 | -0.88 ± 23.6 | -0.90 ± 24.0 | -0.86 ± 22.9 | -0.88 ± 23.6 |
| June 9 | 12.8 ± 25.7 | 12.8 ± 25.6 | 12.4 ± 24.8 | 12.5 ± 25.0 | 2.64 ± 20.3 | 2.71 ± 20.9 | 2.60 ± 20.0 | 2.78 ± 21.4 |
| June 17 | 3.80 ± 15.0 | 3.80 ± 15.0 | 3.91 ± 15.5 | 3.93 ± 15.5 | 13.2 ± 18.1 | 13.3 ± 18.3 | 12.7 ± 17.4 | 12.9 ± 17.8 |
| June 24 | -17.2 ± 13.8 | -17.2 ± 13.9 | -17.4 ± 14.0 | -17.6 ± 14.2 | -5.61 ± 14.1 | -5.90 ± 14.8 | -5.44 ± 13.6 | -5.62 ± 14.1 |

TABLE 3-4
AIRBORNE IODINE
(1.0E⁻³ pCi/m³ ± 2 Sigma)

| Sampling Stations | | | | | | | | |
|-------------------|--------------|--------------|--------------|--------------|----------------------|----------------------|----------------------|----------------------|
| COLLECTION DATE | SS | HIR | BC | ALL | CP | BASF | FE | NN-C |
| July 1 | -8.07 ± 20.5 | -8.07 ± 20.5 | -8.22 ± 20.9 | -8.25 ± 21.0 | 9.37 ± 19.0 | 9.56 ± 19.3 | 9.07 ± 18.4 | 9.41 ± 19.0 |
| July 8 | -12.6 ± 15.3 | -12.6 ± 15.3 | -12.9 ± 15.5 | -13.0 ± 15.7 | 0.26 ± 15.2 | 0.26 ± 15.6 | 0.25 ± 14.7 | 0.26 ± 15.2 |
| July 15 | -2.53 ± 20.4 | -2.52 ± 20.3 | -2.56 ± 20.6 | -2.61 ± 21.0 | -6.77 ± 22.2 | -6.94 ± 22.8 | -4.75 ± 15.6 | -6.79 ± 22.2 |
| July 23 | 1.23 ± 12.4 | 1.23 ± 12.3 | 1.25 ± 12.5 | 1.27 ± 12.7 | 16.8 ± 15.8 A | 17.1 ± 16.1 A | 8.31 ± 7.82 A | 16.7 ± 15.7 A |
| July 29 | -3.84 ± 22.2 | -1.96 ± 11.3 | -3.89 ± 22.5 | -3.96 ± 22.9 | -1.92 ± 20.4 | -1.97 ± 20.9 | -1.87 ± 19.8 | -1.47 ± 15.6 |
| August 5 | 14.1 ± 18.6 | 14.0 ± 18.5 | 14.3 ± 18.9 | 14.5 ± 19.1 | 0.25 ± 21.8 | 0.25 ± 22.2 | 0.24 ± 21.0 | 0.25 ± 21.8 |
| August 12 | 3.55 ± 17.7 | 3.54 ± 17.7 | 3.60 ± 18.0 | 3.65 ± 18.3 | -0.12 ± 16.2 | -0.12 ± 16.6 | -0.12 ± 15.9 | -0.12 ± 16.3 |
| August 19 | 3.97 ± 35.2 | 3.94 ± 35.0 | 4.02 ± 35.7 | 4.07 ± 36.2 | -12.0 ± 42.6 | -12.0 ± 42.4 | -11.5 ± 40.9 | -11.6 ± 41.1 |
| August 26 | 4.35 ± 24.1 | 4.33 ± 24.0 | 4.40 ± 24.4 | 4.49 ± 24.9 | -15.6 ± 27.8 | -15.8 ± 28.2 | -15.1 ± 27.0 | -15.7 ± 27.9 |
| September 2 | -5.91 ± 22.2 | -5.92 ± 22.2 | -6.01 ± 22.5 | -6.10 ± 22.9 | -17.0 ± 25.6 | -17.2 ± 25.9 | -16.4 ± 24.6 | -16.9 ± 25.4 |
| September 9 | 7.88 ± 23.3 | 7.88 ± 23.4 | 8.01 ± 23.7 | 8.19 ± 24.3 | 1.39 ± 12.7 | 1.42 ± 13.0 | 1.49 ± 13.6 | 1.39 ± 12.7 |
| September 16 | 1.41 ± 18.0 | 1.01 ± 12.9 | 1.47 ± 18.7 | 1.49 ± 19.1 | -13.9 ± 12.8 | -14.2 ± 13.1 | -13.4 ± 12.4 | -13.9 ± 12.8 |
| September 23 | -9.01 ± 19.5 | -8.92 ± 19.4 | -8.91 ± 19.3 | -9.09 ± 19.7 | 8.78 ± 19.3 | 8.93 ± 19.7 | 8.51 ± 18.7 | 8.78 ± 19.3 |
| September 30 | -2.44 ± 3.42 | -2.42 ± 3.39 | -2.46 ± 3.45 | -2.51 ± 3.51 | -2.95 ± 5.92 | -3.01 ± 6.04 | -1.45 ± 2.92 | -2.95 ± 5.91 |
| October 7 | -10.3 ± 20.6 | -10.2 ± 20.4 | -10.3 ± 20.7 | -7.59 ± 15.2 | -10.2 ± 20.5 | -6.53 ± 19.1 | -6.18 ± 18.1 | -6.39 ± 18.7 |
| October 14 | -6.30 ± 29.6 | -6.23 ± 29.3 | -6.35 ± 29.9 | -8.62 ± 40.5 | 2.66 ± 33.3 | 2.71 ± 33.8 | 2.55 ± 31.9 | 2.65 ± 33.1 |
| October 21 | 0.50 ± 34.1 | 0.50 ± 33.8 | 0.51 ± 34.3 | 0.51 ± 34.7 | 10.6 ± 26.2 | 10.6 ± 26.2 | 10.3 ± 25.3 | 10.56 ± 26.1 |
| October 28 | 15.0 ± 34.7 | 14.82 ± 34.3 | 15.1 ± 35.1 | 14.8 ± 34.3 | -36.6 ± 44.7 | -36.2 ± 44.3 | -26.9 ± 32.9 | -36.2 ± 44.3 |
| November 4 | 3.46 ± 28.1 | 3.28 ± 26.6 | 3.32 ± 27.0 | 3.25 ± 26.4 | -9.28 ± 26.0 | -9.32 ± 26.2 | -6.77 ± 19.0 | -9.17 ± 25.7 |
| November 11 | -12.1 ± 25.3 | -12.0 ± 25.0 | -12.1 ± 25.2 | -11.9 ± 24.9 | 20.0 ± 29.0 | 20.2 ± 29.3 | 19.4 ± 28.1 | 19.7 ± 28.5 |
| November 18 | 17.5 ± 25.9 | 17.79 ± 26.3 | 17.7 ± 26.3 | 17.6 ± 26.0 | -0.23 ± 19.1 | -0.23 ± 19.3 | -0.22 ± 18.6 | -0.23 ± 19.1 |
| November 26 | -5.06 ± 29.0 | -5.28 ± 30.3 | -5.11 ± 29.3 | -5.0 ± 28.8 | 4.72 ± 24.6 | 4.74 ± 24.7 | 4.53 ± 23.6 | 4.69 ± 24.4 |
| December 3 | 2.61 ± 14.3 | 2.61 ± 14.3 | 2.65 ± 14.6 | 2.58 ± 14.1 | -14.7 ± 26.8 | -14.8 ± 27.1 | -14.1 ± 25.9 | -14.5 ± 26.6 |
| December 10 | -6.19 ± 32.3 | -2.15 ± 11.2 | -6.64 ± 34.6 | -6.54 ± 34.1 | 13.4 ± 32.1 | 13.6 ± 32.7 | 13.0 ± 31.1 | 13.3 ± 31.9 |
| December 16 | 2.99 ± 37.1 | 2.99 ± 37.1 | 2.92 ± 36.3 | 2.87 ± 35.6 | 16.7 ± 33.6 | 17.0 ± 34.0 | 16.2 ± 32.4 | 16.8 ± 33.7 |
| December 23 | -6.00 ± 24.9 | -6.00 ± 24.8 | -6.07 ± 25.1 | -5.97 ± 24.7 | -9.59 ± 36.9 | -9.71 ± 37.4 | -9.27 ± 35.7 | -9.49 ± 36.5 |
| December 30 | -4.95 ± 20.1 | -4.94 ± 20.1 | -4.98 ± 20.3 | -4.93 ± 20.0 | 0.37 ± 15.9 | 0.37 ± 16.0 | 0.39 ± 17.0 | 0.37 ± 15.7 |

A= <MDC

TABLE 3-5
AIR PARTICULATES
GAMMA EMITTER CONCENTRATIONS
 (1.0E⁻³ pCi/m³ ± 2 Sigma)

| SAMPLING LOCATIONS | Nuclide | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter | Avg. ± 2 s.d. |
|---------------------------|----------------|--------------------|--------------------|--------------------|--------------------|----------------------|
| SS | Cs-134 | -0.58 ± 0.66 | 0.02 ± 0.60 | -0.16 ± 0.92 | -0.15 ± 0.75 | 90.4 ± 29.9 |
| | Cs-137 | 0.13 ± 0.53 | -0.45 ± 0.52 | -0.08 ± 0.77 | 0.22 ± 0.43 | |
| | Be-7 | 77.3 ± 17.5 | 89.3 ± 19.5 | 112 ± 30.7 | 83.3 ± 18.2 | |
| HIR | Cs-134 | 0.00 ± 0.85 | 0.63 ± 0.93 | 0.51 ± 1.57 | -0.54 ± 1.14 | 88.7 ± 41.8 |
| | Cs-137 | 0.34 ± 0.60 | 0.19 ± 0.71 | -0.50 ± 1.32 | -0.13 ± 0.92 | |
| | Be-7 | 81.5 ± 21.4 | 101 ± 25.9 | 110 ± 32.8 | 62.8 ± 20.9 | |
| BC | Cs-134 | -1.20 ± 0.94 | 0.14 ± 0.52 | 0.95 ± 0.95 | -0.51 ± 1.10 | 100 ± 14.4 |
| | Cs-137 | -0.38 ± 0.80 | -0.24 ± 0.65 | 0.06 ± 0.81 | -0.74 ± 0.79 | |
| | Be-7 | 92.9 ± 21.7 | 109 ± 25.9 | 102 ± 39.8 | 95.7 ± 29.0 | |
| ALL | Cs-134 | -0.55 ± 0.97 | -0.55 ± 1.10 | -0.81 ± 0.72 | 0.19 ± 1.04 | 108 ± 18.7 |
| | Cs-137 | 0.20 ± 0.97 | -0.07 ± 0.92 | 0.17 ± 0.57 | -0.07 ± 0.78 | |
| | Be-7 | 107 ± 23.8 | 118 ± 29.8 | 112 ± 26.4 | 95.6 ± 23.0 | |
| CP | Cs-134 | -0.37 ± 0.81 | -0.15 ± 0.97 | -0.21 ± 0.78 | 0.45 ± 1.09 | 92.2 ± 7.05 |
| | Cs-137 | 0.07 ± 0.61 | 0.34 ± 0.77 | 0.46 ± 0.67 | 0.60 ± 0.79 | |
| | Be-7 | 96.8 ± 21.4 | 88.2 ± 25.9 | 91.6 ± 26.6 | 92.2 ± 26.9 | |
| BASF | Cs-134 | 0.17 ± 0.65 | -0.45 ± 0.85 | -0.47 ± 0.98 | 0.46 ± 0.85 | 116 ± 25.0 |
| | Cs-137 | -0.06 ± 0.53 | 0.14 ± 0.56 | 0.16 ± 0.98 | 0.48 ± 0.66 | |
| | Be-7 | 114 ± 21.2 | 124 ± 24.5 | 127 ± 33.2 | 99.1 ± 21.3 | |
| FE | Cs-134 | 0.26 ± 0.80 | -0.62 ± 0.72 | 0.17 ± 0.68 | 0.33 ± 1.01 | 112 ± 9.80 |
| | Cs-137 | -0.08 ± 0.66 | 0.21 ± 0.67 | 0.19 ± 0.65 | 0.50 ± 0.87 | |
| | Be-7 | 114 ± 24.2 | 111 ± 28.2 | 117 ± 28.4 | 105 ± 30.0 | |
| NN-C | Cs-134 | 0.53 ± 1.05 | -0.11 ± 0.85 | -0.29 ± 1.43 | -0.41 ± 0.72 | 114 ± 26.9 |
| | Cs-137 | -0.08 ± 0.80 | -0.07 ± 0.78 | -0.68 ± 1.26 | 0.53 ± 0.74 | |
| | Be-7 | 115 ± 28.0 | 112 ± 24.7 | 131 ± 34.5 | 98.6 ± 20.1 | |

TABLE 3-6
MILK
GAMMA EMITTER AND STRONTIUM CONCENTRATIONS
 (pCi/Liter ± 2 Sigma)

| NUCLIDE | *COLONIAL PARKWAY | | BEACHY FARM-C |
|------------------------|----------------------|----------|----------------------|
| <u>JANUARY</u> | | | |
| Cs-134 | -2.16 ± 4.12 | | -3.03 ± 4.32 |
| Cs-137 | -4.57 ± 4.47 | | 4.14 ± 4.28 |
| Ba-140 | 7.67 ± 17.9 | | -2.56 ± 17.2 |
| La-140 | -0.79 ± 5.28 | | -4.57 ± 6.92 |
| I-131 | 0.18 ± 0.43 | | -0.29 ± 0.46 |
| K-40 | 939 ± 149 | | 1222 ± 157 |
| <u>FEBRUARY</u> | | | |
| Cs-134 | -1.16 ± 4.59 | | -1.94 ± 4.67 |
| Cs-137 | 1.82 ± 4.62 | | 2.05 ± 3.86 |
| Ba-140 | -4.27 ± 14.7 | | 0.86 ± 14.7 |
| La-140 | -1.84 ± 4.16 | | -1.44 ± 4.12 |
| I-131 | 0.53 ± 0.56 | | 0.11 ± 0.46 |
| K-40 | 1303 ± 167 | | 1069 ± 160 |
| <u>MARCH</u> | | | |
| Cs-134 | 1.34 ± 4.92 | | 0.48 ± 4.45 |
| Cs-137 | 1.12 ± 4.74 | | 0.69 ± 4.51 |
| Ba-140 | 19.4 ± 16.3 | A | 8.13 ± 16.8 |
| La-140 | -0.98 ± 5.93 | | -1.58 ± 2.98 |
| I-131 | 0.69 ± 0.52 | A | -0.29 ± 0.47 |
| K-40 | 1436 ± 172 | | 1342 ± 166 |
| Sr-89 | -0.92 ± 2.35 | | |
| Sr-90 | 1.89 ± 0.73 | | |
| <u>APRIL</u> | | | |
| Cs-134 | -1.79 ± 4.55 | | -3.62 ± 3.86 |
| Cs-137 | -1.64 ± 4.00 | | -0.84 ± 3.59 |
| Ba-140 | 2.78 ± 16.4 | | -7.65 ± 15.1 |
| La-140 | 1.00 ± 4.92 | | 4.65 ± 4.54 A |
| I-131 | 0.23 ± 0.45 | | 0.40 ± 0.48 |
| K-40 | 1349 ± 166 | | 1024 ± 126 |
| <u>MAY</u> | | | |
| Cs-134 | 6.12 ± 5.94 | A | 2.21 ± 4.97 |
| Cs-137 | -2.55 ± 6.30 | | -0.39 ± 4.79 |
| Ba-140 | 11.8 ± 26.7 | | -1.82 ± 23.5 |
| La-140 | -2.43 ± 8.02 | | 3.92 ± 6.88 |
| I-131 | 0.12 ± 0.49 | | -0.05 ± 0.50 |
| K-40 | 1238 ± 212 | | 1144 ± 165 |

*Sr-89/90 analysis performed quarterly on location Colonial Parkway only.

A= <MDC

TABLE 3-6
MILK
GAMMA EMITTER AND STRONTIUM CONCENTRATIONS
 (pCi/Liter ± 2 Sigma)

| NUCLIDE | *COLONIAL PARKWAY | BEACHY FARM-C |
|-------------------------|----------------------|----------------------|
| <u>JUNE</u> | | |
| Cs-134 | 3.17 ± 3.49 | 2.16 ± 3.95 |
| Cs-137 | -1.47 ± 3.20 | 2.59 ± 3.44 |
| Ba-140 | 7.95 ± 16.2 | -1.76 ± 13.8 |
| La-140 | 0.84 ± 4.65 | -1.02 ± 5.03 |
| I-131 | 0.06 ± 0.43 | 0.33 ± 0.55 |
| K-40 | 1375 ± 137 | 1406 ± 134 |
| Sr-89 | -1.33 ± 2.41 | |
| Sr-90 | 3.21 ± 0.77 | |
| <u>JULY</u> | | |
| Cs-134 | -3.13 ± 4.49 | 3.46 ± 4.13 |
| Cs-137 | 0.28 ± 3.84 | 2.14 ± 4.65 |
| Ba-140 | 8.59 ± 17.3 | -8.59 ± 20.7 |
| La-140 | -1.40 ± 4.82 | 4.65 ± 7.09 |
| I-131 | -0.18 ± 0.54 | 0.05 ± 0.47 |
| K-40 | 1243 ± 137 | 1303 ± 175 |
| <u>AUGUST</u> | | |
| Cs-134 | 0.20 ± 5.77 | 2.85 ± 5.22 |
| Cs-137 | 1.70 ± 5.10 | 5.53 ± 5.26 A |
| Ba-140 | 4.71 ± 18.9 | -0.47 ± 20.6 |
| La-140 | 1.00 ± 6.40 | -0.60 ± 6.09 |
| I-131 | -0.23 ± 0.46 | -0.11 ± 0.36 |
| K-40 | 1387 ± 197 | 1370 ± 178 |
| <u>SEPTEMBER</u> | | |
| Cs-134 | -2.27 ± 3.67 | -1.08 ± 3.37 |
| Cs-137 | 1.37 ± 3.35 | 2.29 ± 3.35 |
| Ba-140 | -6.23 ± 16.3 | -0.53 ± 17.5 |
| La-140 | 0.89 ± 4.45 | 1.09 ± 4.62 |
| I-131 | 0.10 ± 0.52 | 0.09 ± 0.50 |
| K-40 | 1351 ± 132 | 1303 ± 113 |
| Sr-89 | 3.47 ± 2.35 A | |
| Sr-90 | 2.84 ± 0.71 | |
| <u>OCTOBER</u> | | |
| Cs-134 | -1.78 ± 3.91 | -3.82 ± 3.90 |
| Cs-137 | -1.47 ± 4.13 | 4.86 ± 4.67 A |
| Ba-140 | 28.7 ± 19.9 A | 14.5 ± 20.1 |
| La-140 | 4.80 ± 4.71 A | 2.51 ± 5.37 |
| I-131 | 0.52 ± 0.56 | -0.09 ± 0.37 |
| K-40 | 1256 ± 162 | 1404 ± 145 |

*Sr-89/90 analysis performed quarterly on location Colonial Parkway only.

A= <MDC

TABLE 3-6
MILK
GAMMA EMITTER AND STRONTIUM CONCENTRATIONS
 (pCi/Liter ± 2 Sigma)

| NUCLIDE | *COLONIAL PARKWAY | BEACHY FARM-C |
|-----------------|----------------------|----------------------|
| NOVEMBER | | |
| Cs-134 | -0.09 ± 4.48 | -2.00 ± 3.61 |
| Cs-137 | 1.33 ± 3.95 | 0.23 ± 3.71 |
| Ba-140 | -20.3 ± 17.9 | 12.8 ± 18.7 |
| La-140 | -3.00 ± 4.78 | 0.87 ± 3.88 |
| I-131 | -0.57 ± 0.52 | 0.64 ± 0.40 A |
| K-40 | 1219 ± 155 | 1167 ± 161 |
| DECEMBER | | |
| Cs-134 | -2.57 ± 3.98 | -1.95 ± 4.04 |
| Cs-137 | 1.30 ± 4.39 | 0.74 ± 4.30 |
| Ba-140 | 4.37 ± 22.1 | 3.36 ± 22.5 |
| La-140 | 0.10 ± 5.90 | -0.80 ± 5.25 |
| I-131 | 0.36 ± 0.50 | -0.26 ± 0.40 |
| K-40 | 1301 ± 159 | 1040 ± 160 |
| Sr-89 | -0.05 ± 2.59 | |
| Sr-90 | 0.83 ± 0.66 A | |

*Sr-89/90 analysis performed quarterly on location Colonial Parkway only.
A= <MDC

TABLE 3-7
FOOD PRODUCTS
GAMMA EMITTER CONCENTRATIONS
 (pCi/kg (wet) ± 2 Sigma)

| SAMPLING LOCATIONS | COLLECTION DATE | SAMPLE TYPE | NUCLIDE | | | |
|--------------------|-----------------|-------------|--------------|-------------|---------------|-------------|
| | | | Cs-134 | Cs-137 | I-131 | K-40 |
| BROCK FARM | 11/12/2025 | PEANUTS | 2.85 ± 3.55 | 5.08 ± 3.27 | A 7.01 ± 29.7 | 4558 ± 163 |
| | 11/12/2025 | CORN | -3.78 ± 3.68 | 0.66 ± 3.33 | -0.82 ± 31.7 | 2202 ± 122 |
| SLADE FARM | 12/3/2025 | SOYBEANS | 8.56 ± 17.6 | 1.58 ± 13.8 | 1.70 ± 19.6 | 13890 ± 821 |

A= <MDC

**TABLE 3-8
 WELL WATER
 GAMMA EMITTER AND TRITIUM CONCENTRATIONS
 (pCi/Liter ± 2 Sigma)**

| SAMPLING LOCATIONS | COLLECTION DATE | NUCLIDE | | | | |
|--------------------|-----------------|---------------|---------------|---------------|---------------|---------------|
| SS | | Mn-54 | Co-58 | Fe-59 | Co-60 | Zn-65 |
| | 3/11/2025 | -0.68 ± 3.05 | 1.00 ± 2.63 | -0.74 ± 6.42 | 2.31 ± 3.19 | -6.40 ± 7.19 |
| | 6/17/2025 | 0.74 ± 3.97 | 3.17 ± 4.09 | 7.65 ± 8.41 | 0.14 ± 4.31 | 0.14 ± 9.00 |
| | 9/9/2025 | -3.51 ± 4.35 | 2.52 ± 3.21 | -5.73 ± 7.82 | -2.63 ± 4.29 | -8.75 ± 10.7 |
| | 12/10/2025 | 1.08 ± 3.20 | -0.01 ± 3.01 | 5.31 ± 7.21 | -0.22 ± 3.66 | -3.43 ± 8.20 |
| | | Nb-95 | Zr-95 | I-131 | Cs-134 | Cs-137 |
| | 3/11/2025 | 0.33 ± 2.86 | 1.72 ± 5.14 | 0.10 ± 0.46 | -1.10 ± 3.34 | -1.52 ± 3.40 |
| | 6/17/2025 | -2.49 ± 4.43 | -3.35 ± 7.79 | -0.21 ± 0.47 | 0.09 ± 3.96 | 2.41 ± 3.60 |
| | 9/9/2025 | -1.70 ± 4.90 | 0.59 ± 7.61 | -0.33 ± 0.48 | 4.44 ± 5.05 | 3.41 ± 5.16 |
| | 12/10/2025 | 1.47 ± 3.45 | 1.35 ± 5.35 | -0.31 ± 0.44 | 0.42 ± 4.16 | -3.14 ± 3.94 |
| | | Ba-140 | La-140 | H-3 | | |
| | 3/11/2025 | 8.07 ± 11.1 | -1.64 ± 4.63 | 21.3 ± 652 | | |
| 6/17/2025 | 6.96 ± 17.6 | -4.27 ± 7.00 | -209 ± 756 | | | |
| 9/9/2025 | 11.0 ± 13.8 | -1.13 ± 5.81 | 0.00 ± 646 | | | |
| 12/10/2025 | -18.3 ± 18.8 | -4.93 ± 6.73 | 440 ± 647 | | | |
| HIR | | Mn-54 | Co-58 | Fe-59 | Co-60 | Zn-65 |
| | 3/11/2025 | -1.79 ± 2.50 | -1.33 ± 2.58 | 2.65 ± 5.11 | 0.54 ± 2.89 | -2.16 ± 4.73 |
| | 6/17/2025 | 1.54 ± 3.36 | -1.27 ± 3.67 | -3.26 ± 6.00 | -0.57 ± 4.05 | -10.7 ± 7.55 |
| | 9/9/2025 | 2.31 ± 4.05 | -0.75 ± 4.43 | 10.4 ± 7.08 A | 3.46 ± 4.62 | -15.1 ± 10.6 |
| | 12/10/2025 | 1.95 ± 2.93 | 0.18 ± 2.94 | -2.60 ± 7.01 | 1.46 ± 3.20 | -12.2 ± 7.87 |
| | | Nb-95 | Zr-95 | I-131 | Cs-134 | Cs-137 |
| | 3/11/2025 | 0.56 ± 2.49 | 5.27 ± 4.58 A | -0.01 ± 0.42 | -1.41 ± 2.89 | 1.41 ± 2.84 |
| | 6/17/2025 | 0.17 ± 3.94 | -4.42 ± 6.25 | -0.51 ± 0.47 | 1.41 ± 4.01 | -0.80 ± 3.78 |
| | 9/9/2025 | 2.82 ± 4.32 | -1.01 ± 6.53 | -0.03 ± 0.48 | -1.12 ± 4.14 | -1.84 ± 4.50 |
| | 12/10/2025 | 2.36 ± 2.82 | -2.42 ± 5.41 | 0.64 ± 0.55 A | -3.31 ± 3.38 | 1.59 ± 3.06 |
| | | Ba-140 | La-140 | H-3 | | |
| | 3/11/2025 | -8.83 ± 9.7 | 0.01 ± 3.20 | 262 ± 666 | | |
| 6/17/2025 | -14.8 ± 16.9 | 0.58 ± 6.19 | -104 ± 756 | | | |
| 9/9/2025 | -1.53 ± 16.6 | 1.29 ± 4.13 | 91.3 ± 647 | | | |
| 12/10/2025 | 2.72 ± 16.7 | 0.77 ± 4.53 | 239 ± 641 | | | |
| CS | | Mn-54 | Co-58 | Fe-59 | Co-60 | Zn-65 |
| | 3/11/2025 | 1.66 ± 2.48 | -1.27 ± 2.31 | 1.31 ± 3.59 | 0.65 ± 2.61 | -5.80 ± 5.75 |
| | 6/17/2025 | 3.24 ± 4.12 | 0.42 ± 3.75 | -1.93 ± 6.59 | 2.38 ± 4.32 | -0.60 ± 8.07 |
| | 9/9/2025 | -1.03 ± 4.32 | -0.42 ± 5.53 | -2.48 ± 11.5 | 2.03 ± 5.32 | -8.73 ± 12.0 |
| | 12/10/2025 | -1.21 ± 3.44 | -0.08 ± 3.71 | 1.20 ± 6.48 | -0.97 ± 3.63 | -4.55 ± 8.00 |
| | | Nb-95 | Zr-95 | I-131 | Cs-134 | Cs-137 |
| | 3/11/2025 | 1.85 ± 2.39 | -2.04 ± 3.36 | -0.16 ± 0.33 | 0.26 ± 2.30 | 0.14 ± 2.50 |
| | 6/17/2025 | -1.18 ± 3.35 | 0.20 ± 6.56 | -0.41 ± 0.44 | -0.59 ± 4.49 | -1.42 ± 4.61 |
| | 9/9/2025 | -0.64 ± 4.83 | 4.40 ± 6.38 | -0.42 ± 0.48 | -2.95 ± 4.86 | -2.87 ± 5.12 |
| | 12/10/2025 | -0.39 ± 3.07 | -5.05 ± 5.72 | 0.52 ± 0.44 A | -0.17 ± 3.16 | -0.24 ± 3.74 |
| | | Ba-140 | La-140 | H-3 | Th-228 | |
| | 3/11/2025 | -4.91 ± 8.77 | 1.08 ± 3.58 | -276 ± 632 | 8.73 ± 7.08 | |
| 6/17/2025 | 2.55 ± 16.9 | 3.70 ± 6.00 | -228 ± 742 | | | |
| 9/9/2025 | 9.85 ± 15.8 | 1.58 ± 5.42 | 13.2 ± 651 | | | |
| 12/10/2025 | 6.52 ± 16.6 | 0.59 ± 5.49 | 218 ± 637 | | | |

A= <MDC

**TABLE 3-9
 RIVER WATER
 GAMMA EMITTER AND TRITIUM CONCENTRATIONS
 (pCi/Liter ± 2 Sigma)**

| SAMPLING LOCATIONS | COLLECTION DATE | NUCLIDE | | | | |
|--------------------|-----------------|--------------|--------------|-----------------------|--------------|-----------------------|
| | | Mn-54 | Co-58 | Fe-59 | Co-60 | Zn-65 |
| SD | 1/7/2025 | 0.40 ± 3.36 | -1.45 ± 3.33 | 0.51 ± 7.03 | 1.40 ± 3.15 | 6.13 ± 7.94 |
| | 2/11/2025 | 1.21 ± 3.83 | -1.84 ± 3.27 | -6.49 ± 6.70 | 1.18 ± 3.70 | 2.67 ± 9.51 |
| | 3/11/2025 | 0.77 ± 2.99 | -1.96 ± 2.89 | -3.64 ± 5.02 | 0.16 ± 3.39 | -2.97 ± 6.84 |
| | 4/1/2025 | -0.32 ± 2.67 | 1.72 ± 2.84 | 1.20 ± 5.57 | 1.23 ± 2.97 | -2.36 ± 5.83 |
| | 5/6/2025 | -1.14 ± 3.34 | 1.95 ± 2.78 | -1.13 ± 5.82 | 2.20 ± 4.06 | 3.18 ± 6.62 |
| | 6/3/2025 | 1.60 ± 2.97 | -0.58 ± 2.84 | -5.81 ± 6.44 | -2.07 ± 3.00 | -8.21 ± 8.62 |
| | 7/8/2025 | -2.91 ± 3.75 | -4.14 ± 3.57 | 5.72 ± 7.16 | 0.24 ± 4.07 | -0.77 ± 6.79 |
| | 8/5/2025 | -0.82 ± 3.81 | -1.55 ± 3.80 | 1.86 ± 7.53 | 4.53 ± 4.44 | A 1.12 ± 8.37 |
| | 9/2/2025 | -2.06 ± 3.78 | 2.85 ± 4.00 | -1.02 ± 6.88 | 4.48 ± 4.29 | A -2.69 ± 8.05 |
| | 10/7/2025 | 1.72 ± 3.52 | -0.95 ± 2.97 | 3.02 ± 7.52 | 2.05 ± 4.46 | -10.3 ± 8.48 |
| | 11/4/2025 | 1.70 ± 3.44 | -0.73 ± 2.87 | 1.86 ± 8.00 | -1.49 ± 3.30 | -0.28 ± 6.47 |
| | 12/3/2025 | -0.36 ± 2.03 | -1.60 ± 1.85 | -1.31 ± 4.40 | 0.13 ± 1.90 | -3.25 ± 5.02 |
| | | Nb-95 | Zr-95 | I-131 | Cs-134 | Cs-137 |
| | 1/7/2025 | 3.27 ± 3.58 | -0.61 ± 5.71 | -0.05 ± 6.07 | 1.30 ± 3.38 | -1.13 ± 3.78 |
| | 2/11/2025 | -3.62 ± 3.99 | -4.40 ± 7.14 | 0.79 ± 4.96 | 1.56 ± 3.86 | 1.88 ± 4.14 |
| | 3/11/2025 | 2.33 ± 2.75 | 2.90 ± 4.77 | 3.18 ± 3.45 | 0.61 ± 3.11 | 0.81 ± 2.95 |
| | 4/1/2025 | -0.49 ± 2.58 | -1.65 ± 5.22 | 1.08 ± 5.34 | -0.77 ± 2.97 | 2.97 ± 3.05 |
| | 5/6/2025 | -0.72 ± 3.37 | 3.41 ± 7.43 | -0.76 ± 4.33 | 2.50 ± 4.49 | 1.14 ± 3.80 |
| | 6/3/2025 | -0.46 ± 3.25 | -5.27 ± 5.83 | 0.18 ± 3.81 | 0.90 ± 3.50 | -0.03 ± 3.02 |
| | 7/8/2025 | -0.17 ± 3.62 | -7.49 ± 6.00 | -1.02 ± 5.98 | 1.10 ± 4.22 | 0.24 ± 4.03 |
| | 8/5/2025 | 1.58 ± 4.03 | 0.94 ± 6.32 | -1.42 ± 4.33 | 1.27 ± 4.96 | -1.36 ± 4.27 |
| | 9/2/2025 | 3.52 ± 3.61 | 7.72 ± 6.43 | A -1.05 ± 4.94 | -2.27 ± 4.37 | 0.67 ± 4.12 |
| | 10/7/2025 | 2.01 ± 3.83 | 2.21 ± 7.65 | 1.35 ± 5.67 | -0.84 ± 3.91 | -0.55 ± 4.20 |
| | 11/4/2025 | -2.16 ± 3.70 | 0.86 ± 6.44 | 0.29 ± 5.62 | -0.32 ± 4.19 | 1.22 ± 3.61 |
| | 12/3/2025 | 1.09 ± 2.00 | 0.01 ± 3.38 | -0.20 ± 3.77 | 1.16 ± 2.15 | 0.10 ± 2.14 |
| | | Ba-140 | La-140 | H-3 | K-40 | |
| | 1/7/2025 | 10.6 ± 15.9 | 5.32 ± 6.03 | | | |
| | 2/11/2025 | 3.04 ± 17.0 | 0.55 ± 4.03 | | | |
| | 3/11/2025 | 0.23 ± 10.5 | -0.06 ± 3.74 | 141 ± 625 | | |
| | 4/1/2025 | -3.82 ± 14.7 | 2.00 ± 4.17 | | | |
| | 5/6/2025 | 10.4 ± 14.1 | -1.36 ± 6.14 | | | |
| | 6/3/2025 | -1.08 ± 12.0 | 4.35 ± 5.27 | 454 ± 615 | | |
| | 7/8/2025 | -7.28 ± 16.4 | 4.21 ± 6.07 | | | |
| | 8/5/2025 | -5.27 ± 14.4 | 1.35 ± 6.44 | | | |
| | 9/2/2025 | 3.55 ± 16.3 | -1.59 ± 4.45 | 300 ± 679 | | |
| | 10/7/2025 | -2.04 ± 16.2 | 1.69 ± 5.03 | | | |
| | 11/4/2025 | 2.65 ± 16.6 | -3.00 ± 7.03 | | | |
| | 12/3/2025 | -1.12 ± 11.1 | -1.05 ± 3.17 | 540 ± 697 | 128 ± 50.6 | |

A= <MDC

**TABLE 3-9
 RIVER WATER
 GAMMA EMITTER AND TRITIUM CONCENTRATIONS
 (pCi/Liter ± 2 Sigma)**

| SAMPLING LOCATIONS | COLLECTION DATE | NUCLIDE | | | | |
|--------------------|-----------------|----------------------|----------------------|----------------------|--------------------|----------------------|
| | | Mn-54 | Co-58 | Fe-59 | Co-60 | Zn-65 |
| SW-C | 1/7/2025 | 1.81 ± 1.84 | -0.95 ± 1.78 | 0.36 ± 3.87 | 0.88 ± 1.91 | -2.00 ± 4.25 |
| | 2/11/2025 | 1.59 ± 3.43 | -1.29 ± 3.71 | 0.71 ± 7.45 | 3.29 ± 3.98 | -4.25 ± 8.60 |
| | 3/11/2025 | 0.78 ± 2.66 | -1.04 ± 2.88 | -3.43 ± 5.69 | 1.15 ± 2.87 | 3.01 ± 6.47 |
| | 4/1/2025 | 0.27 ± 1.81 | -0.83 ± 1.70 | -1.78 ± 4.04 | -1.00 ± 2.30 | 3.70 ± 4.00 |
| | 5/6/2025 | 0.83 ± 2.85 | -1.80 ± 3.39 | 0.60 ± 7.10 | -1.54 ± 4.22 | 1.17 ± 6.58 |
| | 6/3/2025 | 1.18 ± 3.41 | -1.28 ± 3.17 | -0.75 ± 6.38 | 4.89 ± 3.86 | A 2.16 ± 7.29 |
| | 7/8/2025 | -3.98 ± 4.05 | -0.54 ± 4.33 | -0.51 ± 7.39 | 1.38 ± 4.21 | -0.78 ± 8.32 |
| | 8/5/2025 | 3.17 ± 2.99 A | 1.23 ± 3.19 | 0.25 ± 7.86 | 2.79 ± 3.77 | -5.15 ± 8.72 |
| | 9/2/2025 | -2.05 ± 3.90 | 1.22 ± 4.42 | 4.97 ± 8.24 | 0.10 ± 4.00 | -1.71 ± 7.72 |
| | 10/7/2025 | 1.57 ± 3.40 | -1.95 ± 3.30 | 2.01 ± 7.35 | -1.52 ± 3.39 | -9.03 ± 7.09 |
| | 11/4/2025 | -0.49 ± 2.81 | 3.26 ± 3.31 | -2.35 ± 6.50 | 0.58 ± 3.23 | 3.27 ± 6.63 |
| | 12/3/2025 | 1.64 ± 3.82 | -1.59 ± 3.35 | 1.50 ± 7.25 | -2.21 ± 3.61 | 4.56 ± 6.95 |
| | | | Nb-95 | Zr-95 | I-131 | Cs-134 |
| | 1/7/2025 | -0.55 ± 2.10 | 3.00 ± 3.17 | -0.09 ± 3.12 | 1.91 ± 2.38 | 0.90 ± 2.03 |
| | 2/11/2025 | 1.63 ± 4.46 | -4.15 ± 7.53 | 2.75 ± 5.00 | 2.38 ± 4.87 | -2.31 ± 3.79 |
| | 3/11/2025 | 2.38 ± 3.06 | -2.41 ± 4.53 | 2.46 ± 3.24 | 0.97 ± 3.23 | 0.62 ± 3.29 |
| | 4/1/2025 | 0.14 ± 2.19 | 2.16 ± 3.85 | 1.43 ± 4.02 | -0.24 ± 2.50 | -0.50 ± 2.01 |
| | 5/6/2025 | 1.55 ± 3.20 | 2.84 ± 5.72 | 2.78 ± 4.28 | -0.29 ± 3.30 | 0.10 ± 3.12 |
| | 6/3/2025 | 1.92 ± 3.25 | 10.1 ± 6.44 A | 1.91 ± 3.89 | 5.52 ± 3.54 | A 2.12 ± 3.23 |
| | 7/8/2025 | -1.90 ± 4.45 | -0.53 ± 8.20 | 1.19 ± 5.65 | 2.71 ± 4.41 | -0.75 ± 3.96 |
| | 8/5/2025 | -1.77 ± 3.67 | 2.96 ± 6.74 | 4.93 ± 4.65 A | -0.41 ± 4.06 | -0.66 ± 4.04 |
| | 9/2/2025 | -3.19 ± 3.93 | 3.34 ± 6.78 | 0.58 ± 4.21 | 0.84 ± 3.91 | -2.25 ± 4.32 |
| | 10/7/2025 | 0.02 ± 3.16 | 2.49 ± 5.98 | -1.57 ± 4.89 | -0.05 ± 3.60 | 1.44 ± 3.00 |
| | 11/4/2025 | 0.63 ± 2.87 | -5.35 ± 3.85 | 2.45 ± 5.38 | -0.28 ± 3.39 | 0.16 ± 2.96 |
| | 12/3/2025 | -0.65 ± 2.71 | -5.37 ± 5.52 | -1.04 ± 5.97 | -3.00 ± 3.98 | -0.83 ± 3.54 |
| | | Ba-140 | La-140 | H-3 | K-40 | |
| | 1/7/2025 | 1.35 ± 9.4 | -0.82 ± 2.64 | | | |
| | 2/11/2025 | 8.77 ± 15.0 | -1.53 ± 3.68 | | | |
| | 3/11/2025 | 2.91 ± 10.8 | -0.60 ± 4.01 | 650 ± 660 | | |
| | 4/1/2025 | -5.47 ± 9.8 | -2.03 ± 3.72 | | 81.1 ± 45.7 | |
| | 5/6/2025 | -5.96 ± 14.1 | 2.33 ± 3.30 | | | |
| | 6/3/2025 | 4.67 ± 11.5 | 2.14 ± 4.73 | 380 ± 600 | | |
| | 7/8/2025 | 2.38 ± 18.9 | -0.60 ± 7.78 | | | |
| | 8/5/2025 | 8.62 ± 14.3 | -1.01 ± 4.15 | | | |
| | 9/2/2025 | 5.42 ± 15.7 | -2.95 ± 5.02 | 80.3 ± 667 | | |
| | 10/7/2025 | 12.47 ± 15.4 | -0.19 ± 5.67 | | 136 ± 62.1 | |
| | 11/4/2025 | 8.13 ± 13.6 | -3.52 ± 3.73 | | | |
| | 12/3/2025 | -5.10 ± 19.1 | -0.41 ± 6.39 | 1020 ± 727 A | | |

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TABLE 3-10
SEDIMENT SILT
GAMMA EMITTER CONCENTRATIONS
 (pCi/kg (dry) ± 2 Sigma)

| SAMPLING LOCATIONS | COLLECTION DATE | NUCLIDE | | | |
|--------------------|-----------------|---------------|---------------|---------------|--------------|
| | | Cs-134 | Cs-137 | K-40 | Th-228 |
| SD | 3/25/2025 | 45.8 ± 61.0 | 48.0 ± 63.8 | 12250 ± 2131 | 1077 ± 187 |
| | 9/18/2025 | 78.9 ± 63.6 A | 80.3 ± 57.0 A | 16660 ± 1814 | 1343 ± 129 |
| | | Th-232 | Ac-228 | Ra-226 | Be-7 |
| | 3/25/2025 | | 1333 ± 295 | | |
| | 9/18/2025 | 912 ± 258 | 1022 ± 606 | 2288 ± 1535 | 1089 ± 836.8 |
| | | | | | |
| SI | 3/25/2025 | 32.5 ± 62.3 | 91.6 ± 73.1 A | 15470 ± 2107 | 967 ± 194 |
| | 9/23/2025 | 55.1 ± 63.3 | 162 ± 85.6 A | 13760 ± 2082 | 1301 ± 271 |
| | | Th-232 | Ac-228 | Ra-226 | |
| | 3/25/2025 | 1027 ± 292 | 1323 ± 578 | 2509 ± 2061 | |
| | 9/23/2025 | 929 ± 300 | | 3811 ± 1791 | |
| | | | | | |
| CHIC-C | 3/13/2025 | 75.5 ± 57.0 A | 109 ± 68.5 A | 19110 ± 2134 | 1499 ± 194 |
| | 9/3/2025 | -23.2 ± 89.7 | 74.7 ± 79.5 | 13230 ± 2507 | 1751 ± 289 |
| | | Th-232 | Ra-226 | | |
| | 3/13/2025 | 1276 ± 250 | 2819 ± 1520 | | |
| | 9/3/2025 | | 2813 ± 2086 | | |
| | | | | | |

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TABLE 3-11
SHORELINE SEDIMENT
GAMMA EMITTER CONCENTRATIONS
 (pCi/kg (dry) ± 2 Sigma)

| SAMPLING LOCATIONS | COLLECTION DATE | NUCLIDE | | | | | |
|--------------------|-----------------|--------------------------------|-------------------------------|----------------------------|-----------------------------|-----------------------------|--|
| HIR | 2/11/2025 | <u>Cs-134</u> 11.9 ± 35.5 | <u>Cs-137</u> -20.6 ± 30.1 | <u>K-40</u> 6095 ± 1277 | <u>Th-228</u> | | |
| | 8/26/2025 | 45.0 ± 39.5 A | -5.03 ± 36.8 | 6532 ± 1106 | 383 ± 100 | | |
| CHIC-C | 2/11/2025 | <u>Cs-134</u> 57.4 ± 44.1 A | <u>Cs-137</u> -14.5 ± 37.2 | <u>K-40</u> 1428 ± 680 | <u>Th-228</u> 1407 ± 107 | <u>Th-232</u> 1199 ± 178 | |
| | 8/26/2025 | 134 ± 67.9 A | -41.0 ± 58.3 | 1704 ± 718 | 3137 ± 216 | | |
| | 2/11/2025 | <u>Ra-226</u> 3471 ± 1383 | <u>Ac-228</u> 1571 ± 240 | | | | |
| | 8/26/2025 | 6086 ± 2672 | 3293 ± 361 | | | | |

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TABLE 3-12
FISH
GAMMA EMITTER CONCENTRATIONS
 (pCi/kg (wet) ± 2 Sigma)

| SAMPLING LOCATION | COLLECTION DATE | FISH TYPE | NUCLIDE | | | | |
|-------------------|-----------------|--------------------|--------------|----------------------|---------------|-------------------|-------------|
| | | | Mn-54 | Co-58 | Fe-59 | Co-60 | |
| SD | 4/17/2025 | Catfish | 0.64 ± 35.1 | 16.6 ± 36.9 | 25.9 ± 84.6 | 19.2 ± 43.6 | |
| | 4/17/2025 | Gamefish | 12.0 ± 41.4 | 9.60 ± 49.8 | 19.5 ± 109 | -4.57 ± 46.9 | |
| | 10/21/2025 | Catfish | 0.83 ± 20.6 | -6.33 ± 27.5 | 46.9 ± 64.6 | 6.24 ± 24.8 | |
| | 10/21/2025 | Gamefish | 29.1 ± 46.0 | -44.3 ± 47.7 | 29.6 ± 120 | -27.1 ± 36.3 | |
| | | | | Zn-65 | Cs-134 | Cs-137 | K-40 |
| | 4/17/2025 | Catfish | -82.7 ± 92.5 | 13.0 ± 47.9 | 22.5 ± 43.2 | 3009 ± 899 | |
| | 4/17/2025 | Gamefish | -16.4 ± 117 | -13.7 ± 47.9 | 5.50 ± 47.7 | 1095 ± 774 | |
| | 10/21/2025 | Catfish | -25.4 ± 62.8 | -10.8 ± 23.6 | 2.29 ± 25.2 | 1366 ± 502 | |
| | 10/21/2025 | Gamefish | -84.4 ± 129 | 49.8 ± 42.2 A | -36.3 ± 43.7 | 1647 ± 944 | |
| | | | | Th-228 | | | |
| | 4/17/2025 | Catfish | | | | | |
| | 4/17/2025 | Gamefish | | | | | |
| 10/21/2025 | Catfish | 96.1 ± 74.3 | | | | | |
| 10/21/2025 | Gamefish | | | | | | |

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TABLE 3-13
OYSTERS
GAMMA EMITTER CONCENTRATIONS
 (pCi/kg (wet) ± 2 Sigma)

| SAMPLING LOCATIONS | COLLECTION DATE | NUCLIDE | | | |
|--------------------|-----------------|--------------|---------------|---------------|---------------|
| | | Mn-54 | Co-58 | Fe-59 | Co-60 |
| POS | 3/25/2025 | -4.19 ± 20.9 | 2.07 ± 23.2 | -49.2 ± 52.3 | -4.22 ± 19.6 |
| | 9/23/2025 | 23.6 ± 28.7 | -7.96 ± 31.5 | -6.40 ± 85.1 | 9.45 ± 37.6 |
| | | Zn-65 | Cs-134 | Cs-137 | K-40 |
| | 3/25/2025 | -48.3 ± 47.9 | 3.24 ± 20.1 | 19.6 ± 20.7 | 747 ± 510 |
| | 9/23/2025 | -3.55 ± 58.5 | -0.29 ± 41.9 | 0.99 ± 33.8 | |
| | | Mn-54 | Co-58 | Fe-59 | Co-60 |
| MP | 3/25/2025 | -18.5 ± 22.8 | 9.50 ± 25.4 | 39.3 ± 52.9 | -2.77 ± 20.5 |
| | 9/23/2025 | 1.73 ± 12.2 | -11.7 ± 16.2 | 28.6 ± 37.8 | 0.33 ± 11.7 |
| | | Zn-65 | Cs-134 | Cs-137 | K-40 |
| | 3/25/2025 | -55.6 ± 51.5 | -3.05 ± 22.7 | -24.1 ± 24.9 | 590 ± 445 |
| | 9/23/2025 | -46.4 ± 30.2 | 0.28 ± 13.5 | -2.13 ± 12.3 | 576 ± 306 |
| | | Mn-54 | Co-58 | Fe-59 | Co-60 |
| SHI | 3/25/2025 | 6.61 ± 19.5 | -3.83 ± 22.9 | -14.5 ± 39.4 | -18.8 ± 20.7 |
| | 9/23/2025 | -0.42 ± 9.42 | -0.03 ± 12.0 | 14.4 ± 31.2 | 12.4 ± 10.3 A |
| | | Zn-65 | Cs-134 | Cs-137 | K-40 |
| | 3/25/2025 | -32.0 ± 42.7 | 12.5 ± 19.3 | -15.4 ± 18.0 | 1106 ± 450 |
| | 9/23/2025 | -38.5 ± 24.2 | -0.38 ± 10.7 | -0.95 ± 9.28 | 552 ± 274 |
| | | Mn-54 | Co-58 | Fe-59 | Co-60 |

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TABLE 3-14
CLAMS
GAMMA EMITTER CONCENTRATIONS
 (pCi/kg (wet) ± 2 Sigma)

| SAMPLING LOCATIONS | COLLECTION DATE | NUCLIDE | | | |
|--------------------|-----------------|--------------|---------------|---------------|---------------|
| | | Mn-54 | Co-58 | Fe-59 | Co-60 |
| JI | 3/25/2025 | 18.7 ± 26.3 | -15.1 ± 28.4 | -11.6 ± 64.4 | 13.3 ± 33.6 |
| | 9/18/2025 | 6.62 ± 39.8 | -4.93 ± 37.7 | 46.1 ± 97.7 | -2.49 ± 47.9 |
| | | Zn-65 | Cs-134 | Cs-137 | |
| | 3/25/2025 | 1.65 ± 71.2 | 7.66 ± 37.8 | 11.8 ± 31.4 | |
| | 9/18/2025 | -77.0 ± 84.7 | 16.1 ± 36.4 | -20.0 ± 31.5 | |
| | | | | | |
| SD | 3/13/2025 | -4.65 ± 27.3 | -7.07 ± 28.3 | 55.7 ± 64.7 | 26.4 ± 26.1 A |
| | 9/18/2025 | -17.0 ± 48.0 | -12.8 ± 53.6 | 36.9 ± 112 | 18.3 ± 39.0 |
| | | Zn-65 | Cs-134 | Cs-137 | |
| | 3/13/2025 | -2.57 ± 63.9 | -7.18 ± 25.3 | -0.46 ± 25.4 | |
| | 9/18/2025 | -111 ± 92.0 | 5.82 ± 47.6 | -8.29 ± 43.8 | |
| | | | | | |
| CHIC-C | 3/13/2025 | -13.1 ± 33.4 | -14.0 ± 43.8 | -26.2 ± 100 | 18.1 ± 39.1 |
| | 9/3/2025 | 4.44 ± 10.0 | -7.47 ± 12.5 | -13.3 ± 29.3 | 17.0 ± 10.2 A |
| | | Zn-65 | Cs-134 | Cs-137 | K-40 |
| | 3/13/2025 | -31.5 ± 85.0 | -37.1 ± 36.0 | -24.5 ± 35.9 | |
| | 9/3/2025 | -25.5 ± 22.6 | 2.18 ± 10.8 | 4.06 ± 9.82 | 390 ± 243 |
| | | | | | |

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TABLE 3-15
CRABS
GAMMA EMITTER CONCENTRATIONS
 (pCi/kg (wet) ± 2 Sigma)

| SAMPLING LOCATIONS | COLLECTION DATE | NUCLIDE | | | |
|--------------------|-----------------|-------------------------------|------------------------------|-------------------------------|-----------------------------|
| SD | 6/26/2025 | Mn-54 -32.48 ± 35.0 | Co-58 -23.6 ± 37.1 | Fe-59 -20.5 ± 89.8 | Co-60 26.2 ± 36.9 |
| | 6/26/2025 | Zn-65 -25.4 ± 101 | Cs-134 32.5 ± 36.2 | Cs-137 -6.83 ± 30.9 | K-40 2011 ± 877 |

4. DISCUSSION OF RESULTS

Data from the radiological analyses of environmental media collected during and tabulated in Section 3, are discussed below. The procedures and specifications followed in the laboratory for these analyses are as required in the Teledyne Brown Engineering quality assurance manuals and laboratory procedures. In addition to internal quality control measures performed by the laboratories, they also participate in an Interlaboratory Comparison Program. Participation in this program ensures that independent checks on the precision and accuracy of the measurements of radioactive material in environmental samples are performed. The results of the Interlaboratory Comparison Program are provided in Appendix B.

The predominant radioactivity detected throughout was from external sources, such as fallout from nuclear weapons tests (cesium-137) and naturally occurring radionuclides. Naturally occurring nuclides, such as beryllium-7, radium-226, actinium-228, thorium-228, thorium-232 and potassium-40, were detected in numerous samples.

The following is a discussion and summary of the results of the environmental measurements taken during the reporting period.

4.1 Gamma Exposure Rate

A thermoluminescent dosimeter (TLD) is an inorganic crystal used to detect ambient radiation. These TLDs are made of CaF and LiF compounds and are specifically designed for environmental monitoring. Three TLDs are deployed at each sampling location. TLDs are placed in two concentric rings around the station. The inner ring is in the vicinity of the site boundary, and the outer ring is located at approximately five miles from the station. TLDs are also placed in special interest areas, such as population centers and nearby residences. Additional TLDs serve as controls. Ambient radiation comes from naturally occurring radioisotopes in the air and soil, radiation from cosmic origin, fallout from nuclear weapons testing, station effluents and direct radiation from the station.

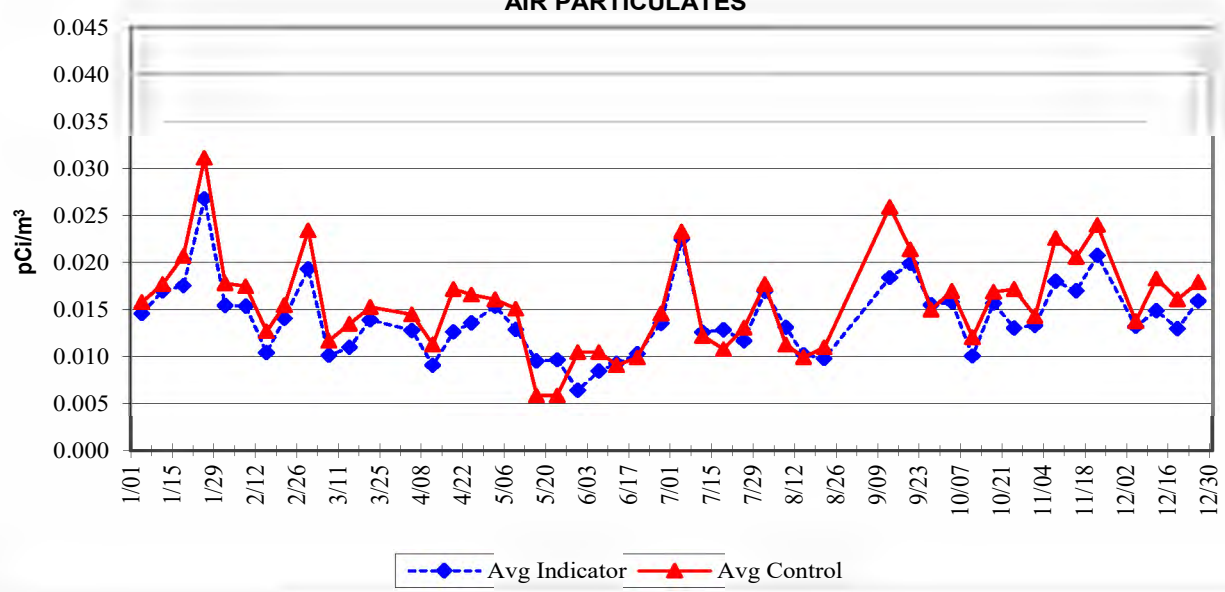
The results of the TLD analyses are presented in Table 3-2. No detectable external dose to members of the public was attributable from Surry Power Station in 2025. The results of the TLD analyses shown in Table 3-2 comply with Section 7 of ANSI/HPS N13.37-2014 to ensure accurate environmental results. The long-term integrity of each field monitoring location is accomplished by a thorough, documented evaluation of the location for changes that could impact data quality in accordance with Section 7.1 of the ANSI Standard. Since off-site processing of TLDs is used, extraneous dose received prior to and after removal from the field is quantified in compliance with Section 7.2 of the ANSI Standard. Data analysis for Table 3-2 was performed in accordance with Section 7.3 of the ANSI Standard. This includes normalizing results to a standard 91-day quarterly monitoring period, determination of the baseline background dose for each monitoring location and determination of the smallest facility-related dose that can be detected above the baseline background.

4.2 Airborne Gross Beta

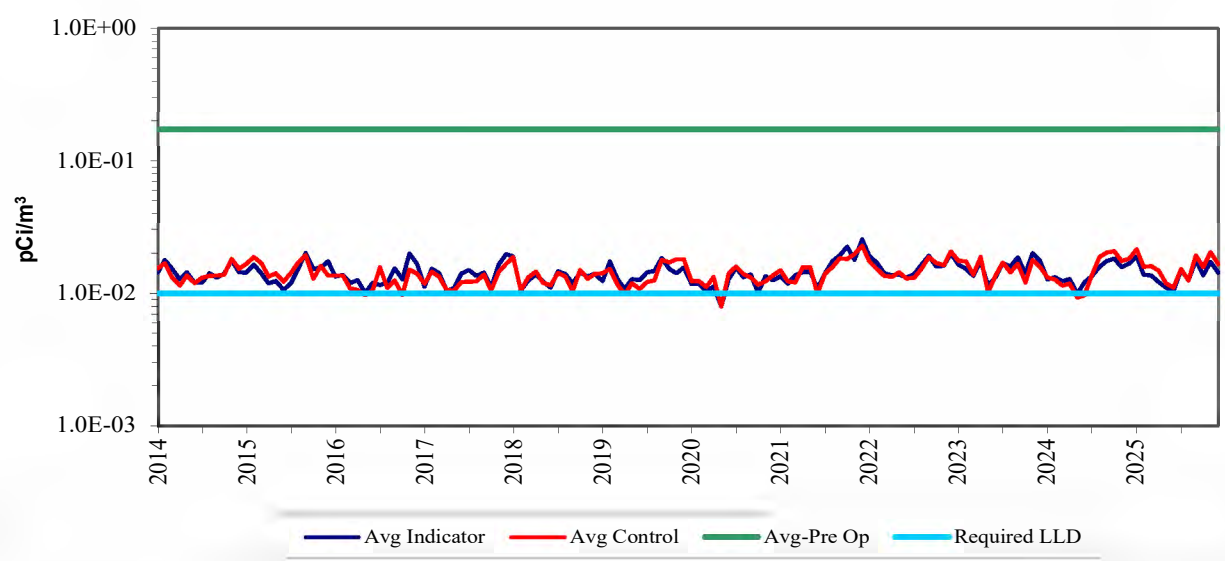
Air is continuously sampled by passing through glass fiber particulate filters. The filters collect airborne particulate radionuclides. These samples are collected weekly and analyzed for gross beta activity. Results of the weekly gross beta analyses are presented in Table 3-3. The analysis results from the control and indicator locations continue to show no significant variation in measured activities. Refer to Figures 4.1 and 4.2 for details. Data presented in these figures indicate that any contribution from station related activities is not measurable.

Gross beta activity found during the pre-operational and early operating period of Surry Power Station was higher because of nuclear weapons testing. During that time, nearly 740 nuclear weapons were tested worldwide. In 1985 weapons testing ceased, and except for the Chernobyl accident in 1986, airborne gross beta results have remained steady.

**Figure 4-1:
2025 GROSS BETA
AIR PARTICULATES**



**Figure 4-2:
GROSS BETA IN AIR PARTICULATES
10 YEAR HISTORICAL TREND**



4.3 Airborne Radioiodine

Air is also continuously sampled for radioiodine by passing air through a charcoal cartridge. Weekly, the charcoal cartridge samples are collected and analyzed. The results of the analyses are presented in Table 3-4. All results are below the lower limit of detection. No positive iodine-131 was detected in the air samples.

4.4 Air Particulate Gamma

The air particulate filters from the weekly gross beta analyses are composited by location and analyzed quarterly by gamma spectroscopy. The analysis results are listed in Table 3-5. The results indicate the presence of naturally occurring beryllium-7, which is produced by cosmic processes. No man-made radionuclides were identified. These analyses confirm there are no effects from station effluents.

4.5 Animal Milk

Analysis of milk samples is generally the most sensitive indicator of fission product existence in the terrestrial environment. This, in combination with the significant human consumption of milk, results in this pathway often being the most critical of station radiological effluents. This pathway also shows measurable amounts of nuclear weapons testing fallout. Therefore, this media needs to be carefully evaluated when determining the effects from station effluents.

Results of gamma spectroscopy indicate no detectable station related radioactivity was identified in the 2025 milk samples. Only naturally occurring potassium-40 was detected. The analysis results are presented in Table 3-6.

At the request of the Commonwealth of Virginia, a quarterly composite sample is prepared from the monthly milk samples from the Colonial Parkway collection station. The composite samples are analyzed for strontium-89 and strontium-90. Strontium-89 was not detected in any of the four composite samples analyzed. Strontium-90 was detected in three of the four composite samples, with an average concentration of 2.65 pCi/L. Strontium-90 is not a component of station radiological effluents and is a product of nuclear weapons testing fallout.

4.6 Food Products

Three food product samples (corn, peanuts, and soybeans) were collected and analyzed by gamma spectroscopy. The analysis results are presented in Table 3-7. Only naturally occurring potassium-40 was detected in all samples. No station related radioactivity was detected in this pathway.

4.7 Well Water

Well water is not impacted by the station's operations since there are no effluent discharges into this pathway. However, Surry Power Station monitors well water on a quarterly frequency at three indicator locations. These samples are analyzed for gamma radiation and tritium. The results are presented in Table 3-8. In 2025, no radioactivity related to the operation of the station was detected in any of the well water samples. Only naturally occurring thorium-228 was detected in one of the quarterly samples. Historically, well water samples collected before the station commenced power operations showed no detectable gamma-emitting isotopes, forming the baseline reference.

4.8 River Water

The results from water samples collected monthly from the James River are presented in Table 3-9. All samples are analyzed by gamma spectroscopy. Additionally, monthly samples are combined and analyzed for tritium every quarter. In 2025, no station related radioactivity was detected in this pathway. Only naturally occurring potassium-40 was detected.

4.9 Silt

Silt is sampled to evaluate the buildup of radionuclides in the environment due to the operation of the station. Sampling of this pathway provides a good indication of the dispersion effects of effluents to the river. The accumulation of radionuclides in silt could indirectly increase the radioactivity levels in clams, oysters, crabs, and fish.

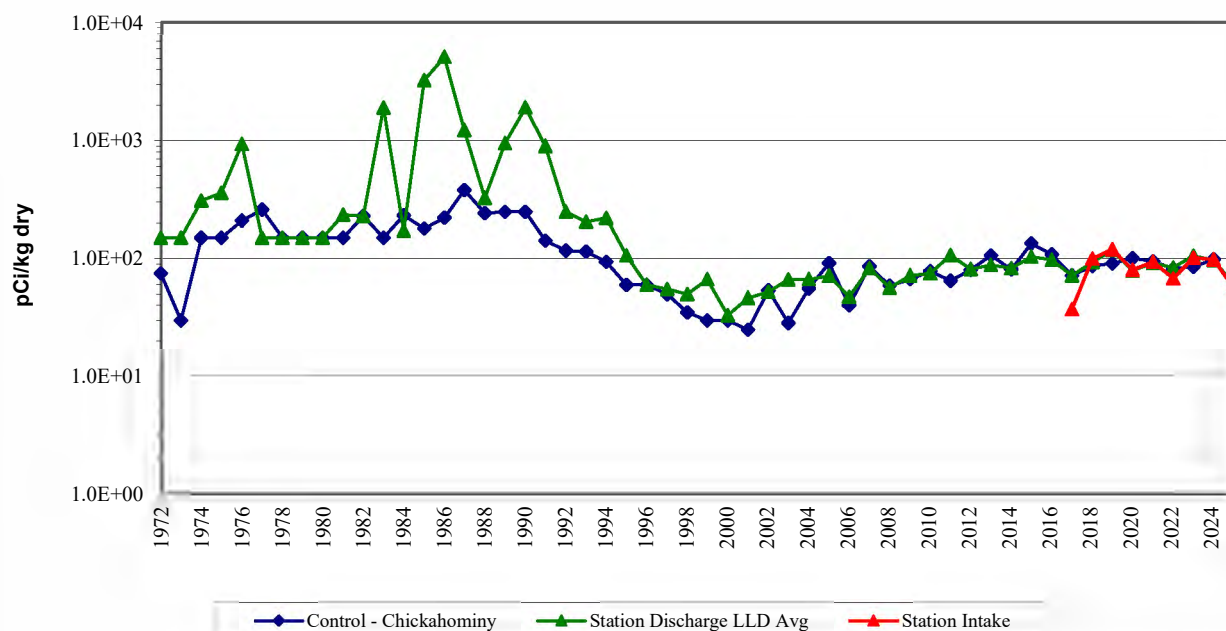
Samples of silt are collected from three locations: one upstream of the station, one downstream of the station and one in the dredge area of the station intake. The results of the gamma spectroscopy analyses are presented in Table 3-10. Naturally occurring potassium-40, radium-226, actinium-228, thorium-228, thorium-232, and beryllium-7 were detected. Historically, cobalt-60 has been detected in samples obtained from the station discharge indicator location. Cobalt-60 has not been detected since 2003. A trend of cesium-137 and cobalt-60 concentrations is shown in Figures 4-3 and 4-4. For three decades, the calculated average concentration for cesium-137 has continued to decrease.

The historical presence of cesium-137 in indicator location, Station Intake, and control location, Chickahominy, is indicative of the accumulation, through runoff, of cesium-137 into the James River from residual weapons testing fallout. Samples collected from the James River, during the pre-operational period, indicated the presence of cesium-137. The average pre-operational cesium-137 concentration is shown in Figure 4-4.

The Station Intake indicator sample was added to the REMP in 2017. The additional sample is collected in the dredge channel area at the station intake. The dredge channel is approximately 150' wide and 1750' in length. This location was added to support future station intake channel dredging operations. The trend of cesium-137 concentration in silt within the dredge channel at the station intake is regularly monitored and evaluated.

The average cesium-137 concentration in the Station Intake dredge channel was 133 pCi/kg. The average cesium-137 concentration in the Station Discharge Canal was 113 pCi/kg. The average cesium-137 concentration at the Chickahominy control location was 135 pCi/kg. The indicator location concentrations trend well with the Chickahominy control location.

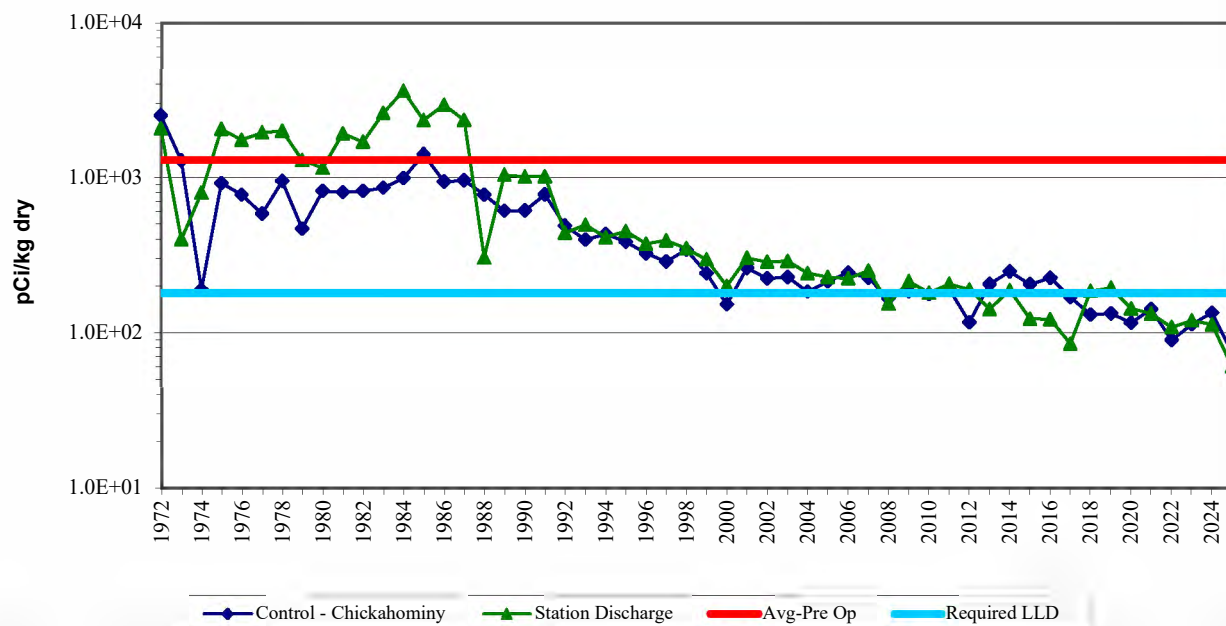
Figure 4-3:
COBALT-60 IN SILT



Chickahominy had detectable activity in 1982 and 1984 - 1994. < MDA 1995 - 2025.

Station Discharge activity: < MDA 1996 - 1998 and 2004 - 2025.

Figure 4-4:
CESIUM-137 IN SILT



4.10 Shoreline Sediment

Shoreline sediment, unlike river silt, may provide a direct dose to humans. A buildup of radionuclides along the shoreline may provide a source of direct exposure for those utilizing the area for commercial and recreational uses. The analysis results for this pathway are presented in Table 3-11.

The naturally occurring radionuclides including potassium-40, radium-226, actinium-228, thorium-228, and thorium-232 were detected at concentrations equivalent to normal background. In 2025, no station related radioactivity was detected in this pathway.

4.11 Fish

The radioactivity measured in fish sampled from the Station Discharge Canal and analyzed by gamma spectroscopy is presented in Table 3-12. The 2025 analysis results are consistent with those observed over the past decade. Only naturally occurring potassium-40 and thorium-228 were detected. No station related radioactivity was detected in fish samples.

4.12 Oysters

The results of the gamma spectroscopy analyses in oyster samples are presented in Table 3-13. In 2025, no station related radioactivity was detected in oyster samples. Only naturally occurring potassium-40 was detected. No station related radioactivity has been detected in oysters since 1991.

4.13 Clams

The results of the gamma spectroscopy analyses in clam samples are presented in Table 3-14. In 2025, no station related radioactivity was detected in clam samples. Only naturally occurring potassium-40 was detected in the control sample.

4.14 Crabs

The results of the gamma spectroscopy analyses of the annual crab sample are presented in Table 3-15. Aside from naturally occurring potassium-40, no gamma-emitting radionuclides associated with station effluents were detected in this medium. This is consistent with pre-operational data and data collected over the past decade.

5. PROGRAM EXCEPTIONS

There were no exceptions to the REMP sampling schedule in 2025.

6. CONCLUSIONS

The 2025 Radiological Environmental Monitoring Program analysis results for Surry Power Station are recorded in Section 3 and discussed in Section 4 of this document. This section provides a conclusion of each listed pathway.

- **Direct Radiation Exposure Pathway** - No detectable external dose to members of the public was attributable to the operation of Surry Power Station in 2025.
- **Airborne Exposure Pathway** - No radioiodine was detected in any of the charcoal cartridge samples. The quarterly composite of weekly collected particulate filters only identified naturally occurring beryllium-7. Figure 4-1 shows that air particulate gross beta concentrations at all indicator locations align closely with those at control locations. Review of the 2025 effluent data concluded that the station's contribution is not measurable.
- **Milk** - Milk samples are an important indicator measuring the effect of radioactive iodine and radionuclides in airborne releases. No positive cesium-137 nor iodine-131 activity was detected in this pathway. Only naturally occurring potassium-40 was detected in the monthly samples. Strontium-90 was detected in three of the four composite samples, with an average concentration of 2.65 pCi/L. Strontium-90 is not a component of station effluents, but rather a product of nuclear weapons testing fallout.
- **Food Products** - Naturally occurring potassium-40 was detected in all three food product samples. Food product sample analysis results indicate no radioactivity was attributable to the operation of the station.
- **Well Water** - Well water samples were analyzed for gamma emitting radionuclides and tritium. Well water sample analysis results indicate no radioactivity was attributable to the operation of the station. Only naturally occurring thorium-228 was detected in the CS sample.
- **River Water** - River water samples were analyzed for gamma emitting radionuclides and tritium. Only naturally occurring potassium-40 was detected. No positive tritium activity was detected. River water sample analysis results indicate no radioactivity was attributable to the operation of the station.

- **Silt** - No radioactivity attributable to the operation of the station was detected in either of the indicator locations. Naturally occurring potassium-40, thorium-228, thorium-232, actinium-228, radium-226, and beryllium-7 were detected in the indicator samples. Potassium-40, thorium-228, thorium-232, and radium-226 were detected in the control sample.

- **Shoreline Sediment** - No radionuclides attributable to the operation of Surry Power Station were detected in any of the shoreline sediment samples. Only naturally occurring potassium-40 and thorium-228 were detected in the indicator sample. Potassium-40, thorium-228, thorium-232, radium-226 and actinium-228 were detected in the Chickahominy control sample.

Aquatic Biota

- **Fish** – Other than naturally occurring potassium-40 and thorium-228, no positive gamma emitting radionuclides were detected in any of the fish samples.

- **Oysters** – Other than naturally occurring potassium-40, no positive gamma emitting radionuclides were detected in any of the oyster samples.

- **Clams** – No positive gamma emitting radionuclides were detected in any of the clam samples. Naturally occurring potassium-40 was detected in the control sample.

- **Crabs** – Other than naturally occurring potassium-40, no positive gamma emitting radionuclides were detected in the crab sample.

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APPENDICES

APPENDIX A: LAND USE CENSUS

Year 2025

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Attachment 1
LAND USE CENSUS

| SECTOR | NEAREST RESIDENT | NEAREST GARDEN | NEAREST COW | NEAREST GOAT |
|---------|------------------|----------------|-------------|--------------|
| A-(N) | 4.1 @ 10° | (a) | (a) | (a) |
| B-(NNE) | 1.9 @ 32° | (a) | (a) | (a) |
| C-(NE) | 4.7 @ 35° | (a) | (a) | (a) |
| D-(ENE) | (a) | (a) | (a) | (a) |
| E-(E) | (a) | (a) | (a) | (a) |
| F-(ESE) | (a) | (a) | (a) | (a) |
| G-(SE) | 2.8 @ 142° | (a) | (a) | (a) |
| H-(SSE) | 2.7 @ 158° | 2.7 @ 158° | (a) | (a) |
| J-(S) | 1.7 @ 181° | 2.0 @ 183° | (a) | (a) |
| K-(SSW) | 1.9 @ 192° | 1.9 @ 192° | (a) | (a) |
| L-(SW) | 2.3 @ 221° | 4.7 @ 228° | (a) | (a) |
| M-(WSW) | 0.4 @ 244° | 3.6 @ 245° | (a) | (a) |
| N-(W) | 3.1 @ 260° | 3.4 @ 260° | (a) | (a) |
| P-(WNW) | 4.9 @ 283° | (a) | (a) | (a) |
| Q-(NW) | 4.6 @ 321° | (a) | (a) | (a) |
| R-(NNW) | 3.8 @ 338° | 4.4 @ 334° | 3.7 @ 336° | (a) |

Locations are listed by miles and degrees heading relative to true north from radius center of Unit 1 Containment.

(a) None

APPENDIX B: SUMMARY OF INTERLABORATORY COMPARISONS

Year 2025

Summary of Results – Interlaboratory Comparison Program (ICP)

The Teledyne Brown Engineering Environmental Services (TBE-ES) laboratory analyzed Performance Evaluation (PE) samples of air particulate (AP), milk, soil, vegetation, and water matrices that represent test and matrix combinations available for REMP programs. The PE samples supplied by Eckert & Ziegler (E&Z) Analytics Inc., Environmental Resource Associates (ERA), and Department of Energy (DOE) Mixed Analyte Performance Evaluation Program (MAPEP), were evaluated against the following pre-set acceptance criteria:

A. E&Z Analytics Evaluation Criteria

Analytics' evaluation report provides a ratio of TBE's result and E&Z Analytics' known value. Since flag values are not assigned by E&Z Analytics, TBE evaluates the reported ratios based on internal QC requirements based on the DOE MAPEP criteria.

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

B. ERA Evaluation Criteria

ERA's evaluation report provides an acceptance range for control and warning limits with associated flag values. ERA's acceptance limits are established per the US EPA, National Environmental Laboratory Accreditation Conference (NELAC), state-specific Performance Testing (PT) program requirements or ERA's SOP for the Generation of Performance Acceptance Limits, as applicable. The acceptance limits are either determined by a regression equation specific to each analyte or a fixed percentage limit promulgated under the appropriate regulatory document.

1. A = Acceptable - Reported value falls within the Acceptance Limits
2. N = Not Acceptable - Reported value falls outside of the Acceptance Limits

C. DOE Evaluation Criteria

MAPEP's evaluation report provides an acceptance range with associated flag values. MAPEP defines three levels of performance:

1. Acceptable (flag = "A") - result within $\pm 20\%$ of the reference value
2. Acceptable with Warning (flag = "W") - result falls in the $\pm 20\%$ to $\pm 30\%$ of the reference value
3. Not Acceptable (flag = "N") - bias is greater than 30% of the reference value

Note: The Department of Energy (DOE) Mixed Analyte Performance Evaluation Program (MAPEP) samples are created to mimic conditions found at DOE sites which do not always resemble typical environmental samples obtained at commercial nuclear power facilities.

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

- A. NCR 25-04: MAPEP 25, RdV52 vegetation study for Sr-90 evaluated as "Not Acceptable." Possible sample interference issue. Study results stated 8 out of 18 participants passed the study. All internal data reviewed and deemed accurate with internal quality control measures for sample also passing. The laboratory performed testing with Sr-85 spike with successful outcomes. The following provider study, RdV53, returned with passing results.
- B. NCR 25-05: Interlaboratory crosscheck failure: MAPEP 25-MaS52 Ni-63 in soil. A manual data-entry error in the carrier volume for one nuclide/matrix led to an incorrect LIMS value. Manual verification showed that the crosscheck would have passed with the correct volume. The procedure has been revised with more prominent notation to assist technicians. No recurrence identified and the following crosscheck study did not result in repeated error, supporting effectiveness of corrective action.

- C. NCR 25-06: Interlaboratory crosscheck failure: ERA RAD141 Gr-A in water. The provider's acceptance range was 10.0–21.2, and their reported value of 15.6 fell within this interval. TBE-ES obtained 22.2 ± 3.76 , which satisfied internal QC criteria and would have aligned with the acceptance range if error margins had been considered. The QC duplicate result of 17.8 met internal requirements, and the 22% RPD demonstrated internal consistency. The provider's Gr-A samples have historically been the lowest spiked. No internal failures identified so no corrective action deemed necessary. The following ERA RAD143 study's performance evaluation results returned acceptable/passing.
- D. NCR 25-10: *IN-PROGRESS* Interlaboratory crosscheck failure: ERA MRAD 43, PU-239/240 (AS) in Air Particulate (filter).
- E. NCR 25-11: Interlaboratory crosscheck failure: ERA RAD-143 crosscheck failure of Uranium in water. Provider acceptance range: 48.0 – 60.0. TBE-ES result of 47.1 with internal acceptance ratio of 87.2 and no prior failures. No corrective action deemed necessary.
- F. NCR 25-12: *IN-PROGRESS* Interlaboratory crosscheck failure: MAPEP Series 53, Ni-63 in Soil.
- G. NCR 25-13: *IN-PROGRESS* Interlaboratory crosscheck failure: MAPEP Series 53, Th-232 in Soil.

Eckert & Ziegler Analytics
Environmental Radioactivity Crosscheck Program
 Teledyne Brown Engineering - Environmental Services

| Month/Year | Identification Number | Matrix | Nuclide | Units | TBE | | Acceptance Ratio (%) | Evaluation ^(b) |
|------------|-----------------------|----------|-------------------|-----------|----------------|----------------------------|----------------------|---------------------------|
| | | | | | Reported Value | Known Value ^(a) | | |
| March 2025 | E14230 | Milk | Ce-141 | pCi/L | 68.1 | 75.8 | 90 | A |
| March 2025 | E14230 | Milk | Cs-134 | pCi/L | 121 | 142 | 85 | A |
| March 2025 | E14230 | Milk | Cs-137 | pCi/L | 154 | 168 | 92 | A |
| March 2025 | E14230 | Milk | Cr-51 | pCi/L | 278 | 291 | 96 | A |
| March 2025 | E14230 | Milk | Co-58 | pCi/L | 95.4 | 105 | 91 | A |
| March 2025 | E14230 | Milk | Co-60 | pCi/L | 169 | 193 | 88 | A |
| March 2025 | E14230 | Milk | Fe-59 | pCi/L | 125 | 135 | 93 | A |
| March 2025 | E14230 | Milk | Mn-54 | pCi/L | 172 | 189 | 91 | A |
| March 2025 | E14230 | Milk | Zn-65 | pCi/L | 229 | 251 | 91 | A |
| March 2025 | E14230 | Milk | I-131 (Low Level) | pCi/L | 88.4 | 94.7 | 93 | A |
| March 2025 | E14229 | Milk | Sr-89 | pCi/L | 84.9 | 91.9 | 92 | A |
| March 2025 | E14229 | Milk | Sr-90 | pCi/L | 11.1 | 15.6 | 71 | W |
| March 2025 | E14323 | AP | Ce-141 | pCi | 55.9 | 54.2 | 103 | A |
| March 2025 | E14323 | AP | Cs-134 | pCi | 93.0 | 102 | 91 | A |
| March 2025 | E14323 | AP | Cs-137 | pCi | 107 | 120 | 89 | A |
| March 2025 | E14323 | AP | Cr-51 | pCi | 194 | 208 | 93 | A |
| March 2025 | E14323 | AP | Co-58 | pCi | 68.4 | 75.2 | 91 | A |
| March 2025 | E14323 | AP | Co-60 | pCi | 142 | 138 | 103 | A |
| March 2025 | E14323 | AP | Fe-59 | pCi | 95.0 | 96.3 | 99 | A |
| March 2025 | E14323 | AP | Mn-54 | pCi | 123 | 135 | 91 | A |
| March 2025 | E14234 | AP | Zn-65 | pCi | 181 | 179 | 101 | A |
| March 2025 | E14336 | AP | Ni-63 | pCi/Total | 81.5 | 87.4 | 93 | A |
| March 2025 | E14234 | AP | Sr-89 | pCi | 81.6 | 88.5 | 92 | A |
| March 2025 | E14234 | AP | Sr-90 | pCi | 13.6 | 15 | 90 | A |
| March 2025 | E14231 | Charcoal | I-131 | pCi | 70.3 | 66.3 | 106 | A |
| March 2025 | E14233 | Soil | Ce-141 | pCi/g | 0.124 | 0.129 | 96 | A |
| March 2025 | E14233 | Soil | Cs-134 | pCi/g | 0.283 | 0.242 | 117 | A |
| March 2025 | E14233 | Soil | Cs-137 | pCi/g | 0.333 | 0.351 | 95 | A |
| March 2025 | E14233 | Soil | Cr-51 | pCi/g | 0.495 | 0.494 | 100 | A |
| March 2025 | E14233 | Soil | Co-58 | pCi/g | 0.193 | 0.179 | 108 | A |
| March 2025 | E14233 | Soil | Co-60 | pCi/g | 0.323 | 0.327 | 99 | A |
| March 2025 | E14233 | Soil | Fe-59 | pCi/g | 0.231 | 0.229 | 101 | A |
| March 2025 | E14233 | Soil | Mn-54 | pCi/g | 0.325 | 0.321 | 101 | A |
| March 2025 | E14233 | Soil | Zn-65 | pCi/g | 0.446 | 0.426 | 105 | A |
| March 2025 | E14235 | Water | Gr-A (Am-241) | pCi/L | 79.6 | 89.4 | 89 | A |
| March 2025 | E14235 | Water | Gr-B (Cs-137) | pCi/L | 242 | 285 | 85 | A |

| | | | | | | | | |
|-----------|--------|----------|-------------------|-----------|-------|-------|-----|---|
| Sept 2025 | E14237 | Milk | Ce-141 | pCi/L | 91.6 | 89.5 | 102 | A |
| Sept 2025 | E14237 | Milk | Cs-134 | pCi/L | 121 | 142 | 85 | A |
| Sept 2025 | E14237 | Milk | Cs-137 | pCi/L | 115 | 126 | 91 | A |
| Sept 2025 | E14237 | Milk | Cr-51 | pCi/L | 280 | 260 | 108 | A |
| Sept 2025 | E14237 | Milk | Co-58 | pCi/L | 104 | 105 | 99 | A |
| Sept 2025 | E14237 | Milk | Co-60 | pCi/L | 145 | 150 | 97 | A |
| Sept 2025 | E14237 | Milk | Fe-59 | pCi/L | 91.4 | 98.6 | 93 | A |
| Sept 2025 | E14237 | Milk | Mn-54 | pCi/L | 159 | 161 | 99 | A |
| Sept 2025 | E14237 | Milk | Zn-65 | pCi/L | 205 | 196 | 105 | A |
| Sept 2025 | E14237 | Milk | I-131 (Low Level) | pCi/L | 79.5 | 76.3 | 104 | A |
| Sept 2025 | E14236 | Milk | Sr-89 | pCi/L | 109 | 89.8 | 121 | W |
| Sept 2025 | E14236 | Milk | Sr-90 | pCi/L | 10.9 | 13.1 | 83 | A |
| Sept 2025 | E14239 | AP | Ce-141 | pCi | 67.5 | 68.1 | 99 | A |
| Sept 2025 | E14239 | AP | Cs-134 | pCi | 103 | 108 | 95 | A |
| Sept 2025 | E14239 | AP | Cs-137 | pCi | 98.4 | 96.1 | 102 | A |
| Sept 2025 | E14239 | AP | Cr-51 | pCi | 227 | 197 | 115 | A |
| Sept 2025 | E14239 | AP | Co-58 | pCi | 79.6 | 79.9 | 100 | A |
| Sept 2025 | E14239 | AP | Co-60 | pCi | 131 | 114 | 115 | A |
| Sept 2025 | E14239 | AP | Fe-59 | pCi | 74.7 | 75 | 100 | A |
| Sept 2025 | E14239 | AP | Mn-54 | pCi | 120 | 123 | 98 | A |
| Sept 2025 | E14239 | AP | Zn-65 | pCi | 133 | 149 | 89 | A |
| Sept 2025 | E14337 | AP | Ni-63 | pCi/Total | 71.4 | 85.1 | 84 | A |
| Sept 2025 | E14241 | AP | Sr-89 | pCi | 78.2 | 84.2 | 93 | A |
| Sept 2025 | E14241 | AP | Sr-90 | pCi | 13.7 | 12.2 | 112 | A |
| Sept 2025 | E14238 | Charcoal | I-131 | pCi | 80.8 | 79 | 102 | A |
| Sept 2025 | E14240 | Soil | Ce-141 | pCi/g | 0.133 | 0.149 | 89 | A |
| Sept 2025 | E14240 | Soil | Cs-134 | pCi/g | 0.166 | 0.236 | 70 | W |
| Sept 2025 | E14240 | Soil | Cs-137 | pCi/g | 0.22 | 0.276 | 80 | A |
| Sept 2025 | E14240 | Soil | Cr-51 | pCi/g | 0.486 | 0.432 | 112 | A |
| Sept 2025 | E14240 | Soil | Co-58 | pCi/g | 0.16 | 0.175 | 91 | A |
| Sept 2025 | E14240 | Soil | Co-60 | pCi/g | 0.234 | 0.251 | 93 | A |
| Sept 2025 | E14240 | Soil | Fe-59 | pCi/g | 0.154 | 0.164 | 94 | A |
| Sept 2025 | E14240 | Soil | Mn-54 | pCi/g | 0.241 | 0.269 | 90 | A |
| Sept 2025 | E14240 | Soil | Zn-65 | pCi/g | 0.308 | 0.326 | 94 | A |
| Sept 2025 | E14242 | Water | Gr-A (Am-241) | pCi/L | 97.2 | 99.7 | 97 | A |
| Sept 2025 | E14242 | Water | Gr-B (Cs-137) | pCi/L | 200 | 201 | 100 | A |

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

(b) Analytics evaluation based on TBE internal QC limits:

A = Acceptable - reported result falls within ratio limits of 0.80-1.20

W = Acceptable with warning - reported result falls within 0.70-0.80 or 1.20-1.30

N = Not Acceptable - reported result falls outside the ratio limits of < 0.70 and > 1.30

ERA
Environmental Radioactivity Crosscheck Program
 Teledyne Brown Engineering - Environmental Services

| Month Year | Identification Number | Matrix | Nuclide | Units | TBE Reported Value | Known Value (a) | Acceptance Range | Acceptance Ratio (%) | Evaluation (b) |
|------------|-----------------------|--------|-------------------|------------|--------------------|-----------------|------------------|----------------------|------------------|
| Mar 2025 | MRAD-42 | Soil | Am-241 | pCi/kg | 955 | 1060 | 572-1500 | 90.1 | A |
| Mar 2025 | MRAD-42 | Soil | Pu-238 | pCi/kg | 1010 | 1070 | 534-1630 | 94.4 | A |
| Mar 2025 | MRAD-42 | Soil | Pu-239 | pCi/kg | 1020 | 1150 | 627-1650 | 88.7 | A |
| Mar 2025 | MRAD-42 | Soil | Sr-90 | pCi/kg | 3540 | 5710 | 1780-8890 | 62.0 | A |
| Mar 2025 | MRAD-42 | Soil | U-234 | pCi/kg | 3598 | 3500 | 1640-4590 | 103 | A |
| Mar 2025 | MRAD-42 | Soil | U-238 | pCi/kg | 3857 | 3470 | 1900-4660 | 111 | A |
| Mar 2025 | MRAD-42 | AP | Am-241 | pCi/Filter | 73.5 | 67.7 | 48.3-90.3 | 109 | A |
| Mar 2025 | MRAD-42 | AP | Fe-55 | pCi/Filter | 224 | 181 | 66.1-289 | 124 | A |
| Mar 2025 | MRAD-42 | AP | Pu-238 | pCi/Filter | 41.7 | 40.2 | 30.4-49.4 | 104 | A |
| Mar 2025 | MRAD-42 | AP | Pu-239 | pCi/Filter | 64.5 | 62.3 | 46.6-75.2 | 104 | A |
| Mar 2025 | MRAD-42 | AP | U-234 | pCi/Filter | 30.8 | 34.2 | 25.4-40.1 | 90.1 | A |
| Mar 2025 | MRAD-42 | AP | U-238 | pCi/Filter | 29.4 | 33.9 | 25.6-40.4 | 86.7 | A |
| Mar 2025 | MRAD-42 | AP | Gr-A (Th-230) | pCi/Filter | 44.8 | 39.5 | 20.6-65.1 | 113 | A |
| Mar 2025 | MRAD-42 | AP | Gr-B (Cs-137) | pCi/Filter | 62.6 | 55.2 | 33.5-83.4 | 113 | A |
| Mar 2025 | MRAD-42 | Water | Am-241 | pCi/L | 40.5 | 39.5 | 27.1-50.5 | 103 | A |
| Mar 2025 | MRAD-42 | Water | Fe-55 | pCi/L | 892.6 | 1460 | 858-2120 | 61.1 | A |
| Mar 2025 | MRAD-42 | Water | Pu-238 | pCi/L | 74.9 | 77.2 | 46.4-100 | 97.0 | A |
| Mar 2025 | MRAD-42 | Water | Pu-239 | pCi/L | 59.2 | 58.4 | 36.1-72.0 | 101 | A |
| Apr 2025 | RAD-141 | Water | Ba-133 | pCi/L | 42.7 | 48.3 | 34.3-62.3 | 88.4 | A |
| Apr 2025 | RAD-141 | Water | Cs-134 | pCi/L | 19.5 | 16.5 | 5.65-27.4 | 118 | A |
| Apr 2025 | RAD-141 | Water | Cs-137 | pCi/L | 47.3 | 50.8 | 27.3-74.3 | 93.1 | A |
| Apr 2025 | RAD-141 | Water | Co-60 | pCi/L | 99.2 | 104 | 84.4-124 | 95.4 | A |
| Apr 2025 | RAD-141 | Water | Zn-65 | pCi/L | 317 | 341 | 279-403 | 93.0 | A |
| Apr 2025 | RAD-141 | Water | GR-A | pCi/L | 22.2 | 15.6 | 10.0-21.2 | 142.3 | N ⁽¹⁾ |
| Apr 2025 | RAD-141 | Water | GR-B | pCi/L | 21.6 | 22.9 | 15.0-30.8 | 94.3 | A |
| Apr 2025 | RAD-141 | Water | H-3 | pCi/L | 19900 | 21200 | 18200-24200 | 93.9 | A |
| Apr 2025 | RAD-141 | Water | I-131 (Low Level) | pCi/L | 26.1 | 26.8 | 23.2-30.4 | 97.4 | A |
| Apr 2025 | RAD-141 | Water | Sr-89 | pCi/L | 70.8 | 67.1 | 51.2-83.0 | 106 | A |
| Apr 2025 | RAD-141 | Water | Sr-90 | pCi/L | 22.5 | 23.9 | 19.7-28.1 | 94.1 | A |
| Apr 2025 | RAD-141 | Water | U (Total) | pCi/L | 48.0 | 49.6 | 44.0-55.2 | 96.8 | A |
| Sept 2025 | MRAD-43 | Soil | Sr-90 | pCi/kg | 6790 | 9490 | 2950-14800 | 71.5 | A |
| Sept 2025 | MRAD-43 | AP | Am-241 | pCi/Filter | 40.2 | 39.8 | 28.4-53.1 | 101 | A |
| Sept 2025 | MRAD-43 | AP | Fe-55 | pCi/Filter | 125 | 166 | 60.6-265 | 75.3 | A |
| Sept 2025 | MRAD-43 | AP | Pu-238 | pCi/Filter | 26 | 15.1 | 11.4-18.6 | 172 | N ⁽³⁾ |
| Sept 2025 | MRAD-43 | AP | U-234 | pCi/Filter | 57.7 | 63.4 | 47.0-74.3 | 91.0 | A |
| Sept 2025 | MRAD-43 | AP | U-238 | pCi/Filter | 63.1 | 62.9 | 47.5-75.0 | 100 | A |
| Sept 2025 | MRAD-43 | AP | Gr-A (Th-230) | pCi/Filter | 28.2 | 22 | 11.5-36.2 | 128 | A |
| Sept 2025 | MRAD-43 | AP | Gr-B (Cs-137) | pCi/Filter | 38.6 | 40.5 | 24.6-61.2 | 95.3 | A |
| Sept 2025 | MRAD-43 | Water | Am-241 | pCi/L | 69.2 | 68.6 | 47.1-87.7 | 101 | A |
| Sept 2025 | MRAD-43 | Water | Fe-55 | pCi/L | 304 | 399 | 234-580 | 76.2 | A |
| Sept 2025 | MRAD-43 | Water | Pu-238 | pCi/L | 104 | 115 | 56.7-122 | 90.4 | A |
| Sept 2025 | MRAD-43 | Water | Pu-239 | pCi/L | 37.8 | 39.8 | 24.6-49.0 | 95.0 | A |
| Oct 2025 | RAD | Water | Ba-133 | pCi/L | 21.3 | 17.5 | 6.55-28.5 | 122 | A |
| Oct 2025 | RAD | Water | Cs-134 | pCi/L | 53.8 | 58 | 43.0-73.0 | 92.8 | A |
| Oct 2025 | RAD | Water | Cs-137 | pCi/L | 179.5 | 178 | 142-214 | 101 | A |
| Oct 2025 | RAD | Water | Co-60 | pCi/L | 58.3 | 55 | 40.3-69.7 | 106 | A |
| Oct 2025 | RAD | Water | Zn-65 | pCi/L | 37.04 | 36.8 | 5.51-68.1 | 101 | A |
| Oct 2025 | RAD | Water | GR-A | pCi/L | 64.8 | 59.9 | 45.5-74.3 | 108 | A |
| Oct 2025 | RAD | Water | GR-B | pCi/L | 19.3 | 19.3 | 12.2-26.4 | 100 | A |
| Oct 2025 | RAD | Water | H-3 | pCi/L | 18400 | 21200 | 18200-24200 | 86.8 | A |
| Oct 2025 | RAD | Water | I-131 (Low Level) | pCi/L | 23.9 | 24.3 | 20.9-27.7 | 98.4 | A |
| Oct 2025 | RAD | Water | Sr-89 | pCi/L | 69.7 | 64.2 | 48.6-79.8 | 109 | A |
| Oct 2025 | RAD | Water | Sr-90 | pCi/L | 39.8 | 43.8 | 37.6-50.0 | 90.9 | A |
| Oct 2025 | RAD | Water | U (Total) | pCi/L | 47.1 | 54 | 48.0-60.0 | 87.2 | N ⁽²⁾ |

KEY

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

(b) ERA evaluation:

A = Acceptable - Reported value falls within the Acceptance Limits

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

N⁽¹⁾ = NCR 25-06

N⁽²⁾ = NCR 25-11

N⁽³⁾ = NCR 25-10

DOE Mixed Analyte Performance Evaluation Program (MAPEP)

Teledyne Brown Engineering - Environmental Services

| Month/Year | Identification Number | Matrix | Nuclide | Units | TBE Reported Value | Known Value ^(a) | Acceptance Range | Acceptance Ratio (%) | Evaluation ^(b) |
|------------|-----------------------|------------|---------|-----------|--------------------|----------------------------|------------------|----------------------|---------------------------|
| Mar 2025 | 25-MaS52 | Soil | Ni-63 | Bq/kg | 964 | 1560 | 1092-2028 | 61.8 | N ⁽¹⁾ |
| Mar 2025 | 25-MaS52 | Soil | Tc-99 | Bq/kg | 659 | 725 | 508-943 | 90.9 | A |
| Mar 2025 | 25-MaS52 | Soil | Th-228 | Bq/kg | 44.3 | 44.4 | 31.1-57.7 | 99.8 | A |
| Mar 2025 | 25-MaS52 | Soil | Th-230 | Bq/kg | 46.4 | 47 | 32.9-61.1 | 98.7 | A |
| Mar 2025 | 25-MaS52 | Soil | Th-232 | Bq/kg | 39.9 | 41.4 | 29.0-53.8 | 96.4 | A |
| Mar 2025 | 25-MaSUS2 | Urine | Cs-134 | Bq/L | -0.0104 | | False Positive | N/A | A |
| Mar 2025 | 25-MaSUS2 | Urine | Cs-137 | Bq/L | 0.497 | 0.608 | 0.426-0.490 | 81.7 | A |
| Mar 2025 | 25-MaSUS2 | Urine | Co-57 | Bq/L | 0.0472 | | False Positive | N/A | A |
| Mar 2025 | 25-MaSUS2 | Urine | Co-60 | Bq/L | 0.104 | 0.0765 | Sensitivity Eval | N/A | A |
| Mar 2025 | 25-MaSUS2 | Urine | Mn-54 | Bq/L | 0.0365 | | False Positive | N/A | A |
| Mar 2025 | 25-MaSUS2 | Urine | U-234 | Bq/L | 0.0963 | 0.105 | 0.074-0.137 | 91.7 | A |
| Mar 2025 | 25-MaSUS2 | Urine | U-238 | Bq/L | 0.108 | 0.109 | 0.076-0.142 | 99.1 | A |
| Mar 2025 | 25-MaSUS2 | Urine | Zn-65 | Bq/L | -0.278 | | False Positive | N/A | A |
| Mar 2025 | 25-MaW52 | Water | Ni-63 | Bq/L | 37.3 | 38.9 | 27.2-50.6 | 95.9 | A |
| Mar 2025 | 25-MaW52 | Water | Tc-99 | Bq/L | 6.64 | 6.34 | 4.44-8.24 | 104.7 | A |
| Mar 2025 | 25-RdV52 | Vegetation | Cs-134 | Bq/sample | 0.0452 | | False Positive | N/A | A |
| Mar 2025 | 25-RdV52 | Vegetation | Cs-137 | Bq/sample | 0.558 | 0.707 | 0.495-0.919 | 78.9 | W |
| Mar 2025 | 25-RdV52 | Vegetation | Co-57 | Bq/sample | 2.86 | 3.40 | 2.38-4.42 | 84.1 | A |
| Mar 2025 | 25-RdV52 | Vegetation | Co-60 | Bq/sample | 0.0284 | | False Positive | N/A | A |
| Mar 2025 | 25-RdV52 | Vegetation | Mn-54 | Bq/sample | 2.22 | 2.72 | 1.90-3.54 | 81.6 | A |
| Mar 2025 | 25-RdV52 | Vegetation | Sr-90 | Bq/sample | 0.222 | 0.370 | 0.259-0.481 | 60.0 | N ⁽²⁾ |
| Mar 2025 | 25-RdV52 | Vegetation | Zn-65 | Bq/sample | 1.5 | 1.87 | 1.31-2.43 | 80.2 | A |
| Mar 2025 | 25-RdV52 (R) | Vegetation | Sr-90 | Bq/sample | 0.356 | 0.370 | 0.259-0.481 | 96.2 | A |
| Mar 2025 | 25-RdV52 (R) | Vegetation | Sr-90 | Bq/sample | 0.4 | 0.370 | 0.259-0.481 | 108.1 | A |
| Sep 2025 | 25-MaS53 | Soil | Ni-63 | Bq/kg | 865 | 1474 | 1032-1916 | 58.7 | N ⁽³⁾ |
| Sep 2025 | 25-MaS53 | Soil | Tc-99 | Bq/kg | 314 | 370 | 259-481 | 84.9 | A |
| Sep 2025 | 25-MaS53 | Soil | Th-228 | Bq/kg | 51.2 | 41.7 | 29.2-54.2 | 123 | W |
| Sep 2025 | 25-MaS53 | Soil | Th-230 | Bq/kg | 54.8 | 45.6 | 31.9-59.3 | 120 | W |
| Sep 2025 | 25-MaS53 | Soil | Th-232 | Bq/kg | 50.4 | 38.7 | 27.1-50.3 | 130 | N ⁽⁴⁾ |
| Sep 2025 | 25-MaW53 | Water | Ni-63 | Bq/L | 23.0 | 25.0 | 17.5-32.5 | 92 | A |
| Sep 2025 | 25-MaW53 | Water | Tc-99 | Bq/L | 0.17 | | False Pos | N/A | A |
| Sep 2025 | 25-RdV53 | Vegetation | Cs-134 | Bq/sample | 0.1051 | | False Pos | N/A | A |
| Sep 2025 | 25-RdV53 | Vegetation | Cs-137 | Bq/sample | 0.9581 | 0.986 | 0.69-1.282 | 97 | A |
| Sep 2025 | 25-RdV53 | Vegetation | Co-57 | Bq/sample | 4.54 | 4.47 | 3.13-5.81 | 102 | A |
| Sep 2025 | 25-RdV53 | Vegetation | Co-60 | Bq/sample | 2.08 | 2.3 | 1.61-2.99 | 90 | A |
| Sep 2025 | 25-RdV53 | Vegetation | Mn-54 | Bq/sample | 2.64 | 3.1 | 2.17-4.03 | 85 | A |
| Sep 2025 | 25-RdV53 | Vegetation | Sr-90 | Bq/sample | 1.5 | 1.43 | 1.00-1.86 | 105 | A |
| Sep 2025 | 25-RdV53 | Vegetation | Zn-65 | Bq/sample | 8.39 | 9.29 | 6.50-12.08 | 90 | A |

KEY

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

(b) DOE/MAPEP evaluation:

A = Acceptable - reported result falls within ratio limits of 0.80-1.20

W = Acceptable with warning - reported result falls within 0.70-0.80 or 1.20-1.30

N = Not Acceptable - reported result falls outside the ratio limits of < 0.70 and > 1.30

Results Flags:

A = Result acceptable.....|Bias| <= 20%

W = Result acceptable with warning.....20% < |Bias| <= 30%

N = Result not acceptable.....|Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP < 2%

ACCEPTABLE.....2% <= RP <= 15%

ACCEPTABLE WITH WARNING.....15% < RP <= 30%

NOT ACCEPTABLE.....RP > 30%

Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

N⁽¹⁾ = NCR 25-05

N⁽²⁾ = NCR 25-04

(R) = Additional Study for N⁽²⁾ failure

N⁽³⁾ = NCR 25-12

N⁽⁴⁾ = NCR 25-13