



M. CHRISTOPHER NOLAN
Vice President

**Nuclear Regulatory Affairs, Policy &
Emergency Preparedness**
526 South Church Street, EC-07C
Charlotte, NC 28202
980-382-7426
Chris.Nolan@duke-energy.com

Serial: RA-20-0079
April 28, 2020

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

Brunswick Steam Electric Plant, Unit Nos. 1 and 2
Renewed Facility Operating License Nos. DPR-71 and DPR-62
Docket Nos. 50-325 and 50-324

Catawba Nuclear Station, Unit Nos. 1 and 2
Renewed Facility Operating License Nos. NPF-35 and NPF-52
Docket Nos. 50-413 and 50-414

H. B. Robinson Steam Electric Plant, Unit 2
Renewed Facility Operating License No. DPR-23
Docket No. 50-261

McGuire Nuclear Station, Unit Nos. 1 and 2
Renewed Facility Operating License Nos. NPF-9 and NPF-17
Docket Nos. 50-369 and 50-370

Oconee Nuclear Station, Unit Nos. 1, 2 and 3
Renewed Facility Operating License Nos. DPR-38, DPR-47 and DPR-55
Docket Nos. 50-269, 50-270 and 50-287

Shearon Harris Nuclear Power Plant, Unit 1
Renewed Facility Operating License No. NPF-63
Docket No. 50-400

SUBJECT: Annual Radiological Environmental Operating Report - 2019

Ladies and Gentlemen:

Duke Energy Carolinas, LLC and Duke Energy Progress, LLC (collectively referred to as Duke Energy), in accordance with Technical Specification (TS) 5.6.2 for the Brunswick Steam Electric Plant (BNP) Units 1 and 2, TS 5.6.2 and Selected Licensing Commitment (SLC) 16.11-16 for the Catawba Nuclear Station Units 1 and 2 (CNS), TS 5.6.2 for the H. B. Robinson Steam Electric Plant Unit 2 (RNP), TS 5.6.2 and SLC 16.11.16 for the McGuire Nuclear Station Units 1 and 2 (MNS), TS 5.6.2 and SLC 16.11.10 for the Oconee Nuclear Station Units 1, 2, and 3 (ONS), and TS 6.9.1.3 for the Shearon Harris Nuclear Power Plant Unit 1 (HNP), is submitting the Annual Radiological Environmental Operating Reports (AREOR) for the period from January 1, 2019, through December 31, 2019. The AREORs are provided in Enclosures 1 through 6.

No regulatory commitments are contained in this submittal.

U.S. Nuclear Regulatory Commission

RA-20-0079

Page 2

Please refer any questions concerning this letter and its enclosures to Mr. Art Zaremba, Manager - Nuclear Fleet Licensing, at (980) 373-2062.

Sincerely,



M. Christopher Nolan

Vice President, Nuclear Regulatory Affairs, Policy & Emergency Preparedness

Enclosures:

1. [BNP Annual Radiological Environmental Operating Report](#)
2. [CNS Annual Radiological Environmental Operating Report](#)
3. [HNP Annual Radiological Environmental Operating Report](#)
4. [MNS Annual Radiological Environmental Operating Report](#)
5. [ONS Annual Radiological Environmental Operating Report](#)
6. [RNP Annual Radiological Environmental Operating Report](#)

cc: (all Enclosures unless specified)

L. Dudes, USNRC, Region II Regional Administrator
A. Hon, USNRC NRR Project Manager for BNP and RNP
M. Mahoney, USNRC NRR Project Manager for CNS, MNS, and ONS
T. Hood, USNRC NRR Project Manager for HNP
G. Smith, USNRC Senior Resident Inspector for BNP
J. Austin, USNRC Senior Resident Inspector for CNS
J. Zeiler, USNRC Senior Resident Inspector for HNP
A. Hutto, USNRC Senior Resident Inspector for MNS
J. Nadel, USNRC Senior Resident Inspector for ONS
J. Rotton, USNRC Senior Resident Inspector for RNP

Enclosure 1

General Counsel to Chair of NC Utilities Commission (swatson@ncuc.net)

Enclosure 6

SC Attorney General (phunter@scag.gov)

Enclosure 1, 3, and 5

W. L. Cox III (lee.cox@dhhs.nc.gov), NC DHHS, Radiation Protection Section

P. D. Cox (patrick.cox@dhhs.nc.gov), NC DHHS, Environmental Program

Enclosures 2, 5, and 6

S. Jackson (Jacksosb@dhec.sc.gov), SC DHEC, Division of Analytical and Radiological Environmental Services

R. Brewer (brewerre@dhec.sc.gov), SC DHEC, Division of Analytical and Radiological Environmental Services

L. Berresford (berresjl@dhec.sc.gov), SC DHEC, Site Assessment, Remediation, and Revitalization Division, State Voluntary Cleanup Program

L. Garner (garnerld@dhec.sc.gov), SC DHEC, Division of Waste Management, Radioactive & Infectious Waste Management

A. Nair-Gimmi (naira@dhec.sc.gov), SC DHEC, Division of Emergency Response

Enclosure 1
RA-20-0079

ENCLOSURE 1: [BNP Annual Radiological Environmental Operating Report](#)



ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT

**DUKE ENERGY PROGRESS, LLC
BRUNSWICK STEAM ELECTRIC PLANT**

2019



TABLE OF CONTENTS

1.0 Executive Summary	1-1
2.0 Introduction	2-1
2.1 Site Description and Sample Locations	2-1
2.2 Scope and Requirements of the REMP	2-2
2.3 Statistical and Computational Methodology	2-3
2.3.1 Estimation of the Mean Value	2-3
2.3.2 Lower Limit of Detection and Minimum Detectable Activity	2-3
2.3.3 Trend Identification	2-4
3.0 Interpretation of Results	3-1
3.1 Airborne Radioiodine and Particulates	3-2
3.2 Surface Water	3-5
3.3 Ground Water	3-7
3.4 Milk	3-9
3.5 Broadleaf Vegetation	3-10
3.6 Fish and Invertebrates	3-12
3.7 Shoreline Sediment	3-13
3.8 Direct Gamma Radiation	3-15
3.8.1 Environmental TLD	3-15
3.8.2 ISFSI	3-16
3.9 Land Use Census	3-20
4.0 Quality Assurance	4-1
4.1 Sample Collection	4-1
4.2 Sample Analysis	4-1
4.3 Dosimetry Analysis	4-1
4.4 Laboratory Equipment Quality Assurance	4-1
4.4.1 Daily Quality Control	4-1
4.4.2 Calibration Verification	4-1
4.4.3 Batch Processing	4-1
4.5 Duke Energy Interlaboratory Comparison Program	4-2
4.5.1 Eckert & Ziegler Analytics Cross Check Program	4-2
4.6 State of North Carolina Intercomparison Program	4-2
4.7 TLD Intercomparison Program	4-2
4.7.1 Nuclear Technology Services Intercomparison Program	4-2
4.7.2 Internal Crosscheck (Duke Energy)	4-3
4.8 General Engineering Laboratory, LLC (GEL)	4-3

APPENDICES

Appendix A: Environmental Sampling and Analysis Procedures	A-1
I. Change of Sampling Procedures	A-2
II. Description of Analysis Procedures	A-2
III. Change of Analysis Procedures	A-2
IV. Sampling and Analysis Procedures	A-3
A.1 Airborne Particulate and Radioiodine	A-3
A.2 Surface Water	A-3
A.3 Ground Water	A-3
A.4 Broadleaf Vegetation	A-4
A.5 Fish and Invertebrates	A-4
A.6 Shoreline Sediment	A-5
A.7 Direct Gamma Radiation (TLD)	A-5

A.8 Annual Land Use Census	A-5
V. Global Positioning System (GPS) Analysis.	A-6
Appendix B: Radiological Environmental Monitoring Program - Summary of Results	B-1
Air Particulate	B-2
Air Radioiodine.	B-2
Broadleaf Vegetation.	B-2
Fish and Invertebrates	B-2
Shoreline Sediment	B-2
Surface Water	B-3
Ground Water	B-3
Direct Gamma Radiation (TLD)	B-3
Direct Gamma Radiation (TLD) ISFSI	B-3
Footnotes to Appendix B.	B-4
Appendix C: Sampling Deviations & Unavailable Analyses	C-1
C.1 Sampling Deviations	C-2
C.2 Unavailable Analyses	C-3
Appendix D: Analytical Deviations	D-1
Appendix E: Radiological Environmental Monitoring Program Results 2019	E-1
Appendix F: Errata to Previous Reports	F-1

LIST OF FIGURES

2.1-1 BSEP Environmental Sample Locations - One mile radius.	2-5
2.1-2 BSEP Environmental Sample Locations (Ground Water Only)-One mile radius	2-6
2.1-3 BSEP Environmental Sample Locations - Ten mile radius.	2-7
3.1 Concentration of Gross Beta in Air Particulate	3-3
3.2 Concentration of Tritium in Surface Water	3-5
3.5 Concentration of Cs-137 in Broadleaf Vegetation	3-10
3.7 Concentration of Cs-137 in Shoreline Sediment.	3-13
3.8 Direct Gamma Radiation (TLD) Results	3-16
3.9 Brunswick Nuclear Plant 2019 Land Use Census Map	3-23

LIST OF TABLES

2.1-A Radiological Monitoring Program Sampling Locations	2-8
2.1-B Radiological Monitoring Program Sampling Locations (TLD Sites)	2-10
2.2-A Reporting Levels for Radioactivity Concentrations in Environmental Samples	2-11
2.2-B REMP Analysis Frequency	2-11
2.2-C Detection Capabilities for the <i>A PRIORI</i> Lower Limit of Detection	2-12
3.1-A Mean Concentration of Gross Beta in Air Particulate	3-4
3.1-B Mean Concentration of Air Radioiodine (I-131)	3-4
3.2 Mean Concentration of Tritium in Surface Water	3-6
3.3 Mean Concentration of Tritium in Ground Water	3-8
3.5 Mean Concentration of Radionuclides in Broadleaf Vegetation (pCi/kg)	3-11
3.7 Mean Concentration of Radionuclides in Shoreline Sediment	3-14
3.8-A Direct Gamma Radiation (TLD) Results	3-17
3.8-B BSEP TLD Results (1972-1994)	3-18
3.8-C BSEP TLD Results (1995-2019)	3-19
3.8-D ISFSI TLD Dose	3-19
3.9-A Land Use Census Comparison (2018-2019).	3-21
3.9-B BSEP Garden Census (2019)	3-22
4.0-A Eckert & Ziegler Analytics Cross Check Program	4-4
4.0-B 2019 Environmental Dosimeter Cross-Check Results	4-6

LIST OF ACRONYMS USED IN THIS TEXT *(in alphabetical order)*

A	Annually
AP	Air Particulate
AR	Air Radioiodine = Air Cartridge
AREOR	Annual Radiological Environmental Operating Report
BO	Benthic Organisms
BSEP	Brunswick Steam Electric Plant
C	Control
CR	Condition Report (analogous to Nuclear Condition Report (NCR))
EZA	Eckert & Ziegler Analytics, Inc.
GEL	General Engineering Laboratories, LLC.
GPS	Global Positioning System
GW	Ground water
I	Indicator
IR	Inner Ring - TLDs
ISFSI	Independent Spent Fuel Storage Installation
LLD	Lower Limit of Detection
LUC	Land Use Census
M	Monthly
MAPEP	Department of Energy Mixed Analyte Performance Evaluation Program
MDA	Minimum Detectable Activity
mrem	Millirem
mR/Std Qtr	milliroentgen per standard quarter
MSL	Mean sea level
NIST	National Institute of Standards and Technology
NCR	Nuclear Condition Report (analogous to Condition Report (CR))
NRC	Nuclear Regulatory Commission
OD	Ocean discharge
ODCM	Offsite Dose Calculation Manual
OR	Outer Ring - TLDs
pCi/kg	picocurie per kilogram
pCi/l	picocurie per liter
pCi/m ³	picocurie per cubic meter
PMAC	Projected Maximum Annual Concentration
Q	Quarterly
REMP	Radiological Environmental Monitoring Program
SA	Semiannually
SDSP	Storm Drain Stabilization Pond
SH	Shellfish
SI	Special Interest - TLDs
SW	Surface Water
TLD	Thermoluminescent Dosimeter
UFSAR	Updated Final Safety Analysis Report
W	Weekly

1.0 EXECUTIVE SUMMARY

This Annual Radiological Environmental Operating Report (AREOR) describes the Brunswick Steam Electric Plant (BSEP) Radiological Environmental Monitoring Program (REMP), and the program results for the calendar year 2019.

Included in the report are the identification of sampling locations, descriptions of environmental sampling and analysis procedures, comparisons of present environmental radioactivity levels, pre-operational environmental data, analysis of trends in environmental radiological data as potentially affected by plant operations, and a summary of environmental radiological sampling results. Quality assurance practices, sampling deviations, unavailable samples, and program changes are also discussed.

Sampling activities were conducted as prescribed by the BSEP Offsite Dose Calculation Manual (ODCM). One thousand three-hundred fifty-six samples were analyzed comprising 1,362 test results to compile data for the 2019 BSEP Annual Radiological Environmental Operating Report. Based on the annual BSEP land use census, the current number of sampling sites for BSEP is sufficient.

Concentrations observed in the environment in 2019 for station related radionuclides were generally within the ranges of concentrations observed in the past. Inspection of the data showed that radioactivity concentrations were as expected and positively identified measurements attributable to plant operation were within limits as specified in the BSEP ODCM. Measured concentrations, including tritium, were not higher than expected and all positively identified measurements attributable to station operation were within limits as specified in the BSEP ODCM and regulatory limits. The radiological environmental data for 2019 indicates that radioactivity concentrations and all positively identified measurements attributable to BSEP operations in 2019 were within limits as specified in the BSEP ODCM, thus presenting no significant impact on the environment or public health and safety.

2.0 INTRODUCTION

2.1 SITE DESCRIPTION AND SAMPLE LOCATIONS

Duke Energy's Brunswick Steam Electric Plant (BSEP) is located in Brunswick County, North Carolina, approximately 16 miles south of Wilmington, North Carolina. The site is along state route 87 approximately two and a half miles north of Southport, North Carolina. The community of Boiling Spring Lakes is about three miles northwest of the site. The towns of Caswell Beach and Oak Island are on a barrier island south of the plant.

The Brunswick Steam Electric Plant consists of two boiling water reactors with a design rating of 2923 megawatts thermal. Commercial production was initiated by Unit 2 on November 3, 1975 and by Unit 1 on March 18, 1977.

The Cape Fear River is east of the plant and cooling water is drawn from the river through a canal. The cooling water and plant liquid effluents are both discharged to the Atlantic Ocean through a canal, pumping station, and piping. The discharge point is south of the town of Caswell Beach. The plant site varies in elevation from sea level to 30 feet above mean sea level (MSL) and is surrounded by extensive marshes.

Sampling locations are chosen based upon meteorological factors, preoperational monitoring, and land use surveys. Additional locations were selected and identified as controls because they are unlikely to be affected by plant operations. Figures 2.1-1, 2.1-2, and 2.1-3 are maps depicting BSEP sampling locations and the Thermoluminescent Dosimeter (TLD) monitoring locations. The location numbers shown on these maps correspond to those listed in Tables 2.1-A and 2.1-B.

2.2 SCOPE AND REQUIREMENTS OF THE REMP

A Radiological Environmental Monitoring Program (REMP) has been in effect at BSEP, and the preoperational program provides data on the existing environmental radioactivity levels for the site and vicinity which may be used to determine whether increases in environmental levels are attributable to the station. The operational program provides surveillance and backup support of detailed effluent monitoring, which is necessary to evaluate the significance, if any, of the contributions to the existing environmental radioactivity levels that result from station operation.

This monitoring program is based on NRC guidance as reflected in the BSEP Offsite Dose Calculation Manual (ODCM), with regards to sample media, sampling locations, sampling frequency and analytical sensitivity requirements. Indicator and control locations were established for comparison purposes to distinguish radioactivity of plant origin from natural or other "man-made" environmental radioactivity. The environmental monitoring program also verifies projected and anticipated radionuclide concentrations in the environment and related exposures from releases of radionuclides from BSEP. This program satisfies the requirements of Section IV.B.2 of Appendix I to 10CFR50 and provides surveillance of all appropriate critical exposure pathways to man and protects vital interests of the company, public and state and federal

agencies concerned with the environment. Reporting levels for activity found in environmental samples are listed in Table 2.2-A. Table 2.2-B lists the REMP analysis and frequency schedule. The Annual Land Use Census, required by the BSEP ODCM, is performed to ensure that changes in the use of areas at or beyond the site boundary are identified and that modifications to the REMP are made if required by changes in land use. This census satisfies the requirements of Section IV.B.3 of Appendix I to 10CFR50. Results are shown in Tables 3.9-A and 3.9-B.

Participation in an interlaboratory comparison program is performed in fulfillment of BSEP ODCM Operational Requirement provides for independent checks on the precision and accuracy of measurements of radioactive material in REMP sample matrices. Such checks are performed as part of the quality assurance program for environmental monitoring in order to demonstrate that the results are valid for the purposes of Section IV.B.2 of Appendix I to 10CFR50. A summary of the results obtained as part of this comparison program are in Section 4 of this annual report.

2.3 STATISTICAL AND CALCULATIONAL METHODOLOGY

2.3.1 ESTIMATION OF THE MEAN VALUE

There was one (1) basic statistical calculation performed on the raw data resulting from the environmental sample analysis program. The calculation involved the determination of the mean value for the indicator and the control samples for each sample medium. The mean is a widely used statistic. This value was used in the reduction of the data generated by the sampling and analysis of the various media in the Radiological Environmental Monitoring Program. "Net activity (or concentration)" is the activity (or concentration) determined to be present in the sample. No "Minimum Detectable Activity", "Lower Limit of Detection", "Less Than Level", or negative activities or concentrations are included in the calculation of the mean. The following equation was used to estimate the mean:

$$\bar{x} = \frac{\sum_{i=1}^N x_i}{N}$$

Where:

\bar{x} = estimate of the mean,

i = individual sample,

N = total number of samples with a net activity (or concentration),

x_i = net activity (or concentration) for sample i .

2.3.2 LOWER LIMIT OF DETECTION AND MINIMUM DETECTABLE ACTIVITY

The Lower Limit of Detection (LLD) and Minimum Detectable Activity (MDA) are used throughout the REMP.

LLD - The LLD, as defined in the Offsite Dose Calculation Manual (ODCM), is the smallest concentration of radioactive material in an unknown sample that will yield a net count, above the system background, that will be detected with 95% probability with a 5% probability of falsely concluding that a blank observation represents a "real" signal. The LLD is an *a priori* (before the fact) lower limit of detection. The actual LLD is dependent upon the standard deviation of the background counting rate, the counting efficiency, the sample size (mass or volume), the radiochemical yield and the radioactive decay of the sample between sample collection and counting. The "required" LLDs for each sample medium and selected radionuclides are given in the ODCMs and are listed in Table 2.2-C.

MDA - The MDA is the net counting rate (sample after subtraction of background) that must be surpassed before a sample is considered to contain a scientifically measurable

amount of a radioactive material exceeding background amounts. The MDA is calculated using a sample background and may be thought of as an "actual" LLD for a sample measurement. Certain gross counting measurements display a calculated negative value, indicating background is greater than sample activity.

2.3.3 TREND IDENTIFICATION

One of the purposes of an environmental monitoring program is to determine if there is a buildup of radionuclides in the environment due to the operation of the nuclear station. Visual inspection of tabular or graphical presentations of data (including preoperational) is used to determine if a trend exists. A decrease in a radionuclide's concentration in an environmental medium does not indicate that reactor operations are removing radioactivity from the environment but that reactor operations are not adding that radionuclide to the environment in quantities exceeding the preoperational level and that the normal removal processes (radioactive decay, deposition, resuspension, etc.) are influencing the concentration.

Substantial increases or decreases in the amount of a radionuclide's release from the nuclear plant will greatly affect the resulting environmental levels; therefore, a knowledge of the release of a radionuclide from the nuclear plant is necessary to completely interpret the trends, or lack of trends, determined from the environmental data. Factors that may affect environmental levels of radionuclides include prevailing weather conditions (periods of drought, solar cycles or heavier than normal precipitation), construction in or around either the nuclear plant or the sampling location, and addition or deletion of other sources of radioactive materials (such as the 1986 Chernobyl accident and the 2011 Japan earthquake and tsunami, which triggered the Fukushima Dai-ichi Nuclear Power Plant incident). Some of these factors may be obvious while others are sometimes unknown. Therefore, how trends are identified will include some judgment by plant personnel.

Figure 2.1-1

BSEP Environmental Sampling Locations - One mile radius

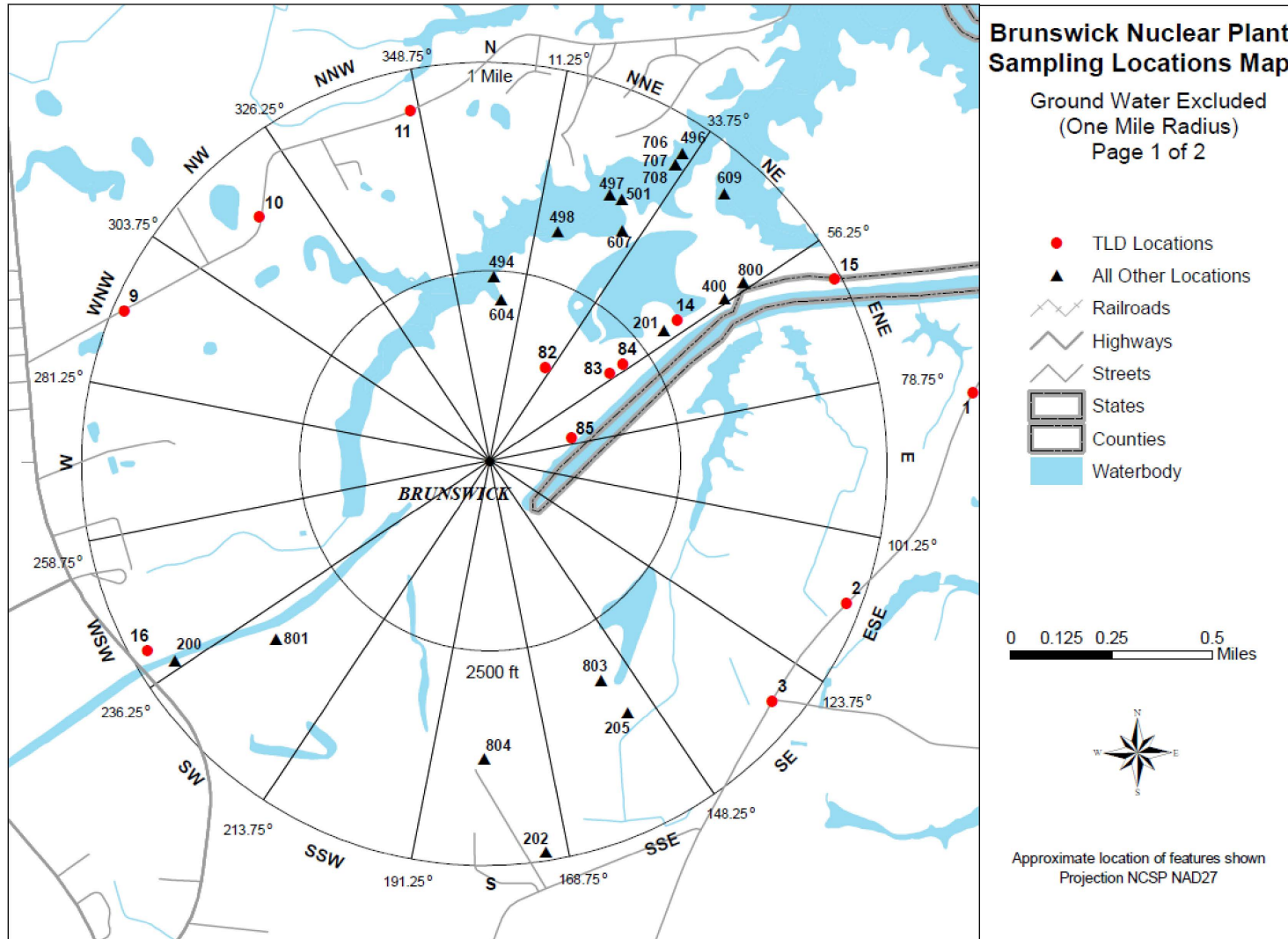


Figure 2.1-2

BSEP Environmental Sampling Locations (Ground Water Only) - One mile radius

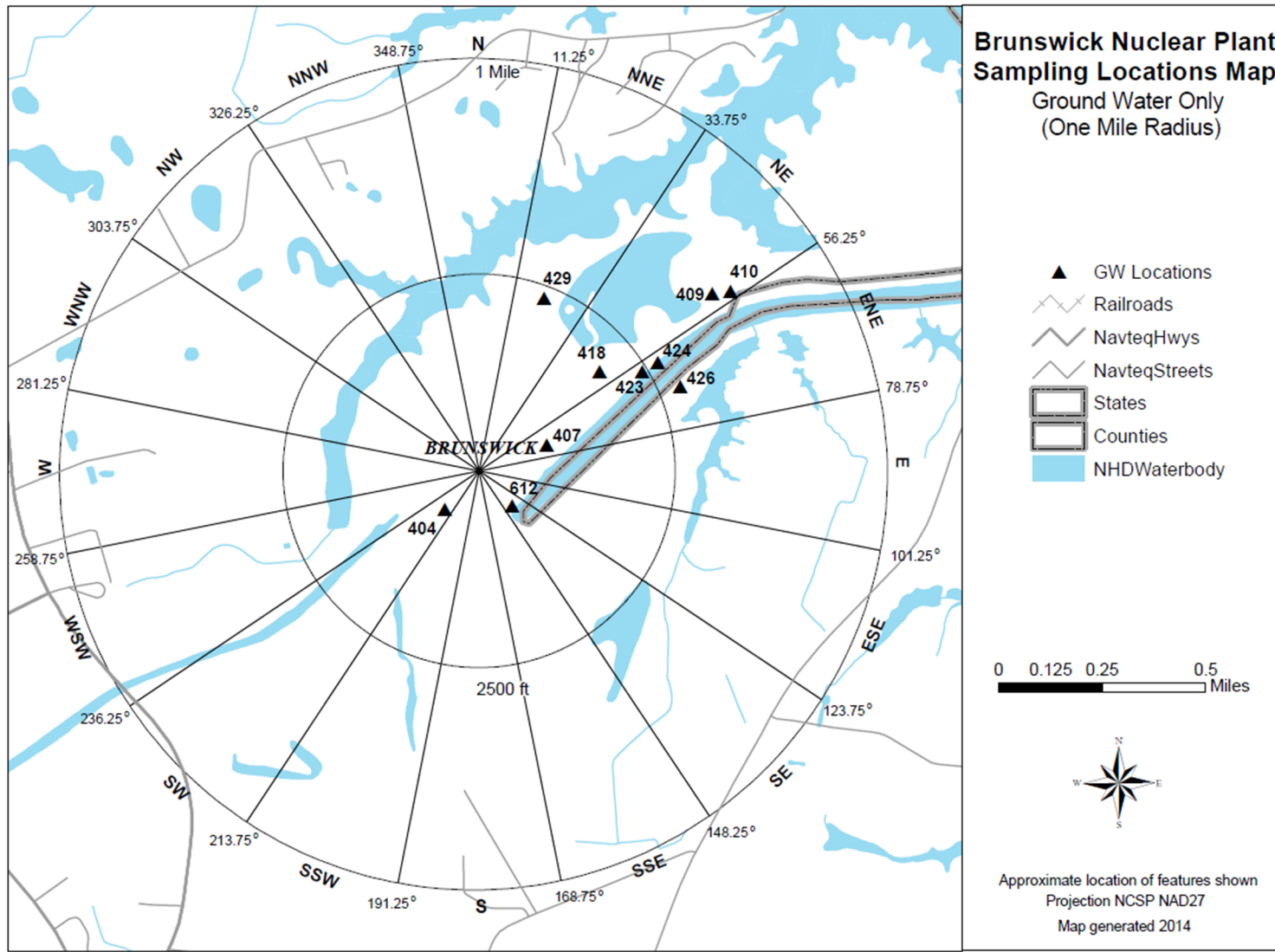


Figure 2.1-3

BSEP Environmental Sample Locations - Ten mile radius

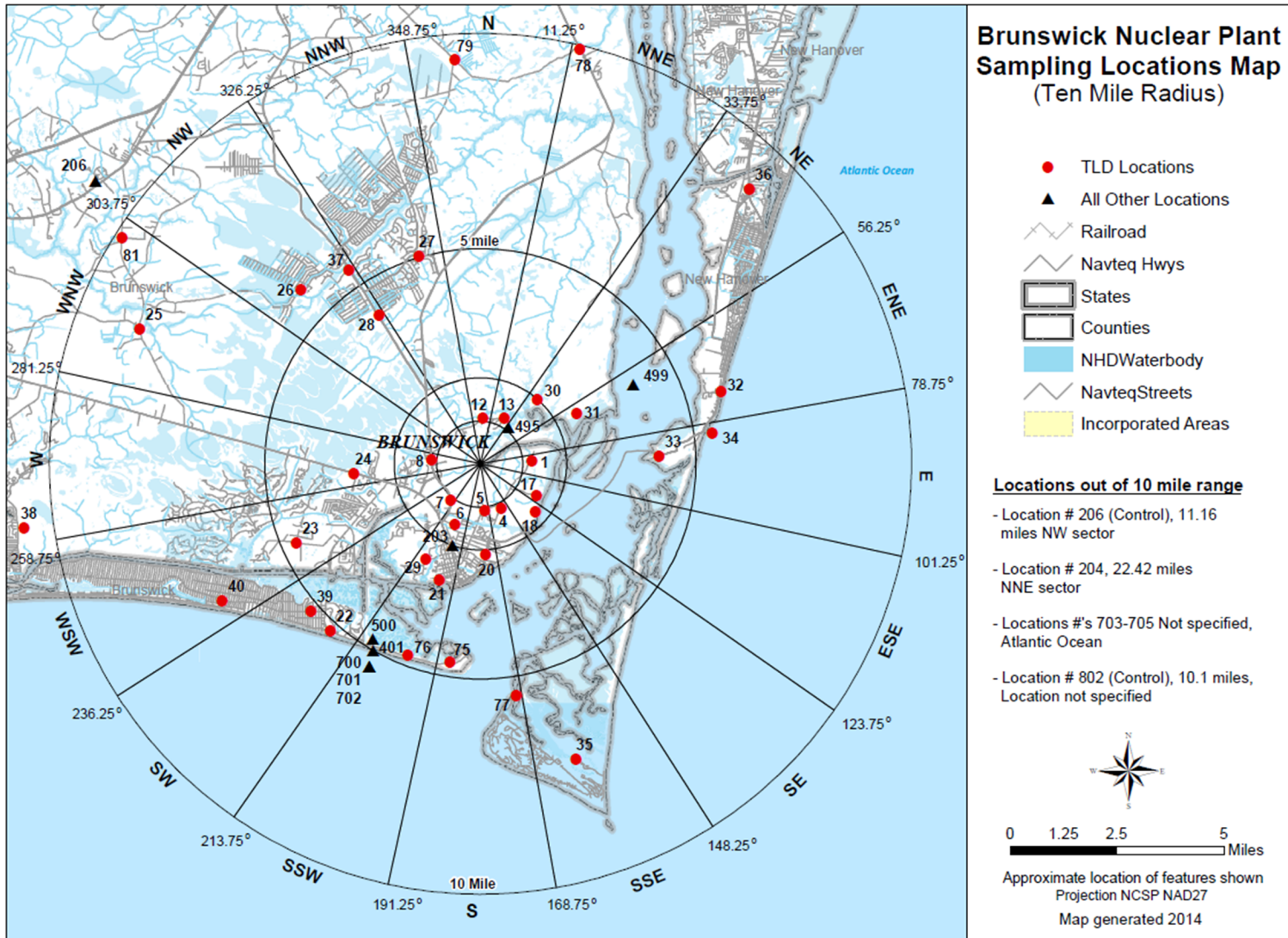


TABLE 2.1-A

RADIOLOGICAL MONITORING PROGRAM SAMPLING LOCATIONS

BRUNSWICK STEAM ELECTRIC PLANT (BSEP) ODCM

Table 2.1-A Codes			
W	Weekly	C	Control
M	Monthly	I	Indicator
Q	Quarterly		
SA	Semiannually		
A	Annually		

Site #	Type	Location Description*	Air Radiiodine & Air Particulate	Surface Water	Shoreline Sediment	Fish (FI)	Broadleaf Vegetation	Ground Water
200	I	1.0 miles WSW – Visitors Center	W/Q					
201	I	0.5 miles NE – Bio Lab Rd. – Projected Maximum Annual Concentration (PMAC)	W/Q					
202	I	1.0 mile S – Substation, Construction Rd.	W/Q					
203	I	2.0 miles SSW – Southport Substation	W/Q					
204	C	22.4 miles NNE – Sutton Plant (Historical Control)	W/Q					
205	I	0.6 miles SSE – Spoil Pond	W/Q					
206	C	11.3 miles NW – Brunswick County Complex	W/Q					
400	C	0.6 miles NE – Intake Canal		M				
401	I	4.9 miles SSW – Discharge Canal @ OD Pumps		M				
404	I	0.16 miles SW, Monitoring Well ESS-1B						Q/SA
407	I	0.06 miles ENE, Monitoring Well ESS-13B						Q/SA
409	I	0.65 miles NE, Monitoring Well ESS-17A						Q/SA
410	I	0.65 miles NE, Monitoring Well ESS-17B						Q/SA
418	I	Monitoring Well ESS-21B, Near SDSP						Q/SA
423	I	Monitoring Well ESS-24A, Near SDSP						Q/SA
424	I	Monitoring Well ESS-24B, Near SDSP						Q/SA
426	I	Monitoring Well ESS-25B, Near SDSP						Q/SA
429	I	Monitoring Well ESS-27A, Near SDSP						Q/SA
494	I	Nancy’s Creek March Area – WP-106		M				
495	I	Nancy’s Creek – WP-52		M				
496	I	Nancy’s Creek – WP-53		M				
497	I	Nancy’s Creek – WP-55		M				
498	I	Nancy’s Creek – WP-57		M				
499	C	Cape Fear River – WP-61		M				
500	I	5.0 miles SSW – Discharge – Beach near OD Pumps			SA			
501	I	Nancy’s Creek, Adjacent to WP-55, Near SDSP			A			
604	I	Nancy’s Creek Marsh Area – WP-92		M				
607	I	Nancy’s Creek Marsh Area – WP-76		M				
609	I	Nancy’s Creek Marsh Area – WP-84		M				
612	I	Monitoring Well ESS MWPA-118B, Near Intake Canal and Plant Stack						Q/SA
700	I	5.5 miles SSW – Atlantic Ocean @ discharge (Free Swimmer)				SA ^{(b)(c)}		
701	I	5.5 miles SSW – Atlantic Ocean @ discharge (Bottom Feeders)				SA ^{(b)(c)}		
702	I	5.5 miles SSW – Atlantic Ocean @ discharge (Shellfish/Invertebrates)				SA ^{(b)(c)}		
703	C	Atlantic Ocean; location not specified (Free Swimmer)				SA ^{(b)(c)}		
704	C	Atlantic Ocean; location not specified (Bottom Feeder)				SA ^{(b)(c)}		
705	C	Atlantic Ocean; location not specified (Shellfish/Invertebrates)				SA ^{(b)(c)}		

TABLE 2.1-A (Continued)

Site #	Type	Location Description*	Air Radioidine & Air Particulate	Surface Water	Shoreline Sediment	Fish (FI)	Broadleaf Vegetation	Ground Water
706	I	Nancy's Creek; location not specified (Free Swimmer)				A ^(b)		
707	I	Nancy's Creek; location not specified (Bottom Feeder)				A ^(b)		
708	I	Nancy's Creek; location not specified (Shellfish/Invertebrates)				A ^(b)		
800	I	0.7 miles NE – Intake Canal					M ^(a)	
801	I	0.8 miles SW – Discharge Canal					M ^(a)	
802	C	10.1 miles – Location not Specified					M ^(a)	
803	I	0.6 miles SSE – Spoil Pond					M ^(a)	
804	I	0.7 miles S – Leonard Street plant exit adjacent to RR tracks					M ^(a)	

(a) When Available

(b) Edible Portions

(c) When in Season

* GPS data reflect approximate accuracy to within 2-5 meters. GPS field measurements were taken as close as possible to the item of interest.

SDSP: Storm Drain Stabilization Pond

TABLE 2.1-B

RADIOLOGICAL MONITORING PROGRAM SAMPLING LOCATIONS (TLD SITES)

BRUNSWICK STEAM ELECTRIC PLANT (BSEP)

Table 2.1-B Codes			
IR	Inner Ring	OR	Outer Ring
ISFSI	Independent Spent Fuel Storage Installation		
C	Control	SI	Special Interest

Site #	Measure Type	Location*	Distance (miles)	Sector	Site #	Measure Type	Location*	Distance (miles)	Sector
1	IR	1.1 miles E	1.1	E	27	OR	5.1 miles NNW	5.1	NNW
2	IR	0.9 miles ESE	0.9	ESE	28	OR	4.2 miles NW	4.2	NW
3	IR	0.9 miles SE	0.9	SE	29	IR	2.6 miles SSW	2.6	SSW
4	IR	1.1 miles SSE	1.1	SSE	30	IR	2.0 miles NE	2.0	NE
5	IR	1.1 miles S	1.1	S	31	IR	2.5 miles ENE	2.5	ENE
6	IR	1.6 miles SSW	1.6	SSW	32	OR	5.8 miles ENE	5.8	ENE
7	IR	1.1 miles SW	1.1	SW	33	OR	4.1 miles E	4.1	E
8	IR	1.2 miles W	1.2	W	34	OR	5.4 miles E	5.4	E
9	IR	1.0 miles WNW	1.0	WNW	35	OR	7.3 miles SSE	7.3	SSE
10	IR	0.8 miles NW	0.8	NW	36	OR	8.9 miles NE	8.9	NE
11	IR	0.9 miles NNW	0.9	NNW	37	OR	5.5 miles NW	5.5	NW
12	IR	1.1 miles N	1.1	N	38	OR	11.0 miles W	11.0	W
13	IR	1.2 miles NNE	1.2	NNE	39	OR	5.3 miles SW	5.3	SW
14	IR	0.5 miles NE	0.5	NE	40	OR	6.9 miles WSW	6.9	WSW
15	IR	0.9 miles ENE	0.9	ENE	75	OR	4.7 miles S	4.7	S
16	IR	1.0 miles WSW	1.0	WSW	76	OR	4.8 miles SSW	4.8	SSW
17	IR	1.4 miles ESE	1.4	ESE	77	OR	5.4 miles S	5.4	S
18	IR	1.7 miles	1.7		78	OR	9.9 miles NNE	9.9	NNE
20	IR	2.1 miles S	2.1	S	79	OR	9.5 miles N	9.5	N
21	IR	2.9 miles SSW	2.9	SSW	81	C	9.9 miles WNW	9.9	WNW
22	OR	5.3 miles SW	5.3	SW	82	ISFSI	0.17 miles NNE @ SW corner of ISFSI	0.17	NNE
23	OR	4.6 miles WSW	4.6	WSW	83	ISFSI	0.27 miles NE @ NW corner ISFSI	0.27	NE
24	IR	3.0 miles W	3.0	W	84	ISFSI	0.27 miles NE @ NE corner of ISFSI	0.27	NE
25	OR	8.6 miles WNW	8.6	WNW	85	ISFSI	0.09 miles ENE @ SE corner of ISFSI	0.09	ENE
26	OR	5.9 miles NW	5.9	NW					

* GPS data reflect approximate accuracy to within 2-5 meters. GPS field measurements were taken as close as possible to the item of interest.

TABLE 2.2-A**REPORTING LEVELS FOR RADIOACTIVITY
CONCENTRATIONS IN ENVIRONMENTAL SAMPLES**

Analysis	Water (pCi/liter)	Airborne Particulate and Gases (pCi/m ³)	Fish (pCi/kg, wet)	Milk (pCi/liter)	Broadleaf Vegetation (pCi/kg)
H-3	30,000				
Mn-54	1,000		30,000		
Fe-59	400		10,000		
Co-58	1,000		30,000		
Co-60	300		10,000		
Zn-65	300		20,000		
Zr-Nb-95	400				
I-131	2	0.9		3	100
Cs-134	30	10	1,000	60	1,000
Cs-137	50	20	2,000	70	2,000
Ba-La-140	200			300	

TABLE 2.2-B**REMP ANALYSIS FREQUENCY**

Sample Medium	Analysis Schedule	Gamma Isotopic	Tritium	Gross Beta	TLD
Air Radioiodine	Weekly	X			
Air Particulate	Weekly			X	
	Quarterly	X			
Direct Radiation (TLD)	Quarterly				X
Surface Water	Monthly Composite (400 & 401)	X	X		
	Monthly Grab (494 - 499, 604, 607, & 609)	X	X		
Ground Water	Quarterly Grab		X		
	Semiannual Grab	X			
Shoreline Sediment	Semiannually (500)	X			
	Annually (501)	X			
Fish and Shellfish/Invertebrates ^(a)	Semiannually (700 – 705)	X			
	Annually (706 – 708)	X			
Broadleaf Vegetation ^(b)	Monthly ^(b)	X			

(a) Edible portions

(b) When available

TABLE 2.2-C

DETECTION CAPABILITIES FOR THE *A PRIORI* LOWER LIMIT OF DETECTION^{(a)(b)(d)}

Analysis	Water (pCi/liter)	Airborne Particulates or Gases (pCi/m ³)	Fish (pCi/kg, wet)	Milk (pCi/liter)	Broadleaf Vegetation (pCi/kg, wet)	Sediment (pCi/kg, dry)
Gross Beta	4	0.01				
H-3	3000					
Mn-54	15		130			
Fe-59	30		260			
Co-58, 60	15		130			
Zn-65	30		260			
Zr-Nb-95	15					
I-131	1 ^(c)	0.07		1	60	
Cs-134	15	0.05	130	15	60	150
Cs-137	18	0.06	150	18	80	180
Ba-La-140	15			15		

- (a) This list does not mean that only these nuclides are to be considered. Other peaks that are identifiable, together with these of the above nuclides, shall be analyzed and reported in the AREOR.
- (b) The LLD is defined in the BSEP ODCM.
- (c) LLD for drinking water samples. If no drinking water pathway exists, a value of 15 pCi/L may be used.
- (d) The LLD for each analysis is specified, with the exception of the Nancy's Creek Marsh Area principal gamma isotopic and I-131. The LLD for the Nancy's Creek Marsh Area gamma isotopic is 5×10^{-7} μ Ci/ml for Principal Gamma Emitters and 1×10^{-6} μ Ci/ml for I-131.

3.0 INTERPRETATION OF RESULTS

Review of 2019 REMP analysis results was performed to detect and identify changes in environmental levels as a result of station operation. The radionuclides with ODCM reporting levels that indicate consistent detectable activity have been historically trended from preoperation to present. Summary tables containing 2019 information required by Technical Specification Administrative Control 5.6.2, BSEP ODCM 7.4.1 are located in Appendix B. Brunswick 2019 REMP results are located in Appendix E.

The highest annual mean concentration of applicable ODCM radionuclides from the indicator locations for each media type was used for trending purposes. Trending was performed by comparing annual mean concentrations to historical results. Factors evaluated include the frequency of detection and the concentration in terms of the percent of the radionuclide's ODCM reporting level (Table 2.2-A). Evaluation for significant trends was performed for radionuclides that are listed as required in the BSEP ODCM. The radionuclides include: H-3, Mn-54, Fe-59, Co-58, Co-60, Zn-65, Zr-95, Nb-95, I-131, Cs-134, Cs-137, Ba-140 and La-140. Gross beta results were trended for air particulate and tritium in surface water samples.

Review of the 2019 data presented in this section supports the conclusion that there were no significant changes in environmental sample radionuclide concentrations of samples collected and analyzed from BSEP and surrounding areas that were attributable to plant operations. The radiological environmental data for 2019 indicates that radioactivity concentrations were not higher than expected and all positively identified measurements attributable to BSEP operations in 2019 were within limits as specified in the BSEP ODCM, thus presenting no significant impact on the environment or public health and safety.

Data presented in Sections 3.1 through 3.9 support the conclusion that there was no significant increase in radioactivity in the environment around Brunswick Steam Electric Plant due to station operations in 2019. Similarly, there was no significant increase in ambient background radiation levels in the surrounding areas. The 2019 land use census data, shown in Section 3.9, indicates that no program changes are required as a result of the census.

3.1 AIRBORNE RADIOIODINE AND PARTICULATES

In 2019, 364 radioiodine and particulate samples were analyzed, 260 from five indicator locations and 104 from the two control locations. The air samplers operated for a total of 99.83% availability for the 2019 year. Particulate samples were analyzed weekly for gross beta. A quarterly gamma analysis was performed on the quarterly filter composite (by location). Radioiodine samples received a weekly gamma analysis.

Gross beta analyses indicated $1.96\text{E-}2$ pCi/m³ at the location with the highest annual mean and $1.95\text{E-}2$ pCi/m³ at the two control locations. The preoperational (1973 – 1974) gross beta average concentration was $8.2\text{E-}2$ pCi/m³. One air particulate filter from location 206 (11.3 mi NW) for monitoring period 20AUG2019–27AUG2019 incurred damage (gouge) during the collection period but any analytical result effects were not discernible (NCR # 02289196). No gamma emitting radionuclides attributable to BNP plant operation were detected in any 2019 radioiodine samples.

Figure 3.1 and Table 3.1-A provide individual sample gross beta results for the highest annual mean indicator location and the control locations concentration since 1999. There is no reporting level for gross beta in air particulate.

Table 3.1-B gives indicator location highest annual means and control means since 1999 for I-131. No I-131 activity due to BSEP operation has been detected since 2006. Since no activity was detected in 2019, no reporting levels were approached.

K-40 and Be-7 observed in air samples are naturally occurring radionuclides.

Figure 3.1

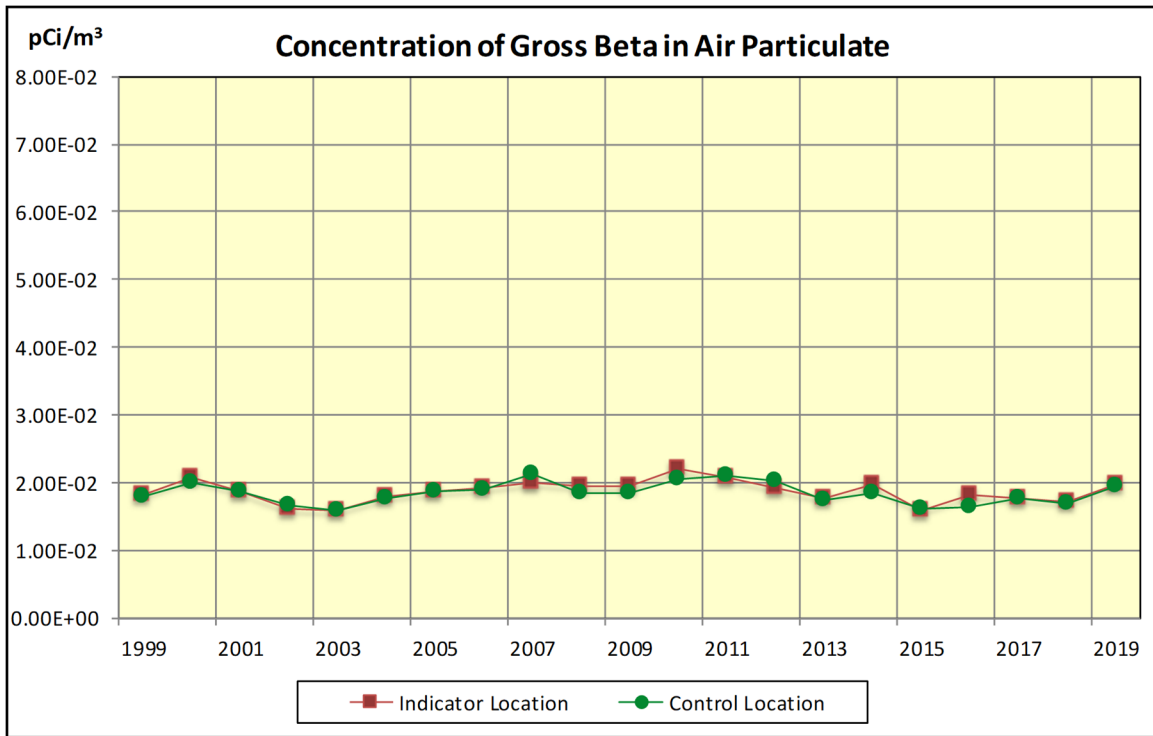


Table 3.1-A Mean Concentration of Gross Beta in Air Particulate

Year	Indicator Location (pCi/m ³)	Control Location (pCi/m ³)
1999	1.82E-2	1.80E-2
2000	2.08E-2	2.01E-2
2001	1.87E-2	1.87E-2
2002	1.62E-2	1.66E-2
2003	1.59E-2	1.59E-2
2004	1.78E-2	1.77E-2
2005	1.86E-2	1.88E-2
2006	1.92E-2	1.90E-2
2007	2.01E-2	2.13E-2
2008	1.94E-2	1.83E-2
2009	1.95E-2	1.83E-2
2010	2.20E-2	2.06E-2
2011	2.08E-2	2.10E-2
2012	1.93E-2	2.03E-2
2013	1.77E-2	1.74E-2
2014	1.97E-2	1.84E-2
2015	1.58E-2	1.60E-2
2016	1.82E-2	1.63E-2
2017	1.77E-2	1.76E-2
2018	1.72E-2	1.69E-2
2019	1.96E-2	1.95E-2

Table 3.1-B Mean Concentration of Air Radioiodine (I-131)

Year	Indicator Location (pCi/m ³)	Control Location (pCi/m ³)
1999	0.00E+0	0.00E+0
2000	0.00E+0	0.00E+0
2001	0.00E+0	0.00E+0
2002	0.00E+0	0.00E+0
2003	0.00E+0	0.00E+0
2004	0.00E+0	0.00E+0
2005	0.00E+0	0.00E+0
2006 ⁽¹⁾	5.31E-2	0.00E+0
2007	0.00E+0	0.00E+0
2008	0.00E+0	0.00E+0
2009	0.00E+0	0.00E+0
2010	0.00E+0	0.00E+0
2011 ⁽²⁾	1.31E-1	1.00E-1
2012	0.00E+0	0.00E+0
2013	0.00E+0	0.00E+0
2014 ⁽³⁾	0.00E+0	0.00E+0
2015	0.00E+0	0.00E+0
2016	0.00E+0	0.00E+0
2017	0.00E+0	0.00E+0
2018	0.00E+0	0.00E+0
2019	0.00E+0	0.00E+0

0.00E+0 indicates no detectable measurements

(1) 2006 concentration affected by plant conditions (NCR # 0211934).

(2) 2011 concentrations affected by Fukushima Dai-ichi (NCR # 0456564).

(3) 2014 Gamma spectroscopy system was replaced 10JUL2014. Gamma spectroscopy system hardware, detector cooling apparatus, software, electronics, nuclide identification libraries, and analytical test matrix components for test matrices were modified (NCR # 0739995). No analytical changes were noted due to the 2014 gamma spectroscopy system change.

3.2 SURFACE WATER

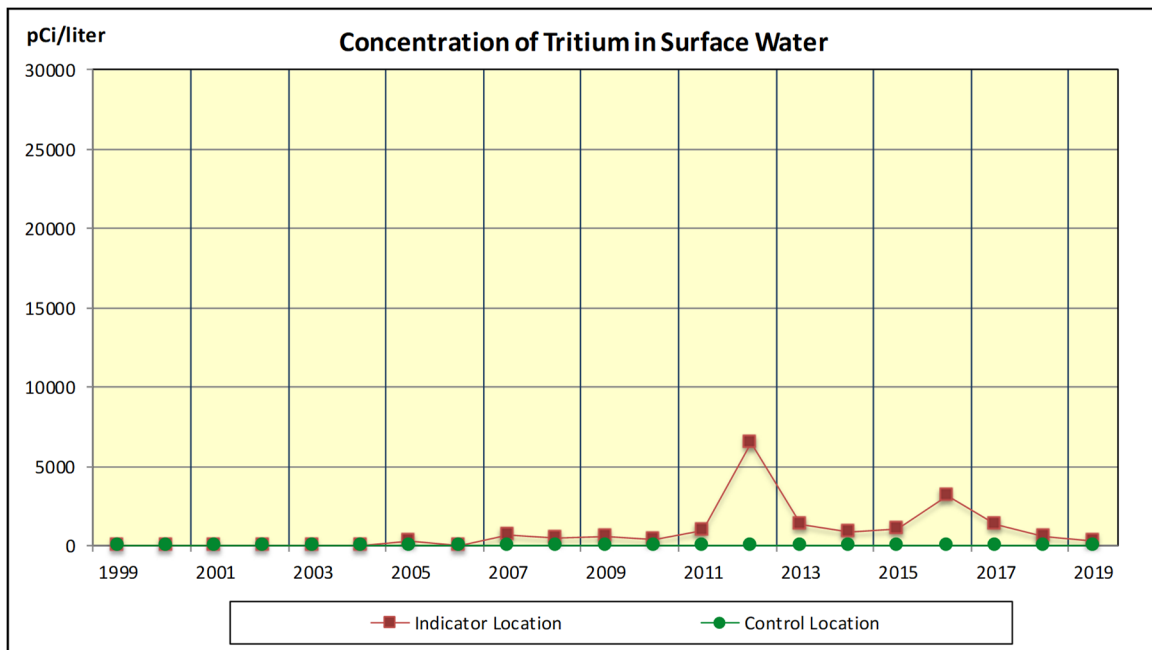
In 2019, 132 surface water samples were analyzed for gamma emitting radionuclides and tritium. Surface water samples were taken monthly from the intake canal, the discharge canal, five Nancy’s Creek surface water locations, and four Nancy’s Creek Marsh Area surface water locations.

No detectable gamma activity attributable to BSEP operation was found in surface water samples in 2019. K-40 and Be-7 observed in some surface water samples are naturally occurring radionuclides. Tritium was detected in 3 of the 132 surface water samples taken in 2019. Tritium was not detected in any of the control location samples in 2019.

The predominate indicator location indicating tritium in 2019 was at location 604, Nancy’s Creek Marsh Area (Waypoint-92). Three of the twelve samples from location 604 indicated the presence of tritium. Indicator samples from Nancy’s Creek and Nancy’s Creek Marsh Area had an average tritium concentration of 251 pCi/L. The reporting limit for tritium in environmental surface water samples is 30,000 pCi/L.

Figure 3.2 displays the tritium results for the highest annual mean indicator and control locations concentrations since 1999. Table 3.2 lists the highest annual mean concentrations for indicator and control locations.

Figure 3.2



There is no reporting level for tritium in surface water; however, if no drinking water pathway exists, a value of 30,000 pCi/l may be used.

Table 3.2 Mean Concentration of Tritium in Surface Water

Year	Indicator Location (pCi/l)	Control Location (pCi/l)
1999	0.00E+0	0.00E+0
2000	0.00E+0	0.00E+0
2001	0.00E+0	0.00E+0
2002	0.00E+0	0.00E+0
2003	0.00E+0	0.00E+0
2004	0.00E+0	0.00E+0
2005	3.22E+2	0.00E+0
2006	0.00E+0	0.00E+0
2007	6.30E+2	0.00E+0
2008	4.85E+2	0.00E+0
2009	5.75E+2	0.00E+0
2010	3.39E+2	0.00E+0
2011	9.28E+2	0.00E+0
2012	6.47E+3	0.00E+0
2013	1.29E+3	0.00E+0
2014	8.80E+2	0.00E+0
2015	1.02E+3	0.00E+0
2016	3.18E+3	0.00E+0
2017	1.33E+3	0.00E+0
2018	5.36E+2	0.00E+0
2019	2.51E+2	0.00E+0

0.00E+0 indicates no detectable measurements

3.3 GROUND WATER

In 2019, forty ground water samples were collected from ten indicator locations and analyzed for gamma emitting radionuclides and tritium. Grab samples were collected quarterly for tritium testing and semiannually for gamma spectroscopy testing. There is no ground water control location sampled.

No detectable gamma activity attributable to BSEP operation was found in ground water samples in 2019. K-40 observed in some ground water samples is a naturally occurring radionuclide. Tritium was detected in four of the forty indicator ground water samples taken in 2019 with a mean tritium concentration of 298 pCi/L.

Brunswick county utilizes water from the Cape Fear River, which is processed at the Northwest Water Treatment Plant, and groundwater that is pumped from the Castle Hayne Aquifer, which is processed at the 211 Water Treatment Plant in Southport. The 211 Water Treatment Plant supplies drinking water to Southport, Oak Island, and St. James Plantation. The 211 Water Treatment Plant uses ground water from fourteen wells screened in the Castle Hayne formation approximately 175 feet below the ground's surface and is located approximately 4 miles northwest, up gradient, of the site according to the North Carolina Department of Environmental Quality (NCDEQ) Public Water Supply Section and the Brunswick County Public Utilities Water Distribution Division. The City of Southport has a network of ground water supply wells installed in the Castle Hayne and PeeDee aquifers, within two miles of the BNP Storm Drain Stabilization Pond (SDSP) area; however, these wells are only maintained as emergency or backup supply wells. Between the Ground Water Program at BSEP, the BSEP REMP, the information provided by the Castle Hayne Aquifer/ formation, and Silar Services, Inc.; the drinking water source for the public is sufficiently monitored and a control point for sampling drinking water is not needed.

Table 3.3 lists the tritium results for the highest annual mean concentrations for indicator and control locations (if applicable) since 1999.

Table 3.3 Mean Concentration of Tritium in Ground Water

Year	Indicator Location (pCi/l)	Control Location (pCi/l)
1999	N/A	N/A
2000	N/A	N/A
2001	N/A	N/A
2002	N/A	N/A
2003	N/A	N/A
2004	N/A	N/A
2005	N/A	N/A
2006	N/A	N/A
2007	N/A	N/A
2008	1.50E+6	No Control
2009	6.48E+5	No Control
2010	5.66E+5	No Control
2011	3.10E+2	No Control
2012	4.00E+2	No Control
2013	4.66E+2	No Control
2014	6.54E+2	No Control
2015	4.02E+2	No Control
2016	0.00E+0	No Control
2017	3.76E+2	No Control
2018	3.22E+2	No Control
2019	3.34E+2	No Control

0.00E+0 indicates no detectable measurements

N/A indicates that Ground Water samples were not part of the BSEP REMP until 2008.

3.4 MILK

No milk sampling locations are currently identified in BSEP environs, therefore no sampling of this media was available or performed in 2019.

3.5 BROADLEAF VEGETATION

In 2019, sixty broadleaf vegetation samples were collected monthly and analyzed by gamma spectroscopy, 48 at the four indicator locations and twelve at the control location.

Gamma spectroscopy analysis did not detect Cs-137 in any of the indicator locations, but did identify Cs-137 in one of the twelve control location samples. Cs-137 was detected at control location 802 with a mean concentration of 25.5 pCi/kg which represents 1.3% of the reporting level.

It is not unusual for Cs-137 to be present in broadleaf vegetation. It is a constituent of nuclear weapons test fallout and nuclear plant accidents and has been observed in samples from indicator and control locations since the preoperational period. Figure 3.5 displays the highest annual mean indicator and control location concentrations for Cs-137 in broadleaf vegetation since 1999. Table 3.5 lists the highest indicator location annual mean and control location annual means for Cs-134, Cs-137, Co-60, and I-131 since 1999. Visual inspection of the tabular data did not reveal any increasing trends.

K-40 and Be-7 observed in broadleaf vegetation samples are naturally occurring radionuclides.

Figure 3.5

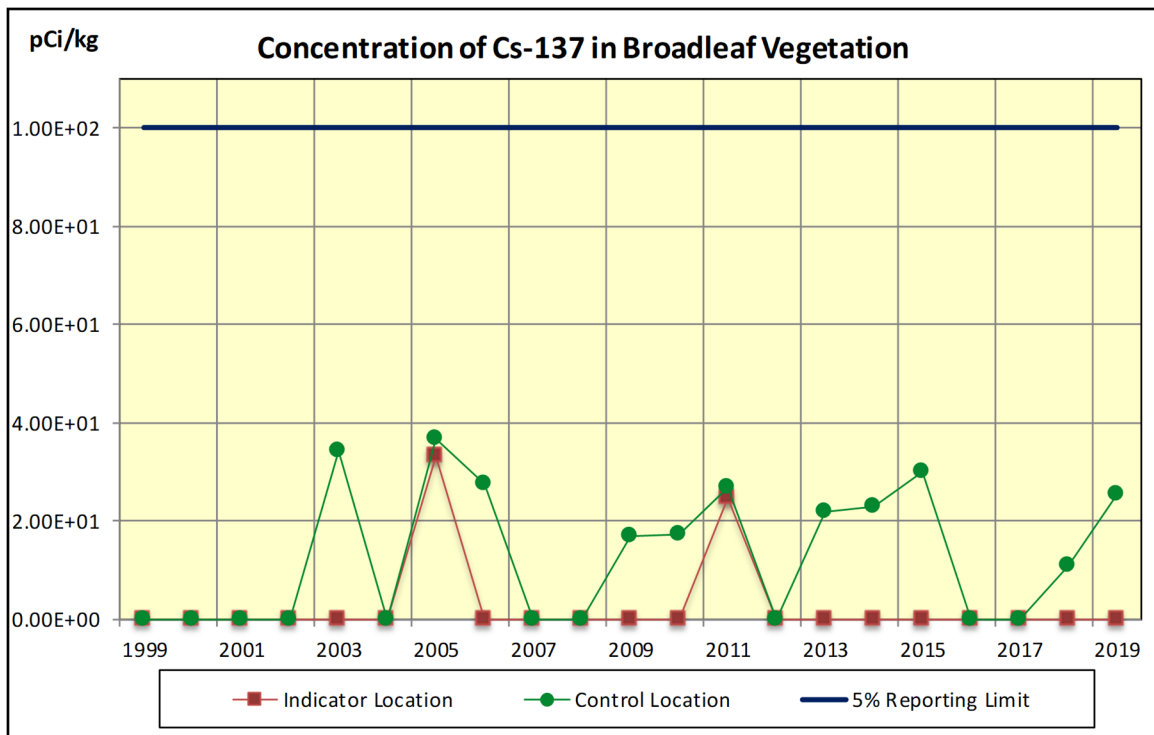


Table 3.5 Mean Concentrations of Radionuclides in Broadleaf Vegetation (pCi/kg)

Year	Cs-134 Indicator	Cs-134 Control	Cs-137 Indicator	Cs-137 Control	Co-60 Indicator	Co-60 Control	I-131 Indicator	I-131 Control
1999	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
2000	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
2001	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
2002	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
2003	0.00E+0	0.00E+0	0.00E+0	3.42E+1	0.00E+0	0.00E+0	0.00E+0	0.00E+0
2004	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
2005	0.00E+0	0.00E+0	3.32E+1	3.66E+1	0.00E+0	0.00E+0	0.00E+0	0.00E+0
2006	0.00E+0	0.00E+0	0.00E+0	2.73E+1	0.00E+0	0.00E+0	0.00E+0	0.00E+0
2007	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
2008	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
2009	0.00E+0	0.00E+0	0.00E+0	1.69E+1	4.94E+1	0.00E+0	0.00E+0	0.00E+0
2010	0.00E+0	0.00E+0	0.00E+0	1.73E+1	0.00E+0	0.00E+0	0.00E+0	0.00E+0
2011 ⁽¹⁾	2.60E+1	1.64E+1	2.48E+1	2.68E+1	0.00E+0	0.00E+0	2.20E+2	1.48E+2
2012	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
2013	0.00E+0	0.00E+0	0.00E+0	2.18E+1	0.00E+0	0.00E+0	0.00E+0	0.00E+0
2014 ⁽²⁾	0.00E+0	0.00E+0	0.00E+0	2.29E+1	0.00E+0	0.00E+0	0.00E+0	0.00E+0
2015	0.00E+0	0.00E+0	0.00E+0	2.98E+1	0.00E+0	0.00E+0	0.00E+0	0.00E+0
2016	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
2017	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
2018	0.00E+0	0.00E+0	0.00E+0	1.07E+1	0.00E+0	0.00E+0	0.00E+0	0.00E+0
2019	0.00E+0	0.00E+0	0.00E+0	2.55E+1	0.00E+0	0.00E+0	0.00E+0	0.00E+0

0.00E+0 indicates no detectable measurements

(1) 2011 concentration affected by Fukushima Dai-ichi

(2) 2014 Gamma spectroscopy system was replaced 10JUL2014. Gamma spectroscopy system hardware, detector cooling apparatus, software, electronics, nuclide identification libraries, and analytical test matrix components for test matrices were modified (NCR # 0739995). No analytical changes were noted due to the 2014 gamma spectroscopy system change.

3.6 FISH and INVERTEBRATES

In 2019, fifteen fish samples were collected and analyzed for gamma emitting radionuclides, nine at the indicator locations and six at the control locations. Fish (free swimmers and bottom feeders), invertebrate (SH), and benthic organism (BO) samples were collected semiannually. Gamma spectroscopy analysis indicated no gamma emitting radionuclides attributable to BSEP plant operations in any indicator or control location fish samples in 2019.

K-40 is a naturally occurring radionuclide observed in fish samples.

3.7 SHORELINE SEDIMENT

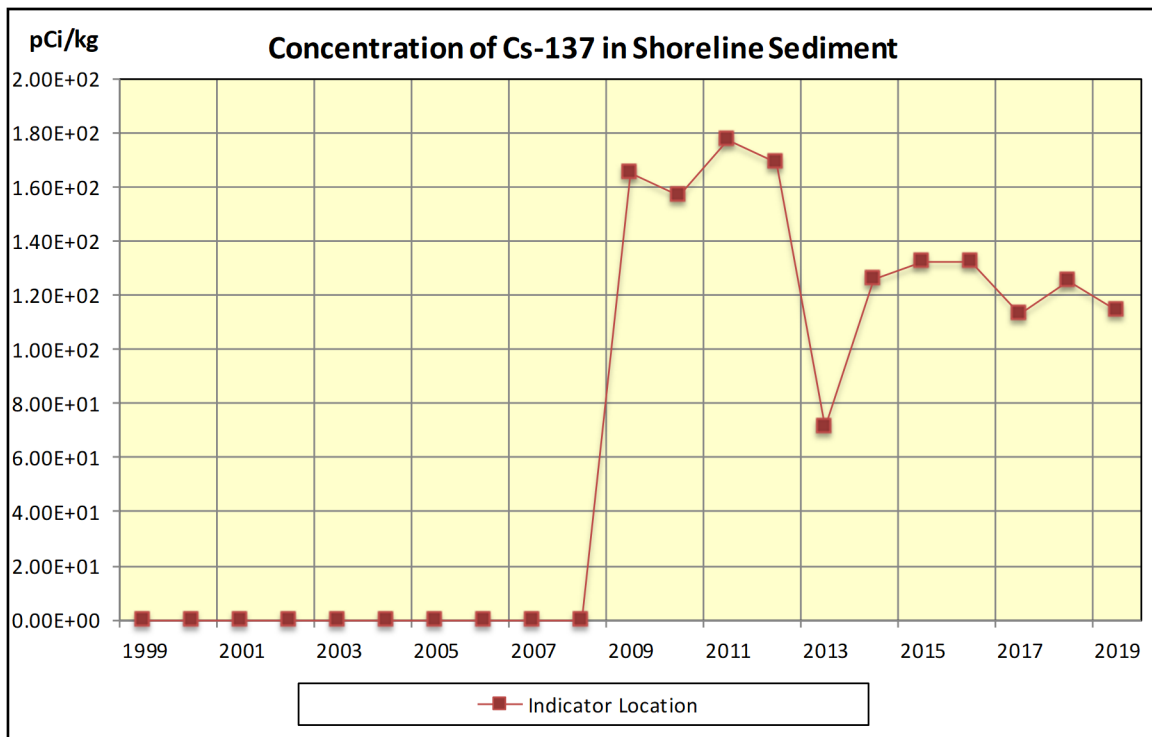
In 2019, four shoreline sediment samples were analyzed from two indicator locations. There is no control shoreline sediment location.

Cs-137 activity was detected in two sediment samples collected from location 501 (Nancy's Creek, adjacent to WP-55, near Storm Drain Stabilization Pond) with a mean concentration of 114 pCi/kg. The Nancy's Creek samples that indicated Cs-137 activity were analyzed for Ni-63, Fe-55, and Sr-89/90 and all results were less than detection limit with no activity being detected.

Figure 3.7 shows Cs-137 highest annual mean indicator concentrations since 1999. Table 3.7 shows indicator location highest annual means since 1999. There is no reporting level for shoreline sediment.

K-40 observed in shoreline samples is a naturally occurring radionuclide.

Figure 3.7



There is no reporting level for Cs-137 in shoreline sediment

Table 3.7 Mean Concentration of Radionuclides in Shoreline Sediment

YEAR	Cs-137 Indicator (pCi/kg)
1999	0.00E+0
2000	0.00E+0
2001	0.00E+0
2002	0.00E+0
2003	0.00E+0
2004	0.00E+0
2005	0.00E+0
2006	0.00E+0
2007	0.00E+0
2008	0.00E+0
2009	1.65E+2
2010	1.57E+2
2011	1.77E+2
2012	1.69E+2
2013	7.13E+1
2014 ⁽¹⁾	1.26E+2
2015	1.32E+2
2016	1.32E+2
2017	1.13E+2
2018	1.25E+2
2019	1.14E+2

0.00E+0 indicates no detectable measurements

There is no control location for Shoreline Sediments.

(1) 2014 Gamma spectroscopy system was replaced 10JUL2014. Gamma spectroscopy system hardware, detector cooling apparatus, software, electronics, nuclide identification libraries, and analytical test matrix components for test matrices were modified (NCR # 0739995). No analytical changes were noted due to the 2014 gamma spectroscopy system change.

3.8 DIRECT GAMMA RADIATION

3.8.1 ENVIRONMENTAL TLD

In 2019, 179 TLDs were analyzed, 175 at indicator locations and 4 at the control location. TLDs were collected and analyzed quarterly. Transit TLDs and laboratory background TLDs were used for determining transit and laboratory background dose and were subtracted from gross field readings as required by ANSI N545-1975.

TLD locations designated as "inner ring" are placed in each meteorological sector in the general area of the site boundary as is reasonably accessible and practical and all are used as indicators. Due to close proximity with Brunswick, and most being within the exclusion area boundary, inner ring TLD locations are not good indicators of radiation exposure to a member of the public, but are good at determining nearby environmental effects due to plant operation. Based on their placement, inner ring TLD locations are expected to occasionally be influenced by normal plant operation. TLD locations designated as "outer ring" are placed in each meteorological sector at distances of 8 kilometers or greater from the site as is reasonably accessible and practical. All outer ring TLD locations are used as indicators. The one "control" location is 9.9 miles WNW from station center. This location was chosen to reduce the probability of influence from Brunswick operation on data. The control location is not used as background subtraction in the TLD analysis. Its purpose is to provide a comparison to indicator locations.

The environmental data on external radiation exposure for 2019 was essentially unchanged from 1989-2019, with an average exposure for all of 2019 indicator locations of 10.5 mR per std. quarter. The TLD location with the highest annual mean of 15.5 mR per std. quarter was location 39, located 5.3 miles SW of the plant. Control TLD location 81 had an annual mean of 10.8 mR per std. quarter.

Figure 3.8 and Table 3.8-A show TLD inner ring, outer ring, and control location annual averages in mR per std. qtr. since 1999. The differences among these locations are attributed to variations in soils, local geology, and are not the result of plant operations. Table 3.8-B shows average TLD results (All Locations) from 1972 to 1994 in mR per week. Table 3.8-C shows TLD results (All Indicator Locations) from 1995 to 2019 in mR per std. quarter.

Quarterly, environmental ODCM TLD results are compared by location to its historical data to evaluate any significant changes. The comparison utilizes the location's average exposure history to determine if quarterly results fall within expected low and high ranges and provides a reliable indication of potential changes occurring at a specific TLD location. The low and high ranges are determined by the historical average \pm two standard deviations. The quarterly TLD evaluation implements portions of American National Standard ANSI/HPS N13.37-2014, "Environmental Dosimetry – Criteria for System Design and Implementation, for environmental Thermoluminescent Dosimeters (TLD)". The CSD-RP-ALL-0030 – Updated Radiological Environmental Monitoring Program TLD Analytical Method, describes the process implemented in late 2018 for the 2019 fleet TLD programs. TLD values identified as < Low Range or > High Range are evaluated in consideration of factors including possible TLD damage, sampling deviations, glow curve irregularities, and any known environmental location changes which may affect results. TLD results are found in Appendix E.

A TLD Intercomparison Program is conducted as part of the quality assurance program. Results of this program are included in Section 4.7.

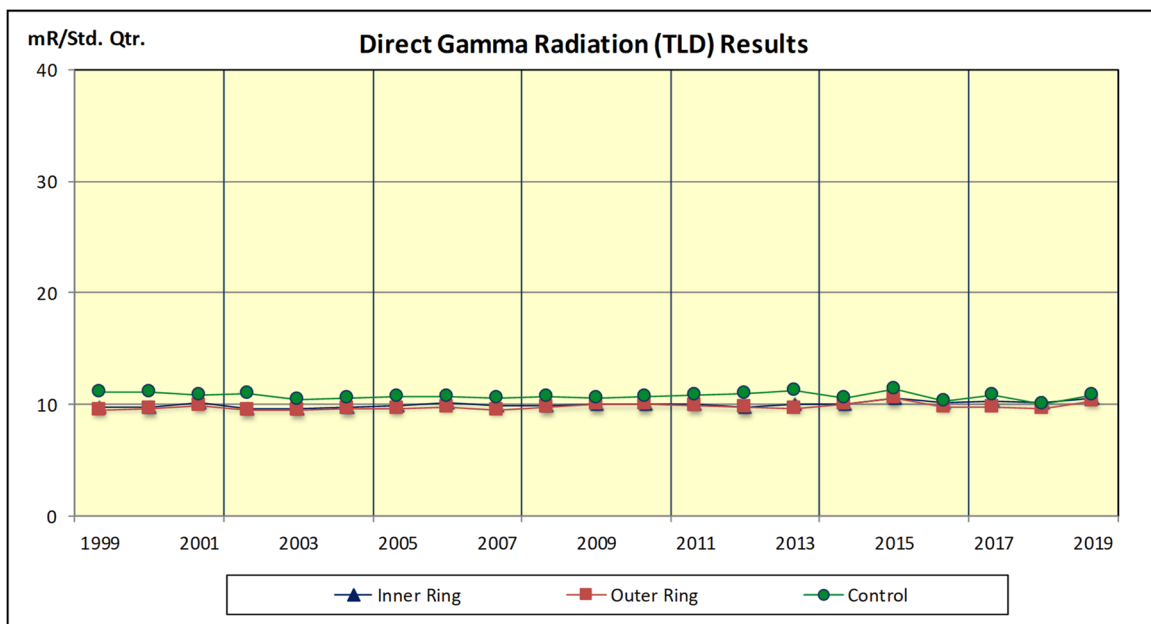
The fourth quarter 2019 TLD from location 11 (0.9 miles NNW) result of 13.3 mR/Std Qtr exceeded the location's acceptance range. Investigation did not indicate any analytical abnormalities or any known TLD site changes and the result is considered valid.

A TLD Intercomparison Program is conducted as part of the quality assurance program. Results of this program are included in Section 4.7.

3.8.2 ISFSI

BSEP ISFSI TLDs were added to the program in the 3rd quarter of 2010. The ISFSI TLDs are not part of the plant's environmental TLD monitoring program. Comparison of the 2019 ISFSI TLD data after loaded fuel with preoperational data (2008 – 3rd Quarter 2010) indicates that the average pre-op TLD dose levels were about the same as the average after fuel was loaded (Table 3.8-D). Dry fuel storage radiation measurements have been monitored since 2008 and additional information can be found in the BSEP 2019 Annual Radioactive Effluent Release Report (ARERR).

Figure 3.8



There is no reporting level for Direct Radiation (TLD)

Table 3.8-A Direct Gamma Radiation (TLD) Results

Year	Inner Ring Average (mR/Std. Qtr.)	Outer Ring Average (mR/Std. Qtr.)	Control Average (mR/Std. Qtr.)
1999	9.76E+0	9.53E+0	1.11E+1
2000	9.75E+0	9.61E+0	1.11E+1
2001	1.01E+1	9.88E+0	1.09E+1
2002	9.65E+0	9.45E+0	1.09E+1
2003	9.60E+0	9.51E+0	1.05E+1
2004	9.78E+0	9.68E+0	1.06E+1
2005	9.94E+0	9.64E+0	1.07E+1
2006	1.02E+1	9.80E+0	1.07E+1
2007	9.96E+0	9.55E+0	1.06E+1
2008	9.93E+0	9.83E+0	1.07E+1
2009	1.00E+1	9.98E+0	1.06E+1
2010	1.01E+1	1.01E+1	1.07E+1
2011	1.00E+1	9.86E+0	1.08E+1
2012	9.78E+0	9.79E+0	1.10E+1
2013	9.98E+0	9.61E+0	1.12E+1
2014 ⁽¹⁾	1.01E+1	9.98E+0	1.05E+1
2015	1.06E+1	1.06E+1	1.14E+1
2016	1.01E+1	9.76E+0	1.03E+1
2017	1.03E+1	9.73E+0	1.08E+1
2018	1.02E+1	9.62E+0	1.00E+1
2019	1.06E+1	1.03E+1	1.08E+1

(1) In 1Q2014 Panasonic TLDs were replaced with Harshaw TLDs causing a step change in activity (NCR # 01982479)

Table 3.8-B
BSEP TLD RESULTS (1972-1994)

Year	Average TLD Exposure All Monitoring Locations (mR per week)*
1972 (4th Qtr.)	8.00E-1
1973	1.25E+0
1974	9.70E-1
1975 (1st, 2nd Qtr)	8.00E-1
1976	9.80E-1
1977	1.32E+0
1978	1.24E+0
1979	9.30E-1
1980	9.00E-1
1981	9.60E-1
1982	1.18E+0
1983	1.21E+0
1984	9.80E-1
1985	1.03E+0
1986	8.90E-1
1987	9.20E-1
1988	8.60E-1
1989	7.50E-1
1990	7.60E-1
1991	7.60E-1
1992	7.50E-1
1993	7.80E-1
1994	7.70E-1

*TLD exposure in mR per quarter beginning in 1995, reference Table 3.8-C.

Table 3.8-C
BSEP TLD RESULTS (1995-2019)

Year	Average TLD Exposure All Indicator Locations mR per quarter *
1995	1.01E+1
1996	1.01E+1
1997	1.01E+1
1998	9.70E+0
1999	9.70E+0
2000	9.70E+0
2001	1.00E+1
2002	9.60E+0
2003	9.60E+0
2004	9.70E+0
2005	9.80E+0
2006	1.00E+1
2007	9.80E+0
2008	9.90E+0
2009	1.00E+1
2010	1.01E+1
2011	9.90E+0
2012	9.80E+0
2013	9.80E+0
2014	1.00E+1
2015	1.07E+1
2016	1.00E+1
2017	1.01E+1
2018	1.00E+1
2019	1.05E+1**

* TLD exposure reported in milliroentgen (mR) per standard quarter (91 days), beginning 1995.

** The equivalent 2019 weekly exposure is 8.1E-1 mR.

Table 3.8-D
ISFSI TLD Dose (mR/Std. Qtr.)

Year	TLD # 82	TLD # 83	TLD # 84	TLD # 85
Average Pre-Op (1Q2008 to 3Q2010)	3.01E+1	2.24E+1	1.67E+1	5.32E+1
Average after Fuel Loaded (4Q2010 to 4Q2019)	2.96E+1	2.40E+1	1.86E+1	3.71E+1

3.9 LAND USE CENSUS

The 2019 BSEP Land Use Census was conducted on 6/10/2019 and 6/17/2019 as required by the BSEP ODCM. Table 3.9-A summarizes the land use census results that was conducted within five miles of BSEP. Table 3.9-B summarizes the results of the garden census that was conducted within three miles of BSEP. A map indicating identified locations is shown in Figure 3.9.

The primary method of performing the land use census is visual inspection from the roadside within the five (5) mile radius, with the exception of the Sunny Point Military Ocean terminal. This information may be supplemented with data from aerial photographs and a Global Positioning System (GPS) to determine distance and direction from the plant. Distances from the plant are accurate to within one tenth of a mile.

During the 2019 census, no milk locations were identified. A closer residence was identified in the NW sector but the nearest residence is located in the North sector at 0.70 miles. No environmental program changes were required as a result of the 2019 land use census.

Table 3.9-A
Brunswick Steam Electric Plant
Land Use Census Comparison (2018 – 2019)
Nearest Pathway (Miles)

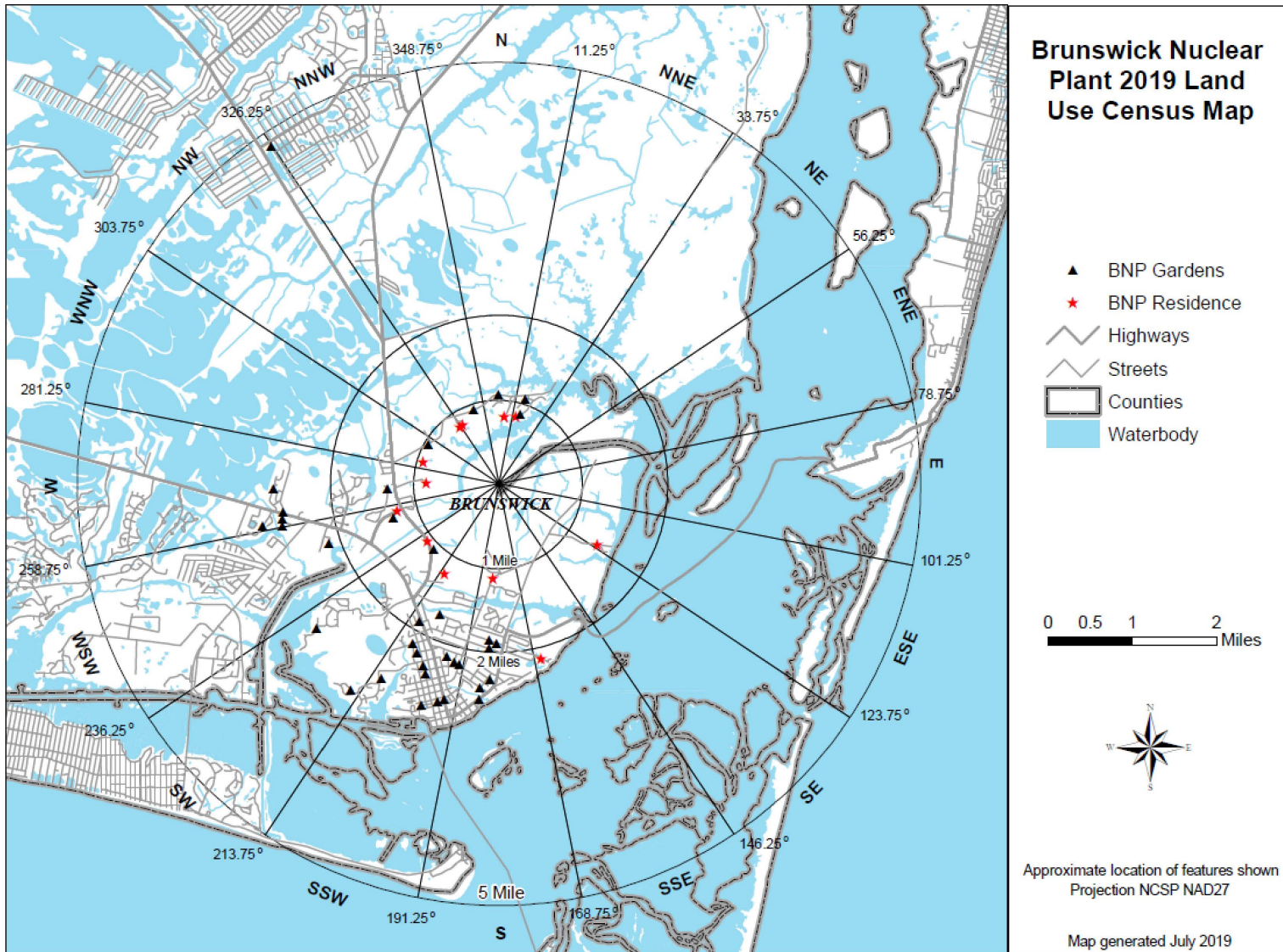
SECTOR	RESIDENT		GARDEN		MILK ANIMALS	
	2018	2019	2018	2019	2018	2019
N	0.7	0.7	1.1	1.1	None	None
NNE	0.8	0.8	0.9	0.9	None	None
NE	None	None	None	None	None	None
ENE	None	None	None	None	None	None
E	None	None	None	None	None	None
ESE	1.4	1.4	None	None	None	None
SE	None	None	None	None	None	None
SSE	2.1	2.1	None	None	None	None
S	1.1	1.1	1.7	1.9*	None	None
SSW	1.2	1.2	1.9	1.7*	None	None
SW	1.1	1.1	2.8	1.1*	None	None
WSW	1.2	1.2	1.2	1.3*	None	None
W	0.9	0.9	1.2	1.3*	None	None
WNW	0.9	0.9	1.0	1.0	None	None
NW	0.9	0.8*	4.9	4.9	None	None
NNW	0.8	0.8	0.9	0.9*	None	None

* Represents a change from the previous year.
Sector and distance determined by Global Positioning System.

Table 3.9-B
Brunswick Steam Electric Plant
Garden Census – 2019

SECTOR	DISTANCE (miles)		SECTOR	DISTANCE (miles)
N	1.1		SSW	2.3
NNE	0.9		SSW	2.4
NNE	1.0		SSW	2.6
NE	None		SSW	2.7
ENE	None		SSW	2.7
E	None		SSW	2.8
ESE	None		SSW	2.8
SE	None		SW	1.1
SSE	None		SW	2.8
S	1.9		SW	3.0
S	1.9		WSW	1.3
S	2.0		WSW	2.1
S	2.3		W	1.3
S	2.4		W	2.6
S	2.6		W	2.6
SSW	1.7		W	2.6
SSW	1.9		W	2.7
SSW	2.1		W	2.8
SSW	2.2		WNW	1.0
SSW	2.2		NW	4.9
SSW	2.2		NNW	0.9
SSW	2.2			

Figure 3.9



4.0 QUALITY ASSURANCE

4.1 SAMPLE COLLECTION

Environmental sample collection at BSEP was performed by BSEP Chemistry personnel in 2019 along with the Environmental Services Group as specified by approved sample collection procedures.

4.2 SAMPLE ANALYSIS

EnRad Laboratories performed the environmental sample analyses as specified by approved analysis procedures. EnRad Laboratories is located in Huntersville, North Carolina, at Duke Energy's Environmental Center. Shoreline sediment analyses for Fe-55, Ni-63, and Sr-89/90 were analyzed by General Engineering Laboratory, LLC (GEL).

4.3 DOSIMETRY ANALYSIS

The Dosimetry and Records group performed the environmental dosimetry measurements as specified by approved dosimetry analysis procedures. The Dosimetry and Records group is located in Huntersville, North Carolina, at Duke Energy's Environmental Center.

4.4 LABORATORY EQUIPMENT QUALITY ASSURANCE

4.4.1 DAILY QUALITY CONTROL

EnRad Laboratories has an internal quality assurance program which monitors each type of instrumentation for reliability and accuracy. Daily quality control checks ensure that instruments are in proper working order and these checks are used to monitor instrument performance.

4.4.2 CALIBRATION VERIFICATION

National Institute of Standards and Technology (NIST) standards that represent counting geometries are analyzed as unknowns at various frequencies ranging from weekly to annually to verify that efficiency calibrations are valid. The frequency is dependent upon instrument use and performance. Investigations are performed and documented should calibration verification data fall outside of the acceptable limits.

4.4.3 BATCH PROCESSING

Method quality control samples are analyzed with sample analyses that are processed in batches. These include tritium analyses in surface water and ground water samples.

4.5 DUKE ENERGY INTERLABORATORY COMPARISON PROGRAM

In 2019 Duke Energy Environmental Laboratory (EnRad) participated in interlaboratory programs to satisfy Radiological Environmental Monitoring Program requirements in Duke Energy nuclear plant Offsite Dose Calculation Manuals and Selected Licensee Commitments Manuals, as applicable.

EnRad Laboratory participated in an interlaboratory program with Eckert & Ziegler Analytics (EZA) in 2019. EZA results were evaluated against the NRC Inspection Manual Procedure 84750 (IP 84750) acceptance criteria stated in EnRad Procedure 515, Cross Check Program Administration. All regulatory requirements continue to be met by the EZA Cross Check Program.

4.5.1 ECKERT & ZIEGLER ANALYTICS CROSS CHECK PROGRAM

EZA mixed gamma in liquid, mixed gamma in vegetation, low-level I-131 in liquid, mixed gamma air filter composites, I-131 air cartridges, gross beta in water, gross beta in filters, and tritium in water were analyzed at various times of the year at EnRad Laboratories. A summary of the applicable REMP EnRad Laboratory program results for 2019 is documented in Table 4.0-A

Interlaboratory cross check samples from EZA were received and analyzed in three of the four quarters of 2019. Table 4.0-A lists the performance for specific samples. Forty-six nuclide results were reported to EZA of which forty-six (100 %) met the acceptance criteria based on IP 84750.

4.6 STATE OF NORTH CAROLINA INTERCOMPARISON PROGRAM

EnRad Laboratories routinely participates with the North Carolina Department of Health and Human Services in an intercomparison program. EnRad Laboratories sends BSEP Radiological Environmental Monitoring Program air, surface water, fish and invertebrates, broadleaf vegetation, and shoreline sediment samples to the North Carolina Department of Health and Human Services, Division of Public Health for intercomparison analysis.

4.7 TLD INTERCOMPARISON PROGRAM

4.7.1 NUCLEAR TECHNOLOGY SERVICES INTERCOMPARISON PROGRAM

Radiation Dosimetry and Records participates in a quarterly TLD intercomparison program administered by Nuclear Technology Services, Inc. of Roswell, GA. Nuclear Technology Services irradiates environmental dosimeters quarterly and sends them to the Radiation Dosimetry and Records group for analysis of the unknown estimated delivered exposure. A summary of the 2019 Nuclear Technology Services Intercomparison Report is documented in Table 4.0-B.

The individual measurements were evaluated and results falling outside the acceptable ratio criteria had an evaluation performed to identify any recommended remedial actions and to reduce anomalous errors.

4.7.2 INTERNAL CROSS CHECK (DUKE ENERGY)

Radiation Dosimetry and Records participates in a quarterly TLD internal comparison program administered internally by the Dosimetry Lab. The Dosimetry Lab Staff irradiates environmental dosimeters quarterly and submits them for analysis of the unknown estimated delivered exposure. A summary of the 2019 Internal Cross Check (Duke Energy) Program is documented in Table 4.0-B.

4.8 GENERAL ENGINEERING LABORATORY, LLC (GEL)

General Engineering Laboratory, LLC (GEL) participated in various Quality Assurance Programs for Inter-laboratory, Intra-laboratory, Third Party Cross Check programs, and a number of proficiency testing programs during 2019. A summary of the GEL quality assurance program results for the sample media types sent to GEL during 2019 is documented in Table 4.0-C. Table 4.0-C may not be applicable to all plants or stations.

TABLE 4.0-A

ECKERT & ZIEGLER ANALYTICS

CROSS CHECK PROGRAM

2019 Cross Check Results for EnRad Laboratories

Interlaboratory cross check samples from EZA were received and analyzed in three of the four quarters of 2019. Results are reported directly to Eckert & Ziegler Analytics. Environmental cross check samples were analyzed in replicate, and the result closest to the mean is reported to Eckert & Ziegler Analytics. The acceptance criteria for the program was based on the NRC Inspection Manual Procedure 84750 (IP 84750). Table 4.0-A lists the performance for specific samples. Forty-six nuclide results were reported to EZA of which forty-six (100 %) met the acceptance criteria based on IP 84750.

Sample	Sample ID	Nuclide	Quarter	Units	EnRad Value	EZA Value	EnRad/EZA Ratio	Evaluation
Beta Filter in Planchet	E12500	Cs-137	1	pCi	170	164	1.04	Agreement
	E12505	Cs-137	2	pCi	231	224	1.03	Agreement
I-131 in Charcoal in Cartridge	E12499	I-131	1	pCi	79.5	75.8	1.05	Agreement
	E12506	I-131	3	pCi	99.9	95.5	1.05	Agreement
Gamma in Composite Filter	E12498	Ce-141	1	pCi	83.8	78.0	1.07	Agreement
		Co-58	1	pCi	100	95.5	1.05	Agreement
		Co-60	1	pCi	212	199	1.06	Agreement
		Cr-51	1	pCi	208	195	1.07	Agreement
		Cs-134	1	pCi	110	107	1.03	Agreement
		Cs-137	1	pCi	141	131	1.08	Agreement
		Fe-59	1	pCi	116	106	1.09	Agreement
		Mn-54	1	pCi	105	95.3	1.10	Agreement
		Zn-65	1	pCi	158	147	1.08	Agreement
Gamma in Simulated Vegetation	E12509	Ce-141	3	pCi/g	0.279	0.273	1.02	Agreement
		Co-58	3	pCi/g	0.281	0.286	0.98	Agreement
		Co-60	3	pCi/g	0.343	0.345	1.00	Agreement
		Cr-51	3	pCi/g	0.612	0.542	1.13	Agreement
		Cs-134	3	pCi/g	0.312	0.339	0.92	Agreement
		Cs-137	3	pCi/g	0.252	0.247	1.02	Agreement
		Fe-59	3	pCi/g	0.278	0.243	1.14	Agreement
		Mn-54	3	pCi/g	0.265	0.252	1.05	Agreement
		Zn-65	3	pCi/g	0.519	0.480	1.08	Agreement

TABLE 4.0-A (Cont.)

Sample	Sample ID	Nuclide	Quarter	Units	EnRad Value	EZA Value	EnRad/EZA Ratio	Evaluation
Gamma in Water	E12510	Ce-141	3	pCi/L	138	130	1.06	Agreement
		Co-58	3	pCi/L	143	136	1.05	Agreement
		Co-60	3	pCi/L	170	164	1.04	Agreement
		Cr-51	3	pCi/L	265	257	1.03	Agreement
		Cs-134	3	pCi/L	150	161	0.93	Agreement
		Cs-137	3	pCi/L	123	117	1.05	Agreement
		Fe-59	3	pCi/L	127	115	1.10	Agreement
		I-131	3	pCi/L	93.6	90.8	1.03	Agreement
		Mn-54	3	pCi/L	129	120	1.07	Agreement
Zn-65	3	pCi/L	259	228	1.14	Agreement		
Gamma in Milk	E12501A	Ce-141	1	pCi/L	120	117	1.03	Agreement
		Co-58	1	pCi/L	141	143	0.98	Agreement
		Co-60	1	pCi/L	303	299	1.01	Agreement
		Cr-51	1	pCi/L	303	293	1.03	Agreement
		Cs-134	1	pCi/L	146	160	0.91	Agreement
		Cs-137	1	pCi/L	202	196	1.03	Agreement
		Fe-59	1	pCi/L	170	159	1.07	Agreement
		Mn-54	1	pCi/L	149	143	1.04	Agreement
Zn-65	1	pCi/L	227	220	1.03	Agreement		
Milk LLI-131	E12501A	I-131	1	pCi/L	96.8	89.5	1.08	Agreement
Gross Beta in Water	E12503	Cs-137	2	pCi/L	240	245	0.98	Agreement
	E12508	Cs-137	3	pCi/L	243	252	0.96	Agreement
Tritium in Water	E12504	H-3	2	pCi/L	14100	13900	1.01	Agreement
	E12507	H-3	3	pCi/L	14000	14000	1.00	Agreement

TABLE 4.0-B

2019 ENVIRONMENTAL DOSIMETER CROSS-CHECK RESULTS

Nuclear Technology Services

Radiation Dosimetry and Records participates in a quarterly TLD intercomparison program administered by Nuclear Technology Services, Inc. of Roswell, GA. Nuclear Technology Services irradiates environmental dosimeters quarterly and sends them to Radiation Dosimetry and Records group for analysis of the unknown estimated delivered exposure. The individual measurements were evaluated and results falling outside the acceptable ratio criteria had an evaluation performed to identify any recommended remedial actions and to reduce anomalous errors.

1st Quarter 2019						2nd Quarter 2019					
TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail	TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail
102973	77.70	79.96	-2.83	<+/-15%	Pass	101136	17.08	18.36	-6.97	<+/-15%	Pass
103309	80.41	79.96	0.56	<+/-15%	Pass	101219	16.52	18.36	-10.02	<+/-15%	Pass
103305	80.21	79.96	0.31	<+/-15%	Pass	100078	16.78	18.36	-8.61	<+/-15%	Pass
103090	80.10	79.96	0.18	<+/-15%	Pass	101364	17.45	18.36	-4.96	<+/-15%	Pass
103102	79.93	79.96	-0.04	<+/-15%	Pass	100239	17.01	18.36	-7.35	<+/-15%	Pass
Average Bias (B)			-0.36			Average Bias (B)			-7.58		
Standard Deviation (S)			1.39			Standard Deviation (S)			1.89		
Measure Performance B +S			1.76	<15%	Pass	Measure Performance B +S			9.47	<15%	Pass
3rd Quarter 2019						4th Quarter 2019					
TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail	TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail
101305	62.24	61.34	1.47	<+/-15%	Pass	104285	49.10	49.31	-0.43	<+/-15%	Pass
101297	61.64	61.34	0.49	<+/-15%	Pass	104300	47.94	49.31	-2.78	<+/-15%	Pass
101333	57.74	61.34	-5.87	<+/-15%	Pass	104288	49.20	49.31	-0.22	<+/-15%	Pass
101350	60.01	61.34	-2.17	<+/-15%	Pass	104298	47.73	49.31	-3.20	<+/-15%	Pass
100417	60.73	61.34	-0.99	<+/-15%	Pass	104314	48.91	49.31	-0.81	<+/-15%	Pass
Average Bias (B)			-1.42			Average Bias (B)			-1.49		
Standard Deviation (S)			2.85			Standard Deviation (S)			1.40		
Measure Performance B +S			4.27	<15%	Pass	Measure Performance B +S			2.88	<15%	Pass

TABLE 4.0-B (Cont.)

2019 ENVIRONMENTAL DOSIMETER

CROSS CHECK RESULTS

Internal Crosscheck (Duke Energy)

Radiation Dosimetry and Records participates in a quarterly TLD internal comparison program administered internally by the Dosimetry Lab. The Dosimetry Lab Staff irradiates environmental dosimetry quarterly and submits them for analysis of the unknown estimated delivered exposure.

1st Quarter 2019						2nd Quarter 2019					
TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail	TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail
103690	39.63	36.00	10.08	<+/-15%	Pass	102290	51.51	48.00	7.31	<+/-15%	Pass
103101	39.48	36.00	9.67	<+/-15%	Pass	102029	51.48	48.00	7.25	<+/-15%	Pass
102869	38.28	36.00	6.33	<+/-15%	Pass	103742	52.75	48.00	9.90	<+/-15%	Pass
102239	37.20	36.00	3.33	<+/-15%	Pass	102931	50.63	48.00	5.48	<+/-15%	Pass
103433	38.17	36.00	6.03	<+/-15%	Pass	103194	51.38	48.00	7.04	<+/-15%	Pass
103586	38.81	36.00	7.81	<+/-15%	Pass	102738	52.11	48.00	8.56	<+/-15%	Pass
102881	39.45	36.00	9.58	<+/-15%	Pass	103721	52.96	48.00	10.33	<+/-15%	Pass
102189	36.77	36.00	2.14	<+/-15%	Pass	102336	50.92	48.00	6.08	<+/-15%	Pass
100358	35.33	36.00	-1.86	<+/-15%	Pass	102442	49.03	48.00	2.15	<+/-15%	Pass
103381	38.37	36.00	6.58	<+/-15%	Pass	102089	51.36	48.00	7.00	<+/-15%	Pass
Average Bias (B)			5.97			Average Bias (B)			7.11		
Standard Deviation (S)			3.81			Standard Deviation (S)			2.33		
Measure Performance B +S			9.78	<15%	Pass	Measure Performance B +S			9.44	<15%	Pass
3rd Quarter 2019						4th Quarter 2019					
TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail	TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail
104054	17.49	18.0	-2.83	<+/-15%	Pass	100958	26.21	27.00	-2.93	<+/-15%	Pass
104051	17.77	18.0	-1.28	<+/-15%	Pass	101322	26.76	27.00	-0.89	<+/-15%	Pass
104148	17.41	18.0	-3.28	<+/-15%	Pass	101180	26.95	27.00	-0.19	<+/-15%	Pass
101165	18.16	18.0	0.89	<+/-15%	Pass	101275	26.52	27.00	-1.78	<+/-15%	Pass
101170	18.10	18.0	0.56	<+/-15%	Pass	101104	25.70	27.00	-4.81	<+/-15%	Pass
101278	18.45	18.0	2.50	<+/-15%	Pass	104038	26.30	27.00	-2.59	<+/-15%	Pass
100570	17.93	18.0	-0.39	<+/-15%	Pass	101215	27.33	27.00	1.22	<+/-15%	Pass
100062	18.50	18.0	2.78	<+/-15%	Pass	101252	26.57	27.00	-1.59	<+/-15%	Pass
104129	17.79	18.0	-1.17	<+/-15%	Pass	101249	26.74	27.00	-0.96	<+/-15%	Pass
104128	17.75	18.0	-1.39	<+/-15%	Pass	101251	25.91	27.00	-4.04	<+/-15%	Pass
Average Bias (B)			-0.36			Average Bias (B)			-1.86		
Standard Deviation (S)			2.04			Standard Deviation (S)			1.80		
Measure Performance B +S			2.41	<15%	Pass	Measure Performance B +S			3.66	<15%	Pass

TABLE 4.0-C

2019 GEL Laboratories, LLC QA Results

Interlaboratory cross check samples from Eckert & Ziegler Analytics (EZA) and Proficiency Tests from the Department of Energy Mixed Analyte Performance Evaluation Program (MAPEP) were received and analyzed by GEL in all four quarters of 2019 from EZA and in two quarters from MAPEP. Table 4.0-C lists the performance for specific samples. Table 4.0-C may not be applicable to all plants/stations.

Sample	Sample ID	Nuclide	Quarter	Units	GEL Value	Known Value	Acceptance Range/Ratio	Evaluation
Hard To Detect in Soil	MAPEP - 19- MaS40	Fe-55	2	Bq/kg	486	344	241 - 447	Non-Agreement ⁽¹⁾
		Ni-63	2	Bq/kg	524	519	363 - 675	Agreement
		Sr-90	2	Bq/kg	3.44	N/A	False Pos Test	Agreement
	MAPEP- 19-MaS41	Fe-55	4	Bq/kg	-48	N/A	False Pos Test	Agreement
		Ni-63	4	Bq/kg	552	629	440 - 818	Agreement
		Sr-90	4	Bq/kg	609	572	400 - 744	Agreement
I-131 in Milk with EZA	E12362	I-131	2	pCi/L	85.1	81.4	1.05	Agreement
	E12370	I-131	3	pCi/L	92.8	92.1	1.01	Agreement
	E12374	I-131	4	pCi/L	93.4	94.5	0.99	Agreement
Gross Beta in Water with EZA	E12550	Cs-137	2	pCi/L	251	244	1.03	Agreement ⁽²⁾

(1) GEL CARR (Corrective Action Request and Report) 190603-1212

(2) Several sets of first quarter 2019 Gross Beta in Water analyses were analyzed at GEL.

APPENDIX A

ENVIRONMENTAL SAMPLING
&
ANALYSIS PROCEDURES

APPENDIX A

ENVIRONMENTAL SAMPLING AND ANALYSIS PROCEDURES

Adherence to established procedures for sampling and analysis of all environmental media at the Brunswick Steam Electric Plant (BSEP) was required to ensure compliance with the BSEP Offsite Dose Calculation Manual (ODCM). Analytical procedures were employed to ensure that the ODCM detection capabilities were achieved.

Environmental sampling was performed by BSEP and Environmental Services. Analyses were performed by EnRad Laboratories, General Engineering Laboratory, LLC (GEL) (for special analyses), and Dosimetry and Records.

This appendix describes the environmental sampling frequencies and analysis procedures by media type.

I. CHANGE OF SAMPLING PROCEDURES

No sampling procedures were changed during 2019.

II. DESCRIPTION OF ANALYSIS PROCEDURES

Gamma spectroscopy analyses are performed using high purity germanium gamma detectors and Canberra analytical software. Designated sample volumes are transferred to appropriate counting geometries and analyzed by gamma spectroscopy. Perishable samples such as fish, invertebrates, and broadleaf vegetation are ground to achieve a homogeneous mixture. Soil and sediments are dried, sifted to remove foreign objects (rocks, clams, glass, etc.) then transferred to appropriate counting geometry.

Tritium analyses are performed by using low-level environmental liquid scintillation analysis technique on a Perkin-Elmer 4910TR liquid scintillation system or Perkin-Elmer 3100TR liquid scintillation system. Tritium samples are distilled and batch processed with a laboratory fortified blank, matrix spike, matrix spike duplicate, and blank to verify instrument performance and sample preparation technique are acceptable.

Gross beta analysis of air filters is performed by analyzing filters on Tennelec XLB Series gas-flow proportional counters. Samples are batch processed with a blank to ensure sample contamination has not occurred.

III. CHANGE OF ANALYSIS PROCEDURES

No analysis procedures were changed during 2019.

IV. SAMPLING AND ANALYSIS PROCEDURES

A.1 AIRBORNE PARTICULATE AND RADIOIODINE

Air particulate and radioiodine samples at each of seven locations were composited continuously by means of continuous air samplers. Air particulates were collected on a particulate filter and radioiodines were collected in a charcoal cartridge positioned behind the filter in the sample head. The samplers are designed to operate at a constant flow rate (in order to compensate for any filter loading) and are set to sample approximately 1 cubic foot per minute. Filters and cartridges were collected weekly. A separate weekly gamma analysis was performed on each charcoal cartridge. A weekly gross beta analysis was performed on each filter and then the filters, by location, were composited to produce quarterly filter samples for gamma analysis. The continuous composite samples were collected from the locations listed below.

Location 200 = 1.0 miles WSW Visitors Center
Location 201 = 0.5 miles NE Bio Lab Rd. – Projected Maximum
Annual Concentration (PMAC)
Location 202 = 1.0 mile S Substation, Construction Rd.
Location 203 = 2.0 miles SSW Southport substation
Location 204 = 22.4 miles NNE Sutton Plant (Historical Control)
Location 205 = 0.6 miles SSE Spoil Pond
Location 206 = 11.3 miles NW Brunswick County Complex (Control)

A.2 SURFACE WATER

Monthly composite samples were collected from locations 400 and 401. Monthly grab samples were collected from locations 494 – 499, 604, 607, and 609. A gamma analysis and tritium analysis was performed on each sample collected. The samples were collected from the locations listed below.

Location 400 = 0.6 miles NE – Intake Canal (Control)
Location 401 = 4.9 miles SSW – Discharge Canal @ OD Pumps
Location 494 = Nancy’s Creek Marsh Area – WP-106
Location 495 = Nancy’s Creek – WP-52
Location 496 = Nancy’s Creek – WP-53
Location 497 = Nancy’s Creek – WP-55
Location 498 = Nancy’s Creek – WP-57
Location 499 = Nancy’s Creek – WP-61 (Control)
Location 604 = Nancy’s Creek Marsh Area – WP-92
Location 607 = Nancy’s Creek Marsh Area – WP-76
Location 609 = Nancy’s Creek Marsh Area – WP-84

A.3 GROUND WATER

Grab samples were collected quarterly and semiannually from ground water wells at ten locations. A tritium analysis was performed quarterly and a gamma analysis

was performed semiannually on each sample. The samples were collected from the locations listed below.

Location 404 = Monitoring Well ESS-1B - 0.16 miles SW
Location 407 = Monitoring Well ESS-13B - 0.06 miles ENE
Location 409 = Monitoring Well ESS-17A - 0.65 miles NE
Location 410 = Monitoring Well ESS-17B - 0.65 miles NE
Location 418 = Monitoring Well ESS-21B – Near SDSP
Location 423 = Monitoring Well ESS-24A – Near SDSP
Location 424 = Monitoring Well ESS-24B – Near SDSP
Location 426 = Monitoring Well ESS-25B – Near SDSP
Location 429 = Monitoring Well ESS-27A – Near SDSP
Location 612 = Monitoring Well ESS MWPA-118B – Near Intake Canal & Plant Stack

Note: SDSP = Storm Drain Stabilization Pond

A.4 BROADLEAF VEGETATION

Monthly samples were collected as available and a gamma analysis was performed on each sample. The samples were collected from the locations listed below.

Location 800 = 0.7 miles NE – Intake Canal
Location 801 = 0.8 miles SW – Discharge Canal
Location 802 = 10.1 miles – location not specified (Control)
Location 803 = 0.6 miles SSE – Spoil Pond
Location 804 = 0.7 miles S – Leonard Street plant exit adjacent to RR tracks

A.5 FISH and INVERTEBRATES

Fish (free swimmers and bottom feeders) and Invertebrates (shell fish and/or benthic organisms) samples are collected semiannually from two locations (near the Atlantic Ocean discharge pipe at Caswell Beach and a control location in the Atlantic Ocean not influenced by plant operations) and annually from three locations on Nancy's Creek (see Figure 2.1-3). A gamma analysis was performed on the edible portions of each sample. The samples were collected from the locations listed below.

Location 700 = 5.5 miles SSW, Atlantic Ocean at Discharge (free swimmers)
Location 701 = 5.5 miles SSW, Atlantic Ocean at Discharge (bottom feeders)
Location 702 = 5.5 miles SSW, Atlantic Ocean at Discharge (shellfish/ Invertebrates)
Location 703 = Atlantic Ocean, location not specified (free swimmer) – (Control)
Location 704 = Atlantic Ocean, location not specified (bottom feeders) – (Control)
Location 705 = Atlantic Ocean, location not specified (shellfish/Invertebrates)
Location 706 = Nancy's Creek, location not specified (free swimmer)
Location 707 = Nancy's Creek, location not specified (bottom feeders)
Location 708 = Nancy's Creek, location not specified (shellfish/Invertebrates)

A.6 SHORELINE SEDIMENT

Semiannual samples were collected at locations 500 and 501. A gamma analysis was performed on each sample following the drying and removal of rocks and clams. Location 501 was analyzed for Sr-89, Sr-90, Fe-55, and Ni-63. The samples were collected from the locations listed below.

Location 500 = 5.0 miles SSW, Discharge,
Beach near Ocean Discharge (OD) pumps
Location 501 = Nancy's Creek, Adjacent to WP-55,
Near Storm Drain Stabilization Pond

A.7 DIRECT GAMMA RADIATION (TLD)

Thermoluminescent dosimeters (TLD) were collected quarterly at forty-five locations and four quarterly ISFSI TLDs. A gamma exposure rate was determined for each TLD. TLD locations are listed in Table 2.1-B. The TLDs were placed as indicated below.

- * An inner ring of 24 TLDs, one in each meteorological sector in the general area of the site boundary.
- * An outer ring of 20 TLDs, one in each meteorological sector at 8 kilometers or greater from the site.
- * The remaining TLDs were placed in special interest areas such as population centers, residential areas, schools, and at one control location.

A.8 ANNUAL LAND USE CENSUS

An Annual Land Use Census was conducted to identify within a distance of 8 kilometers (5.0 miles) from the plant, the nearest location from the site boundary in each of the sixteen meteorological sectors, the following:

- * The Nearest Residence
- * The Nearest Garden greater than 50 square meters or 500 square feet
- * The Nearest Milk-giving Animal (cow, goat, etc.)

The Annual Land Use Census must also identify (for elevated releases) within the three-mile (4.8 kilometer) radius of the plant (a garden census) for each of the 16 meteorological sectors for the following:

- * The location of all milk animals
- * The location of all gardens of greater than 500 square feet (50 square meters)

The census was conducted during the growing season on 7/10/2019 and 7/17/2019. Results are shown in Tables 3.9-A and 3.9-B. The primary method of performing the land use census is visual inspection from the roadside within the five (5) mile radius, with the exception of the Sunny Point Military Ocean terminal. This information may be supplemented with data from aerial photographs and a Global Positioning System (GPS) to determine distance and direction from the plant. Distances from the plant are accurate to within one tenth of a mile. No changes were made to the sampling procedures during 2019 as a result of the 2019 BSEP census.

V. GLOBAL POSITIONING SYSTEM (GPS) ANALYSIS

The Brunswick site centerline used for GPS measurements was referenced from the Brunswick Nuclear Station Updated Final Safety Analysis Report (UFSAR), section 2.1.1, Site Location and Description. Waypoint coordinates used for BNP GPS measurements were latitude 33°57'30" North and longitude 78°00'30" West. Maps and tables were generated using North American Datum (NAD) 27. Data normally reflect accuracy to within one tenth mile from point of measurement. GPS field measurements were taken as close as possible to the item of interest. Distances for the locations are displayed using two significant figures.

APPENDIX B

**RADIOLOGICAL
ENVIRONMENTAL MONITORING
PROGRAM**

SUMMARY OF RESULTS

**BRUNSWICK STEAM ELECTRIC PLANT
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM DATA SUMMARY**

Brunswick Steam Electric Plant
Brunswick County, North Carolina

Docket Numbers 50-324, 325
Calendar Year 2019

Medium or Pathway Sampled or Measured (Unit of Measurement)	Type and Total No. of Measurements Performed	Lower Limit of Detection (LLD) ⁽¹⁾	All Indicator Locations ^{(2) (3)} Mean Range	Location w/Highest Annual Mean		Control Locations Mean Range ^{(2) (3)}	No. of Non-Routine Report Meas.
				Name, Distance, and Direction	Mean Range ^{(2) (3)}		
Air Particulate (pCi/m ³)	Gross Beta 364 ⁽⁴⁾	See Table 2.2-C	1.91E-2 (260/260) 7.77E-3 – 3.73E-2	202 (1.00 mi S)	1.96E-2 (52/52) 7.77E-3 – 3.73E-2	204 (22.4 mi NNE) 206 (11.3 mi NW) 1.95E-2 (104/104) 6.75E-3 – 3.89E-2	0
	Gamma 28 ⁽⁴⁾	See Table 2.2-C	All less than LLD	-----	-----	All less than LLD	0
Air Radioiodine (pCi/m ³)	Gamma 364 ⁽⁴⁾	See Table 2.2-C	All less than LLD	-----	-----	All less than LLD	0
Broadleaf Vegetation (pCi/kg, wet)	Gamma 60 Cs-137	See Table 2.2-C	All less than LLD	-----	-----	802 (10.1 mi not specified) 2.55E+01 (1/12) 2.55E+01 – 2.55E+01	0
Fish and Invertebrates (pCi/l)	Gamma 15 ⁽⁴⁾	See Table 2.2-C	All less than LLD	-----	-----	All less than LLD	0
Sediment - Shoreline (pCi/kg, dry)	Gamma 4 Cs-137	See Table 2.2-C	1.14E+02 (2/4) 1.06E+02 – 1.21E+02	501 Nancy's Creek Adjacent to WP-55 near SDSP	1.14E+02 (2/2) 1.06E+02 – 1.21E+02	No Control	0
	Fe-55, Ni-63, Sr89/90 2	-----	All less than LLD	-----	-----	No Control	0

**BRUNSWICK STEAM ELECTRIC PLANT
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM DATA SUMMARY**

Brunswick Steam Electric Plant
Brunswick County, North Carolina

Docket Numbers 50-324, 325
Calendar Year 2019

Medium or Pathway Sampled or Measured (Unit of Measurement)	Type and Total No. of Measurements Performed	Lower Limit of Detection (LLD) ⁽¹⁾	All Indicator Locations ^{(2) (3)} Mean Range	Location w/Highest Annual Mean		Control Locations Mean Range ^{(2) (3)}	No. of Non-Routine Report Meas.
				Name, Distance, and Direction	Mean Range ^{(2) (3)}		
Surface Water (pCi/l)	Gamma 132	See Table 2.2-C	All less than LLD	----	----	All less than LLD	0
	Tritium 132	See Table 2.2-C	2.51E+02 (3/108) 2.01E+02 – 3.22E+02	604 Nancy's Creek Marsh Area Waypoint-92	2.51E+02 (3/12) 2.01E+02 – 3.22E+02	All less than LLD	0
Ground Water (pCi/l)	Gamma 20	See Table 2.2-C	All less than LLD	----	----	No Control	0
	Tritium 40	See Table 2.2-C	2.98E+02 (4/40) 2.59E+02 – 3.35E+02	407 Monitoring Well ESS-13B 0.06 mi ENE	3.34E+02 (1/4) 3.34E+02 – 3.34E+02	No Control	0
Direct Gamma Radiation (TLD) (mR per Std quarter) ⁽⁵⁾	TLD Readout 179 ⁽⁴⁾	----	1.05E+01 (175/175) 6.37E+00 – 1.86E+01	39 (5.3 mi SW)	1.55E+01 (4/4) 1.33E+01 – 1.86E+01	81 (9.9 mi WNW) 1.08E+01 (4/4) 9.66E+00 – 1.24E+01	0
Direct Gamma Radiation (TLD) ISFSI (mR per Std quarter) ⁽⁵⁾	TLD Readout 16	----	2.34E+01 (16/16) 1.66E+01 – 3.36E+01	82 SW corner of ISFSI (0.17 mi NNE)	2.92E+01 (4/4) 2.45E+01 – 3.36E+01	No Control	0

Footnotes to Appendix B

1. The Lower Limit of Detection (LLD) is the smallest concentration of radioactive material in a sample that will yield a net count above system background which will be detected with 95 percent probability and with only 5 percent probability of falsely concluding that a blank observation represents a "real" signal. Due to counting statistics and varying volumes, occasionally lower LLDs are achieved. Refer to Analytical Procedures Section/Gamma Spectrometry for an explanation of how LLD values were derived.
2. Mean and range are based on detectable measurements only.
3. The fractions of all samples with detectable activities at specific locations are indicated in parentheses.
4. Missing samples or surveillances are discussed in Appendix C or Appendix D.
5. TLD exposure is reported in milliroentgen (mR) per standard quarter (91 days).

APPENDIX C

**SAMPLING DEVIATIONS
&
UNAVAILABLE ANALYSES**

APPENDIX C

BRUNSWICK NUCLEAR PLANT SAMPLING DEVIATIONS & UNAVAILABLE ANALYSES

DEVIATION & UNAVAILABLE REASON CODES			
BF	Blown Fuse	PM	Preventive Maintenance
CN	Construction	PO	Power Outage
FZ	Sample Frozen	PS	Pump out of service / Undergoing repair
IV	Insufficient Volume	SL	Sample Loss/Lost due to Lab Accident
IW	Inclement Weather	SM	Motor / Rotor Seized
LC	Line Clog to Sampler	SU	Seasonally Unavailable
OT	Other	TF	Torn Filter
PI	Power Interrupt	VN	Vandalism

C.1 SAMPLING DEVIATIONS

Air Particulate and Air Radioiodine

REMP weekly air samples (Air Particulate (AP) or Air Radioiodine (AR)) that experience any downtime during a surveillance period are reported as a Deviation and classified as a “Sampling Deviation.” However, the sample is counted and the data reported, whereas a Deviation with no available sample is classified as an “Unavailable Analyses” and does not have any data reported. The Brunswick REMP air samplers operated for a total of 99.83% availability in 2019.

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
201	2/19 – 2/26/2019	PI	Power interruption due to maintenance activities resulted in 1.0 hour of downtime.	NCR # 02259417
206	8/20 – 8/27/2019	TF	Air particulate filter incurred field damage which resulted in a 4 mm gouge/tear.	NCR # 02289196
200	9/3 – 9/10/2019	PI	Power interruption due to Hurricane Dorian resulted in 18.75 hours downtime.	NCR # 02290654
206	9/3 – 9/10/2019	PI	Power interruption due to Hurricane Dorian resulted in 13.17 hours downtime.	NCR # 02290654
203	9/3 – 9/10/2019	PI	Power interruption due to Hurricane Dorian resulted in 39.5 hours downtime.	NCR # 02290655
205	9/24 – 10/1/2019	PI	Power interruption due to phase loss of Southport feeder resulted in 5.1 hours downtime.	NCR # 02294345
200 202 203 205	10/8 – 10/15/2019	PI	Power interruption due to loss of 230 kV Delco East Southport feeder results in 1.4 hours downtime.	NCR # 02297059
200	11/5 – 11/12/2019	PI	Power interruption due to maintenance activities in the area resulted in 0.48 hours downtime.	NCR # 02302551
203	11/19 – 11/26/2019	PS	Air sampler pump failure on 11/25/2019 caused downtime of 20.93 hours. Pump was replaced and normal sampling resumed.	NCR # 02304723
203	11/26 – 12/3/2019	OT	Air flow adjustment discovered loose at time of collection, resulting in decreased sample volume. Flow was adjusted, adjustment screw tightened, and normal sampling resumed.	NCR # 02305427

Surface Water

REMP monthly surface water samples (Surface Water (SW)) that experience any downtime during a surveillance period are reported as a Deviation and classified as a “Sampling Deviation.” However, the sample is counted and the data reported, whereas a Deviation with no available sample is classified as an “Unavailable Analyses” and does not have any data reported. The surface water samplers operated for a total of 100% availability in 2019. There were no surface water sampling deviations or unavailable samples during 2019.

C.2 UNAVAILABLE ANALYSES

TLD

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
33	1/8 – 4/4/2019	CN	TLD missing at time of collection. The structure (pole) on which the TLD was located had been replaced. The second quarter 2019 TLD was placed on the new pole.	NCR # 02267016

APPENDIX D

ANALYTICAL DEVIATIONS

No Analytical Deviations were incurred for the
2019 Radiological Environmental Monitoring Program

APPENDIX E

**RADIOLOGICAL
ENVIRONMENTAL MONITORING
PROGRAM RESULTS**

2019

This appendix includes sample analysis report summaries and supportive data generated from each sample medium for 2019.

BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 200 [INDICATOR - WSW @ 1 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
492495	1/2/2019 - 1/8/2019	Beta	1.69E-02	5.65E-03	7.96E-03
492847	1/8/2019 - 1/15/2019	Beta	1.39E-02	4.81E-03	6.74E-03
493270	1/15/2019 - 1/22/2019	Beta	1.93E-02	5.06E-03	6.58E-03
493532	1/22/2019 - 1/29/2019	Beta	1.81E-02	5.08E-03	6.84E-03
493750	1/29/2019 - 2/5/2019	Beta	1.99E-02	4.92E-03	6.18E-03
494304	2/5/2019 - 2/12/2019	Beta	2.45E-02	5.43E-03	6.80E-03
494920	2/12/2019 - 2/19/2019	Beta	1.77E-02	5.11E-03	6.96E-03
495473	2/19/2019 - 2/26/2019	Beta	1.39E-02	4.14E-03	5.62E-03
496422	2/26/2019 - 3/5/2019	Beta	1.64E-02	4.99E-03	6.83E-03
496699	3/5/2019 - 3/12/2019	Beta	2.55E-02	5.53E-03	6.84E-03
497097	3/12/2019 - 3/19/2019	Beta	2.61E-02	4.84E-03	5.64E-03
497493	3/19/2019 - 3/26/2019	Beta	1.70E-02	4.94E-03	6.66E-03
497975	3/26/2019 - 4/2/2019	Beta	1.78E-02	4.81E-03	6.16E-03
497500	1/2/2019 - 4/2/2019	Cs-134	<1.84E-03	0.00E+00	1.84E-03
		Cs-137	<1.82E-03	0.00E+00	1.82E-03
		Be-7	1.68E-01	4.37E-02	4.95E-02
		K-40	3.68E-02	1.59E-02	1.55E-02
498563	4/2/2019 - 4/9/2019	Beta	1.83E-02	5.15E-03	6.96E-03
498736	4/9/2019 - 4/16/2019	Beta	9.54E-03	4.45E-03	6.71E-03
499412	4/16/2019 - 4/23/2019	Beta	1.23E-02	4.15E-03	5.89E-03
499826	4/23/2019 - 4/30/2019	Beta	2.36E-02	4.66E-03	5.51E-03
500079	4/30/2019 - 5/7/2019	Beta	1.52E-02	4.93E-03	6.86E-03
500412	5/7/2019 - 5/14/2019	Beta	1.17E-02	4.26E-03	6.20E-03
500696	5/14/2019 - 5/21/2019	Beta	2.43E-02	4.83E-03	5.82E-03
501079	5/21/2019 - 5/28/2019	Beta	2.59E-02	4.56E-03	4.91E-03



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 200 [INDICATOR - WSW @ 1 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
501901	5/28/2019 - 6/4/2019	Beta	2.22E-02	4.59E-03	5.58E-03
502161	6/4/2019 - 6/11/2019	Beta	1.23E-02	4.02E-03	5.62E-03
502372	6/11/2019 - 6/18/2019	Beta	1.39E-02	4.74E-03	6.67E-03
503328	6/18/2019 - 6/25/2019	Beta	1.37E-02	4.33E-03	6.14E-03
503792	6/25/2019 - 7/2/2019	Beta	2.52E-02	4.67E-03	5.38E-03
503335	4/2/2019 - 7/2/2019	Cs-134	<1.87E-03	0.00E+00	1.87E-03
		Cs-137	<1.48E-03	0.00E+00	1.48E-03
		Be-7	1.47E-01	3.95E-02	4.82E-02
		K-40	<3.66E-02	0.00E+00	3.66E-02
504152	7/2/2019 - 7/9/2019	Beta	2.51E-02	4.78E-03	5.72E-03
504401	7/9/2019 - 7/16/2019	Beta	1.34E-02	4.11E-03	5.70E-03
504603	7/16/2019 - 7/23/2019	Beta	1.57E-02	4.68E-03	6.33E-03
504887	7/23/2019 - 7/30/2019	Beta	1.89E-02	4.89E-03	6.36E-03
505096	7/30/2019 - 8/6/2019	Beta	9.59E-03	4.36E-03	6.51E-03
505491	8/6/2019 - 8/13/2019	Beta	2.40E-02	4.68E-03	5.63E-03
505809	8/13/2019 - 8/20/2019	Beta	1.46E-02	4.26E-03	5.88E-03
506328	8/20/2019 - 8/27/2019	Beta	9.37E-03	4.59E-03	7.02E-03
507241	8/27/2019 - 9/3/2019	Beta	1.84E-02	5.21E-03	7.08E-03
507781	9/3/2019 - 9/10/2019	Beta	3.12E-02	5.38E-03	6.04E-03
508307	9/10/2019 - 9/17/2019	Beta	2.59E-02	5.40E-03	6.49E-03
509170	9/17/2019 - 9/24/2019	Beta	2.33E-02	4.84E-03	5.51E-03
509785	9/24/2019 - 10/1/2019	Beta	3.39E-02	5.38E-03	6.08E-03
509177	7/2/2019 - 10/1/2019	Cs-134	<2.00E-03	0.00E+00	2.00E-03
		Cs-137	<1.89E-03	0.00E+00	1.89E-03
		Be-7	1.61E-01	4.20E-02	4.87E-02
		K-40	4.68E-02	2.14E-02	2.57E-02
510486	10/1/2019 - 10/8/2019	Beta	2.13E-02	5.36E-03	7.02E-03



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 200 [INDICATOR - WSW @ 1 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
510776	10/8/2019 - 10/15/2019	Beta	1.53E-02	4.10E-03	5.38E-03
511189	10/15/2019 - 10/22/2019	Beta	1.89E-02	5.20E-03	6.89E-03
511421	10/22/2019 - 10/29/2019	Beta	2.04E-02	5.00E-03	6.22E-03
511830	10/29/2019 - 11/5/2019	Beta	2.14E-02	5.15E-03	6.50E-03
512129	11/5/2019 - 11/12/2019	Beta	2.48E-02	5.92E-03	7.78E-03
512440	11/12/2019 - 11/19/2019	Beta	1.58E-02	4.58E-03	6.03E-03
512616	11/19/2019 - 11/26/2019	Beta	2.08E-02	5.15E-03	6.60E-03
513580	11/26/2019 - 12/3/2019	Beta	1.61E-02	4.50E-03	6.11E-03
513889	12/3/2019 - 12/10/2019	Beta	1.44E-02	4.46E-03	6.27E-03
514120	12/10/2019 - 12/17/2019	Beta	1.96E-02	4.62E-03	5.94E-03
514409	12/17/2019 - 12/24/2019	Beta	1.63E-02	5.22E-03	7.26E-03
514883	12/24/2019 - 12/31/2019	Beta	2.13E-02	5.05E-03	6.32E-03
514416	10/1/2019 - 12/31/2019	Cs-134	<2.06E-03	0.00E+00	2.06E-03
		Cs-137	<1.37E-03	0.00E+00	1.37E-03
		Be-7	1.32E-01	3.74E-02	4.30E-02
		K-40	<3.23E-02	0.00E+00	3.23E-02

Sample Point 201 [INDICATOR - NE @ 0.5 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492496	1/2/2019 - 1/8/2019	Beta	1.02E-02	5.10E-03	7.77E-03
492848	1/8/2019 - 1/15/2019	Beta	1.37E-02	4.68E-03	6.55E-03
493271	1/15/2019 - 1/22/2019	Beta	1.61E-02	4.75E-03	6.40E-03
493533	1/22/2019 - 1/29/2019	Beta	1.62E-02	4.87E-03	6.70E-03
493751	1/29/2019 - 2/5/2019	Beta	2.54E-02	5.15E-03	5.98E-03
494305	2/5/2019 - 2/12/2019	Beta	2.14E-02	5.19E-03	6.67E-03
494921	2/12/2019 - 2/19/2019	Beta	1.48E-02	4.83E-03	6.78E-03
495474	2/19/2019 - 2/26/2019	Beta	1.14E-02	3.92E-03	5.52E-03



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 201 [INDICATOR - NE @ 0.5 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
496423	2/26/2019 - 3/5/2019	Beta	1.45E-02	4.79E-03	6.67E-03
496700	3/5/2019 - 3/12/2019	Beta	1.64E-02	4.88E-03	6.68E-03
497098	3/12/2019 - 3/19/2019	Beta	2.54E-02	4.72E-03	5.48E-03
497494	3/19/2019 - 3/26/2019	Beta	1.60E-02	4.78E-03	6.47E-03
497976	3/26/2019 - 4/2/2019	Beta	1.98E-02	4.83E-03	5.99E-03
497501	1/2/2019 - 4/2/2019	Cs-134	<2.17E-03	0.00E+00	2.17E-03
		Cs-137	<1.89E-03	0.00E+00	1.89E-03
		Be-7	1.84E-01	4.57E-02	4.61E-02
		K-40	2.96E-02	1.68E-02	2.04E-02
498564	4/2/2019 - 4/9/2019	Beta	1.30E-02	4.73E-03	6.80E-03
498737	4/9/2019 - 4/16/2019	Beta	1.30E-02	4.58E-03	6.51E-03
499413	4/16/2019 - 4/23/2019	Beta	1.53E-02	4.31E-03	5.82E-03
499827	4/23/2019 - 4/30/2019	Beta	2.61E-02	4.65E-03	5.28E-03
500080	4/30/2019 - 5/7/2019	Beta	1.21E-02	4.61E-03	6.67E-03
500413	5/7/2019 - 5/14/2019	Beta	1.14E-02	4.21E-03	6.16E-03
500697	5/14/2019 - 5/21/2019	Beta	1.97E-02	4.41E-03	5.52E-03
501080	5/21/2019 - 5/28/2019	Beta	2.46E-02	4.39E-03	4.78E-03
501902	5/28/2019 - 6/4/2019	Beta	2.64E-02	4.71E-03	5.41E-03
502162	6/4/2019 - 6/11/2019	Beta	1.72E-02	4.28E-03	5.56E-03
502373	6/11/2019 - 6/18/2019	Beta	1.50E-02	4.82E-03	6.69E-03
503329	6/18/2019 - 6/25/2019	Beta	1.31E-02	4.29E-03	6.12E-03
503793	6/25/2019 - 7/2/2019	Beta	2.73E-02	4.81E-03	5.43E-03
503336	4/2/2019 - 7/2/2019	Cs-134	<2.92E-03	0.00E+00	2.92E-03
		Cs-137	<2.83E-03	0.00E+00	2.83E-03
		Be-7	1.56E-01	4.82E-02	4.97E-02
		K-40	<4.45E-02	0.00E+00	4.45E-02
504153	7/2/2019 - 7/9/2019	Beta	2.73E-02	4.91E-03	5.74E-03



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 201 [INDICATOR - NE @ 0.5 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504402	7/9/2019 - 7/16/2019	Beta	1.37E-02	4.14E-03	5.72E-03
504604	7/16/2019 - 7/23/2019	Beta	2.01E-02	4.98E-03	6.39E-03
504888	7/23/2019 - 7/30/2019	Beta	1.56E-02	4.71E-03	6.40E-03
505097	7/30/2019 - 8/6/2019	Beta	1.41E-02	4.71E-03	6.56E-03
505492	8/6/2019 - 8/13/2019	Beta	2.50E-02	4.73E-03	5.65E-03
505810	8/13/2019 - 8/20/2019	Beta	1.58E-02	4.37E-03	5.93E-03
506329	8/20/2019 - 8/27/2019	Beta	7.78E-03	4.51E-03	7.06E-03
507242	8/27/2019 - 9/3/2019	Beta	1.99E-02	5.30E-03	7.07E-03
507782	9/3/2019 - 9/10/2019	Beta	3.12E-02	5.00E-03	5.41E-03
508308	9/10/2019 - 9/17/2019	Beta	3.06E-02	5.60E-03	6.39E-03
509171	9/17/2019 - 9/24/2019	Beta	2.46E-02	5.02E-03	5.62E-03
509786	9/24/2019 - 10/1/2019	Beta	3.17E-02	5.31E-03	6.12E-03
509178	7/2/2019 - 10/1/2019	Cs-134	<2.33E-03	0.00E+00	2.33E-03
		Cs-137	<2.35E-03	0.00E+00	2.35E-03
		Be-7	1.37E-01	4.35E-02	4.97E-02
		K-40	2.83E-02	1.69E-02	1.70E-02
510487	10/1/2019 - 10/8/2019	Beta	2.10E-02	5.35E-03	7.04E-03
510777	10/8/2019 - 10/15/2019	Beta	1.45E-02	4.05E-03	5.36E-03
511190	10/15/2019 - 10/22/2019	Beta	2.13E-02	5.34E-03	6.91E-03
511422	10/22/2019 - 10/29/2019	Beta	1.93E-02	4.85E-03	6.10E-03
511831	10/29/2019 - 11/5/2019	Beta	2.20E-02	5.23E-03	6.57E-03
512130	11/5/2019 - 11/12/2019	Beta	2.32E-02	5.82E-03	7.74E-03
512441	11/12/2019 - 11/19/2019	Beta	1.26E-02	4.44E-03	6.18E-03
512617	11/19/2019 - 11/26/2019	Beta	2.21E-02	5.17E-03	6.50E-03
513581	11/26/2019 - 12/3/2019	Beta	1.35E-02	4.35E-03	6.11E-03



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 201 [INDICATOR - NE @ 0.5 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
513890	12/3/2019 - 12/10/2019	Beta	1.54E-02	4.54E-03	6.28E-03
514121	12/10/2019 - 12/17/2019	Beta	2.25E-02	4.82E-03	6.00E-03
514410	12/17/2019 - 12/24/2019	Beta	1.83E-02	5.34E-03	7.24E-03
514884	12/24/2019 - 12/31/2019	Beta	2.03E-02	4.97E-03	6.30E-03
514417	10/1/2019 - 12/31/2019	Cs-134	<2.70E-03	0.00E+00	2.70E-03
		Cs-137	<3.98E-03	0.00E+00	3.98E-03
		Be-7	1.33E-01	4.87E-02	4.63E-02
		K-40	<2.64E-02	0.00E+00	2.64E-02

Sample Point 202 [INDICATOR - S @ 1 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492497	1/2/2019 - 1/8/2019	Beta	1.76E-02	5.72E-03	8.02E-03
492849	1/8/2019 - 1/15/2019	Beta	1.28E-02	4.78E-03	6.81E-03
493272	1/15/2019 - 1/22/2019	Beta	2.15E-02	5.23E-03	6.64E-03
493534	1/22/2019 - 1/29/2019	Beta	1.78E-02	5.11E-03	6.92E-03
493752	1/29/2019 - 2/5/2019	Beta	2.34E-02	5.19E-03	6.26E-03
494306	2/5/2019 - 2/12/2019	Beta	1.90E-02	5.18E-03	6.90E-03
494922	2/12/2019 - 2/19/2019	Beta	1.65E-02	5.10E-03	7.07E-03
495475	2/19/2019 - 2/26/2019	Beta	1.78E-02	4.45E-03	5.73E-03
496424	2/26/2019 - 3/5/2019	Beta	1.50E-02	4.95E-03	6.92E-03
496701	3/5/2019 - 3/12/2019	Beta	2.26E-02	5.43E-03	6.97E-03
497099	3/12/2019 - 3/19/2019	Beta	2.83E-02	5.00E-03	5.71E-03
497495	3/19/2019 - 3/26/2019	Beta	1.57E-02	4.92E-03	6.76E-03
497977	3/26/2019 - 4/2/2019	Beta	2.02E-02	5.03E-03	6.26E-03
497502	1/2/2019 - 4/2/2019	Cs-134	<2.67E-03	0.00E+00	2.67E-03
		Cs-137	<1.64E-03	0.00E+00	1.64E-03
		Be-7	1.87E-01	5.00E-02	4.56E-02
		K-40	<4.41E-02	0.00E+00	4.41E-02
498565	4/2/2019 - 4/9/2019	Beta	1.91E-02	5.24E-03	7.04E-03



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 202 [INDICATOR - S @ 1 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
498738	4/9/2019 - 4/16/2019	Beta	1.04E-02	4.57E-03	6.80E-03
499414	4/16/2019 - 4/23/2019	Beta	1.00E-02	4.14E-03	6.11E-03
499828	4/23/2019 - 4/30/2019	Beta	2.24E-02	4.55E-03	5.43E-03
500081	4/30/2019 - 5/7/2019	Beta	1.20E-02	4.77E-03	6.95E-03
500414	5/7/2019 - 5/14/2019	Beta	1.13E-02	4.28E-03	6.28E-03
500698	5/14/2019 - 5/21/2019	Beta	2.16E-02	4.71E-03	5.86E-03
501081	5/21/2019 - 5/28/2019	Beta	2.66E-02	4.63E-03	4.96E-03
501903	5/28/2019 - 6/4/2019	Beta	2.37E-02	4.71E-03	5.63E-03
502163	6/4/2019 - 6/11/2019	Beta	1.47E-02	4.18E-03	5.66E-03
502374	6/11/2019 - 6/18/2019	Beta	1.96E-02	5.10E-03	6.69E-03
503330	6/18/2019 - 6/25/2019	Beta	1.56E-02	4.46E-03	6.16E-03
503794	6/25/2019 - 7/2/2019	Beta	2.69E-02	4.76E-03	5.38E-03
503337	4/2/2019 - 7/2/2019	Cs-134	<3.03E-03	0.00E+00	3.03E-03
		Cs-137	<3.25E-03	0.00E+00	3.25E-03
		Be-7	1.69E-01	5.00E-02	2.94E-02
		K-40	<6.35E-02	0.00E+00	6.35E-02
504154	7/2/2019 - 7/9/2019	Beta	2.41E-02	4.76E-03	5.77E-03
504403	7/9/2019 - 7/16/2019	Beta	1.56E-02	4.26E-03	5.73E-03
504605	7/16/2019 - 7/23/2019	Beta	2.36E-02	5.18E-03	6.36E-03
504889	7/23/2019 - 7/30/2019	Beta	1.93E-02	4.95E-03	6.41E-03
505098	7/30/2019 - 8/6/2019	Beta	7.77E-03	4.27E-03	6.56E-03
505493	8/6/2019 - 8/13/2019	Beta	2.60E-02	4.81E-03	5.67E-03
505811	8/13/2019 - 8/20/2019	Beta	1.36E-02	4.23E-03	5.91E-03
506330	8/20/2019 - 8/27/2019	Beta	8.86E-03	4.60E-03	7.09E-03
507243	8/27/2019 - 9/3/2019	Beta	1.42E-02	4.96E-03	7.10E-03



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 202 [INDICATOR - S @ 1 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
507783	9/3/2019 - 9/10/2019	Beta	2.67E-02	4.81E-03	5.49E-03
508309	9/10/2019 - 9/17/2019	Beta	3.28E-02	5.73E-03	6.42E-03
509172	9/17/2019 - 9/24/2019	Beta	2.29E-02	4.94E-03	5.72E-03
509787	9/24/2019 - 10/1/2019	Beta	3.73E-02	5.61E-03	6.19E-03
509179	7/2/2019 - 10/1/2019	Cs-134	<1.54E-03	0.00E+00	1.54E-03
		Cs-137	<1.88E-03	0.00E+00	1.88E-03
		Be-7	1.69E-01	4.32E-02	4.89E-02
		K-40	<3.45E-02	0.00E+00	3.45E-02
510488	10/1/2019 - 10/8/2019	Beta	2.77E-02	5.79E-03	7.13E-03
510778	10/8/2019 - 10/15/2019	Beta	1.76E-02	4.32E-03	5.50E-03
511191	10/15/2019 - 10/22/2019	Beta	1.53E-02	5.06E-03	7.07E-03
511423	10/22/2019 - 10/29/2019	Beta	2.18E-02	5.07E-03	6.21E-03
511832	10/29/2019 - 11/5/2019	Beta	1.71E-02	5.03E-03	6.75E-03
512131	11/5/2019 - 11/12/2019	Beta	2.09E-02	5.83E-03	8.00E-03
512442	11/12/2019 - 11/19/2019	Beta	1.47E-02	4.69E-03	6.36E-03
512618	11/19/2019 - 11/26/2019	Beta	2.31E-02	5.47E-03	6.92E-03
513582	11/26/2019 - 12/3/2019	Beta	1.85E-02	4.81E-03	6.40E-03
513891	12/3/2019 - 12/10/2019	Beta	1.60E-02	4.70E-03	6.51E-03
514122	12/10/2019 - 12/17/2019	Beta	1.91E-02	4.69E-03	6.11E-03
514411	12/17/2019 - 12/24/2019	Beta	2.36E-02	5.79E-03	7.49E-03
514885	12/24/2019 - 12/31/2019	Beta	3.09E-02	5.73E-03	6.53E-03
514418	10/1/2019 - 12/31/2019	Cs-134	<3.43E-03	0.00E+00	3.43E-03
		Cs-137	<3.43E-03	0.00E+00	3.43E-03
		Be-7	1.86E-01	5.67E-02	4.00E-02
		K-40	<7.68E-02	0.00E+00	7.68E-02

Sample Point 203 [INDICATOR - SSW @ 2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492498	1/2/2019 - 1/8/2019	Beta	1.49E-02	5.54E-03	8.00E-03



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 203 [INDICATOR - SSW @ 2 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
492850	1/8/2019 - 1/15/2019	Beta	1.78E-02	5.09E-03	6.80E-03
493273	1/15/2019 - 1/22/2019	Beta	2.01E-02	5.14E-03	6.64E-03
493535	1/22/2019 - 1/29/2019	Beta	1.62E-02	5.01E-03	6.93E-03
493753	1/29/2019 - 2/5/2019	Beta	2.98E-02	5.57E-03	6.25E-03
494307	2/5/2019 - 2/12/2019	Beta	1.92E-02	5.15E-03	6.85E-03
494923	2/12/2019 - 2/19/2019	Beta	1.92E-02	5.23E-03	7.01E-03
495476	2/19/2019 - 2/26/2019	Beta	1.77E-02	4.41E-03	5.67E-03
496425	2/26/2019 - 3/5/2019	Beta	1.28E-02	4.80E-03	6.89E-03
496702	3/5/2019 - 3/12/2019	Beta	1.90E-02	5.19E-03	6.92E-03
497100	3/12/2019 - 3/19/2019	Beta	2.70E-02	4.92E-03	5.67E-03
497496	3/19/2019 - 3/26/2019	Beta	1.72E-02	4.98E-03	6.69E-03
497978	3/26/2019 - 4/2/2019	Beta	1.50E-02	4.62E-03	6.18E-03
497503	1/2/2019 - 4/2/2019	Cs-134	<3.37E-03	0.00E+00	3.37E-03
		Cs-137	<4.67E-04	0.00E+00	4.67E-04
		Be-7	1.74E-01	5.33E-02	4.97E-02
		K-40	<4.70E-02	0.00E+00	4.70E-02
498566	4/2/2019 - 4/9/2019	Beta	1.35E-02	4.87E-03	7.00E-03
498739	4/9/2019 - 4/16/2019	Beta	1.31E-02	4.70E-03	6.72E-03
499415	4/16/2019 - 4/23/2019	Beta	1.25E-02	4.26E-03	6.04E-03
499829	4/23/2019 - 4/30/2019	Beta	2.46E-02	4.59E-03	5.31E-03
500082	4/30/2019 - 5/7/2019	Beta	1.59E-02	4.97E-03	6.86E-03
500415	5/7/2019 - 5/14/2019	Beta	1.23E-02	4.27E-03	6.16E-03
500699	5/14/2019 - 5/21/2019	Beta	2.33E-02	4.73E-03	5.73E-03
501082	5/21/2019 - 5/28/2019	Beta	2.51E-02	4.48E-03	4.86E-03
501904	5/28/2019 - 6/4/2019	Beta	2.40E-02	4.65E-03	5.51E-03



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 203 [INDICATOR - SSW @ 2 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
502164	6/4/2019 - 6/11/2019	Beta	1.60E-02	4.23E-03	5.60E-03
502375	6/11/2019 - 6/18/2019	Beta	2.18E-02	5.22E-03	6.66E-03
503331	6/18/2019 - 6/25/2019	Beta	1.20E-02	4.23E-03	6.12E-03
503795	6/25/2019 - 7/2/2019	Beta	2.64E-02	4.69E-03	5.32E-03
503338	4/2/2019 - 7/2/2019	Cs-134	<1.85E-03	0.00E+00	1.85E-03
		Cs-137	<1.38E-03	0.00E+00	1.38E-03
		Be-7	1.56E-01	4.13E-02	4.95E-02
		K-40	3.55E-02	2.28E-02	3.33E-02
504155	7/2/2019 - 7/9/2019	Beta	2.83E-02	4.96E-03	5.75E-03
504404	7/9/2019 - 7/16/2019	Beta	1.35E-02	4.11E-03	5.68E-03
504606	7/16/2019 - 7/23/2019	Beta	1.61E-02	4.69E-03	6.31E-03
504890	7/23/2019 - 7/30/2019	Beta	1.68E-02	4.76E-03	6.36E-03
505099	7/30/2019 - 8/6/2019	Beta	1.01E-02	4.41E-03	6.53E-03
505494	8/6/2019 - 8/13/2019	Beta	2.06E-02	4.48E-03	5.61E-03
505812	8/13/2019 - 8/20/2019	Beta	1.69E-02	4.40E-03	5.87E-03
506331	8/20/2019 - 8/27/2019	Beta	7.99E-03	4.47E-03	6.97E-03
507244	8/27/2019 - 9/3/2019	Beta	1.29E-02	4.85E-03	7.04E-03
507784	9/3/2019 - 9/10/2019	Beta	3.26E-02	6.12E-03	7.10E-03
508310	9/10/2019 - 9/17/2019	Beta	2.43E-02	5.24E-03	6.38E-03
509173	9/17/2019 - 9/24/2019	Beta	2.42E-02	5.01E-03	5.67E-03
509788	9/24/2019 - 10/1/2019	Beta	3.54E-02	5.47E-03	6.11E-03
509180	7/2/2019 - 10/1/2019	Cs-134	<2.47E-03	0.00E+00	2.47E-03
		Cs-137	<1.91E-03	0.00E+00	1.91E-03
		Be-7	1.31E-01	4.08E-02	4.42E-02
		K-40	3.03E-02	1.98E-02	2.50E-02
510489	10/1/2019 - 10/8/2019	Beta	1.97E-02	5.30E-03	7.05E-03
510779	10/8/2019 - 10/15/2019	Beta	1.48E-02	4.10E-03	5.43E-03



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 203 [INDICATOR - SSW @ 2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511192	10/15/2019 - 10/22/2019	Beta	1.43E-02	4.94E-03	6.98E-03
511424	10/22/2019 - 10/29/2019	Beta	1.83E-02	4.81E-03	6.13E-03
511833	10/29/2019 - 11/5/2019	Beta	1.96E-02	5.14E-03	6.65E-03
512132	11/5/2019 - 11/12/2019	Beta	2.74E-02	6.11E-03	7.87E-03
512443	11/12/2019 - 11/19/2019	Beta	1.43E-02	4.63E-03	6.32E-03
512619	11/19/2019 - 11/26/2019	Beta	2.66E-02	6.41E-03	8.16E-03
513583	11/26/2019 - 12/3/2019	Beta	1.47E-02	6.04E-03	8.95E-03
513892	12/3/2019 - 12/10/2019	Beta	1.22E-02	4.41E-03	6.42E-03
514123	12/10/2019 - 12/17/2019	Beta	1.63E-02	4.52E-03	6.07E-03
514412	12/17/2019 - 12/24/2019	Beta	1.96E-02	5.53E-03	7.45E-03
514886	12/24/2019 - 12/31/2019	Beta	2.24E-02	5.16E-03	6.39E-03
514419	10/1/2019 - 12/31/2019	Cs-134	<1.50E-03	0.00E+00	1.50E-03
		Cs-137	<1.71E-03	0.00E+00	1.71E-03
		Be-7	1.49E-01	4.26E-02	4.93E-02
		K-40	2.99E-02	2.16E-02	3.10E-02

Sample Point 204 [CONTROL - NNE @ 22.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492499	1/2/2019 - 1/8/2019	Beta	1.27E-02	5.49E-03	8.17E-03
492851	1/8/2019 - 1/15/2019	Beta	1.84E-02	5.19E-03	6.89E-03
493274	1/15/2019 - 1/22/2019	Beta	2.18E-02	5.29E-03	6.71E-03
493536	1/22/2019 - 1/29/2019	Beta	1.78E-02	5.16E-03	6.99E-03
493754	1/29/2019 - 2/5/2019	Beta	2.83E-02	5.49E-03	6.28E-03
494308	2/5/2019 - 2/12/2019	Beta	2.10E-02	5.29E-03	6.90E-03
494924	2/12/2019 - 2/19/2019	Beta	1.68E-02	5.11E-03	7.05E-03
495477	2/19/2019 - 2/26/2019	Beta	1.25E-02	4.06E-03	5.62E-03
496426	2/26/2019 - 3/5/2019	Beta	1.29E-02	4.79E-03	6.86E-03



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 204 [CONTROL - NNE @ 22.4 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
496703	3/5/2019 - 3/12/2019	Beta	1.99E-02	5.28E-03	6.99E-03
497101	3/12/2019 - 3/19/2019	Beta	2.31E-02	4.68E-03	5.63E-03
497497	3/19/2019 - 3/26/2019	Beta	1.94E-02	5.12E-03	6.68E-03
497979	3/26/2019 - 4/2/2019	Beta	2.03E-02	5.00E-03	6.20E-03
497504	1/2/2019 - 4/2/2019	Cs-134	<1.91E-03	0.00E+00	1.91E-03
		Cs-137	<1.47E-03	0.00E+00	1.47E-03
		Be-7	2.23E-01	4.87E-02	4.64E-02
		K-40	3.62E-02	1.61E-02	1.51E-02
498567	4/2/2019 - 4/9/2019	Beta	1.36E-02	4.86E-03	6.97E-03
498740	4/9/2019 - 4/16/2019	Beta	1.19E-02	4.59E-03	6.67E-03
499416	4/16/2019 - 4/23/2019	Beta	1.09E-02	4.08E-03	5.91E-03
499830	4/23/2019 - 4/30/2019	Beta	2.70E-02	4.80E-03	5.45E-03
500083	4/30/2019 - 5/7/2019	Beta	1.27E-02	4.72E-03	6.77E-03
500416	5/7/2019 - 5/14/2019	Beta	1.27E-02	4.31E-03	6.18E-03
500700	5/14/2019 - 5/21/2019	Beta	2.18E-02	4.63E-03	5.69E-03
501083	5/21/2019 - 5/28/2019	Beta	2.68E-02	4.56E-03	4.86E-03
501905	5/28/2019 - 6/4/2019	Beta	1.92E-02	4.39E-03	5.54E-03
502165	6/4/2019 - 6/11/2019	Beta	1.95E-02	4.44E-03	5.58E-03
502376	6/11/2019 - 6/18/2019	Beta	1.91E-02	5.08E-03	6.67E-03
503332	6/18/2019 - 6/25/2019	Beta	1.33E-02	4.28E-03	6.07E-03
503796	6/25/2019 - 7/2/2019	Beta	2.57E-02	4.66E-03	5.33E-03
503339	4/2/2019 - 7/2/2019	Cs-134	<3.29E-03	0.00E+00	3.29E-03
		Cs-137	<3.89E-03	0.00E+00	3.89E-03
		Be-7	1.54E-01	4.70E-02	2.90E-02
		K-40	<6.18E-02	0.00E+00	6.18E-02
504156	7/2/2019 - 7/9/2019	Beta	2.47E-02	4.75E-03	5.68E-03
504405	7/9/2019 - 7/16/2019	Beta	1.82E-02	4.41E-03	5.72E-03



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 204 [CONTROL - NNE @ 22.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504607	7/16/2019 - 7/23/2019	Beta	1.81E-02	4.80E-03	6.29E-03
504891	7/23/2019 - 7/30/2019	Beta	1.46E-02	4.61E-03	6.33E-03
505100	7/30/2019 - 8/6/2019	Beta	7.44E-03	4.18E-03	6.44E-03
505495	8/6/2019 - 8/13/2019	Beta	2.83E-02	4.91E-03	5.66E-03
505813	8/13/2019 - 8/20/2019	Beta	1.40E-02	4.19E-03	5.83E-03
506332	8/20/2019 - 8/27/2019	Beta	9.83E-03	4.60E-03	6.99E-03
507245	8/27/2019 - 9/3/2019	Beta	1.82E-02	5.15E-03	7.00E-03
507785	9/3/2019 - 9/10/2019	Beta	2.73E-02	4.79E-03	5.39E-03
508311	9/10/2019 - 9/17/2019	Beta	2.44E-02	5.20E-03	6.31E-03
509174	9/17/2019 - 9/24/2019	Beta	2.30E-02	4.90E-03	5.64E-03
509789	9/24/2019 - 10/1/2019	Beta	3.50E-02	5.41E-03	6.06E-03
509181	7/2/2019 - 10/1/2019	Cs-134	<2.07E-03	0.00E+00	2.07E-03
		Cs-137	<2.12E-03	0.00E+00	2.12E-03
		Be-7	1.47E-01	4.50E-02	4.95E-02
		K-40	<3.71E-02	0.00E+00	3.71E-02
510490	10/1/2019 - 10/8/2019	Beta	2.44E-02	5.56E-03	7.05E-03
510780	10/8/2019 - 10/15/2019	Beta	1.72E-02	4.23E-03	5.37E-03
511193	10/15/2019 - 10/22/2019	Beta	1.81E-02	5.15E-03	6.92E-03
511425	10/22/2019 - 10/29/2019	Beta	1.70E-02	4.72E-03	6.13E-03
511834	10/29/2019 - 11/5/2019	Beta	1.73E-02	4.92E-03	6.55E-03
512133	11/5/2019 - 11/12/2019	Beta	2.19E-02	5.79E-03	7.82E-03
512444	11/12/2019 - 11/19/2019	Beta	1.67E-02	4.74E-03	6.21E-03
512620	11/19/2019 - 11/26/2019	Beta	2.84E-02	5.64E-03	6.68E-03
513584	11/26/2019 - 12/3/2019	Beta	1.94E-02	4.70E-03	6.13E-03
513893	12/3/2019 - 12/10/2019	Beta	1.23E-02	4.40E-03	6.38E-03



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 204 [CONTROL - NNE @ 22.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514124	12/10/2019 - 12/17/2019	Beta	1.96E-02	4.63E-03	5.95E-03
514413	12/17/2019 - 12/24/2019	Beta	1.87E-02	5.34E-03	7.22E-03
514887	12/24/2019 - 12/31/2019	Beta	2.10E-02	5.01E-03	6.28E-03
514420	10/1/2019 - 12/31/2019	Cs-134	<2.25E-03	0.00E+00	2.25E-03
		Cs-137	<2.11E-03	0.00E+00	2.11E-03
		Be-7	1.79E-01	4.68E-02	4.53E-02
		K-40	<4.15E-02	0.00E+00	4.15E-02

Sample Point 205 [INDICATOR - SSE @ 0.6 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492500	1/2/2019 - 1/8/2019	Beta	1.71E-02	5.67E-03	7.98E-03
492852	1/8/2019 - 1/15/2019	Beta	1.90E-02	5.14E-03	6.75E-03
493275	1/15/2019 - 1/22/2019	Beta	1.43E-02	4.73E-03	6.56E-03
493537	1/22/2019 - 1/29/2019	Beta	1.74E-02	5.04E-03	6.85E-03
493755	1/29/2019 - 2/5/2019	Beta	2.55E-02	5.27E-03	6.18E-03
494309	2/5/2019 - 2/12/2019	Beta	2.57E-02	5.52E-03	6.83E-03
494925	2/12/2019 - 2/19/2019	Beta	1.53E-02	4.97E-03	6.97E-03
495478	2/19/2019 - 2/26/2019	Beta	1.55E-02	4.24E-03	5.62E-03
496427	2/26/2019 - 3/5/2019	Beta	1.48E-02	4.90E-03	6.84E-03
496704	3/5/2019 - 3/12/2019	Beta	1.98E-02	5.20E-03	6.85E-03
497102	3/12/2019 - 3/19/2019	Beta	2.13E-02	4.58E-03	5.64E-03
497498	3/19/2019 - 3/26/2019	Beta	1.57E-02	4.85E-03	6.65E-03
497980	3/26/2019 - 4/2/2019	Beta	1.73E-02	4.76E-03	6.15E-03
497505	1/2/2019 - 4/2/2019	Cs-134	<1.75E-03	0.00E+00	1.75E-03
		Cs-137	<1.46E-03	0.00E+00	1.46E-03
		Be-7	1.80E-01	4.23E-02	4.65E-02
		K-40	5.00E-02	2.09E-02	2.60E-02
498568	4/2/2019 - 4/9/2019	Beta	1.38E-02	4.86E-03	6.94E-03
498741	4/9/2019 - 4/16/2019	Beta	7.91E-03	4.36E-03	6.72E-03



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 205 [INDICATOR - SSE @ 0.6 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
499417	4/16/2019 - 4/23/2019	Beta	1.15E-02	4.13E-03	5.92E-03
499831	4/23/2019 - 4/30/2019	Beta	2.37E-02	4.64E-03	5.47E-03
500084	4/30/2019 - 5/7/2019	Beta	1.44E-02	4.86E-03	6.84E-03
500417	5/7/2019 - 5/14/2019	Beta	1.31E-02	4.34E-03	6.21E-03
500701	5/14/2019 - 5/21/2019	Beta	2.11E-02	4.62E-03	5.77E-03
501084	5/21/2019 - 5/28/2019	Beta	2.68E-02	4.59E-03	4.91E-03
501906	5/28/2019 - 6/4/2019	Beta	2.49E-02	4.72E-03	5.56E-03
502166	6/4/2019 - 6/11/2019	Beta	1.74E-02	4.34E-03	5.65E-03
502377	6/11/2019 - 6/18/2019	Beta	1.44E-02	4.77E-03	6.68E-03
503333	6/18/2019 - 6/25/2019	Beta	1.18E-02	4.24E-03	6.15E-03
503797	6/25/2019 - 7/2/2019	Beta	2.80E-02	4.82E-03	5.39E-03
503340	4/2/2019 - 7/2/2019	Cs-134	<1.55E-03	0.00E+00	1.55E-03
		Cs-137	<1.69E-03	0.00E+00	1.69E-03
		Be-7	2.09E-01	4.18E-02	3.63E-02
		K-40	3.23E-02	1.84E-02	2.44E-02
504157	7/2/2019 - 7/9/2019	Beta	2.83E-02	4.96E-03	5.74E-03
504406	7/9/2019 - 7/16/2019	Beta	1.80E-02	4.39E-03	5.71E-03
504608	7/16/2019 - 7/23/2019	Beta	2.00E-02	4.94E-03	6.35E-03
504892	7/23/2019 - 7/30/2019	Beta	1.30E-02	4.54E-03	6.40E-03
505101	7/30/2019 - 8/6/2019	Beta	1.01E-02	4.44E-03	6.56E-03
505496	8/6/2019 - 8/13/2019	Beta	2.81E-02	4.92E-03	5.68E-03
505814	8/13/2019 - 8/20/2019	Beta	1.71E-02	4.41E-03	5.87E-03
506333	8/20/2019 - 8/27/2019	Beta	9.95E-03	4.13E-03	6.14E-03
507246	8/27/2019 - 9/3/2019	Beta	1.95E-02	5.30E-03	7.11E-03
507786	9/3/2019 - 9/10/2019	Beta	2.76E-02	4.83E-03	5.44E-03



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 205 [INDICATOR - SSE @ 0.6 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
508312	9/10/2019 - 9/17/2019	Beta	2.74E-02	5.45E-03	6.44E-03
509175	9/17/2019 - 9/24/2019	Beta	2.89E-02	5.33E-03	5.72E-03
509790	9/24/2019 - 10/1/2019	Beta	3.14E-02	5.44E-03	6.37E-03
509182	7/2/2019 - 10/1/2019	Cs-134	<1.68E-03	0.00E+00	1.68E-03
		Cs-137	<1.31E-03	0.00E+00	1.31E-03
		Be-7	1.41E-01	3.89E-02	4.79E-02
		K-40	4.45E-02	1.74E-02	1.68E-02
510491	10/1/2019 - 10/8/2019	Beta	2.21E-02	5.47E-03	7.11E-03
510781	10/8/2019 - 10/15/2019	Beta	1.59E-02	4.20E-03	5.46E-03
511194	10/15/2019 - 10/22/2019	Beta	1.86E-02	5.22E-03	6.97E-03
511426	10/22/2019 - 10/29/2019	Beta	1.88E-02	4.84E-03	6.15E-03
511835	10/29/2019 - 11/5/2019	Beta	1.83E-02	5.04E-03	6.63E-03
512134	11/5/2019 - 11/12/2019	Beta	2.53E-02	5.94E-03	7.78E-03
512445	11/12/2019 - 11/19/2019	Beta	1.41E-02	4.54E-03	6.17E-03
512621	11/19/2019 - 11/26/2019	Beta	2.20E-02	5.23E-03	6.61E-03
513585	11/26/2019 - 12/3/2019	Beta	1.60E-02	4.53E-03	6.18E-03
513894	12/3/2019 - 12/10/2019	Beta	1.64E-02	4.59E-03	6.28E-03
514125	12/10/2019 - 12/17/2019	Beta	2.24E-02	4.79E-03	5.95E-03
514414	12/17/2019 - 12/24/2019	Beta	2.01E-02	5.45E-03	7.26E-03
514888	12/24/2019 - 12/31/2019	Beta	2.20E-02	5.10E-03	6.35E-03
514421	10/1/2019 - 12/31/2019	Cs-134	<3.10E-03	0.00E+00	3.10E-03
		Cs-137	<1.68E-03	0.00E+00	1.68E-03
		Be-7	1.53E-01	4.76E-02	4.69E-02
		K-40	<4.12E-02	0.00E+00	4.12E-02

Sample Point 206 [CONTROL - NW @ 11.3 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492501	1/2/2019 - 1/8/2019	Beta	1.26E-02	5.47E-03	8.15E-03
492853	1/8/2019 - 1/15/2019	Beta	1.60E-02	5.03E-03	6.88E-03



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 206 [CONTROL - NW @ 11.3 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
493276	1/15/2019 - 1/22/2019	Beta	1.94E-02	5.12E-03	6.67E-03
493538	1/22/2019 - 1/29/2019	Beta	1.60E-02	5.03E-03	6.99E-03
493756	1/29/2019 - 2/5/2019	Beta	2.81E-02	5.49E-03	6.28E-03
494310	2/5/2019 - 2/12/2019	Beta	2.41E-02	5.50E-03	6.97E-03
494926	2/12/2019 - 2/19/2019	Beta	1.50E-02	5.03E-03	7.10E-03
495479	2/19/2019 - 2/26/2019	Beta	1.78E-02	4.41E-03	5.66E-03
496428	2/26/2019 - 3/5/2019	Beta	2.05E-02	5.31E-03	6.90E-03
496705	3/5/2019 - 3/12/2019	Beta	2.11E-02	5.36E-03	7.00E-03
497103	3/12/2019 - 3/19/2019	Beta	2.66E-02	4.92E-03	5.72E-03
497499	3/19/2019 - 3/26/2019	Beta	1.87E-02	5.10E-03	6.75E-03
497981	3/26/2019 - 4/2/2019	Beta	2.17E-02	5.14E-03	6.28E-03
497506	1/2/2019 - 4/2/2019	Cs-134	<2.15E-03	0.00E+00	2.15E-03
		Cs-137	<1.73E-03	0.00E+00	1.73E-03
		Be-7	1.87E-01	4.37E-02	3.88E-02
		K-40	<3.72E-02	0.00E+00	3.72E-02
498569	4/2/2019 - 4/9/2019	Beta	1.88E-02	5.25E-03	7.07E-03
498742	4/9/2019 - 4/16/2019	Beta	6.75E-03	4.32E-03	6.78E-03
499418	4/16/2019 - 4/23/2019	Beta	9.03E-03	4.01E-03	6.00E-03
499832	4/23/2019 - 4/30/2019	Beta	2.03E-02	4.51E-03	5.57E-03
500085	4/30/2019 - 5/7/2019	Beta	1.14E-02	4.71E-03	6.94E-03
500418	5/7/2019 - 5/14/2019	Beta	1.16E-02	4.33E-03	6.33E-03
500702	5/14/2019 - 5/21/2019	Beta	2.21E-02	4.72E-03	5.81E-03
501085	5/21/2019 - 5/28/2019	Beta	2.46E-02	4.51E-03	4.98E-03
501907	5/28/2019 - 6/4/2019	Beta	2.98E-02	5.06E-03	5.67E-03
502167	6/4/2019 - 6/11/2019	Beta	1.51E-02	4.20E-03	5.60E-03



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 206 [CONTROL - NW @ 11.3 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
502378	6/11/2019 - 6/18/2019	Beta	1.59E-02	4.87E-03	6.66E-03
503334	6/18/2019 - 6/25/2019	Beta	1.45E-02	4.35E-03	6.06E-03
503798	6/25/2019 - 7/2/2019	Beta	2.82E-02	4.81E-03	5.34E-03
503341	4/2/2019 - 7/2/2019	Cs-134	<2.80E-03	0.00E+00	2.80E-03
		Cs-137	<2.01E-03	0.00E+00	2.01E-03
		Be-7	1.57E-01	4.45E-02	4.83E-02
		K-40	<4.38E-02	0.00E+00	4.38E-02
504158	7/2/2019 - 7/9/2019	Beta	1.89E-02	4.44E-03	5.69E-03
504407	7/9/2019 - 7/16/2019	Beta	1.30E-02	4.11E-03	5.73E-03
504609	7/16/2019 - 7/23/2019	Beta	2.28E-02	5.10E-03	6.30E-03
504893	7/23/2019 - 7/30/2019	Beta	1.88E-02	4.86E-03	6.33E-03
505102	7/30/2019 - 8/6/2019	Beta	1.17E-02	4.49E-03	6.47E-03
505497	8/6/2019 - 8/13/2019	Beta	2.27E-02	4.63E-03	5.67E-03
505815	8/13/2019 - 8/20/2019	Beta	1.27E-02	4.13E-03	5.85E-03
506334	8/20/2019 - 8/27/2019	Beta	1.20E-02	4.77E-03	7.03E-03
507247	8/27/2019 - 9/3/2019	Beta	1.81E-02	5.17E-03	7.03E-03
507787	9/3/2019 - 9/10/2019	Beta	2.58E-02	4.98E-03	5.84E-03
508313	9/10/2019 - 9/17/2019	Beta	3.38E-02	5.74E-03	6.33E-03
509176	9/17/2019 - 9/24/2019	Beta	3.16E-02	5.47E-03	5.65E-03
509791	9/24/2019 - 10/1/2019	Beta	2.96E-02	5.18E-03	6.09E-03
509183	7/2/2019 - 10/1/2019	Cs-134	<2.00E-03	0.00E+00	2.00E-03
		Cs-137	<2.67E-03	0.00E+00	2.67E-03
		Be-7	1.85E-01	5.46E-02	4.45E-02
		K-40	<4.07E-02	0.00E+00	4.07E-02
510492	10/1/2019 - 10/8/2019	Beta	2.63E-02	5.68E-03	7.05E-03
510782	10/8/2019 - 10/15/2019	Beta	1.78E-02	4.25E-03	5.37E-03
511195	10/15/2019 - 10/22/2019	Beta	2.52E-02	5.55E-03	6.86E-03



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 206 [CONTROL - NW @ 11.3 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511427	10/22/2019 - 10/29/2019	Beta	1.93E-02	4.86E-03	6.10E-03
511836	10/29/2019 - 11/5/2019	Beta	2.02E-02	5.10E-03	6.52E-03
512135	11/5/2019 - 11/12/2019	Beta	3.89E-02	6.68E-03	7.77E-03
512446	11/12/2019 - 11/19/2019	Beta	1.70E-02	4.75E-03	6.16E-03
512622	11/19/2019 - 11/26/2019	Beta	1.95E-02	5.09E-03	6.62E-03
513586	11/26/2019 - 12/3/2019	Beta	1.04E-02	4.15E-03	6.10E-03
513895	12/3/2019 - 12/10/2019	Beta	1.12E-02	4.31E-03	6.30E-03
514126	12/10/2019 - 12/17/2019	Beta	2.09E-02	4.67E-03	5.90E-03
514415	12/17/2019 - 12/24/2019	Beta	2.72E-02	5.83E-03	7.18E-03
514889	12/24/2019 - 12/31/2019	Beta	2.40E-02	5.15E-03	6.24E-03
514422	10/1/2019 - 12/31/2019	Cs-134	<2.09E-03	0.00E+00	2.09E-03
		Cs-137	<1.42E-03	0.00E+00	1.42E-03
		Be-7	1.31E-01	3.80E-02	4.24E-02
		K-40	2.77E-02	1.36E-02	4.41E-03

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 200 [INDICATOR - WSW @ 1 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492502	1/2/2019 - 1/8/2019	I-131	<4.89E-02	0.00E+00	4.89E-02
		Cs-134	<4.92E-02	0.00E+00	4.92E-02
		Cs-137	<4.83E-02	0.00E+00	4.83E-02
		Be-7	<2.62E-01	0.00E+00	2.62E-01
		K-40	1.54E+00	5.09E-01	4.67E-01
492854	1/8/2019 - 1/15/2019	I-131	<4.98E-02	0.00E+00	4.98E-02
		Cs-134	<3.94E-02	0.00E+00	3.94E-02
		Cs-137	<4.23E-02	0.00E+00	4.23E-02
		Be-7	<2.52E-01	0.00E+00	2.52E-01
		K-40	9.77E-01	4.10E-01	4.66E-01
493277	1/15/2019 - 1/22/2019	I-131	<3.95E-02	0.00E+00	3.95E-02
		Cs-134	<3.82E-02	0.00E+00	3.82E-02
		Cs-137	<4.07E-02	0.00E+00	4.07E-02
		Be-7	<2.43E-01	0.00E+00	2.43E-01
		K-40	1.11E+00	3.88E-01	3.23E-01
493539	1/22/2019 - 1/29/2019	I-131	<4.32E-02	0.00E+00	4.32E-02
		Cs-134	<3.35E-02	0.00E+00	3.35E-02
		Cs-137	<3.85E-02	0.00E+00	3.85E-02
		Be-7	<2.30E-01	0.00E+00	2.30E-01
		K-40	8.93E-01	3.42E-01	2.80E-01

BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 200 [INDICATOR - WSW @ 1 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493757	1/29/2019 - 2/5/2019	I-131	<5.52E-02	0.00E+00	5.52E-02
		Cs-134	<2.88E-02	0.00E+00	2.88E-02
		Cs-137	<3.85E-02	0.00E+00	3.85E-02
		Be-7	<1.92E-01	0.00E+00	1.92E-01
		K-40	1.32E+00	4.37E-01	4.17E-01
494311	2/5/2019 - 2/12/2019	I-131	<4.89E-02	0.00E+00	4.89E-02
		Cs-134	<3.46E-02	0.00E+00	3.46E-02
		Cs-137	<3.71E-02	0.00E+00	3.71E-02
		Be-7	<2.54E-01	0.00E+00	2.54E-01
		K-40	1.05E+00	3.85E-01	3.56E-01
494927	2/12/2019 - 2/19/2019	I-131	<4.75E-02	0.00E+00	4.75E-02
		Cs-134	<3.76E-02	0.00E+00	3.76E-02
		Cs-137	<4.26E-02	0.00E+00	4.26E-02
		Be-7	<2.62E-01	0.00E+00	2.62E-01
		K-40	9.26E-01	4.19E-01	5.12E-01
495480	2/19/2019 - 2/26/2019	I-131	<4.83E-02	0.00E+00	4.83E-02
		Cs-134	<4.09E-02	0.00E+00	4.09E-02
		Cs-137	<4.07E-02	0.00E+00	4.07E-02
		Be-7	<2.71E-01	0.00E+00	2.71E-01
		K-40	9.38E-01	4.16E-01	4.96E-01
496429	2/26/2019 - 3/5/2019	I-131	<4.92E-02	0.00E+00	4.92E-02
		Cs-134	<3.49E-02	0.00E+00	3.49E-02
		Cs-137	<3.74E-02	0.00E+00	3.74E-02
		Be-7	<2.22E-01	0.00E+00	2.22E-01
		K-40	1.00E+00	4.03E-01	4.38E-01
497050	3/5/2019 - 3/12/2019	I-131	<5.09E-02	0.00E+00	5.09E-02
		Cs-134	<3.51E-02	0.00E+00	3.51E-02
		Cs-137	<2.72E-02	0.00E+00	2.72E-02
		Be-7	<2.87E-01	0.00E+00	2.87E-01
		K-40	1.29E+00	4.19E-01	3.42E-01
497104	3/12/2019 - 3/19/2019	I-131	<4.71E-02	0.00E+00	4.71E-02
		Cs-134	<2.63E-02	0.00E+00	2.63E-02
		Cs-137	<3.75E-02	0.00E+00	3.75E-02
		Be-7	<2.49E-01	0.00E+00	2.49E-01
		K-40	1.16E+00	3.87E-01	2.87E-01
497507	3/19/2019 - 3/26/2019	I-131	<5.53E-02	0.00E+00	5.53E-02
		Cs-134	<3.67E-02	0.00E+00	3.67E-02
		Cs-137	<3.01E-02	0.00E+00	3.01E-02
		Be-7	<2.46E-01	0.00E+00	2.46E-01
		K-40	1.11E+00	3.98E-01	3.57E-01
497982	3/26/2019 - 4/2/2019	I-131	<4.55E-02	0.00E+00	4.55E-02
		Cs-134	<2.64E-02	0.00E+00	2.64E-02
		Cs-137	<3.76E-02	0.00E+00	3.76E-02
		Be-7	<2.77E-01	0.00E+00	2.77E-01
		K-40	9.42E-01	3.85E-01	4.08E-01
498570	4/2/2019 - 4/9/2019	I-131	<4.91E-02	0.00E+00	4.91E-02
		Cs-134	<4.03E-02	0.00E+00	4.03E-02
		Cs-137	<3.10E-02	0.00E+00	3.10E-02

BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 200 [INDICATOR - WSW @ 1 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
498570	4/2/2019 - 4/9/2019	Be-7	<2.83E-01	0.00E+00	2.83E-01
		K-40	6.80E-01	3.65E-01	4.67E-01
498743	4/9/2019 - 4/16/2019	I-131	<5.39E-02	0.00E+00	5.39E-02
		Cs-134	<2.18E-02	0.00E+00	2.18E-02
		Cs-137	<2.88E-02	0.00E+00	2.88E-02
		Be-7	<2.16E-01	0.00E+00	2.16E-01
		K-40	9.09E-01	2.86E-01	2.40E-01
499419	4/16/2019 - 4/23/2019	I-131	<4.94E-02	0.00E+00	4.94E-02
		Cs-134	<3.63E-02	0.00E+00	3.63E-02
		Cs-137	<4.34E-02	0.00E+00	4.34E-02
		Be-7	<2.33E-01	0.00E+00	2.33E-01
		K-40	9.36E-01	3.25E-01	7.25E-02
499833	4/23/2019 - 4/30/2019	I-131	<4.71E-02	0.00E+00	4.71E-02
		Cs-134	<3.77E-02	0.00E+00	3.77E-02
		Cs-137	<3.93E-02	0.00E+00	3.93E-02
		Be-7	<1.71E-01	0.00E+00	1.71E-01
		K-40	7.89E-01	3.68E-01	4.29E-01
500086	4/30/2019 - 5/7/2019	I-131	<4.53E-02	0.00E+00	4.53E-02
		Cs-134	<3.46E-02	0.00E+00	3.46E-02
		Cs-137	<3.07E-02	0.00E+00	3.07E-02
		Be-7	<2.19E-01	0.00E+00	2.19E-01
		K-40	1.01E+00	3.85E-01	3.78E-01
500419	5/7/2019 - 5/14/2019	I-131	<5.57E-02	0.00E+00	5.57E-02
		Cs-134	<2.64E-02	0.00E+00	2.64E-02
		Cs-137	<3.28E-02	0.00E+00	3.28E-02
		Be-7	<2.08E-01	0.00E+00	2.08E-01
		K-40	7.25E-01	2.58E-01	2.32E-01
500703	5/14/2019 - 5/21/2019	I-131	<5.27E-02	0.00E+00	5.27E-02
		Cs-134	<1.93E-02	0.00E+00	1.93E-02
		Cs-137	<1.98E-02	0.00E+00	1.98E-02
		Be-7	<1.54E-01	0.00E+00	1.54E-01
		K-40	9.57E-01	2.77E-01	3.26E-01
501086	5/21/2019 - 5/28/2019	I-131	<5.30E-02	0.00E+00	5.30E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<2.18E-02	0.00E+00	2.18E-02
		Be-7	<1.63E-01	0.00E+00	1.63E-01
		K-40	7.67E-01	3.36E-01	4.43E-01
501908	5/28/2019 - 6/4/2019	I-131	<4.41E-02	0.00E+00	4.41E-02
		Cs-134	<4.09E-02	0.00E+00	4.09E-02
		Cs-137	<3.17E-02	0.00E+00	3.17E-02
		Be-7	<2.71E-01	0.00E+00	2.71E-01
		K-40	7.70E-01	3.18E-01	2.82E-01
502168	6/4/2019 - 6/11/2019	I-131	<5.54E-02	0.00E+00	5.54E-02
		Cs-134	<2.34E-02	0.00E+00	2.34E-02
		Cs-137	<2.54E-02	0.00E+00	2.54E-02
		Be-7	<1.98E-01	0.00E+00	1.98E-01
		K-40	9.27E-01	3.39E-01	4.22E-01



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 200 [INDICATOR - WSW @ 1 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
502379	6/11/2019 - 6/18/2019	I-131	<5.57E-02	0.00E+00	5.57E-02
		Cs-134	<3.39E-02	0.00E+00	3.39E-02
		Cs-137	<2.63E-02	0.00E+00	2.63E-02
		Be-7	<2.07E-01	0.00E+00	2.07E-01
		K-40	1.00E+00	3.43E-01	3.69E-01
503342	6/18/2019 - 6/25/2019	I-131	<5.47E-02	0.00E+00	5.47E-02
		Cs-134	<2.35E-02	0.00E+00	2.35E-02
		Cs-137	<2.78E-02	0.00E+00	2.78E-02
		Be-7	<1.87E-01	0.00E+00	1.87E-01
		K-40	9.42E-01	3.70E-01	3.70E-01
503799	6/25/2019 - 7/2/2019	I-131	<5.40E-02	0.00E+00	5.40E-02
		Cs-134	<2.20E-02	0.00E+00	2.20E-02
		Cs-137	<2.82E-02	0.00E+00	2.82E-02
		Be-7	<1.88E-01	0.00E+00	1.88E-01
		K-40	9.42E-01	3.10E-01	3.27E-01
504159	7/2/2019 - 7/9/2019	I-131	<4.58E-02	0.00E+00	4.58E-02
		Cs-134	<2.73E-02	0.00E+00	2.73E-02
		Cs-137	<3.22E-02	0.00E+00	3.22E-02
		Be-7	<2.23E-01	0.00E+00	2.23E-01
		K-40	7.35E-01	3.28E-01	3.47E-01
504408	7/9/2019 - 7/16/2019	I-131	<5.45E-02	0.00E+00	5.45E-02
		Cs-134	<2.68E-02	0.00E+00	2.68E-02
		Cs-137	<3.14E-02	0.00E+00	3.14E-02
		Be-7	<2.26E-01	0.00E+00	2.26E-01
		K-40	1.10E+00	3.45E-01	3.39E-01
504610	7/16/2019 - 7/23/2019	I-131	<5.56E-02	0.00E+00	5.56E-02
		Cs-134	<3.22E-02	0.00E+00	3.22E-02
		Cs-137	<2.65E-02	0.00E+00	2.65E-02
		Be-7	<1.96E-01	0.00E+00	1.96E-01
		K-40	4.66E-01	2.40E-01	2.54E-01
504894	7/23/2019 - 7/30/2019	I-131	<5.24E-02	0.00E+00	5.24E-02
		Cs-134	<3.25E-02	0.00E+00	3.25E-02
		Cs-137	<2.09E-02	0.00E+00	2.09E-02
		Be-7	<2.26E-01	0.00E+00	2.26E-01
		K-40	<7.38E-01	0.00E+00	7.38E-01
505103	7/30/2019 - 8/6/2019	I-131	<5.57E-02	0.00E+00	5.57E-02
		Cs-134	<3.85E-02	0.00E+00	3.85E-02
		Cs-137	<3.41E-02	0.00E+00	3.41E-02
		Be-7	<2.69E-01	0.00E+00	2.69E-01
		K-40	9.77E-01	3.40E-01	2.36E-01
505498	8/6/2019 - 8/13/2019	I-131	<3.80E-02	0.00E+00	3.80E-02
		Cs-134	<2.26E-02	0.00E+00	2.26E-02
		Cs-137	<2.83E-02	0.00E+00	2.83E-02
		Be-7	<1.98E-01	0.00E+00	1.98E-01
		K-40	<5.32E-01	0.00E+00	5.32E-01
505816	8/13/2019 - 8/20/2019	I-131	<3.44E-02	0.00E+00	3.44E-02
		Cs-134	<3.39E-02	0.00E+00	3.39E-02
		Cs-137	<3.78E-02	0.00E+00	3.78E-02

BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 200 [INDICATOR - WSW @ 1 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
505816	8/13/2019 - 8/20/2019	Be-7	<1.90E-01	0.00E+00	1.90E-01
		K-40	3.08E-01	2.17E-01	2.74E-01
506335	8/20/2019 - 8/27/2019	I-131	<4.04E-02	0.00E+00	4.04E-02
		Cs-134	<3.83E-02	0.00E+00	3.83E-02
		Cs-137	<2.86E-02	0.00E+00	2.86E-02
		Be-7	<2.29E-01	0.00E+00	2.29E-01
		K-40	2.79E-01	2.14E-01	2.86E-01
507248	8/27/2019 - 9/3/2019	I-131	<5.05E-02	0.00E+00	5.05E-02
		Cs-134	<3.61E-02	0.00E+00	3.61E-02
		Cs-137	<3.63E-02	0.00E+00	3.63E-02
		Be-7	<3.05E-01	0.00E+00	3.05E-01
		K-40	8.60E-01	3.66E-01	3.97E-01
507788	9/3/2019 - 9/10/2019	I-131	<4.79E-02	0.00E+00	4.79E-02
		Cs-134	<4.31E-02	0.00E+00	4.31E-02
		Cs-137	<3.69E-02	0.00E+00	3.69E-02
		Be-7	<3.67E-01	0.00E+00	3.67E-01
		K-40	8.49E-01	4.07E-01	4.89E-01
508314	9/10/2019 - 9/17/2019	I-131	<3.37E-02	0.00E+00	3.37E-02
		Cs-134	<3.20E-02	0.00E+00	3.20E-02
		Cs-137	<3.28E-02	0.00E+00	3.28E-02
		Be-7	<1.98E-01	0.00E+00	1.98E-01
		K-40	7.06E-01	3.33E-01	3.73E-01
509184	9/17/2019 - 9/24/2019	I-131	<5.17E-02	0.00E+00	5.17E-02
		Cs-134	<3.09E-02	0.00E+00	3.09E-02
		Cs-137	<3.45E-02	0.00E+00	3.45E-02
		Be-7	<2.86E-01	0.00E+00	2.86E-01
		K-40	9.96E-01	3.60E-01	3.06E-01
509792	9/24/2019 - 10/1/2019	I-131	<4.56E-02	0.00E+00	4.56E-02
		Cs-134	<2.98E-02	0.00E+00	2.98E-02
		Cs-137	<3.62E-02	0.00E+00	3.62E-02
		Be-7	<2.84E-01	0.00E+00	2.84E-01
		K-40	8.06E-01	3.60E-01	4.06E-01
510493	10/1/2019 - 10/8/2019	I-131	<5.35E-02	0.00E+00	5.35E-02
		Cs-134	<2.60E-02	0.00E+00	2.60E-02
		Cs-137	<3.52E-02	0.00E+00	3.52E-02
		Be-7	<2.61E-01	0.00E+00	2.61E-01
		K-40	4.71E-01	3.72E-01	5.59E-01
510783	10/8/2019 - 10/15/2019	I-131	<4.70E-02	0.00E+00	4.70E-02
		Cs-134	<3.65E-02	0.00E+00	3.65E-02
		Cs-137	<3.77E-02	0.00E+00	3.77E-02
		Be-7	2.32E-02	9.69E-02	2.28E-01
		K-40	9.55E-01	4.00E-01	4.51E-01
511196	10/15/2019 - 10/22/2019	I-131	<1.87E-02	0.00E+00	1.87E-02
		Cs-134	<1.47E-02	0.00E+00	1.47E-02
		Cs-137	<1.38E-02	0.00E+00	1.38E-02
		Be-7	<9.21E-02	0.00E+00	9.21E-02
		K-40	9.31E-01	2.11E-01	2.20E-01

BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 200 [INDICATOR - WSW @ 1 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511428	10/22/2019 - 10/29/2019	I-131	<4.37E-02	0.00E+00	4.37E-02
		Cs-134	<2.27E-02	0.00E+00	2.27E-02
		Cs-137	<2.48E-02	0.00E+00	2.48E-02
		Be-7	<1.66E-01	0.00E+00	1.66E-01
		K-40	9.40E-01	2.88E-01	3.15E-01
511837	10/29/2019 - 11/5/2019	I-131	<4.25E-02	0.00E+00	4.25E-02
		Cs-134	<2.97E-02	0.00E+00	2.97E-02
		Cs-137	<2.41E-02	0.00E+00	2.41E-02
		Be-7	<1.93E-01	0.00E+00	1.93E-01
		K-40	4.82E-01	3.63E-01	5.39E-01
512136	11/5/2019 - 11/12/2019	I-131	<3.71E-02	0.00E+00	3.71E-02
		Cs-134	<4.73E-02	0.00E+00	4.73E-02
		Cs-137	<2.00E-02	0.00E+00	2.00E-02
		Be-7	<2.07E-01	0.00E+00	2.07E-01
		K-40	1.07E+00	4.26E-01	4.58E-01
512447	11/12/2019 - 11/19/2019	I-131	<3.65E-02	0.00E+00	3.65E-02
		Cs-134	<4.29E-02	0.00E+00	4.29E-02
		Cs-137	<3.03E-02	0.00E+00	3.03E-02
		Be-7	<1.85E-01	0.00E+00	1.85E-01
		K-40	1.22E+00	4.44E-01	4.80E-01
512623	11/19/2019 - 11/26/2019	I-131	<5.26E-02	0.00E+00	5.26E-02
		Cs-134	<3.22E-02	0.00E+00	3.22E-02
		Cs-137	<2.47E-02	0.00E+00	2.47E-02
		Be-7	<1.51E-01	0.00E+00	1.51E-01
		K-40	5.06E-01	3.18E-01	4.27E-01
513587	11/26/2019 - 12/3/2019	I-131	<4.07E-02	0.00E+00	4.07E-02
		Cs-134	<3.87E-02	0.00E+00	3.87E-02
		Cs-137	<2.82E-02	0.00E+00	2.82E-02
		Be-7	<2.49E-01	0.00E+00	2.49E-01
		K-40	1.24E+00	3.74E-01	7.14E-02
513896	12/3/2019 - 12/10/2019	I-131	<4.91E-02	0.00E+00	4.91E-02
		Cs-134	<2.52E-02	0.00E+00	2.52E-02
		Cs-137	<2.43E-02	0.00E+00	2.43E-02
		Be-7	<2.05E-01	0.00E+00	2.05E-01
		K-40	1.12E+00	3.14E-01	3.23E-01
514127	12/10/2019 - 12/17/2019	I-131	<4.12E-02	0.00E+00	4.12E-02
		Cs-134	<3.87E-02	0.00E+00	3.87E-02
		Cs-137	<3.21E-02	0.00E+00	3.21E-02
		Be-7	<1.96E-01	0.00E+00	1.96E-01
		K-40	9.07E-01	3.87E-01	4.36E-01
514423	12/17/2019 - 12/24/2019	I-131	<5.49E-02	0.00E+00	5.49E-02
		Cs-134	<1.72E-02	0.00E+00	1.72E-02
		Cs-137	<1.59E-02	0.00E+00	1.59E-02
		Be-7	<1.54E-01	0.00E+00	1.54E-01
		K-40	9.68E-01	2.06E-01	2.06E-01
514890	12/24/2019 - 12/31/2019	I-131	<5.38E-02	0.00E+00	5.38E-02
		Cs-134	<2.80E-02	0.00E+00	2.80E-02
		Cs-137	<3.31E-02	0.00E+00	3.31E-02



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 200 [INDICATOR - WSW @ 1 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514890	12/24/2019 - 12/31/2019	Be-7	<2.04E-01	0.00E+00	2.04E-01
		K-40	8.30E-01	3.42E-01	3.43E-01

Sample Point 201 [INDICATOR - NE @ 0.5 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492503	1/2/2019 - 1/8/2019	I-131	<5.06E-02	0.00E+00	5.06E-02
		Cs-134	<3.57E-02	0.00E+00	3.57E-02
		Cs-137	<4.42E-02	0.00E+00	4.42E-02
		Be-7	<3.25E-01	0.00E+00	3.25E-01
		K-40	1.08E+00	4.38E-01	4.67E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492855	1/8/2019 - 1/15/2019	I-131	<5.59E-02	0.00E+00	5.59E-02
		Cs-134	<2.95E-02	0.00E+00	2.95E-02
		Cs-137	<3.85E-02	0.00E+00	3.85E-02
		Be-7	<2.80E-01	0.00E+00	2.80E-01
		K-40	7.31E-01	3.66E-01	4.53E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493278	1/15/2019 - 1/22/2019	I-131	<3.43E-02	0.00E+00	3.43E-02
		Cs-134	<4.09E-02	0.00E+00	4.09E-02
		Cs-137	<2.67E-02	0.00E+00	2.67E-02
		Be-7	<2.83E-01	0.00E+00	2.83E-01
		K-40	1.34E+00	4.17E-01	3.08E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493540	1/22/2019 - 1/29/2019	I-131	<5.28E-02	0.00E+00	5.28E-02
		Cs-134	<3.96E-02	0.00E+00	3.96E-02
		Cs-137	<3.27E-02	0.00E+00	3.27E-02
		Be-7	<2.32E-01	0.00E+00	2.32E-01
		K-40	7.81E-01	3.84E-01	4.79E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493758	1/29/2019 - 2/5/2019	I-131	<5.51E-02	0.00E+00	5.51E-02
		Cs-134	<3.27E-02	0.00E+00	3.27E-02
		Cs-137	<2.65E-02	0.00E+00	2.65E-02
		Be-7	<2.19E-01	0.00E+00	2.19E-01
		K-40	<6.95E-01	0.00E+00	6.95E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494312	2/5/2019 - 2/12/2019	I-131	<4.96E-02	0.00E+00	4.96E-02
		Cs-134	<2.93E-02	0.00E+00	2.93E-02
		Cs-137	<3.24E-02	0.00E+00	3.24E-02
		Be-7	<2.49E-01	0.00E+00	2.49E-01
		K-40	8.26E-01	3.84E-01	4.64E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494928	2/12/2019 - 2/19/2019	I-131	<4.89E-02	0.00E+00	4.89E-02
		Cs-134	<4.15E-02	0.00E+00	4.15E-02
		Cs-137	<3.81E-02	0.00E+00	3.81E-02
		Be-7	<2.89E-01	0.00E+00	2.89E-01
		K-40	1.15E+00	4.56E-01	5.36E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
495481	2/19/2019 - 2/26/2019	I-131	<4.99E-02	0.00E+00	4.99E-02
		Cs-134	<4.25E-02	0.00E+00	4.25E-02
		Cs-137	<4.00E-02	0.00E+00	4.00E-02
		Be-7	<2.72E-01	0.00E+00	2.72E-01
		K-40	1.19E+00	4.24E-01	4.18E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
496430	2/26/2019 - 3/5/2019	I-131	<5.53E-02	0.00E+00	5.53E-02
		Cs-134	<3.11E-02	0.00E+00	3.11E-02
		Cs-137	<3.36E-02	0.00E+00	3.36E-02



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 201 [INDICATOR - NE @ 0.5 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
496430	2/26/2019 - 3/5/2019	Be-7	<2.56E-01	0.00E+00	2.56E-01
		K-40	9.04E-01	3.67E-01	3.78E-01
497051	3/5/2019 - 3/12/2019	I-131	<4.92E-02	0.00E+00	4.92E-02
		Cs-134	<3.82E-02	0.00E+00	3.82E-02
		Cs-137	<3.47E-02	0.00E+00	3.47E-02
		Be-7	<2.64E-01	0.00E+00	2.64E-01
		K-40	8.64E-01	4.03E-01	4.98E-01
497105	3/12/2019 - 3/19/2019	I-131	<4.61E-02	0.00E+00	4.61E-02
		Cs-134	<3.10E-02	0.00E+00	3.10E-02
		Cs-137	<3.74E-02	0.00E+00	3.74E-02
		Be-7	<2.30E-01	0.00E+00	2.30E-01
		K-40	7.77E-01	3.31E-01	3.28E-01
497508	3/19/2019 - 3/26/2019	I-131	<5.60E-02	0.00E+00	5.60E-02
		Cs-134	<3.51E-02	0.00E+00	3.51E-02
		Cs-137	<4.39E-02	0.00E+00	4.39E-02
		Be-7	<2.71E-01	0.00E+00	2.71E-01
		K-40	1.17E+00	3.80E-01	3.15E-01
497983	3/26/2019 - 4/2/2019	I-131	<4.17E-02	0.00E+00	4.17E-02
		Cs-134	<3.55E-02	0.00E+00	3.55E-02
		Cs-137	<3.03E-02	0.00E+00	3.03E-02
		Be-7	<2.11E-01	0.00E+00	2.11E-01
		K-40	8.64E-01	4.25E-01	5.51E-01
498571	4/2/2019 - 4/9/2019	I-131	<4.42E-02	0.00E+00	4.42E-02
		Cs-134	<2.76E-02	0.00E+00	2.76E-02
		Cs-137	<3.15E-02	0.00E+00	3.15E-02
		Be-7	<2.48E-01	0.00E+00	2.48E-01
		K-40	6.63E-01	3.71E-01	4.91E-01
498744	4/9/2019 - 4/16/2019	I-131	<5.55E-02	0.00E+00	5.55E-02
		Cs-134	<2.49E-02	0.00E+00	2.49E-02
		Cs-137	<2.53E-02	0.00E+00	2.53E-02
		Be-7	<1.91E-01	0.00E+00	1.91E-01
		K-40	1.19E+00	3.26E-01	3.25E-01
499420	4/16/2019 - 4/23/2019	I-131	<5.23E-02	0.00E+00	5.23E-02
		Cs-134	<4.10E-02	0.00E+00	4.10E-02
		Cs-137	<3.78E-02	0.00E+00	3.78E-02
		Be-7	<2.00E-01	0.00E+00	2.00E-01
		K-40	1.04E+00	4.01E-01	4.17E-01
499834	4/23/2019 - 4/30/2019	I-131	<4.39E-02	0.00E+00	4.39E-02
		Cs-134	<3.86E-02	0.00E+00	3.86E-02
		Cs-137	<3.93E-02	0.00E+00	3.93E-02
		Be-7	<2.21E-01	0.00E+00	2.21E-01
		K-40	1.00E+00	3.97E-01	4.30E-01
500087	4/30/2019 - 5/7/2019	I-131	<5.26E-02	0.00E+00	5.26E-02
		Cs-134	<2.32E-02	0.00E+00	2.32E-02
		Cs-137	<3.31E-02	0.00E+00	3.31E-02
		Be-7	<1.98E-01	0.00E+00	1.98E-01
		K-40	1.09E+00	3.46E-01	7.01E-02



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 201 [INDICATOR - NE @ 0.5 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500420	5/7/2019 - 5/14/2019	I-131	<5.24E-02	0.00E+00	5.24E-02
		Cs-134	<2.43E-02	0.00E+00	2.43E-02
		Cs-137	<2.68E-02	0.00E+00	2.68E-02
		Be-7	<1.71E-01	0.00E+00	1.71E-01
		K-40	9.88E-01	2.86E-01	2.71E-01
500704	5/14/2019 - 5/21/2019	I-131	<4.94E-02	0.00E+00	4.94E-02
		Cs-134	<2.26E-02	0.00E+00	2.26E-02
		Cs-137	<2.04E-02	0.00E+00	2.04E-02
		Be-7	<1.60E-01	0.00E+00	1.60E-01
		K-40	8.88E-01	2.70E-01	3.21E-01
501087	5/21/2019 - 5/28/2019	I-131	<5.49E-02	0.00E+00	5.49E-02
		Cs-134	<2.67E-02	0.00E+00	2.67E-02
		Cs-137	<2.52E-02	0.00E+00	2.52E-02
		Be-7	<2.02E-01	0.00E+00	2.02E-01
		K-40	9.94E-01	2.88E-01	1.97E-01
501909	5/28/2019 - 6/4/2019	I-131	<5.37E-02	0.00E+00	5.37E-02
		Cs-134	<3.97E-02	0.00E+00	3.97E-02
		Cs-137	<2.84E-02	0.00E+00	2.84E-02
		Be-7	<2.20E-01	0.00E+00	2.20E-01
		K-40	1.22E+00	4.52E-01	5.04E-01
502169	6/4/2019 - 6/11/2019	I-131	<4.95E-02	0.00E+00	4.95E-02
		Cs-134	<2.70E-02	0.00E+00	2.70E-02
		Cs-137	<2.75E-02	0.00E+00	2.75E-02
		Be-7	1.76E-01	1.73E-01	2.78E-01
		K-40	8.09E-01	3.05E-01	3.69E-01
502380	6/11/2019 - 6/18/2019	I-131	<5.53E-02	0.00E+00	5.53E-02
		Cs-134	<2.66E-02	0.00E+00	2.66E-02
		Cs-137	<2.94E-02	0.00E+00	2.94E-02
		Be-7	<1.93E-01	0.00E+00	1.93E-01
		K-40	1.30E+00	3.35E-01	5.32E-02
503343	6/18/2019 - 6/25/2019	I-131	<4.34E-02	0.00E+00	4.34E-02
		Cs-134	<2.56E-02	0.00E+00	2.56E-02
		Cs-137	<3.91E-02	0.00E+00	3.91E-02
		Be-7	<2.11E-01	0.00E+00	2.11E-01
		K-40	1.21E+00	4.02E-01	3.35E-01
503800	6/25/2019 - 7/2/2019	I-131	<5.56E-02	0.00E+00	5.56E-02
		Cs-134	<2.48E-02	0.00E+00	2.48E-02
		Cs-137	<2.91E-02	0.00E+00	2.91E-02
		Be-7	<1.94E-01	0.00E+00	1.94E-01
		K-40	9.68E-01	2.97E-01	2.95E-01
504160	7/2/2019 - 7/9/2019	I-131	<4.55E-02	0.00E+00	4.55E-02
		Cs-134	<2.92E-02	0.00E+00	2.92E-02
		Cs-137	<3.53E-02	0.00E+00	3.53E-02
		Be-7	<2.89E-01	0.00E+00	2.89E-01
		K-40	1.18E+00	4.36E-01	4.70E-01
504409	7/9/2019 - 7/16/2019	I-131	<4.94E-02	0.00E+00	4.94E-02
		Cs-134	<2.12E-02	0.00E+00	2.12E-02
		Cs-137	<2.40E-02	0.00E+00	2.40E-02

BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 201 [INDICATOR - NE @ 0.5 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504409	7/9/2019 - 7/16/2019	Be-7	<1.61E-01	0.00E+00	1.61E-01
		K-40	<4.66E-01	0.00E+00	4.66E-01
504611	7/16/2019 - 7/23/2019	I-131	<5.39E-02	0.00E+00	5.39E-02
		Cs-134	<1.38E-02	0.00E+00	1.38E-02
		Cs-137	<1.63E-02	0.00E+00	1.63E-02
		Be-7	<9.94E-02	0.00E+00	9.94E-02
		K-40	7.15E-01	2.00E-01	1.60E-01
504895	7/23/2019 - 7/30/2019	I-131	<4.57E-02	0.00E+00	4.57E-02
		Cs-134	<2.90E-02	0.00E+00	2.90E-02
		Cs-137	<3.12E-02	0.00E+00	3.12E-02
		Be-7	<2.07E-01	0.00E+00	2.07E-01
		K-40	<5.43E-01	0.00E+00	5.43E-01
505104	7/30/2019 - 8/6/2019	I-131	<4.92E-02	0.00E+00	4.92E-02
		Cs-134	<3.22E-02	0.00E+00	3.22E-02
		Cs-137	<2.49E-02	0.00E+00	2.49E-02
		Be-7	<1.66E-01	0.00E+00	1.66E-01
		K-40	4.14E-01	2.83E-01	3.87E-01
505499	8/6/2019 - 8/13/2019	I-131	<3.53E-02	0.00E+00	3.53E-02
		Cs-134	<3.21E-02	0.00E+00	3.21E-02
		Cs-137	<3.45E-02	0.00E+00	3.45E-02
		Be-7	<1.96E-01	0.00E+00	1.96E-01
		K-40	5.55E-01	2.58E-01	2.30E-01
505817	8/13/2019 - 8/20/2019	I-131	<3.03E-02	0.00E+00	3.03E-02
		Cs-134	<3.62E-02	0.00E+00	3.62E-02
		Cs-137	<2.07E-02	0.00E+00	2.07E-02
		Be-7	<1.85E-01	0.00E+00	1.85E-01
		K-40	6.80E-01	3.19E-01	3.49E-01
506336	8/20/2019 - 8/27/2019	I-131	<3.91E-02	0.00E+00	3.91E-02
		Cs-134	<2.93E-02	0.00E+00	2.93E-02
		Cs-137	<2.38E-02	0.00E+00	2.38E-02
		Be-7	<1.61E-01	0.00E+00	1.61E-01
		K-40	6.02E-01	2.79E-01	2.70E-01
507249	8/27/2019 - 9/3/2019	I-131	<4.39E-02	0.00E+00	4.39E-02
		Cs-134	<3.60E-02	0.00E+00	3.60E-02
		Cs-137	<3.82E-02	0.00E+00	3.82E-02
		Be-7	<3.25E-01	0.00E+00	3.25E-01
		K-40	1.22E+00	4.32E-01	4.38E-01
507789	9/3/2019 - 9/10/2019	I-131	<3.89E-02	0.00E+00	3.89E-02
		Cs-134	<3.13E-02	0.00E+00	3.13E-02
		Cs-137	<2.69E-02	0.00E+00	2.69E-02
		Be-7	<2.68E-01	0.00E+00	2.68E-01
		K-40	5.65E-01	2.98E-01	3.51E-01
508315	9/10/2019 - 9/17/2019	I-131	<4.04E-02	0.00E+00	4.04E-02
		Cs-134	<3.61E-02	0.00E+00	3.61E-02
		Cs-137	<3.95E-02	0.00E+00	3.95E-02
		Be-7	<1.85E-01	0.00E+00	1.85E-01
		K-40	1.07E+00	3.68E-01	2.97E-01



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 201 [INDICATOR - NE @ 0.5 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
509185	9/17/2019 - 9/24/2019	I-131	<4.01E-02	0.00E+00	4.01E-02
		Cs-134	<3.72E-02	0.00E+00	3.72E-02
		Cs-137	<3.44E-02	0.00E+00	3.44E-02
		Be-7	7.29E-02	1.34E-01	2.29E-01
		K-40	9.43E-01	3.40E-01	2.65E-01
509793	9/24/2019 - 10/1/2019	I-131	<5.52E-02	0.00E+00	5.52E-02
		Cs-134	<2.02E-02	0.00E+00	2.02E-02
		Cs-137	<2.93E-02	0.00E+00	2.93E-02
		Be-7	<2.41E-01	0.00E+00	2.41E-01
		K-40	1.05E+00	3.10E-01	2.48E-01
510494	10/1/2019 - 10/8/2019	I-131	<4.24E-02	0.00E+00	4.24E-02
		Cs-134	<3.41E-02	0.00E+00	3.41E-02
		Cs-137	<2.81E-02	0.00E+00	2.81E-02
		Be-7	<2.37E-01	0.00E+00	2.37E-01
		K-40	7.84E-01	3.36E-01	3.56E-01
510784	10/8/2019 - 10/15/2019	I-131	<4.23E-02	0.00E+00	4.23E-02
		Cs-134	<3.33E-02	0.00E+00	3.33E-02
		Cs-137	<2.59E-02	0.00E+00	2.59E-02
		Be-7	<2.27E-01	0.00E+00	2.27E-01
		K-40	7.60E-01	3.24E-01	3.21E-01
511197	10/15/2019 - 10/22/2019	I-131	<3.47E-02	0.00E+00	3.47E-02
		Cs-134	<3.20E-02	0.00E+00	3.20E-02
		Cs-137	<3.40E-02	0.00E+00	3.40E-02
		Be-7	<2.12E-01	0.00E+00	2.12E-01
		K-40	1.22E+00	3.69E-01	7.03E-02
511429	10/22/2019 - 10/29/2019	I-131	<3.55E-02	0.00E+00	3.55E-02
		Cs-134	<2.40E-02	0.00E+00	2.40E-02
		Cs-137	<3.36E-02	0.00E+00	3.36E-02
		Be-7	<2.20E-01	0.00E+00	2.20E-01
		K-40	9.31E-01	3.77E-01	4.04E-01
511838	10/29/2019 - 11/5/2019	I-131	<3.22E-02	0.00E+00	3.22E-02
		Cs-134	<2.44E-02	0.00E+00	2.44E-02
		Cs-137	<3.30E-02	0.00E+00	3.30E-02
		Be-7	<2.07E-01	0.00E+00	2.07E-01
		K-40	7.74E-01	3.11E-01	2.49E-01
512137	11/5/2019 - 11/12/2019	I-131	<5.03E-02	0.00E+00	5.03E-02
		Cs-134	<4.21E-02	0.00E+00	4.21E-02
		Cs-137	<3.60E-02	0.00E+00	3.60E-02
		Be-7	<2.73E-01	0.00E+00	2.73E-01
		K-40	1.35E+00	4.28E-01	3.39E-01
512448	11/12/2019 - 11/19/2019	I-131	<3.47E-02	0.00E+00	3.47E-02
		Cs-134	<3.01E-02	0.00E+00	3.01E-02
		Cs-137	<3.78E-02	0.00E+00	3.78E-02
		Be-7	<2.45E-01	0.00E+00	2.45E-01
		K-40	8.17E-01	3.12E-01	2.22E-01
512624	11/19/2019 - 11/26/2019	I-131	<4.91E-02	0.00E+00	4.91E-02
		Cs-134	<3.05E-02	0.00E+00	3.05E-02
		Cs-137	<2.46E-02	0.00E+00	2.46E-02



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 201 [INDICATOR - NE @ 0.5 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512624	11/19/2019 - 11/26/2019	Be-7	<2.10E-01	0.00E+00	2.10E-01
		K-40	6.38E-01	2.86E-01	2.53E-01
513588	11/26/2019 - 12/3/2019	I-131	<4.55E-02	0.00E+00	4.55E-02
		Cs-134	<3.10E-02	0.00E+00	3.10E-02
		Cs-137	<2.94E-02	0.00E+00	2.94E-02
		Be-7	<3.11E-01	0.00E+00	3.11E-01
		K-40	1.65E+00	4.88E-01	4.07E-01
513897	12/3/2019 - 12/10/2019	I-131	<5.58E-02	0.00E+00	5.58E-02
		Cs-134	<2.95E-02	0.00E+00	2.95E-02
		Cs-137	<2.54E-02	0.00E+00	2.54E-02
		Be-7	<2.30E-01	0.00E+00	2.30E-01
		K-40	1.05E+00	4.48E-01	5.72E-01
514128	12/10/2019 - 12/17/2019	I-131	<3.19E-02	0.00E+00	3.19E-02
		Cs-134	<2.42E-02	0.00E+00	2.42E-02
		Cs-137	<2.45E-02	0.00E+00	2.45E-02
		Be-7	<1.39E-01	0.00E+00	1.39E-01
		K-40	1.27E+00	4.25E-01	3.94E-01
514424	12/17/2019 - 12/24/2019	I-131	<3.57E-02	0.00E+00	3.57E-02
		Cs-134	<1.21E-02	0.00E+00	1.21E-02
		Cs-137	<1.08E-02	0.00E+00	1.08E-02
		Be-7	<7.38E-02	0.00E+00	7.38E-02
		K-40	8.27E-01	1.25E-01	1.27E-01
514891	12/24/2019 - 12/31/2019	I-131	<5.21E-02	0.00E+00	5.21E-02
		Cs-134	<2.39E-02	0.00E+00	2.39E-02
		Cs-137	<2.56E-02	0.00E+00	2.56E-02
		Be-7	<1.82E-01	0.00E+00	1.82E-01
		K-40	1.29E+00	3.67E-01	3.94E-01

Sample Point 202 [INDICATOR - S @ 1 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492504	1/2/2019 - 1/8/2019	I-131	<5.14E-02	0.00E+00	5.14E-02
		Cs-134	<4.22E-02	0.00E+00	4.22E-02
		Cs-137	<5.33E-02	0.00E+00	5.33E-02
		Be-7	<2.80E-01	0.00E+00	2.80E-01
		K-40	1.07E+00	3.99E-01	3.09E-01
492856	1/8/2019 - 1/15/2019	I-131	<5.50E-02	0.00E+00	5.50E-02
		Cs-134	<3.21E-02	0.00E+00	3.21E-02
		Cs-137	<3.12E-02	0.00E+00	3.12E-02
		Be-7	<2.08E-01	0.00E+00	2.08E-01
		K-40	7.28E-01	2.77E-01	2.20E-01
493279	1/15/2019 - 1/22/2019	I-131	<4.56E-02	0.00E+00	4.56E-02
		Cs-134	<4.11E-02	0.00E+00	4.11E-02
		Cs-137	<3.62E-02	0.00E+00	3.62E-02
		Be-7	<2.31E-01	0.00E+00	2.31E-01
		K-40	1.04E+00	4.40E-01	5.18E-01
493541	1/22/2019 - 1/29/2019	I-131	<4.91E-02	0.00E+00	4.91E-02
		Cs-134	<2.87E-02	0.00E+00	2.87E-02
		Cs-137	<3.15E-02	0.00E+00	3.15E-02



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 202 [INDICATOR - S @ 1 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493541	1/22/2019 - 1/29/2019	Be-7	<2.66E-01	0.00E+00	2.66E-01
		K-40	9.95E-01	3.80E-01	3.60E-01
493759	1/29/2019 - 2/5/2019	I-131	<4.85E-02	0.00E+00	4.85E-02
		Cs-134	<3.87E-02	0.00E+00	3.87E-02
		Cs-137	<4.29E-02	0.00E+00	4.29E-02
		Be-7	<2.64E-01	0.00E+00	2.64E-01
		K-40	<8.21E-01	0.00E+00	8.21E-01
494313	2/5/2019 - 2/12/2019	I-131	<4.65E-02	0.00E+00	4.65E-02
		Cs-134	<3.03E-02	0.00E+00	3.03E-02
		Cs-137	<4.04E-02	0.00E+00	4.04E-02
		Be-7	<2.76E-01	0.00E+00	2.76E-01
		K-40	1.27E+00	5.03E-01	6.10E-01
494929	2/12/2019 - 2/19/2019	I-131	<5.42E-02	0.00E+00	5.42E-02
		Cs-134	<3.53E-02	0.00E+00	3.53E-02
		Cs-137	<4.06E-02	0.00E+00	4.06E-02
		Be-7	<2.40E-01	0.00E+00	2.40E-01
		K-40	8.49E-01	3.33E-01	2.71E-01
495482	2/19/2019 - 2/26/2019	I-131	<5.59E-02	0.00E+00	5.59E-02
		Cs-134	<4.08E-02	0.00E+00	4.08E-02
		Cs-137	<3.67E-02	0.00E+00	3.67E-02
		Be-7	<2.10E-01	0.00E+00	2.10E-01
		K-40	1.04E+00	3.57E-01	2.48E-01
496431	2/26/2019 - 3/5/2019	I-131	<4.60E-02	0.00E+00	4.60E-02
		Cs-134	<3.54E-02	0.00E+00	3.54E-02
		Cs-137	<3.37E-02	0.00E+00	3.37E-02
		Be-7	<2.25E-01	0.00E+00	2.25E-01
		K-40	1.24E+00	4.31E-01	4.06E-01
497052	3/5/2019 - 3/12/2019	I-131	<5.45E-02	0.00E+00	5.45E-02
		Cs-134	<3.72E-02	0.00E+00	3.72E-02
		Cs-137	<3.40E-02	0.00E+00	3.40E-02
		Be-7	<2.87E-01	0.00E+00	2.87E-01
		K-40	6.68E-01	3.84E-01	5.16E-01
497106	3/12/2019 - 3/19/2019	I-131	<4.55E-02	0.00E+00	4.55E-02
		Cs-134	<4.22E-02	0.00E+00	4.22E-02
		Cs-137	<3.49E-02	0.00E+00	3.49E-02
		Be-7	<2.59E-01	0.00E+00	2.59E-01
		K-40	1.09E+00	3.81E-01	3.00E-01
497509	3/19/2019 - 3/26/2019	I-131	<4.79E-02	0.00E+00	4.79E-02
		Cs-134	<3.73E-02	0.00E+00	3.73E-02
		Cs-137	<4.21E-02	0.00E+00	4.21E-02
		Be-7	<2.35E-01	0.00E+00	2.35E-01
		K-40	1.29E+00	5.01E-01	5.94E-01
497984	3/26/2019 - 4/2/2019	I-131	<5.42E-02	0.00E+00	5.42E-02
		Cs-134	<3.85E-02	0.00E+00	3.85E-02
		Cs-137	<3.28E-02	0.00E+00	3.28E-02
		Be-7	<2.49E-01	0.00E+00	2.49E-01
		K-40	1.04E+00	3.99E-01	4.00E-01



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 202 [INDICATOR - S @ 1 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
498572	4/2/2019 - 4/9/2019	I-131	<4.78E-02	0.00E+00	4.78E-02
		Cs-134	<3.82E-02	0.00E+00	3.82E-02
		Cs-137	<3.26E-02	0.00E+00	3.26E-02
		Be-7	<2.63E-01	0.00E+00	2.63E-01
		K-40	1.11E+00	3.84E-01	2.99E-01
498745	4/9/2019 - 4/16/2019	I-131	<5.51E-02	0.00E+00	5.51E-02
		Cs-134	<2.49E-02	0.00E+00	2.49E-02
		Cs-137	<2.25E-02	0.00E+00	2.25E-02
		Be-7	<1.96E-01	0.00E+00	1.96E-01
		K-40	1.03E+00	2.93E-01	2.79E-01
499421	4/16/2019 - 4/23/2019	I-131	<5.19E-02	0.00E+00	5.19E-02
		Cs-134	<3.90E-02	0.00E+00	3.90E-02
		Cs-137	<4.06E-02	0.00E+00	4.06E-02
		Be-7	<2.83E-01	0.00E+00	2.83E-01
		K-40	8.92E-01	4.81E-01	6.63E-01
499835	4/23/2019 - 4/30/2019	I-131	<4.26E-02	0.00E+00	4.26E-02
		Cs-134	<4.09E-02	0.00E+00	4.09E-02
		Cs-137	<3.17E-02	0.00E+00	3.17E-02
		Be-7	<2.98E-01	0.00E+00	2.98E-01
		K-40	8.34E-01	3.92E-01	4.79E-01
500088	4/30/2019 - 5/7/2019	I-131	<4.28E-02	0.00E+00	4.28E-02
		Cs-134	<4.17E-02	0.00E+00	4.17E-02
		Cs-137	<4.38E-02	0.00E+00	4.38E-02
		Be-7	<2.36E-01	0.00E+00	2.36E-01
		K-40	1.06E+00	4.13E-01	4.38E-01
500421	5/7/2019 - 5/14/2019	I-131	<5.21E-02	0.00E+00	5.21E-02
		Cs-134	<2.93E-02	0.00E+00	2.93E-02
		Cs-137	<2.66E-02	0.00E+00	2.66E-02
		Be-7	<2.00E-01	0.00E+00	2.00E-01
		K-40	6.73E-01	2.62E-01	3.02E-01
500705	5/14/2019 - 5/21/2019	I-131	<5.25E-02	0.00E+00	5.25E-02
		Cs-134	<1.95E-02	0.00E+00	1.95E-02
		Cs-137	<2.18E-02	0.00E+00	2.18E-02
		Be-7	<1.61E-01	0.00E+00	1.61E-01
		K-40	1.07E+00	2.80E-01	3.17E-01
501088	5/21/2019 - 5/28/2019	I-131	<5.44E-02	0.00E+00	5.44E-02
		Cs-134	<2.34E-02	0.00E+00	2.34E-02
		Cs-137	<3.44E-02	0.00E+00	3.44E-02
		Be-7	<2.09E-01	0.00E+00	2.09E-01
		K-40	1.04E+00	3.14E-01	2.82E-01
501910	5/28/2019 - 6/4/2019	I-131	<5.48E-02	0.00E+00	5.48E-02
		Cs-134	<4.28E-02	0.00E+00	4.28E-02
		Cs-137	<3.37E-02	0.00E+00	3.37E-02
		Be-7	<2.32E-01	0.00E+00	2.32E-01
		K-40	5.57E-01	4.17E-01	6.29E-01
502170	6/4/2019 - 6/11/2019	I-131	<5.08E-02	0.00E+00	5.08E-02
		Cs-134	<2.72E-02	0.00E+00	2.72E-02
		Cs-137	<2.71E-02	0.00E+00	2.71E-02



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 202 [INDICATOR - S @ 1 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
502170	6/4/2019 - 6/11/2019	Be-7	<1.99E-01	0.00E+00	1.99E-01
		K-40	1.03E+00	2.99E-01	3.01E-01
502381	6/11/2019 - 6/18/2019	I-131	<5.39E-02	0.00E+00	5.39E-02
		Cs-134	<2.41E-02	0.00E+00	2.41E-02
		Cs-137	<3.24E-02	0.00E+00	3.24E-02
		Be-7	<2.26E-01	0.00E+00	2.26E-01
		K-40	8.54E-01	3.02E-01	3.22E-01
503344	6/18/2019 - 6/25/2019	I-131	<5.60E-02	0.00E+00	5.60E-02
		Cs-134	<2.77E-02	0.00E+00	2.77E-02
		Cs-137	<3.47E-02	0.00E+00	3.47E-02
		Be-7	<2.04E-01	0.00E+00	2.04E-01
		K-40	9.72E-01	4.18E-01	4.95E-01
503801	6/25/2019 - 7/2/2019	I-131	<4.88E-02	0.00E+00	4.88E-02
		Cs-134	<3.80E-02	0.00E+00	3.80E-02
		Cs-137	<3.01E-02	0.00E+00	3.01E-02
		Be-7	<2.75E-01	0.00E+00	2.75E-01
		K-40	1.08E+00	4.20E-01	4.61E-01
504161	7/2/2019 - 7/9/2019	I-131	<5.21E-02	0.00E+00	5.21E-02
		Cs-134	<3.55E-02	0.00E+00	3.55E-02
		Cs-137	<4.25E-02	0.00E+00	4.25E-02
		Be-7	<2.11E-01	0.00E+00	2.11E-01
		K-40	9.24E-01	3.39E-01	2.58E-01
504410	7/9/2019 - 7/16/2019	I-131	<4.95E-02	0.00E+00	4.95E-02
		Cs-134	<2.54E-02	0.00E+00	2.54E-02
		Cs-137	<2.47E-02	0.00E+00	2.47E-02
		Be-7	<1.94E-01	0.00E+00	1.94E-01
		K-40	8.78E-01	2.97E-01	3.22E-01
504612	7/16/2019 - 7/23/2019	I-131	<5.12E-02	0.00E+00	5.12E-02
		Cs-134	<1.89E-02	0.00E+00	1.89E-02
		Cs-137	<1.68E-02	0.00E+00	1.68E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	8.13E-01	2.15E-01	1.94E-01
504896	7/23/2019 - 7/30/2019	I-131	<5.59E-02	0.00E+00	5.59E-02
		Cs-134	<2.81E-02	0.00E+00	2.81E-02
		Cs-137	<2.84E-02	0.00E+00	2.84E-02
		Be-7	<2.67E-01	0.00E+00	2.67E-01
		K-40	9.38E-01	3.48E-01	3.03E-01
505105	7/30/2019 - 8/6/2019	I-131	<5.05E-02	0.00E+00	5.05E-02
		Cs-134	<3.29E-02	0.00E+00	3.29E-02
		Cs-137	<2.40E-02	0.00E+00	2.40E-02
		Be-7	<2.51E-01	0.00E+00	2.51E-01
		K-40	<6.07E-01	0.00E+00	6.07E-01
505500	8/6/2019 - 8/13/2019	I-131	<3.82E-02	0.00E+00	3.82E-02
		Cs-134	<1.83E-02	0.00E+00	1.83E-02
		Cs-137	<2.04E-02	0.00E+00	2.04E-02
		Be-7	<1.82E-01	0.00E+00	1.82E-01
		K-40	4.91E-01	2.53E-01	2.52E-01



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 202 [INDICATOR - S @ 1 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
505818	8/13/2019 - 8/20/2019	I-131	<2.84E-02	0.00E+00	2.84E-02
		Cs-134	<3.15E-02	0.00E+00	3.15E-02
		Cs-137	<3.01E-02	0.00E+00	3.01E-02
		Be-7	<1.83E-01	0.00E+00	1.83E-01
		K-40	<6.27E-01	0.00E+00	6.27E-01
506337	8/20/2019 - 8/27/2019	I-131	<3.17E-02	0.00E+00	3.17E-02
		Cs-134	<3.32E-02	0.00E+00	3.32E-02
		Cs-137	<2.87E-02	0.00E+00	2.87E-02
		Be-7	<2.19E-01	0.00E+00	2.19E-01
		K-40	<1.90E-01	0.00E+00	1.90E-01
507250	8/27/2019 - 9/3/2019	I-131	<5.16E-02	0.00E+00	5.16E-02
		Cs-134	<3.32E-02	0.00E+00	3.32E-02
		Cs-137	<3.32E-02	0.00E+00	3.32E-02
		Be-7	<3.06E-01	0.00E+00	3.06E-01
		K-40	6.65E-01	3.47E-01	4.32E-01
507790	9/3/2019 - 9/10/2019	I-131	<3.29E-02	0.00E+00	3.29E-02
		Cs-134	<3.91E-02	0.00E+00	3.91E-02
		Cs-137	<2.79E-02	0.00E+00	2.79E-02
		Be-7	<1.96E-01	0.00E+00	1.96E-01
		K-40	4.42E-01	2.99E-01	4.13E-01
508316	9/10/2019 - 9/17/2019	I-131	<3.56E-02	0.00E+00	3.56E-02
		Cs-134	<2.97E-02	0.00E+00	2.97E-02
		Cs-137	<3.09E-02	0.00E+00	3.09E-02
		Be-7	<2.24E-01	0.00E+00	2.24E-01
		K-40	7.07E-01	3.35E-01	3.87E-01
509186	9/17/2019 - 9/24/2019	I-131	<4.14E-02	0.00E+00	4.14E-02
		Cs-134	<2.39E-02	0.00E+00	2.39E-02
		Cs-137	<2.72E-02	0.00E+00	2.72E-02
		Be-7	<1.81E-01	0.00E+00	1.81E-01
		K-40	3.58E-01	2.94E-01	4.35E-01
509794	9/24/2019 - 10/1/2019	I-131	<4.15E-02	0.00E+00	4.15E-02
		Cs-134	<2.81E-02	0.00E+00	2.81E-02
		Cs-137	<3.11E-02	0.00E+00	3.11E-02
		Be-7	<2.18E-01	0.00E+00	2.18E-01
		K-40	8.27E-01	3.41E-01	3.43E-01
510495	10/1/2019 - 10/8/2019	I-131	<5.48E-02	0.00E+00	5.48E-02
		Cs-134	<3.16E-02	0.00E+00	3.16E-02
		Cs-137	<3.40E-02	0.00E+00	3.40E-02
		Be-7	<2.64E-01	0.00E+00	2.64E-01
		K-40	8.31E-01	3.16E-01	3.41E-01
510785	10/8/2019 - 10/15/2019	I-131	<3.85E-02	0.00E+00	3.85E-02
		Cs-134	<3.04E-02	0.00E+00	3.04E-02
		Cs-137	<3.17E-02	0.00E+00	3.17E-02
		Be-7	<1.87E-01	0.00E+00	1.87E-01
		K-40	9.10E-01	3.87E-01	4.39E-01
511198	10/15/2019 - 10/22/2019	I-131	<3.77E-02	0.00E+00	3.77E-02
		Cs-134	<3.74E-02	0.00E+00	3.74E-02
		Cs-137	<4.09E-02	0.00E+00	4.09E-02

BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 202 [INDICATOR - S @ 1 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511198	10/15/2019 - 10/22/2019	Be-7	<1.67E-01	0.00E+00	1.67E-01
		K-40	9.25E-01	3.82E-01	4.10E-01
511430	10/22/2019 - 10/29/2019	I-131	<4.17E-02	0.00E+00	4.17E-02
		Cs-134	<3.95E-02	0.00E+00	3.95E-02
		Cs-137	<2.29E-02	0.00E+00	2.29E-02
		Be-7	<2.28E-01	0.00E+00	2.28E-01
		K-40	9.00E-01	3.33E-01	2.51E-01
511839	10/29/2019 - 11/5/2019	I-131	<3.45E-02	0.00E+00	3.45E-02
		Cs-134	<3.50E-02	0.00E+00	3.50E-02
		Cs-137	<1.76E-02	0.00E+00	1.76E-02
		Be-7	<2.49E-01	0.00E+00	2.49E-01
		K-40	<7.02E-01	0.00E+00	7.02E-01
512138	11/5/2019 - 11/12/2019	I-131	<4.04E-02	0.00E+00	4.04E-02
		Cs-134	<3.64E-02	0.00E+00	3.64E-02
		Cs-137	<3.15E-02	0.00E+00	3.15E-02
		Be-7	<2.38E-01	0.00E+00	2.38E-01
		K-40	1.33E+00	4.21E-01	3.21E-01
512449	11/12/2019 - 11/19/2019	I-131	<3.09E-02	0.00E+00	3.09E-02
		Cs-134	<2.76E-02	0.00E+00	2.76E-02
		Cs-137	<3.03E-02	0.00E+00	3.03E-02
		Be-7	<2.29E-01	0.00E+00	2.29E-01
		K-40	<5.60E-01	0.00E+00	5.60E-01
512625	11/19/2019 - 11/26/2019	I-131	<5.18E-02	0.00E+00	5.18E-02
		Cs-134	<2.43E-02	0.00E+00	2.43E-02
		Cs-137	<2.08E-02	0.00E+00	2.08E-02
		Be-7	<2.29E-01	0.00E+00	2.29E-01
		K-40	6.95E-01	3.06E-01	3.73E-01
513589	11/26/2019 - 12/3/2019	I-131	<4.30E-02	0.00E+00	4.30E-02
		Cs-134	<3.90E-02	0.00E+00	3.90E-02
		Cs-137	<3.10E-02	0.00E+00	3.10E-02
		Be-7	<2.54E-01	0.00E+00	2.54E-01
		K-40	1.38E+00	4.28E-01	2.99E-01
513898	12/3/2019 - 12/10/2019	I-131	<5.54E-02	0.00E+00	5.54E-02
		Cs-134	<2.97E-02	0.00E+00	2.97E-02
		Cs-137	<2.55E-02	0.00E+00	2.55E-02
		Be-7	<2.17E-01	0.00E+00	2.17E-01
		K-40	1.24E+00	4.10E-01	3.63E-01
514129	12/10/2019 - 12/17/2019	I-131	<3.04E-02	0.00E+00	3.04E-02
		Cs-134	<3.51E-02	0.00E+00	3.51E-02
		Cs-137	<3.04E-02	0.00E+00	3.04E-02
		Be-7	<2.40E-01	0.00E+00	2.40E-01
		K-40	6.74E-01	3.54E-01	4.36E-01
514425	12/17/2019 - 12/24/2019	I-131	<5.56E-02	0.00E+00	5.56E-02
		Cs-134	<1.90E-02	0.00E+00	1.90E-02
		Cs-137	<1.89E-02	0.00E+00	1.89E-02
		Be-7	<1.38E-01	0.00E+00	1.38E-01
		K-40	9.56E-01	2.25E-01	2.00E-01

BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 202 [INDICATOR - S @ 1 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514892	12/24/2019 - 12/31/2019	I-131	<4.92E-02	0.00E+00	4.92E-02
		Cs-134	<2.93E-02	0.00E+00	2.93E-02
		Cs-137	<3.82E-02	0.00E+00	3.82E-02
		Be-7	<1.96E-01	0.00E+00	1.96E-01
		K-40	8.11E-01	3.27E-01	2.78E-01

Sample Point 203 [INDICATOR - SSW @ 2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492505	1/2/2019 - 1/8/2019	I-131	<5.60E-02	0.00E+00	5.60E-02
		Cs-134	<3.98E-02	0.00E+00	3.98E-02
		Cs-137	<4.10E-02	0.00E+00	4.10E-02
		Be-7	<3.28E-01	0.00E+00	3.28E-01
		K-40	7.38E-01	3.81E-01	4.64E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492857	1/8/2019 - 1/15/2019	I-131	<3.97E-02	0.00E+00	3.97E-02
		Cs-134	<2.83E-02	0.00E+00	2.83E-02
		Cs-137	<3.57E-02	0.00E+00	3.57E-02
		Be-7	<2.12E-01	0.00E+00	2.12E-01
		K-40	4.97E-01	3.16E-01	4.27E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493280	1/15/2019 - 1/22/2019	I-131	<4.51E-02	0.00E+00	4.51E-02
		Cs-134	<3.25E-02	0.00E+00	3.25E-02
		Cs-137	<3.40E-02	0.00E+00	3.40E-02
		Be-7	<2.70E-01	0.00E+00	2.70E-01
		K-40	1.00E+00	4.26E-01	4.95E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493542	1/22/2019 - 1/29/2019	I-131	<4.13E-02	0.00E+00	4.13E-02
		Cs-134	<3.40E-02	0.00E+00	3.40E-02
		Cs-137	<3.27E-02	0.00E+00	3.27E-02
		Be-7	<2.90E-01	0.00E+00	2.90E-01
		K-40	9.37E-01	3.73E-01	3.68E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493760	1/29/2019 - 2/5/2019	I-131	<5.48E-02	0.00E+00	5.48E-02
		Cs-134	<4.49E-02	0.00E+00	4.49E-02
		Cs-137	<4.11E-02	0.00E+00	4.11E-02
		Be-7	<2.70E-01	0.00E+00	2.70E-01
		K-40	<8.83E-01	0.00E+00	8.83E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494314	2/5/2019 - 2/12/2019	I-131	<4.46E-02	0.00E+00	4.46E-02
		Cs-134	<3.17E-02	0.00E+00	3.17E-02
		Cs-137	<3.73E-02	0.00E+00	3.73E-02
		Be-7	<2.43E-01	0.00E+00	2.43E-01
		K-40	8.44E-01	4.24E-01	5.53E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494930	2/12/2019 - 2/19/2019	I-131	<5.58E-02	0.00E+00	5.58E-02
		Cs-134	<3.16E-02	0.00E+00	3.16E-02
		Cs-137	<3.15E-02	0.00E+00	3.15E-02
		Be-7	<2.49E-01	0.00E+00	2.49E-01
		K-40	8.89E-01	4.20E-01	5.37E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
495483	2/19/2019 - 2/26/2019	I-131	<5.22E-02	0.00E+00	5.22E-02
		Cs-134	<3.86E-02	0.00E+00	3.86E-02
		Cs-137	<3.92E-02	0.00E+00	3.92E-02
		Be-7	<2.67E-01	0.00E+00	2.67E-01
		K-40	8.52E-01	3.96E-01	4.75E-01



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 203 [INDICATOR - SSW @ 2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
496432	2/26/2019 - 3/5/2019	I-131	<4.93E-02	0.00E+00	4.93E-02
		Cs-134	<3.94E-02	0.00E+00	3.94E-02
		Cs-137	<3.87E-02	0.00E+00	3.87E-02
		Be-7	<2.16E-01	0.00E+00	2.16E-01
		K-40	7.88E-01	3.75E-01	4.47E-01
497053	3/5/2019 - 3/12/2019	I-131	<4.50E-02	0.00E+00	4.50E-02
		Cs-134	<3.83E-02	0.00E+00	3.83E-02
		Cs-137	<4.25E-02	0.00E+00	4.25E-02
		Be-7	<2.48E-01	0.00E+00	2.48E-01
		K-40	1.22E+00	4.28E-01	4.08E-01
497107	3/12/2019 - 3/19/2019	I-131	<4.27E-02	0.00E+00	4.27E-02
		Cs-134	<3.80E-02	0.00E+00	3.80E-02
		Cs-137	<3.57E-02	0.00E+00	3.57E-02
		Be-7	<2.76E-01	0.00E+00	2.76E-01
		K-40	1.24E+00	4.82E-01	5.62E-01
497510	3/19/2019 - 3/26/2019	I-131	<5.32E-02	0.00E+00	5.32E-02
		Cs-134	<3.39E-02	0.00E+00	3.39E-02
		Cs-137	<3.80E-02	0.00E+00	3.80E-02
		Be-7	<2.54E-01	0.00E+00	2.54E-01
		K-40	6.80E-01	4.18E-01	5.88E-01
497985	3/26/2019 - 4/2/2019	I-131	<4.61E-02	0.00E+00	4.61E-02
		Cs-134	<3.03E-02	0.00E+00	3.03E-02
		Cs-137	<3.96E-02	0.00E+00	3.96E-02
		Be-7	<2.25E-01	0.00E+00	2.25E-01
		K-40	1.20E+00	4.10E-01	3.52E-01
498573	4/2/2019 - 4/9/2019	I-131	<4.70E-02	0.00E+00	4.70E-02
		Cs-134	<3.51E-02	0.00E+00	3.51E-02
		Cs-137	<3.46E-02	0.00E+00	3.46E-02
		Be-7	9.41E-03	1.80E-01	3.26E-01
		K-40	9.48E-01	3.82E-01	3.95E-01
498746	4/9/2019 - 4/16/2019	I-131	<5.59E-02	0.00E+00	5.59E-02
		Cs-134	<2.71E-02	0.00E+00	2.71E-02
		Cs-137	<2.78E-02	0.00E+00	2.78E-02
		Be-7	<1.99E-01	0.00E+00	1.99E-01
		K-40	1.04E+00	3.02E-01	2.96E-01
499422	4/16/2019 - 4/23/2019	I-131	<5.57E-02	0.00E+00	5.57E-02
		Cs-134	<3.22E-02	0.00E+00	3.22E-02
		Cs-137	<3.71E-02	0.00E+00	3.71E-02
		Be-7	<2.33E-01	0.00E+00	2.33E-01
		K-40	6.68E-01	3.37E-01	4.29E-01
499836	4/23/2019 - 4/30/2019	I-131	<4.27E-02	0.00E+00	4.27E-02
		Cs-134	<3.07E-02	0.00E+00	3.07E-02
		Cs-137	<2.61E-02	0.00E+00	2.61E-02
		Be-7	<2.54E-01	0.00E+00	2.54E-01
		K-40	8.30E-01	3.25E-01	2.76E-01
500089	4/30/2019 - 5/7/2019	I-131	<5.23E-02	0.00E+00	5.23E-02
		Cs-134	<3.31E-02	0.00E+00	3.31E-02
		Cs-137	<3.80E-02	0.00E+00	3.80E-02

BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 203 [INDICATOR - SSW @ 2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500089	4/30/2019 - 5/7/2019	Be-7	<2.19E-01	0.00E+00	2.19E-01
		K-40	1.03E+00	4.35E-01	5.18E-01
500422	5/7/2019 - 5/14/2019	I-131	<5.54E-02	0.00E+00	5.54E-02
		Cs-134	<2.37E-02	0.00E+00	2.37E-02
		Cs-137	<2.26E-02	0.00E+00	2.26E-02
		Be-7	<1.85E-01	0.00E+00	1.85E-01
		K-40	9.57E-01	2.73E-01	2.21E-01
500706	5/14/2019 - 5/21/2019	I-131	<5.36E-02	0.00E+00	5.36E-02
		Cs-134	<2.06E-02	0.00E+00	2.06E-02
		Cs-137	<2.29E-02	0.00E+00	2.29E-02
		Be-7	<1.40E-01	0.00E+00	1.40E-01
		K-40	1.00E+00	2.59E-01	2.79E-01
501089	5/21/2019 - 5/28/2019	I-131	<5.58E-02	0.00E+00	5.58E-02
		Cs-134	<2.63E-02	0.00E+00	2.63E-02
		Cs-137	<2.59E-02	0.00E+00	2.59E-02
		Be-7	<1.88E-01	0.00E+00	1.88E-01
		K-40	8.41E-01	2.78E-01	2.53E-01
501911	5/28/2019 - 6/4/2019	I-131	<4.31E-02	0.00E+00	4.31E-02
		Cs-134	<3.25E-02	0.00E+00	3.25E-02
		Cs-137	<3.13E-02	0.00E+00	3.13E-02
		Be-7	<2.79E-01	0.00E+00	2.79E-01
		K-40	<8.11E-01	0.00E+00	8.11E-01
502171	6/4/2019 - 6/11/2019	I-131	<5.36E-02	0.00E+00	5.36E-02
		Cs-134	<2.32E-02	0.00E+00	2.32E-02
		Cs-137	<2.61E-02	0.00E+00	2.61E-02
		Be-7	<1.52E-01	0.00E+00	1.52E-01
		K-40	9.49E-01	2.61E-01	1.92E-01
502382	6/11/2019 - 6/18/2019	I-131	<5.35E-02	0.00E+00	5.35E-02
		Cs-134	<3.20E-02	0.00E+00	3.20E-02
		Cs-137	<3.28E-02	0.00E+00	3.28E-02
		Be-7	<2.32E-01	0.00E+00	2.32E-01
		K-40	8.31E-01	3.71E-01	4.66E-01
503345	6/18/2019 - 6/25/2019	I-131	<5.51E-02	0.00E+00	5.51E-02
		Cs-134	<3.92E-02	0.00E+00	3.92E-02
		Cs-137	<3.64E-02	0.00E+00	3.64E-02
		Be-7	<2.10E-01	0.00E+00	2.10E-01
		K-40	1.33E+00	4.30E-01	3.83E-01
503802	6/25/2019 - 7/2/2019	I-131	<5.17E-02	0.00E+00	5.17E-02
		Cs-134	<3.37E-02	0.00E+00	3.37E-02
		Cs-137	<2.80E-02	0.00E+00	2.80E-02
		Be-7	<1.93E-01	0.00E+00	1.93E-01
		K-40	9.88E-01	3.00E-01	2.15E-01
504162	7/2/2019 - 7/9/2019	I-131	<5.36E-02	0.00E+00	5.36E-02
		Cs-134	<3.54E-02	0.00E+00	3.54E-02
		Cs-137	<3.44E-02	0.00E+00	3.44E-02
		Be-7	<2.63E-01	0.00E+00	2.63E-01
		K-40	8.65E-01	3.56E-01	3.66E-01



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 203 [INDICATOR - SSW @ 2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504411	7/9/2019 - 7/16/2019	I-131	<5.27E-02	0.00E+00	5.27E-02
		Cs-134	<2.68E-02	0.00E+00	2.68E-02
		Cs-137	<2.66E-02	0.00E+00	2.66E-02
		Be-7	<2.21E-01	0.00E+00	2.21E-01
		K-40	9.99E-01	3.59E-01	4.38E-01
504613	7/16/2019 - 7/23/2019	I-131	<5.55E-02	0.00E+00	5.55E-02
		Cs-134	<1.91E-02	0.00E+00	1.91E-02
		Cs-137	<1.83E-02	0.00E+00	1.83E-02
		Be-7	<1.39E-01	0.00E+00	1.39E-01
		K-40	5.53E-01	1.92E-01	1.95E-01
504897	7/23/2019 - 7/30/2019	I-131	<5.47E-02	0.00E+00	5.47E-02
		Cs-134	<2.46E-02	0.00E+00	2.46E-02
		Cs-137	<2.72E-02	0.00E+00	2.72E-02
		Be-7	<2.23E-01	0.00E+00	2.23E-01
		K-40	<5.16E-01	0.00E+00	5.16E-01
505106	7/30/2019 - 8/6/2019	I-131	<3.60E-02	0.00E+00	3.60E-02
		Cs-134	<3.00E-02	0.00E+00	3.00E-02
		Cs-137	<1.26E-02	0.00E+00	1.26E-02
		Be-7	<1.94E-01	0.00E+00	1.94E-01
		K-40	<1.90E-01	0.00E+00	1.90E-01
505501	8/6/2019 - 8/13/2019	I-131	<4.16E-02	0.00E+00	4.16E-02
		Cs-134	<2.46E-02	0.00E+00	2.46E-02
		Cs-137	<2.49E-02	0.00E+00	2.49E-02
		Be-7	<2.24E-01	0.00E+00	2.24E-01
		K-40	4.22E-01	2.66E-01	3.32E-01
505819	8/13/2019 - 8/20/2019	I-131	<3.95E-02	0.00E+00	3.95E-02
		Cs-134	<3.11E-02	0.00E+00	3.11E-02
		Cs-137	<3.40E-02	0.00E+00	3.40E-02
		Be-7	<1.89E-01	0.00E+00	1.89E-01
		K-40	9.13E-01	3.78E-01	4.20E-01
506338	8/20/2019 - 8/27/2019	I-131	<3.99E-02	0.00E+00	3.99E-02
		Cs-134	<3.28E-02	0.00E+00	3.28E-02
		Cs-137	<3.10E-02	0.00E+00	3.10E-02
		Be-7	<2.00E-01	0.00E+00	2.00E-01
		K-40	<6.18E-01	0.00E+00	6.18E-01
507251	8/27/2019 - 9/3/2019	I-131	<4.92E-02	0.00E+00	4.92E-02
		Cs-134	<2.97E-02	0.00E+00	2.97E-02
		Cs-137	<3.89E-02	0.00E+00	3.89E-02
		Be-7	<2.83E-01	0.00E+00	2.83E-01
		K-40	6.01E-01	3.89E-01	5.55E-01
507791	9/3/2019 - 9/10/2019	I-131	<5.48E-02	0.00E+00	5.48E-02
		Cs-134	<4.02E-02	0.00E+00	4.02E-02
		Cs-137	<3.31E-02	0.00E+00	3.31E-02
		Be-7	<2.22E-01	0.00E+00	2.22E-01
		K-40	7.64E-01	4.36E-01	5.89E-01
508317	9/10/2019 - 9/17/2019	I-131	<3.87E-02	0.00E+00	3.87E-02
		Cs-134	<2.97E-02	0.00E+00	2.97E-02
		Cs-137	<3.10E-02	0.00E+00	3.10E-02

BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 203 [INDICATOR - SSW @ 2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
508317	9/10/2019 - 9/17/2019	Be-7	<2.35E-01	0.00E+00	2.35E-01
		K-40	<6.31E-01	0.00E+00	6.31E-01
509187	9/17/2019 - 9/24/2019	I-131	<4.08E-02	0.00E+00	4.08E-02
		Cs-134	<2.98E-02	0.00E+00	2.98E-02
		Cs-137	<3.36E-02	0.00E+00	3.36E-02
		Be-7	<2.19E-01	0.00E+00	2.19E-01
		K-40	<6.72E-01	0.00E+00	6.72E-01
509795	9/24/2019 - 10/1/2019	I-131	<3.15E-02	0.00E+00	3.15E-02
		Cs-134	<2.90E-02	0.00E+00	2.90E-02
		Cs-137	<3.13E-02	0.00E+00	3.13E-02
		Be-7	<1.58E-01	0.00E+00	1.58E-01
		K-40	6.70E-01	2.64E-01	6.73E-02
510496	10/1/2019 - 10/8/2019	I-131	<5.53E-02	0.00E+00	5.53E-02
		Cs-134	<3.34E-02	0.00E+00	3.34E-02
		Cs-137	<3.10E-02	0.00E+00	3.10E-02
		Be-7	<2.42E-01	0.00E+00	2.42E-01
		K-40	7.26E-01	3.38E-01	3.93E-01
510786	10/8/2019 - 10/15/2019	I-131	<5.19E-02	0.00E+00	5.19E-02
		Cs-134	<3.96E-02	0.00E+00	3.96E-02
		Cs-137	<4.00E-02	0.00E+00	4.00E-02
		Be-7	<2.66E-01	0.00E+00	2.66E-01
		K-40	8.59E-01	3.63E-01	3.79E-01
511199	10/15/2019 - 10/22/2019	I-131	<3.08E-02	0.00E+00	3.08E-02
		Cs-134	<3.36E-02	0.00E+00	3.36E-02
		Cs-137	<2.45E-02	0.00E+00	2.45E-02
		Be-7	<2.41E-01	0.00E+00	2.41E-01
		K-40	9.68E-01	3.67E-01	3.47E-01
511431	10/22/2019 - 10/29/2019	I-131	<4.30E-02	0.00E+00	4.30E-02
		Cs-134	<2.98E-02	0.00E+00	2.98E-02
		Cs-137	<3.84E-02	0.00E+00	3.84E-02
		Be-7	<2.39E-01	0.00E+00	2.39E-01
		K-40	7.29E-01	3.67E-01	4.63E-01
511840	10/29/2019 - 11/5/2019	I-131	<4.76E-02	0.00E+00	4.76E-02
		Cs-134	<3.72E-02	0.00E+00	3.72E-02
		Cs-137	<3.31E-02	0.00E+00	3.31E-02
		Be-7	<2.76E-01	0.00E+00	2.76E-01
		K-40	1.10E+00	4.54E-01	5.37E-01
512139	11/5/2019 - 11/12/2019	I-131	<4.09E-02	0.00E+00	4.09E-02
		Cs-134	<3.42E-02	0.00E+00	3.42E-02
		Cs-137	<2.81E-02	0.00E+00	2.81E-02
		Be-7	<2.39E-01	0.00E+00	2.39E-01
		K-40	1.00E+00	3.87E-01	3.92E-01
512450	11/12/2019 - 11/19/2019	I-131	<4.02E-02	0.00E+00	4.02E-02
		Cs-134	<3.19E-02	0.00E+00	3.19E-02
		Cs-137	<2.40E-02	0.00E+00	2.40E-02
		Be-7	<2.39E-01	0.00E+00	2.39E-01
		K-40	6.87E-01	2.80E-01	7.45E-02



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 203 [INDICATOR - SSW @ 2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512626	11/19/2019 - 11/26/2019	I-131	<5.19E-02	0.00E+00	5.19E-02
		Cs-134	<2.55E-02	0.00E+00	2.55E-02
		Cs-137	<2.42E-02	0.00E+00	2.42E-02
		Be-7	<2.20E-01	0.00E+00	2.20E-01
		K-40	1.42E+00	3.53E-01	3.79E-01
513590	11/26/2019 - 12/3/2019	I-131	<5.29E-02	0.00E+00	5.29E-02
		Cs-134	<3.59E-02	0.00E+00	3.59E-02
		Cs-137	<3.57E-02	0.00E+00	3.57E-02
		Be-7	<3.66E-01	0.00E+00	3.66E-01
		K-40	1.98E+00	5.41E-01	4.98E-01
513899	12/3/2019 - 12/10/2019	I-131	<4.79E-02	0.00E+00	4.79E-02
		Cs-134	<3.06E-02	0.00E+00	3.06E-02
		Cs-137	<3.17E-02	0.00E+00	3.17E-02
		Be-7	<1.74E-01	0.00E+00	1.74E-01
		K-40	4.09E-01	3.07E-01	4.40E-01
514130	12/10/2019 - 12/17/2019	I-131	<3.94E-02	0.00E+00	3.94E-02
		Cs-134	<2.94E-02	0.00E+00	2.94E-02
		Cs-137	<2.36E-02	0.00E+00	2.36E-02
		Be-7	<1.91E-01	0.00E+00	1.91E-01
		K-40	7.60E-01	3.86E-01	4.89E-01
514426	12/17/2019 - 12/24/2019	I-131	<5.14E-02	0.00E+00	5.14E-02
		Cs-134	<1.30E-02	0.00E+00	1.30E-02
		Cs-137	<1.34E-02	0.00E+00	1.34E-02
		Be-7	<1.33E-01	0.00E+00	1.33E-01
		K-40	1.14E+00	1.83E-01	1.49E-01
514893	12/24/2019 - 12/31/2019	I-131	<5.03E-02	0.00E+00	5.03E-02
		Cs-134	<2.90E-02	0.00E+00	2.90E-02
		Cs-137	<2.49E-02	0.00E+00	2.49E-02
		Be-7	<2.03E-01	0.00E+00	2.03E-01
		K-40	6.28E-01	3.08E-01	3.38E-01

Sample Point 204 [CONTROL - NNE @ 22.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492507	1/2/2019 - 1/8/2019	I-131	<5.28E-02	0.00E+00	5.28E-02
		Cs-134	<3.56E-02	0.00E+00	3.56E-02
		Cs-137	<3.67E-02	0.00E+00	3.67E-02
		Be-7	<3.16E-01	0.00E+00	3.16E-01
		K-40	1.55E+00	5.85E-01	6.81E-01
492858	1/8/2019 - 1/15/2019	I-131	<5.36E-02	0.00E+00	5.36E-02
		Cs-134	<3.11E-02	0.00E+00	3.11E-02
		Cs-137	<3.24E-02	0.00E+00	3.24E-02
		Be-7	<2.79E-01	0.00E+00	2.79E-01
		K-40	<6.50E-01	0.00E+00	6.50E-01
493281	1/15/2019 - 1/22/2019	I-131	<4.58E-02	0.00E+00	4.58E-02
		Cs-134	<4.03E-02	0.00E+00	4.03E-02
		Cs-137	<3.65E-02	0.00E+00	3.65E-02
		Be-7	<2.48E-01	0.00E+00	2.48E-01
		K-40	8.36E-01	3.65E-01	3.88E-01



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 204 [CONTROL - NNE @ 22.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493543	1/22/2019 - 1/29/2019	I-131	<5.02E-02	0.00E+00	5.02E-02
		Cs-134	<3.43E-02	0.00E+00	3.43E-02
		Cs-137	<4.21E-02	0.00E+00	4.21E-02
		Be-7	<2.44E-01	0.00E+00	2.44E-01
		K-40	8.35E-01	3.58E-01	3.67E-01
493761	1/29/2019 - 2/5/2019	I-131	<5.57E-02	0.00E+00	5.57E-02
		Cs-134	<3.70E-02	0.00E+00	3.70E-02
		Cs-137	<3.35E-02	0.00E+00	3.35E-02
		Be-7	<2.68E-01	0.00E+00	2.68E-01
		K-40	1.17E+00	3.98E-01	3.57E-01
494315	2/5/2019 - 2/12/2019	I-131	<4.41E-02	0.00E+00	4.41E-02
		Cs-134	<3.93E-02	0.00E+00	3.93E-02
		Cs-137	<3.56E-02	0.00E+00	3.56E-02
		Be-7	<2.59E-01	0.00E+00	2.59E-01
		K-40	1.13E+00	3.88E-01	3.11E-01
494931	2/12/2019 - 2/19/2019	I-131	<5.25E-02	0.00E+00	5.25E-02
		Cs-134	<3.21E-02	0.00E+00	3.21E-02
		Cs-137	<3.67E-02	0.00E+00	3.67E-02
		Be-7	<2.54E-01	0.00E+00	2.54E-01
		K-40	8.21E-01	3.52E-01	3.62E-01
495484	2/19/2019 - 2/26/2019	I-131	<5.08E-02	0.00E+00	5.08E-02
		Cs-134	<4.09E-02	0.00E+00	4.09E-02
		Cs-137	<3.59E-02	0.00E+00	3.59E-02
		Be-7	<2.47E-01	0.00E+00	2.47E-01
		K-40	1.07E+00	4.17E-01	4.44E-01
496433	2/26/2019 - 3/5/2019	I-131	<4.93E-02	0.00E+00	4.93E-02
		Cs-134	<3.65E-02	0.00E+00	3.65E-02
		Cs-137	<3.23E-02	0.00E+00	3.23E-02
		Be-7	<2.31E-01	0.00E+00	2.31E-01
		K-40	1.32E+00	3.92E-01	7.31E-02
497054	3/5/2019 - 3/12/2019	I-131	<5.59E-02	0.00E+00	5.59E-02
		Cs-134	<3.41E-02	0.00E+00	3.41E-02
		Cs-137	<2.91E-02	0.00E+00	2.91E-02
		Be-7	<2.13E-01	0.00E+00	2.13E-01
		K-40	8.99E-01	4.44E-01	5.78E-01
497108	3/12/2019 - 3/19/2019	I-131	<5.03E-02	0.00E+00	5.03E-02
		Cs-134	<3.91E-02	0.00E+00	3.91E-02
		Cs-137	<3.34E-02	0.00E+00	3.34E-02
		Be-7	<2.37E-01	0.00E+00	2.37E-01
		K-40	1.06E+00	3.89E-01	3.61E-01
497511	3/19/2019 - 3/26/2019	I-131	<5.20E-02	0.00E+00	5.20E-02
		Cs-134	<4.09E-02	0.00E+00	4.09E-02
		Cs-137	<3.59E-02	0.00E+00	3.59E-02
		Be-7	<2.67E-01	0.00E+00	2.67E-01
		K-40	8.73E-01	3.68E-01	3.86E-01
497986	3/26/2019 - 4/2/2019	I-131	<5.27E-02	0.00E+00	5.27E-02
		Cs-134	<3.95E-02	0.00E+00	3.95E-02
		Cs-137	<3.58E-02	0.00E+00	3.58E-02



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 204 [CONTROL - NNE @ 22.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
497986	3/26/2019 - 4/2/2019	Be-7	<2.27E-01	0.00E+00	2.27E-01
		K-40	9.37E-01	3.71E-01	3.61E-01
498574	4/2/2019 - 4/9/2019	I-131	<4.48E-02	0.00E+00	4.48E-02
		Cs-134	<3.19E-02	0.00E+00	3.19E-02
		Cs-137	<3.94E-02	0.00E+00	3.94E-02
		Be-7	<2.42E-01	0.00E+00	2.42E-01
		K-40	8.43E-01	3.30E-01	2.65E-01
498747	4/9/2019 - 4/16/2019	I-131	<5.36E-02	0.00E+00	5.36E-02
		Cs-134	<2.56E-02	0.00E+00	2.56E-02
		Cs-137	<2.13E-02	0.00E+00	2.13E-02
		Be-7	<1.80E-01	0.00E+00	1.80E-01
		K-40	8.40E-01	2.89E-01	3.50E-01
499423	4/16/2019 - 4/23/2019	I-131	<5.36E-02	0.00E+00	5.36E-02
		Cs-134	<3.44E-02	0.00E+00	3.44E-02
		Cs-137	<3.17E-02	0.00E+00	3.17E-02
		Be-7	<2.08E-01	0.00E+00	2.08E-01
		K-40	8.10E-01	3.14E-01	3.47E-01
499837	4/23/2019 - 4/30/2019	I-131	<5.06E-02	0.00E+00	5.06E-02
		Cs-134	<4.11E-02	0.00E+00	4.11E-02
		Cs-137	<3.29E-02	0.00E+00	3.29E-02
		Be-7	<2.61E-01	0.00E+00	2.61E-01
		K-40	5.49E-01	3.45E-01	4.72E-01
500090	4/30/2019 - 5/7/2019	I-131	<1.53E-02	0.00E+00	1.53E-02
		Cs-134	<8.60E-03	0.00E+00	8.60E-03
		Cs-137	<7.08E-03	0.00E+00	7.08E-03
		Be-7	<6.04E-02	0.00E+00	6.04E-02
		K-40	8.90E-01	1.31E-01	1.18E-01
500423	5/7/2019 - 5/14/2019	I-131	<5.58E-02	0.00E+00	5.58E-02
		Cs-134	<2.56E-02	0.00E+00	2.56E-02
		Cs-137	<3.22E-02	0.00E+00	3.22E-02
		Be-7	<2.40E-01	0.00E+00	2.40E-01
		K-40	9.85E-01	3.33E-01	3.40E-01
500707	5/14/2019 - 5/21/2019	I-131	<4.86E-02	0.00E+00	4.86E-02
		Cs-134	<2.08E-02	0.00E+00	2.08E-02
		Cs-137	<2.12E-02	0.00E+00	2.12E-02
		Be-7	<1.67E-01	0.00E+00	1.67E-01
		K-40	9.09E-01	2.59E-01	3.05E-01
501090	5/21/2019 - 5/28/2019	I-131	<5.37E-02	0.00E+00	5.37E-02
		Cs-134	<2.34E-02	0.00E+00	2.34E-02
		Cs-137	<3.01E-02	0.00E+00	3.01E-02
		Be-7	<1.99E-01	0.00E+00	1.99E-01
		K-40	1.01E+00	3.26E-01	3.25E-01
501912	5/28/2019 - 6/4/2019	I-131	<4.03E-02	0.00E+00	4.03E-02
		Cs-134	<3.11E-02	0.00E+00	3.11E-02
		Cs-137	<3.26E-02	0.00E+00	3.26E-02
		Be-7	<2.76E-01	0.00E+00	2.76E-01
		K-40	7.00E-01	3.72E-01	4.80E-01



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 204 [CONTROL - NNE @ 22.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
502172	6/4/2019 - 6/11/2019	I-131	<5.56E-02	0.00E+00	5.56E-02
		Cs-134	<2.29E-02	0.00E+00	2.29E-02
		Cs-137	<1.94E-02	0.00E+00	1.94E-02
		Be-7	<1.73E-01	0.00E+00	1.73E-01
		K-40	9.63E-01	2.78E-01	2.98E-01
502383	6/11/2019 - 6/18/2019	I-131	<4.91E-02	0.00E+00	4.91E-02
		Cs-134	<2.39E-02	0.00E+00	2.39E-02
		Cs-137	<2.20E-02	0.00E+00	2.20E-02
		Be-7	<1.96E-01	0.00E+00	1.96E-01
		K-40	6.68E-01	2.67E-01	3.34E-01
503346	6/18/2019 - 6/25/2019	I-131	<4.87E-02	0.00E+00	4.87E-02
		Cs-134	<3.77E-02	0.00E+00	3.77E-02
		Cs-137	<3.88E-02	0.00E+00	3.88E-02
		Be-7	<2.79E-01	0.00E+00	2.79E-01
		K-40	1.17E+00	4.02E-01	3.65E-01
503803	6/25/2019 - 7/2/2019	I-131	<5.47E-02	0.00E+00	5.47E-02
		Cs-134	<3.00E-02	0.00E+00	3.00E-02
		Cs-137	<2.61E-02	0.00E+00	2.61E-02
		Be-7	<2.20E-01	0.00E+00	2.20E-01
		K-40	1.41E+00	3.77E-01	3.26E-01
504163	7/2/2019 - 7/9/2019	I-131	<5.09E-02	0.00E+00	5.09E-02
		Cs-134	<3.99E-02	0.00E+00	3.99E-02
		Cs-137	<3.30E-02	0.00E+00	3.30E-02
		Be-7	<2.54E-01	0.00E+00	2.54E-01
		K-40	1.03E+00	3.36E-01	6.98E-02
504412	7/9/2019 - 7/16/2019	I-131	<5.46E-02	0.00E+00	5.46E-02
		Cs-134	<2.33E-02	0.00E+00	2.33E-02
		Cs-137	<2.35E-02	0.00E+00	2.35E-02
		Be-7	<1.58E-01	0.00E+00	1.58E-01
		K-40	8.94E-01	3.00E-01	3.43E-01
504614	7/16/2019 - 7/23/2019	I-131	<5.37E-02	0.00E+00	5.37E-02
		Cs-134	<2.02E-02	0.00E+00	2.02E-02
		Cs-137	<1.81E-02	0.00E+00	1.81E-02
		Be-7	<1.58E-01	0.00E+00	1.58E-01
		K-40	7.20E-01	2.27E-01	2.63E-01
504898	7/23/2019 - 7/30/2019	I-131	<5.52E-02	0.00E+00	5.52E-02
		Cs-134	<2.85E-02	0.00E+00	2.85E-02
		Cs-137	<2.46E-02	0.00E+00	2.46E-02
		Be-7	<2.25E-01	0.00E+00	2.25E-01
		K-40	4.66E-01	2.87E-01	3.84E-01
505107	7/30/2019 - 8/6/2019	I-131	<5.39E-02	0.00E+00	5.39E-02
		Cs-134	<3.66E-02	0.00E+00	3.66E-02
		Cs-137	<2.57E-02	0.00E+00	2.57E-02
		Be-7	<2.10E-01	0.00E+00	2.10E-01
		K-40	5.78E-01	3.34E-01	4.58E-01
505502	8/6/2019 - 8/13/2019	I-131	<4.81E-02	0.00E+00	4.81E-02
		Cs-134	<3.68E-02	0.00E+00	3.68E-02
		Cs-137	<3.57E-02	0.00E+00	3.57E-02



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 204 [CONTROL - NNE @ 22.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
505502	8/6/2019 - 8/13/2019	Be-7	<2.75E-01	0.00E+00	2.75E-01
		K-40	9.83E-01	3.93E-01	4.27E-01
505820	8/13/2019 - 8/20/2019	I-131	<3.60E-02	0.00E+00	3.60E-02
		Cs-134	<2.84E-02	0.00E+00	2.84E-02
		Cs-137	<2.96E-02	0.00E+00	2.96E-02
		Be-7	<1.75E-01	0.00E+00	1.75E-01
		K-40	<4.59E-01	0.00E+00	4.59E-01
506339	8/20/2019 - 8/27/2019	I-131	<3.96E-02	0.00E+00	3.96E-02
		Cs-134	<4.30E-02	0.00E+00	4.30E-02
		Cs-137	<2.92E-02	0.00E+00	2.92E-02
		Be-7	<3.07E-01	0.00E+00	3.07E-01
		K-40	7.18E-01	3.43E-01	4.00E-01
507252	8/27/2019 - 9/3/2019	I-131	<3.71E-02	0.00E+00	3.71E-02
		Cs-134	<2.78E-02	0.00E+00	2.78E-02
		Cs-137	<2.83E-02	0.00E+00	2.83E-02
		Be-7	<1.74E-01	0.00E+00	1.74E-01
		K-40	3.87E-01	2.99E-01	4.35E-01
507792	9/3/2019 - 9/10/2019	I-131	<2.65E-02	0.00E+00	2.65E-02
		Cs-134	<2.70E-02	0.00E+00	2.70E-02
		Cs-137	<3.70E-02	0.00E+00	3.70E-02
		Be-7	<1.85E-01	0.00E+00	1.85E-01
		K-40	4.62E-01	2.69E-01	3.31E-01
508318	9/10/2019 - 9/17/2019	I-131	<2.37E-02	0.00E+00	2.37E-02
		Cs-134	<1.66E-02	0.00E+00	1.66E-02
		Cs-137	<2.38E-02	0.00E+00	2.38E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	4.69E-01	2.19E-01	2.77E-01
509188	9/17/2019 - 9/24/2019	I-131	<3.04E-02	0.00E+00	3.04E-02
		Cs-134	<2.77E-02	0.00E+00	2.77E-02
		Cs-137	<2.04E-02	0.00E+00	2.04E-02
		Be-7	<1.98E-01	0.00E+00	1.98E-01
		K-40	<5.08E-01	0.00E+00	5.08E-01
509796	9/24/2019 - 10/1/2019	I-131	<3.85E-02	0.00E+00	3.85E-02
		Cs-134	<4.05E-02	0.00E+00	4.05E-02
		Cs-137	<2.53E-02	0.00E+00	2.53E-02
		Be-7	<2.07E-01	0.00E+00	2.07E-01
		K-40	<5.48E-01	0.00E+00	5.48E-01
510497	10/1/2019 - 10/8/2019	I-131	<4.95E-02	0.00E+00	4.95E-02
		Cs-134	<2.09E-02	0.00E+00	2.09E-02
		Cs-137	<2.27E-02	0.00E+00	2.27E-02
		Be-7	<2.19E-01	0.00E+00	2.19E-01
		K-40	1.19E+00	2.79E-01	1.62E-01
510787	10/8/2019 - 10/15/2019	I-131	<4.02E-02	0.00E+00	4.02E-02
		Cs-134	<3.18E-02	0.00E+00	3.18E-02
		Cs-137	<3.02E-02	0.00E+00	3.02E-02
		Be-7	<2.36E-01	0.00E+00	2.36E-01
		K-40	9.13E-01	3.50E-01	3.21E-01



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 204 [CONTROL - NNE @ 22.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511200	10/15/2019 - 10/22/2019	I-131	<3.16E-02	0.00E+00	3.16E-02
		Cs-134	<2.77E-02	0.00E+00	2.77E-02
		Cs-137	<2.82E-02	0.00E+00	2.82E-02
		Be-7	<1.79E-01	0.00E+00	1.79E-01
		K-40	<4.02E-01	0.00E+00	4.02E-01
511432	10/22/2019 - 10/29/2019	I-131	<3.58E-02	0.00E+00	3.58E-02
		Cs-134	<3.09E-02	0.00E+00	3.09E-02
		Cs-137	<2.80E-02	0.00E+00	2.80E-02
		Be-7	<2.42E-01	0.00E+00	2.42E-01
		K-40	7.53E-01	2.82E-01	6.80E-02
511841	10/29/2019 - 11/5/2019	I-131	<3.68E-02	0.00E+00	3.68E-02
		Cs-134	<2.80E-02	0.00E+00	2.80E-02
		Cs-137	<2.99E-02	0.00E+00	2.99E-02
		Be-7	<2.10E-01	0.00E+00	2.10E-01
		K-40	1.05E+00	3.81E-01	3.61E-01
512140	11/5/2019 - 11/12/2019	I-131	<4.96E-02	0.00E+00	4.96E-02
		Cs-134	<3.36E-02	0.00E+00	3.36E-02
		Cs-137	<3.39E-02	0.00E+00	3.39E-02
		Be-7	<2.14E-01	0.00E+00	2.14E-01
		K-40	1.45E+00	4.05E-01	7.04E-02
512451	11/12/2019 - 11/19/2019	I-131	<3.66E-02	0.00E+00	3.66E-02
		Cs-134	<3.31E-02	0.00E+00	3.31E-02
		Cs-137	<3.82E-02	0.00E+00	3.82E-02
		Be-7	<2.12E-01	0.00E+00	2.12E-01
		K-40	7.00E-01	3.67E-01	4.50E-01
512627	11/19/2019 - 11/26/2019	I-131	<5.05E-02	0.00E+00	5.05E-02
		Cs-134	<2.42E-02	0.00E+00	2.42E-02
		Cs-137	<2.04E-02	0.00E+00	2.04E-02
		Be-7	<1.65E-01	0.00E+00	1.65E-01
		K-40	1.20E+00	3.01E-01	2.71E-01
513591	11/26/2019 - 12/3/2019	I-131	<5.34E-02	0.00E+00	5.34E-02
		Cs-134	<4.03E-02	0.00E+00	4.03E-02
		Cs-137	<4.68E-02	0.00E+00	4.68E-02
		Be-7	<2.72E-01	0.00E+00	2.72E-01
		K-40	1.04E+00	3.47E-01	7.42E-02
513900	12/3/2019 - 12/10/2019	I-131	<5.50E-02	0.00E+00	5.50E-02
		Cs-134	<3.61E-02	0.00E+00	3.61E-02
		Cs-137	<3.11E-02	0.00E+00	3.11E-02
		Be-7	<2.67E-01	0.00E+00	2.67E-01
		K-40	9.29E-01	3.86E-01	4.16E-01
514131	12/10/2019 - 12/17/2019	I-131	<3.61E-02	0.00E+00	3.61E-02
		Cs-134	<1.93E-02	0.00E+00	1.93E-02
		Cs-137	<1.93E-02	0.00E+00	1.93E-02
		Be-7	<1.58E-01	0.00E+00	1.58E-01
		K-40	7.25E-01	2.85E-01	7.28E-02
514427	12/17/2019 - 12/24/2019	I-131	<5.51E-02	0.00E+00	5.51E-02
		Cs-134	<1.92E-02	0.00E+00	1.92E-02
		Cs-137	<1.89E-02	0.00E+00	1.89E-02



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 204 [CONTROL - NNE @ 22.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514427	12/17/2019 - 12/24/2019	Be-7	<1.47E-01	0.00E+00	1.47E-01
		K-40	9.23E-01	2.25E-01	1.89E-01
Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514894	12/24/2019 - 12/31/2019	I-131	<5.11E-02	0.00E+00	5.11E-02
		Cs-134	<2.63E-02	0.00E+00	2.63E-02
		Cs-137	<2.36E-02	0.00E+00	2.36E-02
		Be-7	<2.57E-01	0.00E+00	2.57E-01
		K-40	9.32E-01	3.38E-01	4.05E-01

Sample Point 205 [INDICATOR - SSE @ 0.6 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492509	1/2/2019 - 1/8/2019	I-131	<3.38E-02	0.00E+00	3.38E-02
		Cs-134	<2.59E-02	0.00E+00	2.59E-02
		Cs-137	<2.22E-02	0.00E+00	2.22E-02
		Be-7	<1.80E-01	0.00E+00	1.80E-01
		K-40	5.52E-01	2.26E-01	2.47E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492859	1/8/2019 - 1/15/2019	I-131	<5.51E-02	0.00E+00	5.51E-02
		Cs-134	<2.09E-02	0.00E+00	2.09E-02
		Cs-137	<2.25E-02	0.00E+00	2.25E-02
		Be-7	<1.40E-01	0.00E+00	1.40E-01
		K-40	4.02E-01	2.73E-01	3.80E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493282	1/15/2019 - 1/22/2019	I-131	<4.33E-02	0.00E+00	4.33E-02
		Cs-134	<3.67E-02	0.00E+00	3.67E-02
		Cs-137	<3.58E-02	0.00E+00	3.58E-02
		Be-7	<2.73E-01	0.00E+00	2.73E-01
		K-40	8.44E-01	3.35E-01	2.82E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493544	1/22/2019 - 1/29/2019	I-131	<4.91E-02	0.00E+00	4.91E-02
		Cs-134	<4.17E-02	0.00E+00	4.17E-02
		Cs-137	<2.72E-02	0.00E+00	2.72E-02
		Be-7	<2.45E-01	0.00E+00	2.45E-01
		K-40	7.11E-01	3.33E-01	3.64E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493762	1/29/2019 - 2/5/2019	I-131	<5.59E-02	0.00E+00	5.59E-02
		Cs-134	<3.37E-02	0.00E+00	3.37E-02
		Cs-137	<3.67E-02	0.00E+00	3.67E-02
		Be-7	<2.60E-01	0.00E+00	2.60E-01
		K-40	1.01E+00	3.78E-01	3.43E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494316	2/5/2019 - 2/12/2019	I-131	<4.65E-02	0.00E+00	4.65E-02
		Cs-134	<4.02E-02	0.00E+00	4.02E-02
		Cs-137	<4.26E-02	0.00E+00	4.26E-02
		Be-7	<2.68E-01	0.00E+00	2.68E-01
		K-40	9.07E-01	3.94E-01	4.51E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494932	2/12/2019 - 2/19/2019	I-131	<4.17E-02	0.00E+00	4.17E-02
		Cs-134	<3.48E-02	0.00E+00	3.48E-02
		Cs-137	<3.20E-02	0.00E+00	3.20E-02
		Be-7	<2.30E-01	0.00E+00	2.30E-01
		K-40	1.13E+00	4.26E-01	4.51E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
495485	2/19/2019 - 2/26/2019	I-131	<5.06E-02	0.00E+00	5.06E-02
		Cs-134	<3.54E-02	0.00E+00	3.54E-02
		Cs-137	<3.48E-02	0.00E+00	3.48E-02



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 205 [INDICATOR - SSE @ 0.6 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
495485	2/19/2019 - 2/26/2019	Be-7	<2.83E-01	0.00E+00	2.83E-01
		K-40	1.06E+00	3.75E-01	2.97E-01
496434	2/26/2019 - 3/5/2019	I-131	<4.24E-02	0.00E+00	4.24E-02
		Cs-134	<3.02E-02	0.00E+00	3.02E-02
		Cs-137	<3.56E-02	0.00E+00	3.56E-02
		Be-7	<2.15E-01	0.00E+00	2.15E-01
		K-40	8.56E-01	3.49E-01	3.35E-01
497055	3/5/2019 - 3/12/2019	I-131	<5.25E-02	0.00E+00	5.25E-02
		Cs-134	<1.87E-02	0.00E+00	1.87E-02
		Cs-137	<3.11E-02	0.00E+00	3.11E-02
		Be-7	<2.52E-01	0.00E+00	2.52E-01
		K-40	9.97E-01	3.63E-01	2.94E-01
497109	3/12/2019 - 3/19/2019	I-131	<5.01E-02	0.00E+00	5.01E-02
		Cs-134	<3.02E-02	0.00E+00	3.02E-02
		Cs-137	<3.56E-02	0.00E+00	3.56E-02
		Be-7	<2.80E-01	0.00E+00	2.80E-01
		K-40	1.16E+00	4.49E-01	5.03E-01
497512	3/19/2019 - 3/26/2019	I-131	<5.47E-02	0.00E+00	5.47E-02
		Cs-134	<3.37E-02	0.00E+00	3.37E-02
		Cs-137	<4.48E-02	0.00E+00	4.48E-02
		Be-7	<2.65E-01	0.00E+00	2.65E-01
		K-40	1.02E+00	3.80E-01	3.44E-01
497987	3/26/2019 - 4/2/2019	I-131	<5.54E-02	0.00E+00	5.54E-02
		Cs-134	<3.02E-02	0.00E+00	3.02E-02
		Cs-137	<3.45E-02	0.00E+00	3.45E-02
		Be-7	<3.15E-01	0.00E+00	3.15E-01
		K-40	1.06E+00	4.82E-01	6.22E-01
498575	4/2/2019 - 4/9/2019	I-131	<4.38E-02	0.00E+00	4.38E-02
		Cs-134	<3.63E-02	0.00E+00	3.63E-02
		Cs-137	<3.54E-02	0.00E+00	3.54E-02
		Be-7	<2.65E-01	0.00E+00	2.65E-01
		K-40	9.43E-01	3.95E-01	4.39E-01
498748	4/9/2019 - 4/16/2019	I-131	<5.59E-02	0.00E+00	5.59E-02
		Cs-134	<2.11E-02	0.00E+00	2.11E-02
		Cs-137	<2.14E-02	0.00E+00	2.14E-02
		Be-7	<2.11E-01	0.00E+00	2.11E-01
		K-40	1.02E+00	3.15E-01	3.34E-01
499424	4/16/2019 - 4/23/2019	I-131	<4.63E-02	0.00E+00	4.63E-02
		Cs-134	<3.35E-02	0.00E+00	3.35E-02
		Cs-137	<3.93E-02	0.00E+00	3.93E-02
		Be-7	<2.27E-01	0.00E+00	2.27E-01
		K-40	1.07E+00	3.50E-01	7.27E-02
499838	4/23/2019 - 4/30/2019	I-131	<5.17E-02	0.00E+00	5.17E-02
		Cs-134	<4.12E-02	0.00E+00	4.12E-02
		Cs-137	<2.55E-02	0.00E+00	2.55E-02
		Be-7	<2.29E-01	0.00E+00	2.29E-01
		K-40	1.07E+00	3.94E-01	3.77E-01



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 205 [INDICATOR - SSE @ 0.6 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500091	4/30/2019 - 5/7/2019	I-131	<4.09E-02	0.00E+00	4.09E-02
		Cs-134	<2.79E-02	0.00E+00	2.79E-02
		Cs-137	<3.70E-02	0.00E+00	3.70E-02
		Be-7	<2.12E-01	0.00E+00	2.12E-01
		K-40	<7.26E-01	0.00E+00	7.26E-01
500424	5/7/2019 - 5/14/2019	I-131	<5.21E-02	0.00E+00	5.21E-02
		Cs-134	<2.04E-02	0.00E+00	2.04E-02
		Cs-137	<2.32E-02	0.00E+00	2.32E-02
		Be-7	<1.70E-01	0.00E+00	1.70E-01
		K-40	8.66E-01	2.67E-01	2.74E-01
500708	5/14/2019 - 5/21/2019	I-131	<5.05E-02	0.00E+00	5.05E-02
		Cs-134	<2.14E-02	0.00E+00	2.14E-02
		Cs-137	<2.01E-02	0.00E+00	2.01E-02
		Be-7	<1.66E-01	0.00E+00	1.66E-01
		K-40	8.55E-01	2.31E-01	2.41E-01
501091	5/21/2019 - 5/28/2019	I-131	<5.54E-02	0.00E+00	5.54E-02
		Cs-134	<2.56E-02	0.00E+00	2.56E-02
		Cs-137	<3.11E-02	0.00E+00	3.11E-02
		Be-7	<2.21E-01	0.00E+00	2.21E-01
		K-40	9.68E-01	3.13E-01	2.94E-01
501913	5/28/2019 - 6/4/2019	I-131	<4.64E-02	0.00E+00	4.64E-02
		Cs-134	<3.43E-02	0.00E+00	3.43E-02
		Cs-137	<3.68E-02	0.00E+00	3.68E-02
		Be-7	<1.96E-01	0.00E+00	1.96E-01
		K-40	5.67E-01	3.44E-01	4.64E-01
502173	6/4/2019 - 6/11/2019	I-131	<5.26E-02	0.00E+00	5.26E-02
		Cs-134	<2.55E-02	0.00E+00	2.55E-02
		Cs-137	<2.38E-02	0.00E+00	2.38E-02
		Be-7	<1.83E-01	0.00E+00	1.83E-01
		K-40	1.01E+00	2.55E-01	1.97E-01
502384	6/11/2019 - 6/18/2019	I-131	<5.40E-02	0.00E+00	5.40E-02
		Cs-134	<2.93E-02	0.00E+00	2.93E-02
		Cs-137	<2.92E-02	0.00E+00	2.92E-02
		Be-7	<2.40E-01	0.00E+00	2.40E-01
		K-40	1.16E+00	3.17E-01	1.88E-01
503347	6/18/2019 - 6/25/2019	I-131	<4.58E-02	0.00E+00	4.58E-02
		Cs-134	<3.11E-02	0.00E+00	3.11E-02
		Cs-137	<3.14E-02	0.00E+00	3.14E-02
		Be-7	<2.33E-01	0.00E+00	2.33E-01
		K-40	8.35E-01	4.21E-01	5.52E-01
503804	6/25/2019 - 7/2/2019	I-131	<5.47E-02	0.00E+00	5.47E-02
		Cs-134	<2.56E-02	0.00E+00	2.56E-02
		Cs-137	<2.55E-02	0.00E+00	2.55E-02
		Be-7	<1.94E-01	0.00E+00	1.94E-01
		K-40	8.10E-01	3.08E-01	3.69E-01
504164	7/2/2019 - 7/9/2019	I-131	<4.67E-02	0.00E+00	4.67E-02
		Cs-134	<2.92E-02	0.00E+00	2.92E-02
		Cs-137	<3.90E-02	0.00E+00	3.90E-02



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 205 [INDICATOR - SSE @ 0.6 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504164	7/2/2019 - 7/9/2019	Be-7	<2.17E-01	0.00E+00	2.17E-01
		K-40	7.40E-01	3.52E-01	4.15E-01
504413	7/9/2019 - 7/16/2019	I-131	<5.46E-02	0.00E+00	5.46E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02
		Cs-137	<2.28E-02	0.00E+00	2.28E-02
		Be-7	<2.05E-01	0.00E+00	2.05E-01
		K-40	6.10E-01	2.72E-01	3.67E-01
504615	7/16/2019 - 7/23/2019	I-131	<3.23E-02	0.00E+00	3.23E-02
		Cs-134	<1.05E-02	0.00E+00	1.05E-02
		Cs-137	<1.07E-02	0.00E+00	1.07E-02
		Be-7	<7.30E-02	0.00E+00	7.30E-02
		K-40	4.02E-01	1.23E-01	1.53E-01
504899	7/23/2019 - 7/30/2019	I-131	<5.11E-02	0.00E+00	5.11E-02
		Cs-134	<2.08E-02	0.00E+00	2.08E-02
		Cs-137	<1.87E-02	0.00E+00	1.87E-02
		Be-7	<1.71E-01	0.00E+00	1.71E-01
		K-40	9.37E-01	2.76E-01	1.93E-01
505108	7/30/2019 - 8/6/2019	I-131	<4.91E-02	0.00E+00	4.91E-02
		Cs-134	<3.07E-02	0.00E+00	3.07E-02
		Cs-137	<2.49E-02	0.00E+00	2.49E-02
		Be-7	<2.14E-01	0.00E+00	2.14E-01
		K-40	<4.14E-01	0.00E+00	4.14E-01
505503	8/6/2019 - 8/13/2019	I-131	<4.62E-02	0.00E+00	4.62E-02
		Cs-134	<3.42E-02	0.00E+00	3.42E-02
		Cs-137	<3.48E-02	0.00E+00	3.48E-02
		Be-7	<2.81E-01	0.00E+00	2.81E-01
		K-40	6.23E-01	3.28E-01	4.02E-01
505821	8/13/2019 - 8/20/2019	I-131	<3.87E-02	0.00E+00	3.87E-02
		Cs-134	<3.39E-02	0.00E+00	3.39E-02
		Cs-137	<2.93E-02	0.00E+00	2.93E-02
		Be-7	<2.14E-01	0.00E+00	2.14E-01
		K-40	5.98E-01	2.49E-01	6.75E-02
506340	8/20/2019 - 8/27/2019	I-131	<3.89E-02	0.00E+00	3.89E-02
		Cs-134	<4.09E-02	0.00E+00	4.09E-02
		Cs-137	<2.55E-02	0.00E+00	2.55E-02
		Be-7	<2.37E-01	0.00E+00	2.37E-01
		K-40	9.55E-01	3.36E-01	2.31E-01
507253	8/27/2019 - 9/3/2019	I-131	<3.74E-02	0.00E+00	3.74E-02
		Cs-134	<2.98E-02	0.00E+00	2.98E-02
		Cs-137	<3.17E-02	0.00E+00	3.17E-02
		Be-7	<2.14E-01	0.00E+00	2.14E-01
		K-40	3.61E-01	2.59E-01	3.43E-01
507793	9/3/2019 - 9/10/2019	I-131	<3.50E-02	0.00E+00	3.50E-02
		Cs-134	<2.36E-02	0.00E+00	2.36E-02
		Cs-137	<2.96E-02	0.00E+00	2.96E-02
		Be-7	<1.51E-01	0.00E+00	1.51E-01
		K-40	5.46E-01	2.83E-01	3.19E-01



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 205 [INDICATOR - SSE @ 0.6 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
508319	9/10/2019 - 9/17/2019	I-131	<4.26E-02	0.00E+00	4.26E-02
		Cs-134	<3.01E-02	0.00E+00	3.01E-02
		Cs-137	<2.89E-02	0.00E+00	2.89E-02
		Be-7	<2.43E-01	0.00E+00	2.43E-01
		K-40	8.46E-01	3.98E-01	4.96E-01
509189	9/17/2019 - 9/24/2019	I-131	<2.40E-02	0.00E+00	2.40E-02
		Cs-134	<1.88E-02	0.00E+00	1.88E-02
		Cs-137	<2.92E-02	0.00E+00	2.92E-02
		Be-7	<1.53E-01	0.00E+00	1.53E-01
		K-40	4.42E-01	2.35E-01	2.13E-01
509797	9/24/2019 - 10/1/2019	I-131	<3.46E-02	0.00E+00	3.46E-02
		Cs-134	<2.74E-02	0.00E+00	2.74E-02
		Cs-137	<3.00E-02	0.00E+00	3.00E-02
		Be-7	<1.93E-01	0.00E+00	1.93E-01
		K-40	<2.91E-01	0.00E+00	2.91E-01
510498	10/1/2019 - 10/8/2019	I-131	<5.07E-02	0.00E+00	5.07E-02
		Cs-134	<3.60E-02	0.00E+00	3.60E-02
		Cs-137	<3.64E-02	0.00E+00	3.64E-02
		Be-7	<2.66E-01	0.00E+00	2.66E-01
		K-40	1.18E+00	1.98E-01	3.65E-01
510788	10/8/2019 - 10/15/2019	I-131	<3.72E-02	0.00E+00	3.72E-02
		Cs-134	<4.05E-02	0.00E+00	4.05E-02
		Cs-137	<4.59E-02	0.00E+00	4.59E-02
		Be-7	<2.28E-01	0.00E+00	2.28E-01
		K-40	1.03E+00	3.69E-01	3.25E-01
511201	10/15/2019 - 10/22/2019	I-131	<2.98E-02	0.00E+00	2.98E-02
		Cs-134	<3.37E-02	0.00E+00	3.37E-02
		Cs-137	<2.29E-02	0.00E+00	2.29E-02
		Be-7	<2.28E-01	0.00E+00	2.28E-01
		K-40	<7.09E-01	0.00E+00	7.09E-01
511433	10/22/2019 - 10/29/2019	I-131	<3.28E-02	0.00E+00	3.28E-02
		Cs-134	<2.99E-02	0.00E+00	2.99E-02
		Cs-137	<3.00E-02	0.00E+00	3.00E-02
		Be-7	<1.85E-01	0.00E+00	1.85E-01
		K-40	<5.88E-01	0.00E+00	5.88E-01
511842	10/29/2019 - 11/5/2019	I-131	<4.31E-02	0.00E+00	4.31E-02
		Cs-134	<3.65E-02	0.00E+00	3.65E-02
		Cs-137	<2.45E-02	0.00E+00	2.45E-02
		Be-7	<2.04E-01	0.00E+00	2.04E-01
		K-40	7.93E-01	3.77E-01	4.59E-01
512141	11/5/2019 - 11/12/2019	I-131	<2.65E-02	0.00E+00	2.65E-02
		Cs-134	<3.72E-02	0.00E+00	3.72E-02
		Cs-137	<2.40E-02	0.00E+00	2.40E-02
		Be-7	<2.15E-01	0.00E+00	2.15E-01
		K-40	<5.99E-01	0.00E+00	5.99E-01
512452	11/12/2019 - 11/19/2019	I-131	<4.86E-02	0.00E+00	4.86E-02
		Cs-134	<3.60E-02	0.00E+00	3.60E-02
		Cs-137	<3.78E-02	0.00E+00	3.78E-02



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 205 [INDICATOR - SSE @ 0.6 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512452	11/12/2019 - 11/19/2019	Be-7	<2.69E-01	0.00E+00	2.69E-01
		K-40	1.06E+00	4.31E-01	4.86E-01
512628	11/19/2019 - 11/26/2019	I-131	<5.58E-02	0.00E+00	5.58E-02
		Cs-134	<2.38E-02	0.00E+00	2.38E-02
		Cs-137	<1.91E-02	0.00E+00	1.91E-02
		Be-7	<2.43E-01	0.00E+00	2.43E-01
		K-40	8.74E-01	3.58E-01	4.31E-01
513592	11/26/2019 - 12/3/2019	I-131	<4.53E-02	0.00E+00	4.53E-02
		Cs-134	<2.94E-02	0.00E+00	2.94E-02
		Cs-137	<3.59E-02	0.00E+00	3.59E-02
		Be-7	<3.14E-01	0.00E+00	3.14E-01
		K-40	1.43E+00	4.61E-01	4.13E-01
513901	12/3/2019 - 12/10/2019	I-131	<5.30E-02	0.00E+00	5.30E-02
		Cs-134	<3.04E-02	0.00E+00	3.04E-02
		Cs-137	<2.83E-02	0.00E+00	2.83E-02
		Be-7	<1.69E-01	0.00E+00	1.69E-01
		K-40	4.75E-01	2.29E-01	2.16E-01
514132	12/10/2019 - 12/17/2019	I-131	<3.34E-02	0.00E+00	3.34E-02
		Cs-134	<3.08E-02	0.00E+00	3.08E-02
		Cs-137	<3.67E-02	0.00E+00	3.67E-02
		Be-7	<2.00E-01	0.00E+00	2.00E-01
		K-40	5.49E-01	3.49E-01	4.71E-01
514428	12/17/2019 - 12/24/2019	I-131	<5.59E-02	0.00E+00	5.59E-02
		Cs-134	<1.66E-02	0.00E+00	1.66E-02
		Cs-137	<1.53E-02	0.00E+00	1.53E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	8.17E-01	1.91E-01	1.96E-01
514895	12/24/2019 - 12/31/2019	I-131	<5.30E-02	0.00E+00	5.30E-02
		Cs-134	<2.30E-02	0.00E+00	2.30E-02
		Cs-137	<2.56E-02	0.00E+00	2.56E-02
		Be-7	<2.36E-01	0.00E+00	2.36E-01
		K-40	1.34E+00	3.80E-01	3.30E-01

Sample Point 206 [CONTROL - NW @ 11.3 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492510	1/2/2019 - 1/8/2019	I-131	<4.95E-02	0.00E+00	4.95E-02
		Cs-134	<2.96E-02	0.00E+00	2.96E-02
		Cs-137	<2.36E-02	0.00E+00	2.36E-02
		Be-7	<1.99E-01	0.00E+00	1.99E-01
		K-40	1.14E+00	3.86E-01	4.19E-01
492860	1/8/2019 - 1/15/2019	I-131	<5.49E-02	0.00E+00	5.49E-02
		Cs-134	<2.39E-02	0.00E+00	2.39E-02
		Cs-137	<2.61E-02	0.00E+00	2.61E-02
		Be-7	<2.10E-01	0.00E+00	2.10E-01
		K-40	5.78E-01	3.63E-01	5.16E-01
493283	1/15/2019 - 1/22/2019	I-131	<4.73E-02	0.00E+00	4.73E-02
		Cs-134	<3.73E-02	0.00E+00	3.73E-02
		Cs-137	<4.63E-02	0.00E+00	4.63E-02



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 206 [CONTROL - NW @ 11.3 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493283	1/15/2019 - 1/22/2019	Be-7	<2.66E-01	0.00E+00	2.66E-01
		K-40	9.80E-01	4.16E-01	4.76E-01
		I-131	<5.04E-02	0.00E+00	5.04E-02
		Cs-134	<3.73E-02	0.00E+00	3.73E-02
493545	1/22/2019 - 1/29/2019	Cs-137	<3.53E-02	0.00E+00	3.53E-02
		Be-7	<2.37E-01	0.00E+00	2.37E-01
		K-40	8.51E-01	3.94E-01	4.67E-01
		I-131	<4.82E-02	0.00E+00	4.82E-02
493763	1/29/2019 - 2/5/2019	Cs-134	<4.14E-02	0.00E+00	4.14E-02
		Cs-137	<3.18E-02	0.00E+00	3.18E-02
		Be-7	<2.31E-01	0.00E+00	2.31E-01
		K-40	9.23E-01	4.12E-01	4.88E-01
494317	2/5/2019 - 2/12/2019	I-131	<5.37E-02	0.00E+00	5.37E-02
		Cs-134	<2.87E-02	0.00E+00	2.87E-02
		Cs-137	<3.60E-02	0.00E+00	3.60E-02
		Be-7	<2.62E-01	0.00E+00	2.62E-01
494933	2/12/2019 - 2/19/2019	K-40	1.12E+00	3.92E-01	3.32E-01
		I-131	<5.24E-02	0.00E+00	5.24E-02
		Cs-134	<4.22E-02	0.00E+00	4.22E-02
		Cs-137	<3.90E-02	0.00E+00	3.90E-02
495486	2/19/2019 - 2/26/2019	Be-7	<2.81E-01	0.00E+00	2.81E-01
		K-40	9.00E-01	3.73E-01	3.86E-01
		I-131	<4.36E-02	0.00E+00	4.36E-02
		Cs-134	<3.99E-02	0.00E+00	3.99E-02
496435	2/26/2019 - 3/5/2019	Cs-137	<4.10E-02	0.00E+00	4.10E-02
		Be-7	<2.12E-01	0.00E+00	2.12E-01
		K-40	9.80E-01	3.97E-01	4.20E-01
		I-131	<4.99E-02	0.00E+00	4.99E-02
497056	3/5/2019 - 3/12/2019	Cs-134	<3.81E-02	0.00E+00	3.81E-02
		Cs-137	<4.06E-02	0.00E+00	4.06E-02
		Be-7	<2.33E-01	0.00E+00	2.33E-01
		K-40	1.20E+00	4.57E-01	5.10E-01
497110	3/12/2019 - 3/19/2019	I-131	<5.32E-02	0.00E+00	5.32E-02
		Cs-134	<4.62E-02	0.00E+00	4.62E-02
		Cs-137	<3.53E-02	0.00E+00	3.53E-02
		Be-7	<3.07E-01	0.00E+00	3.07E-01
497513	3/19/2019 - 3/26/2019	K-40	1.08E+00	3.55E-01	7.47E-02
		I-131	<4.71E-02	0.00E+00	4.71E-02
		Cs-134	<3.06E-02	0.00E+00	3.06E-02
		Cs-137	<3.60E-02	0.00E+00	3.60E-02
497513	3/19/2019 - 3/26/2019	Be-7	<2.03E-01	0.00E+00	2.03E-01
		K-40	1.06E+00	3.88E-01	3.49E-01
		I-131	<5.02E-02	0.00E+00	5.02E-02
		Cs-134	<2.89E-02	0.00E+00	2.89E-02
497513	3/19/2019 - 3/26/2019	Cs-137	<3.41E-02	0.00E+00	3.41E-02
		Be-7	<2.50E-01	0.00E+00	2.50E-01
		K-40	8.88E-01	3.92E-01	4.46E-01
		I-131	<5.02E-02	0.00E+00	5.02E-02



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 206 [CONTROL - NW @ 11.3 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
497988	3/26/2019 - 4/2/2019	I-131	<5.28E-02	0.00E+00	5.28E-02
		Cs-134	<3.73E-02	0.00E+00	3.73E-02
		Cs-137	<4.46E-02	0.00E+00	4.46E-02
		Be-7	<1.87E-01	0.00E+00	1.87E-01
		K-40	<8.54E-01	0.00E+00	8.54E-01
498576	4/2/2019 - 4/9/2019	I-131	<5.11E-02	0.00E+00	5.11E-02
		Cs-134	<4.35E-02	0.00E+00	4.35E-02
		Cs-137	<4.09E-02	0.00E+00	4.09E-02
		Be-7	<2.32E-01	0.00E+00	2.32E-01
		K-40	9.80E-01	3.65E-01	3.07E-01
498749	4/9/2019 - 4/16/2019	I-131	<5.57E-02	0.00E+00	5.57E-02
		Cs-134	<2.08E-02	0.00E+00	2.08E-02
		Cs-137	<2.60E-02	0.00E+00	2.60E-02
		Be-7	<2.08E-01	0.00E+00	2.08E-01
		K-40	1.04E+00	2.98E-01	3.08E-01
499425	4/16/2019 - 4/23/2019	I-131	<5.25E-02	0.00E+00	5.25E-02
		Cs-134	<2.89E-02	0.00E+00	2.89E-02
		Cs-137	<2.94E-02	0.00E+00	2.94E-02
		Be-7	<2.39E-01	0.00E+00	2.39E-01
		K-40	1.14E+00	4.25E-01	5.12E-01
499839	4/23/2019 - 4/30/2019	I-131	<4.67E-02	0.00E+00	4.67E-02
		Cs-134	<4.20E-02	0.00E+00	4.20E-02
		Cs-137	<3.68E-02	0.00E+00	3.68E-02
		Be-7	<2.96E-01	0.00E+00	2.96E-01
		K-40	1.03E+00	3.71E-01	3.01E-01
500092	4/30/2019 - 5/7/2019	I-131	<4.32E-02	0.00E+00	4.32E-02
		Cs-134	<3.65E-02	0.00E+00	3.65E-02
		Cs-137	<3.11E-02	0.00E+00	3.11E-02
		Be-7	<2.92E-01	0.00E+00	2.92E-01
		K-40	8.81E-01	3.56E-01	3.42E-01
500425	5/7/2019 - 5/14/2019	I-131	<5.58E-02	0.00E+00	5.58E-02
		Cs-134	<2.75E-02	0.00E+00	2.75E-02
		Cs-137	<2.29E-02	0.00E+00	2.29E-02
		Be-7	<1.86E-01	0.00E+00	1.86E-01
		K-40	1.10E+00	3.08E-01	3.00E-01
500709	5/14/2019 - 5/21/2019	I-131	<4.77E-02	0.00E+00	4.77E-02
		Cs-134	<1.56E-02	0.00E+00	1.56E-02
		Cs-137	<1.95E-02	0.00E+00	1.95E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	9.50E-01	2.03E-01	1.73E-01
501092	5/21/2019 - 5/28/2019	I-131	<5.06E-02	0.00E+00	5.06E-02
		Cs-134	<1.98E-02	0.00E+00	1.98E-02
		Cs-137	<2.57E-02	0.00E+00	2.57E-02
		Be-7	<1.77E-01	0.00E+00	1.77E-01
		K-40	8.58E-01	2.56E-01	2.55E-01
501914	5/28/2019 - 6/4/2019	I-131	<4.83E-02	0.00E+00	4.83E-02
		Cs-134	<3.19E-02	0.00E+00	3.19E-02
		Cs-137	<3.33E-02	0.00E+00	3.33E-02

BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 206 [CONTROL - NW @ 11.3 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
501914	5/28/2019 - 6/4/2019	Be-7	<2.82E-01	0.00E+00	2.82E-01
		K-40	1.13E+00	4.39E-01	4.87E-01
502174	6/4/2019 - 6/11/2019	I-131	<5.45E-02	0.00E+00	5.45E-02
		Cs-134	<2.57E-02	0.00E+00	2.57E-02
		Cs-137	<2.32E-02	0.00E+00	2.32E-02
		Be-7	<1.86E-01	0.00E+00	1.86E-01
		K-40	1.01E+00	2.68E-01	1.75E-01
502385	6/11/2019 - 6/18/2019	I-131	<5.54E-02	0.00E+00	5.54E-02
		Cs-134	<1.90E-02	0.00E+00	1.90E-02
		Cs-137	<2.56E-02	0.00E+00	2.56E-02
		Be-7	<1.91E-01	0.00E+00	1.91E-01
		K-40	9.06E-01	2.91E-01	2.99E-01
503348	6/18/2019 - 6/25/2019	I-131	<5.39E-02	0.00E+00	5.39E-02
		Cs-134	<3.37E-02	0.00E+00	3.37E-02
		Cs-137	<3.10E-02	0.00E+00	3.10E-02
		Be-7	<2.02E-01	0.00E+00	2.02E-01
		K-40	<8.41E-01	0.00E+00	8.41E-01
503805	6/25/2019 - 7/2/2019	I-131	<5.57E-02	0.00E+00	5.57E-02
		Cs-134	<2.85E-02	0.00E+00	2.85E-02
		Cs-137	<3.11E-02	0.00E+00	3.11E-02
		Be-7	<2.45E-01	0.00E+00	2.45E-01
		K-40	9.64E-01	2.96E-01	1.86E-01
504165	7/2/2019 - 7/9/2019	I-131	<4.63E-02	0.00E+00	4.63E-02
		Cs-134	<3.50E-02	0.00E+00	3.50E-02
		Cs-137	<3.69E-02	0.00E+00	3.69E-02
		Be-7	<2.55E-01	0.00E+00	2.55E-01
		K-40	8.55E-01	3.80E-01	4.45E-01
504414	7/9/2019 - 7/16/2019	I-131	<5.57E-02	0.00E+00	5.57E-02
		Cs-134	<2.54E-02	0.00E+00	2.54E-02
		Cs-137	<2.08E-02	0.00E+00	2.08E-02
		Be-7	<1.68E-01	0.00E+00	1.68E-01
		K-40	9.89E-01	2.70E-01	2.18E-01
504616	7/16/2019 - 7/23/2019	I-131	<5.25E-02	0.00E+00	5.25E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.63E-02	0.00E+00	1.63E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	7.10E-01	1.80E-01	1.86E-01
504900	7/23/2019 - 7/30/2019	I-131	<5.52E-02	0.00E+00	5.52E-02
		Cs-134	<2.87E-02	0.00E+00	2.87E-02
		Cs-137	<3.19E-02	0.00E+00	3.19E-02
		Be-7	<2.05E-01	0.00E+00	2.05E-01
		K-40	4.46E-01	3.02E-01	4.20E-01
505109	7/30/2019 - 8/6/2019	I-131	<4.58E-02	0.00E+00	4.58E-02
		Cs-134	<2.56E-02	0.00E+00	2.56E-02
		Cs-137	<2.66E-02	0.00E+00	2.66E-02
		Be-7	<2.09E-01	0.00E+00	2.09E-01
		K-40	7.75E-01	3.07E-01	2.58E-01



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 206 [CONTROL - NW @ 11.3 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
505504	8/6/2019 - 8/13/2019	I-131	<3.82E-02	0.00E+00	3.82E-02
		Cs-134	<2.56E-02	0.00E+00	2.56E-02
		Cs-137	<2.20E-02	0.00E+00	2.20E-02
		Be-7	<1.60E-01	0.00E+00	1.60E-01
		K-40	4.58E-01	3.11E-01	4.35E-01
505822	8/13/2019 - 8/20/2019	I-131	<3.68E-02	0.00E+00	3.68E-02
		Cs-134	<2.78E-02	0.00E+00	2.78E-02
		Cs-137	<3.42E-02	0.00E+00	3.42E-02
		Be-7	<1.92E-01	0.00E+00	1.92E-01
		K-40	2.32E-01	1.89E-01	2.47E-01
506341	8/20/2019 - 8/27/2019	I-131	<3.43E-02	0.00E+00	3.43E-02
		Cs-134	<3.18E-02	0.00E+00	3.18E-02
		Cs-137	<2.86E-02	0.00E+00	2.86E-02
		Be-7	<1.56E-01	0.00E+00	1.56E-01
		K-40	6.01E-01	2.93E-01	3.24E-01
507254	8/27/2019 - 9/3/2019	I-131	<4.96E-02	0.00E+00	4.96E-02
		Cs-134	<4.09E-02	0.00E+00	4.09E-02
		Cs-137	<3.79E-02	0.00E+00	3.79E-02
		Be-7	<2.99E-01	0.00E+00	2.99E-01
		K-40	9.65E-01	3.76E-01	3.78E-01
507794	9/3/2019 - 9/10/2019	I-131	<3.78E-02	0.00E+00	3.78E-02
		Cs-134	<3.41E-02	0.00E+00	3.41E-02
		Cs-137	<2.22E-02	0.00E+00	2.22E-02
		Be-7	<2.10E-01	0.00E+00	2.10E-01
		K-40	<2.05E-01	0.00E+00	2.05E-01
508320	9/10/2019 - 9/17/2019	I-131	<4.00E-02	0.00E+00	4.00E-02
		Cs-134	<2.75E-02	0.00E+00	2.75E-02
		Cs-137	<3.38E-02	0.00E+00	3.38E-02
		Be-7	<1.80E-01	0.00E+00	1.80E-01
		K-40	8.37E-01	3.81E-01	4.61E-01
509190	9/17/2019 - 9/24/2019	I-131	<4.46E-02	0.00E+00	4.46E-02
		Cs-134	<3.76E-02	0.00E+00	3.76E-02
		Cs-137	<3.54E-02	0.00E+00	3.54E-02
		Be-7	<2.94E-01	0.00E+00	2.94E-01
		K-40	1.22E+00	4.65E-01	5.32E-01
509798	9/24/2019 - 10/1/2019	I-131	<2.73E-02	0.00E+00	2.73E-02
		Cs-134	<3.34E-02	0.00E+00	3.34E-02
		Cs-137	<3.15E-02	0.00E+00	3.15E-02
		Be-7	<2.13E-01	0.00E+00	2.13E-01
		K-40	<6.56E-01	0.00E+00	6.56E-01
510499	10/1/2019 - 10/8/2019	I-131	<4.92E-02	0.00E+00	4.92E-02
		Cs-134	<2.46E-02	0.00E+00	2.46E-02
		Cs-137	<2.61E-02	0.00E+00	2.61E-02
		Be-7	<2.09E-01	0.00E+00	2.09E-01
		K-40	9.77E-01	2.89E-01	2.85E-01
510789	10/8/2019 - 10/15/2019	I-131	<4.55E-02	0.00E+00	4.55E-02
		Cs-134	<3.02E-02	0.00E+00	3.02E-02
		Cs-137	<3.24E-02	0.00E+00	3.24E-02



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 206 [CONTROL - NW @ 11.3 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
510789	10/8/2019 - 10/15/2019	Be-7	<2.87E-01	0.00E+00	2.87E-01
		K-40	1.17E+00	4.67E-01	5.53E-01
511202	10/15/2019 - 10/22/2019	I-131	<3.29E-02	0.00E+00	3.29E-02
		Cs-134	<2.85E-02	0.00E+00	2.85E-02
		Cs-137	<2.77E-02	0.00E+00	2.77E-02
		Be-7	<1.76E-01	0.00E+00	1.76E-01
		K-40	<1.93E-01	0.00E+00	1.93E-01
511434	10/22/2019 - 10/29/2019	I-131	<2.79E-02	0.00E+00	2.79E-02
		Cs-134	<3.35E-02	0.00E+00	3.35E-02
		Cs-137	<2.60E-02	0.00E+00	2.60E-02
		Be-7	<2.29E-01	0.00E+00	2.29E-01
		K-40	5.46E-01	2.42E-01	7.04E-02
511843	10/29/2019 - 11/5/2019	I-131	<3.97E-02	0.00E+00	3.97E-02
		Cs-134	<4.15E-02	0.00E+00	4.15E-02
		Cs-137	<3.48E-02	0.00E+00	3.48E-02
		Be-7	1.76E-02	1.73E-01	3.14E-01
		K-40	1.15E+00	3.83E-01	3.05E-01
512142	11/5/2019 - 11/12/2019	I-131	<3.21E-02	0.00E+00	3.21E-02
		Cs-134	<3.65E-02	0.00E+00	3.65E-02
		Cs-137	<2.61E-02	0.00E+00	2.61E-02
		Be-7	<2.44E-01	0.00E+00	2.44E-01
		K-40	5.92E-01	3.56E-01	4.86E-01
512453	11/12/2019 - 11/19/2019	I-131	<4.17E-02	0.00E+00	4.17E-02
		Cs-134	<3.87E-02	0.00E+00	3.87E-02
		Cs-137	<3.22E-02	0.00E+00	3.22E-02
		Be-7	<2.08E-01	0.00E+00	2.08E-01
		K-40	1.14E+00	4.19E-01	4.28E-01
512629	11/19/2019 - 11/26/2019	I-131	<3.64E-02	0.00E+00	3.64E-02
		Cs-134	<3.33E-02	0.00E+00	3.33E-02
		Cs-137	<3.34E-02	0.00E+00	3.34E-02
		Be-7	<1.61E-01	0.00E+00	1.61E-01
		K-40	8.41E-01	3.30E-01	2.92E-01
513593	11/26/2019 - 12/3/2019	I-131	<4.13E-02	0.00E+00	4.13E-02
		Cs-134	<3.59E-02	0.00E+00	3.59E-02
		Cs-137	<3.55E-02	0.00E+00	3.55E-02
		Be-7	1.79E-01	1.97E-01	3.19E-01
		K-40	1.24E+00	4.17E-01	3.57E-01
513902	12/3/2019 - 12/10/2019	I-131	<5.03E-02	0.00E+00	5.03E-02
		Cs-134	<3.45E-02	0.00E+00	3.45E-02
		Cs-137	<2.51E-02	0.00E+00	2.51E-02
		Be-7	<2.21E-01	0.00E+00	2.21E-01
		K-40	<7.23E-02	0.00E+00	7.23E-02
514133	12/10/2019 - 12/17/2019	I-131	<4.29E-02	0.00E+00	4.29E-02
		Cs-134	<4.37E-02	0.00E+00	4.37E-02
		Cs-137	<3.64E-02	0.00E+00	3.64E-02
		Be-7	<2.67E-01	0.00E+00	2.67E-01
		K-40	1.19E+00	4.42E-01	4.70E-01



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 206 [CONTROL - NW @ 11.3 miles]

Sample ID:	514429	Sample Dates:	12/17/2019 - 12/24/2019	Nuclide	Activity	2 Sigma Error	MDA
				I-131	<5.38E-02	0.00E+00	5.38E-02
				Cs-134	<1.46E-02	0.00E+00	1.46E-02
				Cs-137	<1.11E-02	0.00E+00	1.11E-02
				Be-7	8.95E-03	6.97E-02	1.23E-01
				K-40	6.44E-01	1.85E-01	2.12E-01

Sample ID:	514896	Sample Dates:	12/24/2019 - 12/31/2019	Nuclide	Activity	2 Sigma Error	MDA
				I-131	<3.58E-02	0.00E+00	3.58E-02
				Cs-134	<1.73E-02	0.00E+00	1.73E-02
				Cs-137	<1.68E-02	0.00E+00	1.68E-02
				Be-7	<1.26E-01	0.00E+00	1.26E-01
				K-40	8.08E-01	2.33E-01	2.71E-01

Media Type: FISH Concentration (Activity): pCi/kg wet

Sample Point 700 [INDICATOR - SSW @ 5.5 miles]

Sample ID:	504549	Sample Dates:	6/26/2019 - 6/26/2019	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<4.58E+01	0.00E+00	4.58E+01
					Co-58	<7.85E+01	0.00E+00	7.85E+01
					Fe-59	<2.05E+02	0.00E+00	2.05E+02
					Co-60	<6.95E+01	0.00E+00	6.95E+01
					Zn-65	<1.41E+02	0.00E+00	1.41E+02
					Nb-95	<1.03E+02	0.00E+00	1.03E+02
					I-131	<8.48E+02	0.00E+00	8.48E+02
					Cs-134	<7.08E+01	0.00E+00	7.08E+01
					Cs-137	<5.33E+01	0.00E+00	5.33E+01
					Be-7	<5.73E+02	0.00E+00	5.73E+02
					K-40	3.47E+03	8.75E+02	5.07E+02
					Ag-110M	<4.69E+01	0.00E+00	4.69E+01
					Sb-122	<5.52E+05	0.00E+00	5.52E+05
					Sb-125	<1.55E+02	0.00E+00	1.55E+02

Sample ID:	514037	Sample Dates:	11/7/2019 - 11/7/2019	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<5.94E+01	0.00E+00	5.94E+01
					Co-58	<7.94E+01	0.00E+00	7.94E+01
					Fe-59	<1.95E+02	0.00E+00	1.95E+02
					Co-60	<4.02E+01	0.00E+00	4.02E+01
					Zn-65	<9.01E+01	0.00E+00	9.01E+01
					Nb-95	<1.18E+02	0.00E+00	1.18E+02
					I-131	<1.49E+03	0.00E+00	1.49E+03
					Cs-134	<5.84E+01	0.00E+00	5.84E+01
					Cs-137	<4.93E+01	0.00E+00	4.93E+01
					Be-7	<5.63E+02	0.00E+00	5.63E+02
					K-40	4.58E+03	1.06E+03	8.46E+02
					Ag-110M	<5.10E+01	0.00E+00	5.10E+01
					Sb-122	<1.88E+06	0.00E+00	1.88E+06
					Sb-125	<1.50E+02	0.00E+00	1.50E+02

Sample Point 701 [INDICATOR - SSW @ 5.5 miles]

Sample ID:	504550	Sample Dates:	6/26/2019 - 6/26/2019	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<6.77E+01	0.00E+00	6.77E+01
					Co-58	<9.89E+01	0.00E+00	9.89E+01
					Fe-59	<1.43E+02	0.00E+00	1.43E+02
					Co-60	<6.67E+01	0.00E+00	6.67E+01
					Zn-65	<1.45E+02	0.00E+00	1.45E+02
					Nb-95	<1.08E+02	0.00E+00	1.08E+02
					I-131	<1.13E+03	0.00E+00	1.13E+03
					Cs-134	<5.79E+01	0.00E+00	5.79E+01
					Cs-137	<5.68E+01	0.00E+00	5.68E+01
					Be-7	<5.84E+02	0.00E+00	5.84E+02
					K-40	3.64E+03	9.81E+02	8.55E+02
					Ag-110M	<6.06E+01	0.00E+00	6.06E+01
					Sb-122	<1.64E+06	0.00E+00	1.64E+06



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: FISH Concentration (Activity): pCi/kg wet

Sample Point 701 [INDICATOR - SSW @ 5.5 miles]

Sample ID:	504550	Sample Dates:	6/26/2019 - 6/26/2019	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
					Sb-125	<1.05E+02	0.00E+00	1.05E+02

Sample ID:	514038	Sample Dates:	11/7/2019 - 11/7/2019	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<6.42E+01	0.00E+00	6.42E+01
					Co-58	<8.59E+01	0.00E+00	8.59E+01
					Fe-59	<1.83E+02	0.00E+00	1.83E+02
					Co-60	<3.94E+01	0.00E+00	3.94E+01
					Zn-65	<7.62E+01	0.00E+00	7.62E+01
					Nb-95	<1.30E+02	0.00E+00	1.30E+02
					I-131	<1.26E+03	0.00E+00	1.26E+03
					Cs-134	<6.50E+01	0.00E+00	6.50E+01
					Cs-137	<4.80E+01	0.00E+00	4.80E+01
					Be-7	<6.00E+02	0.00E+00	6.00E+02
					K-40	3.51E+03	1.09E+03	1.14E+03
					Ag-110M	<5.10E+01	0.00E+00	5.10E+01
					Sb-122	<1.74E+06	0.00E+00	1.74E+06
					Sb-125	<1.11E+02	0.00E+00	1.11E+02

Sample Point 702 [INDICATOR - SSW @ 5.5 miles]

Sample ID:	504551	Sample Dates:	6/26/2019 - 6/26/2019	INVERTEBRA	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<6.62E+01	0.00E+00	6.62E+01
					Co-58	<6.16E+01	0.00E+00	6.16E+01
					Fe-59	<1.98E+02	0.00E+00	1.98E+02
					Co-60	<5.70E+01	0.00E+00	5.70E+01
					Zn-65	<1.43E+02	0.00E+00	1.43E+02
					Nb-95	<8.28E+01	0.00E+00	8.28E+01
					I-131	<1.21E+03	0.00E+00	1.21E+03
					Cs-134	<7.45E+01	0.00E+00	7.45E+01
					Cs-137	<6.05E+01	0.00E+00	6.05E+01
					Be-7	<7.26E+02	0.00E+00	7.26E+02
					K-40	5.41E+03	1.22E+03	8.25E+02
					Ag-110M	<5.32E+01	0.00E+00	5.32E+01
					Sb-122	<3.87E+05	0.00E+00	3.87E+05
					Sb-125	<1.62E+02	0.00E+00	1.62E+02

Sample ID:	514039	Sample Dates:	11/7/2019 - 11/7/2019	INVERTEBRA	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<4.91E+01	0.00E+00	4.91E+01
					Co-58	<5.88E+01	0.00E+00	5.88E+01
					Fe-59	<1.96E+02	0.00E+00	1.96E+02
					Co-60	<4.35E+01	0.00E+00	4.35E+01
					Zn-65	<1.02E+02	0.00E+00	1.02E+02
					Nb-95	<7.27E+01	0.00E+00	7.27E+01
					I-131	<1.09E+03	0.00E+00	1.09E+03
					Cs-134	<4.28E+01	0.00E+00	4.28E+01
					Cs-137	<4.14E+01	0.00E+00	4.14E+01
					Be-7	<4.86E+02	0.00E+00	4.86E+02
					K-40	4.15E+03	8.10E+02	8.86E+01
					Ag-110M	<4.40E+01	0.00E+00	4.40E+01
					Sb-122	<1.22E+06	0.00E+00	1.22E+06
					Sb-125	<1.18E+02	0.00E+00	1.18E+02

Sample Point 703 [CONTROL - -- @ 0 miles]

Sample ID:	504552	Sample Dates:	6/26/2019 - 6/26/2019	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<3.80E+01	0.00E+00	3.80E+01
					Co-58	<6.79E+01	0.00E+00	6.79E+01
					Fe-59	<1.59E+02	0.00E+00	1.59E+02
					Co-60	<5.00E+01	0.00E+00	5.00E+01
					Zn-65	<1.09E+02	0.00E+00	1.09E+02
					Nb-95	<7.80E+01	0.00E+00	7.80E+01
					I-131	<1.07E+03	0.00E+00	1.07E+03
					Cs-134	<4.91E+01	0.00E+00	4.91E+01
					Cs-137	<4.41E+01	0.00E+00	4.41E+01



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: FISH Concentration (Activity): pCi/kg wet

Sample Point 703 [CONTROL - -- @ 0 miles]

Sample ID:	504552	Sample Dates:	6/26/2019 - 6/26/2019	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
					Be-7	<4.63E+02	0.00E+00	4.63E+02
					K-40	3.64E+03	7.97E+02	6.47E+02
					Ag-110M	<4.35E+01	0.00E+00	4.35E+01
					Sb-122	<1.21E+06	0.00E+00	1.21E+06
					Sb-125	<1.20E+02	0.00E+00	1.20E+02

Sample ID:	514040	Sample Dates:	11/7/2019 - 11/7/2019	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<4.77E+01	0.00E+00	4.77E+01
					Co-58	<6.38E+01	0.00E+00	6.38E+01
					Fe-59	<1.64E+02	0.00E+00	1.64E+02
					Co-60	<4.44E+01	0.00E+00	4.44E+01
					Zn-65	<9.99E+01	0.00E+00	9.99E+01
					Nb-95	<8.40E+01	0.00E+00	8.40E+01
					I-131	<9.98E+02	0.00E+00	9.98E+02
					Cs-134	<4.19E+01	0.00E+00	4.19E+01
					Cs-137	<3.55E+01	0.00E+00	3.55E+01
					Be-7	<5.73E+02	0.00E+00	5.73E+02
					K-40	2.54E+03	8.56E+02	8.85E+02
					Ag-110M	<2.40E+01	0.00E+00	2.40E+01
					Sb-122	<1.57E+06	0.00E+00	1.57E+06
					Sb-125	<9.36E+01	0.00E+00	9.36E+01

Sample Point 704 [CONTROL - -- @ 0 miles]

Sample ID:	504553	Sample Dates:	6/26/2019 - 6/26/2019	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<6.37E+01	0.00E+00	6.37E+01
					Co-58	<6.79E+01	0.00E+00	6.79E+01
					Fe-59	<1.69E+02	0.00E+00	1.69E+02
					Co-60	<6.92E+01	0.00E+00	6.92E+01
					Zn-65	<1.43E+02	0.00E+00	1.43E+02
					Nb-95	<9.99E+01	0.00E+00	9.99E+01
					I-131	<1.19E+03	0.00E+00	1.19E+03
					Cs-134	<7.53E+01	0.00E+00	7.53E+01
					Cs-137	<2.70E+01	0.00E+00	2.70E+01
					Be-7	<7.01E+02	0.00E+00	7.01E+02
					K-40	2.48E+03	8.67E+02	8.72E+02
					Ag-110M	<3.85E+01	0.00E+00	3.85E+01
					Sb-122	<5.10E+05	0.00E+00	5.10E+05
					Sb-125	<1.46E+02	0.00E+00	1.46E+02

Sample ID:	514041	Sample Dates:	11/7/2019 - 11/7/2019	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<5.55E+01	0.00E+00	5.55E+01
					Co-58	<6.13E+01	0.00E+00	6.13E+01
					Fe-59	<3.53E+01	0.00E+00	3.53E+01
					Co-60	<3.35E+01	0.00E+00	3.35E+01
					Zn-65	<8.24E+01	0.00E+00	8.24E+01
					Nb-95	<8.07E+01	0.00E+00	8.07E+01
					I-131	<1.13E+03	0.00E+00	1.13E+03
					Cs-134	<4.91E+01	0.00E+00	4.91E+01
					Cs-137	<5.01E+01	0.00E+00	5.01E+01
					Be-7	<5.42E+02	0.00E+00	5.42E+02
					K-40	3.41E+03	9.12E+02	7.52E+02
					Ag-110M	<3.37E+01	0.00E+00	3.37E+01
					Sb-122	<2.00E+06	0.00E+00	2.00E+06
					Sb-125	<8.82E+01	0.00E+00	8.82E+01

Sample Point 705 [CONTROL - -- @ 0 miles]

Sample ID:	504554	Sample Dates:	6/26/2019 - 6/26/2019	INVERTEBRA	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<7.60E+01	0.00E+00	7.60E+01
					Co-58	<5.47E+01	0.00E+00	5.47E+01
					Fe-59	<1.73E+02	0.00E+00	1.73E+02
					Co-60	<4.45E+01	0.00E+00	4.45E+01
					Zn-65	<1.74E+02	0.00E+00	1.74E+02



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: FISH Concentration (Activity): pCi/kg wet

Sample Point 705 [CONTROL - -- @ 0 miles]

Sample ID:	504554	Sample Dates:	6/26/2019 - 6/26/2019	INVERTEBRA	Nuclide	Activity	2 Sigma Error	MDA
					Nb-95	<1.62E+02	0.00E+00	1.62E+02
					I-131	<1.00E+03	0.00E+00	1.00E+03
					Cs-134	<5.90E+01	0.00E+00	5.90E+01
					Cs-137	<6.95E+01	0.00E+00	6.95E+01
					Be-7	<5.13E+02	0.00E+00	5.13E+02
					K-40	3.93E+03	1.02E+03	1.62E+02
					Ag-110M	<6.12E+01	0.00E+00	6.12E+01
					Sb-122	<7.60E+05	0.00E+00	7.60E+05
					Sb-125	<1.62E+02	0.00E+00	1.62E+02

Sample ID:	514042	Sample Dates:	11/7/2019 - 11/7/2019	INVERTEBRA	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<3.84E+01	0.00E+00	3.84E+01
					Co-58	<4.44E+01	0.00E+00	4.44E+01
					Fe-59	<2.01E+02	0.00E+00	2.01E+02
					Co-60	<4.35E+01	0.00E+00	4.35E+01
					Zn-65	<9.79E+01	0.00E+00	9.79E+01
					Nb-95	<1.19E+02	0.00E+00	1.19E+02
					I-131	<1.04E+03	0.00E+00	1.04E+03
					Cs-134	<4.11E+01	0.00E+00	4.11E+01
					Cs-137	<3.48E+01	0.00E+00	3.48E+01
					Be-7	<6.63E+02	0.00E+00	6.63E+02
					K-40	3.60E+03	8.97E+02	5.18E+02
					Ag-110M	<4.19E+01	0.00E+00	4.19E+01
					Sb-122	<1.31E+06	0.00E+00	1.31E+06
					Sb-125	<9.80E+01	0.00E+00	9.80E+01

Sample Point 706 [INDICATOR - -- @ 0 miles]

Sample ID:	504555	Sample Dates:	6/5/2019 - 6/24/2019	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<4.64E+01	0.00E+00	4.64E+01
					Co-58	<5.57E+01	0.00E+00	5.57E+01
					Fe-59	<1.28E+02	0.00E+00	1.28E+02
					Co-60	<4.52E+01	0.00E+00	4.52E+01
					Zn-65	<1.05E+02	0.00E+00	1.05E+02
					Nb-95	<8.53E+01	0.00E+00	8.53E+01
					I-131	<2.70E+03	0.00E+00	2.70E+03
					Cs-134	<4.21E+01	0.00E+00	4.21E+01
					Cs-137	<2.97E+01	0.00E+00	2.97E+01
					Be-7	<6.34E+02	0.00E+00	6.34E+02
					K-40	3.80E+03	7.54E+02	5.22E+02
					Ag-110M	<4.28E+01	0.00E+00	4.28E+01
					Sb-122	<1.76E+07	0.00E+00	1.76E+07
					Sb-125	<1.00E+02	0.00E+00	1.00E+02

Sample Point 707 [INDICATOR - -- @ 0 miles]

Sample ID:	504556	Sample Dates:	5/30/2019 - 6/5/2019	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<5.13E+01	0.00E+00	5.13E+01
					Co-58	<8.18E+01	0.00E+00	8.18E+01
					Fe-59	<1.96E+02	0.00E+00	1.96E+02
					Co-60	<4.84E+01	0.00E+00	4.84E+01
					Zn-65	<1.28E+02	0.00E+00	1.28E+02
					Nb-95	<1.53E+02	0.00E+00	1.53E+02
					I-131	<1.00E+04	0.00E+00	1.00E+04
					Cs-134	<5.87E+01	0.00E+00	5.87E+01
					Cs-137	<5.01E+01	0.00E+00	5.01E+01
					Be-7	<8.63E+02	0.00E+00	8.63E+02
					K-40	4.11E+03	9.26E+02	8.19E+02
					Ag-110M	<5.94E+01	0.00E+00	5.94E+01
					Sb-122	<6.11E+08	0.00E+00	6.11E+08
					Sb-125	<1.35E+02	0.00E+00	1.35E+02



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: FISH Concentration (Activity): pCi/kg wet

Sample Point 708 [INDICATOR - -- @ 0 miles]

Sample ID:	504557	Sample Dates:	5/30/2019 - 6/5/2019	INVERTEBRA	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<5.46E+01	0.00E+00	5.46E+01
					Co-58	<5.59E+01	0.00E+00	5.59E+01
					Fe-59	<1.98E+02	0.00E+00	1.98E+02
					Co-60	<3.93E+01	0.00E+00	3.93E+01
					Zn-65	<1.16E+02	0.00E+00	1.16E+02
					Nb-95	<1.58E+02	0.00E+00	1.58E+02
					I-131	<6.43E+03	0.00E+00	6.43E+03
					Cs-134	<5.03E+01	0.00E+00	5.03E+01
					Cs-137	<4.73E+01	0.00E+00	4.73E+01
					Be-7	<7.47E+02	0.00E+00	7.47E+02
					K-40	3.79E+03	8.49E+02	7.00E+02
					Ag-110M	<4.80E+01	0.00E+00	4.80E+01
					Sb-122	<2.57E+08	0.00E+00	2.57E+08
					Sb-125	<1.21E+02	0.00E+00	1.21E+02

Media Type: GROUND WATER Concentration (Activity): pCi/l

Sample Point 404 [INDICATOR - SW @ 0.16 miles]

Sample ID:	493946	Sample Dates:	3/6/2019 - 3/6/2019	Nuclide	Activity	2 Sigma Error	MDA
				H3GW	<9.09E+01	0.00E+00	1.75E+02

Sample ID:	500374	Sample Dates:	6/10/2019 - 6/10/2019	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<4.56E+00	0.00E+00	4.56E+00
				Co-58	<6.98E+00	0.00E+00	6.98E+00
				Fe-59	<8.58E+00	0.00E+00	8.58E+00
				Co-60	<4.33E+00	0.00E+00	4.33E+00
				Zn-65	<1.02E+01	0.00E+00	1.02E+01
				Zr-95	<8.45E+00	0.00E+00	8.45E+00
				Nb-95	<5.32E+00	0.00E+00	5.32E+00
				I-131	<1.18E+01	0.00E+00	1.18E+01
				Cs-134	<5.57E+00	0.00E+00	5.57E+00
				Cs-137	<3.90E+00	0.00E+00	3.90E+00
				BaLa-140	<9.76E+00	0.00E+00	9.76E+00
				Total-Gam	0.00E+00		
				H3GW	<-5.7E+01	0.00E+00	2.00E+02

Sample ID:	505452	Sample Dates:	9/11/2019 - 9/11/2019	Nuclide	Activity	2 Sigma Error	MDA
				H3GW	<-4.8E+01	0.00E+00	1.83E+02

Sample ID:	512076	Sample Dates:	12/9/2019 - 12/9/2019	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<5.12E+00	0.00E+00	5.12E+00
				Co-58	<6.89E+00	0.00E+00	6.89E+00
				Fe-59	<1.14E+01	0.00E+00	1.14E+01
				Co-60	<5.43E+00	0.00E+00	5.43E+00
				Zn-65	<9.69E+00	0.00E+00	9.69E+00
				Zr-95	<9.73E+00	0.00E+00	9.73E+00
				Nb-95	<6.76E+00	0.00E+00	6.76E+00
				I-131	<9.67E+00	0.00E+00	9.67E+00
				Cs-134	<5.71E+00	0.00E+00	5.71E+00
				Cs-137	<6.36E+00	0.00E+00	6.36E+00
				BaLa-140	<7.10E+00	0.00E+00	7.10E+00
				Total-Gam	0.00E+00		
				H3GW	<3.06E+01	0.00E+00	1.81E+02

Sample Point 407 [INDICATOR - ENE @ 0.06 miles]

Sample ID:	493947	Sample Dates:	3/7/2019 - 3/7/2019	Nuclide	Activity	2 Sigma Error	MDA
				H3GW	3.34E+02	1.13E+02	1.76E+02

Sample ID:	500375	Sample Dates:	6/11/2019 - 6/11/2019	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<5.71E+00	0.00E+00	5.71E+00
				Co-58	<5.29E+00	0.00E+00	5.29E+00
				Fe-59	<1.06E+01	0.00E+00	1.06E+01
				Co-60	<3.85E+00	0.00E+00	3.85E+00



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: GROUND WATER Concentration (Activity): pCi/l

Sample Point 407 [INDICATOR - ENE @ 0.06 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500375	6/11/2019 - 6/11/2019	Zn-65	<9.66E+00	0.00E+00	9.66E+00
		Zr-95	<1.30E+01	0.00E+00	1.30E+01
		Nb-95	<6.44E+00	0.00E+00	6.44E+00
		I-131	<1.05E+01	0.00E+00	1.05E+01
		Cs-134	<6.98E+00	0.00E+00	6.98E+00
		Cs-137	<5.52E+00	0.00E+00	5.52E+00
		BaLa-140	<1.02E+01	0.00E+00	1.02E+01
		Total-Gam	0.00E+00		
		H3GW	<1.09E+02	0.00E+00	1.99E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
505453	9/9/2019 - 9/9/2019	H3GW	<1.55E+02	0.00E+00	1.84E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512077	12/9/2019 - 12/9/2019	Mn-54	<5.70E+00	0.00E+00	5.70E+00
		Co-58	<5.02E+00	0.00E+00	5.02E+00
		Fe-59	<1.23E+01	0.00E+00	1.23E+01
		Co-60	<7.69E+00	0.00E+00	7.69E+00
		Zn-65	<9.93E+00	0.00E+00	9.93E+00
		Zr-95	<8.31E+00	0.00E+00	8.31E+00
		Nb-95	<5.93E+00	0.00E+00	5.93E+00
		I-131	<1.01E+01	0.00E+00	1.01E+01
		Cs-134	<7.39E+00	0.00E+00	7.39E+00
		Cs-137	<6.39E+00	0.00E+00	6.39E+00
		BaLa-140	<1.03E+01	0.00E+00	1.03E+01
		Total-Gam	0.00E+00		
		H3GW	<7.10E+01	0.00E+00	1.82E+02

Sample Point 409 [INDICATOR - NE @ 0.65 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493948	3/5/2019 - 3/5/2019	H3GW	<4.74E+01	0.00E+00	1.74E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500376	6/10/2019 - 6/10/2019	Mn-54	<4.43E+00	0.00E+00	4.43E+00
		Co-58	<6.32E+00	0.00E+00	6.32E+00
		Fe-59	<9.98E+00	0.00E+00	9.98E+00
		Co-60	<5.62E+00	0.00E+00	5.62E+00
		Zn-65	<1.06E+01	0.00E+00	1.06E+01
		Zr-95	<8.59E+00	0.00E+00	8.59E+00
		Nb-95	<5.37E+00	0.00E+00	5.37E+00
		I-131	<1.05E+01	0.00E+00	1.05E+01
		Cs-134	<5.95E+00	0.00E+00	5.95E+00
		Cs-137	<5.88E+00	0.00E+00	5.88E+00
		BaLa-140	<1.14E+01	0.00E+00	1.14E+01
		Total-Gam	0.00E+00		
		H3GW	<-2.4E+01	0.00E+00	2.00E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
505454	9/10/2019 - 9/10/2019	H3GW	<-2.4E+01	0.00E+00	1.84E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512078	12/10/2019 - 12/10/2019	Mn-54	<4.41E+00	0.00E+00	4.41E+00
		Co-58	<4.84E+00	0.00E+00	4.84E+00
		Fe-59	<1.06E+01	0.00E+00	1.06E+01
		Co-60	<4.45E+00	0.00E+00	4.45E+00
		Zn-65	<1.43E+01	0.00E+00	1.43E+01
		Zr-95	<8.89E+00	0.00E+00	8.89E+00
		Nb-95	<6.10E+00	0.00E+00	6.10E+00
		I-131	<7.67E+00	0.00E+00	7.67E+00
		Cs-134	<4.63E+00	0.00E+00	4.63E+00
		Cs-137	<4.75E+00	0.00E+00	4.75E+00
		BaLa-140	<8.78E+00	0.00E+00	8.78E+00
		Total-Gam	0.00E+00		



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: GROUND WATER Concentration (Activity): pCi/l

Sample Point 409 [INDICATOR - NE @ 0.65 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512078	12/10/2019 - 12/10/2019	H3GW	<4.97E+01	0.00E+00	1.82E+02

Sample Point 410 [INDICATOR - NE @ 0.65 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493949	3/7/2019 - 3/7/2019	H3GW	<2.67E+01	0.00E+00	1.75E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500377	6/10/2019 - 6/10/2019	Mn-54	<4.29E+00	0.00E+00	4.29E+00
		Co-58	<4.94E+00	0.00E+00	4.94E+00
		Fe-59	<8.89E+00	0.00E+00	8.89E+00
		Co-60	<4.50E+00	0.00E+00	4.50E+00
		Zn-65	<1.01E+01	0.00E+00	1.01E+01
		Zr-95	<9.71E+00	0.00E+00	9.71E+00
		Nb-95	<4.93E+00	0.00E+00	4.93E+00
		I-131	<9.13E+00	0.00E+00	9.13E+00
		Cs-134	<4.13E+00	0.00E+00	4.13E+00
		Cs-137	<4.82E+00	0.00E+00	4.82E+00
		BaLa-140	<1.07E+01	0.00E+00	1.07E+01
		Total-Gam	0.00E+00		
		H3GW	<2.37E+00	0.00E+00	1.99E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
505455	9/10/2019 - 9/10/2019	H3GW	<-7.1E+01	0.00E+00	1.81E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512079	12/10/2019 - 12/10/2019	Mn-54	<4.27E+00	0.00E+00	4.27E+00
		Co-58	<5.24E+00	0.00E+00	5.24E+00
		Fe-59	<7.84E+00	0.00E+00	7.84E+00
		Co-60	<4.59E+00	0.00E+00	4.59E+00
		Zn-65	<1.90E+01	0.00E+00	1.90E+01
		Zr-95	<7.75E+00	0.00E+00	7.75E+00
		Nb-95	<7.06E+00	0.00E+00	7.06E+00
		I-131	<9.64E+00	0.00E+00	9.64E+00
		Cs-134	<5.63E+00	0.00E+00	5.63E+00
		Cs-137	<5.72E+00	0.00E+00	5.72E+00
		BaLa-140	<8.11E+00	0.00E+00	8.11E+00
		Total-Gam	0.00E+00		
		H3GW	<1.14E+02	0.00E+00	1.82E+02

Sample Point 418 [INDICATOR - -- @ 0 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493956	3/5/2019 - 3/5/2019	H3GW	3.35E+02	1.12E+02	1.75E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500385	6/10/2019 - 6/10/2019	Mn-54	<4.74E+00	0.00E+00	4.74E+00
		Co-58	<5.46E+00	0.00E+00	5.46E+00
		Fe-59	<1.02E+01	0.00E+00	1.02E+01
		Co-60	<4.97E+00	0.00E+00	4.97E+00
		Zn-65	<1.15E+01	0.00E+00	1.15E+01
		Zr-95	<1.09E+01	0.00E+00	1.09E+01
		Nb-95	<6.31E+00	0.00E+00	6.31E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<6.68E+00	0.00E+00	6.68E+00
		Cs-137	<4.26E+00	0.00E+00	4.26E+00
		BaLa-140	<1.12E+01	0.00E+00	1.12E+01
		Total-Gam	0.00E+00		
		H3GW	<1.05E+02	0.00E+00	2.00E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
505462	9/10/2019 - 9/10/2019	H3GW	2.64E+02	1.15E+02	1.83E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512087	12/9/2019 - 12/9/2019	Mn-54	<5.73E+00	0.00E+00	5.73E+00



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: GROUND WATER Concentration (Activity): pCi/l

Sample Point 418 [INDICATOR - -- @ 0 miles]

Sample ID: 512087 Sample Dates: 12/9/2019 - 12/9/2019

Nuclide	Activity	2 Sigma Error	MDA
Co-58	<5.80E+00	0.00E+00	5.80E+00
Fe-59	<1.19E+01	0.00E+00	1.19E+01
Co-60	<7.46E+00	0.00E+00	7.46E+00
Zn-65	<1.00E+01	0.00E+00	1.00E+01
Zr-95	<1.12E+01	0.00E+00	1.12E+01
Nb-95	<5.28E+00	0.00E+00	5.28E+00
I-131	<1.19E+01	0.00E+00	1.19E+01
Cs-134	<7.42E+00	0.00E+00	7.42E+00
Cs-137	<6.08E+00	0.00E+00	6.08E+00
BaLa-140	<7.63E+00	0.00E+00	7.63E+00
Total-Gam	0.00E+00		
H3GW	2.59E+02	1.14E+02	1.81E+02

Sample Point 423 [INDICATOR - -- @ 0 miles]

Sample ID: 493958 Sample Dates: 3/6/2019 - 3/6/2019

Nuclide	Activity	2 Sigma Error	MDA
H3GW	<2.72E+01	0.00E+00	1.75E+02

Sample ID: 500388 Sample Dates: 6/10/2019 - 6/10/2019

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<5.73E+00	0.00E+00	5.73E+00
Co-58	<3.57E+00	0.00E+00	3.57E+00
Fe-59	<1.25E+01	0.00E+00	1.25E+01
Co-60	<6.36E+00	0.00E+00	6.36E+00
Zn-65	<1.30E+01	0.00E+00	1.30E+01
Zr-95	<1.20E+01	0.00E+00	1.20E+01
Nb-95	<7.21E+00	0.00E+00	7.21E+00
I-131	<7.98E+00	0.00E+00	7.98E+00
Cs-134	<6.78E+00	0.00E+00	6.78E+00
Cs-137	<4.15E+00	0.00E+00	4.15E+00
BaLa-140	<7.87E+00	0.00E+00	7.87E+00
Total-Gam	0.00E+00		
H3GW	<-7.8E+01	0.00E+00	1.98E+02

Sample ID: 505464 Sample Dates: 9/11/2019 - 9/11/2019

Nuclide	Activity	2 Sigma Error	MDA
H3GW	<-4.0E+01	0.00E+00	1.83E+02

Sample ID: 512092 Sample Dates: 12/10/2019 - 12/10/2019

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<4.41E+00	0.00E+00	4.41E+00
Co-58	<5.98E+00	0.00E+00	5.98E+00
Fe-59	<1.01E+01	0.00E+00	1.01E+01
Co-60	<7.22E+00	0.00E+00	7.22E+00
Zn-65	<1.11E+01	0.00E+00	1.11E+01
Zr-95	<8.94E+00	0.00E+00	8.94E+00
Nb-95	<6.57E+00	0.00E+00	6.57E+00
I-131	<8.19E+00	0.00E+00	8.19E+00
Cs-134	<6.59E+00	0.00E+00	6.59E+00
Cs-137	<4.50E+00	0.00E+00	4.50E+00
BaLa-140	<5.61E+00	0.00E+00	5.61E+00
Total-Gam	0.00E+00		
H3GW	<8.75E+01	0.00E+00	1.82E+02

Sample Point 424 [INDICATOR - -- @ 0 miles]

Sample ID: 493959 Sample Dates: 3/6/2019 - 3/6/2019

Nuclide	Activity	2 Sigma Error	MDA
H3GW	<4.73E+01	0.00E+00	1.74E+02

Sample ID: 500389 Sample Dates: 6/10/2019 - 6/10/2019

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<6.03E+00	0.00E+00	6.03E+00
Co-58	<5.37E+00	0.00E+00	5.37E+00
Fe-59	<9.54E+00	0.00E+00	9.54E+00
Co-60	<6.31E+00	0.00E+00	6.31E+00
Zn-65	<1.45E+01	0.00E+00	1.45E+01
Zr-95	<1.03E+01	0.00E+00	1.03E+01
Nb-95	<5.34E+00	0.00E+00	5.34E+00



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: GROUND WATER Concentration (Activity): pCi/l

Sample Point 424 [INDICATOR - -- @ 0 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500389	6/10/2019 - 6/10/2019	I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<7.17E+00	0.00E+00	7.17E+00
		Cs-137	<6.02E+00	0.00E+00	6.02E+00
		BaLa-140	<9.68E+00	0.00E+00	9.68E+00
		Total-Gam	0.00E+00		
		H3GW	<-3.3E+01	0.00E+00	2.00E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
505465	9/11/2019 - 9/11/2019	H3GW	<-6.9E+01	0.00E+00	1.84E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512093	12/10/2019 - 12/10/2019	Mn-54	<5.74E+00	0.00E+00	5.74E+00
		Co-58	<5.12E+00	0.00E+00	5.12E+00
		Fe-59	<1.01E+01	0.00E+00	1.01E+01
		Co-60	<4.45E+00	0.00E+00	4.45E+00
		Zn-65	<1.34E+01	0.00E+00	1.34E+01
		Zr-95	<9.37E+00	0.00E+00	9.37E+00
		Nb-95	<5.04E+00	0.00E+00	5.04E+00
		I-131	<1.03E+01	0.00E+00	1.03E+01
		Cs-134	<5.48E+00	0.00E+00	5.48E+00
		Cs-137	<3.73E+00	0.00E+00	3.73E+00
		BaLa-140	<1.07E+01	0.00E+00	1.07E+01
		Total-Gam	0.00E+00		
		H3GW	<4.95E+01	0.00E+00	1.81E+02

Sample Point 426 [INDICATOR - -- @ 0 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493961	3/6/2019 - 3/6/2019	H3GW	<9.47E+01	0.00E+00	1.74E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500391	6/11/2019 - 6/11/2019	Mn-54	<4.57E+00	0.00E+00	4.57E+00
		Co-58	<5.37E+00	0.00E+00	5.37E+00
		Fe-59	<9.12E+00	0.00E+00	9.12E+00
		Co-60	<7.42E+00	0.00E+00	7.42E+00
		Zn-65	<1.15E+01	0.00E+00	1.15E+01
		Zr-95	<8.40E+00	0.00E+00	8.40E+00
		Nb-95	<5.09E+00	0.00E+00	5.09E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<7.31E+00	0.00E+00	7.31E+00
		Cs-137	<4.58E+00	0.00E+00	4.58E+00
		BaLa-140	<8.56E+00	0.00E+00	8.56E+00
		Total-Gam	0.00E+00		
		H3GW	<2.38E+00	0.00E+00	2.00E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
505467	9/11/2019 - 9/11/2019	H3GW	<2.40E+01	0.00E+00	1.84E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512095	12/10/2019 - 12/10/2019	Mn-54	<4.25E+00	0.00E+00	4.25E+00
		Co-58	<4.16E+00	0.00E+00	4.16E+00
		Fe-59	<7.23E+00	0.00E+00	7.23E+00
		Co-60	<4.48E+00	0.00E+00	4.48E+00
		Zn-65	<7.38E+00	0.00E+00	7.38E+00
		Zr-95	<8.31E+00	0.00E+00	8.31E+00
		Nb-95	<5.78E+00	0.00E+00	5.78E+00
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<4.93E+00	0.00E+00	4.93E+00
		Cs-137	<4.75E+00	0.00E+00	4.75E+00
		BaLa-140	<1.17E+01	0.00E+00	1.17E+01
		Total-Gam	0.00E+00		
		H3GW	<-5.0E+01	0.00E+00	1.87E+02



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: GROUND WATER Concentration (Activity): pCi/l

Sample Point 429 [INDICATOR - -- @ 0 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493963	3/7/2019 - 3/7/2019	H3GW	<-3.4E+01	0.00E+00	1.85E+02
500392	6/10/2019 - 6/10/2019	Mn-54	<4.66E+00	0.00E+00	4.66E+00
		Co-58	<6.12E+00	0.00E+00	6.12E+00
		Fe-59	<7.30E+00	0.00E+00	7.30E+00
		Co-60	<5.20E+00	0.00E+00	5.20E+00
		Zn-65	<1.17E+01	0.00E+00	1.17E+01
		Zr-95	<9.71E+00	0.00E+00	9.71E+00
		Nb-95	<5.46E+00	0.00E+00	5.46E+00
		I-131	<1.04E+01	0.00E+00	1.04E+01
		Cs-134	<5.55E+00	0.00E+00	5.55E+00
		Cs-137	<5.87E+00	0.00E+00	5.87E+00
		BaLa-140	<1.06E+01	0.00E+00	1.06E+01
		Total-Gam	0.00E+00		
		H3GW	<-1.2E+02	0.00E+00	2.01E+02
505468	9/10/2019 - 9/10/2019	H3GW	<-4.3E+01	0.00E+00	1.82E+02
512096	12/10/2019 - 12/10/2019	Mn-54	<4.70E+00	0.00E+00	4.70E+00
		Co-58	<5.13E+00	0.00E+00	5.13E+00
		Fe-59	<8.67E+00	0.00E+00	8.67E+00
		Co-60	<5.42E+00	0.00E+00	5.42E+00
		Zn-65	<2.35E+01	0.00E+00	2.35E+01
		Zr-95	<7.97E+00	0.00E+00	7.97E+00
		Nb-95	<4.36E+00	0.00E+00	4.36E+00
		I-131	<9.28E+00	0.00E+00	9.28E+00
		Cs-134	<5.00E+00	0.00E+00	5.00E+00
		Cs-137	<5.59E+00	0.00E+00	5.59E+00
		BaLa-140	<7.97E+00	0.00E+00	7.97E+00
		Total-Gam	0.00E+00		
		H3GW	<5.92E+01	0.00E+00	1.82E+02

Sample Point 612 [INDICATOR - -- @ 0 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493964	3/7/2019 - 3/7/2019	H3GW	<9.26E+01	0.00E+00	1.85E+02
500394	6/11/2019 - 6/11/2019	Mn-54	<5.05E+00	0.00E+00	5.05E+00
		Co-58	<4.96E+00	0.00E+00	4.96E+00
		Fe-59	<1.00E+01	0.00E+00	1.00E+01
		Co-60	<5.37E+00	0.00E+00	5.37E+00
		Zn-65	<7.40E+00	0.00E+00	7.40E+00
		Zr-95	<1.13E+01	0.00E+00	1.13E+01
		Nb-95	<5.09E+00	0.00E+00	5.09E+00
		I-131	<9.35E+00	0.00E+00	9.35E+00
		Cs-134	<4.66E+00	0.00E+00	4.66E+00
		Cs-137	<6.58E+00	0.00E+00	6.58E+00
		BaLa-140	<9.44E+00	0.00E+00	9.44E+00
		Total-Gam	0.00E+00		
		H3GW	<7.15E+01	0.00E+00	2.00E+02
505469	9/9/2019 - 9/9/2019	H3GW	<6.40E+01	0.00E+00	1.82E+02
512098	12/9/2019 - 12/9/2019	Mn-54	<4.80E+00	0.00E+00	4.80E+00
		Co-58	<5.33E+00	0.00E+00	5.33E+00
		Fe-59	<1.18E+01	0.00E+00	1.18E+01
		Co-60	<4.15E+00	0.00E+00	4.15E+00
		Zn-65	<1.45E+01	0.00E+00	1.45E+01
		Zr-95	<1.15E+01	0.00E+00	1.15E+01



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: GROUND WATER Concentration (Activity): pCi/l

Sample Point 612 [INDICATOR - -- @ 0 miles]

Sample ID:	512098	Sample Dates:	12/9/2019 - 12/9/2019	Nuclide	Activity	2 Sigma Error	MDA
				Nb-95	<5.83E+00	0.00E+00	5.83E+00
				I-131	<9.26E+00	0.00E+00	9.26E+00
				Cs-134	<5.94E+00	0.00E+00	5.94E+00
				Cs-137	<5.38E+00	0.00E+00	5.38E+00
				BaLa-140	<1.12E+01	0.00E+00	1.12E+01
				Total-Gam	0.00E+00		
				H3GW	<1.39E+02	0.00E+00	1.81E+02

Media Type: SEDIMENT_SHORE Concentration (Activity): pCi/kg dry

Sample Point 500 [INDICATOR - SSW @ 5 miles]

Sample ID:	502322	Sample Dates:	5/29/2019 - 5/29/2019	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<3.65E+01	0.00E+00	3.65E+01
				Co-58	<5.76E+01	0.00E+00	5.76E+01
				Fe-59	<2.85E+01	0.00E+00	2.85E+01
				Co-60	<4.21E+01	0.00E+00	4.21E+01
				Zn-65	<1.02E+02	0.00E+00	1.02E+02
				Zr-95	<1.03E+02	0.00E+00	1.03E+02
				Nb-95	<7.20E+01	0.00E+00	7.20E+01
				I-131	<3.23E+02	0.00E+00	3.23E+02
				Cs-134	<6.16E+01	0.00E+00	6.16E+01
				Cs-137	<2.93E+01	0.00E+00	2.93E+01
				Be-7	<4.02E+02	0.00E+00	4.02E+02
				K-40	1.14E+03	4.99E+02	4.39E+02
				Co-57	<2.73E+01	0.00E+00	2.73E+01
				Mo-99	<1.53E+05	0.00E+00	1.53E+05
				Ag-110M	<2.79E+01	0.00E+00	2.79E+01
				Sb-122	<4.97E+04	0.00E+00	4.97E+04
				Sb-125	<1.21E+02	0.00E+00	1.21E+02

Sample ID:	514044	Sample Dates:	11/20/2019 - 11/20/2019	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<4.20E+01	0.00E+00	4.20E+01
				Co-58	<4.65E+01	0.00E+00	4.65E+01
				Fe-59	<9.30E+01	0.00E+00	9.30E+01
				Co-60	<4.65E+01	0.00E+00	4.65E+01
				Zn-65	<8.72E+01	0.00E+00	8.72E+01
				Zr-95	<9.06E+01	0.00E+00	9.06E+01
				Nb-95	<7.69E+01	0.00E+00	7.69E+01
				I-131	<4.02E+02	0.00E+00	4.02E+02
				Cs-134	<4.58E+01	0.00E+00	4.58E+01
				Cs-137	<3.59E+01	0.00E+00	3.59E+01
				Be-7	<3.87E+02	0.00E+00	3.87E+02
				K-40	1.37E+03	4.96E+02	1.16E+02
				Co-57	<3.27E+01	0.00E+00	3.27E+01
				Mo-99	<2.53E+05	0.00E+00	2.53E+05
				Ag-110M	<3.74E+01	0.00E+00	3.74E+01
				Sb-122	<3.84E+04	0.00E+00	3.84E+04
				Sb-125	<1.33E+02	0.00E+00	1.33E+02

Sample Point 501 [INDICATOR - -- @ 0 miles]

Sample ID:	502323	Sample Dates:	5/30/2019 - 5/30/2019	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<5.03E+01	0.00E+00	5.03E+01
				Co-58	<6.77E+01	0.00E+00	6.77E+01
				Fe-59	<1.60E+02	0.00E+00	1.60E+02
				Co-60	<5.81E+01	0.00E+00	5.81E+01
				Zn-65	<1.09E+02	0.00E+00	1.09E+02
				Zr-95	<1.35E+02	0.00E+00	1.35E+02
				Nb-95	<9.02E+01	0.00E+00	9.02E+01
				I-131	<4.19E+02	0.00E+00	4.19E+02
				Cs-134	<6.63E+01	0.00E+00	6.63E+01
				Cs-137	1.21E+02	7.20E+01	5.73E+01
				Be-7	<6.99E+02	0.00E+00	6.99E+02



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SEDIMENT_SHORE Concentration (Activity): pCi/kg dry

Sample Point 501 [INDICATOR - -- @ 0 miles]

Sample ID: 502323 Sample Dates: 5/30/2019 - 5/30/2019

Nuclide	Activity	2 Sigma Error	MDA
K-40	7.61E+03	1.33E+03	1.04E+03
Co-57	<4.55E+01	0.00E+00	4.55E+01
Mo-99	<2.16E+05	0.00E+00	2.16E+05
Ag-110M	<2.61E+01	0.00E+00	2.61E+01
Sb-122	<5.08E+04	0.00E+00	5.08E+04
Sb-125	<1.38E+02	0.00E+00	1.38E+02
Fe-55	<9.13E+04	0.00E+00	9.13E+04
Ni-63	<4.63E+04	0.00E+00	4.63E+04
Sr-89	<6.74E+01	0.00E+00	6.74E+01
Sr-90	<6.64E+01	0.00E+00	6.64E+01

Sample ID: 514045 Sample Dates: 11/20/2019 - 11/20/2019

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<7.13E+01	0.00E+00	7.13E+01
Co-58	<1.01E+02	0.00E+00	1.01E+02
Fe-59	<2.77E+02	0.00E+00	2.77E+02
Co-60	<8.54E+01	0.00E+00	8.54E+01
Zn-65	<2.91E+02	0.00E+00	2.91E+02
Zr-95	<1.92E+02	0.00E+00	1.92E+02
Nb-95	<1.26E+02	0.00E+00	1.26E+02
I-131	<6.91E+02	0.00E+00	6.91E+02
Cs-134	<1.17E+02	0.00E+00	1.17E+02
Cs-137	1.06E+02	8.56E+01	1.30E+02
Be-7	<6.56E+02	0.00E+00	6.56E+02
K-40	1.08E+04	2.11E+03	1.13E+03
Co-57	<6.99E+01	0.00E+00	6.99E+01
Mo-99	<3.49E+05	0.00E+00	3.49E+05
Ag-110M	<1.46E+02	0.00E+00	1.46E+02
Sb-122	<8.50E+04	0.00E+00	8.50E+04
Sb-125	<2.27E+02	0.00E+00	2.27E+02
Fe-55	<6.67E+04	0.00E+00	6.67E+04
Ni-63	<5.69E+04	0.00E+00	5.69E+04
Sr-89	<6.04E+01	0.00E+00	6.04E+01
Sr-90	<6.32E+01	0.00E+00	6.32E+01

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 400 [CONTROL - NE @ 0.6 miles]

Sample ID: 492534 Sample Dates: 1/2/2019 - 2/4/2019

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<1.35E+00	0.00E+00	1.35E+00
Co-58	<1.79E+00	0.00E+00	1.79E+00
Fe-59	<3.22E+00	0.00E+00	3.22E+00
Co-60	<1.40E+00	0.00E+00	1.40E+00
Zn-65	<2.76E+00	0.00E+00	2.76E+00
Zr-95	<3.26E+00	0.00E+00	3.26E+00
Nb-95	<2.03E+00	0.00E+00	2.03E+00
I-131	<1.02E+01	0.00E+00	1.02E+01
Cs-134	<1.35E+00	0.00E+00	1.35E+00
Cs-137	<1.21E+00	0.00E+00	1.21E+00
BaLa-140	<4.93E+00	0.00E+00	4.93E+00
H3SW	<5.44E+01	0.00E+00	1.78E+02

Sample ID: 496123 Sample Dates: 2/4/2019 - 3/1/2019

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<2.66E+00	0.00E+00	2.66E+00
Co-58	<2.80E+00	0.00E+00	2.80E+00
Fe-59	<6.00E+00	0.00E+00	6.00E+00
Co-60	<2.67E+00	0.00E+00	2.67E+00
Zn-65	<5.31E+00	0.00E+00	5.31E+00
Zr-95	<5.09E+00	0.00E+00	5.09E+00
Nb-95	<3.42E+00	0.00E+00	3.42E+00
I-131	<1.07E+01	0.00E+00	1.07E+01
Cs-134	<3.40E+00	0.00E+00	3.40E+00
Cs-137	<2.62E+00	0.00E+00	2.62E+00
BaLa-140	<7.06E+00	0.00E+00	7.06E+00

BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 400 [CONTROL - NE @ 0.6 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
496123	2/4/2019 - 3/1/2019	H3SW	<-3.1E+01	0.00E+00	1.87E+02
497994	3/1/2019 - 4/1/2019	Mn-54	<1.32E+00	0.00E+00	1.32E+00
		Co-58	<1.77E+00	0.00E+00	1.77E+00
		Fe-59	<3.54E+00	0.00E+00	3.54E+00
		Co-60	<1.26E+00	0.00E+00	1.26E+00
		Zn-65	<2.89E+00	0.00E+00	2.89E+00
		Zr-95	<3.43E+00	0.00E+00	3.43E+00
		Nb-95	<2.08E+00	0.00E+00	2.08E+00
		I-131	<1.06E+01	0.00E+00	1.06E+01
		Cs-134	<1.66E+00	0.00E+00	1.66E+00
		Cs-137	<1.24E+00	0.00E+00	1.24E+00
		BaLa-140	<5.06E+00	0.00E+00	5.06E+00
		H3SW	<-4.5E+00	0.00E+00	1.82E+02
499845	4/1/2019 - 5/1/2019	Mn-54	<1.96E+00	0.00E+00	1.96E+00
		Co-58	<2.00E+00	0.00E+00	2.00E+00
		Fe-59	<5.70E+00	0.00E+00	5.70E+00
		Co-60	<1.56E+00	0.00E+00	1.56E+00
		Zn-65	<5.10E+00	0.00E+00	5.10E+00
		Zr-95	<4.22E+00	0.00E+00	4.22E+00
		Nb-95	<3.08E+00	0.00E+00	3.08E+00
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<2.38E+00	0.00E+00	2.38E+00
		Cs-137	<2.32E+00	0.00E+00	2.32E+00
		BaLa-140	<7.46E+00	0.00E+00	7.46E+00
		H3SW	<-8.7E+01	0.00E+00	1.88E+02
501098	5/1/2019 - 6/3/2019	Mn-54	<1.71E+00	0.00E+00	1.71E+00
		Co-58	<1.97E+00	0.00E+00	1.97E+00
		Fe-59	<4.53E+00	0.00E+00	4.53E+00
		Co-60	<1.39E+00	0.00E+00	1.39E+00
		Zn-65	<3.55E+00	0.00E+00	3.55E+00
		Zr-95	<3.22E+00	0.00E+00	3.22E+00
		Nb-95	<2.39E+00	0.00E+00	2.39E+00
		I-131	<1.11E+01	0.00E+00	1.11E+01
		Cs-134	<2.00E+00	0.00E+00	2.00E+00
		Cs-137	<1.50E+00	0.00E+00	1.50E+00
		BaLa-140	<6.68E+00	0.00E+00	6.68E+00
		H3SW	<-4.2E+01	0.00E+00	1.93E+02
503354	6/3/2019 - 7/2/2019	Mn-54	<1.52E+00	0.00E+00	1.52E+00
		Co-58	<1.77E+00	0.00E+00	1.77E+00
		Fe-59	<3.43E+00	0.00E+00	3.43E+00
		Co-60	<1.52E+00	0.00E+00	1.52E+00
		Zn-65	<3.67E+00	0.00E+00	3.67E+00
		Zr-95	<3.32E+00	0.00E+00	3.32E+00
		Nb-95	<2.07E+00	0.00E+00	2.07E+00
		I-131	<1.05E+01	0.00E+00	1.05E+01
		Cs-134	<1.56E+00	0.00E+00	1.56E+00
		Cs-137	<1.80E+00	0.00E+00	1.80E+00
		BaLa-140	<4.99E+00	0.00E+00	4.99E+00
		H3SW	<-1.6E+01	0.00E+00	1.90E+02
504622	7/2/2019 - 8/1/2019	Mn-54	<1.25E+00	0.00E+00	1.25E+00
		Co-58	<1.34E+00	0.00E+00	1.34E+00
		Fe-59	<3.00E+00	0.00E+00	3.00E+00
		Co-60	<9.23E-01	0.00E+00	9.23E-01
		Zn-65	<2.75E+00	0.00E+00	2.75E+00
		Zr-95	<2.67E+00	0.00E+00	2.67E+00



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 400 [CONTROL - NE @ 0.6 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504622	7/2/2019 - 8/1/2019	Nb-95	<1.79E+00	0.00E+00	1.79E+00
		I-131	<1.05E+01	0.00E+00	1.05E+01
		Cs-134	<1.25E+00	0.00E+00	1.25E+00
		Cs-137	<9.98E-01	0.00E+00	9.98E-01
		BaLa-140	<5.36E+00	0.00E+00	5.36E+00
		H3SW	<2.4E+00	0.00E+00	1.92E+02
505828	8/1/2019 - 9/3/2019	Mn-54	<1.63E+00	0.00E+00	1.63E+00
		Co-58	<1.62E+00	0.00E+00	1.62E+00
		Fe-59	<3.55E+00	0.00E+00	3.55E+00
		Co-60	<1.61E+00	0.00E+00	1.61E+00
		Zn-65	<2.94E+00	0.00E+00	2.94E+00
		Zr-95	<3.30E+00	0.00E+00	3.30E+00
		Nb-95	<2.35E+00	0.00E+00	2.35E+00
		I-131	<1.02E+01	0.00E+00	1.02E+01
		Cs-134	<1.63E+00	0.00E+00	1.63E+00
		Cs-137	<1.26E+00	0.00E+00	1.26E+00
		BaLa-140	<3.84E+00	0.00E+00	3.84E+00
		H3SW	<4.7E+00	0.00E+00	1.92E+02
		508326	9/3/2019 - 10/1/2019	Mn-54	<2.06E+00
Co-58	<2.08E+00			0.00E+00	2.08E+00
Fe-59	<4.82E+00			0.00E+00	4.82E+00
Co-60	<2.08E+00			0.00E+00	2.08E+00
Zn-65	<4.46E+00			0.00E+00	4.46E+00
Zr-95	<3.76E+00			0.00E+00	3.76E+00
Nb-95	<2.78E+00			0.00E+00	2.78E+00
I-131	<1.04E+01			0.00E+00	1.04E+01
Cs-134	<2.28E+00			0.00E+00	2.28E+00
Cs-137	<2.01E+00			0.00E+00	2.01E+00
BaLa-140	<5.36E+00			0.00E+00	5.36E+00
H3SW	<1.2E+02			0.00E+00	1.90E+02
510795	10/1/2019 - 11/4/2019			Mn-54	<2.19E+00
		Co-58	<2.78E+00	0.00E+00	2.78E+00
		Fe-59	<5.57E+00	0.00E+00	5.57E+00
		Co-60	<2.32E+00	0.00E+00	2.32E+00
		Zn-65	<5.29E+00	0.00E+00	5.29E+00
		Zr-95	<3.95E+00	0.00E+00	3.95E+00
		Nb-95	<3.80E+00	0.00E+00	3.80E+00
		I-131	<1.07E+01	0.00E+00	1.07E+01
		Cs-134	<2.46E+00	0.00E+00	2.46E+00
		Cs-137	<2.27E+00	0.00E+00	2.27E+00
		BaLa-140	<7.58E+00	0.00E+00	7.58E+00
		H3SW	<7.6E+01	0.00E+00	1.91E+02
		513908	11/4/2019 - 12/2/2019	Mn-54	<2.09E+00
Co-58	<2.12E+00			0.00E+00	2.12E+00
Fe-59	<4.56E+00			0.00E+00	4.56E+00
Co-60	<1.72E+00			0.00E+00	1.72E+00
Zn-65	<4.04E+00			0.00E+00	4.04E+00
Zr-95	<4.04E+00			0.00E+00	4.04E+00
Nb-95	<3.17E+00			0.00E+00	3.17E+00
I-131	<1.19E+01			0.00E+00	1.19E+01
Cs-134	<2.28E+00			0.00E+00	2.28E+00
Cs-137	<1.94E+00			0.00E+00	1.94E+00
BaLa-140	<5.61E+00			0.00E+00	5.61E+00
H3SW	<1.65E+01			0.00E+00	1.81E+02
515224	12/2/2019 - 1/2/2020			Nuclide	Activity
		Mn-54	<2.10E+00	0.00E+00	2.10E+00



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 400 [CONTROL - NE @ 0.6 miles]

Sample ID: 515224 Sample Dates: 12/2/2019 - 1/2/2020

Nuclide	Activity	2 Sigma Error	MDA
Co-58	<2.82E+00	0.00E+00	2.82E+00
Fe-59	<4.43E+00	0.00E+00	4.43E+00
Co-60	<2.46E+00	0.00E+00	2.46E+00
Zn-65	<5.27E+00	0.00E+00	5.27E+00
Zr-95	<4.76E+00	0.00E+00	4.76E+00
Nb-95	<3.32E+00	0.00E+00	3.32E+00
I-131	<1.17E+01	0.00E+00	1.17E+01
Cs-134	<2.44E+00	0.00E+00	2.44E+00
Cs-137	<2.44E+00	0.00E+00	2.44E+00
BaLa-140	<4.62E+00	0.00E+00	4.62E+00
H3SW	<-1.0E+02	0.00E+00	1.88E+02

Sample Point 401 [INDICATOR - SSW @ 4.9 miles]

Sample ID: 492535 Sample Dates: 1/2/2019 - 2/4/2019

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<1.32E+00	0.00E+00	1.32E+00
Co-58	<1.72E+00	0.00E+00	1.72E+00
Fe-59	<3.35E+00	0.00E+00	3.35E+00
Co-60	<1.22E+00	0.00E+00	1.22E+00
Zn-65	<2.90E+00	0.00E+00	2.90E+00
Zr-95	<2.80E+00	0.00E+00	2.80E+00
Nb-95	<2.01E+00	0.00E+00	2.01E+00
I-131	<1.07E+01	0.00E+00	1.07E+01
Cs-134	<1.50E+00	0.00E+00	1.50E+00
Cs-137	<1.51E+00	0.00E+00	1.51E+00
BaLa-140	<4.85E+00	0.00E+00	4.85E+00
H3SW	<8.00E+01	0.00E+00	1.78E+02

Sample ID: 496124 Sample Dates: 2/4/2019 - 3/4/2019

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<2.94E+00	0.00E+00	2.94E+00
Co-58	<3.57E+00	0.00E+00	3.57E+00
Fe-59	<7.23E+00	0.00E+00	7.23E+00
Co-60	<3.20E+00	0.00E+00	3.20E+00
Zn-65	<6.47E+00	0.00E+00	6.47E+00
Zr-95	<4.95E+00	0.00E+00	4.95E+00
Nb-95	<3.78E+00	0.00E+00	3.78E+00
I-131	<1.13E+01	0.00E+00	1.13E+01
Cs-134	<3.46E+00	0.00E+00	3.46E+00
Cs-137	<3.11E+00	0.00E+00	3.11E+00
BaLa-140	<8.86E+00	0.00E+00	8.86E+00
H3SW	<-7.4E+01	0.00E+00	1.87E+02

Sample ID: 497995 Sample Dates: 3/4/2019 - 4/1/2019

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<2.00E+00	0.00E+00	2.00E+00
Co-58	<2.47E+00	0.00E+00	2.47E+00
Fe-59	<5.64E+00	0.00E+00	5.64E+00
Co-60	<1.99E+00	0.00E+00	1.99E+00
Zn-65	<4.44E+00	0.00E+00	4.44E+00
Zr-95	<5.21E+00	0.00E+00	5.21E+00
Nb-95	<3.51E+00	0.00E+00	3.51E+00
I-131	<1.18E+01	0.00E+00	1.18E+01
Cs-134	<2.58E+00	0.00E+00	2.58E+00
Cs-137	<1.92E+00	0.00E+00	1.92E+00
BaLa-140	<6.99E+00	0.00E+00	6.99E+00
H3SW	<7.42E+01	0.00E+00	1.82E+02

Sample ID: 499846 Sample Dates: 4/1/2019 - 5/1/2019

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<1.96E+00	0.00E+00	1.96E+00
Co-58	<2.26E+00	0.00E+00	2.26E+00
Fe-59	<4.31E+00	0.00E+00	4.31E+00
Co-60	<1.57E+00	0.00E+00	1.57E+00
Zn-65	<4.49E+00	0.00E+00	4.49E+00
Zr-95	<3.63E+00	0.00E+00	3.63E+00
Nb-95	<2.89E+00	0.00E+00	2.89E+00

BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 401 [INDICATOR - SSW @ 4.9 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
499846	4/1/2019 - 5/1/2019	I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<2.12E+00	0.00E+00	2.12E+00
		Cs-137	<1.51E+00	0.00E+00	1.51E+00
		BaLa-140	<6.29E+00	0.00E+00	6.29E+00
		H3SW	<-3.6E+01	0.00E+00	1.89E+02
501099	5/1/2019 - 6/3/2019	Mn-54	<1.28E+00	0.00E+00	1.28E+00
		Co-58	<1.41E+00	0.00E+00	1.41E+00
		Fe-59	<3.17E+00	0.00E+00	3.17E+00
		Co-60	<1.33E+00	0.00E+00	1.33E+00
		Zn-65	<3.20E+00	0.00E+00	3.20E+00
		Zr-95	<2.34E+00	0.00E+00	2.34E+00
		Nb-95	<1.85E+00	0.00E+00	1.85E+00
		I-131	<9.57E+00	0.00E+00	9.57E+00
		Cs-134	<1.46E+00	0.00E+00	1.46E+00
		Cs-137	<1.05E+00	0.00E+00	1.05E+00
		BaLa-140	<4.64E+00	0.00E+00	4.64E+00
		H3SW	<-2.6E+01	0.00E+00	1.93E+02
		503355	6/3/2019 - 7/2/2019	Mn-54	<1.84E+00
Co-58	<2.24E+00			0.00E+00	2.24E+00
Fe-59	<5.02E+00			0.00E+00	5.02E+00
Co-60	<2.23E+00			0.00E+00	2.23E+00
Zn-65	<4.00E+00			0.00E+00	4.00E+00
Zr-95	<4.13E+00			0.00E+00	4.13E+00
Nb-95	<1.99E+00			0.00E+00	1.99E+00
I-131	<1.07E+01			0.00E+00	1.07E+01
Cs-134	<2.13E+00			0.00E+00	2.13E+00
Cs-137	<1.73E+00			0.00E+00	1.73E+00
BaLa-140	<6.79E+00			0.00E+00	6.79E+00
H3SW	<4.05E+01			0.00E+00	1.87E+02
504623	7/2/2019 - 8/1/2019			Mn-54	<1.17E+00
		Co-58	<1.48E+00	0.00E+00	1.48E+00
		Fe-59	<3.40E+00	0.00E+00	3.40E+00
		Co-60	<1.13E+00	0.00E+00	1.13E+00
		Zn-65	<2.34E+00	0.00E+00	2.34E+00
		Zr-95	<2.70E+00	0.00E+00	2.70E+00
		Nb-95	<2.05E+00	0.00E+00	2.05E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<1.45E+00	0.00E+00	1.45E+00
		Cs-137	<9.97E-01	0.00E+00	9.97E-01
		BaLa-140	<4.33E+00	0.00E+00	4.33E+00
		H3SW	<7.52E+01	0.00E+00	1.92E+02
		505829	8/1/2019 - 9/3/2019	Mn-54	<1.63E+00
Co-58	<1.94E+00			0.00E+00	1.94E+00
Fe-59	<4.42E+00			0.00E+00	4.42E+00
Co-60	<1.22E+00			0.00E+00	1.22E+00
Zn-65	<4.64E+00			0.00E+00	4.64E+00
Zr-95	<3.68E+00			0.00E+00	3.68E+00
Nb-95	<2.42E+00			0.00E+00	2.42E+00
I-131	<1.14E+01			0.00E+00	1.14E+01
Cs-134	<1.70E+00			0.00E+00	1.70E+00
Cs-137	<1.65E+00			0.00E+00	1.65E+00
BaLa-140	<5.98E+00			0.00E+00	5.98E+00
H3SW	<5.42E+01			0.00E+00	1.91E+02
508327	9/3/2019 - 10/1/2019			Mn-54	<2.13E+00
		Co-58	<2.44E+00	0.00E+00	2.44E+00



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 401 [INDICATOR - SSW @ 4.9 miles]

Sample ID:	508327	Sample Dates:	9/3/2019 - 10/1/2019	Nuclide	Activity	2 Sigma Error	MDA
				Fe-59	<4.94E+00	0.00E+00	4.94E+00
				Co-60	<1.96E+00	0.00E+00	1.96E+00
				Zn-65	<4.76E+00	0.00E+00	4.76E+00
				Zr-95	<4.24E+00	0.00E+00	4.24E+00
				Nb-95	<3.17E+00	0.00E+00	3.17E+00
				I-131	<1.06E+01	0.00E+00	1.06E+01
				Cs-134	<2.32E+00	0.00E+00	2.32E+00
				Cs-137	<1.80E+00	0.00E+00	1.80E+00
				BaLa-140	<5.78E+00	0.00E+00	5.78E+00
				H3SW	<2.36E+00	0.00E+00	1.90E+02

Sample ID:	510796	Sample Dates:	10/1/2019 - 11/4/2019	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<1.69E+00	0.00E+00	1.69E+00
				Co-58	<1.85E+00	0.00E+00	1.85E+00
				Fe-59	<4.08E+00	0.00E+00	4.08E+00
				Co-60	<1.59E+00	0.00E+00	1.59E+00
				Zn-65	<3.73E+00	0.00E+00	3.73E+00
				Zr-95	<3.79E+00	0.00E+00	3.79E+00
				Nb-95	<2.44E+00	0.00E+00	2.44E+00
				I-131	<9.95E+00	0.00E+00	9.95E+00
				Cs-134	<1.95E+00	0.00E+00	1.95E+00
				Cs-137	<1.55E+00	0.00E+00	1.55E+00
				BaLa-140	<4.40E+00	0.00E+00	4.40E+00
				H3SW	<7.13E+01	0.00E+00	1.91E+02

Sample ID:	513909	Sample Dates:	11/4/2019 - 12/2/2019	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<1.99E+00	0.00E+00	1.99E+00
				Co-58	<2.58E+00	0.00E+00	2.58E+00
				Fe-59	<5.63E+00	0.00E+00	5.63E+00
				Co-60	<2.21E+00	0.00E+00	2.21E+00
				Zn-65	<5.50E+00	0.00E+00	5.50E+00
				Zr-95	<4.54E+00	0.00E+00	4.54E+00
				Nb-95	<3.24E+00	0.00E+00	3.24E+00
				I-131	<1.18E+01	0.00E+00	1.18E+01
				Cs-134	<2.66E+00	0.00E+00	2.66E+00
				Cs-137	<2.19E+00	0.00E+00	2.19E+00
				BaLa-140	<6.16E+00	0.00E+00	6.16E+00
				H3SW	<1.66E+01	0.00E+00	1.81E+02

Sample ID:	515225	Sample Dates:	12/2/2019 - 1/2/2020	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<1.60E+00	0.00E+00	1.60E+00
				Co-58	<2.14E+00	0.00E+00	2.14E+00
				Fe-59	<5.05E+00	0.00E+00	5.05E+00
				Co-60	<1.91E+00	0.00E+00	1.91E+00
				Zn-65	<3.76E+00	0.00E+00	3.76E+00
				Zr-95	<3.43E+00	0.00E+00	3.43E+00
				Nb-95	<2.75E+00	0.00E+00	2.75E+00
				I-131	<9.86E+00	0.00E+00	9.86E+00
				Cs-134	<1.95E+00	0.00E+00	1.95E+00
				Cs-137	<1.67E+00	0.00E+00	1.67E+00
				BaLa-140	<5.33E+00	0.00E+00	5.33E+00
				H3SW	<7.49E+01	0.00E+00	1.91E+02

Sample Point 494 [INDICATOR - -- @ 0 miles]

Sample ID:	491350	Sample Dates:	1/9/2019 - 1/9/2019	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<5.19E+00	0.00E+00	5.19E+00
				Co-58	<5.53E+00	0.00E+00	5.53E+00
				Fe-59	<1.48E+01	0.00E+00	1.48E+01
				Co-60	<3.90E+00	0.00E+00	3.90E+00
				Zn-65	<1.24E+01	0.00E+00	1.24E+01
				Zr-95	<1.19E+01	0.00E+00	1.19E+01
				Nb-95	<6.70E+00	0.00E+00	6.70E+00
				I-131	<9.03E+00	0.00E+00	9.03E+00



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 494 [INDICATOR - -- @ 0 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
491350	1/9/2019 - 1/9/2019	Cs-134	<6.72E+00	0.00E+00	6.72E+00
		Cs-137	<6.83E+00	0.00E+00	6.83E+00
		BaLa-140	<7.12E+00	0.00E+00	7.12E+00
		Total-Gam	0.00E+00		
		H3SW	<1.02E+02	0.00E+00	1.78E+02
492834	2/13/2019 - 2/13/2019	Mn-54	<5.88E+00	0.00E+00	5.88E+00
		Co-58	<5.85E+00	0.00E+00	5.85E+00
		Fe-59	<1.15E+01	0.00E+00	1.15E+01
		Co-60	<4.97E+00	0.00E+00	4.97E+00
		Zn-65	<1.28E+01	0.00E+00	1.28E+01
		Zr-95	<7.86E+00	0.00E+00	7.86E+00
		Nb-95	<5.06E+00	0.00E+00	5.06E+00
		I-131	<7.63E+00	0.00E+00	7.63E+00
		Cs-134	<5.19E+00	0.00E+00	5.19E+00
		Cs-137	<7.23E+00	0.00E+00	7.23E+00
		BaLa-140	<8.12E+00	0.00E+00	8.12E+00
		Total-Gam	0.00E+00		
		H3SW	<9.39E+01	0.00E+00	1.82E+02
		494293	3/13/2019 - 3/13/2019	Mn-54	<4.38E+00
Co-58	<3.90E+00			0.00E+00	3.90E+00
Fe-59	<7.35E+00			0.00E+00	7.35E+00
Co-60	<4.46E+00			0.00E+00	4.46E+00
Zn-65	<1.28E+01			0.00E+00	1.28E+01
Zr-95	<1.01E+01			0.00E+00	1.01E+01
Nb-95	<5.19E+00			0.00E+00	5.19E+00
I-131	<6.26E+00			0.00E+00	6.26E+00
Cs-134	<6.36E+00			0.00E+00	6.36E+00
Cs-137	<5.87E+00			0.00E+00	5.87E+00
BaLa-140	<9.07E+00			0.00E+00	9.07E+00
Total-Gam	0.00E+00				
H3SW	<4.02E+01			0.00E+00	1.85E+02
496675	4/17/2019 - 4/17/2019			Mn-54	<6.19E+00
		Co-58	<5.44E+00	0.00E+00	5.44E+00
		Fe-59	<1.06E+01	0.00E+00	1.06E+01
		Co-60	<6.71E+00	0.00E+00	6.71E+00
		Zn-65	<1.12E+01	0.00E+00	1.12E+01
		Zr-95	<9.05E+00	0.00E+00	9.05E+00
		Nb-95	<6.00E+00	0.00E+00	6.00E+00
		I-131	<8.24E+00	0.00E+00	8.24E+00
		Cs-134	<6.19E+00	0.00E+00	6.19E+00
		Cs-137	<7.10E+00	0.00E+00	7.10E+00
		BaLa-140	<6.84E+00	0.00E+00	6.84E+00
		Total-Gam	0.00E+00		
		H3SW	<5.90E+01	0.00E+00	1.81E+02
		498719	5/9/2019 - 5/9/2019	Mn-54	<6.75E+00
Co-58	<6.08E+00			0.00E+00	6.08E+00
Fe-59	<1.04E+01			0.00E+00	1.04E+01
Co-60	<5.36E+00			0.00E+00	5.36E+00
Zn-65	<1.12E+01			0.00E+00	1.12E+01
Zr-95	<9.81E+00			0.00E+00	9.81E+00
Nb-95	<4.86E+00			0.00E+00	4.86E+00
I-131	<5.97E+00			0.00E+00	5.97E+00
Cs-134	<6.44E+00			0.00E+00	6.44E+00
Cs-137	<6.01E+00			0.00E+00	6.01E+00
BaLa-140	<6.42E+00			0.00E+00	6.42E+00
Total-Gam	0.00E+00				



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 494 [INDICATOR - -- @ 0 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
498719	5/9/2019 - 5/9/2019	H3SW	<-2.9E+01	0.00E+00	1.89E+02
500509	6/17/2019 - 6/17/2019	Mn-54	<4.44E+00	0.00E+00	4.44E+00
		Co-58	<5.92E+00	0.00E+00	5.92E+00
		Fe-59	<1.18E+01	0.00E+00	1.18E+01
		Co-60	<5.36E+00	0.00E+00	5.36E+00
		Zn-65	<1.18E+01	0.00E+00	1.18E+01
		Zr-95	<8.21E+00	0.00E+00	8.21E+00
		Nb-95	<4.86E+00	0.00E+00	4.86E+00
		I-131	<6.39E+00	0.00E+00	6.39E+00
		Cs-134	<6.42E+00	0.00E+00	6.42E+00
		Cs-137	<5.38E+00	0.00E+00	5.38E+00
		BaLa-140	<8.41E+00	0.00E+00	8.41E+00
		Total-Gam	0.00E+00		
		H3SW	<3.80E+01	0.00E+00	2.05E+02
502326	7/17/2019 - 7/17/2019	Mn-54	<5.88E+00	0.00E+00	5.88E+00
		Co-58	<5.17E+00	0.00E+00	5.17E+00
		Fe-59	<1.01E+01	0.00E+00	1.01E+01
		Co-60	<6.01E+00	0.00E+00	6.01E+00
		Zn-65	<1.07E+01	0.00E+00	1.07E+01
		Zr-95	<1.02E+01	0.00E+00	1.02E+01
		Nb-95	<5.47E+00	0.00E+00	5.47E+00
		I-131	<8.87E+00	0.00E+00	8.87E+00
		Cs-134	<5.07E+00	0.00E+00	5.07E+00
		Cs-137	<4.90E+00	0.00E+00	4.90E+00
		BaLa-140	<5.14E+00	0.00E+00	5.14E+00
		Total-Gam	0.00E+00		
		H3SW	<1.55E+02	0.00E+00	2.01E+02
504391	8/14/2019 - 8/14/2019	Mn-54	<5.70E+00	0.00E+00	5.70E+00
		Co-58	<6.41E+00	0.00E+00	6.41E+00
		Fe-59	<1.16E+01	0.00E+00	1.16E+01
		Co-60	<5.43E+00	0.00E+00	5.43E+00
		Zn-65	<1.22E+01	0.00E+00	1.22E+01
		Zr-95	<9.52E+00	0.00E+00	9.52E+00
		Nb-95	<6.13E+00	0.00E+00	6.13E+00
		I-131	<6.91E+00	0.00E+00	6.91E+00
		Cs-134	<5.93E+00	0.00E+00	5.93E+00
		Cs-137	<6.20E+00	0.00E+00	6.20E+00
		BaLa-140	<8.97E+00	0.00E+00	8.97E+00
		Total-Gam	0.00E+00		
		H3SW	<2.66E+01	0.00E+00	1.96E+02
505646	9/17/2019 - 9/17/2019	Mn-54	<6.39E+00	0.00E+00	6.39E+00
		Co-58	<5.82E+00	0.00E+00	5.82E+00
		Fe-59	<1.22E+01	0.00E+00	1.22E+01
		Co-60	<6.41E+00	0.00E+00	6.41E+00
		Zn-65	<9.83E+00	0.00E+00	9.83E+00
		Zr-95	<9.76E+00	0.00E+00	9.76E+00
		Nb-95	<6.35E+00	0.00E+00	6.35E+00
		I-131	<6.12E+00	0.00E+00	6.12E+00
		Cs-134	<6.78E+00	0.00E+00	6.78E+00
		Cs-137	<5.32E+00	0.00E+00	5.32E+00
		BaLa-140	<6.05E+00	0.00E+00	6.05E+00
		Total-Gam	0.00E+00		
		H3SW	<-7.0E+00	0.00E+00	1.87E+02
508238	10/17/2019 - 10/17/2019	Mn-54	<6.05E+00	0.00E+00	6.05E+00
		Co-58	<4.96E+00	0.00E+00	4.96E+00



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 494 [INDICATOR - -- @ 0 miles]

Sample ID: 508238 Sample Dates: 10/17/2019 - 10/17/2019

Nuclide	Activity	2 Sigma Error	MDA
Fe-59	<6.35E+00	0.00E+00	6.35E+00
Co-60	<3.05E+00	0.00E+00	3.05E+00
Zn-65	<1.22E+01	0.00E+00	1.22E+01
Zr-95	<1.11E+01	0.00E+00	1.11E+01
Nb-95	<4.97E+00	0.00E+00	4.97E+00
I-131	<8.22E+00	0.00E+00	8.22E+00
Cs-134	<5.93E+00	0.00E+00	5.93E+00
Cs-137	<6.51E+00	0.00E+00	6.51E+00
BaLa-140	<6.01E+00	0.00E+00	6.01E+00
Total-Gam	0.00E+00		
H3SW	<-1.2E+02	0.00E+00	1.97E+02

Sample ID: 510766 Sample Dates: 11/20/2019 - 11/20/2019

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<6.26E+00	0.00E+00	6.26E+00
Co-58	<6.79E+00	0.00E+00	6.79E+00
Fe-59	<1.19E+01	0.00E+00	1.19E+01
Co-60	<6.42E+00	0.00E+00	6.42E+00
Zn-65	<1.26E+01	0.00E+00	1.26E+01
Zr-95	<1.12E+01	0.00E+00	1.12E+01
Nb-95	<7.21E+00	0.00E+00	7.21E+00
I-131	<9.62E+00	0.00E+00	9.62E+00
Cs-134	<7.59E+00	0.00E+00	7.59E+00
Cs-137	<4.89E+00	0.00E+00	4.89E+00
BaLa-140	<6.49E+00	0.00E+00	6.49E+00
Total-Gam	0.00E+00		
H3SW	<6.90E+01	0.00E+00	1.92E+02

Sample ID: 512400 Sample Dates: 12/18/2019 - 12/18/2019

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<4.90E+00	0.00E+00	4.90E+00
Co-58	<6.66E+00	0.00E+00	6.66E+00
Fe-59	<1.11E+01	0.00E+00	1.11E+01
Co-60	<5.66E+00	0.00E+00	5.66E+00
Zn-65	<1.10E+01	0.00E+00	1.10E+01
Zr-95	<1.12E+01	0.00E+00	1.12E+01
Nb-95	<6.03E+00	0.00E+00	6.03E+00
I-131	<7.64E+00	0.00E+00	7.64E+00
Cs-134	<7.45E+00	0.00E+00	7.45E+00
Cs-137	<6.00E+00	0.00E+00	6.00E+00
BaLa-140	<8.75E+00	0.00E+00	8.75E+00
Total-Gam	0.00E+00		
H3SW	<-4.8E+00	0.00E+00	1.94E+02

Sample Point 495 [INDICATOR - -- @ 0 miles]

Sample ID: 491351 Sample Dates: 1/9/2019 - 1/9/2019

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<6.39E+00	0.00E+00	6.39E+00
Co-58	<4.20E+00	0.00E+00	4.20E+00
Fe-59	<1.09E+01	0.00E+00	1.09E+01
Co-60	<6.90E+00	0.00E+00	6.90E+00
Zn-65	<1.33E+01	0.00E+00	1.33E+01
Zr-95	<1.14E+01	0.00E+00	1.14E+01
Nb-95	<7.02E+00	0.00E+00	7.02E+00
I-131	<8.62E+00	0.00E+00	8.62E+00
Cs-134	<6.77E+00	0.00E+00	6.77E+00
Cs-137	<6.04E+00	0.00E+00	6.04E+00
BaLa-140	<7.79E+00	0.00E+00	7.79E+00
Total-Gam	0.00E+00		
H3SW	<2.36E+00	0.00E+00	1.77E+02

Sample ID: 492835 Sample Dates: 2/13/2019 - 2/13/2019

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<6.41E+00	0.00E+00	6.41E+00
Co-58	<5.46E+00	0.00E+00	5.46E+00
Fe-59	<9.75E+00	0.00E+00	9.75E+00
Co-60	<6.21E+00	0.00E+00	6.21E+00



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 495 [INDICATOR - -- @ 0 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA		
492835	2/13/2019 - 2/13/2019	Zn-65	<1.10E+01	0.00E+00	1.10E+01		
		Zr-95	<9.15E+00	0.00E+00	9.15E+00		
		Nb-95	<4.57E+00	0.00E+00	4.57E+00		
		I-131	<7.79E+00	0.00E+00	7.79E+00		
		Cs-134	<4.30E+00	0.00E+00	4.30E+00		
		Cs-137	<3.07E+00	0.00E+00	3.07E+00		
		BaLa-140	<7.28E+00	0.00E+00	7.28E+00		
		Total-Gam	0.00E+00				
		H3SW	<2.82E+01	0.00E+00	1.82E+02		
		494294	3/13/2019 - 3/13/2019	Mn-54	<6.43E+00	0.00E+00	6.43E+00
Co-58	<6.91E+00			0.00E+00	6.91E+00		
Fe-59	<1.17E+01			0.00E+00	1.17E+01		
Co-60	<5.61E+00			0.00E+00	5.61E+00		
Zn-65	<1.42E+01			0.00E+00	1.42E+01		
Zr-95	<1.04E+01			0.00E+00	1.04E+01		
Nb-95	<6.39E+00			0.00E+00	6.39E+00		
I-131	<7.99E+00			0.00E+00	7.99E+00		
Cs-134	<5.89E+00			0.00E+00	5.89E+00		
Cs-137	<5.52E+00			0.00E+00	5.52E+00		
BaLa-140	<7.99E+00			0.00E+00	7.99E+00		
Total-Gam	0.00E+00						
H3SW	<3.14E+01			0.00E+00	1.86E+02		
496677	4/17/2019 - 4/17/2019			Mn-54	<4.88E+00	0.00E+00	4.88E+00
				Co-58	<5.47E+00	0.00E+00	5.47E+00
		Fe-59	<9.79E+00	0.00E+00	9.79E+00		
		Co-60	<4.45E+00	0.00E+00	4.45E+00		
		Zn-65	<1.22E+01	0.00E+00	1.22E+01		
		Zr-95	<8.78E+00	0.00E+00	8.78E+00		
		Nb-95	<6.15E+00	0.00E+00	6.15E+00		
		I-131	<7.44E+00	0.00E+00	7.44E+00		
		Cs-134	<6.17E+00	0.00E+00	6.17E+00		
		Cs-137	<4.96E+00	0.00E+00	4.96E+00		
		BaLa-140	<1.09E+01	0.00E+00	1.09E+01		
		Total-Gam	0.00E+00				
		H3SW	<1.16E+02	0.00E+00	1.81E+02		
		498720	5/9/2019 - 5/9/2019	Mn-54	<5.28E+00	0.00E+00	5.28E+00
				Co-58	<4.23E+00	0.00E+00	4.23E+00
Fe-59	<8.84E+00			0.00E+00	8.84E+00		
Co-60	<7.44E+00			0.00E+00	7.44E+00		
Zn-65	<8.51E+00			0.00E+00	8.51E+00		
Zr-95	<8.93E+00			0.00E+00	8.93E+00		
Nb-95	<4.23E+00			0.00E+00	4.23E+00		
I-131	<8.02E+00			0.00E+00	8.02E+00		
Cs-134	<5.33E+00			0.00E+00	5.33E+00		
Cs-137	<7.26E+00			0.00E+00	7.26E+00		
BaLa-140	<9.02E+00			0.00E+00	9.02E+00		
Total-Gam	0.00E+00						
H3SW	<1.2E+02			0.00E+00	1.89E+02		
500510	6/17/2019 - 6/17/2019			Mn-54	<4.36E+00	0.00E+00	4.36E+00
				Co-58	<5.06E+00	0.00E+00	5.06E+00
		Fe-59	<1.23E+01	0.00E+00	1.23E+01		
		Co-60	<4.44E+00	0.00E+00	4.44E+00		
		Zn-65	<1.02E+01	0.00E+00	1.02E+01		
		Zr-95	<7.58E+00	0.00E+00	7.58E+00		
		Nb-95	<4.25E+00	0.00E+00	4.25E+00		
		I-131	<5.30E+00	0.00E+00	5.30E+00		
		Cs-134	<5.69E+00	0.00E+00	5.69E+00		



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 495 [INDICATOR - -- @ 0 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500510	6/17/2019 - 6/17/2019	Cs-137	<3.42E+00	0.00E+00	3.42E+00
		BaLa-140	<5.13E+00	0.00E+00	5.13E+00
		Total-Gam	0.00E+00		
		H3SW	<-7.6E+01	0.00E+00	2.04E+02
502327	7/17/2019 - 7/17/2019	Mn-54	<4.87E+00	0.00E+00	4.87E+00
		Co-58	<6.74E+00	0.00E+00	6.74E+00
		Fe-59	<1.21E+01	0.00E+00	1.21E+01
		Co-60	<6.57E+00	0.00E+00	6.57E+00
		Zn-65	<1.04E+01	0.00E+00	1.04E+01
		Zr-95	<1.05E+01	0.00E+00	1.05E+01
		Nb-95	<5.92E+00	0.00E+00	5.92E+00
		I-131	<7.99E+00	0.00E+00	7.99E+00
		Cs-134	<5.45E+00	0.00E+00	5.45E+00
		Cs-137	<6.51E+00	0.00E+00	6.51E+00
		BaLa-140	<6.30E+00	0.00E+00	6.30E+00
		Total-Gam	0.00E+00		
		H3SW	<4.84E+00	0.00E+00	2.00E+02
504392	8/14/2019 - 8/14/2019	Mn-54	<6.08E+00	0.00E+00	6.08E+00
		Co-58	<5.88E+00	0.00E+00	5.88E+00
		Fe-59	<1.31E+01	0.00E+00	1.31E+01
		Co-60	<5.85E+00	0.00E+00	5.85E+00
		Zn-65	<9.65E+00	0.00E+00	9.65E+00
		Zr-95	<1.18E+01	0.00E+00	1.18E+01
		Nb-95	<6.69E+00	0.00E+00	6.69E+00
		I-131	<9.91E+00	0.00E+00	9.91E+00
		Cs-134	<7.54E+00	0.00E+00	7.54E+00
		Cs-137	<5.72E+00	0.00E+00	5.72E+00
		BaLa-140	<9.68E+00	0.00E+00	9.68E+00
		Total-Gam	0.00E+00		
		H3SW	<-6.5E+01	0.00E+00	1.96E+02
505647	9/17/2019 - 9/17/2019	Mn-54	<4.83E+00	0.00E+00	4.83E+00
		Co-58	<5.24E+00	0.00E+00	5.24E+00
		Fe-59	<1.18E+01	0.00E+00	1.18E+01
		Co-60	<6.21E+00	0.00E+00	6.21E+00
		Zn-65	<1.21E+01	0.00E+00	1.21E+01
		Zr-95	<8.36E+00	0.00E+00	8.36E+00
		Nb-95	<4.88E+00	0.00E+00	4.88E+00
		I-131	<3.57E+00	0.00E+00	3.57E+00
		Cs-134	<5.17E+00	0.00E+00	5.17E+00
		Cs-137	<5.33E+00	0.00E+00	5.33E+00
		BaLa-140	<5.86E+00	0.00E+00	5.86E+00
		Total-Gam	0.00E+00		
		H3SW	<-1.4E+01	0.00E+00	1.83E+02
508239	10/17/2019 - 10/17/2019	Mn-54	<6.05E+00	0.00E+00	6.05E+00
		Co-58	<4.03E+00	0.00E+00	4.03E+00
		Fe-59	<1.11E+01	0.00E+00	1.11E+01
		Co-60	<3.96E+00	0.00E+00	3.96E+00
		Zn-65	<1.37E+01	0.00E+00	1.37E+01
		Zr-95	<1.11E+01	0.00E+00	1.11E+01
		Nb-95	<6.56E+00	0.00E+00	6.56E+00
		I-131	<6.58E+00	0.00E+00	6.58E+00
		Cs-134	<6.99E+00	0.00E+00	6.99E+00
		Cs-137	<4.41E+00	0.00E+00	4.41E+00
		BaLa-140	<6.15E+00	0.00E+00	6.15E+00
		Total-Gam	0.00E+00		
		H3SW	<-1.0E+02	0.00E+00	1.98E+02



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 495 [INDICATOR - -- @ 0 miles]

Sample ID: 510767 Sample Dates: 11/20/2019 - 11/20/2019

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<4.48E+00	0.00E+00	4.48E+00
Co-58	<5.17E+00	0.00E+00	5.17E+00
Fe-59	<1.19E+01	0.00E+00	1.19E+01
Co-60	<6.30E+00	0.00E+00	6.30E+00
Zn-65	<1.19E+01	0.00E+00	1.19E+01
Zr-95	<1.14E+01	0.00E+00	1.14E+01
Nb-95	<7.02E+00	0.00E+00	7.02E+00
I-131	<8.39E+00	0.00E+00	8.39E+00
Cs-134	<5.01E+00	0.00E+00	5.01E+00
Cs-137	<6.40E+00	0.00E+00	6.40E+00
BaLa-140	<8.71E+00	0.00E+00	8.71E+00
Total-Gam	0.00E+00		
H3SW	<-7.1E+00	0.00E+00	1.92E+02

Sample ID: 512401 Sample Dates: 12/18/2019 - 12/18/2019

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<5.87E+00	0.00E+00	5.87E+00
Co-58	<6.99E+00	0.00E+00	6.99E+00
Fe-59	<1.24E+01	0.00E+00	1.24E+01
Co-60	<6.22E+00	0.00E+00	6.22E+00
Zn-65	<1.22E+01	0.00E+00	1.22E+01
Zr-95	<9.02E+00	0.00E+00	9.02E+00
Nb-95	<7.71E+00	0.00E+00	7.71E+00
I-131	<8.41E+00	0.00E+00	8.41E+00
Cs-134	<6.57E+00	0.00E+00	6.57E+00
Cs-137	<7.09E+00	0.00E+00	7.09E+00
BaLa-140	<6.87E+00	0.00E+00	6.87E+00
Total-Gam	0.00E+00		
H3SW	<-4.8E+00	0.00E+00	1.91E+02

Sample Point 496 [INDICATOR - -- @ 0 miles]

Sample ID: 491352 Sample Dates: 1/9/2019 - 1/9/2019

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<4.64E+00	0.00E+00	4.64E+00
Co-58	<5.42E+00	0.00E+00	5.42E+00
Fe-59	<1.19E+01	0.00E+00	1.19E+01
Co-60	<4.96E+00	0.00E+00	4.96E+00
Zn-65	<1.22E+01	0.00E+00	1.22E+01
Zr-95	<4.84E+00	0.00E+00	4.84E+00
Nb-95	<4.76E+00	0.00E+00	4.76E+00
I-131	<6.35E+00	0.00E+00	6.35E+00
Cs-134	<6.99E+00	0.00E+00	6.99E+00
Cs-137	<4.74E+00	0.00E+00	4.74E+00
BaLa-140	<9.15E+00	0.00E+00	9.15E+00
Total-Gam	0.00E+00		
H3SW	<4.03E+01	0.00E+00	1.78E+02

Sample ID: 492836 Sample Dates: 2/13/2019 - 2/13/2019

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<5.00E+00	0.00E+00	5.00E+00
Co-58	<5.63E+00	0.00E+00	5.63E+00
Fe-59	<1.05E+01	0.00E+00	1.05E+01
Co-60	<4.56E+00	0.00E+00	4.56E+00
Zn-65	<1.12E+01	0.00E+00	1.12E+01
Zr-95	<1.10E+01	0.00E+00	1.10E+01
Nb-95	<5.81E+00	0.00E+00	5.81E+00
I-131	<7.76E+00	0.00E+00	7.76E+00
Cs-134	<6.75E+00	0.00E+00	6.75E+00
Cs-137	<5.54E+00	0.00E+00	5.54E+00
BaLa-140	<9.20E+00	0.00E+00	9.20E+00
Total-Gam	0.00E+00		
H3SW	<3.76E+01	0.00E+00	1.82E+02

Sample ID: 494295 Sample Dates: 3/13/2019 - 3/13/2019

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<4.76E+00	0.00E+00	4.76E+00
Co-58	<4.86E+00	0.00E+00	4.86E+00



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 496 [INDICATOR - -- @ 0 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494295	3/13/2019 - 3/13/2019	Fe-59	<9.68E+00	0.00E+00	9.68E+00
		Co-60	<6.71E+00	0.00E+00	6.71E+00
		Zn-65	<1.26E+01	0.00E+00	1.26E+01
		Zr-95	<1.10E+01	0.00E+00	1.10E+01
		Nb-95	<5.88E+00	0.00E+00	5.88E+00
		I-131	<7.03E+00	0.00E+00	7.03E+00
		Cs-134	<7.77E+00	0.00E+00	7.77E+00
		Cs-137	<6.93E+00	0.00E+00	6.93E+00
		BaLa-140	<5.13E+00	0.00E+00	5.13E+00
		Total-Gam	0.00E+00		
		H3SW	<2.02E+01	0.00E+00	1.86E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
496679	4/17/2019 - 4/17/2019	Mn-54	<5.04E+00	0.00E+00	5.04E+00
		Co-58	<5.92E+00	0.00E+00	5.92E+00
		Fe-59	<1.13E+01	0.00E+00	1.13E+01
		Co-60	<6.71E+00	0.00E+00	6.71E+00
		Zn-65	<1.04E+01	0.00E+00	1.04E+01
		Zr-95	<1.18E+01	0.00E+00	1.18E+01
		Nb-95	<5.76E+00	0.00E+00	5.76E+00
		I-131	<8.57E+00	0.00E+00	8.57E+00
		Cs-134	<5.92E+00	0.00E+00	5.92E+00
		Cs-137	<6.58E+00	0.00E+00	6.58E+00
		BaLa-140	<8.82E+00	0.00E+00	8.82E+00
		Total-Gam	0.00E+00		
H3SW	<3.98E+01	0.00E+00	1.79E+02		

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
498721	5/9/2019 - 5/9/2019	Mn-54	<5.29E+00	0.00E+00	5.29E+00
		Co-58	<5.97E+00	0.00E+00	5.97E+00
		Fe-59	<1.02E+01	0.00E+00	1.02E+01
		Co-60	<6.22E+00	0.00E+00	6.22E+00
		Zn-65	<1.22E+01	0.00E+00	1.22E+01
		Zr-95	<1.13E+01	0.00E+00	1.13E+01
		Nb-95	<6.33E+00	0.00E+00	6.33E+00
		I-131	<8.04E+00	0.00E+00	8.04E+00
		Cs-134	<6.36E+00	0.00E+00	6.36E+00
		Cs-137	<5.33E+00	0.00E+00	5.33E+00
		BaLa-140	<4.69E+00	0.00E+00	4.69E+00
		Total-Gam	0.00E+00		
H3SW	<6.5E+01	0.00E+00	1.88E+02		

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500511	6/17/2019 - 6/17/2019	Mn-54	<5.63E+00	0.00E+00	5.63E+00
		Co-58	<6.19E+00	0.00E+00	6.19E+00
		Fe-59	<9.47E+00	0.00E+00	9.47E+00
		Co-60	<6.00E+00	0.00E+00	6.00E+00
		Zn-65	<1.25E+01	0.00E+00	1.25E+01
		Zr-95	<1.08E+01	0.00E+00	1.08E+01
		Nb-95	<5.66E+00	0.00E+00	5.66E+00
		I-131	<5.90E+00	0.00E+00	5.90E+00
		Cs-134	<5.34E+00	0.00E+00	5.34E+00
		Cs-137	<4.41E+00	0.00E+00	4.41E+00
		BaLa-140	<6.80E+00	0.00E+00	6.80E+00
		Total-Gam	0.00E+00		
H3SW	<2.36E+01	0.00E+00	2.03E+02		

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
502328	7/17/2019 - 7/17/2019	Mn-54	<5.62E+00	0.00E+00	5.62E+00
		Co-58	<6.20E+00	0.00E+00	6.20E+00
		Fe-59	<1.26E+01	0.00E+00	1.26E+01
		Co-60	<6.59E+00	0.00E+00	6.59E+00
		Zn-65	<1.21E+01	0.00E+00	1.21E+01
		Zr-95	<1.17E+01	0.00E+00	1.17E+01
Nb-95	<6.28E+00	0.00E+00	6.28E+00		



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 496 [INDICATOR - -- @ 0 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
502328	7/17/2019 - 7/17/2019	I-131	<1.03E+01	0.00E+00	1.03E+01
		Cs-134	<8.22E+00	0.00E+00	8.22E+00
		Cs-137	<5.01E+00	0.00E+00	5.01E+00
		BaLa-140	<8.41E+00	0.00E+00	8.41E+00
		Total-Gam	0.00E+00		
		H3SW	<0.00E+00	0.00E+00	2.00E+02
504393	8/14/2019 - 8/14/2019	Mn-54	<5.90E+00	0.00E+00	5.90E+00
		Co-58	<5.02E+00	0.00E+00	5.02E+00
		Fe-59	<1.04E+01	0.00E+00	1.04E+01
		Co-60	<5.42E+00	0.00E+00	5.42E+00
		Zn-65	<1.16E+01	0.00E+00	1.16E+01
		Zr-95	<5.67E+00	0.00E+00	5.67E+00
		Nb-95	<5.75E+00	0.00E+00	5.75E+00
		I-131	<7.74E+00	0.00E+00	7.74E+00
		Cs-134	<5.47E+00	0.00E+00	5.47E+00
		Cs-137	<5.16E+00	0.00E+00	5.16E+00
		BaLa-140	<5.02E+00	0.00E+00	5.02E+00
		Total-Gam	0.00E+00		
		H3SW	<-2.9E+01	0.00E+00	1.96E+02
		505648	9/17/2019 - 9/17/2019	Mn-54	<5.27E+00
Co-58	<5.04E+00			0.00E+00	5.04E+00
Fe-59	<9.76E+00			0.00E+00	9.76E+00
Co-60	<1.12E+00			0.00E+00	1.12E+00
Zn-65	<9.50E+00			0.00E+00	9.50E+00
Zr-95	<8.76E+00			0.00E+00	8.76E+00
Nb-95	<4.90E+00			0.00E+00	4.90E+00
I-131	<5.18E+00			0.00E+00	5.18E+00
Cs-134	<5.45E+00			0.00E+00	5.45E+00
Cs-137	<4.74E+00			0.00E+00	4.74E+00
BaLa-140	<5.86E+00			0.00E+00	5.86E+00
Total-Gam	0.00E+00				
H3SW	<6.81E+00			0.00E+00	1.83E+02
508240	10/17/2019 - 10/17/2019			Mn-54	<7.16E+00
		Co-58	<5.60E+00	0.00E+00	5.60E+00
		Fe-59	<1.14E+01	0.00E+00	1.14E+01
		Co-60	<6.90E+00	0.00E+00	6.90E+00
		Zn-65	<1.60E+01	0.00E+00	1.60E+01
		Zr-95	<1.13E+01	0.00E+00	1.13E+01
		Nb-95	<1.13E+01	0.00E+00	1.13E+01
		I-131	<8.41E+00	0.00E+00	8.41E+00
		Cs-134	<6.57E+00	0.00E+00	6.57E+00
		Cs-137	<6.95E+00	0.00E+00	6.95E+00
		BaLa-140	<7.73E+00	0.00E+00	7.73E+00
		Total-Gam	0.00E+00		
		H3SW	<-3.6E+01	0.00E+00	1.98E+02
		510768	11/20/2019 - 11/20/2019	Mn-54	<5.52E+00
Co-58	<3.95E+00			0.00E+00	3.95E+00
Fe-59	<1.20E+01			0.00E+00	1.20E+01
Co-60	<5.42E+00			0.00E+00	5.42E+00
Zn-65	<1.10E+01			0.00E+00	1.10E+01
Zr-95	<8.75E+00			0.00E+00	8.75E+00
Nb-95	<4.57E+00			0.00E+00	4.57E+00
I-131	<6.38E+00			0.00E+00	6.38E+00
Cs-134	<6.99E+00			0.00E+00	6.99E+00
Cs-137	<4.74E+00			0.00E+00	4.74E+00
BaLa-140	<6.27E+00			0.00E+00	6.27E+00
Total-Gam	0.00E+00				



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 496 [INDICATOR - -- @ 0 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
510768	11/20/2019 - 11/20/2019	H3SW	<-2.4E+00	0.00E+00	1.94E+02
512402	12/18/2019 - 12/18/2019	Mn-54	<6.04E+00	0.00E+00	6.04E+00
		Co-58	<6.16E+00	0.00E+00	6.16E+00
		Fe-59	<1.49E+01	0.00E+00	1.49E+01
		Co-60	<5.09E+00	0.00E+00	5.09E+00
		Zn-65	<1.31E+01	0.00E+00	1.31E+01
		Zr-95	<9.67E+00	0.00E+00	9.67E+00
		Nb-95	<7.36E+00	0.00E+00	7.36E+00
		I-131	<8.44E+00	0.00E+00	8.44E+00
		Cs-134	<6.56E+00	0.00E+00	6.56E+00
		Cs-137	<6.05E+00	0.00E+00	6.05E+00
		BaLa-140	<6.06E+00	0.00E+00	6.06E+00
		Total-Gam	0.00E+00		
		H3SW	<-1.3E+02	0.00E+00	1.93E+02

Sample Point 497 [INDICATOR - -- @ 0 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
491353	1/9/2019 - 1/9/2019	Mn-54	<5.03E+00	0.00E+00	5.03E+00
		Co-58	<5.13E+00	0.00E+00	5.13E+00
		Fe-59	<9.69E+00	0.00E+00	9.69E+00
		Co-60	<6.30E+00	0.00E+00	6.30E+00
		Zn-65	<1.04E+01	0.00E+00	1.04E+01
		Zr-95	<6.78E+00	0.00E+00	6.78E+00
		Nb-95	<7.10E+00	0.00E+00	7.10E+00
		I-131	<6.47E+00	0.00E+00	6.47E+00
		Cs-134	<5.63E+00	0.00E+00	5.63E+00
		Cs-137	<6.76E+00	0.00E+00	6.76E+00
		BaLa-140	<7.51E+00	0.00E+00	7.51E+00
		Total-Gam	0.00E+00		
		H3SW	<6.37E+01	0.00E+00	1.77E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492837	2/13/2019 - 2/13/2019	Mn-54	<5.30E+00	0.00E+00	5.30E+00
		Co-58	<5.01E+00	0.00E+00	5.01E+00
		Fe-59	<1.04E+01	0.00E+00	1.04E+01
		Co-60	<3.85E+00	0.00E+00	3.85E+00
		Zn-65	<1.22E+01	0.00E+00	1.22E+01
		Zr-95	<1.12E+01	0.00E+00	1.12E+01
		Nb-95	<6.48E+00	0.00E+00	6.48E+00
		I-131	<8.74E+00	0.00E+00	8.74E+00
		Cs-134	<6.78E+00	0.00E+00	6.78E+00
		Cs-137	<5.52E+00	0.00E+00	5.52E+00
		BaLa-140	<8.16E+00	0.00E+00	8.16E+00
		Total-Gam	0.00E+00		
		H3SW	<6.60E+01	0.00E+00	1.83E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494296	3/13/2019 - 3/13/2019	Mn-54	<6.05E+00	0.00E+00	6.05E+00
		Co-58	<5.12E+00	0.00E+00	5.12E+00
		Fe-59	<1.06E+01	0.00E+00	1.06E+01
		Co-60	<4.59E+00	0.00E+00	4.59E+00
		Zn-65	<1.26E+01	0.00E+00	1.26E+01
		Zr-95	<1.14E+01	0.00E+00	1.14E+01
		Nb-95	<6.39E+00	0.00E+00	6.39E+00
		I-131	<6.24E+00	0.00E+00	6.24E+00
		Cs-134	<6.35E+00	0.00E+00	6.35E+00
		Cs-137	<4.66E+00	0.00E+00	4.66E+00
		BaLa-140	<6.18E+00	0.00E+00	6.18E+00
		Total-Gam	0.00E+00		
		H3SW	<-1.8E+01	0.00E+00	1.84E+02



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 497 [INDICATOR - -- @ 0 miles]

Sample ID: 496681 Sample Dates: 4/17/2019 - 4/17/2019

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<4.87E+00	0.00E+00	4.87E+00
Co-58	<5.66E+00	0.00E+00	5.66E+00
Fe-59	<1.04E+01	0.00E+00	1.04E+01
Co-60	<3.85E+00	0.00E+00	3.85E+00
Zn-65	<1.28E+01	0.00E+00	1.28E+01
Zr-95	<7.88E+00	0.00E+00	7.88E+00
Nb-95	<5.07E+00	0.00E+00	5.07E+00
I-131	<8.23E+00	0.00E+00	8.23E+00
Cs-134	<5.19E+00	0.00E+00	5.19E+00
Cs-137	<6.20E+00	0.00E+00	6.20E+00
BaLa-140	<7.35E+00	0.00E+00	7.35E+00
Total-Gam	0.00E+00		
H3SW	<4.50E+01	0.00E+00	1.81E+02

Sample ID: 498722 Sample Dates: 5/9/2019 - 5/9/2019

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<5.21E+00	0.00E+00	5.21E+00
Co-58	<6.16E+00	0.00E+00	6.16E+00
Fe-59	<1.02E+01	0.00E+00	1.02E+01
Co-60	<5.02E+00	0.00E+00	5.02E+00
Zn-65	<1.18E+01	0.00E+00	1.18E+01
Zr-95	<1.14E+01	0.00E+00	1.14E+01
Nb-95	<6.90E+00	0.00E+00	6.90E+00
I-131	<7.43E+00	0.00E+00	7.43E+00
Cs-134	<5.84E+00	0.00E+00	5.84E+00
Cs-137	<5.51E+00	0.00E+00	5.51E+00
BaLa-140	<8.27E+00	0.00E+00	8.27E+00
Total-Gam	0.00E+00		
H3SW	<6.0E+01	0.00E+00	1.89E+02

Sample ID: 500512 Sample Dates: 6/17/2019 - 6/17/2019

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<6.36E+00	0.00E+00	6.36E+00
Co-58	<5.65E+00	0.00E+00	5.65E+00
Fe-59	<1.23E+01	0.00E+00	1.23E+01
Co-60	<6.20E+00	0.00E+00	6.20E+00
Zn-65	<1.37E+01	0.00E+00	1.37E+01
Zr-95	<8.00E+00	0.00E+00	8.00E+00
Nb-95	<5.50E+00	0.00E+00	5.50E+00
I-131	<5.02E+00	0.00E+00	5.02E+00
Cs-134	<5.19E+00	0.00E+00	5.19E+00
Cs-137	<5.90E+00	0.00E+00	5.90E+00
BaLa-140	<4.05E+00	0.00E+00	4.05E+00
Total-Gam	0.00E+00		
H3SW	<6.9E+01	0.00E+00	2.04E+02

Sample ID: 502329 Sample Dates: 7/17/2019 - 7/17/2019

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<7.46E+00	0.00E+00	7.46E+00
Co-58	<6.14E+00	0.00E+00	6.14E+00
Fe-59	<1.19E+01	0.00E+00	1.19E+01
Co-60	<7.45E+00	0.00E+00	7.45E+00
Zn-65	<1.12E+01	0.00E+00	1.12E+01
Zr-95	<8.03E+00	0.00E+00	8.03E+00
Nb-95	<6.85E+00	0.00E+00	6.85E+00
I-131	<8.35E+00	0.00E+00	8.35E+00
Cs-134	<6.44E+00	0.00E+00	6.44E+00
Cs-137	<4.35E+00	0.00E+00	4.35E+00
BaLa-140	<8.79E+00	0.00E+00	8.79E+00
Total-Gam	0.00E+00		
H3SW	<0.00E+00	0.00E+00	2.01E+02

Sample ID: 504394 Sample Dates: 8/14/2019 - 8/14/2019

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<6.40E+00	0.00E+00	6.40E+00
Co-58	<6.23E+00	0.00E+00	6.23E+00
Fe-59	<7.47E+00	0.00E+00	7.47E+00
Co-60	<5.43E+00	0.00E+00	5.43E+00
Zn-65	<1.22E+01	0.00E+00	1.22E+01



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 497 [INDICATOR - -- @ 0 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504394	8/14/2019 - 8/14/2019	Zr-95	<1.12E+01	0.00E+00	1.12E+01
		Nb-95	<6.83E+00	0.00E+00	6.83E+00
		I-131	<8.36E+00	0.00E+00	8.36E+00
		Cs-134	<5.65E+00	0.00E+00	5.65E+00
		Cs-137	<5.70E+00	0.00E+00	5.70E+00
		BaLa-140	<8.19E+00	0.00E+00	8.19E+00
		Total-Gam	0.00E+00		
		H3SW	<-7.5E+01	0.00E+00	1.97E+02
505649	9/17/2019 - 9/17/2019	Mn-54	<6.19E+00	0.00E+00	6.19E+00
		Co-58	<4.73E+00	0.00E+00	4.73E+00
		Fe-59	<1.17E+01	0.00E+00	1.17E+01
		Co-60	<6.39E+00	0.00E+00	6.39E+00
		Zn-65	<1.35E+01	0.00E+00	1.35E+01
		Zr-95	<1.01E+01	0.00E+00	1.01E+01
		Nb-95	<5.83E+00	0.00E+00	5.83E+00
		I-131	<5.17E+00	0.00E+00	5.17E+00
		Cs-134	<5.86E+00	0.00E+00	5.86E+00
		Cs-137	<4.66E+00	0.00E+00	4.66E+00
		BaLa-140	<5.20E+00	0.00E+00	5.20E+00
		Total-Gam	0.00E+00		
		H3SW	<-7.3E+01	0.00E+00	1.84E+02
508241	10/17/2019 - 10/17/2019	Mn-54	<7.25E+00	0.00E+00	7.25E+00
		Co-58	<6.38E+00	0.00E+00	6.38E+00
		Fe-59	<1.18E+01	0.00E+00	1.18E+01
		Co-60	<6.78E+00	0.00E+00	6.78E+00
		Zn-65	<1.20E+01	0.00E+00	1.20E+01
		Zr-95	<1.11E+01	0.00E+00	1.11E+01
		Nb-95	<7.41E+00	0.00E+00	7.41E+00
		I-131	<8.66E+00	0.00E+00	8.66E+00
		Cs-134	<8.29E+00	0.00E+00	8.29E+00
		Cs-137	<7.05E+00	0.00E+00	7.05E+00
		BaLa-140	<9.39E+00	0.00E+00	9.39E+00
		Total-Gam	0.00E+00		
		H3SW	<-1.5E+02	0.00E+00	1.97E+02
510769	11/20/2019 - 11/20/2019	Mn-54	<4.78E+00	0.00E+00	4.78E+00
		Co-58	<5.83E+00	0.00E+00	5.83E+00
		Fe-59	<1.00E+01	0.00E+00	1.00E+01
		Co-60	<7.42E+00	0.00E+00	7.42E+00
		Zn-65	<1.61E+01	0.00E+00	1.61E+01
		Zr-95	<1.05E+01	0.00E+00	1.05E+01
		Nb-95	<6.85E+00	0.00E+00	6.85E+00
		I-131	<7.24E+00	0.00E+00	7.24E+00
		Cs-134	<6.35E+00	0.00E+00	6.35E+00
		Cs-137	<6.75E+00	0.00E+00	6.75E+00
		BaLa-140	<6.43E+00	0.00E+00	6.43E+00
		Total-Gam	0.00E+00		
		H3SW	<0.00E+00	0.00E+00	1.93E+02
512403	12/18/2019 - 12/18/2019	Mn-54	<5.30E+00	0.00E+00	5.30E+00
		Co-58	<4.96E+00	0.00E+00	4.96E+00
		Fe-59	<8.92E+00	0.00E+00	8.92E+00
		Co-60	<7.20E+00	0.00E+00	7.20E+00
		Zn-65	<1.22E+01	0.00E+00	1.22E+01
		Zr-95	<7.80E+00	0.00E+00	7.80E+00
		Nb-95	<5.81E+00	0.00E+00	5.81E+00
		I-131	<6.67E+00	0.00E+00	6.67E+00
		Cs-134	<6.17E+00	0.00E+00	6.17E+00
		Cs-137	<5.36E+00	0.00E+00	5.36E+00



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 497 [INDICATOR - -- @ 0 miles]

Sample ID: 512403 Sample Dates: 12/18/2019 - 12/18/2019

Nuclide	Activity	2 Sigma Error	MDA
BaLa-140	<7.67E+00	0.00E+00	7.67E+00
Total-Gam	0.00E+00		
H3SW	<4.3E+01	0.00E+00	1.93E+02

Sample Point 498 [INDICATOR - -- @ 0 miles]

Sample ID: 491354 Sample Dates: 1/9/2019 - 1/9/2019

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<4.39E+00	0.00E+00	4.39E+00
Co-58	<6.37E+00	0.00E+00	6.37E+00
Fe-59	<1.19E+01	0.00E+00	1.19E+01
Co-60	<3.84E+00	0.00E+00	3.84E+00
Zn-65	<1.16E+01	0.00E+00	1.16E+01
Zr-95	<8.68E+00	0.00E+00	8.68E+00
Nb-95	<6.72E+00	0.00E+00	6.72E+00
I-131	<6.81E+00	0.00E+00	6.81E+00
Cs-134	<5.71E+00	0.00E+00	5.71E+00
Cs-137	<4.96E+00	0.00E+00	4.96E+00
BaLa-140	<9.12E+00	0.00E+00	9.12E+00
Total-Gam	0.00E+00		
H3SW	<8.52E+01	0.00E+00	1.78E+02

Sample ID: 492838 Sample Dates: 2/13/2019 - 2/13/2019

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<4.25E+00	0.00E+00	4.25E+00
Co-58	<6.42E+00	0.00E+00	6.42E+00
Fe-59	<1.00E+01	0.00E+00	1.00E+01
Co-60	<6.01E+00	0.00E+00	6.01E+00
Zn-65	<1.26E+01	0.00E+00	1.26E+01
Zr-95	<9.81E+00	0.00E+00	9.81E+00
Nb-95	<5.69E+00	0.00E+00	5.69E+00
I-131	<6.91E+00	0.00E+00	6.91E+00
Cs-134	<4.43E+00	0.00E+00	4.43E+00
Cs-137	<4.14E+00	0.00E+00	4.14E+00
BaLa-140	<5.12E+00	0.00E+00	5.12E+00
Total-Gam	0.00E+00		
H3SW	<4.93E+01	0.00E+00	1.82E+02

Sample ID: 494297 Sample Dates: 3/13/2019 - 3/13/2019

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<6.24E+00	0.00E+00	6.24E+00
Co-58	<4.33E+00	0.00E+00	4.33E+00
Fe-59	<1.17E+01	0.00E+00	1.17E+01
Co-60	<6.01E+00	0.00E+00	6.01E+00
Zn-65	<1.13E+01	0.00E+00	1.13E+01
Zr-95	<1.14E+01	0.00E+00	1.14E+01
Nb-95	<6.00E+00	0.00E+00	6.00E+00
I-131	<7.56E+00	0.00E+00	7.56E+00
Cs-134	<6.81E+00	0.00E+00	6.81E+00
Cs-137	<4.90E+00	0.00E+00	4.90E+00
BaLa-140	<7.13E+00	0.00E+00	7.13E+00
Total-Gam	0.00E+00		
H3SW	<2.67E+01	0.00E+00	1.84E+02

Sample ID: 496683 Sample Dates: 4/17/2019 - 4/17/2019

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<6.43E+00	0.00E+00	6.43E+00
Co-58	<7.55E+00	0.00E+00	7.55E+00
Fe-59	<1.21E+01	0.00E+00	1.21E+01
Co-60	<4.47E+00	0.00E+00	4.47E+00
Zn-65	<1.43E+01	0.00E+00	1.43E+01
Zr-95	<1.18E+01	0.00E+00	1.18E+01
Nb-95	<6.86E+00	0.00E+00	6.86E+00
I-131	<9.62E+00	0.00E+00	9.62E+00
Cs-134	<6.81E+00	0.00E+00	6.81E+00
Cs-137	<6.07E+00	0.00E+00	6.07E+00
BaLa-140	<1.09E+01	0.00E+00	1.09E+01
Total-Gam	0.00E+00		

BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 498 [INDICATOR - -- @ 0 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
496683	4/17/2019 - 4/17/2019	H3SW	<4.28E+01	0.00E+00	1.82E+02
498723	5/9/2019 - 5/9/2019	Mn-54	<5.66E+00	0.00E+00	5.66E+00
		Co-58	<4.86E+00	0.00E+00	4.86E+00
		Fe-59	<9.18E+00	0.00E+00	9.18E+00
		Co-60	<4.59E+00	0.00E+00	4.59E+00
		Zn-65	<6.99E+00	0.00E+00	6.99E+00
		Zr-95	<7.54E+00	0.00E+00	7.54E+00
		Nb-95	<5.78E+00	0.00E+00	5.78E+00
		I-131	<6.83E+00	0.00E+00	6.83E+00
		Cs-134	<6.57E+00	0.00E+00	6.57E+00
		Cs-137	<5.12E+00	0.00E+00	5.12E+00
		BaLa-140	<8.61E+00	0.00E+00	8.61E+00
		Total-Gam	0.00E+00		
		H3SW	<-3.8E+01	0.00E+00	1.89E+02
500513	6/17/2019 - 6/17/2019	Mn-54	<5.65E+00	0.00E+00	5.65E+00
		Co-58	<4.82E+00	0.00E+00	4.82E+00
		Fe-59	<9.80E+00	0.00E+00	9.80E+00
		Co-60	<5.42E+00	0.00E+00	5.42E+00
		Zn-65	<1.15E+01	0.00E+00	1.15E+01
		Zr-95	<9.79E+00	0.00E+00	9.79E+00
		Nb-95	<5.83E+00	0.00E+00	5.83E+00
		I-131	<5.26E+00	0.00E+00	5.26E+00
		Cs-134	<5.17E+00	0.00E+00	5.17E+00
		Cs-137	<5.14E+00	0.00E+00	5.14E+00
		BaLa-140	<7.21E+00	0.00E+00	7.21E+00
		Total-Gam	0.00E+00		
		H3SW	<-1.9E+01	0.00E+00	2.02E+02
502330	7/17/2019 - 7/17/2019	Mn-54	<5.47E+00	0.00E+00	5.47E+00
		Co-58	<4.92E+00	0.00E+00	4.92E+00
		Fe-59	<1.13E+01	0.00E+00	1.13E+01
		Co-60	<6.40E+00	0.00E+00	6.40E+00
		Zn-65	<1.32E+01	0.00E+00	1.32E+01
		Zr-95	<1.06E+01	0.00E+00	1.06E+01
		Nb-95	<6.70E+00	0.00E+00	6.70E+00
		I-131	<7.76E+00	0.00E+00	7.76E+00
		Cs-134	<5.36E+00	0.00E+00	5.36E+00
		Cs-137	<4.66E+00	0.00E+00	4.66E+00
		BaLa-140	<9.19E+00	0.00E+00	9.19E+00
		Total-Gam	0.00E+00		
		H3SW	<-7.2E+00	0.00E+00	1.98E+02
504395	8/14/2019 - 8/14/2019	Mn-54	<6.93E+00	0.00E+00	6.93E+00
		Co-58	<6.04E+00	0.00E+00	6.04E+00
		Fe-59	<1.13E+01	0.00E+00	1.13E+01
		Co-60	<3.14E+00	0.00E+00	3.14E+00
		Zn-65	<2.13E+01	0.00E+00	2.13E+01
		Zr-95	<8.60E+00	0.00E+00	8.60E+00
		Nb-95	<5.70E+00	0.00E+00	5.70E+00
		I-131	<7.40E+00	0.00E+00	7.40E+00
		Cs-134	<6.36E+00	0.00E+00	6.36E+00
		Cs-137	<5.91E+00	0.00E+00	5.91E+00
		BaLa-140	<9.90E+00	0.00E+00	9.90E+00
		Total-Gam	0.00E+00		
		H3SW	<-3.9E+01	0.00E+00	1.96E+02
505650	9/17/2019 - 9/17/2019	Mn-54	<4.99E+00	0.00E+00	4.99E+00
		Co-58	<5.90E+00	0.00E+00	5.90E+00



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 498 [INDICATOR - -- @ 0 miles]

Sample ID: 505650 Sample Dates: 9/17/2019 - 9/17/2019

Nuclide	Activity	2 Sigma Error	MDA
Fe-59	<9.22E+00	0.00E+00	9.22E+00
Co-60	<6.29E+00	0.00E+00	6.29E+00
Zn-65	<1.37E+01	0.00E+00	1.37E+01
Zr-95	<9.09E+00	0.00E+00	9.09E+00
Nb-95	<5.08E+00	0.00E+00	5.08E+00
I-131	<5.62E+00	0.00E+00	5.62E+00
Cs-134	<6.66E+00	0.00E+00	6.66E+00
Cs-137	<4.63E+00	0.00E+00	4.63E+00
BaLa-140	<7.05E+00	0.00E+00	7.05E+00
Total-Gam	0.00E+00		
H3SW	<-9.1E+00	0.00E+00	1.83E+02

Sample ID: 508242 Sample Dates: 10/17/2019 - 10/17/2019

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<5.48E+00	0.00E+00	5.48E+00
Co-58	<5.24E+00	0.00E+00	5.24E+00
Fe-59	<1.16E+01	0.00E+00	1.16E+01
Co-60	<6.73E+00	0.00E+00	6.73E+00
Zn-65	<1.42E+01	0.00E+00	1.42E+01
Zr-95	<1.19E+01	0.00E+00	1.19E+01
Nb-95	<7.12E+00	0.00E+00	7.12E+00
I-131	<8.96E+00	0.00E+00	8.96E+00
Cs-134	<7.18E+00	0.00E+00	7.18E+00
Cs-137	<5.80E+00	0.00E+00	5.80E+00
BaLa-140	<7.26E+00	0.00E+00	7.26E+00
Total-Gam	0.00E+00		
H3SW	<-3.3E+01	0.00E+00	1.97E+02

Sample ID: 510770 Sample Dates: 11/20/2019 - 11/20/2019

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<6.56E+00	0.00E+00	6.56E+00
Co-58	<4.51E+00	0.00E+00	4.51E+00
Fe-59	<9.76E+00	0.00E+00	9.76E+00
Co-60	<5.84E+00	0.00E+00	5.84E+00
Zn-65	<1.28E+01	0.00E+00	1.28E+01
Zr-95	<8.31E+00	0.00E+00	8.31E+00
Nb-95	<7.13E+00	0.00E+00	7.13E+00
I-131	<8.67E+00	0.00E+00	8.67E+00
Cs-134	<3.52E+00	0.00E+00	3.52E+00
Cs-137	<5.87E+00	0.00E+00	5.87E+00
BaLa-140	<8.12E+00	0.00E+00	8.12E+00
Total-Gam	0.00E+00		
H3SW	<2.14E+01	0.00E+00	1.92E+02

Sample ID: 512404 Sample Dates: 12/18/2019 - 12/18/2019

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<4.77E+00	0.00E+00	4.77E+00
Co-58	<4.32E+00	0.00E+00	4.32E+00
Fe-59	<1.17E+01	0.00E+00	1.17E+01
Co-60	<4.59E+00	0.00E+00	4.59E+00
Zn-65	<1.31E+01	0.00E+00	1.31E+01
Zr-95	<9.70E+00	0.00E+00	9.70E+00
Nb-95	<5.98E+00	0.00E+00	5.98E+00
I-131	<7.77E+00	0.00E+00	7.77E+00
Cs-134	<5.62E+00	0.00E+00	5.62E+00
Cs-137	<4.41E+00	0.00E+00	4.41E+00
BaLa-140	<9.87E+00	0.00E+00	9.87E+00
Total-Gam	0.00E+00		
H3SW	<-8.4E+01	0.00E+00	1.93E+02

Sample Point 499 [CONTROL - -- @ 0 miles]

Sample ID: 491355 Sample Dates: 1/9/2019 - 1/9/2019

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<6.03E+00	0.00E+00	6.03E+00
Co-58	<5.91E+00	0.00E+00	5.91E+00
Fe-59	<1.27E+01	0.00E+00	1.27E+01
Co-60	<6.43E+00	0.00E+00	6.43E+00



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 499 [CONTROL - -- @ 0 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
491355	1/9/2019 - 1/9/2019	Zn-65	<1.22E+01	0.00E+00	1.22E+01
		Zr-95	<1.17E+01	0.00E+00	1.17E+01
		Nb-95	<8.01E+00	0.00E+00	8.01E+00
		I-131	<9.42E+00	0.00E+00	9.42E+00
		Cs-134	<7.49E+00	0.00E+00	7.49E+00
		Cs-137	<6.40E+00	0.00E+00	6.40E+00
		BaLa-140	<1.07E+01	0.00E+00	1.07E+01
		Total-Gam	0.00E+00		
		H3SW	<2.59E+01	0.00E+00	1.77E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492839	2/13/2019 - 2/13/2019	Mn-54	<5.97E+00	0.00E+00	5.97E+00
		Co-58	<5.43E+00	0.00E+00	5.43E+00
		Fe-59	<9.81E+00	0.00E+00	9.81E+00
		Co-60	<6.30E+00	0.00E+00	6.30E+00
		Zn-65	<1.12E+01	0.00E+00	1.12E+01
		Zr-95	<1.05E+01	0.00E+00	1.05E+01
		Nb-95	<7.58E+00	0.00E+00	7.58E+00
		I-131	<8.29E+00	0.00E+00	8.29E+00
		Cs-134	<6.69E+00	0.00E+00	6.69E+00
		Cs-137	<5.60E+00	0.00E+00	5.60E+00
		BaLa-140	<6.76E+00	0.00E+00	6.76E+00
		Total-Gam	0.00E+00		
		H3SW	<0.00E+00	0.00E+00	1.82E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494298	3/13/2019 - 3/13/2019	Mn-54	<5.96E+00	0.00E+00	5.96E+00
		Co-58	<5.38E+00	0.00E+00	5.38E+00
		Fe-59	<1.04E+01	0.00E+00	1.04E+01
		Co-60	<5.86E+00	0.00E+00	5.86E+00
		Zn-65	<1.26E+01	0.00E+00	1.26E+01
		Zr-95	<8.46E+00	0.00E+00	8.46E+00
		Nb-95	<7.61E+00	0.00E+00	7.61E+00
		I-131	<7.82E+00	0.00E+00	7.82E+00
		Cs-134	<5.63E+00	0.00E+00	5.63E+00
		Cs-137	<5.81E+00	0.00E+00	5.81E+00
		BaLa-140	<6.44E+00	0.00E+00	6.44E+00
		Total-Gam	0.00E+00		
		H3SW	<-2.7E+01	0.00E+00	1.84E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
496685	4/17/2019 - 4/17/2019	Mn-54	<5.25E+00	0.00E+00	5.25E+00
		Co-58	<3.73E+00	0.00E+00	3.73E+00
		Fe-59	<1.24E+01	0.00E+00	1.24E+01
		Co-60	<8.02E+00	0.00E+00	8.02E+00
		Zn-65	<1.13E+01	0.00E+00	1.13E+01
		Zr-95	<1.16E+01	0.00E+00	1.16E+01
		Nb-95	<6.33E+00	0.00E+00	6.33E+00
		I-131	<8.47E+00	0.00E+00	8.47E+00
		Cs-134	<6.36E+00	0.00E+00	6.36E+00
		Cs-137	<4.66E+00	0.00E+00	4.66E+00
		BaLa-140	<1.90E+00	0.00E+00	1.90E+00
		Total-Gam	0.00E+00		
		H3SW	<9.39E+01	0.00E+00	1.80E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
498724	5/9/2019 - 5/9/2019	Mn-54	<6.72E+00	0.00E+00	6.72E+00
		Co-58	<6.68E+00	0.00E+00	6.68E+00
		Fe-59	<1.08E+01	0.00E+00	1.08E+01
		Co-60	<5.42E+00	0.00E+00	5.42E+00
		Zn-65	<7.87E+00	0.00E+00	7.87E+00
		Zr-95	<1.04E+01	0.00E+00	1.04E+01
		Nb-95	<4.73E+00	0.00E+00	4.73E+00
		I-131	<7.91E+00	0.00E+00	7.91E+00
		Cs-134	<5.94E+00	0.00E+00	5.94E+00



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 499 [CONTROL - -- @ 0 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
498724	5/9/2019 - 5/9/2019	Cs-137	<4.74E+00	0.00E+00	4.74E+00
		BaLa-140	<7.65E+00	0.00E+00	7.65E+00
		Total-Gam	0.00E+00		
		H3SW	<-9.2E+01	0.00E+00	1.90E+02
500514	6/17/2019 - 6/17/2019	Mn-54	<5.65E+00	0.00E+00	5.65E+00
		Co-58	<4.59E+00	0.00E+00	4.59E+00
		Fe-59	<1.09E+01	0.00E+00	1.09E+01
		Co-60	<5.83E+00	0.00E+00	5.83E+00
		Zn-65	<1.32E+01	0.00E+00	1.32E+01
		Zr-95	<1.04E+01	0.00E+00	1.04E+01
		Nb-95	<5.85E+00	0.00E+00	5.85E+00
		I-131	<5.56E+00	0.00E+00	5.56E+00
		Cs-134	<4.89E+00	0.00E+00	4.89E+00
		Cs-137	<5.52E+00	0.00E+00	5.52E+00
		BaLa-140	<4.08E+00	0.00E+00	4.08E+00
		Total-Gam	0.00E+00		
		H3SW	<3.05E+01	0.00E+00	2.01E+02
502331	7/17/2019 - 7/17/2019	Mn-54	<6.25E+00	0.00E+00	6.25E+00
		Co-58	<6.93E+00	0.00E+00	6.93E+00
		Fe-59	<9.77E+00	0.00E+00	9.77E+00
		Co-60	<5.42E+00	0.00E+00	5.42E+00
		Zn-65	<1.48E+01	0.00E+00	1.48E+01
		Zr-95	<9.54E+00	0.00E+00	9.54E+00
		Nb-95	<4.58E+00	0.00E+00	4.58E+00
		I-131	<9.19E+00	0.00E+00	9.19E+00
		Cs-134	<6.80E+00	0.00E+00	6.80E+00
		Cs-137	<3.73E+00	0.00E+00	3.73E+00
		BaLa-140	<1.19E+01	0.00E+00	1.19E+01
		Total-Gam	0.00E+00		
		H3SW	<-2.2E+01	0.00E+00	1.99E+02
504396	8/14/2019 - 8/14/2019	Mn-54	<5.29E+00	0.00E+00	5.29E+00
		Co-58	<6.15E+00	0.00E+00	6.15E+00
		Fe-59	<9.86E+00	0.00E+00	9.86E+00
		Co-60	<6.71E+00	0.00E+00	6.71E+00
		Zn-65	<1.32E+01	0.00E+00	1.32E+01
		Zr-95	<8.57E+00	0.00E+00	8.57E+00
		Nb-95	<4.97E+00	0.00E+00	4.97E+00
		I-131	<7.90E+00	0.00E+00	7.90E+00
		Cs-134	<7.15E+00	0.00E+00	7.15E+00
		Cs-137	<6.21E+00	0.00E+00	6.21E+00
		BaLa-140	<2.00E+00	0.00E+00	2.00E+00
		Total-Gam	0.00E+00		
		H3SW	<-8.5E+01	0.00E+00	1.93E+02
505651	9/17/2019 - 9/17/2019	Mn-54	<6.03E+00	0.00E+00	6.03E+00
		Co-58	<6.19E+00	0.00E+00	6.19E+00
		Fe-59	<1.35E+01	0.00E+00	1.35E+01
		Co-60	<6.78E+00	0.00E+00	6.78E+00
		Zn-65	<9.83E+00	0.00E+00	9.83E+00
		Zr-95	<7.79E+00	0.00E+00	7.79E+00
		Nb-95	<6.36E+00	0.00E+00	6.36E+00
		I-131	<5.84E+00	0.00E+00	5.84E+00
		Cs-134	<6.56E+00	0.00E+00	6.56E+00
		Cs-137	<5.11E+00	0.00E+00	5.11E+00
		BaLa-140	<6.79E+00	0.00E+00	6.79E+00
		Total-Gam	0.00E+00		
		H3SW	<-2.0E+01	0.00E+00	1.82E+02



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 499 [CONTROL - -- @ 0 miles]

Sample ID: 508243 Sample Dates: 10/17/2019 - 10/17/2019

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<5.52E+00	0.00E+00	5.52E+00
Co-58	<4.85E+00	0.00E+00	4.85E+00
Fe-59	<1.11E+01	0.00E+00	1.11E+01
Co-60	<7.09E+00	0.00E+00	7.09E+00
Zn-65	<1.26E+01	0.00E+00	1.26E+01
Zr-95	<1.06E+01	0.00E+00	1.06E+01
Nb-95	<5.64E+00	0.00E+00	5.64E+00
I-131	<9.00E+00	0.00E+00	9.00E+00
Cs-134	<6.44E+00	0.00E+00	6.44E+00
Cs-137	<6.40E+00	0.00E+00	6.40E+00
BaLa-140	<7.47E+00	0.00E+00	7.47E+00
Total-Gam	0.00E+00		
H3SW	<-7.8E+01	0.00E+00	1.96E+02

Sample ID: 510771 Sample Dates: 11/20/2019 - 11/20/2019

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<5.09E+00	0.00E+00	5.09E+00
Co-58	<5.62E+00	0.00E+00	5.62E+00
Fe-59	<9.35E+00	0.00E+00	9.35E+00
Co-60	<5.21E+00	0.00E+00	5.21E+00
Zn-65	<1.37E+01	0.00E+00	1.37E+01
Zr-95	<1.16E+01	0.00E+00	1.16E+01
Nb-95	<5.29E+00	0.00E+00	5.29E+00
I-131	<6.78E+00	0.00E+00	6.78E+00
Cs-134	<4.99E+00	0.00E+00	4.99E+00
Cs-137	<5.15E+00	0.00E+00	5.15E+00
BaLa-140	<6.97E+00	0.00E+00	6.97E+00
Total-Gam	0.00E+00		
H3SW	<7.16E+00	0.00E+00	1.93E+02

Sample ID: 512405 Sample Dates: 12/18/2019 - 12/18/2019

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<5.28E+00	0.00E+00	5.28E+00
Co-58	<4.55E+00	0.00E+00	4.55E+00
Fe-59	<1.04E+01	0.00E+00	1.04E+01
Co-60	<4.15E+00	0.00E+00	4.15E+00
Zn-65	<1.04E+01	0.00E+00	1.04E+01
Zr-95	<5.23E+00	0.00E+00	5.23E+00
Nb-95	<7.25E+00	0.00E+00	7.25E+00
I-131	<7.24E+00	0.00E+00	7.24E+00
Cs-134	<6.44E+00	0.00E+00	6.44E+00
Cs-137	<4.90E+00	0.00E+00	4.90E+00
BaLa-140	<6.39E+00	0.00E+00	6.39E+00
Total-Gam	0.00E+00		
H3SW	<-2.6E+01	0.00E+00	1.91E+02

Sample Point 604 [INDICATOR - -- @ 0 miles]

Sample ID: 491356 Sample Dates: 1/9/2019 - 1/9/2019

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<6.42E+00	0.00E+00	6.42E+00
Co-58	<4.88E+00	0.00E+00	4.88E+00
Fe-59	<9.24E+00	0.00E+00	9.24E+00
Co-60	<4.59E+00	0.00E+00	4.59E+00
Zn-65	<8.11E+00	0.00E+00	8.11E+00
Zr-95	<8.95E+00	0.00E+00	8.95E+00
Nb-95	<4.36E+00	0.00E+00	4.36E+00
I-131	<6.53E+00	0.00E+00	6.53E+00
Cs-134	<4.76E+00	0.00E+00	4.76E+00
Cs-137	<5.12E+00	0.00E+00	5.12E+00
BaLa-140	<6.24E+00	0.00E+00	6.24E+00
Total-Gam	0.00E+00		
H3SW	<1.27E+02	0.00E+00	1.77E+02

Sample ID: 492840 Sample Dates: 2/13/2019 - 2/13/2019

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<5.14E+00	0.00E+00	5.14E+00
Co-58	<5.10E+00	0.00E+00	5.10E+00

BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 604 [INDICATOR - -- @ 0 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492840	2/13/2019 - 2/13/2019	Fe-59	<1.13E+01	0.00E+00	1.13E+01
		Co-60	<6.19E+00	0.00E+00	6.19E+00
		Zn-65	<1.15E+01	0.00E+00	1.15E+01
		Zr-95	<8.58E+00	0.00E+00	8.58E+00
		Nb-95	<5.16E+00	0.00E+00	5.16E+00
		I-131	<7.79E+00	0.00E+00	7.79E+00
		Cs-134	<5.84E+00	0.00E+00	5.84E+00
		Cs-137	<4.66E+00	0.00E+00	4.66E+00
		BaLa-140	<1.14E+01	0.00E+00	1.14E+01
		Total-Gam	0.00E+00		
		H3SW	2.30E+02	1.13E+02	1.82E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494299	3/13/2019 - 3/13/2019	Mn-54	<6.23E+00	0.00E+00	6.23E+00
		Co-58	<5.20E+00	0.00E+00	5.20E+00
		Fe-59	<9.63E+00	0.00E+00	9.63E+00
		Co-60	<7.50E+00	0.00E+00	7.50E+00
		Zn-65	<7.87E+00	0.00E+00	7.87E+00
		Zr-95	<7.82E+00	0.00E+00	7.82E+00
		Nb-95	<5.64E+00	0.00E+00	5.64E+00
		I-131	<6.48E+00	0.00E+00	6.48E+00
		Cs-134	<6.38E+00	0.00E+00	6.38E+00
		Cs-137	<4.28E+00	0.00E+00	4.28E+00
		BaLa-140	<9.12E+00	0.00E+00	9.12E+00
		Total-Gam	0.00E+00		
		H3SW	2.01E+02	1.14E+02	1.85E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
496687	4/17/2019 - 4/17/2019	Mn-54	<7.04E+00	0.00E+00	7.04E+00
		Co-58	<5.46E+00	0.00E+00	5.46E+00
		Fe-59	<1.26E+01	0.00E+00	1.26E+01
		Co-60	<6.89E+00	0.00E+00	6.89E+00
		Zn-65	<1.03E+01	0.00E+00	1.03E+01
		Zr-95	<8.34E+00	0.00E+00	8.34E+00
		Nb-95	<5.08E+00	0.00E+00	5.08E+00
		I-131	<7.54E+00	0.00E+00	7.54E+00
		Cs-134	<6.17E+00	0.00E+00	6.17E+00
		Cs-137	<5.36E+00	0.00E+00	5.36E+00
		BaLa-140	<8.91E+00	0.00E+00	8.91E+00
		Total-Gam	0.00E+00		
		H3SW	3.22E+02	1.15E+02	1.80E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
498725	5/9/2019 - 5/9/2019	Mn-54	<5.08E+00	0.00E+00	5.08E+00
		Co-58	<5.18E+00	0.00E+00	5.18E+00
		Fe-59	<1.02E+01	0.00E+00	1.02E+01
		Co-60	<4.97E+00	0.00E+00	4.97E+00
		Zn-65	<1.28E+01	0.00E+00	1.28E+01
		Zr-95	<8.63E+00	0.00E+00	8.63E+00
		Nb-95	<6.17E+00	0.00E+00	6.17E+00
		I-131	<8.23E+00	0.00E+00	8.23E+00
		Cs-134	<5.69E+00	0.00E+00	5.69E+00
		Cs-137	<4.94E+00	0.00E+00	4.94E+00
		BaLa-140	<6.90E+00	0.00E+00	6.90E+00
		Total-Gam	0.00E+00		
		H3SW	<1.27E+02	0.00E+00	1.88E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500515	6/17/2019 - 6/17/2019	Mn-54	<5.83E+00	0.00E+00	5.83E+00
		Co-58	<5.82E+00	0.00E+00	5.82E+00
		Fe-59	<1.07E+01	0.00E+00	1.07E+01
		Co-60	<8.29E+00	0.00E+00	8.29E+00
		Zn-65	<1.19E+01	0.00E+00	1.19E+01
		Zr-95	<1.08E+01	0.00E+00	1.08E+01
		Nb-95	<5.86E+00	0.00E+00	5.86E+00



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 604 [INDICATOR - -- @ 0 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500515	6/17/2019 - 6/17/2019	I-131	<6.51E+00	0.00E+00	6.51E+00
		Cs-134	<6.97E+00	0.00E+00	6.97E+00
		Cs-137	<5.72E+00	0.00E+00	5.72E+00
		BaLa-140	<9.91E+00	0.00E+00	9.91E+00
		Total-Gam	0.00E+00		
		H3SW	<1.62E+02	0.00E+00	2.01E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
502332	7/17/2019 - 7/17/2019	Mn-54	<6.72E+00	0.00E+00	6.72E+00
		Co-58	<6.75E+00	0.00E+00	6.75E+00
		Fe-59	<1.04E+01	0.00E+00	1.04E+01
		Co-60	<4.97E+00	0.00E+00	4.97E+00
		Zn-65	<1.28E+01	0.00E+00	1.28E+01
		Zr-95	<1.12E+01	0.00E+00	1.12E+01
		Nb-95	<6.12E+00	0.00E+00	6.12E+00
		I-131	<8.50E+00	0.00E+00	8.50E+00
		Cs-134	<6.16E+00	0.00E+00	6.16E+00
		Cs-137	<6.51E+00	0.00E+00	6.51E+00
		BaLa-140	<1.14E+01	0.00E+00	1.14E+01
		Total-Gam	0.00E+00		
		H3SW	<1.93E+02	0.00E+00	1.99E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504397	8/14/2019 - 8/14/2019	Mn-54	<5.88E+00	0.00E+00	5.88E+00
		Co-58	<5.41E+00	0.00E+00	5.41E+00
		Fe-59	<1.01E+01	0.00E+00	1.01E+01
		Co-60	<5.12E+00	0.00E+00	5.12E+00
		Zn-65	<2.31E+01	0.00E+00	2.31E+01
		Zr-95	<1.06E+01	0.00E+00	1.06E+01
		Nb-95	<7.24E+00	0.00E+00	7.24E+00
		I-131	<8.84E+00	0.00E+00	8.84E+00
		Cs-134	<6.12E+00	0.00E+00	6.12E+00
		Cs-137	<5.33E+00	0.00E+00	5.33E+00
		BaLa-140	<9.94E+00	0.00E+00	9.94E+00
		Total-Gam	0.00E+00		
		H3SW	<7.34E+01	0.00E+00	1.93E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
505652	9/17/2019 - 9/17/2019	Mn-54	<6.01E+00	0.00E+00	6.01E+00
		Co-58	<4.81E+00	0.00E+00	4.81E+00
		Fe-59	<1.03E+01	0.00E+00	1.03E+01
		Co-60	<4.97E+00	0.00E+00	4.97E+00
		Zn-65	<8.72E+00	0.00E+00	8.72E+00
		Zr-95	<8.36E+00	0.00E+00	8.36E+00
		Nb-95	<5.98E+00	0.00E+00	5.98E+00
		I-131	<4.26E+00	0.00E+00	4.26E+00
		Cs-134	<6.94E+00	0.00E+00	6.94E+00
		Cs-137	<5.14E+00	0.00E+00	5.14E+00
		BaLa-140	<7.16E+00	0.00E+00	7.16E+00
		Total-Gam	0.00E+00		
		H3SW	<2.05E+01	0.00E+00	1.83E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
508244	10/17/2019 - 10/17/2019	Mn-54	<6.23E+00	0.00E+00	6.23E+00
		Co-58	<6.53E+00	0.00E+00	6.53E+00
		Fe-59	<1.08E+01	0.00E+00	1.08E+01
		Co-60	<6.89E+00	0.00E+00	6.89E+00
		Zn-65	<1.03E+01	0.00E+00	1.03E+01
		Zr-95	<9.07E+00	0.00E+00	9.07E+00
		Nb-95	<6.38E+00	0.00E+00	6.38E+00
		I-131	<7.51E+00	0.00E+00	7.51E+00
		Cs-134	<6.59E+00	0.00E+00	6.59E+00
		Cs-137	<5.90E+00	0.00E+00	5.90E+00
		BaLa-140	<9.09E+00	0.00E+00	9.09E+00
Total-Gam	0.00E+00				



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 604 [INDICATOR - -- @ 0 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
508244	10/17/2019 - 10/17/2019	H3SW	<2.37E+00	0.00E+00	1.97E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
510772	11/20/2019 - 11/20/2019	Mn-54	<6.58E+00	0.00E+00	6.58E+00
		Co-58	<4.77E+00	0.00E+00	4.77E+00
		Fe-59	<9.06E+00	0.00E+00	9.06E+00
		Co-60	<6.21E+00	0.00E+00	6.21E+00
		Zn-65	<1.28E+01	0.00E+00	1.28E+01
		Zr-95	<7.40E+00	0.00E+00	7.40E+00
		Nb-95	<7.15E+00	0.00E+00	7.15E+00
		I-131	<8.49E+00	0.00E+00	8.49E+00
		Cs-134	<6.80E+00	0.00E+00	6.80E+00
		Cs-137	<5.36E+00	0.00E+00	5.36E+00
		BaLa-140	<7.25E+00	0.00E+00	7.25E+00
		Total-Gam	0.00E+00		
		H3SW	<2.85E+01	0.00E+00	1.92E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512406	12/18/2019 - 12/18/2019	Mn-54	<6.16E+00	0.00E+00	6.16E+00
		Co-58	<7.35E+00	0.00E+00	7.35E+00
		Fe-59	<1.30E+01	0.00E+00	1.30E+01
		Co-60	<4.11E+00	0.00E+00	4.11E+00
		Zn-65	<1.29E+01	0.00E+00	1.29E+01
		Zr-95	<1.09E+01	0.00E+00	1.09E+01
		Nb-95	<6.95E+00	0.00E+00	6.95E+00
		I-131	<9.49E+00	0.00E+00	9.49E+00
		Cs-134	<7.39E+00	0.00E+00	7.39E+00
		Cs-137	<6.31E+00	0.00E+00	6.31E+00
		BaLa-140	<7.50E+00	0.00E+00	7.50E+00
		Total-Gam	0.00E+00		
		H3SW	<1.07E+02	0.00E+00	1.91E+02

Sample Point 607 [INDICATOR - -- @ 0 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
491357	1/9/2019 - 1/9/2019	Mn-54	<4.15E+00	0.00E+00	4.15E+00
		Co-58	<6.09E+00	0.00E+00	6.09E+00
		Fe-59	<1.34E+01	0.00E+00	1.34E+01
		Co-60	<4.15E+00	0.00E+00	4.15E+00
		Zn-65	<8.52E+00	0.00E+00	8.52E+00
		Zr-95	<9.41E+00	0.00E+00	9.41E+00
		Nb-95	<5.42E+00	0.00E+00	5.42E+00
		I-131	<6.51E+00	0.00E+00	6.51E+00
		Cs-134	<5.63E+00	0.00E+00	5.63E+00
		Cs-137	<4.90E+00	0.00E+00	4.90E+00
		BaLa-140	<9.87E+00	0.00E+00	9.87E+00
		Total-Gam	0.00E+00		
		H3SW	<5.19E+01	0.00E+00	1.77E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492841	2/13/2019 - 2/13/2019	Mn-54	<5.58E+00	0.00E+00	5.58E+00
		Co-58	<5.86E+00	0.00E+00	5.86E+00
		Fe-59	<1.05E+01	0.00E+00	1.05E+01
		Co-60	<6.32E+00	0.00E+00	6.32E+00
		Zn-65	<1.08E+01	0.00E+00	1.08E+01
		Zr-95	<1.16E+01	0.00E+00	1.16E+01
		Nb-95	<6.16E+00	0.00E+00	6.16E+00
		I-131	<8.08E+00	0.00E+00	8.08E+00
		Cs-134	<5.97E+00	0.00E+00	5.97E+00
		Cs-137	<4.65E+00	0.00E+00	4.65E+00
		BaLa-140	<8.65E+00	0.00E+00	8.65E+00
		Total-Gam	0.00E+00		
		H3SW	<7.98E+01	0.00E+00	1.82E+02



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 607 [INDICATOR - -- @ 0 miles]

Sample ID: 494300 Sample Dates: 3/13/2019 - 3/13/2019

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<5.08E+00	0.00E+00	5.08E+00
Co-58	<5.60E+00	0.00E+00	5.60E+00
Fe-59	<9.64E+00	0.00E+00	9.64E+00
Co-60	<6.57E+00	0.00E+00	6.57E+00
Zn-65	<1.03E+01	0.00E+00	1.03E+01
Zr-95	<9.41E+00	0.00E+00	9.41E+00
Nb-95	<6.86E+00	0.00E+00	6.86E+00
I-131	<6.95E+00	0.00E+00	6.95E+00
Cs-134	<6.57E+00	0.00E+00	6.57E+00
Cs-137	<4.90E+00	0.00E+00	4.90E+00
BaLa-140	<6.96E+00	0.00E+00	6.96E+00
Total-Gam	0.00E+00		
H3SW	<-3.1E+01	0.00E+00	1.84E+02

Sample ID: 496689 Sample Dates: 4/17/2019 - 4/17/2019

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<5.70E+00	0.00E+00	5.70E+00
Co-58	<5.01E+00	0.00E+00	5.01E+00
Fe-59	<1.21E+01	0.00E+00	1.21E+01
Co-60	<4.46E+00	0.00E+00	4.46E+00
Zn-65	<7.90E+00	0.00E+00	7.90E+00
Zr-95	<9.51E+00	0.00E+00	9.51E+00
Nb-95	<6.12E+00	0.00E+00	6.12E+00
I-131	<6.64E+00	0.00E+00	6.64E+00
Cs-134	<6.58E+00	0.00E+00	6.58E+00
Cs-137	<5.14E+00	0.00E+00	5.14E+00
BaLa-140	<8.91E+00	0.00E+00	8.91E+00
Total-Gam	0.00E+00		
H3SW	<9.43E+00	0.00E+00	1.81E+02

Sample ID: 498726 Sample Dates: 5/9/2019 - 5/9/2019

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<5.68E+00	0.00E+00	5.68E+00
Co-58	<5.57E+00	0.00E+00	5.57E+00
Fe-59	<1.62E+01	0.00E+00	1.62E+01
Co-60	<6.78E+00	0.00E+00	6.78E+00
Zn-65	<1.20E+01	0.00E+00	1.20E+01
Zr-95	<1.04E+01	0.00E+00	1.04E+01
Nb-95	<5.58E+00	0.00E+00	5.58E+00
I-131	<8.59E+00	0.00E+00	8.59E+00
Cs-134	<7.20E+00	0.00E+00	7.20E+00
Cs-137	<5.71E+00	0.00E+00	5.71E+00
BaLa-140	<7.13E+00	0.00E+00	7.13E+00
Total-Gam	0.00E+00		
H3SW	<-5.4E+01	0.00E+00	1.89E+02

Sample ID: 500516 Sample Dates: 6/17/2019 - 6/17/2019

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<5.71E+00	0.00E+00	5.71E+00
Co-58	<5.47E+00	0.00E+00	5.47E+00
Fe-59	<1.06E+01	0.00E+00	1.06E+01
Co-60	<5.36E+00	0.00E+00	5.36E+00
Zn-65	<1.18E+01	0.00E+00	1.18E+01
Zr-95	<1.20E+01	0.00E+00	1.20E+01
Nb-95	<6.34E+00	0.00E+00	6.34E+00
I-131	<6.69E+00	0.00E+00	6.69E+00
Cs-134	<6.17E+00	0.00E+00	6.17E+00
Cs-137	<7.26E+00	0.00E+00	7.26E+00
BaLa-140	<7.13E+00	0.00E+00	7.13E+00
Total-Gam	0.00E+00		
H3SW	<2.36E+00	0.00E+00	2.02E+02

Sample ID: 502333 Sample Dates: 7/17/2019 - 7/17/2019

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<8.68E+00	0.00E+00	8.68E+00
Co-58	<3.51E+00	0.00E+00	3.51E+00
Fe-59	<1.41E+01	0.00E+00	1.41E+01
Co-60	<5.37E+00	0.00E+00	5.37E+00
Zn-65	<1.19E+01	0.00E+00	1.19E+01



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 607 [INDICATOR - -- @ 0 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
502333	7/17/2019 - 7/17/2019	Zr-95	<1.11E+01	0.00E+00	1.11E+01
		Nb-95	<6.00E+00	0.00E+00	6.00E+00
		I-131	<8.22E+00	0.00E+00	8.22E+00
		Cs-134	<6.45E+00	0.00E+00	6.45E+00
		Cs-137	<6.01E+00	0.00E+00	6.01E+00
		BaLa-140	<5.41E+00	0.00E+00	5.41E+00
		Total-Gam	0.00E+00		
		H3SW	<2.92E+01	0.00E+00	2.01E+02
504398	8/14/2019 - 8/14/2019	Mn-54	<5.11E+00	0.00E+00	5.11E+00
		Co-58	<5.25E+00	0.00E+00	5.25E+00
		Fe-59	<1.10E+01	0.00E+00	1.10E+01
		Co-60	<4.97E+00	0.00E+00	4.97E+00
		Zn-65	<1.16E+01	0.00E+00	1.16E+01
		Zr-95	<8.36E+00	0.00E+00	8.36E+00
		Nb-95	<6.34E+00	0.00E+00	6.34E+00
		I-131	<8.27E+00	0.00E+00	8.27E+00
		Cs-134	<5.20E+00	0.00E+00	5.20E+00
		Cs-137	<3.73E+00	0.00E+00	3.73E+00
		BaLa-140	<9.65E+00	0.00E+00	9.65E+00
		Total-Gam	0.00E+00		
		H3SW	<-9.7E+01	0.00E+00	1.93E+02
505653	9/17/2019 - 9/17/2019	Mn-54	<5.06E+00	0.00E+00	5.06E+00
		Co-58	<4.08E+00	0.00E+00	4.08E+00
		Fe-59	<8.53E+00	0.00E+00	8.53E+00
		Co-60	<3.83E+00	0.00E+00	3.83E+00
		Zn-65	<9.51E+00	0.00E+00	9.51E+00
		Zr-95	<7.56E+00	0.00E+00	7.56E+00
		Nb-95	<5.11E+00	0.00E+00	5.11E+00
		I-131	<5.09E+00	0.00E+00	5.09E+00
		Cs-134	<7.15E+00	0.00E+00	7.15E+00
		Cs-137	<4.01E+00	0.00E+00	4.01E+00
		BaLa-140	<7.16E+00	0.00E+00	7.16E+00
		Total-Gam	0.00E+00		
		H3SW	<-1.1E+01	0.00E+00	1.83E+02
508245	10/17/2019 - 10/17/2019	Mn-54	<6.24E+00	0.00E+00	6.24E+00
		Co-58	<4.88E+00	0.00E+00	4.88E+00
		Fe-59	<8.45E+00	0.00E+00	8.45E+00
		Co-60	<3.14E+00	0.00E+00	3.14E+00
		Zn-65	<1.31E+01	0.00E+00	1.31E+01
		Zr-95	<8.51E+00	0.00E+00	8.51E+00
		Nb-95	<4.89E+00	0.00E+00	4.89E+00
		I-131	<8.63E+00	0.00E+00	8.63E+00
		Cs-134	<6.12E+00	0.00E+00	6.12E+00
		Cs-137	<4.90E+00	0.00E+00	4.90E+00
		BaLa-140	<1.16E+01	0.00E+00	1.16E+01
		Total-Gam	0.00E+00		
		H3SW	<-2.4E+00	0.00E+00	1.97E+02
510773	11/20/2019 - 11/20/2019	Mn-54	<5.76E+00	0.00E+00	5.76E+00
		Co-58	<5.91E+00	0.00E+00	5.91E+00
		Fe-59	<1.47E+01	0.00E+00	1.47E+01
		Co-60	<8.38E+00	0.00E+00	8.38E+00
		Zn-65	<1.26E+01	0.00E+00	1.26E+01
		Zr-95	<1.22E+01	0.00E+00	1.22E+01
		Nb-95	<7.06E+00	0.00E+00	7.06E+00
		I-131	<8.78E+00	0.00E+00	8.78E+00
		Cs-134	<8.21E+00	0.00E+00	8.21E+00
		Cs-137	<5.90E+00	0.00E+00	5.90E+00



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 607 [INDICATOR - -- @ 0 miles]

Sample ID:	510773	Sample Dates:	11/20/2019 - 11/20/2019	Nuclide	Activity	2 Sigma Error	MDA
				BaLa-140	<1.11E+01	0.00E+00	1.11E+01
				Total-Gam	0.00E+00		
				H3SW	<4.76E+01	0.00E+00	1.92E+02

Sample ID:	512407	Sample Dates:	12/18/2019 - 12/18/2019	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<6.55E+00	0.00E+00	6.55E+00
				Co-58	<5.39E+00	0.00E+00	5.39E+00
				Fe-59	<1.37E+01	0.00E+00	1.37E+01
				Co-60	<5.84E+00	0.00E+00	5.84E+00
				Zn-65	<1.38E+01	0.00E+00	1.38E+01
				Zr-95	<1.10E+01	0.00E+00	1.10E+01
				Nb-95	<9.34E+00	0.00E+00	9.34E+00
				I-131	<8.36E+00	0.00E+00	8.36E+00
				Cs-134	<7.51E+00	0.00E+00	7.51E+00
				Cs-137	<5.70E+00	0.00E+00	5.70E+00
				BaLa-140	<5.95E+00	0.00E+00	5.95E+00
				Total-Gam	0.00E+00		
				H3SW	<8.0E+01	0.00E+00	1.90E+02

Sample Point 609 [INDICATOR - -- @ 0 miles]

Sample ID:	491358	Sample Dates:	1/9/2019 - 1/9/2019	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<4.78E+00	0.00E+00	4.78E+00
				Co-58	<6.37E+00	0.00E+00	6.37E+00
				Fe-59	<1.12E+01	0.00E+00	1.12E+01
				Co-60	<5.59E+00	0.00E+00	5.59E+00
				Zn-65	<1.26E+01	0.00E+00	1.26E+01
				Zr-95	<1.14E+01	0.00E+00	1.14E+01
				Nb-95	<7.87E+00	0.00E+00	7.87E+00
				I-131	<7.17E+00	0.00E+00	7.17E+00
				Cs-134	<5.35E+00	0.00E+00	5.35E+00
				Cs-137	<4.90E+00	0.00E+00	4.90E+00
				BaLa-140	<1.06E+01	0.00E+00	1.06E+01
				Total-Gam	0.00E+00		
				H3SW	<7.31E+01	0.00E+00	1.77E+02

Sample ID:	492842	Sample Dates:	2/13/2019 - 2/13/2019	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<6.41E+00	0.00E+00	6.41E+00
				Co-58	<4.77E+00	0.00E+00	4.77E+00
				Fe-59	<1.34E+01	0.00E+00	1.34E+01
				Co-60	<3.84E+00	0.00E+00	3.84E+00
				Zn-65	<1.10E+01	0.00E+00	1.10E+01
				Zr-95	<1.02E+01	0.00E+00	1.02E+01
				Nb-95	<4.28E+00	0.00E+00	4.28E+00
				I-131	<6.13E+00	0.00E+00	6.13E+00
				Cs-134	<6.39E+00	0.00E+00	6.39E+00
				Cs-137	<5.16E+00	0.00E+00	5.16E+00
				BaLa-140	<7.23E+00	0.00E+00	7.23E+00
				Total-Gam	0.00E+00		
				H3SW	<3.32E+01	0.00E+00	1.83E+02

Sample ID:	494301	Sample Dates:	3/13/2019 - 3/13/2019	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<5.88E+00	0.00E+00	5.88E+00
				Co-58	<4.21E+00	0.00E+00	4.21E+00
				Fe-59	<8.19E+00	0.00E+00	8.19E+00
				Co-60	<5.83E+00	0.00E+00	5.83E+00
				Zn-65	<1.27E+01	0.00E+00	1.27E+01
				Zr-95	<7.34E+00	0.00E+00	7.34E+00
				Nb-95	<4.74E+00	0.00E+00	4.74E+00
				I-131	<6.91E+00	0.00E+00	6.91E+00
				Cs-134	<6.38E+00	0.00E+00	6.38E+00
				Cs-137	<4.96E+00	0.00E+00	4.96E+00
				BaLa-140	<9.07E+00	0.00E+00	9.07E+00
				Total-Gam	0.00E+00		



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 609 [INDICATOR - -- @ 0 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494301	3/13/2019 - 3/13/2019	H3SW	<2.88E+01	0.00E+00	1.84E+02
496691	4/17/2019 - 4/17/2019	Mn-54	<6.27E+00	0.00E+00	6.27E+00
		Co-58	<6.44E+00	0.00E+00	6.44E+00
		Fe-59	<1.49E+01	0.00E+00	1.49E+01
		Co-60	<5.61E+00	0.00E+00	5.61E+00
		Zn-65	<1.20E+01	0.00E+00	1.20E+01
		Zr-95	<1.12E+01	0.00E+00	1.12E+01
		Nb-95	<6.52E+00	0.00E+00	6.52E+00
		I-131	<1.09E+01	0.00E+00	1.09E+01
		Cs-134	<6.80E+00	0.00E+00	6.80E+00
		Cs-137	<5.71E+00	0.00E+00	5.71E+00
		BaLa-140	<9.93E+00	0.00E+00	9.93E+00
		Total-Gam	0.00E+00		
		H3SW	<9.67E+01	0.00E+00	1.81E+02
498727	5/9/2019 - 5/9/2019	Mn-54	<5.02E+00	0.00E+00	5.02E+00
		Co-58	<4.87E+00	0.00E+00	4.87E+00
		Fe-59	<1.28E+01	0.00E+00	1.28E+01
		Co-60	<6.42E+00	0.00E+00	6.42E+00
		Zn-65	<1.13E+01	0.00E+00	1.14E+01
		Zr-95	<1.04E+01	0.00E+00	1.04E+01
		Nb-95	<6.37E+00	0.00E+00	6.37E+00
		I-131	<9.01E+00	0.00E+00	9.01E+00
		Cs-134	<7.00E+00	0.00E+00	7.00E+00
		Cs-137	<7.05E+00	0.00E+00	7.05E+00
		BaLa-140	<7.92E+00	0.00E+00	7.92E+00
		Total-Gam	0.00E+00		
		H3SW	<-3.6E+01	0.00E+00	1.89E+02
500517	6/17/2019 - 6/17/2019	Mn-54	<4.09E+00	0.00E+00	4.09E+00
		Co-58	<4.35E+00	0.00E+00	4.35E+00
		Fe-59	<1.18E+01	0.00E+00	1.18E+01
		Co-60	<4.45E+00	0.00E+00	4.45E+00
		Zn-65	<1.02E+01	0.00E+00	1.02E+01
		Zr-95	<8.76E+00	0.00E+00	8.76E+00
		Nb-95	<5.84E+00	0.00E+00	5.84E+00
		I-131	<5.41E+00	0.00E+00	5.41E+00
		Cs-134	<6.13E+00	0.00E+00	6.13E+00
		Cs-137	<6.20E+00	0.00E+00	6.20E+00
		BaLa-140	<6.63E+00	0.00E+00	6.63E+00
		Total-Gam	0.00E+00		
		H3SW	<-6.8E+01	0.00E+00	2.02E+02
502334	7/17/2019 - 7/17/2019	Mn-54	<6.08E+00	0.00E+00	6.08E+00
		Co-58	<5.85E+00	0.00E+00	5.85E+00
		Fe-59	<8.61E+00	0.00E+00	8.61E+00
		Co-60	<6.03E+00	0.00E+00	6.03E+00
		Zn-65	<1.62E+01	0.00E+00	1.62E+01
		Zr-95	<1.06E+01	0.00E+00	1.06E+01
		Nb-95	<7.56E+00	0.00E+00	7.56E+00
		I-131	<1.08E+01	0.00E+00	1.08E+01
		Cs-134	<7.21E+00	0.00E+00	7.21E+00
		Cs-137	<4.89E+00	0.00E+00	4.89E+00
		BaLa-140	<1.06E+01	0.00E+00	1.06E+01
		Total-Gam	0.00E+00		
		H3SW	<-7.2E+01	0.00E+00	1.97E+02
504399	8/14/2019 - 8/14/2019	Mn-54	<5.04E+00	0.00E+00	5.04E+00
		Co-58	<6.15E+00	0.00E+00	6.15E+00



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 609 [INDICATOR - -- @ 0 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504399	8/14/2019 - 8/14/2019	Fe-59	<9.83E+00	0.00E+00	9.83E+00
		Co-60	<4.81E+00	0.00E+00	4.81E+00
		Zn-65	<8.54E+00	0.00E+00	8.54E+00
		Zr-95	<1.15E+01	0.00E+00	1.15E+01
		Nb-95	<4.97E+00	0.00E+00	4.97E+00
		I-131	<9.56E+00	0.00E+00	9.56E+00
		Cs-134	<5.92E+00	0.00E+00	5.92E+00
		Cs-137	<5.60E+00	0.00E+00	5.60E+00
		BaLa-140	<6.83E+00	0.00E+00	6.83E+00
		Total-Gam	0.00E+00		
		H3SW	<1.89E+01	0.00E+00	1.93E+02
505654	9/17/2019 - 9/17/2019	Mn-54	<4.74E+00	0.00E+00	4.74E+00
		Co-58	<5.61E+00	0.00E+00	5.61E+00
		Fe-59	<8.79E+00	0.00E+00	8.79E+00
		Co-60	<5.11E+00	0.00E+00	5.11E+00
		Zn-65	<8.04E+00	0.00E+00	8.04E+00
		Zr-95	<7.79E+00	0.00E+00	7.79E+00
		Nb-95	<5.46E+00	0.00E+00	5.46E+00
		I-131	<5.21E+00	0.00E+00	5.21E+00
		Cs-134	<4.74E+00	0.00E+00	4.74E+00
		Cs-137	<4.89E+00	0.00E+00	4.89E+00
		BaLa-140	<6.06E+00	0.00E+00	6.06E+00
Total-Gam	0.00E+00				
H3SW	<-4.4E+01	0.00E+00	1.84E+02		
508246	10/17/2019 - 10/17/2019	Mn-54	<5.88E+00	0.00E+00	5.88E+00
		Co-58	<5.42E+00	0.00E+00	5.42E+00
		Fe-59	<8.20E+00	0.00E+00	8.20E+00
		Co-60	<4.45E+00	0.00E+00	4.45E+00
		Zn-65	<1.16E+01	0.00E+00	1.16E+01
		Zr-95	<1.05E+01	0.00E+00	1.05E+01
		Nb-95	<6.21E+00	0.00E+00	6.21E+00
		I-131	<6.96E+00	0.00E+00	6.96E+00
		Cs-134	<6.99E+00	0.00E+00	6.99E+00
		Cs-137	<4.02E+00	0.00E+00	4.02E+00
		BaLa-140	<9.12E+00	0.00E+00	9.12E+00
Total-Gam	0.00E+00				
H3SW	<-8.8E+01	0.00E+00	1.97E+02		
510774	11/20/2019 - 11/20/2019	Mn-54	<5.86E+00	0.00E+00	5.86E+00
		Co-58	<5.09E+00	0.00E+00	5.09E+00
		Fe-59	<9.05E+00	0.00E+00	9.05E+00
		Co-60	<5.73E+00	0.00E+00	5.73E+00
		Zn-65	<1.25E+01	0.00E+00	1.25E+01
		Zr-95	<1.12E+01	0.00E+00	1.12E+01
		Nb-95	<9.74E+00	0.00E+00	9.74E+00
		I-131	<1.08E+01	0.00E+00	1.08E+01
		Cs-134	<5.55E+00	0.00E+00	5.55E+00
		Cs-137	<5.41E+00	0.00E+00	5.41E+00
		BaLa-140	<8.80E+00	0.00E+00	8.80E+00
Total-Gam	0.00E+00				
H3SW	<-3.6E+01	0.00E+00	1.92E+02		
512408	12/18/2019 - 12/18/2019	Mn-54	<6.62E+00	0.00E+00	6.62E+00
		Co-58	<5.45E+00	0.00E+00	5.45E+00
		Fe-59	<1.24E+01	0.00E+00	1.24E+01
		Co-60	<4.63E+00	0.00E+00	4.63E+00
		Zn-65	<1.26E+01	0.00E+00	1.26E+01
		Zr-95	<1.22E+01	0.00E+00	1.22E+01
		Nb-95	<7.21E+00	0.00E+00	7.21E+00



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 609 [INDICATOR - -- @ 0 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512408	12/18/2019 - 12/18/2019	I-131	<8.32E+00	0.00E+00	8.32E+00
		Cs-134	<7.42E+00	0.00E+00	7.42E+00
		Cs-137	<6.66E+00	0.00E+00	6.66E+00
		BaLa-140	<7.72E+00	0.00E+00	7.72E+00
		Total-Gam	0.00E+00		
		H3SW	<1.41E+01	0.00E+00	1.90E+02

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 1 [INDICATOR - E @ 1.1 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
495778	1/7/2019 - 4/3/2019	mR/Std Qtr	9.94
501600	4/3/2019 - 7/8/2019	mR/Std Qtr	10.47
506942	7/8/2019 - 10/10/2019	mR/Std Qtr	9.14
513281	10/10/2019 - 1/6/2020	mR/Std Qtr	10.01

Sample Point 2 [INDICATOR - ESE @ 0.9 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
495788	1/7/2019 - 4/3/2019	mR/Std Qtr	9.36
501610	4/3/2019 - 7/8/2019	mR/Std Qtr	11.15
506952	7/8/2019 - 10/10/2019	mR/Std Qtr	8.64
513291	10/10/2019 - 1/6/2020	mR/Std Qtr	11.46

Sample Point 3 [INDICATOR - SE @ 0.9 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
495799	1/7/2019 - 4/3/2019	mR/Std Qtr	10.72
501621	4/3/2019 - 7/8/2019	mR/Std Qtr	11.66
506963	7/8/2019 - 10/10/2019	mR/Std Qtr	9.80
513302	10/10/2019 - 1/6/2020	mR/Std Qtr	10.10

Sample Point 4 [INDICATOR - SSE @ 1.1 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
495810	1/7/2019 - 4/3/2019	mR/Std Qtr	9.34
501632	4/3/2019 - 7/8/2019	mR/Std Qtr	9.93
506974	7/8/2019 - 10/10/2019	mR/Std Qtr	9.99
513313	10/10/2019 - 1/6/2020	mR/Std Qtr	11.83



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 5 [INDICATOR - S @ 1.1 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
495812	1/7/2019 - 4/3/2019	mR/Std Qtr	9.45
501634	4/3/2019 - 7/8/2019	mR/Std Qtr	9.91
506976	7/8/2019 - 10/10/2019	mR/Std Qtr	10.10
513315	10/10/2019 - 1/6/2020	mR/Std Qtr	11.94

Sample Point 6 [INDICATOR - SSW @ 1.6 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
495813	1/7/2019 - 4/3/2019	mR/Std Qtr	10.72
501635	4/3/2019 - 7/8/2019	mR/Std Qtr	10.43
506977	7/8/2019 - 10/10/2019	mR/Std Qtr	9.83
513316	10/10/2019 - 1/6/2020	mR/Std Qtr	10.67

Sample Point 7 [INDICATOR - SW @ 1.1 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
495814	1/7/2019 - 4/3/2019	mR/Std Qtr	9.29
501636	4/3/2019 - 7/8/2019	mR/Std Qtr	10.25
506978	7/8/2019 - 10/10/2019	mR/Std Qtr	8.66
513317	10/10/2019 - 1/6/2020	mR/Std Qtr	10.82

Sample Point 8 [INDICATOR - W @ 1.2 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
495820	1/7/2019 - 4/3/2019	mR/Std Qtr	9.82
501642	4/3/2019 - 7/9/2019	mR/Std Qtr	8.84
506984	7/9/2019 - 10/9/2019	mR/Std Qtr	9.14
513323	10/9/2019 - 1/6/2020	mR/Std Qtr	11.33

Sample Point 9 [INDICATOR - WNW @ 1 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
495826	1/7/2019 - 4/3/2019	mR/Std Qtr	11.09
501648	4/3/2019 - 7/9/2019	mR/Std Qtr	9.70
506990	7/9/2019 - 10/9/2019	mR/Std Qtr	7.41

BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 9 [INDICATOR - WNW @ 1 miles]

TLD RING TLD_INNER

Sample ID:	513329	Sample Dates:	10/9/2019 - 1/6/2020	Nuclide	Activity
				mR/Std Qtr	10.84

Sample Point 10 [INDICATOR - NW @ 0.8 miles]

TLD RING TLD_INNER

Sample ID:	495779	Sample Dates:	1/7/2019 - 4/3/2019	Nuclide	Activity
				mR/Std Qtr	9.06

Sample ID:	501601	Sample Dates:	4/3/2019 - 7/9/2019	Nuclide	Activity
				mR/Std Qtr	8.61

Sample ID:	506943	Sample Dates:	7/9/2019 - 10/9/2019	Nuclide	Activity
				mR/Std Qtr	8.02

Sample ID:	513282	Sample Dates:	10/9/2019 - 1/6/2020	Nuclide	Activity
				mR/Std Qtr	9.47

Sample Point 11 [INDICATOR - NNW @ 0.9 miles]

TLD RING TLD_INNER

Sample ID:	495780	Sample Dates:	1/7/2019 - 4/3/2019	Nuclide	Activity
				mR/Std Qtr	10.68

Sample ID:	501602	Sample Dates:	4/3/2019 - 7/9/2019	Nuclide	Activity
				mR/Std Qtr	11.26

Sample ID:	506944	Sample Dates:	7/9/2019 - 10/9/2019	Nuclide	Activity
				mR/Std Qtr	9.13

Sample ID:	513283	Sample Dates:	10/9/2019 - 1/6/2020	Nuclide	Activity
				mR/Std Qtr	12.59

Sample Point 12 [INDICATOR - N @ 1.1 miles]

TLD RING TLD_INNER

Sample ID:	495781	Sample Dates:	1/7/2019 - 4/3/2019	Nuclide	Activity
				mR/Std Qtr	12.76

Sample ID:	501603	Sample Dates:	4/3/2019 - 7/9/2019	Nuclide	Activity
				mR/Std Qtr	9.87

Sample ID:	506945	Sample Dates:	7/9/2019 - 10/9/2019	Nuclide	Activity
				mR/Std Qtr	9.50

Sample ID:	513284	Sample Dates:	10/9/2019 - 1/6/2020	Nuclide	Activity
				mR/Std Qtr	12.58

Sample Point 13 [INDICATOR - NNE @ 1.2 miles]

TLD RING TLD_INNER

Sample ID:	495782	Sample Dates:	1/7/2019 - 4/3/2019	Nuclide	Activity
				mR/Std Qtr	8.67

Sample ID:	501604	Sample Dates:	4/3/2019 - 7/9/2019	Nuclide	Activity
				mR/Std Qtr	10.37

Sample ID:	506946	Sample Dates:	7/9/2019 - 10/9/2019	Nuclide	Activity
				mR/Std Qtr	8.18

Sample ID:	513285	Sample Dates:	10/9/2019 - 1/6/2020	Nuclide	Activity
				mR/Std Qtr	11.62

Sample Point 14 [INDICATOR - NE @ 0.5 miles]

TLD RING TLD_INNER

Sample ID:	495783	Sample Dates:	1/8/2019 - 4/1/2019	Nuclide	Activity
				mR/Std Qtr	10.15

BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 14 [INDICATOR - NE @ 0.5 miles]

TLD RING TLD_INNER

Sample ID:	501605	Sample Dates:	4/1/2019 - 7/9/2019	Nuclide	Activity
				mR/Std Qtr	11.19
Sample ID:	506947	Sample Dates:	7/9/2019 - 10/11/2019	Nuclide	Activity
				mR/Std Qtr	10.46
Sample ID:	513286	Sample Dates:	10/11/2019 - 1/3/2020	Nuclide	Activity
				mR/Std Qtr	12.00

Sample Point 15 [INDICATOR - ENE @ 0.9 miles]

TLD RING TLD_INNER

Sample ID:	495784	Sample Dates:	1/8/2019 - 4/1/2019	Nuclide	Activity
				mR/Std Qtr	11.03
Sample ID:	501606	Sample Dates:	4/1/2019 - 7/9/2019	Nuclide	Activity
				mR/Std Qtr	11.89
Sample ID:	506948	Sample Dates:	7/9/2019 - 10/11/2019	Nuclide	Activity
				mR/Std Qtr	10.72
Sample ID:	513287	Sample Dates:	10/11/2019 - 1/3/2020	Nuclide	Activity
				mR/Std Qtr	13.22

Sample Point 16 [INDICATOR - WSW @ 1 miles]

TLD RING TLD_INNER

Sample ID:	495785	Sample Dates:	1/7/2019 - 4/3/2019	Nuclide	Activity
				mR/Std Qtr	9.85
Sample ID:	501607	Sample Dates:	4/3/2019 - 7/9/2019	Nuclide	Activity
				mR/Std Qtr	8.91
Sample ID:	506949	Sample Dates:	7/9/2019 - 10/9/2019	Nuclide	Activity
				mR/Std Qtr	9.77
Sample ID:	513288	Sample Dates:	10/9/2019 - 1/6/2020	Nuclide	Activity
				mR/Std Qtr	11.23

Sample Point 17 [INDICATOR - ESE @ 1.4 miles]

TLD RING TLD_INNER

Sample ID:	495786	Sample Dates:	1/7/2019 - 4/3/2019	Nuclide	Activity
				mR/Std Qtr	12.53
Sample ID:	501608	Sample Dates:	4/3/2019 - 7/8/2019	Nuclide	Activity
				mR/Std Qtr	13.01
Sample ID:	506950	Sample Dates:	7/8/2019 - 10/10/2019	Nuclide	Activity
				mR/Std Qtr	11.18
Sample ID:	513289	Sample Dates:	10/10/2019 - 1/6/2020	Nuclide	Activity
				mR/Std Qtr	13.84

Sample Point 18 [INDICATOR - SE @ 1.7 miles]

TLD RING TLD_INNER

Sample ID:	495787	Sample Dates:	1/7/2019 - 4/3/2019	Nuclide	Activity
				mR/Std Qtr	10.90
Sample ID:	501609	Sample Dates:	4/3/2019 - 7/8/2019	Nuclide	Activity
				mR/Std Qtr	9.44
Sample ID:	506951	Sample Dates:	7/8/2019 - 10/10/2019	Nuclide	Activity
				mR/Std Qtr	9.19
Sample ID:	513290	Sample Dates:	10/10/2019 - 1/6/2020	Nuclide	Activity
				mR/Std Qtr	10.83

BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 20 [INDICATOR - S @ 2.1 miles]

TLD RING TLD_INNER

Sample ID:	495789	Sample Dates:	1/7/2019 - 4/3/2019	Nuclide	Activity
				mR/Std Qtr	10.59
Sample ID:	501611	Sample Dates:	4/3/2019 - 7/8/2019	Nuclide	Activity
				mR/Std Qtr	9.98
Sample ID:	506953	Sample Dates:	7/8/2019 - 10/10/2019	Nuclide	Activity
				mR/Std Qtr	9.62
Sample ID:	513292	Sample Dates:	10/10/2019 - 1/6/2020	Nuclide	Activity
				mR/Std Qtr	11.73

Sample Point 21 [INDICATOR - SSW @ 2.9 miles]

TLD RING TLD_INNER

Sample ID:	495790	Sample Dates:	1/7/2019 - 4/3/2019	Nuclide	Activity
				mR/Std Qtr	15.13
Sample ID:	501612	Sample Dates:	4/3/2019 - 7/8/2019	Nuclide	Activity
				mR/Std Qtr	13.57
Sample ID:	506954	Sample Dates:	7/8/2019 - 10/10/2019	Nuclide	Activity
				mR/Std Qtr	11.05
Sample ID:	513293	Sample Dates:	10/10/2019 - 1/6/2020	Nuclide	Activity
				mR/Std Qtr	14.93

Sample Point 22 [INDICATOR - SW @ 5.3 miles]

TLD RING TLD_OUTER

Sample ID:	495791	Sample Dates:	1/3/2019 - 4/2/2019	Nuclide	Activity
				mR/Std Qtr	10.31
Sample ID:	501613	Sample Dates:	4/2/2019 - 7/3/2019	Nuclide	Activity
				mR/Std Qtr	11.39
Sample ID:	506955	Sample Dates:	7/3/2019 - 10/9/2019	Nuclide	Activity
				mR/Std Qtr	9.71
Sample ID:	513294	Sample Dates:	10/9/2019 - 1/8/2020	Nuclide	Activity
				mR/Std Qtr	11.98

Sample Point 23 [INDICATOR - WSW @ 4.6 miles]

TLD RING TLD_OUTER

Sample ID:	495792	Sample Dates:	1/3/2019 - 4/2/2019	Nuclide	Activity
				mR/Std Qtr	6.65
Sample ID:	501614	Sample Dates:	4/2/2019 - 7/3/2019	Nuclide	Activity
				mR/Std Qtr	7.02
Sample ID:	506956	Sample Dates:	7/3/2019 - 10/9/2019	Nuclide	Activity
				mR/Std Qtr	6.86
Sample ID:	513295	Sample Dates:	10/9/2019 - 1/8/2020	Nuclide	Activity
				mR/Std Qtr	9.62

Sample Point 24 [INDICATOR - W @ 3 miles]

TLD RING TLD_INNER

Sample ID:	495793	Sample Dates:	1/3/2019 - 4/2/2019	Nuclide	Activity
				mR/Std Qtr	14.43
Sample ID:	501615	Sample Dates:	4/2/2019 - 7/3/2019	Nuclide	Activity
				mR/Std Qtr	13.67
Sample ID:	506957	Sample Dates:	7/3/2019 - 10/9/2019	Nuclide	Activity
				mR/Std Qtr	11.76

BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 24 [INDICATOR - W @ 3 miles]

TLD RING TLD_INNER

Sample ID:	513296	Sample Dates:	10/9/2019 - 1/3/2020	Nuclide	Activity
				mR/Std Qtr	14.47

Sample Point 25 [INDICATOR - WNW @ 8.6 miles]

TLD RING TLD_OUTER

Sample ID:	495794	Sample Dates:	1/3/2019 - 4/2/2019	Nuclide	Activity
				mR/Std Qtr	9.63

Sample ID:	501616	Sample Dates:	4/2/2019 - 7/3/2019	Nuclide	Activity
				mR/Std Qtr	10.71

Sample ID:	506958	Sample Dates:	7/3/2019 - 10/9/2019	Nuclide	Activity
				mR/Std Qtr	8.34

Sample ID:	513297	Sample Dates:	10/9/2019 - 1/3/2020	Nuclide	Activity
				mR/Std Qtr	12.35

Sample Point 26 [INDICATOR - NW @ 5.9 miles]

TLD RING TLD_OUTER

Sample ID:	495795	Sample Dates:	1/7/2019 - 4/3/2019	Nuclide	Activity
				mR/Std Qtr	12.82

Sample ID:	501617	Sample Dates:	4/3/2019 - 7/3/2019	Nuclide	Activity
				mR/Std Qtr	11.54

Sample ID:	506959	Sample Dates:	7/3/2019 - 10/9/2019	Nuclide	Activity
				mR/Std Qtr	11.57

Sample ID:	513298	Sample Dates:	10/9/2019 - 1/6/2020	Nuclide	Activity
				mR/Std Qtr	11.85

Sample Point 27 [INDICATOR - NNW @ 5.1 miles]

TLD RING TLD_OUTER

Sample ID:	495796	Sample Dates:	1/7/2019 - 4/3/2019	Nuclide	Activity
				mR/Std Qtr	10.30

Sample ID:	501618	Sample Dates:	4/3/2019 - 7/3/2019	Nuclide	Activity
				mR/Std Qtr	8.96

Sample ID:	506960	Sample Dates:	7/3/2019 - 10/9/2019	Nuclide	Activity
				mR/Std Qtr	8.14

Sample ID:	513299	Sample Dates:	10/9/2019 - 1/6/2020	Nuclide	Activity
				mR/Std Qtr	10.43

Sample Point 28 [INDICATOR - NW @ 4.2 miles]

TLD RING TLD_OUTER

Sample ID:	495797	Sample Dates:	1/7/2019 - 4/3/2019	Nuclide	Activity
				mR/Std Qtr	9.39

Sample ID:	501619	Sample Dates:	4/3/2019 - 7/3/2019	Nuclide	Activity
				mR/Std Qtr	9.08

Sample ID:	506961	Sample Dates:	7/3/2019 - 10/9/2019	Nuclide	Activity
				mR/Std Qtr	8.70

Sample ID:	513300	Sample Dates:	10/9/2019 - 1/6/2020	Nuclide	Activity
				mR/Std Qtr	10.22

Sample Point 29 [INDICATOR - SSW @ 2.6 miles]

TLD RING TLD_INNER

Sample ID:	495798	Sample Dates:	1/7/2019 - 4/3/2019	Nuclide	Activity
				mR/Std Qtr	9.10

BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 29 [INDICATOR - SSW @ 2.6 miles]

TLD RING TLD_INNER

Sample ID:	501620	Sample Dates:	4/3/2019 - 7/8/2019	Nuclide	Activity
				mR/Std Qtr	10.08

Sample ID:	506962	Sample Dates:	7/8/2019 - 10/10/2019	Nuclide	Activity
				mR/Std Qtr	8.24

Sample ID:	513301	Sample Dates:	10/10/2019 - 1/6/2020	Nuclide	Activity
				mR/Std Qtr	10.57

Sample Point 30 [INDICATOR - NE @ 2 miles]

TLD RING TLD_INNER

Sample ID:	495800	Sample Dates:	1/9/2019 - 4/8/2019	Nuclide	Activity
				mR/Std Qtr	9.06

Sample ID:	501622	Sample Dates:	4/8/2019 - 7/9/2019	Nuclide	Activity
				mR/Std Qtr	9.91

Sample ID:	506964	Sample Dates:	7/9/2019 - 10/15/2019	Nuclide	Activity
				mR/Std Qtr	7.60

Sample ID:	513303	Sample Dates:	10/15/2019 - 1/3/2020	Nuclide	Activity
				mR/Std Qtr	10.40

Sample Point 31 [INDICATOR - ENE @ 2.5 miles]

TLD RING TLD_INNER

Sample ID:	495801	Sample Dates:	1/9/2019 - 4/8/2019	Nuclide	Activity
				mR/Std Qtr	10.95

Sample ID:	501623	Sample Dates:	4/8/2019 - 7/9/2019	Nuclide	Activity
				mR/Std Qtr	13.03

Sample ID:	506965	Sample Dates:	7/9/2019 - 10/15/2019	Nuclide	Activity
				mR/Std Qtr	10.03

Sample ID:	513304	Sample Dates:	10/15/2019 - 1/3/2020	Nuclide	Activity
				mR/Std Qtr	11.82

Sample Point 32 [INDICATOR - ENE @ 5.8 miles]

TLD RING TLD_OUTER

Sample ID:	495802	Sample Dates:	1/8/2019 - 4/4/2019	Nuclide	Activity
				mR/Std Qtr	10.71

Sample ID:	501624	Sample Dates:	4/4/2019 - 7/8/2019	Nuclide	Activity
				mR/Std Qtr	11.61

Sample ID:	506966	Sample Dates:	7/8/2019 - 10/11/2019	Nuclide	Activity
				mR/Std Qtr	9.65

Sample ID:	513305	Sample Dates:	10/11/2019 - 1/2/2020	Nuclide	Activity
				mR/Std Qtr	13.09

Sample Point 33 [INDICATOR - E @ 4.1 miles]

TLD RING TLD_OUTER

Sample ID:	501625	Sample Dates:	4/4/2019 - 7/8/2019	Nuclide	Activity
				mR/Std Qtr	9.46

Sample ID:	506967	Sample Dates:	7/8/2019 - 10/11/2019	Nuclide	Activity
				mR/Std Qtr	7.00

Sample ID:	513306	Sample Dates:	10/11/2019 - 1/2/2020	Nuclide	Activity
				mR/Std Qtr	10.52

BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 34 [INDICATOR - E @ 5.4 miles]

TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
495804	1/8/2019 - 4/4/2019	mR/Std Qtr	8.56
501626	4/4/2019 - 7/8/2019	mR/Std Qtr	10.51
506968	7/8/2019 - 10/11/2019	mR/Std Qtr	8.22
513307	10/11/2019 - 1/2/2020	mR/Std Qtr	9.84

Sample Point 35 [INDICATOR - SSE @ 7.3 miles]

TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
495805	1/3/2019 - 4/8/2019	mR/Std Qtr	7.36
501627	4/8/2019 - 7/3/2019	mR/Std Qtr	7.53
506969	7/3/2019 - 10/10/2019	mR/Std Qtr	6.37
513308	10/10/2019 - 1/8/2020	mR/Std Qtr	8.32

Sample Point 36 [INDICATOR - NE @ 8.9 miles]

TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
495806	1/8/2019 - 4/4/2019	mR/Std Qtr	11.42
501628	4/4/2019 - 7/8/2019	mR/Std Qtr	9.70
506970	7/8/2019 - 10/11/2019	mR/Std Qtr	7.96
513309	10/11/2019 - 1/2/2020	mR/Std Qtr	11.16

Sample Point 37 [INDICATOR - NW @ 5.5 miles]

TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
495807	1/7/2019 - 4/3/2019	mR/Std Qtr	8.88
501629	4/3/2019 - 7/3/2019	mR/Std Qtr	9.23
506971	7/3/2019 - 10/9/2019	mR/Std Qtr	7.74
513310	10/9/2019 - 1/6/2020	mR/Std Qtr	9.98

Sample Point 38 [INDICATOR - W @ 11 miles]

TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
495808	1/3/2019 - 4/2/2019	mR/Std Qtr	9.99
501630	4/2/2019 - 7/3/2019	mR/Std Qtr	9.75
506972	7/3/2019 - 10/9/2019	mR/Std Qtr	8.61

BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 38 [INDICATOR - W @ 11 miles]

TLD RING TLD_OUTER

Sample ID:	513311	Sample Dates:	10/9/2019 - 1/3/2020	Nuclide	Activity
				mR/Std Qtr	10.44

Sample Point 39 [INDICATOR - SW @ 5.3 miles]

TLD RING TLD_OUTER

Sample ID:	495809	Sample Dates:	1/3/2019 - 4/2/2019	Nuclide	Activity
				mR/Std Qtr	18.61

Sample ID:	501631	Sample Dates:	4/2/2019 - 7/3/2019	Nuclide	Activity
				mR/Std Qtr	13.42

Sample ID:	506973	Sample Dates:	7/3/2019 - 10/9/2019	Nuclide	Activity
				mR/Std Qtr	13.30

Sample ID:	513312	Sample Dates:	10/9/2019 - 1/8/2020	Nuclide	Activity
				mR/Std Qtr	16.67

Sample Point 40 [INDICATOR - WSW @ 6.9 miles]

TLD RING TLD_OUTER

Sample ID:	495811	Sample Dates:	1/3/2019 - 4/2/2019	Nuclide	Activity
				mR/Std Qtr	13.76

Sample ID:	501633	Sample Dates:	4/2/2019 - 7/3/2019	Nuclide	Activity
				mR/Std Qtr	13.73

Sample ID:	506975	Sample Dates:	7/3/2019 - 10/9/2019	Nuclide	Activity
				mR/Std Qtr	13.67

Sample ID:	513314	Sample Dates:	10/9/2019 - 1/8/2020	Nuclide	Activity
				mR/Std Qtr	15.86

Sample Point 75 [INDICATOR - S @ 4.7 miles]

TLD RING TLD_OUTER

Sample ID:	495815	Sample Dates:	1/3/2019 - 4/2/2019	Nuclide	Activity
				mR/Std Qtr	12.51

Sample ID:	501637	Sample Dates:	4/2/2019 - 7/3/2019	Nuclide	Activity
				mR/Std Qtr	11.94

Sample ID:	506979	Sample Dates:	7/3/2019 - 10/9/2019	Nuclide	Activity
				mR/Std Qtr	9.86

Sample ID:	513318	Sample Dates:	10/9/2019 - 1/8/2020	Nuclide	Activity
				mR/Std Qtr	12.66

Sample Point 76 [INDICATOR - SSW @ 4.8 miles]

TLD RING TLD_OUTER

Sample ID:	495816	Sample Dates:	1/3/2019 - 4/2/2019	Nuclide	Activity
				mR/Std Qtr	13.61

Sample ID:	501638	Sample Dates:	4/2/2019 - 7/3/2019	Nuclide	Activity
				mR/Std Qtr	14.34

Sample ID:	506980	Sample Dates:	7/3/2019 - 10/9/2019	Nuclide	Activity
				mR/Std Qtr	10.31

Sample ID:	513319	Sample Dates:	10/9/2019 - 1/8/2020	Nuclide	Activity
				mR/Std Qtr	13.32

Sample Point 77 [INDICATOR - S @ 5.4 miles]

TLD RING TLD_OUTER

Sample ID:	495817	Sample Dates:	1/3/2019 - 4/8/2019	Nuclide	Activity
				mR/Std Qtr	8.84

BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 77 [INDICATOR - S @ 5.4 miles]

TLD RING TLD_OUTER

Sample ID:	501639	Sample Dates:	4/8/2019 - 7/3/2019	Nuclide	Activity
				mR/Std Qtr	7.49

Sample ID:	506981	Sample Dates:	7/3/2019 - 10/10/2019	Nuclide	Activity
				mR/Std Qtr	6.94

Sample ID:	513320	Sample Dates:	10/10/2019 - 1/8/2020	Nuclide	Activity
				mR/Std Qtr	8.39

Sample Point 78 [INDICATOR - NNE @ 9.9 miles]

TLD RING TLD_OUTER

Sample ID:	495818	Sample Dates:	1/7/2019 - 4/3/2019	Nuclide	Activity
				mR/Std Qtr	7.59

Sample ID:	501640	Sample Dates:	4/3/2019 - 7/3/2019	Nuclide	Activity
				mR/Std Qtr	9.24

Sample ID:	506982	Sample Dates:	7/3/2019 - 10/9/2019	Nuclide	Activity
				mR/Std Qtr	9.00

Sample ID:	513321	Sample Dates:	10/9/2019 - 1/6/2020	Nuclide	Activity
				mR/Std Qtr	9.66

Sample Point 79 [INDICATOR - N @ 9.5 miles]

TLD RING TLD_OUTER

Sample ID:	495819	Sample Dates:	1/7/2019 - 4/3/2019	Nuclide	Activity
				mR/Std Qtr	9.24

Sample ID:	501641	Sample Dates:	4/3/2019 - 7/3/2019	Nuclide	Activity
				mR/Std Qtr	9.15

Sample ID:	506983	Sample Dates:	7/3/2019 - 10/9/2019	Nuclide	Activity
				mR/Std Qtr	9.73

Sample ID:	513322	Sample Dates:	10/9/2019 - 1/6/2020	Nuclide	Activity
				mR/Std Qtr	12.34

Sample Point 81 [CONTROL - WNW @ 9.9 miles]

TLD RING TLD_CTRL

Sample ID:	495821	Sample Dates:	1/3/2019 - 4/2/2019	Nuclide	Activity
				mR/Std Qtr	9.66

Sample ID:	501643	Sample Dates:	4/2/2019 - 7/3/2019	Nuclide	Activity
				mR/Std Qtr	11.22

Sample ID:	506985	Sample Dates:	7/3/2019 - 10/9/2019	Nuclide	Activity
				mR/Std Qtr	10.01

Sample ID:	513324	Sample Dates:	10/9/2019 - 1/3/2020	Nuclide	Activity
				mR/Std Qtr	12.40

Sample Point 82 [INDICATOR - NNE @ 0.17 miles]

TLD RING TLD_ISFSI

Sample ID:	495822	Sample Dates:	1/8/2019 - 4/1/2019	Nuclide	Activity
				mR/Std Qtr	24.48

Sample ID:	501644	Sample Dates:	4/1/2019 - 7/9/2019	Nuclide	Activity
				mR/Std Qtr	30.85

Sample ID:	506986	Sample Dates:	7/9/2019 - 10/11/2019	Nuclide	Activity
				mR/Std Qtr	27.70

Sample ID:	513325	Sample Dates:	10/11/2019 - 1/3/2020	Nuclide	Activity
				mR/Std Qtr	33.60

BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 83 [INDICATOR - NE @ 0.27 miles]

TLD RING TLD_ISFSI

Sample ID:	Sample Dates:	Nuclide	Activity
495823	1/8/2019 - 4/1/2019	mR/Std Qtr	19.21
501645	4/1/2019 - 7/9/2019	mR/Std Qtr	24.19
506987	7/9/2019 - 10/11/2019	mR/Std Qtr	19.84
513326	10/11/2019 - 1/3/2020	mR/Std Qtr	25.19

Sample Point 84 [INDICATOR - NE @ 0.27 miles]

TLD RING TLD_ISFSI

Sample ID:	Sample Dates:	Nuclide	Activity
495824	1/8/2019 - 4/1/2019	mR/Std Qtr	17.03
501646	4/1/2019 - 7/9/2019	mR/Std Qtr	21.73
506988	7/9/2019 - 10/11/2019	mR/Std Qtr	16.57
513327	10/11/2019 - 1/3/2020	mR/Std Qtr	21.99

Sample Point 85 [INDICATOR - ENE @ 0.09 miles]

TLD RING TLD_ISFSI

Sample ID:	Sample Dates:	Nuclide	Activity
495825	1/8/2019 - 4/1/2019	mR/Std Qtr	23.46
501647	4/1/2019 - 7/9/2019	mR/Std Qtr	21.11
506989	7/9/2019 - 10/11/2019	mR/Std Qtr	19.82
513328	10/11/2019 - 1/3/2020	mR/Std Qtr	27.20

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 800 [INDICATOR - NE @ 0.7 miles]

Sample ID:	Sample Dates:	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
491130	1/2/2019 - 1/2/2019	WAXMYRTLE	Mn-54	<3.24E+01	0.00E+00	3.24E+01
			Co-58	<3.24E+01	0.00E+00	3.24E+01
			Fe-59	<5.93E+01	0.00E+00	5.93E+01
			Co-60	<3.02E+01	0.00E+00	3.02E+01
			Zn-65	<4.94E+01	0.00E+00	4.94E+01
			Zr-95	<5.32E+01	0.00E+00	5.32E+01
			Nb-95	<3.18E+01	0.00E+00	3.18E+01
			I-131	<4.52E+01	0.00E+00	4.52E+01
			Cs-134	<3.22E+01	0.00E+00	3.22E+01
			Cs-137	<2.77E+01	0.00E+00	2.77E+01
			BaLa-140	<5.61E+01	0.00E+00	5.61E+01
			Be-7	4.10E+03	5.91E+02	4.38E+02
			K-40	1.67E+03	5.42E+02	6.56E+02
492529	2/4/2019 - 2/4/2019	WAXMYRTLE	Mn-54	<2.39E+01	0.00E+00	2.39E+01
			Co-58	<2.14E+01	0.00E+00	2.14E+01
			Fe-59	<4.39E+01	0.00E+00	4.39E+01
			Co-60	<2.07E+01	0.00E+00	2.07E+01
			Zn-65	<4.61E+01	0.00E+00	4.61E+01
			Zr-95	<4.16E+01	0.00E+00	4.16E+01



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 800 [INDICATOR - NE @ 0.7 miles]

Sample ID:	Sample Dates:	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
492529	2/4/2019 - 2/4/2019	WAXMYRTLE	Nb-95	<2.41E+01	0.00E+00	2.41E+01
			I-131	<2.61E+01	0.00E+00	2.61E+01
			Cs-134	<2.53E+01	0.00E+00	2.53E+01
			Cs-137	<2.74E+01	0.00E+00	2.74E+01
			BaLa-140	<3.53E+01	0.00E+00	3.53E+01
			Be-7	3.03E+03	3.94E+02	1.96E+02
			K-40	2.46E+03	4.91E+02	4.01E+02
496118	3/1/2019 - 3/1/2019	WAXMYRTLE	Mn-54	<2.55E+01	0.00E+00	2.55E+01
			Co-58	<1.88E+01	0.00E+00	1.88E+01
			Fe-59	<5.01E+01	0.00E+00	5.01E+01
			Co-60	<2.42E+01	0.00E+00	2.42E+01
			Zn-65	<5.21E+01	0.00E+00	5.21E+01
			Zr-95	<4.43E+01	0.00E+00	4.43E+01
			Nb-95	<2.42E+01	0.00E+00	2.42E+01
			I-131	<4.32E+01	0.00E+00	4.32E+01
			Cs-134	<2.28E+01	0.00E+00	2.28E+01
			Cs-137	<2.02E+01	0.00E+00	2.02E+01
			BaLa-140	<3.89E+01	0.00E+00	3.89E+01
			Be-7	2.30E+03	3.59E+02	2.70E+02
			K-40	2.37E+03	4.28E+02	2.05E+02
			497989	4/1/2019 - 4/1/2019	WAXMYRTLE	Mn-54
Co-58	<1.88E+01	0.00E+00				1.88E+01
Fe-59	<3.92E+01	0.00E+00				3.92E+01
Co-60	<2.18E+01	0.00E+00				2.18E+01
Zn-65	<4.60E+01	0.00E+00				4.60E+01
Zr-95	<3.06E+01	0.00E+00				3.06E+01
Nb-95	<2.09E+01	0.00E+00				2.09E+01
I-131	<1.84E+01	0.00E+00				1.84E+01
Cs-134	<2.03E+01	0.00E+00				2.03E+01
Cs-137	<2.05E+01	0.00E+00				2.05E+01
BaLa-140	<2.44E+01	0.00E+00				2.44E+01
Be-7	2.20E+03	3.25E+02				2.33E+02
K-40	3.14E+03	5.19E+02				3.72E+02
499840	5/1/2019 - 5/1/2019	WAXMYRTLE				Mn-54
			Co-58	<2.11E+01	0.00E+00	2.11E+01
			Fe-59	<3.78E+01	0.00E+00	3.78E+01
			Co-60	<1.36E+01	0.00E+00	1.36E+01
			Zn-65	<4.50E+01	0.00E+00	4.50E+01
			Zr-95	<2.66E+01	0.00E+00	2.66E+01
			Nb-95	<1.96E+01	0.00E+00	1.96E+01
			I-131	<2.80E+01	0.00E+00	2.80E+01
			Cs-134	<1.97E+01	0.00E+00	1.97E+01
			Cs-137	<1.69E+01	0.00E+00	1.69E+01
			BaLa-140	<3.30E+01	0.00E+00	3.30E+01
			Be-7	1.21E+03	2.57E+02	2.84E+02
			K-40	3.14E+03	4.91E+02	2.36E+02
			501093	6/3/2019 - 6/3/2019	MIXEDBLV	Mn-54
Co-58	<3.11E+01	0.00E+00				3.11E+01
Fe-59	<6.48E+01	0.00E+00				6.48E+01
Co-60	<2.94E+01	0.00E+00				2.94E+01
Zn-65	<5.78E+01	0.00E+00				5.78E+01
Zr-95	<5.41E+01	0.00E+00				5.41E+01
Nb-95	<2.15E+01	0.00E+00				2.15E+01
I-131	<3.84E+01	0.00E+00				3.84E+01
Cs-134	<3.97E+01	0.00E+00				3.97E+01
Cs-137	<2.73E+01	0.00E+00				2.73E+01
BaLa-140	<4.41E+01	0.00E+00				4.41E+01



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 800 [INDICATOR - NE @ 0.7 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
501093	6/3/2019 - 6/3/2019	MIXEDBLV	Be-7	8.00E+02	2.77E+02	3.25E+02
			K-40	3.45E+03	7.08E+02	4.31E+02
503349	7/2/2019 - 7/2/2019	MIXEDBLV	Mn-54	<2.49E+01	0.00E+00	2.49E+01
			Co-58	<2.89E+01	0.00E+00	2.89E+01
			Fe-59	<5.66E+01	0.00E+00	5.66E+01
			Co-60	<2.96E+01	0.00E+00	2.96E+01
			Zn-65	<5.83E+01	0.00E+00	5.83E+01
			Zr-95	<5.88E+01	0.00E+00	5.88E+01
			Nb-95	<2.79E+01	0.00E+00	2.79E+01
			I-131	<4.53E+01	0.00E+00	4.53E+01
			Cs-134	<3.43E+01	0.00E+00	3.43E+01
			Cs-137	<3.02E+01	0.00E+00	3.02E+01
			BaLa-140	<5.18E+01	0.00E+00	5.18E+01
			Be-7	1.47E+03	3.23E+02	3.32E+02
			K-40	3.93E+03	6.92E+02	4.92E+02
504617	8/1/2019 - 8/1/2019	MIXEDBLV	Mn-54	<2.02E+01	0.00E+00	2.02E+01
			Co-58	<1.80E+01	0.00E+00	1.80E+01
			Fe-59	<3.95E+01	0.00E+00	3.95E+01
			Co-60	<1.83E+01	0.00E+00	1.83E+01
			Zn-65	<5.15E+01	0.00E+00	5.15E+01
			Zr-95	<3.73E+01	0.00E+00	3.73E+01
			Nb-95	<2.37E+01	0.00E+00	2.37E+01
			I-131	<4.11E+01	0.00E+00	4.11E+01
			Cs-134	<1.91E+01	0.00E+00	1.91E+01
			Cs-137	<2.06E+01	0.00E+00	2.06E+01
			BaLa-140	<2.45E+01	0.00E+00	2.45E+01
			Be-7	1.52E+03	2.79E+02	2.76E+02
			K-40	4.39E+03	5.93E+02	2.98E+02
505823	9/3/2019 - 9/3/2019	WAXMYRTLE	Mn-54	<2.65E+01	0.00E+00	2.65E+01
			Co-58	<2.05E+01	0.00E+00	2.05E+01
			Fe-59	<6.19E+01	0.00E+00	6.19E+01
			Co-60	<3.36E+01	0.00E+00	3.36E+01
			Zn-65	<6.47E+01	0.00E+00	6.47E+01
			Zr-95	<5.11E+01	0.00E+00	5.11E+01
			Nb-95	<2.48E+01	0.00E+00	2.48E+01
			I-131	<4.56E+01	0.00E+00	4.56E+01
			Cs-134	<2.85E+01	0.00E+00	2.85E+01
			Cs-137	<2.64E+01	0.00E+00	2.64E+01
			BaLa-140	<3.77E+01	0.00E+00	3.77E+01
			Be-7	2.11E+03	3.78E+02	3.06E+02
			K-40	3.48E+03	6.13E+02	2.72E+02
508321	10/1/2019 - 10/1/2019	WAXMYRTLE	Mn-54	<2.68E+01	0.00E+00	2.68E+01
			Co-58	<2.31E+01	0.00E+00	2.31E+01
			Fe-59	<5.59E+01	0.00E+00	5.59E+01
			Co-60	<2.57E+01	0.00E+00	2.57E+01
			Zn-65	<5.19E+01	0.00E+00	5.19E+01
			Zr-95	<4.40E+01	0.00E+00	4.40E+01
			Nb-95	<2.77E+01	0.00E+00	2.77E+01
			I-131	<4.58E+01	0.00E+00	4.58E+01
			Cs-134	<2.56E+01	0.00E+00	2.56E+01
			Cs-137	<2.12E+01	0.00E+00	2.12E+01
			BaLa-140	<3.95E+01	0.00E+00	3.95E+01
			Be-7	8.80E+02	2.55E+02	3.39E+02
			K-40	3.21E+03	5.46E+02	4.53E+02
510790	11/4/2019 - 11/4/2019	WAXMYRTLE	Mn-54	<3.29E+01	0.00E+00	3.29E+01



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 800 [INDICATOR - NE @ 0.7 miles]

Sample ID:	510790	Sample Dates:	11/4/2019 - 11/4/2019	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
					Co-58	<4.69E+01	0.00E+00	4.69E+01
					Fe-59	<7.51E+01	0.00E+00	7.51E+01
					Co-60	<2.32E+01	0.00E+00	2.32E+01
					Zn-65	<1.01E+02	0.00E+00	1.01E+02
					Zr-95	<4.74E+01	0.00E+00	4.74E+01
					Nb-95	<4.19E+01	0.00E+00	4.19E+01
					I-131	<4.45E+01	0.00E+00	4.45E+01
					Cs-134	<2.63E+01	0.00E+00	2.63E+01
					Cs-137	<3.33E+01	0.00E+00	3.33E+01
					BaLa-140	<4.04E+01	0.00E+00	4.04E+01
					Be-7	1.67E+03	4.21E+02	4.41E+02
					K-40	3.65E+03	8.00E+02	5.94E+02

Sample ID:	513903	Sample Dates:	12/2/2019 - 12/2/2019	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<2.31E+01	0.00E+00	2.31E+01
					Co-58	<2.46E+01	0.00E+00	2.46E+01
					Fe-59	<4.73E+01	0.00E+00	4.73E+01
					Co-60	<3.24E+01	0.00E+00	3.24E+01
					Zn-65	<4.94E+01	0.00E+00	4.94E+01
					Zr-95	<4.28E+01	0.00E+00	4.28E+01
					Nb-95	<2.77E+01	0.00E+00	2.77E+01
					I-131	<4.54E+01	0.00E+00	4.54E+01
					Cs-134	<3.04E+01	0.00E+00	3.04E+01
					Cs-137	<2.56E+01	0.00E+00	2.56E+01
					BaLa-140	<4.92E+01	0.00E+00	4.92E+01
					Be-7	1.55E+03	3.12E+02	3.23E+02
					K-40	2.77E+03	5.29E+02	4.12E+02

Sample Point 801 [INDICATOR - SW @ 0.8 miles]

Sample ID:	491131	Sample Dates:	1/2/2019 - 1/2/2019	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<3.97E+01	0.00E+00	3.97E+01
					Co-58	<3.05E+01	0.00E+00	3.05E+01
					Fe-59	<6.05E+01	0.00E+00	6.05E+01
					Co-60	<4.27E+01	0.00E+00	4.27E+01
					Zn-65	<5.75E+01	0.00E+00	5.75E+01
					Zr-95	<6.28E+01	0.00E+00	6.28E+01
					Nb-95	<3.47E+01	0.00E+00	3.47E+01
					I-131	<4.78E+01	0.00E+00	4.78E+01
					Cs-134	<4.27E+01	0.00E+00	4.27E+01
					Cs-137	<2.86E+01	0.00E+00	2.86E+01
					BaLa-140	<5.34E+01	0.00E+00	5.34E+01
					Be-7	3.57E+03	5.77E+02	3.54E+02
					K-40	1.82E+03	6.29E+02	7.29E+02

Sample ID:	492530	Sample Dates:	2/4/2019 - 2/4/2019	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<2.58E+01	0.00E+00	2.58E+01
					Co-58	<2.33E+01	0.00E+00	2.33E+01
					Fe-59	<4.16E+01	0.00E+00	4.16E+01
					Co-60	<2.61E+01	0.00E+00	2.61E+01
					Zn-65	<6.31E+01	0.00E+00	6.31E+01
					Zr-95	<4.63E+01	0.00E+00	4.63E+01
					Nb-95	<2.46E+01	0.00E+00	2.46E+01
					I-131	<3.07E+01	0.00E+00	3.07E+01
					Cs-134	<3.06E+01	0.00E+00	3.06E+01
					Cs-137	<2.07E+01	0.00E+00	2.07E+01
					BaLa-140	<2.80E+01	0.00E+00	2.80E+01
					Be-7	2.66E+03	4.47E+02	4.20E+02
					K-40	2.19E+03	5.44E+02	5.77E+02

Sample ID:	496119	Sample Dates:	3/1/2019 - 3/1/2019	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<2.72E+01	0.00E+00	2.72E+01
					Co-58	<2.21E+01	0.00E+00	2.21E+01
					Fe-59	<5.00E+01	0.00E+00	5.00E+01



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 801 [INDICATOR - SW @ 0.8 miles]

Sample ID:	Sample Dates:	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
496119	3/1/2019 - 3/1/2019	WAXMYRTLE	Co-60	<2.24E+01	0.00E+00	2.24E+01
			Zn-65	<6.14E+01	0.00E+00	6.14E+01
			Zr-95	<5.03E+01	0.00E+00	5.03E+01
			Nb-95	<2.88E+01	0.00E+00	2.88E+01
			I-131	<4.75E+01	0.00E+00	4.75E+01
			Cs-134	<3.07E+01	0.00E+00	3.07E+01
			Cs-137	<2.34E+01	0.00E+00	2.34E+01
			BaLa-140	<4.79E+01	0.00E+00	4.79E+01
			Be-7	2.49E+03	3.83E+02	3.24E+02
			K-40	2.91E+03	5.26E+02	4.26E+02
			497990	4/1/2019 - 4/1/2019	WAXMYRTLE	Mn-54
Co-58	<1.24E+01	0.00E+00				1.24E+01
Fe-59	<2.45E+01	0.00E+00				2.45E+01
Co-60	<1.54E+01	0.00E+00				1.54E+01
Zn-65	<3.12E+01	0.00E+00				3.12E+01
Zr-95	<2.71E+01	0.00E+00				2.71E+01
Nb-95	<1.57E+01	0.00E+00				1.57E+01
I-131	<1.73E+01	0.00E+00				1.73E+01
Cs-134	<1.65E+01	0.00E+00				1.65E+01
Cs-137	<1.54E+01	0.00E+00				1.54E+01
BaLa-140	<1.55E+01	0.00E+00				1.55E+01
Be-7	2.66E+03	3.41E+02				2.06E+02
K-40	2.38E+03	3.71E+02				1.24E+02
499841	5/1/2019 - 5/1/2019	WAXMYRTLE				Mn-54
			Co-58	<2.00E+01	0.00E+00	2.00E+01
			Fe-59	<3.69E+01	0.00E+00	3.69E+01
			Co-60	<2.19E+01	0.00E+00	2.19E+01
			Zn-65	<5.12E+01	0.00E+00	5.12E+01
			Zr-95	<2.52E+01	0.00E+00	2.52E+01
			Nb-95	<1.83E+01	0.00E+00	1.83E+01
			I-131	<3.31E+01	0.00E+00	3.31E+01
			Cs-134	<2.24E+01	0.00E+00	2.24E+01
			Cs-137	<2.09E+01	0.00E+00	2.09E+01
			BaLa-140	<2.78E+01	0.00E+00	2.78E+01
			Be-7	7.51E+02	1.98E+02	2.32E+02
			K-40	3.17E+03	4.83E+02	1.98E+02
			501094	6/3/2019 - 6/3/2019	MIXEDBLV	Mn-54
Co-58	<2.25E+01	0.00E+00				2.25E+01
Fe-59	<4.46E+01	0.00E+00				4.46E+01
Co-60	<2.90E+01	0.00E+00				2.90E+01
Zn-65	<5.53E+01	0.00E+00				5.53E+01
Zr-95	<5.11E+01	0.00E+00				5.11E+01
Nb-95	<3.05E+01	0.00E+00				3.05E+01
I-131	<3.50E+01	0.00E+00				3.50E+01
Cs-134	<2.75E+01	0.00E+00				2.75E+01
Cs-137	<2.83E+01	0.00E+00				2.83E+01
BaLa-140	<3.81E+01	0.00E+00				3.81E+01
Be-7	7.54E+02	2.58E+02				3.45E+02
K-40	3.94E+03	6.30E+02				3.50E+02
503350	7/2/2019 - 7/2/2019	MIXEDBLV				Mn-54
			Co-58	<2.35E+01	0.00E+00	2.35E+01
			Fe-59	<5.72E+01	0.00E+00	5.72E+01
			Co-60	<3.17E+01	0.00E+00	3.17E+01
			Zn-65	<7.11E+01	0.00E+00	7.11E+01
			Zr-95	<4.92E+01	0.00E+00	4.92E+01
			Nb-95	<3.36E+01	0.00E+00	3.36E+01
			I-131	<4.49E+01	0.00E+00	4.49E+01



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 801 [INDICATOR - SW @ 0.8 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
503350	7/2/2019 - 7/2/2019	MIXEDBLV	Cs-134	<3.51E+01	0.00E+00	3.51E+01
			Cs-137	<2.54E+01	0.00E+00	2.54E+01
			BaLa-140	<5.08E+01	0.00E+00	5.08E+01
			Be-7	1.45E+03	3.03E+02	3.36E+02
			K-40	3.94E+03	6.38E+02	4.90E+02
504618	8/1/2019 - 8/1/2019	MIXEDBLV	Mn-54	<1.91E+01	0.00E+00	1.91E+01
			Co-58	<2.28E+01	0.00E+00	2.28E+01
			Fe-59	<4.26E+01	0.00E+00	4.26E+01
			Co-60	<1.92E+01	0.00E+00	1.92E+01
			Zn-65	<4.73E+01	0.00E+00	4.73E+01
			Zr-95	<3.83E+01	0.00E+00	3.83E+01
			Nb-95	<2.51E+01	0.00E+00	2.51E+01
			I-131	<4.73E+01	0.00E+00	4.73E+01
			Cs-134	<2.08E+01	0.00E+00	2.09E+01
			Cs-137	<1.62E+01	0.00E+00	1.62E+01
			BaLa-140	<3.69E+01	0.00E+00	3.69E+01
			Be-7	2.14E+03	3.08E+02	2.41E+02
			K-40	3.30E+03	4.75E+02	2.50E+02
			505824	9/3/2019 - 9/3/2019	WAXMYRTLE	Mn-54
Co-58	<2.56E+01	0.00E+00				2.56E+01
Fe-59	<6.56E+01	0.00E+00				6.56E+01
Co-60	<4.44E+01	0.00E+00				4.44E+01
Zn-65	<4.85E+01	0.00E+00				4.85E+01
Zr-95	<6.73E+01	0.00E+00				6.73E+01
Nb-95	<3.79E+01	0.00E+00				3.79E+01
I-131	<4.59E+01	0.00E+00				4.59E+01
Cs-134	<3.00E+01	0.00E+00				3.00E+01
Cs-137	<3.58E+01	0.00E+00				3.58E+01
BaLa-140	<6.27E+01	0.00E+00				6.27E+01
Be-7	2.24E+03	8.84E+02				2.63E+02
K-40	2.55E+03	5.86E+02				8.03E+01
508322	10/1/2019 - 10/1/2019	WAXMYRTLE				Mn-54
			Co-58	<2.75E+01	0.00E+00	2.75E+01
			Fe-59	<7.94E+01	0.00E+00	7.94E+01
			Co-60	<3.78E+01	0.00E+00	3.78E+01
			Zn-65	<5.35E+01	0.00E+00	5.35E+01
			Zr-95	<5.43E+01	0.00E+00	5.43E+01
			Nb-95	<3.03E+01	0.00E+00	3.03E+01
			I-131	<4.72E+01	0.00E+00	4.72E+01
			Cs-134	<3.23E+01	0.00E+00	3.23E+01
			Cs-137	<3.15E+01	0.00E+00	3.15E+01
			BaLa-140	<4.00E+01	0.00E+00	4.00E+01
			Be-7	2.21E+03	3.94E+02	3.39E+02
			K-40	2.53E+03	5.66E+02	5.07E+02
			510791	11/4/2019 - 11/4/2019	WAXMYRTLE	Mn-54
Co-58	<3.43E+01	0.00E+00				3.43E+01
Fe-59	<6.75E+01	0.00E+00				6.75E+01
Co-60	<3.00E+01	0.00E+00				3.00E+01
Zn-65	<8.39E+01	0.00E+00				8.39E+01
Zr-95	<4.06E+01	0.00E+00				4.06E+01
Nb-95	<3.17E+01	0.00E+00				3.17E+01
I-131	<4.39E+01	0.00E+00				4.39E+01
Cs-134	<3.10E+01	0.00E+00				3.10E+01
Cs-137	<2.67E+01	0.00E+00				2.67E+01
BaLa-140	<4.78E+01	0.00E+00				4.78E+01
Be-7	1.71E+03	3.86E+02				4.11E+02



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 801 [INDICATOR - SW @ 0.8 miles]

Sample ID: 510791	Sample Dates: 11/4/2019 - 11/4/2019	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
			K-40	2.30E+03	5.13E+02	2.85E+02

Sample ID: 513904	Sample Dates: 12/2/2019 - 12/2/2019	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
			Mn-54	<3.25E+01	0.00E+00	3.25E+01
			Co-58	<3.62E+01	0.00E+00	3.62E+01
			Fe-59	<6.79E+01	0.00E+00	6.79E+01
			Co-60	<2.89E+01	0.00E+00	2.89E+01
			Zn-65	<7.90E+01	0.00E+00	7.90E+01
			Zr-95	<4.03E+01	0.00E+00	4.03E+01
			Nb-95	<2.76E+01	0.00E+00	2.76E+01
			I-131	<4.54E+01	0.00E+00	4.54E+01
			Cs-134	<2.93E+01	0.00E+00	2.93E+01
			Cs-137	<3.36E+01	0.00E+00	3.36E+01
			BaLa-140	<5.00E+01	0.00E+00	5.00E+01
			Be-7	2.01E+03	4.24E+02	4.02E+02
			K-40	2.14E+03	5.49E+02	4.01E+02

Sample Point 802 [CONTROL - -- @ 10.1 miles]

Sample ID: 491132	Sample Dates: 1/2/2019 - 1/2/2019	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
			Mn-54	<4.15E+01	0.00E+00	4.15E+01
			Co-58	<2.78E+01	0.00E+00	2.78E+01
			Fe-59	<6.97E+01	0.00E+00	6.97E+01
			Co-60	<3.55E+01	0.00E+00	3.55E+01
			Zn-65	<6.85E+01	0.00E+00	6.85E+01
			Zr-95	<4.84E+01	0.00E+00	4.84E+01
			Nb-95	<4.04E+01	0.00E+00	4.04E+01
			I-131	<4.79E+01	0.00E+00	4.79E+01
			Cs-134	<3.83E+01	0.00E+00	3.83E+01
			Cs-137	<2.98E+01	0.00E+00	2.98E+01
			BaLa-140	<5.90E+01	0.00E+00	5.90E+01
			Be-7	5.51E+03	7.58E+02	3.74E+02
			K-40	1.06E+03	4.93E+02	6.28E+02

Sample ID: 492531	Sample Dates: 2/4/2019 - 2/4/2019	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
			Mn-54	<2.52E+01	0.00E+00	2.52E+01
			Co-58	<2.10E+01	0.00E+00	2.10E+01
			Fe-59	<4.35E+01	0.00E+00	4.35E+01
			Co-60	<2.39E+01	0.00E+00	2.39E+01
			Zn-65	<5.99E+01	0.00E+00	5.99E+01
			Zr-95	<4.90E+01	0.00E+00	4.90E+01
			Nb-95	<2.24E+01	0.00E+00	2.24E+01
			I-131	<2.55E+01	0.00E+00	2.55E+01
			Cs-134	<2.65E+01	0.00E+00	2.65E+01
			Cs-137	<2.28E+01	0.00E+00	2.28E+01
			BaLa-140	<3.61E+01	0.00E+00	3.61E+01
			Be-7	5.93E+03	6.94E+02	2.90E+02
			K-40	1.44E+03	4.10E+02	4.13E+02

Sample ID: 496120	Sample Dates: 3/1/2019 - 3/1/2019	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
			Mn-54	<2.44E+01	0.00E+00	2.44E+01
			Co-58	<3.55E+01	0.00E+00	3.55E+01
			Fe-59	<5.36E+01	0.00E+00	5.36E+01
			Co-60	<3.05E+01	0.00E+00	3.05E+01
			Zn-65	<7.20E+01	0.00E+00	7.20E+01
			Zr-95	<5.64E+01	0.00E+00	5.64E+01
			Nb-95	<2.99E+01	0.00E+00	2.99E+01
			I-131	<4.63E+01	0.00E+00	4.63E+01
			Cs-134	<3.00E+01	0.00E+00	3.00E+01
			Cs-137	<3.21E+01	0.00E+00	3.21E+01
			BaLa-140	<4.36E+01	0.00E+00	4.36E+01
			Be-7	5.42E+03	7.14E+02	3.53E+02
			K-40	1.43E+03	4.38E+02	4.16E+02



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 802 [CONTROL - -- @ 10.1 miles]

Sample ID:	Sample Dates:	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
497991	4/1/2019 - 4/1/2019	WAXMYRTLE	Mn-54	<1.65E+01	0.00E+00	1.65E+01
			Co-58	<1.65E+01	0.00E+00	1.65E+01
			Fe-59	<2.34E+01	0.00E+00	2.34E+01
			Co-60	<2.04E+01	0.00E+00	2.04E+01
			Zn-65	<3.83E+01	0.00E+00	3.83E+01
			Zr-95	<3.16E+01	0.00E+00	3.16E+01
			Nb-95	<1.86E+01	0.00E+00	1.86E+01
			I-131	<1.83E+01	0.00E+00	1.83E+01
			Cs-134	<1.85E+01	0.00E+00	1.85E+01
			Cs-137	<1.80E+01	0.00E+00	1.80E+01
			BaLa-140	<2.62E+01	0.00E+00	2.62E+01
			Be-7	4.95E+03	5.45E+02	2.60E+02
			K-40	2.04E+03	3.84E+02	3.04E+02
			499842	5/1/2019 - 5/1/2019	WAXMYRTLE	Mn-54
Co-58	<1.79E+01	0.00E+00				1.79E+01
Fe-59	<3.93E+01	0.00E+00				3.93E+01
Co-60	<1.36E+01	0.00E+00				1.36E+01
Zn-65	<4.64E+01	0.00E+00				4.64E+01
Zr-95	<2.90E+01	0.00E+00				2.90E+01
Nb-95	<1.96E+01	0.00E+00				1.96E+01
I-131	<2.72E+01	0.00E+00				2.72E+01
Cs-134	<2.15E+01	0.00E+00				2.15E+01
Cs-137	2.55E+01	1.68E+01				2.50E+01
BaLa-140	<3.27E+01	0.00E+00				3.27E+01
Be-7	4.90E+02	1.71E+02				2.22E+02
K-40	3.36E+03	5.12E+02				2.65E+02
501095	6/3/2019 - 6/3/2019	MIXEDBLV				Mn-54
			Co-58	<1.95E+01	0.00E+00	1.95E+01
			Fe-59	<4.95E+01	0.00E+00	4.95E+01
			Co-60	<2.82E+01	0.00E+00	2.82E+01
			Zn-65	<4.78E+01	0.00E+00	4.78E+01
			Zr-95	<4.37E+01	0.00E+00	4.37E+01
			Nb-95	<3.07E+01	0.00E+00	3.07E+01
			I-131	<3.28E+01	0.00E+00	3.28E+01
			Cs-134	<2.57E+01	0.00E+00	2.57E+01
			Cs-137	<2.78E+01	0.00E+00	2.78E+01
			BaLa-140	<4.08E+01	0.00E+00	4.08E+01
			Be-7	9.22E+02	2.37E+02	2.72E+02
			K-40	3.09E+03	5.21E+02	2.66E+02
			503351	7/2/2019 - 7/2/2019	MIXEDBLV	Mn-54
Co-58	<3.01E+01	0.00E+00				3.01E+01
Fe-59	<7.50E+01	0.00E+00				7.50E+01
Co-60	<3.60E+01	0.00E+00				3.60E+01
Zn-65	<5.86E+01	0.00E+00				5.86E+01
Zr-95	<4.20E+01	0.00E+00				4.20E+01
Nb-95	<2.71E+01	0.00E+00				2.71E+01
I-131	<4.77E+01	0.00E+00				4.77E+01
Cs-134	<4.31E+01	0.00E+00				4.31E+01
Cs-137	<2.77E+01	0.00E+00				2.77E+01
BaLa-140	<1.37E+01	0.00E+00				1.37E+01
Be-7	2.41E+03	4.85E+02				4.58E+02
K-40	2.11E+03	5.49E+02				4.10E+02
504619	8/1/2019 - 8/1/2019	MIXEDBLV				Mn-54
			Co-58	<1.66E+01	0.00E+00	1.66E+01
			Fe-59	<3.37E+01	0.00E+00	3.37E+01
			Co-60	<1.73E+01	0.00E+00	1.73E+01
			Zn-65	<3.83E+01	0.00E+00	3.83E+01



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 802 [CONTROL - -- @ 10.1 miles]

Sample ID	Sample Dates	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
504619	8/1/2019 - 8/1/2019	MIXEDBLV	Zr-95	<3.03E+01	0.00E+00	3.03E+01
			Nb-95	<2.11E+01	0.00E+00	2.11E+01
			I-131	<4.06E+01	0.00E+00	4.06E+01
			Cs-134	<1.79E+01	0.00E+00	1.79E+01
			Cs-137	<1.77E+01	0.00E+00	1.77E+01
			BaLa-140	<2.63E+01	0.00E+00	2.63E+01
			Be-7	1.81E+03	2.52E+02	1.94E+02
			K-40	2.93E+03	4.02E+02	2.34E+02
505825	9/3/2019 - 9/3/2019	WAXMYRTLE	Mn-54	<3.87E+01	0.00E+00	3.87E+01
			Co-58	<2.98E+01	0.00E+00	2.98E+01
			Fe-59	<6.65E+01	0.00E+00	6.65E+01
			Co-60	<4.38E+01	0.00E+00	4.38E+01
			Zn-65	<8.07E+01	0.00E+00	8.07E+01
			Zr-95	<6.58E+01	0.00E+00	6.58E+01
			Nb-95	<3.73E+01	0.00E+00	3.73E+01
			I-131	<4.74E+01	0.00E+00	4.74E+01
			Cs-134	<4.20E+01	0.00E+00	4.20E+01
			Cs-137	<2.90E+01	0.00E+00	2.90E+01
			BaLa-140	<3.37E+01	0.00E+00	3.37E+01
			Be-7	2.31E+03	4.39E+02	3.74E+02
			K-40	2.73E+03	6.75E+02	6.39E+02
			508323	10/1/2019 - 10/1/2019	WAXMYRTLE	Mn-54
Co-58	<2.57E+01	0.00E+00				2.57E+01
Fe-59	<4.99E+01	0.00E+00				4.99E+01
Co-60	<2.57E+01	0.00E+00				2.57E+01
Zn-65	<5.50E+01	0.00E+00				5.50E+01
Zr-95	<3.67E+01	0.00E+00				3.67E+01
Nb-95	<2.52E+01	0.00E+00				2.52E+01
I-131	<4.19E+01	0.00E+00				4.19E+01
Cs-134	<2.48E+01	0.00E+00				2.48E+01
Cs-137	<2.71E+01	0.00E+00				2.71E+01
BaLa-140	<4.51E+01	0.00E+00				4.51E+01
Be-7	2.75E+03	4.21E+02				3.52E+02
K-40	2.30E+03	4.80E+02				4.16E+02
510792	11/4/2019 - 11/4/2019	WAXMYRTLE				Mn-54
			Co-58	<3.40E+01	0.00E+00	3.40E+01
			Fe-59	<5.72E+01	0.00E+00	5.72E+01
			Co-60	<3.79E+01	0.00E+00	3.79E+01
			Zn-65	<7.30E+01	0.00E+00	7.30E+01
			Zr-95	<5.91E+01	0.00E+00	5.91E+01
			Nb-95	<4.01E+01	0.00E+00	4.01E+01
			I-131	<4.69E+01	0.00E+00	4.69E+01
			Cs-134	<3.44E+01	0.00E+00	3.44E+01
			Cs-137	<3.81E+01	0.00E+00	3.81E+01
			BaLa-140	<4.00E+01	0.00E+00	4.00E+01
			Be-7	3.30E+03	5.67E+02	3.99E+02
			K-40	1.90E+03	5.38E+02	3.45E+02
			513905	12/2/2019 - 12/2/2019	WAXMYRTLE	Mn-54
Co-58	<2.79E+01	0.00E+00				2.79E+01
Fe-59	<6.08E+01	0.00E+00				6.08E+01
Co-60	<2.96E+01	0.00E+00				2.96E+01
Zn-65	<8.11E+01	0.00E+00				8.11E+01
Zr-95	<3.71E+01	0.00E+00				3.71E+01
Nb-95	<3.35E+01	0.00E+00				3.35E+01
I-131	<4.73E+01	0.00E+00				4.73E+01
Cs-134	<4.30E+01	0.00E+00				4.30E+01
Cs-137	<3.80E+01	0.00E+00				3.80E+01



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 802 [CONTROL - -- @ 10.1 miles]

Sample ID:	513905	Sample Dates:	12/2/2019 - 12/2/2019	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
					BaLa-140	<6.21E+01	0.00E+00	6.21E+01
					Be-7	2.99E+03	5.36E+02	4.56E+02
					K-40	1.78E+03	5.13E+02	4.31E+02

Sample Point 803 [INDICATOR - SSE @ 0.6 miles]

Sample ID:	491133	Sample Dates:	1/2/2019 - 1/2/2019	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<3.83E+01	0.00E+00	3.83E+01
					Co-58	<3.09E+01	0.00E+00	3.09E+01
					Fe-59	<6.62E+01	0.00E+00	6.62E+01
					Co-60	<3.98E+01	0.00E+00	3.98E+01
					Zn-65	<7.02E+01	0.00E+00	7.02E+01
					Zr-95	<5.37E+01	0.00E+00	5.37E+01
					Nb-95	<3.77E+01	0.00E+00	3.77E+01
					I-131	<4.56E+01	0.00E+00	4.56E+01
					Cs-134	<4.47E+01	0.00E+00	4.47E+01
					Cs-137	<2.89E+01	0.00E+00	2.89E+01
					BaLa-140	<5.06E+01	0.00E+00	5.06E+01
					Be-7	5.68E+03	7.99E+02	4.14E+02
					K-40	2.84E+03	6.85E+02	4.03E+02

Sample ID:	492532	Sample Dates:	2/4/2019 - 2/4/2019	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<2.68E+01	0.00E+00	2.68E+01
					Co-58	<2.77E+01	0.00E+00	2.77E+01
					Fe-59	<4.02E+01	0.00E+00	4.02E+01
					Co-60	<2.53E+01	0.00E+00	2.53E+01
					Zn-65	<5.88E+01	0.00E+00	5.88E+01
					Zr-95	<4.52E+01	0.00E+00	4.52E+01
					Nb-95	<2.94E+01	0.00E+00	2.94E+01
					I-131	<2.73E+01	0.00E+00	2.73E+01
					Cs-134	<3.27E+01	0.00E+00	3.27E+01
					Cs-137	<3.03E+01	0.00E+00	3.03E+01
					BaLa-140	<4.32E+01	0.00E+00	4.32E+01
					Be-7	4.02E+03	5.38E+02	2.86E+02
					K-40	2.19E+03	4.87E+02	3.65E+02

Sample ID:	496121	Sample Dates:	3/1/2019 - 3/1/2019	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<2.57E+01	0.00E+00	2.57E+01
					Co-58	<2.59E+01	0.00E+00	2.59E+01
					Fe-59	<4.20E+01	0.00E+00	4.20E+01
					Co-60	<2.90E+01	0.00E+00	2.90E+01
					Zn-65	<6.24E+01	0.00E+00	6.24E+01
					Zr-95	<5.37E+01	0.00E+00	5.37E+01
					Nb-95	<3.34E+01	0.00E+00	3.34E+01
					I-131	<4.74E+01	0.00E+00	4.74E+01
					Cs-134	<4.03E+01	0.00E+00	4.03E+01
					Cs-137	<2.87E+01	0.00E+00	2.87E+01
					BaLa-140	<4.17E+01	0.00E+00	4.17E+01
					Be-7	5.08E+03	6.86E+02	4.55E+02
					K-40	2.95E+03	5.89E+02	3.50E+02

Sample ID:	497992	Sample Dates:	4/1/2019 - 4/1/2019	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<1.76E+01	0.00E+00	1.76E+01
					Co-58	<1.81E+01	0.00E+00	1.81E+01
					Fe-59	<3.02E+01	0.00E+00	3.02E+01
					Co-60	<2.06E+01	0.00E+00	2.06E+01
					Zn-65	<4.00E+01	0.00E+00	4.00E+01
					Zr-95	<2.75E+01	0.00E+00	2.75E+01
					Nb-95	<2.11E+01	0.00E+00	2.11E+01
					I-131	<1.47E+01	0.00E+00	1.47E+01
					Cs-134	<2.11E+01	0.00E+00	2.11E+01
					Cs-137	<1.74E+01	0.00E+00	1.74E+01
					BaLa-140	<1.49E+01	0.00E+00	1.49E+01
					Be-7	3.46E+03	4.17E+02	2.31E+02



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 803 [INDICATOR - SSE @ 0.6 miles]

Sample ID:	Sample Dates:	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
497992	4/1/2019 - 4/1/2019		K-40	2.90E+03	4.47E+02	2.32E+02
499843	5/1/2019 - 5/1/2019	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
			Mn-54	<1.94E+01	0.00E+00	1.94E+01
			Co-58	<1.97E+01	0.00E+00	1.97E+01
			Fe-59	<4.15E+01	0.00E+00	4.15E+01
			Co-60	<2.17E+01	0.00E+00	2.17E+01
			Zn-65	<3.67E+01	0.00E+00	3.67E+01
			Zr-95	<4.15E+01	0.00E+00	4.15E+01
			Nb-95	<2.41E+01	0.00E+00	2.41E+01
			I-131	<3.65E+01	0.00E+00	3.65E+01
			Cs-134	<2.10E+01	0.00E+00	2.10E+01
			Cs-137	<2.22E+01	0.00E+00	2.22E+01
			BaLa-140	<2.76E+01	0.00E+00	2.76E+01
			Be-7	7.52E+02	2.02E+02	2.43E+02
			K-40	3.66E+03	5.50E+02	3.21E+02
501096	6/3/2019 - 6/3/2019	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
			Mn-54	<1.37E+01	0.00E+00	1.37E+01
			Co-58	<3.20E+01	0.00E+00	3.20E+01
			Fe-59	<4.83E+01	0.00E+00	4.83E+01
			Co-60	<3.99E+01	0.00E+00	3.99E+01
			Zn-65	<8.53E+01	0.00E+00	8.53E+01
			Zr-95	<5.02E+01	0.00E+00	5.02E+01
			Nb-95	<3.26E+01	0.00E+00	3.26E+01
			I-131	<4.03E+01	0.00E+00	4.03E+01
			Cs-134	<3.11E+01	0.00E+00	3.11E+01
			Cs-137	<2.97E+01	0.00E+00	2.97E+01
			BaLa-140	<4.26E+01	0.00E+00	4.26E+01
			Be-7	1.49E+03	3.35E+02	2.78E+02
			K-40	3.47E+03	6.85E+02	3.19E+02
503352	7/2/2019 - 7/2/2019	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
			Mn-54	<2.42E+01	0.00E+00	2.42E+01
			Co-58	<2.77E+01	0.00E+00	2.77E+01
			Fe-59	<6.83E+01	0.00E+00	6.83E+01
			Co-60	<3.47E+01	0.00E+00	3.47E+01
			Zn-65	<3.60E+01	0.00E+00	3.60E+01
			Zr-95	<4.83E+01	0.00E+00	4.83E+01
			Nb-95	<2.60E+01	0.00E+00	2.60E+01
			I-131	<3.79E+01	0.00E+00	3.79E+01
			Cs-134	<3.30E+01	0.00E+00	3.30E+01
			Cs-137	<2.93E+01	0.00E+00	2.93E+01
			BaLa-140	<2.99E+01	0.00E+00	2.99E+01
			Be-7	9.64E+02	3.08E+02	3.90E+02
			K-40	3.34E+03	6.32E+02	3.44E+02
504620	8/1/2019 - 8/1/2019	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
			Mn-54	<1.79E+01	0.00E+00	1.79E+01
			Co-58	<1.70E+01	0.00E+00	1.70E+01
			Fe-59	<3.90E+01	0.00E+00	3.90E+01
			Co-60	<1.67E+01	0.00E+00	1.67E+01
			Zn-65	<4.59E+01	0.00E+00	4.59E+01
			Zr-95	<2.99E+01	0.00E+00	2.99E+01
			Nb-95	<1.90E+01	0.00E+00	1.90E+01
			I-131	<3.61E+01	0.00E+00	3.61E+01
			Cs-134	<1.71E+01	0.00E+00	1.71E+01
			Cs-137	<1.62E+01	0.00E+00	1.62E+01
			BaLa-140	<3.22E+01	0.00E+00	3.22E+01
			Be-7	2.05E+03	2.74E+02	2.01E+02
			K-40	2.74E+03	3.81E+02	2.34E+02
505826	9/3/2019 - 9/3/2019	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
			Mn-54	<2.28E+01	0.00E+00	2.28E+01
			Co-58	<3.37E+01	0.00E+00	3.37E+01



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 803 [INDICATOR - SSE @ 0.6 miles]

Sample ID:	505826	Sample Dates:	9/3/2019 - 9/3/2019	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
					Fe-59	<5.57E+01	0.00E+00	5.57E+01
					Co-60	<2.16E+01	0.00E+00	2.16E+01
					Zn-65	<5.40E+01	0.00E+00	5.40E+01
					Zr-95	<4.12E+01	0.00E+00	4.12E+01
					Nb-95	<3.45E+01	0.00E+00	3.45E+01
					I-131	<4.60E+01	0.00E+00	4.60E+01
					Cs-134	<2.54E+01	0.00E+00	2.54E+01
					Cs-137	<3.02E+01	0.00E+00	3.02E+01
					BaLa-140	<4.41E+01	0.00E+00	4.41E+01
					Be-7	2.90E+03	4.70E+02	3.36E+02
					K-40	2.77E+03	5.69E+02	2.78E+02

Sample ID:	508324	Sample Dates:	10/1/2019 - 10/1/2019	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<2.72E+01	0.00E+00	2.72E+01
					Co-58	<3.06E+01	0.00E+00	3.06E+01
					Fe-59	<6.96E+01	0.00E+00	6.96E+01
					Co-60	<3.15E+01	0.00E+00	3.15E+01
					Zn-65	<8.20E+01	0.00E+00	8.20E+01
					Zr-95	<4.73E+01	0.00E+00	4.73E+01
					Nb-95	<3.86E+01	0.00E+00	3.86E+01
					I-131	<4.37E+01	0.00E+00	4.37E+01
					Cs-134	<2.09E+01	0.00E+00	2.09E+01
					Cs-137	<2.25E+01	0.00E+00	2.25E+01
					BaLa-140	<4.94E+01	0.00E+00	4.94E+01
					Be-7	1.37E+03	3.22E+02	3.22E+02
					K-40	2.62E+03	5.43E+02	2.72E+02

Sample ID:	510793	Sample Dates:	11/4/2019 - 11/4/2019	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<3.55E+01	0.00E+00	3.55E+01
					Co-58	<3.87E+01	0.00E+00	3.87E+01
					Fe-59	<7.26E+01	0.00E+00	7.26E+01
					Co-60	<3.49E+01	0.00E+00	3.49E+01
					Zn-65	<7.59E+01	0.00E+00	7.59E+01
					Zr-95	<6.00E+01	0.00E+00	6.00E+01
					Nb-95	<3.40E+01	0.00E+00	3.40E+01
					I-131	<4.68E+01	0.00E+00	4.68E+01
					Cs-134	<3.32E+01	0.00E+00	3.32E+01
					Cs-137	<2.73E+01	0.00E+00	2.73E+01
					BaLa-140	<4.00E+01	0.00E+00	4.00E+01
					Be-7	2.31E+03	4.39E+02	3.96E+02
					K-40	2.53E+03	5.90E+02	4.50E+02

Sample ID:	513906	Sample Dates:	12/2/2019 - 12/2/2019	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<3.57E+01	0.00E+00	3.57E+01
					Co-58	<2.78E+01	0.00E+00	2.78E+01
					Fe-59	<5.34E+01	0.00E+00	5.34E+01
					Co-60	<3.86E+01	0.00E+00	3.86E+01
					Zn-65	<1.01E+02	0.00E+00	1.01E+02
					Zr-95	<5.55E+01	0.00E+00	5.55E+01
					Nb-95	<4.21E+01	0.00E+00	4.21E+01
					I-131	<4.12E+01	0.00E+00	4.12E+01
					Cs-134	<3.23E+01	0.00E+00	3.23E+01
					Cs-137	<2.78E+01	0.00E+00	2.78E+01
					BaLa-140	<3.73E+01	0.00E+00	3.73E+01
					Be-7	3.48E+03	5.69E+02	3.70E+02
					K-40	2.16E+03	5.60E+02	3.62E+02

Sample Point 804 [INDICATOR - S @ 0.7 miles]

Sample ID:	491134	Sample Dates:	1/2/2019 - 1/2/2019	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<3.91E+01	0.00E+00	3.91E+01
					Co-58	<4.13E+01	0.00E+00	4.13E+01
					Fe-59	<8.54E+01	0.00E+00	8.54E+01
					Co-60	<4.10E+01	0.00E+00	4.10E+01



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 804 [INDICATOR - S @ 0.7 miles]

Sample ID:	Sample Dates:	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA			
491134	1/2/2019 - 1/2/2019	WAXMYRTLE	Zn-65	<8.01E+01	0.00E+00	8.01E+01			
			Zr-95	<6.35E+01	0.00E+00	6.35E+01			
			Nb-95	<3.81E+01	0.00E+00	3.81E+01			
			I-131	<4.76E+01	0.00E+00	4.76E+01			
			Cs-134	<3.82E+01	0.00E+00	3.82E+01			
			Cs-137	<3.53E+01	0.00E+00	3.53E+01			
			BaLa-140	<5.43E+01	0.00E+00	5.43E+01			
			Be-7	6.33E+03	8.29E+02	5.09E+02			
			K-40	2.17E+03	6.26E+02	6.51E+02			
492533	2/4/2019 - 2/4/2019	WAXMYRTLE	Mn-54	<2.87E+01	0.00E+00	2.87E+01			
			Co-58	<2.51E+01	0.00E+00	2.51E+01			
			Fe-59	<4.26E+01	0.00E+00	4.26E+01			
			Co-60	<3.26E+01	0.00E+00	3.26E+01			
			Zn-65	<6.18E+01	0.00E+00	6.18E+01			
			Zr-95	<4.78E+01	0.00E+00	4.78E+01			
			Nb-95	<2.55E+01	0.00E+00	2.55E+01			
			I-131	<3.93E+01	0.00E+00	3.93E+01			
			Cs-134	<2.71E+01	0.00E+00	2.71E+01			
			Cs-137	<2.17E+01	0.00E+00	2.17E+01			
			BaLa-140	<3.70E+01	0.00E+00	3.70E+01			
			Be-7	4.14E+03	5.48E+02	3.45E+02			
			K-40	2.44E+03	5.31E+02	4.80E+02			
496122	3/1/2019 - 3/1/2019	WAXMYRTLE	Mn-54	<2.51E+01	0.00E+00	2.51E+01			
			Co-58	<2.28E+01	0.00E+00	2.28E+01			
			Fe-59	<3.49E+01	0.00E+00	3.49E+01			
			Co-60	<2.98E+01	0.00E+00	2.98E+01			
			Zn-65	<3.15E+01	0.00E+00	3.15E+01			
			Zr-95	<3.18E+01	0.00E+00	3.18E+01			
			Nb-95	<2.31E+01	0.00E+00	2.31E+01			
			I-131	<4.77E+01	0.00E+00	4.77E+01			
			Cs-134	<2.79E+01	0.00E+00	2.79E+01			
			Cs-137	<2.68E+01	0.00E+00	2.68E+01			
			BaLa-140	<3.60E+01	0.00E+00	3.60E+01			
			Be-7	4.20E+03	5.48E+02	3.26E+02			
			K-40	2.11E+03	4.69E+02	4.18E+02			
			497993	4/1/2019 - 4/1/2019	WAXMYRTLE	Mn-54	<1.64E+01	0.00E+00	1.64E+01
						Co-58	<1.65E+01	0.00E+00	1.65E+01
Fe-59	<3.39E+01	0.00E+00				3.39E+01			
Co-60	<1.60E+01	0.00E+00				1.60E+01			
Zn-65	<4.03E+01	0.00E+00				4.03E+01			
Zr-95	<3.21E+01	0.00E+00				3.21E+01			
Nb-95	<1.67E+01	0.00E+00				1.67E+01			
I-131	<2.00E+01	0.00E+00				2.00E+01			
Cs-134	<2.32E+01	0.00E+00				2.32E+01			
Cs-137	<1.36E+01	0.00E+00				1.36E+01			
BaLa-140	<1.85E+01	0.00E+00				1.85E+01			
Be-7	3.71E+03	4.43E+02				2.02E+02			
K-40	2.46E+03	4.35E+02				3.06E+02			
499844	5/1/2019 - 5/1/2019	WAXMYRTLE				Mn-54	<1.70E+01	0.00E+00	1.70E+01
						Co-58	<1.93E+01	0.00E+00	1.93E+01
			Fe-59	<3.91E+01	0.00E+00	3.91E+01			
			Co-60	<2.19E+01	0.00E+00	2.19E+01			
			Zn-65	<3.73E+01	0.00E+00	3.73E+01			
			Zr-95	<3.62E+01	0.00E+00	3.62E+01			
			Nb-95	<2.19E+01	0.00E+00	2.19E+01			
			I-131	<2.55E+01	0.00E+00	2.55E+01			
			Cs-134	<1.71E+01	0.00E+00	1.71E+01			



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 804 [INDICATOR - S @ 0.7 miles]

Sample ID:	Sample Dates:	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
499844	5/1/2019 - 5/1/2019		Cs-137	<1.73E+01	0.00E+00	1.73E+01
			BaLa-140	<2.40E+01	0.00E+00	2.40E+01
			Be-7	6.57E+02	1.74E+02	1.96E+02
			K-40	3.21E+03	4.90E+02	2.59E+02
Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
501097	6/3/2019 - 6/3/2019		Mn-54	<4.11E+01	0.00E+00	4.11E+01
			Co-58	<2.98E+01	0.00E+00	2.98E+01
			Fe-59	<6.99E+01	0.00E+00	6.99E+01
			Co-60	<3.17E+01	0.00E+00	3.17E+01
			Zn-65	<6.80E+01	0.00E+00	6.80E+01
			Zr-95	<5.53E+01	0.00E+00	5.53E+01
			Nb-95	<3.24E+01	0.00E+00	3.24E+01
			I-131	<4.15E+01	0.00E+00	4.15E+01
			Cs-134	<3.97E+01	0.00E+00	3.97E+01
			Cs-137	<3.42E+01	0.00E+00	3.42E+01
			BaLa-140	<6.16E+01	0.00E+00	6.16E+01
			Be-7	1.33E+03	3.69E+02	4.07E+02
			K-40	3.43E+03	7.17E+02	3.83E+02
Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
503353	7/2/2019 - 7/2/2019		Mn-54	<3.00E+01	0.00E+00	3.00E+01
			Co-58	<2.62E+01	0.00E+00	2.62E+01
			Fe-59	<4.65E+01	0.00E+00	4.65E+01
			Co-60	<2.31E+01	0.00E+00	2.31E+01
			Zn-65	<5.39E+01	0.00E+00	5.39E+01
			Zr-95	<5.04E+01	0.00E+00	5.04E+01
			Nb-95	<2.98E+01	0.00E+00	2.98E+01
			I-131	<4.71E+01	0.00E+00	4.71E+01
			Cs-134	<3.17E+01	0.00E+00	3.17E+01
			Cs-137	<3.07E+01	0.00E+00	3.07E+01
			BaLa-140	<2.63E+01	0.00E+00	2.63E+01
			Be-7	1.63E+03	3.53E+02	3.73E+02
			K-40	2.27E+03	4.81E+02	3.02E+02
Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
504621	8/1/2019 - 8/1/2019		Mn-54	<1.82E+01	0.00E+00	1.82E+01
			Co-58	<2.05E+01	0.00E+00	2.05E+01
			Fe-59	<4.37E+01	0.00E+00	4.37E+01
			Co-60	<1.88E+01	0.00E+00	1.88E+01
			Zn-65	<4.72E+01	0.00E+00	4.72E+01
			Zr-95	<3.09E+01	0.00E+00	3.09E+01
			Nb-95	<2.13E+01	0.00E+00	2.13E+01
			I-131	<3.98E+01	0.00E+00	3.98E+01
			Cs-134	<1.90E+01	0.00E+00	1.90E+01
			Cs-137	<1.84E+01	0.00E+00	1.84E+01
			BaLa-140	<2.44E+01	0.00E+00	2.44E+01
			Be-7	2.17E+03	3.17E+02	2.59E+02
			K-40	2.71E+03	4.25E+02	2.69E+02
Sample ID:	Sample Dates:	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
505827	9/3/2019 - 9/3/2019		Mn-54	<2.26E+01	0.00E+00	2.26E+01
			Co-58	<2.72E+01	0.00E+00	2.72E+01
			Fe-59	<6.92E+01	0.00E+00	6.92E+01
			Co-60	<3.26E+01	0.00E+00	3.26E+01
			Zn-65	<5.40E+01	0.00E+00	5.40E+01
			Zr-95	<5.81E+01	0.00E+00	5.81E+01
			Nb-95	<2.53E+01	0.00E+00	2.53E+01
			I-131	<4.31E+01	0.00E+00	4.31E+01
			Cs-134	<3.05E+01	0.00E+00	3.05E+01
			Cs-137	<2.88E+01	0.00E+00	2.88E+01
			BaLa-140	<2.82E+01	0.00E+00	2.82E+01
			Be-7	1.71E+03	3.62E+02	3.52E+02
			K-40	2.37E+03	5.89E+02	5.93E+02



BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 804 [INDICATOR - S @ 0.7 miles]

Sample ID:	Sample Dates:	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
508325	10/1/2019 - 10/1/2019		Mn-54	<2.07E+01	0.00E+00	2.07E+01
			Co-58	<2.92E+01	0.00E+00	2.92E+01
			Fe-59	<4.89E+01	0.00E+00	4.89E+01
			Co-60	<4.28E+01	0.00E+00	4.28E+01
			Zn-65	<4.80E+01	0.00E+00	4.80E+01
			Zr-95	<4.49E+01	0.00E+00	4.49E+01
			Nb-95	<2.80E+01	0.00E+00	2.80E+01
			I-131	<4.23E+01	0.00E+00	4.23E+01
			Cs-134	<2.90E+01	0.00E+00	2.90E+01
			Cs-137	<2.56E+01	0.00E+00	2.56E+01
			BaLa-140	<5.74E+01	0.00E+00	5.74E+01
			Be-7	1.13E+03	2.94E+02	3.52E+02
			K-40	2.71E+03	5.31E+02	4.11E+02
			510794	11/4/2019 - 11/4/2019		Mn-54
Co-58	<2.51E+01	0.00E+00				2.51E+01
Fe-59	<7.37E+01	0.00E+00				7.37E+01
Co-60	<3.81E+01	0.00E+00				3.81E+01
Zn-65	<8.94E+01	0.00E+00				8.94E+01
Zr-95	<4.77E+01	0.00E+00				4.77E+01
Nb-95	<3.00E+01	0.00E+00				3.00E+01
I-131	<4.73E+01	0.00E+00				4.73E+01
Cs-134	<3.57E+01	0.00E+00				3.57E+01
Cs-137	<3.38E+01	0.00E+00				3.38E+01
BaLa-140	<4.71E+01	0.00E+00				4.71E+01
Be-7	1.90E+03	4.09E+02				3.52E+02
K-40	2.31E+03	6.03E+02				4.83E+02
513907	12/2/2019 - 12/2/2019					Mn-54
			Co-58	<3.61E+01	0.00E+00	3.61E+01
			Fe-59	<1.53E+01	0.00E+00	1.53E+01
			Co-60	<2.47E+01	0.00E+00	2.47E+01
			Zn-65	<8.34E+01	0.00E+00	8.34E+01
			Zr-95	<6.65E+01	0.00E+00	6.65E+01
			Nb-95	<3.21E+01	0.00E+00	3.21E+01
			I-131	<4.47E+01	0.00E+00	4.47E+01
			Cs-134	<2.41E+01	0.00E+00	2.41E+01
			Cs-137	<4.50E+01	0.00E+00	4.50E+01
			BaLa-140	<5.39E+01	0.00E+00	5.39E+01
			Be-7	1.79E+03	4.54E+02	4.79E+02
			K-40	2.41E+03	6.75E+02	5.97E+02



APPENDIX F

**ERRATA TO
PREVIOUS REPORTS**

There are no errata to be
appended to the 2019 AREOR

Enclosure 2
RA-20-0079

ENCLOSURE 2: [CNS Annual Radiological Environmental Operating Report](#)



ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT

**DUKE ENERGY CORPORATION
CATAWBA NUCLEAR STATION
Units 1 and 2**

2019



TABLE OF CONTENTS

1.0 Executive Summary	1-1
2.0 Introduction	2-1
2.1 Site Description and Sample Locations	2-1
2.2 Scope and Requirements of the REMP	2-1
2.3 Statistical and Calculational Methodology	2-2
2.3.1 Estimation of the Mean Value	2-2
2.3.2 Lower Limit of Detection and Minimum Detectable Activity	2-3
2.3.3 Trend Identification	2-3
3.0 Interpretation of Results	3-1
3.1 Airborne Radioiodine and Particulates	3-3
3.2 Drinking Water	3-6
3.3 Surface Water	3-9
3.4 Milk	3-12
3.5 Broadleaf Vegetation	3-14
3.6 Food Products	3-16
3.7 Fish	3-18
3.8 Shoreline Sediment	3-21
3.9 Direct Gamma Radiation	3-24
3.9.1 Environmental TLD	3-24
3.9.2 ISFSI	3-25
3.10 Land Use Census	3-27
4.0 Quality Assurance	4-1
4.1 Sample Collection	4-1
4.2 Sample Analysis	4-1
4.3 Dosimetry Analysis	4-1
4.4 Laboratory Equipment Quality Assurance	4-1
4.4.1 Daily Quality Control	4-1
4.4.2 Calibration Verification	4-1
4.4.3 Batch Processing	4-1
4.5 Duke Energy Interlaboratory Comparison Program	4-2
4.5.1 Eckert & Ziegler Analytics Cross Check Program	4-2
4.6 Intercomparison Program	4-2
4.7 TLD Intercomparison Program	4-2
4.7.1 Nuclear Technology Services Intercomparison Program	4-2
4.7.2 Internal Cross Check (Duke Energy)	4-3
4.8 General Engineering Laboratory, LLC (GEL)	4-3
 Appendices	
Appendix A: Environmental Sampling and Analysis Procedures	A-1
I. Change of Sampling Procedures	A-2
II. Description of Analysis Procedures	A-2
III. Change of Analysis Procedures	A-3
IV. Sampling and Analysis Procedures	A-3
A.1 Airborne Particulate and Radioiodine	A-3
A.2 Drinking Water	A-4
A.3 Surface Water	A-4
A.4 Milk	A-4
A.5 Broadleaf Vegetation	A-5

A.6	Food Products	A-4
A.7	Fish	A-4
A.8	Shoreline Sediment	A-5
A.9	Direct Gamma Radiation (TLD)	A-6
A.10	Annual Land Use Census	A-6
V.	Global Positioning System (GPS) Analysis.	A-6
Appendix B:	Radiological Environmental Monitoring Program Data Summary	B-1
Air Particulate		B-2
Air Radioiodine.		B-2
Drinking Water		B-2
Surface Water		B-2
Milk		B-2
Broadleaf Vegetation		B-3
Food Products		B-3
Fish		B-3
Shoreline Sediment		B-3
Direct Gamma Radiation (TLD)		B-3
Appendix C:	Catawba Nuclear Station Sampling Deviations & Unavailable Analyses	C-1
C.1	Sampling Deviations	C-2
C.2	Unavailable Analyses	C-3
Appendix D:	Catawba Nuclear Station Analytical Deviations	D-1
Appendix E:	Radiological Environmental Monitoring Program Results	E-1
Appendix F:	Errata to Previous Reports	F-1

LIST OF FIGURES

2.1-1	Catawba Nuclear Station Sampling Locations Map (One Mile Radius)	2-5
2.1-2	Catawba Nuclear Station Sampling Locations Map (Ten Mile Radius).	2-6
3.1	Concentration of Gross Beta in Air Particulate	3-3
3.2-1	Concentration of Gross Beta in Drinking Water	3-7
3.2-2	Concentration of Tritium in Drinking Water	3-7
3.3	Concentration of Tritium in Surface Water	3-10
3.5	Concentration of Cs-137 in Broadleaf Vegetation	3-14
3.7-1	Concentration of Co-58 in Fish	3-18
3.7-2	Concentration of Co-60 in Fish	3-19
3.7-3	Concentration of Cs-137 in Fish.	3-19
3.8-1	Concentration of Co-58 in Shoreline Sediment	3-21
3.8-2	Concentration of Co-60 in Shoreline Sediment	3-22
3.8-3	Concentration of Cs-137 in Shoreline Sediment	3-22
3.9	Direct Gamma Radiation (TLD) Results	3-25
3.10	Catawba Nuclear Station 2019 Land Use Census Map.	3-29

LIST OF TABLES

2.1-A	Catawba Radiological Monitoring Program Sampling Locations	2-7
2.1-B	Catawba Radiological Monitoring Program Sampling Locations (TLD Sites).	2-8
2.2-A	Reporting Levels for Radioactivity Concentrations in Environmental Samples	2-9
2.2-B	REMP Analysis Frequency	2-9
2.2-C	Maximum Values for the <i>A Priori</i> Lower Limits of Detection	2-10
3.1-A	Mean Concentration of Gross Beta in Air Particulate	3-4
3.1-B	Mean Concentration of Air Radioiodine (I-131)	3-5
3.2	Mean Concentrations of Radionuclides in Drinking Water	3-8
3.3	Mean Concentrations of Radionuclides in Surface Water	3-11
3.4	Mean Concentration of Radionuclides in Milk	3-13
3.5	Mean Concentration of Radionuclides in Broadleaf Vegetation	3-15

3.6	Mean Concentration of Radionuclides in Food Products	3-17
3.7	Mean Concentrations of Radionuclides in Fish (pCi/kg).	3-20
3.8	Mean Concentrations of Radionuclides in Shoreline Sediment (pCi/kg).	3-23
3.9	Direct Gamma Radiation (TLD) Results	3-26
3.10	Catawba 2019 Land Use Census Results	3-28
4.0-A	Eckert & Ziegler Analytics Cross Check Program	4-4
4.0-B	2019 Environmental Dosimeter Cross-Check Results	4-6
4.0-C	2019 GEL Laboratories, LLC QA Results	4-8

LIST OF ACRONYMS USED IN THIS TEXT *(in alphabetical order)*

AREOR	Annual Radiological Environmental Operating Report
ARERR	Annual Radiological Effluent Release Report
BW	BiWeekly
C	Control
CNS	Catawba Nuclear Station
EZA	Eckert & Ziegler Analytics
GEL	General Engineering Laboratory, LLC
GPS	Global Positioning System
I	Indicator
IR	Inner Ring
ISFSI	Independent Spent Fuel Storage Installation
LLD	Lower Limit of Detection
LLI	Low Level Iodine
LUC	Land Use Census
M	Monthly
MAPEP	Department of Energy Mixed Analyte Performance Evaluation Program
MDA	Minimum Detectable Activity
mrem	Millirem
MWe	Megawatt (electrical)
NIST	National Institute of Standards and Technology
NCR	Nuclear Condition Report – Corrective Action Program
NRC	Nuclear Regulatory Commission
ODCM	Offsite Dose Calculation Manual
OR	Outer Ring
pCi/kg	picocurie per kilogram
pCi/l	picocurie per liter
pCi/m ³	picocurie per cubic meter
Q	Quarterly
REMP	Radiological Environmental Monitoring Program
SA	Semiannually
SI	Special Interest
SLCs	Selected Licensee Commitments
SM	Semimonthly
TECH SPECS	Technical Specifications
TLD	Thermoluminescent Dosimeter
μCi/ml	microcurie per milliliter
UFSAR	Updated Final Safety Analysis Report
W	Weekly

1.0 EXECUTIVE SUMMARY

This Annual Radiological Environmental Operating Report describes the Catawba Nuclear Station Radiological Environmental Monitoring Program (REMP), and the program results for the calendar year 2019.

Included are the identification of sampling locations, descriptions of environmental sampling and analysis procedures, comparisons of present environmental radioactivity levels and pre-operational environmental data, comparisons of doses calculated from environmental measurements and effluent data, analysis of trends in environmental radiological data as potentially affected by station operations, and a summary of environmental radiological sampling results. Quality assurance practices, sampling deviations, unavailable samples, and program changes are also discussed.

Sampling activities were conducted as prescribed by the Catawba Nuclear Station Offsite Dose Calculated Manual (ODCM) and Selected Licensee Commitments (SLCs). One-thousand and seven samples were analyzed comprising 1,059 test results in order to compile data for the 2019 report. Based on the annual land use census, the current number of sampling sites for Catawba Nuclear Station is sufficient.

Concentrations observed in the environment in 2019 for station related radionuclides were generally within the ranges of concentrations observed in the past. Inspection of data showed that radioactivity concentrations in drinking water, surface water, and broad leaf vegetation are higher than the activities reported for samples collected prior to the operation of the station. Measured concentrations were not higher than expected and all positively identified measurements attributable to station operation were within limits as specified in the CNS ODCM and SLCs.

2.0 INTRODUCTION

2.1 SITE DESCRIPTION AND SAMPLE LOCATIONS

Duke Energy Corporation's Catawba Nuclear Station is a two-unit facility located on the shore of Lake Wylie in York County, South Carolina. Each of the two essentially identical units employs a pressurized water reactor nuclear steam supply system furnished by Westinghouse Electric Corporation. Unit one produces a net electrical output of 1165 MWe, while Unit 2 produces a net electrical output of 1145 MWe. Units 1 and 2 achieved initial criticality on January 7, 1985, and May 8, 1986, respectively.

Condenser cooling is accomplished utilizing a closed system incorporating cooling towers, instead of using lake water directly. Liquid effluents are released into Lake Wylie via the station discharge canal and are not accompanied by the large additional dilution water flow associated with “once-through” condenser cooling. This design results in greater radionuclide concentrations in the discharge canal given comparable liquid effluent source terms.

Sampling locations are chosen based upon meteorological factors, preoperational monitoring, and results of the land use surveys. Figures 2.1-1 and 2.1-2 are maps depicting the Thermoluminescent Dosimeter (TLD) monitoring locations and the sampling locations. The location numbers shown on these maps correspond to those listed in Tables 2.1-A and 2.1-B. Figure 2.1-1 comprises all sample locations within a one mile radius of CNS. Figure 2.1-2 comprises all sample locations within a 10 mile radius of CNS.

2.2 SCOPE AND REQUIREMENTS OF THE REMP

An environmental monitoring program has been in effect at Catawba Nuclear Station since 1981, four years prior to operation of Unit 1 in 1985. The preoperational program provides data on the existing environmental radioactivity levels for the site and vicinity which may be used to determine whether increases in environmental levels are attributable to the station. The operational program provides surveillance and backup support of detailed effluent monitoring which is necessary to evaluate the significance, if any, of the contributions to the existing environmental radioactivity levels that result from station operation.

This monitoring program is based on NRC guidance as reflected in the Selected Licensee Commitments Manual, with regard to sample media, sampling locations, sampling frequency and analytical sensitivity requirements. Indicator and control locations were established for comparison purposes to distinguish radioactivity of station origin from natural or other “man-made” environmental radioactivity. The environmental monitoring program also verifies projected and anticipated radionuclide concentrations in the environment and related exposures from releases of radionuclides from Catawba Nuclear Station. This program satisfies the requirements of Section IV.B.2 of Appendix I to 10CFR50 and provides surveillance of all appropriate critical exposure pathways to man and protects vital interests of the company, public and state and federal

agencies concerned with the environment. Reporting levels for activity found in environmental samples are listed in Table 2.2-A. Table 2.2-B lists the REMP analysis and frequency schedule. The Annual Land Use Census, required by Selected Licensee Commitments, is performed to ensure that changes in the use of areas at or beyond the site boundary are identified and that modifications to the REMP are made if required by changes in land use. This census satisfies the requirements of Section IV.B.3 of Appendix I to 10CFR50. Results are shown in Table 3.10.

Participation in an interlaboratory comparison program as required by Selected Licensee Commitments provides for independent checks on the precision and accuracy of measurements of radioactive material in REMP sample matrices. Such checks are performed as part of the quality assurance program for environmental monitoring in order to demonstrate that the results are valid for the purposes of Section IV.B.2 of Appendix I to 10CFR50. A summary of the results obtained as part of this comparison program are in Section 4 of this annual report.

2.3 STATISTICAL AND CALCULATIONAL METHODOLOGY

2.3.1 ESTIMATION OF THE MEAN VALUE

There was one (1) basic statistical calculation performed on the raw data resulting from the environmental sample analysis program. The calculation involved the determination of the mean value for the indicator and the control samples for each sample medium. The mean is a widely used statistic. This value was used in the reduction of the data generated by the sampling and analysis of the various media in the Radiological Environmental Monitoring Program. "Net activity (or concentration)" is the activity (or concentration) determined to be present in the sample. No "Minimum Detectable Activity", "Lower Limit of Detection", "Less Than Level", or negative activities or concentrations are included in the calculation of the mean. The following equation was used to estimate the mean:

$$\bar{x} = \frac{\sum_{i=1}^N x_i}{N}$$

Where:

\bar{x} = estimate of the mean,

i = individual sample,

N = total number of samples with a net activity (or concentration),

x_i = net activity (or concentration) for sample i.

2.3.2 LOWER LIMIT OF DETECTION AND MINIMUM DETECTABLE ACTIVITY

The Lower Limit of Detection (LLD), and Minimum Detectable Activity (MDA) are used throughout the REMP.

LLD - The LLD, as defined in the Selected Licensee Commitments Manual is the smallest concentration of radioactive material in a sample that will yield a net count, above the system background, that will be detected with 95% probability with only 5% probability of falsely concluding that a blank observation represents a "real" signal. The LLD is an *a priori* (before the fact) lower limit of detection. The actual LLD is dependent upon the standard deviation of the background counting rate, the counting efficiency, the sample size (mass or volume), the radiochemical yield and the radioactive decay of the sample between sample collection and counting. The "required" LLDs for each sample medium and selected radionuclides are given in the Selected Licensee Commitments and are listed in Table 2.2-C.

MDA - The MDA is the net counting rate (sample after subtraction of background) that must be surpassed before a sample is considered to contain a scientifically measurable amount of a radioactive material exceeding background amounts. The MDA is calculated using a sample background and may be thought of as an "actual" LLD for a particular sample measurement. Certain gross counting measurements display a calculated negative value, indicating background is greater than sample activity.

2.3.3 TREND IDENTIFICATION

One of the purposes of an environmental monitoring program is to determine if there is a buildup of radionuclides in the environment due to the operation of the nuclear station. Visual inspection of tabular or graphical presentations of data (including preoperational) is used to determine if a trend exists. A decrease in a particular radionuclide's concentration in an environmental medium does not indicate that reactor operations are removing radioactivity from the environment but that reactor operations are not adding that radionuclide to the environment in quantities exceeding the preoperational level and that the normal removal processes (radioactive decay, deposition, resuspension, etc.) are influencing the concentration.

Substantial increases or decreases in the amount of a particular radionuclide's release from the nuclear plant will greatly affect the resulting environmental levels; therefore, a knowledge of the release of a radionuclide from the nuclear plant is necessary to completely interpret the trends, or lack of trends, determined from the environmental data. Factors that may affect environmental levels of radionuclides include prevailing weather conditions (periods of drought, solar cycles or heavier than normal precipitation), construction in or around either the nuclear plant or the sampling location, and addition or deletion of other sources of radioactive materials (such as the Chernobyl accident and the Japan earthquake and tsunami, which triggered the Fukushima Dai-ichi Nuclear Power Plant incident). Some of these factors may be obvious while others are sometimes

unknown. Therefore, how trends are identified will include some judgment by plant personnel.

Figure 2.1-1

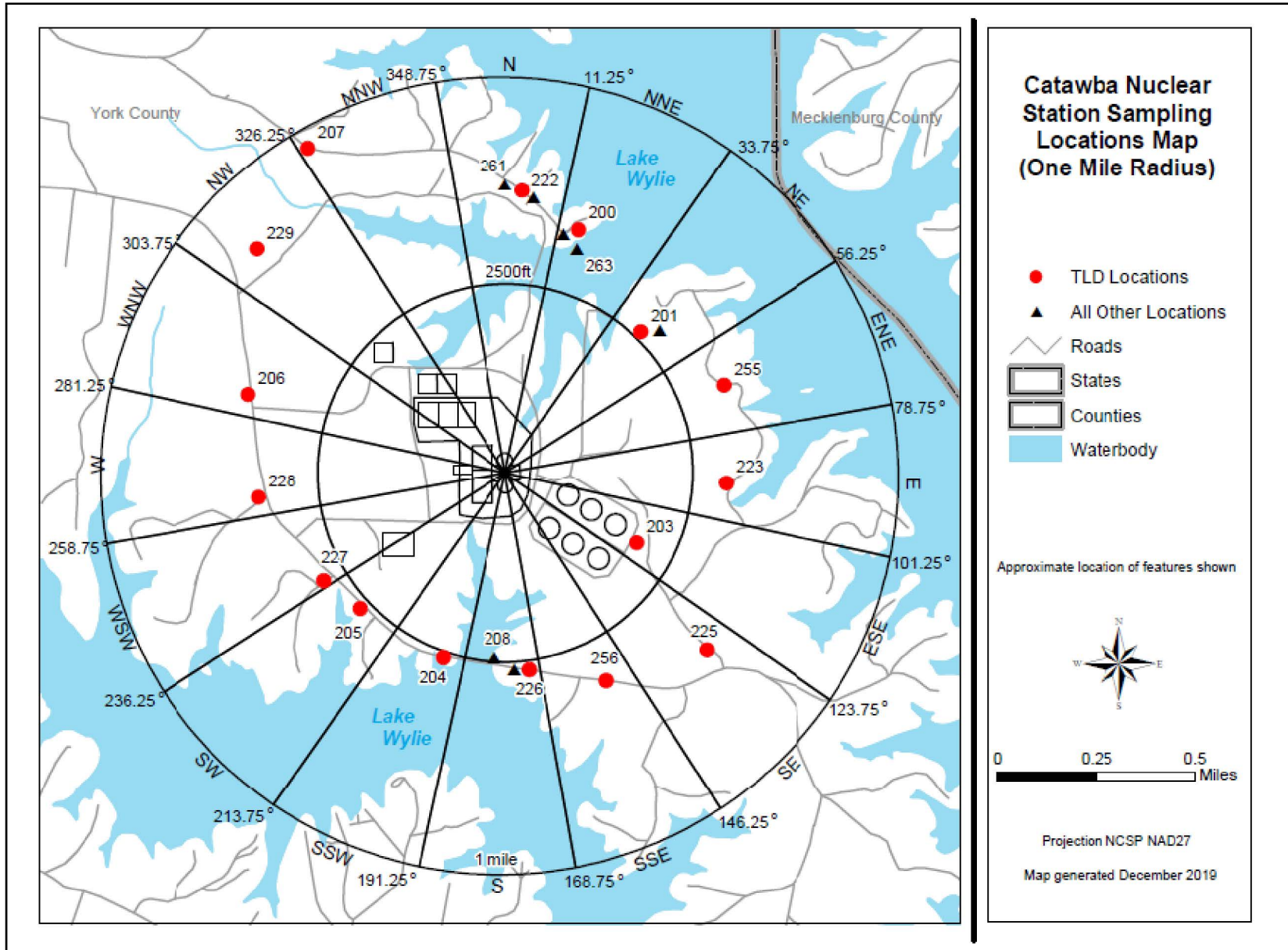


Figure 2.1-2

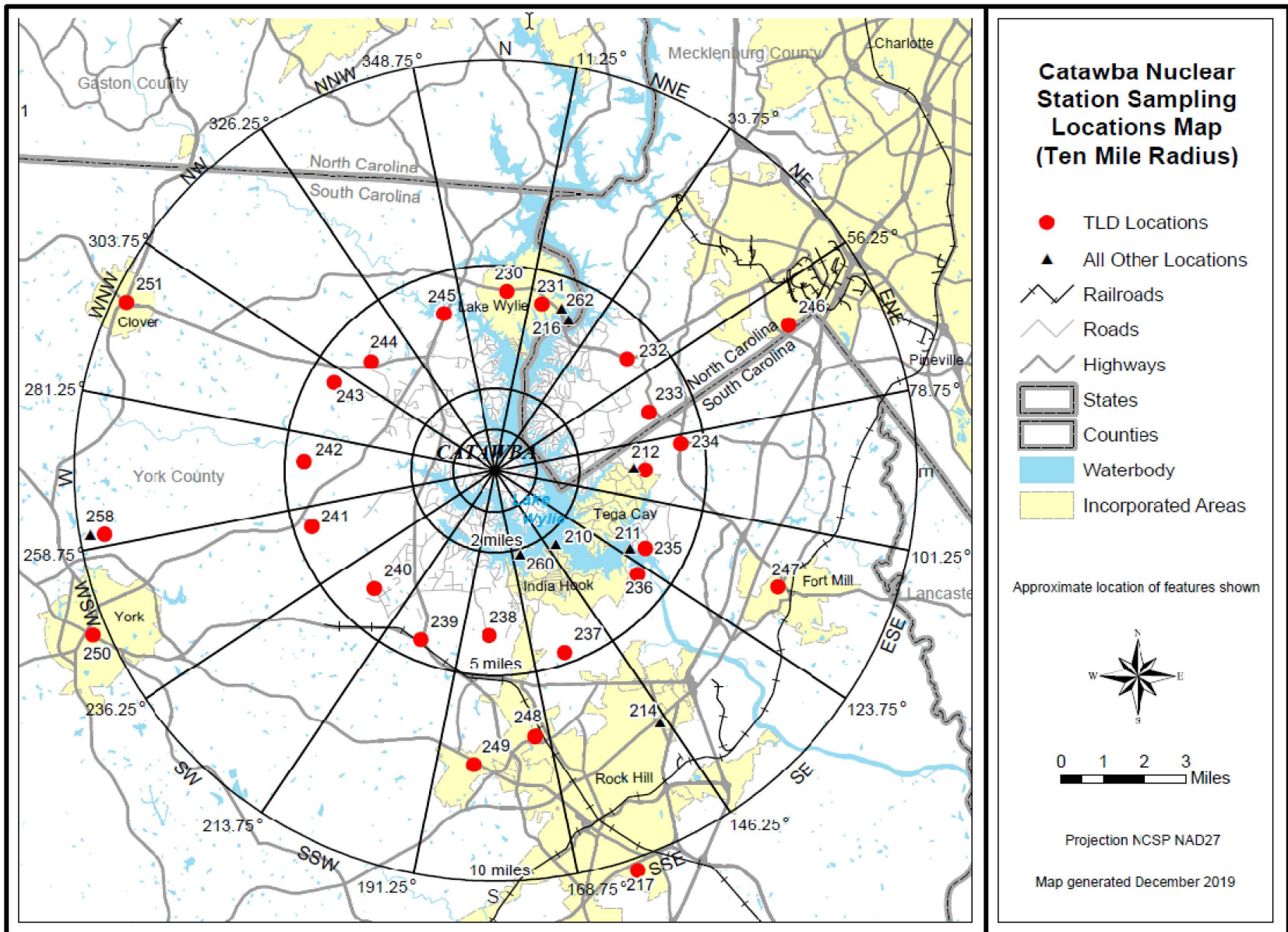


TABLE 2.1-A

**CATAWBA RADIOLOGICAL MONITORING PROGRAM
SAMPLING LOCATIONS**

Table 2.1-A Codes			
W	Weekly	SM	Semimonthly
BW	BiWeekly	Q	Quarterly
M	Monthly	SA	Semiannually
C	Control	I	Indicator

Site #	Measure Type	Location Description*	Air Rad. & Part.	Surface Water	Drinking Water	Shoreline Sediment	Food Products (a)	Fish	Milk	Broad Leaf Veg. (b)
200	I	Site Boundary (0.63 mi NNE)	W							M
201	I	Site Boundary (0.53 mi NE)	W							M
208	I	Discharge Canal (0.45 mi S)	W	M		SA		SA		
210	I	Ebenezer Access (2.31 mi SE)				SA				
211	I	Wylie Dam (4.06 mi ESE)		M						
212	I	Tega Cay (3.32 mi E)	W							
214	I	Rock Hill Water Supply (7.30 mi SSE)			M					
215(c)	C	River Pointe - Hwy 49 (4.21 mi NNE)		M						
216	C	Hwy 49 Bridge (4.19 mi NNE)						SA		
218	C	Belmont Water Supply (13.5 mi NNE)			M					
221	C	Dairy (14.5 mi NW)							SM	
222	I	Site Boundary (0.70 mi N)								M
226	I	Site Boundary (0.48 mi S)								M
258	C	Fairhope Road (9.84 mi W)	W							M
260	I	Irrigated Gardens (2.00 mi SSE)					M(a)			
261	I	Firing Range-Site Boundary (0.72 mi N)	W							
262(d)	C	Lake Wylie Marina- Hwy 49 (4.19 mi NNE)				SA				
263(e)	C	Liberty Hill Road (0.59 mi NNE)		M						

- (a) During Harvest Season
- (b) When Available
- (c) Location terminated on 2JAN2019, CNS ODCM Rev. 063 eff. 12DEC2019
- (d) Location Description change, CNS ODCM Rev. 063 eff. 12DEC2019
- (e) New Location effective 2JAN2019, CNS ODCM Rev. 063 eff. 12DEC2019

* GPS data reflect approximate accuracy to within 2-5 meters. GPS field measurements were taken as close as possible to the item of interest.

TABLE 2.1-B

**CATAWBA RADIOLOGICAL MONITORING PROGRAM
SAMPLING LOCATIONS (TLD SITES)**

Table 2.1-B Codes			
IR	Inner Ring	OR	Outer Ring
C	Control	SI	Special Interest

Site #	Measure Type	Location*	Distance (miles)	Sector	Site #	Measure Type	Location*	Distance (miles)	Sector
200	IR	SITE BOUNDARY	0.63	NNE	234	OR	WELLS FARGO BANK	4.50	E
201	IR	SITE BOUNDARY	0.53	NE	235	OR	LAKE WYLIE DAM	4.07	ESE
203	IR	SITE BOUNDARY	0.38	ESE	236	OR	SC WILDLIFE FEDERATION OFFICE	4.25	SE
204	IR	SITE BOUNDARY	0.48	SSW	237	OR	TWIN LAKES ROAD AND HOMESTEAD ROAD	4.75	SSE
205	IR	SITE BOUNDARY	0.25	SW	238	OR	PENNINGTON ROAD AND WEST OAK ROAD	4.02	S
206	IR	SITE BOUNDARY	0.67	WNW	239	OR	CARTER LUMBER COMPANY	4.49	SSW
207	IR	SITE BOUNDARY	0.95	NNW	240	OR	PARAHAM ROAD	4.07	SW
212	SI	TEGA CAY AIR SITE	3.32	E	241	OR	CAMPBELL ROAD	4.58	WSW
217	C	BLACKMON ROAD	10.3	SSE	242	OR	TRANSMISSION TOWER ON PARAHAM ROAD	4.56	W
222	IR	SITE BOUNDARY	0.71	N	243	OR	KINGSBURRY ROAD	4.39	WNW
223	IR	SITE BOUNDARY	0.57	E	244	OR	BETHEL ELEMENTARY SCHOOL	4.02	NW
225	IR	SITE BOUNDARY	0.68	SE	245	OR	CROWDERS CREEK BOAT LANDING	4.01	NNW
226	IR	SITE BOUNDARY	0.48	S	246	SI	CAROWINDS GUARD HOUSE	7.87	ENE
227	IR	SITE BOUNDARY	0.52	WSW	247	C	FORT MILL	7.33	ESE
228	IR	SITE BOUNDARY	0.61	W	248	SI	PIEDMONT MEDICAL CENTER	6.54	S
229	IR	SITE BOUNDARY	0.84	NW	249	SI	YORK COUNTY OPERATIONS CENTER	7.17	S
230	OR	RIVER HILLS CHURCH	4.37	N	250	SI	YORK DUKE ENERGY OFFICE	10.4	WSW
231	OR	RIVER HILLS FRONT ENTRANCE	4.21	NNE	251	C	CLOVER	9.72	WNW
232	OR	PLEASANT HILL ROAD	4.18	NE	255	IR	SITE BOUNDARY	0.61	ENE
233	OR	ZOAR ROAD AND THOMAS DRIVE	3.95	ENE	256	IR	SITE BOUNDARY	0.58	SSE
					258	SI	FAIRHOPE ROAD	9.84	W

* GPS data reflect approximate accuracy to within 2-5 meters. GPS field measurements were taken as close as possible to the item of interest.

TABLE 2.2-A
REPORTING LEVELS FOR RADIOACTIVITY
CONCENTRATIONS IN ENVIRONMENTAL SAMPLES

Analysis	Water (pCi/liter)	Air Particulates or Gases (pCi/m ³)	Fish (pCi/kg-wet)	Milk (pCi/liter)	Food Products (pCi/kg-wet)
H-3	20,000 ^{(a),(b)}	---	---	---	---
Mn-54	1,000	---	30,000	---	---
Fe-59	400	---	10,000	---	---
Co-58	1,000	---	30,000	---	---
Co-60	300	---	10,000	---	---
Zn-65	300	---	20,000	---	---
Zr-Nb-95	400	---	---	---	---
I-131	2	0.9	---	3	100
Cs-134	30	10	1,000	60	1,000
Cs-137	50	20	2,000	70	2,000
Ba-La-140	200	---	---	300	---

- (a) If no drinking water pathway exists, a value of 30,000 pCi/liter may be used.
(b) H-3 Reporting level not applicable to surface water

TABLE 2.2-B
REMP ANALYSIS FREQUENCY

Sample Medium	Analysis Schedule	Gamma Isotopic	Tritium	Low Level I-131	Gross Beta	TLD
Air Radioiodine	Weekly	X	---	---	---	---
Air Particulate	Weekly	X	---	---	X	---
	Quarterly Composite	X	---	---	---	---
Direct Radiation	Quarterly	---	---	---	---	X
Surface Water	Monthly Composite	X	---	---	---	---
	Quarterly Composite	---	X	---	---	---
Drinking Water	Monthly Composite	X	---	(a)	X	---
	Quarterly Composite	---	X	---	---	---
Ground Water	Quarterly	X	X	---	---	---
Shoreline Sediment	Semiannually	X	---	---	---	---
Milk	Semimonthly	X	---	X	---	---
Fish	Semiannually	X	---	---	---	---
Broadleaf Vegetation	Monthly ^(b)	X	---	---	---	---
Food Products	Monthly ^(b)	X	---	---	---	---

- (a) Low-level I-131 analysis will be performed if the dose calculated for the consumption of drinking water is > 1 mrem per year. An LLD of 1 pCi/liter will be required for this analysis.
(b) When Available

TABLE 2.2-C

MAXIMUM VALUES FOR THE *A PRIORI* LOWER LIMIT OF DETECTION

Analysis	Water (pCi/liter)	Air Particulates or Gases (pCi/m ³)	Fish (pCi/kg-wet)	Milk (pCi/liter)	Food Products (pCi/kg-wet)	Sediment (pCi/kg-dry)
Gross Beta	4	0.01	---	---	---	---
H-3	2000 ^(a)	---	---	---	---	---
Mn-54	15	---	130	---	---	---
Fe-59	30	---	260	---	---	---
Co-58, 60	15	---	130	---	---	---
Zn-65	30	---	260	---	---	---
Zr-Nb-95	15	---	---	---	---	---
I-131	1 ^(b)	0.07	---	1	60	---
Cs-134	15	0.05	130	15	60	150
Cs-137	18	0.06	150	18	80	180
Ba-La-140	15	---	---	15	---	---

(a) If no drinking water pathway exists, a value of 3,000 pCi/liter may be used.

(b) If no drinking water pathway exists, the LLD of gamma isotopic analysis may be used.

3.0 INTERPRETATION OF RESULTS

Review of all 2019 REMP analysis results was performed to identify changes in environmental levels as a result of station operations. The following section depicts and explains the review of these results. Sample data for 2019 was compared to preoperational and historical data. Over the years of operation, analysis and collection changes have taken place that do not allow direct comparisons for some data collected from 1984 (preoperational) through 2019. Summary tables containing 2019 information required by Technical Specification Administrative Control 5.6.2 are located in Appendix B. REMP results for 2019 are located in Appendix E.

Evaluation for significant trends was performed for radionuclides that are listed as required within Selected Licensee Commitments 16.11-13. The radionuclides include: H-3, Mn-54, Fe-59, Co-58, Co-60, Zn-65, Zr-95, Nb-95, I-131, Cs-134, Cs-137, Ba-140 and La-140. Gross beta analysis results were trended for drinking water. Other radionuclides detected that are the result of plant operation, but not required for reporting, are trended.

A comparison of annual mean concentrations of effluent-based detected radionuclides to historical results provided trending bases. Frequency of detection and concentrations related to SLC reporting levels (Table 2.2-A) were used as criteria for trending conclusions. All 2019 maximum percentages of reporting levels attributed to CNS operation were well below the 100% action level.

Selected Licensee Commitment section 16.11-13 addresses actions to be taken if radionuclides other than those required are detected in samples collected. The occurrences of these radionuclides are the result of CNS liquid effluents which contained the radionuclides.

During 1984-1986, all net activity results (sample minus background), both positive and negative were included in calculation of sample mean. A change in the EnRad gamma spectroscopy system on September 1, 1987, decreased the number of measurements yielding detectable low-level activity for indicator and control location samples. It was thought that the method used by the previous system was vulnerable to false-positive results.

All 2019 sample analysis results were reviewed to detect and identify any significant trends. Tables and graphs are used throughout this section to display data from effluent-based radionuclides identified since the system change in late 1987. All negative concentration values were replaced with zero for calculation purposes. Any zero concentrations used in tables or graphs represent activity measurements less than detectable levels.

Review of all 2019 data presented in this section supports the conclusion that there were no significant changes in environmental sample radionuclide concentrations of samples collected and analyzed from CNS site and surrounding areas that were attributable to plant operations. Inspection of the data showed that radioactivity concentrations were as expected and all positively identified measurements attributed to plant operations were within CNS Offsite Dose

Calculation Manual (ODCM) and SLC regulatory limits; thus presenting no significant impact to the environment or public health and safety.

Data presented in Sections 3.1 through 3.9 support the conclusion that there was no significant increase in radioactivity in the environment around Catawba Nuclear Station due to station operations in 2019. Similarly, there was no significant increase in ambient background radiation levels in the surrounding areas. The 2019 land use census data, shown in Section 3.10, indicates that no program changes are required as a result of the census.

3.1 AIRBORNE RADIOIODINE AND PARTICULATES

In 2019, 312 radioiodine and particulate samples were analyzed, 260 from five indicator locations and 52 at the control location. Particulate samples were analyzed weekly for gross beta. A quarterly gamma analysis was performed on the quarterly filter composite (by location). Radioiodine samples received a weekly gamma analysis.

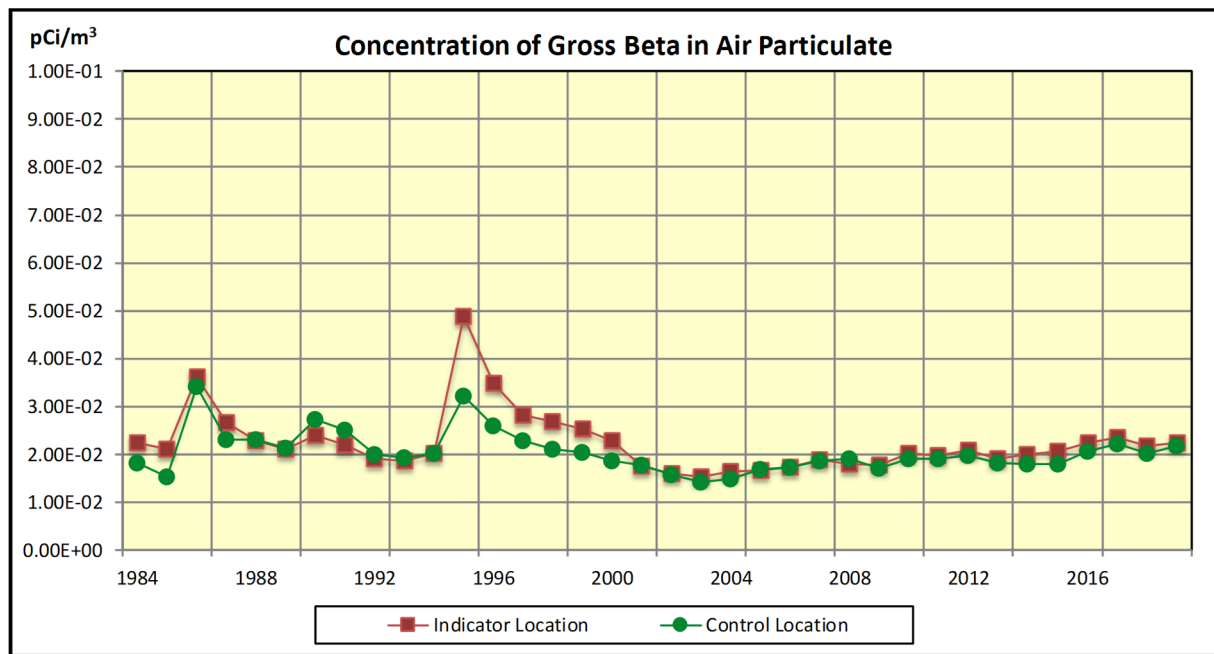
Figure 3.1 shows individual sample gross beta results for the indicator location with highest annual mean and the control location samples during 2019. The two sample locations' results are similar in concentration and have varied negligibly since preoperational periods.

There were no detectable gamma emitters attributable to plant operations identified for particulate filters analyzed during 2019. Table 3.1-A shows the highest indicator annual mean and control location annual mean for gross beta in air particulate.

There was no detectable I-131 in air radioiodine samples analyzed in 2019. Table 3.1-B shows the highest indicator annual mean and control location annual mean for I-131 since 1984 (preoperational period). The table shows similar concentrations for both the indicator and control locations and the activities decreasing from early in the operational history of the plant. No I-131 activity due to CNS plant operations has been detected since 1987.

K-40 and Be-7 that occur naturally were routinely detected in charcoal cartridges collected during the year.

Figure 3.1



There is no reporting level for gross beta in air particulate

Table 3.1-A Mean Concentration of Gross Beta in Air Particulate

Year	Indicator Location (pCi/m³)	Control Location (pCi/m³)
1984	2.25E-2	1.82E-2
1985	2.12E-2	1.53E-2
1986	3.62E-2	3.41E-2
1987	2.67E-2	2.32E-2
1988	2.29E-2	2.30E-2
1989	2.11E-2	2.13E-2
1990	2.39E-2	2.72E-2
1991	2.19E-2	2.51E-2
1992	1.90E-2	2.01E-2
1993	1.87E-2	1.94E-2
1994	2.03E-2	2.03E-2
1995	4.88E-2	3.23E-2
1996	3.49E-2	2.60E-2
1997	2.83E-2	2.28E-2
1998	2.69E-2	2.12E-2
1999	2.53E-2	2.04E-2
2000	2.28E-2	1.86E-2
2001	1.76E-2	1.78E-2
2002	1.60E-2	1.57E-2
2003	1.54E-2	1.42E-2
2004	1.65E-2	1.49E-2
2005	1.66E-2	1.68E-2
2006	1.74E-2	1.74E-2
2007	1.88E-2	1.86E-2
2008	1.80E-2	1.90E-2
2009	1.78E-2	1.72E-2
2010	2.03E-2	1.90E-2
2011	1.98E-2	1.92E-2
2012	2.09E-2	1.97E-2
2013	1.92E-2	1.82E-2
2014	1.99E-2	1.81E-2
2015	2.06E-2	1.80E-2
2016	2.24E-2	2.07E-2
2017	2.35E-2	2.21E-2
2018	2.17E-2	2.03E-2
2019	2.25E-2	2.18E-2

Table 3.1-B Mean Concentration of Air Radioiodine (I-131)

Year	Indicator Location (pCi/m ³)	Control Location (pCi/m ³)
1984	1.30E-3	1.46E-2
1985	4.75E-3	2.38E-2
1986	1.43E-2	1.02E-2
1987	1.38E-2	0.00E0
1988	0.00E0	0.00E0
1989	0.00E0	0.00E0
1990	0.00E0	0.00E0
1991	0.00E0	0.00E0
1992	0.00E0	0.00E0
1993	0.00E0	0.00E0
1994	0.00E0	0.00E0
1995	0.00E0	0.00E0
1996	0.00E0	0.00E0
1997	0.00E0	0.00E0
1998	0.00E0	0.00E0
1999	0.00E0	0.00E0
2000	0.00E0	0.00E0
2001	0.00E0	0.00E0
2002	0.00E0	0.00E0
2003	0.00E0	0.00E0
2004	0.00E0	0.00E0
2005	0.00E0	0.00E0
2006	0.00E0	0.00E0
2007	0.00E0	0.00E0
2008	0.00E0	0.00E0
2009	0.00E0	0.00E0
2010	0.00E0	0.00E0
2011 ⁽¹⁾	5.53E-2	5.65E-2
2012	0.00E0	0.00E0
2013	0.00E0	0.00E0
2014 ⁽²⁾	0.00E0	0.00E0
2015	0.00E0	0.00E0
2016	0.00E0	0.00E0
2017	0.00E0	0.00E0
2018	0.00E0	0.00E0
2019	0.00E0	0.00E0

0.00E0 indicates no detectable measurements

(1) 2011 concentration affected by Fukushima Daiichi

(2) 2014 – Gamma spectroscopy system was replaced 10JUL2014. Gamma spectroscopy system hardware, detector cooling apparatus, software, electronics, nuclide identification libraries, and analytical test matrix components for test matrices were modified (NCR # 0739995). No analytical changes were noted due to the 2014 gamma spectroscopy system change.

3.2 DRINKING WATER

Gross beta analysis and gamma spectroscopy were performed on 26 drinking water samples. These samples were composited to create 8 quarterly composite period samples for tritium analysis. One indicator location was sampled, along with one control location.

No gamma emitting radionuclides attributable to plant operations were identified in 2019 drinking water samples.

Figure 3.2-1 and Table 3.2 shows highest annual mean gross beta concentrations for the indicator location and control location since preoperation. The indicator location (downstream of the plant effluent release point) average concentration was 5.20 pCi/l in 2019 and the control location concentration was 7.54 pCi/l. The gross beta mean indicator activity and mean control activity increased in 2019 due to an analytical method change affecting analytical sensitivities (Appendix A, III). This change is due to the analysis method being changed in 2019 (NCR # 02303030).

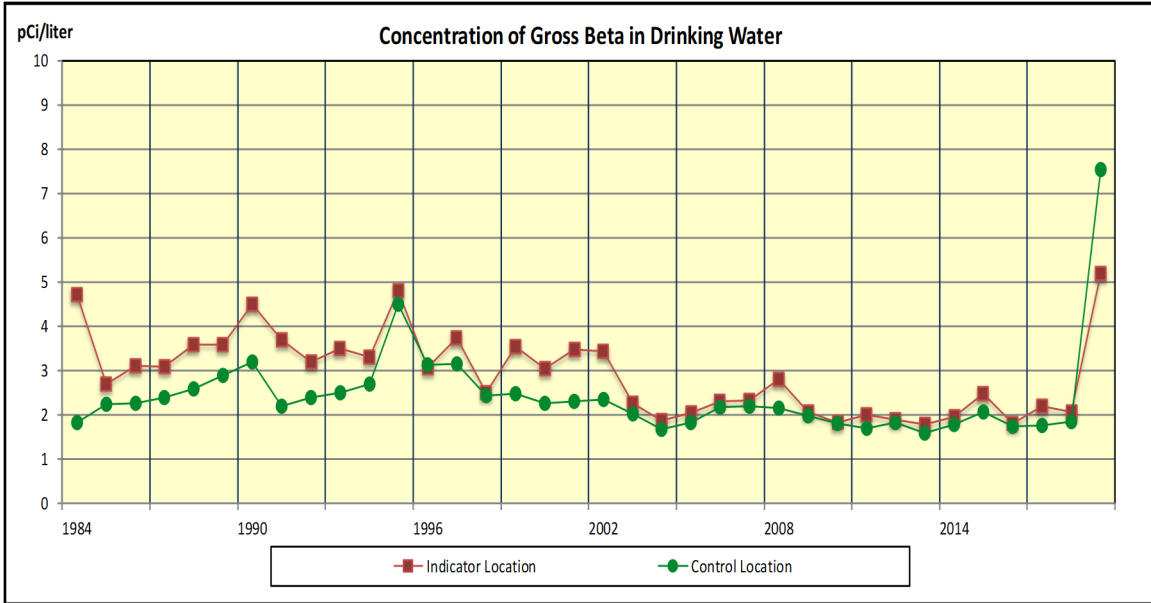
Tritium was detected in two of four indicator samples as well as two of four control samples during 2019. The mean indicator tritium concentration for 2019 was 455 pCi/l, 2.28% of reporting level. The mean control tritium concentration for 2019 was 285 pCi/l, 1.43% of reporting level. Figure 3.2-2 and Table 3.2 display the highest indicator and control location annual mean concentrations for tritium since 1984.

The concentration of tritium in drinking water is affected by releases from the Catawba plant and the McGuire Nuclear Station, located approximately 40 miles upstream of the Catawba plant on the Catawba River.

The dose for consumption of water was less than one mrem per year, historically and for 2019; therefore low-level iodine analysis is not required.

K-40 is a naturally occurring radionuclide observed in drinking water samples in 2019.

Figure 3.2-1



Analytical method change implemented in 2019.

Figure 3.2-2

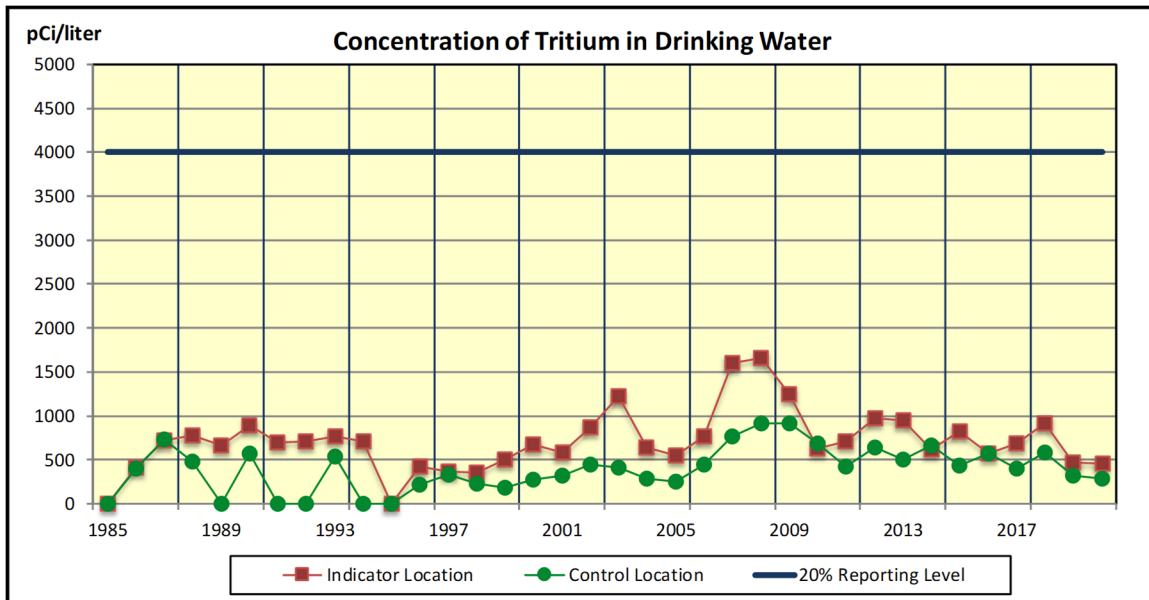


Table 3.2 Mean Concentration of Radionuclides in Drinking Water

YEAR	Gross Beta (pCi/l)		Tritium (pCi/l)	
	Indicator Location	Control Location	Indicator Location	Control Location
1984	4.72	1.83	3.10E-2	3.10E-2
1985	2.70	2.24	4.13E2	4.00E2
1986	3.11	2.26	7.23E2	7.33E2
1987	3.10	2.40	7.80E2	4.80E2
1988	3.60	2.60	6.64E2	0.00E0
1989	3.60	2.90	8.91E2	5.72E2
1990	4.50	3.20	7.03E2	0.00E0
1991	3.70	2.20	7.04E2	0.00E0
1992	3.20	2.40	7.65E2	5.38E2
1993	3.50	2.50	7.06E2	0.00E0
1994	3.30	2.70	0.00E0	0.00E0
1995	4.80	4.50	4.28E2	2.21E2
1996	3.08	3.14	3.71E2	3.27E2
1997	3.74	3.15	3.54E2	2.28E2
1998	2.51	2.44	5.07E2	1.83E2
1999	3.55	2.48	6.71E2	2.70E2
2000	3.04	2.27	5.87E2	3.26E2
2001	3.49	2.30	8.66E2	4.50E2
2002	3.44	2.36	1.22E3	4.11E2
2003	2.27	2.02	6.36E2	2.88E2
2004	1.88	1.69	5.47E2	2.54E2
2005	2.05	1.84	7.69E2	4.50E2
2006	2.30	2.17	1.59E3	7.70E2
2007	2.34	2.21	1.65E3	9.18E2
2008	2.81	2.16	1.25E3	9.16E2
2009	2.07	1.99	6.34E2	6.81E2
2010	1.84	1.80	7.05E2	4.27E2
2011	2.01	1.71	9.73E2	6.36E2
2012	1.89	1.84	9.54E2	5.02E2
2013	1.79	1.59	6.22E2	6.64E2
2014	1.96	1.79	8.21E2	4.37E2
2015	2.48	2.07	5.70E2	5.70E2
2016	1.80	1.75	6.88E2	4.06E2
2017	2.20	1.76	9.16E2	5.83E2
2018	2.06	1.86	4.71E2	3.26E2
2019 ⁽¹⁾	5.20	7.54	4.55E2	2.85E2

0.00E0 indicates detectable measurements

1984 - 1986 mean based on all net activity

(1) Gross beta preparation/analysis methodology change (NCR # 02303030).

3.3 SURFACE WATER

A total of 39 monthly surface water samples were analyzed for gamma emitting radionuclides. The samples were composited to create 12 quarterly composite period samples for tritium analysis. Two indicator locations and one control location were sampled. One indicator location (208) is located near the liquid effluent discharge point.

Tritium was identified in 7 of 8 indicator locations with an average concentration of 3,040 pCi/l. Indicator location 208 (Discharge Canal) showed a range of activities from 4,570 to 6,180 pCi/l which had the highest mean concentration of 5,100 pCi/l. Tritium was detected in two of the four control samples during 2019 with an average concentration of 221 pCi/l.

Surface Water location 215 (River Pointe – Hwy 49) was terminated on 2JAN2019 and replaced with location 263 (Liberty Hill Road) on 2JAN2019. Location 215 was removed from the REMP since it was on private property, location 263 is on Duke Energy owned property (NCR # 02250746).

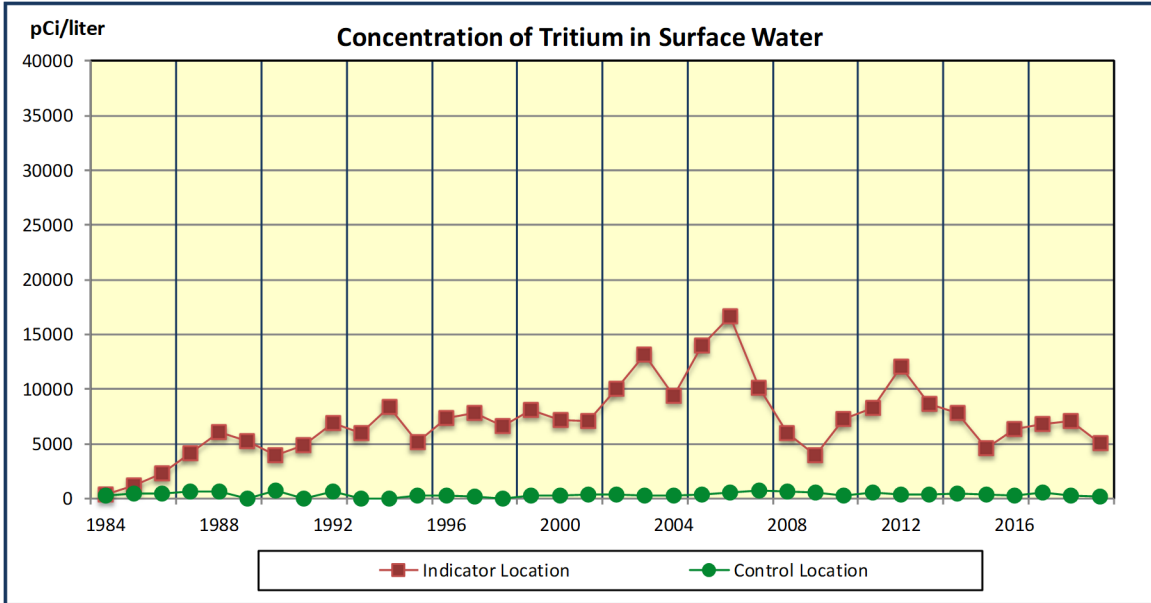
No gamma emitting radionuclides attributable to plant operations were identified in 2019 surface water samples. Table 3.3 summarizes the indicator annual means of radionuclides detected since 1984. Visual inspection of the tabular data did not reveal any increasing trends.

Figure 3.3 displays the highest indicator and control annual means for tritium since 1984.

The concentration of tritium in surface water is affected by releases from the Catawba plant and the McGuire Nuclear Station, located approximately 40 miles upstream of the Catawba plant on the Catawba River.

K-40 and Be-7 are naturally occurring radionuclides observed in surface water samples in 2019.

Figure 3.3



There is no reporting level for tritium in surface water, however, if no drinking water pathway exists, a value of 30,000 pCi/l may be used. A drinking water pathway exists for Catawba Nuclear Station, so this limit does not apply for surface water. See section 3.2 for drinking water results.

Table 3.3 Mean Concentrations of Radionuclides in Surface Water (pCi/l)

YEAR	Co-58	Co-60	Nb-95	Cs-137	H-3 Indicator	H-3 Control
1984	4.59E-1	5.71E-1	6.48E-1	9.08E-1	3.35E2	3.18E2
1985	3.46E0	4.83E-2	2.70E0	8.19E-1	1.19E3	5.05E2
1986	3.10E-1	-4.12E-2	2.05E0	4.85E-1	2.34E3	5.05E2
1987 ⁽¹⁾	0.00E0	3.10E0	4.30E0	9.90E0	4.17E3	6.20E2
1988	9.20E0	0.00E0	0.00E0	0.00E0	6.03E3	6.07E2
1989	0.00E0	0.00E0	0.00E0	0.00E0	5.27E3	0.00E0
1990	6.50E0	0.00E0	0.00E0	0.00E0	3.98E3	7.73E2
1991	0.00E0	0.00E0	0.00E0	0.00E0	4.87E3	0.00E0
1992	0.00E0	0.00E0	0.00E0	0.00E0	6.91E3	6.64E2
1993	4.70E0	1.80E0	0.00E0	0.00E0	5.98E3	0.00E0
1994	0.00E0	0.00E0	0.00E0	0.00E0	8.42E3	0.00E0
1995	0.00E0	0.00E0	0.00E0	0.00E0	5.13E3	2.89E2
1996	0.00E0	0.00E0	0.00E0	0.00E0	7.36E3	2.61E2
1997	0.00E0	0.00E0	0.00E0	0.00E0	7.77E3	2.20E2
1998	0.00E0	0.00E0	0.00E0	0.00E0	6.61E3	0.00E0
1999	0.00E0	0.00E0	0.00E0	0.00E0	8.13E3	2.41E2
2000	0.00E0	0.00E0	0.00E0	0.00E0	7.19E3	2.56E2
2001	0.00E0	0.00E0	0.00E0	0.00E0	7.13E3	3.28E2
2002	0.00E0	0.00E0	0.00E0	0.00E0	1.00E4	3.80E2
2003	0.00E0	0.00E0	0.00E0	0.00E0	1.31E4	2.37E2
2004	0.00E0	0.00E0	0.00E0	0.00E0	9.43E3	2.60E2
2005	0.00E0	0.00E0	0.00E0	0.00E0	1.40E4	3.78E2
2006	0.00E0	0.00E0	0.00E0	0.00E0	1.67E4	5.83E2
2007	0.00E0	0.00E0	0.00E0	0.00E0	1.01E4	7.82E2
2008	6.80E0	1.16E1	0.00E0	0.00E0	6.02E3	6.31E2
2009	9.40E0	1.06E1	0.00E0	0.00E0	3.93E3	5.29E2
2010	0.00E0	0.00E0	0.00E0	0.00E0	7.26E3	2.94E2
2011	8.75E0	1.96E1	0.00E0	0.00E0	8.29E3	5.41E2
2012	0.00E0	0.00E0	0.00E0	0.00E0	1.21E4	3.71E2
2013	0.00E0	0.00E0	0.00E0	0.00E0	8.62E3	4.02E2
2014 ⁽²⁾⁽³⁾	7.23E0	4.69E0	0.00E0	0.00E0	7.79E3	4.18E2
2015 ⁽⁴⁾	1.15E1	1.07E0	0.00E0	0.00E0	4.61E3	4.14E2
2016	0.00E0	0.00E0	0.00E0	0.00E0	6.34E3	2.81E2
2017	0.00E0	0.00E0	0.00E0	0.00E0	6.80E3	5.24E2
2018	0.00E0	0.00E0	0.00E0	0.00E0	7.07E3	2.79E2
2019	0.00E0	0.00E0	0.00E0	0.00E0	5.10E3	2.21E2

0.00E0 indicates no detectable measurements

1984 - 1986 mean based on all net activity

(1) 1987 – Gamma spectroscopy system change

(2) 2014 – Gamma spectroscopy system was replaced 10JUL2014. Gamma spectroscopy system hardware, detector cooling apparatus, software, electronics, nuclide identification libraries, and analytical test matrix components for test matrices were modified (NCR # 0739995). No analytical changes were noted due to the 2014 gamma spectroscopy system change.

(3) 2014 – During the 3rd quarter, CNS experienced higher levels than normal of mixed fission and activation products in the liquid radioactive waste processing system and higher than normal liquid waste discharges (NCR # 01897053).

(4) 2015 – Co-58 and Co-60 were detected at SW Location 208 (NCR # 01934713).

3.4 MILK

A total of 26 milk samples were analyzed by gamma spectroscopy and low-level iodine during 2019. There was one control location sampled. No indicator dairies were identified by the 2019 land use census.

There were no gamma emitting radionuclides attributable to plant operations identified in milk samples in 2019. Cs-137 is the only radionuclide, other than naturally occurring, reported in milk samples since 1996. Cs-137 in milk is not unusual. It is a constituent of nuclear weapons test fallout and nuclear plant accidents and has been observed periodically in samples from indicator and control locations since the preoperational period. Airborne Cs-137 has not been released from the plant since 1992.

Table 3.4 lists highest indicator location annual mean and control location annual mean for Cs-137 since the preoperational period.

K-40 is a naturally occurring radionuclide observed in milk samples in 2019.

Table 3.4 Mean Concentration of Radionuclides in Milk

YEAR	Cs-137 Indicator (pCi/l)	Cs-137 Control (pCi/l)
1984	2.95E0	2.98E0
1985	2.11E0	2.12E0
1986	3.76E0	4.54E0
1987 ⁽¹⁾	5.00E0	5.50E0
1988	3.20E0	3.80E0
1989	0.00E0	0.00E0
1990	8.00E0	6.70E0
1991	0.00E0	0.00E0
1992	3.40E0	5.00E0
1993	5.00E0	0.00E0
1994	2.80E0	0.00E0
1995	8.60E0	0.00E0
1996	6.05E0	0.00E0
1997	0.00E0	0.00E0
1998	0.00E0	0.00E0
1999	0.00E0	0.00E0
2000	0.00E0	0.00E0
2001	0.00E0	0.00E0
2002	0.00E0	0.00E0
2003	0.00E0	0.00E0
2004	No Indicator Location	0.00E0
2005	No Indicator Location	0.00E0
2006	No Indicator Location	0.00E0
2007	No Indicator Location	0.00E0
2008	No Indicator Location	0.00E0
2009	No Indicator Location	0.00E0
2010	No Indicator Location	0.00E0
2011	No Indicator Location	0.00E0
2012	No Indicator Location	0.00E0
2013	No Indicator Location	0.00E0
2014 ⁽²⁾	No Indicator Location	0.00E0
2015	No Indicator Location	0.00E0
2016	No Indicator Location	0.00E0
2017	No Indicator Location	0.00E0
2018	No Indicator Location	0.00E0
2019	No Indicator Location	0.00E0

0.00E0 indicates no detectable measurements

1984 - 1986 mean based on all net activity

(1) 1987 – Gamma spectroscopy system change

(2) 2014 – Gamma spectroscopy system was replaced 10JUL2014. Gamma spectroscopy system hardware, detector cooling apparatus, software, electronics, nuclide identification libraries, and analytical test matrix components for test matrices were modified (NCR # 0739995). No analytical changes were noted due to the 2014 gamma spectroscopy system change.

3.5 BROADLEAF VEGETATION

Gamma spectroscopy was performed on 60 broadleaf vegetation samples during 2019. Four indicator locations and one control location were sampled. Cs-137 was reported in one indicator location, Location 201, in three of twelve samples collected with a mean concentration of 23.5 pCi/kg (1.18% of reporting level). Cs-137 was not detected in any of the control samples in 2019.

Cs-137 is the only gamma emitting radionuclide, other than naturally occurring, reported in vegetation samples. It is not unusual for Cs-137 to be present in vegetation. It is a constituent of nuclear weapons test fallout and nuclear plant accidents and has been observed in samples from indicator and control locations since the preoperational period. Table 3.5 lists the highest indicator location annual mean and control location annual mean for Cs-137 since early in the station's operational history. Visual inspection of the tabular data did not reveal any increasing trends.

Figure 3.5 shows indicator and control annual means for Cs-137 in vegetation since 1984. Values shown from 1984 to 2019 show a stable trend for Cs-137 in vegetation. No airborne Cs-137 has been released from the plant since 1992.

K-40 and Be-7 are naturally occurring radionuclides that were observed in broadleaf vegetation samples in 2019.

Figure 3.5

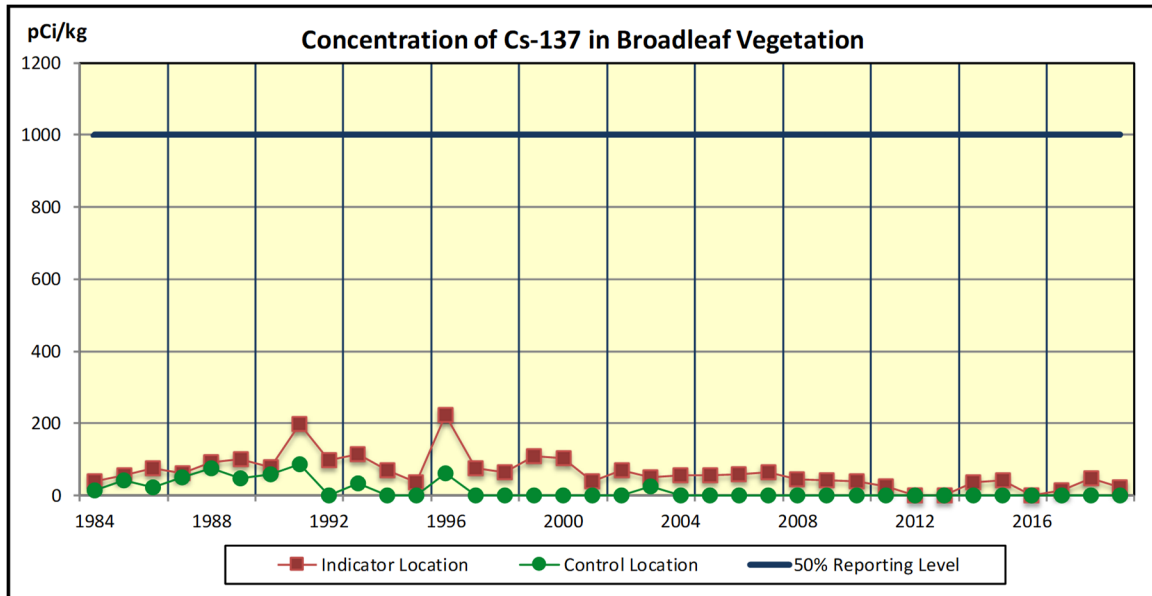


Table 3.5 Mean Concentration of Radionuclides in Broadleaf Vegetation

YEAR	Cs-137 Indicator (pCi/kg)	Cs-137 Control (pCi/kg)
1984	3.76E1	1.30E1
1985	5.48E1	4.16E1
1986	7.42E1	2.22E1
1987 ⁽¹⁾	6.10E1	5.10E1
1988	9.10E1	7.40E1
1989	1.00E2	4.80E1
1990	7.70E1	5.80E1
1991	1.98E2	8.60E1
1992	9.70E1	0.00E0
1993	1.13E2	3.20E1
1994	7.00E1	0.00E0
1995	3.60E1	0.00E0
1996	2.23E2	6.22E1
1997	7.57E1	0.00E0
1998	6.53E1	0.00E0
1999	1.08E2	0.00E0
2000	1.04E2	0.00E0
2001	3.76E1	0.00E0
2002	7.02E1	0.00E0
2003	4.96E1	2.40E1
2004	5.45E1	0.00E0
2005	5.48E1	0.00E0
2006	5.79E1	0.00E0
2007	6.31E1	0.00E0
2008	4.44E1	0.00E0
2009	4.25E1	0.00E0
2010	3.77E1	0.00E0
2011	2.62E1	0.00E0
2012	0.00E0	0.00E0
2013	0.00E0	0.00E0
2014 ⁽²⁾	3.72E1	0.00E0
2015	4.29E1	0.00E0
2016	0.00E0	0.00E0
2017	1.43E1	0.00E0
2018	4.67E1	0.00E0
2019	2.35E1	0.00E0

0.00E0 indicates no detectable measurements

1984 - 1986 mean based on all net activity

2011 concentration affected by Fukushima Daiichi

(1) 1987 – Gamma spectroscopy system change

(2) 2014 – Gamma spectroscopy system was replaced 10JUL2014. Gamma spectroscopy system hardware, detector cooling apparatus, software, electronics, nuclide identification libraries, and analytical test matrix components for test matrices were modified (NCR # 0739995). No analytical changes were noted due to the 2014 gamma spectroscopy system change.

3.6 FOOD PRODUCTS

Collection of food product samples (crops) from an irrigated garden began in 1989. The irrigated garden is located on Lake Wylie downstream from CNS, Location 260. During the 2019 growing season seven samples were collected and analyzed for gamma radionuclides.

There were no gamma emitting radionuclides attributable to plant operations identified in food product samples in 2019. There is no control location for this media type.

Table 3.6 shows Cs-137 indicator location highest annual mean concentrations since 1989.

K-40 and Be-7 are naturally occurring radionuclides that were observed in food product samples in 2019.

Table 3.6 Mean Concentration of Radionuclides in Food Products

YEAR	Cs-137 Indicator (pCi/kg)
1989	0.00E0
1990	0.00E0
1991	0.00E0
1992	0.00E0
1993	2.50E1
1994	0.00E0
1995	0.00E0
1996	0.00E0
1997	0.00E0
1998	0.00E0
1999	0.00E0
2000	0.00E0
2001	0.00E0
2002	0.00E0
2003	0.00E0
2004	0.00E0
2005	0.00E0
2006	0.00E0
2007	0.00E0
2008	0.00E0
2009	0.00E0
2010	0.00E0
2011	0.00E0
2012	0.00E0
2013	0.00E0
2014 ⁽¹⁾	0.00E0
2015	0.00E0
2016	0.00E0
2017	0.00E0
2018	0.00E0
2019	0.00E0

0.00E0 indicates no detectable measurements

There is no control location for Food Products.

(1) 2014 – Gamma spectroscopy system was replaced 10JUL2014. Gamma spectroscopy system hardware, detector cooling apparatus, software, electronics, nuclide identification libraries, and analytical test matrix components for test matrices were modified (NCR # 0739995). No analytical changes were noted due to the 2014 gamma spectroscopy system change.

3.7 FISH

Gamma spectroscopy was performed on twelve fish samples collected during 2019. One downstream indicator location and one control location were sampled.

One of six indicator samples at location 208 (Discharge Canal, 0.45 mi S) had a positive Co-60 activity of 27.2 pCi/kg (2.72% of the reporting level). No other indicator or control samples were positive for gamma emitting radionuclides.

Co-58, Co-60, and Cs-137 are normally the predominant radionuclides identified in fish samples.

Figures 3.7-1, 3.7-2, and 3.7-3 are graphs displaying annual mean concentrations for Co-58, Co-60, and Cs-137. Table 3.7 depicts the highest indicator location annual mean for radionuclides detected. In addition, radionuclides identified in fish samples since 1988 have been included in the table. Overall, radionuclides have not shown a significant trend or accumulation.

K-40 was observed in some fish samples collected during 2019.

Figure 3.7-1

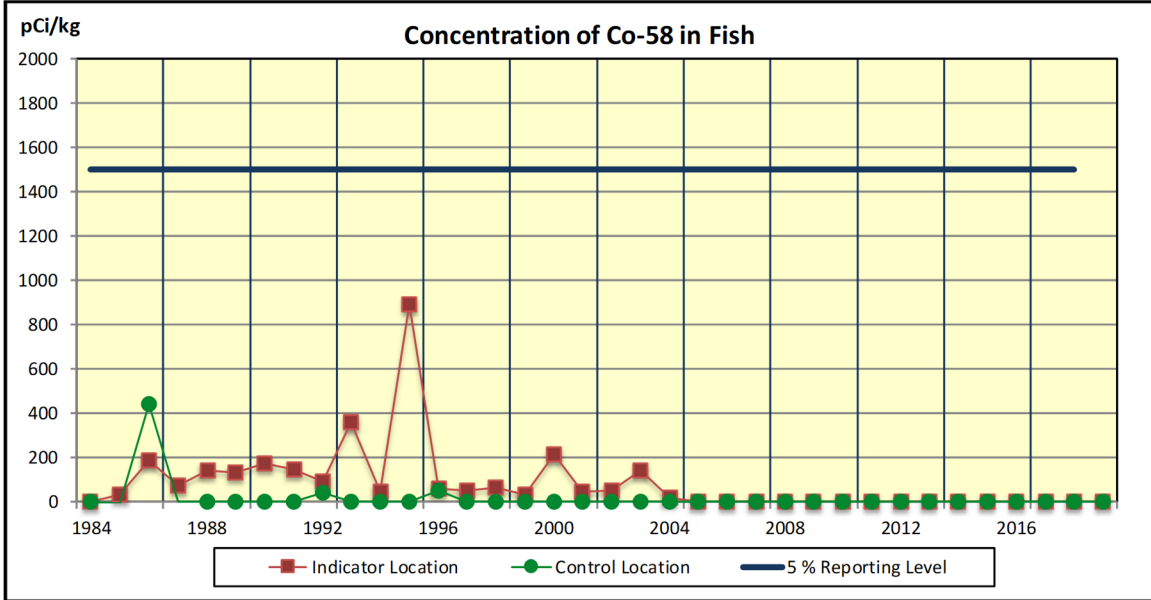


Figure 3.7-2

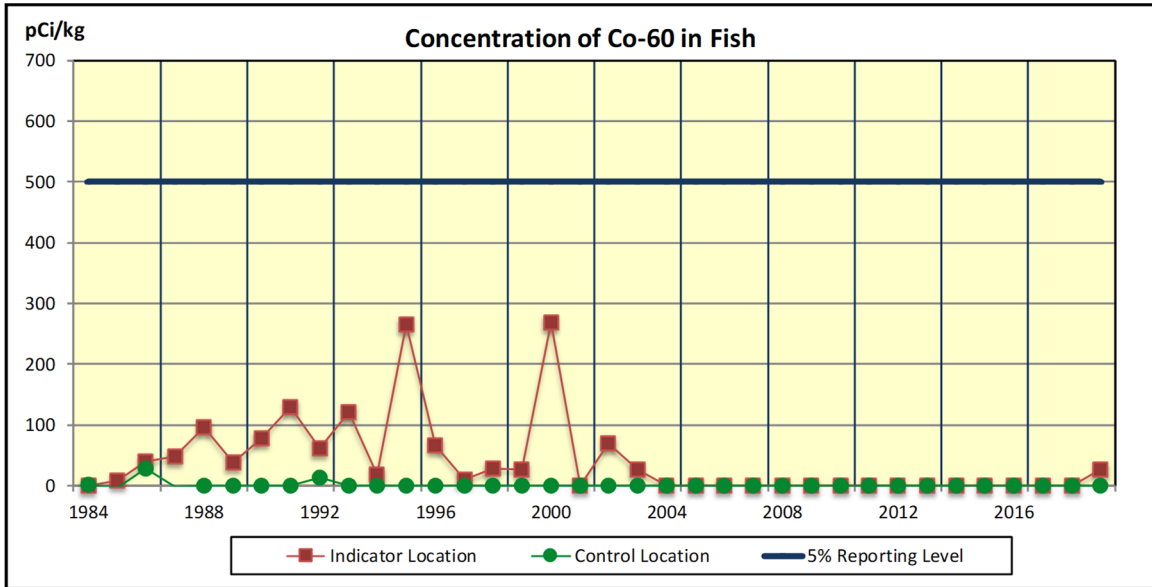


Figure 3.7-3

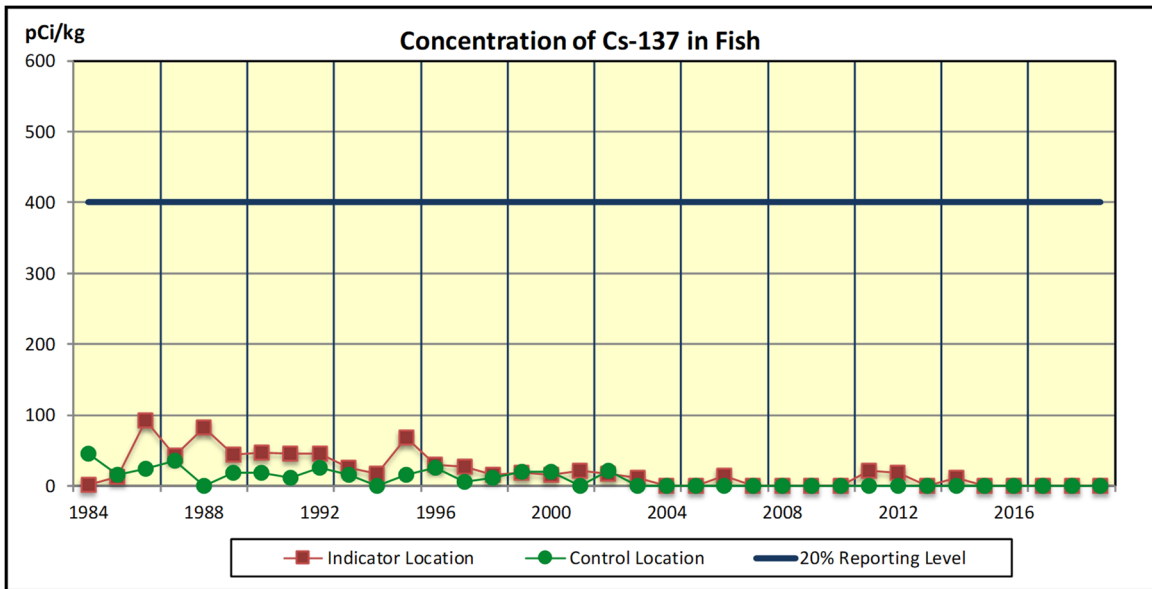


Table 3.7 Mean Concentrations of Radionuclides in Fish (pCi/kg)

Year	Mn-54	Co-58	Co-60	Cs-134	Cs-137	Nb-95	Fe-59	Sb-122	Sb-125
1984	3.07E0	3.00E0	6.11E-1	-5.32E0	1.83E0	0.00E0	0.00E0	0.00E0	0.00E0
1985	7.68E-1	3.40E1	9.11E0	3.22E0	1.28E1	5.07E0	0.00E0	0.00E0	0.00E0
1986	2.01E1	1.86E2	4.01E1	3.51E1	9.29E1	0.00E0	7.30E0	0.00E0	0.00E0
1987 ⁽¹⁾	7.24E0	7.57E1	4.81E1	3.83E0	4.27E1	5.40E0	0.00E0	0.00E0	0.00E0
1988	2.85E1	1.40E2	9.70E1	1.67E1	8.24E1	0.00E0	0.00E0	0.00E0	0.00E0
1989	8.28E0	1.33E2	3.83E1	1.47E1	4.37E1	8.58E-1	0.00E0	0.00E0	0.00E0
1990	2.51E1	1.75E2	7.77E1	1.32E1	4.66E1	3.33E0	0.00E0	7.00E0	9.25E0
1991	3.15E1	1.46E2	1.29E2	1.03E1	4.60E1	7.90E-1	2.30E0	0.00E0	7.45E0
1992	1.34E1	9.02E1	6.20E1	1.27E1	4.61E1	0.00E0	0.00E0	0.00E0	0.00E0
1993	2.14E1	3.58E2	1.21E2	2.73E0	2.56E1	0.00E0	0.00E0	0.00E0	0.00E0
1994	1.91E0	4.75E1	1.81E1	0.00E0	1.75E1	0.00E0	0.00E0	0.00E0	1.45E1
1995	5.65E1	8.90E2	2.66E2	0.00E0	6.77E1	1.38E1	0.00E0	0.00E0	0.00E0
1996	0.00E0	5.95E1	6.68E1	0.00E0	3.02E1	0.00E0	0.00E0	0.00E0	0.00E0
1997	0.00E0	4.93E1	9.88E0	0.00E0	2.74E1	0.00E0	0.00E0	0.00E0	0.00E0
1998	0.00E0	6.44E1	2.86E1	0.00E0	1.58E1	0.00E0	0.00E0	0.00E0	0.00E0
1999	0.00E0	3.12E1	2.71E1	0.00E0	1.87E1	0.00E0	0.00E0	0.00E0	0.00E0
2000	0.00E0	2.13E2	2.69E2	0.00E0	1.52E1	0.00E0	0.00E0	0.00E0	0.00E0
2001	0.00E0	4.66E1	0.00E0	0.00E0	2.08E1	0.00E0	0.00E0	0.00E0	0.00E0
2002	0.00E0	5.23E1	7.00E1	0.00E0	1.73E1	0.00E0	0.00E0	0.00E0	0.00E0
2003	0.00E0	1.43E2	2.61E1	0.00E0	1.19E1	0.00E0	0.00E0	0.00E0	0.00E0
2004	4.92E1	1.81E1	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0
2005	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0
2006	0.00E0	0.00E0	0.00E0	0.00E0	1.44E1	0.00E0	0.00E0	0.00E0	0.00E0
2007	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0
2008	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0
2009	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0
2010	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0
2011	0.00E0	0.00E0	0.00E0	0.00E0	2.16E1	0.00E0	0.00E0	0.00E0	0.00E0
2012	0.00E0	0.00E0	0.00E0	0.00E0	1.84E1	0.00E0	0.00E0	0.00E0	0.00E0
2013	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0
2014 ⁽²⁾	0.00E0	0.00E0	0.00E0	0.00E0	1.10E1	0.00E0	0.00E0	0.00E0	0.00E0
2015	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0
2016	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0
2017	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0
2018	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0
2019	0.00E0	0.00E0	2.72E1	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0

0.00E0 indicates no detectable measurements

1984 - 1986 mean based on all net activity

(1) 1987 – Gamma spectroscopy system change

(2) 2014 – Gamma spectroscopy system was replaced 10JUL2014. Gamma spectroscopy system hardware, detector cooling apparatus, software, electronics, nuclide identification libraries, and analytical test matrix components for test matrices were modified (NCR # 0739995). No analytical changes were noted due to the 2014 gamma spectroscopy system change.

3.8 SHORELINE SEDIMENT

During 2019, a total of six shoreline sediment samples was analyzed, four from two indicator locations and two from the control location.

Shoreline Sediment location 262 received a location description change in Revision 063 of the CNS ODCM (effective 12DEC2019). The prior name included a restaurant which is no longer in operation. The revised name was generalized to prevent future revision needs.

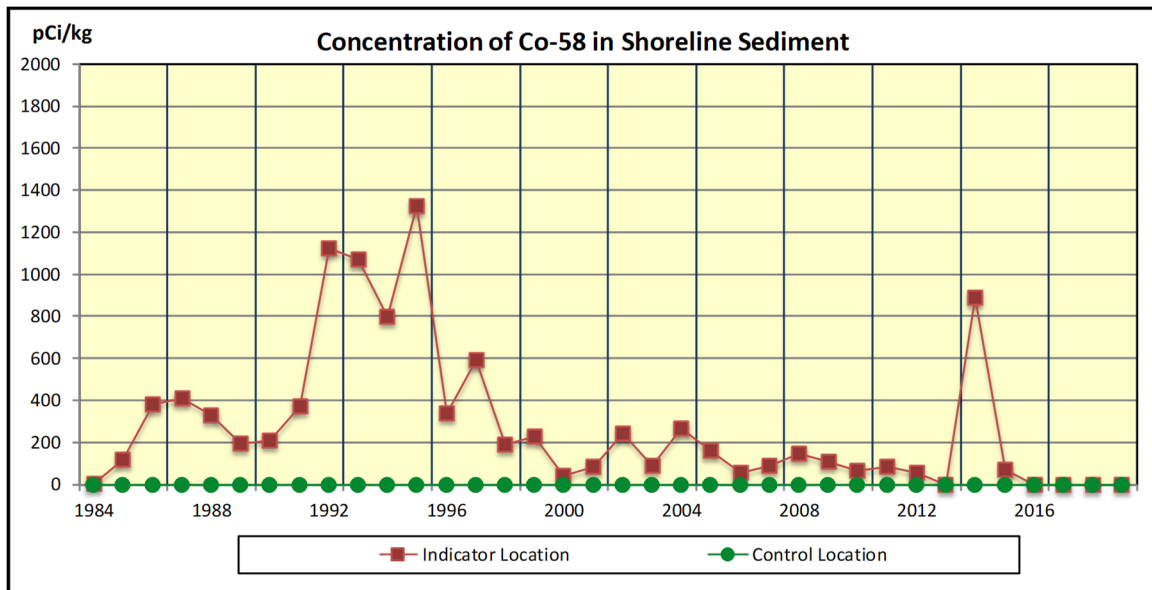
Co-58, Co-60, and Cs-137 are normally the predominant radionuclides identified in shoreline sediment samples. There were no gamma emitting radionuclides attributable to plant operations identified in samples from the indicator locations or the control location in 2019.

Table 3.8 lists highest indicator location annual mean since 1984. Included in the table are radionuclides that have been identified in shoreline sediment samples since 1988.

Figures 3.8-1, 3.8-2, and 3.8-3 are graphs displaying annual mean concentrations for Co-58, Co-60, and Cs-137.

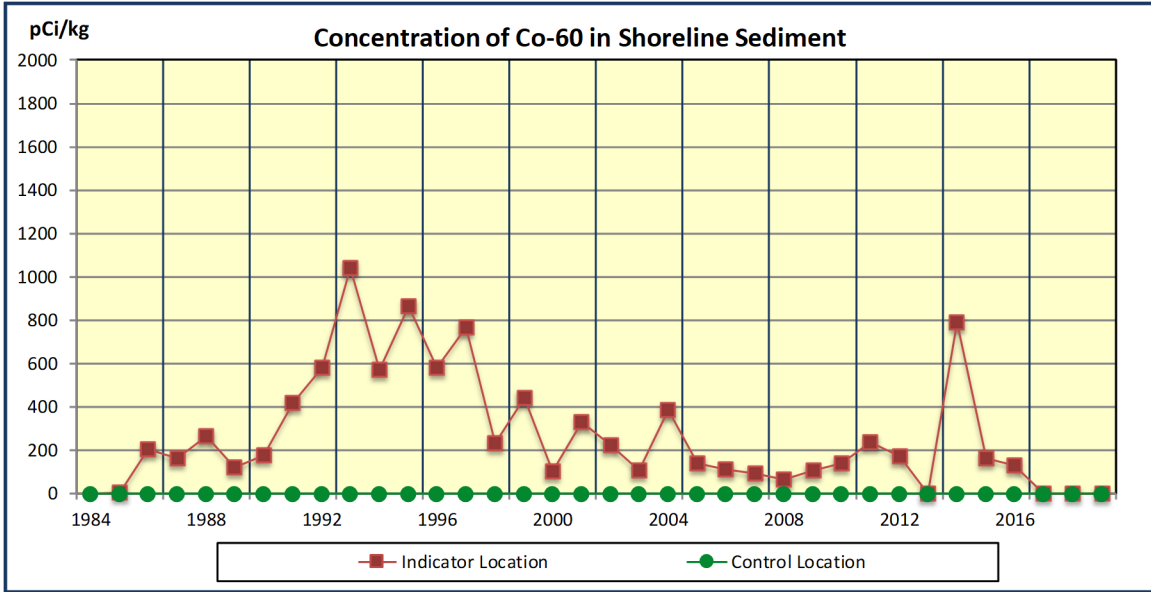
Naturally occurring K-40 was observed in some shoreline sediment samples collected during 2019.

Figure 3.8-1



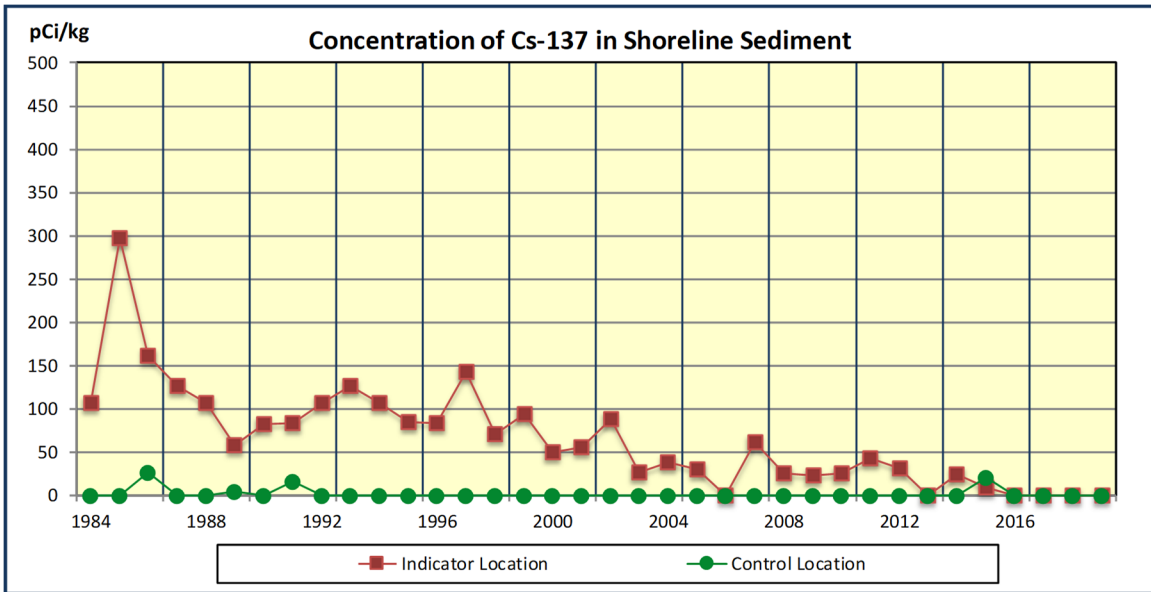
There is no reporting level for Co-58 in Shoreline Sediment

Figure 3.8-2



There is no reporting level for Co-60 in Shoreline Sediment

Figure 3.8-3



There is no reporting level for Cs-137 in Shoreline Sediment

Table 3.8 Mean Concentrations of Radionuclides in Shoreline Sediment (pCi/kg)

Year	Mn-54	Co-58	Co-60	Nb-95	Zr-95	Cs-134	Cs-137	Co-57	Sb-125
1984	1.03E0	4.40E0	-2.34E0	0.00E0	0.00E0	3.19E1	1.07E2	0.00E0	0.00E0
1985	-3.12E0	1.16E2	5.18E0	0.00E0	0.00E0	2.11E2	2.97E2	0.00E0	0.00E0
1986	1.09E2	3.79E2	2.05E2	0.00E0	3.96E1	6.50E1	1.61E2	0.00E0	0.00E0
1987 ⁽¹⁾	8.83E1	4.08E2	1.61E2	4.22E1	0.00E0	6.08E1	1.26E2	0.00E0	0.00E0
1988	1.07E2	3.29E2	2.63E2	2.28E1	7.54E0	2.59E1	1.07E2	7.65E-1	3.68E0
1989	4.58E1	1.94E2	1.21E2	5.02E0	0.00E0	1.65E1	5.77E1	0.00E0	1.57E1
1990	5.39E1	2.08E2	1.77E2	0.00E0	0.00E0	1.66E1	8.18E1	0.00E0	7.15E0
1991	8.50E1	3.70E2	4.19E2	5.30E0	0.00E0	1.82E1	8.33E1	1.20E0	1.50E1
1992	1.17E2	1.13E3	5.80E2	3.50E0	0.00E0	1.69E1	1.07E2	3.00E0	2.70E1
1993	1.33E2	1.07E3	1.04E3	0.00E0	0.00E0	2.80E1	1.26E2	2.47E1	2.16E2
1994	4.93E1	7.98E2	5.73E2	0.00E0	0.00E0	5.67E0	1.07E2	4.38E0	4.60E1
1995	1.02E2	1.33E3	8.65E2	1.13E2	0.00E0	0.00E0	8.50E1	3.69E1	1.49E2
1996	8.73E1	3.39E2	5.81E2	0.00E0	0.00E0	0.00E0	8.30E1	0.00E0	1.96E2
1997	6.96E1	5.90E2	7.64E2	0.00E0	0.00E0	0.00E0	1.43E2	0.00E0	1.76E2
1998	3.07E1	1.88E2	2.30E2	0.00E0	0.00E0	0.00E0	7.11E1	0.00E0	0.00E0
1999	7.28E1	2.29E2	4.39E2	0.00E0	0.00E0	0.00E0	9.42E1	0.00E0	1.40E2
2000	0.00E0	3.90E1	1.03E2	0.00E0	0.00E0	0.00E0	4.96E1	0.00E0	0.00E0
2001	3.86E1	8.27E1	3.29E2	0.00E0	0.00E0	0.00E0	5.58E1	0.00E0	0.00E0
2002	3.51E1	2.41E2	2.22E2	0.00E0	0.00E0	0.00E0	8.83E1	0.00E0	0.00E0
2003	2.17E1	8.75E1	1.08E2	0.00E0	0.00E0	0.00E0	2.69E1	0.00E0	0.00E0
2004	6.60E1	2.67E2	3.83E2	0.00E0	0.00E0	0.00E0	3.79E1	0.00E0	0.00E0
2005	0.00E0	1.61E2	1.41E2	0.00E0	0.00E0	0.00E0	3.04E1	0.00E0	0.00E0
2006	0.00E0	5.40E1	1.11E2	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0
2007	0.00E0	8.77E1	9.46E1	0.00E0	0.00E0	0.00E0	6.13E1	0.00E0	0.00E0
2008	0.00E0	1.48E2	6.24E1	0.00E0	0.00E0	0.00E0	2.57E1	0.00E0	0.00E0
2009	0.00E0	1.10E2	1.04E2	0.00E0	0.00E0	0.00E0	2.27E1	0.00E0	0.00E0
2010	0.00E0	6.56E1	1.37E2	0.00E0	0.00E0	0.00E0	2.56E1	0.00E0	0.00E0
2011	0.00E0	8.36E1	2.36E2	0.00E0	0.00E0	3.62E1	4.33E1	1.05E1	0.00E0
2012	0.00E0	5.59E1	1.70E2	0.00E0	0.00E0	0.00E0	3.15E1	0.00E0	0.00E0
2013	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0
2014 ^{(2) (3)}	6.84E1	8.87E2	7.90E2	0.00E0	0.00E0	0.00E0	2.46E1	0.00E0	0.00E0
2015	0.00E0	6.73E1	1.61E2	0.00E0	0.00E0	0.00E0	8.75E0	0.00E0	0.00E0
2016	0.00E0	0.00E0	1.31E2	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0
2017	0.00E0	0.00E0	1.31E2	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0
2018	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0
2019	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0

0.00E0 indicates no detectable measurements

1984 - 1986 mean based on all net activity

(1) 1987 – Gamma spectroscopy system change

(2) 2014 – Gamma spectroscopy system was replaced 10JUL2014. Gamma spectroscopy system hardware, detector cooling apparatus, software, electronics, nuclide identification libraries, and analytical test matrix components for test matrices were modified (NCR # 0739995). No analytical changes were noted due to the 2014 gamma spectroscopy system change.

(3) 2014 – During the 3rd quarter, CNS experienced higher levels than normal of mixed fission and activation products in the liquid radioactive waste processing system and higher than normal liquid waste discharges (NCR # 01897053).

3.9 DIRECT GAMMA RADIATION

3.9.1 ENVIRONMENTAL TLD

Catawba is licensed with an exclusion area boundary defined by UFSAR Section 2.1.1.2 as a 2500 foot radius from station center. This is the same boundary established for determining radioactive effluent release limits. No permanent public access is permitted within the exclusion area. TLD locations designated as "inner ring" are within a 1 mile radius from station center and all are used as indicators. TLD locations designated as "outer ring" are outside the 1 mile "inner ring" but within a 5 mile radius of station center. All outer ring TLD locations are used as indicators. A subset of TLD locations within a 7 to 11 mile radius from station center are designated as "special interest." The three "control" locations are greater than 7 miles from station center. These locations were chosen to reduce the probability of influence from Catawba operation on data. The control locations are not used as background subtraction in the TLD analysis. Their purpose is to provide a comparison to indicator locations.

In 2019, 163 total TLDs were analyzed, 151 at indicator locations and 12 at control locations. TLDs are collected and analyzed quarterly. Transit and laboratory background dose is determined and subtracted from gross field readings as required by ANSI N545-1975. Based on Appendix B TLD data, the highest annual total dose was 86.3 mrem at indicator location 229, 0.84 miles NW of station center. Figure 3.9 and Table 3.9 show TLD inner ring, outer ring, and control location annual averages in mrem per year. Data is provided from 1984 when TLD locations were added and arranged in an inner ring and outer ring configuration. Preoperational data is also provided in the table. As shown in the graph, doses measured by environmental TLDs show little or no change since the current TLD system was implemented.

Quarterly, environmental ODCM TLD results are compared by location to its historical data to evaluate any significant changes. The comparison utilizes the location's average exposure history to determine if quarterly results fall within low and high ranges and provides a reliable indication of potential changes occurring at a specific TLD location. The low and high ranges are determined by the historical average \pm two standard deviations. The quarterly TLD evaluation implements portions of American National Standard ANSI/HPS N13.37-2014, "Environmental Dosimetry – Criteria for System Design and Implementation, for environmental Thermoluminescent Dosimeters (TLD)". The CSD-RP-ALL-0030 – Updated Radiological Environmental Monitoring Program TLD Analytical Method, describes the process implemented in late 2018 for the 2019 fleet TLD programs.

TLD values identified as < Low Range or > High Range are evaluated in consideration of factors including possible TLD damage, sampling deviations, glow curve irregularities, and any known environmental location changes which may affect results. No 2019 ODCM TLD location exceeded the quarterly investigation level therefore no additional evaluation was performed. Quarterly TLD results are in Appendix E.

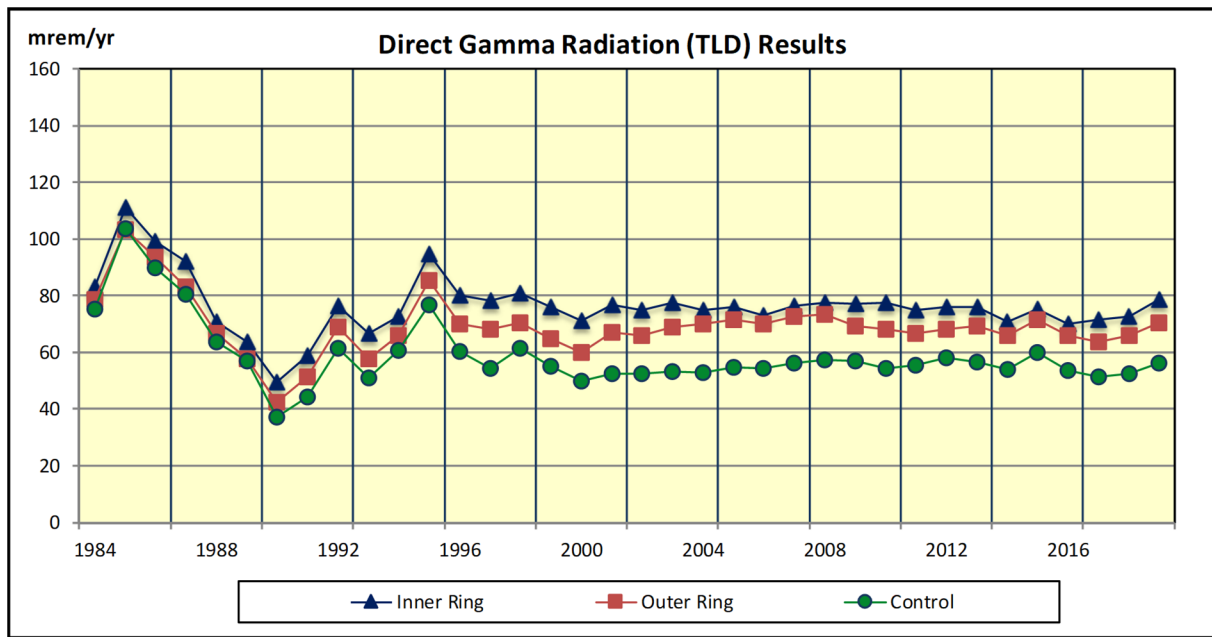
A TLD intercomparison program is conducted as part of the quality assurance program. Results of this program are included in section 4.7.

3.9.2 ISFSI

The Catawba ISFSI began operation in 2007. It is located approximately 0.2 miles north of station center in a secured area specifically constructed to provide dry storage for spent nuclear fuel. The ISFSI employs the NAC-UMS® and MAGNASTOR® vertical storage designs. Irradiated fuel assemblies are confined, protected, and shielded by a reinforced concrete modules. Both systems are completely passive and designed to provide radiation shielding and safe confinement for a range of accident conditions and natural events. Both systems use a passive natural circulation ventilation system to remove decay heat from the modules. No radiological liquid or gaseous effluents are expected from the passive storage provided by the ISFSI. Therefore, any dose to offsite locations would be from direct and scattered gamma radiation.

Environmental TLD results described in 3.9.1 above are reviewed quarterly to identify trends and demonstrate compliance with dose and dose rate limits at the 2500 foot exclusion area boundary. Additional TLD locations not associated with REMP are presently located on the Catawba protected area fence near the ISFSI and on the ISFSI boundary. These are used to demonstrate compliance with occupational exposure controls and augment REMP TLD results. Doses measured by environmental TLDs show little or no change since the ISFSI began operation.

Figure 3.9



There is no reporting level for Direct Radiation (TLD)

Table 3.9 Direct Gamma Radiation (TLD) Results⁽¹⁾

Year	Inner Ring Average (mrem/yr)	Outer Ring Average (mrem/yr)	Control Average (mrem/yr)
1984*	8.31E1	7.85E1	7.53E1
1985	1.11E2	1.03E2	1.03E2
1986	9.91E1	9.36E1	8.97E1
1987	9.22E1	8.30E1	8.05E1
1988	7.09E1	6.68E1	6.37E1
1989	6.37E1	5.78E1	5.70E1
1990	4.94E1	4.23E1	3.71E1
1991	5.89E1	5.14E1	4.44E1
1992	7.64E1	6.89E1	6.13E1
1993	6.68E1	5.79E1	5.09E1
1994	7.25E1	6.58E1	6.07E1
1995	9.46E1	8.52E1	7.68E1
1996	8.01E1	7.02E1	6.04E1
1997	7.83E1	6.83E1	5.45E1
1998	8.10E1	7.05E1	6.14E1
1999	7.60E1	6.47E1	5.49E1
2000	7.13E1	5.98E1	4.98E1
2001	7.69E1	6.72E1	5.24E1
2002	7.49E1	6.60E1	5.24E1
2003	7.76E1	6.90E1	5.32E1
2004	7.47E1	7.01E1	5.28E1
2005	7.58E1	7.15E1	5.48E1
2006	7.31E1	6.99E1	5.43E1
2007	7.65E1	7.26E1	5.62E1
2008	7.74E1	7.32E1	5.74E1
2009	7.73E1	6.94E1	5.70E1
2010	7.74E1	6.80E1	5.43E1
2011	7.50E1	6.67E1	5.54E1
2012	7.61E1	6.80E1	5.83E1
2013	7.60E1	6.92E1	5.65E1
2014	7.07E1	6.60E1	5.40E1
2015	7.51E1	7.14E1	6.00E1
2016	7.00E1	6.61E1	5.37E1
2017	7.15E1	6.38E1	5.13E1
2018	7.26E1	6.58E1	5.25E1
2019	7.86E1	7.05E1	5.62E1

* Preoperational Data

(1) 2014 AREOR, tabular results converted from mR/yr to mrem/yr (n * 0.95)

3.10 LAND USE CENSUS

The 2019 Annual Land Use Census was conducted June 18 - 19, 2019 as required by SLC 16.11-14. Table 3.10 summarizes census results. A map indicating identified locations is shown in Figure 3.10.

During the 2019 census no irrigated gardens (superior to existing gardens) or milk locations were identified. The nearest residence is located in the NE sector at 0.56 miles. No environmental program changes were required as a result of the 2019 land use census.

Table 3.10 Catawba 2019 Land Use Census Results

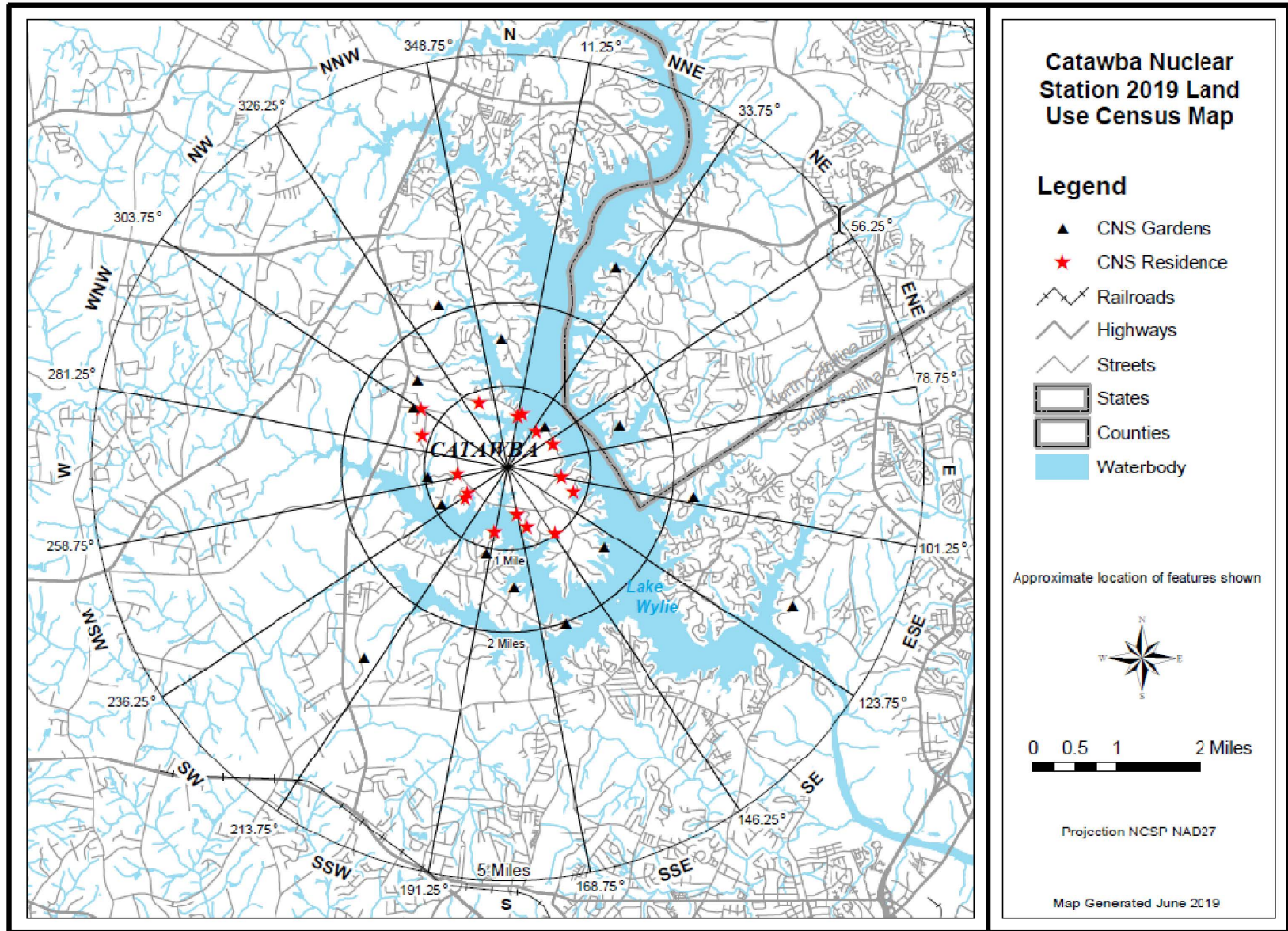
**Performed 6/18/2019 - 6/19/2019
Nearest Pathways (Miles)**

SECTOR	RESIDENCE		GARDEN		MILK ANIMAL	
	2018	2019	2018	2019	2018	2019
North	0.63	0.63	1.55	1.55	---	---
North-Northeast	0.66	0.66	3.09	2.75*	---	---
Northeast	0.56	0.56	0.67	0.67	---	---
East-Northeast	0.61	0.61	1.44	1.44	---	---
East	0.65	0.65	2.26	2.26	---	---
East-Southeast	0.84	0.84	3.54	3.80*	---	---
Southeast	0.97	0.97	1.50	1.50	---	---
South-Southeast	0.74	0.74	2.02	2.02	---	---
South	0.63	0.63	1.45	1.45	---	---
South-Southwest	0.78	0.78	1.08	1.08	---	---
Southwest	0.63	0.63	2.88	2.88	---	---
West-Southwest	0.57	0.57	0.91	0.91	---	---
West	0.62	0.62	0.96	0.96	---	---
West-Northwest	1.10	1.10	1.27	1.35*	---	---
Northwest	1.27	1.27	1.54	1.54	---	---
North-Northwest	0.86	0.86	2.13	2.13	---	---

NOTE: Sector and distances were determined by Global Positioning System

*** Represents a change from the previous year**

Figure 3.10



4.0 QUALITY ASSURANCE

4.1 SAMPLE COLLECTION

EnRad Laboratories and Environmental Services performed the environmental sample collections as specified by approved sample collection procedures.

4.2 SAMPLE ANALYSIS

EnRad Laboratories performed the environmental sample analyses as specified by approved analysis procedures. EnRad Laboratories is located in Huntersville, North Carolina, at Duke Energy's Environmental Center.

4.3 DOSIMETRY ANALYSIS

The Dosimetry and Records group performed the environmental dosimetry measurements as specified by approved dosimetry analysis procedures. The Dosimetry and Records Laboratory is located in Huntersville, North Carolina, at Duke Energy's Environmental Center.

4.4 LABORATORY EQUIPMENT QUALITY ASSURANCE

4.4.1 DAILY QUALITY CONTROL

EnRad Laboratories has an internal quality assurance program which monitors each type of instrumentation for reliability and accuracy. Daily quality control checks ensure that instruments are in proper working order and these checks are used to monitor instrument performance.

4.4.2 CALIBRATION VERIFICATION

National Institute of Standards and Technology (NIST) standards that represent counting geometries are analyzed as unknowns at various frequencies ranging from weekly to annually to verify that efficiency calibrations are valid. The frequency is dependent upon instrument use and performance. Investigations are performed and documented should calibration verification data fall outside of the acceptable limits.

4.4.3 BATCH PROCESSING

Method quality control samples are analyzed with sample analyses that are processed in batches. These include tritium analyses in drinking water, surface water, and ground water samples.

4.5 DUKE ENERGY INTERLABORATORY COMPARISON PROGRAM

In 2019 Duke Energy Environmental Laboratory (EnRad) participated in interlaboratory programs to satisfy Radiological Environmental Monitoring Program requirements in Duke Energy nuclear plant Offsite Dose Calculation Manuals and Selected Licensee Commitments Manuals, as applicable.

EnRad Laboratory participated in an interlaboratory program with Eckert & Ziegler Analytics (EZA) in 2019. EZA results were evaluated against the NRC Inspection Manual Procedure 84750 (IP 84750) acceptance criteria stated in EnRad Procedure 515, Cross Check Program Administration. All regulatory requirements continue to be met by the EZA Cross Check Program.

4.5.1 ECKERT & ZIEGLER ANALYTICS CROSS CHECK PROGRAM

EZA mixed gamma in liquid, mixed gamma in vegetation, low-level I-131 in liquid, mixed gamma air filter composites, I-131 air cartridges, gross beta in water, gross beta in filters, and tritium in water were analyzed at various times of the year at EnRad Laboratories. A summary of the applicable REMP EnRad Laboratory program results for 2019 is documented in Table 4.0-A.

Interlaboratory cross check samples from EZA were received and analyzed in three of the four quarters of 2019. Table 4.0-A lists the performance for specific samples. Forty-six nuclide results were reported to EZA of which forty-six (100 %) met the acceptance criteria based on IP 84750.

4.6 INTERCOMPARISON PROGRAM

Catawba Nuclear Station routinely participates in an environmental sample intercomparison program. Program elements include sampling frequency and analysis parameters for drinking water, surface water, milk, fish, broadleaf vegetation, crops, and shoreline sediment samples that have been collected. Samples are routinely split with a vendor laboratory for intercomparison analysis.

4.7 TLD INTERCOMPARISON PROGRAM

4.7.1 NUCLEAR TECHNOLOGY SERVICES INTERCOMPARISON PROGRAM

Radiation Dosimetry and Records participates in a quarterly TLD intercomparison program administered by Nuclear Technology Services, Inc. of Roswell, GA. Nuclear Technology Services irradiates environmental dosimeters quarterly and sends them to the Radiation Dosimetry and Records group for analysis of the unknown estimated delivered exposure. A summary of the 2019 Nuclear Technology Services Intercomparison Report is documented in Table 4.0-B.

The individual measurements were evaluated and results falling outside the acceptable ratio criteria had an evaluation performed to identify any recommended remedial actions and to reduce anomalous errors.

4.7.2 INTERNAL CROSS CHECK (DUKE ENERGY)

Radiation Dosimetry and Records participates in a quarterly TLD internal comparison program administered internally by the Dosimetry Lab. The Dosimetry Lab Staff irradiates environmental dosimeters quarterly and submits them for analysis of the unknown estimated delivered exposure. A summary of the 2019 Internal Cross Check (Duke Energy) Program is documented in Table 4.0-B.

4.8 GENERAL ENGINEERING LABORATORY, LLC (GEL)

General Engineering Laboratory, LLC (GEL) participated in various Quality Assurance Programs for Inter-laboratory, Intra-laboratory, Third Party Cross Check programs, and a number of proficiency testing programs during 2019. A summary of the GEL quality assurance program results for the sample media types sent to GEL during 2019 is documented in Table 4.0-C. Table 4.0-C may not be applicable to all plants or stations.

TABLE 4.0-A

ECKERT & ZIEGLER ANALYTICS

CROSS CHECK PROGRAM

2019 Cross Check Results for EnRad Laboratories

Interlaboratory cross check samples from EZA were received and analyzed in three of the four quarters of 2019. Results are reported directly to Eckert & Ziegler Analytics. Environmental cross check samples were analyzed in replicate, and the result closest to the mean is reported to Eckert & Ziegler Analytics. The acceptance criteria for the program was based on the NRC Inspection Manual Procedure 84750 (IP 84750). Table 4.0-A lists the performance for specific samples. Forty-six nuclide results were reported to EZA of which forty-six (100 %) met the acceptance criteria based on IP 84750.

Sample	Sample ID	Nuclide	Quarter	Units	EnRad Value	EZA Value	EnRad/EZA Ratio	Evaluation
Beta Filter in Planchet	E12500	Cs-137	1	pCi	170	164	1.04	Agreement
	E12505	Cs-137	2	pCi	231	224	1.03	Agreement
I-131 in Charcoal Cartridge	E12499	I-131	1	pCi	79.5	75.8	1.05	Agreement
	E12506	I-131	3	pCi	99.9	95.5	1.05	Agreement
Gamma in Composite Filter	E12498	Ce-141	1	pCi	83.8	78.0	1.07	Agreement
		Co-58	1	pCi	100	95.5	1.05	Agreement
		Co-60	1	pCi	212	199	1.06	Agreement
		Cr-51	1	pCi	208	195	1.07	Agreement
		Cs-134	1	pCi	110	107	1.03	Agreement
		Cs-137	1	pCi	141	131	1.08	Agreement
		Fe-59	1	pCi	116	106	1.09	Agreement
		Mn-54	1	pCi	105	95.3	1.10	Agreement
		Zn-65	1	pCi	158	147	1.08	Agreement
Gamma in Simulated Vegetation	E12509	Ce-141	3	pCi/g	0.279	0.273	1.02	Agreement
		Co-58	3	pCi/g	0.281	0.286	0.98	Agreement
		Co-60	3	pCi/g	0.343	0.345	1.00	Agreement
		Cr-51	3	pCi/g	0.612	0.542	1.13	Agreement
		Cs-134	3	pCi/g	0.312	0.339	0.92	Agreement
		Cs-137	3	pCi/g	0.252	0.247	1.02	Agreement
		Fe-59	3	pCi/g	0.278	0.243	1.14	Agreement
		Mn-54	3	pCi/g	0.265	0.252	1.05	Agreement
		Zn-65	3	pCi/g	0.519	0.480	1.08	Agreement

TABLE 4.0-A (Cont.)

Sample	Sample ID	Nuclide	Quarter	Units	EnRad Value	EZA Value	EnRad/EZA Ratio	Evaluation
Gamma in Water	E12510	Ce-141	3	pCi/L	138	130	1.06	Agreement
		Co-58	3	pCi/L	143	136	1.05	Agreement
		Co-60	3	pCi/L	170	164	1.04	Agreement
		Cr-51	3	pCi/L	265	257	1.03	Agreement
		Cs-134	3	pCi/L	150	161	0.93	Agreement
		Cs-137	3	pCi/L	123	117	1.05	Agreement
		Fe-59	3	pCi/L	127	115	1.10	Agreement
		I-131	3	pCi/L	93.6	90.8	1.03	Agreement
		Mn-54	3	pCi/L	129	120	1.07	Agreement
		Zn-65	3	pCi/L	259	228	1.14	Agreement
Gamma in Milk	E12501A	Ce-141	1	pCi/L	120	117	1.03	Agreement
		Co-58	1	pCi/L	141	143	0.98	Agreement
		Co-60	1	pCi/L	303	299	1.01	Agreement
		Cr-51	1	pCi/L	303	293	1.03	Agreement
		Cs-134	1	pCi/L	146	160	0.91	Agreement
		Cs-137	1	pCi/L	202	196	1.03	Agreement
		Fe-59	1	pCi/L	170	159	1.07	Agreement
		Mn-54	1	pCi/L	149	143	1.04	Agreement
		Zn-65	1	pCi/L	227	220	1.03	Agreement
LLI-131 in Milk	E12501A	I-131	1	pCi/L	96.8	89.5	1.08	Agreement
Gross Beta in Water	E12503	Cs-137	2	pCi/L	240	245	0.98	Agreement
	E12508	Cs-137	3	pCi/L	243	252	0.96	Agreement
Tritium in Water	E12504	H-3	2	pCi/L	14100	13900	1.01	Agreement
	E12507	H-3	3	pCi/L	14000	14000	1.00	Agreement

TABLE 4.0-B

2019 ENVIRONMENTAL DOSIMETER

CROSS-CHECK RESULTS

Nuclear Technology Services

Radiation Dosimetry and Records participates in a quarterly TLD intercomparison program administered by Nuclear Technology Services, Inc. of Roswell, GA. Nuclear Technology Services irradiates environmental dosimeters quarterly and sends them to Radiation Dosimetry and Records group for analysis of the unknown estimated delivered exposure. The individual measurements were evaluated and results falling outside the acceptable ratio criteria had an evaluation performed to identify any recommended remedial actions and to reduce anomalous errors.

1st Quarter 2019						2nd Quarter 2019						
TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail	TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail	
102973	77.70	79.96	-2.83	<+/-15%	Pass	101136	17.08	18.36	-6.97	<+/-15%	Pass	
103309	80.41	79.96	0.56	<+/-15%	Pass	101219	16.52	18.36	-10.02	<+/-15%	Pass	
103305	80.21	79.96	0.31	<+/-15%	Pass	100078	16.78	18.36	-8.61	<+/-15%	Pass	
103090	80.10	79.96	0.18	<+/-15%	Pass	101364	17.45	18.36	-4.96	<+/-15%	Pass	
103102	79.93	79.96	-0.04	<+/-15%	Pass	100239	17.01	18.36	-7.35	<+/-15%	Pass	
Average Bias (B)			-0.36				Average Bias (B)			-7.58		
Standard Deviation (S)			1.39				Standard Deviation (S)			1.89		
Measure Performance B +S			1.76	<15%	Pass	Measure Performance B +S			9.47	<15%	Pass	
3rd Quarter 2019						4th Quarter 2019						
TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail	TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail	
101305	62.24	61.34	1.47	<+/-15%	Pass	104285	49.10	49.31	-0.43	<+/-15%	Pass	
101297	61.64	61.34	0.49	<+/-15%	Pass	104300	47.94	49.31	-2.78	<+/-15%	Pass	
101333	57.74	61.34	-5.87	<+/-15%	Pass	104288	49.20	49.31	-0.22	<+/-15%	Pass	
101350	60.01	61.34	-2.17	<+/-15%	Pass	104298	47.73	49.31	-3.20	<+/-15%	Pass	
100417	60.73	61.34	-0.99	<+/-15%	Pass	104314	48.91	49.31	-0.81	<+/-15%	Pass	
Average Bias (B)			-1.42				Average Bias (B)			9.27		
Standard Deviation (S)			2.85				Standard Deviation (S)			1.35		
Measure Performance B +S			4.27	<15%	Pass	Measure Performance B +S			10.61	<15%	Pass	

TABLE 4.0-B (Cont.)

2019 ENVIRONMENTAL DOSIMETER

CROSS CHECK RESULTS

Internal Crosscheck (Duke Energy)

Radiation Dosimetry and Records participates in a quarterly TLD internal comparison program administered internally by the Dosimetry Lab. The Dosimetry Lab Staff irradiates environmental dosimetry quarterly and submits them for analysis of the unknown estimated delivered exposure.

1st Quarter 2019						2nd Quarter 2019						
TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail	TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail	
103690	39.63	36.00	10.08	<+/-15%	Pass	102290	51.51	48.00	7.31	<+/-15%	Pass	
103101	39.48	36.00	9.67	<+/-15%	Pass	102029	51.48	48.00	7.25	<+/-15%	Pass	
102869	38.28	36.00	6.33	<+/-15%	Pass	103742	52.75	48.00	9.90	<+/-15%	Pass	
102239	37.20	36.00	3.33	<+/-15%	Pass	102931	50.63	48.00	5.48	<+/-15%	Pass	
103433	38.17	36.00	6.03	<+/-15%	Pass	103194	51.38	48.00	7.04	<+/-15%	Pass	
103586	38.81	36.00	7.81	<+/-15%	Pass	102738	52.11	48.00	8.56	<+/-15%	Pass	
102881	39.45	36.00	9.58	<+/-15%	Pass	103721	52.96	48.00	10.33	<+/-15%	Pass	
102189	36.77	36.00	2.14	<+/-15%	Pass	102336	50.92	48.00	6.08	<+/-15%	Pass	
100358	35.33	36.00	-1.86	<+/-15%	Pass	102442	49.03	48.00	2.15	<+/-15%	Pass	
103381	38.37	36.00	6.58	<+/-15%	Pass	102089	51.36	48.00	7.00	<+/-15%	Pass	
Average Bias (B)			5.97				Average Bias (B)			7.11		
Standard Deviation (S)			3.81				Standard Deviation (S)			2.33		
Measure Performance B +S			9.78	<15%	Pass	Measure Performance B +S			9.44	<15%	Pass	
3rd Quarter 2019						4th Quarter 2019						
TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail	TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail	
104054	17.49	18.0	-2.83	<+/-15%	Pass	100958	26.21	27.00	-2.93	<+/-15%	Pass	
104051	17.77	18.0	-1.28	<+/-15%	Pass	101322	26.76	27.00	-0.89	<+/-15%	Pass	
104148	17.41	18.0	-3.28	<+/-15%	Pass	101180	26.95	27.00	-0.19	<+/-15%	Pass	
101165	18.16	18.0	0.89	<+/-15%	Pass	101275	26.52	27.00	-1.78	<+/-15%	Pass	
101170	18.10	18.0	0.56	<+/-15%	Pass	101104	25.70	27.00	-4.81	<+/-15%	Pass	
101278	18.45	18.0	2.50	<+/-15%	Pass	104038	26.30	27.00	-2.59	<+/-15%	Pass	
100570	17.93	18.0	-0.39	<+/-15%	Pass	101215	27.33	27.00	1.22	<+/-15%	Pass	
100062	18.50	18.0	2.78	<+/-15%	Pass	101252	26.57	27.00	-1.59	<+/-15%	Pass	
104129	17.79	18.0	-1.17	<+/-15%	Pass	101249	26.74	27.00	-0.96	<+/-15%	Pass	
104128	17.75	18.0	-1.39	<+/-15%	Pass	101251	25.91	27.00	-4.04	<+/-15%	Pass	
Average Bias (B)			-0.36				Average Bias (B)			-1.86		
Standard Deviation (S)			2.04				Standard Deviation (S)			1.80		
Measure Performance B +S			2.41	<15%	Pass	Measure Performance B +S			3.66	<15%	Pass	

TABLE 4.0-C

2019 GEL Laboratories, LLC QA Results

Interlaboratory cross check samples from Eckert & Ziegler Analytics (EZA) and Proficiency Tests from the Department of Energy Mixed Analyte Performance Evaluation Program (MAPEP) were received and analyzed by GEL in all four quarters of 2019 from EZA and in two quarters from MAPEP. Table 4.0-C lists the performance for specific samples. Table 4.0-C may not be applicable to all plants/stations.

Sample	Sample ID	Nuclide	Quarter	Units	GEL Value	Known Value	Acceptance Range/Ratio	Evaluation
Hard To Detect in Soil	MAPEP - 19- MaS40	Fe-55	2	Bq/kg	486	344	241 - 447	Non-Agreement ⁽¹⁾
		Ni-63	2	Bq/kg	524	519	363 - 675	Agreement
		Sr-90	2	Bq/kg	3.44	N/A	False Pos Test	Agreement
	MAPEP- 19-MaS41	Fe-55	4	Bq/kg	-48	N/A	False Pos Test	Agreement
		Ni-63	4	Bq/kg	552	629	440 - 818	Agreement
		Sr-90	4	Bq/kg	609	572	400 - 744	Agreement
I-131 in Milk with EZA	E12362	I-131	2	pCi/L	85.1	81.4	1.05	Agreement
	E12370	I-131	3	pCi/L	92.8	92.1	1.01	Agreement
	E12374	I-131	4	pCi/L	93.4	94.5	0.99	Agreement
Gross Beta in Water with EZA	E12550	Cs-137	2	pCi/L	251	244	1.03	Agreement ⁽²⁾

⁽¹⁾ GEL CARR (Corrective Active Request and Report) 190603-1212.

⁽²⁾ Several sets of first quarter 2019 Gross Beta in Water analyses were analyzed at GEL.

APPENDIX A

**ENVIRONMENTAL SAMPLING
&
ANALYSIS PROCEDURES**

2019

APPENDIX A

ENVIRONMENTAL SAMPLING AND ANALYSIS PROCEDURES

Adherence to established procedures for sampling and analysis of all environmental media at Catawba Nuclear Station was required to ensure compliance with Station Selected Licensee Commitments. Analytical procedures were employed to ensure that Selected Licensee Commitments detection capabilities were achieved.

Environmental sampling was performed by EnRad Laboratories and Environmental Services. Environmental sample analysis was performed by EnRad Laboratories and Dosimetry and Records.

This appendix describes the environmental sampling frequencies and analysis procedures by media type.

I. CHANGE OF SAMPLING PROCEDURES

Sampling procedure 725, Shoreline Sediment Sampling at Catawba Nuclear Station was revised to update the name of location 262 (T-Bones Restaurant/Lake Wylie Marina – Hwy 49 (4.19 mi NNE)). The restaurant was sold and the location name was generalized to prevent future procedure and ODCM revisions as a result of business changes. Location 262 was updated to Lake Wylie Marina – Hwy 49 (4.19 mi NNE) in ODCM revision 063, effective 12DEC2019.

Sampling procedure 722, Water Sampling at Catawba Nuclear Station was revised to terminate the use of Control Surface Water location 215 (River Pointe – Hwy 49 (4.21 mi NNE) on 2JAN2019 and location 263 (Liberty Hill Road (0.59 mi NNE) became the new Control Surface Water location for CNS REMP on 2JAN2019 (NCR # 02250746). The Control Surface Water location was relocated from 215 to 263 to move it from a private residence to property owned by Duke Energy. The changes to the REMP were effective in ODCM revision 063, effective 12DEC2019.

II. DESCRIPTION OF ANALYSIS PROCEDURES

Gamma spectroscopy analyses are performed using high purity germanium gamma detectors and Canberra analytical software. Designated sample volumes are transferred to appropriate counting geometries and analyzed by gamma spectroscopy. Perishable samples such as fish and broadleaf vegetation are ground to achieve a homogeneous mixture. Soils and sediments are dried, sifted to remove foreign objects (rocks, clams, glass, etc.) then transferred to appropriate counting geometry.

Low-level iodine analyses are performed by passing a designated sample aliquot through a pre-measured amount of ion exchange resin to remove and concentrate any iodine in the aqueous sample (milk). The resin is then dried, mixed thoroughly, and a net resin weight determined before being transferred to appropriate counting geometry and analyzed by gamma spectroscopy.

Tritium analyses are performed by using low-level environmental liquid scintillation analysis technique on a Perkin-Elmer 4910TR liquid scintillation system or Perkin-Elmer 3100TR liquid scintillation system. Tritium samples are distilled and batch processed with a laboratory fortified blank, matrix spike, matrix spike duplicate, and blank to verify instrument performance and sample preparation technique are acceptable.

Gross beta analysis is performed by concentrating a designated aliquot of sample precipitate and analyzing by Tennelec XLB Series 5 gas-flow proportional counters. Samples are batch processed with a blank to ensure sample contamination has not occurred.

Gross beta analysis of liquid samples is performed by concentrating a designated aliquot of sample and analyzing by Perkin-Elmer 4910TR liquid scintillation system or a Perkin-Elmer 3110TR liquid scintillation system. Samples are batch processed with a blank to ensure sample contamination has not occurred.

III. CHANGE OF ANALYSIS PROCEDURES

Beginning in January 2019 the analysis procedure for Gross Beta in Drinking Water was changed. The samples are prepared similar to ASTM Method D7283-17, Alpha and Beta Activity in Water by Liquid Scintillation Counting, by concentrating an aliquot of sample and analyzing on a Perkin-Elmer 4910TR liquid scintillation system or a Perkin-Elmer 3110TR liquid scintillation system. The results are reported as activities, which are calculated to be above the MDA or less than the calculated MDA (NCR# 02303030).

IV. SAMPLING AND ANALYSIS PROCEDURES

A.1 AIRBORNE PARTICULATE AND RADIOIODINE

Airborne particulate and radioiodine samples at each of six locations were composited continuously by means of continuous air samplers. Air particulates were collected on a particulate filter and radioiodines were collected in a charcoal cartridge positioned behind the filter in the sampler. The samplers are designed to operate at a constant flow rate (in order to compensate for any filter loading) and are set to sample approximately 2 cubic feet per minute. Filters and cartridges were collected weekly. A separate weekly gamma analysis was performed on each charcoal cartridge. A weekly gross beta analysis was performed on each filter. A

quarterly gamma analysis was performed on the quarterly filter composite (by location). The continuous composite samples were collected from the locations listed below.

Location 200 = Site Boundary (0.63 mi. NNE)
Location 201 = Site Boundary (0.53 mi. NE)
Location 208 = Discharge Canal (0.45 mi. S)
Location 212 = Tega Cay (3.32 mi. E)
Location 258 = Fairhope Road (9.84 mi. W)(Control)
Location 261 = Site Boundary (0.72 mi. N)

A.2 DRINKING WATER

Monthly composite drinking water samples were collected at each of two locations. A gross beta and gamma analysis was performed on monthly composites. Tritium analysis was performed on the quarterly composites. The composites were collected monthly from the locations listed below.

Location 214 = Rock Hill Water Supply (7.30 mi. SSE)
Location 218 = Belmont Water Supply (13.5 mi. NNE)(Control)

A.3 SURFACE WATER

Monthly composite samples were collected at each of three locations. A gamma analysis was performed on the monthly composites. Tritium analysis was performed on the quarterly composites. The composites were collected monthly from the locations listed below.

Location 208 = Discharge Canal (0.45 mi. S)
Location 211 = Wylie Dam (4.06 mi. ESE)
Location 215 = River Pointe - Hwy 49 (4.21 mi. NNE)(Control)
Final sample taken 2JAN2019 NCR # 02250746
Location 263 = Liberty Hill Road (0.59 mi. NNE)(Control)
Initial sample taken 2JAN2019 NCR # 02250746

A.4 MILK

Biweekly grab samples were collected at one location. A gamma and low-level Iodine-131 analysis was performed on each sample. The biweekly grab samples were collected from the location listed below.

Location 221 = Dairy (14.5 mi. NW)(Control)

A.5 BROADLEAF VEGETATION

Monthly samples were collected at each of five locations. A gamma analysis was performed on each sample. The samples were collected from the locations listed below.

Location 200 = Site Boundary (0.63 mi. NNE)
Location 201 = Site Boundary (0.53 mi. NE)
Location 222 = Site Boundary (0.70 mi. N)
Location 226 = Site Boundary (0.48 mi. S)
Location 258 = Fairhope Road (9.84 mi. W)(Control)

A.6 FOOD PRODUCTS

Monthly samples were collected when available during the harvest season at one location. A gamma analysis was performed on each sample. The samples were collected from the location listed below.

Location 260 = Irrigated Gardens (2.00 mi. SSE)

A.7 FISH

Semiannual samples were collected at each of two locations. A gamma analysis was performed on the edible portions of each sample. Boney fish (i.e. Sunfish) were prepared whole minus the head and tail portions. The samples were collected from the locations listed below.

Location 208 = Discharge Canal (0.45 mi. S)
Location 216 = Hwy 49 Bridge (4.19 mi. NNE)(Control)

A.8 SHORELINE SEDIMENT

Semiannual samples were collected at each of three locations. A gamma analysis was performed on each sample following the drying and removal of rocks and clams. The samples were collected from the locations listed below.

Location 208 = Discharge Canal (0.45 mi. S)
Location 210 = Ebenezer Access (2.31 mi. SE)
Location 262 = T-Bones/Lake Wylie Marina- Hwy 49 (4.19 mi. NNE)(Control)
*Location 262 = Lake Wylie Marina- Hwy 49 (4.19 mi. NNE)(Control)

**Location Description Revised ODCM Rev. 063, effective 12DEC2019*

A.9 DIRECT GAMMA RADIATION (TLD)

Thermoluminescent dosimeters (TLD) were collected quarterly at forty-one locations. A gamma exposure rate was determined for each TLD. TLD locations are listed in Table 2.1-B. The TLDs were placed as indicated below.

- * An inner ring of 16 TLDs, one in each meteorological sector in the general area of the site boundary.
- * An outer ring of 16 TLDs, one in each meteorological sector in the 6 to 8 kilometer range.
- * The remaining TLDs were placed in special interest areas such as population centers, residential areas, schools, and at three control locations.

A.10 ANNUAL LAND USE CENSUS

An Annual Land Use Census was conducted to identify within a distance of 8 kilometers (5.0 miles) from the station, the nearest location from the site boundary in each of the sixteen meteorological sectors, the following:

- * The Nearest Residence
- * The Nearest Garden greater than 50 square meters or 500 square feet
- * The Nearest Milk-giving Animal (cow, goat, etc.)

The census was conducted during the growing season on 6/18 and 6/19/2019. Results are shown in Table 3.11. No changes were made to the sampling procedures during 2019 as a result of the 2019 census.

V. GLOBAL POSITIONING SYSTEM (GPS) ANALYSIS

The Catawba site centerline used for GPS measurements was referenced from the Catawba Nuclear Station Updated Final Safety Analysis Report (UFSAR), section 2.1.1.1, Specification of Location. Waypoint coordinates used for CNS GPS measurements were latitude 35°-3'-5"N and longitude 81°-4'-10"W. Maps and tables were generated using North American Datum (NAD) 27. Data normally reflect accuracy to within 2 to 5 meters from point of measurement. All GPS field measurements were taken as close as possible to the item of interest. Distances for the locations are displayed using three significant figures.

APPENDIX B

**RADIOLOGICAL
ENVIRONMENTAL MONITORING
PROGRAM**

SUMMARY OF RESULTS

2019

**CATAWBA NUCLEAR STATION
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM DATA SUMMARY**

Catawba Nuclear Station
York County, South Carolina

Docket Numbers 50-413, 414
Calendar Year 2019

Medium or Pathway Sampled or Measured (Unit of Measurement)	Type and Total No. of Measurements Performed	Lower Limit of Detection (LLD) ⁽¹⁾	All Indicator Locations ^{(2) (3)} Mean Range	Location w/Highest Annual Mean		Control Locations Mean Range ^{(2) (3)}	No. of Non-Routine Report Meas.
				Name, Distance, and Direction	Mean Range ^{(2) (3)}		
Air Particulate (pCi/m ³)	Gross Beta 312 ⁽⁴⁾	See Table 2.2-C	2.22E-02 (260/260) 5.48E-03 – 4.57E-02	208 (0.45 mi S)	2.25E-02 (52/52) 9.45E-03 – 4.42E-02	258 (9.84 mi W) 2.18E-02 (52/52) 9.34E-03 – 4.63E-02	0
	Gamma 24 ⁽⁴⁾	See Table 2.2-C	All less than LLD	-----	-----	All less than LLD	0
Air Radioiodine (pCi/m ³)	Gamma 312 ⁽⁴⁾	See Table 2.2-C	All less than LLD	-----	-----	All less than LLD	0
Drinking Water (pCi/l)	Gross Beta 26 ⁽⁴⁾	4	5.20E+00 (5/13) 3.41E+00 – 1.07E+01	214 (7.30 mi SSE)	5.20E+00 (5/13) 3.41E+00 – 1.07E+01	218 (13.5 mi NNE) 7.54E+00 (3/13) 4.03E+00 – 9.85E+00	0
	Gamma 26 ⁽⁴⁾	See Table 2.2-C	All less than LLD	-----	-----	All less than LLD	0
Surface Water (pCi/l)	Tritium 8 ^{(4) (5)}	2000	4.55E+02 (2/4) 3.24E+02 – 5.85E+02	214 (7.30 mi SSE)	4.55E+02 (2/4) 3.24E+02 – 5.85E+02	218 (13.5 mi NNE) 2.85E+02 (2/4) 2.56E+02 – 3.14E+02	0
	Gamma 39 ⁽⁴⁾	See Table 2.2-C	All less than LLD	-----	-----	All less than LLD	0
Milk (pCi/l)	Tritium 12 ⁽⁴⁾	2000	3.04E+03 (7/8) 2.37E+02 – 6.18E+03	208 (0.45 mi S)	5.10E+03 (4/4) 4.57E+03 – 6.18E+03	263 (0.59 mi NNE) 2.21E+02 (2/4) 2.04E+02 – 2.38E+02	0
	Gamma 26	See Table 2.2-C	No Indicator Location	-----	-----	All less than LLD	0
	I-131 26	See Table 2.2-C	No Indicator Location	-----	-----	All less than LLD	0

**CATAWBA NUCLEAR STATION
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM DATA SUMMARY**

Catawba Nuclear Station
York County, South Carolina

Docket Numbers 50-413, 414
Calendar Year 2019

Medium or Pathway Sampled or Measured (Unit of Measurement)	Type and Total No. of Measurements Performed	Lower Limit of Detection (LLD) ⁽¹⁾	All Indicator Locations ^{(2) (3)} Mean Range	Location w/Highest Annual Mean		Control Locations Mean Range ^{(2) (3)}	No. of Non-Routine Report Meas.
				Name, Distance, and Direction	Mean Range ^{(2) (3)}		
Broadleaf Vegetation (pCi/kg, wet)	Gamma 60 Cs-137	See Table 2.2-C	2.35E+01 (3/48) 7.15E+00 – 3.45E+01	201 (0.53 mi NE)	2.35E+01 (3/12) 7.15E+00 – 3.45E+01	All less than LLD	0
Food Products (pCi/kg, wet)	Gamma 7 ⁽⁴⁾	See Table 2.2-C	All less than LLD	-----	-----	No Control Location	0
Fish (pCi/kg, wet)	Gamma 12 Co-60	See Table 2.2-C	2.72E+01 (1/6) 2.72E+01 – 2.72E+01	208 (0.45 mi S)	2.72E+01 (1/6) 2.72E+01 – 2.72E+01	All less than LLD	0
Sediments--Shoreline (pCi/kg, dry)	Gamma 6	See Table 2.2-C	All less than LLD	-----	-----	All less than LLD	0
TLD (mR per quarter) ⁽⁶⁾	TLD Readout 163 ⁽⁴⁾	-----	1.83E+01 (151/151) 1.18E+01 – 2.48E+01	229 (0.84 mi NW)	2.27E+01 (4/4) 1.90E+01 – 2.48E+01	217 (10.3 mi SSE) 247 (7.33 mi ESE) 251 (9.72 mi WNW) 1.40E+01 (12/12) 1.07E+01 – 1.83E+01	0

Footnotes to Appendix B

1. The Lower Limit of Detection (LLD) is the smallest concentration of radioactive material in a sample that will yield a net count above system background which will be detected with 95 percent probability and with only 5 percent probability of falsely concluding that a blank observation represents a "real" signal. Due to counting statistics and varying volumes, occasionally lower LLDs are achieved. Refer to Section 2.3.2 for an explanation of how LLD values were derived.
2. Mean and range are based on detectable measurements only.
3. The fractions of all samples with detectable activities at specific locations are indicated in parentheses.
4. Missing samples or surveillances are discussed in Appendix C or Appendix D.
5. Quarterly tritium composites determined using quarter days (92 days +/- 25% (23 days)).
6. TLD exposure is reported in milliroentgen (mR) per standard quarter (91 days). TLD data indicated in section 3.9 (Direct Gamma Radiation) are reported in mrem /yr ($n * 0.95 \text{ ergs/g-Roentgen}$)².

² Cember, H. (2009). Introduction to Health Physics, 4th Edition. United States: McGraw-Hill Companies, Inc.

APPENDIX C

**SAMPLING DEVIATIONS
&
UNAVAILABLE ANALYSES**

2019

APPENDIX C

CATAWBA NUCLEAR STATION SAMPLING DEVIATIONS & UNAVAILABLE ANALYSES

DEVIATION & UNAVAILABLE REASON CODES			
BF	Blown Fuse	PM	Preventive Maintenance
CN	Construction	PO	Power Outage
FZ	Sample Frozen	PS	Pump out of service / Undergoing repair
IV	Insufficient Volume	SL	Sample Loss/Lost due to Lab Accident
IW	Inclement Weather	SM	Motor / Rotor Seized
LC	Line Clog to Sampler	SU	Seasonally Unavailable
OT	Other	TF	Torn Filter
PI	Power Interrupt	VN	Vandalism

C.1 SAMPLING DEVIATIONS

Air Particulate and Air Radioiodine

REMP weekly air samples (Air Particulate (AP) or Air Radioiodine (AR)) that experience any downtime during a surveillance period are reported as a Deviation and classified as a “Sampling Deviation.” However, the sample is counted and the data reported, whereas a Deviation with no available sample is classified as an “Unavailable Analyses” and does not have any data reported. The Catawba REMP air samplers operated for a total of 99.9% availability in 2019.

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
258	2/12 – 2/19/2019	PI	1.76 hours downtime due to power interruption, cause undetermined.	NCR # 02258479
258	4/30 – 5/7/2019	PI	0.92 hours downtime due to power interruption due to severe weather.	NCR # 02271626
208	7/16 – 7/23/2019	OT	73.33 hours downtime due to tripped breaker, cause undetermined.	NCR # 02283309

Drinking Water and Surface Water

REMP monthly drinking water samples (Drinking Water (DW)) or surface water samples (Surface Water (SW)) that experience any downtime during a surveillance period are reported as a deviation and classified as a “Sampling Deviation.” However, the sample is counted and the data reported, whereas a Deviation with no available sample is classified as an “Unavailable Analyses” and does not have any data reported. The water samplers operated for a total of 99.9% availability in 2019.

Surface Water

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
211	5/21 – 6/18/2019	CN	27.3 hours downtime. Location was undergoing maintenance and sufficient flow was not available for the ISCO. ISCO was temporarily relocated to a new location within the Wylie Dam (NCR # 02274562).	NCR # 02277912
211	8/13 – 9/10/2019	OT	Indeterminate downtime. ISCO pump malfunction, pump was continuously sampling. Grab samples taken. No missed surveillance.	NCR # 02291240

C.2 UNAVAILABLE ANALYSES

Food Products / Crops

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
260	1/8/2019	SU	Sample seasonally unavailable at time of collection.	NCR # 02251448
260	2/5/2019	SU	Sample seasonally unavailable at time of collection.	NCR # 02256058
260	3/5/2019	SU	Sample seasonally unavailable at time of collection.	NCR # 02260853
260	4/2/2019	SU	Sample seasonally unavailable at time of collection.	NCR # 02266266
260	5/7/2019	SU	Sample seasonally unavailable at time of collection.	NCR # 02271544

TLDs

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
225	12/13/18 – 3/14/19	VN	Alpha and Bravo TLDs missing at the time of collection, due to human intervention.	NCR # 02262921

APPENDIX D

ANALYTICAL DEVIATIONS

2019

No Analytical deviations were incurred for the
2019 Radiological Environmental Monitoring Program

APPENDIX E

**RADIOLOGICAL
ENVIRONMENTAL MONITORING
PROGRAM RESULTS**

2019

This appendix includes sample analysis report summaries and supportive data generated from each sample medium for 2019.

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 200 [INDICATOR - NNE @ 0.63 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492177	1/2/2019 - 1/8/2019	Beta	1.10E-02	3.02E-03	4.08E-03
492451	1/8/2019 - 1/15/2019	Beta	1.48E-02	2.46E-03	2.73E-03
492861	1/15/2019 - 1/22/2019	Beta	1.53E-02	2.95E-03	3.54E-03
493284	1/22/2019 - 1/29/2019	Beta	1.79E-02	2.97E-03	3.27E-03
493546	1/29/2019 - 2/5/2019	Beta	2.64E-02	3.33E-03	3.16E-03
493772	2/5/2019 - 2/12/2019	Beta	2.19E-02	2.78E-03	2.73E-03
494318	2/12/2019 - 2/19/2019	Beta	1.49E-02	2.78E-03	3.21E-03
494934	2/19/2019 - 2/26/2019	Beta	9.87E-03	2.58E-03	3.41E-03
495378	2/26/2019 - 3/5/2019	Beta	1.53E-02	2.80E-03	3.24E-03
496248	3/5/2019 - 3/12/2019	Beta	1.97E-02	3.01E-03	3.12E-03
496801	3/12/2019 - 3/19/2019	Beta	2.06E-02	3.10E-03	3.26E-03
496706	3/19/2019 - 3/26/2019	Beta	2.06E-02	3.07E-03	3.22E-03
497111	3/26/2019 - 4/2/2019	Beta	1.95E-02	3.00E-03	3.15E-03
497520	1/2/2019 - 4/2/2019	Cs-134	<1.98E-03	0.00E+00	1.98E-03
		Cs-137	<1.60E-03	0.00E+00	1.60E-03
		Be-7	1.80E-01	4.31E-02	2.93E-02
		K-40	<3.46E-02	0.00E+00	3.46E-02
497514	4/2/2019 - 4/9/2019	Beta	1.37E-02	2.86E-03	3.55E-03
497997	4/9/2019 - 4/16/2019	Beta	1.20E-02	2.29E-03	2.68E-03
498577	4/16/2019 - 4/23/2019	Beta	1.21E-02	2.59E-03	3.17E-03
498750	4/23/2019 - 4/30/2019	Beta	2.13E-02	3.08E-03	3.17E-03
499426	4/30/2019 - 5/7/2019	Beta	1.39E-02	2.75E-03	3.33E-03
499848	5/7/2019 - 5/14/2019	Beta	1.10E-02	2.58E-03	3.29E-03
500093	5/14/2019 - 5/21/2019	Beta	2.60E-02	3.41E-03	3.43E-03
500426	5/21/2019 - 5/28/2019	Beta	2.57E-02	3.25E-03	3.13E-03
500710	5/28/2019 - 6/4/2019	Beta	2.28E-02	3.31E-03	3.59E-03

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 200 [INDICATOR - NNE @ 0.63 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
501101	6/4/2019 - 6/11/2019	Beta	1.70E-02	2.78E-03	2.85E-03
501915	6/11/2019 - 6/18/2019	Beta	1.92E-02	3.02E-03	3.27E-03
502175	6/18/2019 - 6/25/2019	Beta	5.48E-03	2.21E-03	3.24E-03
502386	6/25/2019 - 7/2/2019	Beta	3.15E-02	3.62E-03	3.40E-03
503363	4/2/2019 - 7/2/2019	Cs-134	<1.82E-03	0.00E+00	1.82E-03
		Cs-137	<1.71E-03	0.00E+00	1.71E-03
		Be-7	1.75E-01	3.89E-02	2.73E-02
		K-40	<2.57E-02	0.00E+00	2.57E-02
503357	7/2/2019 - 7/9/2019	Beta	2.27E-02	3.24E-03	3.37E-03
503806	7/9/2019 - 7/16/2019	Beta	1.74E-02	2.90E-03	3.16E-03
504166	7/16/2019 - 7/23/2019	Beta	1.78E-02	2.94E-03	3.22E-03
504415	7/23/2019 - 7/30/2019	Beta	2.36E-02	2.92E-03	2.87E-03
504625	7/30/2019 - 8/6/2019	Beta	2.11E-02	3.14E-03	3.37E-03
504901	8/6/2019 - 8/13/2019	Beta	3.61E-02	3.82E-03	3.41E-03
505110	8/13/2019 - 8/20/2019	Beta	2.59E-02	3.48E-03	3.62E-03
505505	8/20/2019 - 8/27/2019	Beta	1.49E-02	2.47E-03	2.77E-03
505831	8/27/2019 - 9/3/2019	Beta	2.25E-02	2.82E-03	2.83E-03
506342	9/3/2019 - 9/10/2019	Beta	4.20E-02	3.62E-03	2.83E-03
507255	9/10/2019 - 9/17/2019	Beta	4.26E-02	4.07E-03	3.35E-03
507795	9/17/2019 - 9/24/2019	Beta	3.27E-02	3.19E-03	2.57E-03
508329	9/24/2019 - 10/1/2019	Beta	3.74E-02	3.80E-03	3.28E-03
509197	7/2/2019 - 10/1/2019	Cs-134	<1.77E-03	0.00E+00	1.77E-03
		Cs-137	<1.19E-03	0.00E+00	1.19E-03
		Be-7	1.77E-01	4.07E-02	3.50E-02
		K-40	<2.37E-02	0.00E+00	2.37E-02
509191	10/1/2019 - 10/8/2019	Beta	3.18E-02	3.20E-03	2.75E-03
509799	10/8/2019 - 10/15/2019	Beta	2.32E-02	3.21E-03	3.21E-03
510500	10/15/2019 - 10/22/2019	Beta	1.74E-02	3.07E-03	3.59E-03

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 200 [INDICATOR - NNE @ 0.63 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
510798	10/22/2019 - 10/29/2019	Beta	1.96E-02	3.00E-03	3.19E-03
511203	10/29/2019 - 11/5/2019	Beta	2.07E-02	2.93E-03	2.83E-03
511435	11/5/2019 - 11/12/2019	Beta	3.56E-02	3.82E-03	3.37E-03
511844	11/12/2019 - 11/19/2019	Beta	1.92E-02	2.70E-03	2.84E-03
512150	11/19/2019 - 11/25/2019	Beta	2.22E-02	3.34E-03	3.37E-03
512454	11/25/2019 - 12/3/2019	Beta	1.84E-02	2.74E-03	2.90E-03
512630	12/3/2019 - 12/10/2019	Beta	1.93E-02	2.71E-03	2.84E-03
513594	12/10/2019 - 12/17/2019	Beta	1.84E-02	2.86E-03	2.98E-03
513910	12/17/2019 - 12/23/2019	Beta	2.45E-02	3.46E-03	3.46E-03
514134	12/23/2019 - 12/31/2019	Beta	2.21E-02	2.66E-03	2.63E-03
514436	10/1/2019 - 12/31/2019	Cs-134	<1.60E-03	0.00E+00	1.60E-03
		Cs-137	<1.17E-03	0.00E+00	1.17E-03
		Be-7	1.55E-01	3.53E-02	2.51E-02
		K-40	<2.34E-02	0.00E+00	2.34E-02

Sample Point 201 [INDICATOR - NE @ 0.53 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492178	1/2/2019 - 1/8/2019	Beta	1.69E-02	3.34E-03	4.07E-03
492452	1/8/2019 - 1/15/2019	Beta	1.54E-02	2.48E-03	2.73E-03
492862	1/15/2019 - 1/22/2019	Beta	2.17E-02	3.25E-03	3.54E-03
493285	1/22/2019 - 1/29/2019	Beta	1.79E-02	2.98E-03	3.28E-03
493547	1/29/2019 - 2/5/2019	Beta	2.60E-02	3.32E-03	3.16E-03
493773	2/5/2019 - 2/12/2019	Beta	2.50E-02	2.93E-03	2.73E-03
494319	2/12/2019 - 2/19/2019	Beta	1.92E-02	3.00E-03	3.21E-03
494935	2/19/2019 - 2/26/2019	Beta	1.14E-02	2.67E-03	3.41E-03
495379	2/26/2019 - 3/5/2019	Beta	1.62E-02	2.84E-03	3.24E-03
496252	3/5/2019 - 3/12/2019	Beta	1.92E-02	2.98E-03	3.12E-03
496802	3/12/2019 - 3/19/2019	Beta	2.20E-02	3.17E-03	3.27E-03

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 201 [INDICATOR - NE @ 0.53 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
496707	3/19/2019 - 3/26/2019	Beta	2.00E-02	3.03E-03	3.22E-03
497112	3/26/2019 - 4/2/2019	Beta	1.84E-02	2.95E-03	3.17E-03
497521	1/2/2019 - 4/2/2019	Cs-134	<1.64E-03	0.00E+00	1.64E-03
		Cs-137	<1.02E-03	0.00E+00	1.02E-03
		Be-7	1.32E-01	4.07E-02	4.47E-02
		K-40	1.42E-02	1.20E-02	1.58E-02
497515	4/2/2019 - 4/9/2019	Beta	1.69E-02	3.02E-03	3.53E-03
497998	4/9/2019 - 4/16/2019	Beta	1.25E-02	2.31E-03	2.68E-03
498578	4/16/2019 - 4/23/2019	Beta	1.17E-02	2.58E-03	3.17E-03
498751	4/23/2019 - 4/30/2019	Beta	2.53E-02	3.27E-03	3.16E-03
499427	4/30/2019 - 5/7/2019	Beta	1.28E-02	2.70E-03	3.35E-03
499849	5/7/2019 - 5/14/2019	Beta	1.36E-02	2.72E-03	3.28E-03
500094	5/14/2019 - 5/21/2019	Beta	3.04E-02	3.61E-03	3.43E-03
500427	5/21/2019 - 5/28/2019	Beta	2.76E-02	3.33E-03	3.12E-03
500711	5/28/2019 - 6/4/2019	Beta	2.94E-02	3.61E-03	3.61E-03
501102	6/4/2019 - 6/11/2019	Beta	1.76E-02	2.80E-03	2.83E-03
501916	6/11/2019 - 6/18/2019	Beta	1.75E-02	2.95E-03	3.29E-03
502176	6/18/2019 - 6/25/2019	Beta	1.47E-02	2.75E-03	3.23E-03
502387	6/25/2019 - 7/2/2019	Beta	2.94E-02	3.52E-03	3.39E-03
503364	4/2/2019 - 7/2/2019	Cs-134	<1.62E-03	0.00E+00	1.62E-03
		Cs-137	<1.56E-03	0.00E+00	1.56E-03
		Be-7	2.17E-01	4.29E-02	2.61E-02
		K-40	<2.20E-02	0.00E+00	2.20E-02
503358	7/2/2019 - 7/9/2019	Beta	2.62E-02	3.40E-03	3.37E-03
503807	7/9/2019 - 7/16/2019	Beta	1.82E-02	2.95E-03	3.18E-03
504167	7/16/2019 - 7/23/2019	Beta	2.52E-02	3.30E-03	3.22E-03
504416	7/23/2019 - 7/30/2019	Beta	2.20E-02	2.82E-03	2.84E-03
504626	7/30/2019 - 8/6/2019	Beta	2.41E-02	3.29E-03	3.39E-03

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 201 [INDICATOR - NE @ 0.53 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504902	8/6/2019 - 8/13/2019	Beta	3.69E-02	3.86E-03	3.42E-03
505111	8/13/2019 - 8/20/2019	Beta	2.61E-02	3.48E-03	3.60E-03
505506	8/20/2019 - 8/27/2019	Beta	1.19E-02	2.31E-03	2.77E-03
505832	8/27/2019 - 9/3/2019	Beta	2.46E-02	2.91E-03	2.83E-03
506343	9/3/2019 - 9/10/2019	Beta	3.49E-02	3.38E-03	2.85E-03
507256	9/10/2019 - 9/17/2019	Beta	4.46E-02	4.13E-03	3.34E-03
507796	9/17/2019 - 9/24/2019	Beta	2.83E-02	3.02E-03	2.57E-03
508330	9/24/2019 - 10/1/2019	Beta	3.46E-02	3.69E-03	3.28E-03
509198	7/2/2019 - 10/1/2019	Cs-134	<1.49E-03	0.00E+00	1.49E-03
		Cs-137	<1.37E-03	0.00E+00	1.37E-03
		Be-7	1.88E-01	4.12E-02	3.12E-02
		K-40	<1.84E-02	0.00E+00	1.84E-02
509192	10/1/2019 - 10/8/2019	Beta	3.23E-02	3.22E-03	2.75E-03
509800	10/8/2019 - 10/15/2019	Beta	2.48E-02	3.28E-03	3.20E-03
510501	10/15/2019 - 10/22/2019	Beta	1.66E-02	3.02E-03	3.59E-03
510799	10/22/2019 - 10/29/2019	Beta	1.83E-02	2.93E-03	3.19E-03
511204	10/29/2019 - 11/5/2019	Beta	1.92E-02	2.86E-03	2.84E-03
511436	11/5/2019 - 11/12/2019	Beta	3.51E-02	3.79E-03	3.36E-03
511845	11/12/2019 - 11/19/2019	Beta	1.86E-02	2.67E-03	2.83E-03
512151	11/19/2019 - 11/25/2019	Beta	2.16E-02	3.30E-03	3.37E-03
512455	11/25/2019 - 12/3/2019	Beta	1.66E-02	2.65E-03	2.90E-03
512631	12/3/2019 - 12/10/2019	Beta	1.43E-02	2.48E-03	2.83E-03
513595	12/10/2019 - 12/17/2019	Beta	1.74E-02	2.81E-03	2.97E-03
513911	12/17/2019 - 12/23/2019	Beta	2.56E-02	3.51E-03	3.46E-03
514135	12/23/2019 - 12/31/2019	Beta	2.16E-02	2.65E-03	2.63E-03
514437	10/1/2019 - 12/31/2019	Cs-134	<1.46E-03	0.00E+00	1.46E-03
		Cs-137	<1.57E-03	0.00E+00	1.57E-03

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 201 [INDICATOR - NE @ 0.53 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514437	10/1/2019 - 12/31/2019	Be-7	1.12E-01	3.44E-02	3.79E-02
		K-40	<3.49E-02	0.00E+00	3.49E-02

Sample Point 208 [INDICATOR - S @ 0.45 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492179	1/2/2019 - 1/8/2019	Beta	1.51E-02	3.24E-03	4.07E-03
492453	1/8/2019 - 1/15/2019	Beta	1.67E-02	2.55E-03	2.73E-03
492863	1/15/2019 - 1/22/2019	Beta	2.08E-02	3.22E-03	3.54E-03
493286	1/22/2019 - 1/29/2019	Beta	2.09E-02	3.13E-03	3.28E-03
493548	1/29/2019 - 2/5/2019	Beta	2.57E-02	3.30E-03	3.15E-03
493774	2/5/2019 - 2/12/2019	Beta	2.11E-02	2.76E-03	2.74E-03
494320	2/12/2019 - 2/19/2019	Beta	1.58E-02	2.83E-03	3.21E-03
494936	2/19/2019 - 2/26/2019	Beta	9.45E-03	2.56E-03	3.42E-03
495380	2/26/2019 - 3/5/2019	Beta	1.31E-02	2.68E-03	3.24E-03
496256	3/5/2019 - 3/12/2019	Beta	2.24E-02	3.15E-03	3.12E-03
496803	3/12/2019 - 3/19/2019	Beta	1.92E-02	3.03E-03	3.27E-03
496708	3/19/2019 - 3/26/2019	Beta	2.12E-02	3.09E-03	3.22E-03
497113	3/26/2019 - 4/2/2019	Beta	1.81E-02	2.94E-03	3.17E-03
497522	1/2/2019 - 4/2/2019	Cs-134	<1.01E-03	0.00E+00	1.01E-03
		Cs-137	<1.20E-03	0.00E+00	1.20E-03
		Be-7	1.54E-01	4.04E-02	3.56E-02
		K-40	<2.39E-02	0.00E+00	2.39E-02
497516	4/2/2019 - 4/9/2019	Beta	1.48E-02	2.91E-03	3.53E-03
497999	4/9/2019 - 4/16/2019	Beta	1.13E-02	2.24E-03	2.68E-03
498579	4/16/2019 - 4/23/2019	Beta	1.33E-02	2.67E-03	3.17E-03
498752	4/23/2019 - 4/30/2019	Beta	2.50E-02	3.25E-03	3.16E-03
499428	4/30/2019 - 5/7/2019	Beta	1.23E-02	2.67E-03	3.35E-03
499850	5/7/2019 - 5/14/2019	Beta	1.39E-02	2.74E-03	3.28E-03
500095	5/14/2019 - 5/21/2019	Beta	2.32E-02	3.28E-03	3.43E-03

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 208 [INDICATOR - S @ 0.45 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
500428	5/21/2019 - 5/28/2019	Beta	2.56E-02	3.24E-03	3.12E-03
500712	5/28/2019 - 6/4/2019	Beta	2.19E-02	3.28E-03	3.61E-03
501103	6/4/2019 - 6/11/2019	Beta	1.84E-02	2.84E-03	2.83E-03
501917	6/11/2019 - 6/18/2019	Beta	2.35E-02	3.23E-03	3.28E-03
502177	6/18/2019 - 6/25/2019	Beta	1.64E-02	2.86E-03	3.24E-03
502388	6/25/2019 - 7/2/2019	Beta	2.82E-02	3.48E-03	3.39E-03
503365	4/2/2019 - 7/2/2019	Cs-134	<1.43E-03	0.00E+00	1.43E-03
		Cs-137	<1.43E-03	0.00E+00	1.43E-03
		Be-7	1.73E-01	3.99E-02	3.45E-02
		K-40	<2.89E-02	0.00E+00	2.89E-02
503359	7/2/2019 - 7/9/2019	Beta	2.72E-02	3.44E-03	3.37E-03
503808	7/9/2019 - 7/16/2019	Beta	1.99E-02	3.04E-03	3.17E-03
504168	7/16/2019 - 7/20/2019	Beta	2.10E-02	4.61E-03	5.68E-03
504417	7/23/2019 - 7/30/2019	Beta	2.38E-02	2.91E-03	2.84E-03
504627	7/30/2019 - 8/6/2019	Beta	2.19E-02	3.19E-03	3.39E-03
504903	8/6/2019 - 8/13/2019	Beta	3.78E-02	3.89E-03	3.42E-03
505112	8/13/2019 - 8/20/2019	Beta	2.73E-02	3.53E-03	3.60E-03
505507	8/20/2019 - 8/27/2019	Beta	1.44E-02	2.45E-03	2.77E-03
505833	8/27/2019 - 9/3/2019	Beta	2.19E-02	2.79E-03	2.83E-03
506344	9/3/2019 - 9/10/2019	Beta	4.20E-02	3.64E-03	2.84E-03
507257	9/10/2019 - 9/17/2019	Beta	4.42E-02	4.12E-03	3.34E-03
507797	9/17/2019 - 9/24/2019	Beta	2.83E-02	3.02E-03	2.57E-03
508331	9/24/2019 - 10/1/2019	Beta	3.49E-02	3.70E-03	3.28E-03
509199	7/2/2019 - 10/1/2019	Cs-134	<2.00E-03	0.00E+00	2.00E-03
		Cs-137	<1.64E-03	0.00E+00	1.64E-03
		Be-7	1.48E-01	4.23E-02	4.53E-02
		K-40	<2.47E-02	0.00E+00	2.47E-02
509193	10/1/2019 - 10/8/2019	Beta	3.61E-02	3.37E-03	2.76E-03

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 208 [INDICATOR - S @ 0.45 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
509801	10/8/2019 - 10/15/2019	Beta	2.58E-02	3.33E-03	3.20E-03
510502	10/15/2019 - 10/22/2019	Beta	1.80E-02	3.10E-03	3.59E-03
510800	10/22/2019 - 10/29/2019	Beta	1.84E-02	2.93E-03	3.19E-03
511205	10/29/2019 - 11/5/2019	Beta	2.18E-02	2.99E-03	2.84E-03
511437	11/5/2019 - 11/12/2019	Beta	4.28E-02	4.09E-03	3.36E-03
511846	11/12/2019 - 11/19/2019	Beta	1.89E-02	2.69E-03	2.83E-03
512152	11/19/2019 - 11/25/2019	Beta	2.27E-02	3.36E-03	3.37E-03
512456	11/25/2019 - 12/3/2019	Beta	1.90E-02	2.77E-03	2.90E-03
512632	12/3/2019 - 12/10/2019	Beta	2.15E-02	2.81E-03	2.84E-03
513596	12/10/2019 - 12/17/2019	Beta	2.17E-02	3.04E-03	2.97E-03
513912	12/17/2019 - 12/23/2019	Beta	2.37E-02	3.42E-03	3.46E-03
514136	12/23/2019 - 12/31/2019	Beta	2.87E-02	2.93E-03	2.63E-03
514438	10/1/2019 - 12/31/2019	Cs-134	<1.90E-03	0.00E+00	1.90E-03
		Cs-137	<8.12E-04	0.00E+00	8.12E-04
		Be-7	1.30E-01	3.24E-02	2.45E-02
		K-40	<2.37E-02	0.00E+00	2.37E-02

Sample Point 212 [INDICATOR - E @ 3.32 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492180	1/2/2019 - 1/8/2019	Beta	1.53E-02	3.26E-03	4.09E-03
492454	1/8/2019 - 1/15/2019	Beta	1.43E-02	2.43E-03	2.73E-03
492864	1/15/2019 - 1/22/2019	Beta	1.92E-02	3.14E-03	3.54E-03
493287	1/22/2019 - 1/29/2019	Beta	2.28E-02	3.22E-03	3.27E-03
493549	1/29/2019 - 2/5/2019	Beta	2.65E-02	3.34E-03	3.15E-03
493775	2/5/2019 - 2/12/2019	Beta	2.02E-02	2.72E-03	2.74E-03
494321	2/12/2019 - 2/19/2019	Beta	1.72E-02	2.90E-03	3.21E-03
494937	2/19/2019 - 2/26/2019	Beta	1.08E-02	2.63E-03	3.40E-03
495381	2/26/2019 - 3/5/2019	Beta	1.77E-02	2.92E-03	3.25E-03

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 212 [INDICATOR - E @ 3.32 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
496260	3/5/2019 - 3/12/2019	Beta	2.16E-02	3.11E-03	3.12E-03
496804	3/12/2019 - 3/19/2019	Beta	2.15E-02	3.14E-03	3.26E-03
496709	3/19/2019 - 3/26/2019	Beta	1.94E-02	3.00E-03	3.21E-03
497114	3/26/2019 - 4/2/2019	Beta	1.76E-02	2.91E-03	3.16E-03
497523	1/2/2019 - 4/2/2019	Cs-134	<1.04E-03	0.00E+00	1.04E-03
		Cs-137	<1.38E-03	0.00E+00	1.38E-03
		Be-7	1.99E-01	4.49E-02	3.11E-02
		K-40	<2.88E-02	0.00E+00	2.88E-02
497517	4/2/2019 - 4/9/2019	Beta	1.61E-02	2.99E-03	3.56E-03
498000	4/9/2019 - 4/16/2019	Beta	1.27E-02	2.33E-03	2.68E-03
498580	4/16/2019 - 4/23/2019	Beta	1.34E-02	2.66E-03	3.16E-03
498753	4/23/2019 - 4/30/2019	Beta	2.18E-02	3.11E-03	3.17E-03
499429	4/30/2019 - 5/7/2019	Beta	1.29E-02	2.70E-03	3.33E-03
499851	5/7/2019 - 5/14/2019	Beta	1.22E-02	2.65E-03	3.29E-03
500096	5/14/2019 - 5/21/2019	Beta	2.59E-02	3.40E-03	3.42E-03
500429	5/21/2019 - 5/28/2019	Beta	2.93E-02	3.41E-03	3.13E-03
500713	5/28/2019 - 6/4/2019	Beta	2.21E-02	3.28E-03	3.59E-03
501104	6/4/2019 - 6/11/2019	Beta	1.67E-02	2.76E-03	2.85E-03
501918	6/11/2019 - 6/18/2019	Beta	2.13E-02	3.11E-03	3.26E-03
502178	6/18/2019 - 6/25/2019	Beta	1.53E-02	2.80E-03	3.25E-03
502389	6/25/2019 - 7/2/2019	Beta	2.91E-02	3.51E-03	3.40E-03
503366	4/2/2019 - 7/2/2019	Cs-134	<1.79E-03	0.00E+00	1.79E-03
		Cs-137	<1.34E-03	0.00E+00	1.34E-03
		Be-7	1.67E-01	3.98E-02	3.58E-02
		K-40	<3.54E-02	0.00E+00	3.54E-02
503360	7/2/2019 - 7/9/2019	Beta	2.39E-02	3.30E-03	3.37E-03
503809	7/9/2019 - 7/16/2019	Beta	1.72E-02	2.89E-03	3.16E-03
504169	7/16/2019 - 7/23/2019	Beta	2.31E-02	3.20E-03	3.22E-03

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 212 [INDICATOR - E @ 3.32 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504418	7/23/2019 - 7/30/2019	Beta	2.58E-02	3.02E-03	2.89E-03
504628	7/30/2019 - 8/6/2019	Beta	2.35E-02	3.23E-03	3.34E-03
504904	8/6/2019 - 8/13/2019	Beta	3.77E-02	3.88E-03	3.40E-03
505113	8/13/2019 - 8/20/2019	Beta	2.80E-02	3.58E-03	3.62E-03
505508	8/20/2019 - 8/27/2019	Beta	1.65E-02	2.55E-03	2.77E-03
505834	8/27/2019 - 9/3/2019	Beta	2.47E-02	2.91E-03	2.83E-03
506345	9/3/2019 - 9/10/2019	Beta	3.62E-02	3.42E-03	2.83E-03
507258	9/10/2019 - 9/17/2019	Beta	4.57E-02	4.18E-03	3.36E-03
507798	9/17/2019 - 9/24/2019	Beta	3.23E-02	3.17E-03	2.56E-03
508332	9/24/2019 - 10/1/2019	Beta	3.86E-02	3.85E-03	3.28E-03
509200	7/2/2019 - 10/1/2019	Cs-134	<1.43E-03	0.00E+00	1.43E-03
		Cs-137	<8.00E-04	0.00E+00	8.00E-04
		Be-7	1.91E-01	4.23E-02	3.61E-02
		K-40	<2.18E-02	0.00E+00	2.18E-02
509194	10/1/2019 - 10/8/2019	Beta	3.54E-02	3.34E-03	2.75E-03
509802	10/8/2019 - 10/15/2019	Beta	2.31E-02	3.21E-03	3.22E-03
510503	10/15/2019 - 10/22/2019	Beta	1.71E-02	3.05E-03	3.59E-03
510801	10/22/2019 - 10/29/2019	Beta	1.88E-02	2.95E-03	3.19E-03
511206	10/29/2019 - 11/5/2019	Beta	2.01E-02	2.89E-03	2.83E-03
511438	11/5/2019 - 11/12/2019	Beta	3.67E-02	3.88E-03	3.38E-03
511847	11/12/2019 - 11/19/2019	Beta	1.89E-02	2.69E-03	2.83E-03
512153	11/19/2019 - 11/25/2019	Beta	2.42E-02	3.44E-03	3.37E-03
512457	11/25/2019 - 12/3/2019	Beta	1.87E-02	2.74E-03	2.89E-03
512633	12/3/2019 - 12/10/2019	Beta	2.04E-02	2.77E-03	2.84E-03
513597	12/10/2019 - 12/17/2019	Beta	1.76E-02	2.82E-03	2.98E-03
513913	12/17/2019 - 12/23/2019	Beta	2.47E-02	3.47E-03	3.46E-03

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 212 [INDICATOR - E @ 3.32 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514137	12/23/2019 - 12/31/2019	Beta	2.54E-02	2.79E-03	2.63E-03
514439	10/1/2019 - 12/31/2019	Cs-134	<1.49E-03	0.00E+00	1.49E-03
		Cs-137	<1.23E-03	0.00E+00	1.23E-03
		Be-7	1.52E-01	3.66E-02	2.99E-02
		K-40	<1.26E-02	0.00E+00	1.26E-02
Sample Point 258 [CONTROL - W @ 9.84 miles]					
492181	1/2/2019 - 1/8/2019	Beta	1.28E-02	3.12E-03	4.07E-03
492455	1/8/2019 - 1/15/2019	Beta	1.53E-02	2.48E-03	2.73E-03
492865	1/15/2019 - 1/22/2019	Beta	1.92E-02	3.13E-03	3.54E-03
493288	1/22/2019 - 1/29/2019	Beta	2.22E-02	3.19E-03	3.28E-03
493550	1/29/2019 - 2/5/2019	Beta	2.52E-02	3.28E-03	3.16E-03
493776	2/5/2019 - 2/12/2019	Beta	2.04E-02	2.72E-03	2.73E-03
494322	2/12/2019 - 2/19/2019	Beta	1.45E-02	2.77E-03	3.24E-03
494938	2/19/2019 - 2/26/2019	Beta	9.34E-03	2.55E-03	3.42E-03
495382	2/26/2019 - 3/5/2019	Beta	1.43E-02	2.74E-03	3.24E-03
496264	3/5/2019 - 3/12/2019	Beta	1.97E-02	3.01E-03	3.11E-03
496805	3/12/2019 - 3/19/2019	Beta	2.03E-02	3.09E-03	3.27E-03
496710	3/19/2019 - 3/26/2019	Beta	2.16E-02	3.11E-03	3.22E-03
497115	3/26/2019 - 4/2/2019	Beta	1.59E-02	2.83E-03	3.17E-03
497524	1/2/2019 - 4/2/2019	Cs-134	<1.98E-03	0.00E+00	1.98E-03
		Cs-137	<1.84E-03	0.00E+00	1.84E-03
		Be-7	1.61E-01	4.41E-02	4.18E-02
		K-40	<3.21E-02	0.00E+00	3.21E-02
497518	4/2/2019 - 4/9/2019	Beta	1.85E-02	3.10E-03	3.53E-03
498001	4/9/2019 - 4/16/2019	Beta	9.37E-03	2.14E-03	2.68E-03
498581	4/16/2019 - 4/23/2019	Beta	1.13E-02	2.55E-03	3.17E-03
498754	4/23/2019 - 4/30/2019	Beta	2.44E-02	3.22E-03	3.16E-03
499430	4/30/2019 - 5/7/2019	Beta	1.40E-02	2.79E-03	3.37E-03

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 258 [CONTROL - W @ 9.84 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
499852	5/7/2019 - 5/14/2019	Beta	1.09E-02	2.56E-03	3.27E-03
500097	5/14/2019 - 5/21/2019	Beta	2.65E-02	3.44E-03	3.43E-03
500430	5/21/2019 - 5/28/2019	Beta	2.67E-02	3.29E-03	3.12E-03
500714	5/28/2019 - 6/4/2019	Beta	2.35E-02	3.36E-03	3.62E-03
501105	6/4/2019 - 6/11/2019	Beta	1.97E-02	2.91E-03	2.82E-03
501919	6/11/2019 - 6/18/2019	Beta	1.94E-02	3.05E-03	3.30E-03
502179	6/18/2019 - 6/25/2019	Beta	1.41E-02	2.73E-03	3.22E-03
502390	6/25/2019 - 7/2/2019	Beta	2.82E-02	3.48E-03	3.40E-03
503367	4/2/2019 - 7/2/2019	Cs-134	<1.77E-03	0.00E+00	1.77E-03
		Cs-137	<1.12E-03	0.00E+00	1.12E-03
		Be-7	1.65E-01	3.86E-02	2.78E-02
		K-40	<2.74E-02	0.00E+00	2.74E-02
503361	7/2/2019 - 7/9/2019	Beta	3.00E-02	3.56E-03	3.36E-03
503810	7/9/2019 - 7/16/2019	Beta	1.73E-02	2.90E-03	3.18E-03
504170	7/16/2019 - 7/23/2019	Beta	2.11E-02	3.10E-03	3.22E-03
504419	7/23/2019 - 7/30/2019	Beta	2.56E-02	3.00E-03	2.87E-03
504629	7/30/2019 - 8/6/2019	Beta	2.36E-02	3.26E-03	3.37E-03
504905	8/6/2019 - 8/13/2019	Beta	3.62E-02	3.83E-03	3.41E-03
505114	8/13/2019 - 8/20/2019	Beta	3.07E-02	3.68E-03	3.60E-03
505509	8/20/2019 - 8/27/2019	Beta	1.67E-02	2.56E-03	2.77E-03
505835	8/27/2019 - 9/3/2019	Beta	2.46E-02	2.91E-03	2.84E-03
506346	9/3/2019 - 9/10/2019	Beta	3.94E-02	3.55E-03	2.84E-03
507259	9/10/2019 - 9/17/2019	Beta	4.63E-02	4.20E-03	3.35E-03
507799	9/17/2019 - 9/24/2019	Beta	3.24E-02	3.18E-03	2.56E-03
508333	9/24/2019 - 10/1/2019	Beta	3.56E-02	3.74E-03	3.28E-03
509201	7/2/2019 - 10/1/2019	Cs-134	<9.91E-04	0.00E+00	9.91E-04
		Cs-137	<2.99E-04	0.00E+00	2.99E-04

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 258 [CONTROL - W @ 9.84 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
509201	7/2/2019 - 10/1/2019	Be-7	2.40E-01	4.39E-02	1.62E-02
		K-40	1.21E-02	9.99E-03	1.14E-02
509195	10/1/2019 - 10/8/2019	Beta	3.45E-02	3.30E-03	2.75E-03
509803	10/8/2019 - 10/15/2019	Beta	2.67E-02	3.37E-03	3.20E-03
510504	10/15/2019 - 10/22/2019	Beta	1.71E-02	3.05E-03	3.59E-03
510802	10/22/2019 - 10/29/2019	Beta	1.75E-02	2.88E-03	3.19E-03
511207	10/29/2019 - 11/5/2019	Beta	2.14E-02	2.98E-03	2.86E-03
511439	11/5/2019 - 11/12/2019	Beta	3.04E-02	3.58E-03	3.34E-03
511848	11/12/2019 - 11/19/2019	Beta	1.91E-02	2.69E-03	2.84E-03
512154	11/19/2019 - 11/25/2019	Beta	2.02E-02	3.23E-03	3.37E-03
512458	11/25/2019 - 12/3/2019	Beta	1.60E-02	2.63E-03	2.91E-03
512634	12/3/2019 - 12/10/2019	Beta	1.63E-02	2.56E-03	2.82E-03
513598	12/10/2019 - 12/17/2019	Beta	1.75E-02	2.81E-03	2.98E-03
513914	12/17/2019 - 12/23/2019	Beta	2.15E-02	3.31E-03	3.46E-03
514138	12/23/2019 - 12/31/2019	Beta	2.32E-02	2.71E-03	2.63E-03
514440	10/1/2019 - 12/31/2019	Cs-134	<1.08E-03	0.00E+00	1.08E-03
		Cs-137	<1.30E-03	0.00E+00	1.30E-03
		Be-7	1.45E-01	3.90E-02	3.86E-02
		K-40	<3.04E-02	0.00E+00	3.04E-02

Sample Point 261 [INDICATOR - N @ 0.72 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492182	1/2/2019 - 1/8/2019	Beta	1.88E-02	3.48E-03	4.07E-03
492456	1/8/2019 - 1/15/2019	Beta	2.24E-02	2.82E-03	2.73E-03
492866	1/15/2019 - 1/22/2019	Beta	1.86E-02	3.11E-03	3.54E-03
493289	1/22/2019 - 1/29/2019	Beta	1.83E-02	2.99E-03	3.27E-03
493551	1/29/2019 - 2/5/2019	Beta	2.96E-02	3.48E-03	3.16E-03
493777	2/5/2019 - 2/12/2019	Beta	2.49E-02	2.93E-03	2.73E-03
494323	2/12/2019 - 2/19/2019	Beta	1.84E-02	2.96E-03	3.21E-03

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 261 [INDICATOR - N @ 0.72 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
494939	2/19/2019 - 2/26/2019	Beta	1.18E-02	2.69E-03	3.41E-03
495383	2/26/2019 - 3/5/2019	Beta	1.58E-02	2.82E-03	3.24E-03
496268	3/5/2019 - 3/12/2019	Beta	2.23E-02	3.14E-03	3.12E-03
496806	3/12/2019 - 3/19/2019	Beta	2.44E-02	3.29E-03	3.26E-03
496711	3/19/2019 - 3/26/2019	Beta	2.26E-02	3.15E-03	3.22E-03
497116	3/26/2019 - 4/2/2019	Beta	1.82E-02	2.94E-03	3.16E-03
497525	1/2/2019 - 4/2/2019	Cs-134	<1.30E-03	0.00E+00	1.30E-03
		Cs-137	<1.59E-03	0.00E+00	1.59E-03
		Be-7	1.75E-01	4.35E-02	3.85E-02
		K-40	2.01E-02	1.70E-02	2.48E-02
497519	4/2/2019 - 4/9/2019	Beta	1.91E-02	3.15E-03	3.55E-03
498002	4/9/2019 - 4/16/2019	Beta	1.10E-02	2.24E-03	2.68E-03
498582	4/16/2019 - 4/23/2019	Beta	1.28E-02	2.64E-03	3.17E-03
498755	4/23/2019 - 4/30/2019	Beta	2.05E-02	3.04E-03	3.17E-03
499431	4/30/2019 - 5/7/2019	Beta	1.58E-02	2.86E-03	3.33E-03
499853	5/7/2019 - 5/14/2019	Beta	1.50E-02	2.81E-03	3.29E-03
500098	5/14/2019 - 5/21/2019	Beta	2.67E-02	3.45E-03	3.43E-03
500431	5/21/2019 - 5/28/2019	Beta	2.65E-02	3.28E-03	3.13E-03
500715	5/28/2019 - 6/4/2019	Beta	2.29E-02	3.32E-03	3.59E-03
501106	6/4/2019 - 6/11/2019	Beta	1.85E-02	2.86E-03	2.85E-03
501920	6/11/2019 - 6/18/2019	Beta	2.02E-02	3.07E-03	3.27E-03
502180	6/18/2019 - 6/25/2019	Beta	1.55E-02	2.81E-03	3.24E-03
502391	6/25/2019 - 7/2/2019	Beta	2.75E-02	3.44E-03	3.40E-03
503368	4/2/2019 - 7/2/2019	Cs-134	<1.49E-03	0.00E+00	1.49E-03
		Cs-137	<8.39E-04	0.00E+00	8.39E-04
		Be-7	2.14E-01	4.38E-02	3.03E-02
		K-40	<2.57E-02	0.00E+00	2.57E-02
503362	7/2/2019 - 7/9/2019	Beta	3.12E-02	3.63E-03	3.37E-03

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 261 [INDICATOR - N @ 0.72 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
503811	7/9/2019 - 7/16/2019	Beta	1.89E-02	2.98E-03	3.16E-03
504171	7/16/2019 - 7/23/2019	Beta	1.95E-02	3.03E-03	3.22E-03
504420	7/23/2019 - 7/30/2019	Beta	2.06E-02	2.77E-03	2.86E-03
504630	7/30/2019 - 8/6/2019	Beta	2.38E-02	3.27E-03	3.38E-03
504906	8/6/2019 - 8/13/2019	Beta	3.33E-02	3.71E-03	3.41E-03
505115	8/13/2019 - 8/20/2019	Beta	2.99E-02	3.67E-03	3.62E-03
505510	8/20/2019 - 8/27/2019	Beta	1.39E-02	2.41E-03	2.77E-03
505836	8/27/2019 - 9/3/2019	Beta	2.52E-02	2.93E-03	2.83E-03
506347	9/3/2019 - 9/10/2019	Beta	3.92E-02	3.53E-03	2.83E-03
507260	9/10/2019 - 9/17/2019	Beta	4.27E-02	4.07E-03	3.35E-03
507800	9/17/2019 - 9/24/2019	Beta	2.86E-02	3.03E-03	2.57E-03
508334	9/24/2019 - 10/1/2019	Beta	3.09E-02	3.55E-03	3.28E-03
509202	7/2/2019 - 10/1/2019	Cs-134	<1.49E-03	0.00E+00	1.49E-03
		Cs-137	<1.23E-03	0.00E+00	1.23E-03
		Be-7	1.94E-01	4.10E-02	2.68E-02
		K-40	<2.05E-02	0.00E+00	2.05E-02
509196	10/1/2019 - 10/8/2019	Beta	2.90E-02	3.09E-03	2.75E-03
509804	10/8/2019 - 10/15/2019	Beta	2.56E-02	3.32E-03	3.21E-03
510505	10/15/2019 - 10/22/2019	Beta	1.72E-02	3.06E-03	3.59E-03
510803	10/22/2019 - 10/29/2019	Beta	1.96E-02	2.99E-03	3.19E-03
511208	10/29/2019 - 11/5/2019	Beta	2.14E-02	2.96E-03	2.83E-03
511440	11/5/2019 - 11/12/2019	Beta	3.55E-02	3.81E-03	3.37E-03
511849	11/12/2019 - 11/19/2019	Beta	1.87E-02	2.68E-03	2.84E-03
512155	11/19/2019 - 11/25/2019	Beta	2.46E-02	3.46E-03	3.37E-03
512459	11/25/2019 - 12/3/2019	Beta	1.98E-02	2.80E-03	2.90E-03
512635	12/3/2019 - 12/10/2019	Beta	1.63E-02	2.57E-03	2.84E-03

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 261 [INDICATOR - N @ 0.72 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
513599	12/10/2019 - 12/17/2019	Beta	1.61E-02	2.75E-03	2.98E-03
513915	12/17/2019 - 12/23/2019	Beta	2.51E-02	3.49E-03	3.46E-03
514139	12/23/2019 - 12/31/2019	Beta	2.32E-02	2.71E-03	2.63E-03
514441	10/1/2019 - 12/31/2019	Cs-134	<3.75E-04	0.00E+00	3.75E-04
		Cs-137	<8.38E-04	0.00E+00	8.38E-04
		Be-7	1.54E-01	3.74E-02	3.18E-02
		K-40	<1.59E-02	0.00E+00	1.59E-02

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 200 [INDICATOR - NNE @ 0.63 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492183	1/2/2019 - 1/8/2019	I-131	<2.49E-02	0.00E+00	2.49E-02
		Cs-134	<2.16E-02	0.00E+00	2.16E-02
		Cs-137	<1.58E-02	0.00E+00	1.58E-02
		Be-7	<1.29E-01	0.00E+00	1.29E-01
		K-40	4.95E-01	2.38E-01	3.04E-01
492445	1/8/2019 - 1/15/2019	I-131	<2.04E-02	0.00E+00	2.04E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.49E-02	0.00E+00	1.49E-02
		Be-7	<1.38E-01	0.00E+00	1.38E-01
		K-40	5.33E-01	1.79E-01	1.22E-01
492867	1/15/2019 - 1/22/2019	I-131	<2.18E-02	0.00E+00	2.18E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.79E-02	0.00E+00	1.79E-02
		Be-7	<1.31E-01	0.00E+00	1.31E-01
		K-40	4.43E-01	1.63E-01	1.18E-01
493290	1/22/2019 - 1/29/2019	I-131	<2.29E-02	0.00E+00	2.29E-02
		Cs-134	<2.10E-02	0.00E+00	2.10E-02
		Cs-137	<2.13E-02	0.00E+00	2.13E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	4.64E-01	1.93E-01	2.14E-01
493552	1/29/2019 - 2/5/2019	I-131	<1.89E-02	0.00E+00	1.89E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.78E-02	0.00E+00	1.78E-02
		Be-7	<1.31E-01	0.00E+00	1.31E-01
		K-40	3.88E-01	1.58E-01	1.42E-01
493778	2/5/2019 - 2/12/2019	I-131	<2.19E-02	0.00E+00	2.19E-02
		Cs-134	<1.98E-02	0.00E+00	1.98E-02
		Cs-137	<1.96E-02	0.00E+00	1.96E-02
		Be-7	<1.36E-01	0.00E+00	1.36E-01
		K-40	7.00E-01	2.10E-01	1.54E-01
494324	2/12/2019 - 2/19/2019	I-131	<2.17E-02	0.00E+00	2.17E-02
		Cs-134	<2.09E-02	0.00E+00	2.09E-02
		Cs-137	<1.42E-02	0.00E+00	1.42E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	4.53E-01	1.88E-01	2.06E-01
494940	2/19/2019 - 2/26/2019	I-131	<2.09E-02	0.00E+00	2.09E-02

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 200 [INDICATOR - NNE @ 0.63 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494940	2/19/2019 - 2/26/2019	Cs-134	<2.16E-02	0.00E+00	2.16E-02
		Cs-137	<1.37E-02	0.00E+00	1.37E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	3.49E-01	1.89E-01	2.49E-01
495384	2/26/2019 - 3/5/2019	I-131	<1.99E-02	0.00E+00	1.99E-02
		Cs-134	<1.51E-02	0.00E+00	1.51E-02
		Cs-137	<1.53E-02	0.00E+00	1.53E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	6.53E-01	1.99E-01	1.32E-01
496272	3/5/2019 - 3/12/2019	I-131	<2.42E-02	0.00E+00	2.42E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.65E-02	0.00E+00	1.65E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	3.78E-01	1.80E-01	2.16E-01
496807	3/12/2019 - 3/19/2019	I-131	<1.95E-02	0.00E+00	1.95E-02
		Cs-134	<1.85E-02	0.00E+00	1.85E-02
		Cs-137	<1.22E-02	0.00E+00	1.22E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	4.73E-01	1.97E-01	2.24E-01
496625	3/19/2019 - 3/26/2019	I-131	<2.21E-02	0.00E+00	2.21E-02
		Cs-134	<1.87E-02	0.00E+00	1.87E-02
		Cs-137	<2.04E-02	0.00E+00	2.04E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	4.35E-01	1.71E-01	1.58E-01
497117	3/26/2019 - 4/2/2019	I-131	<2.10E-02	0.00E+00	2.10E-02
		Cs-134	<2.03E-02	0.00E+00	2.03E-02
		Cs-137	<1.47E-02	0.00E+00	1.47E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	5.18E-01	1.85E-01	1.64E-01
497526	4/2/2019 - 4/9/2019	I-131	<2.00E-02	0.00E+00	2.00E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<2.02E-02	0.00E+00	2.02E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	3.68E-01	2.00E-01	2.68E-01
498003	4/9/2019 - 4/16/2019	I-131	<1.98E-02	0.00E+00	1.98E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02
		Cs-137	<1.87E-02	0.00E+00	1.87E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	<3.39E-01	0.00E+00	3.39E-01
498583	4/16/2019 - 4/23/2019	I-131	<2.19E-02	0.00E+00	2.19E-02
		Cs-134	<1.66E-02	0.00E+00	1.66E-02
		Cs-137	<1.64E-02	0.00E+00	1.64E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	<3.93E-01	0.00E+00	3.93E-01
498756	4/23/2019 - 4/30/2019	I-131	<2.12E-02	0.00E+00	2.12E-02
		Cs-134	<1.87E-02	0.00E+00	1.87E-02
		Cs-137	<1.65E-02	0.00E+00	1.65E-02
		Be-7	<9.67E-02	0.00E+00	9.67E-02
		K-40	4.45E-01	1.95E-01	2.28E-01

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 200 [INDICATOR - NNE @ 0.63 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
499432	4/30/2019 - 5/7/2019	I-131	<2.11E-02	0.00E+00	2.11E-02
		Cs-134	<2.02E-02	0.00E+00	2.02E-02
		Cs-137	<1.58E-02	0.00E+00	1.58E-02
		Be-7	<9.66E-02	0.00E+00	9.66E-02
		K-40	4.88E-01	1.82E-01	1.70E-01
499854	5/7/2019 - 5/14/2019	I-131	<1.95E-02	0.00E+00	1.95E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.48E-02	0.00E+00	1.48E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	4.89E-01	2.06E-01	2.41E-01
500099	5/14/2019 - 5/21/2019	I-131	<1.69E-02	0.00E+00	1.69E-02
		Cs-134	<1.66E-02	0.00E+00	1.66E-02
		Cs-137	<1.87E-02	0.00E+00	1.87E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	5.13E-01	1.89E-01	1.82E-01
500432	5/21/2019 - 5/28/2019	I-131	<2.44E-02	0.00E+00	2.44E-02
		Cs-134	<1.83E-02	0.00E+00	1.83E-02
		Cs-137	<1.75E-02	0.00E+00	1.75E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	5.43E-01	2.05E-01	2.22E-01
500716	5/28/2019 - 6/4/2019	I-131	<2.08E-02	0.00E+00	2.08E-02
		Cs-134	<2.08E-02	0.00E+00	2.08E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<1.29E-01	0.00E+00	1.29E-01
		K-40	5.33E-01	2.07E-01	2.25E-01
501107	6/4/2019 - 6/11/2019	I-131	<1.90E-02	0.00E+00	1.90E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.75E-02	0.00E+00	1.75E-02
		Be-7	<1.43E-01	0.00E+00	1.43E-01
		K-40	5.55E-01	2.02E-01	2.01E-01
501921	6/11/2019 - 6/18/2019	I-131	<2.28E-02	0.00E+00	2.28E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<2.09E-02	0.00E+00	2.09E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	4.86E-01	2.09E-01	2.53E-01
502181	6/18/2019 - 6/25/2019	I-131	<1.54E-02	0.00E+00	1.54E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<9.36E-02	0.00E+00	9.36E-02
		K-40	<3.21E-01	0.00E+00	3.21E-01
502392	6/25/2019 - 7/2/2019	I-131	<2.00E-02	0.00E+00	2.00E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.94E-02	0.00E+00	1.94E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	5.36E-01	2.19E-01	2.59E-01
503369	7/2/2019 - 7/9/2019	I-131	<2.02E-02	0.00E+00	2.02E-02
		Cs-134	<1.86E-02	0.00E+00	1.86E-02
		Cs-137	<1.64E-02	0.00E+00	1.64E-02
		Be-7	<1.27E-01	0.00E+00	1.27E-01
		K-40	6.57E-01	2.08E-01	1.73E-01

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 200 [INDICATOR - NNE @ 0.63 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
503812	7/9/2019 - 7/16/2019	I-131	<2.44E-02	0.00E+00	2.44E-02
		Cs-134	<2.19E-02	0.00E+00	2.19E-02
		Cs-137	<1.96E-02	0.00E+00	1.96E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	6.27E-01	2.25E-01	2.43E-01
504172	7/16/2019 - 7/23/2019	I-131	<2.14E-02	0.00E+00	2.14E-02
		Cs-134	<1.02E-02	0.00E+00	1.02E-02
		Cs-137	<1.63E-02	0.00E+00	1.63E-02
		Be-7	<1.41E-01	0.00E+00	1.41E-01
		K-40	4.66E-01	2.06E-01	2.51E-01
504421	7/23/2019 - 7/30/2019	I-131	<3.42E-02	0.00E+00	3.42E-02
		Cs-134	<1.84E-02	0.00E+00	1.84E-02
		Cs-137	<1.51E-02	0.00E+00	1.51E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	4.29E-01	1.76E-01	1.85E-01
504631	7/30/2019 - 8/6/2019	I-131	<1.91E-02	0.00E+00	1.91E-02
		Cs-134	<8.61E-03	0.00E+00	8.61E-03
		Cs-137	<9.12E-03	0.00E+00	9.12E-03
		Be-7	<8.93E-02	0.00E+00	8.93E-02
		K-40	4.79E-01	1.21E-01	1.28E-01
504907	8/6/2019 - 8/13/2019	I-131	<1.35E-02	0.00E+00	1.35E-02
		Cs-134	<1.51E-02	0.00E+00	1.51E-02
		Cs-137	<1.30E-02	0.00E+00	1.30E-02
		Be-7	<8.80E-02	0.00E+00	8.80E-02
		K-40	2.58E-01	1.32E-01	1.43E-01
505116	8/13/2019 - 8/20/2019	I-131	<1.44E-02	0.00E+00	1.44E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.18E-02	0.00E+00	1.18E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	<2.85E-01	0.00E+00	2.85E-01
505511	8/20/2019 - 8/27/2019	I-131	<2.09E-02	0.00E+00	2.09E-02
		Cs-134	<2.29E-02	0.00E+00	2.29E-02
		Cs-137	<1.78E-02	0.00E+00	1.78E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	3.10E-01	1.72E-01	2.23E-01
505837	8/27/2019 - 9/3/2019	I-131	<1.99E-02	0.00E+00	1.99E-02
		Cs-134	<1.77E-02	0.00E+00	1.77E-02
		Cs-137	<1.93E-02	0.00E+00	1.93E-02
		Be-7	<1.60E-01	0.00E+00	1.60E-01
		K-40	4.81E-01	1.95E-01	2.20E-01
506348	9/3/2019 - 9/10/2019	I-131	<1.57E-02	0.00E+00	1.57E-02
		Cs-134	<1.64E-02	0.00E+00	1.64E-02
		Cs-137	<1.35E-02	0.00E+00	1.35E-02
		Be-7	<9.38E-02	0.00E+00	9.38E-02
		K-40	4.87E-01	1.71E-01	1.25E-01
507261	9/10/2019 - 9/17/2019	I-131	<2.01E-02	0.00E+00	2.01E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-02
		Cs-137	<1.62E-02	0.00E+00	1.62E-02
		Be-7	<1.34E-01	0.00E+00	1.34E-01
		K-40	4.10E-01	1.75E-01	1.88E-01

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 200 [INDICATOR - NNE @ 0.63 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
507801	9/17/2019 - 9/24/2019	I-131	<1.96E-02	0.00E+00	1.96E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-02
		Cs-137	<1.51E-02	0.00E+00	1.51E-02
		Be-7	<1.62E-01	0.00E+00	1.62E-01
		K-40	3.70E-01	1.72E-01	1.98E-01
508335	9/24/2019 - 10/1/2019	I-131	<1.81E-02	0.00E+00	1.81E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.87E-02	0.00E+00	1.87E-02
		Be-7	<1.29E-01	0.00E+00	1.29E-01
		K-40	5.50E-01	1.99E-01	1.97E-01
509203	10/1/2019 - 10/8/2019	I-131	<2.20E-02	0.00E+00	2.20E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.43E-02	0.00E+00	1.43E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	<3.56E-01	0.00E+00	3.56E-01
509805	10/8/2019 - 10/15/2019	I-131	<1.46E-02	0.00E+00	1.46E-02
		Cs-134	<1.13E-02	0.00E+00	1.13E-02
		Cs-137	<1.07E-02	0.00E+00	1.07E-02
		Be-7	<8.03E-02	0.00E+00	8.03E-02
		K-40	3.33E-01	1.44E-01	1.35E-01
510506	10/15/2019 - 10/22/2019	I-131	<1.59E-02	0.00E+00	1.59E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-02
		Cs-137	<1.09E-02	0.00E+00	1.09E-02
		Be-7	<9.95E-02	0.00E+00	9.95E-02
		K-40	<3.20E-01	0.00E+00	3.20E-01
510804	10/22/2019 - 10/29/2019	I-131	<1.82E-02	0.00E+00	1.82E-02
		Cs-134	<1.88E-02	0.00E+00	1.88E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<1.61E-01	0.00E+00	1.61E-01
		K-40	7.22E-01	2.23E-01	1.95E-01
511209	10/29/2019 - 11/5/2019	I-131	<2.08E-02	0.00E+00	2.08E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	3.92E-01	1.75E-01	1.98E-01
511441	11/5/2019 - 11/12/2019	I-131	<1.87E-02	0.00E+00	1.87E-02
		Cs-134	<1.28E-02	0.00E+00	1.28E-02
		Cs-137	<1.70E-02	0.00E+00	1.70E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	6.09E-01	2.15E-01	2.23E-01
511850	11/12/2019 - 11/19/2019	I-131	<2.32E-02	0.00E+00	2.32E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.17E-02	0.00E+00	1.17E-02
		Be-7	<1.52E-01	0.00E+00	1.52E-01
		K-40	5.81E-01	1.97E-01	1.71E-01
512156	11/19/2019 - 11/25/2019	I-131	<2.35E-02	0.00E+00	2.35E-02
		Cs-134	<1.99E-02	0.00E+00	1.99E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02
		Be-7	<1.62E-01	0.00E+00	1.62E-01
		K-40	4.84E-01	2.11E-01	2.41E-01

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 200 [INDICATOR - NNE @ 0.63 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512460	11/25/2019 - 12/3/2019	I-131	<1.45E-02	0.00E+00	1.45E-02
		Cs-134	<1.28E-02	0.00E+00	1.28E-02
		Cs-137	<1.34E-02	0.00E+00	1.34E-02
		Be-7	<9.44E-02	0.00E+00	9.44E-02
		K-40	2.82E-01	1.48E-01	1.85E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512636	12/3/2019 - 12/10/2019	I-131	<2.06E-02	0.00E+00	2.06E-02
		Cs-134	<1.83E-02	0.00E+00	1.83E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<1.41E-01	0.00E+00	1.41E-01
		K-40	5.83E-01	2.17E-01	2.36E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
513600	12/10/2019 - 12/17/2019	I-131	<1.99E-02	0.00E+00	1.99E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-02
		Cs-137	<1.68E-02	0.00E+00	1.68E-02
		Be-7	<1.48E-01	0.00E+00	1.48E-01
		K-40	5.67E-01	1.99E-01	1.86E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
513916	12/17/2019 - 12/23/2019	I-131	<2.53E-02	0.00E+00	2.53E-02
		Cs-134	<2.28E-02	0.00E+00	2.28E-02
		Cs-137	<1.77E-02	0.00E+00	1.77E-02
		Be-7	<1.41E-01	0.00E+00	1.41E-01
		K-40	7.93E-01	2.76E-01	3.06E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514140	12/23/2019 - 12/31/2019	I-131	<1.86E-02	0.00E+00	1.86E-02
		Cs-134	<1.39E-02	0.00E+00	1.39E-02
		Cs-137	<9.02E-03	0.00E+00	9.02E-03
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	3.38E-01	1.41E-01	1.35E-01

Sample Point 201 [INDICATOR - NE @ 0.53 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492184	1/2/2019 - 1/8/2019	I-131	<2.39E-02	0.00E+00	2.39E-02
		Cs-134	<2.22E-02	0.00E+00	2.22E-02
		Cs-137	<2.27E-02	0.00E+00	2.27E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	6.38E-01	2.14E-01	1.59E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492446	1/8/2019 - 1/15/2019	I-131	<2.12E-02	0.00E+00	2.12E-02
		Cs-134	<1.26E-02	0.00E+00	1.26E-02
		Cs-137	<1.70E-02	0.00E+00	1.70E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	5.81E-01	1.88E-01	1.30E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492868	1/15/2019 - 1/22/2019	I-131	<1.92E-02	0.00E+00	1.92E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.48E-02	0.00E+00	1.48E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	4.21E-01	1.69E-01	1.63E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493291	1/22/2019 - 1/29/2019	I-131	<2.34E-02	0.00E+00	2.34E-02
		Cs-134	<2.05E-02	0.00E+00	2.05E-02
		Cs-137	<1.37E-02	0.00E+00	1.37E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	5.12E-01	1.82E-01	1.50E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493553	1/29/2019 - 2/5/2019	I-131	<2.20E-02	0.00E+00	2.20E-02
		Cs-134	<1.14E-02	0.00E+00	1.14E-02
		Cs-137	<1.87E-02	0.00E+00	1.87E-02

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 201 [INDICATOR - NE @ 0.53 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493553	1/29/2019 - 2/5/2019	Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	5.54E-01	1.91E-01	1.64E-01
493779	2/5/2019 - 2/12/2019	I-131	<2.75E-02	0.00E+00	2.75E-02
		Cs-134	<1.80E-02	0.00E+00	1.80E-02
		Cs-137	<2.33E-02	0.00E+00	2.33E-02
		Be-7	<9.46E-02	0.00E+00	9.46E-02
		K-40	5.17E-01	1.76E-01	1.24E-01
494325	2/12/2019 - 2/19/2019	I-131	<1.94E-02	0.00E+00	1.94E-02
		Cs-134	<1.66E-02	0.00E+00	1.66E-02
		Cs-137	<1.96E-02	0.00E+00	1.96E-02
		Be-7	<8.92E-02	0.00E+00	8.92E-02
		K-40	5.50E-01	2.07E-01	2.21E-01
494941	2/19/2019 - 2/26/2019	I-131	<2.24E-02	0.00E+00	2.24E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	5.25E-01	1.84E-01	1.53E-01
495385	2/26/2019 - 3/5/2019	I-131	<1.82E-02	0.00E+00	1.82E-02
		Cs-134	<1.79E-02	0.00E+00	1.79E-02
		Cs-137	<1.78E-02	0.00E+00	1.78E-02
		Be-7	<9.66E-02	0.00E+00	9.66E-02
		K-40	5.55E-01	1.81E-01	1.17E-01
496275	3/5/2019 - 3/12/2019	I-131	<2.11E-02	0.00E+00	2.11E-02
		Cs-134	<2.05E-02	0.00E+00	2.05E-02
		Cs-137	<1.75E-02	0.00E+00	1.75E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	4.96E-01	2.29E-01	2.97E-01
496808	3/12/2019 - 3/19/2019	I-131	<2.06E-02	0.00E+00	2.06E-02
		Cs-134	<1.79E-02	0.00E+00	1.79E-02
		Cs-137	<1.68E-02	0.00E+00	1.68E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	5.12E-01	1.77E-01	1.34E-01
496626	3/19/2019 - 3/26/2019	I-131	<2.06E-02	0.00E+00	2.06E-02
		Cs-134	<1.93E-02	0.00E+00	1.93E-02
		Cs-137	<1.79E-02	0.00E+00	1.79E-02
		Be-7	<1.36E-01	0.00E+00	1.36E-01
		K-40	3.00E-01	1.53E-01	1.78E-01
497118	3/26/2019 - 4/2/2019	I-131	<1.84E-02	0.00E+00	1.84E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.64E-02	0.00E+00	1.64E-02
		Be-7	<1.39E-01	0.00E+00	1.39E-01
		K-40	5.17E-01	1.97E-01	2.05E-01
497527	4/2/2019 - 4/9/2019	I-131	<2.37E-02	0.00E+00	2.37E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.75E-02	0.00E+00	1.75E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	4.87E-01	2.07E-01	2.45E-01
498004	4/9/2019 - 4/16/2019	Nuclide	Activity	2 Sigma Error	MDA
		I-131	<2.25E-02	0.00E+00	2.25E-02

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 201 [INDICATOR - NE @ 0.53 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
498004	4/9/2019 - 4/16/2019	Cs-134	<2.09E-02	0.00E+00	2.09E-02
		Cs-137	<1.64E-02	0.00E+00	1.64E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	6.14E-01	2.04E-01	1.81E-01
498584	4/16/2019 - 4/23/2019	I-131	<2.24E-02	0.00E+00	2.24E-02
		Cs-134	<1.80E-02	0.00E+00	1.80E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	<3.98E-01	0.00E+00	3.98E-01
498757	4/23/2019 - 4/30/2019	I-131	<2.10E-02	0.00E+00	2.10E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.37E-02	0.00E+00	1.37E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	5.62E-01	1.92E-01	1.61E-01
499433	4/30/2019 - 5/7/2019	I-131	<2.20E-02	0.00E+00	2.20E-02
		Cs-134	<1.79E-02	0.00E+00	1.79E-02
		Cs-137	<1.53E-02	0.00E+00	1.53E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	4.55E-01	1.94E-01	2.23E-01
499855	5/7/2019 - 5/14/2019	I-131	<2.20E-02	0.00E+00	2.20E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.74E-02	0.00E+00	1.74E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	<3.73E-01	0.00E+00	3.73E-01
500100	5/14/2019 - 5/21/2019	I-131	<1.71E-02	0.00E+00	1.71E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.83E-02	0.00E+00	1.83E-02
		Be-7	<1.44E-01	0.00E+00	1.44E-01
		K-40	4.39E-01	2.26E-01	3.08E-01
500433	5/21/2019 - 5/28/2019	I-131	<2.57E-02	0.00E+00	2.57E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.33E-02	0.00E+00	1.33E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	4.86E-01	1.95E-01	2.15E-01
500717	5/28/2019 - 6/4/2019	I-131	<2.03E-02	0.00E+00	2.03E-02
		Cs-134	<1.97E-02	0.00E+00	1.97E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<1.38E-01	0.00E+00	1.38E-01
		K-40	6.34E-01	2.17E-01	2.11E-01
501108	6/4/2019 - 6/11/2019	I-131	<2.22E-02	0.00E+00	2.22E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.74E-02	0.00E+00	1.74E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	6.16E-01	1.84E-01	3.48E-02
501922	6/11/2019 - 6/18/2019	I-131	<1.89E-02	0.00E+00	1.89E-02
		Cs-134	<1.51E-02	0.00E+00	1.51E-02
		Cs-137	<1.95E-02	0.00E+00	1.95E-02
		Be-7	<1.39E-01	0.00E+00	1.39E-01
		K-40	4.49E-01	1.78E-01	1.79E-01

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 201 [INDICATOR - NE @ 0.53 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
502182	6/18/2019 - 6/25/2019	I-131	<1.75E-02	0.00E+00	1.75E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-02
		Cs-137	<1.82E-02	0.00E+00	1.82E-02
		Be-7	<6.61E-02	0.00E+00	6.61E-02
		K-40	4.97E-01	1.62E-01	3.37E-02
502393	6/25/2019 - 7/2/2019	I-131	<2.10E-02	0.00E+00	2.10E-02
		Cs-134	<2.11E-02	0.00E+00	2.11E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	6.24E-01	2.15E-01	2.13E-01
503370	7/2/2019 - 7/9/2019	I-131	<1.62E-02	0.00E+00	1.62E-02
		Cs-134	<1.43E-02	0.00E+00	1.43E-02
		Cs-137	<1.15E-02	0.00E+00	1.15E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	4.64E-01	2.00E-01	2.36E-01
503813	7/9/2019 - 7/16/2019	I-131	<1.92E-02	0.00E+00	1.92E-02
		Cs-134	<2.10E-02	0.00E+00	2.10E-02
		Cs-137	<1.83E-02	0.00E+00	1.83E-02
		Be-7	<1.32E-01	0.00E+00	1.32E-01
		K-40	5.74E-01	1.91E-01	1.53E-01
504173	7/16/2019 - 7/23/2019	I-131	<2.12E-02	0.00E+00	2.12E-02
		Cs-134	<1.34E-02	0.00E+00	1.34E-02
		Cs-137	<1.58E-02	0.00E+00	1.58E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	6.33E-01	2.18E-01	2.20E-01
504422	7/23/2019 - 7/30/2019	I-131	<2.84E-02	0.00E+00	2.84E-02
		Cs-134	<1.56E-02	0.00E+00	1.56E-02
		Cs-137	<1.13E-02	0.00E+00	1.13E-02
		Be-7	<8.79E-02	0.00E+00	8.79E-02
		K-40	2.32E-01	1.31E-01	1.56E-01
504632	7/30/2019 - 8/6/2019	I-131	<1.67E-02	0.00E+00	1.67E-02
		Cs-134	<1.18E-02	0.00E+00	1.18E-02
		Cs-137	<1.35E-02	0.00E+00	1.35E-02
		Be-7	<9.56E-02	0.00E+00	9.56E-02
		K-40	<1.67E-01	0.00E+00	1.67E-01
504908	8/6/2019 - 8/13/2019	I-131	<1.86E-02	0.00E+00	1.86E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.18E-02	0.00E+00	1.18E-02
		Be-7	<8.49E-02	0.00E+00	8.49E-02
		K-40	1.66E-01	1.28E-01	1.81E-01
505117	8/13/2019 - 8/20/2019	I-131	<1.35E-02	0.00E+00	1.35E-02
		Cs-134	<1.47E-02	0.00E+00	1.47E-02
		Cs-137	<9.10E-03	0.00E+00	9.10E-03
		Be-7	<9.40E-02	0.00E+00	9.40E-02
		K-40	<3.44E-02	0.00E+00	3.44E-02
505512	8/20/2019 - 8/27/2019	I-131	<1.96E-02	0.00E+00	1.96E-02
		Cs-134	<1.37E-02	0.00E+00	1.37E-02
		Cs-137	<1.87E-02	0.00E+00	1.87E-02
		Be-7	<1.40E-01	0.00E+00	1.40E-01
		K-40	6.91E-01	2.10E-01	1.55E-01

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 201 [INDICATOR - NE @ 0.53 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
505838	8/27/2019 - 9/3/2019	I-131	<1.10E-02	0.00E+00	1.10E-02
		Cs-134	<1.50E-02	0.00E+00	1.50E-02
		Cs-137	<1.53E-02	0.00E+00	1.53E-02
		Be-7	<9.46E-02	0.00E+00	9.46E-02
		K-40	1.35E-01	1.37E-01	2.14E-01
506349	9/3/2019 - 9/10/2019	I-131	<1.74E-02	0.00E+00	1.74E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02
		Be-7	<9.19E-02	0.00E+00	9.19E-02
		K-40	2.37E-01	1.42E-01	1.81E-01
507262	9/10/2019 - 9/17/2019	I-131	<1.83E-02	0.00E+00	1.83E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.87E-02	0.00E+00	1.87E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	4.00E-01	1.54E-01	1.22E-01
507802	9/17/2019 - 9/24/2019	I-131	<1.74E-02	0.00E+00	1.74E-02
		Cs-134	<1.16E-02	0.00E+00	1.16E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<9.92E-02	0.00E+00	9.92E-02
		K-40	<3.88E-01	0.00E+00	3.88E-01
508336	9/24/2019 - 10/1/2019	I-131	<1.95E-02	0.00E+00	1.95E-02
		Cs-134	<1.80E-02	0.00E+00	1.80E-02
		Cs-137	<1.80E-02	0.00E+00	1.80E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	4.70E-01	1.87E-01	2.01E-01
509204	10/1/2019 - 10/8/2019	I-131	<2.15E-02	0.00E+00	2.15E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.62E-02	0.00E+00	1.62E-02
		Be-7	<1.39E-01	0.00E+00	1.39E-01
		K-40	5.07E-01	1.96E-01	2.06E-01
509806	10/8/2019 - 10/15/2019	I-131	<1.55E-02	0.00E+00	1.55E-02
		Cs-134	<8.91E-03	0.00E+00	8.91E-03
		Cs-137	<7.71E-03	0.00E+00	7.71E-03
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	2.42E-01	1.51E-01	2.01E-01
510507	10/15/2019 - 10/22/2019	I-131	<1.27E-02	0.00E+00	1.27E-02
		Cs-134	<1.28E-02	0.00E+00	1.28E-02
		Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<8.85E-02	0.00E+00	8.85E-02
		K-40	3.17E-01	1.59E-01	1.87E-01
510805	10/22/2019 - 10/29/2019	I-131	<1.64E-02	0.00E+00	1.64E-02
		Cs-134	<2.10E-02	0.00E+00	2.10E-02
		Cs-137	<1.17E-02	0.00E+00	1.17E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	8.05E-01	2.46E-01	2.48E-01
511210	10/29/2019 - 11/5/2019	I-131	<1.97E-02	0.00E+00	1.97E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	3.98E-01	1.90E-01	2.38E-01

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 201 [INDICATOR - NE @ 0.53 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511442	11/5/2019 - 11/12/2019	I-131	<1.72E-02	0.00E+00	1.72E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-02
		Cs-137	<1.01E-02	0.00E+00	1.01E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	4.80E-01	1.91E-01	2.05E-01
511851	11/12/2019 - 11/19/2019	I-131	<1.42E-02	0.00E+00	1.42E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	5.31E-01	2.18E-01	2.63E-01
512157	11/19/2019 - 11/25/2019	I-131	<1.73E-02	0.00E+00	1.73E-02
		Cs-134	<2.06E-02	0.00E+00	2.06E-02
		Cs-137	<1.78E-02	0.00E+00	1.78E-02
		Be-7	<9.94E-02	0.00E+00	9.94E-02
		K-40	9.01E-01	2.55E-01	1.95E-01
512461	11/25/2019 - 12/3/2019	I-131	<1.21E-02	0.00E+00	1.21E-02
		Cs-134	<9.18E-03	0.00E+00	9.18E-03
		Cs-137	<1.04E-02	0.00E+00	1.04E-02
		Be-7	<9.63E-02	0.00E+00	9.63E-02
		K-40	1.94E-01	1.00E-01	9.03E-02
512637	12/3/2019 - 12/10/2019	I-131	<1.78E-02	0.00E+00	1.78E-02
		Cs-134	<1.27E-02	0.00E+00	1.27E-02
		Cs-137	<1.63E-02	0.00E+00	1.63E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	4.94E-01	1.97E-01	2.21E-01
513601	12/10/2019 - 12/17/2019	I-131	<1.76E-02	0.00E+00	1.76E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<1.52E-02	0.00E+00	1.52E-02
		Be-7	<9.74E-02	0.00E+00	9.74E-02
		K-40	5.34E-01	1.80E-01	1.39E-01
513917	12/17/2019 - 12/23/2019	I-131	<2.09E-02	0.00E+00	2.09E-02
		Cs-134	<1.77E-02	0.00E+00	1.77E-02
		Cs-137	<1.72E-02	0.00E+00	1.72E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	4.52E-01	1.98E-01	2.26E-01
514141	12/23/2019 - 12/31/2019	I-131	<2.48E-02	0.00E+00	2.48E-02
		Cs-134	<1.30E-02	0.00E+00	1.30E-02
		Cs-137	<9.51E-03	0.00E+00	9.51E-03
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	2.84E-01	1.51E-01	1.86E-01

Sample Point 208 [INDICATOR - S @ 0.45 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492185	1/2/2019 - 1/8/2019	I-131	<2.69E-02	0.00E+00	2.69E-02
		Cs-134	<2.22E-02	0.00E+00	2.22E-02
		Cs-137	<1.95E-02	0.00E+00	1.95E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	6.52E-01	2.16E-01	1.60E-01
492447	1/8/2019 - 1/15/2019	I-131	<2.36E-02	0.00E+00	2.36E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.93E-02	0.00E+00	1.93E-02

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 208 [INDICATOR - S @ 0.45 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492447	1/8/2019 - 1/15/2019	Be-7	<1.30E-01	0.00E+00	1.30E-01
		K-40	4.55E-01	2.07E-01	2.58E-01
492869	1/15/2019 - 1/22/2019	I-131	<2.01E-02	0.00E+00	2.01E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.88E-02	0.00E+00	1.88E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	5.10E-01	1.81E-01	1.49E-01
493292	1/22/2019 - 1/29/2019	I-131	<2.53E-02	0.00E+00	2.53E-02
		Cs-134	<1.87E-02	0.00E+00	1.87E-02
		Cs-137	<2.13E-02	0.00E+00	2.13E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	4.98E-01	1.82E-01	1.63E-01
493554	1/29/2019 - 2/5/2019	I-131	<1.90E-02	0.00E+00	1.90E-02
		Cs-134	<1.43E-02	0.00E+00	1.43E-02
		Cs-137	<1.68E-02	0.00E+00	1.68E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	4.66E-01	1.90E-01	2.06E-01
493780	2/5/2019 - 2/12/2019	I-131	<2.09E-02	0.00E+00	2.09E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.78E-02	0.00E+00	1.78E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	5.16E-01	2.07E-01	2.34E-01
494326	2/12/2019 - 2/19/2019	I-131	<2.12E-02	0.00E+00	2.12E-02
		Cs-134	<1.51E-02	0.00E+00	1.51E-02
		Cs-137	<1.83E-02	0.00E+00	1.83E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	5.37E-01	1.71E-01	3.46E-02
494942	2/19/2019 - 2/26/2019	I-131	<6.49E-03	0.00E+00	6.49E-03
		Cs-134	<3.58E-03	0.00E+00	3.58E-03
		Cs-137	<3.53E-03	0.00E+00	3.53E-03
		Be-7	<2.76E-02	0.00E+00	2.76E-02
		K-40	2.74E-01	5.07E-02	5.16E-02
495386	2/26/2019 - 3/5/2019	I-131	<1.71E-02	0.00E+00	1.71E-02
		Cs-134	<1.79E-02	0.00E+00	1.79E-02
		Cs-137	<1.58E-02	0.00E+00	1.58E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	4.11E-01	1.63E-01	1.47E-01
496278	3/5/2019 - 3/12/2019	I-131	<1.93E-02	0.00E+00	1.93E-02
		Cs-134	<1.93E-02	0.00E+00	1.93E-02
		Cs-137	<1.75E-02	0.00E+00	1.75E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	4.99E-01	1.93E-01	1.98E-01
496809	3/12/2019 - 3/19/2019	I-131	<1.65E-02	0.00E+00	1.65E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02
		Cs-137	<1.68E-02	0.00E+00	1.68E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	4.06E-01	1.62E-01	1.46E-01
496627	3/19/2019 - 3/26/2019	I-131	<2.19E-02	0.00E+00	2.19E-02

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 208 [INDICATOR - S @ 0.45 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
496627	3/19/2019 - 3/26/2019	Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.70E-02	0.00E+00	1.70E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	3.73E-01	2.08E-01	2.86E-01
497119	3/26/2019 - 4/2/2019	I-131	<2.17E-02	0.00E+00	2.17E-02
		Cs-134	<1.51E-02	0.00E+00	1.51E-02
		Cs-137	<1.74E-02	0.00E+00	1.74E-02
		Be-7	<1.46E-01	0.00E+00	1.46E-01
		K-40	5.25E-01	1.69E-01	3.47E-02
497528	4/2/2019 - 4/9/2019	I-131	<2.08E-02	0.00E+00	2.08E-02
		Cs-134	<1.93E-02	0.00E+00	1.93E-02
		Cs-137	<1.70E-02	0.00E+00	1.70E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	4.40E-01	1.83E-01	1.96E-01
498005	4/9/2019 - 4/16/2019	I-131	<1.69E-02	0.00E+00	1.69E-02
		Cs-134	<1.43E-02	0.00E+00	1.43E-02
		Cs-137	<1.64E-02	0.00E+00	1.64E-02
		Be-7	<9.61E-02	0.00E+00	9.61E-02
		K-40	3.69E-01	1.80E-01	2.20E-01
498585	4/16/2019 - 4/23/2019	I-131	<2.18E-02	0.00E+00	2.18E-02
		Cs-134	<1.86E-02	0.00E+00	1.86E-02
		Cs-137	<1.74E-02	0.00E+00	1.74E-02
		Be-7	<1.27E-01	0.00E+00	1.27E-01
		K-40	4.49E-01	1.56E-01	3.48E-02
498758	4/23/2019 - 4/30/2019	I-131	<2.01E-02	0.00E+00	2.01E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-02
		Cs-137	<1.43E-02	0.00E+00	1.43E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	6.43E-01	2.00E-01	1.41E-01
499434	4/30/2019 - 5/7/2019	I-131	<2.21E-02	0.00E+00	2.21E-02
		Cs-134	<1.43E-02	0.00E+00	1.43E-02
		Cs-137	<1.87E-02	0.00E+00	1.87E-02
		Be-7	<1.34E-01	0.00E+00	1.34E-01
		K-40	4.44E-01	1.81E-01	1.91E-01
499856	5/7/2019 - 5/14/2019	I-131	<2.00E-02	0.00E+00	2.00E-02
		Cs-134	<1.86E-02	0.00E+00	1.86E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<9.73E-02	0.00E+00	9.73E-02
		K-40	3.60E-01	1.90E-01	2.47E-01
500101	5/14/2019 - 5/21/2019	I-131	<2.21E-02	0.00E+00	2.21E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.83E-02	0.00E+00	1.83E-02
		Be-7	<1.29E-01	0.00E+00	1.29E-01
		K-40	5.97E-01	2.06E-01	1.96E-01
500434	5/21/2019 - 5/28/2019	I-131	<2.77E-02	0.00E+00	2.77E-02
		Cs-134	<1.32E-02	0.00E+00	1.32E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02
		Be-7	<1.30E-01	0.00E+00	1.30E-01
		K-40	2.13E-01	1.67E-01	2.48E-01

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 208 [INDICATOR - S @ 0.45 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500718	5/28/2019 - 6/4/2019	I-131	<2.00E-02	0.00E+00	2.00E-02
		Cs-134	<1.85E-02	0.00E+00	1.85E-02
		Cs-137	<1.83E-02	0.00E+00	1.83E-02
		Be-7	<1.43E-01	0.00E+00	1.43E-01
		K-40	5.07E-01	1.75E-01	1.16E-01
501109	6/4/2019 - 6/11/2019	I-131	<2.26E-02	0.00E+00	2.26E-02
		Cs-134	<1.93E-02	0.00E+00	1.93E-02
		Cs-137	<1.92E-02	0.00E+00	1.92E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	3.67E-01	1.82E-01	2.26E-01
501923	6/11/2019 - 6/18/2019	I-131	<2.31E-02	0.00E+00	2.31E-02
		Cs-134	<1.85E-02	0.00E+00	1.85E-02
		Cs-137	<1.77E-02	0.00E+00	1.77E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	5.06E-01	1.79E-01	1.48E-01
502183	6/18/2019 - 6/25/2019	I-131	<1.89E-02	0.00E+00	1.89E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.50E-02	0.00E+00	1.50E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	1.75E-01	1.33E-01	1.88E-01
502394	6/25/2019 - 7/2/2019	I-131	<1.95E-02	0.00E+00	1.95E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	6.04E-01	2.16E-01	2.24E-01
503371	7/2/2019 - 7/9/2019	I-131	<1.97E-02	0.00E+00	1.97E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.74E-02	0.00E+00	1.74E-02
		Be-7	<8.85E-02	0.00E+00	8.85E-02
		K-40	7.05E-01	2.25E-01	2.12E-01
503814	7/9/2019 - 7/16/2019	I-131	<2.00E-02	0.00E+00	2.00E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.79E-02	0.00E+00	1.79E-02
		Be-7	<9.73E-02	0.00E+00	9.73E-02
		K-40	5.37E-01	2.23E-01	2.69E-01
504174	7/16/2019 - 7/20/2019	I-131	<3.84E-02	0.00E+00	3.84E-02
		Cs-134	<2.80E-02	0.00E+00	2.80E-02
		Cs-137	<2.60E-02	0.00E+00	2.60E-02
		Be-7	<1.93E-01	0.00E+00	1.93E-01
		K-40	8.97E-01	3.15E-01	2.51E-01
504423	7/23/2019 - 7/30/2019	I-131	<3.01E-02	0.00E+00	3.01E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<8.48E-02	0.00E+00	8.48E-02
		K-40	1.66E-01	1.09E-01	1.31E-01
504633	7/30/2019 - 8/6/2019	I-131	<1.96E-02	0.00E+00	1.96E-02
		Cs-134	<1.64E-02	0.00E+00	1.64E-02
		Cs-137	<1.20E-02	0.00E+00	1.20E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	2.12E-01	1.31E-01	1.63E-01

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 208 [INDICATOR - S @ 0.45 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504909	8/6/2019 - 8/13/2019	I-131	<1.59E-02	0.00E+00	1.59E-02
		Cs-134	<1.34E-02	0.00E+00	1.34E-02
		Cs-137	<1.53E-02	0.00E+00	1.53E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	<3.26E-01	0.00E+00	3.26E-01
505118	8/13/2019 - 8/20/2019	I-131	<1.19E-02	0.00E+00	1.19E-02
		Cs-134	<1.72E-02	0.00E+00	1.72E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	2.86E-01	1.53E-01	1.79E-01
505513	8/20/2019 - 8/27/2019	I-131	<1.77E-02	0.00E+00	1.77E-02
		Cs-134	<2.07E-02	0.00E+00	2.07E-02
		Cs-137	<1.18E-02	0.00E+00	1.18E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	4.26E-01	1.61E-01	1.33E-01
505839	8/27/2019 - 9/3/2019	I-131	<1.65E-02	0.00E+00	1.65E-02
		Cs-134	<1.66E-02	0.00E+00	1.66E-02
		Cs-137	<1.43E-02	0.00E+00	1.43E-02
		Be-7	<9.50E-02	0.00E+00	9.50E-02
		K-40	<3.36E-01	0.00E+00	3.36E-01
506350	9/3/2019 - 9/10/2019	I-131	<1.48E-02	0.00E+00	1.48E-02
		Cs-134	<1.71E-02	0.00E+00	1.71E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02
		Be-7	<9.44E-02	0.00E+00	9.44E-02
		K-40	<2.96E-01	0.00E+00	2.96E-01
507263	9/10/2019 - 9/17/2019	I-131	<1.84E-02	0.00E+00	1.84E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.77E-02	0.00E+00	1.77E-02
		Be-7	<9.96E-02	0.00E+00	9.96E-02
		K-40	<3.51E-01	0.00E+00	3.51E-01
507803	9/17/2019 - 9/24/2019	I-131	<1.62E-02	0.00E+00	1.62E-02
		Cs-134	<1.80E-02	0.00E+00	1.80E-02
		Cs-137	<1.99E-02	0.00E+00	1.99E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	3.70E-01	1.84E-01	2.34E-01
508337	9/24/2019 - 10/1/2019	I-131	<2.28E-02	0.00E+00	2.28E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-02
		Cs-137	<1.95E-02	0.00E+00	1.95E-02
		Be-7	<1.35E-01	0.00E+00	1.35E-01
		K-40	5.07E-01	1.94E-01	1.98E-01
509205	10/1/2019 - 10/8/2019	I-131	<1.73E-02	0.00E+00	1.73E-02
		Cs-134	<1.80E-02	0.00E+00	1.80E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<9.57E-02	0.00E+00	9.57E-02
		K-40	2.49E-01	1.51E-01	2.00E-01
509807	10/8/2019 - 10/15/2019	I-131	<1.67E-02	0.00E+00	1.67E-02
		Cs-134	<1.77E-02	0.00E+00	1.77E-02
		Cs-137	<1.19E-02	0.00E+00	1.19E-02
		Be-7	<9.29E-02	0.00E+00	9.29E-02
		K-40	2.91E-01	1.39E-01	1.38E-01

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 208 [INDICATOR - S @ 0.45 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
510508	10/15/2019 - 10/22/2019	I-131	<1.79E-02	0.00E+00	1.79E-02
		Cs-134	<1.11E-02	0.00E+00	1.11E-02
		Cs-137	<1.48E-02	0.00E+00	1.48E-02
		Be-7	<9.28E-02	0.00E+00	9.28E-02
		K-40	3.07E-01	1.31E-01	3.62E-02
510806	10/22/2019 - 10/29/2019	I-131	<1.43E-02	0.00E+00	1.43E-02
		Cs-134	<1.03E-02	0.00E+00	1.03E-02
		Cs-137	<1.17E-02	0.00E+00	1.17E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	4.23E-01	1.75E-01	1.85E-01
511211	10/29/2019 - 11/5/2019	I-131	<1.85E-02	0.00E+00	1.85E-02
		Cs-134	<1.34E-02	0.00E+00	1.34E-02
		Cs-137	<1.60E-02	0.00E+00	1.60E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	4.17E-01	1.80E-01	2.05E-01
511443	11/5/2019 - 11/12/2019	I-131	<1.76E-02	0.00E+00	1.76E-02
		Cs-134	<1.16E-02	0.00E+00	1.16E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<9.96E-02	0.00E+00	9.96E-02
		K-40	5.44E-01	1.82E-01	1.42E-01
511852	11/12/2019 - 11/19/2019	I-131	<1.44E-02	0.00E+00	1.44E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.44E-02	0.00E+00	1.44E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	6.59E-01	1.98E-01	1.35E-01
512158	11/19/2019 - 11/25/2019	I-131	<2.29E-02	0.00E+00	2.29E-02
		Cs-134	<2.14E-02	0.00E+00	2.14E-02
		Cs-137	<2.26E-02	0.00E+00	2.26E-02
		Be-7	<1.71E-01	0.00E+00	1.71E-01
		K-40	6.35E-01	2.57E-01	3.09E-01
512462	11/25/2019 - 12/3/2019	I-131	<1.40E-02	0.00E+00	1.40E-02
		Cs-134	<1.22E-02	0.00E+00	1.22E-02
		Cs-137	<1.19E-02	0.00E+00	1.19E-02
		Be-7	<8.36E-02	0.00E+00	8.36E-02
		K-40	<1.47E-01	0.00E+00	1.47E-01
512638	12/3/2019 - 12/10/2019	I-131	<1.58E-02	0.00E+00	1.58E-02
		Cs-134	<1.89E-02	0.00E+00	1.89E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<7.18E-02	0.00E+00	7.18E-02
		K-40	4.22E-01	1.55E-01	1.06E-01
513602	12/10/2019 - 12/17/2019	I-131	<1.97E-02	0.00E+00	1.97E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<1.40E-01	0.00E+00	1.40E-01
		K-40	5.04E-01	1.88E-01	1.80E-01
513918	12/17/2019 - 12/23/2019	I-131	<1.90E-02	0.00E+00	1.90E-02
		Cs-134	<1.42E-02	0.00E+00	1.42E-02
		Cs-137	<8.69E-03	0.00E+00	8.69E-03
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	2.66E-01	1.92E-01	2.80E-01

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 208 [INDICATOR - S @ 0.45 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514142	12/23/2019 - 12/31/2019	I-131	<3.19E-02	0.00E+00	3.19E-02
		Cs-134	<1.58E-02	0.00E+00	1.58E-02
		Cs-137	<1.24E-02	0.00E+00	1.24E-02
		Be-7	<1.50E-01	0.00E+00	1.50E-01
		K-40	5.07E-01	1.77E-01	1.61E-01

Sample Point 212 [INDICATOR - E @ 3.32 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492186	1/2/2019 - 1/8/2019	I-131	<2.59E-02	0.00E+00	2.59E-02
		Cs-134	<2.37E-02	0.00E+00	2.37E-02
		Cs-137	<1.65E-02	0.00E+00	1.65E-02
		Be-7	<1.40E-01	0.00E+00	1.40E-01
		K-40	4.72E-01	1.94E-01	1.90E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492448	1/8/2019 - 1/15/2019	I-131	<1.90E-02	0.00E+00	1.90E-02
		Cs-134	<1.81E-02	0.00E+00	1.81E-02
		Cs-137	<1.65E-02	0.00E+00	1.65E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	4.05E-01	1.83E-01	2.14E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492870	1/15/2019 - 1/22/2019	I-131	<2.32E-02	0.00E+00	2.32E-02
		Cs-134	<1.86E-02	0.00E+00	1.86E-02
		Cs-137	<1.88E-02	0.00E+00	1.88E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	4.32E-01	1.72E-01	1.63E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493293	1/22/2019 - 1/29/2019	I-131	<2.00E-02	0.00E+00	2.00E-02
		Cs-134	<1.26E-02	0.00E+00	1.26E-02
		Cs-137	<2.01E-02	0.00E+00	2.01E-02
		Be-7	<1.27E-01	0.00E+00	1.27E-01
		K-40	3.36E-01	1.65E-01	1.94E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493555	1/29/2019 - 2/5/2019	I-131	<1.82E-02	0.00E+00	1.82E-02
		Cs-134	<1.79E-02	0.00E+00	1.79E-02
		Cs-137	<1.91E-02	0.00E+00	1.91E-02
		Be-7	<9.66E-02	0.00E+00	9.66E-02
		K-40	3.38E-01	1.99E-01	2.77E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493781	2/5/2019 - 2/12/2019	I-131	<2.00E-02	0.00E+00	2.00E-02
		Cs-134	<1.80E-02	0.00E+00	1.80E-02
		Cs-137	<1.88E-02	0.00E+00	1.88E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	4.28E-01	1.95E-01	2.36E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494327	2/12/2019 - 2/19/2019	I-131	<2.06E-02	0.00E+00	2.06E-02
		Cs-134	<1.86E-02	0.00E+00	1.86E-02
		Cs-137	<1.59E-02	0.00E+00	1.59E-02
		Be-7	<1.31E-01	0.00E+00	1.31E-01
		K-40	<3.77E-01	0.00E+00	3.77E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494943	2/19/2019 - 2/26/2019	I-131	<2.07E-02	0.00E+00	2.07E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-02
		Cs-137	<1.84E-02	0.00E+00	1.84E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	5.62E-01	1.93E-01	1.64E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
495387	2/26/2019 - 3/5/2019	I-131	<2.01E-02	0.00E+00	2.01E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.48E-02	0.00E+00	1.48E-02

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 212 [INDICATOR - E @ 3.32 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
495387	2/26/2019 - 3/5/2019	Be-7	<1.34E-01	0.00E+00	1.34E-01
		K-40	4.22E-01	1.96E-01	2.41E-01
496281	3/5/2019 - 3/12/2019	I-131	<2.01E-02	0.00E+00	2.01E-02
		Cs-134	<1.94E-02	0.00E+00	1.94E-02
		Cs-137	<1.93E-02	0.00E+00	1.93E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	4.85E-01	1.82E-01	1.69E-01
496810	3/12/2019 - 3/19/2019	I-131	<1.94E-02	0.00E+00	1.94E-02
		Cs-134	<1.43E-02	0.00E+00	1.43E-02
		Cs-137	<1.77E-02	0.00E+00	1.77E-02
		Be-7	4.45E-02	8.29E-02	1.41E-01
		K-40	3.64E-01	1.61E-01	1.67E-01
496628	3/19/2019 - 3/26/2019	I-131	<2.33E-02	0.00E+00	2.33E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.59E-02	0.00E+00	1.59E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	4.45E-01	1.84E-01	1.98E-01
497120	3/26/2019 - 4/2/2019	I-131	<1.72E-02	0.00E+00	1.72E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02
		Cs-137	<1.87E-02	0.00E+00	1.87E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	5.36E-01	1.71E-01	3.46E-02
497529	4/2/2019 - 4/9/2019	I-131	<2.13E-02	0.00E+00	2.13E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	4.74E-01	1.90E-01	2.02E-01
498006	4/9/2019 - 4/16/2019	I-131	<2.08E-02	0.00E+00	2.08E-02
		Cs-134	<1.66E-02	0.00E+00	1.66E-02
		Cs-137	<1.48E-02	0.00E+00	1.48E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	<3.44E-01	0.00E+00	3.44E-01
498586	4/16/2019 - 4/23/2019	I-131	<1.58E-02	0.00E+00	1.58E-02
		Cs-134	<1.25E-02	0.00E+00	1.25E-02
		Cs-137	<1.53E-02	0.00E+00	1.53E-02
		Be-7	<1.37E-01	0.00E+00	1.37E-01
		K-40	5.58E-01	2.19E-01	2.52E-01
498759	4/23/2019 - 4/30/2019	I-131	<1.85E-02	0.00E+00	1.85E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.89E-02	0.00E+00	1.89E-02
		Be-7	<1.31E-01	0.00E+00	1.31E-01
		K-40	7.72E-01	2.29E-01	1.91E-01
499435	4/30/2019 - 5/7/2019	I-131	<2.23E-02	0.00E+00	2.23E-02
		Cs-134	<1.58E-02	0.00E+00	1.58E-02
		Cs-137	<1.63E-02	0.00E+00	1.63E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	5.23E-01	1.78E-01	1.32E-01
499857	5/7/2019 - 5/14/2019	I-131	<1.97E-02	0.00E+00	1.97E-02

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 212 [INDICATOR - E @ 3.32 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
499857	5/7/2019 - 5/14/2019	Cs-134	<1.93E-02	0.00E+00	1.93E-02
		Cs-137	<2.05E-02	0.00E+00	2.05E-02
		Be-7	<7.59E-02	0.00E+00	7.59E-02
		K-40	3.93E-01	2.00E-01	2.61E-01
500102	5/14/2019 - 5/21/2019	I-131	<2.20E-02	0.00E+00	2.20E-02
		Cs-134	<1.92E-02	0.00E+00	1.92E-02
		Cs-137	<1.42E-02	0.00E+00	1.42E-02
		Be-7	<1.29E-01	0.00E+00	1.29E-01
		K-40	3.32E-01	2.23E-01	3.29E-01
500435	5/21/2019 - 5/28/2019	I-131	<2.24E-02	0.00E+00	2.24E-02
		Cs-134	<1.49E-02	0.00E+00	1.49E-02
		Cs-137	<1.97E-02	0.00E+00	1.97E-02
		Be-7	<9.05E-02	0.00E+00	9.05E-02
		K-40	5.93E-01	1.99E-01	1.77E-01
500719	5/28/2019 - 6/4/2019	I-131	<1.82E-02	0.00E+00	1.82E-02
		Cs-134	<1.83E-02	0.00E+00	1.83E-02
		Cs-137	<1.62E-02	0.00E+00	1.62E-02
		Be-7	<1.52E-01	0.00E+00	1.52E-01
		K-40	4.22E-01	1.88E-01	2.18E-01
501110	6/4/2019 - 6/11/2019	I-131	<2.23E-02	0.00E+00	2.23E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.65E-02	0.00E+00	1.65E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	4.63E-01	1.98E-01	2.30E-01
501924	6/11/2019 - 6/18/2019	I-131	<2.14E-02	0.00E+00	2.14E-02
		Cs-134	<1.64E-02	0.00E+00	1.64E-02
		Cs-137	<1.85E-02	0.00E+00	1.85E-02
		Be-7	<9.75E-02	0.00E+00	9.75E-02
		K-40	<3.87E-01	0.00E+00	3.87E-01
502184	6/18/2019 - 6/25/2019	I-131	<1.65E-02	0.00E+00	1.65E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<1.53E-02	0.00E+00	1.53E-02
		Be-7	<7.96E-02	0.00E+00	7.96E-02
		K-40	2.87E-01	1.44E-01	1.59E-01
502395	6/25/2019 - 7/2/2019	I-131	<2.08E-02	0.00E+00	2.08E-02
		Cs-134	<1.94E-02	0.00E+00	1.94E-02
		Cs-137	<1.94E-02	0.00E+00	1.94E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	6.18E-01	2.09E-01	1.95E-01
503372	7/2/2019 - 7/9/2019	I-131	<2.04E-02	0.00E+00	2.04E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.48E-02	0.00E+00	1.48E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	7.53E-01	2.36E-01	2.25E-01
503815	7/9/2019 - 7/16/2019	I-131	<1.80E-02	0.00E+00	1.80E-02
		Cs-134	<2.03E-02	0.00E+00	2.03E-02
		Cs-137	<1.87E-02	0.00E+00	1.87E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	5.31E-01	1.96E-01	1.97E-01

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 212 [INDICATOR - E @ 3.32 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504175	7/16/2019 - 7/23/2019	I-131	<2.09E-02	0.00E+00	2.09E-02
		Cs-134	<1.51E-02	0.00E+00	1.51E-02
		Cs-137	<1.58E-02	0.00E+00	1.58E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	<3.86E-01	0.00E+00	3.86E-01
504424	7/23/2019 - 7/30/2019	I-131	<3.03E-02	0.00E+00	3.03E-02
		Cs-134	<1.30E-02	0.00E+00	1.30E-02
		Cs-137	<1.35E-02	0.00E+00	1.35E-02
		Be-7	<9.34E-02	0.00E+00	9.34E-02
		K-40	1.51E-01	1.51E-01	2.36E-01
504634	7/30/2019 - 8/6/2019	I-131	<1.95E-02	0.00E+00	1.95E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.50E-02	0.00E+00	1.50E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	4.29E-01	1.88E-01	2.20E-01
504910	8/6/2019 - 8/13/2019	I-131	<2.38E-02	0.00E+00	2.38E-02
		Cs-134	<2.16E-02	0.00E+00	2.16E-02
		Cs-137	<1.89E-02	0.00E+00	1.89E-02
		Be-7	<1.40E-01	0.00E+00	1.40E-01
		K-40	5.73E-01	1.98E-01	1.80E-01
505119	8/13/2019 - 8/20/2019	I-131	<2.16E-02	0.00E+00	2.16E-02
		Cs-134	<1.91E-02	0.00E+00	1.91E-02
		Cs-137	<1.79E-02	0.00E+00	1.79E-02
		Be-7	<1.33E-01	0.00E+00	1.33E-01
		K-40	4.72E-01	1.91E-01	2.04E-01
505514	8/20/2019 - 8/27/2019	I-131	<1.37E-02	0.00E+00	1.37E-02
		Cs-134	<1.71E-02	0.00E+00	1.71E-02
		Cs-137	<1.29E-02	0.00E+00	1.29E-02
		Be-7	<7.62E-02	0.00E+00	7.62E-02
		K-40	4.01E-01	1.43E-01	3.29E-02
505840	8/27/2019 - 9/3/2019	I-131	<1.81E-02	0.00E+00	1.81E-02
		Cs-134	<1.89E-02	0.00E+00	1.89E-02
		Cs-137	<1.51E-02	0.00E+00	1.51E-02
		Be-7	<1.45E-01	0.00E+00	1.45E-01
		K-40	5.15E-01	2.01E-01	2.23E-01
506351	9/3/2019 - 9/10/2019	I-131	<1.71E-02	0.00E+00	1.71E-02
		Cs-134	<1.30E-02	0.00E+00	1.30E-02
		Cs-137	<1.12E-02	0.00E+00	1.12E-02
		Be-7	<9.97E-02	0.00E+00	9.97E-02
		K-40	1.41E-01	1.15E-01	1.61E-01
507264	9/10/2019 - 9/17/2019	I-131	<1.62E-02	0.00E+00	1.62E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	4.10E-01	1.55E-01	1.22E-01
507804	9/17/2019 - 9/24/2019	I-131	<1.48E-02	0.00E+00	1.48E-02
		Cs-134	<1.57E-02	0.00E+00	1.57E-02
		Cs-137	<1.06E-02	0.00E+00	1.06E-02
		Be-7	<7.99E-02	0.00E+00	7.99E-02
		K-40	1.97E-01	1.44E-01	2.04E-01

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 212 [INDICATOR - E @ 3.32 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
508338	9/24/2019 - 10/1/2019	I-131	<1.76E-02	0.00E+00	1.76E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02
		Be-7	<8.75E-02	0.00E+00	8.75E-02
		K-40	3.24E-01	1.51E-01	1.64E-01
509206	10/1/2019 - 10/8/2019	I-131	<2.00E-02	0.00E+00	2.00E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<1.86E-02	0.00E+00	1.86E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	2.77E-01	1.43E-01	1.61E-01
509808	10/8/2019 - 10/15/2019	I-131	<2.16E-02	0.00E+00	2.16E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<1.73E-02	0.00E+00	1.73E-02
		Be-7	<1.53E-01	0.00E+00	1.53E-01
		K-40	6.89E-01	2.22E-01	2.06E-01
510509	10/15/2019 - 10/22/2019	I-131	<2.08E-02	0.00E+00	2.08E-02
		Cs-134	<1.70E-02	0.00E+00	1.70E-02
		Cs-137	<1.78E-02	0.00E+00	1.78E-02
		Be-7	<1.50E-01	0.00E+00	1.50E-01
		K-40	4.59E-01	2.14E-01	2.72E-01
510807	10/22/2019 - 10/29/2019	I-131	<1.61E-02	0.00E+00	1.61E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<9.80E-02	0.00E+00	9.80E-02
		K-40	7.31E-01	2.08E-01	1.39E-01
511212	10/29/2019 - 11/5/2019	I-131	<2.22E-02	0.00E+00	2.22E-02
		Cs-134	<2.11E-02	0.00E+00	2.11E-02
		Cs-137	<1.66E-02	0.00E+00	1.66E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	3.14E-01	1.90E-01	2.63E-01
511444	11/5/2019 - 11/12/2019	I-131	<1.32E-02	0.00E+00	1.32E-02
		Cs-134	<1.66E-02	0.00E+00	1.66E-02
		Cs-137	<1.43E-02	0.00E+00	1.43E-02
		Be-7	<7.61E-02	0.00E+00	7.61E-02
		K-40	3.20E-01	1.41E-01	1.30E-01
511853	11/12/2019 - 11/19/2019	I-131	<1.81E-02	0.00E+00	1.81E-02
		Cs-134	<1.43E-02	0.00E+00	1.43E-02
		Cs-137	<1.43E-02	0.00E+00	1.43E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	5.27E-01	1.66E-01	3.32E-02
512159	11/19/2019 - 11/25/2019	I-131	<1.50E-02	0.00E+00	1.50E-02
		Cs-134	<1.64E-02	0.00E+00	1.64E-02
		Cs-137	<1.50E-02	0.00E+00	1.50E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	6.98E-01	2.42E-01	2.47E-01
512463	11/25/2019 - 12/3/2019	I-131	<1.45E-02	0.00E+00	1.45E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.37E-02	0.00E+00	1.37E-02
		Be-7	<9.87E-02	0.00E+00	9.87E-02
		K-40	<2.66E-01	0.00E+00	2.66E-01

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 212 [INDICATOR - E @ 3.32 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512639	12/3/2019 - 12/10/2019	I-131	<1.50E-02	0.00E+00	1.50E-02
		Cs-134	<1.33E-02	0.00E+00	1.33E-02
		Cs-137	<1.15E-02	0.00E+00	1.15E-02
		Be-7	<8.91E-02	0.00E+00	8.91E-02
		K-40	2.93E-01	1.35E-01	1.29E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
513603	12/10/2019 - 12/17/2019	I-131	<1.52E-02	0.00E+00	1.52E-02
		Cs-134	<1.95E-02	0.00E+00	1.95E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	5.85E-01	1.77E-01	3.37E-02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
513919	12/17/2019 - 12/23/2019	I-131	<2.21E-02	0.00E+00	2.21E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02
		Cs-137	<2.17E-02	0.00E+00	2.17E-02
		Be-7	<1.30E-01	0.00E+00	1.30E-01
		K-40	4.60E-01	2.00E-01	2.23E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514143	12/23/2019 - 12/31/2019	I-131	<2.85E-02	0.00E+00	2.85E-02
		Cs-134	<1.38E-02	0.00E+00	1.38E-02
		Cs-137	<1.18E-02	0.00E+00	1.18E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	3.59E-01	1.66E-01	2.02E-01

Sample Point 258 [CONTROL - W @ 9.84 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492187	1/2/2019 - 1/8/2019	I-131	<2.25E-02	0.00E+00	2.25E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<2.01E-02	0.00E+00	2.01E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	3.44E-01	2.27E-01	3.26E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492449	1/8/2019 - 1/15/2019	I-131	<2.18E-02	0.00E+00	2.18E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.88E-02	0.00E+00	1.88E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	5.04E-01	1.96E-01	2.08E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492871	1/15/2019 - 1/22/2019	I-131	<2.19E-02	0.00E+00	2.19E-02
		Cs-134	<2.14E-02	0.00E+00	2.14E-02
		Cs-137	<1.83E-02	0.00E+00	1.83E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	3.50E-01	1.92E-01	2.56E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493294	1/22/2019 - 1/29/2019	I-131	<2.21E-02	0.00E+00	2.21E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<1.27E-01	0.00E+00	1.27E-01
		K-40	5.13E-01	1.94E-01	1.94E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493556	1/29/2019 - 2/5/2019	I-131	<2.33E-02	0.00E+00	2.33E-02
		Cs-134	<2.34E-02	0.00E+00	2.34E-02
		Cs-137	<1.91E-02	0.00E+00	1.91E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	3.30E-01	1.99E-01	2.79E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493782	2/5/2019 - 2/12/2019	I-131	<2.63E-02	0.00E+00	2.63E-02
		Cs-134	<1.92E-02	0.00E+00	1.92E-02
		Cs-137	<1.78E-02	0.00E+00	1.78E-02

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 258 [CONTROL - W @ 9.84 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493782	2/5/2019 - 2/12/2019	Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	4.26E-01	2.05E-01	2.62E-01
494328	2/12/2019 - 2/19/2019	I-131	<2.16E-02	0.00E+00	2.16E-02
		Cs-134	<1.87E-02	0.00E+00	1.87E-02
		Cs-137	<2.13E-02	0.00E+00	2.13E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	2.85E-01	1.87E-01	2.66E-01
494944	2/19/2019 - 2/26/2019	I-131	<2.34E-02	0.00E+00	2.34E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.89E-02	0.00E+00	1.89E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	4.32E-01	1.96E-01	2.37E-01
495388	2/26/2019 - 3/5/2019	I-131	<2.20E-02	0.00E+00	2.20E-02
		Cs-134	<1.25E-02	0.00E+00	1.25E-02
		Cs-137	<1.78E-02	0.00E+00	1.78E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	4.36E-01	1.64E-01	1.31E-01
496284	3/5/2019 - 3/12/2019	I-131	<2.14E-02	0.00E+00	2.14E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.75E-02	0.00E+00	1.75E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	3.87E-01	1.81E-01	2.13E-01
496811	3/12/2019 - 3/19/2019	I-131	<1.79E-02	0.00E+00	1.79E-02
		Cs-134	<1.51E-02	0.00E+00	1.51E-02
		Cs-137	<1.48E-02	0.00E+00	1.48E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	<3.20E-01	0.00E+00	3.20E-01
496629	3/19/2019 - 3/26/2019	I-131	<2.05E-02	0.00E+00	2.05E-02
		Cs-134	<1.26E-02	0.00E+00	1.26E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	5.33E-01	1.87E-01	1.61E-01
497121	3/26/2019 - 4/2/2019	I-131	<1.83E-02	0.00E+00	1.83E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<1.42E-01	0.00E+00	1.42E-01
		K-40	3.37E-01	1.58E-01	1.71E-01
497530	4/2/2019 - 4/9/2019	I-131	<1.87E-02	0.00E+00	1.87E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<1.30E-01	0.00E+00	1.30E-01
		K-40	7.59E-01	2.16E-01	1.39E-01
498007	4/9/2019 - 4/16/2019	I-131	<2.10E-02	0.00E+00	2.10E-02
		Cs-134	<1.43E-02	0.00E+00	1.43E-02
		Cs-137	<1.36E-02	0.00E+00	1.36E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	4.67E-01	1.87E-01	1.98E-01
498587	4/16/2019 - 4/23/2019	I-131	<2.27E-02	0.00E+00	2.27E-02

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 258 [CONTROL - W @ 9.84 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
498587	4/16/2019 - 4/23/2019	Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.64E-02	0.00E+00	1.64E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	4.99E-01	1.99E-01	2.18E-01
498760	4/23/2019 - 4/30/2019	I-131	<2.38E-02	0.00E+00	2.38E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	4.16E-01	1.71E-01	1.72E-01
499436	4/30/2019 - 5/7/2019	I-131	<2.25E-02	0.00E+00	2.25E-02
		Cs-134	<1.87E-02	0.00E+00	1.87E-02
		Cs-137	<1.60E-02	0.00E+00	1.60E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	6.78E-01	2.08E-01	1.55E-01
499858	5/7/2019 - 5/14/2019	I-131	<2.05E-02	0.00E+00	2.05E-02
		Cs-134	<1.25E-02	0.00E+00	1.25E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	5.51E-01	1.85E-01	1.39E-01
500103	5/14/2019 - 5/21/2019	I-131	<1.98E-02	0.00E+00	1.98E-02
		Cs-134	<1.86E-02	0.00E+00	1.86E-02
		Cs-137	<1.64E-02	0.00E+00	1.64E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	5.69E-01	2.15E-01	2.36E-01
500436	5/21/2019 - 5/28/2019	I-131	<2.48E-02	0.00E+00	2.48E-02
		Cs-134	<1.12E-02	0.00E+00	1.12E-02
		Cs-137	<1.70E-02	0.00E+00	1.70E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	6.01E-01	1.91E-01	1.37E-01
500720	5/28/2019 - 6/4/2019	I-131	<2.28E-02	0.00E+00	2.28E-02
		Cs-134	<1.85E-02	0.00E+00	1.85E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<1.30E-01	0.00E+00	1.30E-01
		K-40	4.84E-01	2.23E-01	2.84E-01
501111	6/4/2019 - 6/11/2019	I-131	<1.96E-02	0.00E+00	1.96E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	3.92E-02	7.77E-02	1.33E-01
		K-40	5.38E-01	1.71E-01	3.47E-02
501925	6/11/2019 - 6/18/2019	I-131	<2.19E-02	0.00E+00	2.19E-02
		Cs-134	<1.86E-02	0.00E+00	1.86E-02
		Cs-137	<1.53E-02	0.00E+00	1.53E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	6.90E-01	1.96E-01	3.46E-02
502185	6/18/2019 - 6/25/2019	I-131	<1.78E-02	0.00E+00	1.78E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.24E-02	0.00E+00	1.24E-02
		Be-7	<9.80E-02	0.00E+00	9.80E-02
		K-40	<3.19E-01	0.00E+00	3.19E-01

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 258 [CONTROL - W @ 9.84 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
502396	6/25/2019 - 7/2/2019	I-131	<2.07E-02	0.00E+00	2.07E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02
		Be-7	<1.34E-01	0.00E+00	1.34E-01
		K-40	5.50E-01	2.03E-01	2.05E-01
503373	7/2/2019 - 7/9/2019	I-131	<2.05E-02	0.00E+00	2.05E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<1.43E-01	0.00E+00	1.43E-01
		K-40	4.64E-01	1.88E-01	2.02E-01
503816	7/9/2019 - 7/16/2019	I-131	<2.09E-02	0.00E+00	2.09E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.64E-02	0.00E+00	1.64E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	4.23E-01	1.65E-01	1.42E-01
504176	7/16/2019 - 7/23/2019	I-131	<2.34E-02	0.00E+00	2.34E-02
		Cs-134	<1.51E-02	0.00E+00	1.51E-02
		Cs-137	<1.53E-02	0.00E+00	1.53E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	5.04E-01	2.06E-01	2.39E-01
504425	7/23/2019 - 7/30/2019	I-131	<2.67E-02	0.00E+00	2.67E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	3.19E-01	1.85E-01	2.53E-01
504635	7/30/2019 - 8/6/2019	I-131	<1.36E-02	0.00E+00	1.36E-02
		Cs-134	<1.23E-02	0.00E+00	1.23E-02
		Cs-137	<1.22E-02	0.00E+00	1.22E-02
		Be-7	<9.53E-02	0.00E+00	9.53E-02
		K-40	2.96E-01	1.51E-01	1.79E-01
504911	8/6/2019 - 8/13/2019	I-131	<1.67E-02	0.00E+00	1.67E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.50E-02	0.00E+00	1.50E-02
		Be-7	<8.80E-02	0.00E+00	8.80E-02
		K-40	4.42E-01	1.77E-01	1.85E-01
505120	8/13/2019 - 8/20/2019	I-131	<1.86E-02	0.00E+00	1.86E-02
		Cs-134	<1.27E-02	0.00E+00	1.27E-02
		Cs-137	<1.52E-02	0.00E+00	1.52E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	2.91E-01	1.90E-01	2.73E-01
505515	8/20/2019 - 8/27/2019	I-131	<1.59E-02	0.00E+00	1.59E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.02E-02	0.00E+00	1.02E-02
		Be-7	<8.36E-02	0.00E+00	8.36E-02
		K-40	3.00E-01	1.35E-01	1.22E-01
505841	8/27/2019 - 9/3/2019	I-131	<1.64E-02	0.00E+00	1.64E-02
		Cs-134	<1.64E-02	0.00E+00	1.64E-02
		Cs-137	<1.07E-02	0.00E+00	1.07E-02
		Be-7	<9.08E-02	0.00E+00	9.08E-02
		K-40	<1.32E-01	0.00E+00	1.32E-01

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 258 [CONTROL - W @ 9.84 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
506352	9/3/2019 - 9/10/2019	I-131	<1.39E-02	0.00E+00	1.39E-02
		Cs-134	<1.48E-02	0.00E+00	1.48E-02
		Cs-137	<1.51E-02	0.00E+00	1.51E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	<2.28E-01	0.00E+00	2.28E-01
507265	9/10/2019 - 9/17/2019	I-131	<1.59E-02	0.00E+00	1.59E-02
		Cs-134	<1.83E-02	0.00E+00	1.83E-02
		Cs-137	<1.41E-02	0.00E+00	1.41E-02
		Be-7	<7.56E-02	0.00E+00	7.56E-02
		K-40	1.59E-01	1.11E-01	1.42E-01
507805	9/17/2019 - 9/24/2019	I-131	<1.59E-02	0.00E+00	1.59E-02
		Cs-134	<1.26E-02	0.00E+00	1.26E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02
		Be-7	<1.39E-01	0.00E+00	1.39E-01
		K-40	4.01E-01	1.83E-01	2.18E-01
508339	9/24/2019 - 10/1/2019	I-131	<2.38E-02	0.00E+00	2.38E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-02
		Cs-137	<1.77E-02	0.00E+00	1.77E-02
		Be-7	<1.44E-01	0.00E+00	1.44E-01
		K-40	6.24E-01	2.11E-01	1.98E-01
509207	10/1/2019 - 10/8/2019	I-131	<1.64E-02	0.00E+00	1.64E-02
		Cs-134	<1.03E-02	0.00E+00	1.03E-02
		Cs-137	<1.85E-02	0.00E+00	1.85E-02
		Be-7	<9.13E-02	0.00E+00	9.13E-02
		K-40	4.30E-01	1.60E-01	1.29E-01
509809	10/8/2019 - 10/15/2019	I-131	<1.35E-02	0.00E+00	1.35E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	5.35E-01	1.81E-01	1.43E-01
510510	10/15/2019 - 10/22/2019	I-131	<1.98E-02	0.00E+00	1.98E-02
		Cs-134	<1.80E-02	0.00E+00	1.80E-02
		Cs-137	<1.38E-02	0.00E+00	1.38E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	4.19E-01	1.71E-01	1.74E-01
510808	10/22/2019 - 10/29/2019	I-131	<1.20E-02	0.00E+00	1.20E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	<2.18E-01	0.00E+00	2.18E-01
511213	10/29/2019 - 11/5/2019	I-131	<1.93E-02	0.00E+00	1.93E-02
		Cs-134	<1.99E-02	0.00E+00	1.99E-02
		Cs-137	<1.24E-02	0.00E+00	1.24E-02
		Be-7	<1.00E-01	0.00E+00	1.00E-01
		K-40	6.22E-01	2.06E-01	1.94E-01
511445	11/5/2019 - 11/12/2019	I-131	<1.55E-02	0.00E+00	1.55E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.17E-02	0.00E+00	1.17E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	4.19E-01	1.59E-01	1.33E-01

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 258 [CONTROL - W @ 9.84 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511854	11/12/2019 - 11/19/2019	I-131	<1.26E-02	0.00E+00	1.26E-02
		Cs-134	<1.23E-02	0.00E+00	1.23E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<8.85E-02	0.00E+00	8.85E-02
		K-40	<1.81E-01	0.00E+00	1.81E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512160	11/19/2019 - 11/25/2019	I-131	<2.24E-02	0.00E+00	2.24E-02
		Cs-134	<2.06E-02	0.00E+00	2.06E-02
		Cs-137	<1.83E-02	0.00E+00	1.83E-02
		Be-7	<1.68E-01	0.00E+00	1.68E-01
		K-40	5.13E-01	2.06E-01	2.13E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512464	11/25/2019 - 12/3/2019	I-131	<1.84E-02	0.00E+00	1.84E-02
		Cs-134	<1.30E-02	0.00E+00	1.30E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	4.56E-01	1.73E-01	1.76E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512640	12/3/2019 - 12/10/2019	I-131	<1.72E-02	0.00E+00	1.72E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	3.63E-01	1.63E-01	1.77E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
513604	12/10/2019 - 12/17/2019	I-131	<1.66E-02	0.00E+00	1.66E-02
		Cs-134	<1.16E-02	0.00E+00	1.16E-02
		Cs-137	<1.33E-02	0.00E+00	1.33E-02
		Be-7	<8.47E-02	0.00E+00	8.47E-02
		K-40	2.83E-01	1.56E-01	1.97E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
513920	12/17/2019 - 12/23/2019	I-131	<1.88E-02	0.00E+00	1.88E-02
		Cs-134	<1.92E-02	0.00E+00	1.92E-02
		Cs-137	<1.14E-02	0.00E+00	1.14E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	4.06E-01	1.79E-01	1.86E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514144	12/23/2019 - 12/31/2019	I-131	<1.62E-02	0.00E+00	1.62E-02
		Cs-134	<8.82E-03	0.00E+00	8.82E-03
		Cs-137	<5.97E-03	0.00E+00	5.97E-03
		Be-7	<6.59E-02	0.00E+00	6.59E-02
		K-40	2.68E-01	1.04E-01	1.24E-01

Sample Point 261 [INDICATOR - N @ 0.72 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492188	1/2/2019 - 1/8/2019	I-131	<2.34E-02	0.00E+00	2.34E-02
		Cs-134	<2.29E-02	0.00E+00	2.29E-02
		Cs-137	<2.07E-02	0.00E+00	2.07E-02
		Be-7	<1.32E-01	0.00E+00	1.32E-01
		K-40	5.64E-01	2.39E-01	2.82E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492450	1/8/2019 - 1/15/2019	I-131	<1.93E-02	0.00E+00	1.93E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.63E-02	0.00E+00	1.63E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	3.90E-01	1.76E-01	2.03E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492872	1/15/2019 - 1/22/2019	I-131	<2.16E-02	0.00E+00	2.16E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 261 [INDICATOR - N @ 0.72 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492872	1/15/2019 - 1/22/2019	Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	5.63E-01	1.88E-01	1.43E-01
493295	1/22/2019 - 1/29/2019	I-131	<2.13E-02	0.00E+00	2.13E-02
		Cs-134	<1.93E-02	0.00E+00	1.93E-02
		Cs-137	<1.49E-02	0.00E+00	1.49E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	4.81E-01	1.93E-01	2.08E-01
493557	1/29/2019 - 2/5/2019	I-131	<2.17E-02	0.00E+00	2.17E-02
		Cs-134	<1.51E-02	0.00E+00	1.51E-02
		Cs-137	<1.64E-02	0.00E+00	1.64E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	4.49E-01	1.66E-01	1.32E-01
493783	2/5/2019 - 2/12/2019	I-131	<2.38E-02	0.00E+00	2.38E-02
		Cs-134	<1.92E-02	0.00E+00	1.92E-02
		Cs-137	<1.74E-02	0.00E+00	1.74E-02
		Be-7	<1.39E-01	0.00E+00	1.39E-01
		K-40	4.71E-01	1.77E-01	1.60E-01
494329	2/12/2019 - 2/19/2019	I-131	<2.11E-02	0.00E+00	2.11E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02
		Cs-137	<1.48E-02	0.00E+00	1.48E-02
		Be-7	<1.32E-01	0.00E+00	1.32E-01
		K-40	3.45E-01	1.62E-01	1.81E-01
494945	2/19/2019 - 2/26/2019	I-131	<2.13E-02	0.00E+00	2.13E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.80E-02	0.00E+00	1.80E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	6.97E-01	2.17E-01	1.82E-01
495389	2/26/2019 - 3/5/2019	I-131	<2.23E-02	0.00E+00	2.23E-02
		Cs-134	<1.66E-02	0.00E+00	1.66E-02
		Cs-137	<1.58E-02	0.00E+00	1.58E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	5.15E-01	1.87E-01	1.74E-01
496287	3/5/2019 - 3/12/2019	I-131	<1.91E-02	0.00E+00	1.91E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-02
		Cs-137	<1.30E-02	0.00E+00	1.30E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	3.07E-01	1.61E-01	1.95E-01
496812	3/12/2019 - 3/19/2019	I-131	<2.32E-02	0.00E+00	2.32E-02
		Cs-134	<2.03E-02	0.00E+00	2.03E-02
		Cs-137	<1.47E-02	0.00E+00	1.47E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	3.29E-01	1.94E-01	2.68E-01
496630	3/19/2019 - 3/26/2019	I-131	<2.43E-02	0.00E+00	2.43E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	3.56E-01	2.00E-01	2.73E-01
497122	3/26/2019 - 4/2/2019	I-131	<2.18E-02	0.00E+00	2.18E-02

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 261 [INDICATOR - N @ 0.72 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
497122	3/26/2019 - 4/2/2019	Cs-134	<1.51E-02	0.00E+00	1.51E-02
		Cs-137	<1.73E-02	0.00E+00	1.73E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	4.64E-01	1.79E-01	1.73E-01
497531	4/2/2019 - 4/9/2019	I-131	<1.96E-02	0.00E+00	1.96E-02
		Cs-134	<2.00E-02	0.00E+00	2.00E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	<3.76E-01	0.00E+00	3.76E-01
498008	4/9/2019 - 4/16/2019	I-131	<1.98E-02	0.00E+00	1.98E-02
		Cs-134	<1.86E-02	0.00E+00	1.86E-02
		Cs-137	<1.83E-02	0.00E+00	1.83E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	<3.72E-01	0.00E+00	3.72E-01
498588	4/16/2019 - 4/23/2019	I-131	<2.17E-02	0.00E+00	2.17E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<1.27E-01	0.00E+00	1.27E-01
		K-40	4.04E-01	1.94E-01	2.42E-01
498761	4/23/2019 - 4/30/2019	I-131	<1.97E-02	0.00E+00	1.97E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.60E-02	0.00E+00	1.60E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	<4.20E-01	0.00E+00	4.20E-01
499437	4/30/2019 - 5/7/2019	I-131	<2.01E-02	0.00E+00	2.01E-02
		Cs-134	<2.33E-02	0.00E+00	2.33E-02
		Cs-137	<1.73E-02	0.00E+00	1.73E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	4.10E-01	1.59E-01	1.28E-01
499859	5/7/2019 - 5/14/2019	I-131	<1.91E-02	0.00E+00	1.91E-02
		Cs-134	<1.87E-02	0.00E+00	1.87E-02
		Cs-137	<1.84E-02	0.00E+00	1.84E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	3.42E-01	1.69E-01	2.01E-01
500104	5/14/2019 - 5/21/2019	I-131	<2.29E-02	0.00E+00	2.29E-02
		Cs-134	<1.86E-02	0.00E+00	1.86E-02
		Cs-137	<1.53E-02	0.00E+00	1.53E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	5.63E-01	1.97E-01	1.81E-01
500437	5/21/2019 - 5/28/2019	I-131	<2.48E-02	0.00E+00	2.48E-02
		Cs-134	<1.56E-02	0.00E+00	1.56E-02
		Cs-137	<1.79E-02	0.00E+00	1.79E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	<3.80E-01	0.00E+00	3.80E-01
500721	5/28/2019 - 6/4/2019	I-131	<2.26E-02	0.00E+00	2.26E-02
		Cs-134	<1.17E-02	0.00E+00	1.17E-02
		Cs-137	<1.77E-02	0.00E+00	1.77E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	5.57E-01	2.02E-01	1.99E-01

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 261 [INDICATOR - N @ 0.72 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
501112	6/4/2019 - 6/11/2019	I-131	<1.77E-02	0.00E+00	1.77E-02
		Cs-134	<1.88E-02	0.00E+00	1.88E-02
		Cs-137	<1.49E-02	0.00E+00	1.49E-02
		Be-7	<1.35E-01	0.00E+00	1.35E-01
		K-40	6.54E-01	2.04E-01	1.54E-01
501926	6/11/2019 - 6/18/2019	I-131	<2.12E-02	0.00E+00	2.12E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<1.72E-02	0.00E+00	1.72E-02
		Be-7	<9.80E-02	0.00E+00	9.80E-02
		K-40	4.09E-01	1.62E-01	1.44E-01
502186	6/18/2019 - 6/25/2019	I-131	<1.52E-02	0.00E+00	1.52E-02
		Cs-134	<1.87E-02	0.00E+00	1.87E-02
		Cs-137	<1.09E-02	0.00E+00	1.09E-02
		Be-7	<7.82E-02	0.00E+00	7.82E-02
		K-40	2.55E-01	1.39E-01	1.65E-01
502397	6/25/2019 - 7/2/2019	I-131	<2.07E-02	0.00E+00	2.07E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.90E-02	0.00E+00	1.90E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	6.91E-01	2.23E-01	2.07E-01
503374	7/2/2019 - 7/9/2019	I-131	<1.82E-02	0.00E+00	1.82E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.79E-02	0.00E+00	1.79E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	8.58E-01	2.20E-01	3.47E-02
503817	7/9/2019 - 7/16/2019	I-131	<2.18E-02	0.00E+00	2.18E-02
		Cs-134	<1.98E-02	0.00E+00	1.98E-02
		Cs-137	<1.78E-02	0.00E+00	1.78E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	4.37E-01	1.64E-01	1.31E-01
504177	7/16/2019 - 7/23/2019	I-131	<2.28E-02	0.00E+00	2.28E-02
		Cs-134	<1.58E-02	0.00E+00	1.58E-02
		Cs-137	<1.68E-02	0.00E+00	1.68E-02
		Be-7	<1.29E-01	0.00E+00	1.29E-01
		K-40	5.09E-01	1.66E-01	3.45E-02
504426	7/23/2019 - 7/30/2019	I-131	<2.59E-02	0.00E+00	2.59E-02
		Cs-134	<1.58E-02	0.00E+00	1.58E-02
		Cs-137	<1.14E-02	0.00E+00	1.14E-02
		Be-7	<9.36E-02	0.00E+00	9.36E-02
		K-40	2.21E-01	1.35E-01	1.73E-01
504636	7/30/2019 - 8/6/2019	I-131	<2.07E-02	0.00E+00	2.07E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	<2.70E-01	0.00E+00	2.70E-01
504912	8/6/2019 - 8/13/2019	I-131	<1.72E-02	0.00E+00	1.72E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<1.13E-02	0.00E+00	1.13E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	1.68E-01	1.13E-01	1.43E-01

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 261 [INDICATOR - N @ 0.72 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
505121	8/13/2019 - 8/20/2019	I-131	<1.50E-02	0.00E+00	1.50E-02
		Cs-134	<1.58E-02	0.00E+00	1.58E-02
		Cs-137	<1.36E-02	0.00E+00	1.36E-02
		Be-7	<7.10E-02	0.00E+00	7.10E-02
		K-40	1.89E-01	1.28E-01	1.71E-01
505516	8/20/2019 - 8/27/2019	I-131	<1.09E-02	0.00E+00	1.09E-02
		Cs-134	<1.38E-02	0.00E+00	1.38E-02
		Cs-137	<1.01E-02	0.00E+00	1.01E-02
		Be-7	<9.84E-02	0.00E+00	9.84E-02
		K-40	1.95E-01	1.46E-01	2.09E-01
505842	8/27/2019 - 9/3/2019	I-131	<1.76E-02	0.00E+00	1.76E-02
		Cs-134	<1.80E-02	0.00E+00	1.80E-02
		Cs-137	<1.12E-02	0.00E+00	1.12E-02
		Be-7	<9.50E-02	0.00E+00	9.50E-02
		K-40	3.26E-01	1.44E-01	1.30E-01
506353	9/3/2019 - 9/10/2019	I-131	<1.49E-02	0.00E+00	1.49E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-02
		Cs-137	<1.44E-02	0.00E+00	1.44E-02
		Be-7	<7.75E-02	0.00E+00	7.75E-02
		K-40	3.57E-01	1.50E-01	1.39E-01
507266	9/10/2019 - 9/17/2019	I-131	<1.58E-02	0.00E+00	1.58E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.87E-02	0.00E+00	1.87E-02
		Be-7	<9.77E-02	0.00E+00	9.77E-02
		K-40	3.09E-01	1.71E-01	2.24E-01
507806	9/17/2019 - 9/24/2019	I-131	<1.66E-02	0.00E+00	1.66E-02
		Cs-134	<1.26E-02	0.00E+00	1.26E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02
		Be-7	<9.55E-02	0.00E+00	9.55E-02
		K-40	1.79E-01	1.06E-01	1.11E-01
508340	9/24/2019 - 10/1/2019	I-131	<2.16E-02	0.00E+00	2.16E-02
		Cs-134	<1.86E-02	0.00E+00	1.86E-02
		Cs-137	<1.24E-02	0.00E+00	1.24E-02
		Be-7	<1.37E-01	0.00E+00	1.37E-01
		K-40	3.74E-01	1.79E-01	2.20E-01
509208	10/1/2019 - 10/8/2019	I-131	<1.47E-02	0.00E+00	1.47E-02
		Cs-134	<1.66E-02	0.00E+00	1.66E-02
		Cs-137	<1.75E-02	0.00E+00	1.75E-02
		Be-7	<8.22E-02	0.00E+00	8.22E-02
		K-40	3.01E-01	1.92E-01	2.75E-01
509810	10/8/2019 - 10/15/2019	I-131	<2.01E-02	0.00E+00	2.01E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	5.97E-01	2.49E-01	3.19E-01
510511	10/15/2019 - 10/22/2019	I-131	<1.54E-02	0.00E+00	1.54E-02
		Cs-134	<1.81E-02	0.00E+00	1.81E-02
		Cs-137	<1.38E-02	0.00E+00	1.38E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	3.45E-01	1.33E-01	3.34E-02

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 261 [INDICATOR - N @ 0.72 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
510809	10/22/2019 - 10/29/2019	I-131	<1.58E-02	0.00E+00	1.58E-02
		Cs-134	<1.34E-02	0.00E+00	1.34E-02
		Cs-137	<9.88E-03	0.00E+00	9.88E-03
		Be-7	<8.62E-02	0.00E+00	8.62E-02
		K-40	3.89E-01	1.54E-01	1.36E-01
511214	10/29/2019 - 11/5/2019	I-131	<2.29E-02	0.00E+00	2.29E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-02
		Cs-137	<1.85E-02	0.00E+00	1.85E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	5.66E-01	1.94E-01	1.71E-01
511446	11/5/2019 - 11/12/2019	I-131	<1.22E-02	0.00E+00	1.22E-02
		Cs-134	<1.29E-02	0.00E+00	1.29E-02
		Cs-137	<1.48E-02	0.00E+00	1.48E-02
		Be-7	3.88E-02	5.68E-02	9.49E-02
		K-40	4.74E-01	1.92E-01	2.10E-01
511855	11/12/2019 - 11/19/2019	I-131	<1.14E-02	0.00E+00	1.14E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-02
		Cs-137	<1.08E-02	0.00E+00	1.08E-02
		Be-7	<6.33E-02	0.00E+00	6.33E-02
		K-40	6.74E-01	1.50E-01	1.06E-01
512161	11/19/2019 - 11/25/2019	I-131	<1.75E-02	0.00E+00	1.75E-02
		Cs-134	<2.20E-02	0.00E+00	2.20E-02
		Cs-137	<1.65E-02	0.00E+00	1.65E-02
		Be-7	<1.37E-01	0.00E+00	1.37E-01
		K-40	5.15E-01	1.94E-01	1.77E-01
512465	11/25/2019 - 12/3/2019	I-131	<1.86E-02	0.00E+00	1.86E-02
		Cs-134	<1.50E-02	0.00E+00	1.50E-02
		Cs-137	<1.23E-02	0.00E+00	1.23E-02
		Be-7	<1.27E-01	0.00E+00	1.27E-01
		K-40	3.25E-01	1.33E-01	1.05E-01
512641	12/3/2019 - 12/10/2019	I-131	<1.79E-02	0.00E+00	1.79E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<9.15E-02	0.00E+00	9.15E-02
		K-40	3.76E-01	2.01E-01	2.71E-01
513605	12/10/2019 - 12/17/2019	I-131	<1.83E-02	0.00E+00	1.83E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.18E-02	0.00E+00	1.18E-02
		Be-7	<9.22E-02	0.00E+00	9.22E-02
		K-40	4.08E-01	1.73E-01	1.87E-01
513921	12/17/2019 - 12/23/2019	I-131	<1.80E-02	0.00E+00	1.80E-02
		Cs-134	<1.94E-02	0.00E+00	1.94E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<1.32E-01	0.00E+00	1.32E-01
		K-40	<3.77E-01	0.00E+00	3.77E-01
514145	12/23/2019 - 12/31/2019	I-131	<2.30E-02	0.00E+00	2.30E-02
		Cs-134	<1.03E-02	0.00E+00	1.03E-02
		Cs-137	<9.70E-03	0.00E+00	9.70E-03
		Be-7	<9.33E-02	0.00E+00	9.33E-02
		K-40	1.79E-01	1.30E-01	1.84E-01

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: CROPS Concentration (Activity): pCi/kg

Sample Point 260 [INDICATOR - SSE @ 2 miles]

Sample ID:	Sample Dates:	MIXEDCROPS	Nuclide	Activity	2 Sigma Error	MDA
501077	6/4/2019 - 6/4/2019		I-131	<7.15E+00	0.00E+00	7.15E+00
			Cs-134	<1.12E+01	0.00E+00	1.12E+01
			Cs-137	<1.16E+01	0.00E+00	1.16E+01
			Be-7	<8.86E+01	0.00E+00	8.86E+01
			K-40	1.88E+03	3.16E+02	1.14E+02
503375	7/2/2019 - 7/2/2019		I-131	<1.56E+01	0.00E+00	1.56E+01
			Cs-134	<1.31E+01	0.00E+00	1.31E+01
			Cs-137	<1.30E+01	0.00E+00	1.30E+01
			Be-7	<9.73E+01	0.00E+00	9.73E+01
			K-40	2.09E+03	3.42E+02	1.72E+02
504743	8/6/2019 - 8/6/2019		I-131	<1.13E+01	0.00E+00	1.13E+01
			Cs-134	<9.16E+00	0.00E+00	9.16E+00
			Cs-137	<1.46E+01	0.00E+00	1.46E+01
			Be-7	<1.05E+02	0.00E+00	1.05E+02
			K-40	2.27E+03	3.81E+02	2.19E+02
506201	9/3/2019 - 9/3/2019		I-131	<1.51E+01	0.00E+00	1.51E+01
			Cs-134	<1.27E+01	0.00E+00	1.27E+01
			Cs-137	<1.40E+01	0.00E+00	1.40E+01
			Be-7	<1.03E+02	0.00E+00	1.03E+02
			K-40	1.97E+03	3.45E+02	2.37E+02
509134	10/1/2019 - 10/1/2019		I-131	<1.75E+01	0.00E+00	1.75E+01
			Cs-134	<1.26E+01	0.00E+00	1.26E+01
			Cs-137	<1.08E+01	0.00E+00	1.08E+01
			Be-7	<9.35E+01	0.00E+00	9.35E+01
			K-40	2.80E+03	4.18E+02	2.07E+02
511080	11/5/2019 - 11/5/2019		I-131	<1.84E+01	0.00E+00	1.84E+01
			Cs-134	<1.23E+01	0.00E+00	1.23E+01
			Cs-137	<1.21E+01	0.00E+00	1.21E+01
			Be-7	<1.19E+02	0.00E+00	1.19E+02
			K-40	2.81E+03	4.24E+02	2.24E+02
512438	12/3/2019 - 12/3/2019		I-131	<1.27E+01	0.00E+00	1.27E+01
			Cs-134	<1.69E+01	0.00E+00	1.69E+01
			Cs-137	<1.33E+01	0.00E+00	1.33E+01
			Be-7	3.02E+02	1.09E+02	1.39E+02
			K-40	3.11E+03	4.63E+02	2.67E+02

Media Type: DRINKING WATER Concentration (Activity): pCi/l

Sample Point 214 [INDICATOR - SSE @ 7.3 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493134	1/2/2019 - 1/29/2019	Mn-54	<2.63E+00	0.00E+00	2.63E+00
		Co-58	<3.66E+00	0.00E+00	3.66E+00
		Fe-59	<6.59E+00	0.00E+00	6.59E+00
		Co-60	<3.51E+00	0.00E+00	3.51E+00
		Zn-65	<5.88E+00	0.00E+00	5.88E+00
		Zr-95	<6.49E+00	0.00E+00	6.49E+00
		Nb-95	<3.26E+00	0.00E+00	3.26E+00
		I-131	<1.11E+01	0.00E+00	1.11E+01
		Cs-134	<3.67E+00	0.00E+00	3.67E+00
		Cs-137	<2.85E+00	0.00E+00	2.85E+00
		BaLa-140	<7.14E+00	0.00E+00	7.14E+00
		Be-7	<2.56E+01	0.00E+00	2.56E+01
		K-40	6.13E+01	3.80E+01	5.56E+01
		Beta	<1.94E+00	0.00E+00	1.94E+00

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: DRINKING WATER Concentration (Activity): pCi/l

Sample Point 214 [INDICATOR - SSE @ 7.3 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494464	1/29/2019 - 2/26/2019	Beta	<3.33E+00	0.00E+00	3.33E+00
		Mn-54	<3.97E+00	0.00E+00	3.97E+00
		Co-58	<3.89E+00	0.00E+00	3.89E+00
		Fe-59	<8.54E+00	0.00E+00	8.54E+00
		Co-60	<3.59E+00	0.00E+00	3.59E+00
		Zn-65	<5.70E+00	0.00E+00	5.70E+00
		Zr-95	<5.88E+00	0.00E+00	5.88E+00
		Nb-95	<5.36E+00	0.00E+00	5.36E+00
		I-131	<1.14E+01	0.00E+00	1.14E+01
		Cs-134	<4.84E+00	0.00E+00	4.84E+00
		Cs-137	<5.18E+00	0.00E+00	5.18E+00
		BaLa-140	<1.16E+01	0.00E+00	1.16E+01
		Be-7	<2.91E+01	0.00E+00	2.91E+01
		K-40	<5.24E+01	0.00E+00	5.24E+01
496907	2/26/2019 - 3/26/2019	Beta	3.41E+00	4.48E+00	3.29E+00
		Mn-54	<2.18E+00	0.00E+00	2.18E+00
		Co-58	<2.55E+00	0.00E+00	2.55E+00
		Fe-59	<5.32E+00	0.00E+00	5.32E+00
		Co-60	<1.89E+00	0.00E+00	1.89E+00
		Zn-65	<4.85E+00	0.00E+00	4.85E+00
		Zr-95	<5.02E+00	0.00E+00	5.02E+00
		Nb-95	<2.85E+00	0.00E+00	2.85E+00
		I-131	<1.09E+01	0.00E+00	1.09E+01
		Cs-134	<2.35E+00	0.00E+00	2.35E+00
		Cs-137	<2.04E+00	0.00E+00	2.04E+00
		BaLa-140	<7.85E+00	0.00E+00	7.85E+00
		Be-7	<1.81E+01	0.00E+00	1.81E+01
		K-40	3.57E+01	2.02E+01	2.80E+01
493729	1/2/2019 - 4/23/2019	Nuclide	Activity	2 Sigma Error	MDA
		H3DW	<1.57E+02	0.00E+00	1.89E+02
498676	3/26/2019 - 4/23/2019	Beta	3.86E+00	4.48E+00	3.28E+00
		Mn-54	<1.60E+00	0.00E+00	1.60E+00
		Co-58	<1.86E+00	0.00E+00	1.86E+00
		Fe-59	<3.83E+00	0.00E+00	3.83E+00
		Co-60	<1.43E+00	0.00E+00	1.43E+00
		Zn-65	<3.15E+00	0.00E+00	3.15E+00
		Zr-95	<2.68E+00	0.00E+00	2.68E+00
		Nb-95	<1.73E+00	0.00E+00	1.73E+00
		I-131	<1.05E+01	0.00E+00	1.05E+01
		Cs-134	<1.72E+00	0.00E+00	1.72E+00
		Cs-137	<1.44E+00	0.00E+00	1.44E+00
		BaLa-140	<4.94E+00	0.00E+00	4.94E+00
		Be-7	<1.52E+01	0.00E+00	1.52E+01
		K-40	4.49E+01	1.51E+01	1.88E+01
500250	4/23/2019 - 5/21/2019	Beta	<3.28E+00	0.00E+00	3.28E+00
		Mn-54	<3.45E+00	0.00E+00	3.45E+00
		Co-58	<3.39E+00	0.00E+00	3.39E+00
		Fe-59	<6.31E+00	0.00E+00	6.31E+00
		Co-60	<3.18E+00	0.00E+00	3.18E+00
		Zn-65	<5.88E+00	0.00E+00	5.88E+00
		Zr-95	<6.01E+00	0.00E+00	6.01E+00
		Nb-95	<3.98E+00	0.00E+00	3.98E+00
		I-131	<1.11E+01	0.00E+00	1.11E+01
		Cs-134	<3.54E+00	0.00E+00	3.54E+00
		Cs-137	<2.82E+00	0.00E+00	2.82E+00
		BaLa-140	<1.12E+01	0.00E+00	1.12E+01
		Be-7	<2.89E+01	0.00E+00	2.89E+01
		K-40	<4.53E+01	0.00E+00	4.53E+01

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: DRINKING WATER Concentration (Activity): pCi/l

Sample Point 214 [INDICATOR - SSE @ 7.3 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
502028	5/21/2019 - 6/18/2019	Beta	<3.25E+00	0.00E+00	3.25E+00
		Mn-54	<1.35E+00	0.00E+00	1.35E+00
		Co-58	<1.53E+00	0.00E+00	1.53E+00
		Fe-59	<3.18E+00	0.00E+00	3.18E+00
		Co-60	<1.26E+00	0.00E+00	1.26E+00
		Zn-65	<3.27E+00	0.00E+00	3.27E+00
		Zr-95	<3.01E+00	0.00E+00	3.01E+00
		Nb-95	<2.04E+00	0.00E+00	2.04E+00
		I-131	<7.53E+00	0.00E+00	7.53E+00
		Cs-134	<1.63E+00	0.00E+00	1.63E+00
		Cs-137	<1.49E+00	0.00E+00	1.49E+00
		BaLa-140	<4.10E+00	0.00E+00	4.10E+00
		Be-7	<1.42E+01	0.00E+00	1.42E+01
		K-40	<2.27E+01	0.00E+00	2.27E+01
500023	4/23/2019 - 7/16/2019	H3DW	<1.38E+02	0.00E+00	1.90E+02
504058	6/18/2019 - 7/16/2019	Beta	4.44E+00	4.48E+00	3.28E+00
		Mn-54	<4.77E+00	0.00E+00	4.77E+00
		Co-58	<4.36E+00	0.00E+00	4.36E+00
		Fe-59	<6.32E+00	0.00E+00	6.32E+00
		Co-60	<3.23E+00	0.00E+00	3.23E+00
		Zn-65	<7.34E+00	0.00E+00	7.34E+00
		Zr-95	<6.97E+00	0.00E+00	6.97E+00
		Nb-95	<4.12E+00	0.00E+00	4.12E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<3.95E+00	0.00E+00	3.95E+00
		Cs-137	<2.78E+00	0.00E+00	2.78E+00
		BaLa-140	<6.58E+00	0.00E+00	6.58E+00
		Be-7	<3.90E+01	0.00E+00	3.90E+01
		K-40	5.27E+01	3.25E+01	4.52E+01
505028	7/16/2019 - 8/13/2019	Beta	3.61E+00	4.53E+00	3.33E+00
		Mn-54	<2.71E+00	0.00E+00	2.71E+00
		Co-58	<4.18E+00	0.00E+00	4.18E+00
		Fe-59	<6.10E+00	0.00E+00	6.10E+00
		Co-60	<4.02E+00	0.00E+00	4.02E+00
		Zn-65	<8.10E+00	0.00E+00	8.10E+00
		Zr-95	<8.97E+00	0.00E+00	8.97E+00
		Nb-95	<4.67E+00	0.00E+00	4.67E+00
		I-131	<9.63E+00	0.00E+00	9.63E+00
		Cs-134	<3.67E+00	0.00E+00	3.67E+00
		Cs-137	<3.22E+00	0.00E+00	3.22E+00
		BaLa-140	<8.29E+00	0.00E+00	8.29E+00
		Be-7	<3.69E+01	0.00E+00	3.69E+01
		K-40	1.66E+01	2.22E+01	3.61E+01
506765	8/13/2019 - 9/10/2019	Beta	1.07E+01	4.73E+00	3.36E+00
		Mn-54	<3.63E+00	0.00E+00	3.63E+00
		Co-58	<3.87E+00	0.00E+00	3.87E+00
		Fe-59	<6.87E+00	0.00E+00	6.87E+00
		Co-60	<2.69E+00	0.00E+00	2.69E+00
		Zn-65	<5.51E+00	0.00E+00	5.51E+00
		Zr-95	<6.34E+00	0.00E+00	6.34E+00
		Nb-95	<4.88E+00	0.00E+00	4.88E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<3.75E+00	0.00E+00	3.75E+00
		Cs-137	<3.52E+00	0.00E+00	3.52E+00
		BaLa-140	<7.14E+00	0.00E+00	7.14E+00
		Be-7	<2.40E+01	0.00E+00	2.40E+01
		K-40	<5.56E+01	0.00E+00	5.56E+01

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: DRINKING WATER Concentration (Activity): pCi/l

Sample Point 214 [INDICATOR - SSE @ 7.3 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
505062	7/16/2019 - 10/8/2019	H3DW	3.24E+02	1.22E+02	1.93E+02
509644	9/10/2019 - 10/8/2019	Beta	<3.36E+00	0.00E+00	3.36E+00
		Mn-54	<3.48E+00	0.00E+00	3.48E+00
		Co-58	<4.22E+00	0.00E+00	4.22E+00
		Fe-59	<7.63E+00	0.00E+00	7.63E+00
		Co-60	<3.23E+00	0.00E+00	3.23E+00
		Zn-65	<6.81E+00	0.00E+00	6.81E+00
		Zr-95	<6.80E+00	0.00E+00	6.80E+00
		Nb-95	<4.84E+00	0.00E+00	4.84E+00
		I-131	<1.10E+01	0.00E+00	1.10E+01
		Cs-134	<3.25E+00	0.00E+00	3.25E+00
		Cs-137	<3.62E+00	0.00E+00	3.62E+00
		BaLa-140	<1.13E+01	0.00E+00	1.13E+01
		Be-7	<2.89E+01	0.00E+00	2.89E+01
		K-40	8.99E+01	3.81E+01	4.44E+01
511356	10/8/2019 - 11/5/2019	Beta	<3.31E+00	0.00E+00	3.31E+00
		Mn-54	<2.56E+00	0.00E+00	2.56E+00
		Co-58	<3.36E+00	0.00E+00	3.36E+00
		Fe-59	<6.04E+00	0.00E+00	6.04E+00
		Co-60	<2.63E+00	0.00E+00	2.63E+00
		Zn-65	<7.75E+00	0.00E+00	7.75E+00
		Zr-95	<6.61E+00	0.00E+00	6.61E+00
		Nb-95	<4.11E+00	0.00E+00	4.11E+00
		I-131	<1.14E+01	0.00E+00	1.14E+01
		Cs-134	<3.50E+00	0.00E+00	3.50E+00
		Cs-137	<2.31E+00	0.00E+00	2.31E+00
		BaLa-140	<6.88E+00	0.00E+00	6.88E+00
		Be-7	<2.61E+01	0.00E+00	2.61E+01
		K-40	6.06E+01	3.17E+01	4.37E+01
512585	11/5/2019 - 12/3/2019	Beta	<3.31E+00	0.00E+00	3.31E+00
		Mn-54	<2.88E+00	0.00E+00	2.88E+00
		Co-58	<3.18E+00	0.00E+00	3.18E+00
		Fe-59	<7.14E+00	0.00E+00	7.14E+00
		Co-60	<3.26E+00	0.00E+00	3.26E+00
		Zn-65	<5.56E+00	0.00E+00	5.56E+00
		Zr-95	<6.13E+00	0.00E+00	6.13E+00
		Nb-95	<3.99E+00	0.00E+00	3.99E+00
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<3.34E+00	0.00E+00	3.34E+00
		Cs-137	<4.13E+00	0.00E+00	4.13E+00
		BaLa-140	<7.99E+00	0.00E+00	7.99E+00
		Be-7	<2.24E+01	0.00E+00	2.24E+01
		K-40	6.86E+01	3.76E+01	5.14E+01
511705	10/8/2019 - 12/31/2019	H3DW	5.85E+02	1.36E+02	2.04E+02
514309	12/3/2019 - 12/31/2019	Beta	<3.29E+00	0.00E+00	3.29E+00
		Mn-54	<2.01E+00	0.00E+00	2.01E+00
		Co-58	<2.87E+00	0.00E+00	2.87E+00
		Fe-59	<4.94E+00	0.00E+00	4.94E+00
		Co-60	<1.76E+00	0.00E+00	1.76E+00
		Zn-65	<5.55E+00	0.00E+00	5.55E+00
		Zr-95	<3.03E+00	0.00E+00	3.03E+00
		Nb-95	<3.24E+00	0.00E+00	3.24E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<3.07E+00	0.00E+00	3.07E+00
		Cs-137	<2.40E+00	0.00E+00	2.40E+00
		BaLa-140	<7.51E+00	0.00E+00	7.51E+00
		Be-7	<2.63E+01	0.00E+00	2.63E+01

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: DRINKING WATER Concentration (Activity): pCi/l

Sample Point 214 [INDICATOR - SSE @ 7.3 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514309	12/3/2019 - 12/31/2019	K-40	<4.31E+01	0.00E+00	4.31E+01

Sample Point 218 [CONTROL - NNE @ 13.5 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493135	1/2/2019 - 1/29/2019	Mn-54	<3.34E+00	0.00E+00	3.34E+00
		Co-58	<3.46E+00	0.00E+00	3.46E+00
		Fe-59	<6.95E+00	0.00E+00	6.95E+00
		Co-60	<3.89E+00	0.00E+00	3.89E+00
		Zn-65	<5.07E+00	0.00E+00	5.07E+00
		Zr-95	<4.04E+00	0.00E+00	4.04E+00
		Nb-95	<4.76E+00	0.00E+00	4.76E+00
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<3.92E+00	0.00E+00	3.92E+00
		Cs-137	<3.43E+00	0.00E+00	3.43E+00
		BaLa-140	<9.36E+00	0.00E+00	9.36E+00
		Be-7	<3.96E+01	0.00E+00	3.96E+01
		K-40	<4.66E+01	0.00E+00	4.66E+01
		Beta	<3.64E+00	0.00E+00	3.64E+00

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494465	1/29/2019 - 2/26/2019	Beta	<3.33E+00	0.00E+00	3.33E+00
		Mn-54	<2.98E+00	0.00E+00	2.98E+00
		Co-58	<3.06E+00	0.00E+00	3.06E+00
		Fe-59	<1.00E+01	0.00E+00	1.00E+01
		Co-60	<2.63E+00	0.00E+00	2.63E+00
		Zn-65	<1.05E+01	0.00E+00	1.05E+01
		Zr-95	<8.32E+00	0.00E+00	8.32E+00
		Nb-95	<3.41E+00	0.00E+00	3.41E+00
		I-131	<1.14E+01	0.00E+00	1.14E+01
		Cs-134	<3.72E+00	0.00E+00	3.72E+00
		Cs-137	<4.12E+00	0.00E+00	4.12E+00
		BaLa-140	<8.12E+00	0.00E+00	8.12E+00
		Be-7	<3.48E+01	0.00E+00	3.48E+01
		K-40	<7.01E+01	0.00E+00	7.01E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
496908	2/26/2019 - 3/26/2019	Beta	4.03E+00	4.50E+00	3.29E+00
		Mn-54	<1.76E+00	0.00E+00	1.76E+00
		Co-58	<2.18E+00	0.00E+00	2.18E+00
		Fe-59	<4.91E+00	0.00E+00	4.91E+00
		Co-60	<1.61E+00	0.00E+00	1.61E+00
		Zn-65	<3.95E+00	0.00E+00	3.95E+00
		Zr-95	<3.52E+00	0.00E+00	3.52E+00
		Nb-95	<1.98E+00	0.00E+00	1.98E+00
		I-131	<1.01E+01	0.00E+00	1.01E+01
		Cs-134	<1.72E+00	0.00E+00	1.72E+00
		Cs-137	<1.69E+00	0.00E+00	1.69E+00
		BaLa-140	<4.41E+00	0.00E+00	4.41E+00
		Be-7	<1.88E+01	0.00E+00	1.88E+01
		K-40	2.92E+01	1.79E+01	2.61E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493730	1/2/2019 - 4/23/2019	H3DW	<6.66E+01	0.00E+00	1.89E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
498677	3/26/2019 - 4/23/2019	Beta	<3.28E+00	0.00E+00	3.28E+00
		Mn-54	<2.00E+00	0.00E+00	2.00E+00
		Co-58	<2.56E+00	0.00E+00	2.56E+00
		Fe-59	<4.92E+00	0.00E+00	4.92E+00
		Co-60	<2.14E+00	0.00E+00	2.14E+00
		Zn-65	<4.56E+00	0.00E+00	4.56E+00
		Zr-95	<3.90E+00	0.00E+00	3.90E+00
		Nb-95	<3.04E+00	0.00E+00	3.04E+00
		I-131	<1.15E+01	0.00E+00	1.15E+01
		Cs-134	<2.20E+00	0.00E+00	2.20E+00
		Cs-137	<1.87E+00	0.00E+00	1.87E+00

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: DRINKING WATER Concentration (Activity): pCi/l

Sample Point 218 [CONTROL - NNE @ 13.5 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
498677	3/26/2019 - 4/23/2019	BaLa-140	<6.20E+00	0.00E+00	6.20E+00
		Be-7	<1.85E+01	0.00E+00	1.85E+01
		K-40	2.73E+01	1.77E+01	2.54E+01
500251	4/23/2019 - 5/21/2019	Beta	<3.28E+00	0.00E+00	3.28E+00
		Mn-54	<1.48E+00	0.00E+00	1.48E+00
		Co-58	<1.75E+00	0.00E+00	1.75E+00
		Fe-59	<3.23E+00	0.00E+00	3.23E+00
		Co-60	<1.24E+00	0.00E+00	1.24E+00
		Zn-65	<3.26E+00	0.00E+00	3.26E+00
		Zr-95	<3.00E+00	0.00E+00	3.00E+00
		Nb-95	<2.24E+00	0.00E+00	2.24E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<1.66E+00	0.00E+00	1.66E+00
		Cs-137	<1.37E+00	0.00E+00	1.37E+00
		BaLa-140	<5.55E+00	0.00E+00	5.55E+00
		Be-7	<1.44E+01	0.00E+00	1.44E+01
		K-40	9.06E+01	1.98E+01	2.31E+01
502029	5/21/2019 - 6/18/2019	Beta	<3.25E+00	0.00E+00	3.25E+00
		Mn-54	<1.41E+00	0.00E+00	1.41E+00
		Co-58	<1.41E+00	0.00E+00	1.41E+00
		Fe-59	<3.15E+00	0.00E+00	3.15E+00
		Co-60	<1.26E+00	0.00E+00	1.26E+00
		Zn-65	<2.51E+00	0.00E+00	2.51E+00
		Zr-95	<2.62E+00	0.00E+00	2.62E+00
		Nb-95	<2.09E+00	0.00E+00	2.09E+00
		I-131	<7.47E+00	0.00E+00	7.47E+00
		Cs-134	<1.54E+00	0.00E+00	1.54E+00
		Cs-137	<1.11E+00	0.00E+00	1.11E+00
		BaLa-140	<3.40E+00	0.00E+00	3.40E+00
		Be-7	<1.34E+01	0.00E+00	1.34E+01
		K-40	3.34E+01	1.43E+01	2.01E+01
500024	4/23/2019 - 7/16/2019	H3DW	2.56E+02	1.19E+02	1.91E+02
504059	6/18/2019 - 7/16/2019	Beta	<3.28E+00	0.00E+00	3.28E+00
		Mn-54	<4.13E+00	0.00E+00	4.13E+00
		Co-58	<3.87E+00	0.00E+00	3.87E+00
		Fe-59	<7.01E+00	0.00E+00	7.01E+00
		Co-60	<3.57E+00	0.00E+00	3.57E+00
		Zn-65	<7.33E+00	0.00E+00	7.33E+00
		Zr-95	<8.81E+00	0.00E+00	8.81E+00
		Nb-95	<4.02E+00	0.00E+00	4.02E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<3.60E+00	0.00E+00	3.60E+00
		Cs-137	<4.68E+00	0.00E+00	4.68E+00
		BaLa-140	<9.62E+00	0.00E+00	9.62E+00
		Be-7	<4.09E+01	0.00E+00	4.09E+01
		K-40	<9.95E+01	0.00E+00	5.95E+01
505029	7/16/2019 - 8/13/2019	Beta	8.73E+00	4.64E+00	3.33E+00
		Mn-54	<3.50E+00	0.00E+00	3.50E+00
		Co-58	<4.17E+00	0.00E+00	4.17E+00
		Fe-59	<5.16E+00	0.00E+00	5.16E+00
		Co-60	<3.33E+00	0.00E+00	3.33E+00
		Zn-65	<8.63E+00	0.00E+00	8.63E+00
		Zr-95	<6.29E+00	0.00E+00	6.29E+00
		Nb-95	<6.64E+00	0.00E+00	6.64E+00
		I-131	<8.27E+00	0.00E+00	8.27E+00
		Cs-134	<4.45E+00	0.00E+00	4.45E+00
		Cs-137	<3.40E+00	0.00E+00	3.40E+00

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: DRINKING WATER Concentration (Activity): pCi/l

Sample Point 218 [CONTROL - NNE @ 13.5 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
505029	7/16/2019 - 8/13/2019	BaLa-140	<1.04E+01	0.00E+00	1.04E+01
		Be-7	<3.11E+01	0.00E+00	3.11E+01
		K-40	<6.92E+01	0.00E+00	6.92E+01
506766	8/13/2019 - 9/10/2019	Beta	9.85E+00	4.72E+00	3.36E+00
		Mn-54	<2.96E+00	0.00E+00	2.96E+00
		Co-58	<3.52E+00	0.00E+00	3.52E+00
		Fe-59	<6.31E+00	0.00E+00	6.31E+00
		Co-60	<3.05E+00	0.00E+00	3.05E+00
		Zn-65	<6.51E+00	0.00E+00	6.51E+00
		Zr-95	<6.25E+00	0.00E+00	6.25E+00
		Nb-95	<3.52E+00	0.00E+00	3.52E+00
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<3.11E+00	0.00E+00	3.11E+00
		Cs-137	<2.93E+00	0.00E+00	2.93E+00
		BaLa-140	<7.80E+00	0.00E+00	7.80E+00
		Be-7	<2.36E+01	0.00E+00	2.36E+01
		K-40	<5.95E+01	0.00E+00	5.95E+01
505063	7/16/2019 - 10/8/2019	H3DW	<1.30E+02	0.00E+00	1.93E+02
509645	9/10/2019 - 10/8/2019	Beta	<3.36E+00	0.00E+00	3.36E+00
		Mn-54	<2.96E+00	0.00E+00	2.96E+00
		Co-58	<4.30E+00	0.00E+00	4.30E+00
		Fe-59	<6.97E+00	0.00E+00	6.97E+00
		Co-60	<2.84E+00	0.00E+00	2.84E+00
		Zn-65	<8.20E+00	0.00E+00	8.20E+00
		Zr-95	<7.22E+00	0.00E+00	7.22E+00
		Nb-95	<4.68E+00	0.00E+00	4.68E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<4.31E+00	0.00E+00	4.31E+00
		Cs-137	<4.32E+00	0.00E+00	4.32E+00
		BaLa-140	<1.01E+01	0.00E+00	1.01E+01
		Be-7	<3.11E+01	0.00E+00	3.11E+01
		K-40	8.01E+01	3.62E+01	4.39E+01
511357	10/8/2019 - 11/5/2019	Beta	<3.31E+00	0.00E+00	3.31E+00
		Mn-54	<3.13E+00	0.00E+00	3.13E+00
		Co-58	<3.20E+00	0.00E+00	3.20E+00
		Fe-59	<6.43E+00	0.00E+00	6.43E+00
		Co-60	<3.00E+00	0.00E+00	3.00E+00
		Zn-65	<6.71E+00	0.00E+00	6.71E+00
		Zr-95	<5.42E+00	0.00E+00	5.42E+00
		Nb-95	<3.78E+00	0.00E+00	3.78E+00
		I-131	<1.13E+01	0.00E+00	1.13E+01
		Cs-134	<2.88E+00	0.00E+00	2.88E+00
		Cs-137	<3.04E+00	0.00E+00	3.04E+00
		BaLa-140	<9.10E+00	0.00E+00	9.10E+00
		Be-7	<3.19E+01	0.00E+00	3.19E+01
		K-40	3.34E+01	2.29E+01	3.04E+01
512586	11/5/2019 - 12/3/2019	Beta	<3.31E+00	0.00E+00	3.31E+00
		Mn-54	<3.17E+00	0.00E+00	3.17E+00
		Co-58	<3.19E+00	0.00E+00	3.19E+00
		Fe-59	<8.29E+00	0.00E+00	8.29E+00
		Co-60	<2.92E+00	0.00E+00	2.92E+00
		Zn-65	<5.87E+00	0.00E+00	5.87E+00
		Zr-95	<5.64E+00	0.00E+00	5.64E+00
		Nb-95	<4.90E+00	0.00E+00	4.90E+00
		I-131	<1.15E+01	0.00E+00	1.15E+01
		Cs-134	<3.36E+00	0.00E+00	3.36E+00
		Cs-137	<2.94E+00	0.00E+00	2.94E+00

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: DRINKING WATER Concentration (Activity): pCi/l

Sample Point 218 [CONTROL - NNE @ 13.5 miles]

Sample ID:	Sample Dates:		Nuclide	Activity	2 Sigma Error	MDA
512586	11/5/2019 - 12/3/2019		BaLa-140	<6.96E+00	0.00E+00	6.96E+00
			Be-7	<2.64E+01	0.00E+00	2.64E+01
			K-40	<2.24E+01	0.00E+00	2.24E+01
511706	10/8/2019 - 12/31/2019		H3DW	3.14E+02	1.26E+02	2.00E+02
514310	12/3/2019 - 12/31/2019		Beta	<3.29E+00	0.00E+00	3.29E+00
			Mn-54	<3.57E+00	0.00E+00	3.57E+00
			Co-58	<4.47E+00	0.00E+00	4.47E+00
			Fe-59	<6.21E+00	0.00E+00	6.21E+00
			Co-60	<4.03E+00	0.00E+00	4.03E+00
			Zn-65	<9.31E+00	0.00E+00	9.31E+00
			Zr-95	<5.39E+00	0.00E+00	5.39E+00
			Nb-95	<5.55E+00	0.00E+00	5.55E+00
			I-131	<1.19E+01	0.00E+00	1.19E+01
			Cs-134	<4.21E+00	0.00E+00	4.21E+00
			Cs-137	<3.22E+00	0.00E+00	3.22E+00
			BaLa-140	<1.15E+01	0.00E+00	1.15E+01
			Be-7	<2.61E+01	0.00E+00	2.61E+01
			K-40	<4.35E+01	0.00E+00	4.35E+01

Media Type: FISH Concentration (Activity): pCi/kg

Sample Point 208 [INDICATOR - S @ 0.45 miles]

Sample ID:	Sample Dates:		Nuclide	Activity	2 Sigma Error	MDA
498009	4/3/2019 - 4/3/2019	PREDATOR	Mn-54	<4.92E+01	0.00E+00	4.92E+01
			Co-58	<6.38E+01	0.00E+00	6.38E+01
			Fe-59	<1.05E+02	0.00E+00	1.05E+02
			Co-60	<4.18E+01	0.00E+00	4.18E+01
			Zn-65	<1.33E+02	0.00E+00	1.33E+02
			Nb-95	<6.53E+01	0.00E+00	6.53E+01
			I-131	<9.53E+01	0.00E+00	9.53E+01
			Cs-134	<6.46E+01	0.00E+00	6.46E+01
			Cs-137	<5.98E+01	0.00E+00	5.98E+01
			Be-7	<5.76E+02	0.00E+00	5.76E+02
			K-40	5.19E+03	1.23E+03	8.45E+02
			Ag-110M	<4.71E+01	0.00E+00	4.71E+01
			Sb-122	<4.01E+02	0.00E+00	4.01E+02
			Sb-125	<1.77E+02	0.00E+00	1.77E+02
498010	4/3/2019 - 4/3/2019	FORAGER	Mn-54	<1.73E+01	0.00E+00	1.73E+01
			Co-58	<2.33E+01	0.00E+00	2.33E+01
			Fe-59	<4.64E+01	0.00E+00	4.64E+01
			Co-60	2.72E+01	1.86E+01	2.93E+01
			Zn-65	<3.95E+01	0.00E+00	3.95E+01
			Nb-95	<2.91E+01	0.00E+00	2.91E+01
			I-131	<1.47E+02	0.00E+00	1.47E+02
			Cs-134	<2.05E+01	0.00E+00	2.05E+01
			Cs-137	<1.46E+01	0.00E+00	1.46E+01
			Be-7	<1.98E+02	0.00E+00	1.98E+02
			K-40	4.28E+03	4.77E+02	2.79E+02
			Ag-110M	<1.45E+01	0.00E+00	1.45E+01
			Sb-122	<1.62E+04	0.00E+00	1.62E+04
			Sb-125	<4.38E+01	0.00E+00	4.38E+01
498011	4/10/2019 - 4/10/2019	BOTMFEEDER	Mn-54	<8.78E+01	0.00E+00	8.78E+01
			Co-58	<8.37E+01	0.00E+00	8.37E+01
			Fe-59	<1.44E+02	0.00E+00	1.44E+02
			Co-60	<6.71E+01	0.00E+00	6.71E+01
			Zn-65	<1.82E+02	0.00E+00	1.82E+02
			Nb-95	<9.96E+01	0.00E+00	9.96E+01
			I-131	<5.17E+02	0.00E+00	5.17E+02
			Cs-134	<1.04E+02	0.00E+00	1.04E+02

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: FISH Concentration (Activity): pCi/kg

Sample Point 208 [INDICATOR - S @ 0.45 miles]

Sample ID:	Sample Dates:	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
498011	4/10/2019 - 4/10/2019		Cs-137	<8.28E+01	0.00E+00	8.28E+01
			Be-7	<7.60E+02	0.00E+00	7.60E+02
			K-40	4.67E+03	1.45E+03	1.09E+03
			Ag-110M	<6.39E+01	0.00E+00	6.39E+01
			Sb-122	<3.36E+04	0.00E+00	3.36E+04
			Sb-125	<2.13E+02	0.00E+00	2.13E+02

Sample ID:	Sample Dates:	PREDATOR	Nuclide	Activity	2 Sigma Error	MDA
510054	10/9/2019 - 10/9/2019		Mn-54	<6.65E+01	0.00E+00	6.65E+01
			Co-58	<9.43E+01	0.00E+00	9.43E+01
			Fe-59	<1.20E+02	0.00E+00	1.20E+02
			Co-60	<1.02E+02	0.00E+00	1.02E+02
			Zn-65	<1.81E+02	0.00E+00	1.81E+02
			Nb-95	<9.48E+01	0.00E+00	9.48E+01
			I-131	<1.05E+02	0.00E+00	1.05E+02
			Cs-134	<1.03E+02	0.00E+00	1.03E+02
			Cs-137	<8.13E+01	0.00E+00	8.13E+01
			Be-7	<4.49E+02	0.00E+00	4.49E+02
			K-40	4.48E+03	1.37E+03	1.19E+03
			Ag-110M	<4.52E+01	0.00E+00	4.52E+01
			Sb-122	<3.54E+02	0.00E+00	3.54E+02
			Sb-125	<1.82E+02	0.00E+00	1.82E+02

Sample ID:	Sample Dates:	FORAGER	Nuclide	Activity	2 Sigma Error	MDA
510055	10/9/2019 - 10/9/2019		Mn-54	<8.05E+01	0.00E+00	8.05E+01
			Co-58	<4.81E+01	0.00E+00	4.81E+01
			Fe-59	<1.54E+02	0.00E+00	1.54E+02
			Co-60	<1.91E+01	0.00E+00	1.91E+01
			Zn-65	<1.65E+02	0.00E+00	1.65E+02
			Nb-95	<7.81E+01	0.00E+00	7.81E+01
			I-131	<7.69E+01	0.00E+00	7.69E+01
			Cs-134	<8.03E+01	0.00E+00	8.03E+01
			Cs-137	<1.34E+01	0.00E+00	1.34E+01
			Be-7	<6.12E+02	0.00E+00	6.12E+02
			K-40	3.16E+03	1.05E+03	8.11E+02
			Ag-110M	<5.83E+01	0.00E+00	5.83E+01
			Sb-122	<2.67E+02	0.00E+00	2.67E+02
			Sb-125	<1.24E+02	0.00E+00	1.24E+02

Sample ID:	Sample Dates:	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
510056	10/9/2019 - 10/9/2019		Mn-54	<7.76E+01	0.00E+00	7.76E+01
			Co-58	<8.80E+01	0.00E+00	8.80E+01
			Fe-59	<1.12E+02	0.00E+00	1.12E+02
			Co-60	<6.74E+01	0.00E+00	6.74E+01
			Zn-65	<1.82E+02	0.00E+00	1.82E+02
			Nb-95	<3.90E+01	0.00E+00	3.90E+01
			I-131	<5.70E+01	0.00E+00	5.70E+01
			Cs-134	<1.57E+01	0.00E+00	1.57E+01
			Cs-137	<8.01E+01	0.00E+00	8.01E+01
			Be-7	<4.54E+02	0.00E+00	4.54E+02
			K-40	4.10E+03	1.26E+03	1.08E+03
			Ag-110M	<7.20E+01	0.00E+00	7.20E+01
			Sb-122	<3.51E+02	0.00E+00	3.51E+02
			Sb-125	<1.85E+02	0.00E+00	1.85E+02

Sample Point 216 [CONTROL - NNE @ 4.19 miles]

Sample ID:	Sample Dates:	PREDATOR	Nuclide	Activity	2 Sigma Error	MDA
498012	4/3/2019 - 4/3/2019		Mn-54	<7.88E+01	0.00E+00	7.88E+01
			Co-58	<7.04E+01	0.00E+00	7.04E+01
			Fe-59	<1.16E+02	0.00E+00	1.16E+02
			Co-60	<5.87E+01	0.00E+00	5.87E+01
			Zn-65	<1.05E+02	0.00E+00	1.05E+02
			Nb-95	<6.30E+01	0.00E+00	6.30E+01
			I-131	<1.03E+02	0.00E+00	1.03E+02
			Cs-134	<9.52E+01	0.00E+00	9.52E+01
			Cs-137	<5.77E+01	0.00E+00	5.77E+01

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: FISH Concentration (Activity): pCi/kg

Sample Point 216 [CONTROL - NNE @ 4.19 miles]

Sample ID:	Sample Dates:	PREDATOR	Nuclide	Activity	2 Sigma Error	MDA
498012	4/3/2019 - 4/3/2019	PREDATOR	Be-7	<5.16E+02	0.00E+00	5.16E+02
			K-40	6.14E+03	1.43E+03	1.00E+03
			Ag-110M	<7.48E+01	0.00E+00	7.48E+01
			Sb-122	<5.09E+02	0.00E+00	5.09E+02
			Sb-125	<1.54E+02	0.00E+00	1.54E+02
Sample ID:	Sample Dates:	FORAGER	Nuclide	Activity	2 Sigma Error	MDA
498013	4/3/2019 - 4/3/2019	FORAGER	Mn-54	<5.54E+01	0.00E+00	5.54E+01
			Co-58	<5.39E+01	0.00E+00	5.39E+01
			Fe-59	<1.06E+02	0.00E+00	1.06E+02
			Co-60	<6.81E+01	0.00E+00	6.81E+01
			Zn-65	<1.11E+02	0.00E+00	1.11E+02
			Nb-95	<7.63E+01	0.00E+00	7.63E+01
			I-131	<1.08E+02	0.00E+00	1.08E+02
			Cs-134	<7.48E+01	0.00E+00	7.48E+01
			Cs-137	<4.70E+01	0.00E+00	4.70E+01
			Be-7	<5.95E+02	0.00E+00	5.95E+02
			K-40	3.05E+03	9.77E+02	9.80E+02
			Ag-110M	<6.52E+01	0.00E+00	6.52E+01
			Sb-122	<3.99E+02	0.00E+00	3.99E+02
Sb-125	<1.62E+02	0.00E+00	1.62E+02			
Sample ID:	Sample Dates:	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
498014	4/3/2019 - 4/3/2019	BOTMFEEDER	Mn-54	<6.94E+01	0.00E+00	6.94E+01
			Co-58	<6.09E+01	0.00E+00	6.09E+01
			Fe-59	<1.58E+02	0.00E+00	1.58E+02
			Co-60	<6.27E+01	0.00E+00	6.27E+01
			Zn-65	<9.65E+01	0.00E+00	9.65E+01
			Nb-95	<5.80E+01	0.00E+00	5.80E+01
			I-131	<9.62E+01	0.00E+00	9.62E+01
			Cs-134	<6.57E+01	0.00E+00	6.57E+01
			Cs-137	<6.09E+01	0.00E+00	6.09E+01
			Be-7	<5.59E+02	0.00E+00	5.59E+02
			K-40	5.17E+03	1.24E+03	8.17E+02
			Ag-110M	<5.50E+01	0.00E+00	5.50E+01
			Sb-122	<4.32E+02	0.00E+00	4.32E+02
Sb-125	<1.76E+02	0.00E+00	1.76E+02			
Sample ID:	Sample Dates:	PREDATOR	Nuclide	Activity	2 Sigma Error	MDA
510057	10/9/2019 - 10/9/2019	PREDATOR	Mn-54	<8.43E+01	0.00E+00	8.43E+01
			Co-58	<7.65E+01	0.00E+00	7.65E+01
			Fe-59	<9.10E+01	0.00E+00	9.10E+01
			Co-60	<5.49E+01	0.00E+00	5.49E+01
			Zn-65	<1.43E+02	0.00E+00	1.43E+02
			Nb-95	<7.14E+01	0.00E+00	7.14E+01
			I-131	<9.99E+01	0.00E+00	9.99E+01
			Cs-134	<1.04E+02	0.00E+00	1.04E+02
			Cs-137	<8.25E+01	0.00E+00	8.25E+01
			Be-7	<4.30E+02	0.00E+00	4.30E+02
			K-40	4.49E+03	1.44E+03	1.49E+03
			Ag-110M	<6.59E+01	0.00E+00	6.59E+01
			Sb-122	<3.00E+02	0.00E+00	3.00E+02
Sb-125	<1.75E+02	0.00E+00	1.75E+02			
Sample ID:	Sample Dates:	FORAGER	Nuclide	Activity	2 Sigma Error	MDA
510058	10/9/2019 - 10/9/2019	FORAGER	Mn-54	<5.93E+01	0.00E+00	5.93E+01
			Co-58	<4.98E+01	0.00E+00	4.98E+01
			Fe-59	<7.72E+01	0.00E+00	7.72E+01
			Co-60	<1.70E+01	0.00E+00	1.70E+01
			Zn-65	<1.21E+02	0.00E+00	1.21E+02
			Nb-95	<5.58E+01	0.00E+00	5.58E+01
			I-131	<9.53E+01	0.00E+00	9.53E+01
			Cs-134	<7.15E+01	0.00E+00	7.15E+01
			Cs-137	<4.75E+01	0.00E+00	4.75E+01
			Be-7	<2.21E+02	0.00E+00	2.21E+02
			K-40	<5.84E+02	0.00E+00	5.84E+02
			Ag-110M	<5.59E+01	0.00E+00	5.59E+01

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: FISH Concentration (Activity): pCi/kg

Sample Point 216 [CONTROL - NNE @ 4.19 miles]

Sample ID:	Sample Dates:	FORAGER	Nuclide	Activity	2 Sigma Error	MDA
510058	10/9/2019 - 10/9/2019		Sb-122	<1.60E+02	0.00E+00	1.60E+02
			Sb-125	<1.73E+02	0.00E+00	1.73E+02
Sample ID:	Sample Dates:	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
510059	10/9/2019 - 10/9/2019		Mn-54	<5.77E+01	0.00E+00	5.77E+01
			Co-58	<6.57E+01	0.00E+00	6.57E+01
			Fe-59	<1.16E+02	0.00E+00	1.16E+02
			Co-60	<5.53E+01	0.00E+00	5.53E+01
			Zn-65	<1.75E+02	0.00E+00	1.75E+02
			Nb-95	<7.76E+01	0.00E+00	7.76E+01
			I-131	<1.11E+02	0.00E+00	1.11E+02
			Cs-134	<9.02E+01	0.00E+00	9.02E+01
			Cs-137	<6.86E+01	0.00E+00	6.86E+01
			Be-7	<4.32E+02	0.00E+00	4.32E+02
			K-40	4.80E+03	1.31E+03	8.02E+02
			Ag-110M	<7.46E+01	0.00E+00	7.46E+01
			Sb-122	<2.46E+02	0.00E+00	2.46E+02
Sb-125	<1.44E+02	0.00E+00	1.44E+02			

Media Type: MILK Concentration (Activity): pCi/l

Sample Point 221 [CONTROL - NW @ 14.5 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492488	1/8/2019 - 1/8/2019	LLI-131	<5.71E-01	0.00E+00	5.71E-01
		I-131	<6.70E+00	0.00E+00	6.70E+00
		Cs-134	<8.70E+00	0.00E+00	8.70E+00
		Cs-137	<7.30E+00	0.00E+00	7.30E+00
		BaLa-140	<6.01E+00	0.00E+00	6.01E+00
		Be-7	<4.23E+01	0.00E+00	4.23E+01
		K-40	1.21E+03	2.08E+02	9.89E+01
Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493296	1/22/2019 - 1/22/2019	LLI-131	<7.52E-01	0.00E+00	7.52E-01
		I-131	<7.69E+00	0.00E+00	7.69E+00
		Cs-134	<7.79E+00	0.00E+00	7.79E+00
		Cs-137	<7.75E+00	0.00E+00	7.75E+00
		BaLa-140	<7.70E+00	0.00E+00	7.70E+00
		Be-7	<5.63E+01	0.00E+00	5.63E+01
		K-40	1.43E+03	2.25E+02	1.80E+01
Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493784	2/5/2019 - 2/5/2019	LLI-131	<5.85E-01	0.00E+00	5.85E-01
		I-131	<8.67E+00	0.00E+00	8.67E+00
		Cs-134	<6.59E+00	0.00E+00	6.59E+00
		Cs-137	<8.10E+00	0.00E+00	8.10E+00
		BaLa-140	<8.91E+00	0.00E+00	8.91E+00
		Be-7	<5.63E+01	0.00E+00	5.63E+01
		K-40	1.51E+03	2.36E+02	8.01E+01
Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494946	2/19/2019 - 2/19/2019	LLI-131	<6.33E-01	0.00E+00	6.33E-01
		I-131	<5.95E+00	0.00E+00	5.95E+00
		Cs-134	<8.70E+00	0.00E+00	8.70E+00
		Cs-137	<7.30E+00	0.00E+00	7.30E+00
		BaLa-140	<7.66E+00	0.00E+00	7.66E+00
		Be-7	<3.88E+01	0.00E+00	3.88E+01
		K-40	1.64E+03	2.46E+02	1.79E+01
Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
496126	3/5/2019 - 3/5/2019	LLI-131	<5.99E-01	0.00E+00	5.99E-01
		I-131	<5.78E+00	0.00E+00	5.78E+00
		Cs-134	<7.11E+00	0.00E+00	7.11E+00
		Cs-137	<6.76E+00	0.00E+00	6.76E+00
		BaLa-140	<5.79E+00	0.00E+00	5.79E+00
		Be-7	<4.13E+01	0.00E+00	4.13E+01
		K-40	1.51E+03	2.33E+02	1.78E+01

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: MILK Concentration (Activity): pCi/l

Sample Point 221 [CONTROL - NW @ 14.5 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
497123	3/19/2019 - 3/19/2019	LLI-131	<6.45E-01	0.00E+00	6.45E-01
		I-131	<6.52E+00	0.00E+00	6.52E+00
		Cs-134	<6.63E+00	0.00E+00	6.63E+00
		Cs-137	<5.26E+00	0.00E+00	5.26E+00
		BaLa-140	<5.84E+00	0.00E+00	5.84E+00
		Be-7	<5.57E+01	0.00E+00	5.57E+01
		K-40	1.36E+03	2.25E+02	1.05E+02
498015	4/2/2019 - 4/2/2019	LLI-131	<6.26E-01	0.00E+00	6.26E-01
		I-131	<5.37E+00	0.00E+00	5.37E+00
		Cs-134	<8.70E+00	0.00E+00	8.70E+00
		Cs-137	<6.85E+00	0.00E+00	6.85E+00
		BaLa-140	<6.12E+00	0.00E+00	6.12E+00
		Be-7	<5.14E+01	0.00E+00	5.14E+01
		K-40	1.66E+03	2.51E+02	9.48E+01
498762	4/16/2019 - 4/16/2019	LLI-131	<6.08E-01	0.00E+00	6.08E-01
		I-131	<5.96E+00	0.00E+00	5.96E+00
		Cs-134	<5.43E+00	0.00E+00	5.43E+00
		Cs-137	<7.30E+00	0.00E+00	7.30E+00
		BaLa-140	<1.12E+01	0.00E+00	1.12E+01
		Be-7	<5.68E+01	0.00E+00	5.68E+01
		K-40	1.61E+03	2.56E+02	1.20E+02
499860	4/30/2019 - 4/30/2019	LLI-131	<5.56E-01	0.00E+00	5.56E-01
		I-131	<7.22E+00	0.00E+00	7.22E+00
		Cs-134	<8.29E+00	0.00E+00	8.29E+00
		Cs-137	<7.33E+00	0.00E+00	7.33E+00
		BaLa-140	<9.93E+00	0.00E+00	9.93E+00
		Be-7	<4.23E+01	0.00E+00	4.23E+01
		K-40	1.48E+03	2.35E+02	9.42E+01
500438	5/14/2019 - 5/14/2019	LLI-131	<6.01E-01	0.00E+00	6.01E-01
		I-131	<6.83E+00	0.00E+00	6.83E+00
		Cs-134	<8.78E+00	0.00E+00	8.78E+00
		Cs-137	<7.30E+00	0.00E+00	7.30E+00
		BaLa-140	<6.28E+00	0.00E+00	6.28E+00
		Be-7	<6.19E+01	0.00E+00	6.19E+01
		K-40	1.65E+03	2.57E+02	9.53E+01
501113	5/28/2019 - 5/28/2019	LLI-131	<6.21E-01	0.00E+00	6.21E-01
		I-131	<7.76E+00	0.00E+00	7.76E+00
		Cs-134	<4.07E+00	0.00E+00	4.07E+00
		Cs-137	<7.36E+00	0.00E+00	7.36E+00
		BaLa-140	<6.43E+00	0.00E+00	6.43E+00
		Be-7	<4.66E+01	0.00E+00	4.66E+01
		K-40	1.37E+03	2.26E+02	1.09E+02
502187	6/11/2019 - 6/11/2019	LLI-131	<6.48E-01	0.00E+00	6.48E-01
		I-131	<6.26E+00	0.00E+00	6.26E+00
		Cs-134	<8.15E+00	0.00E+00	8.15E+00
		Cs-137	<7.20E+00	0.00E+00	7.20E+00
		BaLa-140	<6.09E+00	0.00E+00	6.09E+00
		Be-7	<4.18E+01	0.00E+00	4.18E+01
		K-40	1.36E+03	2.21E+02	8.74E+01
503376	6/25/2019 - 6/25/2019	LLI-131	<6.24E-01	0.00E+00	6.24E-01
		I-131	<7.46E+00	0.00E+00	7.46E+00
		Cs-134	<7.19E+00	0.00E+00	7.19E+00
		Cs-137	<8.10E+00	0.00E+00	8.10E+00
		BaLa-140	<8.81E+00	0.00E+00	8.81E+00

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: MILK Concentration (Activity): pCi/l

Sample Point 221 [CONTROL - NW @ 14.5 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
503376	6/25/2019 - 6/25/2019	Be-7	<5.62E+01	0.00E+00	5.62E+01
		K-40	1.51E+03	2.38E+02	9.88E+01
504178	7/9/2019 - 7/9/2019	LLI-131	<5.64E-01	0.00E+00	5.64E-01
		I-131	<6.55E+00	0.00E+00	6.55E+00
		Cs-134	<8.60E+00	0.00E+00	8.60E+00
		Cs-137	<7.61E+00	0.00E+00	7.61E+00
		BaLa-140	<5.80E+00	0.00E+00	5.80E+00
		Be-7	<5.00E+01	0.00E+00	5.00E+01
		K-40	1.62E+03	2.43E+02	1.78E+01
504642	7/23/2019 - 7/23/2019	LLI-131	<6.16E-01	0.00E+00	6.16E-01
		I-131	<6.77E+00	0.00E+00	6.77E+00
		Cs-134	<8.24E+00	0.00E+00	8.24E+00
		Cs-137	<5.23E+00	0.00E+00	5.23E+00
		BaLa-140	<6.05E+00	0.00E+00	6.05E+00
		Be-7	<4.23E+01	0.00E+00	4.23E+01
		K-40	1.49E+03	2.41E+02	1.32E+02
505122	8/6/2019 - 8/6/2019	LLI-131	<6.42E-01	0.00E+00	6.42E-01
		I-131	<6.47E+00	0.00E+00	6.47E+00
		Cs-134	<7.02E+00	0.00E+00	7.02E+00
		Cs-137	<9.02E+00	0.00E+00	9.02E+00
		BaLa-140	<6.23E+00	0.00E+00	6.23E+00
		Be-7	<5.67E+01	0.00E+00	5.67E+01
		K-40	1.50E+03	2.47E+02	1.28E+02
505843	8/20/2019 - 8/20/2019	LLI-131	<5.38E-01	0.00E+00	5.38E-01
		I-131	<5.78E+00	0.00E+00	5.78E+00
		Cs-134	<7.78E+00	0.00E+00	7.78E+00
		Cs-137	<5.26E+00	0.00E+00	5.26E+00
		BaLa-140	<7.38E+00	0.00E+00	7.38E+00
		Be-7	<5.07E+01	0.00E+00	5.07E+01
		K-40	1.46E+03	2.34E+02	1.04E+02
507267	9/3/2019 - 9/3/2019	LLI-131	<5.77E-01	0.00E+00	5.77E-01
		I-131	<7.71E+00	0.00E+00	7.71E+00
		Cs-134	<7.74E+00	0.00E+00	7.74E+00
		Cs-137	<7.71E+00	0.00E+00	7.71E+00
		BaLa-140	<7.61E+00	0.00E+00	7.61E+00
		Be-7	<5.85E+01	0.00E+00	5.85E+01
		K-40	1.28E+03	2.18E+02	1.16E+02
508341	9/17/2019 - 9/17/2019	LLI-131	<6.48E-01	0.00E+00	6.48E-01
		I-131	<6.15E+00	0.00E+00	6.15E+00
		Cs-134	<7.19E+00	0.00E+00	7.19E+00
		Cs-137	<7.30E+00	0.00E+00	7.30E+00
		BaLa-140	<5.84E+00	0.00E+00	5.84E+00
		Be-7	<6.03E+01	0.00E+00	6.03E+01
		K-40	1.48E+03	2.30E+02	1.79E+01
509811	10/1/2019 - 10/1/2019	LLI-131	<6.16E-01	0.00E+00	6.16E-01
		I-131	<5.21E+00	0.00E+00	5.21E+00
		Cs-134	<8.15E+00	0.00E+00	8.15E+00
		Cs-137	<6.76E+00	0.00E+00	6.76E+00
		BaLa-140	<6.02E+00	0.00E+00	6.02E+00
		Be-7	<4.49E+01	0.00E+00	4.49E+01
		K-40	1.48E+03	2.36E+02	1.05E+02
510810	10/15/2019 - 10/15/2019	LLI-131	<5.99E-01	0.00E+00	5.99E-01

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: MILK Concentration (Activity): pCi/l

Sample Point 221 [CONTROL - NW @ 14.5 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
510810	10/15/2019 - 10/15/2019	I-131	<5.73E+00	0.00E+00	5.73E+00
		Cs-134	<8.14E+00	0.00E+00	8.14E+00
		Cs-137	<5.76E+00	0.00E+00	5.76E+00
		BaLa-140	<7.27E+00	0.00E+00	7.27E+00
		Be-7	<3.78E+01	0.00E+00	3.78E+01
		K-40	1.42E+03	2.24E+02	1.78E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511447	10/29/2019 - 10/29/2019	LLI-131	<6.32E-01	0.00E+00	6.32E-01
		I-131	<7.19E+00	0.00E+00	7.19E+00
		Cs-134	<8.75E+00	0.00E+00	8.75E+00
		Cs-137	<7.33E+00	0.00E+00	7.33E+00
		BaLa-140	<7.37E+00	0.00E+00	7.37E+00
		Be-7	<4.51E+01	0.00E+00	4.51E+01
K-40	1.43E+03	2.25E+02	1.80E+01		

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512162	11/12/2019 - 11/12/2019	LLI-131	<6.20E-01	0.00E+00	6.20E-01
		I-131	<7.41E+00	0.00E+00	7.41E+00
		Cs-134	<6.63E+00	0.00E+00	6.63E+00
		Cs-137	<8.14E+00	0.00E+00	8.14E+00
		BaLa-140	<9.91E+00	0.00E+00	9.91E+00
		Be-7	<3.47E+01	0.00E+00	3.47E+01
K-40	1.38E+03	2.29E+02	1.23E+02		

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512642	11/25/2019 - 11/25/2019	LLI-131	<6.50E-01	0.00E+00	6.50E-01
		I-131	<7.25E+00	0.00E+00	7.25E+00
		Cs-134	<7.79E+00	0.00E+00	7.79E+00
		Cs-137	<7.75E+00	0.00E+00	7.75E+00
		BaLa-140	<8.94E+00	0.00E+00	8.94E+00
		Be-7	<5.63E+01	0.00E+00	5.63E+01
K-40	1.09E+03	2.08E+02	1.56E+02		

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
513922	12/10/2019 - 12/10/2019	LLI-131	<6.21E-01	0.00E+00	6.21E-01
		I-131	<6.67E+00	0.00E+00	6.67E+00
		Cs-134	<5.05E+00	0.00E+00	5.05E+00
		Cs-137	<1.03E+01	0.00E+00	1.03E+01
		BaLa-140	<6.12E+00	0.00E+00	6.12E+00
		Be-7	<4.86E+01	0.00E+00	4.86E+01
K-40	1.49E+03	2.44E+02	1.53E+02		

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514448	12/23/2019 - 12/23/2019	LLI-131	<6.24E-01	0.00E+00	6.24E-01
		I-131	<8.93E+00	0.00E+00	8.93E+00
		Cs-134	<7.83E+00	0.00E+00	7.83E+00
		Cs-137	<7.80E+00	0.00E+00	7.80E+00
		BaLa-140	<1.11E+01	0.00E+00	1.11E+01
		Be-7	<3.11E+01	0.00E+00	3.11E+01
K-40	1.37E+03	2.23E+02	8.03E+01		

Media Type: SEDIMENT_SHORE Concentration (Activity): pCi/kg

Sample Point 208 [INDICATOR - S @ 0.45 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
496127	3/19/2019 - 3/19/2019	Mn-54	<6.98E+01	0.00E+00	6.98E+01
		Co-58	<8.52E+01	0.00E+00	8.52E+01
		Fe-59	<1.89E+02	0.00E+00	1.89E+02
		Co-60	<6.67E+01	0.00E+00	6.67E+01
		Zn-65	<1.75E+02	0.00E+00	1.75E+02
		Zr-95	<1.78E+02	0.00E+00	1.78E+02
		Nb-95	<8.95E+01	0.00E+00	8.95E+01
		I-131	<9.67E+01	0.00E+00	9.67E+01
		Cs-134	<8.17E+01	0.00E+00	8.17E+01
		Cs-137	<1.01E+02	0.00E+00	1.01E+02
		Be-7	<6.19E+02	0.00E+00	6.19E+02

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SEDIMENT_SHORE Concentration (Activity): pCi/kg

Sample Point 208 [INDICATOR - S @ 0.45 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
496127	3/19/2019 - 3/19/2019	K-40	1.27E+04	2.20E+03	1.49E+03
		Co-57	<5.48E+01	0.00E+00	5.48E+01
		Mo-99	<3.20E+03	0.00E+00	3.20E+03
		Ag-110M	<5.06E+01	0.00E+00	5.06E+01
		Sb-122	<3.61E+02	0.00E+00	3.61E+02
		Sb-125	<2.03E+02	0.00E+00	2.03E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
507268	9/17/2019 - 9/17/2019	Mn-54	<6.52E+01	0.00E+00	6.52E+01
		Co-58	<8.71E+01	0.00E+00	8.71E+01
		Fe-59	<1.52E+02	0.00E+00	1.52E+02
		Co-60	<8.59E+01	0.00E+00	8.59E+01
		Zn-65	<1.23E+02	0.00E+00	1.23E+02
		Zr-95	<1.32E+02	0.00E+00	1.32E+02
		Nb-95	<8.22E+01	0.00E+00	8.22E+01
		I-131	<1.12E+02	0.00E+00	1.12E+02
		Cs-134	<8.31E+01	0.00E+00	8.31E+01
		Cs-137	<7.75E+01	0.00E+00	7.75E+01
		Be-7	<4.32E+02	0.00E+00	4.32E+02
		K-40	1.99E+04	2.69E+03	6.49E+02
		Co-57	<4.84E+01	0.00E+00	4.84E+01
		Mo-99	<4.27E+03	0.00E+00	4.27E+03
		Ag-110M	<4.74E+01	0.00E+00	4.74E+01
		Sb-122	<7.32E+02	0.00E+00	7.32E+02
		Sb-125	<1.69E+02	0.00E+00	1.69E+02

Sample Point 210 [INDICATOR - SE @ 2.31 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
496128	3/19/2019 - 3/19/2019	Mn-54	<4.35E+01	0.00E+00	4.35E+01
		Co-58	<4.17E+01	0.00E+00	4.17E+01
		Fe-59	<1.03E+02	0.00E+00	1.03E+02
		Co-60	<4.69E+01	0.00E+00	4.69E+01
		Zn-65	<9.29E+01	0.00E+00	9.29E+01
		Zr-95	<9.67E+01	0.00E+00	9.67E+01
		Nb-95	<5.62E+01	0.00E+00	5.62E+01
		I-131	<7.65E+01	0.00E+00	7.65E+01
		Cs-134	<6.02E+01	0.00E+00	6.02E+01
		Cs-137	<5.45E+01	0.00E+00	5.45E+01
		Be-7	<3.49E+02	0.00E+00	3.49E+02
		K-40	1.03E+04	1.58E+03	1.18E+02
		Co-57	<3.12E+01	0.00E+00	3.12E+01
		Mo-99	<1.39E+03	0.00E+00	1.39E+03
		Ag-110M	<3.25E+01	0.00E+00	3.25E+01
		Sb-122	<1.83E+02	0.00E+00	1.83E+02
		Sb-125	<9.53E+01	0.00E+00	9.53E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
507269	9/17/2019 - 9/17/2019	Mn-54	<4.60E+01	0.00E+00	4.60E+01
		Co-58	<6.54E+01	0.00E+00	6.54E+01
		Fe-59	<1.07E+02	0.00E+00	1.07E+02
		Co-60	<6.94E+01	0.00E+00	6.94E+01
		Zn-65	<1.24E+02	0.00E+00	1.24E+02
		Zr-95	<1.01E+02	0.00E+00	1.01E+02
		Nb-95	<6.59E+01	0.00E+00	6.59E+01
		I-131	<1.00E+02	0.00E+00	1.00E+02
		Cs-134	<6.66E+01	0.00E+00	6.66E+01
		Cs-137	<5.05E+01	0.00E+00	5.05E+01
		Be-7	<4.93E+02	0.00E+00	4.93E+02
		K-40	1.39E+04	2.04E+03	1.04E+03
		Co-57	<3.72E+01	0.00E+00	3.72E+01
		Mo-99	<4.79E+03	0.00E+00	4.79E+03
		Ag-110M	<6.00E+01	0.00E+00	6.00E+01
		Sb-122	<6.22E+02	0.00E+00	6.22E+02
		Sb-125	<1.27E+02	0.00E+00	1.27E+02

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SEDIMENT_SHORE Concentration (Activity): pCi/kg

Sample Point 262 [CONTROL - NNE @ 4.19 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
496129	3/19/2019 - 3/19/2019	Mn-54	<7.18E+01	0.00E+00	7.18E+01
		Co-58	<7.68E+01	0.00E+00	7.68E+01
		Fe-59	<1.40E+02	0.00E+00	1.40E+02
		Co-60	<7.83E+01	0.00E+00	7.83E+01
		Zn-65	<1.48E+02	0.00E+00	1.48E+02
		Zr-95	<1.19E+02	0.00E+00	1.19E+02
		Nb-95	<7.79E+01	0.00E+00	7.79E+01
		I-131	<1.03E+02	0.00E+00	1.03E+02
		Cs-134	<1.07E+02	0.00E+00	1.07E+02
		Cs-137	<9.49E+01	0.00E+00	9.49E+01
		Be-7	<6.21E+02	0.00E+00	6.21E+02
		K-40	5.87E+03	1.34E+03	1.02E+03
		Co-57	<5.86E+01	0.00E+00	5.86E+01
		Mo-99	<2.13E+03	0.00E+00	2.13E+03
		Ag-110M	<7.43E+01	0.00E+00	7.43E+01
		Sb-122	<3.90E+02	0.00E+00	3.90E+02
Sb-125	<2.05E+02	0.00E+00	2.05E+02		

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
507270	9/17/2019 - 9/17/2019	Mn-54	<7.20E+01	0.00E+00	7.20E+01
		Co-58	<3.22E+01	0.00E+00	3.22E+01
		Fe-59	<8.67E+01	0.00E+00	8.67E+01
		Co-60	<3.35E+01	0.00E+00	3.35E+01
		Zn-65	<2.24E+02	0.00E+00	2.24E+02
		Zr-95	<1.06E+02	0.00E+00	1.06E+02
		Nb-95	<7.93E+01	0.00E+00	7.93E+01
		I-131	<1.00E+02	0.00E+00	1.00E+02
		Cs-134	<4.81E+01	0.00E+00	4.81E+01
		Cs-137	<6.78E+01	0.00E+00	6.78E+01
		Be-7	<6.14E+02	0.00E+00	6.14E+02
		K-40	6.19E+03	1.21E+03	6.76E+02
		Co-57	<7.17E+01	0.00E+00	7.17E+01
		Mo-99	<4.18E+03	0.00E+00	4.18E+03
		Ag-110M	<5.03E+01	0.00E+00	5.03E+01
		Sb-122	<7.79E+02	0.00E+00	7.79E+02
Sb-125	<1.61E+02	0.00E+00	1.61E+02		

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 208 [INDICATOR - S @ 0.45 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493558	1/2/2019 - 1/29/2019	Mn-54	<3.10E+00	0.00E+00	3.10E+00
		Co-58	<3.41E+00	0.00E+00	3.41E+00
		Fe-59	<6.03E+00	0.00E+00	6.03E+00
		Co-60	<3.28E+00	0.00E+00	3.28E+00
		Zn-65	<7.33E+00	0.00E+00	7.33E+00
		Zr-95	<6.41E+00	0.00E+00	6.41E+00
		Nb-95	<3.79E+00	0.00E+00	3.79E+00
		I-131	<1.13E+01	0.00E+00	1.13E+01
		Cs-134	<3.33E+00	0.00E+00	3.33E+00
		Cs-137	<3.52E+00	0.00E+00	3.52E+00
		BaLa-140	<7.64E+00	0.00E+00	7.64E+00
		Be-7	<2.73E+01	0.00E+00	2.73E+01
		K-40	3.62E+01	3.01E+01	4.60E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
495257	1/29/2019 - 2/26/2019	Mn-54	<4.54E+00	0.00E+00	4.54E+00
		Co-58	<4.61E+00	0.00E+00	4.61E+00
		Fe-59	<9.21E+00	0.00E+00	9.21E+00
		Co-60	<4.01E+00	0.00E+00	4.01E+00
		Zn-65	<9.23E+00	0.00E+00	9.23E+00
		Zr-95	<6.91E+00	0.00E+00	6.91E+00
		Nb-95	<3.32E+00	0.00E+00	3.32E+00
		I-131	<1.06E+01	0.00E+00	1.06E+01
		Cs-134	<4.41E+00	0.00E+00	4.41E+00
		Cs-137	<3.65E+00	0.00E+00	3.65E+00

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 208 [INDICATOR - S @ 0.45 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
495257	1/29/2019 - 2/26/2019	BaLa-140	<8.25E+00	0.00E+00	8.25E+00
		Be-7	<3.52E+01	0.00E+00	3.52E+01
		K-40	<6.65E+01	0.00E+00	6.65E+01
497532	2/26/2019 - 3/26/2019	Mn-54	<1.94E+00	0.00E+00	1.94E+00
		Co-58	<2.82E+00	0.00E+00	2.82E+00
		Fe-59	<5.59E+00	0.00E+00	5.59E+00
		Co-60	<2.11E+00	0.00E+00	2.11E+00
		Zn-65	<4.94E+00	0.00E+00	4.94E+00
		Zr-95	<3.81E+00	0.00E+00	3.81E+00
		Nb-95	<3.66E+00	0.00E+00	3.66E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<2.37E+00	0.00E+00	2.37E+00
		Cs-137	<2.47E+00	0.00E+00	2.47E+00
		BaLa-140	<9.18E+00	0.00E+00	9.18E+00
		Be-7	<2.32E+01	0.00E+00	2.32E+01
		K-40	2.29E+01	2.18E+01	3.43E+01
493731	1/2/2019 - 4/23/2019	H3SW	4.77E+03	2.19E+02	1.88E+02
499438	3/26/2019 - 4/23/2019	Mn-54	<1.36E+00	0.00E+00	1.36E+00
		Co-58	<1.61E+00	0.00E+00	1.61E+00
		Fe-59	<3.66E+00	0.00E+00	3.66E+00
		Co-60	<1.36E+00	0.00E+00	1.36E+00
		Zn-65	<2.67E+00	0.00E+00	2.67E+00
		Zr-95	<2.90E+00	0.00E+00	2.90E+00
		Nb-95	<2.02E+00	0.00E+00	2.02E+00
		I-131	<6.93E+00	0.00E+00	6.93E+00
		Cs-134	<1.59E+00	0.00E+00	1.59E+00
		Cs-137	<1.30E+00	0.00E+00	1.30E+00
		BaLa-140	<4.75E+00	0.00E+00	4.75E+00
		Be-7	<1.35E+01	0.00E+00	1.35E+01
		K-40	5.61E+01	1.64E+01	2.08E+01
500722	4/23/2019 - 5/21/2019	Mn-54	<2.68E+00	0.00E+00	2.68E+00
		Co-58	<2.98E+00	0.00E+00	2.98E+00
		Fe-59	<7.32E+00	0.00E+00	7.32E+00
		Co-60	<4.04E+00	0.00E+00	4.04E+00
		Zn-65	<6.59E+00	0.00E+00	6.59E+00
		Zr-95	<5.82E+00	0.00E+00	5.82E+00
		Nb-95	<4.19E+00	0.00E+00	4.19E+00
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<3.08E+00	0.00E+00	3.08E+00
		Cs-137	<2.50E+00	0.00E+00	2.50E+00
		BaLa-140	<7.46E+00	0.00E+00	7.46E+00
		Be-7	<2.36E+01	0.00E+00	2.36E+01
		K-40	9.78E+01	3.81E+01	4.73E+01
502398	5/21/2019 - 6/18/2019	Mn-54	<1.99E+00	0.00E+00	1.99E+00
		Co-58	<2.31E+00	0.00E+00	2.31E+00
		Fe-59	<4.82E+00	0.00E+00	4.82E+00
		Co-60	<1.88E+00	0.00E+00	1.88E+00
		Zn-65	<4.18E+00	0.00E+00	4.18E+00
		Zr-95	<4.06E+00	0.00E+00	4.06E+00
		Nb-95	<2.36E+00	0.00E+00	2.36E+00
		I-131	<1.01E+01	0.00E+00	1.01E+01
		Cs-134	<2.28E+00	0.00E+00	2.28E+00
		Cs-137	<2.06E+00	0.00E+00	2.06E+00
		BaLa-140	<5.32E+00	0.00E+00	5.32E+00
		Be-7	<1.91E+01	0.00E+00	1.91E+01
		K-40	9.63E+01	2.72E+01	3.30E+01

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 208 [INDICATOR - S @ 0.45 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500025	4/23/2019 - 7/16/2019	H3SW	4.88E+03	2.22E+02	1.88E+02
504427	6/18/2019 - 7/16/2019	Mn-54	<2.63E+00	0.00E+00	2.63E+00
		Co-58	<3.36E+00	0.00E+00	3.36E+00
		Fe-59	<5.57E+00	0.00E+00	5.57E+00
		Co-60	<2.84E+00	0.00E+00	2.84E+00
		Zn-65	<7.68E+00	0.00E+00	7.68E+00
		Zr-95	<4.17E+00	0.00E+00	4.17E+00
		Nb-95	<3.97E+00	0.00E+00	3.97E+00
		I-131	<1.06E+01	0.00E+00	1.06E+01
		Cs-134	<3.85E+00	0.00E+00	3.85E+00
		Cs-137	<2.95E+00	0.00E+00	2.95E+00
		BaLa-140	<7.08E+00	0.00E+00	7.08E+00
		Be-7	<2.94E+01	0.00E+00	2.94E+01
		K-40	<5.17E+01	0.00E+00	5.17E+01
505517	7/16/2019 - 8/13/2019	Mn-54	<2.97E+00	0.00E+00	2.97E+00
		Co-58	<3.39E+00	0.00E+00	3.39E+00
		Fe-59	<6.73E+00	0.00E+00	6.73E+00
		Co-60	<2.78E+00	0.00E+00	2.78E+00
		Zn-65	<6.83E+00	0.00E+00	6.83E+00
		Zr-95	<4.83E+00	0.00E+00	4.83E+00
		Nb-95	<4.20E+00	0.00E+00	4.20E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<3.77E+00	0.00E+00	3.77E+00
		Cs-137	<2.50E+00	0.00E+00	2.50E+00
		BaLa-140	<7.47E+00	0.00E+00	7.47E+00
		Be-7	<2.91E+01	0.00E+00	2.91E+01
		K-40	9.87E+01	3.08E+01	2.34E+01
507807	8/13/2019 - 9/10/2019	Mn-54	<2.69E+00	0.00E+00	2.69E+00
		Co-58	<3.05E+00	0.00E+00	3.05E+00
		Fe-59	<5.69E+00	0.00E+00	5.69E+00
		Co-60	<2.78E+00	0.00E+00	2.78E+00
		Zn-65	<4.67E+00	0.00E+00	4.67E+00
		Zr-95	<5.28E+00	0.00E+00	5.28E+00
		Nb-95	<3.84E+00	0.00E+00	3.84E+00
		I-131	<1.09E+01	0.00E+00	1.09E+01
		Cs-134	<2.91E+00	0.00E+00	2.91E+00
		Cs-137	<2.97E+00	0.00E+00	2.97E+00
		BaLa-140	<4.62E+00	0.00E+00	4.62E+00
		Be-7	<2.76E+01	0.00E+00	2.76E+01
		K-40	1.19E+02	3.58E+01	3.89E+01
505064	7/16/2019 - 10/8/2019	H3SW	6.18E+03	2.41E+02	1.94E+02
510512	9/10/2019 - 10/8/2019	Mn-54	<3.39E+00	0.00E+00	3.39E+00
		Co-58	<3.17E+00	0.00E+00	3.17E+00
		Fe-59	<7.05E+00	0.00E+00	7.05E+00
		Co-60	<2.93E+00	0.00E+00	2.93E+00
		Zn-65	<6.62E+00	0.00E+00	6.62E+00
		Zr-95	<6.66E+00	0.00E+00	6.66E+00
		Nb-95	<2.71E+00	0.00E+00	2.71E+00
		I-131	<1.08E+01	0.00E+00	1.08E+01
		Cs-134	<3.45E+00	0.00E+00	3.45E+00
		Cs-137	<2.87E+00	0.00E+00	2.87E+00
		BaLa-140	<7.44E+00	0.00E+00	7.44E+00
		Be-7	<2.24E+01	0.00E+00	2.24E+01
		K-40	8.92E+01	3.33E+01	3.83E+01
511856	10/8/2019 - 11/5/2019	Mn-54	<3.11E+00	0.00E+00	3.11E+00

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 208 [INDICATOR - S @ 0.45 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511856	10/8/2019 - 11/5/2019	Co-58	<2.86E+00	0.00E+00	2.86E+00
		Fe-59	<5.24E+00	0.00E+00	5.24E+00
		Co-60	<1.89E+00	0.00E+00	1.89E+00
		Zn-65	<4.58E+00	0.00E+00	4.58E+00
		Zr-95	<5.56E+00	0.00E+00	5.56E+00
		Nb-95	<4.22E+00	0.00E+00	4.22E+00
		I-131	<1.13E+01	0.00E+00	1.13E+01
		Cs-134	<2.85E+00	0.00E+00	2.85E+00
		Cs-137	<3.27E+00	0.00E+00	3.27E+00
		BaLa-140	<5.30E+00	0.00E+00	5.30E+00
		Be-7	<2.75E+01	0.00E+00	2.75E+01
		K-40	9.51E+01	3.13E+01	3.14E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
513606	11/5/2019 - 12/3/2019	Mn-54	<3.76E+00	0.00E+00	3.76E+00
		Co-58	<3.62E+00	0.00E+00	3.62E+00
		Fe-59	<9.80E+00	0.00E+00	9.80E+00
		Co-60	<4.70E+00	0.00E+00	4.70E+00
		Zn-65	<9.22E+00	0.00E+00	9.22E+00
		Zr-95	<5.27E+00	0.00E+00	5.27E+00
		Nb-95	<3.32E+00	0.00E+00	3.32E+00
		I-131	<1.05E+01	0.00E+00	1.05E+01
		Cs-134	<4.63E+00	0.00E+00	4.63E+00
		Cs-137	<3.43E+00	0.00E+00	3.43E+00
		BaLa-140	<9.53E+00	0.00E+00	9.53E+00
		Be-7	<3.38E+01	0.00E+00	3.38E+01
		K-40	<6.65E+01	0.00E+00	6.65E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511707	10/8/2019 - 12/31/2019	H3SW	4.57E+03	2.21E+02	2.01E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514528	12/3/2019 - 12/31/2019	Mn-54	<3.38E+00	0.00E+00	3.38E+00
		Co-58	<3.00E+00	0.00E+00	3.00E+00
		Fe-59	<6.49E+00	0.00E+00	6.49E+00
		Co-60	<2.08E+00	0.00E+00	2.08E+00
		Zn-65	<6.63E+00	0.00E+00	6.63E+00
		Zr-95	<6.44E+00	0.00E+00	6.44E+00
		Nb-95	<4.01E+00	0.00E+00	4.01E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<3.32E+00	0.00E+00	3.32E+00
		Cs-137	<2.83E+00	0.00E+00	2.83E+00
		BaLa-140	<5.89E+00	0.00E+00	5.89E+00
		Be-7	<3.26E+01	0.00E+00	3.26E+01
		K-40	9.41E+01	3.27E+01	3.64E+01

Sample Point 211 [INDICATOR - ESE @ 4.06 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493559	1/2/2019 - 1/29/2019	Mn-54	<2.52E+00	0.00E+00	2.52E+00
		Co-58	<2.97E+00	0.00E+00	2.97E+00
		Fe-59	<5.40E+00	0.00E+00	5.40E+00
		Co-60	<1.86E+00	0.00E+00	1.86E+00
		Zn-65	<5.55E+00	0.00E+00	5.55E+00
		Zr-95	<5.83E+00	0.00E+00	5.83E+00
		Nb-95	<3.41E+00	0.00E+00	3.41E+00
		I-131	<1.09E+01	0.00E+00	1.09E+01
		Cs-134	<2.98E+00	0.00E+00	2.98E+00
		Cs-137	<2.95E+00	0.00E+00	2.95E+00
		BaLa-140	<5.03E+00	0.00E+00	5.03E+00
		Be-7	<2.25E+01	0.00E+00	2.25E+01
		K-40	<4.20E+01	0.00E+00	4.20E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
495258	1/29/2019 - 2/26/2019	Mn-54	<2.38E+00	0.00E+00	2.38E+00
		Co-58	<3.80E+00	0.00E+00	3.80E+00
		Fe-59	<6.53E+00	0.00E+00	6.53E+00

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 211 [INDICATOR - ESE @ 4.06 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
495258	1/29/2019 - 2/26/2019	Co-60	<2.31E+00	0.00E+00	2.31E+00
		Zn-65	<6.40E+00	0.00E+00	6.40E+00
		Zr-95	<5.27E+00	0.00E+00	5.27E+00
		Nb-95	<3.31E+00	0.00E+00	3.31E+00
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<3.65E+00	0.00E+00	3.65E+00
		Cs-137	<2.96E+00	0.00E+00	2.96E+00
		BaLa-140	<6.14E+00	0.00E+00	6.14E+00
		Be-7	<2.30E+01	0.00E+00	2.30E+01
		K-40	<4.67E+01	0.00E+00	4.67E+01
		497533	2/26/2019 - 3/26/2019	Mn-54	<2.26E+00
Co-58	<2.12E+00			0.00E+00	2.12E+00
Fe-59	<5.03E+00			0.00E+00	5.03E+00
Co-60	<2.18E+00			0.00E+00	2.18E+00
Zn-65	<4.58E+00			0.00E+00	4.58E+00
Zr-95	<4.77E+00			0.00E+00	4.77E+00
Nb-95	<3.02E+00			0.00E+00	3.02E+00
I-131	<1.19E+01			0.00E+00	1.19E+01
Cs-134	<2.25E+00			0.00E+00	2.25E+00
Cs-137	<2.09E+00			0.00E+00	2.09E+00
BaLa-140	<3.71E+00			0.00E+00	3.71E+00
Be-7	<1.94E+01			0.00E+00	1.94E+01
K-40	<3.76E+01			0.00E+00	3.76E+01
493732	1/2/2019 - 4/23/2019	H3SW	<1.88E+02	0.00E+00	1.89E+02
499439	3/26/2019 - 4/23/2019	Mn-54	<1.18E+00	0.00E+00	1.18E+00
		Co-58	<1.39E+00	0.00E+00	1.39E+00
		Fe-59	<3.20E+00	0.00E+00	3.20E+00
		Co-60	<1.21E+00	0.00E+00	1.21E+00
		Zn-65	<2.44E+00	0.00E+00	2.44E+00
		Zr-95	<2.57E+00	0.00E+00	2.57E+00
		Nb-95	<1.89E+00	0.00E+00	1.89E+00
		I-131	<8.82E+00	0.00E+00	8.82E+00
		Cs-134	<1.35E+00	0.00E+00	1.35E+00
		Cs-137	<1.11E+00	0.00E+00	1.11E+00
		BaLa-140	<4.78E+00	0.00E+00	4.78E+00
		Be-7	<1.32E+01	0.00E+00	1.32E+01
		K-40	7.97E+01	1.72E+01	2.02E+01
500723	4/23/2019 - 5/21/2019	Mn-54	<1.37E+00	0.00E+00	1.37E+00
		Co-58	<1.53E+00	0.00E+00	1.53E+00
		Fe-59	<2.69E+00	0.00E+00	2.69E+00
		Co-60	<1.16E+00	0.00E+00	1.16E+00
		Zn-65	<2.59E+00	0.00E+00	2.59E+00
		Zr-95	<2.41E+00	0.00E+00	2.41E+00
		Nb-95	<1.76E+00	0.00E+00	1.76E+00
		I-131	<9.82E+00	0.00E+00	9.82E+00
		Cs-134	<1.35E+00	0.00E+00	1.35E+00
		Cs-137	<1.22E+00	0.00E+00	1.22E+00
		BaLa-140	<3.96E+00	0.00E+00	3.96E+00
		Be-7	<1.17E+01	0.00E+00	1.17E+01
		K-40	3.99E+01	1.33E+01	1.74E+01
502399	5/21/2019 - 6/18/2019	Mn-54	<2.29E+00	0.00E+00	2.29E+00
		Co-58	<2.80E+00	0.00E+00	2.80E+00
		Fe-59	<5.70E+00	0.00E+00	5.70E+00
		Co-60	<1.90E+00	0.00E+00	1.90E+00
		Zn-65	<5.20E+00	0.00E+00	5.20E+00
		Zr-95	<4.31E+00	0.00E+00	4.31E+00
		Nb-95	<3.06E+00	0.00E+00	3.06E+00

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 211 [INDICATOR - ESE @ 4.06 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
502399	5/21/2019 - 6/18/2019	I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<2.64E+00	0.00E+00	2.64E+00
		Cs-137	<2.20E+00	0.00E+00	2.20E+00
		BaLa-140	<6.07E+00	0.00E+00	6.07E+00
		Be-7	<2.20E+01	0.00E+00	2.20E+01
		K-40	<3.58E+01	0.00E+00	3.58E+01
500026	4/23/2019 - 7/16/2019	H3SW	2.90E+02	1.19E+02	1.89E+02
504428	6/18/2019 - 7/16/2019	Mn-54	<3.79E+00	0.00E+00	3.79E+00
		Co-58	<4.19E+00	0.00E+00	4.19E+00
		Fe-59	<9.87E+00	0.00E+00	9.87E+00
		Co-60	<4.39E+00	0.00E+00	4.39E+00
		Zn-65	<6.65E+00	0.00E+00	6.65E+00
		Zr-95	<5.94E+00	0.00E+00	5.94E+00
		Nb-95	<4.94E+00	0.00E+00	4.94E+00
		I-131	<1.12E+01	0.00E+00	1.12E+01
		Cs-134	<5.08E+00	0.00E+00	5.08E+00
		Cs-137	<3.89E+00	0.00E+00	3.89E+00
		BaLa-140	<1.17E+01	0.00E+00	1.17E+01
		Be-7	<3.27E+01	0.00E+00	3.27E+01
		K-40	<4.35E+01	0.00E+00	4.35E+01
505518	7/16/2019 - 8/13/2019	Mn-54	<3.76E+00	0.00E+00	3.76E+00
		Co-58	<4.61E+00	0.00E+00	4.61E+00
		Fe-59	<9.22E+00	0.00E+00	9.22E+00
		Co-60	<2.45E+00	0.00E+00	2.45E+00
		Zn-65	<9.75E+00	0.00E+00	9.75E+00
		Zr-95	<7.78E+00	0.00E+00	7.78E+00
		Nb-95	<3.32E+00	0.00E+00	3.32E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<3.92E+00	0.00E+00	3.92E+00
		Cs-137	<3.43E+00	0.00E+00	3.43E+00
		BaLa-140	<1.17E+01	0.00E+00	1.17E+01
		Be-7	<4.03E+01	0.00E+00	4.03E+01
		K-40	6.16E+01	3.50E+01	4.13E+01
507808	8/13/2019 - 9/10/2019	Mn-54	<2.90E+00	0.00E+00	2.90E+00
		Co-58	<2.33E+00	0.00E+00	2.33E+00
		Fe-59	<5.57E+00	0.00E+00	5.57E+00
		Co-60	<2.58E+00	0.00E+00	2.58E+00
		Zn-65	<7.70E+00	0.00E+00	7.70E+00
		Zr-95	<5.50E+00	0.00E+00	5.50E+00
		Nb-95	<4.03E+00	0.00E+00	4.03E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<3.34E+00	0.00E+00	3.34E+00
		Cs-137	<3.39E+00	0.00E+00	3.39E+00
		BaLa-140	<7.87E+00	0.00E+00	7.87E+00
		Be-7	<2.36E+01	0.00E+00	2.36E+01
		K-40	4.60E+01	2.63E+01	3.38E+01
505065	7/16/2019 - 10/8/2019	H3SW	2.37E+02	1.19E+02	1.91E+02
510513	9/10/2019 - 10/8/2019	Mn-54	<2.36E+00	0.00E+00	2.36E+00
		Co-58	<3.49E+00	0.00E+00	3.49E+00
		Fe-59	<6.21E+00	0.00E+00	6.21E+00
		Co-60	<2.87E+00	0.00E+00	2.87E+00
		Zn-65	<8.01E+00	0.00E+00	8.01E+00
		Zr-95	<7.15E+00	0.00E+00	7.15E+00
		Nb-95	<4.39E+00	0.00E+00	4.39E+00
		I-131	<1.12E+01	0.00E+00	1.12E+01

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 211 [INDICATOR - ESE @ 4.06 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
510513	9/10/2019 - 10/8/2019	Cs-134	<4.14E+00	0.00E+00	4.14E+00
		Cs-137	<2.47E+00	0.00E+00	2.47E+00
		BaLa-140	<7.15E+00	0.00E+00	7.15E+00
		Be-7	<2.46E+01	0.00E+00	2.46E+01
		K-40	<2.84E+01	0.00E+00	2.84E+01
511857	10/8/2019 - 11/5/2019	Mn-54	<2.95E+00	0.00E+00	2.95E+00
		Co-58	<2.89E+00	0.00E+00	2.89E+00
		Fe-59	<5.27E+00	0.00E+00	5.27E+00
		Co-60	<2.52E+00	0.00E+00	2.52E+00
		Zn-65	<5.38E+00	0.00E+00	5.38E+00
		Zr-95	<4.48E+00	0.00E+00	4.48E+00
		Nb-95	<3.77E+00	0.00E+00	3.77E+00
		I-131	<9.59E+00	0.00E+00	9.59E+00
		Cs-134	<2.88E+00	0.00E+00	2.88E+00
		Cs-137	<3.15E+00	0.00E+00	3.15E+00
		BaLa-140	<7.41E+00	0.00E+00	7.41E+00
		Be-7	<2.63E+01	0.00E+00	2.63E+01
		K-40	4.89E+01	2.28E+01	2.66E+01
513607	11/5/2019 - 12/3/2019	Mn-54	<3.92E+00	0.00E+00	3.92E+00
		Co-58	<3.45E+00	0.00E+00	3.45E+00
		Fe-59	<4.01E+00	0.00E+00	4.01E+00
		Co-60	<3.35E+00	0.00E+00	3.35E+00
		Zn-65	<6.17E+00	0.00E+00	6.17E+00
		Zr-95	<7.39E+00	0.00E+00	7.39E+00
		Nb-95	<3.84E+00	0.00E+00	3.84E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<3.67E+00	0.00E+00	3.67E+00
		Cs-137	<3.94E+00	0.00E+00	3.94E+00
		BaLa-140	<1.11E+01	0.00E+00	1.11E+01
		Be-7	<3.43E+01	0.00E+00	3.43E+01
		K-40	3.86E+01	3.73E+01	5.83E+01
511708	10/8/2019 - 12/31/2019	H3SW	3.55E+02	1.26E+02	1.99E+02
514529	12/3/2019 - 12/31/2019	Mn-54	<2.75E+00	0.00E+00	2.75E+00
		Co-58	<2.44E+00	0.00E+00	2.44E+00
		Fe-59	<7.04E+00	0.00E+00	7.04E+00
		Co-60	<2.93E+00	0.00E+00	2.93E+00
		Zn-65	<4.72E+00	0.00E+00	4.72E+00
		Zr-95	<4.58E+00	0.00E+00	4.58E+00
		Nb-95	<4.31E+00	0.00E+00	4.31E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<3.15E+00	0.00E+00	3.15E+00
		Cs-137	<3.01E+00	0.00E+00	3.01E+00
		BaLa-140	<6.60E+00	0.00E+00	6.60E+00
		Be-7	<2.56E+01	0.00E+00	2.56E+01
		K-40	3.54E+01	3.00E+01	4.62E+01

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 200 [INDICATOR - NNE @ 0.63 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
495827	12/13/2018 - 3/14/2019	mR/Std Qtr	18.06
501649	3/14/2019 - 6/13/2019	mR/Std Qtr	17.49
506991	6/13/2019 - 9/12/2019	mR/Std Qtr	14.94

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 200 [INDICATOR - NNE @ 0.63 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
513330	9/12/2019 - 12/12/2019	mR/Std Qtr	18.97

Sample Point 201 [INDICATOR - NE @ 0.53 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
495828	12/13/2018 - 3/14/2019	mR/Std Qtr	17.27

Sample ID:	Sample Dates:	Nuclide	Activity
501650	3/14/2019 - 6/13/2019	mR/Std Qtr	17.91

Sample ID:	Sample Dates:	Nuclide	Activity
506992	6/13/2019 - 9/12/2019	mR/Std Qtr	14.51

Sample ID:	Sample Dates:	Nuclide	Activity
513331	9/12/2019 - 12/12/2019	mR/Std Qtr	17.50

Sample Point 203 [INDICATOR - ESE @ 0.38 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
495829	12/13/2018 - 3/14/2019	mR/Std Qtr	19.95

Sample ID:	Sample Dates:	Nuclide	Activity
501651	3/14/2019 - 6/13/2019	mR/Std Qtr	18.62

Sample ID:	Sample Dates:	Nuclide	Activity
506993	6/13/2019 - 9/12/2019	mR/Std Qtr	16.75

Sample ID:	Sample Dates:	Nuclide	Activity
513332	9/12/2019 - 12/12/2019	mR/Std Qtr	20.06

Sample Point 204 [INDICATOR - SSW @ 0.48 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
495830	12/13/2018 - 3/14/2019	mR/Std Qtr	20.88

Sample ID:	Sample Dates:	Nuclide	Activity
501652	3/14/2019 - 6/13/2019	mR/Std Qtr	18.14

Sample ID:	Sample Dates:	Nuclide	Activity
506994	6/13/2019 - 9/12/2019	mR/Std Qtr	14.65

Sample ID:	Sample Dates:	Nuclide	Activity
513333	9/12/2019 - 12/12/2019	mR/Std Qtr	19.68

Sample Point 205 [INDICATOR - SW @ 0.5 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
495831	12/13/2018 - 3/14/2019	mR/Std Qtr	21.17

Sample ID:	Sample Dates:	Nuclide	Activity
501653	3/14/2019 - 6/13/2019	mR/Std Qtr	18.99

Sample ID:	Sample Dates:	Nuclide	Activity
506995	6/13/2019 - 9/12/2019	mR/Std Qtr	16.74

Sample ID:	Sample Dates:	Nuclide	Activity
513334	9/12/2019 - 12/12/2019	mR/Std Qtr	21.47

Sample Point 206 [INDICATOR - WNW @ 0.67 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
495832	12/13/2018 - 3/14/2019	mR/Std Qtr	23.02

Sample ID:	Sample Dates:	Nuclide	Activity
501654	3/14/2019 - 6/13/2019	mR/Std Qtr	22.92

Sample ID:	Sample Dates:	Nuclide	Activity
506996	6/13/2019 - 9/12/2019	mR/Std Qtr	20.48

Sample ID:	Sample Dates:	Nuclide	Activity
513335	9/12/2019 - 12/12/2019	mR/Std Qtr	23.80

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 207 [INDICATOR - NNW @ 0.95 miles]

TLD RING TLD_INNER

Sample ID	Sample Dates	Nuclide	Activity
495833	12/13/2018 - 3/14/2019	mR/Std Qtr	22.14
501655	3/14/2019 - 6/13/2019	mR/Std Qtr	22.46
506997	6/13/2019 - 9/12/2019	mR/Std Qtr	18.18
513336	9/12/2019 - 12/12/2019	mR/Std Qtr	21.62

Sample Point 212 [INDICATOR - E @ 3.32 miles]

TLD RING TLD_SPEC

Sample ID	Sample Dates	Nuclide	Activity
495834	12/13/2018 - 3/14/2019	mR/Std Qtr	17.36
501656	3/14/2019 - 6/13/2019	mR/Std Qtr	16.50
506998	6/13/2019 - 9/12/2019	mR/Std Qtr	14.14
513337	9/12/2019 - 12/12/2019	mR/Std Qtr	18.29

Sample Point 217 [CONTROL - SSE @ 10.3 miles]

TLD RING TLD_CTRL

Sample ID	Sample Dates	Nuclide	Activity
495835	12/13/2018 - 3/14/2019	mR/Std Qtr	12.36
501657	3/14/2019 - 6/13/2019	mR/Std Qtr	11.26
506999	6/13/2019 - 9/12/2019	mR/Std Qtr	10.69
513338	9/12/2019 - 12/12/2019	mR/Std Qtr	12.15

Sample Point 222 [INDICATOR - N @ 0.71 miles]

TLD RING TLD_INNER

Sample ID	Sample Dates	Nuclide	Activity
495836	12/13/2018 - 3/14/2019	mR/Std Qtr	18.90
501658	3/14/2019 - 6/13/2019	mR/Std Qtr	16.97
507000	6/13/2019 - 9/12/2019	mR/Std Qtr	15.61
513339	9/12/2019 - 12/12/2019	mR/Std Qtr	17.30

Sample Point 223 [INDICATOR - E @ 0.57 miles]

TLD RING TLD_INNER

Sample ID	Sample Dates	Nuclide	Activity
495837	12/13/2018 - 3/14/2019	mR/Std Qtr	23.38
501659	3/14/2019 - 6/13/2019	mR/Std Qtr	19.94
507001	6/13/2019 - 9/12/2019	mR/Std Qtr	18.61
513340	9/12/2019 - 12/12/2019	mR/Std Qtr	22.13

Sample Point 225 [INDICATOR - SE @ 0.68 miles]

TLD RING TLD_INNER

Sample ID	Sample Dates	Nuclide	Activity
501660	3/14/2019 - 6/13/2019	mR/Std Qtr	19.90

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 225 [INDICATOR - SE @ 0.68 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
507002	6/13/2019 - 9/12/2019	mR/Std Qtr	16.94
513341	9/12/2019 - 12/12/2019	mR/Std Qtr	21.57

Sample Point 226 [INDICATOR - S @ 0.48 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
495839	12/13/2018 - 3/14/2019	mR/Std Qtr	19.92
501661	3/14/2019 - 6/13/2019	mR/Std Qtr	19.35
507003	6/13/2019 - 9/12/2019	mR/Std Qtr	17.13
513342	9/12/2019 - 12/12/2019	mR/Std Qtr	20.95

Sample Point 227 [INDICATOR - WSW @ 0.52 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
495840	12/13/2018 - 3/14/2019	mR/Std Qtr	19.42
501662	3/14/2019 - 6/13/2019	mR/Std Qtr	17.78
507004	6/13/2019 - 9/12/2019	mR/Std Qtr	17.27
513343	9/12/2019 - 12/12/2019	mR/Std Qtr	18.57

Sample Point 228 [INDICATOR - W @ 0.61 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
495841	12/13/2018 - 3/14/2019	mR/Std Qtr	19.91
501663	3/14/2019 - 6/13/2019	mR/Std Qtr	19.15
507005	6/13/2019 - 9/12/2019	mR/Std Qtr	17.12
513344	9/12/2019 - 12/12/2019	mR/Std Qtr	18.61

Sample Point 229 [INDICATOR - NW @ 0.84 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
495842	12/13/2018 - 3/14/2019	mR/Std Qtr	24.43
501664	3/14/2019 - 6/13/2019	mR/Std Qtr	22.67
507006	6/13/2019 - 9/12/2019	mR/Std Qtr	18.96
513345	9/12/2019 - 12/12/2019	mR/Std Qtr	24.81

Sample Point 230 [INDICATOR - N @ 4.37 miles]

TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
495843	12/13/2018 - 3/14/2019	mR/Std Qtr	17.34
501665	3/14/2019 - 6/13/2019	mR/Std Qtr	14.49
507007	6/13/2019 - 9/12/2019	mR/Std Qtr	11.82

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 230 [INDICATOR - N @ 4.37 miles]

TLD RING TLD_OUTER

Sample ID:	513346	Sample Dates:	9/12/2019 - 12/12/2019	Nuclide	Activity
				mR/Std Qtr	14.71

Sample Point 231 [INDICATOR - NNE @ 4.21 miles]

TLD RING TLD_OUTER

Sample ID:	495844	Sample Dates:	12/13/2018 - 3/14/2019	Nuclide	Activity
				mR/Std Qtr	19.38

Sample ID:	501666	Sample Dates:	3/14/2019 - 6/13/2019	Nuclide	Activity
				mR/Std Qtr	18.18

Sample ID:	507008	Sample Dates:	6/13/2019 - 9/12/2019	Nuclide	Activity
				mR/Std Qtr	16.05

Sample ID:	513347	Sample Dates:	9/12/2019 - 12/12/2019	Nuclide	Activity
				mR/Std Qtr	19.18

Sample Point 232 [INDICATOR - NE @ 4.18 miles]

TLD RING TLD_OUTER

Sample ID:	495845	Sample Dates:	12/13/2018 - 3/14/2019	Nuclide	Activity
				mR/Std Qtr	22.92

Sample ID:	501667	Sample Dates:	3/14/2019 - 6/13/2019	Nuclide	Activity
				mR/Std Qtr	22.61

Sample ID:	507009	Sample Dates:	6/13/2019 - 9/12/2019	Nuclide	Activity
				mR/Std Qtr	19.13

Sample ID:	513348	Sample Dates:	9/12/2019 - 12/12/2019	Nuclide	Activity
				mR/Std Qtr	22.07

Sample Point 233 [INDICATOR - ENE @ 3.95 miles]

TLD RING TLD_OUTER

Sample ID:	495846	Sample Dates:	12/13/2018 - 3/14/2019	Nuclide	Activity
				mR/Std Qtr	16.80

Sample ID:	501668	Sample Dates:	3/14/2019 - 6/13/2019	Nuclide	Activity
				mR/Std Qtr	14.92

Sample ID:	507010	Sample Dates:	6/13/2019 - 9/12/2019	Nuclide	Activity
				mR/Std Qtr	12.51

Sample ID:	513349	Sample Dates:	9/12/2019 - 12/12/2019	Nuclide	Activity
				mR/Std Qtr	15.82

Sample Point 234 [INDICATOR - E @ 4.5 miles]

TLD RING TLD_OUTER

Sample ID:	495847	Sample Dates:	12/13/2018 - 3/14/2019	Nuclide	Activity
				mR/Std Qtr	19.06

Sample ID:	501669	Sample Dates:	3/14/2019 - 6/13/2019	Nuclide	Activity
				mR/Std Qtr	17.82

Sample ID:	507011	Sample Dates:	6/13/2019 - 9/12/2019	Nuclide	Activity
				mR/Std Qtr	15.99

Sample ID:	513350	Sample Dates:	9/12/2019 - 12/12/2019	Nuclide	Activity
				mR/Std Qtr	18.73

Sample Point 235 [INDICATOR - ESE @ 4.07 miles]

TLD RING TLD_OUTER

Sample ID:	495848	Sample Dates:	12/13/2018 - 3/14/2019	Nuclide	Activity
				mR/Std Qtr	20.74

Sample ID:	501670	Sample Dates:	3/14/2019 - 6/13/2019	Nuclide	Activity
				mR/Std Qtr	16.28

Sample ID:	507012	Sample Dates:	6/13/2019 - 9/12/2019	Nuclide	Activity
				mR/Std Qtr	13.39

Sample ID:	513351	Sample Dates:	9/12/2019 - 12/12/2019	Nuclide	Activity
				mR/Std Qtr	15.98

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 236 [INDICATOR - SE @ 4.25 miles]

TLD RING TLD_OUTER

Sample ID: 495849	Sample Dates: 12/13/2018 - 3/14/2019	Nuclide	Activity
		mR/Std Qtr	23.62
Sample ID: 501671	Sample Dates: 3/14/2019 - 6/13/2019	Nuclide	Activity
		mR/Std Qtr	22.55
Sample ID: 507013	Sample Dates: 6/13/2019 - 9/12/2019	Nuclide	Activity
		mR/Std Qtr	19.55
Sample ID: 513352	Sample Dates: 9/12/2019 - 12/12/2019	Nuclide	Activity
		mR/Std Qtr	24.13

Sample Point 237 [INDICATOR - SSE @ 4.75 miles]

TLD RING TLD_OUTER

Sample ID: 495850	Sample Dates: 12/13/2018 - 3/14/2019	Nuclide	Activity
		mR/Std Qtr	22.85
Sample ID: 501672	Sample Dates: 3/14/2019 - 6/13/2019	Nuclide	Activity
		mR/Std Qtr	22.86
Sample ID: 507014	Sample Dates: 6/13/2019 - 9/12/2019	Nuclide	Activity
		mR/Std Qtr	19.42
Sample ID: 513353	Sample Dates: 9/12/2019 - 12/12/2019	Nuclide	Activity
		mR/Std Qtr	23.52

Sample Point 238 [INDICATOR - S @ 4.02 miles]

TLD RING TLD_OUTER

Sample ID: 495851	Sample Dates: 12/13/2018 - 3/14/2019	Nuclide	Activity
		mR/Std Qtr	17.38
Sample ID: 501673	Sample Dates: 3/14/2019 - 6/13/2019	Nuclide	Activity
		mR/Std Qtr	18.61
Sample ID: 507015	Sample Dates: 6/13/2019 - 9/12/2019	Nuclide	Activity
		mR/Std Qtr	15.82
Sample ID: 513354	Sample Dates: 9/12/2019 - 12/12/2019	Nuclide	Activity
		mR/Std Qtr	18.84

Sample Point 239 [INDICATOR - SSW @ 4.49 miles]

TLD RING TLD_OUTER

Sample ID: 495852	Sample Dates: 12/13/2018 - 3/14/2019	Nuclide	Activity
		mR/Std Qtr	20.50
Sample ID: 501674	Sample Dates: 3/14/2019 - 6/13/2019	Nuclide	Activity
		mR/Std Qtr	18.45
Sample ID: 507016	Sample Dates: 6/13/2019 - 9/12/2019	Nuclide	Activity
		mR/Std Qtr	16.33
Sample ID: 513355	Sample Dates: 9/12/2019 - 12/12/2019	Nuclide	Activity
		mR/Std Qtr	21.33

Sample Point 240 [INDICATOR - SW @ 4.07 miles]

TLD RING TLD_OUTER

Sample ID: 495853	Sample Dates: 12/13/2018 - 3/14/2019	Nuclide	Activity
		mR/Std Qtr	15.98
Sample ID: 501675	Sample Dates: 3/14/2019 - 6/13/2019	Nuclide	Activity
		mR/Std Qtr	12.89
Sample ID: 507017	Sample Dates: 6/13/2019 - 9/12/2019	Nuclide	Activity
		mR/Std Qtr	12.16
Sample ID: 513356	Sample Dates: 9/12/2019 - 12/12/2019	Nuclide	Activity
		mR/Std Qtr	15.31

Sample Point 241 [INDICATOR - WSW @ 4.58 miles]

TLD RING TLD_OUTER

Sample ID: 495854	Sample Dates: 12/13/2018 - 3/14/2019	Nuclide	Activity
		mR/Std Qtr	13.69

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 241 [INDICATOR - WSW @ 4.58 miles]

TLD RING TLD_OUTER

Sample ID:	501676	Sample Dates:	3/14/2019 - 6/13/2019	Nuclide	Activity
				mR/Std Qtr	12.42
Sample ID:	507018	Sample Dates:	6/13/2019 - 9/12/2019	Nuclide	Activity
				mR/Std Qtr	11.91
Sample ID:	513357	Sample Dates:	9/12/2019 - 12/12/2019	Nuclide	Activity
				mR/Std Qtr	13.72

Sample Point 242 [INDICATOR - W @ 4.56 miles]

TLD RING TLD_OUTER

Sample ID:	495855	Sample Dates:	12/13/2018 - 3/14/2019	Nuclide	Activity
				mR/Std Qtr	17.18
Sample ID:	501677	Sample Dates:	3/14/2019 - 6/13/2019	Nuclide	Activity
				mR/Std Qtr	14.93
Sample ID:	507019	Sample Dates:	6/13/2019 - 9/12/2019	Nuclide	Activity
				mR/Std Qtr	14.39
Sample ID:	513358	Sample Dates:	9/12/2019 - 12/12/2019	Nuclide	Activity
				mR/Std Qtr	16.47

Sample Point 243 [INDICATOR - WNW @ 4.39 miles]

TLD RING TLD_OUTER

Sample ID:	495856	Sample Dates:	12/13/2018 - 3/14/2019	Nuclide	Activity
				mR/Std Qtr	17.92
Sample ID:	501678	Sample Dates:	3/14/2019 - 6/13/2019	Nuclide	Activity
				mR/Std Qtr	15.78
Sample ID:	507020	Sample Dates:	6/13/2019 - 9/12/2019	Nuclide	Activity
				mR/Std Qtr	14.80
Sample ID:	513359	Sample Dates:	9/12/2019 - 12/12/2019	Nuclide	Activity
				mR/Std Qtr	18.29

Sample Point 244 [INDICATOR - NW @ 4.02 miles]

TLD RING TLD_OUTER

Sample ID:	495857	Sample Dates:	12/13/2018 - 3/14/2019	Nuclide	Activity
				mR/Std Qtr	21.80
Sample ID:	501679	Sample Dates:	3/14/2019 - 6/13/2019	Nuclide	Activity
				mR/Std Qtr	20.69
Sample ID:	507021	Sample Dates:	6/13/2019 - 9/12/2019	Nuclide	Activity
				mR/Std Qtr	18.82
Sample ID:	513360	Sample Dates:	9/12/2019 - 12/12/2019	Nuclide	Activity
				mR/Std Qtr	22.45

Sample Point 245 [INDICATOR - NNW @ 4.01 miles]

TLD RING TLD_OUTER

Sample ID:	495858	Sample Dates:	12/13/2018 - 3/14/2019	Nuclide	Activity
				mR/Std Qtr	17.45
Sample ID:	501680	Sample Dates:	3/14/2019 - 6/13/2019	Nuclide	Activity
				mR/Std Qtr	16.18
Sample ID:	507022	Sample Dates:	6/13/2019 - 9/12/2019	Nuclide	Activity
				mR/Std Qtr	13.62
Sample ID:	513361	Sample Dates:	9/12/2019 - 12/12/2019	Nuclide	Activity
				mR/Std Qtr	16.92

Sample Point 246 [INDICATOR - ENE @ 7.87 miles]

TLD RING TLD_SPEC

Sample ID:	495859	Sample Dates:	12/13/2018 - 3/14/2019	Nuclide	Activity
				mR/Std Qtr	16.09
Sample ID:	501681	Sample Dates:	3/14/2019 - 6/13/2019	Nuclide	Activity
				mR/Std Qtr	14.66

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 246 [INDICATOR - ENE @ 7.87 miles]

TLD RING TLD_SPEC

Sample ID: 507023	Sample Dates: 6/13/2019 - 9/12/2019	Nuclide	Activity
		mR/Std Qtr	12.18

Sample ID: 513362	Sample Dates: 9/12/2019 - 12/12/2019	Nuclide	Activity
		mR/Std Qtr	15.69

Sample Point 247 [CONTROL - ESE @ 7.33 miles]

TLD RING TLD_CTRL

Sample ID: 495860	Sample Dates: 12/13/2018 - 3/14/2019	Nuclide	Activity
		mR/Std Qtr	15.08

Sample ID: 501682	Sample Dates: 3/14/2019 - 6/13/2019	Nuclide	Activity
		mR/Std Qtr	13.64

Sample ID: 507024	Sample Dates: 6/13/2019 - 9/12/2019	Nuclide	Activity
		mR/Std Qtr	12.12

Sample ID: 513363	Sample Dates: 9/12/2019 - 12/12/2019	Nuclide	Activity
		mR/Std Qtr	14.81

Sample Point 248 [INDICATOR - S @ 6.54 miles]

TLD RING TLD_SPEC

Sample ID: 495861	Sample Dates: 12/13/2018 - 3/14/2019	Nuclide	Activity
		mR/Std Qtr	15.27

Sample ID: 501683	Sample Dates: 3/14/2019 - 6/13/2019	Nuclide	Activity
		mR/Std Qtr	15.67

Sample ID: 507025	Sample Dates: 6/13/2019 - 9/12/2019	Nuclide	Activity
		mR/Std Qtr	13.64

Sample ID: 513364	Sample Dates: 9/12/2019 - 12/12/2019	Nuclide	Activity
		mR/Std Qtr	14.62

Sample Point 249 [INDICATOR - S @ 7.17 miles]

TLD RING TLD_SPEC

Sample ID: 495862	Sample Dates: 12/13/2018 - 3/14/2019	Nuclide	Activity
		mR/Std Qtr	16.42

Sample ID: 501684	Sample Dates: 3/14/2019 - 6/13/2019	Nuclide	Activity
		mR/Std Qtr	18.47

Sample ID: 507026	Sample Dates: 6/13/2019 - 9/12/2019	Nuclide	Activity
		mR/Std Qtr	14.80

Sample ID: 513365	Sample Dates: 9/12/2019 - 12/12/2019	Nuclide	Activity
		mR/Std Qtr	16.51

Sample Point 250 [INDICATOR - WSW @ 10.4 miles]

TLD RING TLD_SPEC

Sample ID: 495863	Sample Dates: 12/13/2018 - 3/14/2019	Nuclide	Activity
		mR/Std Qtr	18.39

Sample ID: 501685	Sample Dates: 3/14/2019 - 6/13/2019	Nuclide	Activity
		mR/Std Qtr	16.23

Sample ID: 507027	Sample Dates: 6/13/2019 - 9/12/2019	Nuclide	Activity
		mR/Std Qtr	16.24

Sample ID: 513366	Sample Dates: 9/12/2019 - 12/12/2019	Nuclide	Activity
		mR/Std Qtr	19.02

Sample Point 251 [CONTROL - WNW @ 9.72 miles]

TLD RING TLD_CTRL

Sample ID: 495864	Sample Dates: 12/13/2018 - 3/14/2019	Nuclide	Activity
		mR/Std Qtr	18.28

Sample ID: 501686	Sample Dates: 3/14/2019 - 6/13/2019	Nuclide	Activity
		mR/Std Qtr	17.27

Sample ID: 507028	Sample Dates: 6/13/2019 - 9/12/2019	Nuclide	Activity
		mR/Std Qtr	14.41

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 251 [CONTROL - WNW @ 9.72 miles]

TLD RING TLD_CTRL

Sample ID: 513367	Sample Dates: 9/12/2019 - 12/12/2019	Nuclide	Activity
		mR/Std Qtr	16.47

Sample Point 255 [INDICATOR - ENE @ 0.61 miles]

TLD RING TLD_INNER

Sample ID: 495865	Sample Dates: 12/13/2018 - 3/14/2019	Nuclide	Activity
		mR/Std Qtr	22.76

Sample ID: 501687	Sample Dates: 3/14/2019 - 6/13/2019	Nuclide	Activity
		mR/Std Qtr	21.72

Sample ID: 507029	Sample Dates: 6/13/2019 - 9/12/2019	Nuclide	Activity
		mR/Std Qtr	19.14

Sample ID: 513368	Sample Dates: 9/12/2019 - 12/12/2019	Nuclide	Activity
		mR/Std Qtr	23.51

Sample Point 256 [INDICATOR - SSE @ 0.58 miles]

TLD RING TLD_INNER

Sample ID: 495866	Sample Dates: 12/13/2018 - 3/14/2019	Nuclide	Activity
		mR/Std Qtr	22.58

Sample ID: 501688	Sample Dates: 3/14/2019 - 6/13/2019	Nuclide	Activity
		mR/Std Qtr	21.53

Sample ID: 507030	Sample Dates: 6/13/2019 - 9/12/2019	Nuclide	Activity
		mR/Std Qtr	18.58

Sample ID: 513369	Sample Dates: 9/12/2019 - 12/12/2019	Nuclide	Activity
		mR/Std Qtr	22.37

Sample Point 258 [INDICATOR - W @ 9.84 miles]

TLD RING TLD_SPEC

Sample ID: 495867	Sample Dates: 12/13/2018 - 3/14/2019	Nuclide	Activity
		mR/Std Qtr	19.17

Sample ID: 501689	Sample Dates: 3/14/2019 - 6/13/2019	Nuclide	Activity
		mR/Std Qtr	18.72

Sample ID: 507031	Sample Dates: 6/13/2019 - 9/12/2019	Nuclide	Activity
		mR/Std Qtr	17.32

Sample ID: 513370	Sample Dates: 9/12/2019 - 12/12/2019	Nuclide	Activity
		mR/Std Qtr	19.13

Media Type: VEGETATION Concentration (Activity): pCi/kg

Sample Point 200 [INDICATOR - NNE @ 0.63 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
492189	1/8/2019 - 1/8/2019	MIXEDBLV	Mn-54	<2.60E+01	0.00E+00	2.60E+01
			Co-58	<2.36E+01	0.00E+00	2.36E+01
			Fe-59	<4.82E+01	0.00E+00	4.82E+01
			Co-60	<2.08E+01	0.00E+00	2.08E+01
			Zn-65	<4.38E+01	0.00E+00	4.38E+01
			Zr-95	<3.92E+01	0.00E+00	3.92E+01
			Nb-95	<2.04E+01	0.00E+00	2.04E+01
			I-131	<2.10E+01	0.00E+00	2.10E+01
			Cs-134	<2.78E+01	0.00E+00	2.78E+01
			Cs-137	<2.22E+01	0.00E+00	2.22E+01
			BaLa-140	<2.12E+01	0.00E+00	2.12E+01
			Be-7	2.47E+03	3.46E+02	2.20E+02
			K-40	4.41E+03	6.37E+02	3.09E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
492472	2/5/2019 - 2/5/2019	MIXEDBLV	Mn-54	<3.35E+01	0.00E+00	3.35E+01
			Co-58	<2.71E+01	0.00E+00	2.71E+01
			Fe-59	<6.19E+01	0.00E+00	6.19E+01
			Co-60	<3.46E+01	0.00E+00	3.46E+01
			Zn-65	<4.69E+01	0.00E+00	4.69E+01
			Zr-95	<4.72E+01	0.00E+00	4.72E+01

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg

Sample Point 200 [INDICATOR - NNE @ 0.63 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
492472	2/5/2019 - 2/5/2019	MIXEDBLV	Nb-95	<3.05E+01	0.00E+00	3.05E+01
			I-131	<3.09E+01	0.00E+00	3.09E+01
			Cs-134	<3.46E+01	0.00E+00	3.46E+01
			Cs-137	<3.42E+01	0.00E+00	3.42E+01
			BaLa-140	<3.33E+01	0.00E+00	3.33E+01
			Be-7	3.05E+03	4.44E+02	3.02E+02
			K-40	3.80E+03	6.79E+02	5.16E+02
495463	3/5/2019 - 3/5/2019	MIXEDBLV	Mn-54	<1.96E+01	0.00E+00	1.96E+01
			Co-58	<1.69E+01	0.00E+00	1.69E+01
			Fe-59	<4.31E+01	0.00E+00	4.31E+01
			Co-60	<1.77E+01	0.00E+00	1.77E+01
			Zn-65	<4.26E+01	0.00E+00	4.26E+01
			Zr-95	<3.02E+01	0.00E+00	3.02E+01
			Nb-95	<1.75E+01	0.00E+00	1.75E+01
			I-131	<1.68E+01	0.00E+00	1.68E+01
			Cs-134	<2.60E+01	0.00E+00	2.60E+01
			Cs-137	<1.86E+01	0.00E+00	1.86E+01
			BaLa-140	<2.34E+01	0.00E+00	2.34E+01
			Be-7	2.76E+03	3.41E+02	2.17E+02
			K-40	4.31E+03	5.50E+02	2.43E+02
497871	4/2/2019 - 4/2/2019	MIXEDBLV	Mn-54	<2.23E+01	0.00E+00	2.23E+01
			Co-58	<1.96E+01	0.00E+00	1.96E+01
			Fe-59	<3.88E+01	0.00E+00	3.88E+01
			Co-60	<1.91E+01	0.00E+00	1.91E+01
			Zn-65	<3.87E+01	0.00E+00	3.87E+01
			Zr-95	<3.04E+01	0.00E+00	3.04E+01
			Nb-95	<2.03E+01	0.00E+00	2.03E+01
			I-131	<2.11E+01	0.00E+00	2.11E+01
			Cs-134	<2.46E+01	0.00E+00	2.46E+01
			Cs-137	<1.48E+01	0.00E+00	1.48E+01
			BaLa-140	<1.82E+01	0.00E+00	1.82E+01
			Be-7	1.36E+03	2.49E+02	2.37E+02
			K-40	3.74E+03	5.75E+02	3.77E+02
499816	5/7/2019 - 5/7/2019	MIXEDBLV	Mn-54	<2.51E+01	0.00E+00	2.51E+01
			Co-58	<2.06E+01	0.00E+00	2.06E+01
			Fe-59	<4.34E+01	0.00E+00	4.34E+01
			Co-60	<2.48E+01	0.00E+00	2.48E+01
			Zn-65	<5.63E+01	0.00E+00	5.63E+01
			Zr-95	<3.39E+01	0.00E+00	3.39E+01
			Nb-95	<2.11E+01	0.00E+00	2.11E+01
			I-131	<1.79E+01	0.00E+00	1.79E+01
			Cs-134	<3.18E+01	0.00E+00	3.18E+01
			Cs-137	<1.97E+01	0.00E+00	1.97E+01
			BaLa-140	<2.52E+01	0.00E+00	2.52E+01
			Be-7	5.23E+02	1.70E+02	1.89E+02
			K-40	5.91E+03	7.75E+02	4.24E+02
501070	6/4/2019 - 6/4/2019	MIXEDBLV	Mn-54	<1.88E+01	0.00E+00	1.88E+01
			Co-58	<1.43E+01	0.00E+00	1.43E+01
			Fe-59	<3.44E+01	0.00E+00	3.44E+01
			Co-60	<1.72E+01	0.00E+00	1.72E+01
			Zn-65	<4.47E+01	0.00E+00	4.47E+01
			Zr-95	<3.60E+01	0.00E+00	3.60E+01
			Nb-95	<2.19E+01	0.00E+00	2.19E+01
			I-131	<2.22E+01	0.00E+00	2.22E+01
			Cs-134	<2.39E+01	0.00E+00	2.39E+01
			Cs-137	<2.15E+01	0.00E+00	2.15E+01
			BaLa-140	<2.11E+01	0.00E+00	2.11E+01
			Be-7	5.86E+02	1.90E+02	2.50E+02
			K-40	5.22E+03	6.90E+02	3.13E+02

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg

Sample Point 200 [INDICATOR - NNE @ 0.63 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
503321	7/2/2019 - 7/2/2019	MIXEDBLV	Mn-54	<3.56E+01	0.00E+00	3.56E+01
			Co-58	<3.94E+01	0.00E+00	3.94E+01
			Fe-59	<5.89E+01	0.00E+00	5.89E+01
			Co-60	<3.18E+01	0.00E+00	3.18E+01
			Zn-65	<6.24E+01	0.00E+00	6.24E+01
			Zr-95	<5.78E+01	0.00E+00	5.78E+01
			Nb-95	<4.51E+01	0.00E+00	4.51E+01
			I-131	<4.78E+01	0.00E+00	4.78E+01
			Cs-134	<3.42E+01	0.00E+00	3.42E+01
			Cs-137	<2.94E+01	0.00E+00	2.94E+01
			BaLa-140	<5.25E+01	0.00E+00	5.25E+01
			Be-7	1.21E+03	3.40E+02	3.66E+02
			K-40	4.74E+03	9.36E+02	7.49E+02
504637	8/6/2019 - 8/6/2019	MIXEDBLV	Mn-54	<2.89E+01	0.00E+00	2.89E+01
			Co-58	<2.59E+01	0.00E+00	2.59E+01
			Fe-59	<4.17E+01	0.00E+00	4.17E+01
			Co-60	<2.29E+01	0.00E+00	2.29E+01
			Zn-65	<6.17E+01	0.00E+00	6.17E+01
			Zr-95	<5.38E+01	0.00E+00	5.38E+01
			Nb-95	<2.90E+01	0.00E+00	2.90E+01
			I-131	<2.10E+01	0.00E+00	2.10E+01
			Cs-134	<3.36E+01	0.00E+00	3.36E+01
			Cs-137	<2.91E+01	0.00E+00	2.91E+01
			BaLa-140	<2.47E+01	0.00E+00	2.47E+01
			Be-7	1.83E+03	3.33E+02	3.21E+02
			K-40	4.56E+03	6.61E+02	1.75E+02
505927	9/3/2019 - 9/3/2019	MIXEDBLV	Mn-54	<3.59E+01	0.00E+00	3.59E+01
			Co-58	<2.58E+01	0.00E+00	2.58E+01
			Fe-59	<4.60E+01	0.00E+00	4.60E+01
			Co-60	<3.38E+01	0.00E+00	3.38E+01
			Zn-65	<7.20E+01	0.00E+00	7.20E+01
			Zr-95	<5.55E+01	0.00E+00	5.55E+01
			Nb-95	<3.21E+01	0.00E+00	3.21E+01
			I-131	<3.27E+01	0.00E+00	3.27E+01
			Cs-134	<2.81E+01	0.00E+00	2.81E+01
			Cs-137	<2.58E+01	0.00E+00	2.58E+01
			BaLa-140	<3.09E+01	0.00E+00	3.09E+01
			Be-7	1.26E+03	3.41E+02	3.83E+02
			K-40	4.02E+03	7.85E+02	5.87E+02
508895	10/1/2019 - 10/1/2019	MIXEDBLV	Mn-54	<2.07E+01	0.00E+00	2.07E+01
			Co-58	<2.04E+01	0.00E+00	2.04E+01
			Fe-59	<3.58E+01	0.00E+00	3.58E+01
			Co-60	<1.85E+01	0.00E+00	1.85E+01
			Zn-65	<4.21E+01	0.00E+00	4.21E+01
			Zr-95	<3.76E+01	0.00E+00	3.76E+01
			Nb-95	<2.27E+01	0.00E+00	2.27E+01
			I-131	<3.68E+01	0.00E+00	3.68E+01
			Cs-134	<2.61E+01	0.00E+00	2.61E+01
			Cs-137	<1.74E+01	0.00E+00	1.74E+01
			BaLa-140	<3.28E+01	0.00E+00	3.28E+01
			Be-7	1.87E+03	2.67E+02	2.28E+02
			K-40	4.26E+03	5.39E+02	3.18E+02
510950	11/5/2019 - 11/5/2019	MIXEDBLV	Mn-54	<2.82E+01	0.00E+00	2.82E+01
			Co-58	<2.31E+01	0.00E+00	2.31E+01
			Fe-59	<4.56E+01	0.00E+00	4.56E+01
			Co-60	<2.19E+01	0.00E+00	2.19E+01
			Zn-65	<3.82E+01	0.00E+00	3.82E+01
			Nb-95	<1.94E+01	0.00E+00	1.94E+01

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg

Sample Point 200 [INDICATOR - NNE @ 0.63 miles]

Sample ID:	510950	Sample Dates:	11/5/2019 - 11/5/2019	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					I-131	<2.38E+01	0.00E+00	2.38E+01
					Cs-134	<3.17E+01	0.00E+00	3.17E+01
					Cs-137	<2.63E+01	0.00E+00	2.63E+01
					BaLa-140	<3.15E+01	0.00E+00	3.15E+01
					Be-7	2.59E+03	4.14E+02	3.63E+02
					K-40	3.01E+03	5.41E+02	3.37E+02

Sample ID:	512432	Sample Dates:	12/3/2019 - 12/3/2019	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<2.87E+01	0.00E+00	2.87E+01
					Co-58	<3.28E+01	0.00E+00	3.28E+01
					Fe-59	<5.41E+01	0.00E+00	5.41E+01
					Co-60	<3.16E+01	0.00E+00	3.16E+01
					Zn-65	<7.29E+01	0.00E+00	7.29E+01
					Zr-95	<5.45E+01	0.00E+00	5.45E+01
					Nb-95	<3.30E+01	0.00E+00	3.30E+01
					I-131	<2.91E+01	0.00E+00	2.91E+01
					Cs-134	<3.39E+01	0.00E+00	3.39E+01
					Cs-137	<3.64E+01	0.00E+00	3.64E+01
					BaLa-140	<4.24E+01	0.00E+00	4.24E+01
					Be-7	2.50E+03	4.43E+02	3.46E+02
					K-40	4.04E+03	7.27E+02	7.15E+01

Sample Point 201 [INDICATOR - NE @ 0.53 miles]

Sample ID:	492190	Sample Dates:	1/8/2019 - 1/8/2019	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<3.00E+01	0.00E+00	3.00E+01
					Co-58	<3.81E+01	0.00E+00	3.81E+01
					Fe-59	<6.82E+01	0.00E+00	6.82E+01
					Co-60	<3.82E+01	0.00E+00	3.82E+01
					Zn-65	<7.15E+01	0.00E+00	7.15E+01
					Zr-95	<6.25E+01	0.00E+00	6.25E+01
					Nb-95	<2.90E+01	0.00E+00	2.90E+01
					I-131	<3.50E+01	0.00E+00	3.50E+01
					Cs-134	<3.65E+01	0.00E+00	3.65E+01
					Cs-137	<3.65E+01	0.00E+00	3.65E+01
					BaLa-140	<3.93E+01	0.00E+00	3.93E+01
					Be-7	3.64E+03	5.17E+02	3.42E+02
					K-40	4.83E+03	7.86E+02	4.70E+02

Sample ID:	492473	Sample Dates:	2/5/2019 - 2/5/2019	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<3.69E+01	0.00E+00	3.69E+01
					Co-58	<3.98E+01	0.00E+00	3.98E+01
					Fe-59	<7.06E+01	0.00E+00	7.06E+01
					Co-60	<3.39E+01	0.00E+00	3.39E+01
					Zn-65	<8.50E+01	0.00E+00	8.50E+01
					Zr-95	<7.22E+01	0.00E+00	7.22E+01
					Nb-95	<3.24E+01	0.00E+00	3.24E+01
					I-131	<3.78E+01	0.00E+00	3.78E+01
					Cs-134	<4.80E+01	0.00E+00	4.80E+01
					Cs-137	<3.57E+01	0.00E+00	3.57E+01
					BaLa-140	<4.16E+01	0.00E+00	4.16E+01
					Be-7	1.30E+03	3.45E+02	3.91E+02
					K-40	3.30E+03	6.84E+02	4.41E+02

Sample ID:	495464	Sample Dates:	3/5/2019 - 3/5/2019	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<2.03E+01	0.00E+00	2.03E+01
					Co-58	<2.20E+01	0.00E+00	2.20E+01
					Fe-59	<4.10E+01	0.00E+00	4.10E+01
					Co-60	<2.86E+01	0.00E+00	2.86E+01
					Zn-65	<4.71E+01	0.00E+00	4.71E+01
					Zr-95	<4.14E+01	0.00E+00	4.14E+01
					Nb-95	<2.22E+01	0.00E+00	2.22E+01
					I-131	<1.78E+01	0.00E+00	1.78E+01
					Cs-134	<2.20E+01	0.00E+00	2.20E+01
					Cs-137	<2.42E+01	0.00E+00	2.42E+01
					BaLa-140	<2.51E+01	0.00E+00	2.51E+01
					Be-7	2.76E+03	3.51E+02	2.21E+02

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg

Sample Point 201 [INDICATOR - NE @ 0.53 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
495464	3/5/2019 - 3/5/2019		K-40	4.18E+03	5.63E+02	2.89E+02
497872	4/2/2019 - 4/2/2019		Mn-54	<1.80E+01	0.00E+00	1.80E+01
			Co-58	<1.62E+01	0.00E+00	1.62E+01
			Fe-59	<4.21E+01	0.00E+00	4.21E+01
			Co-60	<1.95E+01	0.00E+00	1.95E+01
			Zn-65	<4.70E+01	0.00E+00	4.70E+01
			Zr-95	<3.71E+01	0.00E+00	3.71E+01
			Nb-95	<2.29E+01	0.00E+00	2.29E+01
			I-131	<1.68E+01	0.00E+00	1.68E+01
			Cs-134	<2.08E+01	0.00E+00	2.08E+01
			Cs-137	<1.75E+01	0.00E+00	1.75E+01
			BaLa-140	<2.08E+01	0.00E+00	2.08E+01
			Be-7	8.65E+02	1.99E+02	2.13E+02
			K-40	4.96E+03	6.64E+02	2.91E+02
499817	5/7/2019 - 5/7/2019		Mn-54	<9.66E+00	0.00E+00	9.66E+00
			Co-58	<9.49E+00	0.00E+00	9.49E+00
			Fe-59	<1.89E+01	0.00E+00	1.89E+01
			Co-60	<1.03E+01	0.00E+00	1.03E+01
			Zn-65	<2.14E+01	0.00E+00	2.14E+01
			Zr-95	<1.83E+01	0.00E+00	1.83E+01
			Nb-95	<1.02E+01	0.00E+00	1.02E+01
			I-131	<8.97E+00	0.00E+00	8.97E+00
			Cs-134	<1.07E+01	0.00E+00	1.07E+01
			Cs-137	3.45E+01	9.70E+00	1.28E+01
			BaLa-140	<9.03E+00	0.00E+00	9.03E+00
			Be-7	2.86E+02	7.94E+01	1.10E+02
			K-40	3.65E+03	3.73E+02	1.77E+02
501071	6/4/2019 - 6/4/2019		Mn-54	<2.00E+01	0.00E+00	2.00E+01
			Co-58	<1.78E+01	0.00E+00	1.78E+01
			Fe-59	<3.54E+01	0.00E+00	3.54E+01
			Co-60	<1.94E+01	0.00E+00	1.94E+01
			Zn-65	<3.92E+01	0.00E+00	3.92E+01
			Zr-95	<3.07E+01	0.00E+00	3.07E+01
			Nb-95	<1.83E+01	0.00E+00	1.83E+01
			I-131	<2.57E+01	0.00E+00	2.57E+01
			Cs-134	<2.48E+01	0.00E+00	2.48E+01
			Cs-137	2.88E+01	1.94E+01	3.04E+01
			BaLa-140	<1.60E+01	0.00E+00	1.60E+01
			Be-7	7.50E+02	1.84E+02	2.36E+02
			K-40	4.16E+03	5.06E+02	1.76E+02
503322	7/2/2019 - 7/2/2019		Mn-54	<3.93E+01	0.00E+00	3.93E+01
			Co-58	<4.19E+01	0.00E+00	4.19E+01
			Fe-59	<9.06E+01	0.00E+00	9.06E+01
			Co-60	<5.67E+01	0.00E+00	5.67E+01
			Zn-65	<5.93E+01	0.00E+00	5.93E+01
			Zr-95	<5.07E+01	0.00E+00	5.07E+01
			Nb-95	<3.91E+01	0.00E+00	3.91E+01
			I-131	<4.78E+01	0.00E+00	4.78E+01
			Cs-134	<4.39E+01	0.00E+00	4.39E+01
			Cs-137	<3.91E+01	0.00E+00	3.91E+01
			BaLa-140	<4.80E+01	0.00E+00	4.80E+01
			Be-7	1.40E+03	3.75E+02	3.91E+02
			K-40	3.10E+03	7.08E+02	4.43E+02
504638	8/6/2019 - 8/6/2019		Mn-54	<3.21E+01	0.00E+00	3.21E+01
			Co-58	<3.16E+01	0.00E+00	3.16E+01
			Fe-59	<6.08E+01	0.00E+00	6.08E+01
			Co-60	<3.09E+01	0.00E+00	3.09E+01

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg

Sample Point 201 [INDICATOR - NE @ 0.53 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
504638	8/6/2019 - 8/6/2019	MIXEDBLV	Zn-65	<7.53E+01	0.00E+00	7.53E+01
			Zr-95	<6.20E+01	0.00E+00	6.20E+01
			Nb-95	<4.27E+01	0.00E+00	4.27E+01
			I-131	<4.67E+01	0.00E+00	4.67E+01
			Cs-134	<3.10E+01	0.00E+00	3.10E+01
			Cs-137	<3.86E+01	0.00E+00	3.86E+01
			BaLa-140	<2.68E+01	0.00E+00	2.68E+01
			Be-7	1.61E+03	3.60E+02	3.93E+02
			K-40	3.26E+03	6.63E+02	5.84E+02
			505928	9/3/2019 - 9/3/2019	MIXEDBLV	Mn-54
Co-58	<2.49E+01	0.00E+00				2.49E+01
Fe-59	<7.37E+01	0.00E+00				7.37E+01
Co-60	<2.65E+01	0.00E+00				2.65E+01
Zn-65	<5.48E+01	0.00E+00				5.48E+01
Zr-95	<5.49E+01	0.00E+00				5.49E+01
Nb-95	<3.64E+01	0.00E+00				3.64E+01
I-131	<4.64E+01	0.00E+00				4.64E+01
Cs-134	<3.74E+01	0.00E+00				3.74E+01
Cs-137	<3.30E+01	0.00E+00				3.30E+01
BaLa-140	<3.90E+01	0.00E+00				3.90E+01
Be-7	2.28E+03	4.07E+02				3.40E+02
K-40	3.60E+03	6.41E+02				2.31E+02
508896	10/1/2019 - 10/1/2019	MIXEDBLV				Mn-54
			Co-58	<1.09E+01	0.00E+00	1.09E+01
			Fe-59	<2.48E+01	0.00E+00	2.48E+01
			Co-60	<1.02E+01	0.00E+00	1.02E+01
			Zn-65	<2.82E+01	0.00E+00	2.82E+01
			Zr-95	<2.08E+01	0.00E+00	2.08E+01
			Nb-95	<1.31E+01	0.00E+00	1.31E+01
			I-131	<2.24E+01	0.00E+00	2.24E+01
			Cs-134	<1.24E+01	0.00E+00	1.24E+01
			Cs-137	7.15E+00	9.05E+00	1.49E+01
			BaLa-140	<1.73E+01	0.00E+00	1.73E+01
			Be-7	9.58E+02	1.49E+02	1.59E+02
			K-40	3.98E+03	4.08E+02	1.74E+02
			510951	11/5/2019 - 11/5/2019	MIXEDBLV	Mn-54
Co-58	<3.01E+01	0.00E+00				3.01E+01
Fe-59	<5.98E+01	0.00E+00				5.98E+01
Co-60	<3.69E+01	0.00E+00				3.69E+01
Zn-65	<6.19E+01	0.00E+00				6.19E+01
Zr-95	<6.03E+01	0.00E+00				6.03E+01
Nb-95	<2.70E+01	0.00E+00				2.70E+01
I-131	<3.24E+01	0.00E+00				3.24E+01
Cs-134	<4.12E+01	0.00E+00				4.12E+01
Cs-137	<3.72E+01	0.00E+00				3.72E+01
BaLa-140	<3.16E+01	0.00E+00				3.16E+01
Be-7	2.17E+03	3.92E+02				3.79E+02
K-40	3.69E+03	6.49E+02				3.84E+02
512433	12/3/2019 - 12/3/2019	MIXEDBLV				Mn-54
			Co-58	<3.88E+01	0.00E+00	3.88E+01
			Fe-59	<9.32E+01	0.00E+00	9.32E+01
			Co-60	<3.83E+01	0.00E+00	3.83E+01
			Zn-65	<9.33E+01	0.00E+00	9.33E+01
			Zr-95	<7.39E+01	0.00E+00	7.39E+01
			Nb-95	<4.32E+01	0.00E+00	4.32E+01
			I-131	<3.29E+01	0.00E+00	3.29E+01
			Cs-134	<4.59E+01	0.00E+00	4.59E+01
			Cs-137	<4.63E+01	0.00E+00	4.63E+01
			BaLa-140	<4.44E+01	0.00E+00	4.44E+01

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg

Sample Point 201 [INDICATOR - NE @ 0.53 miles]

Sample ID:	512433	Sample Dates:	12/3/2019 - 12/3/2019	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Be-7	1.34E+03	4.58E+02	5.97E+02
					K-40	4.07E+03	9.28E+02	7.82E+02

Sample Point 222 [INDICATOR - N @ 0.71 miles]

Sample ID:	492191	Sample Dates:	1/8/2019 - 1/8/2019	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<2.54E+01	0.00E+00	2.54E+01
					Co-58	<2.43E+01	0.00E+00	2.43E+01
					Fe-59	<4.66E+01	0.00E+00	4.66E+01
					Co-60	<2.79E+01	0.00E+00	2.79E+01
					Zn-65	<5.75E+01	0.00E+00	5.75E+01
					Zr-95	<4.16E+01	0.00E+00	4.16E+01
					Nb-95	<2.45E+01	0.00E+00	2.45E+01
					I-131	<2.49E+01	0.00E+00	2.49E+01
					Cs-134	<2.91E+01	0.00E+00	2.91E+01
					Cs-137	<2.38E+01	0.00E+00	2.38E+01
					BaLa-140	<2.85E+01	0.00E+00	2.85E+01
					Be-7	2.38E-01	3.43E+02	5.78E+02
					K-40	2.22E+03	4.17E+02	3.56E+02

Sample ID:	492474	Sample Dates:	2/5/2019 - 2/5/2019	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<2.89E+01	0.00E+00	2.89E+01
					Co-58	<3.16E+01	0.00E+00	3.16E+01
					Fe-59	<5.53E+01	0.00E+00	5.53E+01
					Co-60	<3.08E+01	0.00E+00	3.08E+01
					Zn-65	<5.82E+01	0.00E+00	5.82E+01
					Zr-95	<5.07E+01	0.00E+00	5.07E+01
					Nb-95	<3.19E+01	0.00E+00	3.19E+01
					I-131	<4.78E+01	0.00E+00	4.78E+01
					Cs-134	<3.75E+01	0.00E+00	3.75E+01
					Cs-137	<2.43E+01	0.00E+00	2.43E+01
					BaLa-140	<4.63E+01	0.00E+00	4.63E+01
					Be-7	7.01E+02	2.49E+02	3.60E+02
					K-40	2.51E+03	4.70E+02	4.75E+02

Sample ID:	495465	Sample Dates:	3/5/2019 - 3/5/2019	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<3.61E+01	0.00E+00	3.61E+01
					Co-58	<3.48E+01	0.00E+00	3.48E+01
					Fe-59	<6.69E+01	0.00E+00	6.69E+01
					Co-60	<4.06E+01	0.00E+00	4.06E+01
					Zn-65	<7.97E+01	0.00E+00	7.97E+01
					Zr-95	<5.48E+01	0.00E+00	5.48E+01
					Nb-95	<3.75E+01	0.00E+00	3.75E+01
					I-131	<3.57E+01	0.00E+00	3.57E+01
					Cs-134	<4.00E+01	0.00E+00	4.00E+01
					Cs-137	<3.64E+01	0.00E+00	3.64E+01
					BaLa-140	<3.94E+01	0.00E+00	3.94E+01
					Be-7	1.25E+03	3.19E+02	4.00E+02
					K-40	3.94E+03	6.81E+02	5.18E+02

Sample ID:	497873	Sample Dates:	4/2/2019 - 4/2/2019	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<2.21E+01	0.00E+00	2.21E+01
					Co-58	<2.10E+01	0.00E+00	2.10E+01
					Fe-59	<4.04E+01	0.00E+00	4.04E+01
					Co-60	<2.42E+01	0.00E+00	2.42E+01
					Zn-65	<5.39E+01	0.00E+00	5.39E+01
					Zr-95	<3.95E+01	0.00E+00	3.95E+01
					Nb-95	<2.47E+01	0.00E+00	2.47E+01
					I-131	<2.29E+01	0.00E+00	2.29E+01
					Cs-134	<2.53E+01	0.00E+00	2.53E+01
					Cs-137	<2.40E+01	0.00E+00	2.40E+01
					BaLa-140	<2.27E+01	0.00E+00	2.27E+01
					Be-7	5.67E+02	1.33E+02	2.14E+02
					K-40	3.73E+03	5.17E+02	3.04E+02

Sample ID:	499818	Sample Dates:	5/7/2019 - 5/7/2019	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<2.15E+01	0.00E+00	2.15E+01

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg

Sample Point 222 [INDICATOR - N @ 0.71 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
499818	5/7/2019 - 5/7/2019	MIXEDBLV	Co-58	<2.36E+01	0.00E+00	2.36E+01
			Fe-59	<4.84E+01	0.00E+00	4.84E+01
			Co-60	<2.74E+01	0.00E+00	2.74E+01
			Zn-65	<6.41E+01	0.00E+00	6.41E+01
			Zr-95	<4.78E+01	0.00E+00	4.78E+01
			Nb-95	<2.47E+01	0.00E+00	2.47E+01
			I-131	<2.42E+01	0.00E+00	2.42E+01
			Cs-134	<3.27E+01	0.00E+00	3.27E+01
			Cs-137	<2.65E+01	0.00E+00	2.65E+01
			BaLa-140	<3.09E+01	0.00E+00	3.09E+01
			Be-7	<2.75E+02	0.00E+00	2.75E+02
			K-40	3.10E+03	5.72E+02	4.20E+02
			501072	6/4/2019 - 6/4/2019	MIXEDBLV	Mn-54
Co-58	<2.36E+01	0.00E+00				2.36E+01
Fe-59	<5.03E+01	0.00E+00				5.03E+01
Co-60	<2.66E+01	0.00E+00				2.66E+01
Zn-65	<5.38E+01	0.00E+00				5.38E+01
Zr-95	<3.50E+01	0.00E+00				3.50E+01
Nb-95	<2.44E+01	0.00E+00				2.44E+01
I-131	<2.48E+01	0.00E+00				2.48E+01
Cs-134	<2.66E+01	0.00E+00				2.66E+01
Cs-137	<2.58E+01	0.00E+00				2.58E+01
BaLa-140	<2.56E+01	0.00E+00				2.56E+01
Be-7	3.11E+02	2.00E+02				3.04E+02
K-40	3.55E+03	6.19E+02				3.97E+02
503323	7/2/2019 - 7/2/2019	MIXEDBLV	Mn-54	<3.61E+01	0.00E+00	3.61E+01
			Co-58	<3.56E+01	0.00E+00	3.56E+01
			Fe-59	<6.73E+01	0.00E+00	6.73E+01
			Co-60	<2.67E+01	0.00E+00	2.67E+01
			Zn-65	<7.13E+01	0.00E+00	7.13E+01
			Zr-95	<7.37E+01	0.00E+00	7.37E+01
			Nb-95	<4.52E+01	0.00E+00	4.52E+01
			I-131	<4.30E+01	0.00E+00	4.30E+01
			Cs-134	<4.18E+01	0.00E+00	4.18E+01
			Cs-137	<3.85E+01	0.00E+00	3.85E+01
			BaLa-140	<4.41E+01	0.00E+00	4.41E+01
			Be-7	3.51E+02	2.30E+02	3.37E+02
			K-40	3.17E+03	7.52E+02	6.87E+02
504639	8/6/2019 - 8/6/2019	MIXEDBLV	Mn-54	<3.37E+01	0.00E+00	3.37E+01
			Co-58	<3.03E+01	0.00E+00	3.03E+01
			Fe-59	<8.08E+01	0.00E+00	8.08E+01
			Co-60	<3.00E+01	0.00E+00	3.00E+01
			Zn-65	<7.46E+01	0.00E+00	7.46E+01
			Zr-95	<5.27E+01	0.00E+00	5.27E+01
			Nb-95	<4.07E+01	0.00E+00	4.07E+01
			I-131	<4.58E+01	0.00E+00	4.58E+01
			Cs-134	<3.29E+01	0.00E+00	3.29E+01
			Cs-137	<3.05E+01	0.00E+00	3.05E+01
			BaLa-140	<7.00E+01	0.00E+00	7.00E+01
			Be-7	2.16E+03	4.78E+02	4.58E+02
			K-40	2.01E+03	5.54E+02	3.31E+02
505929	9/3/2019 - 9/3/2019	MIXEDBLV	Mn-54	<3.29E+01	0.00E+00	3.29E+01
			Co-58	<2.62E+01	0.00E+00	2.62E+01
			Fe-59	<4.82E+01	0.00E+00	4.82E+01
			Co-60	<2.74E+01	0.00E+00	2.74E+01
			Zn-65	<5.36E+01	0.00E+00	5.36E+01
			Zr-95	<5.32E+01	0.00E+00	5.32E+01
			Nb-95	<2.80E+01	0.00E+00	2.80E+01
			I-131	<3.35E+01	0.00E+00	3.35E+01

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg

Sample Point 222 [INDICATOR - N @ 0.71 miles]

Sample ID:	505929	Sample Dates:	9/3/2019 - 9/3/2019	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Cs-134	<3.92E+01	0.00E+00	3.92E+01
					Cs-137	<3.05E+01	0.00E+00	3.05E+01
					BaLa-140	<3.97E+01	0.00E+00	3.97E+01
					Be-7	1.44E+03	3.08E+02	3.10E+02
					K-40	2.57E+03	5.09E+02	3.26E+02

Sample ID:	508897	Sample Dates:	10/1/2019 - 10/1/2019	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<3.46E+01	0.00E+00	3.46E+01
					Co-58	<3.90E+01	0.00E+00	3.90E+01
					Fe-59	<6.43E+01	0.00E+00	6.43E+01
					Co-60	<2.76E+01	0.00E+00	2.76E+01
					Zn-65	<5.93E+01	0.00E+00	5.93E+01
					Zr-95	<4.78E+01	0.00E+00	4.78E+01
					Nb-95	<3.72E+01	0.00E+00	3.72E+01
					I-131	<4.75E+01	0.00E+00	4.75E+01
					Cs-134	<4.11E+01	0.00E+00	4.11E+01
					Cs-137	<2.41E+01	0.00E+00	2.41E+01
					BaLa-140	<3.99E+01	0.00E+00	3.99E+01
					Be-7	1.14E+03	3.05E+02	3.18E+02
					K-40	3.37E+03	6.95E+02	4.70E+02

Sample ID:	510952	Sample Dates:	11/5/2019 - 11/5/2019	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<3.43E+01	0.00E+00	3.43E+01
					Co-58	<3.58E+01	0.00E+00	3.58E+01
					Fe-59	<5.69E+01	0.00E+00	5.69E+01
					Co-60	<3.80E+01	0.00E+00	3.80E+01
					Zn-65	<8.83E+01	0.00E+00	8.83E+01
					Zr-95	<4.79E+01	0.00E+00	4.79E+01
					Nb-95	<3.45E+01	0.00E+00	3.45E+01
					I-131	<2.81E+01	0.00E+00	2.81E+01
					Cs-134	<2.52E+01	0.00E+00	2.52E+01
					Cs-137	<3.01E+01	0.00E+00	3.01E+01
					BaLa-140	<2.67E+01	0.00E+00	2.67E+01
					Be-7	1.39E+03	3.09E+02	3.26E+02
					K-40	3.51E+03	6.04E+02	2.25E+02

Sample ID:	512434	Sample Dates:	12/3/2019 - 12/3/2019	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<2.50E+01	0.00E+00	2.50E+01
					Co-58	<2.70E+01	0.00E+00	2.70E+01
					Fe-59	<5.49E+01	0.00E+00	5.49E+01
					Co-60	<2.61E+01	0.00E+00	2.61E+01
					Zn-65	<6.45E+01	0.00E+00	6.45E+01
					Zr-95	<4.40E+01	0.00E+00	4.40E+01
					Nb-95	<3.36E+01	0.00E+00	3.36E+01
					I-131	<4.20E+01	0.00E+00	4.20E+01
					Cs-134	<3.01E+01	0.00E+00	3.01E+01
					Cs-137	<2.96E+01	0.00E+00	2.96E+01
					BaLa-140	<3.27E+01	0.00E+00	3.27E+01
					Be-7	8.12E+02	2.47E+02	3.33E+02
					K-40	3.04E+03	5.32E+02	4.82E+02

Sample Point 226 [INDICATOR - S @ 0.48 miles]

Sample ID:	492192	Sample Dates:	1/8/2019 - 1/8/2019	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<2.55E+01	0.00E+00	2.55E+01
					Co-58	<2.58E+01	0.00E+00	2.58E+01
					Fe-59	<3.96E+01	0.00E+00	3.96E+01
					Co-60	<3.25E+01	0.00E+00	3.25E+01
					Zn-65	<6.46E+01	0.00E+00	6.46E+01
					Zr-95	<4.37E+01	0.00E+00	4.37E+01
					Nb-95	<2.64E+01	0.00E+00	2.64E+01
					I-131	<2.23E+01	0.00E+00	2.23E+01
					Cs-134	<2.99E+01	0.00E+00	2.99E+01
					Cs-137	<2.53E+01	0.00E+00	2.53E+01
					BaLa-140	<1.91E+01	0.00E+00	1.91E+01
					Be-7	1.55E+03	3.01E+02	3.03E+02
					K-40	4.87E+03	7.13E+02	3.81E+02

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg

Sample Point 226 [INDICATOR - S @ 0.48 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
492475	2/5/2019 - 2/5/2019	MIXEDBLV	Mn-54	<1.86E+01	0.00E+00	1.86E+01
			Co-58	<2.01E+01	0.00E+00	2.01E+01
			Fe-59	<4.34E+01	0.00E+00	4.34E+01
			Co-60	<2.32E+01	0.00E+00	2.32E+01
			Zn-65	<5.11E+01	0.00E+00	5.11E+01
			Zr-95	<3.58E+01	0.00E+00	3.58E+01
			Nb-95	<2.19E+01	0.00E+00	2.19E+01
			I-131	<1.75E+01	0.00E+00	1.75E+01
			Cs-134	<2.21E+01	0.00E+00	2.21E+01
			Cs-137	<1.86E+01	0.00E+00	1.86E+01
			BaLa-140	<2.51E+01	0.00E+00	2.51E+01
			Be-7	1.41E+03	4.28E+02	1.89E+02
			K-40	5.48E+03	7.17E+02	3.11E+02
495466	3/5/2019 - 3/5/2019	MIXEDBLV	Mn-54	<2.16E+01	0.00E+00	2.16E+01
			Co-58	<2.11E+01	0.00E+00	2.11E+01
			Fe-59	<4.24E+01	0.00E+00	4.24E+01
			Co-60	<2.46E+01	0.00E+00	2.46E+01
			Zn-65	<5.37E+01	0.00E+00	5.37E+01
			Zr-95	<3.81E+01	0.00E+00	3.81E+01
			Nb-95	<2.13E+01	0.00E+00	2.13E+01
			I-131	<2.02E+01	0.00E+00	2.02E+01
			Cs-134	<2.62E+01	0.00E+00	2.62E+01
			Cs-137	<2.18E+01	0.00E+00	2.18E+01
			BaLa-140	<1.87E+01	0.00E+00	1.87E+01
			Be-7	1.35E+03	2.42E+02	2.15E+02
			K-40	4.82E+03	6.74E+02	4.20E+02
497874	4/2/2019 - 4/2/2019	MIXEDBLV	Mn-54	<1.82E+01	0.00E+00	1.82E+01
			Co-58	<1.92E+01	0.00E+00	1.92E+01
			Fe-59	<3.62E+01	0.00E+00	3.62E+01
			Co-60	<2.13E+01	0.00E+00	2.13E+01
			Zn-65	<4.61E+01	0.00E+00	4.61E+01
			Zr-95	<3.57E+01	0.00E+00	3.57E+01
			Nb-95	<1.71E+01	0.00E+00	1.71E+01
			I-131	<1.80E+01	0.00E+00	1.80E+01
			Cs-134	<2.10E+01	0.00E+00	2.10E+01
			Cs-137	<1.86E+01	0.00E+00	1.86E+01
			BaLa-140	<2.06E+01	0.00E+00	2.06E+01
			Be-7	5.92E+02	1.88E+02	2.44E+02
			K-40	4.97E+03	6.63E+02	3.05E+02
499819	5/7/2019 - 5/7/2019	MIXEDBLV	Mn-54	<2.01E+01	0.00E+00	2.01E+01
			Co-58	<1.88E+01	0.00E+00	1.88E+01
			Fe-59	<4.40E+01	0.00E+00	4.40E+01
			Co-60	<2.29E+01	0.00E+00	2.29E+01
			Zn-65	<4.17E+01	0.00E+00	4.17E+01
			Zr-95	<3.55E+01	0.00E+00	3.55E+01
			Nb-95	<1.92E+01	0.00E+00	1.92E+01
			I-131	<2.02E+01	0.00E+00	2.02E+01
			Cs-134	<2.44E+01	0.00E+00	2.44E+01
			Cs-137	<2.47E+01	0.00E+00	2.47E+01
			BaLa-140	<2.48E+01	0.00E+00	2.48E+01
			Be-7	2.52E+02	1.44E+02	2.13E+02
			K-40	5.23E+03	7.05E+02	3.36E+02
501073	6/4/2019 - 6/4/2019	MIXEDBLV	Mn-54	<2.34E+01	0.00E+00	2.34E+01
			Co-58	<2.38E+01	0.00E+00	2.38E+01
			Fe-59	<4.56E+01	0.00E+00	4.56E+01
			Co-60	<2.37E+01	0.00E+00	2.37E+01
			Zn-65	<4.47E+01	0.00E+00	4.47E+01
			Nb-95	<3.97E+01	0.00E+00	3.97E+01

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg

Sample Point 226 [INDICATOR - S @ 0.48 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
501073	6/4/2019 - 6/4/2019		I-131	<2.15E+01	0.00E+00	2.15E+01
			Cs-134	<2.18E+01	0.00E+00	2.18E+01
			Cs-137	<2.31E+01	0.00E+00	2.31E+01
			BaLa-140	<2.75E+01	0.00E+00	2.75E+01
			Be-7	5.56E+02	1.90E+02	2.53E+02
			K-40	6.21E+03	7.77E+02	2.76E+02
503324	7/2/2019 - 7/2/2019		Mn-54	<3.50E+01	0.00E+00	3.50E+01
			Co-58	<2.44E+01	0.00E+00	2.44E+01
			Fe-59	<7.44E+01	0.00E+00	7.44E+01
			Co-60	<4.46E+01	0.00E+00	4.46E+01
			Zn-65	<6.01E+01	0.00E+00	6.01E+01
			Zr-95	<6.56E+01	0.00E+00	6.56E+01
			Nb-95	<3.81E+01	0.00E+00	3.81E+01
			I-131	<4.76E+01	0.00E+00	4.76E+01
			Cs-134	<4.10E+01	0.00E+00	4.10E+01
			Cs-137	<3.19E+01	0.00E+00	3.19E+01
			BaLa-140	<3.83E+01	0.00E+00	3.83E+01
			Be-7	<5.22E+02	0.00E+00	5.22E+02
			K-40	4.84E+03	8.89E+02	3.58E+02
			504640	8/6/2019 - 8/6/2019		Mn-54
Co-58	<3.04E+01	0.00E+00				3.04E+01
Fe-59	<4.39E+01	0.00E+00				4.39E+01
Co-60	<3.73E+01	0.00E+00				3.73E+01
Zn-65	<8.72E+01	0.00E+00				8.72E+01
Zr-95	<6.14E+01	0.00E+00				6.14E+01
Nb-95	<3.85E+01	0.00E+00				3.85E+01
I-131	<4.66E+01	0.00E+00				4.66E+01
Cs-134	<4.29E+01	0.00E+00				4.29E+01
Cs-137	<3.70E+01	0.00E+00				3.70E+01
BaLa-140	<3.47E+01	0.00E+00				3.47E+01
Be-7	1.13E+03	3.19E+02				3.34E+02
K-40	5.41E+03	9.52E+02				6.01E+02
505930	9/3/2019 - 9/3/2019					Mn-54
			Co-58	<3.48E+01	0.00E+00	3.48E+01
			Fe-59	<8.12E+01	0.00E+00	8.12E+01
			Co-60	<3.90E+01	0.00E+00	3.90E+01
			Zn-65	<9.55E+01	0.00E+00	9.55E+01
			Zr-95	<5.70E+01	0.00E+00	5.70E+01
			Nb-95	<2.52E+01	0.00E+00	2.52E+01
			I-131	<4.21E+01	0.00E+00	4.21E+01
			Cs-134	<3.79E+01	0.00E+00	3.79E+01
			Cs-137	<3.63E+01	0.00E+00	3.63E+01
			BaLa-140	<4.95E+01	0.00E+00	4.95E+01
			Be-7	1.18E+03	4.30E+02	5.73E+02
			K-40	4.92E+03	9.38E+02	5.65E+02
			508898	10/1/2019 - 10/1/2019		Mn-54
Co-58	<3.15E+01	0.00E+00				3.15E+01
Fe-59	<5.76E+01	0.00E+00				5.76E+01
Co-60	<3.90E+01	0.00E+00				3.90E+01
Zn-65	<8.58E+01	0.00E+00				8.58E+01
Zr-95	<5.92E+01	0.00E+00				5.92E+01
Nb-95	<3.19E+01	0.00E+00				3.19E+01
I-131	<4.59E+01	0.00E+00				4.59E+01
Cs-134	<2.79E+01	0.00E+00				2.79E+01
Cs-137	<3.32E+01	0.00E+00				3.32E+01
BaLa-140	<3.75E+01	0.00E+00				3.75E+01
Be-7	8.80E+02	3.07E+02				4.12E+02
K-40	7.67E+03	1.05E+03				5.56E+02

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg

Sample Point 226 [INDICATOR - S @ 0.48 miles]

Sample ID:	510953	Sample Dates:	11/5/2019 - 11/5/2019	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<2.78E+01	0.00E+00	2.78E+01
					Co-58	<2.30E+01	0.00E+00	2.30E+01
					Fe-59	<4.73E+01	0.00E+00	4.73E+01
					Co-60	<2.93E+01	0.00E+00	2.93E+01
					Zn-65	<5.71E+01	0.00E+00	5.71E+01
					Zr-95	<3.73E+01	0.00E+00	3.73E+01
					Nb-95	<2.00E+01	0.00E+00	2.00E+01
					I-131	<2.33E+01	0.00E+00	2.33E+01
					Cs-134	<3.31E+01	0.00E+00	3.31E+01
					Cs-137	<2.63E+01	0.00E+00	2.63E+01
					BaLa-140	<1.58E+01	0.00E+00	1.58E+01
					Be-7	9.00E+02	2.45E+02	2.94E+02
					K-40	5.48E+03	7.82E+02	3.56E+02

Sample ID:	512435	Sample Dates:	12/3/2019 - 12/3/2019	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<2.92E+01	0.00E+00	2.92E+01
					Co-58	<2.19E+01	0.00E+00	2.19E+01
					Fe-59	<4.58E+01	0.00E+00	4.58E+01
					Co-60	<2.25E+01	0.00E+00	2.25E+01
					Zn-65	<8.52E+01	0.00E+00	8.52E+01
					Zr-95	<4.35E+01	0.00E+00	4.35E+01
					Nb-95	<3.17E+01	0.00E+00	3.17E+01
					I-131	<2.63E+01	0.00E+00	2.63E+01
					Cs-134	<4.01E+01	0.00E+00	4.01E+01
					Cs-137	<2.71E+01	0.00E+00	2.71E+01
					BaLa-140	<3.02E+01	0.00E+00	3.02E+01
					Be-7	9.29E+02	2.69E+02	2.95E+02
					K-40	4.80E+03	8.13E+02	4.22E+02

Sample Point 258 [CONTROL - W @ 9.84 miles]

Sample ID:	492193	Sample Dates:	1/8/2019 - 1/8/2019	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<2.04E+01	0.00E+00	2.04E+01
					Co-58	<1.75E+01	0.00E+00	1.75E+01
					Fe-59	<4.19E+01	0.00E+00	4.19E+01
					Co-60	<2.25E+01	0.00E+00	2.25E+01
					Zn-65	<4.33E+01	0.00E+00	4.33E+01
					Zr-95	<3.86E+01	0.00E+00	3.86E+01
					Nb-95	<1.87E+01	0.00E+00	1.87E+01
					I-131	<1.67E+01	0.00E+00	1.67E+01
					Cs-134	<2.61E+01	0.00E+00	2.61E+01
					Cs-137	<2.37E+01	0.00E+00	2.37E+01
					BaLa-140	<2.08E+01	0.00E+00	2.08E+01
					Be-7	4.65E+03	5.45E+02	2.93E+02
					K-40	3.97E+03	5.70E+02	3.02E+02

Sample ID:	492476	Sample Dates:	2/5/2019 - 2/5/2019	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<2.08E+01	0.00E+00	2.08E+01
					Co-58	<1.97E+01	0.00E+00	1.97E+01
					Fe-59	<4.24E+01	0.00E+00	4.24E+01
					Co-60	<2.63E+01	0.00E+00	2.63E+01
					Zn-65	<3.73E+01	0.00E+00	3.73E+01
					Zr-95	<3.68E+01	0.00E+00	3.68E+01
					Nb-95	<1.27E+01	0.00E+00	1.27E+01
					I-131	<1.97E+01	0.00E+00	1.97E+01
					Cs-134	<1.89E+01	0.00E+00	1.89E+01
					Cs-137	<2.38E+01	0.00E+00	2.38E+01
					BaLa-140	<1.95E+01	0.00E+00	1.95E+01
					Be-7	3.64E+03	4.65E+02	2.85E+02
					K-40	5.17E+03	6.84E+02	2.45E+02

Sample ID:	495467	Sample Dates:	3/5/2019 - 3/5/2019	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<2.37E+01	0.00E+00	2.37E+01
					Co-58	<2.98E+01	0.00E+00	2.98E+01
					Fe-59	<4.75E+01	0.00E+00	4.75E+01
					Co-60	<3.80E+01	0.00E+00	3.80E+01
					Zn-65	<7.86E+01	0.00E+00	7.86E+01

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg

Sample Point 258 [CONTROL - W @ 9.84 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
495467	3/5/2019 - 3/5/2019	MIXEDBLV	Zr-95	<5.17E+01	0.00E+00	5.17E+01
			Nb-95	<2.49E+01	0.00E+00	2.49E+01
			I-131	<2.11E+01	0.00E+00	2.11E+01
			Cs-134	<3.17E+01	0.00E+00	3.17E+01
			Cs-137	<2.93E+01	0.00E+00	2.93E+01
			BaLa-140	<7.56E+00	0.00E+00	7.56E+00
			Be-7	2.54E+03	4.14E+02	2.88E+02
			K-40	4.59E+03	7.73E+02	4.67E+02
497875	4/2/2019 - 4/2/2019	MIXEDBLV	Mn-54	<1.71E+01	0.00E+00	1.71E+01
			Co-58	<1.49E+01	0.00E+00	1.49E+01
			Fe-59	<3.39E+01	0.00E+00	3.39E+01
			Co-60	<1.18E+01	0.00E+00	1.18E+01
			Zn-65	<3.57E+01	0.00E+00	3.57E+01
			Zr-95	<2.71E+01	0.00E+00	2.71E+01
			Nb-95	<1.37E+01	0.00E+00	1.37E+01
			I-131	<1.63E+01	0.00E+00	1.63E+01
			Cs-134	<1.95E+01	0.00E+00	1.95E+01
			Cs-137	<1.45E+01	0.00E+00	1.45E+01
			BaLa-140	<2.28E+01	0.00E+00	2.28E+01
			Be-7	6.96E+02	1.74E+02	2.10E+02
			K-40	5.03E+03	6.13E+02	2.22E+02
499820	5/7/2019 - 5/7/2019	MIXEDBLV	Mn-54	<2.70E+01	0.00E+00	2.70E+01
			Co-58	<2.52E+01	0.00E+00	2.52E+01
			Fe-59	<4.84E+01	0.00E+00	4.84E+01
			Co-60	<2.16E+01	0.00E+00	2.16E+01
			Zn-65	<5.92E+01	0.00E+00	5.92E+01
			Zr-95	<3.84E+01	0.00E+00	3.84E+01
			Nb-95	<2.79E+01	0.00E+00	2.79E+01
			I-131	<2.60E+01	0.00E+00	2.60E+01
			Cs-134	<3.36E+01	0.00E+00	3.36E+01
			Cs-137	<2.43E+01	0.00E+00	2.43E+01
			BaLa-140	<2.92E+01	0.00E+00	2.92E+01
			Be-7	3.89E+02	1.71E+02	2.43E+02
			K-40	4.65E+03	6.58E+02	3.44E+02
501074	6/4/2019 - 6/4/2019	MIXEDBLV	Mn-54	<2.40E+01	0.00E+00	2.40E+01
			Co-58	<2.45E+01	0.00E+00	2.45E+01
			Fe-59	<5.07E+01	0.00E+00	5.07E+01
			Co-60	<2.83E+01	0.00E+00	2.83E+01
			Zn-65	<5.79E+01	0.00E+00	5.79E+01
			Zr-95	<5.52E+01	0.00E+00	5.52E+01
			Nb-95	<2.65E+01	0.00E+00	2.65E+01
			I-131	<2.29E+01	0.00E+00	2.29E+01
			Cs-134	<2.88E+01	0.00E+00	2.88E+01
			Cs-137	<2.02E+01	0.00E+00	2.02E+01
			BaLa-140	<2.53E+01	0.00E+00	2.53E+01
			Be-7	6.26E+02	2.43E+02	3.46E+02
			K-40	3.48E+03	6.13E+02	4.99E+02
503325	7/2/2019 - 7/2/2019	MIXEDBLV	Mn-54	<4.19E+01	0.00E+00	4.19E+01
			Co-58	<3.35E+01	0.00E+00	3.35E+01
			Fe-59	<7.30E+01	0.00E+00	7.30E+01
			Co-60	<3.17E+01	0.00E+00	3.17E+01
			Zn-65	<5.58E+01	0.00E+00	5.58E+01
			Zr-95	<6.02E+01	0.00E+00	6.02E+01
			Nb-95	<3.39E+01	0.00E+00	3.39E+01
			I-131	<4.68E+01	0.00E+00	4.68E+01
			Cs-134	<2.80E+01	0.00E+00	2.80E+01
			Cs-137	<2.80E+01	0.00E+00	2.80E+01
			BaLa-140	<6.34E+01	0.00E+00	6.34E+01
			Be-7	1.35E+03	3.31E+02	3.47E+02

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg

Sample Point 258 [CONTROL - W @ 9.84 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
503325	7/2/2019 - 7/2/2019		K-40	3.20E+03	6.53E+02	4.44E+02
504641	8/6/2019 - 8/6/2019		Mn-54	<3.07E+01	0.00E+00	3.07E+01
			Co-58	<2.99E+01	0.00E+00	2.99E+01
			Fe-59	<6.56E+01	0.00E+00	6.56E+01
			Co-60	<3.66E+01	0.00E+00	3.66E+01
			Zn-65	<4.57E+01	0.00E+00	4.57E+01
			Zr-95	<6.04E+01	0.00E+00	6.04E+01
			Nb-95	<3.79E+01	0.00E+00	3.79E+01
			I-131	<4.62E+01	0.00E+00	4.62E+01
			Cs-134	<4.21E+01	0.00E+00	4.21E+01
			Cs-137	<2.80E+01	0.00E+00	2.80E+01
			BaLa-140	<4.33E+01	0.00E+00	4.33E+01
			Be-7	1.35E+03	3.91E+02	4.70E+02
			K-40	2.18E+03	5.94E+02	5.34E+02
505931	9/3/2019 - 9/3/2019		Mn-54	<3.54E+01	0.00E+00	3.54E+01
			Co-58	<3.13E+01	0.00E+00	3.13E+01
			Fe-59	<7.10E+01	0.00E+00	7.10E+01
			Co-60	<3.00E+01	0.00E+00	3.00E+01
			Zn-65	<7.29E+01	0.00E+00	7.29E+01
			Zr-95	<5.61E+01	0.00E+00	5.61E+01
			Nb-95	<3.43E+01	0.00E+00	3.43E+01
			I-131	<4.79E+01	0.00E+00	4.79E+01
			Cs-134	<3.90E+01	0.00E+00	3.90E+01
			Cs-137	<3.75E+01	0.00E+00	3.75E+01
			BaLa-140	<4.23E+01	0.00E+00	4.23E+01
			Be-7	1.65E+03	3.71E+02	4.02E+02
			K-40	3.42E+03	6.60E+02	4.91E+02
508899	10/1/2019 - 10/1/2019		Mn-54	<4.01E+01	0.00E+00	4.01E+01
			Co-58	<3.68E+01	0.00E+00	3.68E+01
			Fe-59	<9.14E+01	0.00E+00	9.14E+01
			Co-60	<3.71E+01	0.00E+00	3.71E+01
			Zn-65	<1.16E+02	0.00E+00	1.16E+02
			Zr-95	<7.73E+01	0.00E+00	7.73E+01
			Nb-95	<3.97E+01	0.00E+00	3.97E+01
			I-131	<4.77E+01	0.00E+00	4.77E+01
			Cs-134	<3.81E+01	0.00E+00	3.81E+01
			Cs-137	<3.66E+01	0.00E+00	3.66E+01
			BaLa-140	<6.22E+01	0.00E+00	6.22E+01
			Be-7	1.64E+03	4.00E+02	4.36E+02
			K-40	2.51E+03	5.78E+02	3.56E+02
510954	11/5/2019 - 11/5/2019		Mn-54	<4.32E+01	0.00E+00	4.32E+01
			Co-58	<2.49E+01	0.00E+00	2.49E+01
			Fe-59	<6.47E+01	0.00E+00	6.47E+01
			Co-60	<3.02E+01	0.00E+00	3.02E+01
			Zn-65	<6.68E+01	0.00E+00	6.68E+01
			Zr-95	<5.30E+01	0.00E+00	5.30E+01
			Nb-95	<3.14E+01	0.00E+00	3.14E+01
			I-131	<2.88E+01	0.00E+00	2.88E+01
			Cs-134	<4.36E+01	0.00E+00	4.36E+01
			Cs-137	<2.79E+01	0.00E+00	2.79E+01
			BaLa-140	<3.57E+01	0.00E+00	3.57E+01
			Be-7	1.40E+03	3.40E+02	3.75E+02
			K-40	3.56E+03	1.24E+03	3.12E+02
512436	12/3/2019 - 12/3/2019		Mn-54	<3.12E+01	0.00E+00	3.12E+01
			Co-58	<3.06E+01	0.00E+00	3.06E+01
			Fe-59	<5.21E+01	0.00E+00	5.21E+01
			Co-60	<2.96E+01	0.00E+00	2.96E+01

CATAWBA Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg

Sample Point 258 [CONTROL - W @ 9.84 miles]

Sample ID:	512436	Sample Dates:	12/3/2019 - 12/3/2019	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Zn-65	<6.22E+01	0.00E+00	6.22E+01
					Zr-95	<5.11E+01	0.00E+00	5.11E+01
					Nb-95	<3.24E+01	0.00E+00	3.24E+01
					I-131	<4.37E+01	0.00E+00	4.37E+01
					Cs-134	<3.66E+01	0.00E+00	3.66E+01
					Cs-137	<3.28E+01	0.00E+00	3.28E+01
					BaLa-140	<3.87E+01	0.00E+00	3.87E+01
					Be-7	1.59E+03	3.53E+02	4.07E+02
					K-40	5.00E+03	7.39E+02	3.96E+02

APPENDIX F

**ERRATA TO
PREVIOUS REPORTS**

2019

There are no errata to be appended to the 2019
Catawba Nuclear Station AREOR.

Enclosure 3
RA-20-0079

ENCLOSURE 3: [HNP Annual Radiological Environmental Operating Report](#)



ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT

DUKE ENERGY PROGRESS, LLC

SHEARON HARRIS NUCLEAR POWER PLANT

2019



TABLE OF CONTENTS

1.0 Executive Summary	1-1
2.0 Introduction	2-1
2.1 Site Description and Sample Locations	2-1
2.2 Scope and Requirements of the REMP	2-1
2.3 Statistical and Calculational Methodology	2-2
2.3.1 Estimation of the Mean Value	2-2
2.3.2 Lower Limit of Detection and Minimum Detectable Activity	2-2
2.3.3 Trend Identification	2-3
3.0 Interpretation of Results	3-1
3.1 Airborne Radioiodine and Particulates	3-2
3.2 Drinking Water	3-5
3.3 Surface Water	3-7
3.4 Ground Water	3-9
3.5 Milk	3-10
3.6 Broadleaf Vegetation	3-11
3.7 Food Products	3-13
3.8 Aquatic Vegetation	3-14
3.9 Fish	3-15
3.10 Shoreline Sediment	3-16
3.11 Bottom Sediment	3-17
3.12 Direct Gamma Radiation	3-19
3.12.1 Environmental TLD	3-19
3.13 Land Use Census	3-22
4.0 Quality Assurance	4-1
4.1 Sample Collection	4-1
4.2 Sample Analysis	4-1
4.3 Dosimetry Analysis	4-1
4.4 Laboratory Equipment Quality Assurance	4-1
4.4.1 Daily Quality Control	4-1
4.4.2 Calibration Verification	4-1
4.4.3 Batch Processing	4-1
4.5 Duke Energy Interlaboratory Comparison Program	4-2
4.5.1 Eckert & Ziegler Analytics Cross Check Program	4-2
4.6 State of North Carolina Intercomparison Program	4-2
4.7 TLD Intercomparison Program	4-2
4.7.1 Nuclear Technology Services Intercomparison Program	4-2
4.7.2 Internal Cross Check (Duke Energy)	4-3
4.8 General Engineering Laboratory, LLC (GEL)	4-3

Appendices

Appendix A: Environmental Sampling and Analysis Procedures	A-1
I. Change of Sampling Procedures	A-2
II. Description of Analysis Procedures	A-3
III. Change of Analysis Procedures	A-3
IV. Sampling and Analysis Procedures	A-4
A.1 Airborne Particulate and Radioiodine	A-4
A.2 Drinking Water	A-4
A.3 Surface Water	A-5
A.4 Ground Water	A-5
A.5 Milk	A-6
A.6 Broadleaf Vegetation	A-6
A.7 Food Products	A-7
A.8 Aquatic Vegetation	A-7
A.9 Fish	A-7
A.10 Shoreline Sediment	A-7
A.11 Bottom Sediment	A-8
A.12 Direct Gamma Radiation (TLD)	A-8
A.13 Annual Land Use Census	A-8
V. Global Positioning System (GPS) Analysis.	A-9
Appendix B: Radiological Environmental Monitoring Program – Summary of Results 2019	B-1
Radiological Environmental Monitoring Program Data Summary.	B-2
Footnotes to Appendix B	B-5
Appendix C: Sampling Deviations & Unavailable Analyses	C-1
C.1 Sampling Deviations.	C-2
C.2 Unavailable Analyses	C-3
Appendix D: Analytical Deviations	D-1
Appendix E: Radiological Environmental Monitoring Program Results 2019	E-1
Appendix F: Errata to Previous Reports	F-1
Errata to the 2017 & 2018 HNP AREOR	F-2

LIST OF FIGURES

2.1-1 Map of Site Boundary	2-4
2.1-2 Harris Nuclear Plant Sampling Locations - One mile radius.	2-5
2.1-3 Harris Nuclear Plant Sampling Locations - Ten mile radius.	2-6
3.1 Concentration of Gross Beta in Air Particulate.	3-3
3.2-1 Concentration of Gross Beta in Drinking Water	3-5
3.2-2 Concentration of Tritium in Drinking Water.	3-6
3.3 Concentration of Tritium in Surface Water.	3-7
3.6 Concentration of Cs-137 in Broadleaf Vegetation	3-11
3.11 Concentration of Co-60 and Cs-137 in Bottom Sediment	3-17
3.12 Direct Gamma Radiation (TLD) Results.	3-20
3.13 Harris Nuclear Plant 2019 Land Use Census Map.	3-24

LIST OF TABLES

2.1-A	Radiological Monitoring Program Sampling Locations	2-7
2.1-B	Radiological Monitoring Program Sampling Locations (TLD Sites)	2-9
2.2-A	Reporting Levels for Radioactivity Concentrations in Environmental Samples	2-10
2.2-B	REMP Analysis Frequency	2-10
2.2-C	Detection Capabilities for the <i>A Priori</i> Lower Limit of Detection.	2-11
3.1-A	Mean Concentration of Gross Beta in Air Particulate	3-3
3.1-B	Mean Concentration of Air Radioiodine (I-131).	3-3
3.2	Mean Concentration of Radionuclides in Drinking Water.	3-6
3.3	Mean Concentration of Tritium in Surface Water.	3-8
3.6	Mean Concentration of Cs-137 in Broadleaf Vegetation	3-12
3.11	Mean Concentration of Radionuclides in Bottom Sediment.	3-18
3.12	Direct Gamma Radiation (TLD) Results.	3-21
3.13	Harris Land Use Census Comparison (2018 – 2019).	3-23
4.0-A	Eckert & Ziegler Analytics Cross Check Program	4-4
4.0-B	2019 Environmental Dosimeter Cross Check Results	4-6
4.0-C	2019 GEL Laboratories, LLC QA Results	4-8

LIST OF ACRONYMS USED IN THIS TEXT *(in alphabetical order)*

A	Annually
APAC	Air Particulate Air Cartridge/Radioiodine
AR	Action Request - Corrective Action Program
AREOR	Annual Radiological Environmental Operating Report
BLV	Broadleaf Vegetation
BW	Biweekly
C	Control
DW	Drinking Water
EZA	Eckert and Ziegler Analytics
GEL	General Engineering Laboratory, LLC
GPS	Global Positioning System
GW	Ground Water
HNP	Harris Nuclear Plant or Shearon Harris Nuclear Plant
LLD	Lower Limit of Detection
LUC	Land Use Census
M	Monthly
MAPEP	Department of Energy Mixed Analyte Performance Evaluation Program
MDA	Minimum Detectable Activity
mR/STD Qtr	milliroentgen per standard quarter
MWe	Mega Watts electric
NIST	National Institute of Standards and Technology
NCR	Nuclear Condition Report - Corrective Action Program
NRC	Nuclear Regulatory Commission
ODCM	Offsite Dose Calculation Manual
pCi/kg	picocurie per kilogram
pCi/l	picocurie per liter
pCi/m ³	picocurie per cubic meter
Q	Quarterly
REMP	Radiological Environmental Monitoring Program
SA	Semiannually
SM	Semimonthly
SW	Surface Water
TECH SPECS	Technical Specifications
TLD	Thermoluminescent Dosimeter
μCi/ml	microcurie per milliliter
UFSAR	Updated Final Safety Analysis Report
W	Weekly

1.0 EXECUTIVE SUMMARY

This Annual Radiological Environmental Operating Report describes the Shearon Harris Nuclear Plant Radiological Environmental Monitoring Program (REMP), and the program results for the calendar year 2019.

Included in the report are the identification of sampling locations, descriptions of environmental sampling and analysis procedures, comparisons of present environmental radioactivity levels and pre-operational environmental data, analysis of trends in environmental radiological data as potentially affected by plant operations, and a summary of environmental radiological sampling results. Quality assurance practices, sampling deviations, unavailable samples, and program changes are also discussed.

Sampling activities were conducted as prescribed by the Harris Nuclear Plant Offsite Dose Calculation Manual (ODCM). One thousand four hundred and twenty-one samples were analyzed comprising 1,496 test results in order to compile data for the 2019 report. Based on the annual land use census, the current number of sampling sites for Harris Nuclear Plant is sufficient.

Concentrations observed in the environment in 2019 for plant related radionuclides were generally within the ranges of concentrations observed in the past. Inspection of the data showed that radioactivity concentrations in drinking water, ground water, surface water, bottom sediment, and aquatic vegetation are higher than the activities reported for samples collected prior to the operation of the station. Measured concentrations, including tritium, were not higher than expected and all positively identified measurements attributable to station operation were within limits as specified in the HNP ODCM and regulatory limits.

2.0 INTRODUCTION

2.1 SITE DESCRIPTION AND SAMPLE LOCATIONS

Duke Energy Corporation's Shearon Harris Nuclear Plant is a one-unit facility located on the shore of Harris Lake in southwest Wake County, North Carolina. The pressurized water reactor nuclear steam supply system furnished by Westinghouse Electric Corporation is designed to produce a net electrical output of approximately 930 MWe. Initial criticality was achieved on January 3, 1987.

Condenser cooling is accomplished utilizing a closed system incorporating a cooling tower, instead of using lake water directly. Liquid effluents are released into Harris Lake via the station discharge canal and are not accompanied by the large additional dilution water flow associated with "once-through" condenser cooling. This design results in greater radionuclide concentrations in the discharge canal given comparable liquid effluent source terms.

Sampling locations are chosen based upon meteorological factors, preoperational monitoring, and results of the land use surveys. Figure 2.1-1 is a map of the HNP site boundary. Sample points beyond the site boundary are considered offsite. Figures 2.1-2 and 2.1-3 are maps depicting the Thermoluminescent Dosimeter (TLD) monitoring locations and the sampling locations. The location numbers shown on these maps correspond to those listed in Tables 2.1-A and 2.1-B. Figure 2.1-2 comprises all sample locations within a one-mile radius of HNP. Figure 2.1-3 comprises all sample locations within a 10-mile radius of HNP.

2.2 SCOPE AND REQUIREMENTS OF THE REMP

An environmental monitoring program has been in effect at Harris Nuclear Plant since 1982, five years prior to commencing operation. The preoperational program provides data on the existing environmental radioactivity levels for the site and vicinity, which may be used to determine whether increases in environmental levels are attributable to the station. The operational program provides surveillance and backup support of detailed effluent monitoring which is necessary to evaluate the significance, if any, of the contributions to the existing environmental radioactivity levels that result from station operation.

This monitoring program is based on NRC guidance and is conducted in accordance with Operational Requirement 3.12.1 in the HNP Offsite Dose Calculation Manual and applicable procedures; with regards to sample media, sampling locations, sampling frequency and analytical sensitivity requirements. Indicator and control locations were established for comparison purposes to distinguish radioactivity of plant origin from natural or other "man-made" environmental radioactivity. The environmental monitoring program also verifies projected and anticipated radionuclide concentrations in the environment and related exposures from releases of radionuclides from Shearon Harris Nuclear Plant. This program satisfies the requirements of Section IV.B.2 of Appendix I to 10CFR50 and provides surveillance of all appropriate critical exposure pathways to man and protects vital interests of the company, public and state and federal

agencies concerned with the environment. Reporting levels for activity found in environmental samples are listed in Table 2.2-A. Table 2.2-B lists the REMP analysis and frequency schedule. The Annual Land Use Census, required by the HNP Offsite Dose Calculation Manual is performed to ensure that changes in the use of areas at or beyond the site boundary are identified and that modifications to the REMP are made if required by changes in land use. This census satisfies the requirements of Section IV.B.3 of Appendix I to 10CFR50. Results are shown in Table 3.13.

Participation in an interlaboratory comparison program is performed in fulfillment of HNP ODCM Operational Requirements. The comparison program provides for independent checks on the precision and accuracy of measurements of radioactive material in REMP sample matrices. Such checks are performed as part of the quality assurance program for environmental monitoring in order to demonstrate that the results are valid for the purposes of Section IV.B.2 of Appendix I to 10CFR50. A summary of the results obtained as part of this comparison program are in Section 4 of this annual report.

2.3 STATISTICAL AND CALCULATIONAL METHODOLOGY

2.3.1 ESTIMATION OF THE MEAN VALUE

There was one (1) basic statistical calculation performed on the raw data resulting from the environmental sample analysis program. The calculation involved the determination of the mean value for the indicator and the control samples for each sample medium. The mean is a widely used statistic. This value was used in the reduction of the data generated by the sampling and analysis of the various media in the Radiological Environmental Monitoring Program. "Net activity (or concentration)" is the activity (or concentration) determined to be present in the sample. No "Minimum Detectable Activity", "Lower Limit of Detection", "Less Than Level", or negative activities or concentrations are included in the calculation of the mean. The following equation was used to estimate the mean:

$$\bar{x} = \frac{\sum_{i=1}^N x_i}{N}$$

Where:

\bar{x} = estimate of the mean,

i = individual sample,

N = total number of samples with a net activity (or concentration),

x_i = net activity (or concentration) for sample i .

2.3.2 LOWER LIMIT OF DETECTION AND MINIMUM DETECTABLE ACTIVITY

The Lower Limit of Detection (LLD) and Minimum Detectable Activity (MDA) are used throughout the REMP.

LLD - The LLD, as defined in the ODCM as the smallest concentration of radioactive material in a sample that will yield a net count, above the system background, that will be detected with 95% probability with only 5% probability of falsely concluding that a blank observation represents a "real" signal. The LLD is an *a priori* (before the fact) lower limit of detection. The actual LLD is dependent upon the standard deviation of the background-counting rate, the counting efficiency, the sample size (mass or volume), the radiochemical yield and the radioactive decay of the sample between sample collection and counting. The "required" LLDs for each sample medium and selected radionuclides are given in the ODCM and are listed in Table 2.2-C.

MDA - The MDA is the net counting rate (sample after subtraction of background) that must be surpassed before a sample is considered to contain a scientifically measurable amount of a radioactive material exceeding background amounts. The MDA is calculated using a sample background and may be thought of as an "actual" LLD for a particular sample measurement. Certain gross counting measurements display a calculated negative value, indicating background is greater than sample activity.

2.3.3 TREND IDENTIFICATION

One of the purposes of an environmental monitoring program is to determine if there is a buildup of radionuclides in the environment due to the operation of the nuclear plant. Visual inspection of tabular or graphical presentations of data (including preoperational) is used to determine if a trend exists. A decrease in a particular radionuclide's concentration in an environmental medium does not indicate that reactor operations are removing radioactivity from the environment, but that reactor operations are not adding that radionuclide to the environment in quantities exceeding the preoperational level and that the normal removal processes (radioactive decay, deposition, resuspension, etc.) are influencing the concentration.

Substantial increases or decreases in the amount of a particular radionuclide's release from the nuclear plant will greatly affect the resulting environmental levels; therefore, a knowledge of the release of a radionuclide from the nuclear plant is necessary to completely interpret the trends, or lack of trends, determined from the environmental data. Factors that may affect environmental levels of radionuclides include prevailing weather conditions (periods of drought, solar cycles or heavier than normal precipitation), construction in or around either the nuclear plant or the sampling location, and addition or deletion of other sources of radioactive materials (such as the 1986 Chernobyl accident and the Japan earthquake and tsunami, which triggered the 2011 Fukushima Dai-ichi Nuclear Power Plant incident). Some of these factors may be obvious while others are sometimes unknown. Therefore, how trends are identified will include some judgment by plant personnel.

Figure 2.1-1

Map of Site Boundary

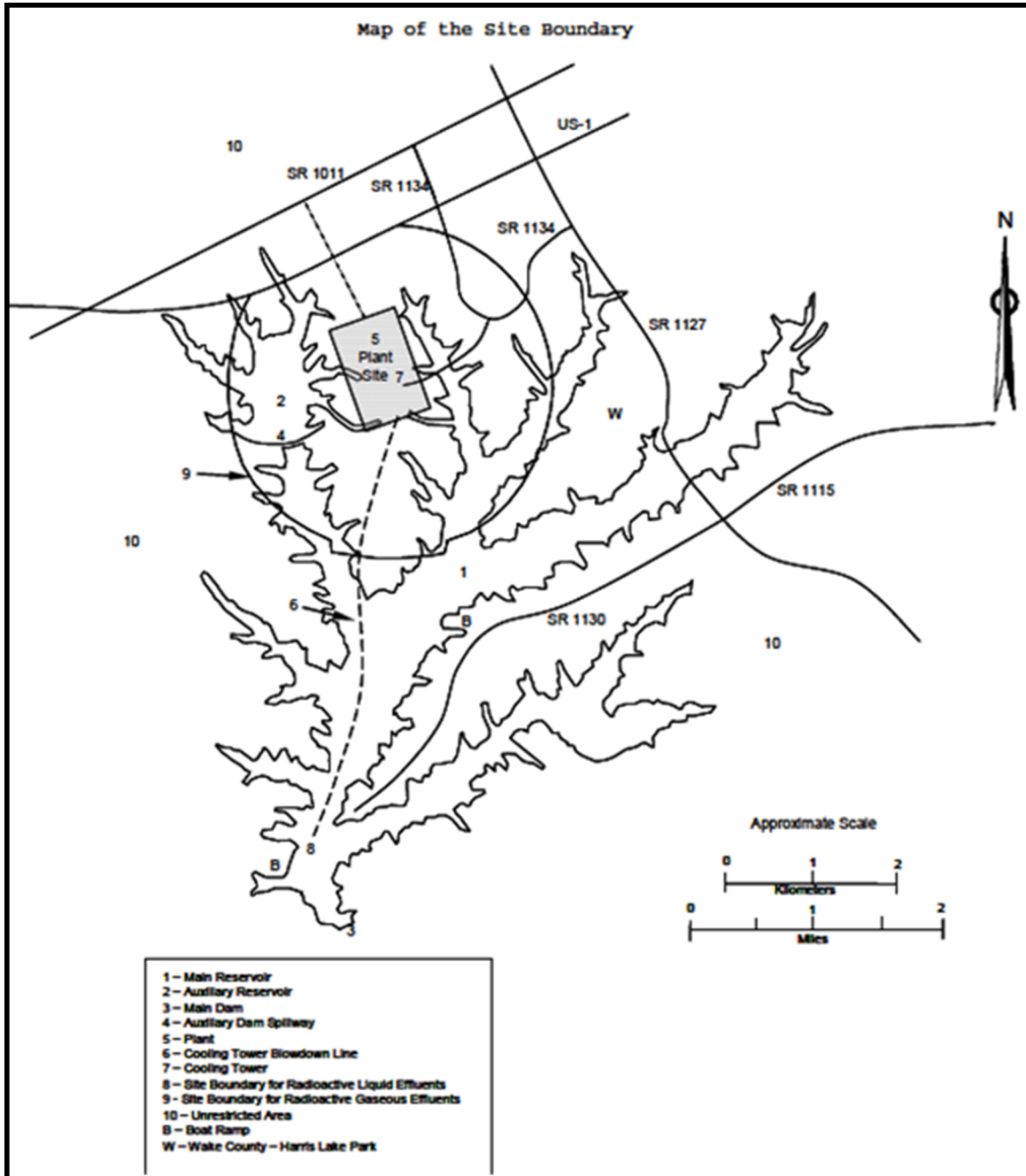
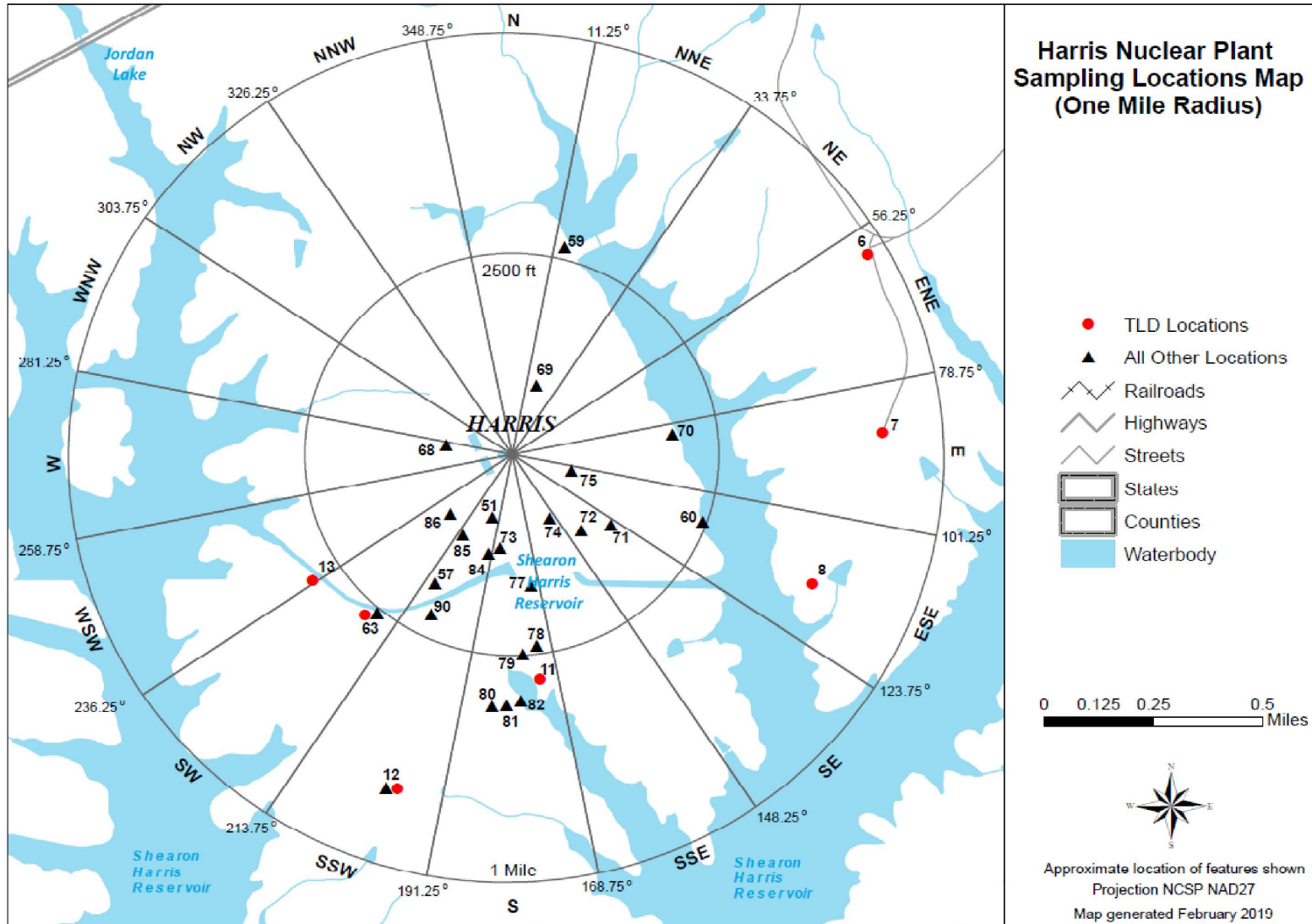


Figure 2.1-2

Harris Nuclear Plant Sampling Locations - One Mile Radius



**Figure 2.1-3
Harris Nuclear Plant Sampling Locations - Ten Mile Radius**

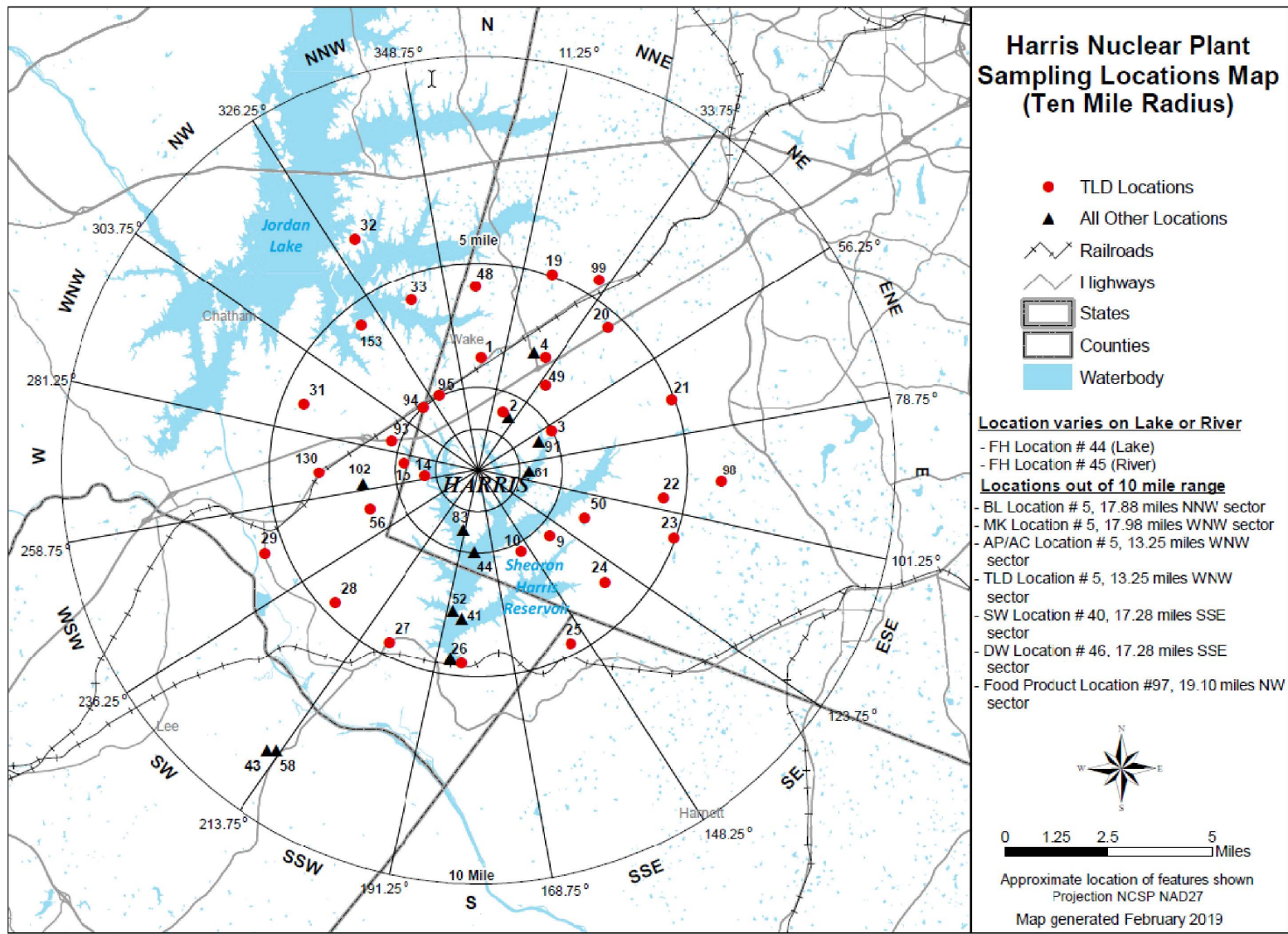


TABLE 2.1-A

HARRIS NUCLEAR PLANT

RADIOLOGICAL MONITORING PROGRAM SAMPLING LOCATIONS

Table 2.1-A Codes				Table 2.1-A Codes (Cont.)					
W	Weekly	SM	Semimonthly	AC	Air Cartridge	SB	Sediment Bottom	FI	Fish
BW	BiWeekly	Q	Quarterly	AP	Air Particulate	AV	Aquatic Vegetation	MK	Milk
M	Monthly	SA	Semiannually	SW	Surface Water	FP	Food Product		
A	Annual			DW	Drinking Water	BLV	Broadleaf Vegetation		
C	Control	I	Indicator	SS	Sediment Shoreline	GW	Ground Water		

Site #	Type	Location Description ⁽⁴⁾	AC & AP	SW	DW	SS	SB	AV	FP ⁽¹⁾	Fish (FI)	Milk (Mk)	BLV ⁽²⁾	GW
1 ⁽⁵⁾	I	0.1 mi. S on SR 1134 from SR 1011 Intersection, N sector, 2.6 mi. from site.	W/Q										
2	I	1.4 mi. S on SR 1134 from SR 1011 intersection, NNE sector, 1.4 mi. from site.	W/Q										
4	I	0.7 mi. N on SR 1127 from intersection with US, NNE sector, 3.1 mi. from site	W/Q										
5	C	Pittsboro, WNW sector, >12 mi. from site	W/Q								SM/M	M ⁽²⁾	
12	I	SHNPP Site, SSW sector, 0.9 mi. from site.										M ⁽²⁾	
26	I	Harris Lake Spillway, S sector, 4.7 mi. from site.	W/Q	BW/M		SA		A					
40	I	NE Harnett Metro Water Treatment Plant Intake building, SSE sector, 17.2 mi. from site.		M/Q									
41	I	Shoreline of Mixing Zone of Cooling Tower Blowdown Line, S sector, 3.8 mi. from site.				SA		A					
43	C	Sanford Water Treatment Plant, SW sector, 8.5 mi. from site.		M/Q									
44	I	Site varies within Harris Lake								SA			
45	C	Site varies above Buckhorn Dam on Cape Fear River								SA			
46	I	NE Harnett Metro Water Treatment Plant Intake building, SSE sector, 17.2 mi. from site.			M/Q								
47 ⁽⁵⁾	I	1.3 mi. N on SR 1912 from intersection of NC 42, SSW sector, 3.4 mi. from site.	W/Q										
51	I	SHNPP Water Treatment Plant (On Site)			BW/M								
52	I	Harris Lake in the Vicinity of the Mixing Zone of the Cooling Tower, S sector, 3.8 mi. of site.					SA						
57	I	SHNPP Site (LP-13), N. side of Aux Res Intake canal, SSW sector, 0.4 mi. from site.											Q
58	C	Sanford Water Treatment Plant, SW sector, 8.5 mi. from site.			M/Q								
59	I	SHNPP Site (W-13), N. Side of Old Construction Road, NNE sector, 0.5 mi. from site.											Q
60	I	SHNPP Site, (W-9A), W. bank of Harris Lake SE of Cooling Tower, ESE sector, 0.5 mi. from site.											Q
61	C	Harris Lake East of New Hill-Holleman Rd, E sector, 2.5 mi. of site.						A					
63	I	SHNPP Site, SW sector, 0.6 mi. from site.	W/Q									M ⁽²⁾	

Site #	Type	Location Description ⁽⁴⁾	AC & AP	SW	DW	SS	SB	AV	FP ⁽¹⁾	Fish (FI)	Milk (Mk)	BLV ⁽²⁾	GW
68	I	SHNPP Site (LP-6), N. of Old Steam Generator building, W sector, 0.2 mi. of site.											Q
69	I	SHNPP Site, (LP-7), N. side of Warehouse 9, NNE sector, 0.2 mi. from site.											Q
70	I	SHNPP Site (LP-9), N. side of Plant Entrance, E sector, 0.4 mi. of site.											Q
71	I	SHNPP Site (LP-16), S. of Switchyard, SE sector, 0.3 mi. of site.											Q
72	I	SHNPP Site (MWA-12), N. of Cooling Tower Makeup Water Intake Structures, SE sector, 0.2 mi. from site.											Q
73	I	SHNPP Site, N. of Emergency Service Water Screening Structure, SE sector, 0.2 mi. from site.											Q
74	I	SHNPP Site, N. of helicopter landing pad, SSE sector, 0.2 mi. from site.											Q
75	I	SHNPP Site, W. of Security Building Entrance, ESE sector, 0.1 mi from site.											Q
77	I	SHNPP Site (BD-MW1), Along the Cooling Tower Blowdown Line, S sector, 0.4 mi. from site.											Q
78	I	SHNPP Site (BD-MW2), Along the Cooling Tower Blowdown Line, S sector, 0.5 mi. from site.											Q
79	I	SHNPP Site (BD-MW3), Along the Cooling Tower Blowdown Line, S sector, 0.5 mi. from site.											Q
80	I	SHNPP Site (BD-MW5), Along the Cooling Tower Blowdown Line, S sector, 0.6 mi. from site.											Q
81	I	SHNPP Site (BD-MW7), Along the Cooling Tower Blowdown Line, S sector, 0.6 mi. from site.											Q
82	I	SHNPP Site (BD-MW8), Along the Cooling Tower Blowdown Line, S sector, 0.6 mi. from site.											Q
83 ⁽⁶⁾	I	SHNPP Site (BD-MW16), Along the Cooling Tower Blowdown Line, S sector, 1.6 mi. from site.											Q
84 ⁽⁶⁾	I	SHNPP Site (MW-14), N. of Emergency Service Water Screening Structure, SSW sector, 0.2 mi. from site.											Q
85 ⁽⁶⁾	I	SHNPP Site (MW-13), W. of site near Settling Basin, SSW sector, 0.2 mi. from site.											Q
86	I	SHNPP Site (MW-12), W. of site near Old Reactor Head Storage Building, SW sector, 0.2 mi. from site.											Q
90	I	SHNPP Site, SSW sector, 0.5 mi. from site.	W/Q										
91	I	HE&EC, Sewage Treatment Facility, ENE sector, 1.6 mi. from site.	W/Q										
97	C	Granite Springs Farm, NW sector, 19.1 mi. from site.							M ⁽¹⁾				
102	I	Goat Farm, W sector, 2.82 mi. from site.									SM ⁽³⁾		

(1) When Available, during Harvest/Growing Season

(2) During Growing Season per ODCM – May through October

(3) When goats are lactating

(4) GPS data reflect approximate accuracy to within 2-5 meters. GPS field measurements were taken as close as possible to the item of interest.

(5) Deleted in HNP ODCM Rev. 28, eff. 29MAY2019 (AR # 02240431)

(6) Added in HNP ODCM Rev. 28, eff. 29MAY2019 (AR # 02173466)

TABLE 2.1-B

HARRIS NUCLEAR PLANT

RADIOLOGICAL MONITORING PROGRAM SAMPLING LOCATIONS (TLD SITES)

Table 2.1-B Codes			
IR	Inner Ring	OR	Outer Ring
C	Control	SI	Special Interest

Site #	Measure Type	Location ⁽¹⁾	Distance (miles)	Sector	Site #	Measure Type	Location ⁽¹⁾	Distance (miles)	Sector
1	IR	0.1 mi. on SR 1134 from SR 1011 intersection	2.6	N	26	OR	Harris lake Spillway	4.7	S
2	IR	1.4 mi. S on SR 1134 from SR 1011 intersection	1.4	NNE	27	OR	NC 42 @ Buckhorn United Methodist Church	4.8	SSW
3	SI	HE&EC Visitor Center (Population Center)	1.9	ENE	28	OR	0.6mi. on SR 1924 from intersection of SR 1916.	4.8	SW
4	SI	New Hill (Population Center), 0.7 mi. N on SR 1127 from intersection with US 1	3.1	NNE	29	OR	Parking Lot of Arclin, Inc. on SR 1916.	5.7	WSW
5	C	Pittsboro	13.3	WNW	30 ⁽²⁾	OR	Exit intersection of SR 1972 and US 1	5.6	W
6	IR	Intersection of SR 1134 & SR 1135	0.8	ENE	31	OR	At intersection of SR 1908, 1909, 1910.	4.7	WNW
7	IR	Extension of SR 1134	0.7	E	32	SI	Jordan Lake (Population Center), SR 1008.	6.4	NNW
8	IR	Dead end of road. Extension of SR 1134.	0.6	ESE	33	OR	SR 1142. 1.7 mi. from intersection of SR 1141.	4.5	NNW
9	IR	1 mi. S on SR 1130 from intersection of SR 1127, 1115, and 1130.	2.2	SE	48	OR	SR 1142. 1.5 mi. from intersection of SR 1141.	4.5	N
10	IR	SR 1130 S of intersection of SR 1127, 1115, and 1130.	2.2	SSE	49	IR	SR 1127. 0.3 mi. S from intersection with US 1.	2.5	NE
11	IR	SHNPP site	0.6	S	50	SI	Holleman Crossroad (Population Center), SR 1127 W from intersection SR 1115 and 1130.	2.6	ESE
12	IR	SHNPP site	0.9	SSW	53 ⁽²⁾	OR	SR 1972 N from intersection of SR 1910 and SR 1972.	5.8	NW
13	IR	SHNPP site	0.7	WSW	56	IR	SR 1912 at intersection of SR 1912 and SR 1924.	3.0	WSW
14	IR	SHNPP site. Access road to aux. reservoir.	1.5	W	63	IR	SHNPP site	0.6	SW
15	IR	SR 1911.	2.0	W	93	IR	SR 1911	2.2	WNW
19	OR	0.6 mi. E on SR 1142 from intersection of SR 1141.	5.0	NNE	94	IR	Old US HWY 1	2.0	NW
20	OR	US 1 at intersection SR 1149.	4.5	NE	95	IR	Bonsal Rd.	2.0	NNW
21	OR	1.2 mi. W on SR 1152 from intersection SR 1153.	4.8	ENE	98	SI	Holly Springs School Complex (Population Center)	5.9	E
22	OR	Formerly Ragan's Dairy on SR 1115.	4.3	E	99	SI	Friendship High School (Population Center)	5.5	NNE
23	OR	Intersection of SR 1127 and SR 1116.	4.8	ESE	130 ⁽³⁾	OR	Old US HWY 1	3.9	W
24	OR	Sweet Springs Church on SR 1116.	4.0	SE	153 ⁽³⁾	OR	Beaver Creek Road	4.5	NW
25	OR	0.2 mi. W on SR 1402 from intersection of SR 1400.	4.7	SSE					

(1) GPS data reflect approximate accuracy to within 2-5 meters. GPS field measurements were taken as close as possible to the item of interest.

(2) Deleted in HNP ODCM Rev. 28, eff. 29MAY2019 (AR # 02202715)

(3) Added in HNP ODCM Rev. 28, eff. 29MAY2019 (AR # 02202715)

TABLE 2.2-A
REPORTING LEVELS FOR RADIOACTIVITY
CONCENTRATIONS IN ENVIRONMENTAL SAMPLES

Analysis	Water (pCi/liter)	Airborne Particulate or Gases (pCi/m ³)	Fish (pCi/kg-wet)	Milk (pCi/liter)	Food Products (pCi/kg-wet)
H-3	20,000 ^(a)				
Mn-54	1,000		30,000		
Fe-59	400		10,000		
Co-58	1,000		30,000		
Co-60	300		10,000		
Zn-65	300		20,000		
Zr-Nb-95	400				
I-131	2 ^(b)	0.9		3	100
Cs-134	30	10	1,000	60	1,000
Cs-137	50	20	2,000	70	2,000
Ba-La-140	200			300	

(a) For drinking water samples. This is 40 CFR Part 141 value. If no drinking water pathway exists, a value of 30,000 pCi/liter may be used.
(b) If no drinking water pathway exists, a value of 20 pCi/liter may be used.

TABLE 2.2-B
REMP ANALYSIS FREQUENCY

Sample Medium	Analysis Schedule	Gamma Isotopic	Tritium	Low Level I-131	Gross Beta	TLD
Air Radioiodine	Weekly	X				
Air Particulate	Weekly				X	
	Quarterly	X				
Direct Radiation	Quarterly					X
Surface Water	Monthly Composite	X	X			
Drinking Water	Monthly Composite ^(c)	X	X		X	
Ground Water	Quarterly	X	X			
Bottom Sediment	Semiannually	X				
Shoreline Sediment	Semiannually	X				
Milk	Semimonthly/Monthly	X		X		
Fish	Semiannually	X				
Aquatic Vegetation	Annually	X				
Broadleaf Vegetation	Monthly ^(a)	X				
Food Products	Monthly ^(b)	X				

(a) During growing season per ODCM - May through October
(b) When Available
(c) Low-level I-131 will be analyzed on each composite when the dose calculated for the consumption of the water is greater than 1 mrem/yr.

TABLE 2.2-C

DETECTION CAPABILITIES FOR THE *A PRIORI* LOWER LIMIT OF DETECTION

Analysis	Water (pCi/liter)	Airborne Particulates or Gases (pCi/m ³)	Fish (pCi/kg-wet)	Milk (pCi/liter)	Food Products (pCi/kg-wet)	Sediment (pCi/kg-dry)
Gross Beta	4	0.01				
H-3	2000 ^(a)					
Mn-54	15		130			
Fe-59	30		260			
Co-58, 60	15		130			
Zn-65	30		260			
Zr-Nb-95	15					
I-131	1 ^(b)	0.07		1	60	
Cs-134	15	0.05	130	15	60	150
Cs-137	18	0.06	150	18	80	180
Ba-La-140	15			15		

- (a) If no drinking water pathway exists, a value of 3000 pCi/liter may be used.
(b) If no drinking water pathway exists, a value of 15 pCi/liter may be used.

3.0 INTERPRETATION OF RESULTS

Review of all 2019 REMP analysis results was performed to identify changes in environmental levels as a result of plant operations. The following section depicts and explains the review of these results. Sample data for 2019 was compared to historical data. Over the years of operation, analysis and collection changes have taken place that do not allow direct comparisons for some data collected from 1984 (preoperational) through 2019. Summary tables containing 2019 information required by Technical Specifications 6.9.1.3 and HNP ODCM E.3 are located in Appendix B. REMP results for 2019 are located in Appendix E.

Evaluation for significant trends was performed for radionuclides that are listed as required within the HNP ODCM. The radionuclides include: H-3, Mn-54, Fe-59, Co-58, Co-60, Zn-65, Zr-95, Nb-95, I-131, Cs-134, Cs-137, Ba-140 and La-140. Other radionuclides detected that are the result of plant operation, but not required for reporting, are trended.

The HNP ODCM addresses actions to be taken if radionuclides other than those required are detected in samples collected. The occurrences of these radionuclides could be the result of HNP liquid effluents which contained the radionuclides.

All 2019 sample analysis results were reviewed to detect and identify any significant trends. All negative concentration values were replaced with zero for calculation purposes. Any zero concentrations used in tables or graphs represent activity measurements less than detectable levels.

Review of the 2019 data presented in this section supports the conclusion that there were no significant changes in environmental sample radionuclide concentrations of samples collected and analyzed from HNP and surrounding areas that were attributable to plant operations. Inspection of the data showed that radioactivity concentrations were as expected and all positively identified measurements attributed to plant operations were within HNP ODCM regulatory limits; thus, presenting no significant impact to the environment or public health and safety.

Data presented in Sections 3.1 through 3.12 support the conclusion that there was no significant increase in radioactivity in the environment around Harris Nuclear Plant due to station operations in 2019. Similarly, there was no significant increase in ambient background radiation levels in the surrounding areas. The 2019 land use census data, shown in Section 3.13, indicates that no program changes are required as a result of the census.

3.1 AIRBORNE RADIOIODINE AND PARTICULATES

In 2019, 407 radioiodine and particulate samples were analyzed, 355 from eight indicator locations and 52 at the control location. Particulate samples were analyzed weekly for gross beta. A quarterly gamma analysis was performed on the quarterly filter composite (by location).

Figure 3.1 shows individual sample gross beta results for the indicator location with highest annual mean and the control location samples during 2019. The two sample locations' results are similar in concentration and have varied negligibly.

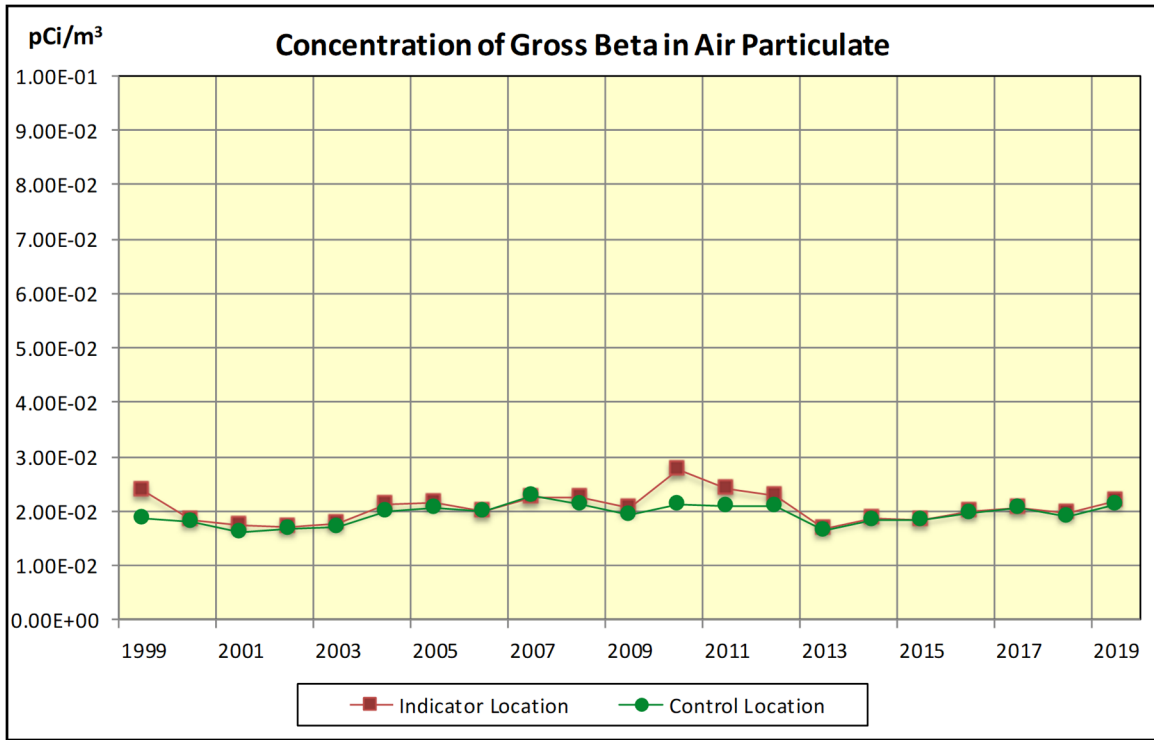
There were no detectable gamma emitters attributable to plant operations identified for particulate filters analyzed during 2019. Table 3.1-A shows the highest indicator annual mean and control location annual mean for gross beta in air particulate.

There was no detectable I-131 in air radioiodine samples analyzed in 2019. Table 3.1-B shows the highest indicator annual mean and control location annual mean for I-131 since 1999. No I-131 activity due to HNP operations has been detected during the entire operating history of the plant.

Two Airborne Radioiodine and Particulate indicator sampling locations were removed from the HNP REMP (AR # 02240431) as it was determined that they were not located in the highest three DOQ sectors nor in the vicinity of a community. The last sample was obtained on 3JUN2019. The HNP REMP currently has six indicator Airborne Radioiodine and Particulate sampling locations.

K-40 and Be-7 were observed in air samples and quarterly particulate composites but are naturally occurring radionuclides.

Figure 3.1



There is no reporting level for gross beta in air particulate

Table 3.1-A Mean Concentration of Gross Beta in Air Particulate

Year	Indicator Location (pCi/m ³)	Control Location (pCi/m ³)
1999	2.38E-2	1.87E-2
2000	1.83E-2	1.80E-2
2001	1.74E-2	1.60E-2
2002	1.70E-2	1.67E-2
2003	1.78E-2	1.70E-2
2004	2.13E-2	2.00E-2
2005	2.14E-2	2.07E-2
2006	1.99E-2	1.98E-2
2007	2.26E-2	2.29E-2
2008	2.25E-2	2.13E-2
2009	2.07E-2	1.92E-2
2010	2.76E-2	2.12E-2
2011	2.40E-2	2.10E-2
2012	2.29E-2	2.10E-2
2013	1.67E-2	1.65E-2
2014	1.86E-2	1.82E-2
2015	1.82E-2	1.82E-2
2016	1.98E-2	1.95E-2
2017	2.06E-2	2.05E-2
2018	1.96E-2	1.89E-2
2019	2.22E-2	2.12E-2

Table 3.1-B Mean Concentration of Air Radioiodine (I-131)

Year	Indicator Location (pCi/m ³)	Control Location (pCi/m ³)
1999	0.00E+0	0.00E+0
2000	0.00E+0	0.00E+0
2001	0.00E+0	0.00E+0
2002	0.00E+0	0.00E+0
2003	0.00E+0	0.00E+0
2004	0.00E+0	0.00E+0
2005	0.00E+0	0.00E+0
2006	0.00E+0	0.00E+0
2007	0.00E+0	0.00E+0
2008	0.00E+0	0.00E+0
2009	0.00E+0	0.00E+0
2010	0.00E+0	0.00E+0
2011 ⁽¹⁾	1.66E-1	1.08E-1
2012	0.00E+0	0.00E+0
2013	0.00E+0	0.00E+0
2014 ⁽²⁾	0.00E+0	0.00E+0
2015	0.00E+0	0.00E+0
2016	0.00E+0	0.00E+0
2017	0.00E+0	0.00E+0
2018	0.00E+0	0.00E+0
2019	0.00E+0	0.00E+0

0.00E+0 indicates no detectable measurements

(1) 2011 concentrations affected by Fukushima Dai-ichi

(2) 2014 Gamma spectroscopy system was replaced 10JUL2014. Gamma spectroscopy system hardware, detector cooling apparatus, software, electronics, nuclide identification libraries, and analytical test matrix components for test matrices were modified (NCR # 0739995). No analytical changes were observed due to the 2014 gamma spectroscopy system change.

3.2 DRINKING WATER

Gross beta analysis, tritium, and gamma spectroscopy were performed on 39 drinking water samples. Two indicator locations were sampled, along with one control location.

No gamma emitting radionuclides attributable to plant operations were identified in any 2019 drinking water samples. There have been no gamma emitting radionuclides attributable to plant operations identified in drinking water samples during the entire operating history of the plant.

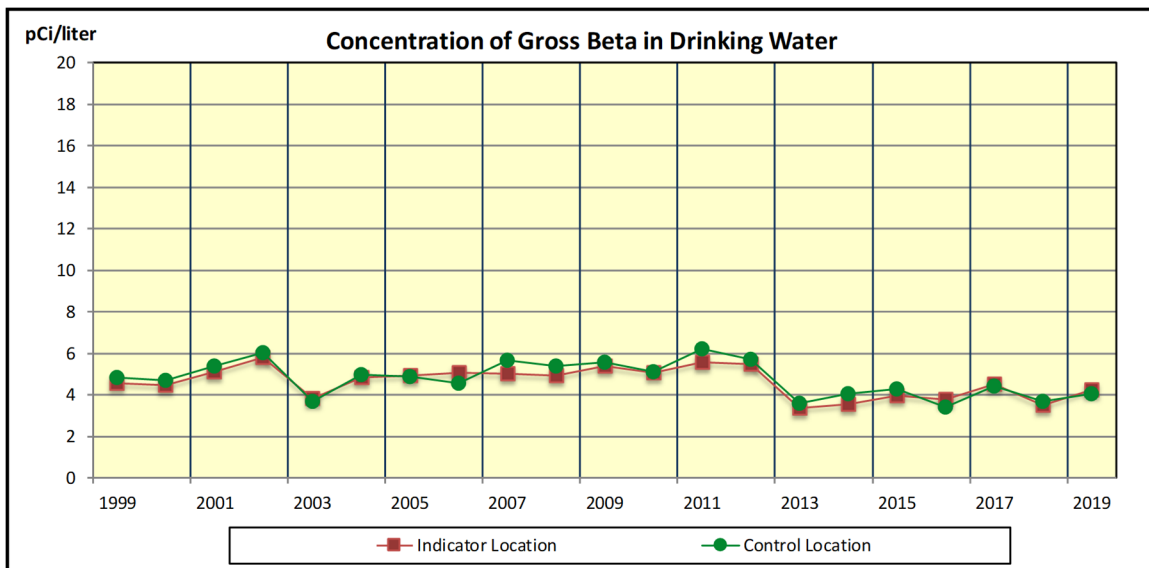
Figure 3.2-1 and Table 3.2 shows highest annual mean gross beta concentrations for the indicator locations and control location since 1999. The indicator locations (downstream of the plant effluent release point) average concentration was 4.25 pCi/l in 2019 and the control location concentration was 4.07 pCi/l. The gross beta mean indicator activity and mean control activity increased in 2019 due to an analytical method change affecting analytical sensitivities (Appendix A, III). This change is due to the analysis method being changed in 2019 (NCR # 02303027).

Tritium was detected in thirteen indicator samples from Location 51 and in no control samples during 2019. The mean indicator tritium concentration for 2019 was 2,566 pCi/l, 12.83% of reporting level. Figure 3.2-2 and Table 3.2 display the highest indicator and control location annual mean concentrations for tritium since 1999.

The dose for consumption of water was less than one mrem per year, historically and for 2019; therefore, low-level iodine analysis is not required.

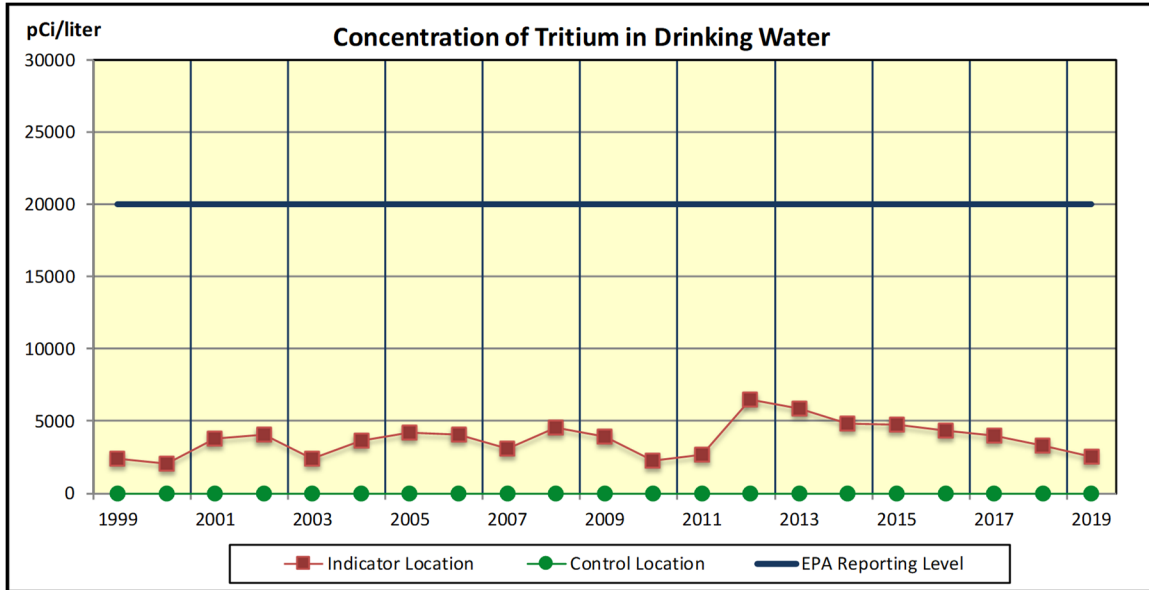
K-40 and Be-7 are naturally occurring radionuclides that were observed in drinking water samples in 2019.

Figure 3.2-1



There is no reporting level for gross beta in drinking water

Figure 3.2-2



Prior to 2009, drinking water indicator location # 51 was previously not classified as a public drinking water source. In 2009, location # 51 was classified as a public drinking water source; however, it is not a community drinking water source.

Table 3.2 Mean Concentration of Radionuclides in Drinking Water

YEAR	Gross Beta (pCi/l)		Tritium (pCi/l)	
	Indicator Location	Control Location	Indicator Location	Control Location
1999	4.55E+0	4.83E+0	2.37E+3	0.00E+0
2000	4.45E+0	4.73E+0	2.06E+3	0.00E+0
2001	5.11E+0	5.39E+0	3.76E+3	0.00E+0
2002	5.80E+0	6.03E+0	4.07E+3	0.00E+0
2003	3.81E+0	3.69E+0	2.40E+3	0.00E+0
2004	4.82E+0	4.96E+0	3.66E+3	0.00E+0
2005	4.95E+0	4.86E+0	4.20E+3	0.00E+0
2006	5.07E+0	4.58E+0	4.03E+3	0.00E+0
2007	5.01E+0	5.67E+0	3.12E+3	0.00E+0
2008	4.92E+0	5.40E+0	4.54E+3	0.00E+0
2009	5.37E+0	5.58E+0	3.95E+3	0.00E+0
2010	5.07E+0	5.09E+0	2.23E+3	0.00E+0
2011	5.58E+0	6.22E+0	2.65E+3	0.00E+0
2012	5.47E+0	5.69E+0	6.51E+3	0.00E+0
2013	3.37E+0	3.60E+0	5.89E+3	0.00E+0
2014	3.56E+0	4.06E+0	4.83E+3	0.00E+0
2015	3.97E+0	4.28E+0	4.74E+3	0.00E+0
2016	3.76E+0	3.40E+0	4.32E+3	0.00E+0
2017	4.52E+0	4.44E+0	4.02E+3	0.00E+0
2018	3.48E+0	3.68E+0	3.27E+3	0.00E+0
2019 ⁽¹⁾	4.25E+0	4.07E+0	2.57E+3	0.00E+0

0.00E+0 indicates no detectable measurements

Prior to 2009, drinking water indicator location # 51 was previously not classified as a public drinking water source. In 2009, location # 51 was classified as a public drinking water source; however, it is not a community drinking water source.

(1) Gross beta preparation/analysis methodology change (NCR # 0203027).

3.3 SURFACE WATER

A total of 39 monthly surface water samples were analyzed for gamma emitting radionuclides and tritium. Two indicator locations and one control location were sampled.

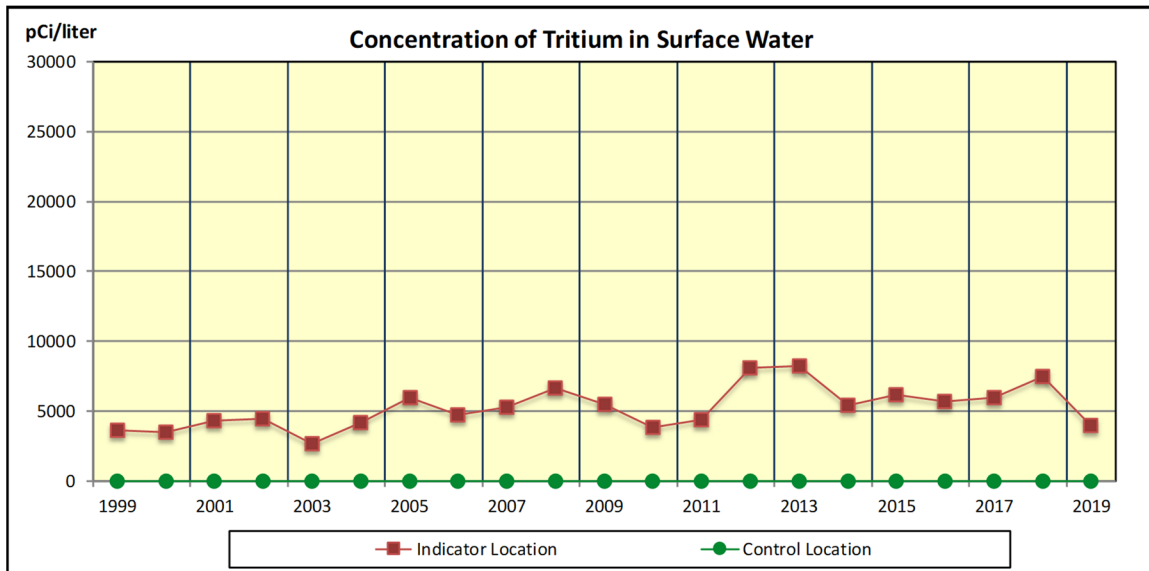
Location 26, Harris Lake Spillway, is the only indicator location sample that contained tritium with an average concentration of 3,967 pCi/l and showed a range of activities from 1,490 to 8,570 pCi/l. Tritium was not detected in the thirteen control samples collected during 2019.

No gamma emitting radionuclides attributable to plant operations were identified in 2019 surface water samples.

Table 3.3 and Figure 3.3 display the highest indicator and control annual means for tritium since 1999.

K-40 is a naturally occurring radionuclide that was observed in surface water samples in 2019.

Figure 3.3



There is no reporting level for tritium in surface water, however, if no drinking water pathway exists, a value of 30,000 pCi/l may be used.

Table 3.3 Mean Concentrations of Tritium in Surface Water

Year	Indicator Location (pCi/l)	Control Location (pCi/l)
1999	3.63E+3	0.00E+0
2000	3.52E+3	0.00E+0
2001	4.31E+3	0.00E+0
2002	4.49E+3	0.00E+0
2003	2.67E+3	0.00E+0
2004	4.20E+3	0.00E+0
2005	5.94E+3	0.00E+0
2006	4.73E+3	0.00E+0
2007	5.26E+3	0.00E+0
2008	6.68E+3	0.00E+0
2009	5.50E+3	0.00E+0
2010	3.83E+3	0.00E+0
2011	4.36E+3	0.00E+0
2012	8.08E+3	0.00E+0
2013	8.21E+3	0.00E+0
2014	5.44E+3	0.00E+0
2015	6.17E+3	0.00E+0
2016	5.68E+3	0.00E+0
2017	5.98E+3	0.00E+0
2018	7.46E+3	0.00E+0
2019	3.97E+3	0.00E+0

0.00E+0 indicates no detectable measurements

3.4 GROUND WATER

Twenty-one indicator ground water sample locations were sampled quarterly on site at HNP, there is no control location. In total, eighty-four ground water samples were analyzed for gamma emitters and tritium in 2019. The measured ground water gamma and tritium concentrations were below environmental requirements stated in the HNP ODCM.

Three new ground water wells were added to the program in 2019 (AR # 02173466). Locations 84, 85, and 86 were installed outside of the protected area and are more representative of the ground water close to the plant.

No gamma emitting radionuclides attributable to plant operations were identified in 2019 ground water samples.

Tritium was detected in some ground water samples, ranging from 204 pCi/l to 1,250 pCi/l in 2019; however, the results are well below the EPA reportable drinking water limit (20,000 pCi/l) and non-drinking water limit (30,000 pCi/l). The ground water wells, located on site at HNP, are monitoring wells and are not a water supply for drinking or irrigation. Therefore, there is no radiological dose via this pathway.

K-40 and Be-7 are naturally occurring radionuclides that were observed in ground water samples in 2019.

3.5 MILK

A total of 36 milk samples were analyzed by gamma spectroscopy and low-level iodine during 2019. One indicator goat milk location was sampled from late spring to late fall and one control cow milk location was sampled the entire year.

There were no gamma emitting radionuclides attributable to plant operations identified in milk samples in 2019. Cs-137 was identified in two goat milk samples collected in October of 2019. An evaluation was conducted in 2018 (AR # 02243634) to determine if any further actions were warranted for the presence of Cs-137 in goat milk samples. The outcome of this study deemed that there is no risk to the public and the Cs-137 most likely is from past nuclear weapons testing. In the 1950s and 1960s, Cs-137 was released during bomb testing and fallout occurred over the Earth. Trees and vegetation grown in contaminated soil concentrated the Cs-137 into their leaves and wood. Plant leaves can be consumed by grazing animals, such as goats and cows, and the radioactivity transferred into the animals' milk. Broadleaf vegetation samples historically have shown that Cs-137 is present in the environment in the area and likely influenced the positive result.

K-40 is a naturally occurring radionuclide that was observed in milk samples in 2019.

3.6 BROADLEAF VEGETATION

In lieu of the monthly indicator milk samples, per HNP ODCM, indicator broadleaf vegetation samples were collected in both the SW and SSW sectors of HNP. Broadleaf sampling is conducted to simulate dose to an individual via the milk pathway for compliance purposes.

Gamma spectroscopy was performed on 18 broadleaf vegetation samples during 2019 during the growing season (May through October). Two indicator locations and one control location were sampled.

No gamma emitting radionuclides, other than naturally occurring, were reported in vegetation samples. However, it is not unusual for Cs-137 to be present in vegetation. It is a constituent of nuclear weapons test fallout and nuclear plant accidents and has been observed in samples from indicator and control locations in the past. Figure 3.6 and Table 3.6 shows the mean activity of Cs-137 at the indicator and control locations.

K-40 and Be-7 are naturally occurring radionuclides that were observed in broadleaf vegetation samples in 2019.

Figure 3.6

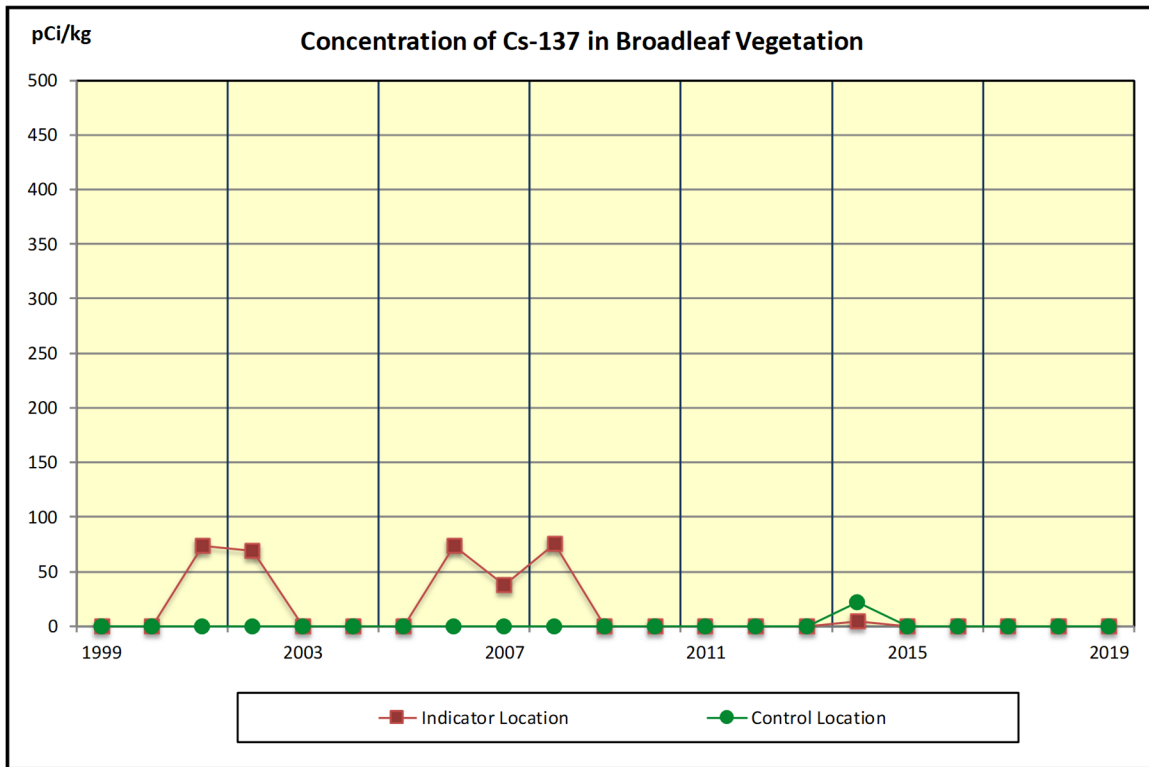


Table 3.6 Mean Concentration of Cs-137 in Broadleaf Vegetation

Year	Indicator Location (pCi/kg)	Control Location (pCi/kg)
1999	0.00E+0	0.00E+0
2000	0.00E+0	0.00E+0
2001	7.39E+1	0.00E+0
2002	6.86E+1	0.00E+0
2003	0.00E+0	0.00E+0
2004	0.00E+0	0.00E+0
2005	0.00E+0	0.00E+0
2006	7.35E+1	0.00E+0
2007	3.77E+1	0.00E+0
2008	6.23E+1	0.00E+0
2009	0.00E+0	0.00E+0
2010	0.00E+0	0.00E+0
2011	0.00E+0	0.00E+0
2012	0.00E+0	0.00E+0
2013	0.00E+0	0.00E+0
2014	4.77E+0	2.20E+1
2015	0.00E+0	0.00E+0
2016	0.00E+0	0.00E+0
2017	0.00E+0	0.00E+0
2018	0.00E+0	0.00E+0
2019	0.00E+0	0.00E+0

3.7 FOOD PRODUCTS

The HNP Land Use Census (LUC) has never identified any gardens irrigated by water in which liquid plant wastes have been discharged; therefore, food product collection is not required. There is no indicator location for this media type and sampling at a control location is maintained for historical integrity.

There were no gamma emitting radionuclides attributable to plant operations identified in any of the twelve food products samples analyzed during the 2019 growing season.

K-40 and Be-7 are naturally occurring radionuclides that were observed in food product samples in 2019.

3.8 AQUATIC VEGETATION

In 2019 three aquatic vegetation indicator samples and two control samples were collected from Harris Lake. The aquatic vegetation samples are sampled annually. The aquatic vegetation samples (Lyngbya and Hydrilla) from Harris Lake are not consumed by humans, thus pose no radiological dose to the general public by the ingestion pathway.

There were no gamma emitting radionuclides attributable to plant operations identified in any aquatic vegetation samples in 2019.

In 2018, gamma analyses of the aquatic vegetation detected historical plant-related activity in the two indicator samples and the one control sample. Cs-137 activity was detected with a concentration of 8.31 pCi/kg at Location #41, which is 3.8 miles S of the plant (NCR # 02236885). An evaluation was conducted in 2018 (AR # 02243634) to determine if any further actions were warranted. The positive detection was caused by a change in the collection species. Historically, Hydrilla has been collected and analyzed for gamma emitters but due to Harris Lake Hydrilla control measures there was inadequate supply of this species so Lyngbya was collected. Lyngbya is a blue green alga mat that floats along the lake surface. The vegetation is not consumed by fish, so it tends to be long lived and less controlled. Since Harris Lake is the recipient of radioactive discharges, the Lyngbya may be accumulating Cs-137 from the water as it floats around the lake surface. Because of the free-floating nature of Lyngbya, the positive detection of Cs-137 should be anticipated and does not indicate an unusual accumulation of Cs-137 in the Harris Lake environment.

No long-term trends have been readily observed in these samples.

K-40 and Be-7 are naturally occurring radionuclides that were observed in aquatic vegetation samples in 2019.

3.9 FISH

Gamma spectroscopy was performed on 12 fish samples collected during 2019; four samples of bottom-feeding species (catfish) and eight samples of free-swimming species (sunfish and largemouth bass) from the indicator and control locations.

There were no gamma emitting radionuclides attributable to plant operations identified in any fish samples in 2019.

K-40 is a naturally occurring radionuclide that was observed in fish samples collected during 2019.

3.10 SHORELINE SEDIMENT

Shoreline sediment samples were collected semiannually in 2019 from two indicator locations. There is no control location for this sample media type.

Gamma analyses of the four shoreline sediments detected natural activity in the samples collected during 2019. No long-term trends are readily observed in these samples.

K-40 is a naturally occurring radionuclide that was observed in shoreline sediment samples collected during 2019.

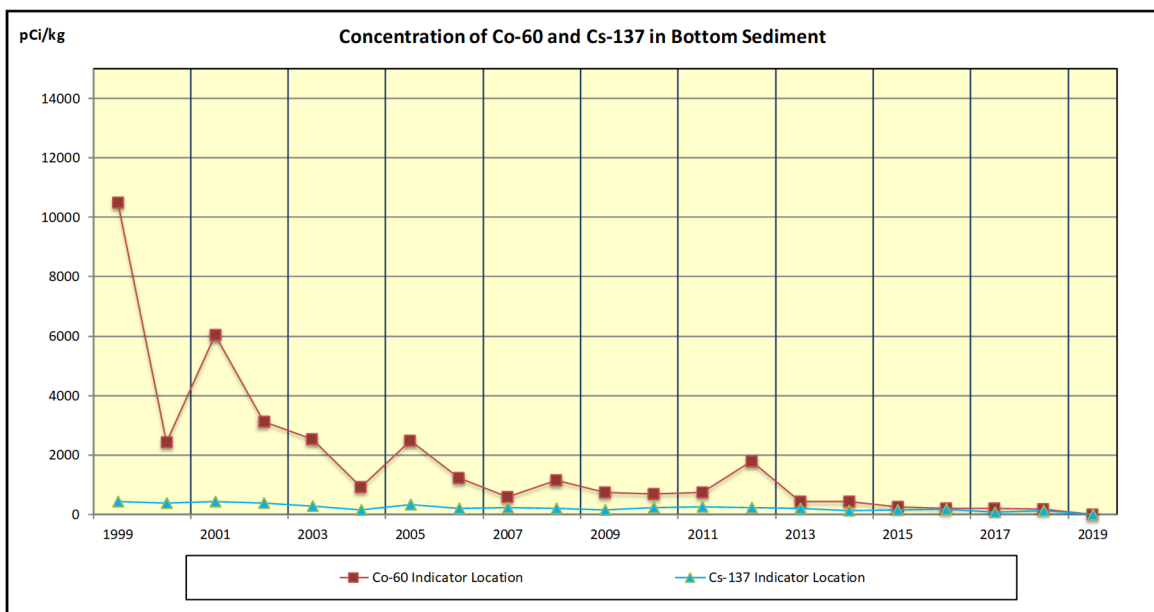
3.11 BOTTOM SEDIMENT

During 2019, a total of two bottom sediment samples were analyzed from the indicator location. There is no control location for bottom sediment.

Figure 3.11 and Table 3.11 provide individual sample gamma results for the highest annual mean indicator location concentrations since 1999 for Co-60 and Cs-137.

Naturally occurring K-40 was observed in some bottom sediment samples collected during 2019.

Figure 3.11



There is no reporting level for Co-60 or Cs-137 in Bottom Sediment.

Table 3.11 Mean Concentration of Radionuclides in Bottom Sediment

YEAR	Control Location	Co-60 (pCi/kg) Indicator Location	Cs-137 (pCi/kg) Indicator Location
1999	No Control	1.05E+4	4.40E+2
2000	No Control	2.42E+3	3.69E+2
2001	No Control	6.03E+3	4.20E+2
2002	No Control	3.12E+3	3.91E+2
2003	No Control	2.52E+3	2.78E+2
2004	No Control	9.17E+2	1.52E+2
2005	No Control	2.49E+3	3.33E+2
2006	No Control	1.23E+3	2.11E+2
2007	No Control	5.92E+2	2.15E+2
2008	No Control	1.15E+3	1.99E+2
2009	No Control	7.50E+2	1.50E+2
2010	No Control	6.84E+2	2.23E+2
2011	No Control	7.30E+2	2.43E+2
2012	No Control	1.79E+3	2.19E+2
2013	No Control	4.20E+2	1.94E+2
2014 ⁽¹⁾	No Control	4.31E+2	1.26E+2
2015	No Control	2.66E+2	1.39E+2
2016	No Control	2.13E+2	1.85E+2
2017	No Control	2.14E+2	8.35E+1
2018	No Control	1.77E+2	1.25E+2
2019	No Control	0.00E+0	0.00E+0

(1) 2014 Gamma spectroscopy system was replaced 10JUL2014. Gamma spectroscopy system hardware, detector cooling apparatus, software, electronics, nuclide identification libraries, and analytical test matrix components for test matrices were modified (NCR # 0739995). No analytical changes were observed due to the 2014 gamma spectroscopy system change.

3.12 DIRECT GAMMA RADIATION

3.12.1 ENVIRONMENTAL TLD

The Harris Updated Final Safety Analysis Report (UFSAR) Section 2.1.1.2 identifies that the minimum distance (± 25 ft.) and direction from the reactor to an exclusion area boundary is 6790 ft. ESE. This is the same boundary established for determining radioactive effluent release limits. No permanent public access is permitted within the exclusion area. Harris has forty-one routine monitoring stations. TLD locations designated as "inner ring" are located in each of the sixteen meteorological sectors in the general area of the Site Boundary. The inner ring TLDs are used as indicators. TLD locations designated as "outer ring" are outside the Site Boundary, located in each of the sixteen meteorological sectors, and are within 6 – 8 km from the site. All outer ring TLD locations are used as indicators. The balance of the stations are placed in locations such as population centers, nearby residences, or schools and are designated as "special interest" and one "control" location. These locations were chosen to reduce the probability of influence from Harris operation on data. The control location is not used as background subtraction in the TLD analysis. It's purpose is to provide a comparison to indicator locations.

Thermoluminescent dosimeters (TLDs) were used to monitor ambient radiation exposures in the plant environs. In 2019, 163 TLDs were analyzed, 159 at indicator locations and 4 at the control location. TLDs are collected and analyzed quarterly. The TLD with the highest annual mean was 17.8 mR/Std Qtr. at indicator location #49, (SR 1127, 0.3 mi. S of intersection with US 1) located 2.5 miles NE of the plant.

Two TLDs were deleted from the REMP in 2019, locations 30 and 53, with the last sample being collected on 10APR2019. Two new TLDs were implemented in the program on 9JAN2019 at locations 130 and 153. Locations 30 and 53 were found to be outside of the 6 – 8 km range (AR # 02202715) and were replaced with TLDs 130 and 153 within the same sector, but within the 6 – 8 km range.

Comparison of the average annual TLD exposure within the area of the Site Boundary (inner ring) of the plant with a distance of 6 – 8 km (outer ring) and the "special interest" and control since 1999 is presented in Figure 3.12 and Table 3.12.

Quarterly, environmental ODCM TLD results are compared by location to its historical data to evaluate any significant changes. The comparison utilizes the location's average exposure history to determine if quarterly results fall within low and high ranges and provides a reliable indication of potential changes occurring at a specific TLD location. The low and high ranges are determined by the historical average \pm two standard deviations. The quarterly TLD evaluation implements portions of American National Standard ANSI/HPS N13.37-2014, "Environmental Dosimetry – Criteria for System Design and Implementation, for environmental Thermoluminescent Dosimeters (TLD)". The CSD-RP-ALL-0030 – Updated Radiological Environmental Monitoring Program TLD Analytical Method, describes the process implemented in late 2018 for the 2019 fleet TLD programs.

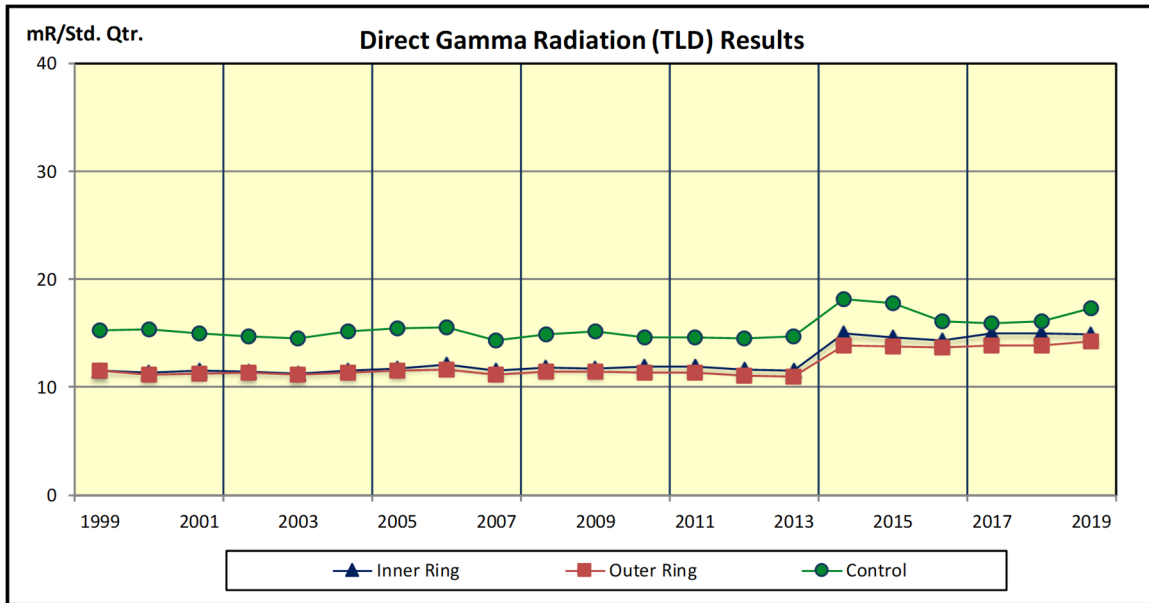
TLD values identified as < Low Range or > High Range are evaluated in consideration of factors including possible TLD damage, sampling deviations, glow curve irregularities, and any known environmental location changes which may affect results. TLD results are found in Appendix E.

The first and second quarter 2019 TLD from location 130 (Old US HWY 1) result of 15.0 mR/Std Qtr and 12.0 mR/Std Qtr respectively exceeded the location's acceptance range. Investigation did not indicate any analytical abnormalities and the result is considered valid, this was a new location and data was being gathered to calculate an average exposure.

The first and second quarter 2019 TLD from location 153 (Beaver Creek Road) result of 14.0 mR/Std Qtr and 13.0 mR/Std Qtr respectively exceeded the location's acceptance range. Investigation did not indicate any analytical abnormalities and the result is considered valid, this was a new location and data was being gathered to calculate an average exposure.

A TLD intercomparison program is conducted as part of the quality assurance program. Results of this program are included in Section 4.7.

Figure 3.12



There is no reporting level for Direct Radiation (TLD).

Table 3.12 Direct Gamma Radiation (TLD) Results

Year	Inner Ring Average (mR/Std. Qtr.)	Outer Ring Average (mR/Std. Qtr.)	Control Average (mR/Std. Qtr.)
1999	1.15E+1	1.15E+1	1.53E+1
2000	1.13E+1	1.12E+1	1.54E+1
2001	1.15E+1	1.13E+1	1.50E+1
2002	1.14E+1	1.14E+1	1.48E+1
2003	1.13E+1	1.11E+1	1.45E+1
2004	1.16E+1	1.14E+1	1.52E+1
2005	1.18E+1	1.15E+1	1.55E+1
2006	1.21E+1	1.16E+1	1.55E+1
2007	1.15E+1	1.12E+1	1.43E+1
2008	1.18E+1	1.15E+1	1.49E+1
2009	1.18E+1	1.15E+1	1.51E+1
2010	1.19E+1	1.14E+1	1.47E+1
2011	1.19E+1	1.14E+1	1.47E+1
2012	1.17E+1	1.11E+1	1.46E+1
2013	1.15E+1	1.09E+1	1.47E+1
2014 ⁽¹⁾	1.50E+1	1.39E+1	1.82E+1
2015	1.46E+1	1.38E+1	1.78E+1
2016	1.44E+1	1.37E+1	1.61E+1
2017	1.50E+1	1.39E+1	1.59E+1
2018	1.50E+1	1.38E+1	1.61E+1
2019	1.49E+1	1.42E+1	1.73E+1

(1) In 1Q2014 Panasonic TLDs were replaced with Harshaw TLDs causing a step change in activity (NCR # 01982479).

3.13 LAND USE CENSUS

The 2019 HNP Annual Land Use Census was conducted July 24 and 25, 2019, as required by the HNP ODCM 4.12.2. Table 3.13 summarizes the comparison between the 2018 and 2019 census results. A map indicating identified locations is shown in Figure 3.13.

During the 2019 census no irrigated gardens, no new meat animals nearer than existing gardens, or new milk locations were identified. The nearest residence is located in the NNW sector at 1.55 miles. No environmental program changes were required as a result of the 2019 land use census.

Table 3.13 Harris Land Use Census Comparison (2018 – 2019)

Nearest Pathway (Miles)

SECTOR	RESIDENCE		GARDEN		MEAT ANIMAL ⁽¹⁾		MILK ANIMAL	
	2018	2019	2018	2019	2018	2019	2018	2019
North	2.21	2.21	2.29	2.29	2.21	2.21	4.14 ⁽²⁾	4.14 ⁽²⁾
North-Northeast	1.81	1.81	1.81	1.81	---	---	---	---
Northeast	2.29	2.29	2.92	2.92	---	---	---	---
East-Northeast	1.78	1.78	---	---	2.01	2.01	---	---
East	1.88	1.88	2.16	2.15*	---	---	---	---
East-Southeast	2.73	2.73	2.83	2.83	---	---	---	---
Southeast	4.11	4.11	4.11	---*	---	---	---	---
South-Southeast	4.26	4.26	4.26	---*	---	---	---	---
South	---	---	---	---	---	---	---	---
South-Southwest	3.82	3.82	4.13	3.94 ⁺	---	---	---	---
Southwest	2.76	2.76	---	4.32*	---	---	---	---
West-Southwest	4.29	4.29	4.29	4.29	---	---	---	---
West	2.75	2.75	4.19	2.82*	---	---	2.82 ⁽³⁾	2.82 ⁽³⁾
West-Northwest	2.13	2.13	3.75	4.03*	---	---	---	---
Northwest	2.24	2.24	3.17	2.91*	---	---	---	---
North-Northwest	1.55	1.55	1.82	1.82	1.82	1.82	---	---

Sector and distance determined by Global Positioning System.

* Represents a change from the previous year.

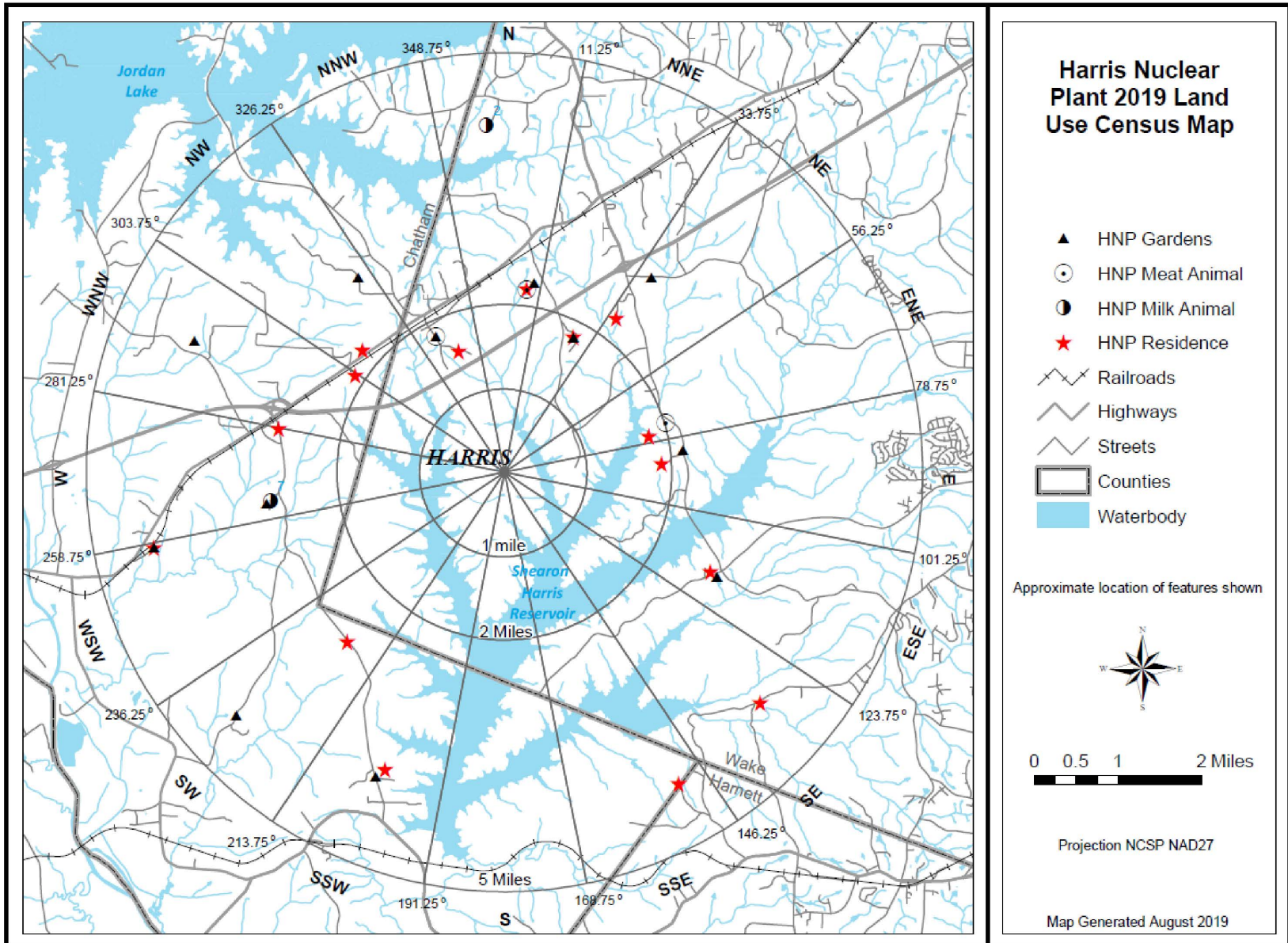
--- Indicates no occurrences within the 5-mile radius

(1) Meat animal was only identified at the nearest garden or closer in each sector. Poultry and egg laying animals were not classified as meat animals for the 2019 census.

(2) Goat Milk - Milk is used to feed goat kids, make a small quantity of cheese, and to make soap for personal use. Owner said they can now supply enough milk to participate in the HNP REMP. This dairy is not required due to HNP already having a dairy within 5 km (3.11 miles) and the dose being <1.0 mRem/year.

(3) Goat Milk - Milk is used to feed goat kids during the breeding months and the family consumes what is left. The milk that is not suitable for consumption is given to someone to make soap. This location participates in the REMP and milk is collected for 4 - 6 consecutive months per year (Late-Spring to Late-Fall months).

Figure 3.13



4.0 QUALITY ASSURANCE

4.1 SAMPLE COLLECTION

EnRad Laboratories and Environmental Services performed the environmental sample collections as specified by approved sample collection procedures.

4.2 SAMPLE ANALYSIS

EnRad Laboratories and General Engineering Laboratories (GEL), LLC performed the environmental sample analyses as specified by approved analysis procedures. EnRad Laboratories is located in Huntersville, North Carolina, at Duke Energy's Environmental Center. GEL is located in Charleston, South Carolina.

4.3 DOSIMETRY ANALYSIS

The Dosimetry and Records group performed the environmental dosimetry measurements as specified by approved dosimetry analysis procedures. The Dosimetry and Records Laboratory is located in Huntersville, North Carolina, at Duke Energy's Environmental Center.

4.4 LABORATORY EQUIPMENT QUALITY ASSURANCE

4.4.1 DAILY QUALITY CONTROL

EnRad Laboratories has an internal quality assurance program which monitors each type of instrumentation for reliability and accuracy. Daily quality control checks ensure that instruments are in proper working order and these checks are used to monitor instrument performance.

4.4.2 CALIBRATION VERIFICATION

National Institute of Standards and Technology (NIST) standards that represent counting geometries are analyzed as unknowns at various frequencies ranging from weekly to annually to verify that efficiency calibrations are valid. The frequency is dependent upon instrument use and performance. Investigations are performed and documented should calibration verification data fall outside of the acceptable limits.

4.4.3 BATCH PROCESSING

Method quality control samples are analyzed with sample analyses that are processed in batches. These include tritium analyses in drinking water, surface water, and ground water samples.

4.5 DUKE ENERGY INTERLABORATORY COMPARISON PROGRAM

In 2019 Duke Energy Environmental Laboratory (EnRad) participated in interlaboratory programs to satisfy Radiological Environmental Monitoring Program requirements in Duke Energy nuclear plant Offsite Dose Calculation Manuals and Selected Licensee Commitments Manuals, as applicable.

EnRad Laboratory participated in an interlaboratory program with Eckert & Ziegler Analytics (EZA) in 2019. EZA results were evaluated against the NRC Inspection Manual Procedure 84750 (IP 84750) acceptance criteria stated in EnRad Procedure 515, Cross Check Program Administration. All regulatory requirements continue to be met by the EZA Cross Check Program.

4.5.1 ECKERT & ZIEGLER ANALYTICS CROSS CHECK PROGRAM

EZA mixed gamma in liquid, mixed gamma in vegetation, low-level I-131 in liquid, mixed gamma air filter composites, I-131 air cartridges, gross beta in water, gross beta in filters, and tritium in water were analyzed at various times of the year at EnRad Laboratories. A summary of the applicable REMP EnRad Laboratory program results for 2019 is documented in Table 4.0-A.

Interlaboratory cross check samples from EZA were received and analyzed in three of the four quarters of 2019. Table 4.0-A lists the performance for specific samples. Forty-six nuclide results were reported to EZA of which forty-six (100 %) met the acceptance criteria based on IP 84750.

4.6 STATE OF NORTH CAROLINA INTERCOMPARISON PROGRAM

Harris Nuclear Power Plant routinely participates in an environmental sample intercomparison program. Program elements include sampling frequency and analysis parameters for surface water, ground water, cow milk, air particulate, air radioiodine, fish, bottom sediment, and shoreline sediment samples that have been collected. Samples are routinely split with the State of North Carolina for intercomparison analysis for Harris Nuclear Plant.

4.7 TLD INTERCOMPARISON PROGRAM

4.7.1 NUCLEAR TECHNOLOGY SERVICES INTERCOMPARISON PROGRAM

Radiation Dosimetry and Records participates in a quarterly TLD intercomparison program administered by Nuclear Technology Services, Inc. of Roswell, GA. Nuclear Technology Services irradiates environmental dosimeters quarterly and sends them to the Radiation Dosimetry and Records group for analysis of the unknown estimated delivered exposure. A summary of the 2019 Nuclear Technology Services Intercomparison Report is documented in Table 4.0-B.

The individual measurements were evaluated and results falling outside the acceptable ratio criteria had an evaluation performed to identify any recommended remedial actions and to reduce anomalous errors.

4.7.2 INTERNAL CROSS CHECK (DUKE ENERGY)

Radiation Dosimetry and Records participates in a quarterly TLD internal comparison program administered internally by the Dosimetry Lab. The Dosimetry Lab Staff irradiates environmental dosimeters quarterly and submits them for analysis of the unknown estimated delivered exposure. A summary of the 2019 Internal Cross Check (Duke Energy) Program is documented in Table 4.0-B.

4.8 GENERAL ENGINEERING LABORATORY, LLC (GEL)

General Engineering Laboratory, LLC (GEL) participated in various Quality Assurance Programs for Inter-laboratory, Intra-laboratory, Third Party Cross Check programs, and a number of proficiency testing programs during 2019. A summary of the GEL quality assurance program results for the sample media types sent to GEL during 2019 is documented in Table 4.0-C. Table 4.0-C may not be applicable to all plants or stations.

TABLE 4.0-A

ECKERT & ZIEGLER ANALYTICS

CROSS CHECK PROGRAM

2019 Cross Check Results for EnRad Laboratories

Interlaboratory cross check samples from EZA were received and analyzed in three of the four quarters of 2019. Results are reported directly to Eckert & Ziegler Analytics. Environmental cross check samples were analyzed in replicate, and the result closest to the mean is reported to Eckert & Ziegler Analytics. The acceptance criteria for the program was based on the NRC Inspection Manual Procedure 84750 (IP 84750). Table 4.0-A lists the performance for specific samples. Forty-six nuclide results were reported to EZA of which forty-six (100 %) met the acceptance criteria based on IP 84750.

Sample	Sample ID	Nuclide	Quarter	Units	EnRad Value	EZA Value	EnRad/EZA Ratio	Evaluation
Beta Filter in Planchet	E12500	Cs-137	1	pCi	170	164	1.04	Agreement
	E12505	Cs-137	2	pCi	231	224	1.03	Agreement
I-131 in Charcoal Cartridge	E12499	I-131	1	pCi	79.5	75.8	1.05	Agreement
	E12506	I-131	3	pCi	99.9	95.5	1.05	Agreement
Gamma in Composite Filter	E12498	Ce-141	1	pCi	83.8	78.0	1.07	Agreement
		Co-58	1	pCi	100	95.5	1.05	Agreement
		Co-60	1	pCi	212	199	1.06	Agreement
		Cr-51	1	pCi	208	195	1.07	Agreement
		Cs-134	1	pCi	110	107	1.03	Agreement
		Cs-137	1	pCi	141	131	1.08	Agreement
		Fe-59	1	pCi	116	106	1.09	Agreement
		Mn-54	1	pCi	105	95.3	1.10	Agreement
		Zn-65	1	pCi	158	147	1.08	Agreement
Gamma in Simulated Vegetation	E12509	Ce-141	3	pCi/g	0.279	0.273	1.02	Agreement
		Co-58	3	pCi/g	0.281	0.286	0.98	Agreement
		Co-60	3	pCi/g	0.343	0.345	1.00	Agreement
		Cr-51	3	pCi/g	0.612	0.542	1.13	Agreement
		Cs-134	3	pCi/g	0.312	0.339	0.92	Agreement
		Cs-137	3	pCi/g	0.252	0.247	1.02	Agreement
		Fe-59	3	pCi/g	0.278	0.243	1.14	Agreement
		Mn-54	3	pCi/g	0.265	0.252	1.05	Agreement
		Zn-65	3	pCi/g	0.519	0.480	1.08	Agreement

TABLE 4.0-A (Cont.)

Sample	Sample ID	Nuclide	Quarter	Units	EnRad Value	EZA Value	EnRad/EZA Ratio	Evaluation
Gamma in Water	E12510	Ce-141	3	pCi/L	138	130	1.06	Agreement
		Co-58	3	pCi/L	143	136	1.05	Agreement
		Co-60	3	pCi/L	170	164	1.04	Agreement
		Cr-51	3	pCi/L	265	257	1.03	Agreement
		Cs-134	3	pCi/L	150	161	0.93	Agreement
		Cs-137	3	pCi/L	123	117	1.05	Agreement
		Fe-59	3	pCi/L	127	115	1.10	Agreement
		I-131	3	pCi/L	93.6	90.8	1.03	Agreement
		Mn-54	3	pCi/L	129	120	1.07	Agreement
		Zn-65	3	pCi/L	259	228	1.14	Agreement
Gamma in Milk	E12501A	Ce-141	1	pCi/L	120	117	1.03	Agreement
		Co-58	1	pCi/L	141	143	0.98	Agreement
		Co-60	1	pCi/L	303	299	1.01	Agreement
		Cr-51	1	pCi/L	303	293	1.03	Agreement
		Cs-134	1	pCi/L	146	160	0.91	Agreement
		Cs-137	1	pCi/L	202	196	1.03	Agreement
		Fe-59	1	pCi/L	170	159	1.07	Agreement
		Mn-54	1	pCi/L	149	143	1.04	Agreement
		Zn-65	1	pCi/L	227	220	1.03	Agreement
LLI-131 in Milk	E12501A	I-131	1	pCi/L	96.8	89.5	1.08	Agreement
Gross Beta in Water	E12503	Cs-137	2	pCi/L	240	245	0.98	Agreement
	E12508	Cs-137	3	pCi/L	243	252	0.96	Agreement
Tritium in Water	E12504	H-3	2	pCi/L	14100	13900	1.01	Agreement
	E12507	H-3	3	pCi/L	14000	14000	1.00	Agreement

TABLE 4.0-B

2019 ENVIRONMENTAL DOSIMETER

CROSS-CHECK RESULTS

Nuclear Technology Services

Radiation Dosimetry and Records participates in a quarterly TLD intercomparison program administered by Nuclear Technology Services, Inc. of Roswell, GA. Nuclear Technology Services irradiates environmental dosimeters quarterly and sends them to Radiation Dosimetry and Records group for analysis of the unknown estimated delivered exposure. The individual measurements were evaluated and results falling outside the acceptable ratio criteria had an evaluation performed to identify any recommended remedial actions and to reduce anomalous errors.

1st Quarter 2019						2nd Quarter 2019						
TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail	TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail	
102973	77.70	79.96	-2.83	<+/-15%	Pass	101136	17.08	18.36	-6.97	<+/-15%	Pass	
103309	80.41	79.96	0.56	<+/-15%	Pass	101219	16.52	18.36	-10.02	<+/-15%	Pass	
103305	80.21	79.96	0.31	<+/-15%	Pass	100078	16.78	18.36	-8.61	<+/-15%	Pass	
103090	80.10	79.96	0.18	<+/-15%	Pass	101364	17.45	18.36	-4.96	<+/-15%	Pass	
103102	79.93	79.96	-0.04	<+/-15%	Pass	100239	17.01	18.36	-7.35	<+/-15%	Pass	
Average Bias (B)			-0.36				Average Bias (B)			-7.58		
Standard Deviation (S)			1.39				Standard Deviation (S)			1.89		
Measure Performance B +S			1.76	<15%	Pass	Measure Performance B +S			9.47	<15%	Pass	
3rd Quarter 2019						4th Quarter 2019						
TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail	TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail	
101305	62.24	61.34	1.47	<+/-15%	Pass	104285	49.10	49.31	-0.43	<+/-15%	Pass	
101297	61.64	61.34	0.49	<+/-15%	Pass	104300	47.94	49.31	-2.78	<+/-15%	Pass	
101333	57.74	61.34	-5.87	<+/-15%	Pass	104288	49.20	49.31	-0.22	<+/-15%	Pass	
101350	60.01	61.34	-2.17	<+/-15%	Pass	104298	47.73	49.31	-3.20	<+/-15%	Pass	
100417	60.73	61.34	-0.99	<+/-15%	Pass	104314	48.91	49.31	-0.81	<+/-15%	Pass	
Average Bias (B)			-1.42				Average Bias (B)			9.27		
Standard Deviation (S)			2.85				Standard Deviation (S)			1.35		
Measure Performance B +S			4.27	<15%	Pass	Measure Performance B +S			10.61	<15%	Pass	

TABLE 4.0-B (Cont.)

2019 ENVIRONMENTAL DOSIMETER

CROSS CHECK RESULTS

Internal Crosscheck (Duke Energy)

Radiation Dosimetry and Records participates in a quarterly TLD internal comparison program administered internally by the Dosimetry Lab. The Dosimetry Lab Staff irradiates environmental dosimetry quarterly and submits them for analysis of the unknown estimated delivered exposure.

1st Quarter 2019						2nd Quarter 2019						
TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail	TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail	
103690	39.63	36.00	10.08	<+/-15%	Pass	102290	51.51	48.00	7.31	<+/-15%	Pass	
103101	39.48	36.00	9.67	<+/-15%	Pass	102029	51.48	48.00	7.25	<+/-15%	Pass	
102869	38.28	36.00	6.33	<+/-15%	Pass	103742	52.75	48.00	9.90	<+/-15%	Pass	
102239	37.20	36.00	3.33	<+/-15%	Pass	102931	50.63	48.00	5.48	<+/-15%	Pass	
103433	38.17	36.00	6.03	<+/-15%	Pass	103194	51.38	48.00	7.04	<+/-15%	Pass	
103586	38.81	36.00	7.81	<+/-15%	Pass	102738	52.11	48.00	8.56	<+/-15%	Pass	
102881	39.45	36.00	9.58	<+/-15%	Pass	103721	52.96	48.00	10.33	<+/-15%	Pass	
102189	36.77	36.00	2.14	<+/-15%	Pass	102336	50.92	48.00	6.08	<+/-15%	Pass	
100358	35.33	36.00	-1.86	<+/-15%	Pass	102442	49.03	48.00	2.15	<+/-15%	Pass	
103381	38.37	36.00	6.58	<+/-15%	Pass	102089	51.36	48.00	7.00	<+/-15%	Pass	
Average Bias (B)			5.97				Average Bias (B)			7.11		
Standard Deviation (S)			3.81				Standard Deviation (S)			2.33		
Measure Performance B +S			9.78	<15%	Pass	Measure Performance B +S			9.44	<15%	Pass	
3rd Quarter 2019						4th Quarter 2019						
TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail	TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail	
104054	17.49	18.0	-2.83	<+/-15%	Pass	100958	26.21	27.00	-2.93	<+/-15%	Pass	
104051	17.77	18.0	-1.28	<+/-15%	Pass	101322	26.76	27.00	-0.89	<+/-15%	Pass	
104148	17.41	18.0	-3.28	<+/-15%	Pass	101180	26.95	27.00	-0.19	<+/-15%	Pass	
101165	18.16	18.0	0.89	<+/-15%	Pass	101275	26.52	27.00	-1.78	<+/-15%	Pass	
101170	18.10	18.0	0.56	<+/-15%	Pass	101104	25.70	27.00	-4.81	<+/-15%	Pass	
101278	18.45	18.0	2.50	<+/-15%	Pass	104038	26.30	27.00	-2.59	<+/-15%	Pass	
100570	17.93	18.0	-0.39	<+/-15%	Pass	101215	27.33	27.00	1.22	<+/-15%	Pass	
100062	18.50	18.0	2.78	<+/-15%	Pass	101252	26.57	27.00	-1.59	<+/-15%	Pass	
104129	17.79	18.0	-1.17	<+/-15%	Pass	101249	26.74	27.00	-0.96	<+/-15%	Pass	
104128	17.75	18.0	-1.39	<+/-15%	Pass	101251	25.91	27.00	-4.04	<+/-15%	Pass	
Average Bias (B)			-0.36				Average Bias (B)			-1.86		
Standard Deviation (S)			2.04				Standard Deviation (S)			1.80		
Measure Performance B +S			2.41	<15%	Pass	Measure Performance B +S			3.66	<15%	Pass	

TABLE 4.0-C

2019 GEL Laboratories, LLC QA Results

Interlaboratory cross check samples from Eckert & Ziegler Analytics (EZA) and Proficiency Tests from the Department of Energy Mixed Analyte Performance Evaluation Program (MAPEP) were received and analyzed by GEL in all four quarters of 2019 from EZA and in two quarters from MAPEP. Table 4.0-C lists the performance for specific samples. Table 4.0-C may not be applicable to all plants/stations.

Sample	Sample ID	Nuclide	Quarter	Units	GEL Value	Known Value	Acceptance Range/Ratio	Evaluation
Hard To Detect in Soil	MAPEP - 19- MaS40	Fe-55	2	Bq/kg	486	344	241 - 447	Non-Agreement ⁽¹⁾
		Ni-63	2	Bq/kg	524	519	363 - 675	Agreement
		Sr-90	2	Bq/kg	3.44	N/A	False Pos Test	Agreement
	MAPEP- 19-MaS41	Fe-55	4	Bq/kg	-48	N/A	False Pos Test	Agreement
		Ni-63	4	Bq/kg	552	629	440 - 818	Agreement
		Sr-90	4	Bq/kg	609	572	400 - 744	Agreement
I-131 in Milk with EZA	E12362	I-131	2	pCi/L	85.1	81.4	1.05	Agreement
	E12370	I-131	3	pCi/L	92.8	92.1	1.01	Agreement
	E12374	I-131	4	pCi/L	93.4	94.5	0.99	Agreement
Gross Beta in Water with EZA	E12550	Cs-137	2	pCi/L	251	244	1.03	Agreement ⁽²⁾

⁽¹⁾ GEL CARR (Corrective Active Request and Report) 190603-1212.

⁽²⁾ Several sets of first quarter 2019 Gross Beta in Water analyses were analyzed at GEL.

APPENDIX A

ENVIRONMENTAL SAMPLING

&

ANALYSIS PROCEDURES

2019

APPENDIX A

ENVIRONMENTAL SAMPLING AND ANALYSIS PROCEDURES

Adherence to established procedures for sampling and analysis of environmental media at Harris Nuclear Plant was required to ensure compliance with the Harris Nuclear Plant Offsite Dose Calculation Manual. Analytical procedures were employed to ensure that the ODCM detection capabilities were achieved.

Environmental sampling was performed by EnRad Laboratories and Environmental Services. Environmental analysis was performed by EnRad Laboratories, Dosimetry and Records, and General Engineering Laboratories, LLC (GEL).

This appendix describes the environmental sampling frequencies and analysis procedures by media type.

I. CHANGE OF SAMPLING PROCEDURES

Air Sampling procedure 749, Airborne Radioiodine and Airborne Particulate Sampling at Harris Nuclear Plant was revised to delete air sampling locations #1 (0.1 mi. S on SR 1134 from SR 1011 intersection, N sector, 2.6 mi. from site) and #47 (1.3 mi. N on SR 1912 from intersection of NC 42, SSW sector, 3.4 mi. from site) from the REMP. This change was due to the air samplers not being located in either of the three highest DOQ sectors nor in the vicinity of a community (AR # 02240431).

TLD Sampling procedure 752, Direct Radiation Measurement (TLDs) at Harris Nuclear Plant was revised to delete TLD location # 30 (Exit intersection of SR 1972 and US 1, W Sector, 5.6 mi. from site) and TLD location # 53 (SR 1972 N from intersection of SR 1910 and SR 1972, NW Sector, 5.8 mi. from site). These locations were removed from the REMP after a self-assessment (AR # 02202715) identified the TLDs were not within the ODCM required five-mile range. TLD location # 130 (Old US HWY 1, W Sector, 3.9 mi. from site) and TLD location # 153 (Beaver Creek Road, NW Sector, 4.5 mi. from site) were added to the REMP in the same respective sectors, but within the five-mile radius.

Ground Water Sampling Procedure 767, Ground Water Sampling at Harris Nuclear Plant, was changed to add locations #84 (SHNPP Site (MW-14), N. of Emergency Service Water Screening Structure, SSW Sector, 0.2 mi. from site), #85 (SHNPP Site (MW-13), W. of site near Settling Basin, SSW Sector, 0.2 mi. from site), and #86 (SHNPP Site (MW-12), W. of site near Old Reactor Head Storage Building, SW Sector, 0.2 mi. from site). These three GW locations were installed outside of the protective area and are more representative of the groundwater close to the plant (AR # 02173466).

II. DESCRIPTION OF ANALYSIS PROCEDURES

Gamma spectroscopy analyses are performed using high purity germanium gamma detectors and Canberra analytical software. Designated sample volumes are transferred to appropriate counting geometries and analyzed by gamma spectroscopy. Perishable samples such as fish, food products, aquatic vegetation, and broadleaf vegetation are ground to achieve a homogeneous mixture. Soils and sediments are dried, sifted to remove foreign objects (rocks, clams, glass, etc.), and then transferred to an appropriate counting geometry.

Low-level iodine analyses are performed by passing a designated sample aliquot through a pre-measured amount of ion exchange resin to remove and concentrate any iodine in the aqueous sample (milk). The resin is then dried, mixed thoroughly, and a net resin weight determined before being transferred to an appropriate counting geometry and analyzed by gamma spectroscopy.

Tritium analyses are performed by using low-level environmental liquid scintillation analysis technique on a Perkin-Elmer 4910TR liquid scintillation system or Perkin-Elmer 3100TR liquid scintillation system. Tritium samples are distilled and batch processed with a laboratory fortified blank, matrix spike, matrix spike duplicate, and blank to verify instrument performance and sample preparation technique are acceptable.

Gross beta analysis of air filters is performed by analyzing filters on Tennelec XLB Series 5 gas-flow proportional counters. Samples are batch processed with a blank to ensure sample contamination has not occurred.

Gross beta analysis of liquid samples is performed by concentrating a designated aliquot of sample and analyzing by Perkin-Elmer 4910TR liquid scintillation system or a Perkin-Elmer 3110TR liquid scintillation system. Samples are batch processed with a blank to ensure sample contamination has not occurred.

III. CHANGE OF ANALYSIS PROCEDURES

Beginning in January 2019 the analysis procedure for Gross Beta in Drinking Water was changed. The samples are prepared similar to ASTM Method D7283-17, Alpha and Beta Activity in Water by Liquid Scintillation Counting, by concentrating an aliquot of sample and analyzing on a Perkin-Elmer 4910TR liquid scintillation system or a Perkin-Elmer 3110TR liquid scintillation system. The results are reported as activities, which are calculated to be above the MDA or less than the calculated MDA (NCR# 02303027).

IV. SAMPLING AND ANALYSIS PROCEDURES

A.1 AIRBORNE PARTICULATE AND RADIOIODINE

Airborne particulate and radioiodine samples at each of nine locations were composited continuously by means of continuous air samplers. Air particulates were collected on a particulate filter and radioiodines were collected in a charcoal cartridge positioned behind the filter in the sampler. The samplers are designed to operate at a constant flow rate (in order to compensate for any filter loading) and are set to sample approximately 2 cubic feet per minute. Filters and cartridges were collected weekly. A separate weekly gamma analysis was performed on each charcoal cartridge. A weekly gross beta analysis was performed on each filter and then the filters, by location, were composited to produce quarterly filter samples for gamma analysis. The continuous composite samples were collected from the locations listed below.

Location 1 = 0.1 mi. S on SR 1134 from SR 1011 intersection. N sector, 2.6 mi. from site. *(Final Sample Taken 3JUN2019 (AR # 02240431), Deleted in Rev. 28 of HNP ODCM)*

Location 2 = 1.4 mi. S on SR 1134 from SR 1011 intersection. NNE sector, 1.4 mi. from site.

Location 4 = 0.7 mi. N on SR 1127 from intersection with US 1. NNE sector, 3.1 mi. from site.

Location 5 = Pittsboro (Control Station), WNW sector, >12mi. from site.

Location 26 = Harris Lake Spillway, S sector, 4.7 mi. from site.

Location 47 = 1.3 mi. N on SR 1912 from intersection of NC 42, SSW sector, 3.4 mi. from site. *(Final Sample Taken 3JUN2019 (AR # 02240431), Deleted in Rev. 28 of HNP ODCM)*

Location 63 = SHNPP site, SW sector, 0.6 mi. from site.

Location 90 = SHNPP site, SSW sector, 0.5 mi. from site.

Location 91 = HE&EC, Sewage Treatment Facility, ENE sector, 1.6 mi. from site.

A.2 DRINKING WATER

Bimonthly composite drinking water samples were collected from location 51, with aliquots going to monthly composite samples. A monthly composite drinking water sample was collected from the remaining drinking water locations. Gross beta, tritium, and gamma analyses were performed on the monthly composites. The composites are collected from the locations listed below.

Location 46 = NE Harnett Metro Water Treatment Plant Intake Building SSE sector, 17.2 mi. from site.

Location 51 = SHNPP Water Treatment Building (on Site)

Location 58 = Sanford Water Treatment Plant (Control Station), SW sector, 8.5 mi. from site.

A.3 SURFACE WATER

Bimonthly composite surface water samples were collected from location 26, with aliquots going to monthly composite samples. A monthly composite surface water sample was collected from the remaining surface water locations. Tritium and gamma analyses were performed on the monthly composites. The composites are collected from the locations listed below.

Location 26 = Harris Lake Spillway, S sector, 4.7 mi. from site.

Location 40 = NE Harnett Metro Water Treatment Plant Intake Building SSE sector, 17.2 mi. from site.

Location 43 = Sanford Water Treatment Plant (Control Station), SW sector, 8.5 mi. from site.

A.4 GROUND WATER

Grab samples were collected quarterly from ground water wells at twenty-one locations. A gamma analysis and tritium analysis were performed on each sample. The samples were collected from the locations listed below.

Location 57 = SHNPP Site (LP-13), N. side of Aux Res Intake canal, SSW sector, 0.4 mi. from site

Location 59 = SHNPP Site (W-13), N. Side of Old Construction Road, NNE sector, 0.5 mi. from site.

Location 60 = SHNPP Site (W-9A), W. bank of Harris Lake SE of Cooling Tower, ESE sector, 0.5 mi. from site.

Location 68 = SHNPP Site (LP-6), N. of Old Steam Generator Building, W sector, 0.2 mi. from site.

Location 69 = SHNPP Site (LP-7), S. side of Warehouse 9, NNE sector, 0.2 mi. from site.

Location 70 = SHNPP Site (LP-9), N. side of Plant Entrance Road, E sector, 0.4 mi. from site.

Location 71 = SHNPP Site (LP-16), S. of Switch Yard, SE sector, 0.3 mi from site.

Location 72 = SHNPP Site (MWA-12), N. of Cooling Tower Makeup Water Intake Structures, SE sector, 0.2 mi. from site.

Location 73 = SHNPP Site, N. of Emergency Service Water Screening Structure, S sector, 0.2 mi. from site.

Location 74 = SHNPP Site, N. of helicopter landing pad, SSE sector, 0.2 mi. from site.

Location 75 = SHNPP Site, W. of Security Building Entrance, ESE sector, 0.1 mi. from site.

- Location 77 = SHNPP Site (BD-MW1), Along the Cooling Tower Blowdown Line, S Sector, 0.4 mi. from site.
- Location 78 = SHNPP Site (BD-MW2), Along the Cooling Tower Blowdown Line, S Sector, 0.5 mi. from site.
- Location 79 = SHNPP Site (BD-MW3), Along the Cooling Tower Blowdown Line, S Sector, 0.5 mi. from site.
- Location 80 = SHNPP Site (BD-MW5), Along the Cooling Tower Blowdown Line, S Sector, 0.6 mi. from site.
- Location 81 = SHNPP Site (BD-MW7), Along the Cooling Tower Blowdown Line, S Sector, 0.6 mi. from site.
- Location 82 = SHNPP Site (BD-MW8), Along the Cooling Tower Blowdown Line, S Sector, 0.6 mi. from site.
- Location 83 = SHNPP Site (BD-MW16), Along the Cooling Tower Blowdown Line, SSW Sector, 1.6 mi. from site.
- Location 84 = SHNPP Site (MW-14), N. of Emergency Service Water Screening Structure, SSW Sector, 0.2 mi. from site.
- Location 85 = SHNPP Site (MW-13), W. of site near Settling Basin, SSW Sector, 0.2 mi. from site.
- Location 86 = SHNPP Site (MW-12), W. of site near Old Reactor Head Storage Building, SW Sector, 0.2 mi. from site.

A.5 MILK

Monthly grab samples were collected at the control location January through May and December of 2019. Biweekly grab samples were collected from the control location and the indicator location mid-May through November of 2019. A gamma and low-level Iodine-131 analysis were performed on each sample. The grab samples were collected from the locations listed below.

- Location 5 = Manco's Dairy, Pittsboro, (Control Station), WNW sector, >12mi. from site.
- Location 102 = Goat Farm, W sector, 2.82 mi. from site.

A.6 BROADLEAF VEGETATION

Monthly samples were collected when available during the growing season of May through October. A gamma analysis was performed on each sample. The samples were collected from the locations listed below.

- Location 5 = Pittsboro (Control Station), NNW sector, >12 mi. from site.
- Location 12 = SHNPP Site, SSW sector, 0.9 mi. from site.
- Location 63 = SHNPP Site, SW sector, 0.6 mi. from site.

A.7 FOOD PRODUCTS

Monthly samples were collected when available during the growing season at one location. A gamma analysis was performed on each sample. The samples were collected from the location listed below.

Location 97 = Granite Springs Farm (Control Station), NW sector, 19.1 mi. from site.

A.8 AQUATIC VEGETATION

Annual samples were collected at each of the three locations. A gamma analysis was performed on each sample. The samples were collected from the locations listed below.

Location 26 = Harris Lake Spillway, S sector, 4.7 mi. from site.

Location 41 = Shoreline of Mixing Zone of Cooling Tower Blowdown Line, S sector, 3.8 mi. from site.

Location 61 = Harris Lake East of New Hill – Holleman Rd (Control Location), E sector, 2.5 mi. from site.

A.9 FISH

Semiannual samples of bottom feeders (catfish) and free swimmers (sunfish and largemouth bass) were collected at each of two locations. A gamma analysis was performed on the edible portions of each sample. The samples were collected from the locations listed below.

Location 44 = Site varies within the Harris Lake

Location 45 = Site varies above Buckhorn Dam on Cape Fear River (Control Station)

A.10 SHORELINE SEDIMENT

Semiannual samples were collected at each of two locations. A gamma analysis was performed on each sample following the drying and removal of rocks and clams. The samples were collected from the locations listed below.

Location 26 = 4.6 miles S

Location 41 = 3.8 miles S

A.11 BOTTOM SEDIMENT

Semiannual samples were collected from the one location. A gamma analysis was performed on each sample following the drying and removal of rocks and clams. The samples were collected from the location listed below.

Location 52 = Harris Lake in the Vicinity of the Mixing Zone of the Cooling Tower, S sector, 3.8 mi. from site.

A.12 DIRECT GAMMA RADIATION (TLD)

Thermoluminescent dosimeters (TLD) were collected quarterly at forty-one locations. A gamma exposure rate was determined for each TLD. TLD locations are listed in Table 2.1-B. The TLDs were placed as indicated below.

- * An inner ring of 18 TLDs, one in each meteorological sector in the general area of the site boundary.
- * An outer ring of 16 TLDs, one in each meteorological sector in the 6 to 8 kilometer range.
TLD Locations 130 & 153 were deployed into the field on 9JAN2019 (AR # 02202715). TLD Locations 130 & 153 were added in Rev. 28 of HNP ODCM.
TLD Locations 30 & 53 were collected on 10APR2019 for the final time (AR # 02202715). TLD Locations 30 & 53 were deleted in Rev. 28 of HNP ODCM.
- * The remaining TLDs were placed in special interest areas such as population centers, residential areas, schools, and at a control location.

A.13 ANNUAL LAND USE CENSUS

An Annual Land Use Census was conducted to identify within a distance of 8 kilometers (5.0 miles) from the plant, the nearest location from the site boundary in each of the sixteen meteorological sectors, the following:

- * The Nearest Residence
- * The Nearest Garden greater than 50 square meters or 500 square feet
- * The Nearest Milk-giving Animal (cow, goat, etc.)
- * The Nearest Meat Animal (beef, hogs, etc.) was only identified at the nearest garden or closer in each sector, and poultry and egg laying animals were not classified as meat animals for the 2019 census.

The census was conducted during the growing season from July 24 - 25, 2019. Results are shown in Table 3.13. No changes were made to the sampling procedures during 2019 as a result of the 2019 census.

V. GLOBAL POSITIONING SYSTEM (GPS) ANALYSIS

The Shearon Harris Nuclear Plant centerline used for GPS measurements was referenced from the Shearon Harris Nuclear Plant Updated Final Safety Analysis Report (UFSAR), section 2.1.1.1, Specification of Location. Waypoint coordinates used for HNP GPS measurements were latitude 35°-38'-00"N and longitude 78°-57'-22"W. Maps and tables were generated using North American Datum (NAD) 27. Data normally reflect accuracy to within 2 to 5 meters from point of measurement. All GPS field measurements were taken as close as possible to the item of interest. Distances for the locations are displayed using three significant figures.

APPENDIX B

**RADIOLOGICAL
ENVIRONMENTAL MONITORING
PROGRAM**

SUMMARY OF RESULTS

2019

**HARRIS NUCLEAR PLANT
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM DATA SUMMARY**

Shearon Harris Nuclear Power Plant
Wake County, North Carolina

Docket Numbers: STN 50-400
Calendar Year: 2019

Medium or Pathway Sampled or Measured (Unit of Measurement)	Type and Total No. of Measurements Performed	Lower Limit of Detection (LLD) ⁽¹⁾	All Indicator Locations Mean ⁽²⁾⁽³⁾ Range ⁽²⁾	Location w/Highest Annual Mean ⁽²⁾		Control Locations Mean ⁽²⁾⁽³⁾ Range ⁽²⁾	No. of Non-Routine Report Meas.
				Name, Distance, and Direction	Mean ⁽²⁾⁽³⁾ Range ⁽²⁾		
Air Particulate (pCi/m ³)	Gross Beta 407 ⁽⁴⁾⁽¹⁰⁾	See Table 2.2-C	2.05E-02 (355/355) 6.25E-03 – 3.93E-02	Loc. # 91 1.6 miles ENE	2.22E-02 (52/52) 1.05E-02 – 3.93E-02	Loc. # 5 2.12E-02 (52/52) 9.71E-03 – 4.11E-02	0
	Gamma 32	See Table 2.2-C	All less than LLD	----	----	All less than LLD	0
Air Radioiodine (pCi/m ³)	I-131 408 ⁽⁴⁾⁽¹⁰⁾	See Table 2.2-C	All less than LLD	----	----	All less than LLD	0
Drinking Water ⁽⁴⁾⁽⁸⁾ (pCi/l)	Gross Beta 39	4	4.05E+00 (6/26) 3.33E+00 – 5.61E+00	Loc. # 46 NE Harnett Metro Water Treatment Plant - Lillington 17.2 miles SSE	4.25E+00 (4/13) 3.33E+00 – 5.61E+00	Loc. # 58 4.07E+00 (7/13) 3.45E+00 – 5.18E+00	0
	Gamma 39	See Table 2.2-C	All less than LLD	----	----	All less than LLD	0
	Tritium ⁽⁵⁾ 39	2000 ⁽⁷⁾	2.57E+03 (13/26) 1.21E+03 – 5.95E+03	Loc. # 51 Water Treatment Building on Site	2.57E+03 (13/13) 1.21E+03 – 5.95E+03	All less than LLD	0
Surface Water ⁽⁴⁾ (pCi/l)	Gamma 39	See Table 2.2-C	All less than LLD	----	----	All less than LLD	0
	Tritium ⁽⁵⁾ 39	2000 ⁽⁷⁾	3.97E+03 (13/26) 1.49E+03 – 8.57E+03	Loc. # 26 Harris Lake Spillway 4.7 miles S	3.97E+3 (13/13) 1.49E+03 – 8.57E+03	All less than LLD	0

**HARRIS NUCLEAR PLANT
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM DATA SUMMARY (cont.)**

Shearon Harris Nuclear Power Plant
Wake County, North Carolina

Docket Numbers: STN 50-400
Calendar Year: 2019

Medium or Pathway Sampled or Measured (Unit of Measurement)	Type and Total No. of Measurements Performed	Lower Limit of Detection (LLD) ⁽¹⁾	All Indicator Locations Mean ⁽²⁾⁽³⁾ Range ⁽²⁾	Location w/Highest Annual Mean ⁽²⁾		Control Locations Mean ⁽²⁾⁽³⁾ Range ⁽²⁾	No. of Non-Routine Report Meas.
				Name, Distance, and Direction	Mean ⁽²⁾⁽³⁾ Range ⁽²⁾		
Ground Water (pCi/l)	Gamma 84	See Table 2.2-C	All less than LLD	-----	-----	No Control	0
	Tritium 84	2000 ⁽⁷⁾	4.41E+02 (15/72) 2.04E+02 – 1.25E+03	Loc. # 83 On Site (BD-MW16) along Cooling Tower Blowdown line 1.6 miles SSW	9.90E+02 (4/4) 8.41E+02 – 1.25E+03	No Control	0
Milk (pCi/l)	I-131 36	See Table 2.2-C	All less than LLD	-----	-----	All less than LLD	0
	Gamma 36 Cs-137 ⁽⁹⁾	See Table 2.2-C	1.94E+01 (2/15) 1.75E+01 – 2.13E+01	102 Goat Farm 2.82 miles W	1.94E+01 (2/15) 1.75E+01 – 2.13E+01	All less than LLD	0
Broadleaf Vegetation (pCi/kg, wet)	Gamma 18 ⁽⁴⁾	See Table 2.2-C	All less than LLD	-----	-----	All less than LLD	0
Food Products (pCi/kg, wet)	Gamma 12 ⁽⁴⁾	See Table 2.2-C	All less than LLD	-----	-----	All less than LLD	0
Aquatic Vegetation (pCi/kg, wet)	Gamma 3	See Table 2.2-C	All less than LLD	-----	-----	All less than LLD	0
Fish (pCi/kg, wet)	Gamma 12	See Table 2.2-C	All less than LLD	-----	-----	All less than LLD	0

**HARRIS NUCLEAR PLANT
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM DATA SUMMARY (cont.)**

Shearon Harris Nuclear Plant
Wake County, North Carolina

Docket Numbers: STN 50-400
Calendar Year: 2019

Medium or Pathway Sampled or Measured (Unit of Measurement)	Type and Total No. of Measurements Performed	Lower Limit of Detection (LLD) ⁽¹⁾	All Indicator Locations Mean ⁽²⁾⁽³⁾ Range ⁽²⁾	Location w/Highest Annual Mean ⁽²⁾		Control Locations Mean ⁽²⁾⁽³⁾ Range ⁽²⁾	No. of Non-Routine Report Meas.
				Name, Distance, and Direction	Mean ⁽²⁾⁽³⁾ Range ⁽²⁾		
Sediments -- Shoreline (pCi/kg, dry)	Gamma 4	See Table 2.2-C	All less than LLD	----	----	No Control	0
Sediments -- Bottom (pCi/kg, dry)	Gamma 2	See Table 2.2-C	All less than LLD	----	----	No Control	0
Direct Radiation (TLD) (mR per quarter) ⁽⁶⁾	TLD Readout 163 ⁽⁴⁾	----	1.44E+01 (159/159) 1.02E+01 – 2.10E+01	Loc. # 49 SR 1127, 0.3 mi S of Intersection w/ US 1 2.5 miles NE	1.78E+01 (4/4) 1.54E+01 – 2.10E+01	Loc. # 5 1.73E+01 (4/4) 1.60E+01 – 1.90E+01	0

Footnotes to Appendix B

1. The Lower Limit of Detection (LLD) is the smallest concentration of radioactive material in a sample that will yield a net count above system background, which will be detected with 95 percent probability and with only 5 percent probability of falsely concluding that a blank observation represents a "real" signal. Due to counting statistics and varying volumes, occasionally lower LLDs are achieved. Refer to Section 2.3.2 for an explanation of how LLD values were derived.
2. Mean and range are based on detectable measurements only.
3. The fractions of all samples with detectable activities at specific locations are indicated in parentheses.
4. Missing samples or surveillances are discussed in Appendix C or Appendix D.
5. Although quarterly composite samples are required, monthly composite samples are used to provide more frequent and sensitive analyses for some locations.
6. TLD exposure is reported in milliroentgen (mR) per standard quarter (91 days).
7. Tritium Lower Limit of Detection (LLD) is approximately 2.00E+2 pCi/L for samples that typically demonstrate activity less than the LLD.
8. Drinking Water 51 (DW-51) has been included, as of 2009, in the Data Summary even though it does not meet the EPA (Environmental Protection Agency) definition of a public drinking water supply.
9. Cs-137 identified in Goat Milk samples collected 14OCT2019 & 28OCT2019. No NCR was written due to trend evaluation of Cs-137 in REMP samples at HNP documented in AR # 02243634 in 2018.
10. Crimped/Collapsed tube on air sampler causing reduced air flow. Air Particulate sample was deemed invalid by laboratory, Air Radioiodine sample was deemed valid (NCR # 02278052).

APPENDIX C

SAMPLING DEVIATIONS

&

UNAVAILABLE ANALYSES

2019

APPENDIX C

HARRIS NUCLEAR PLANT SAMPLING DEVIATIONS & UNAVAILABLE ANALYSES

DEVIATION & UNAVAILABLE REASON CODES			
BF	Blown Fuse	PM	Preventive Maintenance
CN	Construction	PO	Power Outage
FZ	Sample Frozen	PS	Pump out of service / Undergoing repair
IV	Insufficient Volume	SL	Sample Loss/Lost due to Lab Accident
IW	Inclement Weather	SM	Motor / Rotor Seized
LC	Line Clog to Sampler	SU	Seasonally Unavailable
OT	Other	TF	Torn Filter
PI	Power Interrupt	VN	Vandalism

C.1 SAMPLING DEVIATIONS

Air Particulate and Air Radioiodine

REMP weekly air samples (Air Particulate (AP) or Air Radioiodine (AR)) that experience any downtime during a surveillance period are reported as a Deviation and classified as a “Sampling Deviation.” However, the sample is counted and the data reported, whereas a Deviation with no available sample is classified as an “Unavailable Analyses” and does not have any data reported. The Harris REMP air samplers operated for a total of 99.8% availability in 2019.

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
4	1/28 – 2/4/2019	PI	0.43 hours of downtime due to unknown power interruption.	NCR # 02255956
47	4/1 – 4/8/2019	PI	1.75 hours of downtime due to unknown power interruption.	NCR # 02267431
47	4/8 – 4/15/2019	PI	0.35 hours of downtime due to unknown power interruption.	NCR # 02268808
26	4/8 – 4/15/2019	PI	5.99 hours of downtime due to unknown power interruption.	NCR # 02268811
1	4/15 – 4/22/2019	PI	0.84 hours of downtime due to unknown power interruption.	NCR # 02269712
4	4/15 – 4/22/2019	PI	12.1 hours of downtime due to unknown power interruption.	NCR # 02269719
91	4/29 – 5/6/2019	PI	6.44 hours of downtime due to unknown power interruption.	NCR # 02271498
4	6/10 – 6/17/2019	OT	Crimped/Collapsed tube on air sampler causing reduced air flow. Air Particulate sample was deemed invalid by laboratory, Air Radioiodine sample was deemed valid.	NCR # 02278052
4	6/17 – 6/24/2019	PI	1.89 hours of downtime due to unknown power interruption.	NCR # 02278880
5	6/17 – 6/24/2019	PI	1.16 hours of downtime due to unknown power interruption.	NCR # 02278885

Drinking Water and Surface Water

REMP monthly drinking water samples (Drinking Water (DW)) or surface water samples (Surface Water (SW)) that experience any downtime during a surveillance period are reported as a Deviation and classified as a "Sampling Deviation." The sample is counted and the data reported, whereas a Deviation with no available sample is classified as an "Unavailable Analyses" and does not have any data reported. The Harris REMP water samplers operated for a total of 97.8% availability in 2019.

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
51	5/13 – 6/10/2019	PI	289 hours of downtime for monthly composite due to GFCI breaker trip. 56.9% availability for month.	NCR # 02276866
51	6/10 – 7/8/2019	PI	292.8 hours of downtime for monthly composite due to GFCI breaker trip. 56.3% availability for month.	NCR # 02281099
58	9/3 – 9/30/2019	SM	584.7 hours of downtime for monthly composite. ISCO malfunction (rotor). 9.64% availability.	NCR # 02294813

C.2 UNAVAILABLE ANALYSES

TLDs

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
31	1/9 – 4/10/2019	VN	TLD and the ty-wrap to hold the TLD were missing at the time of collection. Attributed to human intervention.	NCR # 02268125
23	4/10 – 7/10/2019	CN	TLD was unavailable at the time of collection due to utility pole replacement. TLD lost due to construction.	NCR # 02281549
22	7/10 – 10/19/2019	OT	TLD was found on the ground, ty-wrap and cage appeared to be weathered and worn, no human intervention in suspected. TLD not in its designated location - TLD not valid.	NCR # 02296202

Air Particulate

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
4	6/10 – 6/17/2019	OT	Crimped/Collapsed tube on air sampler causing reduced air flow. Air Particulate sample was deemed invalid/unavailable by laboratory, Air Radioiodine sample was deemed valid.	NCR # 02278052

APPENDIX D

ANALYTICAL DEVIATIONS

2019

No Analytical deviations were incurred for the 2019 HNP Radiological Environmental Monitoring Program.

APPENDIX D

HARRIS NUCLEAR PLANT

ANALYTICAL DEVIATIONS

No Analytical deviations were incurred for the 2019 HNP Radiological Environmental Monitoring Program.

APPENDIX E

**RADIOLOGICAL
ENVIRONMENTAL MONITORING
PROGRAM RESULTS**

2019

This appendix includes sample analysis report summaries and supportive data generated from each sample medium for 2019.

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 1 [INDICATOR - N @ 2.6 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492198	12/31/2018 - 1/7/2019	Beta	1.93E-02	2.65E-03	2.72E-03
492436	1/7/2019 - 1/14/2019	Beta	1.78E-02	2.93E-03	3.15E-03
492873	1/14/2019 - 1/21/2019	Beta	2.25E-02	2.80E-03	2.74E-03
493297	1/21/2019 - 1/28/2019	Beta	1.61E-02	2.55E-03	2.80E-03
493562	1/28/2019 - 2/4/2019	Beta	2.70E-02	3.33E-03	3.09E-03
493785	2/4/2019 - 2/11/2019	Beta	2.43E-02	3.23E-03	3.08E-03
494330	2/11/2019 - 2/18/2019	Beta	1.61E-02	2.78E-03	3.15E-03
494947	2/18/2019 - 2/25/2019	Beta	1.07E-02	2.63E-03	3.41E-03
495420	2/25/2019 - 3/4/2019	Beta	1.76E-02	2.51E-03	2.50E-03
496290	3/4/2019 - 3/11/2019	Beta	2.31E-02	3.16E-03	3.05E-03
496167	3/11/2019 - 3/18/2019	Beta	2.48E-02	2.86E-03	2.66E-03
496631	3/18/2019 - 3/25/2019	Beta	1.51E-02	2.65E-03	3.13E-03
497124	3/25/2019 - 4/1/2019	Beta	1.93E-02	2.63E-03	2.63E-03
497545	12/31/2018 - 4/1/2019	Cs-134	<1.45E-03	0.00E+00	1.45E-03
		Cs-137	<1.17E-03	0.00E+00	1.17E-03
		Be-7	1.85E-01	4.02E-02	1.62E-02
		K-40	<2.76E-02	0.00E+00	2.76E-02
497536	4/1/2019 - 4/8/2019	Beta	2.14E-02	3.19E-03	3.39E-03
498016	4/8/2019 - 4/15/2019	Beta	1.15E-02	2.67E-03	3.45E-03
498589	4/15/2019 - 4/22/2019	Beta	1.24E-02	2.90E-03	3.80E-03
498763	4/22/2019 - 4/29/2019	Beta	2.04E-02	3.02E-03	3.11E-03
499442	4/29/2019 - 5/6/2019	Beta	1.76E-02	2.66E-03	2.90E-03
499861	5/6/2019 - 5/13/2019	Beta	1.45E-02	2.73E-03	3.16E-03
500105	5/13/2019 - 5/20/2019	Beta	2.53E-02	3.37E-03	3.28E-03
500439	5/20/2019 - 5/28/2019	Beta	2.34E-02	2.99E-03	2.93E-03
500726	5/28/2019 - 6/3/2019	Beta	2.41E-02	3.72E-03	4.06E-03

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 1 [INDICATOR - N @ 2.6 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
503384	4/1/2019 - 6/3/2019	Cs-134	<2.51E-03	0.00E+00	2.51E-03
		Cs-137	<1.57E-03	0.00E+00	1.57E-03
		Be-7	1.78E-01	5.34E-02	4.88E-02
		K-40	<3.82E-02	0.00E+00	3.82E-02

Sample Point 2 [INDICATOR - NNE @ 1.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492199	12/31/2018 - 1/7/2019	Beta	1.69E-02	2.54E-03	2.72E-03
492437	1/7/2019 - 1/14/2019	Beta	1.48E-02	2.76E-03	3.15E-03
492874	1/14/2019 - 1/21/2019	Beta	1.94E-02	2.66E-03	2.74E-03
493298	1/21/2019 - 1/28/2019	Beta	1.74E-02	2.62E-03	2.81E-03
493563	1/28/2019 - 2/4/2019	Beta	2.51E-02	3.24E-03	3.09E-03
493786	2/4/2019 - 2/11/2019	Beta	2.70E-02	3.36E-03	3.07E-03
494331	2/11/2019 - 2/18/2019	Beta	1.61E-02	2.78E-03	3.14E-03
494948	2/18/2019 - 2/25/2019	Beta	9.89E-03	2.59E-03	3.42E-03
495421	2/25/2019 - 3/4/2019	Beta	1.89E-02	2.57E-03	2.50E-03
496291	3/4/2019 - 3/11/2019	Beta	2.24E-02	3.12E-03	3.05E-03
496168	3/11/2019 - 3/18/2019	Beta	2.09E-02	2.69E-03	2.66E-03
496632	3/18/2019 - 3/25/2019	Beta	1.77E-02	2.77E-03	3.13E-03
497125	3/25/2019 - 4/1/2019	Beta	1.56E-02	2.46E-03	2.63E-03
497546	12/31/2018 - 4/1/2019	Cs-134	<1.64E-03	0.00E+00	1.64E-03
		Cs-137	<1.33E-03	0.00E+00	1.33E-03
		Be-7	1.68E-01	4.20E-02	3.55E-02
		K-40	1.51E-02	1.01E-02	4.54E-03
497537	4/1/2019 - 4/8/2019	Beta	1.56E-02	2.90E-03	3.39E-03
498017	4/8/2019 - 4/15/2019	Beta	9.44E-03	2.56E-03	3.45E-03
498590	4/15/2019 - 4/22/2019	Beta	1.04E-02	2.78E-03	3.78E-03
498764	4/22/2019 - 4/29/2019	Beta	1.75E-02	2.87E-03	3.11E-03
499443	4/29/2019 - 5/6/2019	Beta	1.61E-02	2.59E-03	2.90E-03
499862	5/6/2019 - 5/13/2019	Beta	1.13E-02	2.55E-03	3.15E-03

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 2 [INDICATOR - NNE @ 1.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500106	5/13/2019 - 5/20/2019	Beta	2.52E-02	3.36E-03	3.29E-03
500440	5/20/2019 - 5/28/2019	Beta	2.17E-02	2.91E-03	2.93E-03
500727	5/28/2019 - 6/3/2019	Beta	2.10E-02	3.57E-03	4.06E-03
501115	6/3/2019 - 6/10/2019	Beta	2.01E-02	2.84E-03	2.77E-03
501928	6/10/2019 - 6/17/2019	Beta	1.48E-02	2.54E-03	2.96E-03
502188	6/17/2019 - 6/24/2019	Beta	1.57E-02	2.81E-03	3.11E-03
502401	6/24/2019 - 7/1/2019	Beta	2.79E-02	3.35E-03	2.87E-03
503385	4/1/2019 - 7/1/2019	Cs-134	<1.64E-03	0.00E+00	1.64E-03
		Cs-137	<1.34E-03	0.00E+00	1.34E-03
		Be-7	1.53E-01	4.14E-02	4.47E-02
		K-40	2.43E-02	1.51E-02	1.71E-02
503377	7/1/2019 - 7/8/2019	Beta	2.17E-02	3.00E-03	2.99E-03
503818	7/8/2019 - 7/15/2019	Beta	1.69E-02	2.94E-03	3.31E-03
504179	7/15/2019 - 7/22/2019	Beta	2.69E-02	3.24E-03	2.89E-03
504430	7/22/2019 - 7/29/2019	Beta	2.11E-02	3.02E-03	2.93E-03
504643	7/29/2019 - 8/5/2019	Beta	1.56E-02	2.42E-03	2.63E-03
504913	8/5/2019 - 8/12/2019	Beta	3.03E-02	3.20E-03	2.74E-03
505123	8/12/2019 - 8/20/2019	Beta	2.09E-02	2.82E-03	2.84E-03
505520	8/20/2019 - 8/26/2019	Beta	1.62E-02	3.18E-03	3.73E-03
505844	8/26/2019 - 9/3/2019	Beta	2.01E-02	2.59E-03	2.34E-03
506354	9/3/2019 - 9/9/2019	Beta	2.93E-02	3.86E-03	3.69E-03
507271	9/9/2019 - 9/16/2019	Beta	3.83E-02	3.76E-03	2.87E-03
507810	9/16/2019 - 9/23/2019	Beta	2.36E-02	3.15E-03	3.02E-03
508342	9/23/2019 - 9/30/2019	Beta	3.30E-02	3.60E-03	3.24E-03
509216	7/1/2019 - 9/30/2019	Cs-134	<1.62E-03	0.00E+00	1.62E-03
		Cs-137	<2.98E-04	0.00E+00	2.98E-04
		Be-7	1.46E-01	3.80E-02	3.65E-02
		K-40	<1.80E-02	0.00E+00	1.80E-02

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 2 [INDICATOR - NNE @ 1.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
509209	9/30/2019 - 10/7/2019	Beta	3.14E-02	3.67E-03	3.36E-03
509812	10/7/2019 - 10/14/2019	Beta	1.52E-02	2.83E-03	3.36E-03
510515	10/14/2019 - 10/21/2019	Beta	1.88E-02	2.74E-03	2.97E-03
510811	10/21/2019 - 10/28/2019	Beta	1.54E-02	2.94E-03	3.57E-03
511215	10/28/2019 - 11/4/2019	Beta	1.56E-02	2.94E-03	3.43E-03
511448	11/4/2019 - 11/11/2019	Beta	2.70E-02	3.10E-03	3.01E-03
511859	11/11/2019 - 11/18/2019	Beta	2.37E-02	3.17E-03	2.99E-03
512163	11/18/2019 - 11/25/2019	Beta	2.16E-02	3.08E-03	3.19E-03
512466	11/25/2019 - 12/2/2019	Beta	1.78E-02	2.91E-03	3.11E-03
512643	12/2/2019 - 12/9/2019	Beta	1.57E-02	2.70E-03	2.93E-03
513609	12/9/2019 - 12/16/2019	Beta	1.33E-02	2.75E-03	3.34E-03
513923	12/16/2019 - 12/23/2019	Beta	2.77E-02	3.40E-03	3.26E-03
514146	12/23/2019 - 12/30/2019	Beta	2.67E-02	3.46E-03	3.40E-03
514456	9/30/2019 - 12/30/2019	Cs-134	<2.05E-03	0.00E+00	2.05E-03
		Cs-137	<1.35E-03	0.00E+00	1.35E-03
		Be-7	1.10E-01	3.27E-02	3.37E-02
		K-40	<3.65E-02	0.00E+00	3.65E-02

Sample Point 4 [INDICATOR - NNE @ 3.1 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492201	12/31/2018 - 1/7/2019	Beta	1.49E-02	2.44E-03	2.72E-03
492439	1/7/2019 - 1/14/2019	Beta	2.00E-02	3.04E-03	3.15E-03
492876	1/14/2019 - 1/21/2019	Beta	1.83E-02	2.61E-03	2.75E-03
493300	1/21/2019 - 1/28/2019	Beta	1.86E-02	2.67E-03	2.80E-03
493565	1/28/2019 - 2/4/2019	Beta	2.73E-02	3.34E-03	3.10E-03
493788	2/4/2019 - 2/11/2019	Beta	2.67E-02	3.34E-03	3.08E-03
494333	2/11/2019 - 2/18/2019	Beta	1.63E-02	2.81E-03	3.16E-03
494950	2/18/2019 - 2/25/2019	Beta	1.25E-02	2.73E-03	3.40E-03
495423	2/25/2019 - 3/4/2019	Beta	2.18E-02	2.71E-03	2.50E-03

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 4 [INDICATOR - NNE @ 3.1 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
496293	3/4/2019 - 3/11/2019	Beta	2.41E-02	3.20E-03	3.05E-03
496170	3/11/2019 - 3/18/2019	Beta	2.56E-02	2.90E-03	2.66E-03
496634	3/18/2019 - 3/25/2019	Beta	1.78E-02	2.78E-03	3.13E-03
497127	3/25/2019 - 4/1/2019	Beta	2.00E-02	2.67E-03	2.63E-03
497548	12/31/2018 - 4/1/2019	Cs-134	<1.30E-03	0.00E+00	1.30E-03
		Cs-137	<1.06E-03	0.00E+00	1.06E-03
		Be-7	1.93E-01	4.32E-02	2.39E-02
		K-40	<2.57E-02	0.00E+00	2.57E-02
497539	4/1/2019 - 4/8/2019	Beta	1.85E-02	3.05E-03	3.39E-03
498019	4/8/2019 - 4/15/2019	Beta	9.63E-03	2.56E-03	3.45E-03
498592	4/15/2019 - 4/22/2019	Beta	9.55E-03	2.91E-03	4.09E-03
498766	4/22/2019 - 4/29/2019	Beta	1.86E-02	2.94E-03	3.11E-03
499445	4/29/2019 - 5/6/2019	Beta	1.79E-02	2.68E-03	2.90E-03
499864	5/6/2019 - 5/13/2019	Beta	1.60E-02	2.80E-03	3.15E-03
500108	5/13/2019 - 5/20/2019	Beta	2.28E-02	3.25E-03	3.29E-03
500442	5/20/2019 - 5/28/2019	Beta	2.22E-02	2.94E-03	2.93E-03
500729	5/28/2019 - 6/3/2019	Beta	2.14E-02	3.60E-03	4.06E-03
501117	6/3/2019 - 6/10/2019	Beta	2.02E-02	2.85E-03	2.78E-03
502190	6/17/2019 - 6/24/2019	Beta	1.50E-02	2.78E-03	3.13E-03
502403	6/24/2019 - 7/1/2019	Beta	2.88E-02	3.39E-03	2.87E-03
503387	4/1/2019 - 7/1/2019	Cs-134	<1.93E-03	0.00E+00	1.93E-03
		Cs-137	<1.45E-03	0.00E+00	1.45E-03
		Be-7	1.63E-01	4.10E-02	3.72E-02
		K-40	<2.20E-02	0.00E+00	2.20E-02
503379	7/1/2019 - 7/8/2019	Beta	2.33E-02	3.08E-03	3.00E-03
503820	7/8/2019 - 7/15/2019	Beta	1.56E-02	2.85E-03	3.29E-03
504181	7/15/2019 - 7/22/2019	Beta	2.38E-02	3.11E-03	2.92E-03
504432	7/22/2019 - 7/29/2019	Beta	1.88E-02	2.90E-03	2.92E-03

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 4 [INDICATOR - NNE @ 3.1 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504645	7/29/2019 - 8/5/2019	Beta	2.16E-02	2.70E-03	2.63E-03
504915	8/5/2019 - 8/12/2019	Beta	2.90E-02	3.17E-03	2.77E-03
505125	8/12/2019 - 8/20/2019	Beta	1.89E-02	2.73E-03	2.85E-03
505522	8/20/2019 - 8/26/2019	Beta	1.62E-02	3.16E-03	3.70E-03
505846	8/26/2019 - 9/3/2019	Beta	2.08E-02	2.62E-03	2.33E-03
506356	9/3/2019 - 9/9/2019	Beta	3.20E-02	3.98E-03	3.68E-03
507273	9/9/2019 - 9/16/2019	Beta	3.73E-02	3.73E-03	2.87E-03
507812	9/16/2019 - 9/23/2019	Beta	2.21E-02	3.08E-03	3.01E-03
508344	9/23/2019 - 9/30/2019	Beta	3.57E-02	3.71E-03	3.24E-03
509218	7/1/2019 - 9/30/2019	Cs-134	<1.37E-03	0.00E+00	1.37E-03
		Cs-137	<1.81E-03	0.00E+00	1.81E-03
		Be-7	1.69E-01	4.09E-02	3.45E-02
		K-40	<2.38E-02	0.00E+00	2.38E-02
509211	9/30/2019 - 10/7/2019	Beta	3.11E-02	3.67E-03	3.37E-03
509814	10/7/2019 - 10/14/2019	Beta	1.83E-02	3.01E-03	3.39E-03
510517	10/14/2019 - 10/21/2019	Beta	2.22E-02	2.86E-03	2.93E-03
510813	10/21/2019 - 10/28/2019	Beta	1.63E-02	2.98E-03	3.59E-03
511217	10/28/2019 - 11/4/2019	Beta	1.60E-02	2.95E-03	3.43E-03
511450	11/4/2019 - 11/11/2019	Beta	3.17E-02	3.28E-03	3.01E-03
511861	11/11/2019 - 11/18/2019	Beta	2.51E-02	3.23E-03	2.99E-03
512165	11/18/2019 - 11/25/2019	Beta	2.01E-02	3.08E-03	3.29E-03
512468	11/25/2019 - 12/2/2019	Beta	1.58E-02	2.73E-03	3.00E-03
512645	12/2/2019 - 12/9/2019	Beta	1.51E-02	2.67E-03	2.93E-03
513611	12/9/2019 - 12/16/2019	Beta	1.62E-02	2.91E-03	3.34E-03
513925	12/16/2019 - 12/23/2019	Beta	2.98E-02	3.49E-03	3.26E-03
514148	12/23/2019 - 12/30/2019	Beta	2.38E-02	3.33E-03	3.40E-03

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 4 [INDICATOR - NNE @ 3.1 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514458	9/30/2019 - 12/30/2019	Cs-134	<1.00E-03	0.00E+00	1.00E-03
		Cs-137	<1.20E-03	0.00E+00	1.20E-03
		Be-7	1.13E-01	3.37E-02	3.56E-02
		K-40	2.47E-02	1.44E-02	1.47E-02

Sample Point 5 [CONTROL - WNW @ 12 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492203	12/31/2018 - 1/7/2019	Beta	1.66E-02	2.53E-03	2.72E-03
492441	1/7/2019 - 1/14/2019	Beta	1.79E-02	2.93E-03	3.15E-03
492878	1/14/2019 - 1/21/2019	Beta	1.93E-02	2.67E-03	2.77E-03
493302	1/21/2019 - 1/28/2019	Beta	2.11E-02	2.77E-03	2.78E-03
493567	1/28/2019 - 2/4/2019	Beta	2.74E-02	3.33E-03	3.08E-03
493790	2/4/2019 - 2/11/2019	Beta	2.62E-02	3.32E-03	3.07E-03
494335	2/11/2019 - 2/18/2019	Beta	1.69E-02	2.85E-03	3.19E-03
494952	2/18/2019 - 2/25/2019	Beta	1.15E-02	2.66E-03	3.37E-03
495425	2/25/2019 - 3/4/2019	Beta	2.14E-02	2.69E-03	2.50E-03
496295	3/4/2019 - 3/11/2019	Beta	2.49E-02	3.24E-03	3.05E-03
496172	3/11/2019 - 3/18/2019	Beta	2.33E-02	2.83E-03	2.72E-03
496636	3/18/2019 - 3/25/2019	Beta	1.82E-02	2.74E-03	3.05E-03
497129	3/25/2019 - 4/1/2019	Beta	1.76E-02	2.55E-03	2.63E-03
497550	12/31/2018 - 4/1/2019	Cs-134	<2.10E-03	0.00E+00	2.10E-03
		Cs-137	<1.59E-03	0.00E+00	1.59E-03
		Be-7	2.02E-01	4.53E-02	2.63E-02
		K-40	<2.89E-02	0.00E+00	2.89E-02
497541	4/1/2019 - 4/8/2019	Beta	2.04E-02	3.16E-03	3.41E-03
498021	4/8/2019 - 4/15/2019	Beta	9.72E-03	2.61E-03	3.52E-03
498594	4/15/2019 - 4/22/2019	Beta	9.71E-03	2.69E-03	3.69E-03
498768	4/22/2019 - 4/29/2019	Beta	2.00E-02	3.00E-03	3.10E-03
499447	4/29/2019 - 5/6/2019	Beta	1.56E-02	2.56E-03	2.89E-03
499866	5/6/2019 - 5/13/2019	Beta	1.31E-02	2.69E-03	3.23E-03

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 5 [CONTROL - WNW @ 12 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500110	5/13/2019 - 5/20/2019	Beta	2.50E-02	3.31E-03	3.24E-03
500444	5/20/2019 - 5/28/2019	Beta	2.23E-02	2.93E-03	2.92E-03
500731	5/28/2019 - 6/3/2019	Beta	2.44E-02	3.74E-03	4.06E-03
501119	6/3/2019 - 6/10/2019	Beta	1.71E-02	2.74E-03	2.86E-03
501932	6/10/2019 - 6/17/2019	Beta	1.83E-02	2.71E-03	2.96E-03
502191	6/17/2019 - 6/24/2019	Beta	1.56E-02	2.76E-03	3.04E-03
502404	6/24/2019 - 7/1/2019	Beta	2.96E-02	3.41E-03	2.86E-03
503389	4/1/2019 - 7/1/2019	Cs-134	<1.59E-03	0.00E+00	1.59E-03
		Cs-137	<1.13E-03	0.00E+00	1.13E-03
		Be-7	1.61E-01	3.96E-02	3.33E-02
		K-40	<2.89E-02	0.00E+00	2.89E-02
503380	7/1/2019 - 7/8/2019	Beta	2.29E-02	3.08E-03	3.02E-03
503821	7/8/2019 - 7/15/2019	Beta	1.80E-02	2.97E-03	3.28E-03
504182	7/15/2019 - 7/22/2019	Beta	2.52E-02	3.16E-03	2.90E-03
504433	7/22/2019 - 7/29/2019	Beta	1.99E-02	2.97E-03	2.94E-03
504646	7/29/2019 - 8/5/2019	Beta	2.16E-02	2.75E-03	2.71E-03
504916	8/5/2019 - 8/12/2019	Beta	2.51E-02	2.93E-03	2.67E-03
505126	8/12/2019 - 8/20/2019	Beta	2.16E-02	2.85E-03	2.84E-03
505523	8/20/2019 - 8/26/2019	Beta	1.25E-02	2.95E-03	3.70E-03
505847	8/26/2019 - 9/3/2019	Beta	1.81E-02	2.52E-03	2.39E-03
506357	9/3/2019 - 9/9/2019	Beta	2.86E-02	3.75E-03	3.58E-03
507274	9/9/2019 - 9/16/2019	Beta	4.11E-02	3.88E-03	2.87E-03
507813	9/16/2019 - 9/23/2019	Beta	2.44E-02	3.18E-03	3.01E-03
508345	9/23/2019 - 9/30/2019	Beta	3.20E-02	3.62E-03	3.32E-03
509219	7/1/2019 - 9/30/2019	Cs-134	<1.79E-03	0.00E+00	1.79E-03
		Cs-137	<1.46E-03	0.00E+00	1.46E-03
		Be-7	1.64E-01	3.82E-02	3.01E-02
		K-40	<3.63E-02	0.00E+00	3.63E-02

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 5 [CONTROL - WNW @ 12 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
509212	9/30/2019 - 10/7/2019	Beta	3.39E-02	3.70E-03	3.26E-03
509815	10/7/2019 - 10/14/2019	Beta	1.65E-02	2.91E-03	3.38E-03
510518	10/14/2019 - 10/21/2019	Beta	2.14E-02	2.85E-03	2.96E-03
510814	10/21/2019 - 10/28/2019	Beta	1.56E-02	2.98E-03	3.64E-03
511218	10/28/2019 - 11/4/2019	Beta	1.81E-02	3.02E-03	3.35E-03
511451	11/4/2019 - 11/11/2019	Beta	3.21E-02	3.28E-03	2.99E-03
511862	11/11/2019 - 11/18/2019	Beta	2.56E-02	3.27E-03	3.02E-03
512166	11/18/2019 - 11/25/2019	Beta	2.10E-02	3.10E-03	3.24E-03
512469	11/25/2019 - 12/2/2019	Beta	1.81E-02	2.88E-03	3.04E-03
512646	12/2/2019 - 12/9/2019	Beta	1.71E-02	2.75E-03	2.91E-03
513612	12/9/2019 - 12/16/2019	Beta	1.83E-02	3.03E-03	3.37E-03
513926	12/16/2019 - 12/23/2019	Beta	2.73E-02	3.43E-03	3.32E-03
514149	12/23/2019 - 12/30/2019	Beta	2.55E-02	3.42E-03	3.43E-03
514459	9/30/2019 - 12/30/2019	Cs-134	<1.25E-03	0.00E+00	1.25E-03
		Cs-137	<1.33E-03	0.00E+00	1.33E-03
		Be-7	1.57E-01	3.87E-02	3.59E-02
		K-40	<2.67E-02	0.00E+00	2.67E-02

Sample Point 26 [INDICATOR - S @ 4.7 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492200	12/31/2018 - 1/7/2019	Beta	1.67E-02	2.55E-03	2.75E-03
492438	1/7/2019 - 1/14/2019	Beta	1.72E-02	2.88E-03	3.13E-03
492875	1/14/2019 - 1/21/2019	Beta	1.90E-02	2.65E-03	2.76E-03
493299	1/21/2019 - 1/28/2019	Beta	1.60E-02	2.53E-03	2.77E-03
493564	1/28/2019 - 2/4/2019	Beta	2.62E-02	3.31E-03	3.12E-03
493787	2/4/2019 - 2/11/2019	Beta	2.65E-02	3.32E-03	3.06E-03
494332	2/11/2019 - 2/18/2019	Beta	1.61E-02	2.79E-03	3.17E-03
494949	2/18/2019 - 2/25/2019	Beta	1.10E-02	2.64E-03	3.40E-03
495422	2/25/2019 - 3/4/2019	Beta	1.97E-02	2.61E-03	2.51E-03

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 26 [INDICATOR - S @ 4.7 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
496292	3/4/2019 - 3/11/2019	Beta	2.24E-02	3.12E-03	3.03E-03
496169	3/11/2019 - 3/18/2019	Beta	2.18E-02	2.77E-03	2.71E-03
496633	3/18/2019 - 3/25/2019	Beta	1.48E-02	2.60E-03	3.08E-03
497126	3/25/2019 - 4/1/2019	Beta	1.66E-02	2.52E-03	2.65E-03
497547	12/31/2018 - 4/1/2019	Cs-134	<1.77E-03	0.00E+00	1.77E-03
		Cs-137	<1.17E-03	0.00E+00	1.17E-03
		Be-7	2.03E-01	4.77E-02	4.23E-02
		K-40	<2.63E-02	0.00E+00	2.63E-02
497538	4/1/2019 - 4/8/2019	Beta	1.88E-02	3.06E-03	3.38E-03
498018	4/8/2019 - 4/15/2019	Beta	6.25E-03	2.46E-03	3.62E-03
498591	4/15/2019 - 4/22/2019	Beta	8.76E-03	2.66E-03	3.72E-03
498765	4/22/2019 - 4/29/2019	Beta	1.85E-02	2.95E-03	3.14E-03
499444	4/29/2019 - 5/6/2019	Beta	1.47E-02	2.47E-03	2.81E-03
499863	5/6/2019 - 5/13/2019	Beta	1.55E-02	2.85E-03	3.28E-03
500107	5/13/2019 - 5/20/2019	Beta	2.64E-02	3.38E-03	3.24E-03
500441	5/20/2019 - 5/28/2019	Beta	2.29E-02	2.97E-03	2.94E-03
500728	5/28/2019 - 6/3/2019	Beta	2.03E-02	3.48E-03	3.96E-03
501116	6/3/2019 - 6/10/2019	Beta	1.99E-02	2.91E-03	2.89E-03
501929	6/10/2019 - 6/17/2019	Beta	1.50E-02	2.55E-03	2.94E-03
502189	6/17/2019 - 6/24/2019	Beta	1.42E-02	2.70E-03	3.08E-03
502402	6/24/2019 - 7/1/2019	Beta	3.12E-02	3.44E-03	2.80E-03
503386	4/1/2019 - 7/1/2019	Cs-134	<2.01E-03	0.00E+00	2.01E-03
		Cs-137	<1.31E-03	0.00E+00	1.31E-03
		Be-7	1.65E-01	3.69E-02	2.50E-02
		K-40	<3.02E-02	0.00E+00	3.02E-02
503378	7/1/2019 - 7/8/2019	Beta	1.89E-02	2.93E-03	3.10E-03
503819	7/8/2019 - 7/15/2019	Beta	1.40E-02	2.74E-03	3.25E-03
504180	7/15/2019 - 7/22/2019	Beta	2.37E-02	3.10E-03	2.91E-03

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 26 [INDICATOR - S @ 4.7 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504431	7/22/2019 - 7/29/2019	Beta	1.64E-02	2.77E-03	2.92E-03
504644	7/29/2019 - 8/5/2019	Beta	2.04E-02	2.69E-03	2.69E-03
504914	8/5/2019 - 8/12/2019	Beta	2.75E-02	3.05E-03	2.68E-03
505124	8/12/2019 - 8/20/2019	Beta	1.94E-02	2.75E-03	2.85E-03
505521	8/20/2019 - 8/26/2019	Beta	1.59E-02	3.15E-03	3.70E-03
505845	8/26/2019 - 9/3/2019	Beta	1.74E-02	2.49E-03	2.38E-03
506355	9/3/2019 - 9/9/2019	Beta	2.26E-02	3.48E-03	3.62E-03
507272	9/9/2019 - 9/16/2019	Beta	3.84E-02	3.78E-03	2.87E-03
507811	9/16/2019 - 9/23/2019	Beta	2.40E-02	3.16E-03	3.00E-03
508343	9/23/2019 - 9/30/2019	Beta	3.33E-02	3.66E-03	3.32E-03
509217	7/1/2019 - 9/30/2019	Cs-134	<1.82E-03	0.00E+00	1.82E-03
		Cs-137	<1.49E-03	0.00E+00	1.49E-03
		Be-7	1.57E-01	3.96E-02	3.66E-02
		K-40	1.20E-02	1.15E-02	1.61E-02
509210	9/30/2019 - 10/7/2019	Beta	3.07E-02	3.56E-03	3.24E-03
509813	10/7/2019 - 10/14/2019	Beta	1.61E-02	2.92E-03	3.43E-03
510516	10/14/2019 - 10/21/2019	Beta	1.94E-02	2.76E-03	2.95E-03
510812	10/21/2019 - 10/28/2019	Beta	1.70E-02	3.03E-03	3.61E-03
511216	10/28/2019 - 11/4/2019	Beta	1.83E-02	3.04E-03	3.37E-03
511449	11/4/2019 - 11/11/2019	Beta	3.06E-02	3.24E-03	3.01E-03
511860	11/11/2019 - 11/18/2019	Beta	2.25E-02	3.11E-03	2.99E-03
512164	11/18/2019 - 11/25/2019	Beta	1.81E-02	2.98E-03	3.29E-03
512467	11/25/2019 - 12/2/2019	Beta	1.81E-02	2.87E-03	3.00E-03
512644	12/2/2019 - 12/9/2019	Beta	1.49E-02	2.66E-03	2.93E-03
513610	12/9/2019 - 12/16/2019	Beta	1.66E-02	2.93E-03	3.34E-03
513924	12/16/2019 - 12/23/2019	Beta	2.47E-02	3.30E-03	3.30E-03

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 26 [INDICATOR - S @ 4.7 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514147	12/23/2019 - 12/30/2019	Beta	2.70E-02	3.45E-03	3.36E-03
514457	9/30/2019 - 12/30/2019	Cs-134	<1.43E-03	0.00E+00	1.43E-03
		Cs-137	<1.43E-03	0.00E+00	1.43E-03
		Be-7	1.32E-01	3.32E-02	2.72E-02
		K-40	<2.89E-02	0.00E+00	2.89E-02

Sample Point 47 [INDICATOR - SSW @ 3.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492202	12/31/2018 - 1/7/2019	Beta	1.57E-02	2.50E-03	2.75E-03
492440	1/7/2019 - 1/14/2019	Beta	1.64E-02	2.84E-03	3.13E-03
492877	1/14/2019 - 1/21/2019	Beta	1.89E-02	2.64E-03	2.76E-03
493301	1/21/2019 - 1/28/2019	Beta	1.75E-02	2.61E-03	2.77E-03
493566	1/28/2019 - 2/4/2019	Beta	2.48E-02	3.25E-03	3.12E-03
493789	2/4/2019 - 2/11/2019	Beta	2.52E-02	3.26E-03	3.06E-03
494334	2/11/2019 - 2/18/2019	Beta	1.35E-02	2.66E-03	3.17E-03
494951	2/18/2019 - 2/25/2019	Beta	1.09E-02	2.63E-03	3.39E-03
495424	2/25/2019 - 3/4/2019	Beta	1.90E-02	2.58E-03	2.51E-03
496294	3/4/2019 - 3/11/2019	Beta	2.07E-02	3.03E-03	3.03E-03
496171	3/11/2019 - 3/18/2019	Beta	2.38E-02	2.85E-03	2.71E-03
496635	3/18/2019 - 3/25/2019	Beta	1.63E-02	2.67E-03	3.08E-03
497128	3/25/2019 - 4/1/2019	Beta	1.66E-02	2.52E-03	2.65E-03
497549	12/31/2018 - 4/1/2019	Cs-134	<1.30E-03	0.00E+00	1.30E-03
		Cs-137	<1.06E-03	0.00E+00	1.06E-03
		Be-7	1.45E-01	4.26E-02	4.48E-02
		K-40	<2.41E-02	0.00E+00	2.41E-02
497540	4/1/2019 - 4/8/2019	Beta	1.60E-02	2.94E-03	3.41E-03
498020	4/8/2019 - 4/15/2019	Beta	8.01E-03	2.50E-03	3.50E-03
498593	4/15/2019 - 4/22/2019	Beta	9.74E-03	2.71E-03	3.72E-03
498767	4/22/2019 - 4/29/2019	Beta	1.99E-02	3.02E-03	3.14E-03
499446	4/29/2019 - 5/6/2019	Beta	1.64E-02	2.55E-03	2.82E-03

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 47 [INDICATOR - SSW @ 3.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
499865	5/6/2019 - 5/13/2019	Beta	1.48E-02	2.82E-03	3.27E-03
500109	5/13/2019 - 5/20/2019	Beta	2.37E-02	3.26E-03	3.24E-03
500443	5/20/2019 - 5/28/2019	Beta	1.94E-02	2.80E-03	2.94E-03
500730	5/28/2019 - 6/3/2019	Beta	2.50E-02	3.70E-03	3.96E-03
503388	4/1/2019 - 6/3/2019	Cs-134	<1.22E-03	0.00E+00	1.22E-03
		Cs-137	<9.87E-04	0.00E+00	9.87E-04
		Be-7	2.03E-01	4.75E-02	4.25E-02
		K-40	<3.40E-02	0.00E+00	3.40E-02

Sample Point 63 [INDICATOR - SW @ 0.6 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492204	12/31/2018 - 1/7/2019	Beta	1.49E-02	2.44E-03	2.72E-03
492442	1/7/2019 - 1/14/2019	Beta	1.74E-02	2.90E-03	3.15E-03
492879	1/14/2019 - 1/21/2019	Beta	1.63E-02	2.50E-03	2.71E-03
493303	1/21/2019 - 1/28/2019	Beta	1.68E-02	2.60E-03	2.83E-03
493568	1/28/2019 - 2/4/2019	Beta	2.22E-02	3.10E-03	3.09E-03
493791	2/4/2019 - 2/11/2019	Beta	2.47E-02	3.25E-03	3.07E-03
494336	2/11/2019 - 2/18/2019	Beta	1.28E-02	2.58E-03	3.11E-03
494953	2/18/2019 - 2/25/2019	Beta	8.00E-03	2.49E-03	3.46E-03
495426	2/25/2019 - 3/4/2019	Beta	1.73E-02	2.49E-03	2.50E-03
496296	3/4/2019 - 3/11/2019	Beta	2.17E-02	3.09E-03	3.05E-03
496173	3/11/2019 - 3/18/2019	Beta	2.18E-02	2.74E-03	2.66E-03
496637	3/18/2019 - 3/25/2019	Beta	1.18E-02	2.48E-03	3.14E-03
497130	3/25/2019 - 4/1/2019	Beta	2.00E-02	2.66E-03	2.63E-03
497551	12/31/2018 - 4/1/2019	Cs-134	<1.47E-03	0.00E+00	1.47E-03
		Cs-137	<1.19E-03	0.00E+00	1.19E-03
		Be-7	1.53E-01	3.94E-02	3.18E-02
		K-40	<3.04E-02	0.00E+00	3.04E-02
497542	4/1/2019 - 4/8/2019	Beta	1.65E-02	2.95E-03	3.40E-03
498022	4/8/2019 - 4/15/2019	Beta	8.44E-03	2.49E-03	3.44E-03

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 63 [INDICATOR - SW @ 0.6 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
498595	4/15/2019 - 4/22/2019	Beta	1.34E-02	2.94E-03	3.79E-03
498769	4/22/2019 - 4/29/2019	Beta	1.98E-02	3.00E-03	3.11E-03
499448	4/29/2019 - 5/6/2019	Beta	1.62E-02	2.59E-03	2.91E-03
499867	5/6/2019 - 5/13/2019	Beta	1.25E-02	2.58E-03	3.11E-03
500111	5/13/2019 - 5/20/2019	Beta	2.41E-02	3.35E-03	3.35E-03
500445	5/20/2019 - 5/28/2019	Beta	2.00E-02	2.83E-03	2.93E-03
500732	5/28/2019 - 6/3/2019	Beta	2.45E-02	3.76E-03	4.08E-03
501120	6/3/2019 - 6/10/2019	Beta	1.76E-02	2.71E-03	2.76E-03
501933	6/10/2019 - 6/17/2019	Beta	1.78E-02	2.68E-03	2.94E-03
502192	6/17/2019 - 6/24/2019	Beta	1.61E-02	2.83E-03	3.13E-03
502405	6/24/2019 - 7/1/2019	Beta	2.76E-02	3.34E-03	2.88E-03
503390	4/1/2019 - 7/1/2019	Cs-134	<1.93E-03	0.00E+00	1.93E-03
		Cs-137	<1.34E-03	0.00E+00	1.34E-03
		Be-7	1.67E-01	3.94E-02	3.37E-02
		K-40	<3.33E-02	0.00E+00	3.33E-02
503381	7/1/2019 - 7/8/2019	Beta	2.15E-02	2.98E-03	2.98E-03
503822	7/8/2019 - 7/15/2019	Beta	1.64E-02	2.90E-03	3.30E-03
504183	7/15/2019 - 7/22/2019	Beta	2.70E-02	3.25E-03	2.91E-03
504434	7/22/2019 - 7/29/2019	Beta	1.49E-02	2.68E-03	2.92E-03
504647	7/29/2019 - 8/5/2019	Beta	2.25E-02	2.75E-03	2.64E-03
504917	8/5/2019 - 8/12/2019	Beta	2.69E-02	3.05E-03	2.73E-03
505127	8/12/2019 - 8/20/2019	Beta	2.12E-02	2.83E-03	2.84E-03
505524	8/20/2019 - 8/26/2019	Beta	1.52E-02	3.12E-03	3.74E-03
505848	8/26/2019 - 9/3/2019	Beta	2.15E-02	2.73E-03	2.44E-03
506358	9/3/2019 - 9/9/2019	Beta	2.86E-02	3.69E-03	3.50E-03
507275	9/9/2019 - 9/16/2019	Beta	3.88E-02	3.78E-03	2.86E-03

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 63 [INDICATOR - SW @ 0.6 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
507814	9/16/2019 - 9/23/2019	Beta	2.43E-02	3.18E-03	3.02E-03
508346	9/23/2019 - 9/30/2019	Beta	3.01E-02	3.48E-03	3.23E-03
509220	7/1/2019 - 9/30/2019	Cs-134	<9.79E-04	0.00E+00	9.79E-04
		Cs-137	<1.17E-03	0.00E+00	1.17E-03
		Be-7	1.54E-01	3.39E-02	1.46E-02
		K-40	1.10E-02	1.40E-02	2.27E-02
509213	9/30/2019 - 10/7/2019	Beta	2.97E-02	3.62E-03	3.39E-03
509816	10/7/2019 - 10/14/2019	Beta	1.59E-02	2.86E-03	3.34E-03
510519	10/14/2019 - 10/21/2019	Beta	1.85E-02	2.73E-03	2.96E-03
510815	10/21/2019 - 10/28/2019	Beta	1.48E-02	2.89E-03	3.54E-03
511219	10/28/2019 - 11/4/2019	Beta	1.62E-02	2.97E-03	3.44E-03
511452	11/4/2019 - 11/11/2019	Beta	2.55E-02	3.02E-03	2.99E-03
511863	11/11/2019 - 11/18/2019	Beta	2.56E-02	3.27E-03	3.01E-03
512167	11/18/2019 - 11/25/2019	Beta	1.95E-02	2.98E-03	3.18E-03
512470	11/25/2019 - 12/2/2019	Beta	1.74E-02	2.89E-03	3.12E-03
512647	12/2/2019 - 12/9/2019	Beta	1.62E-02	2.71E-03	2.91E-03
513613	12/9/2019 - 12/16/2019	Beta	1.80E-02	3.01E-03	3.36E-03
513927	12/16/2019 - 12/23/2019	Beta	2.83E-02	3.43E-03	3.25E-03
514150	12/23/2019 - 12/30/2019	Beta	2.42E-02	3.36E-03	3.42E-03
514460	9/30/2019 - 12/30/2019	Cs-134	<1.82E-03	0.00E+00	1.82E-03
		Cs-137	<1.23E-03	0.00E+00	1.23E-03
		Be-7	1.20E-01	3.32E-02	3.05E-02
		K-40	<1.26E-02	0.00E+00	1.26E-02

Sample Point 90 [INDICATOR - SSW @ 0.5 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492205	12/31/2018 - 1/7/2019	Beta	1.71E-02	2.55E-03	2.72E-03
492443	1/7/2019 - 1/14/2019	Beta	1.52E-02	2.78E-03	3.15E-03
492880	1/14/2019 - 1/21/2019	Beta	2.04E-02	2.69E-03	2.71E-03
493304	1/21/2019 - 1/28/2019	Beta	2.02E-02	2.77E-03	2.83E-03

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 90 [INDICATOR - SSW @ 0.5 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
493569	1/28/2019 - 2/4/2019	Beta	2.35E-02	3.16E-03	3.09E-03
493792	2/4/2019 - 2/11/2019	Beta	2.70E-02	3.35E-03	3.07E-03
494337	2/11/2019 - 2/18/2019	Beta	1.28E-02	2.58E-03	3.11E-03
494954	2/18/2019 - 2/25/2019	Beta	1.01E-02	2.62E-03	3.46E-03
495427	2/25/2019 - 3/4/2019	Beta	2.06E-02	2.65E-03	2.50E-03
496297	3/4/2019 - 3/11/2019	Beta	2.16E-02	3.09E-03	3.05E-03
496174	3/11/2019 - 3/18/2019	Beta	2.19E-02	2.74E-03	2.66E-03
496638	3/18/2019 - 3/25/2019	Beta	1.64E-02	2.71E-03	3.13E-03
497131	3/25/2019 - 4/1/2019	Beta	1.57E-02	2.46E-03	2.63E-03
497552	12/31/2018 - 4/1/2019	Cs-134	<1.25E-03	0.00E+00	1.25E-03
		Cs-137	<1.17E-03	0.00E+00	1.17E-03
		Be-7	1.89E-01	4.12E-02	2.03E-02
		K-40	<3.54E-02	0.00E+00	3.54E-02
497543	4/1/2019 - 4/8/2019	Beta	1.57E-02	2.91E-03	3.40E-03
498023	4/8/2019 - 4/15/2019	Beta	8.46E-03	2.49E-03	3.44E-03
498596	4/15/2019 - 4/22/2019	Beta	9.77E-03	2.75E-03	3.79E-03
498770	4/22/2019 - 4/29/2019	Beta	1.74E-02	2.87E-03	3.11E-03
499449	4/29/2019 - 5/6/2019	Beta	1.63E-02	2.60E-03	2.91E-03
499868	5/6/2019 - 5/13/2019	Beta	1.23E-02	2.57E-03	3.10E-03
500112	5/13/2019 - 5/20/2019	Beta	2.42E-02	3.35E-03	3.35E-03
500446	5/20/2019 - 5/28/2019	Beta	2.06E-02	2.86E-03	2.93E-03
500733	5/28/2019 - 6/3/2019	Beta	2.00E-02	3.54E-03	4.08E-03
501121	6/3/2019 - 6/10/2019	Beta	1.71E-02	2.68E-03	2.76E-03
501934	6/10/2019 - 6/17/2019	Beta	1.79E-02	2.68E-03	2.94E-03
502193	6/17/2019 - 6/24/2019	Beta	1.37E-02	2.71E-03	3.13E-03
502406	6/24/2019 - 7/1/2019	Beta	3.43E-02	3.64E-03	2.88E-03

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 90 [INDICATOR - SSW @ 0.5 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
503391	4/1/2019 - 7/1/2019	Cs-134	<1.24E-03	0.00E+00	1.24E-03
		Cs-137	<1.17E-03	0.00E+00	1.17E-03
		Be-7	1.90E-01	4.22E-02	3.58E-02
		K-40	<2.64E-02	0.00E+00	2.64E-02
503382	7/1/2019 - 7/8/2019	Beta	2.33E-02	3.07E-03	2.98E-03
503823	7/8/2019 - 7/15/2019	Beta	1.48E-02	2.81E-03	3.29E-03
504184	7/15/2019 - 7/22/2019	Beta	2.69E-02	3.24E-03	2.91E-03
504435	7/22/2019 - 7/29/2019	Beta	2.09E-02	3.01E-03	2.92E-03
504648	7/29/2019 - 8/5/2019	Beta	2.45E-02	2.83E-03	2.64E-03
504918	8/5/2019 - 8/12/2019	Beta	3.15E-02	3.24E-03	2.73E-03
505128	8/12/2019 - 8/20/2019	Beta	2.16E-02	2.85E-03	2.84E-03
505525	8/20/2019 - 8/26/2019	Beta	1.52E-02	3.13E-03	3.74E-03
505849	8/26/2019 - 9/3/2019	Beta	1.98E-02	2.64E-03	2.44E-03
506359	9/3/2019 - 9/9/2019	Beta	1.97E-02	3.26E-03	3.50E-03
507276	9/9/2019 - 9/16/2019	Beta	3.71E-02	3.71E-03	2.86E-03
507815	9/16/2019 - 9/23/2019	Beta	2.65E-02	3.29E-03	3.02E-03
508347	9/23/2019 - 9/30/2019	Beta	3.79E-02	3.79E-03	3.23E-03
509221	7/1/2019 - 9/30/2019	Cs-134	<1.90E-03	0.00E+00	1.90E-03
		Cs-137	<1.44E-03	0.00E+00	1.44E-03
		Be-7	1.76E-01	3.93E-02	2.91E-02
		K-40	<2.91E-02	0.00E+00	2.91E-02
509214	9/30/2019 - 10/7/2019	Beta	3.09E-02	3.67E-03	3.39E-03
509817	10/7/2019 - 10/14/2019	Beta	1.82E-02	2.97E-03	3.34E-03
510520	10/14/2019 - 10/21/2019	Beta	2.08E-02	2.83E-03	2.96E-03
510816	10/21/2019 - 10/28/2019	Beta	1.48E-02	2.88E-03	3.54E-03
511220	10/28/2019 - 11/4/2019	Beta	2.05E-02	3.20E-03	3.44E-03
511453	11/4/2019 - 11/11/2019	Beta	3.06E-02	3.22E-03	2.99E-03
511864	11/11/2019 - 11/18/2019	Beta	2.31E-02	3.15E-03	3.01E-03

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 90 [INDICATOR - SSW @ 0.5 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512168	11/18/2019 - 11/25/2019	Beta	2.25E-02	3.13E-03	3.18E-03
512471	11/25/2019 - 12/2/2019	Beta	1.88E-02	2.97E-03	3.12E-03
512648	12/2/2019 - 12/9/2019	Beta	1.70E-02	2.75E-03	2.91E-03
513614	12/9/2019 - 12/16/2019	Beta	1.72E-02	2.98E-03	3.36E-03
513928	12/16/2019 - 12/23/2019	Beta	2.93E-02	3.47E-03	3.25E-03
514151	12/23/2019 - 12/30/2019	Beta	2.66E-02	3.46E-03	3.42E-03
514461	9/30/2019 - 12/30/2019	Cs-134	<1.59E-03	0.00E+00	1.59E-03
		Cs-137	<1.46E-03	0.00E+00	1.46E-03
		Be-7	1.24E-01	3.69E-02	3.88E-02
		K-40	<2.19E-02	0.00E+00	2.19E-02

Sample Point 91 [INDICATOR - ENE @ 1.6 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492206	12/31/2018 - 1/7/2019	Beta	2.30E-02	2.85E-03	2.74E-03
492444	1/7/2019 - 1/14/2019	Beta	1.97E-02	3.01E-03	3.13E-03
492881	1/14/2019 - 1/21/2019	Beta	1.94E-02	2.64E-03	2.69E-03
493305	1/21/2019 - 1/28/2019	Beta	1.94E-02	2.75E-03	2.85E-03
493570	1/28/2019 - 2/4/2019	Beta	2.88E-02	3.42E-03	3.12E-03
493793	2/4/2019 - 2/11/2019	Beta	2.57E-02	3.29E-03	3.06E-03
494338	2/11/2019 - 2/18/2019	Beta	1.73E-02	2.81E-03	3.09E-03
494955	2/18/2019 - 2/25/2019	Beta	1.21E-02	2.76E-03	3.48E-03
495428	2/25/2019 - 3/4/2019	Beta	1.84E-02	2.55E-03	2.51E-03
496298	3/4/2019 - 3/11/2019	Beta	2.31E-02	3.15E-03	3.03E-03
496175	3/11/2019 - 3/18/2019	Beta	2.36E-02	2.82E-03	2.66E-03
496639	3/18/2019 - 3/25/2019	Beta	1.94E-02	2.85E-03	3.13E-03
497132	3/25/2019 - 4/1/2019	Beta	1.85E-02	2.61E-03	2.65E-03
497553	12/31/2018 - 4/1/2019	Cs-134	<2.38E-03	0.00E+00	2.38E-03
		Cs-137	<8.13E-04	0.00E+00	8.13E-04
		Be-7	1.72E-01	4.17E-02	3.22E-02
		K-40	<2.20E-02	0.00E+00	2.20E-02

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 91 [INDICATOR - ENE @ 1.6 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
497544	4/1/2019 - 4/8/2019	Beta	1.62E-02	2.92E-03	3.37E-03
498024	4/8/2019 - 4/15/2019	Beta	1.17E-02	2.66E-03	3.41E-03
498597	4/15/2019 - 4/22/2019	Beta	1.05E-02	2.81E-03	3.83E-03
498771	4/22/2019 - 4/29/2019	Beta	1.88E-02	2.96E-03	3.14E-03
499450	4/29/2019 - 5/6/2019	Beta	1.43E-02	2.54E-03	2.96E-03
499869	5/6/2019 - 5/13/2019	Beta	1.13E-02	2.52E-03	3.12E-03
500113	5/13/2019 - 5/20/2019	Beta	2.48E-02	3.40E-03	3.38E-03
500447	5/20/2019 - 5/28/2019	Beta	2.29E-02	2.97E-03	2.94E-03
500734	5/28/2019 - 6/3/2019	Beta	2.38E-02	3.68E-03	4.01E-03
501122	6/3/2019 - 6/10/2019	Beta	2.16E-02	2.92E-03	2.76E-03
501935	6/10/2019 - 6/17/2019	Beta	1.81E-02	2.70E-03	2.95E-03
502194	6/17/2019 - 6/24/2019	Beta	1.63E-02	2.87E-03	3.17E-03
502407	6/24/2019 - 7/1/2019	Beta	3.24E-02	3.53E-03	2.82E-03
503392	4/1/2019 - 7/1/2019	Cs-134	<1.62E-03	0.00E+00	1.62E-03
		Cs-137	<1.03E-03	0.00E+00	1.03E-03
		Be-7	1.95E-01	4.00E-02	2.27E-02
		K-40	<2.37E-02	0.00E+00	2.37E-02
503383	7/1/2019 - 7/8/2019	Beta	2.17E-02	2.98E-03	2.97E-03
503824	7/8/2019 - 7/15/2019	Beta	1.73E-02	2.97E-03	3.33E-03
504185	7/15/2019 - 7/22/2019	Beta	2.39E-02	3.11E-03	2.90E-03
504436	7/22/2019 - 7/29/2019	Beta	2.30E-02	3.11E-03	2.92E-03
504649	7/29/2019 - 8/5/2019	Beta	2.40E-02	2.80E-03	2.63E-03
504919	8/5/2019 - 8/12/2019	Beta	3.13E-02	3.26E-03	2.77E-03
505129	8/12/2019 - 8/20/2019	Beta	1.99E-02	2.78E-03	2.85E-03
505526	8/20/2019 - 8/26/2019	Beta	1.51E-02	3.09E-03	3.68E-03
505850	8/26/2019 - 9/3/2019	Beta	2.08E-02	2.62E-03	2.33E-03

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 91 [INDICATOR - ENE @ 1.6 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
506360	9/3/2019 - 9/9/2019	Beta	3.35E-02	4.08E-03	3.73E-03
507277	9/9/2019 - 9/16/2019	Beta	3.88E-02	3.77E-03	2.85E-03
507816	9/16/2019 - 9/23/2019	Beta	2.93E-02	3.41E-03	3.01E-03
508348	9/23/2019 - 9/30/2019	Beta	3.93E-02	3.86E-03	3.24E-03
509222	7/1/2019 - 9/30/2019	Cs-134	<1.28E-03	0.00E+00	1.28E-03
		Cs-137	<8.35E-04	0.00E+00	8.35E-04
		Be-7	1.88E-01	4.41E-02	4.07E-02
		K-40	<1.26E-02	0.00E+00	1.26E-02
509215	9/30/2019 - 10/7/2019	Beta	3.19E-02	3.71E-03	3.38E-03
509818	10/7/2019 - 10/14/2019	Beta	1.93E-02	3.03E-03	3.34E-03
510521	10/14/2019 - 10/21/2019	Beta	2.48E-02	2.99E-03	2.96E-03
510817	10/21/2019 - 10/28/2019	Beta	1.54E-02	2.92E-03	3.56E-03
511221	10/28/2019 - 11/4/2019	Beta	2.24E-02	3.30E-03	3.44E-03
511454	11/4/2019 - 11/11/2019	Beta	3.16E-02	3.26E-03	3.00E-03
511865	11/11/2019 - 11/18/2019	Beta	2.26E-02	3.13E-03	3.01E-03
512169	11/18/2019 - 11/25/2019	Beta	2.62E-02	3.31E-03	3.18E-03
512472	11/25/2019 - 12/2/2019	Beta	1.83E-02	2.95E-03	3.11E-03
512649	12/2/2019 - 12/9/2019	Beta	1.74E-02	2.78E-03	2.91E-03
513615	12/9/2019 - 12/16/2019	Beta	1.75E-02	3.00E-03	3.36E-03
513929	12/16/2019 - 12/23/2019	Beta	2.94E-02	3.47E-03	3.25E-03
514152	12/23/2019 - 12/30/2019	Beta	2.97E-02	3.62E-03	3.41E-03
514462	9/30/2019 - 12/30/2019	Cs-134	<2.05E-03	0.00E+00	2.05E-03
		Cs-137	<1.04E-03	0.00E+00	1.04E-03
		Be-7	1.40E-01	3.65E-02	3.49E-02
		K-40	<3.44E-02	0.00E+00	3.44E-02

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 1 [INDICATOR - N @ 2.6 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492207	12/31/2018 - 1/7/2019	I-131	<2.14E-02	0.00E+00	2.14E-02
		Cs-134	<1.90E-02	0.00E+00	1.90E-02
		Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 1 [INDICATOR - N @ 2.6 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492207	12/31/2018 - 1/7/2019	K-40	4.78E-01	1.88E-01	1.98E-01
492427	1/7/2019 - 1/14/2019	I-131	<1.66E-02	0.00E+00	1.66E-02
		Cs-134	<1.94E-02	0.00E+00	1.94E-02
		Cs-137	<2.10E-02	0.00E+00	2.10E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	5.04E-01	1.66E-01	3.50E-02
492882	1/14/2019 - 1/21/2019	I-131	<2.44E-02	0.00E+00	2.44E-02
		Cs-134	<1.70E-02	0.00E+00	1.70E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	4.26E-01	1.76E-01	1.85E-01
493306	1/21/2019 - 1/28/2019	I-131	<2.11E-02	0.00E+00	2.11E-02
		Cs-134	<1.83E-02	0.00E+00	1.83E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	4.11E-01	2.14E-01	2.86E-01
493571	1/28/2019 - 2/4/2019	I-131	<1.91E-02	0.00E+00	1.91E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.84E-02	0.00E+00	1.84E-02
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	3.07E-01	1.63E-01	2.00E-01
493794	2/4/2019 - 2/11/2019	I-131	<2.15E-02	0.00E+00	2.15E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.89E-02	0.00E+00	1.89E-02
		Be-7	<1.27E-01	0.00E+00	1.27E-01
		K-40	<3.59E-01	0.00E+00	3.59E-01
494339	2/11/2019 - 2/18/2019	I-131	<2.30E-02	0.00E+00	2.30E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-02
		Cs-137	<1.82E-02	0.00E+00	1.82E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	4.09E-01	1.61E-01	1.43E-01
494956	2/18/2019 - 2/25/2019	I-131	<2.68E-02	0.00E+00	2.68E-02
		Cs-134	<1.56E-02	0.00E+00	1.56E-02
		Cs-137	<1.84E-02	0.00E+00	1.84E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	5.00E-01	1.67E-01	3.57E-02
495411	2/25/2019 - 3/4/2019	I-131	<2.35E-02	0.00E+00	2.35E-02
		Cs-134	<1.97E-02	0.00E+00	1.97E-02
		Cs-137	<1.82E-02	0.00E+00	1.82E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	6.18E-01	2.18E-01	2.26E-01
496299	3/4/2019 - 3/11/2019	I-131	<2.29E-02	0.00E+00	2.29E-02
		Cs-134	<1.26E-02	0.00E+00	1.26E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	5.29E-01	1.83E-01	1.43E-01
496176	3/11/2019 - 3/18/2019	I-131	<2.10E-02	0.00E+00	2.10E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 1 [INDICATOR - N @ 2.6 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
496176	3/11/2019 - 3/18/2019	Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	<3.16E-01	0.00E+00	3.16E-01
496640	3/18/2019 - 3/25/2019	I-131	<2.64E-02	0.00E+00	2.64E-02
		Cs-134	<1.57E-02	0.00E+00	1.57E-02
		Cs-137	<1.94E-02	0.00E+00	1.94E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	6.51E-01	1.93E-01	3.60E-02
497133	3/25/2019 - 4/1/2019	I-131	<2.22E-02	0.00E+00	2.22E-02
		Cs-134	<1.43E-02	0.00E+00	1.43E-02
		Cs-137	<1.87E-02	0.00E+00	1.87E-02
		Be-7	<1.30E-01	0.00E+00	1.30E-01
		K-40	4.59E-01	1.80E-01	1.80E-01
497554	4/1/2019 - 4/8/2019	I-131	<2.20E-02	0.00E+00	2.20E-02
		Cs-134	<1.81E-02	0.00E+00	1.81E-02
		Cs-137	<1.97E-02	0.00E+00	1.97E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	5.31E-01	2.02E-01	2.13E-01
498025	4/8/2019 - 4/15/2019	I-131	<2.23E-02	0.00E+00	2.23E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.49E-02	0.00E+00	1.49E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	6.65E-01	2.11E-01	1.89E-01
498598	4/15/2019 - 4/22/2019	I-131	<2.27E-02	0.00E+00	2.27E-02
		Cs-134	<1.50E-02	0.00E+00	1.50E-02
		Cs-137	<2.36E-02	0.00E+00	2.36E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	<3.93E-01	0.00E+00	3.93E-01
498772	4/22/2019 - 4/29/2019	I-131	<1.96E-02	0.00E+00	1.96E-02
		Cs-134	<1.58E-02	0.00E+00	1.58E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	4.94E-01	1.63E-01	3.43E-02
499451	4/29/2019 - 5/6/2019	I-131	<1.84E-02	0.00E+00	1.84E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.76E-02	0.00E+00	1.76E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	5.70E-01	1.78E-01	3.51E-02
499870	5/6/2019 - 5/13/2019	I-131	<2.17E-02	0.00E+00	2.17E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-02
		Cs-137	<1.70E-02	0.00E+00	1.70E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	<3.59E-01	0.00E+00	3.59E-01
500114	5/13/2019 - 5/20/2019	I-131	<2.33E-02	0.00E+00	2.33E-02
		Cs-134	<1.85E-02	0.00E+00	1.85E-02
		Cs-137	<2.10E-02	0.00E+00	2.10E-02
		Be-7	<1.32E-01	0.00E+00	1.32E-01
		K-40	5.37E-01	2.09E-01	2.28E-01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 1 [INDICATOR - N @ 2.6 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500448	5/20/2019 - 5/28/2019	I-131	<2.58E-02	0.00E+00	2.58E-02
		Cs-134	<1.78E-02	0.00E+00	1.78E-02
		Cs-137	<1.43E-02	0.00E+00	1.43E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	5.77E-01	1.78E-01	1.33E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500735	5/28/2019 - 6/3/2019	I-131	<2.14E-02	0.00E+00	2.14E-02
		Cs-134	<1.79E-02	0.00E+00	1.79E-02
		Cs-137	<2.05E-02	0.00E+00	2.05E-02
		Be-7	<1.50E-01	0.00E+00	1.50E-01
		K-40	5.84E-01	2.49E-01	2.99E-01

Sample Point 2 [INDICATOR - NNE @ 1.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492208	12/31/2018 - 1/7/2019	I-131	<2.35E-02	0.00E+00	2.35E-02
		Cs-134	<1.71E-02	0.00E+00	1.71E-02
		Cs-137	<1.76E-02	0.00E+00	1.76E-02
		Be-7	<1.27E-01	0.00E+00	1.27E-01
		K-40	2.95E-01	1.36E-01	1.25E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492428	1/7/2019 - 1/14/2019	I-131	<2.20E-02	0.00E+00	2.20E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-02
		Cs-137	<1.85E-02	0.00E+00	1.85E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	3.83E-01	1.95E-01	2.52E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492883	1/14/2019 - 1/21/2019	I-131	<1.77E-02	0.00E+00	1.77E-02
		Cs-134	<1.22E-02	0.00E+00	1.22E-02
		Cs-137	<1.60E-02	0.00E+00	1.60E-02
		Be-7	<1.32E-01	0.00E+00	1.32E-01
		K-40	6.00E-01	1.90E-01	1.37E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493307	1/21/2019 - 1/28/2019	I-131	<2.06E-02	0.00E+00	2.06E-02
		Cs-134	<1.37E-02	0.00E+00	1.37E-02
		Cs-137	<2.20E-02	0.00E+00	2.20E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	5.47E-01	1.87E-01	1.46E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493572	1/28/2019 - 2/4/2019	I-131	<1.99E-02	0.00E+00	1.99E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.84E-02	0.00E+00	1.84E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	<3.84E-01	0.00E+00	3.84E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493795	2/4/2019 - 2/11/2019	I-131	<1.95E-02	0.00E+00	1.95E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.80E-02	0.00E+00	1.80E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	5.04E-01	1.89E-01	1.82E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494340	2/11/2019 - 2/18/2019	I-131	<2.04E-02	0.00E+00	2.04E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	3.84E-01	1.70E-01	1.90E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494957	2/18/2019 - 2/25/2019	I-131	<2.33E-02	0.00E+00	2.33E-02
		Cs-134	<1.72E-02	0.00E+00	1.72E-02
		Cs-137	<1.64E-02	0.00E+00	1.64E-02

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 2 [INDICATOR - NNE @ 1.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494957	2/18/2019 - 2/25/2019	Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	3.66E-01	1.88E-01	2.40E-01
495412	2/25/2019 - 3/4/2019	I-131	<2.10E-02	0.00E+00	2.10E-02
		Cs-134	<1.23E-02	0.00E+00	1.23E-02
		Cs-137	<1.82E-02	0.00E+00	1.82E-02
		Be-7	<9.41E-02	0.00E+00	9.41E-02
		K-40	5.95E-01	2.04E-01	1.90E-01
496300	3/4/2019 - 3/11/2019	I-131	<2.22E-02	0.00E+00	2.22E-02
		Cs-134	<2.11E-02	0.00E+00	2.11E-02
		Cs-137	<1.30E-02	0.00E+00	1.30E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	5.34E-01	2.01E-01	2.09E-01
496177	3/11/2019 - 3/18/2019	I-131	<2.22E-02	0.00E+00	2.22E-02
		Cs-134	<1.11E-02	0.00E+00	1.11E-02
		Cs-137	<1.73E-02	0.00E+00	1.73E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	3.66E-01	1.80E-01	2.24E-01
496641	3/18/2019 - 3/25/2019	I-131	<2.34E-02	0.00E+00	2.34E-02
		Cs-134	<1.49E-02	0.00E+00	1.49E-02
		Cs-137	<1.80E-02	0.00E+00	1.80E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	5.61E-01	2.09E-01	2.17E-01
497134	3/25/2019 - 4/1/2019	I-131	<2.23E-02	0.00E+00	2.23E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.82E-02	0.00E+00	1.82E-02
		Be-7	<1.27E-01	0.00E+00	1.27E-01
		K-40	3.74E-01	1.76E-01	2.06E-01
497555	4/1/2019 - 4/8/2019	I-131	<2.40E-02	0.00E+00	2.40E-02
		Cs-134	<1.94E-02	0.00E+00	1.94E-02
		Cs-137	<1.70E-02	0.00E+00	1.70E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	4.93E-01	1.74E-01	1.32E-01
498026	4/8/2019 - 4/15/2019	I-131	<2.56E-02	0.00E+00	2.56E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.59E-02	0.00E+00	1.59E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	3.03E-01	1.60E-01	1.99E-01
498599	4/15/2019 - 4/22/2019	I-131	<2.69E-02	0.00E+00	2.69E-02
		Cs-134	<1.93E-02	0.00E+00	1.93E-02
		Cs-137	<1.75E-02	0.00E+00	1.75E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	4.88E-01	1.92E-01	1.97E-01
498773	4/22/2019 - 4/29/2019	I-131	<2.21E-02	0.00E+00	2.21E-02
		Cs-134	<1.90E-02	0.00E+00	1.90E-02
		Cs-137	<1.34E-02	0.00E+00	1.34E-02
		Be-7	<7.57E-02	0.00E+00	7.57E-02
		K-40	3.98E-01	1.67E-01	1.70E-01
499452	4/29/2019 - 5/6/2019	I-131	<2.00E-02	0.00E+00	2.00E-02

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 2 [INDICATOR - NNE @ 1.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
499452	4/29/2019 - 5/6/2019	Cs-134	<1.88E-02	0.00E+00	1.88E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	8.03E-01	2.14E-01	3.51E-02
499871	5/6/2019 - 5/13/2019	I-131	<2.32E-02	0.00E+00	2.32E-02
		Cs-134	<1.22E-02	0.00E+00	1.22E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02
		Be-7	9.60E-02	9.07E-02	1.43E-01
		K-40	5.20E-01	1.83E-01	1.58E-01
500115	5/13/2019 - 5/20/2019	I-131	<2.66E-02	0.00E+00	2.66E-02
		Cs-134	<1.79E-02	0.00E+00	1.79E-02
		Cs-137	<2.02E-02	0.00E+00	2.02E-02
		Be-7	<1.49E-01	0.00E+00	1.49E-01
		K-40	4.79E-01	1.86E-01	1.83E-01
500449	5/20/2019 - 5/28/2019	I-131	<2.52E-02	0.00E+00	2.52E-02
		Cs-134	<1.32E-02	0.00E+00	1.32E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	4.35E-01	1.54E-01	1.24E-01
500736	5/28/2019 - 6/3/2019	I-131	<2.25E-02	0.00E+00	2.25E-02
		Cs-134	<1.79E-02	0.00E+00	1.79E-02
		Cs-137	<2.00E-02	0.00E+00	2.00E-02
		Be-7	<1.51E-01	0.00E+00	1.51E-01
		K-40	6.92E-01	2.28E-01	1.78E-01
501124	6/3/2019 - 6/10/2019	I-131	<2.19E-02	0.00E+00	2.19E-02
		Cs-134	<1.66E-02	0.00E+00	1.66E-02
		Cs-137	<1.52E-02	0.00E+00	1.52E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	5.72E-01	1.88E-01	1.50E-01
501937	6/10/2019 - 6/17/2019	I-131	<3.72E-02	0.00E+00	3.72E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-02
		Cs-137	<1.85E-02	0.00E+00	1.85E-02
		Be-7	<1.31E-01	0.00E+00	1.31E-01
		K-40	6.26E-01	2.14E-01	2.06E-01
502195	6/17/2019 - 6/24/2019	I-131	<2.04E-02	0.00E+00	2.04E-02
		Cs-134	<1.57E-02	0.00E+00	1.57E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	2.02E-01	1.13E-01	1.11E-01
502408	6/24/2019 - 7/1/2019	I-131	<2.05E-02	0.00E+00	2.05E-02
		Cs-134	<1.96E-02	0.00E+00	1.96E-02
		Cs-137	<1.77E-02	0.00E+00	1.77E-02
		Be-7	<1.29E-01	0.00E+00	1.29E-01
		K-40	6.69E-01	2.20E-01	2.05E-01
503393	7/1/2019 - 7/8/2019	I-131	<1.73E-02	0.00E+00	1.73E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<1.53E-02	0.00E+00	1.53E-02
		Be-7	<9.86E-02	0.00E+00	9.86E-02
		K-40	<4.02E-01	0.00E+00	4.02E-01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 2 [INDICATOR - NNE @ 1.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
503828	7/8/2019 - 7/15/2019	I-131	<4.04E-02	0.00E+00	4.04E-02
		Cs-134	<2.13E-02	0.00E+00	2.13E-02
		Cs-137	<1.76E-02	0.00E+00	1.76E-02
		Be-7	<1.27E-01	0.00E+00	1.27E-01
		K-40	6.62E-01	2.31E-01	2.40E-01
504186	7/15/2019 - 7/22/2019	I-131	<2.30E-02	0.00E+00	2.30E-02
		Cs-134	<1.97E-02	0.00E+00	1.97E-02
		Cs-137	<2.02E-02	0.00E+00	2.02E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	4.06E-01	2.05E-01	2.69E-01
504437	7/22/2019 - 7/29/2019	I-131	<2.62E-02	0.00E+00	2.62E-02
		Cs-134	<1.72E-02	0.00E+00	1.72E-02
		Cs-137	<1.29E-02	0.00E+00	1.29E-02
		Be-7	<9.90E-02	0.00E+00	9.90E-02
		K-40	2.13E-01	1.55E-01	2.23E-01
504650	7/29/2019 - 8/5/2019	I-131	<3.01E-02	0.00E+00	3.01E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.12E-02	0.00E+00	1.12E-02
		Be-7	1.10E-01	1.24E-01	2.02E-01
		K-40	<2.92E-01	0.00E+00	2.92E-01
504920	8/5/2019 - 8/12/2019	I-131	<2.04E-02	0.00E+00	2.04E-02
		Cs-134	<2.10E-02	0.00E+00	2.10E-02
		Cs-137	<1.58E-02	0.00E+00	1.58E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	5.64E-01	1.98E-01	1.80E-01
505130	8/12/2019 - 8/20/2019	I-131	<1.25E-02	0.00E+00	1.25E-02
		Cs-134	<1.34E-02	0.00E+00	1.34E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<1.00E-01	0.00E+00	1.00E-01
		K-40	2.90E-01	1.46E-01	1.78E-01
505527	8/20/2019 - 8/26/2019	I-131	<1.76E-02	0.00E+00	1.76E-02
		Cs-134	<1.71E-02	0.00E+00	1.71E-02
		Cs-137	<1.63E-02	0.00E+00	1.63E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	4.64E-01	2.16E-01	2.61E-01
505851	8/26/2019 - 9/3/2019	I-131	<1.82E-02	0.00E+00	1.82E-02
		Cs-134	<1.42E-02	0.00E+00	1.42E-02
		Cs-137	<1.22E-02	0.00E+00	1.22E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	2.64E-01	1.60E-01	2.22E-01
506361	9/3/2019 - 9/9/2019	I-131	<1.78E-02	0.00E+00	1.78E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<9.74E-02	0.00E+00	9.74E-02
		K-40	<1.43E-01	0.00E+00	1.43E-01
507278	9/9/2019 - 9/16/2019	I-131	<1.91E-02	0.00E+00	1.91E-02
		Cs-134	<2.12E-02	0.00E+00	2.12E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<1.47E-01	0.00E+00	1.47E-01
		K-40	4.77E-01	1.95E-01	2.17E-01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 2 [INDICATOR - NNE @ 1.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
507817	9/16/2019 - 9/23/2019	I-131	<1.98E-02	0.00E+00	1.98E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	4.61E-01	1.87E-01	2.04E-01
508349	9/23/2019 - 9/30/2019	I-131	<2.29E-02	0.00E+00	2.29E-02
		Cs-134	<1.12E-02	0.00E+00	1.12E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<1.65E-01	0.00E+00	1.65E-01
		K-40	5.00E-01	1.78E-01	1.54E-01
509223	9/30/2019 - 10/7/2019	I-131	<1.99E-02	0.00E+00	1.99E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<1.42E-02	0.00E+00	1.42E-02
		Be-7	<9.90E-02	0.00E+00	9.90E-02
		K-40	2.56E-01	1.73E-01	2.45E-01
509819	10/7/2019 - 10/14/2019	I-131	<1.90E-02	0.00E+00	1.90E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-02
		Cs-137	<1.38E-02	0.00E+00	1.38E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	4.42E-01	1.67E-01	1.47E-01
510522	10/14/2019 - 10/21/2019	I-131	<1.93E-02	0.00E+00	1.93E-02
		Cs-134	<1.39E-02	0.00E+00	1.39E-02
		Cs-137	<1.27E-02	0.00E+00	1.27E-02
		Be-7	<9.54E-02	0.00E+00	9.54E-02
		K-40	3.41E-01	1.66E-01	1.94E-01
510818	10/21/2019 - 10/28/2019	I-131	<2.22E-02	0.00E+00	2.22E-02
		Cs-134	<1.64E-02	0.00E+00	1.64E-02
		Cs-137	<1.81E-02	0.00E+00	1.81E-02
		Be-7	<1.49E-01	0.00E+00	1.49E-01
		K-40	6.53E-01	2.12E-01	1.97E-01
511222	10/28/2019 - 11/4/2019	I-131	<2.23E-02	0.00E+00	2.23E-02
		Cs-134	<1.51E-02	0.00E+00	1.51E-02
		Cs-137	<1.89E-02	0.00E+00	1.89E-02
		Be-7	<1.42E-01	0.00E+00	1.42E-01
		K-40	5.23E-01	1.94E-01	1.83E-01
511455	11/4/2019 - 11/11/2019	I-131	<1.96E-02	0.00E+00	1.96E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.86E-02	0.00E+00	1.86E-02
		Be-7	<1.37E-01	0.00E+00	1.37E-01
		K-40	5.85E-01	2.03E-01	1.91E-01
511866	11/11/2019 - 11/18/2019	I-131	<2.13E-02	0.00E+00	2.13E-02
		Cs-134	<1.90E-02	0.00E+00	1.90E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<1.31E-01	0.00E+00	1.31E-01
		K-40	4.86E-01	1.81E-01	1.64E-01
512170	11/18/2019 - 11/25/2019	I-131	<2.33E-02	0.00E+00	2.33E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<1.53E-01	0.00E+00	1.53E-01
		K-40	4.58E-01	1.77E-01	1.75E-01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 2 [INDICATOR - NNE @ 1.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512473	11/25/2019 - 12/2/2019	I-131	<2.21E-02	0.00E+00	2.21E-02
		Cs-134	<2.03E-02	0.00E+00	2.03E-02
		Cs-137	<1.74E-02	0.00E+00	1.74E-02
		Be-7	<1.69E-01	0.00E+00	1.69E-01
		K-40	7.52E-01	2.51E-01	2.65E-01
512650	12/2/2019 - 12/9/2019	I-131	<1.89E-02	0.00E+00	1.89E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-02
		Cs-137	<1.31E-02	0.00E+00	1.31E-02
		Be-7	<1.51E-01	0.00E+00	1.51E-01
		K-40	5.29E-01	2.07E-01	2.31E-01
513616	12/9/2019 - 12/16/2019	I-131	<1.36E-02	0.00E+00	1.36E-02
		Cs-134	<1.01E-02	0.00E+00	1.01E-02
		Cs-137	<8.74E-03	0.00E+00	8.74E-03
		Be-7	<6.57E-02	0.00E+00	6.57E-02
		K-40	2.83E-01	1.43E-01	1.62E-01
513930	12/16/2019 - 12/23/2019	I-131	<2.03E-02	0.00E+00	2.03E-02
		Cs-134	<1.56E-02	0.00E+00	1.56E-02
		Cs-137	<8.73E-03	0.00E+00	8.73E-03
		Be-7	<8.91E-02	0.00E+00	8.91E-02
		K-40	4.29E-01	1.58E-01	1.24E-01
514153	12/23/2019 - 12/30/2019	I-131	<2.71E-02	0.00E+00	2.71E-02
		Cs-134	<7.24E-03	0.00E+00	7.24E-03
		Cs-137	<1.27E-02	0.00E+00	1.27E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	<2.75E-01	0.00E+00	2.75E-01

Sample Point 4 [INDICATOR - NNE @ 3.1 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492210	12/31/2018 - 1/7/2019	I-131	<2.16E-02	0.00E+00	2.16E-02
		Cs-134	<1.57E-02	0.00E+00	1.57E-02
		Cs-137	<1.76E-02	0.00E+00	1.76E-02
		Be-7	<1.33E-01	0.00E+00	1.33E-01
		K-40	4.06E-01	1.83E-01	2.15E-01
492430	1/7/2019 - 1/14/2019	I-131	<1.83E-02	0.00E+00	1.83E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-02
		Cs-137	<1.75E-02	0.00E+00	1.75E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	4.83E-01	1.83E-01	1.73E-01
492885	1/14/2019 - 1/21/2019	I-131	<2.14E-02	0.00E+00	2.14E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	4.23E-01	1.88E-01	2.23E-01
493309	1/21/2019 - 1/28/2019	I-131	<1.96E-02	0.00E+00	1.96E-02
		Cs-134	<1.89E-02	0.00E+00	1.89E-02
		Cs-137	<1.72E-02	0.00E+00	1.72E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	5.04E-01	2.18E-01	2.66E-01
493574	1/28/2019 - 2/4/2019	I-131	<2.11E-02	0.00E+00	2.11E-02
		Cs-134	<2.16E-02	0.00E+00	2.16E-02
		Cs-137	<1.60E-02	0.00E+00	1.60E-02

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 4 [INDICATOR - NNE @ 3.1 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493574	1/28/2019 - 2/4/2019	Be-7	<1.40E-01	0.00E+00	1.40E-01
		K-40	3.77E-01	1.54E-01	1.31E-01
493797	2/4/2019 - 2/11/2019	I-131	<1.81E-02	0.00E+00	1.81E-02
		Cs-134	<1.88E-02	0.00E+00	1.88E-02
		Cs-137	<1.60E-02	0.00E+00	1.60E-02
		Be-7	<1.30E-01	0.00E+00	1.30E-01
		K-40	3.78E-01	1.72E-01	1.92E-01
494342	2/11/2019 - 2/18/2019	I-131	<2.35E-02	0.00E+00	2.35E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<1.65E-02	0.00E+00	1.65E-02
		Be-7	<8.50E-02	0.00E+00	8.50E-02
		K-40	4.71E-01	1.84E-01	1.91E-01
494959	2/18/2019 - 2/25/2019	I-131	<2.29E-02	0.00E+00	2.29E-02
		Cs-134	<1.71E-02	0.00E+00	1.71E-02
		Cs-137	<1.73E-02	0.00E+00	1.73E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	5.20E-01	1.96E-01	1.96E-01
495414	2/25/2019 - 3/4/2019	I-131	<2.30E-02	0.00E+00	2.30E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.63E-02	0.00E+00	1.63E-02
		Be-7	<1.38E-01	0.00E+00	1.38E-01
		K-40	5.86E-01	2.00E-01	1.82E-01
496302	3/4/2019 - 3/11/2019	I-131	<2.43E-02	0.00E+00	2.43E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.60E-02	0.00E+00	1.60E-02
		Be-7	<1.35E-01	0.00E+00	1.35E-01
		K-40	4.34E-01	1.93E-01	2.27E-01
496179	3/11/2019 - 3/18/2019	I-131	<2.20E-02	0.00E+00	2.20E-02
		Cs-134	<1.92E-02	0.00E+00	1.92E-02
		Cs-137	<1.49E-02	0.00E+00	1.49E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	<3.39E-01	0.00E+00	3.39E-01
496643	3/18/2019 - 3/25/2019	I-131	<1.95E-02	0.00E+00	1.95E-02
		Cs-134	<1.49E-02	0.00E+00	1.49E-02
		Cs-137	<1.65E-02	0.00E+00	1.65E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	3.99E-01	1.86E-01	2.20E-01
497136	3/25/2019 - 4/1/2019	I-131	<2.36E-02	0.00E+00	2.36E-02
		Cs-134	<1.25E-02	0.00E+00	1.25E-02
		Cs-137	<1.53E-02	0.00E+00	1.53E-02
		Be-7	<1.30E-01	0.00E+00	1.30E-01
		K-40	5.37E-01	1.81E-01	1.33E-01
497557	4/1/2019 - 4/8/2019	I-131	<2.25E-02	0.00E+00	2.25E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.84E-02	0.00E+00	1.84E-02
		Be-7	<1.38E-01	0.00E+00	1.38E-01
		K-40	6.11E-01	2.21E-01	2.35E-01
498028	4/8/2019 - 4/15/2019	I-131	<1.96E-02	0.00E+00	1.96E-02

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 4 [INDICATOR - NNE @ 3.1 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
498028	4/8/2019 - 4/15/2019	Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	4.44E-01	1.92E-01	2.26E-01
498601	4/15/2019 - 4/22/2019	I-131	<2.38E-02	0.00E+00	2.38E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<2.19E-02	0.00E+00	2.19E-02
		Be-7	<1.40E-01	0.00E+00	1.40E-01
		K-40	4.34E-01	2.12E-01	2.66E-01
498775	4/22/2019 - 4/29/2019	I-131	<2.22E-02	0.00E+00	2.22E-02
		Cs-134	<2.02E-02	0.00E+00	2.02E-02
		Cs-137	<1.81E-02	0.00E+00	1.81E-02
		Be-7	<1.40E-01	0.00E+00	1.40E-01
		K-40	4.67E-01	1.94E-01	2.20E-01
499454	4/29/2019 - 5/6/2019	I-131	<2.23E-02	0.00E+00	2.23E-02
		Cs-134	<1.27E-02	0.00E+00	1.27E-02
		Cs-137	<1.50E-02	0.00E+00	1.50E-02
		Be-7	<1.30E-01	0.00E+00	1.30E-01
		K-40	4.45E-01	1.77E-01	1.73E-01
499873	5/6/2019 - 5/13/2019	I-131	<2.07E-02	0.00E+00	2.07E-02
		Cs-134	<1.32E-02	0.00E+00	1.32E-02
		Cs-137	<1.78E-02	0.00E+00	1.78E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	3.64E-01	1.63E-01	1.78E-01
500117	5/13/2019 - 5/20/2019	I-131	<2.12E-02	0.00E+00	2.12E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<1.89E-02	0.00E+00	1.89E-02
		Be-7	<1.36E-01	0.00E+00	1.36E-01
		K-40	5.56E-01	1.77E-01	3.58E-02
500451	5/20/2019 - 5/28/2019	I-131	<2.34E-02	0.00E+00	2.34E-02
		Cs-134	<1.57E-02	0.00E+00	1.57E-02
		Cs-137	<1.43E-02	0.00E+00	1.43E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	<2.95E-01	0.00E+00	2.95E-01
500738	5/28/2019 - 6/3/2019	I-131	<2.74E-02	0.00E+00	2.74E-02
		Cs-134	<1.79E-02	0.00E+00	1.79E-02
		Cs-137	<2.05E-02	0.00E+00	2.05E-02
		Be-7	<1.37E-01	0.00E+00	1.37E-01
		K-40	6.43E-01	2.36E-01	2.38E-01
501126	6/3/2019 - 6/10/2019	I-131	<2.00E-02	0.00E+00	2.00E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02
		Cs-137	<1.10E-02	0.00E+00	1.10E-02
		Be-7	<1.31E-01	0.00E+00	1.31E-01
		K-40	6.17E-01	1.92E-01	1.40E-01
501939	6/10/2019 - 6/17/2019	I-131	<5.50E-02	0.00E+00	5.50E-02
		Cs-134	<3.03E-02	0.00E+00	3.03E-02
		Cs-137	<3.34E-02	0.00E+00	3.34E-02
		Be-7	<1.82E-01	0.00E+00	1.82E-01
		K-40	8.99E-01	2.90E-01	2.81E-01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 4 [INDICATOR - NNE @ 3.1 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
502197	6/17/2019 - 6/24/2019	I-131	<2.09E-02	0.00E+00	2.09E-02
		Cs-134	<1.99E-02	0.00E+00	1.99E-02
		Cs-137	<1.28E-02	0.00E+00	1.28E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	2.73E-01	1.31E-01	1.23E-01
502410	6/24/2019 - 7/1/2019	I-131	<2.25E-02	0.00E+00	2.25E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	5.26E-01	1.99E-01	2.05E-01
503395	7/1/2019 - 7/8/2019	I-131	<2.16E-02	0.00E+00	2.16E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.89E-02	0.00E+00	1.89E-02
		Be-7	<9.88E-02	0.00E+00	9.88E-02
		K-40	5.43E-01	1.81E-01	1.39E-01
503830	7/8/2019 - 7/15/2019	I-131	<4.22E-02	0.00E+00	4.22E-02
		Cs-134	<2.17E-02	0.00E+00	2.17E-02
		Cs-137	<1.93E-02	0.00E+00	1.93E-02
		Be-7	<1.46E-01	0.00E+00	1.46E-01
		K-40	5.91E-01	2.20E-01	2.38E-01
504188	7/15/2019 - 7/22/2019	I-131	<2.72E-02	0.00E+00	2.72E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-02
		Cs-137	<1.74E-02	0.00E+00	1.74E-02
		Be-7	<1.31E-01	0.00E+00	1.31E-01
		K-40	4.01E-01	1.99E-01	2.56E-01
504439	7/22/2019 - 7/29/2019	I-131	<3.04E-02	0.00E+00	3.04E-02
		Cs-134	<1.77E-02	0.00E+00	1.77E-02
		Cs-137	<1.52E-02	0.00E+00	1.52E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	2.87E-01	1.78E-01	2.47E-01
504652	7/29/2019 - 8/5/2019	I-131	<3.23E-02	0.00E+00	3.23E-02
		Cs-134	<1.30E-02	0.00E+00	1.30E-02
		Cs-137	<8.51E-03	0.00E+00	8.51E-03
		Be-7	<9.17E-02	0.00E+00	9.17E-02
		K-40	<2.43E-01	0.00E+00	2.43E-01
504922	8/5/2019 - 8/12/2019	I-131	<2.08E-02	0.00E+00	2.08E-02
		Cs-134	<1.33E-02	0.00E+00	1.33E-02
		Cs-137	<1.53E-02	0.00E+00	1.53E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	3.50E-01	1.53E-01	1.46E-01
505132	8/12/2019 - 8/20/2019	I-131	<1.27E-02	0.00E+00	1.27E-02
		Cs-134	<1.26E-02	0.00E+00	1.26E-02
		Cs-137	<1.26E-02	0.00E+00	1.26E-02
		Be-7	<6.86E-02	0.00E+00	6.86E-02
		K-40	5.01E-02	1.29E-01	2.28E-01
505529	8/20/2019 - 8/26/2019	I-131	<1.76E-02	0.00E+00	1.76E-02
		Cs-134	<1.95E-02	0.00E+00	1.95E-02
		Cs-137	<1.53E-02	0.00E+00	1.53E-02
		Be-7	<1.29E-01	0.00E+00	1.29E-01
		K-40	3.02E-01	1.69E-01	2.10E-01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 4 [INDICATOR - NNE @ 3.1 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
505853	8/26/2019 - 9/3/2019	I-131	<1.30E-02	0.00E+00	1.30E-02
		Cs-134	<8.01E-03	0.00E+00	8.01E-03
		Cs-137	<1.24E-02	0.00E+00	1.24E-02
		Be-7	<8.68E-02	0.00E+00	8.68E-02
		K-40	2.05E-01	1.21E-01	1.49E-01
506363	9/3/2019 - 9/9/2019	I-131	<2.01E-02	0.00E+00	2.01E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<1.44E-01	0.00E+00	1.44E-01
		K-40	3.84E-01	1.70E-01	1.52E-01
507280	9/9/2019 - 9/16/2019	I-131	<1.76E-02	0.00E+00	1.76E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.50E-02	0.00E+00	1.50E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	4.59E-01	1.55E-01	3.37E-02
507819	9/16/2019 - 9/23/2019	I-131	<1.87E-02	0.00E+00	1.87E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-02
		Cs-137	<1.51E-02	0.00E+00	1.51E-02
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	2.14E-01	1.48E-01	2.06E-01
508351	9/23/2019 - 9/30/2019	I-131	<1.76E-02	0.00E+00	1.76E-02
		Cs-134	<1.47E-02	0.00E+00	1.47E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	3.69E-01	1.66E-01	1.88E-01
509225	9/30/2019 - 10/7/2019	I-131	<1.23E-02	0.00E+00	1.23E-02
		Cs-134	<8.65E-03	0.00E+00	8.65E-03
		Cs-137	<8.63E-03	0.00E+00	8.63E-03
		Be-7	<6.26E-02	0.00E+00	6.26E-02
		K-40	3.10E-01	1.30E-01	1.68E-01
509821	10/7/2019 - 10/14/2019	I-131	<1.52E-02	0.00E+00	1.52E-02
		Cs-134	<1.49E-02	0.00E+00	1.49E-02
		Cs-137	<1.68E-02	0.00E+00	1.68E-02
		Be-7	<9.08E-02	0.00E+00	9.08E-02
		K-40	<2.02E-01	0.00E+00	2.02E-01
510524	10/14/2019 - 10/21/2019	I-131	<2.23E-02	0.00E+00	2.23E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-02
		Cs-137	<1.76E-02	0.00E+00	1.76E-02
		Be-7	<1.38E-01	0.00E+00	1.38E-01
		K-40	7.21E-01	2.07E-01	1.21E-01
510820	10/21/2019 - 10/28/2019	I-131	<2.19E-02	0.00E+00	2.19E-02
		Cs-134	<1.72E-02	0.00E+00	1.72E-02
		Cs-137	<1.35E-02	0.00E+00	1.35E-02
		Be-7	<1.57E-01	0.00E+00	1.57E-01
		K-40	5.17E-01	2.05E-01	2.32E-01
511224	10/28/2019 - 11/4/2019	I-131	<2.20E-02	0.00E+00	2.20E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<1.73E-02	0.00E+00	1.73E-02
		Be-7	<1.53E-01	0.00E+00	1.53E-01
		K-40	5.09E-01	2.02E-01	2.18E-01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 4 [INDICATOR - NNE @ 3.1 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511457	11/4/2019 - 11/11/2019	I-131	<1.50E-02	0.00E+00	1.50E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-02
		Cs-137	<1.24E-02	0.00E+00	1.24E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	<2.39E-01	0.00E+00	2.39E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511868	11/11/2019 - 11/18/2019	I-131	<1.69E-02	0.00E+00	1.69E-02
		Cs-134	<1.57E-02	0.00E+00	1.57E-02
		Cs-137	<1.47E-02	0.00E+00	1.47E-02
		Be-7	<9.51E-02	0.00E+00	9.51E-02
		K-40	2.67E-01	1.45E-01	1.75E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512172	11/18/2019 - 11/25/2019	I-131	<2.60E-02	0.00E+00	2.60E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-02
		Cs-137	<1.77E-02	0.00E+00	1.77E-02
		Be-7	<1.33E-01	0.00E+00	1.33E-01
		K-40	4.65E-01	2.08E-01	2.56E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512475	11/25/2019 - 12/2/2019	I-131	<2.01E-02	0.00E+00	2.01E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-02
		Cs-137	<1.33E-02	0.00E+00	1.33E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	4.65E-01	1.76E-01	1.67E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512652	12/2/2019 - 12/9/2019	I-131	<1.86E-02	0.00E+00	1.86E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-02
		Cs-137	<1.24E-02	0.00E+00	1.24E-02
		Be-7	<9.68E-02	0.00E+00	9.68E-02
		K-40	6.16E-01	2.46E-01	3.08E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
513618	12/9/2019 - 12/16/2019	I-131	<1.40E-02	0.00E+00	1.40E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02
		Be-7	<8.94E-02	0.00E+00	8.94E-02
		K-40	2.38E-01	1.36E-01	1.64E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
513932	12/16/2019 - 12/23/2019	I-131	<1.13E-02	0.00E+00	1.13E-02
		Cs-134	<1.14E-02	0.00E+00	1.14E-02
		Cs-137	<1.36E-02	0.00E+00	1.36E-02
		Be-7	<9.35E-02	0.00E+00	9.35E-02
		K-40	<9.03E-02	0.00E+00	9.03E-02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514155	12/23/2019 - 12/30/2019	I-131	<2.91E-02	0.00E+00	2.91E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.36E-02	0.00E+00	1.36E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	<3.41E-01	0.00E+00	3.41E-01

Sample Point 5 [CONTROL - WNW @ 12 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492212	12/31/2018 - 1/7/2019	I-131	<2.42E-02	0.00E+00	2.42E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<2.02E-02	0.00E+00	2.02E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	3.28E-01	1.84E-01	2.46E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492432	1/7/2019 - 1/14/2019	I-131	<2.22E-02	0.00E+00	2.22E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 5 [CONTROL - WNW @ 12 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492432	1/7/2019 - 1/14/2019	Be-7	<1.31E-01	0.00E+00	1.31E-01
		K-40	4.44E-01	1.80E-01	1.84E-01
492887	1/14/2019 - 1/21/2019	I-131	<1.94E-02	0.00E+00	1.94E-02
		Cs-134	<1.84E-02	0.00E+00	1.84E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<1.33E-01	0.00E+00	1.33E-01
		K-40	3.92E-01	2.00E-01	2.62E-01
493311	1/21/2019 - 1/28/2019	I-131	<1.85E-02	0.00E+00	1.85E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.43E-02	0.00E+00	1.43E-02
		Be-7	<1.40E-01	0.00E+00	1.40E-01
		K-40	6.14E-01	2.21E-01	2.35E-01
493576	1/28/2019 - 2/4/2019	I-131	<2.31E-02	0.00E+00	2.31E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.74E-02	0.00E+00	1.74E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	5.35E-01	1.96E-01	1.92E-01
493799	2/4/2019 - 2/11/2019	I-131	<2.21E-02	0.00E+00	2.21E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.65E-02	0.00E+00	1.65E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	5.79E-01	2.12E-01	2.21E-01
494344	2/11/2019 - 2/18/2019	I-131	<2.43E-02	0.00E+00	2.43E-02
		Cs-134	<1.33E-02	0.00E+00	1.33E-02
		Cs-137	<1.76E-02	0.00E+00	1.76E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	3.39E-01	1.53E-01	1.56E-01
494961	2/18/2019 - 2/25/2019	I-131	<1.72E-02	0.00E+00	1.72E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-02
		Cs-137	<2.08E-02	0.00E+00	2.08E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	4.39E-01	1.94E-01	2.28E-01
495416	2/25/2019 - 3/4/2019	I-131	<2.24E-02	0.00E+00	2.24E-02
		Cs-134	<1.97E-02	0.00E+00	1.97E-02
		Cs-137	<1.58E-02	0.00E+00	1.58E-02
		Be-7	<1.30E-01	0.00E+00	1.30E-01
		K-40	4.23E-01	1.61E-01	1.29E-01
496304	3/4/2019 - 3/11/2019	I-131	<2.62E-02	0.00E+00	2.62E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-02
		Cs-137	<2.01E-02	0.00E+00	2.01E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	4.37E-01	2.00E-01	2.44E-01
496181	3/11/2019 - 3/18/2019	I-131	<1.80E-02	0.00E+00	1.80E-02
		Cs-134	<1.57E-02	0.00E+00	1.57E-02
		Cs-137	<1.51E-02	0.00E+00	1.51E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	4.51E-01	2.22E-01	2.95E-01
496645	3/18/2019 - 3/25/2019	I-131	<2.45E-02	0.00E+00	2.45E-02

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 5 [CONTROL - WNW @ 12 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
496645	3/18/2019 - 3/25/2019	Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	4.38E-01	1.69E-01	1.47E-01
497138	3/25/2019 - 4/1/2019	I-131	<2.36E-02	0.00E+00	2.36E-02
		Cs-134	<1.66E-02	0.00E+00	1.66E-02
		Cs-137	<1.53E-02	0.00E+00	1.53E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	4.74E-01	1.70E-01	1.28E-01
497559	4/1/2019 - 4/8/2019	I-131	<2.06E-02	0.00E+00	2.06E-02
		Cs-134	<1.89E-02	0.00E+00	1.89E-02
		Cs-137	<1.94E-02	0.00E+00	1.94E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	4.18E-01	1.98E-01	2.46E-01
498030	4/8/2019 - 4/15/2019	I-131	<1.86E-02	0.00E+00	1.86E-02
		Cs-134	<1.42E-02	0.00E+00	1.42E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	4.62E-01	1.87E-01	2.00E-01
498603	4/15/2019 - 4/22/2019	I-131	<2.29E-02	0.00E+00	2.29E-02
		Cs-134	<2.01E-02	0.00E+00	2.01E-02
		Cs-137	<1.81E-02	0.00E+00	1.81E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	4.94E-01	2.08E-01	2.43E-01
498777	4/22/2019 - 4/29/2019	I-131	<2.51E-02	0.00E+00	2.51E-02
		Cs-134	<1.71E-02	0.00E+00	1.71E-02
		Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	<3.67E-01	0.00E+00	3.67E-01
499456	4/29/2019 - 5/6/2019	I-131	<2.15E-02	0.00E+00	2.15E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<1.60E-02	0.00E+00	1.60E-02
		Be-7	<1.38E-01	0.00E+00	1.38E-01
		K-40	5.05E-01	1.89E-01	1.82E-01
499875	5/6/2019 - 5/13/2019	I-131	<2.37E-02	0.00E+00	2.37E-02
		Cs-134	<1.92E-02	0.00E+00	1.92E-02
		Cs-137	<1.59E-02	0.00E+00	1.59E-02
		Be-7	<1.39E-01	0.00E+00	1.39E-01
		K-40	4.79E-01	2.07E-01	2.49E-01
500119	5/13/2019 - 5/20/2019	I-131	<2.73E-02	0.00E+00	2.73E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<2.11E-02	0.00E+00	2.11E-02
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	4.53E-01	1.86E-01	1.98E-01
500453	5/20/2019 - 5/28/2019	I-131	<2.22E-02	0.00E+00	2.22E-02
		Cs-134	<1.57E-02	0.00E+00	1.57E-02
		Cs-137	<1.70E-02	0.00E+00	1.70E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	3.89E-01	1.56E-01	1.57E-01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 5 [CONTROL - WNW @ 12 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500740	5/28/2019 - 6/3/2019	I-131	<2.83E-02	0.00E+00	2.83E-02
		Cs-134	<2.34E-02	0.00E+00	2.34E-02
		Cs-137	<1.81E-02	0.00E+00	1.81E-02
		Be-7	<1.33E-01	0.00E+00	1.33E-01
		K-40	6.56E-01	2.83E-01	3.61E-01
501128	6/3/2019 - 6/10/2019	I-131	<2.44E-02	0.00E+00	2.44E-02
		Cs-134	<1.71E-02	0.00E+00	1.71E-02
		Cs-137	<1.72E-02	0.00E+00	1.72E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	5.44E-01	1.93E-01	1.79E-01
501941	6/10/2019 - 6/17/2019	I-131	<3.24E-02	0.00E+00	3.24E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.76E-02	0.00E+00	1.76E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	4.50E-01	1.84E-01	1.93E-01
502198	6/17/2019 - 6/24/2019	I-131	<1.61E-02	0.00E+00	1.61E-02
		Cs-134	<1.25E-02	0.00E+00	1.25E-02
		Cs-137	<9.92E-03	0.00E+00	9.92E-03
		Be-7	<9.28E-02	0.00E+00	9.28E-02
		K-40	<3.07E-01	0.00E+00	3.07E-01
502411	6/24/2019 - 7/1/2019	I-131	<1.93E-02	0.00E+00	1.94E-02
		Cs-134	<1.16E-02	0.00E+00	1.16E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	4.25E-01	1.90E-01	2.23E-01
503396	7/1/2019 - 7/8/2019	I-131	<2.21E-02	0.00E+00	2.21E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<1.65E-02	0.00E+00	1.65E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	<3.68E-01	0.00E+00	3.68E-01
503831	7/8/2019 - 7/15/2019	I-131	<4.02E-02	0.00E+00	4.02E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<1.58E-02	0.00E+00	1.58E-02
		Be-7	<1.68E-01	0.00E+00	1.68E-01
		K-40	5.18E-01	1.79E-01	1.26E-01
504189	7/15/2019 - 7/22/2019	I-131	<2.38E-02	0.00E+00	2.38E-02
		Cs-134	<1.51E-02	0.00E+00	1.51E-02
		Cs-137	<1.72E-02	0.00E+00	1.72E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	4.24E-01	1.81E-01	2.00E-01
504440	7/22/2019 - 7/29/2019	I-131	<2.97E-02	0.00E+00	2.97E-02
		Cs-134	<1.25E-02	0.00E+00	1.25E-02
		Cs-137	<1.36E-02	0.00E+00	1.36E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	2.61E-01	1.43E-01	1.72E-01
504653	7/29/2019 - 8/5/2019	I-131	<2.85E-02	0.00E+00	2.85E-02
		Cs-134	<1.26E-02	0.00E+00	1.26E-02
		Cs-137	<1.24E-02	0.00E+00	1.24E-02
		Be-7	<9.59E-02	0.00E+00	9.59E-02
		K-40	<1.33E-01	0.00E+00	1.33E-01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 5 [CONTROL - WNW @ 12 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504923	8/5/2019 - 8/12/2019	I-131	<1.51E-02	0.00E+00	1.51E-02
		Cs-134	<1.01E-02	0.00E+00	1.01E-02
		Cs-137	<1.07E-02	0.00E+00	1.07E-02
		Be-7	<9.02E-02	0.00E+00	9.02E-02
		K-40	4.82E-01	1.18E-01	1.16E-01
505133	8/12/2019 - 8/20/2019	I-131	<1.28E-02	0.00E+00	1.28E-02
		Cs-134	<1.02E-02	0.00E+00	1.02E-02
		Cs-137	<1.10E-02	0.00E+00	1.10E-02
		Be-7	<5.92E-02	0.00E+00	5.92E-02
		K-40	<1.02E-01	0.00E+00	1.02E-01
505530	8/20/2019 - 8/26/2019	I-131	<1.52E-02	0.00E+00	1.52E-02
		Cs-134	<1.49E-02	0.00E+00	1.49E-02
		Cs-137	<1.38E-02	0.00E+00	1.38E-02
		Be-7	<9.20E-02	0.00E+00	9.20E-02
		K-40	<1.37E-01	0.00E+00	1.37E-01
505854	8/26/2019 - 9/3/2019	I-131	<1.57E-02	0.00E+00	1.57E-02
		Cs-134	<1.18E-02	0.00E+00	1.18E-02
		Cs-137	<1.20E-02	0.00E+00	1.20E-02
		Be-7	<9.63E-02	0.00E+00	9.63E-02
		K-40	4.31E-01	1.49E-01	1.13E-01
506364	9/3/2019 - 9/9/2019	I-131	<1.97E-02	0.00E+00	1.97E-02
		Cs-134	<1.57E-02	0.00E+00	1.57E-02
		Cs-137	<1.87E-02	0.00E+00	1.87E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	3.41E-01	2.05E-01	2.82E-01
507281	9/9/2019 - 9/16/2019	I-131	<1.72E-02	0.00E+00	1.72E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02
		Cs-137	<1.80E-02	0.00E+00	1.80E-02
		Be-7	<9.93E-02	0.00E+00	9.93E-02
		K-40	4.17E-01	1.70E-01	1.74E-01
507820	9/16/2019 - 9/23/2019	I-131	<1.72E-02	0.00E+00	1.72E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<1.11E-02	0.00E+00	1.11E-02
		Be-7	<8.95E-02	0.00E+00	8.95E-02
		K-40	2.54E-01	1.15E-01	3.44E-02
508352	9/23/2019 - 9/30/2019	I-131	<1.58E-02	0.00E+00	1.58E-02
		Cs-134	<1.34E-02	0.00E+00	1.34E-02
		Cs-137	<1.63E-02	0.00E+00	1.63E-02
		Be-7	<9.03E-02	0.00E+00	9.03E-02
		K-40	3.25E-01	1.84E-01	2.50E-01
509226	9/30/2019 - 10/7/2019	I-131	<9.65E-03	0.00E+00	9.65E-03
		Cs-134	<8.48E-03	0.00E+00	8.48E-03
		Cs-137	<7.31E-03	0.00E+00	7.31E-03
		Be-7	<4.84E-02	0.00E+00	4.84E-02
		K-40	4.02E-01	1.01E-01	1.15E-01
509822	10/7/2019 - 10/14/2019	I-131	<1.42E-02	0.00E+00	1.42E-02
		Cs-134	<1.15E-02	0.00E+00	1.15E-02
		Cs-137	<1.31E-02	0.00E+00	1.31E-02
		Be-7	<8.38E-02	0.00E+00	8.38E-02
		K-40	<2.62E-01	0.00E+00	2.62E-01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 5 [CONTROL - WNW @ 12 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
510525	10/14/2019 - 10/21/2019	I-131	<1.70E-02	0.00E+00	1.70E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<1.27E-01	0.00E+00	1.27E-01
		K-40	6.49E-01	1.87E-01	3.38E-02
510821	10/21/2019 - 10/28/2019	I-131	<2.04E-02	0.00E+00	2.04E-02
		Cs-134	<1.24E-02	0.00E+00	1.24E-02
		Cs-137	<1.59E-02	0.00E+00	1.59E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	3.86E-01	2.21E-01	3.15E-01
511225	10/28/2019 - 11/4/2019	I-131	<1.60E-02	0.00E+00	1.60E-02
		Cs-134	<1.77E-02	0.00E+00	1.77E-02
		Cs-137	<1.41E-02	0.00E+00	1.41E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	5.40E-01	2.12E-01	2.43E-01
511458	11/4/2019 - 11/11/2019	I-131	<1.56E-02	0.00E+00	1.56E-02
		Cs-134	<1.26E-02	0.00E+00	1.26E-02
		Cs-137	<1.09E-02	0.00E+00	1.09E-02
		Be-7	<9.26E-02	0.00E+00	9.26E-02
		K-40	2.94E-01	1.70E-01	2.26E-01
511869	11/11/2019 - 11/18/2019	I-131	<1.79E-02	0.00E+00	1.79E-02
		Cs-134	<1.37E-02	0.00E+00	1.37E-02
		Cs-137	<1.52E-02	0.00E+00	1.52E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	3.00E-01	1.63E-01	2.06E-01
512173	11/18/2019 - 11/25/2019	I-131	<1.88E-02	0.00E+00	1.88E-02
		Cs-134	<1.24E-02	0.00E+00	1.24E-02
		Cs-137	<1.30E-02	0.00E+00	1.30E-02
		Be-7	<8.81E-02	0.00E+00	8.81E-02
		K-40	4.06E-01	1.71E-01	1.84E-01
512476	11/25/2019 - 12/2/2019	I-131	<1.67E-02	0.00E+00	1.67E-02
		Cs-134	<1.71E-02	0.00E+00	1.71E-02
		Cs-137	<1.59E-02	0.00E+00	1.59E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	5.78E-01	1.91E-01	1.54E-01
512653	12/2/2019 - 12/9/2019	I-131	<1.53E-02	0.00E+00	1.53E-02
		Cs-134	<9.97E-03	0.00E+00	9.97E-03
		Cs-137	<1.05E-02	0.00E+00	1.05E-02
		Be-7	<8.49E-02	0.00E+00	8.49E-02
		K-40	5.37E-01	1.66E-01	3.23E-02
513619	12/9/2019 - 12/16/2019	I-131	<1.49E-02	0.00E+00	1.49E-02
		Cs-134	<7.25E-03	0.00E+00	7.25E-03
		Cs-137	<1.28E-02	0.00E+00	1.28E-02
		Be-7	<6.91E-02	0.00E+00	6.91E-02
		K-40	3.27E-01	1.75E-01	2.24E-01
513933	12/16/2019 - 12/23/2019	I-131	<1.57E-02	0.00E+00	1.57E-02
		Cs-134	<1.51E-02	0.00E+00	1.51E-02
		Cs-137	<1.08E-02	0.00E+00	1.08E-02
		Be-7	<8.44E-02	0.00E+00	8.44E-02
		K-40	<2.67E-01	0.00E+00	2.67E-01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 5 [CONTROL - WNW @ 12 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514156	12/23/2019 - 12/30/2019	I-131	<3.45E-02	0.00E+00	3.45E-02
		Cs-134	<1.96E-02	0.00E+00	1.96E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<1.49E-01	0.00E+00	1.49E-01
		K-40	4.80E-01	1.96E-01	2.14E-01

Sample Point 26 [INDICATOR - S @ 4.7 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492209	12/31/2018 - 1/7/2019	I-131	<2.56E-02	0.00E+00	2.56E-02
		Cs-134	<1.66E-02	0.00E+00	1.66E-02
		Cs-137	<1.58E-02	0.00E+00	1.58E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	2.86E-01	1.71E-01	2.31E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492429	1/7/2019 - 1/14/2019	I-131	<2.17E-02	0.00E+00	2.17E-02
		Cs-134	<1.80E-02	0.00E+00	1.80E-02
		Cs-137	<1.59E-02	0.00E+00	1.59E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	6.40E-01	2.00E-01	1.47E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492884	1/14/2019 - 1/21/2019	I-131	<2.16E-02	0.00E+00	2.16E-02
		Cs-134	<1.95E-02	0.00E+00	1.95E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02
		Be-7	<8.85E-02	0.00E+00	8.85E-02
		K-40	4.40E-01	1.53E-01	3.41E-02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493308	1/21/2019 - 1/28/2019	I-131	<2.06E-02	0.00E+00	2.06E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-02
		Cs-137	<1.37E-02	0.00E+00	1.37E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	4.08E-01	1.71E-01	1.76E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493573	1/28/2019 - 2/4/2019	I-131	<2.21E-02	0.00E+00	2.21E-02
		Cs-134	<2.11E-02	0.00E+00	2.11E-02
		Cs-137	<1.44E-02	0.00E+00	1.44E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	4.34E-01	1.63E-01	1.21E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493796	2/4/2019 - 2/11/2019	I-131	<2.20E-02	0.00E+00	2.20E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-02
		Cs-137	<1.74E-02	0.00E+00	1.74E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	4.99E-01	2.21E-01	2.77E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494341	2/11/2019 - 2/18/2019	I-131	<2.28E-02	0.00E+00	2.28E-02
		Cs-134	<1.70E-02	0.00E+00	1.70E-02
		Cs-137	<1.50E-02	0.00E+00	1.50E-02
		Be-7	<8.48E-02	0.00E+00	8.48E-02
		K-40	<3.80E-01	0.00E+00	3.80E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494958	2/18/2019 - 2/25/2019	I-131	<2.43E-02	0.00E+00	2.43E-02
		Cs-134	<1.91E-02	0.00E+00	1.91E-02
		Cs-137	<1.73E-02	0.00E+00	1.73E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	5.32E-01	1.89E-01	1.63E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
495413	2/25/2019 - 3/4/2019	I-131	<2.51E-02	0.00E+00	2.51E-02
		Cs-134	<2.09E-02	0.00E+00	2.09E-02
		Cs-137	<1.53E-02	0.00E+00	1.53E-02

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 26 [INDICATOR - S @ 4.7 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
495413	2/25/2019 - 3/4/2019	Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	5.20E-01	1.93E-01	1.91E-01
496301	3/4/2019 - 3/11/2019	I-131	<1.92E-02	0.00E+00	1.92E-02
		Cs-134	<2.15E-02	0.00E+00	2.15E-02
		Cs-137	<1.79E-02	0.00E+00	1.79E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	5.53E-01	2.05E-01	2.13E-01
496178	3/11/2019 - 3/18/2019	I-131	<2.54E-02	0.00E+00	2.54E-02
		Cs-134	<1.83E-02	0.00E+00	1.83E-02
		Cs-137	<1.51E-02	0.00E+00	1.51E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	4.70E-01	1.78E-01	1.68E-01
496642	3/18/2019 - 3/25/2019	I-131	<2.19E-02	0.00E+00	2.19E-02
		Cs-134	<1.90E-02	0.00E+00	1.90E-02
		Cs-137	<1.82E-02	0.00E+00	1.82E-02
		Be-7	<9.19E-02	0.00E+00	9.19E-02
		K-40	3.62E-01	1.72E-01	2.00E-01
497135	3/25/2019 - 4/1/2019	I-131	<2.46E-02	0.00E+00	2.46E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-02
		Cs-137	<1.79E-02	0.00E+00	1.79E-02
		Be-7	<1.31E-01	0.00E+00	1.31E-01
		K-40	4.21E-01	1.85E-01	2.11E-01
497556	4/1/2019 - 4/8/2019	I-131	<1.86E-02	0.00E+00	1.86E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.84E-02	0.00E+00	1.84E-02
		Be-7	<9.78E-02	0.00E+00	9.78E-02
		K-40	3.67E-01	1.73E-01	2.01E-01
498027	4/8/2019 - 4/15/2019	I-131	<2.43E-02	0.00E+00	2.43E-02
		Cs-134	<1.83E-02	0.00E+00	1.83E-02
		Cs-137	<1.82E-02	0.00E+00	1.82E-02
		Be-7	<1.32E-01	0.00E+00	1.32E-01
		K-40	4.41E-01	1.83E-01	1.93E-01
498600	4/15/2019 - 4/22/2019	I-131	<2.73E-02	0.00E+00	2.73E-02
		Cs-134	<2.14E-02	0.00E+00	2.14E-02
		Cs-137	<9.14E-03	0.00E+00	9.14E-03
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	4.05E-01	1.96E-01	2.46E-01
498774	4/22/2019 - 4/29/2019	I-131	<2.75E-02	0.00E+00	2.75E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.59E-02	0.00E+00	1.59E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	4.43E-01	1.72E-01	1.60E-01
499453	4/29/2019 - 5/6/2019	I-131	<3.01E-02	0.00E+00	3.01E-02
		Cs-134	<1.88E-02	0.00E+00	1.88E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	4.14E-01	2.12E-01	2.84E-01
499872	5/6/2019 - 5/13/2019	I-131	<2.77E-02	0.00E+00	2.77E-02

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 26 [INDICATOR - S @ 4.7 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
499872	5/6/2019 - 5/13/2019	Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	4.41E-01	1.91E-01	2.18E-01
500116	5/13/2019 - 5/20/2019	I-131	<2.70E-02	0.00E+00	2.70E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.50E-02	0.00E+00	1.50E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	6.13E-01	2.19E-01	2.28E-01
500450	5/20/2019 - 5/28/2019	I-131	<2.70E-02	0.00E+00	2.70E-02
		Cs-134	<1.18E-02	0.00E+00	1.18E-02
		Cs-137	<1.34E-02	0.00E+00	1.34E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	4.06E-01	1.77E-01	2.13E-01
500737	5/28/2019 - 6/3/2019	I-131	<2.21E-02	0.00E+00	2.21E-02
		Cs-134	<2.00E-02	0.00E+00	2.00E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	6.29E-01	2.70E-01	3.39E-01
501125	6/3/2019 - 6/10/2019	I-131	<2.27E-02	0.00E+00	2.27E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.87E-02	0.00E+00	1.87E-02
		Be-7	<1.31E-01	0.00E+00	1.31E-01
		K-40	5.52E-01	2.03E-01	2.09E-01
501938	6/10/2019 - 6/17/2019	I-131	<3.94E-02	0.00E+00	3.94E-02
		Cs-134	<2.17E-02	0.00E+00	2.17E-02
		Cs-137	<1.16E-02	0.00E+00	1.16E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	3.99E-01	1.94E-01	2.44E-01
502196	6/17/2019 - 6/24/2019	I-131	<1.81E-02	0.00E+00	1.81E-02
		Cs-134	<1.24E-02	0.00E+00	1.24E-02
		Cs-137	<1.68E-02	0.00E+00	1.68E-02
		Be-7	<7.88E-02	0.00E+00	7.88E-02
		K-40	<2.70E-01	0.00E+00	2.70E-01
502409	6/24/2019 - 7/1/2019	I-131	<2.38E-02	0.00E+00	2.38E-02
		Cs-134	<2.07E-02	0.00E+00	2.07E-02
		Cs-137	<1.94E-02	0.00E+00	1.94E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	4.48E-01	2.25E-01	3.04E-01
503394	7/1/2019 - 7/8/2019	I-131	<2.28E-02	0.00E+00	2.28E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.92E-02	0.00E+00	1.92E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	4.79E-01	1.92E-01	2.07E-01
503829	7/8/2019 - 7/15/2019	I-131	<4.40E-02	0.00E+00	4.40E-02
		Cs-134	<1.38E-02	0.00E+00	1.38E-02
		Cs-137	<1.51E-02	0.00E+00	1.51E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	5.34E-01	2.16E-01	2.51E-01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 26 [INDICATOR - S @ 4.7 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504187	7/15/2019 - 7/22/2019	I-131	<2.37E-02	0.00E+00	2.37E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.53E-02	0.00E+00	1.53E-02
		Be-7	<1.34E-01	0.00E+00	1.34E-01
		K-40	3.90E-01	2.08E-01	2.81E-01
504438	7/22/2019 - 7/29/2019	I-131	<2.91E-02	0.00E+00	2.91E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02
		Be-7	<9.15E-02	0.00E+00	9.15E-02
		K-40	2.87E-01	1.45E-01	1.64E-01
504651	7/29/2019 - 8/5/2019	I-131	<2.21E-02	0.00E+00	2.21E-02
		Cs-134	<1.30E-02	0.00E+00	1.30E-02
		Cs-137	<1.11E-02	0.00E+00	1.11E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	<2.38E-01	0.00E+00	2.38E-01
504921	8/5/2019 - 8/12/2019	I-131	<1.81E-02	0.00E+00	1.81E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<9.83E-02	0.00E+00	9.83E-02
		K-40	3.26E-01	1.41E-01	1.25E-01
505131	8/12/2019 - 8/20/2019	I-131	<1.43E-02	0.00E+00	1.43E-02
		Cs-134	<1.43E-02	0.00E+00	1.43E-02
		Cs-137	<1.42E-02	0.00E+00	1.42E-02
		Be-7	<5.68E-02	0.00E+00	5.68E-02
		K-40	<2.06E-01	0.00E+00	2.06E-01
505528	8/20/2019 - 8/26/2019	I-131	<1.32E-02	0.00E+00	1.32E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<8.81E-02	0.00E+00	8.81E-02
		K-40	3.41E-01	1.62E-01	1.67E-01
505852	8/26/2019 - 9/3/2019	I-131	<1.34E-02	0.00E+00	1.34E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-02
		Cs-137	<1.20E-02	0.00E+00	1.20E-02
		Be-7	<7.71E-02	0.00E+00	7.71E-02
		K-40	<1.01E-01	0.00E+00	1.01E-01
506362	9/3/2019 - 9/9/2019	I-131	<1.93E-02	0.00E+00	1.93E-02
		Cs-134	<1.95E-02	0.00E+00	1.95E-02
		Cs-137	<2.00E-02	0.00E+00	2.00E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	3.34E-01	1.81E-01	2.13E-01
507279	9/9/2019 - 9/16/2019	I-131	<1.86E-02	0.00E+00	1.86E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	<3.98E-01	0.00E+00	3.98E-01
507818	9/16/2019 - 9/23/2019	I-131	<1.89E-02	0.00E+00	1.89E-02
		Cs-134	<1.94E-02	0.00E+00	1.94E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	3.57E-01	1.46E-01	1.17E-01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 26 [INDICATOR - S @ 4.7 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
508350	9/23/2019 - 9/30/2019	I-131	<1.41E-02	0.00E+00	1.41E-02
		Cs-134	<2.23E-02	0.00E+00	2.23E-02
		Cs-137	<1.65E-02	0.00E+00	1.65E-02
		Be-7	<7.77E-02	0.00E+00	7.77E-02
		K-40	4.64E-01	1.77E-01	1.73E-01
509224	9/30/2019 - 10/7/2019	I-131	<2.36E-02	0.00E+00	2.36E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	4.56E-01	1.86E-01	1.99E-01
509820	10/7/2019 - 10/14/2019	I-131	<2.13E-02	0.00E+00	2.13E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.26E-02	0.00E+00	1.26E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	5.71E-01	1.99E-01	1.91E-01
510523	10/14/2019 - 10/21/2019	I-131	<1.86E-02	0.00E+00	1.86E-02
		Cs-134	<1.64E-02	0.00E+00	1.64E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<8.44E-02	0.00E+00	8.44E-02
		K-40	4.32E-01	1.78E-01	1.79E-01
510819	10/21/2019 - 10/28/2019	I-131	<1.83E-02	0.00E+00	1.83E-02
		Cs-134	<1.49E-02	0.00E+00	1.49E-02
		Cs-137	<1.52E-02	0.00E+00	1.52E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	5.15E-01	2.19E-01	2.75E-01
511223	10/28/2019 - 11/4/2019	I-131	<2.02E-02	0.00E+00	2.02E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-02
		Cs-137	<1.64E-02	0.00E+00	1.64E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	7.31E-01	2.32E-01	2.29E-01
511456	11/4/2019 - 11/11/2019	I-131	<1.38E-02	0.00E+00	1.38E-02
		Cs-134	<1.34E-02	0.00E+00	1.34E-02
		Cs-137	<1.60E-02	0.00E+00	1.60E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	5.07E-01	1.71E-01	1.18E-01
511867	11/11/2019 - 11/18/2019	I-131	<1.92E-02	0.00E+00	1.92E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	6.92E-01	2.32E-01	2.43E-01
512171	11/18/2019 - 11/25/2019	I-131	<1.71E-02	0.00E+00	1.71E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	5.18E-01	2.27E-01	2.91E-01
512474	11/25/2019 - 12/2/2019	I-131	<1.99E-02	0.00E+00	1.99E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-02
		Cs-137	<1.87E-02	0.00E+00	1.87E-02
		Be-7	<1.58E-01	0.00E+00	1.58E-01
		K-40	3.35E-01	1.85E-01	2.44E-01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 26 [INDICATOR - S @ 4.7 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512651	12/2/2019 - 12/9/2019	I-131	<1.95E-02	0.00E+00	1.95E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-02
		Cs-137	<1.51E-02	0.00E+00	1.51E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	6.18E-01	1.81E-01	3.35E-02
513617	12/9/2019 - 12/16/2019	I-131	<2.04E-02	0.00E+00	2.04E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.63E-02	0.00E+00	1.63E-02
		Be-7	<8.08E-02	0.00E+00	8.08E-02
		K-40	5.73E-01	1.91E-01	1.56E-01
513931	12/16/2019 - 12/23/2019	I-131	<2.02E-02	0.00E+00	2.02E-02
		Cs-134	<1.43E-02	0.00E+00	1.43E-02
		Cs-137	<1.31E-02	0.00E+00	1.31E-02
		Be-7	<8.95E-02	0.00E+00	8.95E-02
		K-40	2.57E-01	1.74E-01	2.46E-01
514154	12/23/2019 - 12/30/2019	I-131	<2.28E-02	0.00E+00	2.28E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<1.20E-02	0.00E+00	1.20E-02
		Be-7	<7.36E-02	0.00E+00	7.36E-02
		K-40	1.64E-01	1.48E-01	2.26E-01

Sample Point 47 [INDICATOR - SSW @ 3.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492211	12/31/2018 - 1/7/2019	I-131	<2.69E-02	0.00E+00	2.69E-02
		Cs-134	<1.92E-02	0.00E+00	1.92E-02
		Cs-137	<1.95E-02	0.00E+00	1.95E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	4.09E-01	1.94E-01	2.41E-01
492431	1/7/2019 - 1/14/2019	I-131	<2.19E-02	0.00E+00	2.19E-02
		Cs-134	<2.04E-02	0.00E+00	2.04E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	3.90E-01	1.55E-01	1.25E-01
492886	1/14/2019 - 1/21/2019	I-131	<2.10E-02	0.00E+00	2.10E-02
		Cs-134	<2.06E-02	0.00E+00	2.06E-02
		Cs-137	<1.66E-02	0.00E+00	1.66E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	5.91E-01	1.99E-01	1.78E-01
493310	1/21/2019 - 1/28/2019	I-131	<2.27E-02	0.00E+00	2.27E-02
		Cs-134	<1.87E-02	0.00E+00	1.87E-02
		Cs-137	<1.65E-02	0.00E+00	1.65E-02
		Be-7	<1.32E-01	0.00E+00	1.32E-01
		K-40	<3.80E-01	0.00E+00	3.80E-01
493575	1/28/2019 - 2/4/2019	I-131	<1.97E-02	0.00E+00	1.97E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	6.14E-01	1.94E-01	1.29E-01
493798	2/4/2019 - 2/11/2019	I-131	<2.28E-02	0.00E+00	2.28E-02
		Cs-134	<1.87E-02	0.00E+00	1.87E-02
		Cs-137	<1.70E-02	0.00E+00	1.70E-02

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 47 [INDICATOR - SSW @ 3.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493798	2/4/2019 - 2/11/2019	Be-7	2.25E-02	7.19E-02	1.27E-01
		K-40	4.28E-01	1.73E-01	1.72E-01
494343	2/11/2019 - 2/18/2019	I-131	<2.35E-02	0.00E+00	2.35E-02
		Cs-134	<1.70E-02	0.00E+00	1.70E-02
		Cs-137	<1.84E-02	0.00E+00	1.84E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	4.76E-01	1.72E-01	1.41E-01
494960	2/18/2019 - 2/25/2019	I-131	<2.52E-02	0.00E+00	2.52E-02
		Cs-134	<1.71E-02	0.00E+00	1.71E-02
		Cs-137	<1.92E-02	0.00E+00	1.92E-02
		Be-7	<1.69E-01	0.00E+00	1.69E-01
		K-40	5.77E-01	2.01E-01	1.85E-01
495415	2/25/2019 - 3/4/2019	I-131	<2.72E-02	0.00E+00	2.72E-02
		Cs-134	<1.80E-02	0.00E+00	1.80E-02
		Cs-137	<2.11E-02	0.00E+00	2.11E-02
		Be-7	<1.31E-01	0.00E+00	1.31E-01
		K-40	5.79E-01	2.06E-01	2.06E-01
496303	3/4/2019 - 3/11/2019	I-131	<2.16E-02	0.00E+00	2.16E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.59E-02	0.00E+00	1.59E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	<3.84E-01	0.00E+00	3.84E-01
496180	3/11/2019 - 3/18/2019	I-131	<1.80E-02	0.00E+00	1.80E-02
		Cs-134	<1.64E-02	0.00E+00	1.64E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	6.80E-01	2.13E-01	1.82E-01
496644	3/18/2019 - 3/25/2019	I-131	<2.20E-02	0.00E+00	2.20E-02
		Cs-134	<1.90E-02	0.00E+00	1.90E-02
		Cs-137	<1.62E-02	0.00E+00	1.62E-02
		Be-7	<1.33E-01	0.00E+00	1.33E-01
		K-40	5.14E-01	1.89E-01	1.77E-01
497137	3/25/2019 - 4/1/2019	I-131	<2.48E-02	0.00E+00	2.48E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<1.37E-01	0.00E+00	1.37E-01
		K-40	4.70E-01	2.01E-01	2.35E-01
497558	4/1/2019 - 4/8/2019	I-131	<2.05E-02	0.00E+00	2.05E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<1.31E-01	0.00E+00	1.31E-01
		K-40	2.86E-01	1.83E-01	2.56E-01
498029	4/8/2019 - 4/15/2019	I-131	<2.23E-02	0.00E+00	2.23E-02
		Cs-134	<1.33E-02	0.00E+00	1.33E-02
		Cs-137	<1.80E-02	0.00E+00	1.80E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	6.30E-01	1.85E-01	3.42E-02
498602	4/15/2019 - 4/22/2019	Nuclide	Activity	2 Sigma Error	MDA
		I-131	<2.01E-02	0.00E+00	2.01E-02

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 47 [INDICATOR - SSW @ 3.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
498602	4/15/2019 - 4/22/2019	Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<1.62E-02	0.00E+00	1.62E-02
		Be-7	<1.42E-01	0.00E+00	1.42E-01
		K-40	6.74E-01	2.18E-01	1.95E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
498776	4/22/2019 - 4/29/2019	I-131	<2.39E-02	0.00E+00	2.39E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-02
		Cs-137	<1.64E-02	0.00E+00	1.64E-02
		Be-7	<1.33E-01	0.00E+00	1.33E-01
		K-40	4.92E-01	1.80E-01	1.60E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
499455	4/29/2019 - 5/6/2019	I-131	<1.81E-02	0.00E+00	1.81E-02
		Cs-134	<1.94E-02	0.00E+00	1.94E-02
		Cs-137	<1.75E-02	0.00E+00	1.75E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	4.80E-01	2.00E-01	2.31E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
499874	5/6/2019 - 5/13/2019	I-131	<2.21E-02	0.00E+00	2.21E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.90E-02	0.00E+00	1.90E-02
		Be-7	<1.27E-01	0.00E+00	1.27E-01
		K-40	5.86E-01	1.90E-01	1.31E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500118	5/13/2019 - 5/20/2019	I-131	<2.48E-02	0.00E+00	2.48E-02
		Cs-134	<1.96E-02	0.00E+00	1.96E-02
		Cs-137	<1.72E-02	0.00E+00	1.72E-02
		Be-7	<1.34E-01	0.00E+00	1.34E-01
		K-40	4.45E-01	1.72E-01	1.51E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500452	5/20/2019 - 5/28/2019	I-131	<2.21E-02	0.00E+00	2.21E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<1.31E-01	0.00E+00	1.31E-01
		K-40	5.05E-01	1.64E-01	1.15E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500739	5/28/2019 - 6/3/2019	I-131	<2.81E-02	0.00E+00	2.81E-02
		Cs-134	<2.48E-02	0.00E+00	2.48E-02
		Cs-137	<2.11E-02	0.00E+00	2.11E-02
		Be-7	<1.33E-01	0.00E+00	1.33E-01
		K-40	5.70E-01	2.72E-01	3.62E-01

Sample Point 63 [INDICATOR - SW @ 0.6 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492213	12/31/2018 - 1/7/2019	I-131	<2.48E-02	0.00E+00	2.48E-02
		Cs-134	<1.78E-02	0.00E+00	1.78E-02
		Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	<3.57E-01	0.00E+00	3.57E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492433	1/7/2019 - 1/14/2019	I-131	<2.20E-02	0.00E+00	2.20E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<1.34E-01	0.00E+00	1.34E-01
		K-40	3.74E-01	1.83E-01	2.25E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492888	1/14/2019 - 1/21/2019	I-131	<2.30E-02	0.00E+00	2.30E-02
		Cs-134	<1.39E-02	0.00E+00	1.39E-02
		Cs-137	<1.73E-02	0.00E+00	1.73E-02
		Be-7	<9.85E-02	0.00E+00	9.85E-02

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 63 [INDICATOR - SW @ 0.6 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492888	1/14/2019 - 1/21/2019	K-40	3.85E-01	1.54E-01	1.32E-01
493312	1/21/2019 - 1/28/2019	I-131	<2.18E-02	0.00E+00	2.18E-02
		Cs-134	<1.64E-02	0.00E+00	1.64E-02
		Cs-137	<1.58E-02	0.00E+00	1.58E-02
		Be-7	<1.35E-01	0.00E+00	1.35E-01
		K-40	4.77E-01	1.74E-01	1.35E-01
493577	1/28/2019 - 2/4/2019	I-131	<1.88E-02	0.00E+00	1.88E-02
		Cs-134	<2.10E-02	0.00E+00	2.10E-02
		Cs-137	<1.97E-02	0.00E+00	1.97E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	3.79E-01	1.70E-01	1.86E-01
493800	2/4/2019 - 2/11/2019	I-131	<2.02E-02	0.00E+00	2.02E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<2.05E-02	0.00E+00	2.05E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	4.64E-01	1.59E-01	3.50E-02
494345	2/11/2019 - 2/18/2019	I-131	<2.46E-02	0.00E+00	2.46E-02
		Cs-134	<2.02E-02	0.00E+00	2.02E-02
		Cs-137	<2.21E-02	0.00E+00	2.21E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	4.64E-01	2.11E-01	2.68E-01
494962	2/18/2019 - 2/25/2019	I-131	<2.27E-02	0.00E+00	2.27E-02
		Cs-134	<1.94E-02	0.00E+00	1.94E-02
		Cs-137	<2.17E-02	0.00E+00	2.17E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	3.43E-01	2.18E-01	3.15E-01
495417	2/25/2019 - 3/4/2019	I-131	<1.82E-02	0.00E+00	1.82E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<1.68E-02	0.00E+00	1.68E-02
		Be-7	<1.30E-01	0.00E+00	1.30E-01
		K-40	5.64E-01	1.83E-01	1.23E-01
496305	3/4/2019 - 3/11/2019	I-131	<1.94E-02	0.00E+00	1.94E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<1.60E-02	0.00E+00	1.60E-02
		Be-7	<1.27E-01	0.00E+00	1.27E-01
		K-40	4.38E-01	1.68E-01	1.44E-01
496182	3/11/2019 - 3/18/2019	I-131	<2.23E-02	0.00E+00	2.23E-02
		Cs-134	<1.86E-02	0.00E+00	1.86E-02
		Cs-137	<1.25E-02	0.00E+00	1.25E-02
		Be-7	<1.30E-01	0.00E+00	1.30E-01
		K-40	5.16E-01	1.81E-01	1.57E-01
496646	3/18/2019 - 3/25/2019	I-131	<2.03E-02	0.00E+00	2.03E-02
		Cs-134	<1.66E-02	0.00E+00	1.66E-02
		Cs-137	<1.20E-02	0.00E+00	1.20E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	7.68E-01	2.24E-01	1.57E-01
497139	3/25/2019 - 4/1/2019	I-131	<2.35E-02	0.00E+00	2.35E-02
		Cs-134	<1.85E-02	0.00E+00	1.85E-02

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 63 [INDICATOR - SW @ 0.6 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
497139	3/25/2019 - 4/1/2019	Cs-137	<1.63E-02	0.00E+00	1.63E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	5.17E-01	1.92E-01	1.90E-01
497560	4/1/2019 - 4/8/2019	I-131	<2.19E-02	0.00E+00	2.19E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.80E-02	0.00E+00	1.80E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	6.20E-01	1.86E-01	3.50E-02
498031	4/8/2019 - 4/15/2019	I-131	<1.98E-02	0.00E+00	1.98E-02
		Cs-134	<1.39E-02	0.00E+00	1.39E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	4.20E-01	1.83E-01	2.09E-01
498604	4/15/2019 - 4/22/2019	I-131	<2.23E-02	0.00E+00	2.23E-02
		Cs-134	<2.00E-02	0.00E+00	2.00E-02
		Cs-137	<1.70E-02	0.00E+00	1.70E-02
		Be-7	<1.27E-01	0.00E+00	1.27E-01
		K-40	5.45E-01	1.76E-01	3.60E-02
498778	4/22/2019 - 4/29/2019	I-131	<2.61E-02	0.00E+00	2.61E-02
		Cs-134	<1.24E-02	0.00E+00	1.24E-02
		Cs-137	<2.02E-02	0.00E+00	2.02E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	4.61E-01	1.86E-01	2.00E-01
499457	4/29/2019 - 5/6/2019	I-131	<2.12E-02	0.00E+00	2.12E-02
		Cs-134	<1.89E-02	0.00E+00	1.89E-02
		Cs-137	<1.38E-02	0.00E+00	1.38E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	5.32E-01	1.94E-01	1.83E-01
499876	5/6/2019 - 5/13/2019	I-131	<2.02E-02	0.00E+00	2.02E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02
		Cs-137	<1.52E-02	0.00E+00	1.52E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	4.56E-01	1.80E-01	1.86E-01
500120	5/13/2019 - 5/20/2019	I-131	<2.71E-02	0.00E+00	2.71E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<1.38E-01	0.00E+00	1.38E-01
		K-40	5.42E-01	1.96E-01	1.79E-01
500454	5/20/2019 - 5/28/2019	I-131	<2.16E-02	0.00E+00	2.16E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.18E-02	0.00E+00	1.18E-02
		Be-7	<9.80E-02	0.00E+00	9.80E-02
		K-40	3.35E-01	1.47E-01	1.58E-01
500741	5/28/2019 - 6/3/2019	I-131	<2.80E-02	0.00E+00	2.80E-02
		Cs-134	<1.89E-02	0.00E+00	1.89E-02
		Cs-137	<2.07E-02	0.00E+00	2.07E-02
		Be-7	<1.48E-01	0.00E+00	1.48E-01
		K-40	8.17E-01	2.47E-01	1.82E-01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 63 [INDICATOR - SW @ 0.6 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
501129	6/3/2019 - 6/10/2019	I-131	<2.96E-02	0.00E+00	2.96E-02
		Cs-134	<1.78E-02	0.00E+00	1.78E-02
		Cs-137	<1.79E-02	0.00E+00	1.79E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	4.51E-01	1.88E-01	2.13E-01
501942	6/10/2019 - 6/17/2019	I-131	<3.82E-02	0.00E+00	3.82E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<1.31E-01	0.00E+00	1.31E-01
		K-40	4.62E-01	1.85E-01	1.91E-01
502199	6/17/2019 - 6/24/2019	I-131	<1.76E-02	0.00E+00	1.76E-02
		Cs-134	<1.86E-02	0.00E+00	1.86E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<9.52E-02	0.00E+00	9.52E-02
		K-40	4.75E-01	1.70E-01	1.29E-01
502412	6/24/2019 - 7/1/2019	I-131	<2.17E-02	0.00E+00	2.17E-02
		Cs-134	<1.17E-02	0.00E+00	1.17E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02
		Be-7	<1.27E-01	0.00E+00	1.27E-01
		K-40	3.94E-01	2.04E-01	2.69E-01
503397	7/1/2019 - 7/8/2019	I-131	<1.97E-02	0.00E+00	1.97E-02
		Cs-134	<2.01E-02	0.00E+00	2.01E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	6.55E-01	1.96E-01	1.28E-01
503832	7/8/2019 - 7/15/2019	I-131	<4.34E-02	0.00E+00	4.34E-02
		Cs-134	<1.87E-02	0.00E+00	1.87E-02
		Cs-137	<1.80E-02	0.00E+00	1.80E-02
		Be-7	<1.34E-01	0.00E+00	1.34E-01
		K-40	5.29E-01	2.02E-01	2.09E-01
504190	7/15/2019 - 7/22/2019	I-131	<2.09E-02	0.00E+00	2.09E-02
		Cs-134	<1.51E-02	0.00E+00	1.51E-02
		Cs-137	<1.53E-02	0.00E+00	1.53E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	2.17E-01	1.61E-01	2.34E-01
504441	7/22/2019 - 7/29/2019	I-131	<2.74E-02	0.00E+00	2.74E-02
		Cs-134	<1.17E-02	0.00E+00	1.17E-02
		Cs-137	<1.25E-02	0.00E+00	1.25E-02
		Be-7	<9.76E-02	0.00E+00	9.76E-02
		K-40	2.48E-01	1.35E-01	1.57E-01
504654	7/29/2019 - 8/5/2019	I-131	<3.63E-02	0.00E+00	3.63E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<1.70E-02	0.00E+00	1.70E-02
		Be-7	<1.44E-01	0.00E+00	1.44E-01
		K-40	5.44E-01	1.87E-01	1.65E-01
504924	8/5/2019 - 8/12/2019	I-131	<2.06E-02	0.00E+00	2.06E-02
		Cs-134	<2.02E-02	0.00E+00	2.02E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<9.97E-02	0.00E+00	9.97E-02
		K-40	<2.71E-01	0.00E+00	2.71E-01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 63 [INDICATOR - SW @ 0.6 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
505134	8/12/2019 - 8/20/2019	I-131	<1.35E-02	0.00E+00	1.35E-02
		Cs-134	<1.08E-02	0.00E+00	1.08E-02
		Cs-137	<1.34E-02	0.00E+00	1.34E-02
		Be-7	<9.38E-02	0.00E+00	9.38E-02
		K-40	<2.61E-01	0.00E+00	2.61E-01
505531	8/20/2019 - 8/26/2019	I-131	<2.07E-02	0.00E+00	2.07E-02
		Cs-134	<2.01E-02	0.00E+00	2.01E-02
		Cs-137	<1.89E-02	0.00E+00	1.89E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	2.39E-01	1.77E-01	2.50E-01
505855	8/26/2019 - 9/3/2019	I-131	<1.12E-02	0.00E+00	1.12E-02
		Cs-134	<1.10E-02	0.00E+00	1.10E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02
		Be-7	<7.35E-02	0.00E+00	7.35E-02
		K-40	1.74E-01	1.06E-01	1.28E-01
506365	9/3/2019 - 9/9/2019	I-131	<1.62E-02	0.00E+00	1.62E-02
		Cs-134	<2.09E-02	0.00E+00	2.09E-02
		Cs-137	<1.36E-02	0.00E+00	1.36E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	<2.78E-01	0.00E+00	2.78E-01
507282	9/9/2019 - 9/16/2019	I-131	<1.59E-02	0.00E+00	1.59E-02
		Cs-134	<1.40E-02	0.00E+00	1.40E-02
		Cs-137	<1.27E-02	0.00E+00	1.27E-02
		Be-7	<5.74E-02	0.00E+00	5.74E-02
		K-40	2.80E-01	1.56E-01	1.99E-01
507821	9/16/2019 - 9/23/2019	I-131	<1.35E-02	0.00E+00	1.35E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-02
		Cs-137	<1.17E-02	0.00E+00	1.17E-02
		Be-7	<8.93E-02	0.00E+00	8.93E-02
		K-40	2.51E-01	1.43E-01	1.70E-01
508353	9/23/2019 - 9/30/2019	I-131	<1.55E-02	0.00E+00	1.55E-02
		Cs-134	<1.27E-02	0.00E+00	1.27E-02
		Cs-137	<1.23E-02	0.00E+00	1.23E-02
		Be-7	<1.00E-01	0.00E+00	1.00E-01
		K-40	2.37E-01	1.16E-01	1.08E-01
509227	9/30/2019 - 10/7/2019	I-131	<1.99E-02	0.00E+00	1.99E-02
		Cs-134	<1.50E-02	0.00E+00	1.50E-02
		Cs-137	<1.44E-02	0.00E+00	1.44E-02
		Be-7	<7.54E-02	0.00E+00	7.54E-02
		K-40	3.25E-01	1.69E-01	2.10E-01
509823	10/7/2019 - 10/14/2019	I-131	<1.44E-02	0.00E+00	1.44E-02
		Cs-134	<1.33E-02	0.00E+00	1.33E-02
		Cs-137	<1.70E-02	0.00E+00	1.70E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	2.32E-01	1.52E-01	2.04E-01
510526	10/14/2019 - 10/21/2019	I-131	<1.67E-02	0.00E+00	1.67E-02
		Cs-134	<1.38E-02	0.00E+00	1.38E-02
		Cs-137	<1.11E-02	0.00E+00	1.11E-02
		Be-7	<9.54E-02	0.00E+00	9.54E-02
		K-40	<1.18E-01	0.00E+00	1.18E-01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 63 [INDICATOR - SW @ 0.6 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
510822	10/21/2019 - 10/28/2019	I-131	<2.53E-02	0.00E+00	2.53E-02
		Cs-134	<1.70E-02	0.00E+00	1.70E-02
		Cs-137	<1.27E-02	0.00E+00	1.27E-02
		Be-7	<1.53E-01	0.00E+00	1.53E-01
		K-40	7.13E-01	2.08E-01	1.47E-01
511226	10/28/2019 - 11/4/2019	I-131	<1.72E-02	0.00E+00	1.72E-02
		Cs-134	<1.30E-02	0.00E+00	1.30E-02
		Cs-137	<1.13E-02	0.00E+00	1.13E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	6.36E-01	2.00E-01	1.51E-01
511459	11/4/2019 - 11/11/2019	I-131	<1.75E-02	0.00E+00	1.75E-02
		Cs-134	<1.33E-02	0.00E+00	1.33E-02
		Cs-137	<1.52E-02	0.00E+00	1.52E-02
		Be-7	<9.25E-02	0.00E+00	9.25E-02
		K-40	3.08E-01	1.55E-01	1.76E-01
511870	11/11/2019 - 11/18/2019	I-131	<1.66E-02	0.00E+00	1.66E-02
		Cs-134	<1.18E-02	0.00E+00	1.18E-02
		Cs-137	<1.11E-02	0.00E+00	1.11E-02
		Be-7	<9.09E-02	0.00E+00	9.09E-02
		K-40	<1.18E-01	0.00E+00	1.18E-01
512174	11/18/2019 - 11/25/2019	I-131	<2.06E-02	0.00E+00	2.06E-02
		Cs-134	<1.56E-02	0.00E+00	1.56E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<1.57E-01	0.00E+00	1.57E-01
		K-40	6.92E-01	1.93E-01	3.35E-02
512477	11/25/2019 - 12/2/2019	I-131	<1.72E-02	0.00E+00	1.72E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<1.47E-02	0.00E+00	1.47E-02
		Be-7	<8.41E-02	0.00E+00	8.41E-02
		K-40	4.41E-01	1.77E-01	1.78E-01
512654	12/2/2019 - 12/9/2019	I-131	<1.64E-02	0.00E+00	1.64E-02
		Cs-134	<1.66E-02	0.00E+00	1.66E-02
		Cs-137	<1.08E-02	0.00E+00	1.08E-02
		Be-7	<9.78E-02	0.00E+00	9.78E-02
		K-40	3.00E-01	1.61E-01	2.02E-01
513620	12/9/2019 - 12/16/2019	I-131	<1.42E-02	0.00E+00	1.42E-02
		Cs-134	<1.56E-02	0.00E+00	1.56E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<7.25E-02	0.00E+00	7.25E-02
		K-40	4.45E-01	1.71E-01	1.43E-01
513934	12/16/2019 - 12/23/2019	I-131	<1.95E-02	0.00E+00	1.95E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.37E-02	0.00E+00	1.37E-02
		Be-7	<7.01E-02	0.00E+00	7.01E-02
		K-40	3.28E-01	1.52E-01	1.71E-01
514157	12/23/2019 - 12/30/2019	I-131	<2.86E-02	0.00E+00	2.86E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.62E-02	0.00E+00	1.62E-02
		Be-7	<1.46E-01	0.00E+00	1.46E-01
		K-40	4.30E-01	2.03E-01	2.56E-01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 90 [INDICATOR - SSW @ 0.5 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492214	12/31/2018 - 1/7/2019	I-131	<2.63E-02	0.00E+00	2.63E-02
		Cs-134	<2.01E-02	0.00E+00	2.01E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<1.38E-01	0.00E+00	1.38E-01
		K-40	4.43E-01	1.98E-01	2.41E-01
492434	1/7/2019 - 1/14/2019	I-131	<2.36E-02	0.00E+00	2.36E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.75E-02	0.00E+00	1.75E-02
		Be-7	<1.37E-01	0.00E+00	1.37E-01
		K-40	4.39E-01	1.55E-01	3.50E-02
492889	1/14/2019 - 1/21/2019	I-131	<2.28E-02	0.00E+00	2.28E-02
		Cs-134	<1.39E-02	0.00E+00	1.39E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	<3.55E-01	0.00E+00	3.55E-01
493313	1/21/2019 - 1/28/2019	I-131	<2.32E-02	0.00E+00	2.32E-02
		Cs-134	<1.71E-02	0.00E+00	1.71E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	5.04E-01	1.78E-01	1.33E-01
493578	1/28/2019 - 2/4/2019	I-131	<1.93E-02	0.00E+00	1.93E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<1.27E-01	0.00E+00	1.27E-01
		K-40	5.16E-01	2.10E-01	2.43E-01
493801	2/4/2019 - 2/11/2019	I-131	<2.07E-02	0.00E+00	2.07E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<2.01E-02	0.00E+00	2.01E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	<3.91E-01	0.00E+00	3.91E-01
494346	2/11/2019 - 2/18/2019	I-131	<2.57E-02	0.00E+00	2.57E-02
		Cs-134	<1.38E-02	0.00E+00	1.38E-02
		Cs-137	<1.72E-02	0.00E+00	1.72E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	4.65E-01	1.92E-01	2.20E-01
494963	2/18/2019 - 2/25/2019	I-131	<2.32E-02	0.00E+00	2.32E-02
		Cs-134	<1.41E-02	0.00E+00	1.41E-02
		Cs-137	<2.08E-02	0.00E+00	2.08E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	<3.71E-01	0.00E+00	3.71E-01
495418	2/25/2019 - 3/4/2019	I-131	<2.79E-02	0.00E+00	2.79E-02
		Cs-134	<1.72E-02	0.00E+00	1.72E-02
		Cs-137	<1.47E-02	0.00E+00	1.47E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	5.26E-01	2.07E-01	2.31E-01
496306	3/4/2019 - 3/11/2019	I-131	<2.39E-02	0.00E+00	2.39E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.49E-02	0.00E+00	1.49E-02
		Be-7	<9.18E-02	0.00E+00	9.18E-02
		K-40	6.11E-01	1.92E-01	1.24E-01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 90 [INDICATOR - SSW @ 0.5 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
496183	3/11/2019 - 3/18/2019	I-131	<2.68E-02	0.00E+00	2.68E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.97E-02	0.00E+00	1.97E-02
		Be-7	<1.33E-01	0.00E+00	1.33E-01
		K-40	4.09E-01	1.46E-01	3.36E-02
496647	3/18/2019 - 3/25/2019	I-131	<2.36E-02	0.00E+00	2.36E-02
		Cs-134	<1.87E-02	0.00E+00	1.87E-02
		Cs-137	<1.34E-02	0.00E+00	1.34E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	4.22E-01	1.84E-01	2.04E-01
497140	3/25/2019 - 4/1/2019	I-131	<2.36E-02	0.00E+00	2.36E-02
		Cs-134	<1.51E-02	0.00E+00	1.51E-02
		Cs-137	<2.10E-02	0.00E+00	2.10E-02
		Be-7	<9.44E-02	0.00E+00	9.44E-02
		K-40	5.10E-01	1.85E-01	1.69E-01
497561	4/1/2019 - 4/8/2019	I-131	<1.66E-02	0.00E+00	1.66E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-02
		Cs-137	<1.80E-02	0.00E+00	1.80E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	4.75E-01	1.76E-01	1.51E-01
498032	4/8/2019 - 4/15/2019	I-131	<2.26E-02	0.00E+00	2.26E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<1.68E-02	0.00E+00	1.68E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	3.91E-01	1.84E-01	2.26E-01
498605	4/15/2019 - 4/22/2019	I-131	<2.57E-02	0.00E+00	2.57E-02
		Cs-134	<1.19E-02	0.00E+00	1.19E-02
		Cs-137	<1.75E-02	0.00E+00	1.75E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	4.39E-01	2.04E-01	2.51E-01
498779	4/22/2019 - 4/29/2019	I-131	<2.18E-02	0.00E+00	2.18E-02
		Cs-134	<1.50E-02	0.00E+00	1.50E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	3.30E-01	1.73E-01	2.19E-01
499458	4/29/2019 - 5/6/2019	I-131	<2.27E-02	0.00E+00	2.27E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.50E-02	0.00E+00	1.50E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	4.51E-01	1.63E-01	1.09E-01
499877	5/6/2019 - 5/13/2019	I-131	<2.10E-02	0.00E+00	2.10E-02
		Cs-134	<1.90E-02	0.00E+00	1.90E-02
		Cs-137	<1.42E-02	0.00E+00	1.42E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	6.64E-01	1.88E-01	3.33E-02
500121	5/13/2019 - 5/20/2019	I-131	<2.33E-02	0.00E+00	2.33E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<1.12E-02	0.00E+00	1.12E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	4.59E-01	2.10E-01	2.58E-01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 90 [INDICATOR - SSW @ 0.5 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500455	5/20/2019 - 5/28/2019	I-131	<2.34E-02	0.00E+00	2.34E-02
		Cs-134	<1.39E-02	0.00E+00	1.39E-02
		Cs-137	<1.51E-02	0.00E+00	1.51E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	3.25E-01	1.47E-01	1.62E-01
500742	5/28/2019 - 6/3/2019	I-131	<2.72E-02	0.00E+00	2.72E-02
		Cs-134	<2.29E-02	0.00E+00	2.29E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<1.34E-01	0.00E+00	1.34E-01
		K-40	8.55E-01	2.48E-01	1.57E-01
501130	6/3/2019 - 6/10/2019	I-131	<3.03E-02	0.00E+00	3.03E-02
		Cs-134	<1.84E-02	0.00E+00	1.84E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<1.36E-01	0.00E+00	1.36E-01
		K-40	5.57E-01	1.93E-01	1.83E-01
501943	6/10/2019 - 6/17/2019	I-131	<3.68E-02	0.00E+00	3.68E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.60E-02	0.00E+00	1.60E-02
		Be-7	<1.31E-01	0.00E+00	1.31E-01
		K-40	4.73E-01	1.76E-01	1.55E-01
502200	6/17/2019 - 6/24/2019	I-131	<1.46E-02	0.00E+00	1.46E-02
		Cs-134	<1.47E-02	0.00E+00	1.47E-02
		Cs-137	<1.27E-02	0.00E+00	1.27E-02
		Be-7	<9.97E-02	0.00E+00	9.97E-02
		K-40	2.68E-01	1.43E-01	1.68E-01
502413	6/24/2019 - 7/1/2019	I-131	<2.18E-02	0.00E+00	2.18E-02
		Cs-134	<1.17E-02	0.00E+00	1.17E-02
		Cs-137	<1.91E-02	0.00E+00	1.91E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	6.41E-01	1.90E-01	3.54E-02
503398	7/1/2019 - 7/8/2019	I-131	<2.46E-02	0.00E+00	2.46E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.63E-02	0.00E+00	1.63E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	3.65E-01	1.82E-01	2.31E-01
503833	7/8/2019 - 7/15/2019	I-131	<3.88E-02	0.00E+00	3.88E-02
		Cs-134	<2.34E-02	0.00E+00	2.34E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<1.30E-01	0.00E+00	1.30E-01
		K-40	5.34E-01	2.33E-01	2.92E-01
504191	7/15/2019 - 7/22/2019	I-131	<2.27E-02	0.00E+00	2.27E-02
		Cs-134	<1.86E-02	0.00E+00	1.86E-02
		Cs-137	<1.87E-02	0.00E+00	1.87E-02
		Be-7	<9.89E-02	0.00E+00	9.89E-02
		K-40	4.21E-01	2.06E-01	2.66E-01
504442	7/22/2019 - 7/29/2019	I-131	<2.86E-02	0.00E+00	2.86E-02
		Cs-134	<1.97E-02	0.00E+00	1.97E-02
		Cs-137	<1.52E-02	0.00E+00	1.52E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	3.69E-01	1.71E-01	1.99E-01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 90 [INDICATOR - SSW @ 0.5 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504655	7/29/2019 - 8/5/2019	I-131	<3.79E-02	0.00E+00	3.79E-02
		Cs-134	<1.70E-02	0.00E+00	1.70E-02
		Cs-137	<1.50E-02	0.00E+00	1.50E-02
		Be-7	<1.42E-01	0.00E+00	1.42E-01
		K-40	4.30E-01	1.93E-01	2.35E-01
504925	8/5/2019 - 8/12/2019	I-131	<2.20E-02	0.00E+00	2.20E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.95E-02	0.00E+00	1.95E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	2.49E-01	1.31E-01	1.36E-01
505135	8/12/2019 - 8/20/2019	I-131	<1.67E-02	0.00E+00	1.67E-02
		Cs-134	<1.41E-02	0.00E+00	1.41E-02
		Cs-137	<1.21E-02	0.00E+00	1.21E-02
		Be-7	<9.23E-02	0.00E+00	9.23E-02
		K-40	2.35E-01	1.25E-01	1.48E-01
505532	8/20/2019 - 8/26/2019	I-131	<2.25E-02	0.00E+00	2.25E-02
		Cs-134	<1.81E-02	0.00E+00	1.81E-02
		Cs-137	<2.35E-02	0.00E+00	2.35E-02
		Be-7	<1.48E-01	0.00E+00	1.48E-01
		K-40	5.04E-01	2.04E-01	2.02E-01
505856	8/26/2019 - 9/3/2019	I-131	<2.00E-02	0.00E+00	2.00E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<1.42E-02	0.00E+00	1.42E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	4.28E-01	1.43E-01	3.05E-02
506366	9/3/2019 - 9/9/2019	I-131	<1.57E-02	0.00E+00	1.57E-02
		Cs-134	<1.48E-02	0.00E+00	1.48E-02
		Cs-137	<1.63E-02	0.00E+00	1.63E-02
		Be-7	<9.86E-02	0.00E+00	9.86E-02
		K-40	2.00E-01	1.51E-01	2.11E-01
507283	9/9/2019 - 9/16/2019	I-131	<1.73E-02	0.00E+00	1.73E-02
		Cs-134	<1.15E-02	0.00E+00	1.15E-02
		Cs-137	<1.44E-02	0.00E+00	1.44E-02
		Be-7	<8.37E-02	0.00E+00	8.37E-02
		K-40	2.46E-01	1.51E-01	2.01E-01
507822	9/16/2019 - 9/23/2019	I-131	<2.32E-02	0.00E+00	2.32E-02
		Cs-134	<2.09E-02	0.00E+00	2.09E-02
		Cs-137	<1.97E-02	0.00E+00	1.97E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	7.26E-01	2.02E-01	3.51E-02
508354	9/23/2019 - 9/30/2019	I-131	<1.44E-02	0.00E+00	1.44E-02
		Cs-134	<1.39E-02	0.00E+00	1.39E-02
		Cs-137	<1.66E-02	0.00E+00	1.66E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	3.77E-01	1.59E-01	1.63E-01
509228	9/30/2019 - 10/7/2019	I-131	<2.09E-02	0.00E+00	2.09E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<1.75E-02	0.00E+00	1.75E-02
		Be-7	<1.66E-01	0.00E+00	1.66E-01
		K-40	4.89E-01	2.00E-01	2.18E-01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 90 [INDICATOR - SSW @ 0.5 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
509824	10/7/2019 - 10/14/2019	I-131	<2.31E-02	0.00E+00	2.31E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.43E-02	0.00E+00	1.43E-02
		Be-7	<1.54E-01	0.00E+00	1.54E-01
		K-40	5.95E-01	1.80E-01	3.43E-02
510527	10/14/2019 - 10/21/2019	I-131	<1.68E-02	0.00E+00	1.68E-02
		Cs-134	<1.26E-02	0.00E+00	1.26E-02
		Cs-137	<1.38E-02	0.00E+00	1.38E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	6.56E-01	1.87E-01	3.35E-02
510823	10/21/2019 - 10/28/2019	I-131	<1.78E-02	0.00E+00	1.78E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<1.20E-02	0.00E+00	1.20E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	4.28E-01	1.80E-01	2.05E-01
511227	10/28/2019 - 11/4/2019	I-131	<1.76E-02	0.00E+00	1.76E-02
		Cs-134	<1.22E-02	0.00E+00	1.22E-02
		Cs-137	<1.15E-02	0.00E+00	1.15E-02
		Be-7	<8.79E-02	0.00E+00	8.79E-02
		K-40	4.57E-01	1.77E-01	1.64E-01
511460	11/4/2019 - 11/11/2019	I-131	<9.16E-03	0.00E+00	9.16E-03
		Cs-134	<7.61E-03	0.00E+00	7.61E-03
		Cs-137	<7.44E-03	0.00E+00	7.44E-03
		Be-7	<4.37E-02	0.00E+00	4.37E-02
		K-40	2.87E-01	8.78E-02	8.79E-02
511871	11/11/2019 - 11/18/2019	I-131	<1.86E-02	0.00E+00	1.86E-02
		Cs-134	<9.62E-03	0.00E+00	9.62E-03
		Cs-137	<1.74E-02	0.00E+00	1.74E-02
		Be-7	<9.54E-02	0.00E+00	9.54E-02
		K-40	3.78E-01	1.59E-01	1.41E-01
512175	11/18/2019 - 11/25/2019	I-131	<1.70E-02	0.00E+00	1.70E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<1.21E-02	0.00E+00	1.21E-02
		Be-7	<9.87E-02	0.00E+00	9.87E-02
		K-40	6.22E-01	1.88E-01	1.25E-01
512478	11/25/2019 - 12/2/2019	I-131	<1.24E-02	0.00E+00	1.24E-02
		Cs-134	<1.66E-02	0.00E+00	1.66E-02
		Cs-137	<1.44E-02	0.00E+00	1.44E-02
		Be-7	<8.12E-02	0.00E+00	8.12E-02
		K-40	5.13E-01	1.77E-01	1.33E-01
512655	12/2/2019 - 12/9/2019	I-131	<1.85E-02	0.00E+00	1.85E-02
		Cs-134	<1.34E-02	0.00E+00	1.34E-02
		Cs-137	<1.30E-02	0.00E+00	1.30E-02
		Be-7	<6.63E-02	0.00E+00	6.63E-02
		K-40	1.04E-01	1.61E-01	2.70E-01
513621	12/9/2019 - 12/16/2019	I-131	<2.67E-02	0.00E+00	2.67E-02
		Cs-134	<1.85E-02	0.00E+00	1.85E-02
		Cs-137	<1.52E-02	0.00E+00	1.52E-02
		Be-7	<1.29E-01	0.00E+00	1.29E-01
		K-40	6.82E-01	2.20E-01	2.02E-01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 90 [INDICATOR - SSW @ 0.5 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
513935	12/16/2019 - 12/23/2019	I-131	<2.15E-02	0.00E+00	2.15E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<1.14E-02	0.00E+00	1.14E-02
		Be-7	<9.56E-02	0.00E+00	9.56E-02
		K-40	4.20E-01	1.73E-01	1.86E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514158	12/23/2019 - 12/30/2019	I-131	<3.32E-02	0.00E+00	3.32E-02
		Cs-134	<1.50E-02	0.00E+00	1.50E-02
		Cs-137	<1.35E-02	0.00E+00	1.35E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	3.11E-01	1.68E-01	2.12E-01

Sample Point 91 [INDICATOR - ENE @ 1.6 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492215	12/31/2018 - 1/7/2019	I-131	<2.28E-02	0.00E+00	2.28E-02
		Cs-134	<2.03E-02	0.00E+00	2.03E-02
		Cs-137	<2.03E-02	0.00E+00	2.03E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	4.48E-01	1.85E-01	2.00E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492435	1/7/2019 - 1/14/2019	I-131	<2.40E-02	0.00E+00	2.40E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	5.59E-01	1.93E-01	1.69E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492890	1/14/2019 - 1/21/2019	I-131	<2.20E-02	0.00E+00	2.20E-02
		Cs-134	<2.20E-02	0.00E+00	2.20E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	5.83E-01	1.92E-01	1.63E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493314	1/21/2019 - 1/28/2019	I-131	<1.83E-02	0.00E+00	1.83E-02
		Cs-134	<1.57E-02	0.00E+00	1.57E-02
		Cs-137	<1.64E-02	0.00E+00	1.64E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	5.98E-01	1.95E-01	1.40E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493579	1/28/2019 - 2/4/2019	I-131	<2.38E-02	0.00E+00	2.38E-02
		Cs-134	<1.27E-02	0.00E+00	1.27E-02
		Cs-137	<1.81E-02	0.00E+00	1.81E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	4.97E-01	1.74E-01	1.26E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493802	2/4/2019 - 2/11/2019	I-131	<1.96E-02	0.00E+00	1.96E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.79E-02	0.00E+00	1.79E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	<3.15E-01	0.00E+00	3.15E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494347	2/11/2019 - 2/18/2019	I-131	<2.35E-02	0.00E+00	2.35E-02
		Cs-134	<1.20E-02	0.00E+00	1.20E-02
		Cs-137	<1.75E-02	0.00E+00	1.75E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	5.53E-01	1.80E-01	1.30E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494964	2/18/2019 - 2/25/2019	I-131	<2.79E-02	0.00E+00	2.79E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-02
		Cs-137	<1.72E-02	0.00E+00	1.72E-02

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 91 [INDICATOR - ENE @ 1.6 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494964	2/18/2019 - 2/25/2019	Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	4.19E-01	1.66E-01	1.39E-01
495419	2/25/2019 - 3/4/2019	I-131	<2.38E-02	0.00E+00	2.38E-02
		Cs-134	<2.04E-02	0.00E+00	2.04E-02
		Cs-137	<1.78E-02	0.00E+00	1.78E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	4.19E-01	1.79E-01	1.97E-01
496307	3/4/2019 - 3/11/2019	I-131	<2.40E-02	0.00E+00	2.40E-02
		Cs-134	<1.81E-02	0.00E+00	1.81E-02
		Cs-137	<1.15E-02	0.00E+00	1.15E-02
		Be-7	<1.37E-01	0.00E+00	1.37E-01
		K-40	5.01E-01	1.88E-01	1.81E-01
496184	3/11/2019 - 3/18/2019	I-131	<2.38E-02	0.00E+00	2.38E-02
		Cs-134	<1.86E-02	0.00E+00	1.86E-02
		Cs-137	<1.77E-02	0.00E+00	1.77E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	4.36E-01	1.91E-01	2.27E-01
496648	3/18/2019 - 3/25/2019	I-131	<2.26E-02	0.00E+00	2.26E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<1.59E-02	0.00E+00	1.59E-02
		Be-7	<1.35E-01	0.00E+00	1.35E-01
		K-40	4.82E-01	2.08E-01	2.45E-01
497141	3/25/2019 - 4/1/2019	I-131	<2.20E-02	0.00E+00	2.20E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.74E-02	0.00E+00	1.74E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	3.72E-01	1.55E-01	1.40E-01
497562	4/1/2019 - 4/8/2019	I-131	<2.46E-02	0.00E+00	2.46E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.74E-02	0.00E+00	1.74E-02
		Be-7	<1.27E-01	0.00E+00	1.27E-01
		K-40	4.49E-01	1.56E-01	3.48E-02
498033	4/8/2019 - 4/15/2019	I-131	<2.01E-02	0.00E+00	2.01E-02
		Cs-134	<1.90E-02	0.00E+00	1.90E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	4.03E-01	1.72E-01	1.87E-01
498606	4/15/2019 - 4/22/2019	I-131	<2.49E-02	0.00E+00	2.49E-02
		Cs-134	<1.41E-02	0.00E+00	1.41E-02
		Cs-137	<1.82E-02	0.00E+00	1.82E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	5.21E-01	1.87E-01	1.56E-01
498780	4/22/2019 - 4/29/2019	I-131	<2.53E-02	0.00E+00	2.53E-02
		Cs-134	<1.80E-02	0.00E+00	1.80E-02
		Cs-137	<1.42E-02	0.00E+00	1.42E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	3.52E-01	1.91E-01	2.53E-01
499459	4/29/2019 - 5/6/2019	I-131	<2.32E-02	0.00E+00	2.32E-02

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 91 [INDICATOR - ENE @ 1.6 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
499459	4/29/2019 - 5/6/2019	Cs-134	<2.10E-02	0.00E+00	2.10E-02
		Cs-137	<1.84E-02	0.00E+00	1.84E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	5.68E-01	1.90E-01	1.41E-01
499878	5/6/2019 - 5/13/2019	I-131	<2.26E-02	0.00E+00	2.26E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-02
		Cs-137	<1.37E-02	0.00E+00	1.37E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
500122	5/13/2019 - 5/20/2019	K-40	5.02E-01	1.87E-01	1.85E-01
		I-131	<1.99E-02	0.00E+00	1.99E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<1.65E-02	0.00E+00	1.65E-02
500456	5/20/2019 - 5/28/2019	Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	4.61E-01	1.76E-01	1.47E-01
		I-131	<2.37E-02	0.00E+00	2.37E-02
		Cs-134	<1.40E-02	0.00E+00	1.40E-02
500743	5/28/2019 - 6/3/2019	Cs-137	<1.52E-02	0.00E+00	1.52E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	4.15E-01	1.61E-01	1.60E-01
		I-131	<2.77E-02	0.00E+00	2.77E-02
501131	6/3/2019 - 6/10/2019	Cs-134	<2.10E-02	0.00E+00	2.10E-02
		Cs-137	<1.97E-02	0.00E+00	1.97E-02
		Be-7	<1.39E-01	0.00E+00	1.39E-01
		K-40	5.99E-01	2.54E-01	3.09E-01
501944	6/10/2019 - 6/17/2019	I-131	<3.49E-02	0.00E+00	3.49E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.52E-02	0.00E+00	1.52E-02
		Be-7	<1.30E-01	0.00E+00	1.30E-01
502201	6/17/2019 - 6/24/2019	K-40	3.41E-01	1.64E-01	1.94E-01
		I-131	<3.69E-02	0.00E+00	3.69E-02
		Cs-134	<1.83E-02	0.00E+00	1.83E-02
		Cs-137	<1.16E-02	0.00E+00	1.16E-02
502414	6/24/2019 - 7/1/2019	Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	5.05E-01	2.09E-01	2.44E-01
		I-131	<1.84E-02	0.00E+00	1.84E-02
		Cs-134	<9.40E-03	0.00E+00	9.40E-03
503399	7/1/2019 - 7/8/2019	Cs-137	<1.05E-02	0.00E+00	1.05E-02
		Be-7	<9.84E-02	0.00E+00	9.84E-02
		K-40	1.29E-01	1.18E-01	1.73E-01
		I-131	<2.45E-02	0.00E+00	2.45E-02
502414	6/24/2019 - 7/1/2019	Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.59E-02	0.00E+00	1.59E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	6.65E-01	2.46E-01	2.88E-01
503399	7/1/2019 - 7/8/2019	I-131	<2.41E-02	0.00E+00	2.41E-02
		Cs-134	<1.84E-02	0.00E+00	1.84E-02
		Cs-137	<1.62E-02	0.00E+00	1.62E-02
		Be-7	<1.33E-01	0.00E+00	1.33E-01
503399	7/1/2019 - 7/8/2019	K-40	5.38E-01	1.91E-01	1.83E-01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 91 [INDICATOR - ENE @ 1.6 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
503834	7/8/2019 - 7/15/2019	I-131	<4.59E-02	0.00E+00	4.59E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<1.81E-02	0.00E+00	1.81E-02
		Be-7	<1.31E-01	0.00E+00	1.31E-01
		K-40	6.01E-01	1.97E-01	1.45E-01
504192	7/15/2019 - 7/22/2019	I-131	<2.65E-02	0.00E+00	2.65E-02
		Cs-134	<1.79E-02	0.00E+00	1.79E-02
		Cs-137	<1.95E-02	0.00E+00	1.95E-02
		Be-7	<9.48E-02	0.00E+00	9.48E-02
		K-40	3.68E-01	1.55E-01	1.43E-01
504443	7/22/2019 - 7/29/2019	I-131	<3.27E-02	0.00E+00	3.27E-02
		Cs-134	<1.14E-02	0.00E+00	1.14E-02
		Cs-137	<1.59E-02	0.00E+00	1.59E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	<1.93E-01	0.00E+00	1.93E-01
504656	7/29/2019 - 8/5/2019	I-131	<4.29E-02	0.00E+00	4.29E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.44E-02	0.00E+00	1.44E-02
		Be-7	<1.39E-01	0.00E+00	1.39E-01
		K-40	4.16E-01	1.92E-01	2.38E-01
504926	8/5/2019 - 8/12/2019	I-131	<2.18E-02	0.00E+00	2.18E-02
		Cs-134	<1.40E-02	0.00E+00	1.40E-02
		Cs-137	<1.36E-02	0.00E+00	1.36E-02
		Be-7	<7.63E-02	0.00E+00	7.63E-02
		K-40	2.25E-01	1.26E-01	1.39E-01
505136	8/12/2019 - 8/20/2019	I-131	<1.28E-02	0.00E+00	1.28E-02
		Cs-134	<1.23E-02	0.00E+00	1.23E-02
		Cs-137	<1.18E-02	0.00E+00	1.18E-02
		Be-7	<9.02E-02	0.00E+00	9.02E-02
		K-40	2.87E-01	1.53E-01	1.98E-01
505533	8/20/2019 - 8/26/2019	I-131	<2.43E-02	0.00E+00	2.43E-02
		Cs-134	<1.96E-02	0.00E+00	1.96E-02
		Cs-137	<1.82E-02	0.00E+00	1.82E-02
		Be-7	<1.57E-01	0.00E+00	1.57E-01
		K-40	5.31E-01	2.49E-01	3.19E-01
505857	8/26/2019 - 9/3/2019	I-131	<2.11E-02	0.00E+00	2.11E-02
		Cs-134	<1.79E-02	0.00E+00	1.79E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	3.45E-01	1.25E-01	2.92E-02
506367	9/3/2019 - 9/9/2019	I-131	<2.12E-02	0.00E+00	2.12E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.83E-02	0.00E+00	1.83E-02
		Be-7	<9.61E-02	0.00E+00	9.61E-02
		K-40	3.24E-01	1.78E-01	2.07E-01
507284	9/9/2019 - 9/16/2019	I-131	<1.68E-02	0.00E+00	1.68E-02
		Cs-134	<1.72E-02	0.00E+00	1.72E-02
		Cs-137	<1.43E-02	0.00E+00	1.43E-02
		Be-7	<9.92E-02	0.00E+00	9.92E-02
		K-40	<2.21E-01	0.00E+00	2.21E-01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 91 [INDICATOR - ENE @ 1.6 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
507823	9/16/2019 - 9/23/2019	I-131	<1.60E-02	0.00E+00	1.60E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.93E-02	0.00E+00	1.93E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	2.76E-01	1.55E-01	1.96E-01
508355	9/23/2019 - 9/30/2019	I-131	<1.59E-02	0.00E+00	1.59E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02
		Cs-137	<1.04E-02	0.00E+00	1.04E-02
		Be-7	<7.50E-02	0.00E+00	7.50E-02
		K-40	1.61E-01	1.22E-01	1.71E-01
509229	9/30/2019 - 10/7/2019	I-131	<2.23E-02	0.00E+00	2.23E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<2.17E-02	0.00E+00	2.17E-02
		Be-7	<1.34E-01	0.00E+00	1.34E-01
		K-40	5.36E-01	1.98E-01	1.91E-01
509825	10/7/2019 - 10/14/2019	I-131	<1.64E-02	0.00E+00	1.64E-02
		Cs-134	<1.03E-02	0.00E+00	1.03E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<9.75E-02	0.00E+00	9.75E-02
		K-40	4.11E-01	1.84E-01	2.18E-01
510528	10/14/2019 - 10/21/2019	I-131	<1.74E-02	0.00E+00	1.74E-02
		Cs-134	<1.11E-02	0.00E+00	1.11E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<7.87E-02	0.00E+00	7.87E-02
		K-40	2.73E-01	1.67E-01	2.23E-01
510824	10/21/2019 - 10/28/2019	I-131	<1.74E-02	0.00E+00	1.74E-02
		Cs-134	<1.30E-02	0.00E+00	1.30E-02
		Cs-137	<1.99E-02	0.00E+00	1.99E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	3.78E-01	2.22E-01	3.19E-01
511228	10/28/2019 - 11/4/2019	I-131	<1.48E-02	0.00E+00	1.48E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.30E-02	0.00E+00	1.30E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	<3.47E-01	0.00E+00	3.47E-01
511461	11/4/2019 - 11/11/2019	I-131	<1.86E-02	0.00E+00	1.86E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	3.14E-01	1.94E-01	2.75E-01
511872	11/11/2019 - 11/18/2019	I-131	<2.40E-02	0.00E+00	2.40E-02
		Cs-134	<1.97E-02	0.00E+00	1.97E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<1.48E-01	0.00E+00	1.48E-01
		K-40	4.66E-01	1.97E-01	2.25E-01
512176	11/18/2019 - 11/25/2019	I-131	<1.95E-02	0.00E+00	1.95E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<1.20E-02	0.00E+00	1.20E-02
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	4.27E-01	1.62E-01	1.47E-01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 91 [INDICATOR - ENE @ 1.6 miles]

Sample ID:	Sample Dates:		Nuclide	Activity	2 Sigma Error	MDA
512479	11/25/2019 - 12/2/2019		I-131	<1.72E-02	0.00E+00	1.72E-02
			Cs-134	<1.78E-02	0.00E+00	1.78E-02
			Cs-137	<1.46E-02	0.00E+00	1.46E-02
			Be-7	<1.11E-01	0.00E+00	1.11E-01
			K-40	3.28E-01	1.61E-01	1.75E-01
512656	12/2/2019 - 12/9/2019		I-131	<1.62E-02	0.00E+00	1.62E-02
			Cs-134	<1.36E-02	0.00E+00	1.36E-02
			Cs-137	<1.17E-02	0.00E+00	1.17E-02
			Be-7	<7.91E-02	0.00E+00	7.91E-02
			K-40	3.49E-01	1.48E-01	1.35E-01
513622	12/9/2019 - 12/16/2019		I-131	<1.56E-02	0.00E+00	1.56E-02
			Cs-134	<1.84E-02	0.00E+00	1.84E-02
			Cs-137	<1.41E-02	0.00E+00	1.41E-02
			Be-7	<9.55E-02	0.00E+00	9.55E-02
			K-40	5.88E-01	2.00E-01	1.83E-01
513936	12/16/2019 - 12/23/2019		I-131	<1.98E-02	0.00E+00	1.98E-02
			Cs-134	<1.57E-02	0.00E+00	1.57E-02
			Cs-137	<1.58E-02	0.00E+00	1.58E-02
			Be-7	<9.69E-02	0.00E+00	9.69E-02
			K-40	4.68E-01	1.78E-01	1.76E-01
514159	12/23/2019 - 12/30/2019		I-131	<2.30E-02	0.00E+00	2.30E-02
			Cs-134	<1.04E-02	0.00E+00	1.04E-02
			Cs-137	<1.17E-02	0.00E+00	1.17E-02
			Be-7	<1.16E-01	0.00E+00	1.16E-01
			K-40	3.39E-01	1.59E-01	1.77E-01

Media Type: AQUATIC VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 26 [INDICATOR - S @ 4.7 miles]

Sample ID:	Sample Dates:	ALLIWEED	Nuclide	Activity	2 Sigma Error	MDA
503825	7/15/2019 - 7/15/2019		Mn-54	<1.41E+01	0.00E+00	1.41E+01
			Co-58	<1.52E+01	0.00E+00	1.52E+01
			Fe-59	<2.99E+01	0.00E+00	2.99E+01
			Co-60	<1.70E+01	0.00E+00	1.70E+01
			Zn-65	<3.72E+01	0.00E+00	3.72E+01
			Zr-95	<2.26E+01	0.00E+00	2.26E+01
			Nb-95	<1.63E+01	0.00E+00	1.63E+01
			I-131	<1.16E+01	0.00E+00	1.16E+01
			Cs-134	<1.45E+01	0.00E+00	1.45E+01
			Cs-137	<1.19E+01	0.00E+00	1.19E+01
			BaLa-140	<1.47E+01	0.00E+00	1.47E+01
			Be-7	1.62E+02	9.42E+01	1.35E+02
			K-40	3.79E+03	5.28E+02	1.79E+02

Sample Point 41 [INDICATOR - S @ 3.8 miles]

Sample ID:	Sample Dates:	ALLIWEED	Nuclide	Activity	2 Sigma Error	MDA
503826	7/15/2019 - 7/15/2019		Mn-54	<1.25E+01	0.00E+00	1.25E+01
			Co-58	<1.47E+01	0.00E+00	1.47E+01
			Fe-59	<3.58E+01	0.00E+00	3.58E+01
			Co-60	<1.30E+01	0.00E+00	1.30E+01
			Zn-65	<3.58E+01	0.00E+00	3.58E+01
			Zr-95	<2.37E+01	0.00E+00	2.37E+01
			Nb-95	<1.77E+01	0.00E+00	1.77E+01
			I-131	<1.17E+01	0.00E+00	1.17E+01
			Cs-134	<1.34E+01	0.00E+00	1.34E+01
			Cs-137	<1.03E+01	0.00E+00	1.03E+01
			BaLa-140	<1.11E+01	0.00E+00	1.11E+01
			Be-7	3.40E+02	1.15E+02	1.38E+02

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AQUATIC VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 41 [INDICATOR - S @ 3.8 miles]

Sample ID:	Sample Dates:	ALLIWEED	Nuclide	Activity	2 Sigma Error	MDA
503826	7/15/2019 - 7/15/2019		K-40	5.55E+03	6.78E+02	2.68E+02

Sample Point 61 [CONTROL - E @ 2.5 miles]

Sample ID:	Sample Dates:	PRIMROSE	Nuclide	Activity	2 Sigma Error	MDA
503827	7/15/2019 - 7/15/2019		Mn-54	<1.32E+01	0.00E+00	1.32E+01
			Co-58	<1.03E+01	0.00E+00	1.03E+01
			Fe-59	<2.67E+01	0.00E+00	2.67E+01
			Co-60	<9.84E+00	0.00E+00	9.84E+00
			Zn-65	<2.94E+01	0.00E+00	2.94E+01
			Zr-95	<2.39E+01	0.00E+00	2.39E+01
			Nb-95	<1.53E+01	0.00E+00	1.53E+01
			I-131	<1.67E+01	0.00E+00	1.67E+01
			Cs-134	<1.36E+01	0.00E+00	1.36E+01
			Cs-137	<1.28E+01	0.00E+00	1.28E+01
			BaLa-140	<1.10E+01	0.00E+00	1.10E+01
			Be-7	7.70E+01	6.38E+01	9.65E+01
			K-40	1.60E+03	3.02E+02	1.61E+02

Media Type: CROPS Concentration (Activity): pCi/kg wet

Sample Point 97 [CONTROL - NW @ 19.1 miles]

Sample ID:	Sample Dates:	MIXEDCROPS	Nuclide	Activity	2 Sigma Error	MDA
492471	1/7/2019 - 1/7/2019		Mn-54	<1.51E+01	0.00E+00	1.51E+01
			Co-58	<1.25E+01	0.00E+00	1.25E+01
			Fe-59	<2.36E+01	0.00E+00	2.36E+01
			Co-60	<1.51E+01	0.00E+00	1.51E+01
			Zn-65	<4.03E+01	0.00E+00	4.03E+01
			Zr-95	<2.39E+01	0.00E+00	2.39E+01
			Nb-95	<1.34E+01	0.00E+00	1.34E+01
			I-131	<1.40E+01	0.00E+00	1.40E+01
			Cs-134	<1.16E+01	0.00E+00	1.16E+01
			Cs-137	<1.17E+01	0.00E+00	1.17E+01
			BaLa-140	<1.87E+01	0.00E+00	1.87E+01
			Be-7	<1.06E+02	0.00E+00	1.06E+02
			K-40	2.54E+03	4.00E+02	2.28E+02

Sample ID:	Sample Dates:	MIXEDCROPS	Nuclide	Activity	2 Sigma Error	MDA
493803	2/4/2019 - 2/4/2019		I-131	<1.31E+01	0.00E+00	1.31E+01
			Cs-134	<1.29E+01	0.00E+00	1.29E+01
			Cs-137	<1.35E+01	0.00E+00	1.35E+01
			Be-7	<9.21E+01	0.00E+00	9.21E+01
			K-40	2.68E+03	4.45E+02	2.37E+02

Sample ID:	Sample Dates:	MIXEDCROPS	Nuclide	Activity	2 Sigma Error	MDA
496130	3/4/2019 - 3/4/2019		I-131	<1.89E+01	0.00E+00	1.89E+01
			Cs-134	<1.83E+01	0.00E+00	1.83E+01
			Cs-137	<1.71E+01	0.00E+00	1.71E+01
			Be-7	<1.04E+02	0.00E+00	1.04E+02
			K-40	2.96E+03	4.85E+02	2.36E+02

Sample ID:	Sample Dates:	MIXEDCROPS	Nuclide	Activity	2 Sigma Error	MDA
498034	4/1/2019 - 4/1/2019		I-131	<1.01E+01	0.00E+00	1.01E+01
			Cs-134	<1.05E+01	0.00E+00	1.05E+01
			Cs-137	<1.26E+01	0.00E+00	1.26E+01
			Be-7	<8.39E+01	0.00E+00	8.39E+01
			K-40	3.39E+03	4.20E+02	1.64E+02

Sample ID:	Sample Dates:	MIXEDCROPS	Nuclide	Activity	2 Sigma Error	MDA
500126	5/6/2019 - 5/6/2019		I-131	<1.10E+01	0.00E+00	1.10E+01
			Cs-134	<1.46E+01	0.00E+00	1.46E+01
			Cs-137	<1.14E+01	0.00E+00	1.14E+01
			Be-7	<8.89E+01	0.00E+00	8.89E+01
			K-40	1.91E+03	3.52E+02	2.25E+02

Sample ID:	Sample Dates:	MIXEDCROPS	Nuclide	Activity	2 Sigma Error	MDA
501948	6/3/2019 - 6/3/2019		I-131	<1.26E+01	0.00E+00	1.26E+01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: CROPS Concentration (Activity): pCi/kg wet

Sample Point 97 [CONTROL - NW @ 19.1 miles]

Sample ID:	Sample Dates:	MIXEDCROPS	Nuclide	Activity	2 Sigma Error	MDA
501948	6/3/2019 - 6/3/2019	MIXEDCROPS	Cs-134	<1.43E+01	0.00E+00	1.43E+01
			Cs-137	<1.67E+01	0.00E+00	1.67E+01
			Be-7	<9.52E+01	0.00E+00	9.52E+01
			K-40	1.92E+03	3.47E+02	2.04E+02
503838	7/1/2019 - 7/1/2019	MIXEDCROPS	I-131	<2.09E+01	0.00E+00	2.09E+01
			Cs-134	<1.71E+01	0.00E+00	1.71E+01
			Cs-137	<1.31E+01	0.00E+00	1.31E+01
			Be-7	<9.68E+01	0.00E+00	9.68E+01
505140	8/5/2019 - 8/5/2019	MIXEDCROPS	K-40	1.70E+03	3.12E+02	1.80E+02
			I-131	<1.42E+01	0.00E+00	1.42E+01
			Cs-134	<8.17E+00	0.00E+00	8.17E+00
			Cs-137	<1.09E+01	0.00E+00	1.09E+01
507288	9/3/2019 - 9/3/2019	MIXEDCROPS	Be-7	<8.32E+01	0.00E+00	8.32E+01
			K-40	1.61E+03	3.04E+02	2.12E+02
			I-131	<2.32E+01	0.00E+00	2.32E+01
			Cs-134	<1.79E+01	0.00E+00	1.79E+01
510532	10/7/2019 - 10/7/2019	MIXEDCROPS	Cs-137	<1.48E+01	0.00E+00	1.48E+01
			Be-7	<1.05E+02	0.00E+00	1.05E+02
			K-40	2.09E+03	3.67E+02	3.46E+01
			I-131	<1.59E+01	0.00E+00	1.59E+01
511873	11/4/2019 - 11/4/2019	MIXEDCROPS	Cs-134	<1.19E+01	0.00E+00	1.19E+01
			Cs-137	<9.76E+00	0.00E+00	9.76E+00
			Be-7	<8.30E+01	0.00E+00	8.30E+01
			K-40	1.72E+03	2.97E+02	1.53E+02
513623	12/2/2019 - 12/2/2019	MIXEDCROPS	I-131	<1.26E+01	0.00E+00	1.26E+01
			Cs-134	<1.41E+01	0.00E+00	1.41E+01
			Cs-137	<1.03E+01	0.00E+00	1.03E+01
			Be-7	1.59E+02	1.04E+02	1.57E+02
513623	12/2/2019 - 12/2/2019	MIXEDCROPS	K-40	2.22E+03	3.72E+02	1.74E+02
			I-131	<1.35E+01	0.00E+00	1.35E+01
			Cs-134	<1.46E+01	0.00E+00	1.46E+01
			Cs-137	<1.22E+01	0.00E+00	1.22E+01
513623	12/2/2019 - 12/2/2019	MIXEDCROPS	Be-7	<8.92E+01	0.00E+00	8.92E+01
			K-40	3.00E+03	4.20E+02	1.15E+02

Media Type: DRINKING WATER Concentration (Activity): pCi/l

Sample Point 46 [INDICATOR - SSE @ 17.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493318	12/26/2018 - 1/21/2019	Mn-54	<4.00E+00	0.00E+00	4.00E+00
		Co-58	<4.18E+00	0.00E+00	4.18E+00
		Fe-59	<6.08E+00	0.00E+00	6.08E+00
		Co-60	<4.02E+00	0.00E+00	4.02E+00
		Zn-65	<9.79E+00	0.00E+00	9.79E+00
		Zr-95	<9.61E+00	0.00E+00	9.61E+00
		Nb-95	<5.83E+00	0.00E+00	5.83E+00
		I-131	<1.05E+01	0.00E+00	1.05E+01
		Cs-134	<4.44E+00	0.00E+00	4.44E+00
		Cs-137	<4.28E+00	0.00E+00	4.28E+00
		BaLa-140	<8.21E+00	0.00E+00	8.21E+00
		Be-7	<2.94E+01	0.00E+00	2.94E+01
		K-40	<5.78E+01	0.00E+00	5.78E+01
		Alpha	<2.26E+00	0.00E+00	2.26E+00
		Beta	<2.86E+00	0.00E+00	2.86E+00
		H3DW	<7.48E+01	0.00E+00	1.91E+02

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: DRINKING WATER Concentration (Activity): pCi/l

Sample Point 46 [INDICATOR - SSE @ 17.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494968	1/21/2019 - 2/18/2019	Beta	<3.33E+00	0.00E+00	3.33E+00
		Mn-54	<3.11E+00	0.00E+00	3.11E+00
		Co-58	<3.64E+00	0.00E+00	3.64E+00
		Fe-59	<6.69E+00	0.00E+00	6.69E+00
		Co-60	<3.07E+00	0.00E+00	3.07E+00
		Zn-65	<5.96E+00	0.00E+00	5.96E+00
		Zr-95	<5.22E+00	0.00E+00	5.22E+00
		Nb-95	<3.67E+00	0.00E+00	3.67E+00
		I-131	<1.14E+01	0.00E+00	1.14E+01
		Cs-134	<2.43E+00	0.00E+00	2.43E+00
		Cs-137	<2.47E+00	0.00E+00	2.47E+00
		BaLa-140	<3.97E+00	0.00E+00	3.97E+00
		Be-7	<2.63E+01	0.00E+00	2.63E+01
		K-40	4.40E+01	2.38E+01	2.96E+01
		H3DW	<-1.6E+01	0.00E+00	1.85E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
497145	2/18/2019 - 3/18/2019	Beta	<3.34E+00	0.00E+00	3.34E+00
		Mn-54	<2.67E+00	0.00E+00	2.67E+00
		Co-58	<2.56E+00	0.00E+00	2.56E+00
		Fe-59	<6.38E+00	0.00E+00	6.38E+00
		Co-60	<2.39E+00	0.00E+00	2.39E+00
		Zn-65	<6.56E+00	0.00E+00	6.56E+00
		Zr-95	<4.54E+00	0.00E+00	4.54E+00
		Nb-95	<3.51E+00	0.00E+00	3.51E+00
		I-131	<1.14E+01	0.00E+00	1.14E+01
		Cs-134	<3.05E+00	0.00E+00	3.05E+00
		Cs-137	<2.75E+00	0.00E+00	2.75E+00
		BaLa-140	<7.01E+00	0.00E+00	7.01E+00
		Be-7	<2.18E+01	0.00E+00	2.18E+01
		K-40	<4.04E+01	0.00E+00	4.04E+01
		H3DW	<-7.1E+00	0.00E+00	1.86E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
498784	3/18/2019 - 4/15/2019	Beta	<3.30E+00	0.00E+00	3.30E+00
		Mn-54	<2.25E+00	0.00E+00	2.25E+00
		Co-58	<2.51E+00	0.00E+00	2.51E+00
		Fe-59	<5.35E+00	0.00E+00	5.35E+00
		Co-60	<2.09E+00	0.00E+00	2.09E+00
		Zn-65	<4.97E+00	0.00E+00	4.97E+00
		Zr-95	<4.58E+00	0.00E+00	4.58E+00
		Nb-95	<3.15E+00	0.00E+00	3.15E+00
		I-131	<9.68E+00	0.00E+00	9.68E+00
		Cs-134	<2.57E+00	0.00E+00	2.57E+00
		Cs-137	<1.89E+00	0.00E+00	1.89E+00
		BaLa-140	<6.94E+00	0.00E+00	6.94E+00
		Be-7	<1.93E+01	0.00E+00	1.93E+01
		K-40	<3.68E+01	0.00E+00	3.68E+01
		H3DW	<-1.2E+02	0.00E+00	2.04E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500460	4/15/2019 - 5/13/2019	Beta	3.33E+00	4.50E+00	3.31E+00
		Mn-54	<3.50E+00	0.00E+00	3.50E+00
		Co-58	<3.21E+00	0.00E+00	3.21E+00
		Fe-59	<6.29E+00	0.00E+00	6.29E+00
		Co-60	<3.54E+00	0.00E+00	3.54E+00
		Zn-65	<6.53E+00	0.00E+00	6.53E+00
		Zr-95	<6.13E+00	0.00E+00	6.13E+00
		Nb-95	<4.38E+00	0.00E+00	4.38E+00
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<4.43E+00	0.00E+00	4.43E+00
		Cs-137	<3.20E+00	0.00E+00	3.20E+00
		BaLa-140	<9.89E+00	0.00E+00	9.89E+00
		Be-7	9.63E+00	2.26E+01	3.93E+01
		K-40	<7.01E+01	0.00E+00	7.01E+01
		H3DW	<-1.3E+02	0.00E+00	1.91E+02

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: DRINKING WATER Concentration (Activity): pCi/l

Sample Point 46 [INDICATOR - SSE @ 17.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
502205	5/13/2019 - 6/10/2019	Beta	<3.25E+00	0.00E+00	3.25E+00
		Mn-54	<1.71E+00	0.00E+00	1.71E+00
		Co-58	<1.88E+00	0.00E+00	1.88E+00
		Fe-59	<4.62E+00	0.00E+00	4.62E+00
		Co-60	<1.63E+00	0.00E+00	1.63E+00
		Zn-65	<3.46E+00	0.00E+00	3.46E+00
		Zr-95	<2.85E+00	0.00E+00	2.85E+00
		Nb-95	<2.60E+00	0.00E+00	2.60E+00
		I-131	<6.41E+00	0.00E+00	6.41E+00
		Cs-134	<1.56E+00	0.00E+00	1.56E+00
		Cs-137	<1.71E+00	0.00E+00	1.71E+00
		BaLa-140	<4.47E+00	0.00E+00	4.47E+00
		Be-7	<1.91E+01	0.00E+00	1.91E+01
		K-40	4.45E+01	2.00E+01	2.78E+01
		H3DW	<-1.7E+02	0.00E+00	2.02E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504197	6/10/2019 - 7/8/2019	Beta	<3.28E+00	0.00E+00	3.28E+00
		Mn-54	<2.55E+00	0.00E+00	2.55E+00
		Co-58	<3.29E+00	0.00E+00	3.29E+00
		Fe-59	<5.86E+00	0.00E+00	5.86E+00
		Co-60	<2.91E+00	0.00E+00	2.91E+00
		Zn-65	<4.85E+00	0.00E+00	4.85E+00
		Zr-95	<5.24E+00	0.00E+00	5.24E+00
		Nb-95	<3.74E+00	0.00E+00	3.74E+00
		I-131	<9.53E+00	0.00E+00	9.53E+00
		Cs-134	<2.42E+00	0.00E+00	2.42E+00
		Cs-137	<3.10E+00	0.00E+00	3.10E+00
		BaLa-140	<6.19E+00	0.00E+00	6.19E+00
		Be-7	<2.63E+01	0.00E+00	2.63E+01
		K-40	3.13E+01	2.71E+01	4.19E+01
		H3DW	<6.22E+01	0.00E+00	1.95E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
505144	7/8/2019 - 8/5/2019	Beta	<3.41E+00	0.00E+00	3.41E+00
		Mn-54	<2.06E+00	0.00E+00	2.06E+00
		Co-58	<1.86E+00	0.00E+00	1.86E+00
		Fe-59	<4.30E+00	0.00E+00	4.30E+00
		Co-60	<2.12E+00	0.00E+00	2.12E+00
		Zn-65	<4.07E+00	0.00E+00	4.07E+00
		Zr-95	<3.96E+00	0.00E+00	3.96E+00
		Nb-95	<2.82E+00	0.00E+00	2.82E+00
		I-131	<1.07E+01	0.00E+00	1.07E+01
		Cs-134	<2.19E+00	0.00E+00	2.19E+00
		Cs-137	<2.37E+00	0.00E+00	2.37E+00
		BaLa-140	<6.69E+00	0.00E+00	6.69E+00
		Be-7	<1.83E+01	0.00E+00	1.83E+01
		K-40	4.48E+01	1.97E+01	2.58E+01
		H3DW	<1.69E+01	0.00E+00	1.91E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
507292	8/5/2019 - 9/3/2019	Beta	4.03E+00	4.49E+00	3.29E+00
		Mn-54	<3.23E+00	0.00E+00	3.23E+00
		Co-58	<2.00E+00	0.00E+00	2.00E+00
		Fe-59	<5.77E+00	0.00E+00	5.77E+00
		Co-60	<3.10E+00	0.00E+00	3.10E+00
		Zn-65	<6.78E+00	0.00E+00	6.78E+00
		Zr-95	<7.02E+00	0.00E+00	7.02E+00
		Nb-95	<4.35E+00	0.00E+00	4.35E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<2.92E+00	0.00E+00	2.92E+00
		Cs-137	<2.92E+00	0.00E+00	2.92E+00
		BaLa-140	<8.92E+00	0.00E+00	8.92E+00
		Be-7	<2.38E+01	0.00E+00	2.38E+01
		K-40	2.45E+01	2.13E+01	3.13E+01
		H3DW	<2.35E+00	0.00E+00	1.86E+02

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: DRINKING WATER Concentration (Activity): pCi/l

Sample Point 46 [INDICATOR - SSE @ 17.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
509829	9/3/2019 - 9/30/2019	Beta	4.04E+00	4.50E+00	3.30E+00
		Mn-54	<3.40E+00	0.00E+00	3.40E+00
		Co-58	<3.27E+00	0.00E+00	3.27E+00
		Fe-59	<7.05E+00	0.00E+00	7.05E+00
		Co-60	<4.09E+00	0.00E+00	4.09E+00
		Zn-65	<3.06E+00	0.00E+00	3.06E+00
		Zr-95	<6.54E+00	0.00E+00	6.54E+00
		Nb-95	<5.39E+00	0.00E+00	5.39E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<3.66E+00	0.00E+00	3.66E+00
		Cs-137	<3.78E+00	0.00E+00	3.78E+00
		BaLa-140	<8.11E+00	0.00E+00	8.11E+00
		Be-7	<3.11E+01	0.00E+00	3.11E+01
		K-40	2.73E+01	2.84E+01	4.50E+01
		H3DW	<-3.8E+01	0.00E+00	1.88E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511465	9/30/2019 - 10/28/2019	Beta	5.61E+00	4.49E+00	3.27E+00
		Mn-54	<3.35E+00	0.00E+00	3.35E+00
		Co-58	<2.91E+00	0.00E+00	2.91E+00
		Fe-59	<7.53E+00	0.00E+00	7.53E+00
		Co-60	<3.31E+00	0.00E+00	3.31E+00
		Zn-65	<5.79E+00	0.00E+00	5.79E+00
		Zr-95	<3.73E+00	0.00E+00	3.73E+00
		Nb-95	<3.43E+00	0.00E+00	3.43E+00
		I-131	<1.02E+01	0.00E+00	1.02E+01
		Cs-134	<2.90E+00	0.00E+00	2.90E+00
		Cs-137	<2.87E+00	0.00E+00	2.87E+00
		BaLa-140	<7.06E+00	0.00E+00	7.06E+00
		Be-7	<2.77E+01	0.00E+00	2.77E+01
		K-40	<4.75E+01	0.00E+00	4.75E+01
		H3DW	<4.99E+01	0.00E+00	1.76E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512660	10/28/2019 - 11/25/2019	Beta	<3.43E+00	0.00E+00	3.43E+00
		Mn-54	<1.74E+00	0.00E+00	1.74E+00
		Co-58	<2.29E+00	0.00E+00	2.29E+00
		Fe-59	<5.23E+00	0.00E+00	5.23E+00
		Co-60	<1.85E+00	0.00E+00	1.85E+00
		Zn-65	<3.81E+00	0.00E+00	3.81E+00
		Zr-95	<3.32E+00	0.00E+00	3.32E+00
		Nb-95	<2.68E+00	0.00E+00	2.68E+00
		I-131	<1.03E+01	0.00E+00	1.03E+01
		Cs-134	<2.10E+00	0.00E+00	2.10E+00
		Cs-137	<1.64E+00	0.00E+00	1.64E+00
		BaLa-140	<6.75E+00	0.00E+00	6.75E+00
		Be-7	<1.73E+01	0.00E+00	1.73E+01
		K-40	5.78E+01	1.95E+01	2.32E+01
		H3DW	<-5.2E+01	0.00E+00	1.97E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514473	11/25/2019 - 12/23/2019	Beta	<3.37E+00	0.00E+00	3.37E+00
		Mn-54	<1.55E+00	0.00E+00	1.55E+00
		Co-58	<1.99E+00	0.00E+00	1.99E+00
		Fe-59	<3.61E+00	0.00E+00	3.61E+00
		Co-60	<1.40E+00	0.00E+00	1.40E+00
		Zn-65	<4.41E+00	0.00E+00	4.41E+00
		Zr-95	<3.60E+00	0.00E+00	3.60E+00
		Nb-95	<2.72E+00	0.00E+00	2.72E+00
		I-131	<1.04E+01	0.00E+00	1.04E+01
		Cs-134	<2.03E+00	0.00E+00	2.03E+00
		Cs-137	<1.59E+00	0.00E+00	1.59E+00
		BaLa-140	<5.13E+00	0.00E+00	5.13E+00
		Be-7	<1.60E+01	0.00E+00	1.60E+01
		K-40	2.69E+01	1.95E+01	3.04E+01
		H3DW	<8.27E+01	0.00E+00	1.97E+02

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: DRINKING WATER Concentration (Activity): pCi/l

Sample Point 51 [INDICATOR - -- @ 0 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493319	12/26/2018 - 1/21/2019	Mn-54	<3.22E+00	0.00E+00	3.22E+00
		Co-58	<3.54E+00	0.00E+00	3.54E+00
		Fe-59	<9.57E+00	0.00E+00	9.57E+00
		Co-60	<3.77E+00	0.00E+00	3.77E+00
		Zn-65	<6.16E+00	0.00E+00	6.16E+00
		Zr-95	<6.02E+00	0.00E+00	6.02E+00
		Nb-95	<4.52E+00	0.00E+00	4.52E+00
		I-131	<1.10E+01	0.00E+00	1.10E+01
		Cs-134	<4.20E+00	0.00E+00	4.20E+00
		Cs-137	<4.13E+00	0.00E+00	4.13E+00
		BaLa-140	<7.42E+00	0.00E+00	7.42E+00
		Be-7	<3.06E+01	0.00E+00	3.06E+01
		K-40	<5.28E+01	0.00E+00	5.28E+01
		Alpha	<2.38E+00	0.00E+00	2.38E+00
		Beta	<3.40E+00	0.00E+00	3.40E+00
		H3DW	2.55E+03	1.79E+02	1.91E+02
494969	1/21/2019 - 2/18/2019	Beta	<3.33E+00	0.00E+00	3.33E+00
		Mn-54	<3.48E+00	0.00E+00	3.48E+00
		Co-58	<2.92E+00	0.00E+00	2.92E+00
		Fe-59	<6.21E+00	0.00E+00	6.21E+00
		Co-60	<3.83E+00	0.00E+00	3.83E+00
		Zn-65	<8.09E+00	0.00E+00	8.09E+00
		Zr-95	<6.85E+00	0.00E+00	6.85E+00
		Nb-95	<3.58E+00	0.00E+00	3.58E+00
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<4.41E+00	0.00E+00	4.41E+00
		Cs-137	<3.38E+00	0.00E+00	3.38E+00
		BaLa-140	<7.44E+00	0.00E+00	7.44E+00
		Be-7	<3.65E+01	0.00E+00	3.65E+01
		K-40	<6.49E+01	0.00E+00	6.49E+01
		H3DW	2.25E+03	1.69E+02	1.85E+02
		497146	2/18/2019 - 3/18/2019	Beta	<3.34E+00
Mn-54	<2.91E+00			0.00E+00	2.91E+00
Co-58	<3.70E+00			0.00E+00	3.70E+00
Fe-59	<7.72E+00			0.00E+00	7.72E+00
Co-60	<2.95E+00			0.00E+00	2.95E+00
Zn-65	<5.93E+00			0.00E+00	5.93E+00
Zr-95	<6.30E+00			0.00E+00	6.30E+00
Nb-95	<4.00E+00			0.00E+00	4.00E+00
I-131	<1.12E+01			0.00E+00	1.12E+01
Cs-134	<3.83E+00			0.00E+00	3.83E+00
Cs-137	<2.96E+00			0.00E+00	2.96E+00
BaLa-140	<8.99E+00			0.00E+00	8.99E+00
Be-7	<2.39E+01			0.00E+00	2.39E+01
K-40	<6.21E+01			0.00E+00	6.21E+01
H3DW	1.90E+03			1.62E+02	1.88E+02
498785	3/18/2019 - 4/15/2019			Beta	3.60E+00
		Mn-54	<2.40E+00	0.00E+00	2.40E+00
		Co-58	<2.90E+00	0.00E+00	2.90E+00
		Fe-59	<5.53E+00	0.00E+00	5.53E+00
		Co-60	<2.80E+00	0.00E+00	2.80E+00
		Zn-65	<4.47E+00	0.00E+00	4.47E+00
		Zr-95	<6.54E+00	0.00E+00	6.54E+00
		Nb-95	<3.83E+00	0.00E+00	3.83E+00
		I-131	<1.02E+01	0.00E+00	1.02E+01
		Cs-134	<2.90E+00	0.00E+00	2.90E+00
		Cs-137	<2.43E+00	0.00E+00	2.43E+00
		BaLa-140	<5.03E+00	0.00E+00	5.03E+00
		Be-7	<2.32E+01	0.00E+00	2.32E+01
		K-40	8.18E+01	3.40E+01	4.61E+01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: DRINKING WATER Concentration (Activity): pCi/l

Sample Point 51 [INDICATOR - -- @ 0 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
498785	3/18/2019 - 4/15/2019	H3DW	1.65E+03	1.64E+02	2.05E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500461	4/15/2019 - 5/13/2019	Beta	<3.31E+00	0.00E+00	3.31E+00
		Mn-54	<4.66E+00	0.00E+00	4.66E+00
		Co-58	<4.46E+00	0.00E+00	4.46E+00
		Fe-59	<7.61E+00	0.00E+00	7.61E+00
		Co-60	<2.64E+00	0.00E+00	2.64E+00
		Zn-65	<7.92E+00	0.00E+00	7.92E+00
		Zr-95	<7.42E+00	0.00E+00	7.42E+00
		Nb-95	<5.00E+00	0.00E+00	5.00E+00
		I-131	<1.13E+01	0.00E+00	1.13E+01
		Cs-134	<3.89E+00	0.00E+00	3.89E+00
		Cs-137	<3.89E+00	0.00E+00	3.89E+00
		BaLa-140	<1.06E+01	0.00E+00	1.06E+01
		Be-7	<3.63E+01	0.00E+00	3.63E+01
		K-40	<7.57E+01	0.00E+00	7.57E+01
		H3DW	1.38E+03	1.51E+02	1.91E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
502206	5/13/2019 - 6/10/2019	Beta	<3.25E+00	0.00E+00	3.25E+00
		Mn-54	<2.34E+00	0.00E+00	2.34E+00
		Co-58	<2.37E+00	0.00E+00	2.37E+00
		Fe-59	<4.63E+00	0.00E+00	4.63E+00
		Co-60	<3.23E+00	0.00E+00	3.23E+00
		Zn-65	<5.48E+00	0.00E+00	5.48E+00
		Zr-95	<5.49E+00	0.00E+00	5.49E+00
		Nb-95	<2.26E+00	0.00E+00	2.26E+00
		I-131	<1.10E+01	0.00E+00	1.10E+01
		Cs-134	<3.09E+00	0.00E+00	3.09E+00
		Cs-137	<2.85E+00	0.00E+00	2.85E+00
		BaLa-140	<7.86E+00	0.00E+00	7.86E+00
		Be-7	<0.00E+00	0.00E+00	0.00E+00
		K-40	<0.00E+00	0.00E+00	0.00E+00
		Cr-51	<3.28E+01	0.00E+00	3.28E+01
		Co-57	<2.68E+00	0.00E+00	2.68E+00
		Y-88	<3.18E+00	0.00E+00	3.18E+00
		Ru-103	<2.74E+00	0.00E+00	2.74E+00
		Cd-109	<8.59E+01	0.00E+00	8.59E+01
		Ag-110M	<1.58E+00	0.00E+00	1.58E+00
		Sn-113	<3.52E+00	0.00E+00	3.52E+00
		Cd-115	<1.62E+02	0.00E+00	1.62E+02
		Sb-122	<1.57E+02	0.00E+00	1.57E+02
		Sb-124	<2.87E+00	0.00E+00	2.87E+00
		Sb-125	<7.25E+00	0.00E+00	7.25E+00
		Ba-133	<3.38E+00	0.00E+00	3.38E+00
		I-133	<8.62E+05	0.00E+00	8.62E+05
		Ce-139	<2.74E+00	0.00E+00	2.74E+00
		Ce-141	<6.66E+00	0.00E+00	6.66E+00
		Ce-144	<2.07E+01	0.00E+00	2.07E+01
		Hg-203	<2.99E+00	0.00E+00	2.99E+00
		Am-241	<1.76E+01	0.00E+00	1.76E+01
		Te-123M	<2.63E+00	0.00E+00	2.63E+00
		H3DW	1.21E+03	1.52E+02	2.03E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504198	6/10/2019 - 7/8/2019	Beta	<3.28E+00	0.00E+00	3.28E+00
		Mn-54	<2.55E+00	0.00E+00	2.55E+00
		Co-58	<2.95E+00	0.00E+00	2.95E+00
		Fe-59	<4.63E+00	0.00E+00	4.63E+00
		Co-60	<3.80E+00	0.00E+00	3.80E+00
		Zn-65	<7.46E+00	0.00E+00	7.46E+00
		Zr-95	<6.93E+00	0.00E+00	6.93E+00
		Nb-95	<4.39E+00	0.00E+00	4.39E+00
		I-131	<1.15E+01	0.00E+00	1.15E+01
		Cs-134	<4.22E+00	0.00E+00	4.22E+00

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: DRINKING WATER Concentration (Activity): pCi/l

Sample Point 51 [INDICATOR - -- @ 0 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504198	6/10/2019 - 7/8/2019	Cs-137	<2.94E+00	0.00E+00	2.94E+00
		BaLa-140	<7.08E+00	0.00E+00	7.08E+00
		Be-7	<3.11E+01	0.00E+00	3.11E+01
		K-40	8.92E+01	3.29E+01	3.58E+01
		H3DW	1.64E+03	1.58E+02	1.94E+02
505145	7/8/2019 - 8/5/2019	Beta	<3.41E+00	0.00E+00	3.41E+00
		Mn-54	<2.79E+00	0.00E+00	2.79E+00
		Co-58	<2.70E+00	0.00E+00	2.70E+00
		Fe-59	<6.47E+00	0.00E+00	6.47E+00
		Co-60	<3.23E+00	0.00E+00	3.23E+00
		Zn-65	<5.70E+00	0.00E+00	5.70E+00
		Zr-95	<5.87E+00	0.00E+00	5.87E+00
		Nb-95	<3.19E+00	0.00E+00	3.19E+00
		I-131	<1.01E+01	0.00E+00	1.01E+01
		Cs-134	<3.08E+00	0.00E+00	3.08E+00
		Cs-137	<3.01E+00	0.00E+00	3.01E+00
		BaLa-140	<6.51E+00	0.00E+00	6.51E+00
		Be-7	<2.63E+01	0.00E+00	2.63E+01
		K-40	<4.94E+01	0.00E+00	4.94E+01
		H3DW	2.23E+03	1.71E+02	1.90E+02
507293	8/5/2019 - 9/3/2019	Beta	<3.29E+00	0.00E+00	3.29E+00
		Mn-54	<3.17E+00	0.00E+00	3.17E+00
		Co-58	<3.18E+00	0.00E+00	3.18E+00
		Fe-59	<7.26E+00	0.00E+00	7.26E+00
		Co-60	<3.80E+00	0.00E+00	3.80E+00
		Zn-65	<6.74E+00	0.00E+00	6.74E+00
		Zr-95	<5.19E+00	0.00E+00	5.19E+00
		Nb-95	<3.58E+00	0.00E+00	3.58E+00
		I-131	<1.11E+01	0.00E+00	1.11E+01
		Cs-134	<3.92E+00	0.00E+00	3.92E+00
		Cs-137	<3.07E+00	0.00E+00	3.07E+00
		BaLa-140	<6.34E+00	0.00E+00	6.34E+00
		Be-7	<2.97E+01	0.00E+00	2.97E+01
		K-40	<5.09E+01	0.00E+00	5.09E+01
		H3DW	1.94E+03	1.62E+02	1.86E+02
509830	9/3/2019 - 9/30/2019	Beta	<3.30E+00	0.00E+00	3.30E+00
		Mn-54	<3.77E+00	0.00E+00	3.77E+00
		Co-58	<3.87E+00	0.00E+00	3.87E+00
		Fe-59	<9.20E+00	0.00E+00	9.20E+00
		Co-60	<4.30E+00	0.00E+00	4.30E+00
		Zn-65	<7.09E+00	0.00E+00	7.09E+00
		Zr-95	<6.86E+00	0.00E+00	6.86E+00
		Nb-95	<4.33E+00	0.00E+00	4.33E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<4.18E+00	0.00E+00	4.18E+00
		Cs-137	<3.40E+00	0.00E+00	3.40E+00
		BaLa-140	<1.04E+01	0.00E+00	1.04E+01
		Be-7	<3.46E+01	0.00E+00	3.46E+01
		K-40	<7.36E+01	0.00E+00	7.36E+01
		H3DW	2.15E+03	1.67E+02	1.87E+02
511466	9/30/2019 - 10/28/2019	Beta	3.66E+00	4.45E+00	3.27E+00
		Mn-54	<3.10E+00	0.00E+00	3.10E+00
		Co-58	<2.85E+00	0.00E+00	2.85E+00
		Fe-59	<8.16E+00	0.00E+00	8.16E+00
		Co-60	<2.98E+00	0.00E+00	2.98E+00
		Zn-65	<7.89E+00	0.00E+00	7.89E+00
		Zr-95	<6.11E+00	0.00E+00	6.11E+00
		Nb-95	<4.29E+00	0.00E+00	4.29E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: DRINKING WATER Concentration (Activity): pCi/l

Sample Point 51 [INDICATOR - -- @ 0 miles]

Sample ID:	511466	Sample Dates:	9/30/2019 - 10/28/2019	Nuclide	Activity	2 Sigma Error	MDA
				Cs-134	<3.57E+00	0.00E+00	3.57E+00
				Cs-137	<3.98E+00	0.00E+00	3.98E+00
				BaLa-140	<1.00E+01	0.00E+00	1.00E+01
				Be-7	<3.42E+01	0.00E+00	3.42E+01
				K-40	1.36E+02	4.33E+01	4.43E+01
				H3DW	2.59E+03	1.71E+02	1.76E+02

Sample ID:	512661	Sample Dates:	10/28/2019 - 11/25/2019	Nuclide	Activity	2 Sigma Error	MDA
				Beta	<3.43E+00	0.00E+00	3.43E+00
				Mn-54	<1.78E+00	0.00E+00	1.78E+00
				Co-58	<1.95E+00	0.00E+00	1.95E+00
				Fe-59	<4.33E+00	0.00E+00	4.33E+00
				Co-60	<1.99E+00	0.00E+00	1.99E+00
				Zn-65	<4.50E+00	0.00E+00	4.50E+00
				Zr-95	<4.38E+00	0.00E+00	4.38E+00
				Nb-95	<2.66E+00	0.00E+00	2.66E+00
				I-131	<1.10E+01	0.00E+00	1.10E+01
				Cs-134	<2.13E+00	0.00E+00	2.13E+00
				Cs-137	<1.89E+00	0.00E+00	1.89E+00
				BaLa-140	<5.42E+00	0.00E+00	5.42E+00
				Be-7	<1.76E+01	0.00E+00	1.76E+01
				K-40	7.82E+01	2.27E+01	2.77E+01
				H3DW	5.92E+03	2.42E+02	1.98E+02

Sample ID:	514474	Sample Dates:	11/25/2019 - 12/23/2019	Nuclide	Activity	2 Sigma Error	MDA
				Beta	<3.37E+00	0.00E+00	3.37E+00
				Mn-54	<1.81E+00	0.00E+00	1.81E+00
				Co-58	<2.20E+00	0.00E+00	2.20E+00
				Fe-59	<4.92E+00	0.00E+00	4.92E+00
				Co-60	<1.92E+00	0.00E+00	1.92E+00
				Zn-65	<4.09E+00	0.00E+00	4.09E+00
				Zr-95	<4.49E+00	0.00E+00	4.49E+00
				Nb-95	<2.87E+00	0.00E+00	2.87E+00
				I-131	<1.20E+01	0.00E+00	1.20E+01
				Cs-134	<2.27E+00	0.00E+00	2.27E+00
				Cs-137	<2.14E+00	0.00E+00	2.14E+00
				BaLa-140	<5.51E+00	0.00E+00	5.51E+00
				Be-7	<2.20E+01	0.00E+00	2.20E+01
				K-40	7.91E+01	2.74E+01	3.69E+01
				H3DW	5.95E+03	2.41E+02	1.97E+02

Sample Point 58 [CONTROL - SW @ 8.47 miles]

Sample ID:	493320	Sample Dates:	12/26/2018 - 1/21/2019	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<3.10E+00	0.00E+00	3.10E+00
				Co-58	<3.59E+00	0.00E+00	3.59E+00
				Fe-59	<5.49E+00	0.00E+00	5.49E+00
				Co-60	<3.69E+00	0.00E+00	3.69E+00
				Zn-65	<6.78E+00	0.00E+00	6.78E+00
				Zr-95	<5.38E+00	0.00E+00	5.38E+00
				Nb-95	<4.17E+00	0.00E+00	4.17E+00
				I-131	<1.19E+01	0.00E+00	1.19E+01
				Cs-134	<4.08E+00	0.00E+00	4.08E+00
				Cs-137	<3.44E+00	0.00E+00	3.44E+00
				BaLa-140	<9.04E+00	0.00E+00	9.04E+00
				Be-7	<2.84E+01	0.00E+00	2.84E+01
				K-40	<4.52E+01	0.00E+00	4.52E+01
				Alpha	<2.28E+00	0.00E+00	2.28E+00
				Beta	<2.12E+00	0.00E+00	2.12E+00
				H3DW	<3.15E+01	0.00E+00	1.92E+02

Sample ID:	494970	Sample Dates:	1/21/2019 - 2/18/2019	Nuclide	Activity	2 Sigma Error	MDA
				Beta	<3.33E+00	0.00E+00	3.33E+00
				Mn-54	<3.41E+00	0.00E+00	3.41E+00
				Co-58	<4.04E+00	0.00E+00	4.04E+00
				Fe-59	<8.35E+00	0.00E+00	8.35E+00
				Co-60	<3.45E+00	0.00E+00	3.45E+00

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: DRINKING WATER Concentration (Activity): pCi/l

Sample Point 58 [CONTROL - SW @ 8.47 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494970	1/21/2019 - 2/18/2019	Zn-65	<8.90E+00	0.00E+00	8.90E+00
		Zr-95	<6.73E+00	0.00E+00	6.73E+00
		Nb-95	<3.97E+00	0.00E+00	3.97E+00
		I-131	<1.15E+01	0.00E+00	1.15E+01
		Cs-134	<3.52E+00	0.00E+00	3.52E+00
		Cs-137	<3.08E+00	0.00E+00	3.08E+00
		BaLa-140	<1.17E+01	0.00E+00	1.17E+01
		Be-7	<3.70E+01	0.00E+00	3.70E+01
		K-40	3.81E+01	2.82E+01	3.73E+01
		H3DW	<7.06E+00	0.00E+00	1.85E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
497147	2/18/2019 - 3/18/2019	Beta	<3.34E+00	0.00E+00	3.34E+00
		Mn-54	<3.37E+00	0.00E+00	3.37E+00
		Co-58	<4.55E+00	0.00E+00	4.55E+00
		Fe-59	<8.09E+00	0.00E+00	8.09E+00
		Co-60	<3.22E+00	0.00E+00	3.22E+00
		Zn-65	<7.45E+00	0.00E+00	7.45E+00
		Zr-95	<7.01E+00	0.00E+00	7.01E+00
		Nb-95	<3.86E+00	0.00E+00	3.86E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<3.74E+00	0.00E+00	3.74E+00
		Cs-137	<3.56E+00	0.00E+00	3.56E+00
		BaLa-140	<7.69E+00	0.00E+00	7.69E+00
		Be-7	<3.32E+01	0.00E+00	3.32E+01
		K-40	<5.95E+01	0.00E+00	5.95E+01
		H3DW	<2.62E+01	0.00E+00	1.88E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
498786	3/18/2019 - 4/15/2019	Beta	<3.30E+00	0.00E+00	3.30E+00
		Mn-54	<3.62E+00	0.00E+00	3.62E+00
		Co-58	<4.20E+00	0.00E+00	4.20E+00
		Fe-59	<6.90E+00	0.00E+00	6.90E+00
		Co-60	<3.80E+00	0.00E+00	3.80E+00
		Zn-65	<7.02E+00	0.00E+00	7.02E+00
		Zr-95	<8.05E+00	0.00E+00	8.05E+00
		Nb-95	<4.92E+00	0.00E+00	4.92E+00
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<3.82E+00	0.00E+00	3.82E+00
		Cs-137	<3.66E+00	0.00E+00	3.66E+00
		BaLa-140	<9.69E+00	0.00E+00	9.69E+00
		Be-7	<2.82E+01	0.00E+00	2.82E+01
		K-40	<5.41E+01	0.00E+00	5.41E+01
		H3DW	<-1.6E+02	0.00E+00	2.06E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500462	4/15/2019 - 5/13/2019	Beta	3.46E+00	4.51E+00	3.31E+00
		Mn-54	<2.98E+00	0.00E+00	2.98E+00
		Co-58	<2.90E+00	0.00E+00	2.90E+00
		Fe-59	<7.63E+00	0.00E+00	7.63E+00
		Co-60	<2.30E+00	0.00E+00	2.30E+00
		Zn-65	<5.89E+00	0.00E+00	5.89E+00
		Zr-95	<5.70E+00	0.00E+00	5.70E+00
		Nb-95	<4.32E+00	0.00E+00	4.32E+00
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<3.40E+00	0.00E+00	3.40E+00
		Cs-137	<2.71E+00	0.00E+00	2.71E+00
		BaLa-140	<6.41E+00	0.00E+00	6.41E+00
		Be-7	<2.69E+01	0.00E+00	2.69E+01
		K-40	5.18E+01	2.90E+01	3.94E+01
		H3DW	<-6.1E+01	0.00E+00	1.91E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
502207	5/13/2019 - 6/10/2019	Beta	3.59E+00	4.43E+00	3.25E+00
		Mn-54	<2.62E+00	0.00E+00	2.62E+00
		Co-58	<3.40E+00	0.00E+00	3.40E+00
		Fe-59	<7.26E+00	0.00E+00	7.26E+00

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: DRINKING WATER Concentration (Activity): pCi/l

Sample Point 58 [CONTROL - SW @ 8.47 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
502207	5/13/2019 - 6/10/2019	Co-60	<2.26E+00	0.00E+00	2.26E+00
		Zn-65	<5.46E+00	0.00E+00	5.46E+00
		Zr-95	<6.78E+00	0.00E+00	6.78E+00
		Nb-95	<3.28E+00	0.00E+00	3.28E+00
		I-131	<1.12E+01	0.00E+00	1.12E+01
		Cs-134	<3.28E+00	0.00E+00	3.28E+00
		Cs-137	<3.24E+00	0.00E+00	3.24E+00
		BaLa-140	<8.87E+00	0.00E+00	8.87E+00
		Be-7	<2.95E+01	0.00E+00	2.95E+01
		K-40	<5.22E+01	0.00E+00	5.22E+01
		H3DW	<-1.1E+02	0.00E+00	2.01E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504199	6/10/2019 - 7/8/2019	Beta	<3.28E+00	0.00E+00	3.28E+00
		Mn-54	<2.71E+00	0.00E+00	2.71E+00
		Co-58	<3.03E+00	0.00E+00	3.03E+00
		Fe-59	<6.39E+00	0.00E+00	6.39E+00
		Co-60	<2.81E+00	0.00E+00	2.81E+00
		Zn-65	<5.66E+00	0.00E+00	5.66E+00
		Zr-95	<5.53E+00	0.00E+00	5.53E+00
		Nb-95	<4.41E+00	0.00E+00	4.41E+00
		I-131	<1.11E+01	0.00E+00	1.11E+01
		Cs-134	<2.92E+00	0.00E+00	2.92E+00
		Cs-137	<2.62E+00	0.00E+00	2.62E+00
		BaLa-140	<9.67E+00	0.00E+00	9.67E+00
		Be-7	<2.24E+01	0.00E+00	2.24E+01
		K-40	7.71E+01	3.09E+01	3.77E+01
		H3DW	<2.87E+01	0.00E+00	1.95E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
505146	7/8/2019 - 8/5/2019	Beta	<3.41E+00	0.00E+00	3.41E+00
		Mn-54	<1.89E+00	0.00E+00	1.89E+00
		Co-58	<2.18E+00	0.00E+00	2.18E+00
		Fe-59	<4.00E+00	0.00E+00	4.00E+00
		Co-60	<2.20E+00	0.00E+00	2.20E+00
		Zn-65	<4.12E+00	0.00E+00	4.12E+00
		Zr-95	<3.45E+00	0.00E+00	3.45E+00
		Nb-95	<2.18E+00	0.00E+00	2.18E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<1.71E+00	0.00E+00	1.71E+00
		Cs-137	<1.71E+00	0.00E+00	1.71E+00
		BaLa-140	<6.14E+00	0.00E+00	6.14E+00
		Be-7	<1.62E+01	0.00E+00	1.62E+01
		K-40	2.17E+01	2.01E+01	3.19E+01
		H3DW	<2.43E+01	0.00E+00	1.93E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
507294	8/5/2019 - 9/3/2019	Beta	5.12E+00	4.52E+00	3.29E+00
		Mn-54	<3.98E+00	0.00E+00	3.98E+00
		Co-58	<6.43E+00	0.00E+00	6.43E+00
		Fe-59	<1.00E+01	0.00E+00	1.00E+01
		Co-60	<3.59E+00	0.00E+00	3.59E+00
		Zn-65	<7.41E+00	0.00E+00	7.41E+00
		Zr-95	<5.97E+00	0.00E+00	5.97E+00
		Nb-95	<4.14E+00	0.00E+00	4.14E+00
		I-131	<1.12E+01	0.00E+00	1.12E+01
		Cs-134	<3.65E+00	0.00E+00	3.65E+00
		Cs-137	<3.65E+00	0.00E+00	3.65E+00
		BaLa-140	<1.14E+01	0.00E+00	1.14E+01
		Be-7	<3.44E+01	0.00E+00	3.44E+01
		K-40	<6.44E+01	0.00E+00	6.44E+01
		H3DW	<1.65E+01	0.00E+00	1.86E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
509831	9/3/2019 - 9/30/2019	Beta	4.22E+00	4.50E+00	3.30E+00
		Mn-54	<4.08E+00	0.00E+00	4.08E+00
		Co-58	<1.91E+00	0.00E+00	1.91E+00

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: DRINKING WATER Concentration (Activity): pCi/l

Sample Point 58 [CONTROL - SW @ 8.47 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA		
509831	9/3/2019 - 9/30/2019	Fe-59	<7.37E+00	0.00E+00	7.37E+00		
		Co-60	<3.35E+00	0.00E+00	3.35E+00		
		Zn-65	<1.04E+01	0.00E+00	1.04E+01		
		Zr-95	<7.31E+00	0.00E+00	7.31E+00		
		Nb-95	<4.37E+00	0.00E+00	4.37E+00		
		I-131	<1.20E+01	0.00E+00	1.20E+01		
		Cs-134	<4.53E+00	0.00E+00	4.53E+00		
		Cs-137	<3.62E+00	0.00E+00	3.62E+00		
		BaLa-140	<6.22E+00	0.00E+00	6.22E+00		
		Be-7	<2.58E+01	0.00E+00	2.58E+01		
		K-40	<3.32E+01	0.00E+00	3.32E+01		
		H3DW	<-4.3E+01	0.00E+00	1.87E+02		
		511467	9/30/2019 - 10/28/2019	Beta	5.18E+00	4.49E+00	3.27E+00
				Mn-54	<3.81E+00	0.00E+00	3.81E+00
Co-58	<3.06E+00			0.00E+00	3.06E+00		
Fe-59	<7.30E+00			0.00E+00	7.30E+00		
Co-60	<3.38E+00			0.00E+00	3.38E+00		
Zn-65	<8.22E+00			0.00E+00	8.22E+00		
Zr-95	<7.22E+00			0.00E+00	7.22E+00		
Nb-95	<4.58E+00			0.00E+00	4.58E+00		
I-131	<1.19E+01			0.00E+00	1.19E+01		
Cs-134	<3.88E+00			0.00E+00	3.88E+00		
Cs-137	<4.09E+00			0.00E+00	4.09E+00		
BaLa-140	<7.31E+00			0.00E+00	7.31E+00		
Be-7	<2.98E+01			0.00E+00	2.98E+01		
K-40	<5.61E+01			0.00E+00	5.61E+01		
H3DW	<3.17E+01			0.00E+00	1.76E+02		
512662	10/28/2019 - 11/25/2019			Beta	3.50E+00	4.66E+00	3.43E+00
		Mn-54	<2.55E+00	0.00E+00	2.55E+00		
		Co-58	<2.49E+00	0.00E+00	2.49E+00		
		Fe-59	<5.71E+00	0.00E+00	5.71E+00		
		Co-60	<1.93E+00	0.00E+00	1.93E+00		
		Zn-65	<4.99E+00	0.00E+00	4.99E+00		
		Zr-95	<5.15E+00	0.00E+00	5.15E+00		
		Nb-95	<3.41E+00	0.00E+00	3.41E+00		
		I-131	<1.19E+01	0.00E+00	1.19E+01		
		Cs-134	<2.38E+00	0.00E+00	2.38E+00		
		Cs-137	<1.82E+00	0.00E+00	1.82E+00		
		BaLa-140	<7.90E+00	0.00E+00	7.90E+00		
		Be-7	<1.89E+01	0.00E+00	1.89E+01		
		K-40	2.90E+01	2.22E+01	3.37E+01		
		H3DW	<-1.2E+01	0.00E+00	2.00E+02		
		514475	11/25/2019 - 12/23/2019	Beta	3.45E+00	4.59E+00	3.37E+00
Mn-54	<1.90E+00			0.00E+00	1.90E+00		
Co-58	<1.94E+00			0.00E+00	1.94E+00		
Fe-59	<5.26E+00			0.00E+00	5.26E+00		
Co-60	<2.23E+00			0.00E+00	2.23E+00		
Zn-65	<4.05E+00			0.00E+00	4.05E+00		
Zr-95	<3.65E+00			0.00E+00	3.65E+00		
Nb-95	<2.90E+00			0.00E+00	2.90E+00		
I-131	<1.07E+01			0.00E+00	1.07E+01		
Cs-134	<2.00E+00			0.00E+00	2.00E+00		
Cs-137	<2.16E+00			0.00E+00	2.16E+00		
BaLa-140	<8.77E+00			0.00E+00	8.77E+00		
Be-7	<1.86E+01			0.00E+00	1.86E+01		
K-40	6.30E+01			2.14E+01	2.45E+01		
H3DW	<1.25E+02			0.00E+00	1.97E+02		

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: FISH Concentration (Activity): pCi/kg wet

Sample Point 44 [INDICATOR - -- @ 0 miles]

Sample ID:	Sample Dates:	Location:	Nuclide	Activity	2 Sigma Error	MDA
497563	4/23/2019 - 4/23/2019	FREESWIM	Mn-54	<7.85E+01	0.00E+00	7.85E+01
			Co-58	<8.89E+01	0.00E+00	8.89E+01
			Fe-59	<1.58E+02	0.00E+00	1.58E+02
			Co-60	<7.75E+01	0.00E+00	7.75E+01
			Zn-65	<1.39E+02	0.00E+00	1.39E+02
			Nb-95	<1.10E+02	0.00E+00	1.10E+02
			I-131	<1.43E+02	0.00E+00	1.43E+02
			Cs-134	<8.02E+01	0.00E+00	8.02E+01
			Cs-137	<9.67E+01	0.00E+00	9.67E+01
			Be-7	<5.50E+02	0.00E+00	5.50E+02
			K-40	4.49E+03	1.27E+03	2.25E+02
			Ag-110M	<7.91E+01	0.00E+00	7.91E+01
			Sb-122	<1.12E+03	0.00E+00	1.12E+03
			Sb-125	<1.94E+02	0.00E+00	1.94E+02

Sample ID:	Sample Dates:	Location:	Nuclide	Activity	2 Sigma Error	MDA
497564	4/23/2019 - 4/23/2019	FREESWIM	Mn-54	<4.52E+01	0.00E+00	4.52E+01
			Co-58	<3.94E+01	0.00E+00	3.94E+01
			Fe-59	<9.20E+01	0.00E+00	9.20E+01
			Co-60	<5.50E+01	0.00E+00	5.50E+01
			Zn-65	<1.13E+02	0.00E+00	1.13E+02
			Nb-95	<7.00E+01	0.00E+00	7.00E+01
			I-131	<8.35E+01	0.00E+00	8.35E+01
			Cs-134	<5.04E+01	0.00E+00	5.04E+01
			Cs-137	<5.92E+01	0.00E+00	5.92E+01
			Be-7	<3.17E+02	0.00E+00	3.17E+02
			K-40	4.12E+03	9.31E+02	8.04E+02
			Ag-110M	<5.04E+01	0.00E+00	5.04E+01
			Sb-122	<6.40E+02	0.00E+00	6.40E+02
			Sb-125	<1.39E+02	0.00E+00	1.39E+02

Sample ID:	Sample Dates:	Location:	Nuclide	Activity	2 Sigma Error	MDA
497565	4/23/2019 - 4/23/2019	BOTMFEEDER	Mn-54	<7.50E+01	0.00E+00	7.50E+01
			Co-58	<5.94E+01	0.00E+00	5.94E+01
			Fe-59	<1.68E+02	0.00E+00	1.68E+02
			Co-60	<9.53E+01	0.00E+00	9.53E+01
			Zn-65	<1.88E+02	0.00E+00	1.88E+02
			Nb-95	<6.67E+01	0.00E+00	6.67E+01
			I-131	<1.12E+02	0.00E+00	1.12E+02
			Cs-134	<1.02E+02	0.00E+00	1.02E+02
			Cs-137	<7.87E+01	0.00E+00	7.87E+01
			Be-7	<5.70E+02	0.00E+00	5.70E+02
			K-40	3.75E+03	1.13E+03	1.03E+03
			Ag-110M	<6.88E+01	0.00E+00	6.88E+01
			Sb-122	<7.15E+02	0.00E+00	7.15E+02
			Sb-125	<1.73E+02	0.00E+00	1.73E+02

Sample ID:	Sample Dates:	Location:	Nuclide	Activity	2 Sigma Error	MDA
509588	10/1/2019 - 10/1/2019	FREESWIM	Mn-54	<6.98E+01	0.00E+00	6.98E+01
			Co-58	<5.52E+01	0.00E+00	5.52E+01
			Fe-59	<1.28E+02	0.00E+00	1.28E+02
			Co-60	<8.37E+01	0.00E+00	8.37E+01
			Zn-65	<1.49E+02	0.00E+00	1.49E+02
			Nb-95	<7.89E+01	0.00E+00	7.89E+01
			I-131	<8.51E+01	0.00E+00	8.51E+01
			Cs-134	<7.25E+01	0.00E+00	7.25E+01
			Cs-137	<4.47E+01	0.00E+00	4.47E+01
			Be-7	<4.79E+02	0.00E+00	4.79E+02
			K-40	4.46E+03	1.22E+03	7.21E+02
			Ag-110M	<5.69E+01	0.00E+00	5.69E+01
			Sb-122	<4.86E+02	0.00E+00	4.86E+02
			Sb-125	<1.53E+02	0.00E+00	1.53E+02

Sample ID:	Sample Dates:	Location:	Nuclide	Activity	2 Sigma Error	MDA
509590	10/1/2019 - 10/1/2019	BOTMFEEDER	Mn-54	<8.34E+01	0.00E+00	8.34E+01
			Co-58	<8.24E+01	0.00E+00	8.24E+01
			Fe-59	<1.79E+02	0.00E+00	1.79E+02

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: FISH Concentration (Activity): pCi/kg wet

Sample Point 44 [INDICATOR - -- @ 0 miles]

Sample ID:	509590	Sample Dates:	10/1/2019 - 10/1/2019	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
					Co-60	<8.35E+01	0.00E+00	8.35E+01
					Zn-65	<2.07E+02	0.00E+00	2.07E+02
					Nb-95	<8.44E+01	0.00E+00	8.44E+01
					I-131	<9.49E+01	0.00E+00	9.49E+01
					Cs-134	<9.75E+01	0.00E+00	9.75E+01
					Cs-137	<5.84E+01	0.00E+00	5.84E+01
					Be-7	<5.67E+02	0.00E+00	5.67E+02
					K-40	3.14E+03	1.08E+03	9.85E+02
					Ag-110M	<5.76E+01	0.00E+00	5.76E+01
					Sb-122	<5.15E+02	0.00E+00	5.15E+02
					Sb-125	<1.69E+02	0.00E+00	1.69E+02

Sample ID:	509589	Sample Dates:	10/1/2019 - 10/2/2019	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<5.56E+01	0.00E+00	5.56E+01
					Co-58	<8.93E+01	0.00E+00	8.93E+01
					Fe-59	<1.48E+02	0.00E+00	1.48E+02
					Co-60	<6.71E+01	0.00E+00	6.71E+01
					Zn-65	<1.55E+02	0.00E+00	1.55E+02
					Nb-95	<7.74E+01	0.00E+00	7.74E+01
					I-131	<9.51E+01	0.00E+00	9.51E+01
					Cs-134	<6.22E+01	0.00E+00	6.22E+01
					Cs-137	<5.42E+01	0.00E+00	5.42E+01
					Be-7	<4.67E+02	0.00E+00	4.67E+02
					K-40	3.08E+03	1.05E+03	8.34E+02
					Ag-110M	<6.82E+01	0.00E+00	6.83E+01
					Sb-122	<4.21E+02	0.00E+00	4.21E+02
					Sb-125	<1.15E+02	0.00E+00	1.15E+02

Sample Point 45 [CONTROL - -- @ 0 miles]

Sample ID:	497566	Sample Dates:	4/22/2019 - 4/22/2019	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<5.17E+01	0.00E+00	5.17E+01
					Co-58	<4.55E+01	0.00E+00	4.55E+01
					Fe-59	<1.29E+02	0.00E+00	1.29E+02
					Co-60	<4.33E+01	0.00E+00	4.33E+01
					Zn-65	<1.03E+02	0.00E+00	1.03E+02
					Nb-95	<5.33E+01	0.00E+00	5.33E+01
					I-131	<1.01E+02	0.00E+00	1.01E+02
					Cs-134	<6.04E+01	0.00E+00	6.04E+01
					Cs-137	<4.59E+01	0.00E+00	4.59E+01
					Be-7	<4.11E+02	0.00E+00	4.11E+02
					K-40	4.41E+03	9.70E+02	8.79E+02
					Ag-110M	<4.31E+01	0.00E+00	4.31E+01
					Sb-122	<7.82E+02	0.00E+00	7.82E+02
					Sb-125	<1.19E+02	0.00E+00	1.19E+02

Sample ID:	497567	Sample Dates:	4/22/2019 - 4/22/2019	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<7.11E+01	0.00E+00	7.11E+01
					Co-58	<7.45E+01	0.00E+00	7.45E+01
					Fe-59	<1.80E+02	0.00E+00	1.80E+02
					Co-60	<5.49E+01	0.00E+00	5.49E+01
					Zn-65	<1.51E+02	0.00E+00	1.51E+02
					Nb-95	<8.67E+01	0.00E+00	8.67E+01
					I-131	<2.15E+02	0.00E+00	2.15E+02
					Cs-134	<9.20E+01	0.00E+00	9.20E+01
					Cs-137	<5.75E+01	0.00E+00	5.75E+01
					Be-7	<6.21E+02	0.00E+00	6.21E+02
					K-40	4.71E+03	1.16E+03	6.29E+02
					Ag-110M	<5.65E+01	0.00E+00	5.65E+01
					Sb-122	<3.50E+03	0.00E+00	3.50E+03
					Sb-125	<1.57E+02	0.00E+00	1.57E+02

Sample ID:	497568	Sample Dates:	4/22/2019 - 4/22/2019	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<6.05E+01	0.00E+00	6.05E+01
					Co-58	<7.72E+01	0.00E+00	7.72E+01
					Fe-59	<1.61E+02	0.00E+00	1.61E+02
					Co-60	<6.72E+01	0.00E+00	6.72E+01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: FISH Concentration (Activity): pCi/kg wet

Sample Point 45 [CONTROL - -- @ 0 miles]

Sample ID:	497568	Sample Dates:	4/22/2019 - 4/22/2019	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
					Zn-65	<1.61E+02	0.00E+00	1.61E+02
					Nb-95	<8.56E+01	0.00E+00	8.56E+01
					I-131	<1.59E+02	0.00E+00	1.59E+02
					Cs-134	<4.80E+01	0.00E+00	4.80E+01
					Cs-137	<5.78E+01	0.00E+00	5.78E+01
					Be-7	<6.59E+02	0.00E+00	6.59E+02
					K-40	3.96E+03	1.13E+03	1.05E+03
					Ag-110M	<5.01E+01	0.00E+00	5.01E+01
					Sb-122	<2.57E+03	0.00E+00	2.57E+03
					Sb-125	<1.59E+02	0.00E+00	1.59E+02

Sample ID:	509591	Sample Dates:	10/1/2019 - 10/1/2019	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<4.96E+01	0.00E+00	4.96E+01
					Co-58	<5.00E+01	0.00E+00	5.00E+01
					Fe-59	<8.10E+01	0.00E+00	8.10E+01
					Co-60	<3.32E+01	0.00E+00	3.32E+01
					Zn-65	<6.87E+01	0.00E+00	6.87E+01
					Nb-95	<5.51E+01	0.00E+00	5.51E+01
					I-131	<7.47E+01	0.00E+00	7.47E+01
					Cs-134	<6.83E+01	0.00E+00	6.83E+01
					Cs-137	<4.48E+01	0.00E+00	4.48E+01
					Be-7	<4.05E+02	0.00E+00	4.05E+02
					K-40	3.97E+03	8.69E+02	5.70E+02
					Ag-110M	<4.50E+01	0.00E+00	4.50E+01
					Sb-122	<3.52E+02	0.00E+00	3.52E+02
					Sb-125	<1.17E+02	0.00E+00	1.17E+02

Sample ID:	509592	Sample Dates:	10/1/2019 - 10/1/2019	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<7.54E+01	0.00E+00	7.54E+01
					Co-58	<5.31E+01	0.00E+00	5.31E+01
					Fe-59	<1.49E+02	0.00E+00	1.49E+02
					Co-60	<7.20E+01	0.00E+00	7.20E+01
					Zn-65	<1.28E+02	0.00E+00	1.28E+02
					Nb-95	<7.12E+01	0.00E+00	7.12E+01
					I-131	<8.19E+01	0.00E+00	8.19E+01
					Cs-134	<6.38E+01	0.00E+00	6.38E+01
					Cs-137	<5.55E+01	0.00E+00	5.55E+01
					Be-7	<3.92E+02	0.00E+00	3.92E+02
					K-40	4.12E+03	1.16E+03	7.92E+02
					Ag-110M	<6.27E+01	0.00E+00	6.27E+01
					Sb-122	<4.70E+02	0.00E+00	4.70E+02
					Sb-125	<1.47E+02	0.00E+00	1.47E+02

Sample ID:	509593	Sample Dates:	10/1/2019 - 10/1/2019	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<8.53E+01	0.00E+00	8.53E+01
					Co-58	<8.46E+01	0.00E+00	8.46E+01
					Fe-59	<1.09E+02	0.00E+00	1.09E+02
					Co-60	<9.03E+01	0.00E+00	9.03E+01
					Zn-65	<1.73E+02	0.00E+00	1.73E+02
					Nb-95	<8.67E+01	0.00E+00	8.67E+01
					I-131	<1.24E+02	0.00E+00	1.24E+02
					Cs-134	<5.08E+01	0.00E+00	5.08E+01
					Cs-137	<5.72E+01	0.00E+00	5.72E+01
					Be-7	<6.10E+02	0.00E+00	6.10E+02
					K-40	4.19E+03	1.13E+03	1.86E+02
					Ag-110M	<7.80E+01	0.00E+00	7.80E+01
					Sb-122	<4.35E+02	0.00E+00	4.35E+02
					Sb-125	<2.15E+02	0.00E+00	2.15E+02

Media Type: GROUND WATER Concentration (Activity): pCi/l

Sample Point 57 [INDICATOR - SSW @ 0.4 miles]

Sample ID:	488359	Sample Dates:	2/19/2019 - 2/19/2019		Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<6.80E+00	0.00E+00	6.80E+00
					Co-58	<6.70E+00	0.00E+00	6.70E+00
					Fe-59	<1.27E+01	0.00E+00	1.27E+01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: GROUND WATER Concentration (Activity): pCi/l

Sample Point 57 [INDICATOR - SSW @ 0.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
488359	2/19/2019 - 2/19/2019	Co-60	<6.79E+00	0.00E+00	6.79E+00
		Zn-65	<1.43E+01	0.00E+00	1.43E+01
		Zr-95	<1.10E+01	0.00E+00	1.10E+01
		Nb-95	<7.40E+00	0.00E+00	7.40E+00
		I-131	<9.97E+00	0.00E+00	9.97E+00
		Cs-134	<7.02E+00	0.00E+00	7.02E+00
		Cs-137	<6.74E+00	0.00E+00	6.74E+00
		BaLa-140	<1.12E+01	0.00E+00	1.12E+01
		Be-7	<4.93E+01	0.00E+00	4.93E+01
		K-40	<1.15E+02	0.00E+00	1.15E+02
		H3GW	<1.60E+02	0.00E+00	1.81E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493491	5/20/2019 - 5/20/2019	Mn-54	<4.89E+00	0.00E+00	4.89E+00
		Co-58	<4.67E+00	0.00E+00	4.67E+00
		Fe-59	<1.07E+01	0.00E+00	1.07E+01
		Co-60	<5.54E+00	0.00E+00	5.54E+00
		Zn-65	<9.94E+00	0.00E+00	9.94E+00
		Zr-95	<9.58E+00	0.00E+00	9.58E+00
		Nb-95	<6.53E+00	0.00E+00	6.53E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<6.17E+00	0.00E+00	6.17E+00
		Cs-137	<4.07E+00	0.00E+00	4.07E+00
		BaLa-140	<9.25E+00	0.00E+00	9.25E+00
		Be-7	<3.53E+01	0.00E+00	3.53E+01
		K-40	8.44E+01	5.46E+01	8.01E+01
		H3GW	<-5.6E+01	0.00E+00	1.90E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504829	8/19/2019 - 8/19/2019	Mn-54	<5.78E+00	0.00E+00	5.78E+00
		Co-58	<6.90E+00	0.00E+00	6.90E+00
		Fe-59	<1.16E+01	0.00E+00	1.16E+01
		Co-60	<4.81E+00	0.00E+00	4.81E+00
		Zn-65	<1.39E+01	0.00E+00	1.39E+01
		Zr-95	<1.10E+01	0.00E+00	1.10E+01
		Nb-95	<7.53E+00	0.00E+00	7.53E+00
		I-131	<1.04E+01	0.00E+00	1.04E+01
		Cs-134	<4.85E+00	0.00E+00	4.85E+00
		Cs-137	<6.40E+00	0.00E+00	6.40E+00
		BaLa-140	<1.07E+01	0.00E+00	1.07E+01
		Be-7	<3.97E+01	0.00E+00	3.97E+01
		K-40	5.18E+01	5.50E+01	8.72E+01
		H3GW	<1.07E+02	0.00E+00	1.87E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
499789	11/20/2019 - 11/20/2019	Mn-54	<5.69E+00	0.00E+00	5.69E+00
		Co-58	<5.46E+00	0.00E+00	5.46E+00
		Fe-59	<1.02E+01	0.00E+00	1.02E+01
		Co-60	<5.12E+00	0.00E+00	5.12E+00
		Zn-65	<2.10E+01	0.00E+00	2.10E+01
		Zr-95	<1.10E+01	0.00E+00	1.10E+01
		Nb-95	<8.20E+00	0.00E+00	8.20E+00
		I-131	<9.67E+00	0.00E+00	9.67E+00
		Cs-134	<7.59E+00	0.00E+00	7.59E+00
		Cs-137	<5.12E+00	0.00E+00	5.12E+00
		BaLa-140	<8.96E+00	0.00E+00	8.96E+00
		Be-7	<4.99E+01	0.00E+00	4.99E+01
		K-40	<6.77E+01	0.00E+00	6.77E+01
		H3GW	<6.76E+00	0.00E+00	1.87E+02

Sample Point 59 [INDICATOR - NNE @ 0.5 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
488360	2/18/2019 - 2/18/2019	Mn-54	<5.53E+00	0.00E+00	5.53E+00
		Co-58	<4.32E+00	0.00E+00	4.32E+00
		Fe-59	<1.07E+01	0.00E+00	1.07E+01
		Co-60	<5.43E+00	0.00E+00	5.43E+00

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: GROUND WATER Concentration (Activity): pCi/l

Sample Point 59 [INDICATOR - NNE @ 0.5 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
488360	2/18/2019 - 2/18/2019	Zn-65	<1.34E+01	0.00E+00	1.34E+01
		Zr-95	<8.50E+00	0.00E+00	8.50E+00
		Nb-95	<6.75E+00	0.00E+00	6.75E+00
		I-131	<8.99E+00	0.00E+00	8.99E+00
		Cs-134	<6.38E+00	0.00E+00	6.38E+00
		Cs-137	<4.72E+00	0.00E+00	4.72E+00
		BaLa-140	<7.06E+00	0.00E+00	7.06E+00
		Be-7	<4.17E+01	0.00E+00	4.17E+01
		K-40	<9.30E+01	0.00E+00	9.30E+01
		H3GW	<3.79E+01	0.00E+00	1.82E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493492	5/21/2019 - 5/21/2019	Mn-54	<7.01E+00	0.00E+00	7.01E+00
		Co-58	<3.65E+00	0.00E+00	3.65E+00
		Fe-59	<1.33E+01	0.00E+00	1.33E+01
		Co-60	<7.10E+00	0.00E+00	7.10E+00
		Zn-65	<1.05E+01	0.00E+00	1.05E+01
		Zr-95	<1.12E+01	0.00E+00	1.12E+01
		Nb-95	<6.22E+00	0.00E+00	6.22E+00
		I-131	<1.07E+01	0.00E+00	1.07E+01
		Cs-134	<6.95E+00	0.00E+00	6.95E+00
		Cs-137	<6.40E+00	0.00E+00	6.40E+00
		BaLa-140	<1.19E+01	0.00E+00	1.19E+01
		Be-7	<4.65E+01	0.00E+00	4.65E+01
		K-40	<1.03E+02	0.00E+00	1.03E+02
		H3GW	<-9.5E+01	0.00E+00	1.87E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504830	8/19/2019 - 8/19/2019	Mn-54	<4.52E+00	0.00E+00	4.52E+00
		Co-58	<4.87E+00	0.00E+00	4.87E+00
		Fe-59	<1.16E+01	0.00E+00	1.16E+01
		Co-60	<4.94E+00	0.00E+00	4.94E+00
		Zn-65	<1.13E+01	0.00E+00	1.13E+01
		Zr-95	<8.51E+00	0.00E+00	8.51E+00
		Nb-95	<6.36E+00	0.00E+00	6.36E+00
		I-131	<7.94E+00	0.00E+00	7.94E+00
		Cs-134	<5.61E+00	0.00E+00	5.61E+00
		Cs-137	<5.93E+00	0.00E+00	5.93E+00
		BaLa-140	<1.11E+01	0.00E+00	1.11E+01
		Be-7	<3.30E+01	0.00E+00	3.30E+01
		K-40	<8.93E+01	0.00E+00	8.93E+01
		H3GW	<0.00E+00	0.00E+00	1.87E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
499790	11/20/2019 - 11/20/2019	Mn-54	<5.99E+00	0.00E+00	5.99E+00
		Co-58	<5.98E+00	0.00E+00	5.98E+00
		Fe-59	<9.99E+00	0.00E+00	9.99E+00
		Co-60	<5.86E+00	0.00E+00	5.86E+00
		Zn-65	<1.04E+01	0.00E+00	1.04E+01
		Zr-95	<1.02E+01	0.00E+00	1.02E+01
		Nb-95	<6.35E+00	0.00E+00	6.35E+00
		I-131	<9.54E+00	0.00E+00	9.54E+00
		Cs-134	<7.58E+00	0.00E+00	7.58E+00
		Cs-137	<5.81E+00	0.00E+00	5.81E+00
		BaLa-140	<1.02E+01	0.00E+00	1.02E+01
		Be-7	<5.31E+01	0.00E+00	5.31E+01
		K-40	4.91E+01	5.20E+01	8.22E+01
		H3GW	<2.26E+00	0.00E+00	1.88E+02

Sample Point 60 [INDICATOR - ESE @ 0.5 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
488361	2/20/2019 - 2/20/2019	Mn-54	<4.52E+00	0.00E+00	4.52E+00
		Co-58	<6.18E+00	0.00E+00	6.18E+00
		Fe-59	<9.22E+00	0.00E+00	9.22E+00
		Co-60	<4.59E+00	0.00E+00	4.59E+00
		Zn-65	<9.05E+00	0.00E+00	9.05E+00

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: GROUND WATER Concentration (Activity): pCi/l

Sample Point 60 [INDICATOR - ESE @ 0.5 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
488361	2/20/2019 - 2/20/2019	Zr-95	<1.04E+01	0.00E+00	1.04E+01
		Nb-95	<6.75E+00	0.00E+00	6.75E+00
		I-131	<6.43E+00	0.00E+00	6.43E+00
		Cs-134	<6.35E+00	0.00E+00	6.35E+00
		Cs-137	<4.90E+00	0.00E+00	4.90E+00
		BaLa-140	<1.80E+00	0.00E+00	1.80E+00
		Be-7	<4.31E+01	0.00E+00	4.31E+01
		K-40	<9.09E+01	0.00E+00	9.09E+01
		H3GW	<1.66E+01	0.00E+00	1.82E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493493	5/21/2019 - 5/21/2019	Mn-54	<6.85E+00	0.00E+00	6.85E+00
		Co-58	<5.86E+00	0.00E+00	5.86E+00
		Fe-59	<1.38E+01	0.00E+00	1.38E+01
		Co-60	<6.04E+00	0.00E+00	6.04E+00
		Zn-65	<1.49E+01	0.00E+00	1.49E+01
		Zr-95	<1.03E+01	0.00E+00	1.03E+01
		Nb-95	<6.17E+00	0.00E+00	6.17E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<7.24E+00	0.00E+00	7.24E+00
		Cs-137	<5.32E+00	0.00E+00	5.32E+00
		BaLa-140	<1.14E+01	0.00E+00	1.14E+01
		Be-7	<5.12E+01	0.00E+00	5.12E+01
		K-40	<1.29E+02	0.00E+00	1.29E+02
		H3GW	<-3.6E+01	0.00E+00	1.89E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504831	8/20/2019 - 8/20/2019	Mn-54	<4.80E+00	0.00E+00	4.80E+00
		Co-58	<5.68E+00	0.00E+00	5.68E+00
		Fe-59	<8.70E+00	0.00E+00	8.70E+00
		Co-60	<5.12E+00	0.00E+00	5.12E+00
		Zn-65	<1.43E+01	0.00E+00	1.43E+01
		Zr-95	<7.72E+00	0.00E+00	7.72E+00
		Nb-95	<7.36E+00	0.00E+00	7.36E+00
		I-131	<7.37E+00	0.00E+00	7.37E+00
		Cs-134	<5.89E+00	0.00E+00	5.89E+00
		Cs-137	<5.33E+00	0.00E+00	5.33E+00
		BaLa-140	<1.11E+01	0.00E+00	1.11E+01
		Be-7	6.68E+00	2.30E+01	4.15E+01
		K-40	<5.59E+01	0.00E+00	5.59E+01
		H3GW	<-2.9E+01	0.00E+00	1.87E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
499791	11/20/2019 - 11/20/2019	Mn-54	<6.58E+00	0.00E+00	6.58E+00
		Co-58	<6.07E+00	0.00E+00	6.07E+00
		Fe-59	<1.07E+01	0.00E+00	1.07E+01
		Co-60	<5.83E+00	0.00E+00	5.83E+00
		Zn-65	<8.81E+00	0.00E+00	8.81E+00
		Zr-95	<8.36E+00	0.00E+00	8.36E+00
		Nb-95	<6.34E+00	0.00E+00	6.34E+00
		I-131	<8.46E+00	0.00E+00	8.46E+00
		Cs-134	<4.93E+00	0.00E+00	4.93E+00
		Cs-137	<6.23E+00	0.00E+00	6.23E+00
		BaLa-140	<8.25E+00	0.00E+00	8.25E+00
		Be-7	<4.31E+01	0.00E+00	4.31E+01
		K-40	<1.02E+02	0.00E+00	1.02E+02
		H3GW	<-6.1E+01	0.00E+00	1.86E+02

Sample Point 68 [INDICATOR - W @ 0.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
488362	2/19/2019 - 2/19/2019	Mn-54	<5.76E+00	0.00E+00	5.76E+00
		Co-58	<5.69E+00	0.00E+00	5.69E+00
		Fe-59	<8.08E+00	0.00E+00	8.08E+00
		Co-60	<5.37E+00	0.00E+00	5.37E+00
		Zn-65	<1.04E+01	0.00E+00	1.04E+01
		Zr-95	<8.05E+00	0.00E+00	8.05E+00

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: GROUND WATER Concentration (Activity): pCi/l

Sample Point 68 [INDICATOR - W @ 0.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
488362	2/19/2019 - 2/19/2019	Nb-95	<6.23E+00	0.00E+00	6.23E+00
		I-131	<8.78E+00	0.00E+00	8.78E+00
		Cs-134	<5.01E+00	0.00E+00	5.01E+00
		Cs-137	<5.60E+00	0.00E+00	5.60E+00
		BaLa-140	<5.42E+00	0.00E+00	5.42E+00
		Be-7	<3.21E+01	0.00E+00	3.21E+01
		K-40	5.36E+01	5.26E+01	8.19E+01
		H3GW	<1.39E+02	0.00E+00	1.81E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493494	5/21/2019 - 5/21/2019	Mn-54	<5.55E+00	0.00E+00	5.55E+00
		Co-58	<5.63E+00	0.00E+00	5.63E+00
		Fe-59	<1.27E+01	0.00E+00	1.27E+01
		Co-60	<6.57E+00	0.00E+00	6.57E+00
		Zn-65	<1.11E+01	0.00E+00	1.11E+01
		Zr-95	<9.47E+00	0.00E+00	9.47E+00
		Nb-95	<6.32E+00	0.00E+00	6.32E+00
		I-131	<1.05E+01	0.00E+00	1.05E+01
		Cs-134	<5.48E+00	0.00E+00	5.48E+00
		Cs-137	<5.36E+00	0.00E+00	5.36E+00
		BaLa-140	<5.92E+00	0.00E+00	5.92E+00
		Be-7	<4.36E+01	0.00E+00	4.36E+01
		K-40	<9.73E+01	0.00E+00	9.73E+01
		H3GW	<-1.0E+02	0.00E+00	1.87E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504832	8/20/2019 - 8/20/2019	Mn-54	<3.43E+00	0.00E+00	3.43E+00
		Co-58	<5.23E+00	0.00E+00	5.23E+00
		Fe-59	<1.21E+01	0.00E+00	1.21E+01
		Co-60	<4.81E+00	0.00E+00	4.81E+00
		Zn-65	<1.12E+01	0.00E+00	1.12E+01
		Zr-95	<1.19E+01	0.00E+00	1.19E+01
		Nb-95	<5.88E+00	0.00E+00	5.88E+00
		I-131	<8.13E+00	0.00E+00	8.13E+00
		Cs-134	<5.34E+00	0.00E+00	5.34E+00
		Cs-137	<4.90E+00	0.00E+00	4.90E+00
		BaLa-140	<5.71E+00	0.00E+00	5.71E+00
		Be-7	<3.43E+01	0.00E+00	3.43E+01
		K-40	5.65E+01	6.23E+01	1.00E+02
		H3GW	<5.23E+01	0.00E+00	1.87E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
499792	11/19/2019 - 11/19/2019	Mn-54	<5.32E+00	0.00E+00	5.32E+00
		Co-58	<5.51E+00	0.00E+00	5.51E+00
		Fe-59	<8.48E+00	0.00E+00	8.48E+00
		Co-60	<5.84E+00	0.00E+00	5.84E+00
		Zn-65	<1.04E+01	0.00E+00	1.04E+01
		Zr-95	<9.99E+00	0.00E+00	9.99E+00
		Nb-95	<7.48E+00	0.00E+00	7.48E+00
		I-131	<8.53E+00	0.00E+00	8.53E+00
		Cs-134	<5.70E+00	0.00E+00	5.70E+00
		Cs-137	<5.70E+00	0.00E+00	5.70E+00
		BaLa-140	<8.71E+00	0.00E+00	8.71E+00
		Be-7	<3.87E+01	0.00E+00	3.87E+01
		K-40	3.54E+01	5.56E+01	9.35E+01
		H3GW	<-7.0E+01	0.00E+00	1.88E+02

Sample Point 69 [INDICATOR - NNE @ 0.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
488363	2/18/2019 - 2/18/2019	Mn-54	<4.27E+00	0.00E+00	4.27E+00
		Co-58	<4.74E+00	0.00E+00	4.74E+00
		Fe-59	<1.22E+01	0.00E+00	1.22E+01
		Co-60	<5.12E+00	0.00E+00	5.12E+00
		Zn-65	<1.21E+01	0.00E+00	1.21E+01
		Zr-95	<1.00E+01	0.00E+00	1.00E+01
		Nb-95	<6.14E+00	0.00E+00	6.14E+00

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: GROUND WATER Concentration (Activity): pCi/l

Sample Point 69 [INDICATOR - NNE @ 0.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
488363	2/18/2019 - 2/18/2019	I-131	<9.54E+00	0.00E+00	9.54E+00
		Cs-134	<6.37E+00	0.00E+00	6.37E+00
		Cs-137	<5.53E+00	0.00E+00	5.53E+00
		BaLa-140	<1.02E+01	0.00E+00	1.02E+01
		Be-7	<3.15E+01	0.00E+00	3.15E+01
		K-40	5.66E+01	5.63E+01	8.85E+01
		H3GW	<-5.4E+01	0.00E+00	1.81E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493495	5/20/2019 - 5/20/2019	Mn-54	<5.35E+00	0.00E+00	5.35E+00
		Co-58	<6.43E+00	0.00E+00	6.43E+00
		Fe-59	<1.02E+01	0.00E+00	1.02E+01
		Co-60	<3.36E+00	0.00E+00	3.36E+00
		Zn-65	<9.15E+00	0.00E+00	9.15E+00
		Zr-95	<1.18E+01	0.00E+00	1.18E+01
		Nb-95	<5.02E+00	0.00E+00	5.02E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<6.60E+00	0.00E+00	6.60E+00
		Cs-137	<5.14E+00	0.00E+00	5.14E+00
		BaLa-140	<9.73E+00	0.00E+00	9.73E+00
		Be-7	<4.24E+01	0.00E+00	4.24E+01
		K-40	1.89E+02	6.19E+01	5.85E+01
		H3GW	<-1.1E+02	0.00E+00	1.88E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504833	8/19/2019 - 8/19/2019	Mn-54	<5.51E+00	0.00E+00	5.51E+00
		Co-58	<6.36E+00	0.00E+00	6.36E+00
		Fe-59	<1.17E+01	0.00E+00	1.17E+01
		Co-60	<6.04E+00	0.00E+00	6.04E+00
		Zn-65	<1.43E+01	0.00E+00	1.43E+01
		Zr-95	<1.11E+01	0.00E+00	1.11E+01
		Nb-95	<8.15E+00	0.00E+00	8.15E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<6.60E+00	0.00E+00	6.60E+00
		Cs-137	<5.11E+00	0.00E+00	5.11E+00
		BaLa-140	<9.31E+00	0.00E+00	9.31E+00
		Be-7	<4.97E+01	0.00E+00	4.97E+01
		K-40	1.29E+02	6.44E+01	8.21E+01
		H3GW	<-2.1E+01	0.00E+00	1.86E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
499793	11/19/2019 - 11/19/2019	Mn-54	<4.42E+00	0.00E+00	4.42E+00
		Co-58	<5.34E+00	0.00E+00	5.34E+00
		Fe-59	<1.07E+01	0.00E+00	1.07E+01
		Co-60	<3.84E+00	0.00E+00	3.84E+00
		Zn-65	<8.86E+00	0.00E+00	8.86E+00
		Zr-95	<7.57E+00	0.00E+00	7.57E+00
		Nb-95	<5.27E+00	0.00E+00	5.27E+00
		I-131	<8.85E+00	0.00E+00	8.85E+00
		Cs-134	<5.47E+00	0.00E+00	5.47E+00
		Cs-137	<4.52E+00	0.00E+00	4.52E+00
		BaLa-140	<1.06E+01	0.00E+00	1.06E+01
		Be-7	<3.92E+01	0.00E+00	3.92E+01
		K-40	7.42E+01	5.14E+01	7.24E+01
		H3GW	<-8.6E+01	0.00E+00	1.87E+02

Sample Point 70 [INDICATOR - E @ 0.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
488364	2/19/2019 - 2/19/2019	Mn-54	<5.48E+00	0.00E+00	5.48E+00
		Co-58	<4.97E+00	0.00E+00	4.97E+00
		Fe-59	<9.50E+00	0.00E+00	9.50E+00
		Co-60	<6.40E+00	0.00E+00	6.40E+00
		Zn-65	<9.93E+00	0.00E+00	9.93E+00
		Zr-95	<9.12E+00	0.00E+00	9.12E+00
		Nb-95	<6.03E+00	0.00E+00	6.03E+00
		I-131	<8.63E+00	0.00E+00	8.63E+00

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: GROUND WATER Concentration (Activity): pCi/l

Sample Point 70 [INDICATOR - E @ 0.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
488364	2/19/2019 - 2/19/2019	Cs-134	<7.00E+00	0.00E+00	7.00E+00
		Cs-137	<4.90E+00	0.00E+00	4.90E+00
		BaLa-140	<9.69E+00	0.00E+00	9.69E+00
		Be-7	<4.54E+01	0.00E+00	4.54E+01
		K-40	<9.34E+01	0.00E+00	9.34E+01
		H3GW	<0.00E+00	0.00E+00	1.81E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493496	5/20/2019 - 5/20/2019	Mn-54	<5.10E+00	0.00E+00	5.10E+00
		Co-58	<4.98E+00	0.00E+00	4.98E+00
		Fe-59	<1.06E+01	0.00E+00	1.06E+01
		Co-60	<4.89E+00	0.00E+00	4.89E+00
		Zn-65	<1.14E+01	0.00E+00	1.14E+01
		Zr-95	<8.17E+00	0.00E+00	8.17E+00
		Nb-95	<4.36E+00	0.00E+00	4.36E+00
		I-131	<9.21E+00	0.00E+00	9.21E+00
		Cs-134	<5.82E+00	0.00E+00	5.82E+00
		Cs-137	<4.51E+00	0.00E+00	4.51E+00
		BaLa-140	<1.18E+01	0.00E+00	1.18E+01
		Be-7	<3.58E+01	0.00E+00	3.58E+01
		K-40	8.38E+01	4.64E+01	6.12E+01
		H3GW	<-7.3E+01	0.00E+00	1.87E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504834	8/19/2019 - 8/19/2019	Mn-54	<6.09E+00	0.00E+00	6.09E+00
		Co-58	<4.60E+00	0.00E+00	4.60E+00
		Fe-59	<9.37E+00	0.00E+00	9.37E+00
		Co-60	<7.80E+00	0.00E+00	7.80E+00
		Zn-65	<9.68E+00	0.00E+00	9.68E+00
		Zr-95	<8.92E+00	0.00E+00	8.92E+00
		Nb-95	<6.36E+00	0.00E+00	6.36E+00
		I-131	<8.52E+00	0.00E+00	8.52E+00
		Cs-134	<5.94E+00	0.00E+00	5.94E+00
		Cs-137	<6.36E+00	0.00E+00	6.36E+00
		BaLa-140	<7.02E+00	0.00E+00	7.02E+00
		Be-7	<3.01E+01	0.00E+00	3.01E+01
		K-40	<7.80E+01	0.00E+00	7.80E+01
		H3GW	<6.42E+01	0.00E+00	1.87E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
499794	11/19/2019 - 11/19/2019	Mn-54	<5.12E+00	0.00E+00	5.12E+00
		Co-58	<4.86E+00	0.00E+00	4.86E+00
		Fe-59	<1.35E+01	0.00E+00	1.35E+01
		Co-60	<5.43E+00	0.00E+00	5.43E+00
		Zn-65	<8.87E+00	0.00E+00	8.87E+00
		Zr-95	<8.50E+00	0.00E+00	8.50E+00
		Nb-95	<6.92E+00	0.00E+00	6.92E+00
		I-131	<9.14E+00	0.00E+00	9.14E+00
		Cs-134	<6.17E+00	0.00E+00	6.17E+00
		Cs-137	<6.20E+00	0.00E+00	6.20E+00
		BaLa-140	<1.07E+01	0.00E+00	1.07E+01
		Be-7	<3.19E+01	0.00E+00	3.19E+01
		K-40	1.24E+02	5.46E+01	5.85E+01
		H3GW	<-4.1E+01	0.00E+00	1.88E+02

Sample Point 71 [INDICATOR - SE @ 0.3 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
488365	2/18/2019 - 2/18/2019	Mn-54	<6.78E+00	0.00E+00	6.78E+00
		Co-58	<4.95E+00	0.00E+00	4.95E+00
		Fe-59	<9.02E+00	0.00E+00	9.02E+00
		Co-60	<4.81E+00	0.00E+00	4.81E+00
		Zn-65	<1.44E+01	0.00E+00	1.44E+01
		Zr-95	<1.16E+01	0.00E+00	1.16E+01
		Nb-95	<7.18E+00	0.00E+00	7.18E+00
		I-131	<9.83E+00	0.00E+00	9.83E+00
		Cs-134	<4.66E+00	0.00E+00	4.66E+00

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: GROUND WATER Concentration (Activity): pCi/l

Sample Point 71 [INDICATOR - SE @ 0.3 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
488365	2/18/2019 - 2/18/2019	Cs-137	<6.76E+00	0.00E+00	6.76E+00
		BaLa-140	<7.17E+00	0.00E+00	7.17E+00
		Be-7	<4.61E+01	0.00E+00	4.61E+01
		K-40	7.59E+01	5.95E+01	8.86E+01
		H3GW	<5.66E+01	0.00E+00	1.81E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493497	5/20/2019 - 5/20/2019	Mn-54	<4.96E+00	0.00E+00	4.96E+00
		Co-58	<6.29E+00	0.00E+00	6.29E+00
		Fe-59	<8.72E+00	0.00E+00	8.72E+00
		Co-60	<3.73E+00	0.00E+00	3.73E+00
		Zn-65	<1.13E+01	0.00E+00	1.13E+01
		Zr-95	<1.15E+01	0.00E+00	1.15E+01
		Nb-95	<6.78E+00	0.00E+00	6.78E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<6.31E+00	0.00E+00	6.31E+00
		Cs-137	<4.92E+00	0.00E+00	4.92E+00
		BaLa-140	<1.01E+01	0.00E+00	1.01E+01
		Be-7	<3.25E+01	0.00E+00	3.25E+01
		K-40	1.55E+02	5.71E+01	6.03E+01
H3GW	<-6.5E+01	0.00E+00	1.89E+02		

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504835	8/19/2019 - 8/19/2019	Mn-54	<9.33E+00	0.00E+00	9.33E+00
		Co-58	<7.46E+00	0.00E+00	7.46E+00
		Fe-59	<1.57E+01	0.00E+00	1.57E+01
		Co-60	<6.96E+00	0.00E+00	6.96E+00
		Zn-65	<1.91E+01	0.00E+00	1.91E+01
		Zr-95	<1.37E+01	0.00E+00	1.37E+01
		Nb-95	<9.76E+00	0.00E+00	9.76E+00
		I-131	<1.09E+01	0.00E+00	1.09E+01
		Cs-134	<8.35E+00	0.00E+00	8.35E+00
		Cs-137	<8.11E+00	0.00E+00	8.11E+00
		BaLa-140	<8.84E+00	0.00E+00	8.84E+00
		Be-7	<5.70E+01	0.00E+00	5.70E+01
		K-40	<1.38E+02	0.00E+00	1.38E+02
H3GW	<-6.1E+01	0.00E+00	1.85E+02		

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
499795	11/19/2019 - 11/19/2019	Mn-54	<3.76E+00	0.00E+00	3.76E+00
		Co-58	<5.21E+00	0.00E+00	5.21E+00
		Fe-59	<7.53E+00	0.00E+00	7.53E+00
		Co-60	<5.70E+00	0.00E+00	5.70E+00
		Zn-65	<1.08E+01	0.00E+00	1.08E+01
		Zr-95	<7.86E+00	0.00E+00	7.86E+00
		Nb-95	<7.59E+00	0.00E+00	7.59E+00
		I-131	<9.27E+00	0.00E+00	9.27E+00
		Cs-134	<7.84E+00	0.00E+00	7.84E+00
		Cs-137	<5.89E+00	0.00E+00	5.89E+00
		BaLa-140	<1.18E+01	0.00E+00	1.18E+01
		Be-7	<3.42E+01	0.00E+00	3.42E+01
		K-40	<7.87E+01	0.00E+00	7.87E+01
H3GW	<-1.1E+02	0.00E+00	1.87E+02		

Sample Point 72 [INDICATOR - SE @ 0.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
488366	2/18/2019 - 2/18/2019	Mn-54	<7.49E+00	0.00E+00	7.49E+00
		Co-58	<5.92E+00	0.00E+00	5.92E+00
		Fe-59	<1.32E+01	0.00E+00	1.32E+01
		Co-60	<7.20E+00	0.00E+00	7.20E+00
		Zn-65	<1.33E+01	0.00E+00	1.33E+01
		Zr-95	<1.13E+01	0.00E+00	1.13E+01
		Nb-95	<6.62E+00	0.00E+00	6.62E+00
		I-131	<1.01E+01	0.00E+00	1.01E+01
		Cs-134	<8.21E+00	0.00E+00	8.21E+00
		Cs-137	<5.90E+00	0.00E+00	5.90E+00

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: GROUND WATER Concentration (Activity): pCi/l

Sample Point 72 [INDICATOR - SE @ 0.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
488366	2/18/2019 - 2/18/2019	BaLa-140	<1.01E+01	0.00E+00	1.01E+01
		Be-7	<3.87E+01	0.00E+00	3.87E+01
		K-40	5.85E+01	4.22E+01	5.74E+01
		H3GW	<4.25E+01	0.00E+00	1.81E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493498	5/20/2019 - 5/20/2019	Mn-54	<6.46E+00	0.00E+00	6.46E+00
		Co-58	<6.85E+00	0.00E+00	6.85E+00
		Fe-59	<1.23E+01	0.00E+00	1.23E+01
		Co-60	<6.23E+00	0.00E+00	6.23E+00
		Zn-65	<1.58E+01	0.00E+00	1.58E+01
		Zr-95	<1.17E+01	0.00E+00	1.17E+01
		Nb-95	<7.63E+00	0.00E+00	7.63E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<6.80E+00	0.00E+00	6.80E+00
		Cs-137	<5.52E+00	0.00E+00	5.52E+00
		BaLa-140	<9.15E+00	0.00E+00	9.15E+00
		Be-7	<4.15E+01	0.00E+00	4.15E+01
		K-40	<9.07E+01	0.00E+00	9.07E+01
		H3GW	<-1.1E+02	0.00E+00	1.87E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504836	8/20/2019 - 8/20/2019	Mn-54	<6.72E+00	0.00E+00	6.72E+00
		Co-58	<6.42E+00	0.00E+00	6.42E+00
		Fe-59	<1.48E+01	0.00E+00	1.48E+01
		Co-60	<6.90E+00	0.00E+00	6.90E+00
		Zn-65	<1.61E+01	0.00E+00	1.61E+01
		Zr-95	<9.52E+00	0.00E+00	9.52E+00
		Nb-95	<1.09E+01	0.00E+00	1.09E+01
		I-131	<8.45E+00	0.00E+00	8.45E+00
		Cs-134	<7.34E+00	0.00E+00	7.34E+00
		Cs-137	<7.09E+00	0.00E+00	7.09E+00
		BaLa-140	<9.82E+00	0.00E+00	9.82E+00
		Be-7	<5.18E+01	0.00E+00	5.18E+01
		K-40	<9.53E+01	0.00E+00	9.53E+01
		H3GW	<4.72E+00	0.00E+00	1.85E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
499796	11/19/2019 - 11/19/2019	Mn-54	<7.67E+00	0.00E+00	7.67E+00
		Co-58	<6.63E+00	0.00E+00	6.63E+00
		Fe-59	<1.55E+01	0.00E+00	1.55E+01
		Co-60	<6.49E+00	0.00E+00	6.49E+00
		Zn-65	<1.44E+01	0.00E+00	1.44E+01
		Zr-95	<1.16E+01	0.00E+00	1.16E+01
		Nb-95	<7.00E+00	0.00E+00	7.00E+00
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<7.86E+00	0.00E+00	7.86E+00
		Cs-137	<6.28E+00	0.00E+00	6.28E+00
		BaLa-140	<1.07E+01	0.00E+00	1.07E+01
		Be-7	<4.03E+01	0.00E+00	4.03E+01
		K-40	<1.12E+02	0.00E+00	1.12E+02
		H3GW	<-6.3E+01	0.00E+00	1.85E+02

Sample Point 73 [INDICATOR - S @ 0.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
488367	2/18/2019 - 2/18/2019	Mn-54	<3.94E+00	0.00E+00	3.94E+00
		Co-58	<3.14E+00	0.00E+00	3.14E+00
		Fe-59	<7.89E+00	0.00E+00	7.89E+00
		Co-60	<2.92E+00	0.00E+00	2.92E+00
		Zn-65	<6.93E+00	0.00E+00	6.93E+00
		Zr-95	<6.75E+00	0.00E+00	6.75E+00
		Nb-95	<4.43E+00	0.00E+00	4.43E+00
		I-131	<5.81E+00	0.00E+00	5.81E+00
		Cs-134	<4.01E+00	0.00E+00	4.01E+00
		Cs-137	<4.05E+00	0.00E+00	4.05E+00
		BaLa-140	<6.47E+00	0.00E+00	6.47E+00

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: GROUND WATER Concentration (Activity): pCi/l

Sample Point 73 [INDICATOR - S @ 0.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
488367	2/18/2019 - 2/18/2019	Be-7	<2.33E+01	0.00E+00	2.33E+01
		K-40	6.21E+01	4.21E+01	6.35E+01
		H3GW	<3.54E+01	0.00E+00	1.81E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493499	5/20/2019 - 5/20/2019	Mn-54	<6.19E+00	0.00E+00	6.19E+00
		Co-58	<5.71E+00	0.00E+00	5.71E+00
		Fe-59	<1.21E+01	0.00E+00	1.21E+01
		Co-60	<5.21E+00	0.00E+00	5.21E+00
		Zn-65	<1.35E+01	0.00E+00	1.35E+01
		Zr-95	<1.13E+01	0.00E+00	1.13E+01
		Nb-95	<8.42E+00	0.00E+00	8.42E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<5.99E+00	0.00E+00	5.99E+00
		Cs-137	<5.08E+00	0.00E+00	5.08E+00
		BaLa-140	<8.81E+00	0.00E+00	8.81E+00
		Be-7	<4.54E+01	0.00E+00	4.54E+01
		K-40	<8.53E+01	0.00E+00	8.53E+01
		H3GW	<-1.3E+02	0.00E+00	1.88E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504837	8/19/2019 - 8/19/2019	Mn-54	<5.27E+00	0.00E+00	5.27E+00
		Co-58	<4.71E+00	0.00E+00	4.71E+00
		Fe-59	<1.09E+01	0.00E+00	1.09E+01
		Co-60	<4.59E+00	0.00E+00	4.59E+00
		Zn-65	<1.78E+01	0.00E+00	1.78E+01
		Zr-95	<8.70E+00	0.00E+00	8.70E+00
		Nb-95	<5.82E+00	0.00E+00	5.82E+00
		I-131	<7.45E+00	0.00E+00	7.45E+00
		Cs-134	<6.58E+00	0.00E+00	6.58E+00
		Cs-137	<4.90E+00	0.00E+00	4.90E+00
		BaLa-140	<8.93E+00	0.00E+00	8.93E+00
		Be-7	<3.76E+01	0.00E+00	3.76E+01
		K-40	4.81E+01	5.44E+01	8.76E+01
		H3GW	<-1.1E+02	0.00E+00	1.85E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
499797	11/19/2019 - 11/19/2019	Mn-54	<5.54E+00	0.00E+00	5.54E+00
		Co-58	<3.69E+00	0.00E+00	3.69E+00
		Fe-59	<1.13E+01	0.00E+00	1.13E+01
		Co-60	<6.56E+00	0.00E+00	6.56E+00
		Zn-65	<1.17E+01	0.00E+00	1.17E+01
		Zr-95	<8.53E+00	0.00E+00	8.53E+00
		Nb-95	<6.95E+00	0.00E+00	6.95E+00
		I-131	<1.01E+01	0.00E+00	1.01E+01
		Cs-134	<6.61E+00	0.00E+00	6.61E+00
		Cs-137	<5.90E+00	0.00E+00	5.90E+00
		BaLa-140	<1.14E+01	0.00E+00	1.14E+01
		Be-7	<4.64E+01	0.00E+00	4.64E+01
		K-40	<9.51E+01	0.00E+00	9.51E+01
		H3GW	<-6.6E+01	0.00E+00	1.88E+02

Sample Point 74 [INDICATOR - SSE @ 0.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
488368	2/18/2019 - 2/18/2019	Mn-54	<5.54E+00	0.00E+00	5.54E+00
		Co-58	<6.19E+00	0.00E+00	6.19E+00
		Fe-59	<7.71E+00	0.00E+00	7.71E+00
		Co-60	<5.83E+00	0.00E+00	5.83E+00
		Zn-65	<9.67E+00	0.00E+00	9.67E+00
		Zr-95	<7.06E+00	0.00E+00	7.06E+00
		Nb-95	<5.30E+00	0.00E+00	5.30E+00
		I-131	<1.00E+01	0.00E+00	1.00E+01
		Cs-134	<4.93E+00	0.00E+00	4.93E+00
		Cs-137	<4.02E+00	0.00E+00	4.02E+00
		BaLa-140	<1.08E+01	0.00E+00	1.08E+01
		Be-7	<3.80E+01	0.00E+00	3.80E+01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: GROUND WATER Concentration (Activity): pCi/l

Sample Point 74 [INDICATOR - SSE @ 0.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
488368	2/18/2019 - 2/18/2019	K-40	<9.06E+01	0.00E+00	9.06E+01
		H3GW	<1.40E+01	0.00E+00	1.80E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493500	5/20/2019 - 5/20/2019	Mn-54	<5.74E+00	0.00E+00	5.74E+00
		Co-58	<5.87E+00	0.00E+00	5.87E+00
		Fe-59	<7.92E+00	0.00E+00	7.92E+00
		Co-60	<6.23E+00	0.00E+00	6.23E+00
		Zn-65	<1.18E+01	0.00E+00	1.18E+01
		Zr-95	<9.10E+00	0.00E+00	9.10E+00
		Nb-95	<5.46E+00	0.00E+00	5.46E+00
		I-131	<1.09E+01	0.00E+00	1.09E+01
		Cs-134	<5.95E+00	0.00E+00	5.95E+00
		Cs-137	<5.88E+00	0.00E+00	5.88E+00
		BaLa-140	<1.10E+01	0.00E+00	1.10E+01
		Be-7	<4.73E+01	0.00E+00	4.73E+01
		K-40	7.42E+01	5.32E+01	7.64E+01
H3GW	<-1.1E+02	0.00E+00	1.89E+02		

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504838	8/19/2019 - 8/19/2019	Mn-54	<4.49E+00	0.00E+00	4.49E+00
		Co-58	<5.74E+00	0.00E+00	5.74E+00
		Fe-59	<1.27E+01	0.00E+00	1.27E+01
		Co-60	<7.09E+00	0.00E+00	7.09E+00
		Zn-65	<1.19E+01	0.00E+00	1.19E+01
		Zr-95	<8.12E+00	0.00E+00	8.12E+00
		Nb-95	<5.34E+00	0.00E+00	5.34E+00
		I-131	<8.05E+00	0.00E+00	8.05E+00
		Cs-134	<6.20E+00	0.00E+00	6.20E+00
		Cs-137	<5.38E+00	0.00E+00	5.38E+00
		BaLa-140	<9.26E+00	0.00E+00	9.26E+00
		Be-7	<4.48E+01	0.00E+00	4.48E+01
		K-40	<9.78E+01	0.00E+00	9.78E+01
H3GW	<-9.9E+01	0.00E+00	1.85E+02		

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
499798	11/20/2019 - 11/20/2019	Mn-54	<4.40E+00	0.00E+00	4.40E+00
		Co-58	<4.81E+00	0.00E+00	4.81E+00
		Fe-59	<9.92E+00	0.00E+00	9.92E+00
		Co-60	<5.84E+00	0.00E+00	5.84E+00
		Zn-65	<1.04E+01	0.00E+00	1.04E+01
		Zr-95	<8.40E+00	0.00E+00	8.40E+00
		Nb-95	<7.11E+00	0.00E+00	7.11E+00
		I-131	<8.67E+00	0.00E+00	8.67E+00
		Cs-134	<5.94E+00	0.00E+00	5.94E+00
		Cs-137	<6.04E+00	0.00E+00	6.04E+00
		BaLa-140	<9.36E+00	0.00E+00	9.36E+00
		Be-7	<4.76E+01	0.00E+00	4.76E+01
		K-40	4.90E+01	4.41E+01	6.62E+01
H3GW	<-9.0E+00	0.00E+00	1.87E+02		

Sample Point 75 [INDICATOR - ESE @ 0.1 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
488369	2/19/2019 - 2/19/2019	Mn-54	<5.70E+00	0.00E+00	5.70E+00
		Co-58	<6.12E+00	0.00E+00	6.12E+00
		Fe-59	<8.75E+00	0.00E+00	8.75E+00
		Co-60	<6.43E+00	0.00E+00	6.43E+00
		Zn-65	<1.38E+01	0.00E+00	1.38E+01
		Zr-95	<1.10E+01	0.00E+00	1.10E+01
		Nb-95	<6.46E+00	0.00E+00	6.46E+00
		I-131	<7.91E+00	0.00E+00	7.91E+00
		Cs-134	<7.41E+00	0.00E+00	7.41E+00
		Cs-137	<5.71E+00	0.00E+00	5.71E+00
		BaLa-140	<1.12E+01	0.00E+00	1.12E+01
		Be-7	<4.71E+01	0.00E+00	4.71E+01
		K-40	<1.31E+02	0.00E+00	1.31E+02

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: GROUND WATER Concentration (Activity): pCi/l

Sample Point 75 [INDICATOR - ESE @ 0.1 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
488369	2/19/2019 - 2/19/2019	H3GW	<-1.2E+02	0.00E+00	1.88E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493501	5/21/2019 - 5/21/2019	Mn-54	<5.52E+00	0.00E+00	5.52E+00
		Co-58	<6.23E+00	0.00E+00	6.23E+00
		Fe-59	<1.17E+01	0.00E+00	1.17E+01
		Co-60	<6.44E+00	0.00E+00	6.44E+00
		Zn-65	<1.19E+01	0.00E+00	1.19E+01
		Zr-95	<9.61E+00	0.00E+00	9.61E+00
		Nb-95	<6.34E+00	0.00E+00	6.34E+00
		I-131	<1.02E+01	0.00E+00	1.02E+01
		Cs-134	<5.83E+00	0.00E+00	5.83E+00
		Cs-137	<4.24E+00	0.00E+00	4.24E+00
		BaLa-140	<1.19E+01	0.00E+00	1.19E+01
		Be-7	<3.81E+01	0.00E+00	3.81E+01
		K-40	1.21E+02	6.04E+01	8.01E+01
		H3GW	<-6.3E+01	0.00E+00	1.89E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504839	8/19/2019 - 8/19/2019	Mn-54	<5.14E+00	0.00E+00	5.14E+00
		Co-58	<6.04E+00	0.00E+00	6.04E+00
		Fe-59	<8.72E+00	0.00E+00	8.72E+00
		Co-60	<5.43E+00	0.00E+00	5.43E+00
		Zn-65	<1.29E+01	0.00E+00	1.29E+01
		Zr-95	<1.16E+01	0.00E+00	1.16E+01
		Nb-95	<5.87E+00	0.00E+00	5.87E+00
		I-131	<9.10E+00	0.00E+00	9.10E+00
		Cs-134	<6.19E+00	0.00E+00	6.19E+00
		Cs-137	<4.75E+00	0.00E+00	4.75E+00
		BaLa-140	<8.62E+00	0.00E+00	8.62E+00
		Be-7	<4.81E+01	0.00E+00	4.81E+01
		K-40	<9.73E+01	0.00E+00	9.73E+01
		H3GW	<-5.9E+01	0.00E+00	1.85E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
499799	11/20/2019 - 11/20/2019	Mn-54	<5.54E+00	0.00E+00	5.54E+00
		Co-58	<4.31E+00	0.00E+00	4.31E+00
		Fe-59	<9.95E+00	0.00E+00	9.95E+00
		Co-60	<6.30E+00	0.00E+00	6.30E+00
		Zn-65	<1.26E+01	0.00E+00	1.26E+01
		Zr-95	<8.11E+00	0.00E+00	8.11E+00
		Nb-95	<6.54E+00	0.00E+00	6.54E+00
		I-131	<8.39E+00	0.00E+00	8.39E+00
		Cs-134	<7.37E+00	0.00E+00	7.37E+00
		Cs-137	<6.40E+00	0.00E+00	6.40E+00
		BaLa-140	<5.64E+00	0.00E+00	5.64E+00
		Be-7	<4.47E+01	0.00E+00	4.47E+01
		K-40	<1.10E+02	0.00E+00	1.10E+02
		H3GW	<-8.4E+01	0.00E+00	1.88E+02

Sample Point 77 [INDICATOR - S @ 0.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
488371	2/19/2019 - 2/19/2019	Mn-54	<4.39E+00	0.00E+00	4.39E+00
		Co-58	<4.51E+00	0.00E+00	4.51E+00
		Fe-59	<9.09E+00	0.00E+00	9.09E+00
		Co-60	<6.22E+00	0.00E+00	6.22E+00
		Zn-65	<7.90E+00	0.00E+00	7.90E+00
		Zr-95	<9.51E+00	0.00E+00	9.51E+00
		Nb-95	<5.52E+00	0.00E+00	5.52E+00
		I-131	<8.92E+00	0.00E+00	8.92E+00
		Cs-134	<5.70E+00	0.00E+00	5.70E+00
		Cs-137	<5.52E+00	0.00E+00	5.52E+00
		BaLa-140	<1.02E+01	0.00E+00	1.02E+01
		Be-7	<3.11E+01	0.00E+00	3.11E+01
		K-40	1.06E+02	5.77E+01	7.54E+01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: GROUND WATER Concentration (Activity): pCi/l

Sample Point 77 [INDICATOR - S @ 0.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
488371	2/19/2019 - 2/19/2019	H3GW	<1.40E+02	0.00E+00	1.88E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493503	5/21/2019 - 5/21/2019	Mn-54	<4.39E+00	0.00E+00	4.39E+00
		Co-58	<5.71E+00	0.00E+00	5.71E+00
		Fe-59	<1.15E+01	0.00E+00	1.15E+01
		Co-60	<4.67E+00	0.00E+00	4.67E+00
		Zn-65	<1.10E+01	0.00E+00	1.10E+01
		Zr-95	<7.24E+00	0.00E+00	7.24E+00
		Nb-95	<5.60E+00	0.00E+00	5.60E+00
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<6.38E+00	0.00E+00	6.38E+00
		Cs-137	<5.96E+00	0.00E+00	5.96E+00
		BaLa-140	<1.19E+01	0.00E+00	1.19E+01
		Be-7	<4.93E+01	0.00E+00	4.93E+01
		K-40	5.43E+01	4.21E+01	6.03E+01
		H3GW	<4.72E+01	0.00E+00	1.90E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504841	8/19/2019 - 8/19/2019	Mn-54	<5.34E+00	0.00E+00	5.34E+00
		Co-58	<5.38E+00	0.00E+00	5.38E+00
		Fe-59	<8.70E+00	0.00E+00	8.70E+00
		Co-60	<5.85E+00	0.00E+00	5.85E+00
		Zn-65	<1.23E+01	0.00E+00	1.23E+01
		Zr-95	<1.05E+01	0.00E+00	1.05E+01
		Nb-95	<7.21E+00	0.00E+00	7.21E+00
		I-131	<8.43E+00	0.00E+00	8.43E+00
		Cs-134	<5.71E+00	0.00E+00	5.71E+00
		Cs-137	<5.14E+00	0.00E+00	5.14E+00
		BaLa-140	<1.04E+01	0.00E+00	1.04E+01
		Be-7	<3.22E+01	0.00E+00	3.22E+01
		K-40	2.34E+01	3.57E+01	6.02E+01
		H3GW	<1.78E+02	0.00E+00	1.86E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
499800	11/19/2019 - 11/19/2019	Mn-54	<5.05E+00	0.00E+00	5.05E+00
		Co-58	<4.74E+00	0.00E+00	4.74E+00
		Fe-59	<1.28E+01	0.00E+00	1.28E+01
		Co-60	<4.59E+00	0.00E+00	4.59E+00
		Zn-65	<1.43E+01	0.00E+00	1.43E+01
		Zr-95	<1.00E+01	0.00E+00	1.00E+01
		Nb-95	<5.67E+00	0.00E+00	5.67E+00
		I-131	<8.81E+00	0.00E+00	8.81E+00
		Cs-134	<4.06E+00	0.00E+00	4.06E+00
		Cs-137	<4.90E+00	0.00E+00	4.90E+00
		BaLa-140	<2.09E+00	0.00E+00	2.09E+00
		Be-7	<3.80E+01	0.00E+00	3.80E+01
		K-40	<6.41E+01	0.00E+00	6.41E+01
		H3GW	<1.26E+02	0.00E+00	1.86E+02

Sample Point 78 [INDICATOR - S @ 0.5 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
488372	2/19/2019 - 2/19/2019	Mn-54	<5.27E+00	0.00E+00	5.27E+00
		Co-58	<5.46E+00	0.00E+00	5.46E+00
		Fe-59	<6.74E+00	0.00E+00	6.74E+00
		Co-60	<6.77E+00	0.00E+00	6.77E+00
		Zn-65	<1.20E+01	0.00E+00	1.20E+01
		Zr-95	<8.23E+00	0.00E+00	8.23E+00
		Nb-95	<7.38E+00	0.00E+00	7.38E+00
		I-131	<1.01E+01	0.00E+00	1.01E+01
		Cs-134	<5.63E+00	0.00E+00	5.63E+00
		Cs-137	<5.33E+00	0.00E+00	5.33E+00
		BaLa-140	<8.94E+00	0.00E+00	8.94E+00
		Be-7	<4.99E+01	0.00E+00	4.99E+01
		K-40	<8.31E+01	0.00E+00	8.31E+01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: GROUND WATER Concentration (Activity): pCi/l

Sample Point 78 [INDICATOR - S @ 0.5 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
488372	2/19/2019 - 2/19/2019	H3GW	2.04E+02	1.15E+02	1.88E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493504	5/21/2019 - 5/21/2019	Mn-54	<4.44E+00	0.00E+00	4.44E+00
		Co-58	<5.91E+00	0.00E+00	5.91E+00
		Fe-59	<1.23E+01	0.00E+00	1.23E+01
		Co-60	<5.84E+00	0.00E+00	5.84E+00
		Zn-65	<1.54E+01	0.00E+00	1.54E+01
		Zr-95	<1.04E+01	0.00E+00	1.04E+01
		Nb-95	<6.45E+00	0.00E+00	6.45E+00
		I-131	<1.06E+01	0.00E+00	1.06E+01
		Cs-134	<5.74E+00	0.00E+00	5.74E+00
		Cs-137	<5.73E+00	0.00E+00	5.73E+00
		BaLa-140	<1.02E+01	0.00E+00	1.02E+01
		Be-7	<3.29E+01	0.00E+00	3.29E+01
		K-40	<7.51E+01	0.00E+00	7.51E+01
		H3GW	2.40E+02	1.18E+02	1.90E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504842	8/20/2019 - 8/20/2019	Mn-54	<5.62E+00	0.00E+00	5.62E+00
		Co-58	<5.23E+00	0.00E+00	5.23E+00
		Fe-59	<9.40E+00	0.00E+00	9.40E+00
		Co-60	<5.43E+00	0.00E+00	5.43E+00
		Zn-65	<1.02E+01	0.00E+00	1.02E+01
		Zr-95	<1.13E+01	0.00E+00	1.13E+01
		Nb-95	<7.46E+00	0.00E+00	7.46E+00
		I-131	<1.01E+01	0.00E+00	1.01E+01
		Cs-134	<6.58E+00	0.00E+00	6.58E+00
		Cs-137	<5.42E+00	0.00E+00	5.42E+00
		BaLa-140	<9.44E+00	0.00E+00	9.44E+00
		Be-7	<4.80E+01	0.00E+00	4.80E+01
		K-40	1.66E+02	5.85E+01	5.78E+01
		H3GW	2.89E+02	1.17E+02	1.86E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
499801	11/20/2019 - 11/20/2019	Mn-54	<5.30E+00	0.00E+00	5.30E+00
		Co-58	<4.65E+00	0.00E+00	4.65E+00
		Fe-59	<1.21E+01	0.00E+00	1.21E+01
		Co-60	<4.81E+00	0.00E+00	4.81E+00
		Zn-65	<9.56E+00	0.00E+00	9.56E+00
		Zr-95	<9.61E+00	0.00E+00	9.61E+00
		Nb-95	<5.36E+00	0.00E+00	5.36E+00
		I-131	<7.94E+00	0.00E+00	7.94E+00
		Cs-134	<5.93E+00	0.00E+00	5.93E+00
		Cs-137	<5.14E+00	0.00E+00	5.14E+00
		BaLa-140	<8.38E+00	0.00E+00	8.38E+00
		Be-7	<4.07E+01	0.00E+00	4.07E+01
		K-40	8.65E+01	5.05E+01	6.31E+01
		H3GW	2.13E+02	1.15E+02	1.86E+02

Sample Point 79 [INDICATOR - S @ 0.5 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
488373	2/19/2019 - 2/19/2019	Mn-54	<4.17E+00	0.00E+00	4.17E+00
		Co-58	<4.66E+00	0.00E+00	4.66E+00
		Fe-59	<1.08E+01	0.00E+00	1.08E+01
		Co-60	<5.86E+00	0.00E+00	5.86E+00
		Zn-65	<1.33E+01	0.00E+00	1.33E+01
		Zr-95	<8.67E+00	0.00E+00	8.67E+00
		Nb-95	<6.59E+00	0.00E+00	6.59E+00
		I-131	<7.25E+00	0.00E+00	7.25E+00
		Cs-134	<7.79E+00	0.00E+00	7.79E+00
		Cs-137	<6.01E+00	0.00E+00	6.01E+00
		BaLa-140	<1.10E+01	0.00E+00	1.10E+01
		Be-7	<4.98E+01	0.00E+00	4.98E+01
		K-40	<8.41E+01	0.00E+00	8.41E+01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: GROUND WATER Concentration (Activity): pCi/l

Sample Point 79 [INDICATOR - S @ 0.5 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
488373	2/19/2019 - 2/19/2019	H3GW	2.77E+02	1.18E+02	1.88E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493505	5/21/2019 - 5/21/2019	Mn-54	<6.61E+00	0.00E+00	6.61E+00
		Co-58	<5.17E+00	0.00E+00	5.17E+00
		Fe-59	<7.86E+00	0.00E+00	7.86E+00
		Co-60	<3.85E+00	0.00E+00	3.85E+00
		Zn-65	<9.72E+00	0.00E+00	9.72E+00
		Zr-95	<9.46E+00	0.00E+00	9.46E+00
		Nb-95	<6.32E+00	0.00E+00	6.32E+00
		I-131	<8.01E+00	0.00E+00	8.01E+00
		Cs-134	<5.95E+00	0.00E+00	5.95E+00
		Cs-137	<5.70E+00	0.00E+00	5.70E+00
		BaLa-140	<5.98E+00	0.00E+00	5.98E+00
		Be-7	<4.23E+01	0.00E+00	4.23E+01
		K-40	<1.11E+02	0.00E+00	1.11E+02
		H3GW	<8.09E+01	0.00E+00	1.90E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504843	8/20/2019 - 8/20/2019	Mn-54	<6.10E+00	0.00E+00	6.10E+00
		Co-58	<5.53E+00	0.00E+00	5.53E+00
		Fe-59	<9.70E+00	0.00E+00	9.70E+00
		Co-60	<6.41E+00	0.00E+00	6.41E+00
		Zn-65	<1.53E+01	0.00E+00	1.53E+01
		Zr-95	<8.34E+00	0.00E+00	8.34E+00
		Nb-95	<5.22E+00	0.00E+00	5.22E+00
		I-131	<9.46E+00	0.00E+00	9.46E+00
		Cs-134	<4.06E+00	0.00E+00	4.06E+00
		Cs-137	<6.09E+00	0.00E+00	6.09E+00
		BaLa-140	<7.38E+00	0.00E+00	7.38E+00
		Be-7	<4.37E+01	0.00E+00	4.37E+01
		K-40	9.37E+01	5.12E+01	6.29E+01
		H3GW	<1.78E+02	0.00E+00	1.87E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
499802	11/20/2019 - 11/20/2019	Mn-54	<5.91E+00	0.00E+00	5.91E+00
		Co-58	<5.73E+00	0.00E+00	5.73E+00
		Fe-59	<9.24E+00	0.00E+00	9.24E+00
		Co-60	<5.83E+00	0.00E+00	5.83E+00
		Zn-65	<1.04E+01	0.00E+00	1.04E+01
		Zr-95	<9.66E+00	0.00E+00	9.66E+00
		Nb-95	<5.43E+00	0.00E+00	5.43E+00
		I-131	<6.65E+00	0.00E+00	6.65E+00
		Cs-134	<5.95E+00	0.00E+00	5.95E+00
		Cs-137	<5.36E+00	0.00E+00	5.36E+00
		BaLa-140	<1.15E+01	0.00E+00	1.15E+01
		Be-7	<4.37E+01	0.00E+00	4.37E+01
		K-40	7.16E+01	4.53E+01	5.88E+01
		H3GW	<1.65E+02	0.00E+00	1.87E+02

Sample Point 80 [INDICATOR - S @ 0.6 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
488374	2/19/2019 - 2/19/2019	Mn-54	<5.33E+00	0.00E+00	5.33E+00
		Co-58	<5.31E+00	0.00E+00	5.31E+00
		Fe-59	<1.23E+01	0.00E+00	1.23E+01
		Co-60	<5.42E+00	0.00E+00	5.42E+00
		Zn-65	<1.17E+01	0.00E+00	1.17E+01
		Zr-95	<1.04E+01	0.00E+00	1.04E+01
		Nb-95	<6.09E+00	0.00E+00	6.09E+00
		I-131	<8.91E+00	0.00E+00	8.91E+00
		Cs-134	<6.60E+00	0.00E+00	6.60E+00
		Cs-137	<4.28E+00	0.00E+00	4.28E+00
		BaLa-140	<5.34E+00	0.00E+00	5.34E+00
		Be-7	<3.33E+01	0.00E+00	3.33E+01
		K-40	3.24E+01	4.96E+01	8.33E+01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: GROUND WATER Concentration (Activity): pCi/l

Sample Point 80 [INDICATOR - S @ 0.6 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
488374	2/19/2019 - 2/19/2019	H3GW	<1.67E+02	0.00E+00	1.88E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493506	5/21/2019 - 5/21/2019	Mn-54	<4.86E+00	0.00E+00	4.86E+00
		Co-58	<5.15E+00	0.00E+00	5.15E+00
		Fe-59	<1.03E+01	0.00E+00	1.03E+01
		Co-60	<5.77E+00	0.00E+00	5.77E+00
		Zn-65	<1.28E+01	0.00E+00	1.28E+01
		Zr-95	<8.61E+00	0.00E+00	8.61E+00
		Nb-95	<7.50E+00	0.00E+00	7.50E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<6.53E+00	0.00E+00	6.53E+00
		Cs-137	<3.69E+00	0.00E+00	3.69E+00
		BaLa-140	<6.18E+00	0.00E+00	6.18E+00
		Be-7	<4.29E+01	0.00E+00	4.29E+01
		K-40	<8.47E+01	0.00E+00	8.47E+01
		H3GW	2.20E+02	1.19E+02	1.93E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504844	8/20/2019 - 8/20/2019	Mn-54	<4.41E+00	0.00E+00	4.41E+00
		Co-58	<5.11E+00	0.00E+00	5.11E+00
		Fe-59	<9.39E+00	0.00E+00	9.39E+00
		Co-60	<6.91E+00	0.00E+00	6.91E+00
		Zn-65	<9.68E+00	0.00E+00	9.68E+00
		Zr-95	<9.34E+00	0.00E+00	9.34E+00
		Nb-95	<6.57E+00	0.00E+00	6.57E+00
		I-131	<8.82E+00	0.00E+00	8.82E+00
		Cs-134	<4.62E+00	0.00E+00	4.62E+00
		Cs-137	<5.70E+00	0.00E+00	5.70E+00
		BaLa-140	<1.07E+01	0.00E+00	1.07E+01
		Be-7	<4.83E+01	0.00E+00	4.83E+01
		K-40	1.18E+02	4.82E+01	3.90E+01
		H3GW	2.48E+02	1.16E+02	1.85E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
499803	11/20/2019 - 11/20/2019	Mn-54	<6.62E+00	0.00E+00	6.62E+00
		Co-58	<5.90E+00	0.00E+00	5.90E+00
		Fe-59	<1.09E+01	0.00E+00	1.09E+01
		Co-60	<6.40E+00	0.00E+00	6.40E+00
		Zn-65	<1.14E+01	0.00E+00	1.14E+01
		Zr-95	<8.23E+00	0.00E+00	8.23E+00
		Nb-95	<6.46E+00	0.00E+00	6.46E+00
		I-131	<6.72E+00	0.00E+00	6.72E+00
		Cs-134	<6.13E+00	0.00E+00	6.13E+00
		Cs-137	<4.66E+00	0.00E+00	4.66E+00
		BaLa-140	<8.00E+00	0.00E+00	8.00E+00
		Be-7	<3.62E+01	0.00E+00	3.62E+01
		K-40	<6.77E+01	0.00E+00	6.77E+01
		H3GW	<1.55E+02	0.00E+00	1.86E+02

Sample Point 81 [INDICATOR - S @ 0.6 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
488375	2/19/2019 - 2/19/2019	Mn-54	<4.17E+00	0.00E+00	4.17E+00
		Co-58	<3.56E+00	0.00E+00	3.56E+00
		Fe-59	<1.15E+01	0.00E+00	1.15E+01
		Co-60	<5.86E+00	0.00E+00	5.86E+00
		Zn-65	<1.04E+01	0.00E+00	1.04E+01
		Zr-95	<9.62E+00	0.00E+00	9.62E+00
		Nb-95	<6.81E+00	0.00E+00	6.81E+00
		I-131	<9.86E+00	0.00E+00	9.86E+00
		Cs-134	<4.27E+00	0.00E+00	4.27E+00
		Cs-137	<6.01E+00	0.00E+00	6.01E+00
		BaLa-140	<8.43E+00	0.00E+00	8.43E+00
		Be-7	<4.49E+01	0.00E+00	4.49E+01
		K-40	<9.26E+01	0.00E+00	9.26E+01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: GROUND WATER Concentration (Activity): pCi/l

Sample Point 81 [INDICATOR - S @ 0.6 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
488375	2/19/2019 - 2/19/2019	H3GW	2.11E+02	1.16E+02	1.88E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493507	5/21/2019 - 5/21/2019	Mn-54	<6.12E+00	0.00E+00	6.12E+00
		Co-58	<5.62E+00	0.00E+00	5.62E+00
		Fe-59	<1.27E+01	0.00E+00	1.27E+01
		Co-60	<6.77E+00	0.00E+00	6.77E+00
		Zn-65	<1.15E+01	0.00E+00	1.15E+01
		Zr-95	<9.43E+00	0.00E+00	9.43E+00
		Nb-95	<6.41E+00	0.00E+00	6.41E+00
		I-131	<1.10E+01	0.00E+00	1.10E+01
		Cs-134	<6.38E+00	0.00E+00	6.38E+00
		Cs-137	<4.66E+00	0.00E+00	4.66E+00
		BaLa-140	<9.39E+00	0.00E+00	9.39E+00
		Be-7	<4.84E+01	0.00E+00	4.84E+01
		K-40	<9.58E+01	0.00E+00	9.58E+01
		H3GW	2.46E+02	1.19E+02	1.91E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504845	8/20/2019 - 8/20/2019	Mn-54	<5.78E+00	0.00E+00	5.78E+00
		Co-58	<5.55E+00	0.00E+00	5.55E+00
		Fe-59	<1.09E+01	0.00E+00	1.09E+01
		Co-60	<4.81E+00	0.00E+00	4.81E+00
		Zn-65	<1.33E+01	0.00E+00	1.33E+01
		Zr-95	<1.17E+01	0.00E+00	1.17E+01
		Nb-95	<6.93E+00	0.00E+00	6.93E+00
		I-131	<1.06E+01	0.00E+00	1.06E+01
		Cs-134	<5.93E+00	0.00E+00	5.93E+00
		Cs-137	<6.02E+00	0.00E+00	6.02E+00
		BaLa-140	<7.62E+00	0.00E+00	7.62E+00
		Be-7	<4.67E+01	0.00E+00	4.67E+01
		K-40	<9.26E+01	0.00E+00	9.26E+01
		H3GW	2.60E+02	1.16E+02	1.85E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
499804	11/20/2019 - 11/20/2019	Mn-54	<5.70E+00	0.00E+00	5.70E+00
		Co-58	<5.91E+00	0.00E+00	5.91E+00
		Fe-59	<1.37E+01	0.00E+00	1.37E+01
		Co-60	<3.97E+00	0.00E+00	3.97E+00
		Zn-65	<1.27E+01	0.00E+00	1.27E+01
		Zr-95	<1.10E+01	0.00E+00	1.10E+01
		Nb-95	<6.85E+00	0.00E+00	6.85E+00
		I-131	<1.02E+01	0.00E+00	1.02E+01
		Cs-134	<5.37E+00	0.00E+00	5.37E+00
		Cs-137	<5.52E+00	0.00E+00	5.52E+00
		BaLa-140	<9.78E+00	0.00E+00	9.78E+00
		Be-7	<5.03E+01	0.00E+00	5.03E+01
		K-40	1.76E+02	7.31E+01	8.76E+01
		H3GW	2.47E+02	1.16E+02	1.86E+02

Sample Point 82 [INDICATOR - S @ 0.6 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
488376	2/19/2019 - 2/19/2019	Mn-54	<4.84E+00	0.00E+00	4.84E+00
		Co-58	<5.58E+00	0.00E+00	5.58E+00
		Fe-59	<1.15E+01	0.00E+00	1.15E+01
		Co-60	<5.87E+00	0.00E+00	5.87E+00
		Zn-65	<1.26E+01	0.00E+00	1.26E+01
		Zr-95	<1.15E+01	0.00E+00	1.15E+01
		Nb-95	<5.47E+00	0.00E+00	5.47E+00
		I-131	<7.63E+00	0.00E+00	7.63E+00
		Cs-134	<6.06E+00	0.00E+00	6.06E+00
		Cs-137	<5.60E+00	0.00E+00	5.60E+00
		BaLa-140	<9.17E+00	0.00E+00	9.17E+00
		Be-7	<4.10E+01	0.00E+00	4.10E+01
		K-40	5.56E+01	4.67E+01	6.98E+01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: GROUND WATER Concentration (Activity): pCi/l

Sample Point 82 [INDICATOR - S @ 0.6 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
488376	2/19/2019 - 2/19/2019	H3GW	<1.64E+01	0.00E+00	1.88E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493508	5/21/2019 - 5/21/2019	Mn-54	<4.79E+00	0.00E+00	4.79E+00
		Co-58	<4.85E+00	0.00E+00	4.85E+00
		Fe-59	<9.20E+00	0.00E+00	9.20E+00
		Co-60	<5.88E+00	0.00E+00	5.88E+00
		Zn-65	<1.10E+01	0.00E+00	1.10E+01
		Zr-95	<1.09E+01	0.00E+00	1.09E+01
		Nb-95	<7.56E+00	0.00E+00	7.56E+00
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<5.34E+00	0.00E+00	5.34E+00
		Cs-137	<5.14E+00	0.00E+00	5.14E+00
		BaLa-140	<1.03E+01	0.00E+00	1.03E+01
		Be-7	<4.06E+01	0.00E+00	4.06E+01
		K-40	<8.12E+01	0.00E+00	8.12E+01
		H3GW	<-9.5E+00	0.00E+00	1.93E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504846	8/20/2019 - 8/20/2019	Mn-54	<5.49E+00	0.00E+00	5.49E+00
		Co-58	<6.16E+00	0.00E+00	6.16E+00
		Fe-59	<1.04E+01	0.00E+00	1.04E+01
		Co-60	<6.41E+00	0.00E+00	6.41E+00
		Zn-65	<2.04E+01	0.00E+00	2.04E+01
		Zr-95	<1.04E+01	0.00E+00	1.04E+01
		Nb-95	<6.58E+00	0.00E+00	6.58E+00
		I-131	<9.00E+00	0.00E+00	9.00E+00
		Cs-134	<5.37E+00	0.00E+00	5.37E+00
		Cs-137	<4.66E+00	0.00E+00	4.66E+00
		BaLa-140	<1.17E+01	0.00E+00	1.17E+01
		Be-7	<5.45E+01	0.00E+00	5.45E+01
		K-40	<4.59E+01	0.00E+00	4.59E+01
		H3GW	<1.20E+02	0.00E+00	1.85E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
499805	11/20/2019 - 11/20/2019	Mn-54	<5.70E+00	0.00E+00	5.70E+00
		Co-58	<6.50E+00	0.00E+00	6.50E+00
		Fe-59	<1.09E+01	0.00E+00	1.09E+01
		Co-60	<8.06E+00	0.00E+00	8.06E+00
		Zn-65	<1.32E+01	0.00E+00	1.32E+01
		Zr-95	<1.10E+01	0.00E+00	1.10E+01
		Nb-95	<7.54E+00	0.00E+00	7.54E+00
		I-131	<1.07E+01	0.00E+00	1.07E+01
		Cs-134	<7.60E+00	0.00E+00	7.60E+00
		Cs-137	<4.65E+00	0.00E+00	4.65E+00
		BaLa-140	<8.91E+00	0.00E+00	8.91E+00
		Be-7	<4.37E+01	0.00E+00	4.37E+01
		K-40	1.80E+02	7.34E+01	8.70E+01
		H3GW	<3.40E+01	0.00E+00	1.88E+02

Sample Point 83 [INDICATOR - SSW @ 1.6 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
488377	2/19/2019 - 2/19/2019	Mn-54	<5.68E+00	0.00E+00	5.68E+00
		Co-58	<5.66E+00	0.00E+00	5.66E+00
		Fe-59	<1.31E+01	0.00E+00	1.31E+01
		Co-60	<5.40E+00	0.00E+00	5.40E+00
		Zn-65	<1.22E+01	0.00E+00	1.22E+01
		Zr-95	<1.18E+01	0.00E+00	1.18E+01
		Nb-95	<7.03E+00	0.00E+00	7.03E+00
		I-131	<7.71E+00	0.00E+00	7.71E+00
		Cs-134	<6.77E+00	0.00E+00	6.77E+00
		Cs-137	<5.53E+00	0.00E+00	5.53E+00
		BaLa-140	<9.72E+00	0.00E+00	9.72E+00
		Be-7	<4.77E+01	0.00E+00	4.77E+01
		K-40	6.82E+01	4.92E+01	6.97E+01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: GROUND WATER Concentration (Activity): pCi/l

Sample Point 83 [INDICATOR - SSW @ 1.6 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
488377	2/19/2019 - 2/19/2019	H3GW	9.94E+02	1.39E+02	1.88E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493509	5/21/2019 - 5/21/2019	Mn-54	<5.73E+00	0.00E+00	5.73E+00
		Co-58	<4.55E+00	0.00E+00	4.55E+00
		Fe-59	<1.27E+01	0.00E+00	1.27E+01
		Co-60	<7.11E+00	0.00E+00	7.11E+00
		Zn-65	<1.15E+01	0.00E+00	1.15E+01
		Zr-95	<1.06E+01	0.00E+00	1.06E+01
		Nb-95	<8.00E+00	0.00E+00	8.00E+00
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<6.60E+00	0.00E+00	6.60E+00
		Cs-137	<3.85E+00	0.00E+00	3.85E+00
		BaLa-140	<8.08E+00	0.00E+00	8.08E+00
		Be-7	<4.59E+01	0.00E+00	4.59E+01
		K-40	4.74E+01	4.57E+01	7.02E+01
		H3GW	8.74E+02	1.38E+02	1.92E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504847	8/20/2019 - 8/20/2019	Mn-54	<7.33E+00	0.00E+00	7.33E+00
		Co-58	<6.06E+00	0.00E+00	6.06E+00
		Fe-59	<1.15E+01	0.00E+00	1.15E+01
		Co-60	<6.56E+00	0.00E+00	6.56E+00
		Zn-65	<1.38E+01	0.00E+00	1.38E+01
		Zr-95	<9.90E+00	0.00E+00	9.90E+00
		Nb-95	<7.91E+00	0.00E+00	7.91E+00
		I-131	<8.87E+00	0.00E+00	8.87E+00
		Cs-134	<5.95E+00	0.00E+00	5.95E+00
		Cs-137	<5.90E+00	0.00E+00	5.90E+00
		BaLa-140	<1.13E+01	0.00E+00	1.13E+01
		Be-7	<3.83E+01	0.00E+00	3.83E+01
		K-40	<1.09E+02	0.00E+00	1.09E+02
		H3GW	8.41E+02	1.34E+02	1.86E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
499806	11/20/2019 - 11/20/2019	Mn-54	<5.98E+00	0.00E+00	5.98E+00
		Co-58	<4.92E+00	0.00E+00	4.92E+00
		Fe-59	<1.20E+01	0.00E+00	1.20E+01
		Co-60	<6.71E+00	0.00E+00	6.71E+00
		Zn-65	<1.44E+01	0.00E+00	1.44E+01
		Zr-95	<1.19E+01	0.00E+00	1.19E+01
		Nb-95	<7.47E+00	0.00E+00	7.47E+00
		I-131	<9.50E+00	0.00E+00	9.50E+00
		Cs-134	<7.58E+00	0.00E+00	7.58E+00
		Cs-137	<5.38E+00	0.00E+00	5.38E+00
		BaLa-140	<9.80E+00	0.00E+00	9.80E+00
		Be-7	2.69E+00	2.94E+01	5.36E+01
		K-40	<1.07E+02	0.00E+00	1.07E+02
		H3GW	1.25E+03	1.45E+02	1.88E+02

Sample Point 84 [GWPI - SSW @ 0.24 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493463	2/18/2019 - 2/18/2019	Mn-54	<4.59E+00	0.00E+00	4.59E+00
		Co-58	<5.07E+00	0.00E+00	5.07E+00
		Fe-59	<6.62E+00	0.00E+00	6.62E+00
		Co-60	<6.46E+00	0.00E+00	6.46E+00
		Zn-65	<1.27E+01	0.00E+00	1.27E+01
		Zr-95	<1.19E+01	0.00E+00	1.19E+01
		Nb-95	<6.75E+00	0.00E+00	6.75E+00
		I-131	<1.01E+01	0.00E+00	1.01E+01
		Cs-134	<6.68E+00	0.00E+00	6.68E+00
		Cs-137	<4.43E+00	0.00E+00	4.43E+00
		BaLa-140	<5.76E+00	0.00E+00	5.76E+00
		Be-7	<5.19E+01	0.00E+00	5.19E+01
		K-40	1.72E+02	5.76E+01	4.14E+01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: GROUND WATER Concentration (Activity): pCi/l

Sample Point 84 [GWPI - SSW @ 0.24 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493463	2/18/2019 - 2/18/2019	H3GW	<3.04E+01	0.00E+00	1.80E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493510	5/20/2019 - 5/20/2019	Mn-54	<5.00E+00	0.00E+00	5.00E+00
		Co-58	<6.16E+00	0.00E+00	6.16E+00
		Fe-59	<5.50E+00	0.00E+00	5.50E+00
		Co-60	<1.12E+00	0.00E+00	1.12E+00
		Zn-65	<9.75E+00	0.00E+00	9.75E+00
		Zr-95	<7.82E+00	0.00E+00	7.82E+00
		Nb-95	<7.17E+00	0.00E+00	7.17E+00
		I-131	<9.87E+00	0.00E+00	9.87E+00
		Cs-134	<6.42E+00	0.00E+00	6.42E+00
		Cs-137	<4.75E+00	0.00E+00	4.75E+00
		BaLa-140	<1.07E+01	0.00E+00	1.07E+01
		Be-7	<4.70E+01	0.00E+00	4.70E+01
		K-40	<7.79E+01	0.00E+00	7.79E+01
		H3GW	<0.00E+00	0.00E+00	1.92E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504848	8/19/2019 - 8/19/2019	Mn-54	<6.96E+00	0.00E+00	6.96E+00
		Co-58	<5.74E+00	0.00E+00	5.74E+00
		Fe-59	<1.38E+01	0.00E+00	1.38E+01
		Co-60	<7.09E+00	0.00E+00	7.09E+00
		Zn-65	<1.60E+01	0.00E+00	1.60E+01
		Zr-95	<9.13E+00	0.00E+00	9.13E+00
		Nb-95	<4.74E+00	0.00E+00	4.74E+00
		I-131	<8.44E+00	0.00E+00	8.44E+00
		Cs-134	<6.69E+00	0.00E+00	6.69E+00
		Cs-137	<6.01E+00	0.00E+00	6.01E+00
		BaLa-140	<8.28E+00	0.00E+00	8.28E+00
		Be-7	<4.60E+01	0.00E+00	4.60E+01
		K-40	<9.78E+01	0.00E+00	9.78E+01
		H3GW	<4.5E+01	0.00E+00	1.89E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
499807	11/19/2019 - 11/19/2019	Mn-54	<6.08E+00	0.00E+00	6.08E+00
		Co-58	<5.23E+00	0.00E+00	5.23E+00
		Fe-59	<1.27E+01	0.00E+00	1.27E+01
		Co-60	<6.01E+00	0.00E+00	6.01E+00
		Zn-65	<1.97E+01	0.00E+00	1.97E+01
		Zr-95	<8.70E+00	0.00E+00	8.70E+00
		Nb-95	<7.03E+00	0.00E+00	7.03E+00
		I-131	<9.30E+00	0.00E+00	9.30E+00
		Cs-134	<5.36E+00	0.00E+00	5.36E+00
		Cs-137	<5.53E+00	0.00E+00	5.53E+00
		BaLa-140	<1.18E+01	0.00E+00	1.18E+01
		Be-7	<4.43E+01	0.00E+00	4.43E+01
		K-40	<5.59E+01	0.00E+00	5.59E+01
		H3GW	<-1.0E+02	0.00E+00	1.86E+02

Sample Point 85 [GWPI - SSW @ 0.22 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493464	2/18/2019 - 2/18/2019	Mn-54	<4.80E+00	0.00E+00	4.80E+00
		Co-58	<3.77E+00	0.00E+00	3.77E+00
		Fe-59	<9.52E+00	0.00E+00	9.52E+00
		Co-60	<5.12E+00	0.00E+00	5.12E+00
		Zn-65	<9.94E+00	0.00E+00	9.94E+00
		Zr-95	<9.95E+00	0.00E+00	9.95E+00
		Nb-95	<6.46E+00	0.00E+00	6.46E+00
		I-131	<8.73E+00	0.00E+00	8.73E+00
		Cs-134	<6.13E+00	0.00E+00	6.13E+00
		Cs-137	<3.85E+00	0.00E+00	3.85E+00
		BaLa-140	<1.05E+01	0.00E+00	1.05E+01
		Be-7	<4.18E+01	0.00E+00	4.18E+01
		K-40	<9.81E+01	0.00E+00	9.81E+01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: GROUND WATER Concentration (Activity): pCi/l

Sample Point 85 [GWPI - SSW @ 0.22 miles]

Sample ID: 493464	Sample Dates: 2/18/2019 - 2/18/2019	Nuclide	Activity	2 Sigma Error	MDA
		H3GW	<-2.1E+01	0.00E+00	1.82E+02

Sample ID: 493511	Sample Dates: 5/20/2019 - 5/20/2019	Nuclide	Activity	2 Sigma Error	MDA
		Mn-54	<4.69E+00	0.00E+00	4.69E+00
		Co-58	<3.76E+00	0.00E+00	3.76E+00
		Fe-59	<1.17E+01	0.00E+00	1.17E+01
		Co-60	<6.22E+00	0.00E+00	6.22E+00
		Zn-65	<1.18E+01	0.00E+00	1.18E+01
		Zr-95	<1.10E+01	0.00E+00	1.10E+01
		Nb-95	<6.21E+00	0.00E+00	6.21E+00
		I-131	<1.15E+01	0.00E+00	1.15E+01
		Cs-134	<7.39E+00	0.00E+00	7.39E+00
		Cs-137	<4.02E+00	0.00E+00	4.02E+00
		BaLa-140	<1.01E+01	0.00E+00	1.01E+01
		Be-7	<4.87E+01	0.00E+00	4.87E+01
		K-40	<9.73E+01	0.00E+00	9.73E+01
		H3GW	<3.52E+01	0.00E+00	1.92E+02

Sample ID: 504849	Sample Dates: 8/19/2019 - 8/19/2019	Nuclide	Activity	2 Sigma Error	MDA
		Mn-54	<5.89E+00	0.00E+00	5.89E+00
		Co-58	<4.96E+00	0.00E+00	4.96E+00
		Fe-59	<6.71E+00	0.00E+00	6.71E+00
		Co-60	<6.01E+00	0.00E+00	6.01E+00
		Zn-65	<1.52E+01	0.00E+00	1.52E+01
		Zr-95	<9.91E+00	0.00E+00	9.91E+00
		Nb-95	<4.19E+00	0.00E+00	4.19E+00
		I-131	<7.50E+00	0.00E+00	7.50E+00
		Cs-134	<3.64E+00	0.00E+00	3.64E+00
		Cs-137	<4.90E+00	0.00E+00	4.90E+00
		BaLa-140	<7.89E+00	0.00E+00	7.89E+00
		Be-7	<3.45E+01	0.00E+00	3.45E+01
		K-40	<4.59E+01	0.00E+00	4.59E+01
		H3GW	<-8.9E+01	0.00E+00	1.89E+02

Sample ID: 499808	Sample Dates: 11/19/2019 - 11/19/2019	Nuclide	Activity	2 Sigma Error	MDA
		Mn-54	<3.05E+00	0.00E+00	3.05E+00
		Co-58	<3.11E+00	0.00E+00	3.11E+00
		Fe-59	<7.39E+00	0.00E+00	7.39E+00
		Co-60	<3.41E+00	0.00E+00	3.41E+00
		Zn-65	<6.91E+00	0.00E+00	6.91E+00
		Zr-95	<6.32E+00	0.00E+00	6.32E+00
		Nb-95	<4.68E+00	0.00E+00	4.68E+00
		I-131	<8.73E+00	0.00E+00	8.73E+00
		Cs-134	<3.21E+00	0.00E+00	3.21E+00
		Cs-137	<3.57E+00	0.00E+00	3.57E+00
		BaLa-140	<6.61E+00	0.00E+00	6.61E+00
		Be-7	<2.37E+01	0.00E+00	2.37E+01
		K-40	9.13E+01	3.14E+01	3.57E+01
		H3GW	<-2.4E+01	0.00E+00	1.92E+02

Sample Point 86 [GWPI - SW @ 0.2 miles]

Sample ID: 493465	Sample Dates: 2/18/2019 - 2/18/2019	Nuclide	Activity	2 Sigma Error	MDA
		Mn-54	<4.90E+00	0.00E+00	4.90E+00
		Co-58	<6.67E+00	0.00E+00	6.67E+00
		Fe-59	<1.12E+01	0.00E+00	1.12E+01
		Co-60	<6.21E+00	0.00E+00	6.21E+00
		Zn-65	<9.65E+00	0.00E+00	9.65E+00
		Zr-95	<9.28E+00	0.00E+00	9.28E+00
		Nb-95	<5.20E+00	0.00E+00	5.20E+00
		I-131	<7.77E+00	0.00E+00	7.77E+00
		Cs-134	<7.37E+00	0.00E+00	7.37E+00
		Cs-137	<5.36E+00	0.00E+00	5.36E+00
		BaLa-140	<6.73E+00	0.00E+00	6.73E+00
		Be-7	<3.33E+01	0.00E+00	3.33E+01
		K-40	<9.06E+01	0.00E+00	9.06E+01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: GROUND WATER Concentration (Activity): pCi/l

Sample Point 86 [GWPI - SW @ 0.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493465	2/18/2019 - 2/18/2019	H3GW	<1.88E+01	0.00E+00	1.81E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493512	5/20/2019 - 5/20/2019	Mn-54	<5.24E+00	0.00E+00	5.24E+00
		Co-58	<6.12E+00	0.00E+00	6.12E+00
		Fe-59	<1.13E+01	0.00E+00	1.13E+01
		Co-60	<6.29E+00	0.00E+00	6.29E+00
		Zn-65	<1.28E+01	0.00E+00	1.28E+01
		Zr-95	<1.04E+01	0.00E+00	1.04E+01
		Nb-95	<8.46E+00	0.00E+00	8.46E+00
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<4.49E+00	0.00E+00	4.49E+00
		Cs-137	<4.31E+00	0.00E+00	4.31E+00
		BaLa-140	<8.68E+00	0.00E+00	8.68E+00
		Be-7	<5.01E+01	0.00E+00	5.01E+01
		K-40	1.85E+02	6.32E+01	6.20E+01
		H3GW	<3.99E+01	0.00E+00	1.92E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504850	8/19/2019 - 8/19/2019	Mn-54	<6.04E+00	0.00E+00	6.04E+00
		Co-58	<5.90E+00	0.00E+00	5.90E+00
		Fe-59	<1.32E+01	0.00E+00	1.32E+01
		Co-60	<5.14E+00	0.00E+00	5.14E+00
		Zn-65	<1.14E+01	0.00E+00	1.14E+01
		Zr-95	<1.10E+01	0.00E+00	1.10E+01
		Nb-95	<7.18E+00	0.00E+00	7.18E+00
		I-131	<1.12E+01	0.00E+00	1.12E+01
		Cs-134	<6.81E+00	0.00E+00	6.81E+00
		Cs-137	<5.52E+00	0.00E+00	5.52E+00
		BaLa-140	<1.11E+01	0.00E+00	1.11E+01
		Be-7	<3.98E+01	0.00E+00	3.98E+01
		K-40	<1.47E+02	0.00E+00	1.47E+02
		H3GW	<4.0E+01	0.00E+00	1.89E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
499809	11/19/2019 - 11/19/2019	Mn-54	<3.88E+00	0.00E+00	3.88E+00
		Co-58	<4.47E+00	0.00E+00	4.47E+00
		Fe-59	<1.07E+01	0.00E+00	1.07E+01
		Co-60	<4.61E+00	0.00E+00	4.61E+00
		Zn-65	<7.05E+00	0.00E+00	7.05E+00
		Zr-95	<8.30E+00	0.00E+00	8.30E+00
		Nb-95	<5.50E+00	0.00E+00	5.50E+00
		I-131	<1.09E+01	0.00E+00	1.09E+01
		Cs-134	<4.71E+00	0.00E+00	4.71E+00
		Cs-137	<4.78E+00	0.00E+00	4.78E+00
		BaLa-140	<1.14E+01	0.00E+00	1.14E+01
		Be-7	<3.81E+01	0.00E+00	3.81E+01
		K-40	<8.02E+01	0.00E+00	8.02E+01
		H3GW	<4.78E+00	0.00E+00	1.94E+02

Media Type: MILK Concentration (Activity): pCi/l

Sample Point 5 [CONTROL - WNW @ 12 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
487665	1/7/2019 - 1/7/2019	LLI-131	<6.47E-01	0.00E+00	6.47E-01
		I-131	<5.87E+00	0.00E+00	5.87E+00
		Cs-134	<8.15E+00	0.00E+00	8.15E+00
		Cs-137	<7.20E+00	0.00E+00	7.20E+00
		BaLa-140	<6.03E+00	0.00E+00	6.03E+00
		Be-7	<5.77E+01	0.00E+00	5.77E+01
		K-40	1.35E+03	2.27E+02	1.29E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
488414	2/4/2019 - 2/4/2019	LLI-131	<6.27E-01	0.00E+00	6.27E-01
		I-131	<6.17E+00	0.00E+00	6.17E+00
		Cs-134	<5.04E+00	0.00E+00	5.04E+00
		Cs-137	<7.20E+00	0.00E+00	7.20E+00

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: MILK Concentration (Activity): pCi/l

Sample Point 5 [CONTROL - WNW @ 12 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
488414	2/4/2019 - 2/4/2019	BaLa-140	<7.61E+00	0.00E+00	7.61E+00
		Be-7	<5.30E+01	0.00E+00	5.30E+01
		K-40	1.33E+03	2.22E+02	1.08E+02
489077	3/4/2019 - 3/4/2019	LLI-131	<6.38E-01	0.00E+00	6.38E-01
		I-131	<6.27E+00	0.00E+00	6.27E+00
		Cs-134	<6.59E+00	0.00E+00	6.59E+00
		Cs-137	<6.85E+00	0.00E+00	6.85E+00
		BaLa-140	<6.08E+00	0.00E+00	6.08E+00
		Be-7	<4.86E+01	0.00E+00	4.86E+01
		K-40	1.44E+03	2.32E+02	1.04E+02
491416	4/1/2019 - 4/1/2019	LLI-131	<6.45E-01	0.00E+00	6.45E-01
		I-131	<5.99E+00	0.00E+00	5.99E+00
		Cs-134	<7.12E+00	0.00E+00	7.12E+00
		Cs-137	<7.20E+00	0.00E+00	7.20E+00
		BaLa-140	<7.98E+00	0.00E+00	7.98E+00
		Be-7	<6.06E+01	0.00E+00	6.06E+01
		K-40	1.55E+03	2.39E+02	6.83E+01
498423	4/29/2019 - 4/29/2019	LLI-131	<6.35E-01	0.00E+00	6.35E-01
		I-131	<8.45E+00	0.00E+00	8.45E+00
		Cs-134	<1.04E+01	0.00E+00	1.04E+01
		Cs-137	<6.40E+00	0.00E+00	6.40E+00
		BaLa-140	<2.47E+00	0.00E+00	2.47E+00
		Be-7	<3.56E+01	0.00E+00	3.56E+01
		K-40	1.42E+03	2.24E+02	1.80E+01
498425	5/13/2019 - 5/13/2019	LLI-131	<5.47E-01	0.00E+00	5.47E-01
		I-131	<5.63E+00	0.00E+00	5.63E+00
		Cs-134	<6.63E+00	0.00E+00	6.63E+00
		Cs-137	<7.33E+00	0.00E+00	7.33E+00
		BaLa-140	<7.74E+00	0.00E+00	7.74E+00
		Be-7	<5.63E+01	0.00E+00	5.63E+01
		K-40	1.42E+03	2.27E+02	7.37E+01
498500	5/28/2019 - 5/28/2019	LLI-131	<6.30E-01	0.00E+00	6.30E-01
		I-131	<8.75E+00	0.00E+00	8.75E+00
		Cs-134	<8.62E+00	0.00E+00	8.62E+00
		Cs-137	<6.29E+00	0.00E+00	6.29E+00
		BaLa-140	<6.33E+00	0.00E+00	6.33E+00
		Be-7	<5.11E+01	0.00E+00	5.11E+01
		K-40	1.57E+03	2.47E+02	1.23E+02
498729	6/10/2019 - 6/10/2019	LLI-131	<6.61E-01	0.00E+00	6.61E-01
		I-131	<7.65E+00	0.00E+00	7.65E+00
		Cs-134	<8.71E+00	0.00E+00	8.71E+00
		Cs-137	<5.84E+00	0.00E+00	5.84E+00
		BaLa-140	<6.38E+00	0.00E+00	6.38E+00
		Be-7	<5.45E+01	0.00E+00	5.45E+01
		K-40	1.53E+03	2.40E+02	9.89E+01
499823	6/24/2019 - 6/24/2019	LLI-131	<5.95E-01	0.00E+00	5.95E-01
		I-131	<7.33E+00	0.00E+00	7.33E+00
		Cs-134	<7.74E+00	0.00E+00	7.74E+00
		Cs-137	<6.85E+00	0.00E+00	6.85E+00
		BaLa-140	<7.67E+00	0.00E+00	7.67E+00
		Be-7	<5.13E+01	0.00E+00	5.13E+01
		K-40	1.56E+03	2.44E+02	1.07E+02

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: MILK Concentration (Activity): pCi/l

Sample Point 5 [CONTROL - WNW @ 12 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500410	7/8/2019 - 7/8/2019	LLI-131	<6.25E-01	0.00E+00	6.25E-01
		I-131	<7.36E+00	0.00E+00	7.36E+00
		Cs-134	<7.66E+00	0.00E+00	7.66E+00
		Cs-137	<7.99E+00	0.00E+00	7.99E+00
		BaLa-140	<7.88E+00	0.00E+00	7.88E+00
		Be-7	<3.45E+01	0.00E+00	3.45E+01
		K-40	1.40E+03	2.29E+02	1.11E+02
501076	7/22/2019 - 7/22/2019	LLI-131	<5.47E-01	0.00E+00	5.47E-01
		I-131	<6.91E+00	0.00E+00	6.91E+00
		Cs-134	<1.00E+01	0.00E+00	1.00E+01
		Cs-137	<6.40E+00	0.00E+00	6.40E+00
		BaLa-140	<6.36E+00	0.00E+00	6.36E+00
		Be-7	<4.90E+01	0.00E+00	4.90E+01
		K-40	1.61E+03	2.43E+02	1.80E+01
502156	8/5/2019 - 8/5/2019	LLI-131	<6.41E-01	0.00E+00	6.41E-01
		I-131	<6.53E+00	0.00E+00	6.53E+00
		Cs-134	<7.03E+00	0.00E+00	7.03E+00
		Cs-137	<9.02E+00	0.00E+00	9.02E+00
		BaLa-140	<8.68E+00	0.00E+00	8.68E+00
		Be-7	<4.19E+01	0.00E+00	4.19E+01
		K-40	1.29E+03	2.20E+02	8.31E+01
503320	8/20/2019 - 8/20/2019	LLI-131	<6.30E-01	0.00E+00	6.30E-01
		I-131	<5.45E+00	0.00E+00	5.45E+00
		Cs-134	<5.84E+00	0.00E+00	5.84E+00
		Cs-137	<5.16E+00	0.00E+00	5.16E+00
		BaLa-140	<7.52E+00	0.00E+00	7.52E+00
		Be-7	<3.81E+01	0.00E+00	3.81E+01
		K-40	1.34E+03	2.22E+02	1.04E+02
504140	9/3/2019 - 9/3/2019	LLI-131	<6.45E-01	0.00E+00	6.45E-01
		I-131	<6.80E+00	0.00E+00	6.80E+00
		Cs-134	<1.03E+01	0.00E+00	1.03E+01
		Cs-137	<8.46E+00	0.00E+00	8.46E+00
		BaLa-140	<6.07E+00	0.00E+00	6.07E+00
		Be-7	<5.39E+01	0.00E+00	5.39E+01
		K-40	1.44E+03	2.29E+02	7.85E+01
504390	9/16/2019 - 9/16/2019	LLI-131	<6.39E-01	0.00E+00	6.39E-01
		I-131	<9.21E+00	0.00E+00	9.21E+00
		Cs-134	<8.33E+00	0.00E+00	8.33E+00
		Cs-137	<8.19E+00	0.00E+00	8.19E+00
		BaLa-140	<2.28E+00	0.00E+00	2.28E+00
		Be-7	<5.20E+01	0.00E+00	5.20E+01
		K-40	1.40E+03	2.23E+02	1.81E+01
504884	9/30/2019 - 9/30/2019	LLI-131	<5.60E-01	0.00E+00	5.60E-01
		I-131	<7.86E+00	0.00E+00	7.86E+00
		Cs-134	<6.64E+00	0.00E+00	6.64E+00
		Cs-137	<8.14E+00	0.00E+00	8.14E+00
		BaLa-140	<2.36E+00	0.00E+00	2.36E+00
		Be-7	<5.19E+01	0.00E+00	5.19E+01
		K-40	1.48E+03	2.38E+02	1.17E+02
505485	10/14/2019 - 10/14/2019	LLI-131	<6.12E-01	0.00E+00	6.12E-01
		I-131	<6.04E+00	0.00E+00	6.04E+00
		Cs-134	<7.67E+00	0.00E+00	7.67E+00
		Cs-137	<5.57E+00	0.00E+00	5.57E+00
		BaLa-140	<8.26E+00	0.00E+00	8.26E+00

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: MILK Concentration (Activity): pCi/l

Sample Point 5 [CONTROL - WNW @ 12 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
505485	10/14/2019 - 10/14/2019	Be-7	<5.17E+01	0.00E+00	5.17E+01
		K-40	1.51E+03	2.45E+02	1.11E+02
506326	10/28/2019 - 10/28/2019	LLI-131	<6.47E-01	0.00E+00	6.47E-01
		I-131	<7.04E+00	0.00E+00	7.04E+00
		Cs-134	<6.65E+00	0.00E+00	6.65E+00
		Cs-137	<6.92E+00	0.00E+00	6.92E+00
		BaLa-140	<9.30E+00	0.00E+00	9.30E+00
		Be-7	<5.23E+01	0.00E+00	5.23E+01
		K-40	1.32E+03	2.21E+02	1.10E+02
507738	11/11/2019 - 11/11/2019	LLI-131	<6.48E-01	0.00E+00	6.48E-01
		I-131	<6.10E+00	0.00E+00	6.10E+00
		Cs-134	<5.04E+00	0.00E+00	5.04E+00
		Cs-137	<9.94E+00	0.00E+00	9.94E+00
		BaLa-140	<8.77E+00	0.00E+00	8.77E+00
		Be-7	<4.17E+01	0.00E+00	4.17E+01
		K-40	1.34E+03	2.18E+02	7.31E+01
508300	11/25/2019 - 11/25/2019	LLI-131	<6.00E-01	0.00E+00	6.00E-01
		I-131	<5.57E+00	0.00E+00	5.57E+00
		Cs-134	<5.94E+00	0.00E+00	5.94E+00
		Cs-137	<6.40E+00	0.00E+00	6.40E+00
		BaLa-140	<9.96E+00	0.00E+00	9.96E+00
		Be-7	<5.86E+01	0.00E+00	5.86E+01
		K-40	1.46E+03	2.30E+02	6.92E+01
509770	12/9/2019 - 12/9/2019	LLI-131	<5.90E-01	0.00E+00	5.90E-01
		I-131	<6.21E+00	0.00E+00	6.21E+00
		Cs-134	<8.24E+00	0.00E+00	8.24E+00
		Cs-137	<8.10E+00	0.00E+00	8.10E+00
		BaLa-140	<7.62E+00	0.00E+00	7.62E+00
		Be-7	<5.12E+01	0.00E+00	5.12E+01
		K-40	1.33E+03	2.19E+02	8.53E+01

Sample Point 102 [INDICATOR - W @ 2.82 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
498424	5/13/2019 - 5/13/2019	I-131	<5.55E+00	0.00E+00	5.55E+00
		Cs-134	<8.61E+00	0.00E+00	8.61E+00
		Cs-137	<9.65E+00	0.00E+00	9.65E+00
		BaLa-140	<7.61E+00	0.00E+00	7.61E+00
		Be-7	<5.05E+01	0.00E+00	5.05E+01
		K-40	1.78E+03	2.67E+02	1.26E+02
		LLI-131	<4.85E-01	0.00E+00	4.85E-01
498499	5/28/2019 - 5/28/2019	I-131	<7.07E+00	0.00E+00	7.07E+00
		Cs-134	<9.21E+00	0.00E+00	9.21E+00
		Cs-137	<9.51E+00	0.00E+00	9.51E+00
		BaLa-140	<8.14E+00	0.00E+00	8.14E+00
		Be-7	<4.92E+01	0.00E+00	4.92E+01
		K-40	2.07E+03	2.87E+02	7.22E+01
		LLI-131	<8.90E-01	0.00E+00	8.90E-01
498728	6/10/2019 - 6/10/2019	I-131	<7.25E+00	0.00E+00	7.25E+00
		Cs-134	<7.66E+00	0.00E+00	7.66E+00
		Cs-137	<8.70E+00	0.00E+00	8.70E+00
		BaLa-140	<2.33E+00	0.00E+00	2.33E+00
		Be-7	<4.22E+01	0.00E+00	4.22E+01
		K-40	2.07E+03	2.88E+02	8.06E+01
		LLI-131	<4.98E-01	0.00E+00	4.98E-01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: MILK Concentration (Activity): pCi/l

Sample Point 102 [INDICATOR - W @ 2.82 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
499822	6/24/2019 - 6/24/2019	I-131	<6.35E+00	0.00E+00	6.35E+00
		Cs-134	<7.25E+00	0.00E+00	7.25E+00
		Cs-137	<8.17E+00	0.00E+00	8.17E+00
		BaLa-140	<2.25E+00	0.00E+00	2.25E+00
		Be-7	<4.91E+01	0.00E+00	4.91E+01
		K-40	1.88E+03	2.72E+02	9.37E+01
LLI-131	<3.76E-01	0.00E+00	3.76E-01		
500409	7/8/2019 - 7/8/2019	I-131	<7.15E+00	0.00E+00	7.15E+00
		Cs-134	<7.79E+00	0.00E+00	7.79E+00
		Cs-137	<6.40E+00	0.00E+00	6.40E+00
		BaLa-140	<2.33E+00	0.00E+00	2.33E+00
		Be-7	<4.89E+01	0.00E+00	4.89E+01
		K-40	1.76E+03	2.62E+02	1.05E+02
LLI-131	<4.51E-01	0.00E+00	4.51E-01		
501075	7/22/2019 - 7/22/2019	I-131	<8.51E+00	0.00E+00	8.51E+00
		Cs-134	<6.52E+00	0.00E+00	6.52E+00
		Cs-137	<8.35E+00	0.00E+00	8.35E+00
		BaLa-140	<2.33E+00	0.00E+00	2.33E+00
		Be-7	<5.11E+01	0.00E+00	5.11E+01
		K-40	1.92E+03	2.76E+02	9.86E+01
LLI-131	<4.62E-01	0.00E+00	4.62E-01		
502155	8/5/2019 - 8/5/2019	I-131	<5.36E+00	0.00E+00	5.36E+00
		Cs-134	<7.81E+00	0.00E+00	7.81E+00
		Cs-137	<7.36E+00	0.00E+00	7.36E+00
		BaLa-140	<9.37E+00	0.00E+00	9.37E+00
		Be-7	<3.97E+01	0.00E+00	3.97E+01
		K-40	2.04E+03	2.86E+02	8.73E+01
LLI-131	<7.70E-01	0.00E+00	7.70E-01		
503319	8/20/2019 - 8/20/2019	I-131	<6.18E+00	0.00E+00	6.18E+00
		Cs-134	<9.20E+00	0.00E+00	9.20E+00
		Cs-137	<8.51E+00	0.00E+00	8.51E+00
		BaLa-140	<6.10E+00	0.00E+00	6.10E+00
		Be-7	<6.50E+01	0.00E+00	6.50E+01
		K-40	2.03E+03	2.83E+02	6.96E+01
LLI-131	<6.93E-01	0.00E+00	6.93E-01		
504139	9/3/2019 - 9/3/2019	I-131	<7.21E+00	0.00E+00	7.21E+00
		Cs-134	<1.00E+01	0.00E+00	1.00E+01
		Cs-137	<8.14E+00	0.00E+00	8.14E+00
		BaLa-140	<7.69E+00	0.00E+00	7.69E+00
		Be-7	<5.62E+01	0.00E+00	5.62E+01
		K-40	2.03E+03	2.82E+02	1.80E+01
LLI-131	<1.32E+00	0.00E+00	1.32E+00		
504389	9/16/2019 - 9/16/2019	I-131	<7.91E+00	0.00E+00	7.91E+00
		Cs-134	<1.04E+01	0.00E+00	1.04E+01
		Cs-137	<1.17E+01	0.00E+00	1.17E+01
		BaLa-140	<6.21E+00	0.00E+00	6.21E+00
		Be-7	<4.57E+01	0.00E+00	4.57E+01
		K-40	1.89E+03	2.69E+02	1.80E+01
LLI-131	<7.47E-01	0.00E+00	7.47E-01		
504883	9/30/2019 - 9/30/2019	I-131	<7.89E+00	0.00E+00	7.89E+00
		Cs-134	<1.03E+01	0.00E+00	1.03E+01
		Cs-137	<1.21E+01	0.00E+00	1.21E+01
		BaLa-140	<6.34E+00	0.00E+00	6.34E+00
		Be-7	<5.44E+01	0.00E+00	5.44E+01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: MILK Concentration (Activity): pCi/l

Sample Point 102 [INDICATOR - W @ 2.82 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504883	9/30/2019 - 9/30/2019	K-40	2.38E+03	3.17E+02	1.13E+02
		LLI-131	<8.14E-01	0.00E+00	8.14E-01
505484	10/14/2019 - 10/14/2019	I-131	<5.81E+00	0.00E+00	5.81E+00
		Cs-134	<8.78E+00	0.00E+00	8.78E+00
		Cs-137	1.75E+01	7.15E+00	7.54E+00
		BaLa-140	<7.80E+00	0.00E+00	7.80E+00
		Be-7	<5.46E+01	0.00E+00	5.46E+01
		K-40	2.03E+03	2.88E+02	1.15E+02
		LLI-131	<5.08E-01	0.00E+00	5.08E-01
506325	10/28/2019 - 10/28/2019	I-131	<6.75E+00	0.00E+00	6.75E+00
		Cs-134	<7.03E+00	0.00E+00	7.03E+00
		Cs-137	2.13E+01	8.80E+00	1.04E+01
		BaLa-140	<6.78E+00	0.00E+00	6.78E+00
		Be-7	<4.56E+01	0.00E+00	4.56E+01
		K-40	2.06E+03	2.92E+02	1.92E+01
		LLI-131	<9.50E-01	0.00E+00	9.50E-01
507737	11/11/2019 - 11/11/2019	I-131	<8.28E+00	0.00E+00	8.28E+00
		Cs-134	<8.19E+00	0.00E+00	8.19E+00
		Cs-137	<1.11E+01	0.00E+00	1.11E+01
		BaLa-140	<2.23E+00	0.00E+00	2.23E+00
		Be-7	<5.39E+01	0.00E+00	5.39E+01
		K-40	1.91E+03	2.77E+02	1.21E+02
		LLI-131	<7.19E-01	0.00E+00	7.19E-01
508299	11/25/2019 - 11/25/2019	I-131	<5.81E+00	0.00E+00	5.81E+00
		Cs-134	<1.02E+01	0.00E+00	1.02E+01
		Cs-137	<9.94E+00	0.00E+00	9.94E+00
		BaLa-140	<2.20E+00	0.00E+00	2.20E+00
		Be-7	<4.77E+01	0.00E+00	4.77E+01
		K-40	2.03E+03	2.86E+02	1.05E+02
		LLI-131	<5.10E-01	0.00E+00	5.10E-01

Media Type: SEDIMENT_BOTTOM Concentration (Activity): pCi/kg dry

Sample Point 52 [INDICATOR - S @ 3.8 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492891	2/20/2019 - 2/20/2019	Mn-54	<5.35E+01	0.00E+00	5.35E+01
		Co-58	<4.93E+01	0.00E+00	4.93E+01
		Fe-59	<1.06E+02	0.00E+00	1.06E+02
		Co-60	<8.38E+01	0.00E+00	8.38E+01
		Zn-65	<1.34E+02	0.00E+00	1.34E+02
		Zr-95	<7.77E+01	0.00E+00	7.77E+01
		Nb-95	<7.42E+01	0.00E+00	7.42E+01
		I-131	<9.85E+01	0.00E+00	9.85E+01
		Cs-134	<8.96E+01	0.00E+00	8.96E+01
		Cs-137	<7.75E+01	0.00E+00	7.75E+01
		Be-7	<6.21E+02	0.00E+00	6.21E+02
		K-40	3.17E+03	9.24E+02	7.10E+02
		Co-57	<3.26E+01	0.00E+00	3.26E+01
		Mo-99	<7.40E+03	0.00E+00	7.40E+03
		Ag-110M	<4.71E+01	0.00E+00	4.71E+01
		Sb-122	<1.51E+03	0.00E+00	1.51E+03
Sb-125	<1.01E+02	0.00E+00	1.01E+02		
504193	7/15/2019 - 7/15/2019	Mn-54	<6.89E+01	0.00E+00	6.89E+01
		Co-58	<7.93E+01	0.00E+00	7.93E+01
		Fe-59	<2.11E+02	0.00E+00	2.11E+02
		Co-60	<9.39E+01	0.00E+00	9.39E+01
		Zn-65	<1.32E+02	0.00E+00	1.32E+02

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SEDIMENT_BOTTOM Concentration (Activity): pCi/kg dry

Sample Point 52 [INDICATOR - S @ 3.8 miles]

Sample ID:	504193	Sample Dates:	7/15/2019 - 7/15/2019	Nuclide	Activity	2 Sigma Error	MDA
				Zr-95	<1.81E+02	0.00E+00	1.81E+02
				Nb-95	<9.95E+01	0.00E+00	9.95E+01
				I-131	<3.36E+02	0.00E+00	3.36E+02
				Cs-134	<1.04E+02	0.00E+00	1.04E+02
				Cs-137	<1.11E+02	0.00E+00	1.11E+02
				Be-7	<7.87E+02	0.00E+00	7.87E+02
				K-40	8.39E+03	1.64E+03	1.79E+02
				Co-57	<4.98E+01	0.00E+00	4.98E+01
				Mo-99	<1.83E+04	0.00E+00	1.83E+04
				Ag-110M	<6.11E+01	0.00E+00	6.11E+01
				Sb-122	<1.77E+04	0.00E+00	1.77E+04
				Sb-125	<1.92E+02	0.00E+00	1.92E+02

Media Type: SEDIMENT_SHORE Concentration (Activity): pCi/kg dry

Sample Point 26 [INDICATOR - S @ 4.6 miles]

Sample ID:	492892	Sample Dates:	2/20/2019 - 2/20/2019	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<4.92E+01	0.00E+00	4.92E+01
				Co-58	<7.38E+01	0.00E+00	7.38E+01
				Fe-59	<1.28E+02	0.00E+00	1.28E+02
				Co-60	<7.37E+01	0.00E+00	7.37E+01
				Zn-65	<1.13E+02	0.00E+00	1.13E+02
				Zr-95	<9.38E+01	0.00E+00	9.38E+01
				Nb-95	<7.69E+01	0.00E+00	7.69E+01
				I-131	<1.24E+02	0.00E+00	1.24E+02
				Cs-134	<5.46E+01	0.00E+00	5.46E+01
				Cs-137	<4.33E+01	0.00E+00	4.33E+01
				Be-7	<4.35E+02	0.00E+00	4.35E+02
				K-40	8.64E+03	1.52E+03	1.41E+02
				Co-57	<4.30E+01	0.00E+00	4.30E+01
				Mo-99	<1.29E+04	0.00E+00	1.29E+04
				Ag-110M	<4.97E+01	0.00E+00	4.97E+01
				Sb-122	<1.32E+03	0.00E+00	1.32E+03
				Sb-125	<1.08E+02	0.00E+00	1.08E+02

Sample ID:	504200	Sample Dates:	7/15/2019 - 7/15/2019	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<6.23E+01	0.00E+00	6.23E+01
				Co-58	<7.18E+01	0.00E+00	7.18E+01
				Fe-59	<1.79E+02	0.00E+00	1.79E+02
				Co-60	<8.08E+01	0.00E+00	8.08E+01
				Zn-65	<1.57E+02	0.00E+00	1.57E+02
				Zr-95	<1.08E+02	0.00E+00	1.08E+02
				Nb-95	<6.65E+01	0.00E+00	6.65E+01
				I-131	<2.66E+02	0.00E+00	2.66E+02
				Cs-134	<4.93E+01	0.00E+00	4.93E+01
				Cs-137	<4.63E+01	0.00E+00	4.63E+01
				Be-7	<6.35E+02	0.00E+00	6.35E+02
				K-40	8.48E+03	1.56E+03	9.54E+02
				Co-57	<4.23E+01	0.00E+00	4.23E+01
				Mo-99	<6.87E+04	0.00E+00	6.87E+04
				Ag-110M	<5.25E+01	0.00E+00	5.25E+01
				Sb-122	<1.18E+04	0.00E+00	1.18E+04
				Sb-125	<1.25E+02	0.00E+00	1.25E+02

Sample Point 41 [INDICATOR - S @ 3.8 miles]

Sample ID:	492893	Sample Dates:	2/20/2019 - 2/20/2019	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<4.68E+01	0.00E+00	4.68E+01
				Co-58	<3.34E+01	0.00E+00	3.34E+01
				Fe-59	<1.29E+02	0.00E+00	1.29E+02
				Co-60	<1.24E+01	0.00E+00	1.24E+01
				Zn-65	<1.09E+02	0.00E+00	1.09E+02
				Zr-95	<4.66E+01	0.00E+00	4.66E+01
				Nb-95	<4.69E+01	0.00E+00	4.69E+01
				I-131	<1.10E+02	0.00E+00	1.10E+02
				Cs-134	<5.53E+01	0.00E+00	5.53E+01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SEDIMENT_SHORE Concentration (Activity): pCi/kg dry

Sample Point 41 [INDICATOR - S @ 3.8 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492893	2/20/2019 - 2/20/2019	Cs-137	<5.79E+01	0.00E+00	5.79E+01
		Be-7	<4.42E+02	0.00E+00	4.42E+02
		K-40	1.17E+04	1.75E+03	1.24E+02
		Co-57	<3.61E+01	0.00E+00	3.61E+01
		Mo-99	<1.64E+03	0.00E+00	1.64E+03
		Ag-110M	<2.72E+01	0.00E+00	2.72E+01
		Sb-122	<1.48E+03	0.00E+00	1.48E+03
		Sb-125	<1.08E+02	0.00E+00	1.08E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504201	7/15/2019 - 7/15/2019	Mn-54	<5.23E+01	0.00E+00	5.23E+01
		Co-58	<5.35E+01	0.00E+00	5.35E+01
		Fe-59	<1.24E+02	0.00E+00	1.24E+02
		Co-60	<5.84E+01	0.00E+00	5.84E+01
		Zn-65	<1.55E+02	0.00E+00	1.55E+02
		Zr-95	<8.84E+01	0.00E+00	8.84E+01
		Nb-95	<7.45E+01	0.00E+00	7.45E+01
		I-131	<2.30E+02	0.00E+00	2.30E+02
		Cs-134	<3.36E+01	0.00E+00	3.36E+01
		Cs-137	<3.35E+01	0.00E+00	3.35E+01
		Be-7	<3.67E+02	0.00E+00	3.67E+02
		K-40	9.42E+03	1.55E+03	8.03E+02
		Co-57	<3.54E+01	0.00E+00	3.54E+01
		Mo-99	<8.63E+04	0.00E+00	8.63E+04
		Ag-110M	<4.62E+01	0.00E+00	4.62E+01
		Sb-122	<1.24E+04	0.00E+00	1.24E+04
		Sb-125	<9.22E+01	0.00E+00	9.22E+01

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 26 [INDICATOR - S @ 4.7 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493315	12/26/2018 - 1/21/2019	Mn-54	<3.04E+00	0.00E+00	3.04E+00
		Co-58	<3.47E+00	0.00E+00	3.47E+00
		Fe-59	<5.51E+00	0.00E+00	5.51E+00
		Co-60	<3.23E+00	0.00E+00	3.23E+00
		Zn-65	<5.20E+00	0.00E+00	5.20E+00
		Zr-95	<5.72E+00	0.00E+00	5.72E+00
		Nb-95	<3.59E+00	0.00E+00	3.59E+00
		I-131	<1.13E+01	0.00E+00	1.13E+01
		Cs-134	<2.99E+00	0.00E+00	2.99E+00
		Cs-137	<3.06E+00	0.00E+00	3.06E+00
		BaLa-140	<5.25E+00	0.00E+00	5.25E+00
		Be-7	<2.59E+01	0.00E+00	2.59E+01
		K-40	<4.42E+01	0.00E+00	4.42E+01
		H3SW	2.78E+03	1.83E+02	1.89E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494965	1/21/2019 - 2/18/2019	Mn-54	<1.98E+00	0.00E+00	1.98E+00
		Co-58	<2.88E+00	0.00E+00	2.88E+00
		Fe-59	<5.21E+00	0.00E+00	5.21E+00
		Co-60	<2.37E+00	0.00E+00	2.37E+00
		Zn-65	<5.68E+00	0.00E+00	5.68E+00
		Zr-95	<5.62E+00	0.00E+00	5.62E+00
		Nb-95	<4.05E+00	0.00E+00	4.05E+00
		I-131	<9.84E+00	0.00E+00	9.84E+00
		Cs-134	<3.02E+00	0.00E+00	3.02E+00
		Cs-137	<2.16E+00	0.00E+00	2.16E+00
		BaLa-140	<6.20E+00	0.00E+00	6.20E+00
		Be-7	<2.48E+01	0.00E+00	2.48E+01
		K-40	<5.36E+01	0.00E+00	5.36E+01
		H3SW	2.79E+03	1.80E+02	1.85E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
497142	2/18/2019 - 3/18/2019	Mn-54	<3.33E+00	0.00E+00	3.33E+00
		Co-58	<3.57E+00	0.00E+00	3.57E+00

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 26 [INDICATOR - S @ 4.7 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA		
497142	2/18/2019 - 3/18/2019	Fe-59	<6.63E+00	0.00E+00	6.63E+00		
		Co-60	<2.84E+00	0.00E+00	2.84E+00		
		Zn-65	<7.27E+00	0.00E+00	7.27E+00		
		Zr-95	<6.34E+00	0.00E+00	6.34E+00		
		Nb-95	<4.60E+00	0.00E+00	4.60E+00		
		I-131	<1.20E+01	0.00E+00	1.20E+01		
		Cs-134	<3.27E+00	0.00E+00	3.27E+00		
		Cs-137	<2.98E+00	0.00E+00	2.98E+00		
		BaLa-140	<8.74E+00	0.00E+00	8.74E+00		
		Be-7	<2.60E+01	0.00E+00	2.60E+01		
		K-40	<5.97E+01	0.00E+00	5.97E+01		
		H3SW	2.51E+03	1.76E+02	1.87E+02		
		498781	3/18/2019 - 4/15/2019	Mn-54	<4.50E+00	0.00E+00	4.50E+00
				Co-58	<4.80E+00	0.00E+00	4.80E+00
Fe-59	<7.06E+00			0.00E+00	7.06E+00		
Co-60	<3.57E+00			0.00E+00	3.57E+00		
Zn-65	<9.18E+00			0.00E+00	9.18E+00		
Zr-95	<5.87E+00			0.00E+00	5.87E+00		
Nb-95	<5.39E+00			0.00E+00	5.39E+00		
I-131	<1.16E+01			0.00E+00	1.16E+01		
Cs-134	<4.99E+00			0.00E+00	4.99E+00		
Cs-137	<4.00E+00			0.00E+00	4.00E+00		
BaLa-140	<9.88E+00			0.00E+00	9.88E+00		
Be-7	<3.22E+01			0.00E+00	3.22E+01		
K-40	6.83E+01			3.92E+01	4.96E+01		
H3SW	1.82E+03			1.67E+02	2.04E+02		
500457	4/15/2019 - 5/13/2019	Mn-54	<3.17E+00	0.00E+00	3.17E+00		
		Co-58	<3.79E+00	0.00E+00	3.79E+00		
		Fe-59	<8.35E+00	0.00E+00	8.35E+00		
		Co-60	<3.45E+00	0.00E+00	3.45E+00		
		Zn-65	<8.36E+00	0.00E+00	8.36E+00		
		Zr-95	<9.30E+00	0.00E+00	9.30E+00		
		Nb-95	<5.70E+00	0.00E+00	5.70E+00		
		I-131	<9.32E+00	0.00E+00	9.32E+00		
		Cs-134	<5.40E+00	0.00E+00	5.40E+00		
		Cs-137	<2.18E+00	0.00E+00	2.18E+00		
		BaLa-140	<1.17E+01	0.00E+00	1.17E+01		
		Be-7	<3.44E+01	0.00E+00	3.44E+01		
		K-40	<5.98E+01	0.00E+00	5.98E+01		
		H3SW	1.61E+03	1.56E+02	1.91E+02		
502202	5/13/2019 - 6/10/2019	Mn-54	<2.98E+00	0.00E+00	2.98E+00		
		Co-58	<3.52E+00	0.00E+00	3.52E+00		
		Fe-59	<4.72E+00	0.00E+00	4.72E+00		
		Co-60	<2.78E+00	0.00E+00	2.78E+00		
		Zn-65	<5.47E+00	0.00E+00	5.47E+00		
		Zr-95	<3.84E+00	0.00E+00	3.84E+00		
		Nb-95	<3.74E+00	0.00E+00	3.74E+00		
		I-131	<1.14E+01	0.00E+00	1.14E+01		
		Cs-134	<4.03E+00	0.00E+00	4.03E+00		
		Cs-137	<2.80E+00	0.00E+00	2.80E+00		
		BaLa-140	<5.99E+00	0.00E+00	5.99E+00		
		Be-7	<2.48E+01	0.00E+00	2.48E+01		
		K-40	<4.89E+01	0.00E+00	4.89E+01		
		H3SW	1.49E+03	1.58E+02	2.02E+02		
504194	6/10/2019 - 7/8/2019	Mn-54	<3.00E+00	0.00E+00	3.00E+00		
		Co-58	<3.53E+00	0.00E+00	3.53E+00		
		Fe-59	<6.88E+00	0.00E+00	6.88E+00		
		Co-60	<3.47E+00	0.00E+00	3.47E+00		
		Zn-65	<7.15E+00	0.00E+00	7.15E+00		

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 26 [INDICATOR - S @ 4.7 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504194	6/10/2019 - 7/8/2019	Zr-95	<5.91E+00	0.00E+00	5.91E+00
		Nb-95	<3.97E+00	0.00E+00	3.97E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<3.42E+00	0.00E+00	3.42E+00
		Cs-137	<2.99E+00	0.00E+00	2.99E+00
		BaLa-140	<8.81E+00	0.00E+00	8.81E+00
		Be-7	<2.19E+01	0.00E+00	2.19E+01
		K-40	<5.39E+01	0.00E+00	5.39E+01
		H3SW	1.91E+03	1.65E+02	1.94E+02
		505141	7/8/2019 - 8/5/2019	Mn-54	<2.94E+00
Co-58	<2.24E+00			0.00E+00	2.24E+00
Fe-59	<7.00E+00			0.00E+00	7.00E+00
Co-60	<3.70E+00			0.00E+00	3.70E+00
Zn-65	<5.98E+00			0.00E+00	5.98E+00
Zr-95	<3.43E+00			0.00E+00	3.43E+00
Nb-95	<3.10E+00			0.00E+00	3.10E+00
I-131	<1.18E+01			0.00E+00	1.18E+01
Cs-134	<3.42E+00			0.00E+00	3.42E+00
Cs-137	<2.70E+00			0.00E+00	2.70E+00
BaLa-140	<8.74E+00			0.00E+00	8.74E+00
Be-7	<3.30E+01			0.00E+00	3.30E+01
K-40	<5.86E+01			0.00E+00	5.86E+01
H3SW	2.83E+03			1.86E+02	1.93E+02
507289	8/5/2019 - 9/3/2019	Mn-54	<2.91E+00	0.00E+00	2.91E+00
		Co-58	<2.75E+00	0.00E+00	2.75E+00
		Fe-59	<6.09E+00	0.00E+00	6.09E+00
		Co-60	<2.32E+00	0.00E+00	2.32E+00
		Zn-65	<5.78E+00	0.00E+00	5.78E+00
		Zr-95	<4.99E+00	0.00E+00	4.99E+00
		Nb-95	<3.37E+00	0.00E+00	3.37E+00
		I-131	<1.02E+01	0.00E+00	1.02E+01
		Cs-134	<2.85E+00	0.00E+00	2.85E+00
		Cs-137	<2.49E+00	0.00E+00	2.49E+00
		BaLa-140	<4.30E+00	0.00E+00	4.30E+00
		Be-7	<2.05E+01	0.00E+00	2.05E+01
		K-40	7.65E+01	2.97E+01	3.77E+01
		H3SW	4.25E+03	2.09E+02	1.86E+02
509826	9/3/2019 - 9/30/2019	Mn-54	<2.95E+00	0.00E+00	2.95E+00
		Co-58	<3.88E+00	0.00E+00	3.88E+00
		Fe-59	<8.86E+00	0.00E+00	8.86E+00
		Co-60	<2.30E+00	0.00E+00	2.30E+00
		Zn-65	<8.29E+00	0.00E+00	8.29E+00
		Zr-95	<5.80E+00	0.00E+00	5.80E+00
		Nb-95	<3.26E+00	0.00E+00	3.26E+00
		I-131	<9.84E+00	0.00E+00	9.84E+00
		Cs-134	<2.71E+00	0.00E+00	2.71E+00
		Cs-137	<3.01E+00	0.00E+00	3.01E+00
		BaLa-140	<1.18E+01	0.00E+00	1.18E+01
		Be-7	<3.01E+01	0.00E+00	3.01E+01
		K-40	<5.51E+01	0.00E+00	5.51E+01
		H3SW	5.78E+03	2.37E+02	1.88E+02
511462	9/30/2019 - 10/28/2019	Mn-54	<2.96E+00	0.00E+00	2.96E+00
		Co-58	<2.86E+00	0.00E+00	2.86E+00
		Fe-59	<6.57E+00	0.00E+00	6.57E+00
		Co-60	<2.48E+00	0.00E+00	2.48E+00
		Zn-65	<6.53E+00	0.00E+00	6.53E+00
		Zr-95	<5.56E+00	0.00E+00	5.56E+00
		Nb-95	<4.37E+00	0.00E+00	4.37E+00
		I-131	<1.15E+01	0.00E+00	1.15E+01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 26 [INDICATOR - S @ 4.7 miles]

Sample ID:	511462	Sample Dates:	9/30/2019 - 10/28/2019	Nuclide	Activity	2 Sigma Error	MDA
				Cs-134	<3.21E+00	0.00E+00	3.21E+00
				Cs-137	<2.32E+00	0.00E+00	2.32E+00
				BaLa-140	<6.97E+00	0.00E+00	6.97E+00
				Be-7	<2.47E+01	0.00E+00	2.47E+01
				K-40	6.64E+01	3.26E+01	4.42E+01
				H3SW	7.46E+03	2.57E+02	1.79E+02

Sample ID:	512657	Sample Dates:	10/28/2019 - 11/25/2019	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<1.78E+00	0.00E+00	1.78E+00
				Co-58	<1.65E+00	0.00E+00	1.65E+00
				Fe-59	<3.81E+00	0.00E+00	3.81E+00
				Co-60	<1.49E+00	0.00E+00	1.49E+00
				Zn-65	<3.72E+00	0.00E+00	3.72E+00
				Zr-95	<3.48E+00	0.00E+00	3.48E+00
				Nb-95	<2.72E+00	0.00E+00	2.72E+00
				I-131	<9.93E+00	0.00E+00	9.93E+00
				Cs-134	<1.54E+00	0.00E+00	1.54E+00
				Cs-137	<1.66E+00	0.00E+00	1.66E+00
				BaLa-140	<6.08E+00	0.00E+00	6.08E+00
				Be-7	<1.44E+01	0.00E+00	1.44E+01
				K-40	2.97E+01	1.84E+01	2.79E+01
				H3SW	8.57E+03	2.83E+02	2.00E+02

Sample ID:	514470	Sample Dates:	11/25/2019 - 12/23/2019	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<2.03E+00	0.00E+00	2.03E+00
				Co-58	<2.53E+00	0.00E+00	2.53E+00
				Fe-59	<4.04E+00	0.00E+00	4.04E+00
				Co-60	<2.09E+00	0.00E+00	2.09E+00
				Zn-65	<4.08E+00	0.00E+00	4.08E+00
				Zr-95	<4.82E+00	0.00E+00	4.82E+00
				Nb-95	<3.00E+00	0.00E+00	3.00E+00
				I-131	<1.20E+01	0.00E+00	1.20E+01
				Cs-134	<2.30E+00	0.00E+00	2.30E+00
				Cs-137	<1.92E+00	0.00E+00	1.92E+00
				BaLa-140	<4.73E+00	0.00E+00	4.73E+00
				Be-7	<1.98E+01	0.00E+00	1.98E+01
				K-40	8.71E+01	2.57E+01	3.11E+01
				H3SW	7.77E+03	2.68E+02	1.97E+02

Sample Point 40 [INDICATOR - SSE @ 17.2 miles]

Sample ID:	493316	Sample Dates:	12/26/2018 - 1/21/2019	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<2.65E+00	0.00E+00	2.65E+00
				Co-58	<3.53E+00	0.00E+00	3.53E+00
				Fe-59	<8.94E+00	0.00E+00	8.94E+00
				Co-60	<2.53E+00	0.00E+00	2.53E+00
				Zn-65	<6.49E+00	0.00E+00	6.49E+00
				Zr-95	<6.48E+00	0.00E+00	6.48E+00
				Nb-95	<4.35E+00	0.00E+00	4.35E+00
				I-131	<1.13E+01	0.00E+00	1.13E+01
				Cs-134	<4.05E+00	0.00E+00	4.05E+00
				Cs-137	<2.57E+00	0.00E+00	2.57E+00
				BaLa-140	<8.78E+00	0.00E+00	8.78E+00
				Be-7	<3.05E+01	0.00E+00	3.05E+01
				K-40	6.54E+01	4.62E+01	7.02E+01
				H3SW	<7.65E+01	0.00E+00	1.89E+02

Sample ID:	494966	Sample Dates:	1/21/2019 - 2/18/2019	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<2.69E+00	0.00E+00	2.69E+00
				Co-58	<3.62E+00	0.00E+00	3.62E+00
				Fe-59	<7.13E+00	0.00E+00	7.13E+00
				Co-60	<2.55E+00	0.00E+00	2.55E+00
				Zn-65	<6.63E+00	0.00E+00	6.63E+00
				Zr-95	<4.86E+00	0.00E+00	4.86E+00
				Nb-95	<4.65E+00	0.00E+00	4.65E+00
				I-131	<1.19E+01	0.00E+00	1.19E+01
				Cs-134	<4.57E+00	0.00E+00	4.57E+00

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 40 [INDICATOR - SSE @ 17.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494966	1/21/2019 - 2/18/2019	Cs-137	<4.12E+00	0.00E+00	4.12E+00
		BaLa-140	<5.64E+00	0.00E+00	5.64E+00
		Be-7	<2.91E+01	0.00E+00	2.91E+01
		K-40	3.64E+01	3.42E+01	5.30E+01
		H3SW	<-4.9E+01	0.00E+00	1.85E+02
497143	2/18/2019 - 3/18/2019	Mn-54	<2.83E+00	0.00E+00	2.83E+00
		Co-58	<3.43E+00	0.00E+00	3.43E+00
		Fe-59	<7.78E+00	0.00E+00	7.78E+00
		Co-60	<3.29E+00	0.00E+00	3.29E+00
		Zn-65	<6.53E+00	0.00E+00	6.53E+00
		Zr-95	<4.73E+00	0.00E+00	4.73E+00
		Nb-95	<3.15E+00	0.00E+00	3.15E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<3.31E+00	0.00E+00	3.31E+00
		Cs-137	<2.57E+00	0.00E+00	2.57E+00
		BaLa-140	<8.03E+00	0.00E+00	8.03E+00
		Be-7	<2.98E+01	0.00E+00	2.98E+01
		K-40	8.38E+01	2.99E+01	3.09E+01
H3SW	<7.59E+01	0.00E+00	1.87E+02		
498782	3/18/2019 - 4/15/2019	Mn-54	<3.32E+00	0.00E+00	3.32E+00
		Co-58	<2.91E+00	0.00E+00	2.91E+00
		Fe-59	<6.95E+00	0.00E+00	6.95E+00
		Co-60	<2.48E+00	0.00E+00	2.48E+00
		Zn-65	<6.94E+00	0.00E+00	6.94E+00
		Zr-95	<6.25E+00	0.00E+00	6.25E+00
		Nb-95	<4.36E+00	0.00E+00	4.36E+00
		I-131	<1.11E+01	0.00E+00	1.11E+01
		Cs-134	<3.12E+00	0.00E+00	3.12E+00
		Cs-137	<3.76E+00	0.00E+00	3.76E+00
		BaLa-140	<1.13E+01	0.00E+00	1.13E+01
		Be-7	<3.59E+01	0.00E+00	3.59E+01
		K-40	4.16E+01	2.66E+01	3.37E+01
H3SW	<-9.2E+01	0.00E+00	2.03E+02		
500458	4/15/2019 - 5/13/2019	Mn-54	<2.48E+00	0.00E+00	2.48E+00
		Co-58	<2.39E+00	0.00E+00	2.39E+00
		Fe-59	<5.19E+00	0.00E+00	5.19E+00
		Co-60	<2.33E+00	0.00E+00	2.33E+00
		Zn-65	<5.06E+00	0.00E+00	5.06E+00
		Zr-95	<5.71E+00	0.00E+00	5.71E+00
		Nb-95	<2.32E+00	0.00E+00	2.32E+00
		I-131	<1.03E+01	0.00E+00	1.03E+01
		Cs-134	<2.17E+00	0.00E+00	2.17E+00
		Cs-137	<2.74E+00	0.00E+00	2.74E+00
		BaLa-140	<6.08E+00	0.00E+00	6.08E+00
		Be-7	<2.16E+01	0.00E+00	2.16E+01
		K-40	<3.48E+01	0.00E+00	3.48E+01
H3SW	<-3.5E+01	0.00E+00	1.91E+02		
502203	5/13/2019 - 6/10/2019	Mn-54	<2.67E+00	0.00E+00	2.67E+00
		Co-58	<3.41E+00	0.00E+00	3.41E+00
		Fe-59	<7.07E+00	0.00E+00	7.07E+00
		Co-60	<3.25E+00	0.00E+00	3.25E+00
		Zn-65	<7.05E+00	0.00E+00	7.05E+00
		Zr-95	<6.73E+00	0.00E+00	6.73E+00
		Nb-95	<3.08E+00	0.00E+00	3.08E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<3.77E+00	0.00E+00	3.77E+00
		Cs-137	<2.38E+00	0.00E+00	2.38E+00
		BaLa-140	<7.13E+00	0.00E+00	7.13E+00
		Be-7	<3.13E+01	0.00E+00	3.13E+01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 40 [INDICATOR - SSE @ 17.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
502203	5/13/2019 - 6/10/2019	K-40	<5.70E+01	0.00E+00	5.70E+01
		H3SW	<-6.0E+01	0.00E+00	2.04E+02
504195	6/10/2019 - 7/8/2019	Mn-54	<2.10E+00	0.00E+00	2.10E+00
		Co-58	<2.49E+00	0.00E+00	2.49E+00
		Fe-59	<4.26E+00	0.00E+00	4.26E+00
		Co-60	<3.62E+00	0.00E+00	3.62E+00
		Zn-65	<3.95E+00	0.00E+00	3.95E+00
		Zr-95	<4.66E+00	0.00E+00	4.66E+00
		Nb-95	<3.75E+00	0.00E+00	3.75E+00
		I-131	<9.63E+00	0.00E+00	9.63E+00
		Cs-134	<3.32E+00	0.00E+00	3.32E+00
		Cs-137	<2.81E+00	0.00E+00	2.81E+00
		BaLa-140	<6.03E+00	0.00E+00	6.03E+00
		Be-7	<2.68E+01	0.00E+00	2.68E+01
		K-40	2.92E+01	2.53E+01	3.84E+01
		H3SW	<3.35E+01	0.00E+00	1.95E+02
505142	7/8/2019 - 8/5/2019	Mn-54	<1.81E+00	0.00E+00	1.81E+00
		Co-58	<2.10E+00	0.00E+00	2.10E+00
		Fe-59	<4.17E+00	0.00E+00	4.17E+00
		Co-60	<1.74E+00	0.00E+00	1.74E+00
		Zn-65	<3.80E+00	0.00E+00	3.80E+00
		Zr-95	<3.62E+00	0.00E+00	3.62E+00
		Nb-95	<2.41E+00	0.00E+00	2.41E+00
		I-131	<9.53E+00	0.00E+00	9.53E+00
		Cs-134	<2.06E+00	0.00E+00	2.06E+00
		Cs-137	<1.65E+00	0.00E+00	1.65E+00
		BaLa-140	<5.61E+00	0.00E+00	5.61E+00
		Be-7	<1.59E+01	0.00E+00	1.59E+01
		K-40	3.34E+01	1.82E+01	2.63E+01
		H3SW	<-9.7E+00	0.00E+00	1.91E+02
507290	8/5/2019 - 9/3/2019	Mn-54	<3.28E+00	0.00E+00	3.28E+00
		Co-58	<3.10E+00	0.00E+00	3.10E+00
		Fe-59	<7.84E+00	0.00E+00	7.84E+00
		Co-60	<3.68E+00	0.00E+00	3.68E+00
		Zn-65	<8.76E+00	0.00E+00	8.76E+00
		Zr-95	<7.35E+00	0.00E+00	7.35E+00
		Nb-95	<2.31E+00	0.00E+00	2.31E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<2.35E+00	0.00E+00	2.35E+00
		Cs-137	<3.19E+00	0.00E+00	3.19E+00
		BaLa-140	<8.05E+00	0.00E+00	8.05E+00
		Be-7	<3.13E+01	0.00E+00	3.13E+01
		K-40	<3.65E+01	0.00E+00	3.65E+01
		H3SW	<-2.1E+01	0.00E+00	1.86E+02
509827	9/3/2019 - 9/30/2019	Mn-54	<2.45E+00	0.00E+00	2.45E+00
		Co-58	<2.49E+00	0.00E+00	2.49E+00
		Fe-59	<4.18E+00	0.00E+00	4.18E+00
		Co-60	<2.00E+00	0.00E+00	2.00E+00
		Zn-65	<4.94E+00	0.00E+00	4.94E+00
		Zr-95	<4.64E+00	0.00E+00	4.64E+00
		Nb-95	<3.30E+00	0.00E+00	3.30E+00
		I-131	<9.90E+00	0.00E+00	9.90E+00
		Cs-134	<2.83E+00	0.00E+00	2.83E+00
		Cs-137	<2.52E+00	0.00E+00	2.52E+00
		BaLa-140	<5.53E+00	0.00E+00	5.53E+00
		Be-7	<2.08E+01	0.00E+00	2.08E+01
		K-40	8.17E+01	2.99E+01	3.73E+01
		H3SW	<-8.1E+01	0.00E+00	1.88E+02

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 40 [INDICATOR - SSE @ 17.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511463	9/30/2019 - 10/28/2019	Mn-54	<4.22E+00	0.00E+00	4.22E+00
		Co-58	<3.11E+00	0.00E+00	3.11E+00
		Fe-59	<9.80E+00	0.00E+00	9.80E+00
		Co-60	<4.07E+00	0.00E+00	4.07E+00
		Zn-65	<6.89E+00	0.00E+00	6.89E+00
		Zr-95	<7.29E+00	0.00E+00	7.29E+00
		Nb-95	<4.86E+00	0.00E+00	4.86E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<4.09E+00	0.00E+00	4.09E+00
		Cs-137	<3.92E+00	0.00E+00	3.92E+00
		BaLa-140	<9.41E+00	0.00E+00	9.41E+00
		Be-7	<3.29E+01	0.00E+00	3.29E+01
		K-40	<4.88E+01	0.00E+00	4.88E+01
		H3SW	<7.06E+01	0.00E+00	1.77E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512658	10/28/2019 - 11/25/2019	Mn-54	<1.83E+00	0.00E+00	1.83E+00
		Co-58	<2.28E+00	0.00E+00	2.28E+00
		Fe-59	<4.96E+00	0.00E+00	4.96E+00
		Co-60	<1.97E+00	0.00E+00	1.97E+00
		Zn-65	<4.01E+00	0.00E+00	4.01E+00
		Zr-95	<4.12E+00	0.00E+00	4.12E+00
		Nb-95	<3.00E+00	0.00E+00	3.00E+00
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<2.28E+00	0.00E+00	2.28E+00
		Cs-137	<2.12E+00	0.00E+00	2.12E+00
		BaLa-140	<6.23E+00	0.00E+00	6.23E+00
		Be-7	<1.80E+01	0.00E+00	1.80E+01
		K-40	4.90E+01	1.90E+01	2.44E+01
		H3SW	<4.29E+01	0.00E+00	1.97E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514471	11/25/2019 - 12/23/2019	Mn-54	<1.82E+00	0.00E+00	1.82E+00
		Co-58	<1.85E+00	0.00E+00	1.85E+00
		Fe-59	<4.01E+00	0.00E+00	4.01E+00
		Co-60	<1.35E+00	0.00E+00	1.35E+00
		Zn-65	<3.80E+00	0.00E+00	3.80E+00
		Zr-95	<3.36E+00	0.00E+00	3.36E+00
		Nb-95	<2.45E+00	0.00E+00	2.45E+00
		I-131	<1.03E+01	0.00E+00	1.03E+01
		Cs-134	<2.21E+00	0.00E+00	2.21E+00
		Cs-137	<1.72E+00	0.00E+00	1.72E+00
		BaLa-140	<6.01E+00	0.00E+00	6.01E+00
		Be-7	<1.70E+01	0.00E+00	1.70E+01
		K-40	3.54E+01	1.55E+01	2.00E+01
		H3SW	<1.11E+02	0.00E+00	1.97E+02

Sample Point 43 [CONTROL - SW @ 8.47 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493317	12/26/2018 - 1/21/2019	Mn-54	<3.26E+00	0.00E+00	3.26E+00
		Co-58	<3.19E+00	0.00E+00	3.19E+00
		Fe-59	<8.05E+00	0.00E+00	8.05E+00
		Co-60	<3.61E+00	0.00E+00	3.61E+00
		Zn-65	<7.14E+00	0.00E+00	7.14E+00
		Zr-95	<6.98E+00	0.00E+00	6.98E+00
		Nb-95	<4.19E+00	0.00E+00	4.19E+00
		I-131	<1.14E+01	0.00E+00	1.14E+01
		Cs-134	<3.22E+00	0.00E+00	3.22E+00
		Cs-137	<4.13E+00	0.00E+00	4.13E+00
		BaLa-140	<7.79E+00	0.00E+00	7.79E+00
		Be-7	<2.52E+01	0.00E+00	2.52E+01
		K-40	4.09E+01	3.03E+01	4.29E+01
		H3SW	<5.57E+01	0.00E+00	1.92E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494967	1/21/2019 - 2/18/2019	Mn-54	<2.74E+00	0.00E+00	2.74E+00

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 43 [CONTROL - SW @ 8.47 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494967	1/21/2019 - 2/18/2019	Co-58	<2.20E+00	0.00E+00	2.20E+00
		Fe-59	<6.97E+00	0.00E+00	6.97E+00
		Co-60	<2.85E+00	0.00E+00	2.85E+00
		Zn-65	<6.48E+00	0.00E+00	6.48E+00
		Zr-95	<4.72E+00	0.00E+00	4.72E+00
		Nb-95	<3.14E+00	0.00E+00	3.14E+00
		I-131	<1.11E+01	0.00E+00	1.11E+01
		Cs-134	<3.15E+00	0.00E+00	3.15E+00
		Cs-137	<3.20E+00	0.00E+00	3.20E+00
		BaLa-140	<7.41E+00	0.00E+00	7.41E+00
		Be-7	<2.30E+01	0.00E+00	2.30E+01
		K-40	<4.81E+01	0.00E+00	4.81E+01
		H3SW	<-3.3E+01	0.00E+00	1.85E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
497144	2/18/2019 - 3/18/2019	Mn-54	<2.14E+00	0.00E+00	2.14E+00
		Co-58	<2.78E+00	0.00E+00	2.78E+00
		Fe-59	<4.57E+00	0.00E+00	4.57E+00
		Co-60	<2.75E+00	0.00E+00	2.75E+00
		Zn-65	<5.27E+00	0.00E+00	5.27E+00
		Zr-95	<4.80E+00	0.00E+00	4.80E+00
		Nb-95	<4.18E+00	0.00E+00	4.18E+00
		I-131	<9.75E+00	0.00E+00	9.75E+00
		Cs-134	<3.08E+00	0.00E+00	3.08E+00
		Cs-137	<2.95E+00	0.00E+00	2.95E+00
		BaLa-140	<7.01E+00	0.00E+00	7.01E+00
		Be-7	<2.19E+01	0.00E+00	2.19E+01
		K-40	4.22E+01	2.79E+01	4.14E+01
		H3SW	<3.32E+01	0.00E+00	1.87E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
498783	3/18/2019 - 4/15/2019	Mn-54	<2.73E+00	0.00E+00	2.73E+00
		Co-58	<3.31E+00	0.00E+00	3.31E+00
		Fe-59	<6.13E+00	0.00E+00	6.13E+00
		Co-60	<2.63E+00	0.00E+00	2.63E+00
		Zn-65	<5.70E+00	0.00E+00	5.70E+00
		Zr-95	<5.86E+00	0.00E+00	5.86E+00
		Nb-95	<3.42E+00	0.00E+00	3.42E+00
		I-131	<1.14E+01	0.00E+00	1.14E+01
		Cs-134	<2.88E+00	0.00E+00	2.88E+00
		Cs-137	<3.29E+00	0.00E+00	3.29E+00
		BaLa-140	<7.35E+00	0.00E+00	7.35E+00
		Be-7	<2.73E+01	0.00E+00	2.73E+01
		K-40	5.11E+01	2.55E+01	2.86E+01
		H3SW	<-9.7E+01	0.00E+00	2.03E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500459	4/15/2019 - 5/13/2019	Mn-54	<3.58E+00	0.00E+00	3.58E+00
		Co-58	<4.14E+00	0.00E+00	4.14E+00
		Fe-59	<6.50E+00	0.00E+00	6.50E+00
		Co-60	<2.94E+00	0.00E+00	2.94E+00
		Zn-65	<6.61E+00	0.00E+00	6.61E+00
		Zr-95	<2.98E+00	0.00E+00	2.98E+00
		Nb-95	<4.65E+00	0.00E+00	4.65E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<2.98E+00	0.00E+00	2.98E+00
		Cs-137	<3.88E+00	0.00E+00	3.88E+00
		BaLa-140	<5.59E+00	0.00E+00	5.59E+00
		Be-7	<3.33E+01	0.00E+00	3.33E+01
		K-40	<4.71E+01	0.00E+00	4.71E+01
		H3SW	<-6.1E+01	0.00E+00	1.91E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
502204	5/13/2019 - 6/10/2019	Mn-54	<2.89E+00	0.00E+00	2.89E+00
		Co-58	<2.19E+00	0.00E+00	2.19E+00
		Fe-59	<5.22E+00	0.00E+00	5.22E+00
		Co-60	<1.73E+00	0.00E+00	1.73E+00

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 43 [CONTROL - SW @ 8.47 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
502204	5/13/2019 - 6/10/2019	Zn-65	<6.23E+00	0.00E+00	6.23E+00
		Zr-95	<4.99E+00	0.00E+00	4.99E+00
		Nb-95	<3.52E+00	0.00E+00	3.52E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<2.91E+00	0.00E+00	2.91E+00
		Cs-137	<3.03E+00	0.00E+00	3.03E+00
		BaLa-140	<4.89E+00	0.00E+00	4.89E+00
		Be-7	<2.45E+01	0.00E+00	2.45E+01
		K-40	<4.80E+01	0.00E+00	4.80E+01
		H3SW	<-1.4E+02	0.00E+00	2.03E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504196	6/10/2019 - 7/8/2019	Mn-54	<5.04E+00	0.00E+00	5.04E+00
		Co-58	<5.61E+00	0.00E+00	5.61E+00
		Fe-59	<7.95E+00	0.00E+00	7.95E+00
		Co-60	<4.01E+00	0.00E+00	4.01E+00
		Zn-65	<6.63E+00	0.00E+00	6.63E+00
		Zr-95	<5.32E+00	0.00E+00	5.32E+00
		Nb-95	<4.71E+00	0.00E+00	4.71E+00
		I-131	<1.14E+01	0.00E+00	1.14E+01
		Cs-134	<2.99E+00	0.00E+00	2.99E+00
		Cs-137	<3.65E+00	0.00E+00	3.65E+00
		BaLa-140	<6.83E+00	0.00E+00	6.83E+00
		Be-7	<3.27E+01	0.00E+00	3.27E+01
		K-40	<6.65E+01	0.00E+00	6.65E+01
		H3SW	<-4.1E+01	0.00E+00	1.94E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
505143	7/8/2019 - 8/5/2019	Mn-54	<1.88E+00	0.00E+00	1.88E+00
		Co-58	<2.26E+00	0.00E+00	2.26E+00
		Fe-59	<4.14E+00	0.00E+00	4.14E+00
		Co-60	<1.55E+00	0.00E+00	1.55E+00
		Zn-65	<3.77E+00	0.00E+00	3.77E+00
		Zr-95	<3.78E+00	0.00E+00	3.78E+00
		Nb-95	<2.55E+00	0.00E+00	2.55E+00
		I-131	<1.00E+01	0.00E+00	1.00E+01
		Cs-134	<2.30E+00	0.00E+00	2.30E+00
		Cs-137	<1.71E+00	0.00E+00	1.71E+00
		BaLa-140	<5.06E+00	0.00E+00	5.06E+00
		Be-7	<1.81E+01	0.00E+00	1.81E+01
		K-40	6.54E+01	2.10E+01	2.58E+01
		H3SW	<1.69E+01	0.00E+00	1.91E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
507291	8/5/2019 - 9/3/2019	Mn-54	<1.98E+00	0.00E+00	1.98E+00
		Co-58	<2.53E+00	0.00E+00	2.53E+00
		Fe-59	<6.34E+00	0.00E+00	6.34E+00
		Co-60	<2.06E+00	0.00E+00	2.06E+00
		Zn-65	<6.40E+00	0.00E+00	6.40E+00
		Zr-95	<5.86E+00	0.00E+00	5.86E+00
		Nb-95	<3.94E+00	0.00E+00	3.94E+00
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<2.87E+00	0.00E+00	2.87E+00
		Cs-137	<3.25E+00	0.00E+00	3.25E+00
		BaLa-140	<7.68E+00	0.00E+00	7.68E+00
		Be-7	<3.07E+01	0.00E+00	3.07E+01
		K-40	2.34E+01	2.80E+01	4.56E+01
		H3SW	<0.00E+00	0.00E+00	1.86E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
509828	9/3/2019 - 9/30/2019	Mn-54	<3.10E+00	0.00E+00	3.10E+00
		Co-58	<3.89E+00	0.00E+00	3.89E+00
		Fe-59	<5.67E+00	0.00E+00	5.67E+00
		Co-60	<2.36E+00	0.00E+00	2.36E+00
		Zn-65	<7.61E+00	0.00E+00	7.61E+00
		Zr-95	<6.30E+00	0.00E+00	6.30E+00
		Nb-95	<4.92E+00	0.00E+00	4.92E+00

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 43 [CONTROL - SW @ 8.47 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
509828	9/3/2019 - 9/30/2019	I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<4.65E+00	0.00E+00	4.65E+00
		Cs-137	<2.78E+00	0.00E+00	2.78E+00
		BaLa-140	<6.48E+00	0.00E+00	6.48E+00
		Be-7	<2.93E+01	0.00E+00	2.93E+01
		K-40	9.75E+01	4.29E+01	5.64E+01
		H3SW	<-9.3E+01	0.00E+00	1.87E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511464	9/30/2019 - 10/28/2019	Mn-54	<2.12E+00	0.00E+00	2.12E+00
		Co-58	<3.00E+00	0.00E+00	3.00E+00
		Fe-59	<7.55E+00	0.00E+00	7.55E+00
		Co-60	<2.83E+00	0.00E+00	2.83E+00
		Zn-65	<6.61E+00	0.00E+00	6.61E+00
		Zr-95	<6.49E+00	0.00E+00	6.49E+00
		Nb-95	<4.44E+00	0.00E+00	4.44E+00
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<3.56E+00	0.00E+00	3.56E+00
		Cs-137	<3.18E+00	0.00E+00	3.18E+00
		BaLa-140	<6.04E+00	0.00E+00	6.04E+00
		Be-7	<3.02E+01	0.00E+00	3.02E+01
		K-40	<6.51E+01	0.00E+00	6.51E+01
		H3SW	<8.13E+01	0.00E+00	1.76E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512659	10/28/2019 - 11/25/2019	Mn-54	<1.82E+00	0.00E+00	1.82E+00
		Co-58	<1.85E+00	0.00E+00	1.85E+00
		Fe-59	<4.60E+00	0.00E+00	4.60E+00
		Co-60	<2.07E+00	0.00E+00	2.07E+00
		Zn-65	<3.71E+00	0.00E+00	3.71E+00
		Zr-95	<4.29E+00	0.00E+00	4.29E+00
		Nb-95	<2.56E+00	0.00E+00	2.56E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<2.09E+00	0.00E+00	2.09E+00
		Cs-137	<1.70E+00	0.00E+00	1.70E+00
		BaLa-140	<4.55E+00	0.00E+00	4.55E+00
		Be-7	<1.71E+01	0.00E+00	1.71E+01
		K-40	7.19E+01	2.08E+01	2.33E+01
		H3SW	<1.91E+01	0.00E+00	1.97E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514472	11/25/2019 - 12/23/2019	Mn-54	<1.64E+00	0.00E+00	1.64E+00
		Co-58	<1.82E+00	0.00E+00	1.82E+00
		Fe-59	<3.68E+00	0.00E+00	3.68E+00
		Co-60	<1.79E+00	0.00E+00	1.79E+00
		Zn-65	<3.00E+00	0.00E+00	3.00E+00
		Zr-95	<3.75E+00	0.00E+00	3.75E+00
		Nb-95	<2.46E+00	0.00E+00	2.46E+00
		I-131	<1.09E+01	0.00E+00	1.09E+01
		Cs-134	<2.07E+00	0.00E+00	2.07E+00
		Cs-137	<1.78E+00	0.00E+00	1.78E+00
		BaLa-140	<5.60E+00	0.00E+00	5.60E+00
		Be-7	<1.73E+01	0.00E+00	1.73E+01
		K-40	6.82E+01	2.09E+01	2.60E+01
		H3SW	<1.23E+02	0.00E+00	1.97E+02

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 1 [INDICATOR - N @ 2.6 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
495868	1/9/2019 - 4/10/2019	mR/Std Qtr	14.28
501690	4/10/2019 - 7/10/2019	mR/Std Qtr	14.92
507032	7/10/2019 - 10/9/2019	mR/Std Qtr	14.14

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 1 [INDICATOR - N @ 2.6 miles]

TLD RING TLD_INNER

Sample ID:	513371	Sample Dates:	10/9/2019 - 1/8/2020	Nuclide	Activity
				mR/Std Qtr	16.35

Sample Point 2 [INDICATOR - NNE @ 1.4 miles]

TLD RING TLD_INNER

Sample ID:	495876	Sample Dates:	1/9/2019 - 4/10/2019	Nuclide	Activity
				mR/Std Qtr	17.16

Sample ID:	501698	Sample Dates:	4/10/2019 - 7/10/2019	Nuclide	Activity
				mR/Std Qtr	15.28

Sample ID:	507040	Sample Dates:	7/10/2019 - 10/9/2019	Nuclide	Activity
				mR/Std Qtr	15.90

Sample ID:	513379	Sample Dates:	10/9/2019 - 1/8/2020	Nuclide	Activity
				mR/Std Qtr	16.92

Sample Point 3 [INDICATOR - ENE @ 1.9 miles]

TLD RING TLD_SPEC

Sample ID:	495887	Sample Dates:	1/9/2019 - 4/10/2019	Nuclide	Activity
				mR/Std Qtr	13.60

Sample ID:	501709	Sample Dates:	4/10/2019 - 7/10/2019	Nuclide	Activity
				mR/Std Qtr	13.47

Sample ID:	507051	Sample Dates:	7/10/2019 - 10/9/2019	Nuclide	Activity
				mR/Std Qtr	12.47

Sample ID:	513390	Sample Dates:	10/9/2019 - 1/8/2020	Nuclide	Activity
				mR/Std Qtr	15.14

Sample Point 4 [INDICATOR - NNE @ 3.1 miles]

TLD RING TLD_SPEC

Sample ID:	495892	Sample Dates:	1/9/2019 - 4/10/2019	Nuclide	Activity
				mR/Std Qtr	14.99

Sample ID:	501714	Sample Dates:	4/10/2019 - 7/10/2019	Nuclide	Activity
				mR/Std Qtr	11.80

Sample ID:	507055	Sample Dates:	7/10/2019 - 10/9/2019	Nuclide	Activity
				mR/Std Qtr	12.40

Sample ID:	513394	Sample Dates:	10/9/2019 - 1/8/2020	Nuclide	Activity
				mR/Std Qtr	16.55

Sample Point 5 [CONTROL - WNW @ 12 miles]

TLD RING TLD_CTRL

Sample ID:	495895	Sample Dates:	1/9/2019 - 4/10/2019	Nuclide	Activity
				mR/Std Qtr	17.39

Sample ID:	501717	Sample Dates:	4/10/2019 - 7/10/2019	Nuclide	Activity
				mR/Std Qtr	16.78

Sample ID:	507058	Sample Dates:	7/10/2019 - 10/9/2019	Nuclide	Activity
				mR/Std Qtr	16.00

Sample ID:	513397	Sample Dates:	10/9/2019 - 1/8/2020	Nuclide	Activity
				mR/Std Qtr	19.02

Sample Point 6 [INDICATOR - ENE @ 0.8 miles]

TLD RING TLD_INNER

Sample ID:	495899	Sample Dates:	1/9/2019 - 4/10/2019	Nuclide	Activity
				mR/Std Qtr	16.32

Sample ID:	501721	Sample Dates:	4/10/2019 - 7/10/2019	Nuclide	Activity
				mR/Std Qtr	13.90

Sample ID:	507061	Sample Dates:	7/10/2019 - 10/9/2019	Nuclide	Activity
				mR/Std Qtr	14.58

Sample ID:	513400	Sample Dates:	10/9/2019 - 1/8/2020	Nuclide	Activity
				mR/Std Qtr	17.76

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 7 [INDICATOR - E @ 0.7 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
495901	1/9/2019 - 4/10/2019	mR/Std Qtr	14.94
501723	4/10/2019 - 7/10/2019	mR/Std Qtr	15.24
507063	7/10/2019 - 10/9/2019	mR/Std Qtr	14.57
513402	10/9/2019 - 1/8/2020	mR/Std Qtr	15.99

Sample Point 8 [INDICATOR - ESE @ 0.6 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
495906	1/9/2019 - 4/10/2019	mR/Std Qtr	13.91
501728	4/10/2019 - 7/10/2019	mR/Std Qtr	13.83
507068	7/10/2019 - 10/9/2019	mR/Std Qtr	13.89
513407	10/9/2019 - 1/8/2020	mR/Std Qtr	14.02

Sample Point 9 [INDICATOR - SE @ 2.2 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
495907	1/9/2019 - 4/10/2019	mR/Std Qtr	13.24
501729	4/10/2019 - 7/10/2019	mR/Std Qtr	11.69
507069	7/10/2019 - 10/9/2019	mR/Std Qtr	12.14
513408	10/9/2019 - 1/8/2020	mR/Std Qtr	13.78

Sample Point 10 [INDICATOR - SSE @ 2.2 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
495869	1/9/2019 - 4/10/2019	mR/Std Qtr	12.60
501691	4/10/2019 - 7/10/2019	mR/Std Qtr	12.69
507033	7/10/2019 - 10/9/2019	mR/Std Qtr	11.63
513372	10/9/2019 - 1/8/2020	mR/Std Qtr	13.77

Sample Point 11 [INDICATOR - S @ 0.6 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
495870	1/9/2019 - 4/10/2019	mR/Std Qtr	14.13
501692	4/10/2019 - 7/10/2019	mR/Std Qtr	12.39
507034	7/10/2019 - 10/9/2019	mR/Std Qtr	11.81
513373	10/9/2019 - 1/8/2020	mR/Std Qtr	14.48

Sample Point 12 [INDICATOR - SSW @ 0.9 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
495871	1/9/2019 - 4/10/2019	mR/Std Qtr	13.00

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 12 [INDICATOR - SSW @ 0.9 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
501693	4/10/2019 - 7/10/2019	mR/Std Qtr	11.77
507035	7/10/2019 - 10/9/2019	mR/Std Qtr	11.70
513374	10/9/2019 - 1/8/2020	mR/Std Qtr	14.69

Sample Point 13 [INDICATOR - WSW @ 0.7 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
495872	1/9/2019 - 4/10/2019	mR/Std Qtr	14.68
501694	4/10/2019 - 7/10/2019	mR/Std Qtr	12.47
507036	7/10/2019 - 10/9/2019	mR/Std Qtr	13.32
513375	10/9/2019 - 1/8/2020	mR/Std Qtr	14.40

Sample Point 14 [INDICATOR - W @ 1.5 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
495873	1/9/2019 - 4/10/2019	mR/Std Qtr	19.12
501695	4/10/2019 - 7/10/2019	mR/Std Qtr	13.69
507037	7/10/2019 - 10/9/2019	mR/Std Qtr	16.16
513376	10/9/2019 - 1/8/2020	mR/Std Qtr	16.86

Sample Point 15 [INDICATOR - W @ 2 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
495874	1/9/2019 - 4/10/2019	mR/Std Qtr	13.70
501696	4/10/2019 - 7/10/2019	mR/Std Qtr	11.95
507038	7/10/2019 - 10/9/2019	mR/Std Qtr	11.73
513377	10/9/2019 - 1/8/2020	mR/Std Qtr	14.52

Sample Point 19 [INDICATOR - NNE @ 4.95 miles]

TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
495875	1/9/2019 - 4/10/2019	mR/Std Qtr	13.98
501697	4/10/2019 - 7/10/2019	mR/Std Qtr	13.97
507039	7/10/2019 - 10/9/2019	mR/Std Qtr	13.65
513378	10/9/2019 - 1/8/2020	mR/Std Qtr	13.80

Sample Point 20 [INDICATOR - NE @ 4.5 miles]

TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
495877	1/9/2019 - 4/10/2019	mR/Std Qtr	18.68
501699	4/10/2019 - 7/10/2019	mR/Std Qtr	17.57

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 20 [INDICATOR - NE @ 4.5 miles]

TLD RING TLD_OUTER

Sample ID:	507041	Sample Dates:	7/10/2019 - 10/9/2019	Nuclide	Activity
				mR/Std Qtr	14.63
Sample ID:	513380	Sample Dates:	10/9/2019 - 1/8/2020	Nuclide	Activity
				mR/Std Qtr	17.88

Sample Point 21 [INDICATOR - ENE @ 4.8 miles]

TLD RING TLD_OUTER

Sample ID:	495878	Sample Dates:	1/9/2019 - 4/10/2019	Nuclide	Activity
				mR/Std Qtr	15.46
Sample ID:	501700	Sample Dates:	4/10/2019 - 7/10/2019	Nuclide	Activity
				mR/Std Qtr	13.67
Sample ID:	507042	Sample Dates:	7/10/2019 - 10/9/2019	Nuclide	Activity
				mR/Std Qtr	14.16
Sample ID:	513381	Sample Dates:	10/9/2019 - 1/8/2020	Nuclide	Activity
				mR/Std Qtr	17.24

Sample Point 22 [INDICATOR - E @ 4.3 miles]

TLD RING TLD_OUTER

Sample ID:	495879	Sample Dates:	1/9/2019 - 4/10/2019	Nuclide	Activity
				mR/Std Qtr	13.37
Sample ID:	501701	Sample Dates:	4/10/2019 - 7/10/2019	Nuclide	Activity
				mR/Std Qtr	12.01
Sample ID:	513382	Sample Dates:	10/9/2019 - 1/8/2020	Nuclide	Activity
				mR/Std Qtr	15.06

Sample Point 23 [INDICATOR - ESE @ 4.8 miles]

TLD RING TLD_OUTER

Sample ID:	495880	Sample Dates:	1/9/2019 - 4/10/2019	Nuclide	Activity
				mR/Std Qtr	17.25
Sample ID:	507044	Sample Dates:	7/10/2019 - 10/9/2019	Nuclide	Activity
				mR/Std Qtr	13.53
Sample ID:	513383	Sample Dates:	10/9/2019 - 1/8/2020	Nuclide	Activity
				mR/Std Qtr	17.13

Sample Point 24 [INDICATOR - SE @ 4 miles]

TLD RING TLD_OUTER

Sample ID:	495881	Sample Dates:	1/9/2019 - 4/10/2019	Nuclide	Activity
				mR/Std Qtr	15.21
Sample ID:	501703	Sample Dates:	4/10/2019 - 7/10/2019	Nuclide	Activity
				mR/Std Qtr	12.03
Sample ID:	507045	Sample Dates:	7/10/2019 - 10/9/2019	Nuclide	Activity
				mR/Std Qtr	13.26
Sample ID:	513384	Sample Dates:	10/9/2019 - 1/8/2020	Nuclide	Activity
				mR/Std Qtr	15.14

Sample Point 25 [INDICATOR - SSE @ 4.7 miles]

TLD RING TLD_OUTER

Sample ID:	495882	Sample Dates:	1/9/2019 - 4/10/2019	Nuclide	Activity
				mR/Std Qtr	16.20
Sample ID:	501704	Sample Dates:	4/10/2019 - 7/10/2019	Nuclide	Activity
				mR/Std Qtr	12.89
Sample ID:	507046	Sample Dates:	7/10/2019 - 10/9/2019	Nuclide	Activity
				mR/Std Qtr	13.21
Sample ID:	513385	Sample Dates:	10/9/2019 - 1/8/2020	Nuclide	Activity
				mR/Std Qtr	16.09

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 26 [INDICATOR - S @ 4.7 miles]

TLD RING TLD_OUTER

Sample ID:	495883	Sample Dates:	1/9/2019 - 4/10/2019	Nuclide	Activity
				mR/Std Qtr	12.56
Sample ID:	501705	Sample Dates:	4/10/2019 - 7/10/2019	Nuclide	Activity
				mR/Std Qtr	11.68
Sample ID:	507047	Sample Dates:	7/10/2019 - 10/9/2019	Nuclide	Activity
				mR/Std Qtr	12.03
Sample ID:	513386	Sample Dates:	10/9/2019 - 1/8/2020	Nuclide	Activity
				mR/Std Qtr	14.73

Sample Point 27 [INDICATOR - SSW @ 4.8 miles]

TLD RING TLD_OUTER

Sample ID:	495884	Sample Dates:	1/9/2019 - 4/10/2019	Nuclide	Activity
				mR/Std Qtr	11.93
Sample ID:	501706	Sample Dates:	4/10/2019 - 7/10/2019	Nuclide	Activity
				mR/Std Qtr	10.86
Sample ID:	507048	Sample Dates:	7/10/2019 - 10/9/2019	Nuclide	Activity
				mR/Std Qtr	11.97
Sample ID:	513387	Sample Dates:	10/9/2019 - 1/8/2020	Nuclide	Activity
				mR/Std Qtr	13.62

Sample Point 28 [INDICATOR - SW @ 4.8 miles]

TLD RING TLD_OUTER

Sample ID:	495885	Sample Dates:	1/9/2019 - 4/10/2019	Nuclide	Activity
				mR/Std Qtr	13.29
Sample ID:	501707	Sample Dates:	4/10/2019 - 7/10/2019	Nuclide	Activity
				mR/Std Qtr	11.41
Sample ID:	507049	Sample Dates:	7/10/2019 - 10/9/2019	Nuclide	Activity
				mR/Std Qtr	12.26
Sample ID:	513388	Sample Dates:	10/9/2019 - 1/8/2020	Nuclide	Activity
				mR/Std Qtr	14.15

Sample Point 29 [INDICATOR - WSW @ 5.7 miles]

TLD RING TLD_OUTER

Sample ID:	495886	Sample Dates:	1/9/2019 - 4/10/2019	Nuclide	Activity
				mR/Std Qtr	16.82
Sample ID:	501708	Sample Dates:	4/10/2019 - 7/10/2019	Nuclide	Activity
				mR/Std Qtr	15.03
Sample ID:	507050	Sample Dates:	7/10/2019 - 10/9/2019	Nuclide	Activity
				mR/Std Qtr	15.91
Sample ID:	513389	Sample Dates:	10/9/2019 - 1/8/2020	Nuclide	Activity
				mR/Std Qtr	18.60

Sample Point 30 [INDICATOR - W @ 5.6 miles]

TLD RING TLD_OUTER

Sample ID:	495888	Sample Dates:	1/9/2019 - 4/10/2019	Nuclide	Activity
				mR/Std Qtr	13.28

Sample Point 31 [INDICATOR - WNW @ 4.7 miles]

TLD RING TLD_OUTER

Sample ID:	501711	Sample Dates:	4/10/2019 - 7/10/2019	Nuclide	Activity
				mR/Std Qtr	11.93
Sample ID:	507052	Sample Dates:	7/10/2019 - 10/9/2019	Nuclide	Activity
				mR/Std Qtr	10.22
Sample ID:	513391	Sample Dates:	10/9/2019 - 1/8/2020	Nuclide	Activity
				mR/Std Qtr	12.77

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 32 [INDICATOR - NNW @ 6.4 miles]

TLD RING TLD_SPEC

Sample ID:	Sample Dates:	Nuclide	Activity
495890	1/9/2019 - 4/10/2019	mR/Std Qtr	14.68
501712	4/10/2019 - 7/10/2019	mR/Std Qtr	13.29
507053	7/10/2019 - 10/9/2019	mR/Std Qtr	12.96
513392	10/9/2019 - 1/8/2020	mR/Std Qtr	16.29

Sample Point 33 [INDICATOR - NNW @ 4.5 miles]

TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
495891	1/9/2019 - 4/10/2019	mR/Std Qtr	12.72
501713	4/10/2019 - 7/10/2019	mR/Std Qtr	12.60
507054	7/10/2019 - 10/9/2019	mR/Std Qtr	10.95
513393	10/9/2019 - 1/8/2020	mR/Std Qtr	14.93

Sample Point 48 [INDICATOR - N @ 4.5 miles]

TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
495893	1/9/2019 - 4/10/2019	mR/Std Qtr	17.70
501715	4/10/2019 - 7/10/2019	mR/Std Qtr	14.15
507056	7/10/2019 - 10/9/2019	mR/Std Qtr	15.04
513395	10/9/2019 - 1/8/2020	mR/Std Qtr	18.11

Sample Point 49 [INDICATOR - NE @ 2.5 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
495894	1/9/2019 - 4/10/2019	mR/Std Qtr	18.87
501716	4/10/2019 - 7/10/2019	mR/Std Qtr	15.37
507057	7/10/2019 - 10/9/2019	mR/Std Qtr	15.93
513396	10/9/2019 - 1/8/2020	mR/Std Qtr	20.97

Sample Point 50 [INDICATOR - ESE @ 2.6 miles]

TLD RING TLD_SPEC

Sample ID:	Sample Dates:	Nuclide	Activity
495896	1/9/2019 - 4/10/2019	mR/Std Qtr	13.78
501718	4/10/2019 - 7/10/2019	mR/Std Qtr	12.63
507059	7/10/2019 - 10/9/2019	mR/Std Qtr	11.45
513398	10/9/2019 - 1/8/2020	mR/Std Qtr	14.02

Sample Point 53 [INDICATOR - NW @ 5.8 miles]

TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
495897	1/9/2019 - 4/10/2019	mR/Std Qtr	14.35

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 56 [INDICATOR - WSW @ 3 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
495898	1/9/2019 - 4/10/2019	mR/Std Qtr	16.14
501720	4/10/2019 - 7/10/2019	mR/Std Qtr	12.63
507060	7/10/2019 - 10/9/2019	mR/Std Qtr	11.48
513399	10/9/2019 - 1/8/2020	mR/Std Qtr	14.61

Sample Point 63 [INDICATOR - SW @ 0.6 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
495900	1/9/2019 - 4/10/2019	mR/Std Qtr	18.22
501722	4/10/2019 - 7/10/2019	mR/Std Qtr	16.05
507062	7/10/2019 - 10/9/2019	mR/Std Qtr	15.81
513401	10/9/2019 - 1/8/2020	mR/Std Qtr	17.52

Sample Point 93 [INDICATOR - WNW @ 2.2 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
495908	1/9/2019 - 4/10/2019	mR/Std Qtr	16.21
501730	4/10/2019 - 7/10/2019	mR/Std Qtr	15.42
507070	7/10/2019 - 10/9/2019	mR/Std Qtr	14.09
513409	10/9/2019 - 1/8/2020	mR/Std Qtr	17.99

Sample Point 94 [INDICATOR - NW @ 2 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
495909	1/9/2019 - 4/10/2019	mR/Std Qtr	17.78
501731	4/10/2019 - 7/10/2019	mR/Std Qtr	14.61
507071	7/10/2019 - 10/9/2019	mR/Std Qtr	16.12
513410	10/9/2019 - 1/8/2020	mR/Std Qtr	19.54

Sample Point 95 [INDICATOR - NNW @ 2 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
495910	1/9/2019 - 4/10/2019	mR/Std Qtr	17.10
501732	4/10/2019 - 7/10/2019	mR/Std Qtr	14.53
507072	7/10/2019 - 10/9/2019	mR/Std Qtr	13.41
513411	10/9/2019 - 1/8/2020	mR/Std Qtr	17.02

Sample Point 98 [INDICATOR - E @ 5.9 miles]

TLD RING TLD_SPEC

Sample ID:	Sample Dates:	Nuclide	Activity
495911	1/9/2019 - 4/10/2019	mR/Std Qtr	14.90

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 98 [INDICATOR - E @ 5.9 miles]

TLD RING TLD_SPEC

Sample ID:	Sample Dates:	Nuclide	Activity
501733	4/10/2019 - 7/10/2019	mR/Std Qtr	13.63
507073	7/10/2019 - 10/9/2019	mR/Std Qtr	13.06
513412	10/9/2019 - 1/8/2020	mR/Std Qtr	16.81

Sample Point 99 [INDICATOR - NNE @ 5.47 miles]

TLD RING TLD_SPEC

Sample ID:	Sample Dates:	Nuclide	Activity
495912	1/9/2019 - 4/10/2019	mR/Std Qtr	14.14
501734	4/10/2019 - 7/10/2019	mR/Std Qtr	13.75
507074	7/10/2019 - 10/9/2019	mR/Std Qtr	13.43
513413	10/9/2019 - 1/8/2020	mR/Std Qtr	15.25

Sample Point 130 [INDICATOR - W @ 3.85 miles]

TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
495913	1/9/2019 - 4/10/2019	mR/Std Qtr	15.41
501735	4/10/2019 - 7/10/2019	mR/Std Qtr	11.89
507075	7/10/2019 - 10/9/2019	mR/Std Qtr	12.30
513414	10/9/2019 - 1/8/2020	mR/Std Qtr	15.39

Sample Point 153 [INDICATOR - NW @ 4.51 miles]

TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
495914	1/9/2019 - 4/10/2019	mR/Std Qtr	13.61
501736	4/10/2019 - 7/10/2019	mR/Std Qtr	12.93
507076	7/10/2019 - 10/9/2019	mR/Std Qtr	12.47
513415	10/9/2019 - 1/8/2020	mR/Std Qtr	16.50

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 5 [CONTROL - NNW @ 12 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
500124	5/6/2019 - 5/6/2019	MIXEDBLV	Mn-54	<1.65E+01	0.00E+00	1.65E+01
			Co-58	<1.66E+01	0.00E+00	1.66E+01
			Fe-59	<3.18E+01	0.00E+00	3.18E+01
			Co-60	<2.13E+01	0.00E+00	2.13E+01
			Zn-65	<4.05E+01	0.00E+00	4.05E+01
			Zr-95	<3.59E+01	0.00E+00	3.59E+01
			Nb-95	<1.82E+01	0.00E+00	1.82E+01
			I-131	<1.92E+01	0.00E+00	1.92E+01
			Cs-134	<2.44E+01	0.00E+00	2.44E+01
			Cs-137	<1.73E+01	0.00E+00	1.73E+01
			BaLa-140	<1.81E+01	0.00E+00	1.81E+01
			Be-7	2.58E+02	1.58E+02	2.41E+02
			K-40	3.21E+03	5.09E+02	3.12E+02
501946	6/3/2019 - 6/3/2019	MIXEDBLV	Mn-54	<2.26E+01	0.00E+00	2.26E+01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 5 [CONTROL - NNW @ 12 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA			
501946	6/3/2019 - 6/3/2019	MIXEDBLV	Co-58	<2.26E+01	0.00E+00	2.26E+01			
			Fe-59	<4.51E+01	0.00E+00	4.51E+01			
			Co-60	<2.58E+01	0.00E+00	2.58E+01			
			Zn-65	<6.07E+01	0.00E+00	6.07E+01			
			Zr-95	<2.93E+01	0.00E+00	2.93E+01			
			Nb-95	<2.08E+01	0.00E+00	2.08E+01			
			I-131	<2.41E+01	0.00E+00	2.41E+01			
			Cs-134	<2.53E+01	0.00E+00	2.53E+01			
			Cs-137	<2.25E+01	0.00E+00	2.25E+01			
			BaLa-140	<3.43E+01	0.00E+00	3.43E+01			
			Be-7	7.44E+02	2.41E+02	3.17E+02			
			K-40	3.92E+03	6.11E+02	2.28E+02			
			503836	7/1/2019 - 7/1/2019	MIXEDBLV	Mn-54	<3.11E+01	0.00E+00	3.11E+01
						Co-58	<2.70E+01	0.00E+00	2.70E+01
Fe-59	<6.84E+01	0.00E+00				6.84E+01			
Co-60	<2.58E+01	0.00E+00				2.58E+01			
Zn-65	<7.41E+01	0.00E+00				7.41E+01			
Zr-95	<4.90E+01	0.00E+00				4.90E+01			
Nb-95	<2.98E+01	0.00E+00				2.98E+01			
I-131	<4.21E+01	0.00E+00				4.21E+01			
Cs-134	<3.15E+01	0.00E+00				3.15E+01			
Cs-137	<3.07E+01	0.00E+00				3.07E+01			
BaLa-140	<3.47E+01	0.00E+00				3.47E+01			
Be-7	1.14E+03	3.10E+02				3.60E+02			
K-40	3.82E+03	6.50E+02				5.82E+01			
505138	8/5/2019 - 8/5/2019	MIXEDBLV				Mn-54	<2.14E+01	0.00E+00	2.14E+01
			Co-58	<1.95E+01	0.00E+00	1.95E+01			
			Fe-59	<4.36E+01	0.00E+00	4.36E+01			
			Co-60	<1.83E+01	0.00E+00	1.83E+01			
			Zn-65	<6.05E+01	0.00E+00	6.05E+01			
			Zr-95	<3.40E+01	0.00E+00	3.40E+01			
			Nb-95	<1.90E+01	0.00E+00	1.90E+01			
			I-131	<3.44E+01	0.00E+00	3.44E+01			
			Cs-134	<3.22E+01	0.00E+00	3.22E+01			
			Cs-137	<1.36E+01	0.00E+00	1.36E+01			
			BaLa-140	<3.72E+01	0.00E+00	3.72E+01			
			Be-7	2.11E+03	3.50E+02	2.66E+02			
			K-40	4.83E+03	7.14E+02	2.89E+02			
			507286	9/3/2019 - 9/3/2019	MIXEDBLV	Mn-54	<3.01E+01	0.00E+00	3.01E+01
Co-58	<3.98E+01	0.00E+00				3.98E+01			
Fe-59	<8.08E+01	0.00E+00				8.08E+01			
Co-60	<3.27E+01	0.00E+00				3.27E+01			
Zn-65	<8.56E+01	0.00E+00				8.56E+01			
Zr-95	<5.60E+01	0.00E+00				5.60E+01			
Nb-95	<3.71E+01	0.00E+00				3.71E+01			
I-131	<4.75E+01	0.00E+00				4.75E+01			
Cs-134	<4.11E+01	0.00E+00				4.11E+01			
Cs-137	<3.44E+01	0.00E+00				3.44E+01			
BaLa-140	<6.16E+01	0.00E+00				6.16E+01			
Be-7	2.52E+03	4.75E+02				4.45E+02			
K-40	6.09E+03	9.56E+02				4.39E+02			
510530	10/7/2019 - 10/7/2019	MIXEDBLV				Mn-54	<2.40E+01	0.00E+00	2.40E+01
			Co-58	<2.57E+01	0.00E+00	2.57E+01			
			Fe-59	<3.52E+01	0.00E+00	3.52E+01			
			Co-60	<3.06E+01	0.00E+00	3.06E+01			
			Zn-65	<6.48E+01	0.00E+00	6.48E+01			
			Zr-95	<4.60E+01	0.00E+00	4.60E+01			
			Nb-95	<2.74E+01	0.00E+00	2.74E+01			
			I-131	<2.76E+01	0.00E+00	2.76E+01			

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 5 [CONTROL - NNW @ 12 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
510530	10/7/2019 - 10/7/2019		Cs-134	<2.69E+01	0.00E+00	2.69E+01
			Cs-137	<2.32E+01	0.00E+00	2.32E+01
			BaLa-140	<3.09E+01	0.00E+00	3.09E+01
			Be-7	1.54E+03	3.02E+02	2.70E+02
			K-40	4.48E+03	6.94E+02	3.04E+02

Sample Point 12 [INDICATOR - SSW @ 0.9 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
500123	5/6/2019 - 5/6/2019		Mn-54	<1.45E+01	0.00E+00	1.45E+01
			Co-58	<1.79E+01	0.00E+00	1.79E+01
			Fe-59	<3.67E+01	0.00E+00	3.67E+01
			Co-60	<1.85E+01	0.00E+00	1.85E+01
			Zn-65	<4.21E+01	0.00E+00	4.21E+01
			Zr-95	<2.51E+01	0.00E+00	2.51E+01
			Nb-95	<1.60E+01	0.00E+00	1.60E+01
			I-131	<1.80E+01	0.00E+00	1.80E+01
			Cs-134	<2.11E+01	0.00E+00	2.11E+01
			Cs-137	<1.35E+01	0.00E+00	1.35E+01
			BaLa-140	<1.86E+01	0.00E+00	1.86E+01
			Be-7	6.10E+02	1.71E+02	2.10E+02
			K-40	2.94E+03	4.63E+02	2.55E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
501945	6/3/2019 - 6/3/2019		Mn-54	<2.72E+01	0.00E+00	2.72E+01
			Co-58	<3.15E+01	0.00E+00	3.15E+01
			Fe-59	<6.26E+01	0.00E+00	6.26E+01
			Co-60	<3.65E+01	0.00E+00	3.65E+01
			Zn-65	<5.88E+01	0.00E+00	5.88E+01
			Zr-95	<5.33E+01	0.00E+00	5.33E+01
			Nb-95	<3.16E+01	0.00E+00	3.16E+01
			I-131	<3.06E+01	0.00E+00	3.06E+01
			Cs-134	<3.24E+01	0.00E+00	3.24E+01
			Cs-137	<2.45E+01	0.00E+00	2.45E+01
			BaLa-140	<4.51E+01	0.00E+00	4.51E+01
			Be-7	6.68E+02	2.59E+02	3.53E+02
			K-40	3.03E+03	6.24E+02	5.38E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
503835	7/1/2019 - 7/1/2019		Mn-54	<2.67E+01	0.00E+00	2.67E+01
			Co-58	<3.67E+01	0.00E+00	3.67E+01
			Fe-59	<7.00E+01	0.00E+00	7.00E+01
			Co-60	<4.13E+01	0.00E+00	4.13E+01
			Zn-65	<7.30E+01	0.00E+00	7.30E+01
			Zr-95	<5.18E+01	0.00E+00	5.18E+01
			Nb-95	<2.59E+01	0.00E+00	2.59E+01
			I-131	<4.66E+01	0.00E+00	4.66E+01
			Cs-134	<3.60E+01	0.00E+00	3.60E+01
			Cs-137	<3.09E+01	0.00E+00	3.09E+01
			BaLa-140	<6.77E+01	0.00E+00	6.77E+01
			Be-7	1.35E+03	3.67E+02	3.98E+02
			K-40	3.11E+03	7.04E+02	4.98E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
505137	8/5/2019 - 8/5/2019		Mn-54	<2.39E+01	0.00E+00	2.39E+01
			Co-58	<2.37E+01	0.00E+00	2.37E+01
			Fe-59	<6.63E+01	0.00E+00	6.63E+01
			Co-60	<2.22E+01	0.00E+00	2.22E+01
			Zn-65	<5.48E+01	0.00E+00	5.48E+01
			Zr-95	<5.07E+01	0.00E+00	5.07E+01
			Nb-95	<2.56E+01	0.00E+00	2.56E+01
			I-131	<4.75E+01	0.00E+00	4.75E+01
			Cs-134	<2.66E+01	0.00E+00	2.66E+01
			Cs-137	<3.31E+01	0.00E+00	3.31E+01
			BaLa-140	<5.31E+01	0.00E+00	5.31E+01
			Be-7	2.49E+03	4.24E+02	3.37E+02

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 12 [INDICATOR - SSW @ 0.9 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
505137	8/5/2019 - 8/5/2019		K-40	2.96E+03	6.07E+02	4.85E+02
507285	9/3/2019 - 9/3/2019		Mn-54	<2.90E+01	0.00E+00	2.90E+01
			Co-58	<2.74E+01	0.00E+00	2.74E+01
			Fe-59	<5.79E+01	0.00E+00	5.79E+01
			Co-60	<3.47E+01	0.00E+00	3.47E+01
			Zn-65	<8.27E+01	0.00E+00	8.27E+01
			Zr-95	<6.15E+01	0.00E+00	6.15E+01
			Nb-95	<3.64E+01	0.00E+00	3.64E+01
			I-131	<4.71E+01	0.00E+00	4.71E+01
			Cs-134	<3.70E+01	0.00E+00	3.70E+01
			Cs-137	<2.92E+01	0.00E+00	2.92E+01
			BaLa-140	<3.45E+01	0.00E+00	3.45E+01
			Be-7	3.95E+03	5.47E+02	3.89E+02
			K-40	3.79E+03	6.72E+02	4.68E+02
510529	10/7/2019 - 10/7/2019		Mn-54	<3.08E+01	0.00E+00	3.08E+01
			Co-58	<3.26E+01	0.00E+00	3.26E+01
			Fe-59	<5.30E+01	0.00E+00	5.30E+01
			Co-60	<2.95E+01	0.00E+00	2.95E+01
			Zn-65	<6.39E+01	0.00E+00	6.39E+01
			Zr-95	<4.74E+01	0.00E+00	4.74E+01
			Nb-95	<2.59E+01	0.00E+00	2.59E+01
			I-131	<3.18E+01	0.00E+00	3.18E+01
			Cs-134	<2.82E+01	0.00E+00	2.82E+01
			Cs-137	<3.21E+01	0.00E+00	3.21E+01
			BaLa-140	<3.20E+01	0.00E+00	3.20E+01
			Be-7	2.97E+03	4.61E+02	3.49E+02
			K-40	2.49E+03	5.23E+02	3.21E+02

Sample Point 63 [INDICATOR - SW @ 0.6 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
500125	5/6/2019 - 5/6/2019		Mn-54	<2.21E+01	0.00E+00	2.21E+01
			Co-58	<2.28E+01	0.00E+00	2.28E+01
			Fe-59	<5.02E+01	0.00E+00	5.02E+01
			Co-60	<2.84E+01	0.00E+00	2.84E+01
			Zn-65	<6.67E+01	0.00E+00	6.67E+01
			Zr-95	<3.95E+01	0.00E+00	3.95E+01
			Nb-95	<2.42E+01	0.00E+00	2.42E+01
			I-131	<2.41E+01	0.00E+00	2.41E+01
			Cs-134	<3.29E+01	0.00E+00	3.29E+01
			Cs-137	<2.91E+01	0.00E+00	2.91E+01
			BaLa-140	<2.73E+01	0.00E+00	2.73E+01
			Be-7	7.73E+02	2.18E+02	2.52E+02
			K-40	2.79E+03	5.32E+02	3.82E+02
501947	6/3/2019 - 6/3/2019		Mn-54	<2.80E+01	0.00E+00	2.80E+01
			Co-58	<2.68E+01	0.00E+00	2.68E+01
			Fe-59	<6.15E+01	0.00E+00	6.15E+01
			Co-60	<2.72E+01	0.00E+00	2.72E+01
			Zn-65	<5.03E+01	0.00E+00	5.03E+01
			Zr-95	<4.77E+01	0.00E+00	4.77E+01
			Nb-95	<2.56E+01	0.00E+00	2.56E+01
			I-131	<3.16E+01	0.00E+00	3.16E+01
			Cs-134	<2.64E+01	0.00E+00	2.64E+01
			Cs-137	<2.36E+01	0.00E+00	2.36E+01
			BaLa-140	<3.38E+01	0.00E+00	3.38E+01
			Be-7	3.97E+02	2.08E+02	3.05E+02
			K-40	3.45E+03	6.27E+02	4.71E+02
503837	7/1/2019 - 7/1/2019		Mn-54	<3.14E+01	0.00E+00	3.14E+01
			Co-58	<4.02E+01	0.00E+00	4.02E+01

HARRIS Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 63 [INDICATOR - SW @ 0.6 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
503837	7/1/2019 - 7/1/2019	MIXEDBLV	Fe-59	<9.05E+01	0.00E+00	9.05E+01
			Co-60	<4.53E+01	0.00E+00	4.53E+01
			Zn-65	<6.10E+01	0.00E+00	6.10E+01
			Zr-95	<6.04E+01	0.00E+00	6.04E+01
			Nb-95	<3.54E+01	0.00E+00	3.54E+01
			I-131	<2.85E+01	0.00E+00	2.85E+01
			Cs-134	<2.68E+01	0.00E+00	2.68E+01
			Cs-137	<3.57E+01	0.00E+00	3.57E+01
			BaLa-140	<6.09E+01	0.00E+00	6.09E+01
			Be-7	1.07E+03	3.97E+02	5.21E+02
			K-40	2.98E+03	6.89E+02	3.95E+02
505139	8/5/2019 - 8/5/2019	MIXEDBLV	Mn-54	<2.51E+01	0.00E+00	2.51E+01
			Co-58	<2.54E+01	0.00E+00	2.54E+01
			Fe-59	<4.74E+01	0.00E+00	4.74E+01
			Co-60	<2.29E+01	0.00E+00	2.29E+01
			Zn-65	<4.91E+01	0.00E+00	4.91E+01
			Zr-95	<5.29E+01	0.00E+00	5.29E+01
			Nb-95	<2.35E+01	0.00E+00	2.35E+01
			I-131	<4.63E+01	0.00E+00	4.63E+01
			Cs-134	<3.25E+01	0.00E+00	3.25E+01
			Cs-137	<2.26E+01	0.00E+00	2.26E+01
			BaLa-140	<4.18E+01	0.00E+00	4.18E+01
			Be-7	1.24E+03	2.78E+02	2.87E+02
			K-40	2.58E+03	4.87E+02	2.22E+02
			507287	9/3/2019 - 9/3/2019	MIXEDBLV	Mn-54
Co-58	<2.91E+01	0.00E+00				2.91E+01
Fe-59	<6.37E+01	0.00E+00				6.37E+01
Co-60	<2.91E+01	0.00E+00				2.91E+01
Zn-65	<1.19E+02	0.00E+00				1.19E+02
Zr-95	<5.62E+01	0.00E+00				5.62E+01
Nb-95	<4.29E+01	0.00E+00				4.29E+01
I-131	<4.74E+01	0.00E+00				4.74E+01
Cs-134	<3.66E+01	0.00E+00				3.66E+01
Cs-137	<2.55E+01	0.00E+00				2.55E+01
BaLa-140	<3.31E+01	0.00E+00				3.31E+01
Be-7	1.94E+03	4.21E+02				4.10E+02
K-40	3.06E+03	6.51E+02				3.71E+02
510531	10/7/2019 - 10/7/2019	MIXEDBLV				Mn-54
			Co-58	<1.63E+01	0.00E+00	1.63E+01
			Fe-59	<4.75E+01	0.00E+00	4.75E+01
			Co-60	<1.40E+01	0.00E+00	1.40E+01
			Zn-65	<4.01E+01	0.00E+00	4.01E+01
			Zr-95	<3.80E+01	0.00E+00	3.80E+01
			Nb-95	<2.27E+01	0.00E+00	2.27E+01
			I-131	<3.26E+01	0.00E+00	3.26E+01
			Cs-134	<1.92E+01	0.00E+00	1.92E+01
			Cs-137	<2.25E+01	0.00E+00	2.25E+01
			BaLa-140	<2.71E+01	0.00E+00	2.71E+01
			Be-7	1.88E+03	3.04E+02	2.79E+02
			K-40	2.83E+03	4.56E+02	2.94E+02

APPENDIX F

ERRATA TO
PREVIOUS REPORTS

2019

APPENDIX F

ERRATA TO THE 2017 HNP AREOR

Section 2.0 (Introduction) incorrectly identifies the REMP Analysis Frequency for Drinking Water (Monthly Composite), the analysis for Gross Beta should be identified as being performed in Table 2.2-B (page 12).

ERRATA TO THE 2018 HNP AREOR

1. Section 2.0 (Introduction) incorrectly identifies the REMP Analysis Frequency for Drinking Water (Monthly Composite), the analysis for Gross Beta should be identified as being performed in Table 2.2-B (page 10).
2. Section 4.0 (Quality Assurance) is a section that is common to all Duke Energy Fleet AREORs. During fleet peer reviews after the final 2018 HNP AREOR had been submitted to the NRC, two incorrect numbers were identified in tables within Section 4.0 (Quality Assurance).
 - Table 4.0-A (page 5), Sample ID E12247, the ratio was stated as 1.00, but the correct ratio is 1.02.
 - Table 4.0-C (page 8), Sample ID MAPEP – 18 - MaS38, the Sr90 GEL value was stated as -108 Bq/kg, but the correct value is -1.08 Bq/kg.

Enclosure 4
RA-20-0079

ENCLOSURE 4: [MNS Annual Radiological Environmental Operating Report](#)



ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT

**DUKE ENERGY CORPORATION
MCGUIRE NUCLEAR STATION
Units 1 and 2**

2019



TABLE OF CONTENTS

1.0 Executive Summary	1-1
2.0 Introduction	2-1
2.1 Site Description and Sample Locations	2-1
2.2 Scope and Requirements of the REMP	2-1
2.3 Statistical and Calculational Methodology	2-2
2.3.1 Estimation of the Mean Value	2-2
2.3.2 Lower Limit of Detection and Minimum Detectable Activity	2-3
2.3.3 Trend Identification.	2-3
3.0 Interpretation of Results	3-1
3.1 Airborne Radioiodine and Particulates	3-3
3.2 Drinking Water	3-6
3.3 Surface Water	3-9
3.4 Milk	3-11
3.5 Broadleaf Vegetation	3-13
3.6 Food Products	3-15
3.7 Fish	3-17
3.8 Shoreline Sediment	3-19
3.9 Direct Gamma Radiation	3-21
3.9.1 Environmental TLD	3-21
3.9.2 ISFSI	3-22
3.10 Land Use Census	3-25
4.0 Quality Assurance	4-1
4.1 Sample Collection	4-1
4.2 Sample Analysis	4-1
4.3 Dosimetry Analysis	4-1
4.4 Laboratory Equipment Quality Assurance	4-1
4.4.1 Daily Quality Control	4-1
4.4.2 Calibration Verification	4-1
4.4.3 Batch Processing	4-1
4.5 Duke Energy Interlaboratory Comparison Program	4-2
4.5.1 Eckert & Ziegler Analytics Cross Check Program	4-2
4.6 State of North Carolina Intercomparison Program	4-2
4.7 TLD Intercomparison Program	4-2
4.7.1 Nuclear Technology Services Intercomparison Program	4-2
4.7.2 Internal Cross Check (Duke Energy)	4-3
4.8 General Engineering Laboratory, LLC (GEL)	4-3
Appendices	
Appendix A: Environmental Sampling & Analysis Procedures	A-1
I. Change of Sampling Procedures	A-2
II. Description of Analysis Procedures	A-2
III. Change of Analysis Procedures	A-3
IV. Sampling and Analysis Procedures	A-3
A.1 Airborne Particulate and Radioiodine	A-3
A.2 Drinking Water	A-3
A.3 Surface Water	A-4
A.4 Milk	A-4
A.5 Broadleaf Vegetation	A-4
A.6 Food Products	A-4

A.7	Fish	A-4
A.8	Shoreline Sediment	A-5
A.9	Direct Gamma Radiation (TLD)	A-5
A.10	Annual Land Use Census	A-5
V.	Global Positioning System (GPS) Analysis	A-6
Appendix B:	Radiological Environmental Monitoring Program - Summary of Results	B-1
	Air Particulate	B-2
	Air Radioiodine	B-2
	Drinking Water	B-2
	Surface Water	B-2
	Milk	B-2
	Broadleaf Vegetation	B-3
	Food Products	B-3
	Fish	B-3
	Shoreline Sediment	B-3
	Direct Gamma Radiation (TLD)	B-3
	Footnotes to Appendix B	B-4
Appendix C:	Sampling Deviations & Unavailable Analyses	C-1
	C.1 Sampling Deviations	C-2
	C.2 Unavailable Analyses	C-3
Appendix D:	Analytical Deviations	D-1
	Analytical Deviations	D-2
Appendix E:	Radiological Environmental Monitoring Program Results	E-1
Appendix F:	Errata to Previous Reports	F-1

LIST OF FIGURES

2.1-1	McGuire Nuclear Station Sampling Locations Map (0.5 Mile Radius)	2-4
2.1-2	McGuire Nuclear Station Sampling Locations Map (Ten Mile Radius)	2-5
3.1	Concentration of Gross Beta in Air Particulate	3-3
3.2-1	Concentration of Gross Beta in Drinking Water	3-7
3.2-2	Concentration of Tritium in Drinking Water	3-7
3.3	Concentration of Tritium in Surface Water	3-9
3.7	Concentration of Cs-137 in Fish	3-17
3.8	Concentration of Cs-137 in Shoreline Sediment	3-19
3.9	Direct Gamma Radiation (TLD) Results	3-23
3.10	McGuire Nuclear Station 2019 Land Use Census Map	3-27

LIST OF TABLES

2.1-A	McGuire Radiological Monitoring Program Sampling Locations	2-6
2.1-B	McGuire Radiological Monitoring Program Sampling Locations (TLD Sites)	2-7
2.2-A	Reporting Levels for Radioactivity Concentrations in Environmental Samples	2-8
2.2-B	REMP Analysis Frequency	2-8
2.2-C	Maximum Values for the <i>A Priori</i> Lower Limits of Detection	2-9
3.1-A	Mean Concentrations of Radionuclides in Air Particulate	3-4
3.1-B	Mean Concentrations of Air Radioiodine (I-131)	3-5
3.2	Mean Concentrations of Radionuclides in Drinking Water	3-8
3.3	Mean Concentrations of Tritium in Surface Water	3-10
3.4	Mean Concentrations of Cs-137 in Milk	3-12
3.5	Mean Concentrations of Cs-137 in Broadleaf Vegetation	3-14
3.6	Mean Concentrations of Cs-137 in Food Products	3-16
3.7	Mean Concentrations of Radionuclides in Fish (pCi/kg)	3-18
3.8	Mean Concentrations of Radionuclides in Shoreline Sediment (pCi/kg)	3-20
3.9	Direct Gamma Radiation (TLD) Results	3-24
3.10	McGuire 2019 Land Use Census Results	3-26

4.0-A	Eckert & Ziegler Analytics Cross Check Program	5-4
4.0-B	2019 Environmental Dosimeter Cross-Check Results	5-6
4.0-C	2019 GEL Laboratories, LLC QA Results	5-8

LIST OF ACRONYMS USED IN THIS TEXT *(in alphabetical order)*

AREOR	Annual Radiological Environmental Operating Report
ARERR	Annual Radiological Effluent Release Report
BW	BiWeekly
C	Control
CR	Condition Report (analogous to Nuclear Condition Report (NCR))
EZA	Eckert & Ziegler Analytics
GEL	General Engineering Laboratory, LLC
GPS	Global Positioning System
I	Indicator
IR	Inner Ring
ISFSI	Independent Spent Fuel Storage Installation
LLD	Lower Limit of Detection
LLI	Low Level Iodine
LUC	Land Use Census
M	Monthly
MAPEP	Department of Energy Mixed Analyte Performance Evaluation Program
MDA	Minimum Detectable Activity
MNS	McGuire Nuclear Station
mrem	Millirem
mR/Std Qtr	milliroentgen per standard quarter
MWe	Megawatt (electrical)
NIST	National Institute of Standards and Technology
NCR	Nuclear Condition Report (analogous to Condition Report (CR))
NRC	Nuclear Regulatory Commission
ODCM	Offsite Dose Calculation Manual
OR	Outer Ring
pCi/kg	picocurie per kilogram
pCi/l	picocurie per liter
pCi/m ³	picocurie per cubic meter
Q	Quarterly
REMP	Radiological Environmental Monitoring Program
SA	Semiannually
SI	Special Interest
SLCs	Selected Licensee Commitments
SM	Semimonthly
TECH SPECS	Technical Specifications
TLD	Thermoluminescent Dosimeter
μCi/ml	microcurie per milliliter
UFSAR	Updated Final Safety Analysis Report
W	Weekly

1.0 EXECUTIVE SUMMARY

This Annual Radiological Environmental Operating Report describes the McGuire Nuclear Station Radiological Environmental Monitoring Program (REMP), and the program results for the calendar year 2019.

Included are the identification of sampling locations, descriptions of environmental sampling and analysis procedures, comparisons of present environmental radioactivity levels and pre-operational environmental data, comparisons of doses calculated from environmental measurements and effluent data, analysis of trends in environmental radiological data as potentially affected by station operations, and a summary of environmental radiological sampling results. Quality assurance practices, sampling deviations, unavailable samples, and program changes are also discussed.

Sampling activities were conducted as prescribed by the McGuire Offsite Dose Calculation Manual (ODCM) and Selected Licensee Commitments (SLCs). Eleven hundred fifty-eight samples were analyzed comprising 1,249 test results to compile data for the 2019 report. Based on the annual land use census, the current number of sampling sites for McGuire Nuclear Station is sufficient.

Concentrations observed in the environment in 2019 for station related radionuclides were generally within the ranges of concentrations observed in the past. Inspection of data showed that radioactivity concentrations in drinking water and surface water are higher than the activities reported for samples collected prior to the operation of the station. Measured concentrations were not higher than expected, and all positively identified measurements attributable to station operation were within limits as specified in the ODCM and SLCs.

2.0 INTRODUCTION

2.1 SITE DESCRIPTION AND SAMPLE LOCATIONS

McGuire Nuclear Station (MNS) is located geographically near the center of a highly industrialized region of the Carolinas. The land is predominantly rural non-farm with a small amount of land being used for farming. The McGuire site is in northwestern Mecklenburg County, North Carolina, 17 miles north-northwest of Charlotte, North Carolina. The site is bounded to the west by the Catawba River channel and to the north by 32,510 acre Lake Norman. Lake Norman is impounded by Duke Energy Corporation's Cowans Ford Dam Hydroelectric Station. The tailwater of Cowans Ford Dam is the upper limit of Mountain Island Reservoir. Mountain Island Dam is located 15 miles downstream from the site. Lookout Shoals Hydroelectric Station is at the upper reaches of Lake Norman. Marshall Steam Station is located on the western shore of Lake Norman, approximately 16 miles upstream from the site.

MNS consists of two pressurized water reactors. Each reactor unit is essentially a mirror image of the other joined by an auxiliary building housing both separate and common equipment. Each unit was designed to produce approximately 1200 gross MWe. Unit 1 achieved criticality August 8, 1981 and Unit 2 on May 8, 1983.

Sampling locations are chosen based upon meteorological factors, preoperational monitoring, and results of the land use surveys. Figures 2.1-1 and 2.1-2 are maps depicting the Thermoluminescent Dosimeter (TLD) monitoring locations and the sampling locations. The location numbers shown on these maps correspond to those listed in Tables 2.1-A and 2.1-B. Figure 2.1-1 comprises all sample locations within 0.5 mile radius of MNS. Figure 2.1-2 comprises all sample locations within a ten mile radius of MNS.

2.2 SCOPE AND REQUIREMENTS OF THE REMP

An environmental monitoring program has been in effect at McGuire Nuclear Station since 1977, four years prior to operation of Unit 1 in 1981. The preoperational program provides data on the existing environmental radioactivity levels for the site and vicinity which may be used to determine whether increases in environmental levels are attributable to the station. The operational program provides surveillance and backup support of detailed effluent monitoring which is necessary to evaluate the significance, if any, of the contributions to the existing environmental radioactivity levels that result from station operation.

This monitoring program is based on NRC guidance as reflected in the Selected Licensee Commitments Manual, with regard to sample media, sampling locations, sampling frequency, and analytical sensitivity requirements. Indicator and control locations were established for comparison purposes to distinguish radioactivity of station origin from natural or other "man-made" environmental radioactivity. The environmental monitoring program also verifies projected and anticipated radionuclide concentrations in the environment and related exposures from releases of radionuclides from McGuire Nuclear Station. This program satisfies the requirements of Section IV.B.2 of Appendix I to 10CFR50 and provides surveillance of all appropriate critical

exposure pathways to man and protects vital interests of the company, public, and state and federal agencies concerned with the environment. Reporting levels for radioactivity found in environmental samples are listed in Table 2.2-A. Table 2.2-B lists the REMP analysis and frequency schedule.

The Annual Land Use Census, required by Selected Licensee Commitments, is performed to ensure that changes in the use of areas at or beyond the site boundary are identified and that modifications to the Radiological Environmental Monitoring Program are made if required by changes in land use. This census satisfies the requirements of Section IV.B.3 of Appendix I to 10CFR50. Results are shown in Table 3.10.

Participation in an interlaboratory comparison program as required by Selected Licensee Commitments provides for independent checks on the precision and accuracy of measurements of radioactive material in REMP sample matrices. Such checks are performed as part of the quality assurance program for environmental monitoring in order to demonstrate that the results are valid for the purposes of Section IV.B.2 of Appendix I to 10CFR50. A summary of the results obtained as part of this comparison program are in Section 5 of this annual report.

2.3 STATISTICAL AND CALCULATIONAL METHODOLOGY

2.3.1 ESTIMATION OF THE MEAN VALUE

There was one (1) basic statistical calculation performed on the raw data resulting from the environmental sample analysis program. The calculation involved the determination of the mean value for the indicator and the control samples for each sample medium. The mean is a widely used statistic. This value was used in the reduction of the data generated by the sampling and analysis of the various media in the Radiological Environmental Monitoring Program. "Net activity (or concentration)" is the activity (or concentration) determined to be present in the sample. No "Minimum Detectable Activity", "Lower Limit of Detection", "Less Than Level", or negative activities or concentrations are included in the calculation of the mean. The following equation was used to estimate the mean:

$$\bar{x} = \frac{\sum_{i=1}^N x_i}{N}$$

Where:

\bar{x} = estimate of the mean,

i = individual sample,

N = total number of samples with a net activity (or concentration),

x_i = net activity (or concentration) for sample i .

2.3.2 LOWER LIMIT OF DETECTION AND MINIMUM DETECTABLE ACTIVITY

The Lower Limit of Detection (LLD) and Minimum Detectable Activity (MDA) are used throughout the Environmental Monitoring Program.

LLD - The LLD, as defined in the Selected Licensee Commitments Manual is the smallest concentration of radioactive material in a sample that will yield a net count, above the system background, that will be detected with 95% probability with only 5% probability of falsely concluding that a blank observation represents a "real" signal. The LLD is an *a priori* (before the fact) lower limit of detection. The actual LLD is dependent upon the standard deviation of the background counting rate, the counting efficiency, the sample size (mass or volume), the radiochemical yield, and the radioactive decay of the sample between sample collection and counting. The "required" LLDs for each sample medium and selected radionuclides are given in the Selected Licensee Commitments and are listed in Table 2.2-C.

MDA - The MDA is the net counting rate (sample after subtraction of background) that must be surpassed before a sample is considered to contain a scientifically measurable amount of a radioactive material exceeding background amounts. The MDA is calculated using a sample background and may be thought of as an "actual" LLD for a particular sample measurement. Certain gross counting measurements display a calculated negative value, indicating background is greater than sample activity.

2.3.3 TREND IDENTIFICATION

One of the purposes of an environmental monitoring program is to determine if there is a buildup of radionuclides in the environment due to the operation of the nuclear station. Visual inspection of tabular or graphical presentations of data (including preoperational) is used to determine if a trend exists. A decrease in a particular radionuclide's concentration in an environmental medium does not indicate that reactor operations are removing radioactivity from the environment but that reactor operations are not adding that radionuclide to the environment in quantities exceeding the preoperational level and that the normal removal processes (radioactive decay, deposition, resuspension, etc.) are influencing the concentration.

Substantial increases or decreases in the amount of a particular radionuclide's release from the nuclear plant will greatly affect the resulting environmental levels; therefore, a knowledge of the release of a radionuclide from the nuclear plant is necessary to completely interpret the trends, or lack of trends, determined from the environmental data. Some factors that may affect environmental levels of radionuclides include prevailing weather conditions (periods of drought, solar cycles or heavier than normal precipitation), construction in or around either the nuclear plant or the sampling location, and addition or deletion of other sources of radioactive materials (such as the 1986 Chernobyl accident and the 2011 Japan earthquake and tsunami, which triggered the Fukushima Dai-ichi Nuclear Power Plant incident). Some of these factors may be obvious while others are sometimes unknown. Therefore, how trends are identified will include some judgment by plant personnel.

Figure 2.1-1

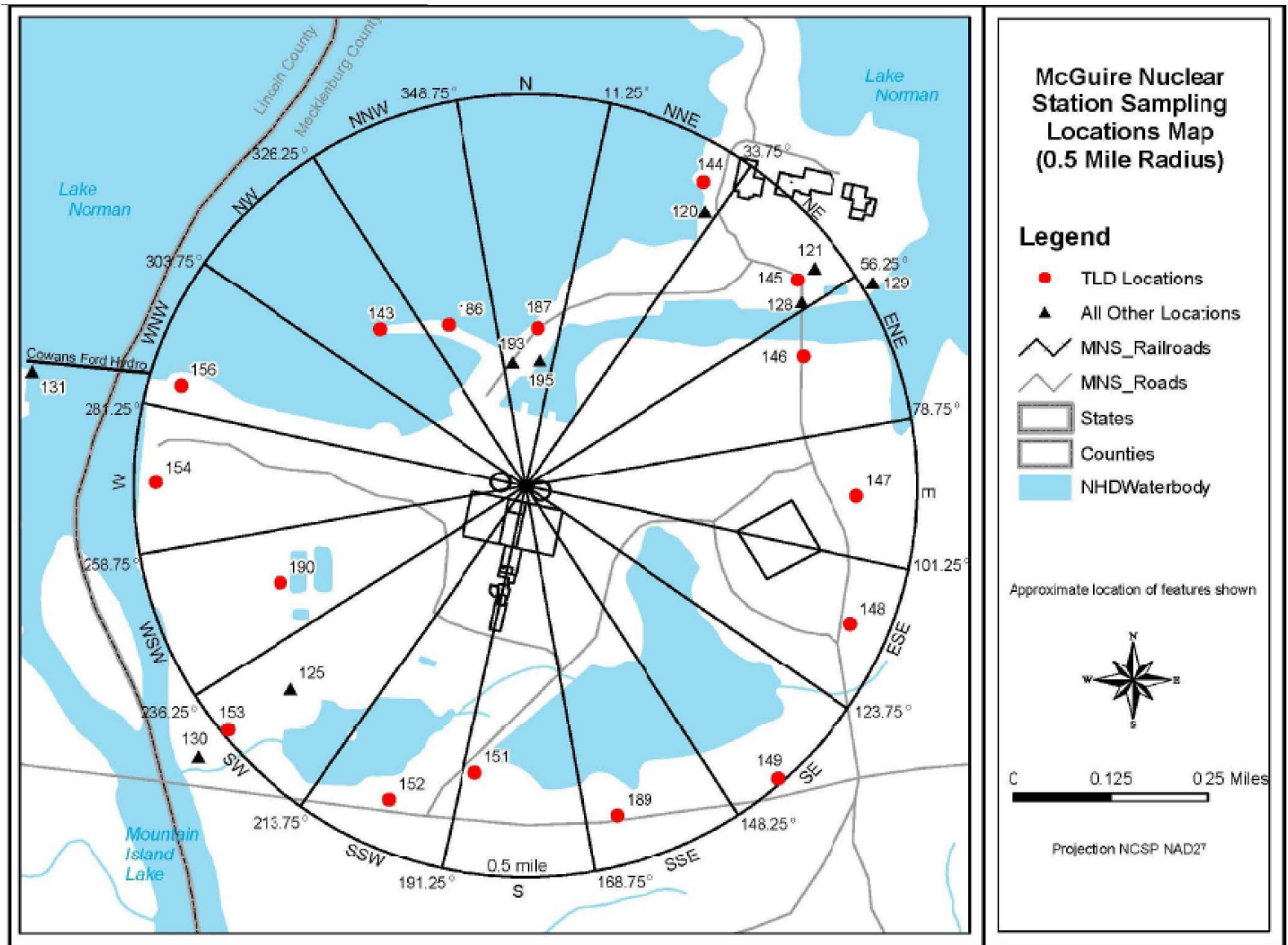


Figure 2.1-2

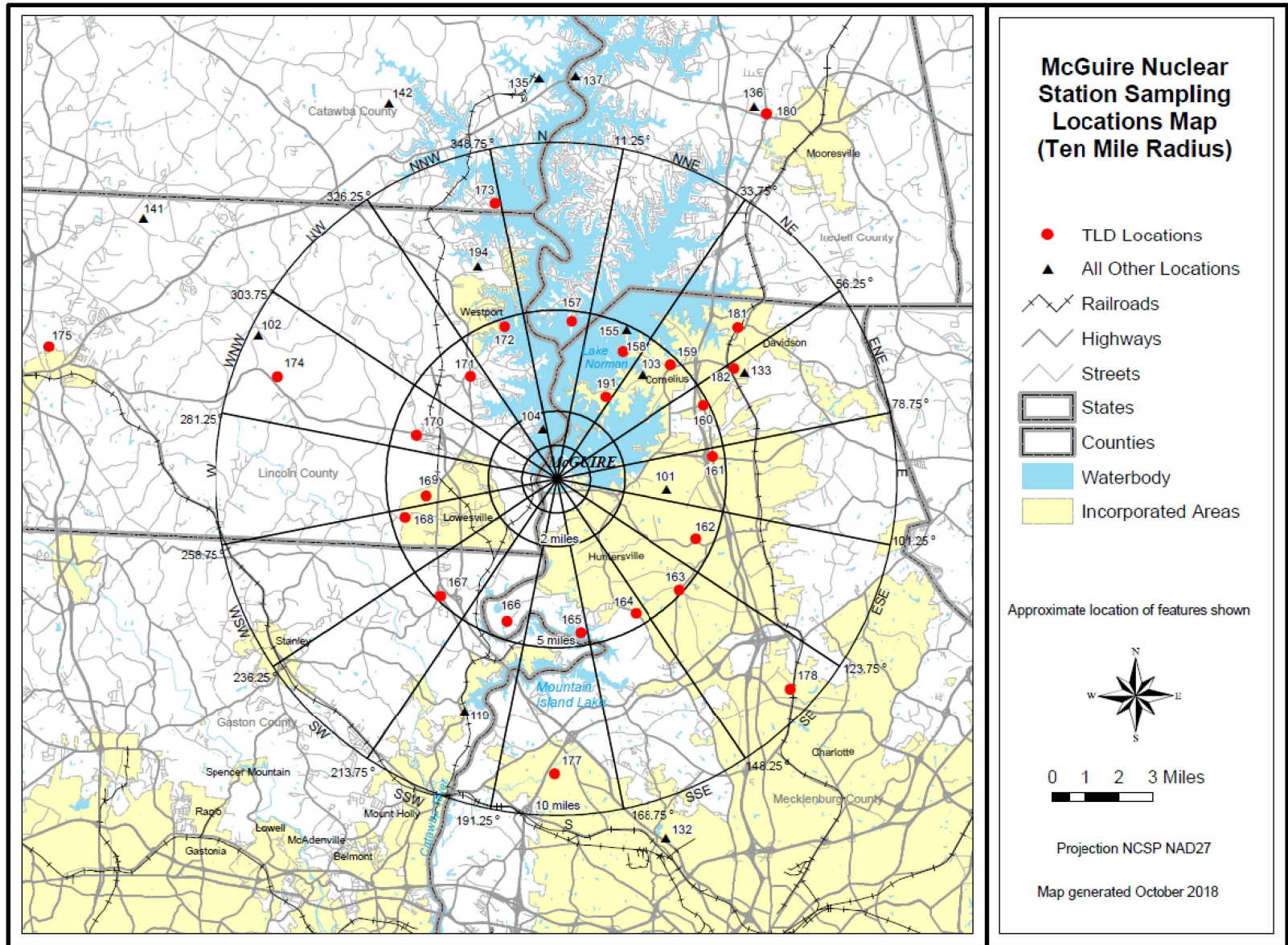


TABLE 2.1-A

**MCGUIRE RADIOLOGICAL MONITORING PROGRAM
SAMPLING LOCATIONS**

Table 2.1-A Codes			
W	Weekly	SM	Semimonthly
BW	BiWeekly	Q	Quarterly
M	Monthly	SA	Semiannually
C	Control	I	Indicator

Site #	Measure Type	Location Description*	Air Rad. & Part.	Surface Water	Drinking Water	Shoreline Sediment	Food Products	Fish	Milk	Broad Leaf Veg.
101	I	North Mecklenburg Water Treatment Facility (3.31 mi E)			M					
102	C	Amity Church Road (9.89 mi WNW)	W							M (b)
103	I	Cottonwood Substation (4.20 mi NE)	W							
119	I	Mt. Holly Municipal Water Supply (7.40 mi SSW)			M					
120	I	Site Boundary (0.46 mi NNE)	W							M (b)
121	I	Site Boundary (0.47 mi NE)	W							
125	I	Site Boundary (0.38 mi SW)	W							M (b)
128	I	Discharge Canal Bridge (0.45 mi NE)		M						
129	I	Discharge Canal Entrance to Lake Norman (0.51 mi ENE)				SA		SA		
130	I	Hwy 73 Bridge Downstream (0.52 mi SW)				SA				
131	I	Cowans Ford Dam (0.64 mi WNW)		M						
132	I	Charlotte Municipal Water Supply (11.1 mi SSE)			M					
133	I	Cornelius (6.23 mi ENE)	W							
135	C	Plant Marshall Intake Canal (11.9 mi N)		M						
136	C	Mooreville Municipal Water Supply (12.7 mi NNE)			M					
137	C	Pinnacle Access Area (12.0 mi N)				SA		SA		
142	C	Lowman Farms-Cows (12.2 mi NNW)							SM	
155	I	Island Forest Drive (4.87 mi NNE)					M (a)			
193	I	Site Boundary (0.19 mi N)								M (b)
194	I	East Lincoln County Water Supply (6.73 mi NNW)			M					
195	I	Fishing Access Road (0.19 mi N)	W							

(a) During Harvest Season

(b) When Available

* GPS data reflect approximate accuracy to within 2-5 meters. GPS field measurements were taken as close as possible to the item of interest.

TABLE 2.1-B

**MCGUIRE RADIOLOGICAL MONITORING PROGRAM
SAMPLING LOCATIONS (TLD SITES)**

Table 2.1-B Codes			
IR	Inner Ring	OR	Outer Ring
C	Control	SI	Special Interest

Site #	Measure Type	Location	Distance* (miles)	Sector	Site #	Measure Type	Location	Distance* (miles)	Sector
143	IR	SITE BOUNDARY	0.27	NW	164	OR	HAMBRIGHT & BEATTIES FORD ROAD	4.64	SSE
144	IR	SITE BOUNDARY	0.46	NNE	165	OR	ARTHER AUTEN ROAD	4.57	S
145	IR	SITE BOUNDARY	0.47	NE	166	OR	NECK ROAD REFUGUE BOUNDARY	4.44	SSW
146	IR	SITE BOUNDARY	0.42	ENE	167	OR	LUCIA RIVERBEND HWY/OLD FIREHOUSE	4.87	SW
147	IR	SITE BOUNDARY	0.44	E	168	OR	OLD PLANK ROAD BRIDGE	4.60	WSW
148	IR	SITE BOUNDARY	0.46	ESE	169	OR	GLOVER LANE	4.03	W
149	IR	SITE BOUNDARY	0.50	SE	170	OR	LITTLE EGYPT ROAD	4.32	WNW
151	IR	SITE BOUNDARY	0.37	S	171	OR	TRIANGLE ACE HARDWARE	3.95	NW
152	IR	SITE BOUNDARY	0.44	SSW	172	OR	LAKESHORE S RD ISLAND VIEW COURT	4.69	NNW
153	IR	SITE BOUNDARY	0.47	SW	173	SI	KEISTLER STORE / GLENWOOD ROAD	8.39	NNW
154	IR	SITE BOUNDARY	0.45	W	174	SI	EAST LINCOLN JR. HIGH SCHOOL	8.85	WNW
156	IR	SITE BOUNDARY	0.44	WNW	175	C	BOGER CITY	15.5	WNW
189	IR	SITE BOUNDARY	0.43	SSE	177	SI	BELMALLOW RD / COULWOOD	8.77	S
190	IR	SITE BOUNDARY	0.37	WSW	178	SI	FLORIDA STEEL CORPORATION	9.36	SE
157	IR	THE POINTE (MOORESVILLE)	4.69	N	180	SI	MOORESVILLE WATER TREATMENT FACILITY	12.7	NNE
158	OR	BETHEL CHURCH RD	4.33	NNE	181	SI	OLD DAVIDSON WATER FACILITY	7.02	NE
159	OR	HENDERSON ROAD	4.77	NE	182	SI	CORNELIUS AIR SITE # 133	6.23	ENE
160	OR	ANCHORAGE MARINE SHOWROOM	4.89	ENE	186	SI	MCGUIRE FISHING ACCESS ROAD	0.24	NNW
161	OR	SAM FURR ROAD & HWY 21	4.70	E	187	SI	ENERGY EXPLORIUM / AIR SITE # 195	0.19	N
162	OR	RANSON ROAD	4.53	ESE	191	SI	PENINSULA DEV. / JOHN CONNOR ROAD	2.84	NNE
163	OR	MCCOY ROAD	4.94	SE					

* GPS data reflect approximate accuracy to within 2-5 meters. GPS field measurements were taken as close as possible to the item of interest.

TABLE 2.2-A

**REPORTING LEVELS FOR RADIOACTIVITY
CONCENTRATIONS IN ENVIRONMENTAL SAMPLES**

Analysis	Water (pCi/liter)	Air Particulates or Gases (pCi/m ³)	Fish (pCi/kg-wet)	Milk (pCi/liter)	BroadLeaf Vegetation (pCi/kg-wet)
H-3	20,000 ^{(a),(b)}	---	---	---	---
Mn-54	1,000	---	30,000	---	---
Fe-59	400	---	10,000	---	---
Co-58	1,000	---	30,000	---	---
Co-60	300	---	10,000	---	---
Zn-65	300	---	20,000	---	---
Zr-Nb-95	400	---	---	---	---
I-131	2	0.9	---	3	100
Cs-134	30	10	1,000	60	1,000
Cs-137	50	20	2,000	70	2,000
Ba-La-140	200	---	---	300	---

(a) If no drinking water pathway exists, a value of 30,000 pCi/liter may be used.

(b) H-3 Reporting level not applicable to surface water

TABLE 2.2-B

REMP ANALYSIS FREQUENCY

Sample Medium	Analysis Schedule	Gamma Isotopic	Tritium	Low Level I-131	Gross Beta	TLD
Air Radioiodine	Weekly	X	---	---	---	---
Air Particulate	Weekly	---	---	---	X	---
	Quarterly Composite	X	---	---	---	---
Direct Radiation	Quarterly	---	---	---	---	X
Surface Water	Monthly Composite	X	---	---	---	---
	Quarterly Composite	---	X	---	---	---
Drinking Water	Monthly Composite	X	---	(a)	X	---
	Quarterly Composite	---	X	---	---	---
Shoreline Sediment	Semiannually	X	---	---	---	---
Milk	Semimonthly	X	---	X	---	---
Fish	Semiannually	X	---	---	---	---
Broadleaf Vegetation	Monthly ^(b)	X	---	---	---	---
Food Products	Monthly ^(b)	X	---	---	---	---

(a) Low-level I-131 analysis will be performed if the dose calculated for the consumption of drinking water is > 1 mrem per year. An LLD of 1 pCi/liter will be required for this analysis.

(b) When Available

TABLE 2.2-C**MAXIMUM VALUES FOR THE *A PRIORI* LOWER LIMITS OF DETECTION**

Analysis	Water (pCi/liter)	Air Particulates or Gases (pCi/m ³)	Fish (pCi/kg-wet)	Milk (pCi/liter)	BroadLeaf Vegetation (pCi/kg-wet)	Sediment (pCi/kg-dry)
Gross Beta	4	0.01	---	---	---	---
H-3	2,000 ^(a)	---	---	---	---	---
Mn-54	15	---	130	---	---	---
Fe-59	30	---	260	---	---	---
Co-58, 60	15	---	130	---	---	---
Zn-65	30	---	260	---	---	---
Zr-Nb-95	15	---	---	---	---	---
I-131	1 ^(b)	0.07	---	1	60	---
Cs-134	15	0.05	130	15	60	150
Cs-137	18	0.06	150	18	80	180
Ba-La-140	15	---	---	15	---	---

(a) If no drinking water pathway exists, a value of 3,000 pCi/liter may be used.

(b) If no drinking water pathway exists, the LLD of gamma isotopic analysis may be used.

3.0 INTERPRETATION OF RESULTS

Review of 2019 REMP analysis results was performed to detect and identify changes in environmental levels as a result of station operation. The radionuclides with Selected Licensee Commitments reporting levels that indicate consistent detectable activity have been historically trended from preoperation to present. Analyses from 1977 - 1978 have been excluded since these results were much higher than the other preoperational years due to outside influences such as weapons testing. The preoperational analyses from 1981 were combined with the operational analyses from the latter part of 1981 and averaged to give one concentration for each radionuclide for that year. Summary tables containing 2019 information required by Technical Specification Administrative Control 5.6.2 are located in Appendix B. McGuire 2019 REMP results are located in Appendix E.

The highest annual mean concentration of applicable Selected Licensee Commitments radionuclides from the indicator locations for each media type was used for trending purposes. Trending was performed by comparing annual mean concentrations to historical results. Factors evaluated include the frequency of detection and the concentration in terms of the percent of the radionuclide's SLC reporting level (Table 2.2-A). All maximum percent of reporting level values attributable to MNS plant operation were well below the 100% action level. The highest value attributable to MNS plant operations during 2019 was 2.62% for drinking water tritium at the North Mecklenburg Water Treatment Facility (Location 101). Only Selected Licensee Commitments radionuclides were detected in 2019.

Ground water monitoring wells located on the MNS site are part of the Nuclear Energy Institute (NEI) 07-07 radiological groundwater monitoring wells and are reported in the MNS Annual Radioactive Effluent Release Report (ARERR). NEI 07-07 was developed to describe the industry's Ground Water Protection Initiative. NEI 07-07 radiological groundwater monitoring wells are used to assure timely detection and effective response to situations involving inadvertent radiological releases to ground water to prevent migration of licensed radioactive material off-site and to quantify impacts on decommissioning. These monitoring wells are not used for Radiological Environmental Monitoring Program (REMP), because they do not monitor water supply for drinking or irrigation purposes. These are not REMP wells because there is no dose associated with this pathway. The McGuire site is bounded to the west by the Catawba River channel and the hydraulic gradient for McGuire flows toward the Catawba River. Sentinel wells are installed and monitored at regular intervals for early detection purposes (NCR # 02035750).

Changes in sample location, analytical technique, and presentation of results must be considered when reviewing for trends. Calculation of the annual mean concentrations has been performed differently over the history of the REMP. During 1979-1986, all net results (sample minus background) positive and negative, were included in the calculation of the mean. Only positive net activity results were used to calculate the mean for the other years. All negative values were replaced with a zero for calculational and graphical purposes to properly represent environmental conditions. A change in gamma spectroscopy analysis systems in 1987 ended a period when many measurements yielded detectable low-level activity for both indicator and control location samples. It is possible that the method the previous system used to estimate net activity may have been vulnerable to false-positive results.

This section includes tables and graphs containing the highest annual mean concentrations of any effluent related radionuclide detected since the change in analysis systems in 1987. Any zero concentrations used in tables or graphs represent activity measurements less than detectable levels. Only the specific radionuclides that represent the highest dose contributors or demonstrate consistent detectable activity are shown graphically.

Data presented in Sections 3.1 through 3.9 support the conclusion that there was no significant increase in radioactivity in the environment around McGuire Nuclear Station due to station operations in 2019. Similarly, there was no significant increase in ambient background radiation levels in the surrounding areas. The 2019 land use census data, shown in Section 3.10, indicates that no program changes are required as a result of the census.

3.1 AIRBORNE RADIOIODINE AND PARTICULATES

In 2019, 364 radioiodine and particulate samples were analyzed, 312 from 6 indicator locations and 52 from the control location. Particulate samples were analyzed weekly for gross beta. A quarterly gamma analysis was performed on the quarterly filter composite (by location). Radioiodine samples received a weekly gamma analysis.

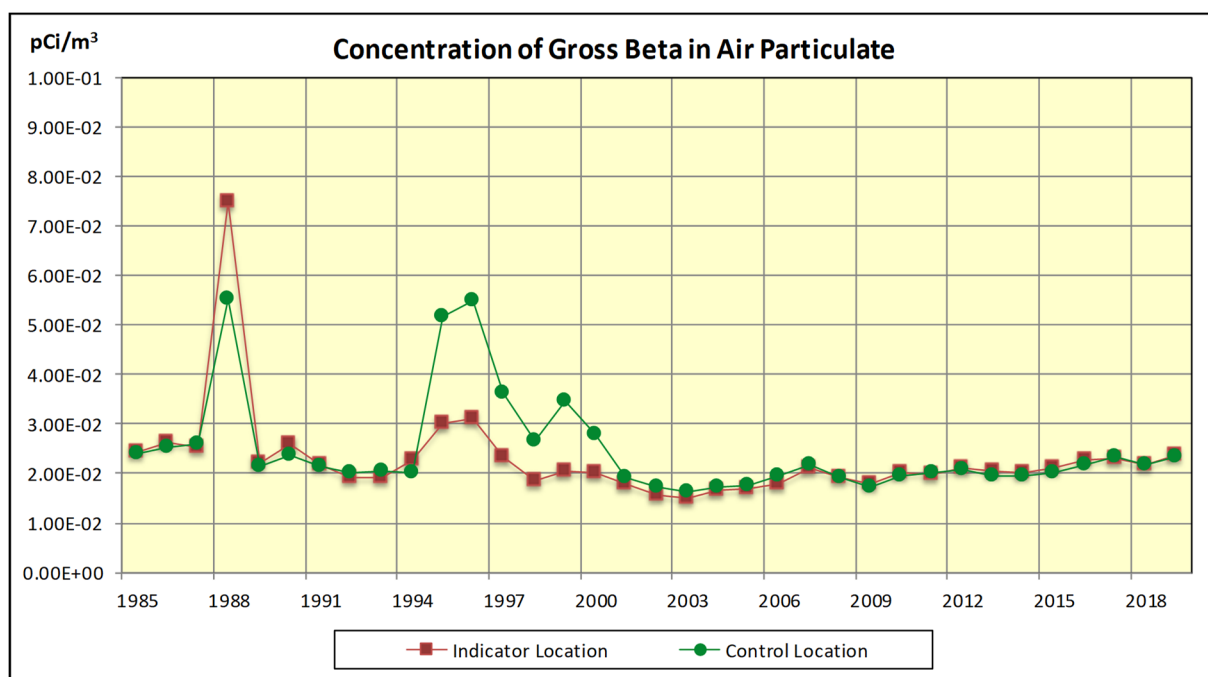
Gross beta analyses indicated $2.36\text{E-}2$ pCi/m³ at the location with the highest annual mean and $2.32\text{E-}2$ pCi/m³ at the control location. No gamma emitting radionuclide attributable to MNS plant operation has been detected in any air samples since 2004 when Co-58 was observed (NCR # 01552730).

Figure 3.1 shows gross beta highest annual mean indicator and control location concentrations since 1985. There is no reporting level for gross beta. Table 3.1-A shows indicator and control location highest annual means for Cs-137 and gross beta.

Table 3.1-B gives indicator location highest annual means and control means since 1979 for I-131. No I-131 activity due to MNS plant operation has been detected since 1989. Since no activity was detected in 2019, no reporting levels were approached.

K-40 and Be-7 observed in air samples are naturally occurring radionuclides.

Figure 3.1



There is no reporting level for Gross Beta in air particulate

Table 3.1-A Mean Concentrations of Radionuclides in Air Particulate

YEAR	Cs-137 Indicator (pCi/m ³)	Cs-137 Control (pCi/m ³)	Beta Indicator (pCi/m ³)	Beta Control (pCi/m ³)
1979*	4.40E-3	1.47E-3	Not Performed	Not Performed
1980*	6.70E-3	4.53E-3	Not Performed	Not Performed
1981*	6.16E-3	5.32E-3	Not Performed	Not Performed
1982*	3.82E-3	2.29E-3	Not Performed	Not Performed
1983*	2.93E-3	3.21E-3	Not Performed	Not Performed
1984	1.74E-3	8.29E-4	Not Performed	Not Performed
1985	1.86E-3	1.32E-3	2.44E-2	2.40E-2
1986	4.98E-3	3.03E-3	2.64E-2	2.52E-2
1987 ⁽¹⁾	1.07E-2	7.91E-3	2.54E-2	2.59E-2
1988	0.00E0	0.00E0	7.49E-2	5.51E-2
1989	0.00E0	0.00E0	2.22E-2	2.14E-2
1990	0.00E0	0.00E0	2.58E-2	2.37E-2
1991	0.00E0	0.00E0	2.16E-2	2.15E-2
1992	0.00E0	0.00E0	1.92E-2	2.02E-2
1993	0.00E0	0.00E0	1.93E-2	2.04E-2
1994	0.00E0	0.00E0	2.28E-2	2.02E-2
1995	0.00E0	0.00E0	3.02E-2	5.17E-2
1996	0.00E0	0.00E0	3.11E-2	5.49E-2
1997	0.00E0	0.00E0	2.34E-2	3.62E-2
1998	0.00E0	0.00E0	1.86E-2	2.66E-2
1999	0.00E0	0.00E0	2.06E-2	3.47E-2
2000	0.00E0	0.00E0	2.00E-2	2.77E-2
2001	0.00E0	0.00E0	1.79E-2	1.91E-2
2002	0.00E0	0.00E0	1.57E-2	1.72E-2
2003	0.00E0	0.00E0	1.50E-2	1.63E-2
2004	0.00E0	0.00E0	1.67E-2	1.71E-2
2005	0.00E0	0.00E0	1.68E-2	1.77E-2
2006	0.00E0	0.00E0	1.79E-2	1.94E-2
2007	0.00E0	0.00E0	2.12E-2	2.18E-2
2008	0.00E0	0.00E0	1.92E-2	1.93E-2
2009	0.00E0	0.00E0	1.79E-2	1.76E-2
2010	0.00E0	0.00E0	2.01E-2	1.95E-2
2011 ⁽²⁾	7.06E-3	0.00E0	1.99E-2	2.00E-2
2012	0.00E0	0.00E0	2.10E-2	2.08E-2
2013	0.00E0	0.00E0	2.04E-2	1.96E-2
2014 ⁽³⁾	0.00E0	0.00E0	2.02E-2	1.94E-2
2015	0.00E0	0.00E0	2.10E-2	2.02E-2
2016	0.00E0	0.00E0	2.26E-2	2.19E-2
2017	0.00E0	0.00E0	2.31E-2	2.33E-2
2018	0.00E0	0.00E0	2.17E-2	2.17E-2
2019	0.00E0	0.00E0	2.36E-2	2.32E-2

0.00E0 indicates no detectable measurements

* Radioiodine and Particulates analyzed together

(1) 1987 – Gamma spectroscopy system change

(2) 2011 – Concentration affected by Fukushima Daiichi

(3) 2014 – Gamma spectroscopy system was replaced 10JUL2014. Gamma spectroscopy system hardware, detector cooling apparatus, software, electronics, nuclide identification libraries, and analytical test matrix components for test matrices were modified (NCR # 0739995). No analytical changes were noted due to the 2014 gamma spectroscopy system change.

Table 3.1-B Mean Concentrations of Air Radioiodine (I-131)

Year	Indicator Location (pCi/m ³)	Control Location (pCi/m ³)
1979*	3.28E-3	1.04E-3
1980*	2.01E-3	1.10E-3
1981*	4.17E-3	6.27E-4
1982*	1.42E-3	2.48E-3
1983*	1.99E-3	2.01E-4
1984	3.17E-3	0.00E0
1985	3.15E-3	1.04E-3
1986	1.27E-2	6.10E-3
1987 ⁽¹⁾	1.07E-2	6.60E-3
1988	0.00E0	0.00E0
1989	2.18E-2	0.00E0
1990	0.00E0	0.00E0
1991	0.00E0	0.00E0
1992	0.00E0	0.00E0
1993	0.00E0	0.00E0
1994	0.00E0	0.00E0
1995	0.00E0	0.00E0
1996	0.00E0	0.00E0
1997	0.00E0	0.00E0
1998	0.00E0	0.00E0
1999	0.00E0	0.00E0
2000	0.00E0	0.00E0
2001	0.00E0	0.00E0
2002	0.00E0	0.00E0
2003	0.00E0	0.00E0
2004	0.00E0	0.00E0
2005	0.00E0	0.00E0
2006	0.00E0	0.00E0
2007	0.00E0	0.00E0
2008	0.00E0	0.00E0
2009	0.00E0	0.00E0
2010	0.00E0	0.00E0
2011 ⁽²⁾	6.00E-2	5.46E-2
2012	0.00E0	0.00E0
2013	0.00E0	0.00E0
2014 ⁽³⁾	0.00E0	0.00E0
2015	0.00E0	0.00E0
2016	0.00E0	0.00E0
2017	0.00E0	0.00E0
2018	0.00E0	0.00E0
2019	0.00E0	0.00E0

0.00E0 indicates no detectable measurements

* Radioiodine and Particulate analyzed together.

(1) 1987 – Gamma spectroscopy system change

(2) 2011– Concentration affected by Fukushima Daiichi

(3) 2014 – Gamma spectroscopy system was replaced 10JUL2014. Gamma spectroscopy system hardware, detector cooling apparatus, software, electronics, nuclide identification libraries, and analytical test matrix components for test matrices were modified (NCR # 0739995). No analytical changes were noted due to the 2014 gamma spectroscopy system change.

3.2 DRINKING WATER

In 2019, 65 drinking water samples were analyzed for gross beta and gamma emitting radionuclides. Fifty-two samples were from the 4 indicator locations and 13 from the control location. These samples were composited to create 20 quarterly composite period samples for tritium analysis.

No detectable gamma activity attributable to MNS plant operation was found in drinking water samples in 2019 and has not been detected since 1987. K-40 observed in some drinking water samples is a naturally occurring radionuclide.

Figure 3.2-1 and Table 3.2 shows highest annual mean gross beta concentrations for the indicator location and control location since preoperation. Gross beta analyses indicated 4.51 pCi/l at the location with the highest annual mean and 4.22 pCi/l at the control location. The gross beta mean indicator activity and mean control activity increased in 2019 due to an analytical method change affecting analytical sensitivities (Appendix A, III). This change is due to the analysis method being changed in 2019 (NCR # 02303031).

Tritium was detected in 10 of the 16 indicator composite samples taken in 2019. The 2019 highest mean indicator tritium concentration from location 101 was 436 pCi/liter, which is 2.18% of the 20,000 pCi/l tritium reporting level. Tritium was not detected in any of the four control location samples. The dose for consumption of water was less than one mrem per year, historically and for 2019; therefore low-level iodine analysis is not required. Figure 3.2-2 shows tritium highest annual mean indicator and control location concentrations with comparisons to the 20% reporting level. Table 3.2 gives indicator location highest annual means and control means since 1979 for tritium and gross beta. There is no reporting level for gross beta.

Drinking water Location 101 was added to the sampling program in 1999. Figure 3.2 shows an increase beginning in that year. There was an increase in tritium releases in 2006 due to silica removal from the spent fuel pools which resulted in additional water volume being released from the plant. An extreme drought during the second half of 2007 and much of 2008 affecting the Catawba River Basin resulted in less dilution volume available in Lake Norman.

Figure 3.2-1

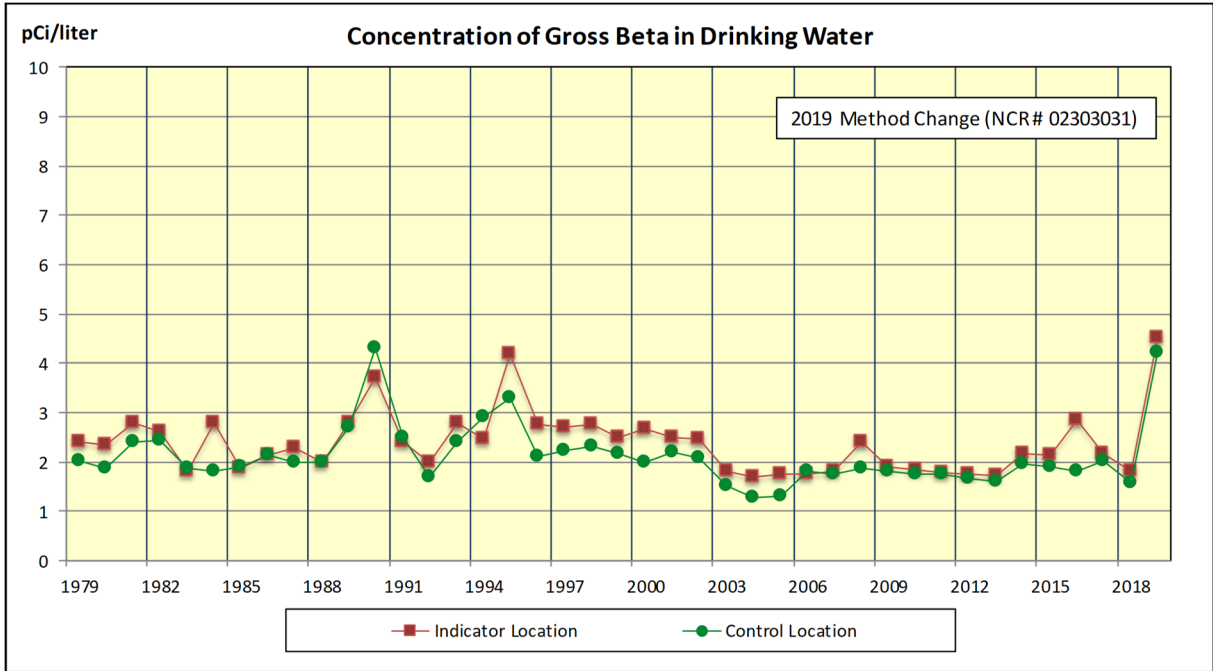


Figure 3.2-2

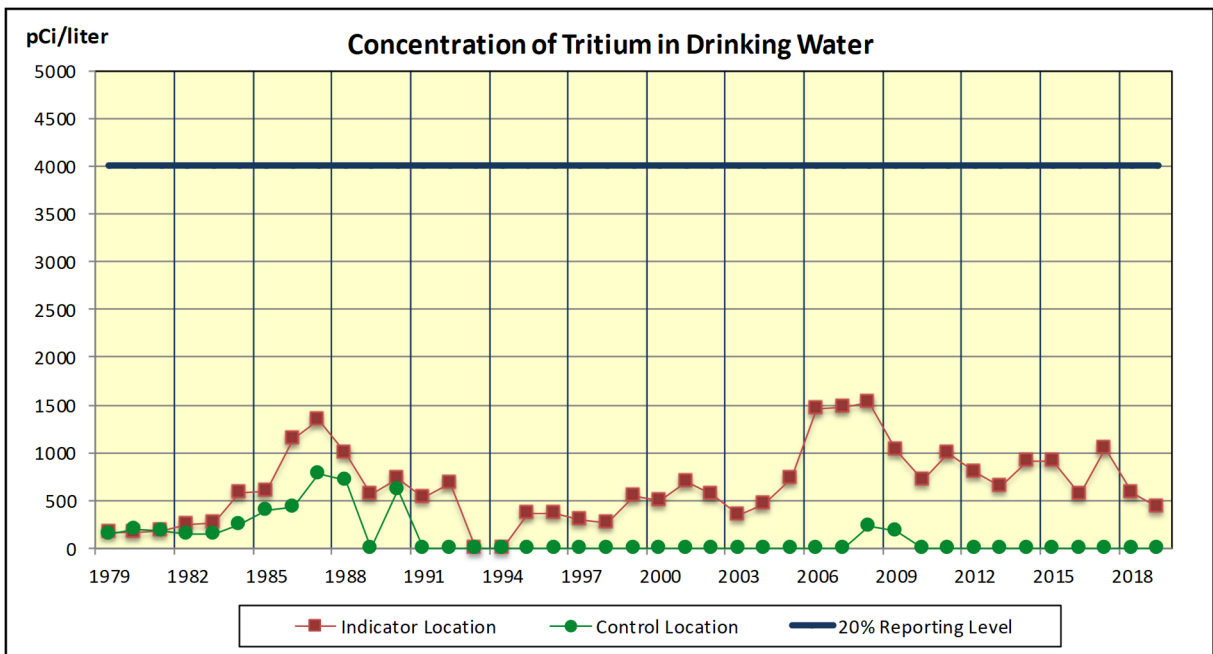


Table 3.2 Mean Concentrations of Radionuclides in Drinking Water

YEAR	Gross Beta (pCi/l)		Tritium (pCi/l)	
	Indicator Location	Control Location	Indicator Location	Control Location
1979	2.40E0	2.03E0	1.65E2	1.50E2
1980	2.34E0	1.87E0	1.63E2	2.05E2
1981	2.79E0	2.41E0	1.88E2	1.78E2
1982	2.62E0	2.43E0	2.43E2	1.45E2
1983	1.80E0	1.87E0	2.65E2	1.45E2
1984	2.78E0	1.81E0	5.77E2	2.45E2
1985	1.88E0	1.90E0	5.93E2	4.00E2
1986	2.13E0	2.15E0	1.14E3	4.37E2
1987	2.30E0	2.00E0	1.35E3	7.75E2
1988	2.00E0	2.00E0	9.92E2	7.11E2
1989	2.80E0	2.70E0	5.62E2	0.00E0
1990	3.70E0	4.30E0	7.32E2	6.11E2
1991	2.40E0	2.50E0	5.22E2	0.00E0
1992	2.00E0	1.70E0	6.73E2	0.00E0
1993	2.80E0	2.40E0	0.00E0	0.00E0
1994	2.47E0	2.90E0	0.00E0	0.00E0
1995	4.20E0	3.30E0	3.58E2	0.00E0
1996	2.75E0	2.11E0	3.60E2	0.00E0
1997	2.70E0	2.24E0	2.90E2	0.00E0
1998	2.75E0	2.33E0	2.68E2	0.00E0
1999	2.48E0	2.17E0	5.49E2	0.00E0
2000	2.66E0	1.99E0	5.04E2	0.00E0
2001	2.48E0	2.19E0	6.98E2	0.00E0
2002	2.47E0	2.08E0	5.64E2	0.00E0
2003	1.81E0	1.52E0	3.51E2	0.00E0
2004	1.68E0	1.29E0	4.61E2	0.00E0
2005	1.74E0	1.30E0	7.35E2	0.00E0
2006	1.75E0	1.80E0	1.46E3	0.00E0
2007	1.81E0	1.76E0	1.48E3	0.00E0
2008	2.40E0	1.87E0	1.52E3	2.26E2
2009	1.90E0	1.81E0	1.03E3	1.86E2
2010	1.85E0	1.74E0	7.20E2	0.00E0
2011	1.77E0	1.75E0	9.97E2	0.00E0
2012	1.74E0	1.66E0	7.95E2	0.00E0
2013	1.73E0	1.61E0	6.47E2	0.00E0
2014	2.18E0	1.95E0	9.07E2	0.00E0
2015	2.14E0	1.91E0	9.19E2	0.00E0
2016	2.85E0	1.80E0	5.69E2	0.00E0
2017	2.18E0	2.02E0	1.05E3	0.00E0
2018	1.80E0	1.57E0	5.85E2	0.00E0
2019 ⁽¹⁾	4.51E0	4.22E0	4.36E2	0.00E0

0.00E0 indicates no detectable measurements

(1) Gross beta preparation/analysis methodology change (NCR # 02303031)

3.3 SURFACE WATER

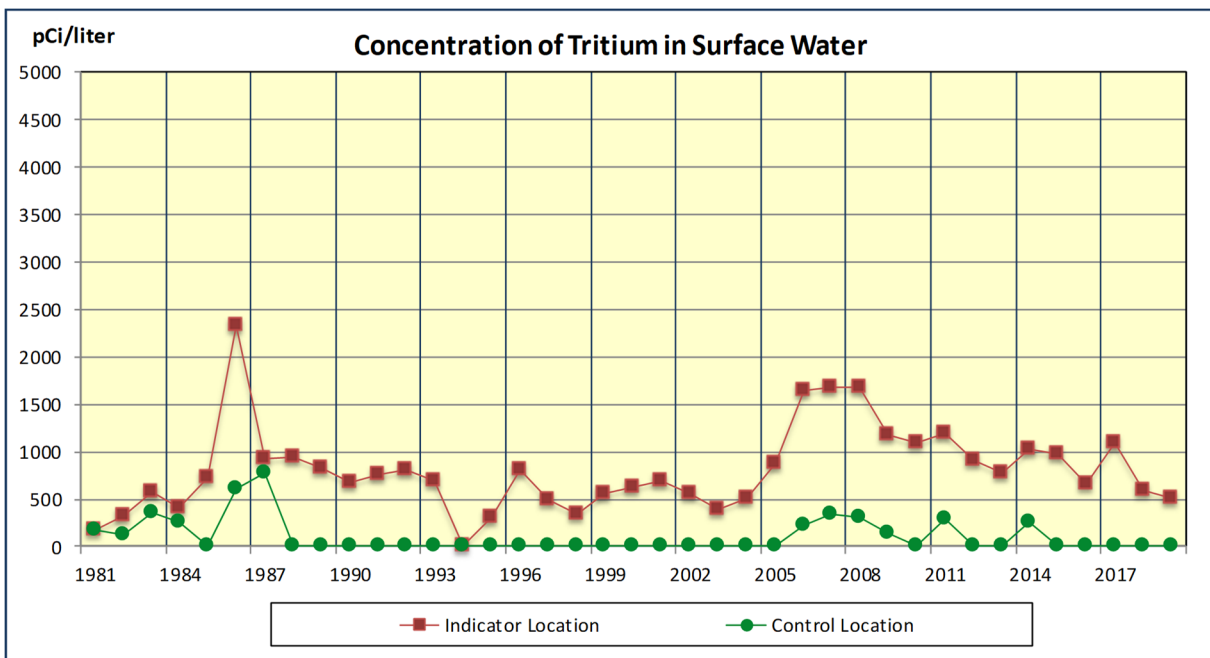
In 2019, 39 surface water samples were analyzed for gamma emitting radionuclides, 26 at the 2 indicator locations and 13 at the control location. The samples were composited to create 12 quarterly composite period samples for tritium analysis.

No detectable gamma activity attributable to MNS plant operation was found in surface water samples in 2019 and has not been detected since 1988. K-40 and Be-7 observed in some surface water samples are naturally occurring radionuclides. Tritium was detected in 5 the 8 indicator composite samples taken in 2019. Tritium was not detected in any of the 4 control location composite samples in 2019.

Figure 3.3 shows tritium highest annual mean indicator and control location concentrations. Table 3.3 gives indicator and control location highest annual means since 1979 for tritium.

There was an increase in surface water tritium in 2006 due to silica removal from the spent fuel pools which resulted in additional water volume being released from the plant. An extreme drought during the second half of 2007 and much of 2008 affecting the Catawba River Basin resulted in less dilution volume available in Lake Norman.

Figure 3.3



There is no reporting level for tritium in surface water

Table 3.3 Mean Concentrations of Tritium in Surface Water

YEAR	H-3 Indicator (pCi/l)	H-3 Control (pCi/l)
1979	1.85E2	1.66E2
1980	2.13E2	1.93E2
1981	1.75E2	1.70E2
1982	3.30E2	1.23E2
1983	5.75E2	3.67E2
1984	4.10E2	2.65E2
1985	7.33E2	0.00E0
1986	2.33E3	6.13E2
1987	9.20E2	7.70E2
1988	9.40E2	0.00E0
1989	8.22E2	0.00E0
1990	6.77E2	0.00E0
1991	7.53E2	0.00E0
1992	8.13E2	0.00E0
1993	6.85E2	0.00E0
1994	0.00E0	0.00E0
1995	3.15E2	0.00E0
1996	8.08E2	0.00E0
1997	4.85E2	0.00E0
1998	3.40E2	0.00E0
1999	5.60E2	0.00E0
2000	6.22E2	0.00E0
2001	6.98E2	0.00E0
2002	5.65E2	0.00E0
2003	3.91E2	0.00E0
2004	5.04E2	0.00E0
2005	8.74E2	0.00E0
2006	1.65E3	2.19E2
2007	1.68E3	3.42E2
2008	1.67E3	3.13E2
2009	1.18E3	1.41E2
2010	1.09E3	0.00E0
2011	1.19E3	2.94E2
2012	9.06E2	0.00E0
2013	7.73E2	0.00E0
2014	1.03E3	2.57E2
2015	9.79E2	0.00E0
2016	6.63E2	0.00E0
2017	1.09E3	0.00E0
2018	6.85E2	0.00E0
2019	5.07E2	0.00E0

0.00E0 indicates no detectable measurements

3.4 MILK

In 2019, 26 milk samples from the control location were analyzed for low level I-131 and other gamma emitting radionuclides. No indicator dairies were sampled during 2019 and none were identified by the 2019 land use census.

There were no gamma emitting radionuclides due to MNS plant operations identified in milk samples in 2019. Cs-137 is the only radionuclide, other than naturally occurring, reported in milk samples since 1990 (excluding Fukushima Daiichi). Cs-137 in milk is not unusual. It is a constituent of nuclear weapons test fallout and nuclear plant accidents and has been observed periodically in samples from indicator and control locations since the preoperational period.

A control milk sample collected during 2019 was inadvertently contaminated with Iodine-131 in the laboratory when a contaminated separatory funnel was used to prepare the sample for analysis. The laboratory contamination event is discussed in Appendix D (NCR # 02283264).

Table 3.4 gives indicator location highest annual means and control means since 1979 for Cs-137. Since no Cs-137 was detected in 2019, no reporting levels were approached.

K-40 observed in milk samples is a naturally occurring radionuclide.

Table 3.4 Mean Concentrations of Cs-137 in Milk

YEAR	Cs-137 Indicator (pCi/l)	Cs-137 Control (pCi/l)
1979	2.48E1	6.04E0
1980	1.72E1	4.13E0
1981	2.04E1	4.15E0
1982	1.21E1	5.20E0
1983	2.01E1	2.82E0
1984	1.48E1	2.56E0
1985	1.42E1	2.72E0
1986	3.74E0	3.45E0
1987 ⁽¹⁾	5.20E0	8.60E0
1988	3.40E0	2.90E0
1989	6.00E0	5.60E0
1990	5.30E0	2.60E0
1991	0.00E0	0.00E0
1992	0.00E0	0.00E0
1993	0.00E0	0.00E0
1994	0.00E0	0.00E0
1995	0.00E0	0.00E0
1996	0.00E0	0.00E0
1997	0.00E0	0.00E0
1998	0.00E0	0.00E0
1999	0.00E0	0.00E0
2000	0.00E0	0.00E0
2001	0.00E0	0.00E0
2002	No Indicator Location	0.00E0
2003	No Indicator Location	0.00E0
2004	No Indicator Location	0.00E0
2005	No Indicator Location	0.00E0
2006	No Indicator Location	0.00E0
2007	No Indicator Location	0.00E0
2008	No Indicator Location	0.00E0
2009	No Indicator Location	0.00E0
2010	No Indicator Location	0.00E0
2011	No Indicator Location	0.00E0
2012	No Indicator Location	0.00E0
2013	No Indicator Location	0.00E0
2014 ⁽²⁾	No Indicator Location	0.00E0
2015	No Indicator Location	0.00E0
2016	No Indicator Location	0.00E0
2017	No Indicator Location	0.00E0
2018	No Indicator Location	0.00E0
2019	No Indicator Location	0.00E0

0.00E0 indicates no detectable measurements

(1) 1987 – Gamma spectroscopy system change

(2) 2014 – Gamma spectroscopy system was replaced 10JUL2014. Gamma spectroscopy system hardware, detector cooling apparatus, software, electronics, nuclide identification libraries, and analytical test matrix components for test matrices were modified (NCR # 0739995). No analytical changes were noted due to the 2014 gamma spectroscopy system change.

3.5 BROADLEAF VEGETATION

In 2019, 48 broadleaf vegetation samples were analyzed, 36 at the three indicator locations and 12 at the control location.

There were no gamma emitting radionuclides attributable to MNS plant operation identified in any indicator or control location broadleaf vegetation samples in 2019. Cs-137 is the only radionuclide, other than naturally occurring, reported in vegetation samples since the change in gamma spectroscopy analysis systems in 1987. No airborne Cs-137 has been released from the plant since 1998.

It is not unusual for Cs-137 to be present in vegetation. It is a constituent of nuclear weapons test fallout and nuclear plant accidents and has been observed in samples from indicator and control locations since the preoperational period. Table 3.5 lists the highest indicator location annual mean and control location annual mean for Cs-137 since early in the station's operational history. Visual inspection of the tabular data did not reveal any increasing trends.

K-40 and Be-7 observed in broadleaf vegetation samples are naturally occurring radionuclides.

Table 3.5 Mean Concentrations of Cs-137 in Broadleaf Vegetation

YEAR	Cs-137 Indicator (pCi/kg)	Cs-137 Control (pCi/kg)
1979	2.19E1	1.93E1
1980	2.30E1	1.92E1
1981	3.04E1	2.02E1
1982	2.46E1	1.22E1
1983	9.07E0	7.85E0
1984	1.02E1	1.05E1
1985	8.05E0	2.37E-2
1986	4.03E1	1.27E1
1987 ⁽¹⁾	2.20E1	1.70E1
1988	3.90E1	3.40E1
1989	9.60E1	0.00E0
1990	4.00E1	0.00E0
1991	3.30E1	0.00E0
1992	4.90E1	0.00E0
1993	1.60E1	0.00E0
1994	0.00E0	0.00E0
1995	0.00E0	0.00E0
1996	0.00E0	0.00E0
1997	0.00E0	0.00E0
1998	0.00E0	2.69E1
1999	0.00E0	0.00E0
2000	0.00E0	0.00E0
2001	0.00E0	0.00E0
2002	0.00E0	0.00E0
2003	0.00E0	0.00E0
2004	0.00E0	0.00E0
2005	0.00E0	0.00E0
2006	2.98E1	0.00E0
2007	1.34E1	0.00E0
2008	0.00E0	0.00E0
2009	0.00E0	0.00E0
2010	0.00E0	0.00E0
2011 ⁽²⁾	2.29E1	0.00E0
2012	0.00E0	0.00E0
2013	0.00E0	0.00E0
2014 ⁽³⁾	0.00E0	0.00E0
2015	0.00E0	0.00E0
2016	1.22E1	0.00E0
2017	3.03E1	0.00E0
2018	0.00E0	0.00E0
2019	0.00E0	0.00E0

0.00E0 indicates no detectable measurements

(1) 1987 – Gamma spectroscopy system change

(2) 2011 – Concentration affected by Fukushima Daiichi

(3) 2014 – Gamma spectroscopy system was replaced 10JUL2014. Gamma spectroscopy system hardware, detector cooling apparatus, software, electronics, nuclide identification libraries, and analytical test matrix components for test matrices were modified (NCR # 0739995). No analytical changes were noted due to the 2014 gamma spectroscopy system change.

3.6 FOOD PRODUCTS

In 2019, 12 food products (crops) samples were analyzed from 1 indicator location. There is no control location for this media.

No detectable activity attributable to MNS station operation has been detected in this media since 1987. Table 3.6 shows Cs-137 indicator highest annual means with preoperational data. Since no activity was detected in 2019, no reporting levels were approached.

K-40 and Be-7 observed in food product samples are naturally occurring radionuclides.

Table 3.6 Mean Concentrations of Cs-137 in Food Products

YEAR	Cs-137 Indicator (pCi/kg)
1979	2.19E1
1980	2.30E1
1981	3.04E1
1982	2.46E1
1983	9.07E0
1984	8.45E0
1985	7.99E0
1986	2.15E1
1987 ⁽¹⁾	2.90E1
1988	0.00E0
1989	0.00E0
1990	0.00E0
1991	0.00E0
1992	0.00E0
1993	0.00E0
1994	0.00E0
1995	0.00E0
1996	0.00E0
1997	0.00E0
1998	0.00E0
1999	0.00E0
2000	0.00E0
2001	0.00E0
2002	0.00E0
2003	0.00E0
2004	0.00E0
2005	0.00E0
2006	0.00E0
2007	0.00E0
2008	0.00E0
2009	0.00E0
2010	0.00E0
2011 ⁽²⁾	3.06E1
2012	0.00E0
2013	0.00E0
2014 ⁽³⁾	0.00E0
2015	0.00E0
2016	0.00E0
2017	0.00E0
2018	0.00E0
2019	0.00E0

0.00E0 indicates no detectable measurements

(1) 1987 – Gamma spectroscopy system change

(2) 2011 – Concentration affected by Fukushima Daiichi

(3) 2014 – Gamma spectroscopy system was replaced 10JUL2014. Gamma spectroscopy system hardware, detector cooling apparatus, software, electronics, nuclide identification libraries, and analytical test matrix components for test matrices were modified (NCR # 0739995). No analytical changes were noted due to the 2014 gamma spectroscopy system change.

3.7 FISH

In 2019, 12 fish samples were analyzed for gamma emitting radionuclides, 6 at the indicator location and 6 at the control location.

Gamma spectroscopy analysis indicated no gamma emitting radionuclides attributable to MNS plant operation identified in any indicator or control location fish samples in 2019.

Figure 3.7 shows Cs-137 highest annual mean indicator and control location concentrations with comparisons to 5% of the reporting level. Table 3.7 gives indicator location highest annual means since 1980 for all radionuclides detected since the analysis change in 1988. All other radionuclides not shown in the table have demonstrated no detectable activity since 1986.

K-40 is a naturally occurring radionuclide observed in fish samples.

Figure 3.7

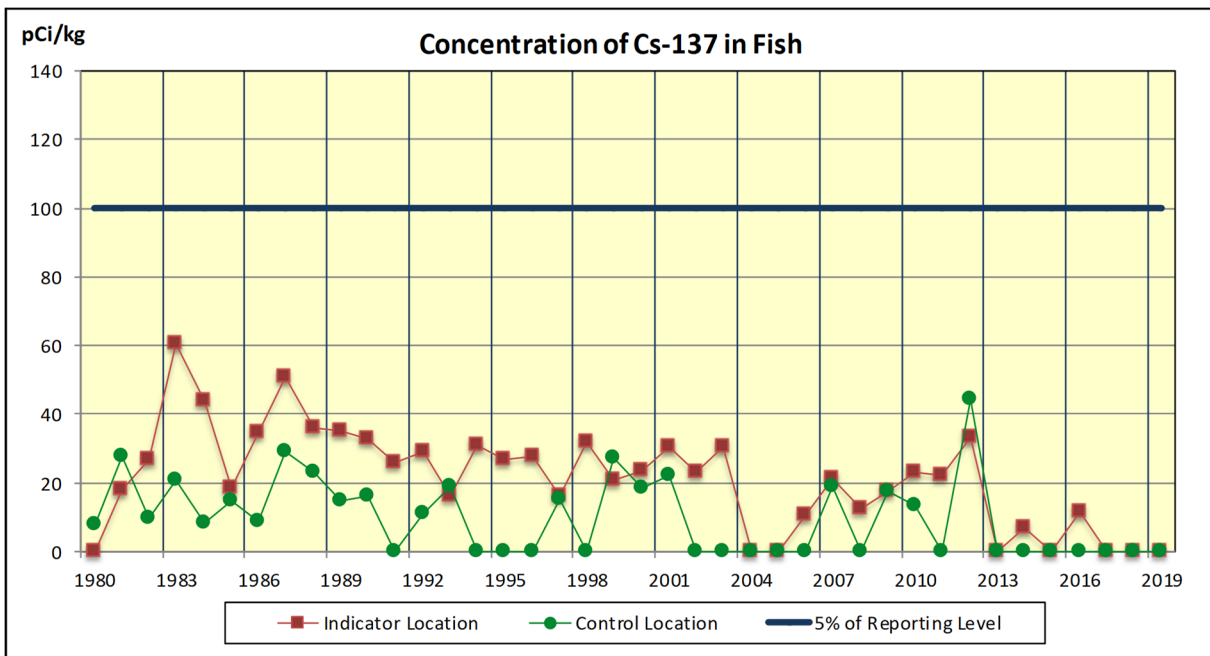


Table 3.7 Mean Concentrations of Radionuclides in Fish (pCi/kg)

YEAR	Mn-54 Indicator	Co-58 Indicator	Co-60 Indicator	Cs-134 Indicator	Cs-137 Indicator
1980	-1.97E1	8.36E0	-2.25E1	-2.70E1	-4.13E0
1981	-2.71E0	-2.98E0	-2.65E0	-1.99E0	1.80E1
1982	-3.83E0	8.16E0	-4.34E-1	-8.22E-1	2.69E1
1983	-2.60E0	2.60E1	1.11E1	-1.32E0	6.03E1
1984	3.61E0	1.45E2	2.82E1	3.11E1	4.38E1
1985	2.53E-1	7.19E0	1.72E1	-1.56E0	1.86E1
1986	1.03E0	3.17E1	2.96E1	1.67E1	3.49E1
1987 ⁽¹⁾	0.00E0	2.71E2	1.25E2	2.60E1	5.10E1
1988	1.20E1	7.70E1	0.00E0	2.70E1	3.60E1
1989	9.00E1	4.05E2	2.99E2	1.10E1	3.50E1
1990	0.00E0	5.60E1	4.10E1	0.00E0	3.30E1
1991	6.20E0	1.40E1	6.50E1	5.90E0	2.60E1
1992	0.00E0	0.00E0	0.00E0	0.00E0	2.90E1
1993	0.00E0	8.20E1	1.30E1	0.00E0	1.60E1
1994	0.00E0	0.00E0	0.00E0	0.00E0	3.10E1
1995	0.00E0	0.00E0	0.00E0	0.00E0	2.70E1
1996	0.00E0	0.00E0	0.00E0	0.00E0	2.78E1
1997	0.00E0	0.00E0	0.00E0	0.00E0	1.62E1
1998	0.00E0	0.00E0	0.00E0	0.00E0	3.21E1
1999	0.00E0	3.53E1	0.00E0	0.00E0	2.10E1
2000	0.00E0	4.28E1	0.00E0	0.00E0	2.34E1
2001	0.00E0	1.32E1	0.00E0	0.00E0	3.04E1
2002	0.00E0	0.00E0	0.00E0	0.00E0	2.33E1
2003	0.00E0	0.00E0	0.00E0	0.00E0	3.05E1
2004	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0
2005	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0
2006	0.00E0	0.00E0	0.00E0	0.00E0	1.08E1
2007	0.00E0	0.00E0	0.00E0	0.00E0	2.11E1
2008	0.00E0	0.00E0	0.00E0	0.00E0	1.24E1
2009	0.00E0	0.00E0	0.00E0	0.00E0	1.76E1
2010	0.00E0	0.00E0	0.00E0	0.00E0	2.33E1
2011	0.00E0	0.00E0	0.00E0	0.00E0	2.23E1
2012	0.00E0	0.00E0	0.00E0	0.00E0	3.34E1
2013	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0
2014 ⁽²⁾	0.00E0	0.00E0	0.00E0	0.00E0	6.75E0
2015	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0
2016	0.00E0	0.00E0	0.00E0	0.00E0	1.14E1
2017	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0
2018	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0
2019	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0

0.00E0 indicates no detectable measurements

(1) 1987 – Gamma spectroscopy system change

(2) 2014 – Gamma spectroscopy system was replaced 10JUL2014. Gamma spectroscopy system hardware, detector cooling apparatus, software, electronics, nuclide identification libraries, and analytical test matrix components for test matrices were modified (NCR # 0739995). No analytical changes were noted due to the 2014 gamma spectroscopy system change.

3.8 SHORELINE SEDIMENT

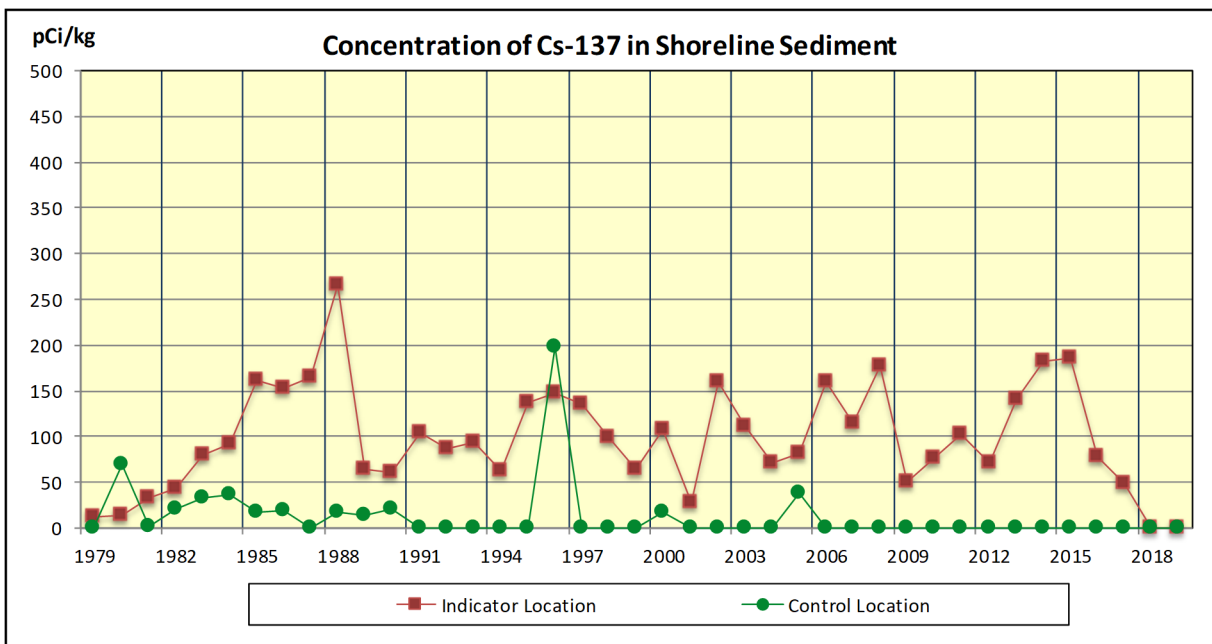
In 2019, 6 shoreline sediment samples were analyzed, 4 from 2 indicator locations and 2 at the control location.

Gamma spectroscopy analysis indicated no gamma emitting radionuclides attributable to MNS plant operation identified in any indicator or control location shoreline sediment samples in 2019.

Figure 3.8 shows Cs-137 highest annual mean indicator and control location concentrations since 1979. Table 3.8 gives indicator location highest annual means since 1979 for all radionuclides detected since the analysis change in 1988. There is no reporting level for shoreline sediment.

K-40 and Be-7 observed in shoreline samples are naturally occurring radionuclides.

Figure 3.8



There is no reporting level for Cs-137 in shoreline sediment

Table 3.8 Mean Concentrations of Radionuclides in Shoreline Sediment (pCi/kg)

YEAR	Mn-54 Indicator	Co-58 Indicator	Co-60 Indicator	Cs-134 Indicator	Cs-137 Indicator
1979	-1.07E1	2.25E1	-6.50E0	0.00E0	1.20E1
1980	1.06E1	-8.74E0	2.36E1	-3.53E0	1.44E1
1981	2.13E1	1.20E1	8.21E0	3.97E1	3.36E1
1982	5.38E1	1.66E1	-1.69E0	7.67E1	4.40E1
1983	4.40E0	3.43E1	2.12E1	7.65E1	8.02E1
1984	1.19E1	7.11E1	3.04E1	3.34E1	9.13E1
1985	4.77E0	1.46E1	9.20E0	2.02E1	1.61E2
1986	1.37E1	1.02E1	1.16E1	6.35E1	1.53E2
1987 ⁽¹⁾	0.00E0	1.06E2	2.10E1	4.20E1	1.65E2
1988	6.50E0	9.20E1	1.20E1	9.10E0	2.66E2
1989	2.90E1	3.80E1	2.90E1	5.30E1	6.50E1
1990	3.80E1	2.70E1	1.68E2	0.00E0	6.10E1
1991	2.80E1	5.30E1	1.31E2	0.00E0	1.03E2
1992	9.40E0	0.00E0	5.10E1	9.20E0	8.60E1
1993	0.00E0	2.20E1	8.60E1	0.00E0	9.30E1
1994	4.10E1	0.00E0	0.00E0	0.00E0	8.00E1
1995	1.70E1	0.00E0	2.30E1	0.00E0	1.38E2
1996	2.90E1	1.78E1	3.50E1	0.00E0	1.47E2
1997	0.00E0	0.00E0	1.11E2	3.10E1	1.36E2
1998	0.00E0	0.00E0	5.21E1	0.00E0	9.97E1
1999	0.00E0	2.47E1	8.49E1	0.00E0	6.51E1
2000	0.00E0	3.04E1	0.00E0	0.00E0	1.08E2
2001	0.00E0	0.00E0	0.00E0	0.00E0	2.77E1
2002	2.24E1	0.00E0	0.00E0	0.00E0	1.59E2
2003	0.00E0	0.00E0	0.00E0	0.00E0	1.11E2
2004	0.00E0	0.00E0	0.00E0	0.00E0	7.17E1
2005	0.00E0	0.00E0	0.00E0	0.00E0	8.08E1
2006	0.00E0	0.00E0	0.00E0	0.00E0	1.59E2
2007	0.00E0	0.00E0	0.00E0	0.00E0	1.14E2
2008	0.00E0	0.00E0	0.00E0	0.00E0	1.77E2
2009	0.00E0	0.00E0	0.00E0	0.00E0	5.08E1
2010	0.00E0	0.00E0	0.00E0	0.00E0	7.58E1
2011	0.00E0	0.00E0	0.00E0	0.00E0	1.02E2
2012	0.00E0	0.00E0	0.00E0	0.00E0	7.13E1
2013	0.00E0	0.00E0	0.00E0	0.00E0	1.41E2
2014 ⁽²⁾	0.00E0	0.00E0	0.00E0	0.00E0	1.82E2
2015	0.00E0	0.00E0	0.00E0	0.00E0	1.85E2
2016	0.00E0	0.00E0	0.00E0	0.00E0	7.84E1
2017	0.00E0	0.00E0	0.00E0	0.00E0	4.87E1
2018	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0
2019	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0

0.00E0 indicates no detectable measurements

(1) 1987 – Gamma spectroscopy system change

(2) 2014 – Gamma spectroscopy system was replaced 10JUL2014. Gamma spectroscopy system hardware, detector cooling apparatus, software, electronics, nuclide identification libraries, and analytical test matrix components for test matrices were modified (NCR # 0739995). No analytical changes were noted due to the 2014 gamma spectroscopy system change.

3.9 DIRECT GAMMA RADIATION

3.9.1 ENVIRONMENTAL TLD

McGuire is licensed with an exclusion area boundary defined by UFSAR Section 2.1.2.1 as a 2500 foot radius from station center. This is the same boundary established for determining radioactive effluent release limits. No permanent public access is permitted within the exclusion area. TLD locations designated as "inner ring" are within a 0.5 mile radius from station center and all are used as indicators. Due to close proximity with McGuire, and most being within the exclusion area boundary, inner ring TLD locations are not good indicators of radiation exposure to a member of the public, but are good at determining nearby environmental effects due to plant operation. Based on their placement, inner ring TLD locations are expected to occasionally be influenced by normal plant operation. TLD locations designated as "outer ring" are outside the 0.5 mile "inner ring" but within a 5 mile radius of station center. All outer ring TLD locations are used as indicators. A subset of TLD locations are designated as "special interest". The nearest "special interest" locations are within the Owner Control Area approximately 0.2 miles from station center. They are located near public access areas for fishing and the Energy Explorium. The remaining "special interest" locations are within a 3 to 13 mile radius from station center. The one "control" location is greater than 15 miles from station center. This location was chosen to reduce the probability of influence from McGuire operation on data. The control location is not used as background subtraction in the TLD analysis. Its purpose is to provide a comparison to indicator locations.

In 2019, 162 total TLDs were analyzed, 158 at indicator locations and 4 at the control location. TLDs are collected and analyzed quarterly. Transit and laboratory background dose is determined and subtracted from gross field readings as required by ANSI N545-1975. Based on Appendix B TLD data, the highest annual total dose was 95.8 mrem at indicator location 180, 12.7 miles NNE of station center. Figure 3.9 and Table 3.9 show TLD inner ring, outer ring, and control location annual averages in mrem per year. Data is provided from 1979 to show preoperational values. As shown in the graph, doses measured by environmental TLDs show little or no change since the current TLD system was implemented. As shown in the graph, historical inner and outer ring averages compare similarly, while control data is somewhat higher. This is most likely an artifact of the underlying geologic structures at the control location.

Quarterly, environmental ODCM TLD results are compared by location to its historical data to evaluate any significant changes. The comparison utilizes the location's average exposure history to determine if quarterly results fall within expected low and high ranges and provides a reliable indication of potential changes occurring at a specific TLD location. The low and high ranges are determined by the historical average \pm two standard deviations. The quarterly TLD evaluation implements portions of American National Standard ANSI/HPS N13.37-2014, "Environmental Dosimetry – Criteria for System Design and Implementation, for environmental Thermoluminescent Dosimeters (TLD)". The CSD-RP-ALL-0030 – Updated Radiological Environmental Monitoring Program TLD Analytical Method, describes the process implemented in late 2018 for the 2019 fleet TLD programs. TLD values identified as < Low Range or > High Range are evaluated in consideration of factors including possible TLD damage, sampling deviations, glow curve

irregularities, and any known environmental location changes which may affect results. TLD results are found in Appendix E.

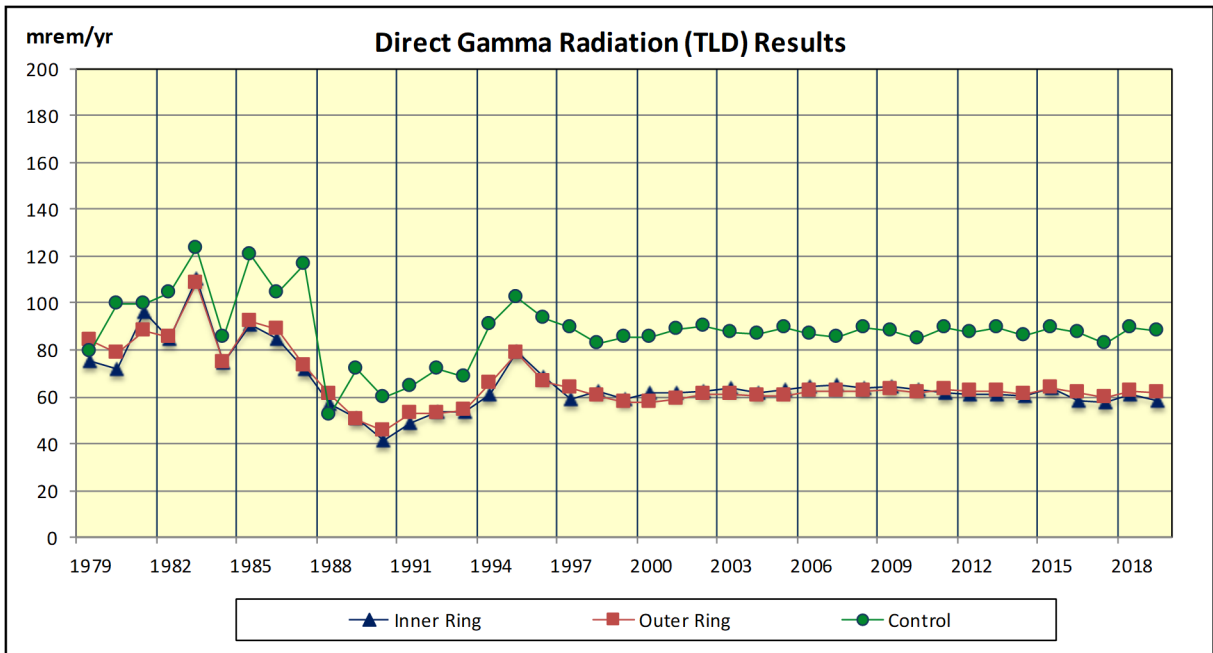
A TLD intercomparison program is conducted as part of the quality assurance program. Results of this program are included in section 4.7.

3.9.2 ISFSI

The McGuire ISFSI began operation in 2000. It is located approximately 0.15 miles west of station center in a secured area specifically constructed to provide dry storage for spent nuclear fuel. The ISFSI is situated at a lower elevation compared to other structures in the protected area. Exposure from direct radiation north of the ISFSI is shielded by the berm on the south boundary of Lake Norman. Exposure from direct radiation at the exclusion area boundary west of the ISFSI is shielded by the decrease in elevation at the ISFSI to the river bank below Cowan's Ford Dam. These geographic features lessen the potential dose to a member of the public in accessible areas within the exclusion area boundary. The ISFSI employs the multiple vertical storage designs. Irradiated fuel assemblies are confined, protected, and shielded by reinforced concrete modules. All designs used are completely passive and designed to provide radiation shielding and safe confinement for a range of accident conditions and natural events. They each use a passive natural circulation ventilation system to remove decay heat from the modules. No radiological liquid or gaseous effluents are expected from the passive storage provided by the ISFSI. Therefore any dose to offsite locations would be from direct and scattered gamma radiation.

Environmental TLD results described in 3.9.1 above are reviewed quarterly to identify trends and demonstrate compliance with dose and dose rate limits at the 2500 foot exclusion area boundary. Additional TLD locations not associated with REMP are presently located on the McGuire protected area fence near the ISFSI and on the ISFSI boundary. These are used to demonstrate compliance with occupational exposure controls and augment REMP TLD results. Doses measured by environmental TLDs show little or no change since the ISFSI began operation.

Figure 3.9



There is no reporting level for Direct Radiation (TLD)

Table 3.9 Direct Gamma Radiation (TLD) Results⁽¹⁾

YEAR	Inner Ring Average (mrem/yr)	Outer Ring Average (mrem/yr)	Control (mrem/yr)
1979	7.51E1	8.38E1	7.90E1
1980	7.16E1 [†]	7.88E1 [†]	9.98E1 [†]
1981	9.60E1	8.84E1	9.98E1
1982	8.50E1	8.52E1	1.05E2
1983	1.10E2	1.08E2	1.24E2
1984	7.46E1	7.44E1	8.57E1
1985	9.06E1	9.21E1	1.21E2
1986	8.46E1	8.88E1	1.05E2
1987	7.20E1	7.32E1	1.17E2
1988	5.73E1	6.10E1	5.21E1
1989	5.10E1	5.04E1	7.17E1
1990	4.12E1	4.54E1	5.94E1
1991	4.88E1	5.31E1	6.46E1
1992	5.37E1	5.27E1	7.22E1
1993	5.33E1	5.42E1	6.84E1
1994	6.08E1	6.58E1	9.07E1
1995	7.94E1	7.84E1	1.03E2
1996	6.82E1	6.67E1	9.39E1
1997	5.91E1	6.35E1	8.98E1
1998	6.26E1	6.00E1	8.26E1
1999	5.92E1	5.75E1	8.51E1
2000	6.18E1	5.77E1	8.52E1
2001	6.16E1	5.91E1	8.86E1
2002	6.24E1	6.11E1	9.01E1
2003	6.41E1	6.13E1	8.74E1
2004	6.14E1	6.02E1	8.70E1
2005	6.29E1	6.06E1	8.97E1
2006	6.41E1	6.25E1	8.70E1
2007	6.50E1	6.27E1	8.55E1
2008	6.36E1	6.25E1	8.93E1
2009	6.43E1	6.31E1	8.78E1
2010	6.30E1	6.20E1	8.47E1
2011	6.18E1	6.32E1	8.97E1
2012	6.13E1	6.24E1	8.74E1
2013	6.09E1	6.23E1	8.97E1
2014	6.03E1	6.08E1	8.57E1
2015	6.35E1	6.40E1	8.93E1
2016	5.84E1	6.14E1	8.73E1
2017	5.74E1	5.94E1	8.25E1
2018	6.07E1	6.24E1	8.94E1
2019	5.81E1	6.16E1	8.82E1

[†] Values are based on two quarters due to change in TLD locations.

(1) 2014 AREOR, tabular results converted from mR/yr to mrem/yr (n * 0.95)

3.10 LAND USE CENSUS

The land use census was conducted 6/5 – 6/6/2019 as required by SLC 16.11.14. Table 3.10 summarizes census results. A map indicating identified locations is shown in Figure 3.10.

During the 2019 census, no new irrigated gardens (superior to existing gardens) or milk locations were identified. The nearest residence is in the East sector at 0.50 miles. No environmental program changes were required as a result of the 2019 land use census.

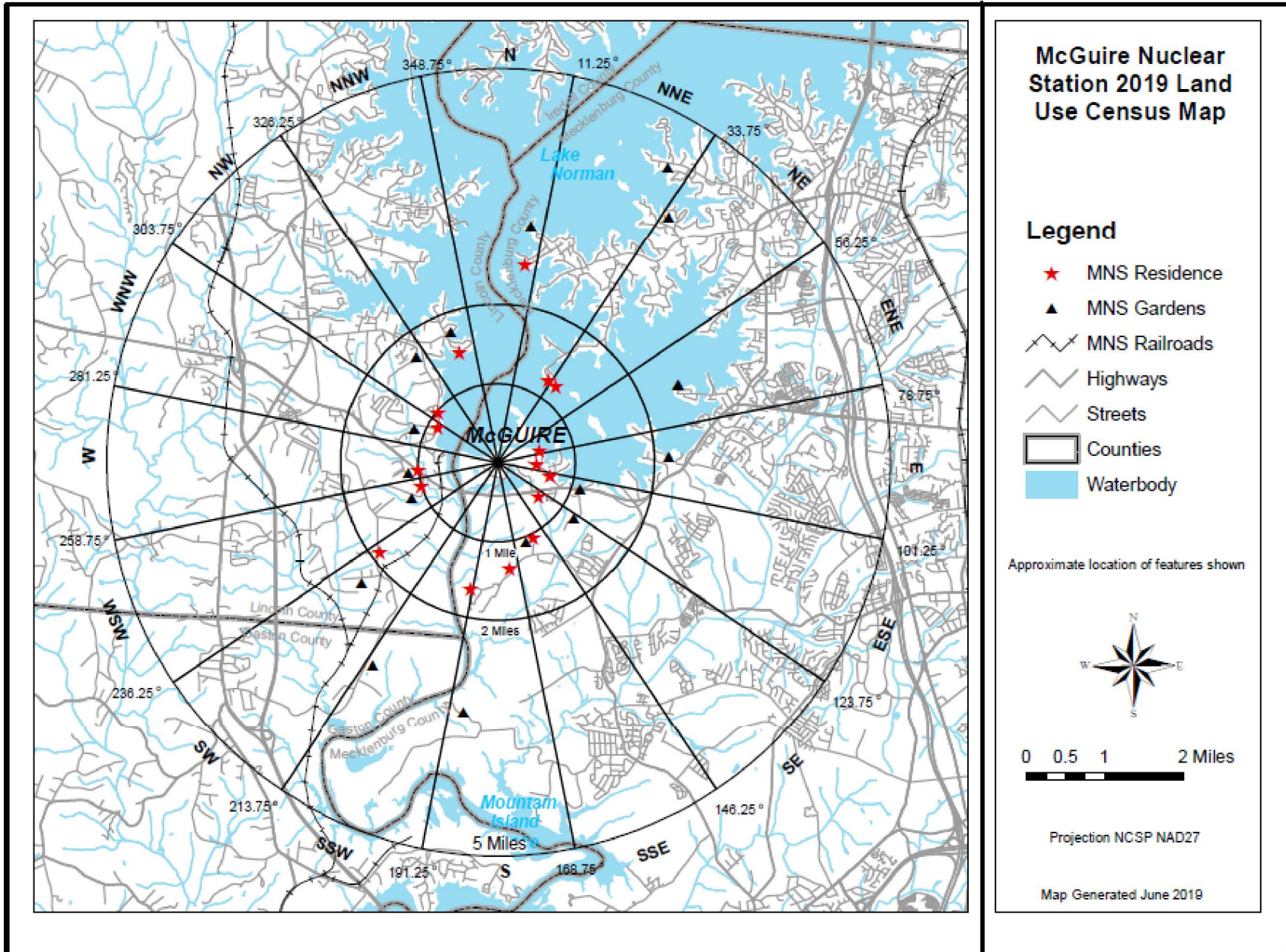
Table 3.10 McGuire 2019 Land Use Census Results

**Performed 6/5 - 6/6/2019
Nearest Pathways (Miles)**

SECTOR	RESIDENCE		GARDEN		MILK ANIMAL	
	2018	2019	2018	2019	2018	2019
North	2.53	2.53	---	3.03*	---	---
North-Northeast	1.23	1.23	4.34	4.34	---	---
Northeast	1.21	1.21	3.80	3.80	---	---
East-Northeast	0.56	0.56	2.50	2.50	---	---
East	0.50	0.50	2.11	2.11	---	---
East-Southeast	0.71	0.69*	1.93	1.10*	---	---
Southeast	0.67	0.67	1.20	1.20*	---	---
South-Southeast	1.06	1.06	1.06	1.06	---	---
South	1.35	1.35	3.19	3.19	---	---
South-Southwest	2.56	1.64*	2.94	3.02*	---	---
Southwest	1.88	1.88	2.31	2.31	---	---
West-Southwest	1.01	1.01	1.10	1.10	---	---
West	1.15	1.15	1.15	1.15	---	---
West-Northwest	0.88	0.88	1.15	1.15	---	---
Northwest	0.95	0.95	1.68	1.68	---	---
North-Northwest	1.48	1.48	1.76	1.76	---	---

NOTE: Sector and distances were determined by Global Positioning System
 "----" Indicates no occurrences within the 5 mile radius
 * Represents a change from the previous year

Figure 3.10



4.0 QUALITY ASSURANCE

4.1 SAMPLE COLLECTION

EnRad Laboratories and the Environmental Services Group performed the environmental sample collections as specified by approved sample collection procedures.

4.2 SAMPLE ANALYSIS

EnRad Laboratories performed the environmental sample analyses as specified by approved analysis procedures. EnRad Laboratories is in Huntersville, North Carolina, at Duke Energy's Environmental Center.

4.3 DOSIMETRY ANALYSIS

The Dosimetry and Records group performed the environmental dosimetry measurements as specified by approved dosimetry analysis procedures. The Dosimetry and Records Laboratory is in Huntersville, North Carolina, at Duke Energy's Environmental Center.

4.4 LABORATORY EQUIPMENT QUALITY ASSURANCE

4.4.1 DAILY QUALITY CONTROL

EnRad Laboratories has an internal quality assurance program which monitors each type of instrumentation for reliability and accuracy. Daily quality control checks ensure that instruments are in proper working order and these checks are used to monitor instrument performance.

4.4.2 CALIBRATION VERIFICATION

National Institute of Standards and Technology (NIST) standards that represent counting geometries are analyzed as unknowns at various frequencies ranging from weekly to annually to verify that efficiency calibrations are valid. The frequency is dependent upon instrument use and performance. Investigations are performed and documented should calibration verification data fall outside of the acceptable limits.

4.4.3 BATCH PROCESSING

Method quality control samples are analyzed with sample analyses that are processed in batches. These include tritium analyses in drinking water, surface water, and ground water samples.

4.5 DUKE ENERGY INTERLABORATORY COMPARISON PROGRAM

In 2019 Duke Energy Environmental Laboratory (EnRad) participated in interlaboratory programs to satisfy Radiological Environmental Monitoring Program requirements in Duke Energy nuclear plant Offsite Dose Calculation Manuals and Selected Licensee Commitments Manuals, as applicable.

EnRad Laboratory participated in an interlaboratory program with Eckert & Ziegler Analytics (EZA) in 2019. EZA results were evaluated against the NRC Inspection Manual Procedure 84750 (IP 84750) acceptance criteria stated in EnRad Procedure 515, Cross Check Program Administration. All regulatory requirements continue to be met by the EZA Cross Check Program.

4.5.1 ECKERT & ZIEGLER ANALYTICS CROSS CHECK PROGRAM

EZA mixed gamma in liquid, mixed gamma in vegetation, low-level I-131 in liquid, mixed gamma air filter composites, I-131 air cartridges, gross beta in water, gross beta in filters, and tritium in water were analyzed at various times of the year at EnRad Laboratories. A summary of the applicable REMP EnRad Laboratory program results for 2019 is documented in Table 4.0-A.

Interlaboratory cross check samples from EZA were received and analyzed in three of the four quarters of 2019. Table 4.0-A lists the performance for specific samples. Forty-six nuclide results were reported to EZA of which forty-six (100 %) met the acceptance criteria based on IP 84750.

4.6 STATE OF NORTH CAROLINA INTERCOMPARISON PROGRAM

EnRad Laboratories routinely participates with the North Carolina Department of Health and Human Services in an intercomparison program. EnRad Laboratories sends McGuire Nuclear Plant Radiological Environmental Monitoring Program air, drinking water, surface water, milk, fish, food products, and shoreline sediment samples to the North Carolina Department of Health and Human Services, Division of Public Health for intercomparison analysis.

4.7 TLD INTERCOMPARISON PROGRAM

4.7.1 NUCLEAR TECHNOLOGY SERVICES INTERCOMPARISON PROGRAM

Radiation Dosimetry and Records participates in a quarterly TLD intercomparison program administered by Nuclear Technology Services, Inc. of Roswell, GA. Nuclear Technology Services irradiates environmental dosimeters quarterly and sends them to the Radiation Dosimetry and Records group for analysis of the unknown estimated delivered exposure. A summary of the 2019 Nuclear Technology Services Intercomparison Report is documented in Table 4.0-B.

The individual measurements were evaluated and results falling outside the acceptable ratio criteria had an evaluation performed to identify any recommended remedial actions and to reduce anomalous errors.

4.7.2 INTERNAL CROSS CHECK (DUKE ENERGY)

Radiation Dosimetry and Records participates in a quarterly TLD internal comparison program administered internally by the Dosimetry Lab. The Dosimetry Lab Staff irradiates environmental dosimeters quarterly and submits them for analysis of the unknown estimated delivered exposure. A summary of the 2019 Internal Cross Check (Duke Energy) Program is documented in Table 4.0-B.

4.8 GENERAL ENGINEERING LABORATORY, LLC (GEL)

General Engineering Laboratory, LLC (GEL) participated in various Quality Assurance Programs for Inter-laboratory, Intra-laboratory, Third Party Cross Check programs, and a number of proficiency testing programs during 2019. A summary of the GEL quality assurance program results for the sample media types sent to GEL during 2019 is documented in Table 4.0-C. Table 4.0-C may not be applicable to all plants or stations.

TABLE 4.0-A

ECKERT & ZIEGLER ANALYTICS

CROSS CHECK PROGRAM

2019 Cross Check Results for EnRad Laboratories

Interlaboratory cross check samples from EZA were received and analyzed in three of the four quarters of 2019. Results are reported directly to Eckert & Ziegler Analytics. Environmental cross check samples were analyzed in replicate, and the result closest to the mean is reported to Eckert & Ziegler Analytics. The acceptance criteria for the program was based on the NRC Inspection Manual Procedure 84750 (IP 84750). Table 4.0-A lists the performance for specific samples. Forty-six nuclide results were reported to EZA of which forty-six (100 %) met the acceptance criteria based on IP 84750.

Sample	Sample ID	Nuclide	Quarter	Units	EnRad Value	EZA Value	EnRad/EZA Ratio	Evaluation
Beta Filter in Planchet	E12500	Cs-137	1	pCi	170	164	1.04	Agreement
	E12505	Cs-137	2	pCi	231	224	1.03	Agreement
I-131 in Charcoal in Cartridge	E12499	I-131	1	pCi	79.5	75.8	1.05	Agreement
	E12506	I-131	3	pCi	99.9	95.5	1.05	Agreement
Gamma in Composite Filter	E12498	Ce-141	1	pCi	83.8	78.0	1.07	Agreement
		Co-58	1	pCi	100	95.5	1.05	Agreement
		Co-60	1	pCi	212	199	1.06	Agreement
		Cr-51	1	pCi	208	195	1.07	Agreement
		Cs-134	1	pCi	110	107	1.03	Agreement
		Cs-137	1	pCi	141	131	1.08	Agreement
		Fe-59	1	pCi	116	106	1.09	Agreement
		Mn-54	1	pCi	105	95.3	1.10	Agreement
		Zn-65	1	pCi	158	147	1.08	Agreement
Gamma in Simulated Vegetation	E12509	Ce-141	3	pCi/g	0.279	0.273	1.02	Agreement
		Co-58	3	pCi/g	0.281	0.286	0.98	Agreement
		Co-60	3	pCi/g	0.343	0.345	1.00	Agreement
		Cr-51	3	pCi/g	0.612	0.542	1.13	Agreement
		Cs-134	3	pCi/g	0.312	0.339	0.92	Agreement
		Cs-137	3	pCi/g	0.252	0.247	1.02	Agreement
		Fe-59	3	pCi/g	0.278	0.243	1.14	Agreement
		Mn-54	3	pCi/g	0.265	0.252	1.05	Agreement
		Zn-65	3	pCi/g	0.519	0.480	1.08	Agreement

TABLE 4.0-A (Cont.)

Sample	Sample ID	Nuclide	Quarter	Units	EnRad Value	EZA Value	EnRad/EZA Ratio	Evaluation
Gamma in Water	E12510	Ce-141	3	pCi/L	138	130	1.06	Agreement
		Co-58	3	pCi/L	143	136	1.05	Agreement
		Co-60	3	pCi/L	170	164	1.04	Agreement
		Cr-51	3	pCi/L	265	257	1.03	Agreement
		Cs-134	3	pCi/L	150	161	0.93	Agreement
		Cs-137	3	pCi/L	123	117	1.05	Agreement
		Fe-59	3	pCi/L	127	115	1.10	Agreement
		I-131	3	pCi/L	93.6	90.8	1.03	Agreement
		Mn-54	3	pCi/L	129	120	1.07	Agreement
		Zn-65	3	pCi/L	259	228	1.14	Agreement
Gamma in Milk	E12501A	Ce-141	1	pCi/L	120	117	1.03	Agreement
		Co-58	1	pCi/L	141	143	0.98	Agreement
		Co-60	1	pCi/L	303	299	1.01	Agreement
		Cr-51	1	pCi/L	303	293	1.03	Agreement
		Cs-134	1	pCi/L	146	160	0.91	Agreement
		Cs-137	1	pCi/L	202	196	1.03	Agreement
		Fe-59	1	pCi/L	170	159	1.07	Agreement
		Mn-54	1	pCi/L	149	143	1.04	Agreement
		Zn-65	1	pCi/L	227	220	1.03	Agreement
Milk LLI-131	E12501A	I-131	1	pCi/L	96.8	89.5	1.08	Agreement
Gross Beta in Water	E12503	Cs-137	2	pCi/L	240	245	0.98	Agreement
	E12508	Cs-137	3	pCi/L	243	252	0.96	Agreement
Tritium in Water	E12504	H-3	2	pCi/L	14100	13900	1.01	Agreement
	E12507	H-3	3	pCi/L	14000	14000	1.00	Agreement

TABLE 4.0-B

2019 ENVIRONMENTAL DOSIMETER

CROSS-CHECK RESULTS

Nuclear Technology Services

Radiation Dosimetry and Records participates in a quarterly TLD intercomparison program administered by Nuclear Technology Services, Inc. of Roswell, GA. Nuclear Technology Services irradiates environmental dosimeters quarterly and sends them to Radiation Dosimetry and Records group for analysis of the unknown estimated delivered exposure. The individual measurements were evaluated and results falling outside the acceptable ratio criteria had an evaluation performed to identify any recommended remedial actions and to reduce anomalous errors.

1st Quarter 2019						2nd Quarter 2019					
TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail	TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail
102973	77.70	79.96	-2.83	<+/-15%	Pass	101136	17.08	18.36	-6.97	<+/-15%	Pass
103309	80.41	79.96	0.56	<+/-15%	Pass	101219	16.52	18.36	-10.02	<+/-15%	Pass
103305	80.21	79.96	0.31	<+/-15%	Pass	100078	16.78	18.36	-8.61	<+/-15%	Pass
103090	80.10	79.96	0.18	<+/-15%	Pass	101364	17.45	18.36	-4.96	<+/-15%	Pass
103102	79.93	79.96	-0.04	<+/-15%	Pass	100239	17.01	18.36	-7.35	<+/-15%	Pass
Average Bias (B)			-0.36			Average Bias (B)			-7.58		
Standard Deviation (S)			1.39			Standard Deviation (S)			1.89		
Measure Performance B +S			1.76	<15%	Pass	Measure Performance B +S			9.47	<15%	Pass
3rd Quarter 2019						4th Quarter 2019					
TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail	TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail
101305	62.24	61.34	1.47	<+/-15%	Pass	104285	49.10	49.31	-0.43	<+/-15%	Pass
101297	61.64	61.34	0.49	<+/-15%	Pass	104300	47.94	49.31	-2.78	<+/-15%	Pass
101333	57.74	61.34	-5.87	<+/-15%	Pass	104288	49.20	49.31	-0.22	<+/-15%	Pass
101350	60.01	61.34	-2.17	<+/-15%	Pass	104298	47.73	49.31	-3.20	<+/-15%	Pass
100417	60.73	61.34	-0.99	<+/-15%	Pass	104314	48.91	49.31	-0.81	<+/-15%	Pass
Average Bias (B)			-1.42			Average Bias (B)			-1.49		
Standard Deviation (S)			2.85			Standard Deviation (S)			1.40		
Measure Performance B +S			4.27	<15%	Pass	Measure Performance B +S			2.88	<15%	Pass

TABLE 4.0-B (Cont.)

2019 ENVIRONMENTAL DOSIMETER

CROSS CHECK RESULTS

Internal Crosscheck (Duke Energy)

Radiation Dosimetry and Records participates in a quarterly TLD internal comparison program administered internally by the Dosimetry Lab. The Dosimetry Lab Staff irradiates environmental dosimetry quarterly and submits them for analysis of the unknown estimated delivered exposure.

1st Quarter 2019						2nd Quarter 2019					
TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail	TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail
103690	39.63	36.00	10.08	<+/-15%	Pass	102290	51.51	48.00	7.31	<+/-15%	Pass
103101	39.48	36.00	9.67	<+/-15%	Pass	102029	51.48	48.00	7.25	<+/-15%	Pass
102869	38.28	36.00	6.33	<+/-15%	Pass	103742	52.75	48.00	9.90	<+/-15%	Pass
102239	37.20	36.00	3.33	<+/-15%	Pass	102931	50.63	48.00	5.48	<+/-15%	Pass
103433	38.17	36.00	6.03	<+/-15%	Pass	103194	51.38	48.00	7.04	<+/-15%	Pass
103586	38.81	36.00	7.81	<+/-15%	Pass	102738	52.11	48.00	8.56	<+/-15%	Pass
102881	39.45	36.00	9.58	<+/-15%	Pass	103721	52.96	48.00	10.33	<+/-15%	Pass
102189	36.77	36.00	2.14	<+/-15%	Pass	102336	50.92	48.00	6.08	<+/-15%	Pass
100358	35.33	36.00	-1.86	<+/-15%	Pass	102442	49.03	48.00	2.15	<+/-15%	Pass
103381	38.37	36.00	6.58	<+/-15%	Pass	102089	51.36	48.00	7.00	<+/-15%	Pass
Average Bias (B)			5.97			Average Bias (B)			7.11		
Standard Deviation (S)			3.81			Standard Deviation (S)			2.33		
Measure Performance B +S			9.78	<15%	Pass	Measure Performance B +S			9.44	<15%	Pass
3rd Quarter 2019						4th Quarter 2019					
TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail	TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail
104054	17.49	18.0	-2.83	<+/-15%	Pass	100958	26.21	27.00	-2.93	<+/-15%	Pass
104051	17.77	18.0	-1.28	<+/-15%	Pass	101322	26.76	27.00	-0.89	<+/-15%	Pass
104148	17.41	18.0	-3.28	<+/-15%	Pass	101180	26.95	27.00	-0.19	<+/-15%	Pass
101165	18.16	18.0	0.89	<+/-15%	Pass	101275	26.52	27.00	-1.78	<+/-15%	Pass
101170	18.10	18.0	0.56	<+/-15%	Pass	101104	25.70	27.00	-4.81	<+/-15%	Pass
101278	18.45	18.0	2.50	<+/-15%	Pass	104038	26.30	27.00	-2.59	<+/-15%	Pass
100570	17.93	18.0	-0.39	<+/-15%	Pass	101215	27.33	27.00	1.22	<+/-15%	Pass
100062	18.50	18.0	2.78	<+/-15%	Pass	101252	26.57	27.00	-1.59	<+/-15%	Pass
104129	17.79	18.0	-1.17	<+/-15%	Pass	101249	26.74	27.00	-0.96	<+/-15%	Pass
104128	17.75	18.0	-1.39	<+/-15%	Pass	101251	25.91	27.00	-4.04	<+/-15%	Pass
Average Bias (B)			-0.36			Average Bias (B)			-1.86		
Standard Deviation (S)			2.04			Standard Deviation (S)			1.80		
Measure Performance B +S			2.41	<15%	Pass	Measure Performance B +S			3.66	<15%	Pass

TABLE 4.0-C

2019 GEL Laboratories, LLC QA Results

Interlaboratory cross check samples from Eckert & Ziegler Analytics (EZA) and Proficiency Tests from the Department of Energy Mixed Analyte Performance Evaluation Program (MAPEP) were received and analyzed by GEL in all four quarters of 2019 from EZA and in two quarters from MAPEP. Table 4.0-C lists the performance for specific samples. Table 4.0-C may not be applicable to all plants/stations.

Sample	Sample ID	Nuclide	Quarter	Units	GEL Value	Known Value	Acceptance Range/Ratio	Evaluation
Hard To Detect in Soil	MAPEP - 19- MaS40	Fe-55	2	Bq/kg	486	344	241 - 447	Non-Agreement ⁽¹⁾
		Ni-63	2	Bq/kg	524	519	363 - 675	Agreement
		Sr-90	2	Bq/kg	3.44	N/A	False Pos Test	Agreement
	MAPEP- 19-MaS41	Fe-55	4	Bq/kg	-48	N/A	False Pos Test	Agreement
		Ni-63	4	Bq/kg	552	629	440 - 818	Agreement
		Sr-90	4	Bq/kg	609	572	400 - 744	Agreement
I-131 in Milk with EZA	E12362	I-131	2	pCi/L	85.1	81.4	1.05	Agreement
	E12370	I-131	3	pCi/L	92.8	92.1	1.01	Agreement
	E12374	I-131	4	pCi/L	93.4	94.5	0.99	Agreement
Gross Beta in Water with EZA	E12550	Cs-137	2	pCi/L	251	244	1.03	Agreement ⁽²⁾

(1) GEL CARR (Corrective Action Request and Report) 190603-1212

(2) Several sets of first quarter 2019 Gross Beta in Water analyses were analyzed at GEL.

APPENDIX A

ENVIRONMENTAL SAMPLING
&
ANALYSIS PROCEDURES

APPENDIX A

ENVIRONMENTAL SAMPLING AND ANALYSIS PROCEDURES

Adherence to established procedures for sampling and analysis of all environmental media at McGuire Nuclear Station was required to ensure compliance with Station Selected Licensee Commitments. Analytical procedures were employed to ensure that Selected Licensee Commitments detection capabilities were achieved.

Environmental sampling and analyses were performed by EnRad Laboratories, Dosimetry and Records, Environmental Services, and General Engineering Laboratories, LLC.

This appendix describes the environmental sampling frequencies and analysis procedures by media type.

I. CHANGE OF SAMPLING PROCEDURES

Indicator TLD Location 154 (Inner Ring, W sector 0.45 miles) was minimally relocated beginning fourth quarter due to flood damage along the riverbank where TLD was previously placed (NCR # 02276956, NCR # 02291464).

II. DESCRIPTION OF ANALYSIS PROCEDURES

Gamma spectroscopy analyses are performed using high purity germanium gamma detectors and Canberra analytical software. Designated sample volumes are transferred to appropriate counting geometries and analyzed by gamma spectroscopy. Perishable samples such as fish and broadleaf vegetation are ground to achieve a homogeneous mixture. Soils and sediments are dried, sifted to remove foreign objects (rocks, clams, glass, etc.) then transferred to appropriate counting geometry.

Low-level iodine analyses are performed by passing a designated sample aliquot through a pre-weighed amount of ion exchange resin to remove and concentrate any iodine in the aqueous sample (milk). The resin is then dried, mixed thoroughly, and a net resin weight determined before being transferred to appropriate counting geometry and analyzed by gamma spectroscopy.

Tritium analyses are performed by using low-level environmental liquid scintillation analysis technique on a Perkin-Elmer 4910TR liquid scintillation system or Perkin-Elmer 3100TR liquid scintillation system. Tritium samples are distilled and batch processed with a laboratory fortified blank, matrix spike, matrix spike duplicate, and blank to verify instrument performance and sample preparation technique are acceptable.

Gross beta analysis of air filters is performed by analyzing filters on Tennelec XLB Series gas-flow proportional counters. Samples are batch processed with a blank to ensure sample contamination has not occurred.

Gross beta analysis of liquid samples is performed by concentrating a designated aliquot of sample and analyzing by Perkin-Elmer 4910TR liquid scintillation system or a Perkin-Elmer 3110TR liquid scintillation system. Samples are batch processed with a blank to ensure sample contamination has not occurred.

III. CHANGE OF ANALYSIS PROCEDURES

Beginning in January 2019 the analysis procedure for Gross Beta in Drinking Water was changed. The samples are prepared similar to ASTM Method D7283-17, Alpha and Beta Activity in Water by Liquid Scintillation Counting, by concentrating an aliquot of sample and analyzing on a Perkin-Elmer 4910TR liquid scintillation system or a Perkin-Elmer 3110TR liquid scintillation system. The results are reported as activities, which are calculated to be above the MDA or less than the calculated MDA (NCR# 02303031).

IV. SAMPLING AND ANALYSIS PROCEDURES

A.1 AIRBORNE PARTICULATE AND RADIOIODINE

Airborne particulate and radioiodine samples at each of seven locations were composited continuously by means of continuous air samplers. Air particulates were collected on a particulate filter and radioiodines were collected in a charcoal cartridge positioned behind the filter in the sampler. The samplers are designed to operate at a constant flow rate (in order to compensate for any filter loading) and are set to sample approximately 2 cubic feet per minute. Filters and cartridges were collected weekly. A separate weekly gamma analysis was performed on each charcoal cartridge and air particulate. A weekly gross beta analysis was performed on each filter. The continuous composite samples were collected from the locations listed below.

Location 102 = Amity Church Road (9.89 mi. WNW)(Control)

Location 103 = Cottonwood (4.20 mi. NE)

Location 120 = Site Boundary (0.46 mi. NNE)

Location 121 = Site Boundary (0.47 mi. NE)

Location 125 = Site Boundary (0.38 mi. SW)

Location 133 = Cornelius (6.23 mi. ENE)

Location 195 = Fishing Access Road (0.19 mi. N)

A.2 DRINKING WATER

Monthly composite samples were collected. A gross beta and gamma analysis was performed on monthly composites. Tritium analysis was performed on the quarterly composites. The composites were collected monthly from the locations listed below.

Location 101 = North Mecklenburg Water Treatment Facility (3.31 mi E)

Location 119 = Mt. Holly Municipal Water Supply (7.40 mi. SSW)
Location 132 = Charlotte Municipal Water Supply (11.1 mi. SSE)
Location 136 = Mooresville Municipal Water Supply (12.7 mi. NNE) (Control)
Location 194 = East Lincoln County Water Supply (6.73 mi. NNW)

A.3 SURFACE WATER

Monthly composite samples were collected. A gamma analysis was performed on the monthly composites. Tritium analysis was performed on the quarterly composites sample. The composites were collected monthly from the locations listed below.

Location 128 = Discharge Canal Bridge (0.45 mi. NE)
Location 131 = Cowans Ford Dam (0.64 mi. WNW)
Location 135 = Plant Marshall Intake Canal (11.9 mi. N) (Control)

A.4 MILK

Biweekly grab samples were collected at one location. A gamma and low-level Iodine-131 analysis was performed on each sample. The biweekly grab samples were collected from the location listed below.

Location 142 = Lowman Dairy – Cows (12.2 mi. NNW) (Control)

A.5 BROADLEAF VEGETATION

Monthly samples were collected as available and a gamma analysis was performed on each sample. The samples were collected from the locations listed below.

Location 102 = Amity Church Road (9.89 mi. WNW) (Control)
Location 120 = Site Boundary (0.46 mi. NNE)
Location 125 = Site Boundary (0.38 mi. SW)
Location 193 = Site Boundary (0.19 mi. N)

A.6 FOOD PRODUCTS

Samples were collected monthly when available during the harvest season and a gamma analysis was performed on each. The samples were collected at the location listed below.

Location 155 = Island Forest Drive (4.87 mi. NNE)

A.7 FISH

Semiannual samples were collected and a gamma analysis was performed on the edible portions of each sample. Boney fish (i.e. Sunfish) were prepared whole minus the head and tail portions. The samples were collected from the locations listed below.

Location 129 = Discharge Canal Entrance to Lake Norman (0.51 mi. ENE)
Location 137 = Pinnacle Access Area (12.0 mi. N) (Control)

A.8 SHORELINE SEDIMENT

Semiannual samples were collected and a gamma analysis was performed on each following the drying and removal of rocks and clams. The samples were collected from the locations listed below.

Location 129 = Discharge Canal Entrance to Lake Norman (0.51 mi. ENE)
Location 130 = Highway 73 Bridge Downstream (0.52 mi. SW)
Location 137 = Pinnacle Access Area (12.0 mi. N) (Control)

A.9 DIRECT GAMMA RADIATION (TLD)

Thermoluminescent dosimeters (TLD) were collected quarterly at forty-one locations. A gamma exposure rate was determined for each TLD. TLD locations are listed in Table 2.1-B. The TLDs were placed as indicated below.

- * An inner ring of 14 TLDs at the site boundary, one in each available meteorological sector. The site boundary locations in the N and NNW sectors are over water; however, two special interest TLD's were placed in these sectors inside the site boundary in March, 1991.
- * An outer ring of 16 TLDs, one in each meteorological sector in the 6 to 8 kilometer range.
- * The remaining TLDs were placed in special interest areas such as population centers, residential areas, schools, and control locations.

A.10 ANNUAL LAND USE CENSUS

An annual Land Use Census was conducted to identify within a distance of 8 kilometers (5.0 miles) from the station, the nearest location from the site boundary in each of the sixteen meteorological sectors, the following:

- * The Nearest Residence
- * The Nearest Garden greater than 50 square meters or 500 square feet
- * The Nearest Milk-giving Animal (cow, goat, etc.)

The census was conducted during the growing season 6/5 - 6/6/2019. Results are shown in Table 3.10. No changes were made to the sampling procedures during 2019 as a result of the 2019 census.

In the environmental program, the air deposition parameters (D/Q) are used to determine air, broadleaf vegetation and milk sampling locations. McGuire's sectors with the three highest values did not change in 2019.

V. GLOBAL POSITIONING SYSTEM (GPS) ANALYSIS

The McGuire site centerline used for GPS measurements was referenced from the McGuire Nuclear Station Updated Final Safety Analysis Report (UFSAR), section 2.1.1, Site Location. Waypoint coordinates used for MNS GPS measurements were latitude 35°-25'-59"N and longitude 80°-56'-55"W. Maps and tables were generated using North American Datum (NAD) 27. Data normally reflect accuracy to within 2 to 5 meters from point of measurement. GPS field measurements were taken as close as possible to the item of interest. Distances for the locations are displayed using three significant figures.

APPENDIX B

**RADIOLOGICAL
ENVIRONMENTAL MONITORING
PROGRAM**

SUMMARY OF RESULTS

**MCGUIRE NUCLEAR STATION
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM DATA SUMMARY**

McGuire Nuclear Station
Mecklenburg County, North Carolina

Docket Numbers 50-369, 370
Calendar Year 2019

Medium or Pathway Sampled or Measured (Unit of Measurement)	Type and Total No. of Measurements Performed	Lower Limit of Detection (LLD) ⁽¹⁾	All Indicator Locations ^{(2) (3)} Mean Range	Location w/Highest Annual Mean		Control Locations Mean Range ^{(2) (3)}	No. of Non-Routine Report Meas.
				Name, Distance, and Direction	Mean Range ^{(2) (3)}		
Air Particulate (pCi/m ³)	Gross Beta 364 ⁽⁴⁾	See Table 2.2-C	2.29E-2 (312/312) 8.74E-3 – 4.82E-2	195 (0.19 mi N)	2.36E-2 (52/52) 1.11E-2 – 4.62E-2	102 (9.89 mi WNW) 2.32E-2 (52/52) 1.01E-2 – 4.15E-2	0
	Gamma 28 ⁽⁴⁾	See Table 2.2-C	All less than LLD	----	----	All less than LLD	0
Air Radioiodine (pCi/m ³)	Gamma 364 ⁽⁴⁾	See Table 2.2-C	All less than LLD	----	----	All less than LLD	0
Drinking Water (pCi/l)	Gross Beta 65	4	4.07E+00 (13/52) 3.35E+00 – 5.74E+00	194 (6.73 mi NNW)	4.51E+00 (3/13) 3.70E+00 – 5.74E+00	136 (12.7 mi NNE) 4.22E+00 (3/13) 3.27E+00 – 5.58E+00	0
	Gamma 65	See Table 2.2-C	All less than LLD	----	----	All less than LLD	0
	Tritium ⁽⁶⁾ 20	2000	3.49E+2 (10/16) 2.29E+02 – 5.24E+02	101 (3.31 mi E)	4.36E+02 (4/4) 3.48E+02 – 5.24E+02	All less than LLD	0
Surface Water (pCi/l)	Gamma 39	See Table 2.2-C	All less than LLD	----	----	All less than LLD	0
	Tritium ⁽⁶⁾ 12	2000	4.74E+2 (5/8) 3.42E+02 – 5.31E+02	128 (0.45 mi NE)	5.07E+2 (4/4) 4.90E+02 – 5.31E+02	All less than LLD	0
Milk (pCi/l)	Gamma 26	See Table 2.2-C	No Indicator Location	----	----	All less than LLD	0
	I-131 ⁽⁴⁾⁽⁷⁾ 26	See Table 2.2-C	No Indicator Location	----	----	142 (12.2 mi NNW) 1.44E+00 (1/26) 1.44E+00 – 1.44E+00	0

**MCGUIRE NUCLEAR STATION
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM DATA SUMMARY**

McGuire Nuclear Station
Mecklenburg County, North Carolina

Docket Numbers 50-369, 370
Calendar Year 2019

Medium or Pathway Sampled or Measured (Unit of Measurement)	Type and Total No. of Measurements Performed	Lower Limit of Detection (LLD) ⁽¹⁾	All Indicator Locations ⁽²⁾⁽³⁾ Mean Range	Location w/Highest Annual Mean		Control Locations Mean Range ⁽²⁾⁽³⁾	No. of Non-Routine Report Meas.
				Name, Distance, and Direction	Mean Range ⁽²⁾⁽³⁾		
Broadleaf Vegetation (pCi/kg, wet)	Gamma 48	See Table 2.2-C	All less than LLD	-----	-----	All less than LLD	0
Food Products (pCi/kg, wet)	Gamma 12	See Table 2.2-C	All less than LLD	-----	-----	No Control Location	0
Fish (pCi/kg, wet)	Gamma 12	See Table 2.2-C	All less than LLD	-----	-----	All less than LLD	0
Sediments--Shoreline (pCi/kg, dry)	Gamma 6	See Table 2.2-C	All less than LLD	-----	-----	All less than LLD	0
Direct Gamma Radiation (TLD) (mR per quarter)	TLD Readout 162 ⁽⁴⁾⁽⁵⁾	-----	1.65E+01 (158/158) 1.02E+01 – 2.85E+01	180 (12.7 mi NNE)	2.52E+01 (4/4) 2.17E+01 – 2.85E+01	175 (15.5 mi WNW) 2.32E+01 (4/4) 2.09E+01 – 2.51E+01	0

Footnotes to Appendix B

1. The Lower Limit of Detection (LLD) is the smallest concentration of radioactive material in a sample that will yield a net count above system background which will be detected with 95 percent probability and with only 5 percent probability of falsely concluding that a blank observation represents a "real" signal. Due to counting statistics and varying volumes, occasionally lower LLDs are achieved. Refer to Analytical Procedures Section/Gamma Spectrometry for an explanation of how LLD values were derived.
2. Mean and range are based on detectable measurements only.
3. The fractions of all samples with detectable activities at specific locations are indicated in parentheses.
4. Missing samples or surveillances are discussed in Appendix C or Appendix D.
5. TLD exposure is reported in milliroentgen (mR) per standard quarter (91 days). TLD data indicated in section 3.9 (Direct Gamma Radiation) are reported in mrem /yr ($n * 0.95 \text{ ergs/g-Roentgen}$)².
6. Quarterly tritium composites determined using quarter days (92 days +/- 25% (23 days)).
7. Low-level Iodine-131 laboratory contamination event of control milk sample (NCR # 02283264).

² Cember, H. (2009). Introduction to Health Physics, 4th Edition. United States: McGraw-Hill Companies, Inc.

APPENDIX C

**SAMPLING DEVIATIONS
&
UNAVAILABLE ANALYSES**

APPENDIX C

MCGUIRE NUCLEAR STATION SAMPLING DEVIATIONS & UNAVAILABLE ANALYSES

DEVIATION & UNAVAILABLE REASON CODES			
BF	Blown Fuse	PM	Preventive Maintenance
CN	Construction	PO	Power Outage
FZ	Sample Frozen	PS	Pump out of service / Undergoing repair
IV	Insufficient Volume	SL	Sample Loss/Lost due to Lab Accident
IW	Inclement Weather	SM	Motor / Rotor Seized
LC	Line Clog to Sampler	SU	Seasonally Unavailable
OT	Other	TF	Torn Filter
PI	Power Interrupt	VN	Vandalism

C.1 SAMPLING DEVIATIONS

Air Particulate and Air Radioiodine

REMP weekly air samples (Air Particulate (AP) or Air Radioiodine (AR)) that experience any downtime during a surveillance period are reported as a Deviation and classified as a “Sampling Deviation.” However, the sample is counted and the data reported, whereas a Deviation with no available sample is classified as an “Unavailable Analyses” and does not have any data reported. The air samplers operated for a total of 99.94% availability in 2019.

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
103	1/7 – 1/14/2019	PI	10.23 hours downtime due to power interruption, cause undetermined.	NCR # 02252369
103	1/14 – 1/21/2019	PI	5.48 hours downtime due to power interruption, cause undetermined.	NCR # 02253472
120	3/11 – 3/18/2019	PI	1.10 hours downtime due to power interruption, loss of retail power.	NCR # 02263494
121	3/11 – 3/18/2019	PI	1.12 hours downtime due to power interruption, loss of retail power.	NCR # 02263498
195	3/11 – 3/18/2019	PI	1.46 hours downtime due to power interruption, loss of retail power.	NCR # 02263501
125	5/6 – 5/13/2019	PO	2.87 hours downtime due to power outage, cause undetermined.	NCR # 02272394
125	5/13 – 5/20/2019	PO	17.22 hours downtime due to power outage, cause undetermined.	NCR # 02273622
133	9/9 – 9/16/2019	PI	1.08 hours downtime due to power interruption, cause undetermined.	NCR # 02291987

Drinking Water and Surface Water

REMP monthly drinking water samples (Drinking Water (DW)) or surface water samples (Surface Water (SW)) that experience any downtime during a surveillance period are reported as a Deviation and classified as a “Sampling Deviation.” However, the sample is counted and the data reported, whereas a Deviation with no available sample is classified as an “Unavailable Analyses” and does not have any data reported. The drinking and surface water samplers operated for a total of 100% availability in 2019. There were no drinking water or surface water sampling deviations or unavailable samples during 2019.

C.2 UNAVAILABLE ANALYSES

TLD

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
154	3/13 – 6/12/2019	IW	TLD missing at time of collection due to flood damage to area where TLD was placed. Significant river bank erosion caused the TLD to be irretrievable.	NCR # 02276956
154	6/12 – 9/11/2019	CN	TLD damaged due to construction and repairs for flood damage mitigation of river bank. Third quarter TLDs were damaged by heavy earth moving equipment and were not usable.	NCR # 02291464

APPENDIX D

ANALYTICAL DEVIATIONS

APPENDIX D

MCGUIRE NUCLEAR STATION ANALYTICAL DEVIATIONS

DEVIATION & UNAVAILABLE REASON CODES			
AD	Analytical Deviation	PM	Preventive Maintenance
BF	Blown Fuse	PO	Power Outage
CN	Construction	PS	Pump out of service / Undergoing repair
FZ	Sample Frozen	SL	Sample Loss/Lost due to Lab Accident
IV	Insufficient Volume	SM	Motor / Rotor Seized
IW	Inclement Weather	SU	Seasonally Unavailable
LC	Line Clog to Sampler	TF	Torn Filter
OT	Other	VN	Vandalism
PI	Power Interrupt		

D.1 ANALYTICAL DEVIATIONS

Milk

MNS REMF milk samples are collected every two weeks from control location 142 which is located outside the influence of the plant operation (NNW Sector at 12.2 miles). The low-level Iodine-131 (LLI-131) analysis of location 142 milk sample collected 08JUL2019 indicated Iodine-131 concentration of 1.44E0 pCi/L. The sample was analyzed on different instruments, confirming the activity. Since this sample was taken from a control location, and there is no known source of I-131 in the environment near the sample location, it was determined that the likely source of the I-131 was a cross-contamination in the laboratory. Investigation revealed that an I-131 contaminated quality control separatory funnel was used to prepare the sample in the lab for analysis and contaminated it.

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
142	7/8/2019	AD	Control location milk sample was contaminated in the laboratory. A contaminated separatory funnel was used to prepare the sample for analysis, inadvertently contaminating the sample with Iodine-131. No personnel who collected, handled, analyzed, and processed the milk sample had received any Iodine-131 radiopharmaceutical treatments or testing during this time. Laboratory personnel were coached and glassware labeling was enhanced to prevent recurrence.	NCR # 02283264

TLDs

McGuire environmental Alpha (A) and Bravo (B) TLDs are co-located TLDs at each TLD location placed next to each other to comply with ANSI/HPS N13.37-2014 Section 7.1 Paragraph 7. The 3Q2019 TLD collection indicated vandalism with one of the two co-located location 191 TLDs during third quarter 2019. The Alpha (A) TLD was intact, available, was collected, and did not appear to have experienced any tampering or vandalism. The Bravo (B) TLD was found on the ground destroyed and unusable. The Alpha (A) TLD was collected and analyzed but did not get averaged with the unusable Bravo (B) TLD which is normally included in the established process.

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
191	6/12 – 9/11/2019	VN	Bravo TLD vandalized, unusable, 1 TLD reported.	NCR # 02291467

APPENDIX E

**RADIOLOGICAL
ENVIRONMENTAL MONITORING
PROGRAM RESULTS**

2019

This appendix includes sample analysis report summaries and supportive data generated from each sample medium for 2019.

MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 102 [CONTROL - WNW @ 9.89 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
492216	12/31/2018 - 1/7/2019	Beta	1.34E-02	2.34E-03	2.65E-03
492464	1/7/2019 - 1/14/2019	Beta	1.94E-02	2.72E-03	2.82E-03
492894	1/14/2019 - 1/21/2019	Beta	1.73E-02	2.61E-03	2.86E-03
493321	1/21/2019 - 1/28/2019	Beta	2.13E-02	2.83E-03	2.93E-03
493580	1/28/2019 - 2/4/2019	Beta	2.79E-02	3.49E-03	3.43E-03
493806	2/4/2019 - 2/11/2019	Beta	2.46E-02	2.96E-03	2.86E-03
494348	2/11/2019 - 2/18/2019	Beta	1.72E-02	2.64E-03	2.93E-03
494971	2/18/2019 - 2/25/2019	Beta	1.01E-02	2.54E-03	3.29E-03
495390	2/25/2019 - 3/4/2019	Beta	2.05E-02	3.04E-03	3.16E-03
496308	3/4/2019 - 3/11/2019	Beta	2.28E-02	2.82E-03	2.69E-03
496718	3/11/2019 - 3/18/2019	Beta	2.32E-02	3.21E-03	3.33E-03
496649	3/18/2019 - 3/25/2019	Beta	1.92E-02	2.72E-03	2.85E-03
497569	3/25/2019 - 4/1/2019	Beta	2.10E-02	2.97E-03	2.93E-03
497576	12/31/2018 - 4/1/2019	Cs-134	<1.25E-03	0.00E+00	1.25E-03
		Cs-137	<1.63E-03	0.00E+00	1.63E-03
		Be-7	1.70E-01	4.29E-02	3.81E-02
		K-40	<2.89E-02	0.00E+00	2.89E-02
498037	4/1/2019 - 4/8/2019	Beta	1.76E-02	3.04E-03	3.46E-03
498607	4/8/2019 - 4/15/2019	Beta	1.19E-02	2.31E-03	2.78E-03
498787	4/15/2019 - 4/22/2019	Beta	1.28E-02	2.36E-03	2.75E-03
499460	4/22/2019 - 4/29/2019	Beta	2.37E-02	2.84E-03	2.66E-03
499881	4/29/2019 - 5/6/2019	Beta	1.78E-02	3.06E-03	3.49E-03
500127	5/6/2019 - 5/13/2019	Beta	1.50E-02	2.48E-03	2.80E-03
500463	5/13/2019 - 5/20/2019	Beta	2.72E-02	2.97E-03	2.61E-03
500744	5/20/2019 - 5/28/2019	Beta	2.96E-02	2.86E-03	2.29E-03
501134	5/28/2019 - 6/3/2019	Beta	2.78E-02	3.24E-03	2.82E-03
501949	6/3/2019 - 6/10/2019	Beta	2.01E-02	3.06E-03	3.20E-03



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m³

Sample Point 102 [CONTROL - WNW @ 9.89 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
502208	6/10/2019 - 6/17/2019	Beta	2.25E-02	2.86E-03	2.84E-03
502415	6/17/2019 - 6/24/2019	Beta	1.88E-02	2.64E-03	2.71E-03
503402	6/24/2019 - 7/1/2019	Beta	3.15E-02	3.54E-03	3.14E-03
503409	4/1/2019 - 7/1/2019	Cs-134	<1.47E-03	0.00E+00	1.47E-03
		Cs-137	<1.87E-03	0.00E+00	1.87E-03
		Be-7	1.61E-01	4.17E-02	4.31E-02
		K-40	<2.84E-02	0.00E+00	2.84E-02
503839	7/1/2019 - 7/8/2019	Beta	2.74E-02	3.02E-03	2.76E-03
504202	7/8/2019 - 7/15/2019	Beta	1.91E-02	2.74E-03	2.95E-03
504444	7/15/2019 - 7/22/2019	Beta	2.36E-02	2.84E-03	2.70E-03
504659	7/22/2019 - 7/29/2019	Beta	2.09E-02	2.78E-03	2.78E-03
504927	7/29/2019 - 8/5/2019	Beta	2.47E-02	3.28E-03	3.22E-03
505147	8/5/2019 - 8/12/2019	Beta	3.41E-02	3.71E-03	3.24E-03
505534	8/12/2019 - 8/19/2019	Beta	2.99E-02	3.52E-03	3.38E-03
505860	8/19/2019 - 8/26/2019	Beta	2.00E-02	2.76E-03	2.87E-03
506368	8/26/2019 - 9/3/2019	Beta	2.45E-02	3.05E-03	2.99E-03
507295	9/3/2019 - 9/9/2019	Beta	3.93E-02	4.28E-03	3.81E-03
507824	9/9/2019 - 9/16/2019	Beta	4.15E-02	3.97E-03	3.35E-03
508358	9/16/2019 - 9/23/2019	Beta	3.46E-02	3.80E-03	3.59E-03
509230	9/23/2019 - 9/30/2019	Beta	3.38E-02	3.22E-03	2.57E-03
509237	7/1/2019 - 9/30/2019	Cs-134	<1.37E-03	0.00E+00	1.37E-03
		Cs-137	<8.90E-04	0.00E+00	8.90E-04
		Be-7	1.83E-01	4.22E-02	3.29E-02
		K-40	1.25E-02	1.46E-02	2.31E-02
509832	9/30/2019 - 10/7/2019	Beta	3.80E-02	3.89E-03	3.44E-03
510533	10/7/2019 - 10/14/2019	Beta	2.11E-02	3.21E-03	3.52E-03
510827	10/14/2019 - 10/21/2019	Beta	2.20E-02	2.73E-03	2.48E-03
511229	10/21/2019 - 10/28/2019	Beta	2.17E-02	2.72E-03	2.57E-03
511468	10/28/2019 - 11/4/2019	Beta	1.86E-02	2.74E-03	2.99E-03



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 102 [CONTROL - WNW @ 9.89 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511874	11/4/2019 - 11/11/2019	Beta	3.14E-02	3.16E-03	2.69E-03
512179	11/11/2019 - 11/18/2019	Beta	2.55E-02	3.40E-03	3.44E-03
512480	11/18/2019 - 11/25/2019	Beta	2.19E-02	2.82E-03	2.85E-03
512663	11/25/2019 - 12/2/2019	Beta	1.93E-02	3.16E-03	3.57E-03
513624	12/2/2019 - 12/9/2019	Beta	1.61E-02	2.77E-03	3.03E-03
513939	12/9/2019 - 12/16/2019	Beta	1.44E-02	2.94E-03	3.64E-03
514160	12/16/2019 - 12/23/2019	Beta	2.38E-02	3.31E-03	3.52E-03
514476	12/23/2019 - 12/30/2019	Beta	2.52E-02	3.37E-03	3.38E-03
514483	9/30/2019 - 12/30/2019	Cs-134	<1.09E-03	0.00E+00	1.09E-03
		Cs-137	<1.12E-03	0.00E+00	1.12E-03
		Be-7	1.41E-01	3.81E-02	3.66E-02
		K-40	1.52E-02	1.40E-02	2.00E-02

Sample Point 103 [INDICATOR - NE @ 4.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492217	12/31/2018 - 1/7/2019	Beta	1.43E-02	2.44E-03	2.73E-03
492465	1/7/2019 - 1/14/2019	Beta	2.02E-02	2.84E-03	2.94E-03
492895	1/14/2019 - 1/21/2019	Beta	1.76E-02	2.72E-03	3.01E-03
493322	1/21/2019 - 1/28/2019	Beta	1.87E-02	2.67E-03	2.85E-03
493581	1/28/2019 - 2/4/2019	Beta	2.35E-02	3.37E-03	3.54E-03
493807	2/4/2019 - 2/11/2019	Beta	2.58E-02	2.98E-03	2.81E-03
494349	2/11/2019 - 2/18/2019	Beta	1.65E-02	2.64E-03	2.98E-03
494972	2/18/2019 - 2/25/2019	Beta	9.11E-03	2.42E-03	3.20E-03
495392	2/25/2019 - 3/4/2019	Beta	1.77E-02	2.96E-03	3.25E-03
496309	3/4/2019 - 3/11/2019	Beta	2.10E-02	2.71E-03	2.64E-03
496721	3/11/2019 - 3/18/2019	Beta	2.23E-02	3.20E-03	3.38E-03
496650	3/18/2019 - 3/25/2019	Beta	2.11E-02	2.75E-03	2.77E-03
497570	3/25/2019 - 4/1/2019	Beta	2.10E-02	3.03E-03	3.02E-03
497577	12/31/2018 - 4/1/2019	Cs-134	<1.65E-03	0.00E+00	1.65E-03
		Cs-137	<1.34E-03	0.00E+00	1.34E-03
		Be-7	1.89E-01	4.43E-02	3.42E-02
		K-40	<2.22E-02	0.00E+00	2.22E-02



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m³

Sample Point 103 [INDICATOR - NE @ 4.2 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
498038	4/1/2019 - 4/8/2019	Beta	1.84E-02	3.02E-03	3.38E-03
498608	4/8/2019 - 4/15/2019	Beta	1.34E-02	2.42E-03	2.83E-03
498788	4/15/2019 - 4/22/2019	Beta	1.42E-02	2.39E-03	2.68E-03
499461	4/22/2019 - 4/29/2019	Beta	2.24E-02	2.83E-03	2.73E-03
499882	4/29/2019 - 5/6/2019	Beta	1.56E-02	2.91E-03	3.43E-03
500128	5/6/2019 - 5/13/2019	Beta	1.35E-02	2.43E-03	2.85E-03
500464	5/13/2019 - 5/20/2019	Beta	2.59E-02	2.86E-03	2.54E-03
500745	5/20/2019 - 5/28/2019	Beta	2.44E-02	2.69E-03	2.35E-03
501135	5/28/2019 - 6/3/2019	Beta	2.86E-02	3.27E-03	2.81E-03
501950	6/3/2019 - 6/10/2019	Beta	1.85E-02	2.98E-03	3.21E-03
502209	6/10/2019 - 6/17/2019	Beta	2.10E-02	2.75E-03	2.77E-03
502416	6/17/2019 - 6/24/2019	Beta	1.69E-02	2.59E-03	2.78E-03
503403	6/24/2019 - 7/1/2019	Beta	2.82E-02	3.35E-03	3.07E-03
503410	4/1/2019 - 7/1/2019	Cs-134	<1.60E-03	0.00E+00	1.60E-03
		Cs-137	<1.42E-03	0.00E+00	1.42E-03
		Be-7	2.02E-01	4.16E-02	2.80E-02
		K-40	<2.63E-02	0.00E+00	2.63E-02
503840	7/1/2019 - 7/8/2019	Beta	2.60E-02	3.00E-03	2.82E-03
504203	7/8/2019 - 7/15/2019	Beta	1.83E-02	2.65E-03	2.87E-03
504445	7/15/2019 - 7/22/2019	Beta	2.40E-02	2.92E-03	2.80E-03
504660	7/22/2019 - 7/29/2019	Beta	2.26E-02	2.81E-03	2.73E-03
504928	7/29/2019 - 8/5/2019	Beta	2.78E-02	3.45E-03	3.28E-03
505148	8/5/2019 - 8/12/2019	Beta	3.48E-02	3.68E-03	3.15E-03
505535	8/12/2019 - 8/19/2019	Beta	2.93E-02	3.55E-03	3.46E-03
505861	8/19/2019 - 8/26/2019	Beta	1.54E-02	2.51E-03	2.83E-03
506369	8/26/2019 - 9/3/2019	Beta	2.45E-02	3.09E-03	3.04E-03
507296	9/3/2019 - 9/9/2019	Beta	3.65E-02	4.09E-03	3.68E-03



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m³

Sample Point 103 [INDICATOR - NE @ 4.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
507825	9/9/2019 - 9/16/2019	Beta	4.82E-02	4.28E-03	3.43E-03
508359	9/16/2019 - 9/23/2019	Beta	3.07E-02	3.61E-03	3.53E-03
509231	9/23/2019 - 9/30/2019	Beta	3.81E-02	3.41E-03	2.61E-03
509238	7/1/2019 - 9/30/2019	Cs-134	<1.64E-03	0.00E+00	1.64E-03
		Cs-137	<1.68E-03	0.00E+00	1.68E-03
		Be-7	1.62E-01	4.01E-02	3.77E-02
		K-40	<2.97E-02	0.00E+00	2.97E-02
509833	9/30/2019 - 10/7/2019	Beta	3.62E-02	3.76E-03	3.35E-03
510534	10/7/2019 - 10/14/2019	Beta	2.24E-02	3.35E-03	3.65E-03
510828	10/14/2019 - 10/21/2019	Beta	2.31E-02	2.74E-03	2.42E-03
511230	10/21/2019 - 10/28/2019	Beta	1.67E-02	2.52E-03	2.61E-03
511469	10/28/2019 - 11/4/2019	Beta	1.72E-02	2.63E-03	2.92E-03
511875	11/4/2019 - 11/11/2019	Beta	3.40E-02	3.31E-03	2.75E-03
512180	11/11/2019 - 11/18/2019	Beta	2.53E-02	3.36E-03	3.39E-03
512481	11/18/2019 - 11/25/2019	Beta	2.21E-02	2.86E-03	2.89E-03
512664	11/25/2019 - 12/2/2019	Beta	1.93E-02	3.11E-03	3.49E-03
513625	12/2/2019 - 12/9/2019	Beta	1.55E-02	2.78E-03	3.10E-03
513940	12/9/2019 - 12/16/2019	Beta	1.73E-02	3.06E-03	3.58E-03
514161	12/16/2019 - 12/23/2019	Beta	2.55E-02	3.42E-03	3.57E-03
514477	12/23/2019 - 12/30/2019	Beta	2.82E-02	3.45E-03	3.31E-03
514484	9/30/2019 - 12/30/2019	Cs-134	<1.29E-03	0.00E+00	1.29E-03
		Cs-137	<1.37E-03	0.00E+00	1.37E-03
		Be-7	1.32E-01	3.47E-02	3.04E-02
		K-40	<4.62E-03	0.00E+00	4.62E-03

Sample Point 120 [INDICATOR - NNE @ 0.46 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492218	12/31/2018 - 1/7/2019	Beta	1.36E-02	2.43E-03	2.78E-03
492466	1/7/2019 - 1/14/2019	Beta	1.82E-02	2.63E-03	2.77E-03
492896	1/14/2019 - 1/21/2019	Beta	1.70E-02	2.63E-03	2.90E-03
493323	1/21/2019 - 1/28/2019	Beta	2.15E-02	2.77E-03	2.80E-03
493582	1/28/2019 - 2/4/2019	Beta	2.55E-02	3.48E-03	3.58E-03



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 120 [INDICATOR - NNE @ 0.46 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
493808	2/4/2019 - 2/11/2019	Beta	2.74E-02	3.04E-03	2.81E-03
494350	2/11/2019 - 2/18/2019	Beta	1.67E-02	2.65E-03	2.98E-03
494973	2/18/2019 - 2/25/2019	Beta	9.76E-03	2.44E-03	3.15E-03
495394	2/25/2019 - 3/4/2019	Beta	1.99E-02	3.10E-03	3.30E-03
496310	3/4/2019 - 3/11/2019	Beta	2.11E-02	2.72E-03	2.63E-03
496724	3/11/2019 - 3/18/2019	Beta	2.24E-02	3.23E-03	3.42E-03
496651	3/18/2019 - 3/25/2019	Beta	1.78E-02	2.67E-03	2.86E-03
497571	3/25/2019 - 4/1/2019	Beta	1.88E-02	2.95E-03	3.07E-03
497578	12/31/2018 - 4/1/2019	Cs-134	<1.70E-03	0.00E+00	1.70E-03
		Cs-137	<1.91E-03	0.00E+00	1.91E-03
		Be-7	1.84E-01	4.63E-02	4.24E-02
		K-40	1.03E-02	1.30E-02	2.09E-02
498039	4/1/2019 - 4/8/2019	Beta	2.08E-02	3.14E-03	3.37E-03
498609	4/8/2019 - 4/15/2019	Beta	1.24E-02	2.38E-03	2.84E-03
498789	4/15/2019 - 4/22/2019	Beta	1.28E-02	2.29E-03	2.63E-03
499462	4/22/2019 - 4/29/2019	Beta	2.25E-02	2.87E-03	2.79E-03
499883	4/29/2019 - 5/6/2019	Beta	1.32E-02	2.78E-03	3.43E-03
500129	5/6/2019 - 5/13/2019	Beta	1.38E-02	2.45E-03	2.86E-03
500465	5/13/2019 - 5/20/2019	Beta	2.64E-02	2.95E-03	2.64E-03
500746	5/20/2019 - 5/28/2019	Beta	2.57E-02	2.68E-03	2.26E-03
501136	5/28/2019 - 6/3/2019	Beta	2.95E-02	3.31E-03	2.80E-03
501951	6/3/2019 - 6/10/2019	Beta	2.14E-02	3.14E-03	3.24E-03
502210	6/10/2019 - 6/17/2019	Beta	1.82E-02	2.59E-03	2.72E-03
502417	6/17/2019 - 6/24/2019	Beta	1.59E-02	2.57E-03	2.83E-03
503404	6/24/2019 - 7/1/2019	Beta	2.61E-02	3.25E-03	3.07E-03
503411	4/1/2019 - 7/1/2019	Cs-134	<1.62E-03	0.00E+00	1.62E-03
		Cs-137	<1.19E-03	0.00E+00	1.19E-03
		Be-7	2.17E-01	4.23E-02	2.16E-02
		K-40	<2.79E-02	0.00E+00	2.79E-02



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m³

Sample Point 120 [INDICATOR - NNE @ 0.46 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
503841	7/1/2019 - 7/8/2019	Beta	2.38E-02	2.91E-03	2.82E-03
504204	7/8/2019 - 7/15/2019	Beta	1.50E-02	2.47E-03	2.82E-03
504446	7/15/2019 - 7/22/2019	Beta	2.27E-02	2.89E-03	2.83E-03
504661	7/22/2019 - 7/29/2019	Beta	2.18E-02	2.79E-03	2.74E-03
504929	7/29/2019 - 8/5/2019	Beta	2.78E-02	3.45E-03	3.27E-03
505149	8/5/2019 - 8/12/2019	Beta	3.67E-02	3.72E-03	3.10E-03
505536	8/12/2019 - 8/19/2019	Beta	3.11E-02	3.68E-03	3.53E-03
505862	8/19/2019 - 8/26/2019	Beta	1.73E-02	2.61E-03	2.83E-03
506370	8/26/2019 - 9/3/2019	Beta	2.33E-02	3.03E-03	3.03E-03
507297	9/3/2019 - 9/9/2019	Beta	3.67E-02	4.04E-03	3.62E-03
507826	9/9/2019 - 9/16/2019	Beta	4.81E-02	4.32E-03	3.50E-03
508360	9/16/2019 - 9/23/2019	Beta	3.07E-02	3.60E-03	3.53E-03
509232	9/23/2019 - 9/30/2019	Beta	3.38E-02	3.26E-03	2.62E-03
509239	7/1/2019 - 9/30/2019	Beta	3.38E-02	3.26E-03	2.62E-03
509834	9/30/2019 - 10/7/2019	Cs-134	<1.44E-03	0.00E+00	1.44E-03
		Cs-137	<1.31E-03	0.00E+00	1.31E-03
		Be-7	1.78E-01	4.09E-02	3.49E-02
		K-40	<2.77E-02	0.00E+00	2.77E-02
509834	9/30/2019 - 10/7/2019	Beta	3.42E-02	3.63E-03	3.29E-03
510535	10/7/2019 - 10/14/2019	Beta	1.76E-02	3.15E-03	3.71E-03
510829	10/14/2019 - 10/21/2019	Beta	2.23E-02	2.70E-03	2.43E-03
511231	10/21/2019 - 10/28/2019	Beta	1.85E-02	2.59E-03	2.61E-03
511470	10/28/2019 - 11/4/2019	Beta	1.85E-02	2.65E-03	2.86E-03
511876	11/4/2019 - 11/11/2019	Beta	3.71E-02	3.47E-03	2.81E-03
512181	11/11/2019 - 11/18/2019	Beta	2.28E-02	3.25E-03	3.39E-03
512482	11/18/2019 - 11/25/2019	Beta	2.04E-02	2.78E-03	2.89E-03
512665	11/25/2019 - 12/2/2019	Beta	1.91E-02	3.06E-03	3.42E-03
513626	12/2/2019 - 12/9/2019	Beta	1.74E-02	2.92E-03	3.16E-03



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 120 [INDICATOR - NNE @ 0.46 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
513941	12/9/2019 - 12/16/2019	Beta	1.63E-02	3.00E-03	3.58E-03
514162	12/16/2019 - 12/23/2019	Beta	2.29E-02	3.31E-03	3.58E-03
514478	12/23/2019 - 12/30/2019	Beta	3.09E-02	3.52E-03	3.24E-03
514485	9/30/2019 - 12/30/2019	Cs-134	<1.58E-03	0.00E+00	1.58E-03
		Cs-137	<8.88E-04	0.00E+00	8.88E-04
		Be-7	1.46E-01	3.71E-02	3.10E-02
		K-40	<3.16E-02	0.00E+00	3.16E-02

Sample Point 121 [INDICATOR - NE @ 0.47 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492219	12/31/2018 - 1/7/2019	Beta	1.47E-02	2.48E-03	2.77E-03
492467	1/7/2019 - 1/14/2019	Beta	2.04E-02	2.74E-03	2.77E-03
492897	1/14/2019 - 1/21/2019	Beta	1.81E-02	2.68E-03	2.90E-03
493324	1/21/2019 - 1/28/2019	Beta	1.74E-02	2.59E-03	2.81E-03
493583	1/28/2019 - 2/4/2019	Beta	2.54E-02	3.47E-03	3.58E-03
493809	2/4/2019 - 2/11/2019	Beta	2.56E-02	2.97E-03	2.81E-03
494351	2/11/2019 - 2/18/2019	Beta	1.67E-02	2.64E-03	2.98E-03
494974	2/18/2019 - 2/25/2019	Beta	1.09E-02	2.51E-03	3.16E-03
495396	2/25/2019 - 3/4/2019	Beta	1.65E-02	2.93E-03	3.30E-03
496311	3/4/2019 - 3/11/2019	Beta	2.04E-02	2.69E-03	2.64E-03
496727	3/11/2019 - 3/18/2019	Beta	2.08E-02	3.15E-03	3.40E-03
496652	3/18/2019 - 3/25/2019	Beta	2.02E-02	2.73E-03	2.80E-03
497572	3/25/2019 - 4/1/2019	Beta	2.01E-02	3.01E-03	3.06E-03
497579	12/31/2018 - 4/1/2019	Cs-134	<4.07E-04	0.00E+00	4.07E-04
		Cs-137	<1.72E-03	0.00E+00	1.72E-03
		Be-7	1.69E-01	4.07E-02	2.17E-02
		K-40	<2.58E-02	0.00E+00	2.58E-02
498040	4/1/2019 - 4/8/2019	Beta	1.72E-02	2.96E-03	3.37E-03
498610	4/8/2019 - 4/15/2019	Beta	1.34E-02	2.43E-03	2.85E-03
498790	4/15/2019 - 4/22/2019	Beta	1.38E-02	2.34E-03	2.64E-03
499463	4/22/2019 - 4/29/2019	Beta	2.37E-02	2.92E-03	2.78E-03
499884	4/29/2019 - 5/6/2019	Beta	1.49E-02	2.87E-03	3.43E-03



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 121 [INDICATOR - NE @ 0.47 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500130	5/6/2019 - 5/13/2019	Beta	1.45E-02	2.49E-03	2.85E-03
500466	5/13/2019 - 5/20/2019	Beta	2.52E-02	2.89E-03	2.63E-03
500747	5/20/2019 - 5/28/2019	Beta	2.97E-02	2.85E-03	2.27E-03
501137	5/28/2019 - 6/3/2019	Beta	2.81E-02	3.25E-03	2.80E-03
501952	6/3/2019 - 6/10/2019	Beta	1.99E-02	3.07E-03	3.24E-03
502211	6/10/2019 - 6/17/2019	Beta	2.02E-02	2.69E-03	2.73E-03
502418	6/17/2019 - 6/24/2019	Beta	1.57E-02	2.55E-03	2.82E-03
503405	6/24/2019 - 7/1/2019	Beta	2.52E-02	3.21E-03	3.07E-03
503412	4/1/2019 - 7/1/2019	Cs-134	<1.82E-03	0.00E+00	1.82E-03
		Cs-137	<1.06E-03	0.00E+00	1.06E-03
		Be-7	2.10E-01	4.30E-02	2.80E-02
		K-40	<2.57E-02	0.00E+00	2.57E-02
503842	7/1/2019 - 7/8/2019	Beta	2.57E-02	3.00E-03	2.82E-03
504205	7/8/2019 - 7/15/2019	Beta	1.90E-02	2.66E-03	2.82E-03
504447	7/15/2019 - 7/22/2019	Beta	2.38E-02	2.94E-03	2.83E-03
504662	7/22/2019 - 7/29/2019	Beta	1.89E-02	2.66E-03	2.74E-03
504930	7/29/2019 - 8/5/2019	Beta	2.72E-02	3.42E-03	3.28E-03
505150	8/5/2019 - 8/12/2019	Beta	3.51E-02	3.65E-03	3.10E-03
505537	8/12/2019 - 8/19/2019	Beta	2.83E-02	3.55E-03	3.53E-03
505863	8/19/2019 - 8/26/2019	Beta	1.86E-02	2.67E-03	2.83E-03
506371	8/26/2019 - 9/3/2019	Beta	2.47E-02	3.09E-03	3.03E-03
507298	9/3/2019 - 9/9/2019	Beta	3.77E-02	4.09E-03	3.63E-03
507827	9/9/2019 - 9/16/2019	Beta	4.59E-02	4.23E-03	3.48E-03
508361	9/16/2019 - 9/23/2019	Beta	3.13E-02	3.63E-03	3.53E-03
509233	9/23/2019 - 9/30/2019	Beta	3.80E-02	3.41E-03	2.61E-03
509240	7/1/2019 - 9/30/2019	Cs-134	<1.25E-03	0.00E+00	1.25E-03
		Cs-137	<1.33E-03	0.00E+00	1.33E-03
		Be-7	2.01E-01	4.12E-02	2.47E-02
		K-40	<2.37E-02	0.00E+00	2.37E-02



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 121 [INDICATOR - NE @ 0.47 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
509835	9/30/2019 - 10/7/2019	Beta	3.52E-02	3.68E-03	3.30E-03
510536	10/7/2019 - 10/14/2019	Beta	2.46E-02	3.48E-03	3.70E-03
510830	10/14/2019 - 10/21/2019	Beta	2.26E-02	2.72E-03	2.43E-03
511232	10/21/2019 - 10/28/2019	Beta	1.90E-02	2.62E-03	2.61E-03
511471	10/28/2019 - 11/4/2019	Beta	1.99E-02	2.72E-03	2.87E-03
511877	11/4/2019 - 11/11/2019	Beta	3.61E-02	3.43E-03	2.80E-03
512182	11/11/2019 - 11/18/2019	Beta	2.51E-02	3.35E-03	3.39E-03
512483	11/18/2019 - 11/25/2019	Beta	2.35E-02	2.92E-03	2.89E-03
512666	11/25/2019 - 12/2/2019	Beta	1.97E-02	3.09E-03	3.43E-03
513627	12/2/2019 - 12/9/2019	Beta	1.90E-02	3.00E-03	3.15E-03
513942	12/9/2019 - 12/16/2019	Beta	1.87E-02	3.12E-03	3.58E-03
514163	12/16/2019 - 12/23/2019	Beta	2.55E-02	3.43E-03	3.58E-03
514479	12/23/2019 - 12/30/2019	Beta	2.74E-02	3.37E-03	3.25E-03
514486	9/30/2019 - 12/30/2019	Cs-134	<1.49E-03	0.00E+00	1.49E-03
		Cs-137	<1.05E-03	0.00E+00	1.05E-03
		Be-7	1.51E-01	3.82E-02	3.53E-02
		K-40	<1.26E-02	0.00E+00	1.26E-02

Sample Point 125 [INDICATOR - SW @ 0.38 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
492220	12/31/2018 - 1/7/2019	Beta	1.37E-02	2.43E-03	2.77E-03
492468	1/7/2019 - 1/14/2019	Beta	1.76E-02	2.60E-03	2.77E-03
492898	1/14/2019 - 1/21/2019	Beta	1.79E-02	2.66E-03	2.90E-03
493325	1/21/2019 - 1/28/2019	Beta	1.78E-02	2.60E-03	2.81E-03
493584	1/28/2019 - 2/4/2019	Beta	2.97E-02	3.66E-03	3.58E-03
493810	2/4/2019 - 2/11/2019	Beta	2.54E-02	2.96E-03	2.81E-03
494352	2/11/2019 - 2/18/2019	Beta	1.71E-02	2.66E-03	2.98E-03
494975	2/18/2019 - 2/25/2019	Beta	9.08E-03	2.39E-03	3.16E-03
495398	2/25/2019 - 3/4/2019	Beta	1.90E-02	3.06E-03	3.29E-03
496312	3/4/2019 - 3/11/2019	Beta	2.06E-02	2.69E-03	2.64E-03



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 125 [INDICATOR - SW @ 0.38 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
496730	3/11/2019 - 3/18/2019	Beta	2.17E-02	3.18E-03	3.38E-03
496653	3/18/2019 - 3/25/2019	Beta	2.19E-02	2.76E-03	2.73E-03
497573	3/25/2019 - 4/1/2019	Beta	2.00E-02	3.01E-03	3.06E-03
497580	12/31/2018 - 4/1/2019	Cs-134	<2.08E-03	0.00E+00	2.08E-03
		Cs-137	<1.58E-03	0.00E+00	1.58E-03
		Be-7	1.53E-01	4.25E-02	4.24E-02
		K-40	4.13E-02	1.88E-02	1.74E-02
498041	4/1/2019 - 4/8/2019	Beta	1.88E-02	3.04E-03	3.37E-03
498611	4/8/2019 - 4/15/2019	Beta	1.11E-02	2.31E-03	2.85E-03
498791	4/15/2019 - 4/22/2019	Beta	1.26E-02	2.28E-03	2.64E-03
499464	4/22/2019 - 4/29/2019	Beta	2.28E-02	2.88E-03	2.78E-03
499885	4/29/2019 - 5/6/2019	Beta	1.40E-02	2.82E-03	3.43E-03
500131	5/6/2019 - 5/13/2019	Beta	1.57E-02	2.58E-03	2.90E-03
500467	5/14/2019 - 5/20/2019	Beta	2.45E-02	3.05E-03	2.90E-03
500748	5/20/2019 - 5/28/2019	Beta	2.71E-02	2.76E-03	2.29E-03
501138	5/28/2019 - 6/3/2019	Beta	2.67E-02	3.18E-03	2.79E-03
501953	6/3/2019 - 6/11/2019	Beta	1.91E-02	2.71E-03	2.75E-03
502212	6/11/2019 - 6/17/2019	Beta	2.00E-02	3.04E-03	3.29E-03
502419	6/17/2019 - 6/24/2019	Beta	1.45E-02	2.49E-03	2.82E-03
503406	6/24/2019 - 7/1/2019	Beta	3.07E-02	3.46E-03	3.07E-03
503413	4/1/2019 - 7/1/2019	Cs-134	<1.95E-03	0.00E+00	1.95E-03
		Cs-137	<1.94E-03	0.00E+00	1.94E-03
		Be-7	2.00E-01	4.45E-02	3.49E-02
		K-40	<2.59E-02	0.00E+00	2.59E-02
503843	7/1/2019 - 7/8/2019	Beta	2.72E-02	3.05E-03	2.82E-03
504206	7/8/2019 - 7/15/2019	Beta	1.77E-02	2.60E-03	2.83E-03
504448	7/15/2019 - 7/22/2019	Beta	2.26E-02	2.89E-03	2.83E-03
504663	7/22/2019 - 7/29/2019	Beta	2.25E-02	2.81E-03	2.73E-03
504931	7/29/2019 - 8/5/2019	Beta	3.00E-02	3.55E-03	3.28E-03



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 125 [INDICATOR - SW @ 0.38 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
505151	8/5/2019 - 8/12/2019	Beta	3.81E-02	3.77E-03	3.11E-03
505538	8/12/2019 - 8/19/2019	Beta	3.28E-02	3.74E-03	3.52E-03
505864	8/19/2019 - 8/26/2019	Beta	1.87E-02	2.67E-03	2.83E-03
506372	8/26/2019 - 9/3/2019	Beta	2.38E-02	3.05E-03	3.03E-03
507299	9/3/2019 - 9/9/2019	Beta	3.98E-02	4.17E-03	3.61E-03
507828	9/9/2019 - 9/16/2019	Beta	4.67E-02	4.27E-03	3.50E-03
508362	9/16/2019 - 9/23/2019	Beta	3.05E-02	3.60E-03	3.53E-03
509234	9/23/2019 - 9/30/2019	Beta	4.07E-02	3.51E-03	2.61E-03
509241	7/1/2019 - 9/30/2019	Cs-134	<1.29E-03	0.00E+00	1.29E-03
		Cs-137	<1.06E-03	0.00E+00	1.06E-03
		Be-7	1.92E-01	4.21E-02	3.13E-02
		K-40	<1.59E-02	0.00E+00	1.59E-02
509836	9/30/2019 - 10/7/2019	Beta	3.49E-02	3.67E-03	3.30E-03
510537	10/7/2019 - 10/14/2019	Beta	2.24E-02	3.37E-03	3.70E-03
510831	10/14/2019 - 10/21/2019	Beta	2.41E-02	2.79E-03	2.43E-03
511233	10/21/2019 - 10/28/2019	Beta	1.90E-02	2.62E-03	2.61E-03
511472	10/28/2019 - 11/4/2019	Beta	1.93E-02	2.69E-03	2.87E-03
511878	11/4/2019 - 11/11/2019	Beta	3.54E-02	3.40E-03	2.80E-03
512183	11/11/2019 - 11/18/2019	Beta	2.53E-02	3.36E-03	3.39E-03
512484	11/18/2019 - 11/25/2019	Beta	2.10E-02	2.81E-03	2.89E-03
512667	11/25/2019 - 12/2/2019	Beta	2.03E-02	3.12E-03	3.43E-03
513628	12/2/2019 - 12/9/2019	Beta	1.76E-02	2.92E-03	3.15E-03
513943	12/9/2019 - 12/16/2019	Beta	2.03E-02	3.20E-03	3.58E-03
514164	12/16/2019 - 12/23/2019	Beta	2.53E-02	3.42E-03	3.58E-03
514480	12/23/2019 - 12/30/2019	Beta	3.06E-02	3.51E-03	3.25E-03
514487	9/30/2019 - 12/30/2019	Cs-134	<1.58E-03	0.00E+00	1.58E-03
		Cs-137	<1.30E-03	0.00E+00	1.30E-03
		Be-7	1.32E-01	3.57E-02	3.20E-02
		K-40	<2.73E-02	0.00E+00	2.73E-02



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m³

Sample Point 133 [INDICATOR - ENE @ 6.23 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
492221	12/31/2018 - 1/7/2019	Beta	1.38E-02	2.41E-03	2.73E-03
492469	1/7/2019 - 1/14/2019	Beta	1.78E-02	2.61E-03	2.76E-03
492899	1/14/2019 - 1/21/2019	Beta	1.69E-02	2.62E-03	2.91E-03
493326	1/21/2019 - 1/28/2019	Beta	1.94E-02	2.70E-03	2.85E-03
493585	1/28/2019 - 2/4/2019	Beta	2.43E-02	3.39E-03	3.54E-03
493811	2/4/2019 - 2/11/2019	Beta	2.42E-02	2.90E-03	2.80E-03
494353	2/11/2019 - 2/18/2019	Beta	1.51E-02	2.57E-03	2.98E-03
494976	2/18/2019 - 2/25/2019	Beta	8.74E-03	2.40E-03	3.20E-03
495400	2/25/2019 - 3/4/2019	Beta	1.26E-02	2.68E-03	3.25E-03
496313	3/4/2019 - 3/11/2019	Beta	1.98E-02	2.65E-03	2.64E-03
496733	3/11/2019 - 3/18/2019	Beta	2.18E-02	3.18E-03	3.38E-03
496654	3/18/2019 - 3/25/2019	Beta	1.95E-02	2.68E-03	2.77E-03
497574	3/25/2019 - 4/1/2019	Beta	1.71E-02	2.83E-03	3.02E-03
497581	12/31/2018 - 4/1/2019	Cs-134	<1.26E-03	0.00E+00	1.26E-03
		Cs-137	<1.64E-03	0.00E+00	1.64E-03
		Be-7	1.63E-01	4.51E-02	4.76E-02
		K-40	2.41E-02	1.44E-02	1.54E-02
498042	4/1/2019 - 4/8/2019	Beta	1.60E-02	2.91E-03	3.38E-03
498612	4/8/2019 - 4/15/2019	Beta	9.48E-03	2.21E-03	2.83E-03
498792	4/15/2019 - 4/22/2019	Beta	9.82E-03	2.16E-03	2.68E-03
499465	4/22/2019 - 4/29/2019	Beta	1.85E-02	2.64E-03	2.73E-03
499886	4/29/2019 - 5/6/2019	Beta	1.41E-02	2.83E-03	3.43E-03
500132	5/6/2019 - 5/13/2019	Beta	1.20E-02	2.35E-03	2.85E-03
500468	5/13/2019 - 5/20/2019	Beta	2.32E-02	2.75E-03	2.54E-03
500749	5/20/2019 - 5/28/2019	Beta	2.56E-02	2.74E-03	2.35E-03
501139	5/28/2019 - 6/3/2019	Beta	2.36E-02	3.04E-03	2.81E-03
501954	6/3/2019 - 6/10/2019	Beta	1.97E-02	3.04E-03	3.21E-03



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m³

Sample Point 133 [INDICATOR - ENE @ 6.23 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
502213	6/10/2019 - 6/17/2019	Beta	1.98E-02	2.69E-03	2.77E-03
502420	6/17/2019 - 6/24/2019	Beta	1.43E-02	2.46E-03	2.78E-03
503407	6/24/2019 - 7/1/2019	Beta	3.09E-02	3.46E-03	3.07E-03
503414	4/1/2019 - 7/1/2019	Cs-134	<1.93E-03	0.00E+00	1.93E-03
		Cs-137	<1.46E-03	0.00E+00	1.46E-03
		Be-7	2.06E-01	4.37E-02	3.48E-02
		K-40	<3.43E-02	0.00E+00	3.43E-02
503844	7/1/2019 - 7/8/2019	Beta	2.73E-02	3.05E-03	2.82E-03
504207	7/8/2019 - 7/15/2019	Beta	1.63E-02	2.56E-03	2.87E-03
504449	7/15/2019 - 7/22/2019	Beta	2.12E-02	2.80E-03	2.80E-03
504664	7/22/2019 - 7/29/2019	Beta	1.83E-02	2.62E-03	2.73E-03
504932	7/29/2019 - 8/5/2019	Beta	2.59E-02	3.37E-03	3.28E-03
505152	8/5/2019 - 8/12/2019	Beta	3.60E-02	3.72E-03	3.14E-03
505539	8/12/2019 - 8/19/2019	Beta	2.64E-02	3.43E-03	3.47E-03
505865	8/19/2019 - 8/26/2019	Beta	1.59E-02	2.54E-03	2.83E-03
506373	8/26/2019 - 9/3/2019	Beta	2.31E-02	3.03E-03	3.04E-03
507300	9/3/2019 - 9/9/2019	Beta	3.50E-02	4.02E-03	3.68E-03
507829	9/9/2019 - 9/16/2019	Beta	4.36E-02	4.13E-03	3.46E-03
508363	9/16/2019 - 9/23/2019	Beta	3.15E-02	3.63E-03	3.53E-03
509235	9/23/2019 - 9/30/2019	Beta	3.34E-02	3.24E-03	2.61E-03
509242	7/1/2019 - 9/30/2019	Cs-134	<1.37E-03	0.00E+00	1.37E-03
		Cs-137	<1.30E-03	0.00E+00	1.30E-03
		Be-7	2.20E-01	4.48E-02	2.51E-02
		K-40	<2.89E-02	0.00E+00	2.89E-02
509837	9/30/2019 - 10/7/2019	Beta	3.61E-02	3.75E-03	3.34E-03
510538	10/7/2019 - 10/14/2019	Beta	1.95E-02	3.22E-03	3.66E-03
510832	10/14/2019 - 10/21/2019	Beta	2.17E-02	2.67E-03	2.42E-03
511234	10/21/2019 - 10/28/2019	Beta	1.85E-02	2.60E-03	2.61E-03
511473	10/28/2019 - 11/4/2019	Beta	1.89E-02	2.70E-03	2.91E-03



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 133 [INDICATOR - ENE @ 6.23 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511879	11/4/2019 - 11/11/2019	Beta	3.73E-02	3.44E-03	2.76E-03
512184	11/11/2019 - 11/18/2019	Beta	2.69E-02	3.43E-03	3.39E-03
512485	11/18/2019 - 11/25/2019	Beta	1.93E-02	2.73E-03	2.89E-03
512668	11/25/2019 - 12/2/2019	Beta	1.96E-02	3.11E-03	3.48E-03
513629	12/2/2019 - 12/9/2019	Beta	2.05E-02	3.05E-03	3.11E-03
513944	12/9/2019 - 12/16/2019	Beta	1.58E-02	2.97E-03	3.57E-03
514165	12/16/2019 - 12/23/2019	Beta	2.46E-02	3.39E-03	3.58E-03
514481	12/23/2019 - 12/30/2019	Beta	2.76E-02	3.42E-03	3.30E-03
514488	9/30/2019 - 12/30/2019	Cs-134	<2.05E-03	0.00E+00	2.05E-03
		Cs-137	<8.22E-04	0.00E+00	8.22E-04
		Be-7	1.31E-01	3.62E-02	3.66E-02
		K-40	<3.53E-02	0.00E+00	3.53E-02

Sample Point 195 [INDICATOR - N @ 0.19 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492222	12/31/2018 - 1/7/2019	Beta	1.32E-02	2.41E-03	2.78E-03
492470	1/7/2019 - 1/14/2019	Beta	1.91E-02	2.68E-03	2.77E-03
492900	1/14/2019 - 1/21/2019	Beta	2.22E-02	2.86E-03	2.90E-03
493327	1/21/2019 - 1/28/2019	Beta	1.90E-02	2.66E-03	2.80E-03
493586	1/28/2019 - 2/4/2019	Beta	2.50E-02	3.46E-03	3.59E-03
493812	2/4/2019 - 2/11/2019	Beta	2.37E-02	2.89E-03	2.81E-03
494354	2/11/2019 - 2/18/2019	Beta	1.63E-02	2.62E-03	2.98E-03
494977	2/18/2019 - 2/25/2019	Beta	1.12E-02	2.51E-03	3.15E-03
495402	2/25/2019 - 3/4/2019	Beta	1.65E-02	2.93E-03	3.30E-03
496314	3/4/2019 - 3/11/2019	Beta	2.20E-02	2.76E-03	2.64E-03
496736	3/11/2019 - 3/18/2019	Beta	2.15E-02	3.18E-03	3.41E-03
496655	3/18/2019 - 3/25/2019	Beta	2.09E-02	2.71E-03	2.72E-03
497575	3/25/2019 - 4/1/2019	Beta	1.68E-02	2.84E-03	3.07E-03
497582	12/31/2018 - 4/1/2019	Cs-134	<1.47E-03	0.00E+00	1.47E-03
		Cs-137	<1.19E-03	0.00E+00	1.19E-03
		Be-7	1.59E-01	4.17E-02	3.77E-02
		K-40	<2.67E-02	0.00E+00	2.67E-02



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 195 [INDICATOR - N @ 0.19 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
498043	4/1/2019 - 4/8/2019	Beta	1.81E-02	3.01E-03	3.37E-03
498613	4/8/2019 - 4/15/2019	Beta	1.36E-02	2.45E-03	2.84E-03
498793	4/15/2019 - 4/22/2019	Beta	1.11E-02	2.20E-03	2.63E-03
499466	4/22/2019 - 4/29/2019	Beta	2.11E-02	2.81E-03	2.79E-03
499887	4/29/2019 - 5/6/2019	Beta	1.55E-02	2.92E-03	3.43E-03
500133	5/6/2019 - 5/13/2019	Beta	1.38E-02	2.45E-03	2.85E-03
500469	5/13/2019 - 5/20/2019	Beta	2.42E-02	2.86E-03	2.63E-03
500750	5/20/2019 - 5/28/2019	Beta	2.74E-02	2.75E-03	2.26E-03
501140	5/28/2019 - 6/3/2019	Beta	2.57E-02	3.14E-03	2.80E-03
501955	6/3/2019 - 6/10/2019	Beta	1.81E-02	2.97E-03	3.24E-03
502214	6/10/2019 - 6/17/2019	Beta	2.10E-02	2.72E-03	2.72E-03
502421	6/17/2019 - 6/24/2019	Beta	1.57E-02	2.56E-03	2.82E-03
503408	6/24/2019 - 7/1/2019	Beta	2.94E-02	3.41E-03	3.08E-03
503415	4/1/2019 - 7/1/2019	Cs-134	<1.43E-03	0.00E+00	1.43E-03
		Cs-137	<1.31E-03	0.00E+00	1.31E-03
		Be-7	1.72E-01	3.85E-02	2.89E-02
		K-40	<3.12E-02	0.00E+00	3.12E-02
503845	7/1/2019 - 7/8/2019	Beta	2.55E-02	2.98E-03	2.82E-03
504208	7/8/2019 - 7/15/2019	Beta	1.76E-02	2.59E-03	2.82E-03
504450	7/15/2019 - 7/22/2019	Beta	2.35E-02	2.93E-03	2.83E-03
504665	7/22/2019 - 7/29/2019	Beta	2.56E-02	2.95E-03	2.74E-03
504933	7/29/2019 - 8/5/2019	Beta	2.61E-02	3.37E-03	3.28E-03
505153	8/5/2019 - 8/12/2019	Beta	3.76E-02	3.75E-03	3.10E-03
505540	8/12/2019 - 8/19/2019	Beta	2.85E-02	3.57E-03	3.53E-03
505866	8/19/2019 - 8/26/2019	Beta	1.89E-02	2.67E-03	2.83E-03
506374	8/26/2019 - 9/3/2019	Beta	2.71E-02	3.19E-03	3.03E-03
507301	9/3/2019 - 9/9/2019	Beta	4.04E-02	4.19E-03	3.61E-03



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 195 [INDICATOR - N @ 0.19 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
507830	9/9/2019 - 9/16/2019	Beta	4.62E-02	4.25E-03	3.50E-03
508364	9/16/2019 - 9/23/2019	Beta	3.47E-02	3.76E-03	3.53E-03
509236	9/23/2019 - 9/30/2019	Beta	3.51E-02	3.31E-03	2.62E-03
509243	7/1/2019 - 9/30/2019	Cs-134	<1.27E-03	0.00E+00	1.27E-03
		Cs-137	<1.78E-03	0.00E+00	1.78E-03
		Be-7	1.96E-01	4.32E-02	3.58E-02
		K-40	2.18E-02	1.36E-02	1.41E-02
509838	9/30/2019 - 10/7/2019	Beta	3.86E-02	3.81E-03	3.29E-03
510539	10/7/2019 - 10/14/2019	Beta	2.08E-02	3.31E-03	3.71E-03
510833	10/14/2019 - 10/21/2019	Beta	2.42E-02	2.79E-03	2.43E-03
511235	10/21/2019 - 10/28/2019	Beta	2.00E-02	2.67E-03	2.61E-03
511474	10/28/2019 - 11/4/2019	Beta	2.32E-02	2.86E-03	2.86E-03
511880	11/4/2019 - 11/11/2019	Beta	4.04E-02	3.60E-03	2.81E-03
512185	11/11/2019 - 11/18/2019	Beta	2.91E-02	3.54E-03	3.39E-03
512486	11/18/2019 - 11/25/2019	Beta	2.54E-02	3.00E-03	2.89E-03
512669	11/25/2019 - 12/2/2019	Beta	2.12E-02	3.16E-03	3.43E-03
513630	12/2/2019 - 12/9/2019	Beta	1.83E-02	2.97E-03	3.16E-03
513945	12/9/2019 - 12/16/2019	Beta	1.92E-02	3.15E-03	3.58E-03
514166	12/16/2019 - 12/23/2019	Beta	2.53E-02	3.41E-03	3.58E-03
514482	12/23/2019 - 12/30/2019	Beta	3.08E-02	3.52E-03	3.24E-03
514489	9/30/2019 - 12/30/2019	Cs-134	<1.46E-03	0.00E+00	1.46E-03
		Cs-137	<1.56E-03	0.00E+00	1.56E-03
		Be-7	1.60E-01	3.63E-02	2.47E-02
		K-40	2.85E-02	1.40E-02	4.54E-03

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 102 [CONTROL - WNW @ 9.89 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492223	12/31/2018 - 1/7/2019	I-131	<2.42E-02	0.00E+00	2.42E-02
		Cs-134	<1.78E-02	0.00E+00	1.78E-02
		Cs-137	<1.81E-02	0.00E+00	1.81E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	<3.29E-01	0.00E+00	3.29E-01
492457	1/7/2019 - 1/14/2019	I-131	<2.20E-02	0.00E+00	2.20E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-02
		Cs-137	<1.77E-02	0.00E+00	1.77E-02
		Be-7	<1.27E-01	0.00E+00	1.27E-01



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 102 [CONTROL - WNW @ 9.89 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492457	1/7/2019 - 1/14/2019	K-40	5.51E-01	2.13E-01	2.36E-01
492901	1/14/2019 - 1/21/2019	I-131	<2.05E-02	0.00E+00	2.05E-02
		Cs-134	<1.71E-02	0.00E+00	1.71E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<1.31E-01	0.00E+00	1.31E-01
		K-40	4.11E-01	1.80E-01	2.04E-01
493328	1/21/2019 - 1/28/2019	I-131	<2.07E-02	0.00E+00	2.07E-02
		Cs-134	<1.95E-02	0.00E+00	1.95E-02
		Cs-137	<1.85E-02	0.00E+00	1.85E-02
		Be-7	<9.87E-02	0.00E+00	9.87E-02
		K-40	4.73E-01	1.90E-01	2.02E-01
493587	1/28/2019 - 2/4/2019	I-131	<1.73E-02	0.00E+00	1.73E-02
		Cs-134	<1.33E-02	0.00E+00	1.33E-02
		Cs-137	<1.85E-02	0.00E+00	1.85E-02
		Be-7	<9.49E-02	0.00E+00	9.49E-02
		K-40	3.71E-01	2.07E-01	2.86E-01
493813	2/4/2019 - 2/11/2019	I-131	<2.08E-02	0.00E+00	2.08E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<1.31E-02	0.00E+00	1.31E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	4.80E-01	1.97E-01	2.18E-01
494355	2/11/2019 - 2/18/2019	I-131	<2.28E-02	0.00E+00	2.28E-02
		Cs-134	<1.50E-02	0.00E+00	1.50E-02
		Cs-137	<1.82E-02	0.00E+00	1.82E-02
		Be-7	<1.30E-01	0.00E+00	1.30E-01
		K-40	<3.48E-01	0.00E+00	3.48E-01
494978	2/18/2019 - 2/25/2019	I-131	<2.08E-02	0.00E+00	2.08E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-02
		Cs-137	<1.66E-02	0.00E+00	1.66E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	<4.45E-01	0.00E+00	4.45E-01
495404	2/25/2019 - 3/4/2019	I-131	<2.15E-02	0.00E+00	2.15E-02
		Cs-134	<1.50E-02	0.00E+00	1.50E-02
		Cs-137	<1.77E-02	0.00E+00	1.77E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	3.85E-01	1.72E-01	1.90E-01
496315	3/4/2019 - 3/11/2019	I-131	<2.27E-02	0.00E+00	2.27E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.75E-02	0.00E+00	1.75E-02
		Be-7	<1.33E-01	0.00E+00	1.33E-01
		K-40	5.08E-01	2.17E-01	2.64E-01
496185	3/11/2019 - 3/18/2019	I-131	<2.09E-02	0.00E+00	2.09E-02
		Cs-134	<1.91E-02	0.00E+00	1.91E-02
		Cs-137	<1.28E-02	0.00E+00	1.28E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	5.68E-01	2.11E-01	2.27E-01
496656	3/18/2019 - 3/25/2019	I-131	<2.68E-02	0.00E+00	2.68E-02
		Cs-134	<2.07E-02	0.00E+00	2.07E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<1.35E-01	0.00E+00	1.35E-01



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m³

Sample Point 102 [CONTROL - WNW @ 9.89 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
496656	3/18/2019 - 3/25/2019	K-40	5.14E-01	1.98E-01	2.07E-01
497155	3/25/2019 - 4/1/2019	I-131	<2.23E-02	0.00E+00	2.23E-02
		Cs-134	<1.57E-02	0.00E+00	1.57E-02
		Cs-137	<1.72E-02	0.00E+00	1.72E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	4.89E-01	2.00E-01	2.27E-01
497583	4/1/2019 - 4/8/2019	I-131	<2.00E-02	0.00E+00	2.00E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<1.81E-02	0.00E+00	1.81E-02
		Be-7	<1.31E-01	0.00E+00	1.31E-01
		K-40	3.42E-01	1.71E-01	2.05E-01
498044	4/8/2019 - 4/15/2019	I-131	<1.81E-02	0.00E+00	1.81E-02
		Cs-134	<1.58E-02	0.00E+00	1.58E-02
		Cs-137	<1.62E-02	0.00E+00	1.62E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	5.15E-01	1.85E-01	1.66E-01
498614	4/15/2019 - 4/22/2019	I-131	<2.64E-02	0.00E+00	2.64E-02
		Cs-134	<1.95E-02	0.00E+00	1.95E-02
		Cs-137	<1.94E-02	0.00E+00	1.94E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	6.53E-01	1.99E-01	1.24E-01
498794	4/22/2019 - 4/29/2019	I-131	<2.23E-02	0.00E+00	2.23E-02
		Cs-134	<1.50E-02	0.00E+00	1.50E-02
		Cs-137	<1.72E-02	0.00E+00	1.72E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	5.55E-01	1.98E-01	1.90E-01
499467	4/29/2019 - 5/6/2019	I-131	<2.28E-02	0.00E+00	2.28E-02
		Cs-134	<1.89E-02	0.00E+00	1.89E-02
		Cs-137	<1.77E-02	0.00E+00	1.77E-02
		Be-7	<8.71E-02	0.00E+00	8.71E-02
		K-40	3.83E-01	1.71E-01	1.85E-01
499888	5/6/2019 - 5/13/2019	I-131	<1.86E-02	0.00E+00	1.86E-02
		Cs-134	<1.90E-02	0.00E+00	1.90E-02
		Cs-137	<1.98E-02	0.00E+00	1.98E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	4.27E-01	1.80E-01	1.95E-01
500134	5/13/2019 - 5/20/2019	I-131	<2.49E-02	0.00E+00	2.49E-02
		Cs-134	<1.42E-02	0.00E+00	1.42E-02
		Cs-137	<1.80E-02	0.00E+00	1.80E-02
		Be-7	<1.41E-01	0.00E+00	1.41E-01
		K-40	5.85E-01	2.22E-01	2.52E-01
500470	5/20/2019 - 5/28/2019	I-131	<2.37E-02	0.00E+00	2.37E-02
		Cs-134	<1.92E-02	0.00E+00	1.92E-02
		Cs-137	<1.21E-02	0.00E+00	1.21E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	5.82E-01	1.70E-01	3.09E-02
500751	5/28/2019 - 6/3/2019	I-131	<2.78E-02	0.00E+00	2.78E-02
		Cs-134	<1.86E-02	0.00E+00	1.86E-02
		Cs-137	<1.85E-02	0.00E+00	1.85E-02
		Be-7	<1.35E-01	0.00E+00	1.35E-01



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 102 [CONTROL - WNW @ 9.89 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500751	5/28/2019 - 6/3/2019	K-40	4.16E-01	2.06E-01	2.52E-01
501141	6/3/2019 - 6/10/2019	I-131	<3.93E-02	0.00E+00	3.93E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.53E-02	0.00E+00	1.53E-02
		Be-7	<1.48E-01	0.00E+00	1.48E-01
		K-40	5.99E-01	2.01E-01	1.80E-01
501956	6/10/2019 - 6/17/2019	I-131	<2.70E-02	0.00E+00	2.70E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.66E-02	0.00E+00	1.66E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	4.54E-01	1.92E-01	2.15E-01
502215	6/17/2019 - 6/24/2019	I-131	<2.15E-02	0.00E+00	2.15E-02
		Cs-134	<1.02E-02	0.00E+00	1.02E-02
		Cs-137	<1.62E-02	0.00E+00	1.62E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	5.96E-01	1.90E-01	1.35E-01
502422	6/24/2019 - 7/1/2019	I-131	<1.88E-02	0.00E+00	1.88E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-02
		Cs-137	<1.94E-02	0.00E+00	1.94E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	5.41E-01	2.08E-01	2.27E-01
503416	7/1/2019 - 7/8/2019	I-131	<1.98E-02	0.00E+00	1.98E-02
		Cs-134	<1.72E-02	0.00E+00	1.72E-02
		Cs-137	<1.41E-02	0.00E+00	1.41E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	3.68E-01	2.08E-01	2.88E-01
503846	7/8/2019 - 7/15/2019	I-131	<4.37E-02	0.00E+00	4.37E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-02
		Cs-137	<1.50E-02	0.00E+00	1.50E-02
		Be-7	<1.43E-01	0.00E+00	1.43E-01
		K-40	8.15E-01	2.25E-01	1.41E-01
504209	7/15/2019 - 7/22/2019	I-131	<2.32E-02	0.00E+00	2.32E-02
		Cs-134	<1.71E-02	0.00E+00	1.71E-02
		Cs-137	<1.85E-02	0.00E+00	1.85E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	5.65E-01	1.89E-01	1.53E-01
504451	7/22/2019 - 7/29/2019	I-131	<2.98E-02	0.00E+00	2.98E-02
		Cs-134	<1.47E-02	0.00E+00	1.47E-02
		Cs-137	<1.19E-02	0.00E+00	1.19E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	<2.73E-01	0.00E+00	2.73E-01
504666	7/29/2019 - 8/5/2019	I-131	<3.90E-02	0.00E+00	3.90E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-02
		Cs-137	<1.75E-02	0.00E+00	1.75E-02
		Be-7	<1.59E-01	0.00E+00	1.59E-01
		K-40	4.84E-01	1.84E-01	1.81E-01
504934	8/5/2019 - 8/12/2019	I-131	<2.43E-02	0.00E+00	2.43E-02
		Cs-134	<2.35E-02	0.00E+00	2.35E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<1.48E-01	0.00E+00	1.48E-01



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m³

Sample Point 102 [CONTROL - WNW @ 9.89 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504934	8/5/2019 - 8/12/2019	K-40	4.52E-01	1.81E-01	1.83E-01
505154	8/12/2019 - 8/19/2019	I-131	<1.89E-02	0.00E+00	1.89E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<1.81E-02	0.00E+00	1.81E-02
		Be-7	<1.45E-01	0.00E+00	1.45E-01
		K-40	1.62E-01	1.68E-01	2.67E-01
505541	8/19/2019 - 8/26/2019	I-131	<2.15E-02	0.00E+00	2.15E-02
		Cs-134	<1.77E-02	0.00E+00	1.77E-02
		Cs-137	<1.68E-02	0.00E+00	1.68E-02
		Be-7	<1.32E-01	0.00E+00	1.32E-01
		K-40	5.16E-01	1.90E-01	1.82E-01
505867	8/26/2019 - 9/3/2019	I-131	<1.69E-02	0.00E+00	1.69E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	4.36E-01	1.81E-01	2.11E-01
506375	9/3/2019 - 9/9/2019	I-131	<2.09E-02	0.00E+00	2.09E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	4.06E-01	1.81E-01	1.91E-01
507302	9/9/2019 - 9/16/2019	I-131	<2.06E-02	0.00E+00	2.06E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<2.06E-02	0.00E+00	2.06E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	3.71E-01	1.98E-01	2.64E-01
507831	9/16/2019 - 9/23/2019	I-131	<2.08E-02	0.00E+00	2.08E-02
		Cs-134	<2.14E-02	0.00E+00	2.14E-02
		Cs-137	<1.63E-02	0.00E+00	1.63E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	4.85E-01	2.01E-01	2.30E-01
508365	9/23/2019 - 9/30/2019	I-131	<1.33E-02	0.00E+00	1.33E-02
		Cs-134	<1.50E-02	0.00E+00	1.50E-02
		Cs-137	<1.36E-02	0.00E+00	1.36E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	4.01E-01	1.68E-01	1.78E-01
509244	9/30/2019 - 10/7/2019	I-131	<2.07E-02	0.00E+00	2.07E-02
		Cs-134	<1.91E-02	0.00E+00	1.91E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<1.49E-01	0.00E+00	1.49E-01
		K-40	3.78E-01	1.75E-01	2.00E-01
509839	10/7/2019 - 10/14/2019	I-131	<1.44E-02	0.00E+00	1.44E-02
		Cs-134	<1.26E-02	0.00E+00	1.26E-02
		Cs-137	<1.17E-02	0.00E+00	1.17E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	<1.15E-01	0.00E+00	1.15E-01
510540	10/14/2019 - 10/21/2019	I-131	<1.95E-02	0.00E+00	1.95E-02
		Cs-134	<1.71E-02	0.00E+00	1.71E-02
		Cs-137	<1.59E-02	0.00E+00	1.59E-02
		Be-7	<1.43E-01	0.00E+00	1.43E-01



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 102 [CONTROL - WNW @ 9.89 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
510540	10/14/2019 - 10/21/2019	K-40	4.50E-01	1.96E-01	2.29E-01
510834	10/21/2019 - 10/28/2019	I-131	<2.01E-02	0.00E+00	2.01E-02
		Cs-134	<2.10E-02	0.00E+00	2.10E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02
		Be-7	<1.47E-01	0.00E+00	1.47E-01
		K-40	6.21E-01	1.97E-01	1.46E-01
511236	10/28/2019 - 11/4/2019	I-131	<2.15E-02	0.00E+00	2.15E-02
		Cs-134	<1.47E-02	0.00E+00	1.47E-02
		Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<1.51E-01	0.00E+00	1.51E-01
		K-40	7.51E-01	2.35E-01	2.21E-01
511475	11/4/2019 - 11/11/2019	I-131	<1.99E-02	0.00E+00	1.99E-02
		Cs-134	<2.00E-02	0.00E+00	2.00E-02
		Cs-137	<1.98E-02	0.00E+00	1.98E-02
		Be-7	<1.40E-01	0.00E+00	1.40E-01
		K-40	6.69E-01	2.07E-01	1.62E-01
511881	11/11/2019 - 11/18/2019	I-131	<2.00E-02	0.00E+00	2.00E-02
		Cs-134	<1.84E-02	0.00E+00	1.84E-02
		Cs-137	<1.58E-02	0.00E+00	1.58E-02
		Be-7	<1.56E-01	0.00E+00	1.56E-01
		K-40	6.00E-01	2.18E-01	2.32E-01
512186	11/18/2019 - 11/25/2019	I-131	<1.48E-02	0.00E+00	1.48E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	<2.62E-01	0.00E+00	2.62E-01
512487	11/25/2019 - 12/2/2019	I-131	<1.94E-02	0.00E+00	1.94E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.26E-02	0.00E+00	1.26E-02
		Be-7	<9.45E-02	0.00E+00	9.45E-02
		K-40	3.40E-01	1.53E-01	1.55E-01
512670	12/2/2019 - 12/9/2019	I-131	<1.96E-02	0.00E+00	1.96E-02
		Cs-134	<2.03E-02	0.00E+00	2.03E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	6.86E-01	2.10E-01	1.68E-01
513631	12/9/2019 - 12/16/2019	I-131	<1.77E-02	0.00E+00	1.77E-02
		Cs-134	<1.71E-02	0.00E+00	1.71E-02
		Cs-137	<1.47E-02	0.00E+00	1.47E-02
		Be-7	<9.65E-02	0.00E+00	9.65E-02
		K-40	5.61E-01	2.02E-01	2.03E-01
513946	12/16/2019 - 12/23/2019	I-131	<2.23E-02	0.00E+00	2.23E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	3.79E-01	1.68E-01	1.87E-01
514167	12/23/2019 - 12/30/2019	I-131	<3.70E-02	0.00E+00	3.70E-02
		Cs-134	<1.84E-02	0.00E+00	1.84E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<1.62E-01	0.00E+00	1.62E-01



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 102 [CONTROL - WNW @ 9.89 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514167	12/23/2019 - 12/30/2019	K-40	5.34E-01	1.98E-01	1.98E-01

Sample Point 103 [INDICATOR - NE @ 4.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492224	12/31/2018 - 1/7/2019	I-131	<2.30E-02	0.00E+00	2.30E-02
		Cs-134	<1.70E-02	0.00E+00	1.70E-02
		Cs-137	<1.82E-02	0.00E+00	1.82E-02
		Be-7	<1.35E-01	0.00E+00	1.35E-01
		K-40	6.31E-01	2.06E-01	1.74E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492458	1/7/2019 - 1/14/2019	I-131	<2.12E-02	0.00E+00	2.12E-02
		Cs-134	<1.84E-02	0.00E+00	1.84E-02
		Cs-137	<1.79E-02	0.00E+00	1.79E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	4.95E-01	2.13E-01	2.50E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492902	1/14/2019 - 1/21/2019	I-131	<2.29E-02	0.00E+00	2.29E-02
		Cs-134	<1.87E-02	0.00E+00	1.87E-02
		Cs-137	<1.60E-02	0.00E+00	1.60E-02
		Be-7	<1.30E-01	0.00E+00	1.30E-01
		K-40	4.75E-01	2.06E-01	2.42E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493329	1/21/2019 - 1/28/2019	I-131	<2.26E-02	0.00E+00	2.26E-02
		Cs-134	<2.01E-02	0.00E+00	2.01E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	4.66E-01	2.04E-01	2.46E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493588	1/28/2019 - 2/4/2019	I-131	<2.20E-02	0.00E+00	2.20E-02
		Cs-134	<1.37E-02	0.00E+00	1.37E-02
		Cs-137	<1.91E-02	0.00E+00	1.91E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	3.89E-01	1.88E-01	2.32E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493814	2/4/2019 - 2/11/2019	I-131	<2.05E-02	0.00E+00	2.05E-02
		Cs-134	<1.42E-02	0.00E+00	1.43E-02
		Cs-137	<1.73E-02	0.00E+00	1.73E-02
		Be-7	<9.92E-02	0.00E+00	9.92E-02
		K-40	6.75E-01	1.93E-01	3.45E-02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494356	2/11/2019 - 2/18/2019	I-131	<1.97E-02	0.00E+00	1.97E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-02
		Cs-137	<1.60E-02	0.00E+00	1.60E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	4.54E-01	1.91E-01	2.13E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494979	2/18/2019 - 2/25/2019	I-131	<2.22E-02	0.00E+00	2.22E-02
		Cs-134	<1.32E-02	0.00E+00	1.32E-02
		Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	<3.66E-01	0.00E+00	3.66E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
495405	2/25/2019 - 3/4/2019	I-131	<1.65E-02	0.00E+00	1.65E-02
		Cs-134	<1.70E-02	0.00E+00	1.70E-02
		Cs-137	<1.91E-02	0.00E+00	1.91E-02
		Be-7	<1.36E-01	0.00E+00	1.36E-01
		K-40	4.19E-01	1.64E-01	1.39E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
496316	3/4/2019 - 3/11/2019	I-131	<2.04E-02	0.00E+00	2.04E-02
		Cs-134	<1.90E-02	0.00E+00	1.90E-02



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 103 [INDICATOR - NE @ 4.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
496316	3/4/2019 - 3/11/2019	Cs-137	<1.52E-02	0.00E+00	1.52E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	3.73E-01	1.75E-01	2.06E-01
496186	3/11/2019 - 3/18/2019	I-131	<1.88E-02	0.00E+00	1.88E-02
		Cs-134	<1.81E-02	0.00E+00	1.81E-02
		Cs-137	<7.62E-03	0.00E+00	7.62E-03
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	3.48E-01	2.07E-01	2.91E-01
496657	3/18/2019 - 3/25/2019	I-131	<2.34E-02	0.00E+00	2.34E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<1.76E-02	0.00E+00	1.76E-02
		Be-7	<1.42E-01	0.00E+00	1.42E-01
		K-40	4.40E-01	1.79E-01	1.88E-01
497156	3/25/2019 - 4/1/2019	I-131	<2.18E-02	0.00E+00	2.18E-02
		Cs-134	<1.77E-02	0.00E+00	1.77E-02
		Cs-137	<1.91E-02	0.00E+00	1.91E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	5.32E-01	1.93E-01	1.80E-01
497584	4/1/2019 - 4/8/2019	I-131	<2.13E-02	0.00E+00	2.13E-02
		Cs-134	<2.02E-02	0.00E+00	2.02E-02
		Cs-137	<2.17E-02	0.00E+00	2.17E-02
		Be-7	<1.29E-01	0.00E+00	1.29E-01
		K-40	4.91E-01	1.78E-01	1.54E-01
498045	4/8/2019 - 4/15/2019	I-131	<1.89E-02	0.00E+00	1.89E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.89E-02	0.00E+00	1.89E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	5.89E-01	2.05E-01	1.93E-01
498615	4/15/2019 - 4/22/2019	I-131	<2.51E-02	0.00E+00	2.51E-02
		Cs-134	<1.96E-02	0.00E+00	1.96E-02
		Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<9.83E-02	0.00E+00	9.83E-02
		K-40	4.68E-01	1.71E-01	1.39E-01
498795	4/22/2019 - 4/29/2019	I-131	<2.30E-02	0.00E+00	2.30E-02
		Cs-134	<1.83E-02	0.00E+00	1.83E-02
		Cs-137	<1.51E-02	0.00E+00	1.51E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	4.56E-01	2.08E-01	2.58E-01
499468	4/29/2019 - 5/6/2019	I-131	<2.07E-02	0.00E+00	2.07E-02
		Cs-134	<1.25E-02	0.00E+00	1.25E-02
		Cs-137	<1.74E-02	0.00E+00	1.74E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	6.39E-01	1.99E-01	1.42E-01
499889	5/6/2019 - 5/13/2019	I-131	<2.54E-02	0.00E+00	2.54E-02
		Cs-134	<1.99E-02	0.00E+00	1.99E-02
		Cs-137	<1.65E-02	0.00E+00	1.65E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	4.70E-01	1.98E-01	2.26E-01
500135	5/13/2019 - 5/20/2019	I-131	<2.43E-02	0.00E+00	2.43E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 103 [INDICATOR - NE @ 4.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500135	5/13/2019 - 5/20/2019	Cs-137	<1.42E-02	0.00E+00	1.42E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	4.06E-01	1.45E-01	3.33E-02
500471	5/20/2019 - 5/28/2019	I-131	<2.73E-02	0.00E+00	2.73E-02
		Cs-134	<1.64E-02	0.00E+00	1.64E-02
		Cs-137	<1.50E-02	0.00E+00	1.50E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	<3.39E-01	0.00E+00	3.39E-01
500752	5/28/2019 - 6/3/2019	I-131	<2.97E-02	0.00E+00	2.97E-02
		Cs-134	<2.09E-02	0.00E+00	2.09E-02
		Cs-137	<1.85E-02	0.00E+00	1.85E-02
		Be-7	<1.70E-01	0.00E+00	1.70E-01
		K-40	5.50E-01	2.18E-01	2.29E-01
501142	6/3/2019 - 6/10/2019	I-131	<3.46E-02	0.00E+00	3.46E-02
		Cs-134	<1.81E-02	0.00E+00	1.81E-02
		Cs-137	<1.53E-02	0.00E+00	1.53E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	5.25E-01	2.01E-01	2.13E-01
501957	6/10/2019 - 6/17/2019	I-131	<2.78E-02	0.00E+00	2.78E-02
		Cs-134	<1.28E-02	0.00E+00	1.28E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	5.12E-01	2.02E-01	2.24E-01
502216	6/17/2019 - 6/24/2019	I-131	<2.22E-02	0.00E+00	2.22E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.95E-02	0.00E+00	1.95E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	2.82E-01	1.73E-01	2.35E-01
502423	6/24/2019 - 7/1/2019	I-131	<1.92E-02	0.00E+00	1.92E-02
		Cs-134	<1.72E-02	0.00E+00	1.72E-02
		Cs-137	<1.77E-02	0.00E+00	1.77E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	4.82E-01	1.83E-01	1.79E-01
503417	7/1/2019 - 7/8/2019	I-131	<2.38E-02	0.00E+00	2.38E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.66E-02	0.00E+00	1.66E-02
		Be-7	<1.34E-01	0.00E+00	1.34E-01
		K-40	3.06E-01	1.89E-01	2.64E-01
503847	7/8/2019 - 7/15/2019	I-131	<3.78E-02	0.00E+00	3.78E-02
		Cs-134	<1.57E-02	0.00E+00	1.57E-02
		Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	6.07E-01	2.08E-01	2.01E-01
504210	7/15/2019 - 7/22/2019	I-131	<2.07E-02	0.00E+00	2.07E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<1.62E-02	0.00E+00	1.62E-02
		Be-7	<1.30E-01	0.00E+00	1.30E-01
		K-40	5.23E-01	2.15E-01	2.51E-01
504452	7/22/2019 - 7/29/2019	I-131	<2.37E-02	0.00E+00	2.37E-02
		Cs-134	<1.41E-02	0.00E+00	1.41E-02



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 103 [INDICATOR - NE @ 4.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504452	7/22/2019 - 7/29/2019	Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	<2.50E-01	0.00E+00	2.50E-01
504667	7/29/2019 - 8/5/2019	I-131	<3.52E-02	0.00E+00	3.52E-02
		Cs-134	<9.15E-03	0.00E+00	9.15E-03
		Cs-137	<1.02E-02	0.00E+00	1.02E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	2.38E-01	1.60E-01	2.24E-01
504935	8/5/2019 - 8/12/2019	I-131	<1.70E-02	0.00E+00	1.70E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.37E-02	0.00E+00	1.37E-02
		Be-7	<8.37E-02	0.00E+00	8.37E-02
		K-40	2.17E-01	1.60E-01	2.33E-01
505155	8/12/2019 - 8/19/2019	I-131	<1.42E-02	0.00E+00	1.42E-02
		Cs-134	<1.56E-02	0.00E+00	1.56E-02
		Cs-137	<1.47E-02	0.00E+00	1.47E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	<3.89E-01	0.00E+00	3.89E-01
505542	8/19/2019 - 8/26/2019	I-131	<1.81E-02	0.00E+00	1.81E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.43E-02	0.00E+00	1.43E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	<3.38E-01	0.00E+00	3.38E-01
505868	8/26/2019 - 9/3/2019	I-131	<1.49E-02	0.00E+00	1.49E-02
		Cs-134	<1.12E-02	0.00E+00	1.12E-02
		Cs-137	<1.23E-02	0.00E+00	1.23E-02
		Be-7	<7.70E-02	0.00E+00	7.70E-02
		K-40	3.24E-01	1.31E-01	1.07E-01
506376	9/3/2019 - 9/9/2019	I-131	<2.68E-02	0.00E+00	2.68E-02
		Cs-134	<1.99E-02	0.00E+00	1.99E-02
		Cs-137	<1.51E-02	0.00E+00	1.51E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	2.95E-01	1.67E-01	2.10E-01
507303	9/9/2019 - 9/16/2019	I-131	<1.54E-02	0.00E+00	1.54E-02
		Cs-134	<1.95E-02	0.00E+00	1.95E-02
		Cs-137	<1.33E-02	0.00E+00	1.33E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	4.09E-01	1.83E-01	2.15E-01
507832	9/16/2019 - 9/23/2019	I-131	<1.69E-02	0.00E+00	1.69E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<9.96E-02	0.00E+00	9.96E-02
		K-40	4.67E-01	1.90E-01	2.12E-01
508366	9/23/2019 - 9/30/2019	I-131	<1.41E-02	0.00E+00	1.41E-02
		Cs-134	<1.50E-02	0.00E+00	1.50E-02
		Cs-137	<1.36E-02	0.00E+00	1.36E-02
		Be-7	<8.48E-02	0.00E+00	8.48E-02
		K-40	3.16E-01	1.27E-01	3.29E-02
509245	9/30/2019 - 10/7/2019	I-131	<1.53E-02	0.00E+00	1.53E-02
		Cs-134	<1.25E-02	0.00E+00	1.25E-02



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 103 [INDICATOR - NE @ 4.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
509245	9/30/2019 - 10/7/2019	Cs-137	<1.70E-02	0.00E+00	1.70E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	3.33E-01	1.56E-01	1.75E-01
509840	10/7/2019 - 10/14/2019	I-131	<1.67E-02	0.00E+00	1.67E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-02
		Cs-137	<1.50E-02	0.00E+00	1.50E-02
		Be-7	<9.98E-02	0.00E+00	9.98E-02
		K-40	<3.05E-01	0.00E+00	3.05E-01
510541	10/14/2019 - 10/21/2019	I-131	<1.90E-02	0.00E+00	1.90E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.17E-02	0.00E+00	1.17E-02
		Be-7	<9.55E-02	0.00E+00	9.55E-02
		K-40	4.52E-01	1.71E-01	1.57E-01
510835	10/21/2019 - 10/28/2019	I-131	<1.58E-02	0.00E+00	1.58E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	6.09E-01	1.96E-01	1.56E-01
511237	10/28/2019 - 11/4/2019	I-131	<1.49E-02	0.00E+00	1.49E-02
		Cs-134	<1.14E-02	0.00E+00	1.14E-02
		Cs-137	<1.24E-02	0.00E+00	1.24E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	6.15E-01	1.88E-01	1.20E-01
511476	11/4/2019 - 11/11/2019	I-131	<1.50E-02	0.00E+00	1.50E-02
		Cs-134	<1.78E-02	0.00E+00	1.78E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	6.31E-01	2.05E-01	1.78E-01
511882	11/11/2019 - 11/18/2019	I-131	<1.79E-02	0.00E+00	1.79E-02
		Cs-134	<1.78E-02	0.00E+00	1.78E-02
		Cs-137	<1.36E-02	0.00E+00	1.36E-02
		Be-7	<9.39E-02	0.00E+00	9.39E-02
		K-40	4.47E-01	1.69E-01	1.57E-01
512187	11/18/2019 - 11/25/2019	I-131	<1.73E-02	0.00E+00	1.73E-02
		Cs-134	<1.81E-02	0.00E+00	1.81E-02
		Cs-137	<1.25E-02	0.00E+00	1.25E-02
		Be-7	<1.30E-01	0.00E+00	1.30E-01
		K-40	<2.64E-01	0.00E+00	2.64E-01
512488	11/25/2019 - 12/2/2019	I-131	<1.58E-02	0.00E+00	1.58E-02
		Cs-134	<1.50E-02	0.00E+00	1.50E-02
		Cs-137	<1.15E-02	0.00E+00	1.15E-02
		Be-7	<9.87E-02	0.00E+00	9.87E-02
		K-40	3.02E-01	1.23E-01	3.28E-02
512671	12/2/2019 - 12/9/2019	I-131	<2.02E-02	0.00E+00	2.02E-02
		Cs-134	<1.05E-02	0.00E+00	1.05E-02
		Cs-137	<1.52E-02	0.00E+00	1.52E-02
		Be-7	<1.37E-01	0.00E+00	1.37E-01
		K-40	4.86E-01	2.22E-01	2.83E-01
513632	12/9/2019 - 12/16/2019	I-131	<1.98E-02	0.00E+00	1.98E-02
		Cs-134	<1.16E-02	0.00E+00	1.16E-02



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 103 [INDICATOR - NE @ 4.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
513632	12/9/2019 - 12/16/2019	Cs-137	<1.62E-02	0.00E+00	1.62E-02
		Be-7	<1.41E-01	0.00E+00	1.41E-01
		K-40	5.49E-01	2.16E-01	2.48E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
513947	12/16/2019 - 12/23/2019	I-131	<2.36E-02	0.00E+00	2.36E-02
		Cs-134	<1.70E-02	0.00E+00	1.70E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<9.49E-02	0.00E+00	9.49E-02
		K-40	4.70E-01	1.76E-01	1.61E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514168	12/23/2019 - 12/30/2019	I-131	<3.17E-02	0.00E+00	3.17E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.43E-02	0.00E+00	1.43E-02
		Be-7	<1.30E-01	0.00E+00	1.30E-01
		K-40	4.20E-01	1.64E-01	1.54E-01

Sample Point 120 [INDICATOR - NNE @ 0.46 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492225	12/31/2018 - 1/7/2019	I-131	<2.35E-02	0.00E+00	2.35E-02
		Cs-134	<2.05E-02	0.00E+00	2.05E-02
		Cs-137	<1.70E-02	0.00E+00	1.70E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	4.91E-01	2.11E-01	2.51E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492459	1/7/2019 - 1/14/2019	I-131	<1.83E-02	0.00E+00	1.83E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-02
		Cs-137	<1.74E-02	0.00E+00	1.74E-02
		Be-7	<9.24E-02	0.00E+00	9.24E-02
		K-40	3.12E-01	1.92E-01	2.70E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492903	1/14/2019 - 1/21/2019	I-131	<1.91E-02	0.00E+00	1.91E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.60E-02	0.00E+00	1.60E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	4.04E-01	1.70E-01	1.72E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493330	1/21/2019 - 1/28/2019	I-131	<2.08E-02	0.00E+00	2.08E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	4.76E-01	1.89E-01	2.03E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493589	1/28/2019 - 2/4/2019	I-131	<1.94E-02	0.00E+00	1.94E-02
		Cs-134	<1.39E-02	0.00E+00	1.39E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<1.31E-01	0.00E+00	1.31E-01
		K-40	5.22E-01	2.00E-01	2.07E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493815	2/4/2019 - 2/11/2019	I-131	<2.05E-02	0.00E+00	2.05E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.68E-02	0.00E+00	1.68E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	5.96E-01	2.14E-01	2.22E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494357	2/11/2019 - 2/18/2019	I-131	<2.07E-02	0.00E+00	2.07E-02
		Cs-134	<2.00E-02	0.00E+00	2.00E-02
		Cs-137	<1.89E-02	0.00E+00	1.89E-02
		Be-7	<9.79E-02	0.00E+00	9.79E-02
		K-40	5.56E-01	1.75E-01	3.50E-02



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 120 [INDICATOR - NNE @ 0.46 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494980	2/18/2019 - 2/25/2019	I-131	<1.66E-02	0.00E+00	1.66E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.59E-02	0.00E+00	1.59E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	3.70E-01	1.71E-01	1.99E-01
495406	2/25/2019 - 3/4/2019	I-131	<1.92E-02	0.00E+00	1.92E-02
		Cs-134	<1.93E-02	0.00E+00	1.93E-02
		Cs-137	<1.47E-02	0.00E+00	1.47E-02
		Be-7	<9.63E-02	0.00E+00	9.63E-02
		K-40	4.46E-01	2.14E-01	2.74E-01
496317	3/4/2019 - 3/11/2019	I-131	<1.83E-02	0.00E+00	1.83E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	4.53E-01	2.05E-01	2.55E-01
496187	3/11/2019 - 3/18/2019	I-131	<1.72E-02	0.00E+00	1.72E-02
		Cs-134	<2.38E-02	0.00E+00	2.38E-02
		Cs-137	<1.82E-02	0.00E+00	1.82E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	4.72E-01	1.72E-01	1.34E-01
496658	3/18/2019 - 3/25/2019	I-131	<2.37E-02	0.00E+00	2.37E-02
		Cs-134	<1.96E-02	0.00E+00	1.96E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<1.33E-01	0.00E+00	1.33E-01
		K-40	<3.69E-01	0.00E+00	3.69E-01
497157	3/25/2019 - 4/1/2019	I-131	<2.45E-02	0.00E+00	2.45E-02
		Cs-134	<2.11E-02	0.00E+00	2.11E-02
		Cs-137	<2.11E-02	0.00E+00	2.11E-02
		Be-7	<1.30E-01	0.00E+00	1.30E-01
		K-40	4.70E-01	2.18E-01	2.75E-01
497585	4/1/2019 - 4/8/2019	I-131	<2.38E-02	0.00E+00	2.38E-02
		Cs-134	<1.78E-02	0.00E+00	1.78E-02
		Cs-137	<1.90E-02	0.00E+00	1.90E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	4.84E-01	1.71E-01	1.30E-01
498046	4/8/2019 - 4/15/2019	I-131	<1.68E-02	0.00E+00	1.68E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02
		Be-7	<1.40E-01	0.00E+00	1.40E-01
		K-40	3.68E-01	1.80E-01	2.19E-01
498616	4/15/2019 - 4/22/2019	I-131	<2.40E-02	0.00E+00	2.40E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.58E-02	0.00E+00	1.58E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	<3.70E-01	0.00E+00	3.70E-01
498796	4/22/2019 - 4/29/2019	I-131	<2.33E-02	0.00E+00	2.33E-02
		Cs-134	<1.51E-02	0.00E+00	1.51E-02
		Cs-137	<1.48E-02	0.00E+00	1.48E-02
		Be-7	<1.32E-01	0.00E+00	1.32E-01
		K-40	6.00E-01	1.97E-01	1.46E-01



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 120 [INDICATOR - NNE @ 0.46 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
499469	4/29/2019 - 5/6/2019	I-131	<2.25E-02	0.00E+00	2.25E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.36E-02	0.00E+00	1.36E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	5.25E-01	1.80E-01	1.37E-01
499890	5/6/2019 - 5/13/2019	I-131	<2.78E-02	0.00E+00	2.78E-02
		Cs-134	<1.88E-02	0.00E+00	1.88E-02
		Cs-137	<1.70E-02	0.00E+00	1.70E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	4.51E-01	1.57E-01	3.49E-02
500136	5/13/2019 - 5/20/2019	I-131	<2.19E-02	0.00E+00	2.19E-02
		Cs-134	<1.51E-02	0.00E+00	1.51E-02
		Cs-137	<1.68E-02	0.00E+00	1.68E-02
		Be-7	<1.29E-01	0.00E+00	1.29E-01
		K-40	2.16E-01	1.67E-01	2.48E-01
500472	5/20/2019 - 5/28/2019	I-131	<2.18E-02	0.00E+00	2.18E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<1.53E-02	0.00E+00	1.53E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	4.51E-01	1.76E-01	1.90E-01
500753	5/28/2019 - 6/3/2019	I-131	<3.03E-02	0.00E+00	3.03E-02
		Cs-134	<2.16E-02	0.00E+00	2.16E-02
		Cs-137	<2.01E-02	0.00E+00	2.01E-02
		Be-7	<1.35E-01	0.00E+00	1.35E-01
		K-40	5.84E-01	2.02E-01	1.43E-01
501143	6/3/2019 - 6/10/2019	I-131	<4.10E-02	0.00E+00	4.10E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.43E-02	0.00E+00	1.43E-02
		Be-7	<1.49E-01	0.00E+00	1.49E-01
		K-40	4.00E-01	1.47E-01	3.50E-02
501958	6/10/2019 - 6/17/2019	I-131	<2.49E-02	0.00E+00	2.49E-02
		Cs-134	<2.13E-02	0.00E+00	2.13E-02
		Cs-137	<1.49E-02	0.00E+00	1.49E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	4.89E-01	1.90E-01	2.01E-01
502217	6/17/2019 - 6/24/2019	I-131	<2.24E-02	0.00E+00	2.24E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<1.80E-02	0.00E+00	1.80E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	4.45E-01	2.00E-01	2.40E-01
502424	6/24/2019 - 7/1/2019	I-131	<2.09E-02	0.00E+00	2.09E-02
		Cs-134	<1.96E-02	0.00E+00	1.96E-02
		Cs-137	<1.72E-02	0.00E+00	1.72E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	<4.03E-01	0.00E+00	4.03E-01
503418	7/1/2019 - 7/8/2019	I-131	<2.28E-02	0.00E+00	2.28E-02
		Cs-134	<2.01E-02	0.00E+00	2.01E-02
		Cs-137	<1.90E-02	0.00E+00	1.90E-02
		Be-7	<1.34E-01	0.00E+00	1.34E-01
		K-40	5.90E-01	2.07E-01	2.01E-01



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 120 [INDICATOR - NNE @ 0.46 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
503848	7/8/2019 - 7/15/2019	I-131	<4.16E-02	0.00E+00	4.16E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<1.11E-02	0.00E+00	1.11E-02
		Be-7	<9.46E-02	0.00E+00	9.46E-02
		K-40	4.34E-01	1.74E-01	1.77E-01
504211	7/15/2019 - 7/22/2019	I-131	<2.16E-02	0.00E+00	2.16E-02
		Cs-134	<2.11E-02	0.00E+00	2.11E-02
		Cs-137	<1.90E-02	0.00E+00	1.90E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	4.29E-01	1.98E-01	2.40E-01
504453	7/22/2019 - 7/29/2019	I-131	<3.03E-02	0.00E+00	3.03E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<1.31E-02	0.00E+00	1.31E-02
		Be-7	<9.10E-02	0.00E+00	9.10E-02
		K-40	<2.76E-01	0.00E+00	2.76E-01
504668	7/29/2019 - 8/5/2019	I-131	<3.46E-02	0.00E+00	3.46E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	<2.70E-01	0.00E+00	2.70E-01
504936	8/5/2019 - 8/12/2019	I-131	<1.84E-02	0.00E+00	1.84E-02
		Cs-134	<1.07E-02	0.00E+00	1.07E-02
		Cs-137	<1.60E-02	0.00E+00	1.60E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	3.46E-01	1.55E-01	1.57E-01
505156	8/12/2019 - 8/19/2019	I-131	<1.79E-02	0.00E+00	1.79E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-02
		Cs-137	<1.79E-02	0.00E+00	1.79E-02
		Be-7	<8.75E-02	0.00E+00	8.75E-02
		K-40	2.03E-01	1.23E-01	1.47E-01
505543	8/19/2019 - 8/26/2019	I-131	<1.39E-02	0.00E+00	1.39E-02
		Cs-134	<1.22E-02	0.00E+00	1.22E-02
		Cs-137	<1.27E-02	0.00E+00	1.27E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	2.76E-01	1.30E-01	1.26E-01
505869	8/26/2019 - 9/3/2019	I-131	<1.24E-02	0.00E+00	1.24E-02
		Cs-134	<6.22E-03	0.00E+00	6.22E-03
		Cs-137	<1.16E-02	0.00E+00	1.16E-02
		Be-7	<6.36E-02	0.00E+00	6.36E-02
		K-40	<2.18E-01	0.00E+00	2.18E-01
506377	9/3/2019 - 9/9/2019	I-131	<2.12E-02	0.00E+00	2.12E-02
		Cs-134	<1.64E-02	0.00E+00	1.64E-02
		Cs-137	<1.14E-02	0.00E+00	1.14E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	<1.71E-01	0.00E+00	1.71E-01
507304	9/9/2019 - 9/16/2019	I-131	<2.26E-02	0.00E+00	2.26E-02
		Cs-134	<2.02E-02	0.00E+00	2.02E-02
		Cs-137	<1.83E-02	0.00E+00	1.83E-02
		Be-7	<1.40E-01	0.00E+00	1.40E-01
		K-40	4.06E-01	1.84E-01	2.12E-01



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 120 [INDICATOR - NNE @ 0.46 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
507833	9/16/2019 - 9/23/2019	I-131	<1.52E-02	0.00E+00	1.52E-02
		Cs-134	<1.66E-02	0.00E+00	1.66E-02
		Cs-137	<1.50E-02	0.00E+00	1.50E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	2.52E-01	1.39E-01	1.66E-01
508367	9/23/2019 - 9/30/2019	I-131	<1.85E-02	0.00E+00	1.85E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-02
		Cs-137	<1.58E-02	0.00E+00	1.58E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	3.03E-01	1.26E-01	3.42E-02
509246	9/30/2019 - 10/7/2019	I-131	<1.95E-02	0.00E+00	1.95E-02
		Cs-134	<1.80E-02	0.00E+00	1.80E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	5.35E-01	1.84E-01	1.68E-01
509841	10/7/2019 - 10/14/2019	I-131	<1.89E-02	0.00E+00	1.89E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<1.88E-02	0.00E+00	1.88E-02
		Be-7	<1.44E-01	0.00E+00	1.44E-01
		K-40	3.75E-01	1.82E-01	2.18E-01
510542	10/14/2019 - 10/21/2019	I-131	<1.27E-02	0.00E+00	1.27E-02
		Cs-134	<1.91E-02	0.00E+00	1.91E-02
		Cs-137	<1.60E-02	0.00E+00	1.60E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	5.93E-01	2.02E-01	1.95E-01
510836	10/21/2019 - 10/28/2019	I-131	<1.39E-02	0.00E+00	1.39E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	5.68E-01	2.03E-01	2.08E-01
511238	10/28/2019 - 11/4/2019	I-131	<1.52E-02	0.00E+00	1.52E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	4.74E-01	2.03E-01	2.49E-01
511477	11/4/2019 - 11/11/2019	I-131	<1.71E-02	0.00E+00	1.71E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<1.22E-02	0.00E+00	1.22E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	4.63E-01	1.74E-01	1.50E-01
511883	11/11/2019 - 11/18/2019	I-131	<2.13E-02	0.00E+00	2.13E-02
		Cs-134	<1.81E-02	0.00E+00	1.81E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<1.42E-01	0.00E+00	1.42E-01
		K-40	6.73E-01	2.05E-01	1.48E-01
512188	11/18/2019 - 11/25/2019	I-131	<1.82E-02	0.00E+00	1.82E-02
		Cs-134	<1.78E-02	0.00E+00	1.78E-02
		Cs-137	<1.02E-02	0.00E+00	1.02E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	1.64E-01	1.67E-01	2.65E-01



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 120 [INDICATOR - NNE @ 0.46 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512489	11/25/2019 - 12/2/2019	I-131	<1.29E-02	0.00E+00	1.29E-02
		Cs-134	<1.33E-02	0.00E+00	1.33E-02
		Cs-137	<1.15E-02	0.00E+00	1.15E-02
		Be-7	<8.14E-02	0.00E+00	8.14E-02
		K-40	1.83E-01	1.34E-01	1.89E-01
512672	12/2/2019 - 12/9/2019	I-131	<1.89E-02	0.00E+00	1.89E-02
		Cs-134	<1.88E-02	0.00E+00	1.88E-02
		Cs-137	<1.77E-02	0.00E+00	1.77E-02
		Be-7	<1.48E-01	0.00E+00	1.48E-01
		K-40	4.06E-01	2.21E-01	3.02E-01
513633	12/9/2019 - 12/16/2019	I-131	<1.73E-02	0.00E+00	1.73E-02
		Cs-134	<2.06E-02	0.00E+00	2.06E-02
		Cs-137	<1.68E-02	0.00E+00	1.68E-02
		Be-7	<9.62E-02	0.00E+00	9.62E-02
		K-40	<3.60E-01	0.00E+00	3.60E-01
513948	12/16/2019 - 12/23/2019	I-131	<1.72E-02	0.00E+00	1.72E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-02
		Cs-137	<1.18E-02	0.00E+00	1.18E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	2.38E-01	1.51E-01	2.04E-01
514169	12/23/2019 - 12/30/2019	I-131	<2.60E-02	0.00E+00	2.60E-02
		Cs-134	<1.01E-02	0.00E+00	1.01E-02
		Cs-137	<1.27E-02	0.00E+00	1.27E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	6.09E-01	2.08E-01	2.11E-01

Sample Point 121 [INDICATOR - NE @ 0.47 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492226	12/31/2018 - 1/7/2019	I-131	<2.47E-02	0.00E+00	2.47E-02
		Cs-134	<1.48E-02	0.00E+00	1.48E-02
		Cs-137	<1.94E-02	0.00E+00	1.94E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	4.41E-01	2.02E-01	2.45E-01
492460	1/7/2019 - 1/14/2019	I-131	<2.06E-02	0.00E+00	2.06E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-02
		Cs-137	<1.87E-02	0.00E+00	1.87E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	<3.93E-01	0.00E+00	3.93E-01
492904	1/14/2019 - 1/21/2019	I-131	<2.04E-02	0.00E+00	2.04E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.70E-02	0.00E+00	1.70E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	3.65E-01	1.50E-01	1.24E-01
493331	1/21/2019 - 1/28/2019	I-131	<2.12E-02	0.00E+00	2.12E-02
		Cs-134	<1.22E-02	0.00E+00	1.22E-02
		Cs-137	<1.59E-02	0.00E+00	1.59E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	3.40E-01	1.67E-01	2.01E-01
493590	1/28/2019 - 2/4/2019	I-131	<2.11E-02	0.00E+00	2.11E-02
		Cs-134	<1.48E-02	0.00E+00	1.48E-02
		Cs-137	<1.93E-02	0.00E+00	1.93E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	5.41E-01	1.90E-01	1.61E-01



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 121 [INDICATOR - NE @ 0.47 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493816	2/4/2019 - 2/11/2019	I-131	<1.80E-02	0.00E+00	1.80E-02
		Cs-134	<1.25E-02	0.00E+00	1.25E-02
		Cs-137	<1.73E-02	0.00E+00	1.73E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	4.00E-01	1.68E-01	1.70E-01
494358	2/11/2019 - 2/18/2019	I-131	<1.65E-02	0.00E+00	1.65E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<9.80E-02	0.00E+00	9.80E-02
		K-40	4.69E-01	1.70E-01	1.30E-01
494981	2/18/2019 - 2/25/2019	I-131	<1.89E-02	0.00E+00	1.89E-02
		Cs-134	<1.81E-02	0.00E+00	1.81E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	3.40E-01	1.55E-01	1.66E-01
495407	2/25/2019 - 3/4/2019	I-131	<2.24E-02	0.00E+00	2.24E-02
		Cs-134	<1.48E-02	0.00E+00	1.48E-02
		Cs-137	<1.64E-02	0.00E+00	1.64E-02
		Be-7	5.52E-03	7.57E-02	1.38E-01
		K-40	4.97E-01	2.28E-01	2.91E-01
496318	3/4/2019 - 3/11/2019	I-131	<1.81E-02	0.00E+00	1.81E-02
		Cs-134	<1.79E-02	0.00E+00	1.79E-02
		Cs-137	<1.47E-02	0.00E+00	1.47E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	4.49E-01	2.07E-01	2.60E-01
496188	3/11/2019 - 3/18/2019	I-131	<1.83E-02	0.00E+00	1.83E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<1.50E-02	0.00E+00	1.50E-02
		Be-7	<1.37E-01	0.00E+00	1.37E-01
		K-40	5.12E-01	1.88E-01	1.73E-01
496659	3/18/2019 - 3/25/2019	I-131	<2.43E-02	0.00E+00	2.43E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-02
		Cs-137	<1.91E-02	0.00E+00	1.91E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	<3.50E-01	0.00E+00	3.50E-01
497158	3/25/2019 - 4/1/2019	I-131	<2.20E-02	0.00E+00	2.20E-02
		Cs-134	<1.79E-02	0.00E+00	1.79E-02
		Cs-137	<1.89E-02	0.00E+00	1.89E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	5.52E-01	2.04E-01	2.04E-01
497586	4/1/2019 - 4/8/2019	I-131	<1.93E-02	0.00E+00	1.93E-02
		Cs-134	<1.78E-02	0.00E+00	1.78E-02
		Cs-137	<1.76E-02	0.00E+00	1.76E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	4.93E-01	1.75E-01	1.41E-01
498047	4/8/2019 - 4/15/2019	I-131	<1.87E-02	0.00E+00	1.87E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.99E-02	0.00E+00	1.99E-02
		Be-7	<1.45E-01	0.00E+00	1.45E-01
		K-40	6.37E-01	2.10E-01	1.86E-01



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 121 [INDICATOR - NE @ 0.47 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
498617	4/15/2019 - 4/22/2019	I-131	<2.31E-02	0.00E+00	2.31E-02
		Cs-134	<1.47E-02	0.00E+00	1.47E-02
		Cs-137	<1.82E-02	0.00E+00	1.82E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	3.98E-01	1.68E-01	1.75E-01
498797	4/22/2019 - 4/29/2019	I-131	<2.26E-02	0.00E+00	2.26E-02
		Cs-134	<1.19E-02	0.00E+00	1.19E-02
		Cs-137	<1.11E-02	0.00E+00	1.11E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	6.83E-01	2.42E-01	2.64E-01
499470	4/29/2019 - 5/6/2019	I-131	<2.40E-02	0.00E+00	2.40E-02
		Cs-134	<1.43E-02	0.00E+00	1.43E-02
		Cs-137	<1.48E-02	0.00E+00	1.48E-02
		Be-7	<1.27E-01	0.00E+00	1.27E-01
		K-40	4.79E-01	1.69E-01	1.21E-01
499891	5/6/2019 - 5/13/2019	I-131	<3.01E-02	0.00E+00	3.01E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<1.75E-02	0.00E+00	1.75E-02
		Be-7	<9.25E-02	0.00E+00	9.25E-02
		K-40	5.15E-01	1.68E-01	3.49E-02
500137	5/13/2019 - 5/20/2019	I-131	<2.81E-02	0.00E+00	2.81E-02
		Cs-134	<1.72E-02	0.00E+00	1.72E-02
		Cs-137	<2.10E-02	0.00E+00	2.10E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	5.93E-01	2.03E-01	1.90E-01
500473	5/20/2019 - 5/28/2019	I-131	<2.50E-02	0.00E+00	2.50E-02
		Cs-134	<1.70E-02	0.00E+00	1.70E-02
		Cs-137	<1.30E-02	0.00E+00	1.30E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	6.32E-01	1.76E-01	3.06E-02
500754	5/28/2019 - 6/3/2019	I-131	<2.52E-02	0.00E+00	2.52E-02
		Cs-134	<2.23E-02	0.00E+00	2.23E-02
		Cs-137	<2.50E-02	0.00E+00	2.50E-02
		Be-7	<1.00E-01	0.00E+00	1.00E-01
		K-40	7.40E-01	2.32E-01	1.70E-01
501144	6/3/2019 - 6/10/2019	I-131	<3.30E-02	0.00E+00	3.30E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.93E-02	0.00E+00	1.93E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	6.32E-01	1.87E-01	3.49E-02
501959	6/10/2019 - 6/17/2019	I-131	<2.44E-02	0.00E+00	2.44E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<1.59E-02	0.00E+00	1.59E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	6.46E-01	2.15E-01	2.11E-01
502218	6/17/2019 - 6/24/2019	I-131	<2.25E-02	0.00E+00	2.25E-02
		Cs-134	<2.16E-02	0.00E+00	2.16E-02
		Cs-137	<1.19E-02	0.00E+00	1.19E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	5.99E-01	2.12E-01	2.08E-01



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 121 [INDICATOR - NE @ 0.47 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
502425	6/24/2019 - 7/1/2019	I-131	<1.72E-02	0.00E+00	1.72E-02
		Cs-134	<1.71E-02	0.00E+00	1.71E-02
		Cs-137	<2.02E-02	0.00E+00	2.02E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	4.48E-01	1.64E-01	1.22E-01
503419	7/1/2019 - 7/8/2019	I-131	<2.29E-02	0.00E+00	2.29E-02
		Cs-134	<2.01E-02	0.00E+00	2.01E-02
		Cs-137	<1.66E-02	0.00E+00	1.66E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	<3.55E-01	0.00E+00	3.55E-01
503849	7/8/2019 - 7/15/2019	I-131	<3.32E-02	0.00E+00	3.32E-02
		Cs-134	<1.47E-02	0.00E+00	1.47E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	4.80E-01	2.10E-01	2.60E-01
504212	7/15/2019 - 7/22/2019	I-131	<1.70E-02	0.00E+00	1.70E-02
		Cs-134	<1.51E-02	0.00E+00	1.51E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02
		Be-7	<9.78E-02	0.00E+00	9.78E-02
		K-40	2.05E-01	1.14E-01	1.12E-01
504454	7/22/2019 - 7/29/2019	I-131	<3.53E-02	0.00E+00	3.53E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.25E-02	0.00E+00	1.25E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	2.46E-01	1.60E-01	2.21E-01
504669	7/29/2019 - 8/5/2019	I-131	<3.33E-02	0.00E+00	3.33E-02
		Cs-134	<1.51E-02	0.00E+00	1.51E-02
		Cs-137	<1.42E-02	0.00E+00	1.42E-02
		Be-7	<9.00E-02	0.00E+00	9.00E-02
		K-40	<2.52E-01	0.00E+00	2.52E-01
504937	8/5/2019 - 8/12/2019	I-131	<2.20E-02	0.00E+00	2.20E-02
		Cs-134	<1.40E-02	0.00E+00	1.40E-02
		Cs-137	<2.00E-02	0.00E+00	2.00E-02
		Be-7	<1.00E-01	0.00E+00	1.00E-01
		K-40	5.38E-02	1.37E-01	2.43E-01
505157	8/12/2019 - 8/19/2019	I-131	<1.80E-02	0.00E+00	1.80E-02
		Cs-134	<1.58E-02	0.00E+00	1.58E-02
		Cs-137	<1.29E-02	0.00E+00	1.29E-02
		Be-7	<8.52E-02	0.00E+00	8.52E-02
		K-40	2.81E-01	1.37E-01	1.37E-01
505544	8/19/2019 - 8/26/2019	I-131	<1.99E-02	0.00E+00	1.99E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02
		Be-7	<1.43E-01	0.00E+00	1.43E-01
		K-40	4.72E-01	1.70E-01	1.32E-01
505870	8/26/2019 - 9/3/2019	I-131	<9.82E-03	0.00E+00	9.82E-03
		Cs-134	<1.13E-02	0.00E+00	1.13E-02
		Cs-137	<6.89E-03	0.00E+00	6.89E-03
		Be-7	<6.96E-02	0.00E+00	6.96E-02
		K-40	2.57E-01	1.18E-01	1.05E-01



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 121 [INDICATOR - NE @ 0.47 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
506378	9/3/2019 - 9/9/2019	I-131	<2.00E-02	0.00E+00	2.00E-02
		Cs-134	<1.64E-02	0.00E+00	1.64E-02
		Cs-137	<1.20E-02	0.00E+00	1.20E-02
		Be-7	<6.21E-02	0.00E+00	6.21E-02
		K-40	1.35E-01	1.59E-01	2.55E-01
507305	9/9/2019 - 9/16/2019	I-131	<2.00E-02	0.00E+00	2.00E-02
		Cs-134	<1.39E-02	0.00E+00	1.39E-02
		Cs-137	<1.48E-02	0.00E+00	1.48E-02
		Be-7	<9.74E-02	0.00E+00	9.74E-02
		K-40	4.09E-01	1.70E-01	1.72E-01
507834	9/16/2019 - 9/23/2019	I-131	<2.23E-02	0.00E+00	2.23E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.66E-02	0.00E+00	1.66E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	5.05E-01	1.90E-01	1.90E-01
508368	9/23/2019 - 9/30/2019	I-131	<1.24E-02	0.00E+00	1.24E-02
		Cs-134	<1.26E-02	0.00E+00	1.26E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02
		Be-7	<8.74E-02	0.00E+00	8.74E-02
		K-40	<2.57E-01	0.00E+00	2.57E-01
509247	9/30/2019 - 10/7/2019	I-131	<1.69E-02	0.00E+00	1.69E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.77E-02	0.00E+00	1.77E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	4.59E-01	1.88E-01	2.13E-01
509842	10/7/2019 - 10/14/2019	I-131	<1.66E-02	0.00E+00	1.66E-02
		Cs-134	<1.81E-02	0.00E+00	1.81E-02
		Cs-137	<1.62E-02	0.00E+00	1.62E-02
		Be-7	<9.60E-02	0.00E+00	9.60E-02
		K-40	5.17E-01	1.98E-01	2.08E-01
510543	10/14/2019 - 10/21/2019	I-131	<1.95E-02	0.00E+00	1.95E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.38E-02	0.00E+00	1.38E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	6.78E-01	2.20E-01	2.06E-01
510837	10/21/2019 - 10/28/2019	I-131	<1.36E-02	0.00E+00	1.36E-02
		Cs-134	<1.64E-02	0.00E+00	1.64E-02
		Cs-137	<1.42E-02	0.00E+00	1.42E-02
		Be-7	<9.31E-02	0.00E+00	9.31E-02
		K-40	4.55E-01	1.73E-01	1.64E-01
511239	10/28/2019 - 11/4/2019	I-131	<1.39E-02	0.00E+00	1.39E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.53E-02	0.00E+00	1.53E-02
		Be-7	<9.43E-02	0.00E+00	9.43E-02
		K-40	3.40E-01	1.42E-01	1.27E-01
511478	11/4/2019 - 11/11/2019	I-131	<1.62E-02	0.00E+00	1.62E-02
		Cs-134	<2.05E-02	0.00E+00	2.05E-02
		Cs-137	<1.49E-02	0.00E+00	1.49E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	5.98E-01	2.10E-01	2.12E-01



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 121 [INDICATOR - NE @ 0.47 miles]

Sample ID:	511884	Sample Dates:	11/11/2019 - 11/18/2019	Nuclide	Activity	2 Sigma Error	MDA
				I-131	<1.47E-02	0.00E+00	1.47E-02
				Cs-134	<1.24E-02	0.00E+00	1.24E-02
				Cs-137	<1.48E-02	0.00E+00	1.48E-02
				Be-7	<8.56E-02	0.00E+00	8.56E-02
				K-40	3.41E-01	1.69E-01	2.08E-01

Sample ID:	512189	Sample Dates:	11/18/2019 - 11/25/2019	Nuclide	Activity	2 Sigma Error	MDA
				I-131	<1.85E-02	0.00E+00	1.85E-02
				Cs-134	<1.24E-02	0.00E+00	1.24E-02
				Cs-137	<1.48E-02	0.00E+00	1.48E-02
				Be-7	<1.00E-01	0.00E+00	1.00E-01
				K-40	<3.84E-01	0.00E+00	3.84E-01

Sample ID:	512490	Sample Dates:	11/25/2019 - 12/2/2019	Nuclide	Activity	2 Sigma Error	MDA
				I-131	<1.30E-02	0.00E+00	1.30E-02
				Cs-134	<1.44E-02	0.00E+00	1.44E-02
				Cs-137	<1.31E-02	0.00E+00	1.31E-02
				Be-7	<9.44E-02	0.00E+00	9.44E-02
				K-40	1.08E-01	1.45E-01	2.39E-01

Sample ID:	512673	Sample Dates:	12/2/2019 - 12/9/2019	Nuclide	Activity	2 Sigma Error	MDA
				I-131	<1.84E-02	0.00E+00	1.84E-02
				Cs-134	<1.87E-02	0.00E+00	1.87E-02
				Cs-137	<1.60E-02	0.00E+00	1.60E-02
				Be-7	<1.61E-01	0.00E+00	1.61E-01
				K-40	3.71E-01	2.02E-01	2.71E-01

Sample ID:	513634	Sample Dates:	12/9/2019 - 12/16/2019	Nuclide	Activity	2 Sigma Error	MDA
				I-131	<1.78E-02	0.00E+00	1.78E-02
				Cs-134	<1.88E-02	0.00E+00	1.88E-02
				Cs-137	<1.38E-02	0.00E+00	1.38E-02
				Be-7	<8.64E-02	0.00E+00	8.64E-02
				K-40	5.72E-01	2.03E-01	2.05E-01

Sample ID:	513949	Sample Dates:	12/16/2019 - 12/23/2019	Nuclide	Activity	2 Sigma Error	MDA
				I-131	<1.27E-02	0.00E+00	1.27E-02
				Cs-134	<1.48E-02	0.00E+00	1.48E-02
				Cs-137	<1.20E-02	0.00E+00	1.20E-02
				Be-7	<8.21E-02	0.00E+00	8.21E-02
				K-40	1.78E-01	1.55E-01	2.34E-01

Sample ID:	514170	Sample Dates:	12/23/2019 - 12/30/2019	Nuclide	Activity	2 Sigma Error	MDA
				I-131	<2.96E-02	0.00E+00	2.96E-02
				Cs-134	<1.52E-02	0.00E+00	1.52E-02
				Cs-137	<1.17E-02	0.00E+00	1.17E-02
				Be-7	<8.40E-02	0.00E+00	8.40E-02
				K-40	4.08E-01	1.54E-01	1.28E-01

Sample Point 125 [INDICATOR - SW @ 0.38 miles]

Sample ID:	492227	Sample Dates:	12/31/2018 - 1/7/2019	Nuclide	Activity	2 Sigma Error	MDA
				I-131	<2.18E-02	0.00E+00	2.18E-02
				Cs-134	<1.57E-02	0.00E+00	1.57E-02
				Cs-137	<1.94E-02	0.00E+00	1.94E-02
				Be-7	<1.13E-01	0.00E+00	1.13E-01
				K-40	4.87E-01	1.80E-01	1.53E-01

Sample ID:	492461	Sample Dates:	1/7/2019 - 1/14/2019	Nuclide	Activity	2 Sigma Error	MDA
				I-131	<2.07E-02	0.00E+00	2.07E-02
				Cs-134	<2.04E-02	0.00E+00	2.04E-02
				Cs-137	<1.74E-02	0.00E+00	1.74E-02
				Be-7	<1.07E-01	0.00E+00	1.07E-01
				K-40	3.06E-01	1.93E-01	2.74E-01

Sample ID:	492905	Sample Dates:	1/14/2019 - 1/21/2019	Nuclide	Activity	2 Sigma Error	MDA
				I-131	<2.05E-02	0.00E+00	2.05E-02
				Cs-134	<1.60E-02	0.00E+00	1.60E-02
				Cs-137	<1.93E-02	0.00E+00	1.93E-02
				Be-7	<1.20E-01	0.00E+00	1.20E-01
				K-40	5.07E-01	1.97E-01	2.08E-01



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 125 [INDICATOR - SW @ 0.38 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493332	1/21/2019 - 1/28/2019	I-131	<1.73E-02	0.00E+00	1.73E-02
		Cs-134	<1.87E-02	0.00E+00	1.87E-02
		Cs-137	<1.78E-02	0.00E+00	1.78E-02
		Be-7	<7.85E-02	0.00E+00	7.85E-02
		K-40	<3.51E-01	0.00E+00	3.51E-01
493591	1/28/2019 - 2/4/2019	I-131	<2.15E-02	0.00E+00	2.15E-02
		Cs-134	<1.98E-02	0.00E+00	1.98E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	4.73E-01	2.10E-01	2.55E-01
493817	2/4/2019 - 2/11/2019	I-131	<2.07E-02	0.00E+00	2.07E-02
		Cs-134	<1.43E-02	0.00E+00	1.43E-02
		Cs-137	<1.47E-02	0.00E+00	1.47E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	3.29E-01	1.66E-01	2.01E-01
494359	2/11/2019 - 2/18/2019	I-131	<2.47E-02	0.00E+00	2.47E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<1.93E-02	0.00E+00	1.93E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	4.56E-01	1.67E-01	1.27E-01
494982	2/18/2019 - 2/25/2019	I-131	<2.14E-02	0.00E+00	2.14E-02
		Cs-134	<2.18E-02	0.00E+00	2.18E-02
		Cs-137	<1.86E-02	0.00E+00	1.86E-02
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	4.35E-01	1.97E-01	2.41E-01
495408	2/25/2019 - 3/4/2019	I-131	<1.81E-02	0.00E+00	1.81E-02
		Cs-134	<1.56E-02	0.00E+00	1.56E-02
		Cs-137	<1.53E-02	0.00E+00	1.53E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	5.04E-01	2.01E-01	2.18E-01
496319	3/4/2019 - 3/11/2019	I-131	<2.09E-02	0.00E+00	2.09E-02
		Cs-134	<2.08E-02	0.00E+00	2.08E-02
		Cs-137	<1.58E-02	0.00E+00	1.58E-02
		Be-7	<1.31E-01	0.00E+00	1.31E-01
		K-40	5.31E-01	2.22E-01	2.71E-01
496189	3/11/2019 - 3/18/2019	I-131	<2.37E-02	0.00E+00	2.37E-02
		Cs-134	<1.81E-02	0.00E+00	1.81E-02
		Cs-137	<1.65E-02	0.00E+00	1.65E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	5.26E-01	2.14E-01	2.51E-01
496660	3/18/2019 - 3/25/2019	I-131	<2.04E-02	0.00E+00	2.04E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-02
		Cs-137	<1.78E-02	0.00E+00	1.78E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	4.70E-01	1.94E-01	2.21E-01
497159	3/25/2019 - 4/1/2019	I-131	<2.17E-02	0.00E+00	2.17E-02
		Cs-134	<1.72E-02	0.00E+00	1.72E-02
		Cs-137	<1.59E-02	0.00E+00	1.59E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	3.62E-01	2.03E-01	2.75E-01



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 125 [INDICATOR - SW @ 0.38 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
497587	4/1/2019 - 4/8/2019	I-131	<2.20E-02	0.00E+00	2.20E-02
		Cs-134	<1.90E-02	0.00E+00	1.90E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	4.56E-01	1.83E-01	1.93E-01
498048	4/8/2019 - 4/15/2019	I-131	<2.01E-02	0.00E+00	2.01E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.81E-02	0.00E+00	1.81E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	3.46E-01	1.57E-01	1.63E-01
498618	4/15/2019 - 4/22/2019	I-131	<2.43E-02	0.00E+00	2.43E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	3.73E-01	1.85E-01	2.35E-01
498798	4/22/2019 - 4/29/2019	I-131	<2.04E-02	0.00E+00	2.04E-02
		Cs-134	<1.99E-02	0.00E+00	1.99E-02
		Cs-137	<1.90E-02	0.00E+00	1.90E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	4.48E-01	1.99E-01	2.36E-01
499471	4/29/2019 - 5/6/2019	I-131	<2.24E-02	0.00E+00	2.24E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.53E-02	0.00E+00	1.53E-02
		Be-7	<9.80E-02	0.00E+00	9.80E-02
		K-40	4.91E-01	1.83E-01	1.71E-01
499892	5/6/2019 - 5/13/2019	I-131	<3.23E-02	0.00E+00	3.23E-02
		Cs-134	<1.47E-02	0.00E+00	1.47E-02
		Cs-137	<1.51E-02	0.00E+00	1.51E-02
		Be-7	3.01E-02	6.70E-02	1.17E-01
		K-40	6.03E-01	2.24E-01	2.47E-01
500138	5/14/2019 - 5/20/2019	I-131	<2.81E-02	0.00E+00	2.81E-02
		Cs-134	<1.66E-02	0.00E+00	1.66E-02
		Cs-137	<2.10E-02	0.00E+00	2.10E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	5.27E-01	2.18E-01	2.49E-01
500474	5/20/2019 - 5/28/2019	I-131	<2.66E-02	0.00E+00	2.66E-02
		Cs-134	<1.72E-02	0.00E+00	1.72E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02
		Be-7	<9.74E-02	0.00E+00	9.74E-02
		K-40	5.00E-01	1.85E-01	1.94E-01
500755	5/28/2019 - 6/3/2019	I-131	<2.71E-02	0.00E+00	2.71E-02
		Cs-134	<2.00E-02	0.00E+00	2.00E-02
		Cs-137	<2.06E-02	0.00E+00	2.06E-02
		Be-7	<1.38E-01	0.00E+00	1.38E-01
		K-40	8.47E-01	2.52E-01	1.96E-01
501145	6/3/2019 - 6/11/2019	I-131	<2.97E-02	0.00E+00	2.97E-02
		Cs-134	<1.30E-02	0.00E+00	1.30E-02
		Cs-137	<1.49E-02	0.00E+00	1.49E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	4.10E-01	1.53E-01	1.38E-01



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 125 [INDICATOR - SW @ 0.38 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
501960	6/11/2019 - 6/17/2019	I-131	<2.90E-02	0.00E+00	2.90E-02
		Cs-134	<1.96E-02	0.00E+00	1.96E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<1.54E-01	0.00E+00	1.54E-01
		K-40	5.43E-01	2.37E-01	2.82E-01
502219	6/17/2019 - 6/24/2019	I-131	<2.43E-02	0.00E+00	2.43E-02
		Cs-134	<1.48E-02	0.00E+00	1.48E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	5.50E-01	2.02E-01	1.99E-01
502426	6/24/2019 - 7/1/2019	I-131	<1.96E-02	0.00E+00	1.96E-02
		Cs-134	<1.71E-02	0.00E+00	1.71E-02
		Cs-137	<1.41E-02	0.00E+00	1.41E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	4.43E-01	1.67E-01	1.41E-01
503420	7/1/2019 - 7/8/2019	I-131	<2.20E-02	0.00E+00	2.20E-02
		Cs-134	<1.27E-02	0.00E+00	1.27E-02
		Cs-137	<1.31E-02	0.00E+00	1.31E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	3.74E-01	1.61E-01	1.58E-01
503850	7/8/2019 - 7/15/2019	I-131	<3.27E-02	0.00E+00	3.27E-02
		Cs-134	<1.94E-02	0.00E+00	1.94E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	5.20E-01	2.23E-01	2.80E-01
504213	7/15/2019 - 7/22/2019	I-131	<2.02E-02	0.00E+00	2.02E-02
		Cs-134	<1.85E-02	0.00E+00	1.85E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	2.62E-01	1.22E-01	3.74E-02
504455	7/22/2019 - 7/29/2019	I-131	<1.88E-02	0.00E+00	1.88E-02
		Cs-134	<1.50E-02	0.00E+00	1.50E-02
		Cs-137	<1.47E-02	0.00E+00	1.47E-02
		Be-7	<7.72E-02	0.00E+00	7.72E-02
		K-40	2.45E-01	1.22E-01	1.19E-01
504670	7/29/2019 - 8/5/2019	I-131	<3.02E-02	0.00E+00	3.02E-02
		Cs-134	<1.84E-02	0.00E+00	1.84E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<9.77E-02	0.00E+00	9.77E-02
		K-40	6.76E-01	1.91E-01	3.39E-02
504938	8/5/2019 - 8/12/2019	I-131	<1.29E-02	0.00E+00	1.29E-02
		Cs-134	<1.09E-02	0.00E+00	1.09E-02
		Cs-137	<1.36E-02	0.00E+00	1.36E-02
		Be-7	<7.89E-02	0.00E+00	7.89E-02
		K-40	1.89E-01	1.40E-01	2.00E-01
505158	8/12/2019 - 8/19/2019	I-131	<1.67E-02	0.00E+00	1.67E-02
		Cs-134	<1.51E-02	0.00E+00	1.51E-02
		Cs-137	<1.31E-02	0.00E+00	1.31E-02
		Be-7	<9.13E-02	0.00E+00	9.13E-02
		K-40	<1.41E-01	0.00E+00	1.41E-01



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 125 [INDICATOR - SW @ 0.38 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
505545	8/19/2019 - 8/26/2019	I-131	<1.89E-02	0.00E+00	1.89E-02
		Cs-134	<1.15E-02	0.00E+00	1.15E-02
		Cs-137	<1.43E-02	0.00E+00	1.43E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	3.88E-01	1.73E-01	1.96E-01
505871	8/26/2019 - 9/3/2019	I-131	<1.42E-02	0.00E+00	1.42E-02
		Cs-134	<1.24E-02	0.00E+00	1.24E-02
		Cs-137	<1.47E-02	0.00E+00	1.47E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	1.65E-01	1.10E-01	1.38E-01
506379	9/3/2019 - 9/9/2019	I-131	<2.17E-02	0.00E+00	2.17E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	5.86E-01	2.17E-01	2.19E-01
507306	9/9/2019 - 9/16/2019	I-131	<2.12E-02	0.00E+00	2.12E-02
		Cs-134	<1.51E-02	0.00E+00	1.51E-02
		Cs-137	<1.83E-02	0.00E+00	1.83E-02
		Be-7	<1.51E-01	0.00E+00	1.51E-01
		K-40	5.85E-01	1.82E-01	3.60E-02
507835	9/16/2019 - 9/23/2019	I-131	<1.11E-02	0.00E+00	1.11E-02
		Cs-134	<1.19E-02	0.00E+00	1.19E-02
		Cs-137	<1.02E-02	0.00E+00	1.02E-02
		Be-7	<5.96E-02	0.00E+00	5.96E-02
		K-40	3.74E-01	1.07E-01	8.15E-02
508369	9/23/2019 - 9/30/2019	I-131	<1.21E-02	0.00E+00	1.21E-02
		Cs-134	<1.18E-02	0.00E+00	1.18E-02
		Cs-137	<1.19E-02	0.00E+00	1.19E-02
		Be-7	<7.34E-02	0.00E+00	7.34E-02
		K-40	<9.35E-02	0.00E+00	9.36E-02
509248	9/30/2019 - 10/7/2019	I-131	<1.70E-02	0.00E+00	1.70E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.96E-02	0.00E+00	1.96E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	3.44E-01	1.86E-01	2.49E-01
509843	10/7/2019 - 10/14/2019	I-131	<1.82E-02	0.00E+00	1.82E-02
		Cs-134	<1.64E-02	0.00E+00	1.64E-02
		Cs-137	<1.35E-02	0.00E+00	1.35E-02
		Be-7	<9.86E-02	0.00E+00	9.86E-02
		K-40	3.06E-01	1.54E-01	1.79E-01
510544	10/14/2019 - 10/21/2019	I-131	<1.73E-02	0.00E+00	1.73E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<1.79E-02	0.00E+00	1.79E-02
		Be-7	<9.41E-02	0.00E+00	9.41E-02
		K-40	6.37E-01	1.92E-01	1.27E-01
510838	10/21/2019 - 10/28/2019	I-131	<1.24E-02	0.00E+00	1.24E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<9.58E-02	0.00E+00	9.58E-02
		K-40	2.77E-01	1.58E-01	2.06E-01



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 125 [INDICATOR - SW @ 0.38 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511240	10/28/2019 - 11/4/2019	I-131	<1.48E-02	0.00E+00	1.48E-02
		Cs-134	<1.22E-02	0.00E+00	1.22E-02
		Cs-137	<1.27E-02	0.00E+00	1.27E-02
		Be-7	<7.54E-02	0.00E+00	7.54E-02
		K-40	4.04E-01	1.55E-01	1.32E-01
511479	11/4/2019 - 11/11/2019	I-131	<1.18E-02	0.00E+00	1.18E-02
		Cs-134	<1.17E-02	0.00E+00	1.17E-02
		Cs-137	<1.10E-02	0.00E+00	1.10E-02
		Be-7	<9.16E-02	0.00E+00	9.16E-02
		K-40	2.71E-01	1.40E-01	1.58E-01
511885	11/11/2019 - 11/18/2019	I-131	<1.89E-02	0.00E+00	1.89E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<1.49E-01	0.00E+00	1.49E-01
		K-40	6.37E-01	1.87E-01	3.46E-02
512190	11/18/2019 - 11/25/2019	I-131	<2.85E-02	0.00E+00	2.85E-02
		Cs-134	<1.84E-02	0.00E+00	1.84E-02
		Cs-137	<1.26E-02	0.00E+00	1.26E-02
		Be-7	<1.73E-01	0.00E+00	1.73E-01
		K-40	7.85E-01	2.31E-01	1.91E-01
512491	11/25/2019 - 12/2/2019	I-131	<1.77E-02	0.00E+00	1.77E-02
		Cs-134	<1.40E-02	0.00E+00	1.40E-02
		Cs-137	<1.47E-02	0.00E+00	1.47E-02
		Be-7	<9.49E-02	0.00E+00	9.49E-02
		K-40	3.88E-01	1.64E-01	1.73E-01
512674	12/2/2019 - 12/9/2019	I-131	<2.29E-02	0.00E+00	2.29E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<1.12E-02	0.00E+00	1.12E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	5.04E-01	2.21E-01	2.78E-01
513635	12/9/2019 - 12/16/2019	I-131	<2.10E-02	0.00E+00	2.10E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-02
		Cs-137	<1.82E-02	0.00E+00	1.82E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	<3.68E-01	0.00E+00	3.68E-01
513950	12/16/2019 - 12/23/2019	I-131	<1.46E-02	0.00E+00	1.46E-02
		Cs-134	<1.25E-02	0.00E+00	1.25E-02
		Cs-137	<9.82E-03	0.00E+00	9.82E-03
		Be-7	<8.83E-02	0.00E+00	8.83E-02
		K-40	2.00E-01	1.25E-01	1.55E-01
514171	12/23/2019 - 12/30/2019	I-131	<3.28E-02	0.00E+00	3.28E-02
		Cs-134	<1.32E-02	0.00E+00	1.32E-02
		Cs-137	<1.28E-02	0.00E+00	1.28E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	3.20E-01	1.65E-01	2.06E-01

Sample Point 133 [INDICATOR - ENE @ 6.23 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492228	12/31/2018 - 1/7/2019	I-131	<2.32E-02	0.00E+00	2.32E-02
		Cs-134	<1.72E-02	0.00E+00	1.72E-02
		Cs-137	<1.02E-02	0.00E+00	1.02E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	2.88E-01	1.44E-01	1.59E-01



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 133 [INDICATOR - ENE @ 6.23 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492462	1/7/2019 - 1/14/2019	I-131	<1.89E-02	0.00E+00	1.89E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02
		Cs-137	<1.64E-02	0.00E+00	1.64E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	5.86E-01	1.91E-01	1.41E-01
492906	1/14/2019 - 1/21/2019	I-131	<1.69E-02	0.00E+00	1.69E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.23E-02	0.00E+00	1.23E-02
		Be-7	<1.34E-01	0.00E+00	1.34E-01
		K-40	4.77E-01	1.61E-01	3.49E-02
493333	1/21/2019 - 1/28/2019	I-131	<2.41E-02	0.00E+00	2.41E-02
		Cs-134	<1.49E-02	0.00E+00	1.49E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	4.42E-01	1.53E-01	3.42E-02
493592	1/28/2019 - 2/4/2019	I-131	<1.92E-02	0.00E+00	1.92E-02
		Cs-134	<1.83E-02	0.00E+00	1.83E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	5.72E-01	1.91E-01	1.49E-01
493818	2/4/2019 - 2/11/2019	I-131	<1.71E-02	0.00E+00	1.71E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<1.68E-02	0.00E+00	1.68E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	5.22E-01	1.68E-01	3.45E-02
494360	2/11/2019 - 2/18/2019	I-131	<2.37E-02	0.00E+00	2.37E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.60E-02	0.00E+00	1.60E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	3.97E-01	1.87E-01	2.27E-01
494983	2/18/2019 - 2/25/2019	I-131	<2.06E-02	0.00E+00	2.06E-02
		Cs-134	<1.70E-02	0.00E+00	1.70E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	<4.05E-01	0.00E+00	4.05E-01
495409	2/25/2019 - 3/4/2019	I-131	<2.18E-02	0.00E+00	2.18E-02
		Cs-134	<1.70E-02	0.00E+00	1.70E-02
		Cs-137	<1.77E-02	0.00E+00	1.77E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	4.08E-01	1.88E-01	2.22E-01
496320	3/4/2019 - 3/11/2019	I-131	<2.24E-02	0.00E+00	2.24E-02
		Cs-134	<1.85E-02	0.00E+00	1.85E-02
		Cs-137	<1.81E-02	0.00E+00	1.81E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	3.45E-01	1.63E-01	1.83E-01
496190	3/11/2019 - 3/18/2019	I-131	<1.91E-02	0.00E+00	1.91E-02
		Cs-134	<1.93E-02	0.00E+00	1.93E-02
		Cs-137	<1.60E-02	0.00E+00	1.60E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	5.20E-01	1.88E-01	1.72E-01



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 133 [INDICATOR - ENE @ 6.23 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
496661	3/18/2019 - 3/25/2019	I-131	<2.14E-02	0.00E+00	2.14E-02
		Cs-134	<1.71E-02	0.00E+00	1.71E-02
		Cs-137	<1.85E-02	0.00E+00	1.85E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	2.91E-01	1.67E-01	2.20E-01
497160	3/25/2019 - 4/1/2019	I-131	<2.10E-02	0.00E+00	2.10E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-02
		Cs-137	<2.08E-02	0.00E+00	2.08E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	<3.74E-01	0.00E+00	3.74E-01
497588	4/1/2019 - 4/8/2019	I-131	<2.26E-02	0.00E+00	2.26E-02
		Cs-134	<1.91E-02	0.00E+00	1.91E-02
		Cs-137	<1.41E-02	0.00E+00	1.41E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	3.88E-01	1.89E-01	2.36E-01
498049	4/8/2019 - 4/15/2019	I-131	<1.77E-02	0.00E+00	1.77E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.70E-02	0.00E+00	1.70E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	4.40E-01	1.89E-01	2.15E-01
498619	4/15/2019 - 4/22/2019	I-131	<2.58E-02	0.00E+00	2.58E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<2.16E-02	0.00E+00	2.16E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	3.98E-01	1.67E-01	1.69E-01
498799	4/22/2019 - 4/29/2019	I-131	<2.18E-02	0.00E+00	2.18E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	6.52E-01	2.29E-01	2.44E-01
499472	4/29/2019 - 5/6/2019	I-131	<1.85E-02	0.00E+00	1.85E-02
		Cs-134	<1.66E-02	0.00E+00	1.66E-02
		Cs-137	<1.42E-02	0.00E+00	1.42E-02
		Be-7	<9.02E-02	0.00E+00	9.02E-02
		K-40	4.90E-01	1.72E-01	1.26E-01
499893	5/6/2019 - 5/13/2019	I-131	<3.62E-02	0.00E+00	3.62E-02
		Cs-134	<1.94E-02	0.00E+00	1.94E-02
		Cs-137	<1.84E-02	0.00E+00	1.84E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	5.21E-01	2.10E-01	2.42E-01
500139	5/13/2019 - 5/20/2019	I-131	<2.42E-02	0.00E+00	2.42E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.76E-02	0.00E+00	1.76E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	5.41E-01	1.69E-01	3.33E-02
500475	5/20/2019 - 5/28/2019	I-131	<2.89E-02	0.00E+00	2.89E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.50E-02	0.00E+00	1.50E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	6.33E-01	1.87E-01	1.22E-01



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 133 [INDICATOR - ENE @ 6.23 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500756	5/28/2019 - 6/3/2019	I-131	<3.09E-02	0.00E+00	3.09E-02
		Cs-134	<1.94E-02	0.00E+00	1.94E-02
		Cs-137	<1.65E-02	0.00E+00	1.65E-02
		Be-7	<1.65E-01	0.00E+00	1.65E-01
		K-40	7.47E-01	2.80E-01	3.27E-01
501146	6/3/2019 - 6/10/2019	I-131	<3.75E-02	0.00E+00	3.75E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.48E-02	0.00E+00	1.48E-02
		Be-7	<1.31E-01	0.00E+00	1.31E-01
		K-40	7.29E-01	2.20E-01	1.81E-01
501961	6/10/2019 - 6/17/2019	I-131	<2.43E-02	0.00E+00	2.43E-02
		Cs-134	<1.90E-02	0.00E+00	1.90E-02
		Cs-137	<1.62E-02	0.00E+00	1.62E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	<3.83E-01	0.00E+00	3.83E-01
502220	6/17/2019 - 6/24/2019	I-131	<2.20E-02	0.00E+00	2.20E-02
		Cs-134	<1.90E-02	0.00E+00	1.90E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	3.52E-01	1.81E-01	2.28E-01
502427	6/24/2019 - 7/1/2019	I-131	<2.18E-02	0.00E+00	2.18E-02
		Cs-134	<1.42E-02	0.00E+00	1.42E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<1.32E-01	0.00E+00	1.32E-01
		K-40	4.90E-01	2.15E-01	2.68E-01
503421	7/1/2019 - 7/8/2019	I-131	<2.24E-02	0.00E+00	2.24E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<1.66E-02	0.00E+00	1.66E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	4.88E-01	2.02E-01	2.30E-01
503851	7/8/2019 - 7/15/2019	I-131	<4.03E-02	0.00E+00	4.03E-02
		Cs-134	<1.84E-02	0.00E+00	1.84E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02
		Be-7	<1.39E-01	0.00E+00	1.39E-01
		K-40	5.28E-01	1.68E-01	3.41E-02
504214	7/15/2019 - 7/22/2019	I-131	<1.28E-02	0.00E+00	1.28E-02
		Cs-134	<2.10E-02	0.00E+00	2.10E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02
		Be-7	<7.82E-02	0.00E+00	7.82E-02
		K-40	3.50E-01	1.68E-01	1.99E-01
504456	7/22/2019 - 7/29/2019	I-131	<3.31E-02	0.00E+00	3.31E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.24E-02	0.00E+00	1.24E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	<2.88E-01	0.00E+00	2.88E-01
504671	7/29/2019 - 8/5/2019	I-131	<4.29E-02	0.00E+00	4.29E-02
		Cs-134	<1.64E-02	0.00E+00	1.64E-02
		Cs-137	<1.92E-02	0.00E+00	1.92E-02
		Be-7	<1.53E-01	0.00E+00	1.53E-01
		K-40	5.42E-01	2.06E-01	2.21E-01



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 133 [INDICATOR - ENE @ 6.23 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504939	8/5/2019 - 8/12/2019	I-131	<2.16E-02	0.00E+00	2.16E-02
		Cs-134	<1.25E-02	0.00E+00	1.25E-02
		Cs-137	<2.03E-02	0.00E+00	2.03E-02
		Be-7	<1.55E-01	0.00E+00	1.55E-01
		K-40	<3.65E-01	0.00E+00	3.65E-01
505159	8/12/2019 - 8/19/2019	I-131	<1.47E-02	0.00E+00	1.47E-02
		Cs-134	<1.66E-02	0.00E+00	1.66E-02
		Cs-137	<1.70E-02	0.00E+00	1.70E-02
		Be-7	<7.80E-02	0.00E+00	7.80E-02
		K-40	<3.27E-01	0.00E+00	3.27E-01
505546	8/19/2019 - 8/26/2019	I-131	<1.69E-02	0.00E+00	1.69E-02
		Cs-134	<1.31E-02	0.00E+00	1.31E-02
		Cs-137	<1.51E-02	0.00E+00	1.51E-02
		Be-7	<5.73E-02	0.00E+00	5.73E-02
		K-40	2.93E-01	1.30E-01	1.13E-01
505872	8/26/2019 - 9/3/2019	I-131	<1.97E-02	0.00E+00	1.97E-02
		Cs-134	<1.49E-02	0.00E+00	1.49E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	2.79E-01	1.66E-01	2.27E-01
506380	9/3/2019 - 9/9/2019	I-131	<1.61E-02	0.00E+00	1.61E-02
		Cs-134	<1.87E-02	0.00E+00	1.87E-02
		Cs-137	<1.68E-02	0.00E+00	1.68E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	4.70E-01	1.66E-01	3.75E-02
507307	9/9/2019 - 9/16/2019	I-131	<1.37E-02	0.00E+00	1.37E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<1.70E-02	0.00E+00	1.70E-02
		Be-7	<7.84E-02	0.00E+00	7.84E-02
		K-40	3.02E-01	1.25E-01	3.41E-02
507836	9/16/2019 - 9/23/2019	I-131	<1.46E-02	0.00E+00	1.46E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<9.70E-02	0.00E+00	9.70E-02
		K-40	1.65E-01	1.75E-01	2.79E-01
508370	9/23/2019 - 9/30/2019	I-131	<1.51E-02	0.00E+00	1.51E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-02
		Cs-137	<1.62E-02	0.00E+00	1.62E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	3.40E-01	1.63E-01	1.79E-01
509249	9/30/2019 - 10/7/2019	I-131	<2.18E-02	0.00E+00	2.18E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<1.37E-01	0.00E+00	1.37E-01
		K-40	3.47E-01	1.94E-01	2.64E-01
509844	10/7/2019 - 10/14/2019	I-131	<2.35E-02	0.00E+00	2.35E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<1.63E-01	0.00E+00	1.63E-01
		K-40	3.76E-01	1.64E-01	1.66E-01



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 133 [INDICATOR - ENE @ 6.23 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
510545	10/14/2019 - 10/21/2019	I-131	<2.06E-02	0.00E+00	2.06E-02
		Cs-134	<2.00E-02	0.00E+00	2.00E-02
		Cs-137	<1.66E-02	0.00E+00	1.66E-02
		Be-7	<1.58E-01	0.00E+00	1.58E-01
		K-40	6.75E-01	2.03E-01	1.40E-01
510839	10/21/2019 - 10/28/2019	I-131	<1.38E-02	0.00E+00	1.38E-02
		Cs-134	<1.18E-02	0.00E+00	1.18E-02
		Cs-137	<1.02E-02	0.00E+00	1.02E-02
		Be-7	<9.74E-02	0.00E+00	9.74E-02
		K-40	4.22E-01	1.64E-01	1.43E-01
511241	10/28/2019 - 11/4/2019	I-131	<1.38E-02	0.00E+00	1.38E-02
		Cs-134	<1.86E-02	0.00E+00	1.86E-02
		Cs-137	<7.67E-03	0.00E+00	7.67E-03
		Be-7	<9.19E-02	0.00E+00	9.19E-02
		K-40	2.91E-01	1.62E-01	2.09E-01
511480	11/4/2019 - 11/11/2019	I-131	<1.48E-02	0.00E+00	1.48E-02
		Cs-134	<1.70E-02	0.00E+00	1.70E-02
		Cs-137	<1.11E-02	0.00E+00	1.11E-02
		Be-7	<7.32E-02	0.00E+00	7.32E-02
		K-40	1.71E-01	1.30E-01	1.82E-01
511886	11/11/2019 - 11/18/2019	I-131	<1.53E-02	0.00E+00	1.53E-02
		Cs-134	<1.16E-02	0.00E+00	1.16E-02
		Cs-137	<1.65E-02	0.00E+00	1.65E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	5.45E-01	2.04E-01	2.22E-01
512191	11/18/2019 - 11/25/2019	I-131	<1.82E-02	0.00E+00	1.82E-02
		Cs-134	<1.90E-02	0.00E+00	1.90E-02
		Cs-137	<1.33E-02	0.00E+00	1.33E-02
		Be-7	<1.43E-01	0.00E+00	1.43E-01
		K-40	5.62E-01	2.06E-01	2.17E-01
512492	11/25/2019 - 12/2/2019	I-131	<1.57E-02	0.00E+00	1.57E-02
		Cs-134	<1.13E-02	0.00E+00	1.13E-02
		Cs-137	<8.76E-03	0.00E+00	8.76E-03
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	2.57E-01	1.25E-01	1.20E-01
512675	12/2/2019 - 12/9/2019	I-131	<1.80E-02	0.00E+00	1.80E-02
		Cs-134	<1.17E-02	0.00E+00	1.17E-02
		Cs-137	<1.33E-02	0.00E+00	1.33E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	4.84E-01	1.80E-01	1.68E-01
513636	12/9/2019 - 12/16/2019	I-131	<2.12E-02	0.00E+00	2.12E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.68E-02	0.00E+00	1.68E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	4.36E-01	1.61E-01	1.27E-01
513951	12/16/2019 - 12/23/2019	I-131	<1.78E-02	0.00E+00	1.78E-02
		Cs-134	<1.89E-02	0.00E+00	1.89E-02
		Cs-137	<1.49E-02	0.00E+00	1.49E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	<2.96E-01	0.00E+00	2.96E-01



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 133 [INDICATOR - ENE @ 6.23 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514172	12/23/2019 - 12/30/2019	I-131	<2.52E-02	0.00E+00	2.52E-02
		Cs-134	<1.41E-02	0.00E+00	1.41E-02
		Cs-137	<1.14E-02	0.00E+00	1.14E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	1.58E-01	1.14E-01	1.51E-01

Sample Point 195 [INDICATOR - N @ 0.19 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492229	12/31/2018 - 1/7/2019	I-131	<2.07E-02	0.00E+00	2.07E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02
		Cs-137	<1.75E-02	0.00E+00	1.75E-02
		Be-7	<1.43E-01	0.00E+00	1.43E-01
		K-40	4.05E-01	2.32E-01	3.28E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492463	1/7/2019 - 1/14/2019	I-131	<2.20E-02	0.00E+00	2.20E-02
		Cs-134	<1.43E-02	0.00E+00	1.43E-02
		Cs-137	<1.83E-02	0.00E+00	1.83E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	3.84E-01	1.85E-01	2.28E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492907	1/14/2019 - 1/21/2019	I-131	<1.97E-02	0.00E+00	1.97E-02
		Cs-134	<1.87E-02	0.00E+00	1.87E-02
		Cs-137	<1.79E-02	0.00E+00	1.79E-02
		Be-7	<1.31E-01	0.00E+00	1.31E-01
		K-40	4.38E-01	1.54E-01	3.49E-02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493334	1/21/2019 - 1/28/2019	I-131	<1.89E-02	0.00E+00	1.89E-02
		Cs-134	<1.31E-02	0.00E+00	1.31E-02
		Cs-137	<1.64E-02	0.00E+00	1.64E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	4.53E-01	1.63E-01	1.18E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493593	1/28/2019 - 2/4/2019	I-131	<2.16E-02	0.00E+00	2.16E-02
		Cs-134	<1.79E-02	0.00E+00	1.79E-02
		Cs-137	<1.98E-02	0.00E+00	1.98E-02
		Be-7	<1.29E-01	0.00E+00	1.29E-01
		K-40	4.04E-01	2.06E-01	2.68E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493819	2/4/2019 - 2/11/2019	I-131	<1.95E-02	0.00E+00	1.95E-02
		Cs-134	<2.03E-02	0.00E+00	2.03E-02
		Cs-137	<1.78E-02	0.00E+00	1.78E-02
		Be-7	<1.38E-01	0.00E+00	1.38E-01
		K-40	5.31E-01	1.98E-01	2.01E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494361	2/11/2019 - 2/18/2019	I-131	<2.20E-02	0.00E+00	2.20E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<1.31E-02	0.00E+00	1.31E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	4.13E-01	1.89E-01	2.26E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494984	2/18/2019 - 2/25/2019	I-131	<2.14E-02	0.00E+00	2.14E-02
		Cs-134	<1.47E-02	0.00E+00	1.47E-02
		Cs-137	<1.64E-02	0.00E+00	1.64E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	5.08E-01	1.75E-01	1.38E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
495410	2/25/2019 - 3/4/2019	I-131	<2.17E-02	0.00E+00	2.17E-02
		Cs-134	<1.72E-02	0.00E+00	1.72E-02
		Cs-137	<1.85E-02	0.00E+00	1.85E-02
		Be-7	<9.65E-02	0.00E+00	9.65E-02
		K-40	3.89E-01	1.83E-01	2.15E-01



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 195 [INDICATOR - N @ 0.19 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
496321	3/4/2019 - 3/11/2019	I-131	<2.24E-02	0.00E+00	2.24E-02
		Cs-134	<1.58E-02	0.00E+00	1.58E-02
		Cs-137	<1.86E-02	0.00E+00	1.86E-02
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	4.08E-01	1.85E-01	2.19E-01
496191	3/11/2019 - 3/18/2019	I-131	<2.09E-02	0.00E+00	2.09E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.81E-02	0.00E+00	1.81E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	4.13E-01	1.66E-01	1.53E-01
496662	3/18/2019 - 3/25/2019	I-131	<2.42E-02	0.00E+00	2.42E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.43E-02	0.00E+00	1.43E-02
		Be-7	<1.30E-01	0.00E+00	1.30E-01
		K-40	3.14E-01	1.89E-01	2.63E-01
497161	3/25/2019 - 4/1/2019	I-131	<2.23E-02	0.00E+00	2.23E-02
		Cs-134	<1.99E-02	0.00E+00	1.99E-02
		Cs-137	<1.65E-02	0.00E+00	1.65E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	4.12E-01	2.19E-01	2.96E-01
497589	4/1/2019 - 4/8/2019	I-131	<2.29E-02	0.00E+00	2.29E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<1.85E-02	0.00E+00	1.85E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	3.42E-01	2.11E-01	3.02E-01
498050	4/8/2019 - 4/15/2019	I-131	<1.85E-02	0.00E+00	1.85E-02
		Cs-134	<1.95E-02	0.00E+00	1.95E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	4.06E-01	2.12E-01	2.85E-01
498620	4/15/2019 - 4/22/2019	I-131	<2.43E-02	0.00E+00	2.43E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<1.58E-02	0.00E+00	1.58E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	5.50E-01	2.13E-01	2.45E-01
498800	4/22/2019 - 4/29/2019	I-131	<2.57E-02	0.00E+00	2.57E-02
		Cs-134	<1.30E-02	0.00E+00	1.30E-02
		Cs-137	<1.76E-02	0.00E+00	1.76E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	5.68E-01	2.06E-01	2.03E-01
499473	4/29/2019 - 5/6/2019	I-131	<2.18E-02	0.00E+00	2.18E-02
		Cs-134	<1.98E-02	0.00E+00	1.98E-02
		Cs-137	<1.59E-02	0.00E+00	1.59E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	3.97E-01	1.71E-01	1.81E-01
499894	5/6/2019 - 5/13/2019	I-131	<3.95E-02	0.00E+00	3.95E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.49E-02	0.00E+00	1.49E-02
		Be-7	<1.70E-01	0.00E+00	1.70E-01
		K-40	5.21E-01	1.97E-01	2.01E-01



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 195 [INDICATOR - N @ 0.19 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500140	5/13/2019 - 5/20/2019	I-131	<2.89E-02	0.00E+00	2.89E-02
		Cs-134	<1.43E-02	0.00E+00	1.43E-02
		Cs-137	<1.91E-02	0.00E+00	1.91E-02
		Be-7	<1.40E-01	0.00E+00	1.40E-01
		K-40	3.91E-01	1.95E-01	2.49E-01
500476	5/20/2019 - 5/28/2019	I-131	<2.26E-02	0.00E+00	2.26E-02
		Cs-134	<1.40E-02	0.00E+00	1.40E-02
		Cs-137	<1.49E-02	0.00E+00	1.49E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	5.01E-01	1.62E-01	1.06E-01
500757	5/28/2019 - 6/3/2019	I-131	<3.03E-02	0.00E+00	3.03E-02
		Cs-134	<1.56E-02	0.00E+00	1.56E-02
		Cs-137	<1.96E-02	0.00E+00	1.96E-02
		Be-7	<1.31E-01	0.00E+00	1.31E-01
		K-40	6.44E-01	2.11E-01	1.42E-01
501147	6/3/2019 - 6/10/2019	I-131	<2.98E-02	0.00E+00	2.98E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-02
		Cs-137	<1.60E-02	0.00E+00	1.60E-02
		Be-7	<1.58E-01	0.00E+00	1.58E-01
		K-40	<3.53E-01	0.00E+00	3.53E-01
501962	6/10/2019 - 6/17/2019	I-131	<2.34E-02	0.00E+00	2.34E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.82E-02	0.00E+00	1.82E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	5.12E-01	1.85E-01	1.73E-01
502221	6/17/2019 - 6/24/2019	I-131	<2.38E-02	0.00E+00	2.38E-02
		Cs-134	<1.79E-02	0.00E+00	1.79E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	3.28E-01	1.72E-01	2.12E-01
502428	6/24/2019 - 7/1/2019	I-131	<1.97E-02	0.00E+00	1.97E-02
		Cs-134	<1.58E-02	0.00E+00	1.58E-02
		Cs-137	<1.35E-02	0.00E+00	1.35E-02
		Be-7	<1.29E-01	0.00E+00	1.29E-01
		K-40	6.56E-01	2.12E-01	1.90E-01
503422	7/1/2019 - 7/8/2019	I-131	<1.97E-02	0.00E+00	1.97E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.31E-02	0.00E+00	1.31E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	6.00E-01	2.28E-01	2.59E-01
503852	7/8/2019 - 7/15/2019	I-131	<3.88E-02	0.00E+00	3.88E-02
		Cs-134	<1.81E-02	0.00E+00	1.81E-02
		Cs-137	<1.81E-02	0.00E+00	1.81E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	4.31E-01	1.64E-01	1.42E-01
504215	7/15/2019 - 7/22/2019	I-131	<1.83E-02	0.00E+00	1.83E-02
		Cs-134	<1.19E-02	0.00E+00	1.19E-02
		Cs-137	<1.72E-02	0.00E+00	1.72E-02
		Be-7	<6.94E-02	0.00E+00	6.94E-02
		K-40	<3.12E-01	0.00E+00	3.12E-01



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 195 [INDICATOR - N @ 0.19 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504457	7/22/2019 - 7/29/2019	I-131	<3.55E-02	0.00E+00	3.55E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<1.29E-01	0.00E+00	1.29E-01
		K-40	4.20E-01	1.64E-01	1.48E-01
504672	7/29/2019 - 8/5/2019	I-131	<2.47E-02	0.00E+00	2.47E-02
		Cs-134	<1.48E-02	0.00E+00	1.48E-02
		Cs-137	<1.11E-02	0.00E+00	1.11E-02
		Be-7	<8.22E-02	0.00E+00	8.22E-02
		K-40	2.02E-01	1.26E-01	1.55E-01
504940	8/5/2019 - 8/12/2019	I-131	<2.36E-02	0.00E+00	2.36E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.51E-02	0.00E+00	1.51E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	4.22E-01	1.75E-01	1.88E-01
505160	8/12/2019 - 8/19/2019	I-131	<2.48E-02	0.00E+00	2.48E-02
		Cs-134	<1.90E-02	0.00E+00	1.90E-02
		Cs-137	<1.89E-02	0.00E+00	1.89E-02
		Be-7	<1.31E-01	0.00E+00	1.31E-01
		K-40	4.80E-01	1.93E-01	2.04E-01
505547	8/19/2019 - 8/26/2019	I-131	<2.11E-02	0.00E+00	2.11E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.80E-02	0.00E+00	1.80E-02
		Be-7	1.37E-02	8.08E-02	1.45E-01
		K-40	<3.59E-01	0.00E+00	3.59E-01
505873	8/26/2019 - 9/3/2019	I-131	<1.41E-02	0.00E+00	1.41E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.28E-02	0.00E+00	1.28E-02
		Be-7	<9.75E-02	0.00E+00	9.75E-02
		K-40	<3.20E-01	0.00E+00	3.20E-01
506381	9/3/2019 - 9/9/2019	I-131	<1.75E-02	0.00E+00	1.75E-02
		Cs-134	<1.41E-02	0.00E+00	1.41E-02
		Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	2.85E-01	1.37E-01	1.21E-01
507308	9/9/2019 - 9/16/2019	I-131	<1.67E-02	0.00E+00	1.67E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.63E-02	0.00E+00	1.63E-02
		Be-7	<9.57E-02	0.00E+00	9.57E-02
		K-40	3.04E-01	1.53E-01	1.77E-01
507837	9/16/2019 - 9/23/2019	I-131	<1.93E-02	0.00E+00	1.93E-02
		Cs-134	<1.87E-02	0.00E+00	1.87E-02
		Cs-137	<1.80E-02	0.00E+00	1.80E-02
		Be-7	<1.43E-01	0.00E+00	1.43E-01
		K-40	4.20E-01	1.96E-01	2.42E-01
508371	9/23/2019 - 9/30/2019	I-131	<1.91E-02	0.00E+00	1.91E-02
		Cs-134	<1.38E-02	0.00E+00	1.38E-02
		Cs-137	<1.97E-02	0.00E+00	1.97E-02
		Be-7	<1.56E-01	0.00E+00	1.56E-01
		K-40	3.36E-01	1.85E-01	2.44E-01



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 195 [INDICATOR - N @ 0.19 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
509250	9/30/2019 - 10/7/2019	I-131	<2.20E-02	0.00E+00	2.20E-02
		Cs-134	<1.77E-02	0.00E+00	1.77E-02
		Cs-137	<1.85E-02	0.00E+00	1.85E-02
		Be-7	<1.27E-01	0.00E+00	1.27E-01
		K-40	3.76E-01	1.78E-01	2.16E-01
509845	10/7/2019 - 10/14/2019	I-131	<1.93E-02	0.00E+00	1.93E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.74E-02	0.00E+00	1.74E-02
		Be-7	<1.30E-01	0.00E+00	1.30E-01
		K-40	5.24E-01	1.94E-01	1.91E-01
510546	10/14/2019 - 10/21/2019	I-131	<1.42E-02	0.00E+00	1.42E-02
		Cs-134	<1.34E-02	0.00E+00	1.34E-02
		Cs-137	<1.30E-02	0.00E+00	1.30E-02
		Be-7	<9.09E-02	0.00E+00	9.09E-02
		K-40	5.52E-01	1.98E-01	2.01E-01
510840	10/21/2019 - 10/28/2019	I-131	<1.04E-02	0.00E+00	1.04E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<8.27E-02	0.00E+00	8.27E-02
		K-40	3.20E-01	1.50E-01	1.51E-01
511242	10/28/2019 - 11/4/2019	I-131	<1.41E-02	0.00E+00	1.41E-02
		Cs-134	<1.49E-02	0.00E+00	1.49E-02
		Cs-137	<1.49E-02	0.00E+00	1.49E-02
		Be-7	<9.90E-02	0.00E+00	9.90E-02
		K-40	2.71E-01	1.20E-01	3.49E-02
511481	11/4/2019 - 11/11/2019	I-131	<1.02E-02	0.00E+00	1.02E-02
		Cs-134	<9.38E-03	0.00E+00	9.38E-03
		Cs-137	<1.31E-02	0.00E+00	1.31E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	<1.22E-01	0.00E+00	1.22E-01
511887	11/11/2019 - 11/18/2019	I-131	<2.30E-02	0.00E+00	2.30E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.98E-02	0.00E+00	1.98E-02
		Be-7	<1.38E-01	0.00E+00	1.38E-01
		K-40	6.76E-01	2.12E-01	1.80E-01
512192	11/18/2019 - 11/25/2019	I-131	<4.38E-02	0.00E+00	4.38E-02
		Cs-134	<1.71E-02	0.00E+00	1.71E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<1.46E-01	0.00E+00	1.46E-01
		K-40	6.41E-01	2.12E-01	1.93E-01
512493	11/25/2019 - 12/2/2019	I-131	<1.57E-02	0.00E+00	1.57E-02
		Cs-134	<1.23E-02	0.00E+00	1.23E-02
		Cs-137	<7.55E-03	0.00E+00	7.55E-03
		Be-7	<7.65E-02	0.00E+00	7.65E-02
		K-40	<1.72E-01	0.00E+00	1.72E-01
512676	12/2/2019 - 12/9/2019	I-131	<1.82E-02	0.00E+00	1.82E-02
		Cs-134	<1.26E-02	0.00E+00	1.26E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<8.28E-02	0.00E+00	8.28E-02
		K-40	3.89E-01	1.52E-01	1.22E-01



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 195 [INDICATOR - N @ 0.19 miles]

Sample ID:	Sample Dates:		Nuclide	Activity	2 Sigma Error	MDA
513637	12/9/2019 - 12/16/2019		I-131	<1.75E-02	0.00E+00	1.75E-02
			Cs-134	<1.36E-02	0.00E+00	1.36E-02
			Cs-137	<1.25E-02	0.00E+00	1.25E-02
			Be-7	<1.11E-01	0.00E+00	1.11E-01
			K-40	4.61E-01	2.24E-01	2.99E-01
513952	12/16/2019 - 12/23/2019		I-131	<2.42E-02	0.00E+00	2.42E-02
			Cs-134	<1.48E-02	0.00E+00	1.48E-02
			Cs-137	<1.46E-02	0.00E+00	1.46E-02
			Be-7	<1.55E-01	0.00E+00	1.55E-01
			K-40	2.93E-01	1.62E-01	2.03E-01
514173	12/23/2019 - 12/30/2019		I-131	<2.43E-02	0.00E+00	2.43E-02
			Cs-134	<1.41E-02	0.00E+00	1.41E-02
			Cs-137	<1.14E-02	0.00E+00	1.14E-02
			Be-7	<7.64E-02	0.00E+00	7.64E-02
			K-40	3.80E-01	1.59E-01	1.62E-01

Media Type: CROPS Concentration (Activity): pCi/kg

Sample Point 155 [INDICATOR - NNE @ 4.87 miles]

Sample ID:	Sample Dates:		Nuclide	Activity	2 Sigma Error	MDA
492482	1/7/2019 - 1/7/2019		I-131	<1.44E+01	0.00E+00	1.44E+01
			Cs-134	<1.81E+01	0.00E+00	1.81E+01
			Cs-137	<1.46E+01	0.00E+00	1.46E+01
			Be-7	2.04E+02	1.22E+02	1.81E+02
			K-40	5.43E+03	6.84E+02	2.50E+02
493883	2/4/2019 - 2/4/2019	MIXEDCROPS	I-131	<2.06E+01	0.00E+00	2.07E+01
			Cs-134	<2.55E+01	0.00E+00	2.55E+01
			Cs-137	<1.46E+01	0.00E+00	1.46E+01
			Be-7	7.74E+02	2.01E+02	1.98E+02
			K-40	3.73E+03	6.17E+02	2.32E+02
496137	3/4/2019 - 3/4/2019	MIXEDCROPS	I-131	<2.62E+01	0.00E+00	2.62E+01
			Cs-134	<2.85E+01	0.00E+00	2.85E+01
			Cs-137	<2.53E+01	0.00E+00	2.53E+01
			Be-7	9.16E+02	2.45E+02	3.47E+02
			K-40	6.33E+03	7.02E+02	3.92E+02
498055	4/1/2019 - 4/1/2019	MIXEDCROPS	I-131	<4.72E+01	0.00E+00	4.72E+01
			Cs-134	<4.90E+01	0.00E+00	4.90E+01
			Cs-137	<4.22E+01	0.00E+00	4.22E+01
			Be-7	7.27E+02	4.06E+02	4.75E+02
			K-40	1.32E+04	1.30E+03	7.32E+02
500145	5/6/2019 - 5/6/2019	MIXEDCROPS	I-131	<2.76E+01	0.00E+00	2.76E+01
			Cs-134	<3.06E+01	0.00E+00	3.06E+01
			Cs-137	<2.47E+01	0.00E+00	2.47E+01
			Be-7	9.17E+02	2.48E+02	3.49E+02
			K-40	1.04E+04	1.04E+03	3.86E+02
501967	6/3/2019 - 6/3/2019	MIXEDCROPS	I-131	<2.95E+00	0.00E+00	2.95E+00
			Cs-134	<3.36E+00	0.00E+00	3.36E+00
			Cs-137	<3.06E+00	0.00E+00	3.06E+00
			Be-7	3.56E+01	3.48E+01	2.36E+01
			K-40	3.32E+03	2.95E+02	4.59E+01
503857	7/1/2019 - 7/1/2019	MIXEDCROPS	I-131	<2.16E+01	0.00E+00	2.16E+01
			Cs-134	<1.39E+01	0.00E+00	1.39E+01
			Cs-137	<1.44E+01	0.00E+00	1.44E+01
			Be-7	<1.36E+02	0.00E+00	1.36E+02



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: CROPS Concentration (Activity): pCi/kg

Sample Point 155 [INDICATOR - NNE @ 4.87 miles]

Sample ID:	Sample Dates:	MIXEDCROPS	Nuclide	Activity	2 Sigma Error	MDA
503857	7/1/2019 - 7/1/2019		K-40	2.89E+03	4.31E+02	1.37E+02
505165	8/5/2019 - 8/5/2019		I-131	<1.06E+01	0.00E+00	1.06E+01
			Cs-134	<1.15E+01	0.00E+00	1.15E+01
			Cs-137	<1.33E+01	0.00E+00	1.33E+01
			Be-7	<6.83E+01	0.00E+00	6.83E+01
			K-40	2.49E+03	3.91E+02	1.74E+02
507313	9/3/2019 - 9/3/2019		I-131	<7.91E+00	0.00E+00	7.91E+00
			Cs-134	<1.09E+01	0.00E+00	1.09E+01
			Cs-137	<1.11E+01	0.00E+00	1.11E+01
			Be-7	6.41E+01	5.46E+01	8.35E+01
			K-40	2.77E+03	3.94E+02	1.33E+02
510551	10/7/2019 - 10/7/2019		I-131	<1.66E+01	0.00E+00	1.66E+01
			Cs-134	<1.68E+01	0.00E+00	1.68E+01
			Cs-137	<1.40E+01	0.00E+00	1.40E+01
			Be-7	3.24E+01	9.13E+01	1.57E+02
			K-40	4.34E+03	5.52E+02	1.85E+02
511892	11/4/2019 - 11/4/2019		I-131	<1.13E+01	0.00E+00	1.13E+01
			Cs-134	<1.33E+01	0.00E+00	1.33E+01
			Cs-137	<1.19E+01	0.00E+00	1.19E+01
			Be-7	1.42E+02	7.35E+01	1.01E+02
			K-40	3.20E+03	4.42E+02	2.12E+02
513642	12/2/2019 - 12/2/2019		I-131	<1.22E+01	0.00E+00	1.22E+01
			Cs-134	<1.27E+01	0.00E+00	1.27E+01
			Cs-137	<1.51E+01	0.00E+00	1.51E+01
			Be-7	3.55E+02	1.25E+02	1.59E+02
			K-40	5.19E+03	6.44E+02	2.44E+02

Media Type: DRINKING WATER Concentration (Activity): pCi/l

Sample Point 101 [INDICATOR - E @ 3.31 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493136	12/31/2018 - 1/28/2019	Mn-54	<3.07E+00	0.00E+00	3.07E+00
		Co-58	<3.82E+00	0.00E+00	3.82E+00
		Fe-59	<6.97E+00	0.00E+00	6.97E+00
		Co-60	<2.52E+00	0.00E+00	2.52E+00
		Zn-65	<6.48E+00	0.00E+00	6.48E+00
		Zr-95	<6.31E+00	0.00E+00	6.31E+00
		Nb-95	<4.44E+00	0.00E+00	4.44E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<3.93E+00	0.00E+00	3.93E+00
		Cs-137	<2.98E+00	0.00E+00	2.98E+00
		BaLa-140	<7.05E+00	0.00E+00	7.05E+00
		Be-7	<3.03E+01	0.00E+00	3.03E+01
		K-40	<4.66E+01	0.00E+00	4.66E+01
		Beta	<2.88E+00	0.00E+00	2.88E+00
494466	1/28/2019 - 2/25/2019	Beta	<3.30E+00	0.00E+00	3.30E+00
		Mn-54	<4.00E+00	0.00E+00	4.00E+00
		Co-58	<4.85E+00	0.00E+00	4.85E+00
		Fe-59	<6.08E+00	0.00E+00	6.08E+00
		Co-60	<3.61E+00	0.00E+00	3.61E+00
		Zn-65	<1.67E+00	0.00E+00	1.67E+00
		Zr-95	<8.23E+00	0.00E+00	8.23E+00
		Nb-95	<4.66E+00	0.00E+00	4.66E+00
		I-131	<1.15E+01	0.00E+00	1.15E+01
		Cs-134	<3.36E+00	0.00E+00	3.36E+00
		Cs-137	<3.46E+00	0.00E+00	3.46E+00
		BaLa-140	<8.23E+00	0.00E+00	8.23E+00



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: DRINKING WATER Concentration (Activity): pCi/l

Sample Point 101 [INDICATOR - E @ 3.31 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494466	1/28/2019 - 2/25/2019	Be-7	<2.57E+01	0.00E+00	2.57E+01
		K-40	<5.27E+01	0.00E+00	5.27E+01
496909	2/25/2019 - 3/25/2019	Beta	<3.32E+00	0.00E+00	3.32E+00
		Mn-54	<3.17E+00	0.00E+00	3.17E+00
		Co-58	<3.51E+00	0.00E+00	3.51E+00
		Fe-59	<5.71E+00	0.00E+00	5.71E+00
		Co-60	<3.63E+00	0.00E+00	3.63E+00
		Zn-65	<6.70E+00	0.00E+00	6.70E+00
		Zr-95	<5.96E+00	0.00E+00	5.96E+00
		Nb-95	<4.24E+00	0.00E+00	4.24E+00
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<3.53E+00	0.00E+00	3.53E+00
		Cs-137	<2.95E+00	0.00E+00	2.95E+00
		BaLa-140	<4.77E+00	0.00E+00	4.77E+00
		Be-7	<2.57E+01	0.00E+00	2.57E+01
		K-40	<5.25E+01	0.00E+00	5.25E+01
493735	12/31/2018 - 4/22/2019	Nuclide	Activity	2 Sigma Error	MDA
		H3DW	3.48E+02	1.20E+02	1.88E+02
498678	3/25/2019 - 4/22/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	<3.30E+00	0.00E+00	3.30E+00
		Mn-54	<1.46E+00	0.00E+00	1.46E+00
		Co-58	<1.58E+00	0.00E+00	1.58E+00
		Fe-59	<4.05E+00	0.00E+00	4.05E+00
		Co-60	<1.32E+00	0.00E+00	1.32E+00
		Zn-65	<3.41E+00	0.00E+00	3.41E+00
		Zr-95	<3.20E+00	0.00E+00	3.20E+00
		Nb-95	<1.90E+00	0.00E+00	1.90E+00
		I-131	<1.00E+01	0.00E+00	1.00E+01
		Cs-134	<1.84E+00	0.00E+00	1.84E+00
		Cs-137	<1.35E+00	0.00E+00	1.35E+00
		BaLa-140	<5.37E+00	0.00E+00	5.37E+00
		Be-7	<1.68E+01	0.00E+00	1.68E+01
K-40	1.59E+01	1.56E+01	2.50E+01		
500252	4/22/2019 - 5/20/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	<3.28E+00	0.00E+00	3.28E+00
		Mn-54	<2.93E+00	0.00E+00	2.93E+00
		Co-58	<2.47E+00	0.00E+00	2.47E+00
		Fe-59	<6.86E+00	0.00E+00	6.86E+00
		Co-60	<2.27E+00	0.00E+00	2.27E+00
		Zn-65	<6.80E+00	0.00E+00	6.80E+00
		Zr-95	<3.39E+00	0.00E+00	3.39E+00
		Nb-95	<3.85E+00	0.00E+00	3.85E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<3.08E+00	0.00E+00	3.08E+00
		Cs-137	<2.53E+00	0.00E+00	2.53E+00
		BaLa-140	<6.35E+00	0.00E+00	6.35E+00
		Be-7	<2.73E+01	0.00E+00	2.73E+01
K-40	4.09E+01	3.47E+01	5.31E+01		
502030	5/20/2019 - 6/17/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	<3.25E+00	0.00E+00	3.25E+00
		Mn-54	<2.77E+00	0.00E+00	2.77E+00
		Co-58	<2.14E+00	0.00E+00	2.14E+00
		Fe-59	<6.05E+00	0.00E+00	6.05E+00
		Co-60	<2.09E+00	0.00E+00	2.09E+00
		Zn-65	<4.68E+00	0.00E+00	4.68E+00
		Zr-95	<5.88E+00	0.00E+00	5.88E+00
		Nb-95	<3.36E+00	0.00E+00	3.36E+00
		I-131	<1.13E+01	0.00E+00	1.13E+01
		Cs-134	<2.76E+00	0.00E+00	2.76E+00
		Cs-137	<2.19E+00	0.00E+00	2.19E+00
		BaLa-140	<7.08E+00	0.00E+00	7.08E+00
		Be-7	<2.34E+01	0.00E+00	2.34E+01



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: DRINKING WATER Concentration (Activity): pCi/l

Sample Point 101 [INDICATOR - E @ 3.31 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
502030	5/20/2019 - 6/17/2019	K-40	<3.71E+01	0.00E+00	3.71E+01
500029	4/22/2019 - 7/15/2019	H3DW	5.24E+02	1.28E+02	1.91E+02
504060	6/17/2019 - 7/15/2019	Beta	<3.28E+00	0.00E+00	3.28E+00
		Mn-54	<3.22E+00	0.00E+00	3.22E+00
		Co-58	<2.20E+00	0.00E+00	2.20E+00
		Fe-59	<6.81E+00	0.00E+00	6.81E+00
		Co-60	<2.29E+00	0.00E+00	2.29E+00
		Zn-65	<5.96E+00	0.00E+00	5.96E+00
		Zr-95	<7.51E+00	0.00E+00	7.51E+00
		Nb-95	<4.73E+00	0.00E+00	4.73E+00
		I-131	<1.11E+01	0.00E+00	1.11E+01
		Cs-134	<3.58E+00	0.00E+00	3.58E+00
		Cs-137	<2.70E+00	0.00E+00	2.70E+00
		BaLa-140	<8.63E+00	0.00E+00	8.63E+00
		Be-7	<3.22E+01	0.00E+00	3.22E+01
		K-40	<4.76E+01	0.00E+00	4.76E+01
505030	7/15/2019 - 8/12/2019	Beta	3.91E+00	4.54E+00	3.33E+00
		Mn-54	<4.78E+00	0.00E+00	4.78E+00
		Co-58	<2.84E+00	0.00E+00	2.84E+00
		Fe-59	<8.25E+00	0.00E+00	8.25E+00
		Co-60	<3.42E+00	0.00E+00	3.42E+00
		Zn-65	<8.25E+00	0.00E+00	8.25E+00
		Zr-95	<6.60E+00	0.00E+00	6.60E+00
		Nb-95	<4.46E+00	0.00E+00	4.46E+00
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<4.18E+00	0.00E+00	4.18E+00
		Cs-137	<4.76E+00	0.00E+00	4.76E+00
		BaLa-140	<1.06E+01	0.00E+00	1.06E+01
		Be-7	<3.49E+01	0.00E+00	3.49E+01
		K-40	<6.51E+01	0.00E+00	6.51E+01
506767	8/12/2019 - 9/9/2019	Beta	<3.29E+00	0.00E+00	3.29E+00
		Mn-54	<4.13E+00	0.00E+00	4.13E+00
		Co-58	<4.80E+00	0.00E+00	4.80E+00
		Fe-59	<8.61E+00	0.00E+00	8.61E+00
		Co-60	<4.35E+00	0.00E+00	4.35E+00
		Zn-65	<5.68E+00	0.00E+00	5.68E+00
		Zr-95	<8.15E+00	0.00E+00	8.15E+00
		Nb-95	<6.04E+00	0.00E+00	6.04E+00
		I-131	<1.06E+01	0.00E+00	1.06E+01
		Cs-134	<4.36E+00	0.00E+00	4.36E+00
		Cs-137	<4.00E+00	0.00E+00	4.00E+00
		BaLa-140	<9.92E+00	0.00E+00	9.92E+00
		Be-7	<3.07E+01	0.00E+00	3.07E+01
		K-40	<5.47E+01	0.00E+00	5.47E+01
505067	7/15/2019 - 10/7/2019	H3DW	4.88E+02	1.26E+02	1.91E+02
509646	9/9/2019 - 10/7/2019	Beta	<3.30E+00	0.00E+00	3.30E+00
		Mn-54	<3.74E+00	0.00E+00	3.74E+00
		Co-58	<4.13E+00	0.00E+00	4.13E+00
		Fe-59	<7.31E+00	0.00E+00	7.31E+00
		Co-60	<2.46E+00	0.00E+00	2.46E+00
		Zn-65	<8.86E+00	0.00E+00	8.86E+00
		Zr-95	<6.49E+00	0.00E+00	6.49E+00
		Nb-95	<5.22E+00	0.00E+00	5.22E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<4.01E+00	0.00E+00	4.01E+00
		Cs-137	<4.55E+00	0.00E+00	4.55E+00



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: DRINKING WATER Concentration (Activity): pCi/l

Sample Point 101 [INDICATOR - E @ 3.31 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
509646	9/9/2019 - 10/7/2019	BaLa-140	<5.17E+00	0.00E+00	5.17E+00
		Be-7	<2.92E+01	0.00E+00	2.92E+01
		K-40	8.85E+01	3.99E+01	4.78E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511358	10/7/2019 - 11/4/2019	Beta	3.41E+00	4.45E+00	3.27E+00
		Mn-54	<3.97E+00	0.00E+00	3.97E+00
		Co-58	<3.68E+00	0.00E+00	3.68E+00
		Fe-59	<9.30E+00	0.00E+00	9.30E+00
		Co-60	<2.19E+00	0.00E+00	2.19E+00
		Zn-65	<7.87E+00	0.00E+00	7.87E+00
		Zr-95	<5.50E+00	0.00E+00	5.50E+00
		Nb-95	<4.65E+00	0.00E+00	4.65E+00
		I-131	<1.12E+01	0.00E+00	1.12E+01
		Cs-134	<4.41E+00	0.00E+00	4.41E+00
		Cs-137	<3.66E+00	0.00E+00	3.66E+00
		BaLa-140	<5.88E+00	0.00E+00	5.88E+00
		Be-7	<3.21E+01	0.00E+00	3.21E+01
		K-40	8.16E+01	3.86E+01	4.96E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512587	11/4/2019 - 12/2/2019	Beta	<3.31E+00	0.00E+00	3.31E+00
		Mn-54	<4.52E+00	0.00E+00	4.52E+00
		Co-58	<3.61E+00	0.00E+00	3.61E+00
		Fe-59	<6.98E+00	0.00E+00	6.98E+00
		Co-60	<3.97E+00	0.00E+00	3.97E+00
		Zn-65	<7.32E+00	0.00E+00	7.32E+00
		Zr-95	<6.88E+00	0.00E+00	6.88E+00
		Nb-95	<3.31E+00	0.00E+00	3.31E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<4.15E+00	0.00E+00	4.15E+00
		Cs-137	<2.25E+00	0.00E+00	2.25E+00
		BaLa-140	<6.49E+00	0.00E+00	6.49E+00
		Be-7	<3.51E+01	0.00E+00	3.51E+01
		K-40	<4.92E+01	0.00E+00	4.92E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511710	10/7/2019 - 12/30/2019	H3DW	3.82E+02	1.29E+02	2.01E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514311	12/2/2019 - 12/30/2019	Beta	<3.29E+00	0.00E+00	3.29E+00
		Mn-54	<3.08E+00	0.00E+00	3.08E+00
		Co-58	<3.36E+00	0.00E+00	3.36E+00
		Fe-59	<4.67E+00	0.00E+00	4.67E+00
		Co-60	<2.08E+00	0.00E+00	2.08E+00
		Zn-65	<5.35E+00	0.00E+00	5.35E+00
		Zr-95	<6.61E+00	0.00E+00	6.61E+00
		Nb-95	<3.93E+00	0.00E+00	3.93E+00
		I-131	<1.08E+01	0.00E+00	1.08E+01
		Cs-134	<2.90E+00	0.00E+00	2.90E+00
		Cs-137	<3.13E+00	0.00E+00	3.13E+00
		BaLa-140	<8.03E+00	0.00E+00	8.03E+00
		Be-7	<2.56E+01	0.00E+00	2.56E+01
		K-40	5.93E+01	2.75E+01	3.28E+01

Sample Point 119 [INDICATOR - SSW @ 7.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493137	12/31/2018 - 1/28/2019	Mn-54	<4.27E+00	0.00E+00	4.27E+00
		Co-58	<4.42E+00	0.00E+00	4.42E+00
		Fe-59	<6.95E+00	0.00E+00	6.95E+00
		Co-60	<3.50E+00	0.00E+00	3.50E+00
		Zn-65	<8.08E+00	0.00E+00	8.08E+00
		Zr-95	<7.20E+00	0.00E+00	7.20E+00
		Nb-95	<6.16E+00	0.00E+00	6.16E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<4.57E+00	0.00E+00	4.57E+00
		Cs-137	<4.64E+00	0.00E+00	4.64E+00



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: DRINKING WATER Concentration (Activity): pCi/l

Sample Point 119 [INDICATOR - SSW @ 7.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493137	12/31/2018 - 1/28/2019	BaLa-140	<9.82E+00	0.00E+00	9.82E+00
		Be-7	<3.32E+01	0.00E+00	3.32E+01
		K-40	8.36E+01	4.33E+01	5.63E+01
		Beta	<1.99E+00	0.00E+00	1.99E+00
494467	1/28/2019 - 2/25/2019	Beta	<3.30E+00	0.00E+00	3.30E+00
		Mn-54	<3.80E+00	0.00E+00	3.80E+00
		Co-58	<2.83E+00	0.00E+00	2.83E+00
		Fe-59	<5.51E+00	0.00E+00	5.51E+00
		Co-60	<3.43E+00	0.00E+00	3.43E+00
		Zn-65	<5.18E+00	0.00E+00	5.18E+00
		Zr-95	<6.06E+00	0.00E+00	6.06E+00
		Nb-95	<4.19E+00	0.00E+00	4.19E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<2.33E+00	0.00E+00	2.33E+00
		Cs-137	<3.00E+00	0.00E+00	3.00E+00
		BaLa-140	<1.11E+01	0.00E+00	1.11E+01
		Be-7	<3.31E+01	0.00E+00	3.31E+01
		K-40	4.86E+01	3.11E+01	4.19E+01
		496910	2/25/2019 - 3/25/2019	Beta	<3.32E+00
Mn-54	<3.27E+00			0.00E+00	3.27E+00
Co-58	<3.62E+00			0.00E+00	3.62E+00
Fe-59	<5.69E+00			0.00E+00	5.69E+00
Co-60	<3.17E+00			0.00E+00	3.17E+00
Zn-65	<6.27E+00			0.00E+00	6.27E+00
Zr-95	<5.89E+00			0.00E+00	5.89E+00
Nb-95	<3.71E+00			0.00E+00	3.71E+00
I-131	<1.18E+01			0.00E+00	1.18E+01
Cs-134	<3.49E+00			0.00E+00	3.49E+00
Cs-137	<3.05E+00			0.00E+00	3.05E+00
BaLa-140	<4.78E+00			0.00E+00	4.78E+00
Be-7	<2.44E+01			0.00E+00	2.44E+01
K-40	<5.25E+01			0.00E+00	5.25E+01
493736	12/31/2018 - 4/22/2019			H3DW	<1.59E+02
498679	3/25/2019 - 4/22/2019	Beta	<3.30E+00	0.00E+00	3.30E+00
		Mn-54	<2.00E+00	0.00E+00	2.00E+00
		Co-58	<2.17E+00	0.00E+00	2.17E+00
		Fe-59	<4.75E+00	0.00E+00	4.75E+00
		Co-60	<1.80E+00	0.00E+00	1.80E+00
		Zn-65	<4.23E+00	0.00E+00	4.23E+00
		Zr-95	<3.81E+00	0.00E+00	3.81E+00
		Nb-95	<2.89E+00	0.00E+00	2.89E+00
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<2.27E+00	0.00E+00	2.27E+00
		Cs-137	<1.89E+00	0.00E+00	1.89E+00
		BaLa-140	<6.37E+00	0.00E+00	6.37E+00
		Be-7	<2.03E+01	0.00E+00	2.03E+01
		K-40	8.05E+01	2.15E+01	2.13E+01
		500253	4/22/2019 - 5/20/2019	Beta	3.35E+00
Mn-54	<3.03E+00			0.00E+00	3.03E+00
Co-58	<2.95E+00			0.00E+00	2.95E+00
Fe-59	<5.53E+00			0.00E+00	5.53E+00
Co-60	<2.11E+00			0.00E+00	2.11E+00
Zn-65	<4.24E+00			0.00E+00	4.24E+00
Zr-95	<7.23E+00			0.00E+00	7.23E+00
Nb-95	<3.43E+00			0.00E+00	3.43E+00
I-131	<1.06E+01			0.00E+00	1.06E+01
Cs-134	<4.24E+00			0.00E+00	4.24E+00
Cs-137	<2.64E+00			0.00E+00	2.64E+00



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: DRINKING WATER Concentration (Activity): pCi/l

Sample Point 119 [INDICATOR - SSW @ 7.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500253	4/22/2019 - 5/20/2019	BaLa-140	<7.44E+00	0.00E+00	7.44E+00
		Be-7	<2.72E+01	0.00E+00	2.72E+01
		K-40	8.17E+01	3.43E+01	4.40E+01
502031	5/20/2019 - 6/17/2019	Beta	4.26E+00	4.44E+00	3.25E+00
		Mn-54	<3.60E+00	0.00E+00	3.60E+00
		Co-58	<3.89E+00	0.00E+00	3.89E+00
		Fe-59	<8.93E+00	0.00E+00	8.93E+00
		Co-60	<3.33E+00	0.00E+00	3.33E+00
		Zn-65	<4.36E+00	0.00E+00	4.36E+00
		Zr-95	<5.37E+00	0.00E+00	5.37E+00
		Nb-95	<3.87E+00	0.00E+00	3.87E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<4.38E+00	0.00E+00	4.38E+00
		Cs-137	<2.93E+00	0.00E+00	2.93E+00
		BaLa-140	<8.13E+00	0.00E+00	8.13E+00
		Be-7	<2.85E+01	0.00E+00	2.85E+01
		K-40	<5.64E+01	0.00E+00	5.64E+01
500030	4/22/2019 - 7/15/2019	H3DW	3.00E+02	1.21E+02	1.91E+02
504061	6/17/2019 - 7/15/2019	Beta	<3.28E+00	0.00E+00	3.28E+00
		Mn-54	<2.79E+00	0.00E+00	2.79E+00
		Co-58	<4.28E+00	0.00E+00	4.28E+00
		Fe-59	<7.99E+00	0.00E+00	7.99E+00
		Co-60	<2.29E+00	0.00E+00	2.29E+00
		Zn-65	<8.07E+00	0.00E+00	8.07E+00
		Zr-95	<5.96E+00	0.00E+00	5.96E+00
		Nb-95	<4.55E+00	0.00E+00	4.55E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<4.85E+00	0.00E+00	4.85E+00
		Cs-137	<3.18E+00	0.00E+00	3.18E+00
		BaLa-140	<9.00E+00	0.00E+00	9.00E+00
		Be-7	<3.73E+01	0.00E+00	3.73E+01
		K-40	<6.02E+01	0.00E+00	6.02E+01
505031	7/15/2019 - 8/12/2019	Beta	5.40E+00	4.57E+00	3.33E+00
		Mn-54	<3.26E+00	0.00E+00	3.26E+00
		Co-58	<3.22E+00	0.00E+00	3.22E+00
		Fe-59	<8.58E+00	0.00E+00	8.58E+00
		Co-60	<2.00E+00	0.00E+00	2.00E+00
		Zn-65	<8.38E+00	0.00E+00	8.38E+00
		Zr-95	<4.87E+00	0.00E+00	4.87E+00
		Nb-95	<5.17E+00	0.00E+00	5.17E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<3.21E+00	0.00E+00	3.21E+00
		Cs-137	<2.40E+00	0.00E+00	2.40E+00
		BaLa-140	<7.06E+00	0.00E+00	7.06E+00
		Be-7	<2.69E+01	0.00E+00	2.69E+01
		K-40	<1.98E+01	0.00E+00	1.98E+01
506768	8/12/2019 - 9/9/2019	Beta	<3.29E+00	0.00E+00	3.29E+00
		Mn-54	<3.38E+00	0.00E+00	3.38E+00
		Co-58	<3.58E+00	0.00E+00	3.58E+00
		Fe-59	<8.05E+00	0.00E+00	8.05E+00
		Co-60	<2.51E+00	0.00E+00	2.51E+00
		Zn-65	<3.67E+00	0.00E+00	3.67E+00
		Zr-95	<6.35E+00	0.00E+00	6.35E+00
		Nb-95	<4.61E+00	0.00E+00	4.61E+00
		I-131	<1.15E+01	0.00E+00	1.15E+01
		Cs-134	<3.57E+00	0.00E+00	3.57E+00
		Cs-137	<3.57E+00	0.00E+00	3.57E+00
		BaLa-140	<8.11E+00	0.00E+00	8.11E+00



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: DRINKING WATER Concentration (Activity): pCi/l

Sample Point 119 [INDICATOR - SSW @ 7.4 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
506768	8/12/2019 - 9/9/2019	Be-7	<3.20E+01	0.00E+00	3.20E+01
		K-40	<5.70E+01	0.00E+00	5.70E+01
505068	7/15/2019 - 10/7/2019	H3DW	2.80E+02	1.21E+02	1.93E+02
509647	9/9/2019 - 10/7/2019	Beta	4.10E+00	4.50E+00	3.30E+00
		Mn-54	<3.60E+00	0.00E+00	3.60E+00
		Co-58	<3.13E+00	0.00E+00	3.13E+00
		Fe-59	<5.36E+00	0.00E+00	5.36E+00
		Co-60	<3.17E+00	0.00E+00	3.17E+00
		Zn-65	<5.58E+00	0.00E+00	5.58E+00
		Zr-95	<6.56E+00	0.00E+00	6.56E+00
		Nb-95	<3.78E+00	0.00E+00	3.78E+00
		I-131	<1.10E+01	0.00E+00	1.10E+01
		Cs-134	<3.31E+00	0.00E+00	3.31E+00
		Cs-137	<2.40E+00	0.00E+00	2.40E+00
		BaLa-140	<6.41E+00	0.00E+00	6.41E+00
		Be-7	<2.88E+01	0.00E+00	2.88E+01
		K-40	1.19E+02	3.32E+01	2.55E+01
511359	10/7/2019 - 11/4/2019	Beta	<3.27E+00	0.00E+00	3.27E+00
		Mn-54	<2.97E+00	0.00E+00	2.97E+00
		Co-58	<4.11E+00	0.00E+00	4.11E+00
		Fe-59	<7.79E+00	0.00E+00	7.79E+00
		Co-60	<3.57E+00	0.00E+00	3.57E+00
		Zn-65	<7.33E+00	0.00E+00	7.33E+00
		Zr-95	<5.82E+00	0.00E+00	5.82E+00
		Nb-95	<7.01E+00	0.00E+00	7.01E+00
		I-131	<1.13E+01	0.00E+00	1.13E+01
		Cs-134	<4.36E+00	0.00E+00	4.36E+00
		Cs-137	<4.83E+00	0.00E+00	4.83E+00
		BaLa-140	<8.18E+00	0.00E+00	8.18E+00
		Be-7	<3.33E+01	0.00E+00	3.33E+01
		K-40	<5.72E+01	0.00E+00	5.72E+01
512588	11/4/2019 - 12/2/2019	Beta	<3.31E+00	0.00E+00	3.31E+00
		Mn-54	<4.03E+00	0.00E+00	4.03E+00
		Co-58	<3.62E+00	0.00E+00	3.62E+00
		Fe-59	<5.03E+00	0.00E+00	5.03E+00
		Co-60	<3.64E+00	0.00E+00	3.64E+00
		Zn-65	<7.65E+00	0.00E+00	7.65E+00
		Zr-95	<5.71E+00	0.00E+00	5.71E+00
		Nb-95	<4.44E+00	0.00E+00	4.44E+00
		I-131	<1.15E+01	0.00E+00	1.15E+01
		Cs-134	<3.01E+00	0.00E+00	3.01E+00
		Cs-137	<3.78E+00	0.00E+00	3.78E+00
		BaLa-140	<1.04E+01	0.00E+00	1.04E+01
		Be-7	<3.93E+01	0.00E+00	3.93E+01
		K-40	<6.61E+01	0.00E+00	6.61E+01
511711	10/7/2019 - 12/30/2019	H3DW	3.41E+02	1.28E+02	2.01E+02
514312	12/2/2019 - 12/30/2019	Beta	<3.29E+00	0.00E+00	3.29E+00
		Mn-54	<1.93E+00	0.00E+00	1.93E+00
		Co-58	<3.56E+00	0.00E+00	3.56E+00
		Fe-59	<5.42E+00	0.00E+00	5.42E+00
		Co-60	<3.42E+00	0.00E+00	3.42E+00
		Zn-65	<6.56E+00	0.00E+00	6.56E+00
		Zr-95	<5.03E+00	0.00E+00	5.03E+00
		Nb-95	<2.88E+00	0.00E+00	2.88E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<3.67E+00	0.00E+00	3.67E+00



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: DRINKING WATER Concentration (Activity): pCi/l

Sample Point 119 [INDICATOR - SSW @ 7.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514312	12/21/2019 - 12/30/2019	Cs-137	<3.13E+00	0.00E+00	3.13E+00
		BaLa-140	<7.87E+00	0.00E+00	7.87E+00
		Be-7	<2.80E+01	0.00E+00	2.80E+01
		K-40	<4.86E+01	0.00E+00	4.86E+01

Sample Point 132 [INDICATOR - SSE @ 11.1 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493138	12/31/2018 - 1/28/2019	Mn-54	<2.76E+00	0.00E+00	2.76E+00
		Co-58	<2.85E+00	0.00E+00	2.85E+00
		Fe-59	<7.07E+00	0.00E+00	7.07E+00
		Co-60	<2.11E+00	0.00E+00	2.11E+00
		Zn-65	<5.74E+00	0.00E+00	5.74E+00
		Zr-95	<6.34E+00	0.00E+00	6.34E+00
		Nb-95	<3.46E+00	0.00E+00	3.46E+00
		I-131	<1.13E+01	0.00E+00	1.13E+01
		Cs-134	<2.58E+00	0.00E+00	2.58E+00
		Cs-137	<3.03E+00	0.00E+00	3.03E+00
		BaLa-140	<7.76E+00	0.00E+00	7.76E+00
		Be-7	<2.38E+01	0.00E+00	2.38E+01
		K-40	<5.05E+01	0.00E+00	5.05E+01
		Beta	<1.90E+00	0.00E+00	1.90E+00

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494468	1/28/2019 - 2/25/2019	Beta	<3.30E+00	0.00E+00	3.30E+00
		Mn-54	<3.33E+00	0.00E+00	3.33E+00
		Co-58	<3.30E+00	0.00E+00	3.30E+00
		Fe-59	<5.08E+00	0.00E+00	5.08E+00
		Co-60	<3.44E+00	0.00E+00	3.44E+00
		Zn-65	<5.14E+00	0.00E+00	5.14E+00
		Zr-95	<4.84E+00	0.00E+00	4.84E+00
		Nb-95	<2.40E+00	0.00E+00	2.40E+00
		I-131	<1.03E+01	0.00E+00	1.03E+01
		Cs-134	<3.21E+00	0.00E+00	3.21E+00
		Cs-137	<2.40E+00	0.00E+00	2.40E+00
		BaLa-140	<9.18E+00	0.00E+00	9.18E+00
		Be-7	<2.32E+01	0.00E+00	2.32E+01
		K-40	<4.80E+01	0.00E+00	4.80E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
496911	2/25/2019 - 3/25/2019	Beta	<3.32E+00	0.00E+00	3.32E+00
		Mn-54	<3.79E+00	0.00E+00	3.79E+00
		Co-58	<3.65E+00	0.00E+00	3.65E+00
		Fe-59	<7.07E+00	0.00E+00	7.07E+00
		Co-60	<4.02E+00	0.00E+00	4.02E+00
		Zn-65	<9.27E+00	0.00E+00	9.27E+00
		Zr-95	<8.24E+00	0.00E+00	8.24E+00
		Nb-95	<4.08E+00	0.00E+00	4.08E+00
		I-131	<1.02E+01	0.00E+00	1.02E+01
		Cs-134	<4.21E+00	0.00E+00	4.21E+00
		Cs-137	<3.22E+00	0.00E+00	3.22E+00
		BaLa-140	<8.30E+00	0.00E+00	8.30E+00
		Be-7	<3.42E+01	0.00E+00	3.42E+01
		K-40	<5.27E+01	0.00E+00	5.27E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493737	12/31/2018 - 4/22/2019	H3DW	<1.86E+02	0.00E+00	1.89E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
498680	3/25/2019 - 4/22/2019	Beta	3.42E+00	4.49E+00	3.30E+00
		Mn-54	<1.99E+00	0.00E+00	1.99E+00
		Co-58	<2.30E+00	0.00E+00	2.30E+00
		Fe-59	<5.12E+00	0.00E+00	5.12E+00
		Co-60	<1.61E+00	0.00E+00	1.61E+00
		Zn-65	<3.69E+00	0.00E+00	3.69E+00
		Zr-95	<4.45E+00	0.00E+00	4.45E+00
		Nb-95	<2.96E+00	0.00E+00	2.96E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: DRINKING WATER Concentration (Activity): pCi/l

Sample Point 132 [INDICATOR - SSE @ 11.1 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
498680	3/25/2019 - 4/22/2019	Cs-134	<2.06E+00	0.00E+00	2.06E+00
		Cs-137	<2.00E+00	0.00E+00	2.00E+00
		BaLa-140	<5.67E+00	0.00E+00	5.67E+00
		Be-7	<1.99E+01	0.00E+00	1.99E+01
		K-40	3.71E+01	1.90E+01	2.62E+01
500254	4/22/2019 - 5/20/2019	Beta	<3.28E+00	0.00E+00	3.28E+00
		Mn-54	<2.73E+00	0.00E+00	2.73E+00
		Co-58	<2.84E+00	0.00E+00	2.84E+00
		Fe-59	<5.68E+00	0.00E+00	5.68E+00
		Co-60	<2.55E+00	0.00E+00	2.55E+00
		Zn-65	<6.27E+00	0.00E+00	6.27E+00
		Zr-95	<6.00E+00	0.00E+00	6.00E+00
		Nb-95	<4.41E+00	0.00E+00	4.41E+00
		I-131	<1.05E+01	0.00E+00	1.05E+01
		Cs-134	<3.46E+00	0.00E+00	3.46E+00
		Cs-137	<2.29E+00	0.00E+00	2.29E+00
		BaLa-140	<6.62E+00	0.00E+00	6.62E+00
		Be-7	<2.89E+01	0.00E+00	2.89E+01
		K-40	6.83E+01	3.35E+01	4.53E+01
502032	5/20/2019 - 6/17/2019	Beta	<3.25E+00	0.00E+00	3.25E+00
		Mn-54	<2.50E+00	0.00E+00	2.50E+00
		Co-58	<2.89E+00	0.00E+00	2.89E+00
		Fe-59	<5.31E+00	0.00E+00	5.31E+00
		Co-60	<2.77E+00	0.00E+00	2.77E+00
		Zn-65	<5.98E+00	0.00E+00	5.98E+00
		Zr-95	<4.31E+00	0.00E+00	4.31E+00
		Nb-95	<3.56E+00	0.00E+00	3.56E+00
		I-131	<1.02E+01	0.00E+00	1.02E+01
		Cs-134	<2.85E+00	0.00E+00	2.85E+00
		Cs-137	<2.82E+00	0.00E+00	2.82E+00
		BaLa-140	<9.30E+00	0.00E+00	9.30E+00
		Be-7	<2.41E+01	0.00E+00	2.41E+01
		K-40	<3.95E+01	0.00E+00	3.95E+01
500031	4/22/2019 - 7/15/2019	H3DW	2.53E+02	1.19E+02	1.91E+02
504062	6/17/2019 - 7/15/2019	Beta	3.86E+00	4.47E+00	3.28E+00
		Mn-54	<3.12E+00	0.00E+00	3.12E+00
		Co-58	<3.95E+00	0.00E+00	3.95E+00
		Fe-59	<7.50E+00	0.00E+00	7.50E+00
		Co-60	<3.43E+00	0.00E+00	3.43E+00
		Zn-65	<9.32E+00	0.00E+00	9.32E+00
		Zr-95	<5.60E+00	0.00E+00	5.60E+00
		Nb-95	<5.33E+00	0.00E+00	5.33E+00
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<3.18E+00	0.00E+00	3.18E+00
		Cs-137	<4.79E+00	0.00E+00	4.79E+00
		BaLa-140	<7.90E+00	0.00E+00	7.90E+00
		Be-7	<3.47E+01	0.00E+00	3.47E+01
		K-40	<7.09E+01	0.00E+00	7.09E+01
505032	7/15/2019 - 8/12/2019	Beta	3.77E+00	4.54E+00	3.33E+00
		Mn-54	<2.21E+00	0.00E+00	2.21E+00
		Co-58	<3.02E+00	0.00E+00	3.02E+00
		Fe-59	<6.11E+00	0.00E+00	6.11E+00
		Co-60	<2.41E+00	0.00E+00	2.41E+00
		Zn-65	<4.61E+00	0.00E+00	4.61E+00
		Zr-95	<5.11E+00	0.00E+00	5.11E+00
		Nb-95	<3.50E+00	0.00E+00	3.50E+00
		I-131	<9.42E+00	0.00E+00	9.42E+00
		Cs-134	<2.51E+00	0.00E+00	2.51E+00



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: DRINKING WATER Concentration (Activity): pCi/l

Sample Point 132 [INDICATOR - SSE @ 11.1 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA	
505032	7/15/2019 - 8/12/2019	Cs-137	<2.51E+00	0.00E+00	2.51E+00	
		BaLa-140	<6.24E+00	0.00E+00	6.24E+00	
		Be-7	<2.35E+01	0.00E+00	2.35E+01	
		K-40	8.15E+01	2.85E+01	3.47E+01	
506769	8/12/2019 - 9/9/2019	Beta	<3.29E+00	0.00E+00	3.29E+00	
		Mn-54	<2.84E+00	0.00E+00	2.84E+00	
		Co-58	<3.56E+00	0.00E+00	3.56E+00	
		Fe-59	<4.93E+00	0.00E+00	4.93E+00	
		Co-60	<2.88E+00	0.00E+00	2.88E+00	
		Zn-65	<7.83E+00	0.00E+00	7.83E+00	
		Zr-95	<5.22E+00	0.00E+00	5.22E+00	
		Nb-95	<4.20E+00	0.00E+00	4.20E+00	
		I-131	<1.14E+01	0.00E+00	1.14E+01	
		Cs-134	<4.21E+00	0.00E+00	4.21E+00	
		Cs-137	<3.81E+00	0.00E+00	3.81E+00	
		BaLa-140	<9.78E+00	0.00E+00	9.78E+00	
		Be-7	<3.28E+01	0.00E+00	3.28E+01	
		K-40	2.17E+01	2.12E+01	3.15E+01	
505069	7/15/2019 - 10/7/2019	H3DW	2.29E+02	1.19E+02	1.92E+02	
509648	9/9/2019 - 10/7/2019	Beta	3.87E+00	4.49E+00	3.30E+00	
		Mn-54	<3.41E+00	0.00E+00	3.41E+00	
		Co-58	<3.00E+00	0.00E+00	3.00E+00	
		Fe-59	<5.75E+00	0.00E+00	5.75E+00	
		Co-60	<3.77E+00	0.00E+00	3.77E+00	
		Zn-65	<3.55E+00	0.00E+00	3.55E+00	
		Zr-95	<7.19E+00	0.00E+00	7.19E+00	
		Nb-95	<3.99E+00	0.00E+00	3.99E+00	
		I-131	<1.18E+01	0.00E+00	1.18E+01	
		Cs-134	<3.69E+00	0.00E+00	3.69E+00	
		Cs-137	<2.95E+00	0.00E+00	2.95E+00	
		BaLa-140	<7.31E+00	0.00E+00	7.31E+00	
		Be-7	<2.86E+01	0.00E+00	2.86E+01	
		K-40	1.12E+02	3.72E+01	3.80E+01	
511360	10/7/2019 - 11/4/2019	Beta	<3.27E+00	0.00E+00	3.27E+00	
		Mn-54	<3.46E+00	0.00E+00	3.46E+00	
		Co-58	<3.22E+00	0.00E+00	3.22E+00	
		Fe-59	<5.74E+00	0.00E+00	5.74E+00	
		Co-60	<2.93E+00	0.00E+00	2.93E+00	
		Zn-65	<6.85E+00	0.00E+00	6.85E+00	
		Zr-95	<4.29E+00	0.00E+00	4.29E+00	
		Nb-95	<4.63E+00	0.00E+00	4.63E+00	
		I-131	<1.19E+01	0.00E+00	1.19E+01	
		Cs-134	<3.36E+00	0.00E+00	3.36E+00	
		Cs-137	<3.04E+00	0.00E+00	3.04E+00	
		BaLa-140	<7.20E+00	0.00E+00	7.20E+00	
		Be-7	<2.97E+01	0.00E+00	2.97E+01	
		K-40	<5.08E+01	0.00E+00	5.08E+01	
512589	11/4/2019 - 12/2/2019	Beta	<3.31E+00	0.00E+00	3.31E+00	
		Mn-54	<2.51E+00	0.00E+00	2.51E+00	
		Co-58	<3.86E+00	0.00E+00	3.86E+00	
		Fe-59	<7.28E+00	0.00E+00	7.28E+00	
		Co-60	<3.33E+00	0.00E+00	3.33E+00	
		Zn-65	<9.05E+00	0.00E+00	9.05E+00	
		Zr-95	<5.98E+00	0.00E+00	5.98E+00	
		Nb-95	<5.00E+00	0.00E+00	5.00E+00	
		I-131	<1.19E+01	0.00E+00	1.19E+01	
		Cs-134	<4.51E+00	0.00E+00	4.51E+00	
		Cs-137	<3.20E+00	0.00E+00	3.20E+00	



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: DRINKING WATER Concentration (Activity): pCi/l

Sample Point 132 [INDICATOR - SSE @ 11.1 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512589	11/4/2019 - 12/2/2019	BaLa-140	<1.16E+01	0.00E+00	1.16E+01
		Be-7	<2.72E+01	0.00E+00	2.72E+01
		K-40	<4.02E+01	0.00E+00	4.02E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511712	10/7/2019 - 12/30/2019	H3DW	3.47E+02	1.27E+02	2.00E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514313	12/2/2019 - 12/30/2019	Beta	<3.29E+00	0.00E+00	3.29E+00
		Mn-54	<3.39E+00	0.00E+00	3.39E+00
		Co-58	<2.89E+00	0.00E+00	2.89E+00
		Fe-59	<7.91E+00	0.00E+00	7.91E+00
		Co-60	<3.49E+00	0.00E+00	3.49E+00
		Zn-65	<6.78E+00	0.00E+00	6.78E+00
		Zr-95	<5.94E+00	0.00E+00	5.94E+00
		Nb-95	<4.32E+00	0.00E+00	4.32E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<4.00E+00	0.00E+00	4.00E+00
		Cs-137	<3.18E+00	0.00E+00	3.18E+00
		BaLa-140	<8.15E+00	0.00E+00	8.15E+00
		Be-7	<2.72E+01	0.00E+00	2.72E+01
		K-40	3.02E+01	3.53E+01	5.73E+01

Sample Point 136 [CONTROL - NNE @ 12.7 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493139	12/31/2018 - 1/28/2019	Mn-54	<2.83E+00	0.00E+00	2.83E+00
		Co-58	<3.86E+00	0.00E+00	3.86E+00
		Fe-59	<8.34E+00	0.00E+00	8.34E+00
		Co-60	<2.89E+00	0.00E+00	2.89E+00
		Zn-65	<8.61E+00	0.00E+00	8.61E+00
		Zr-95	<6.55E+00	0.00E+00	6.55E+00
		Nb-95	<4.97E+00	0.00E+00	4.97E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<3.88E+00	0.00E+00	3.88E+00
		Cs-137	<3.79E+00	0.00E+00	3.79E+00
		BaLa-140	<8.59E+00	0.00E+00	8.59E+00
		Be-7	<2.81E+01	0.00E+00	2.81E+01
		K-40	<7.27E+01	0.00E+00	7.27E+01
		Beta	<2.56E+00	0.00E+00	2.56E+00

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494469	1/28/2019 - 2/25/2019	Beta	<3.30E+00	0.00E+00	3.30E+00
		Mn-54	<3.04E+00	0.00E+00	3.04E+00
		Co-58	<3.12E+00	0.00E+00	3.12E+00
		Fe-59	<5.23E+00	0.00E+00	5.23E+00
		Co-60	<4.06E+00	0.00E+00	4.06E+00
		Zn-65	<6.95E+00	0.00E+00	6.95E+00
		Zr-95	<7.02E+00	0.00E+00	7.02E+00
		Nb-95	<5.94E+00	0.00E+00	5.94E+00
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<3.37E+00	0.00E+00	3.37E+00
		Cs-137	<3.63E+00	0.00E+00	3.63E+00
		BaLa-140	<7.09E+00	0.00E+00	7.09E+00
		Be-7	<3.01E+01	0.00E+00	3.01E+01
		K-40	<7.00E+01	0.00E+00	7.00E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
496912	2/25/2019 - 3/25/2019	Beta	<3.32E+00	0.00E+00	3.32E+00
		Mn-54	<3.72E+00	0.00E+00	3.72E+00
		Co-58	<4.34E+00	0.00E+00	4.34E+00
		Fe-59	<4.77E+00	0.00E+00	4.77E+00
		Co-60	<3.98E+00	0.00E+00	3.98E+00
		Zn-65	<5.67E+00	0.00E+00	5.67E+00
		Zr-95	<8.44E+00	0.00E+00	8.44E+00
		Nb-95	<4.84E+00	0.00E+00	4.84E+00
		I-131	<1.14E+01	0.00E+00	1.14E+01
		Cs-134	<4.58E+00	0.00E+00	4.58E+00



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: DRINKING WATER Concentration (Activity): pCi/l

Sample Point 136 [CONTROL - NNE @ 12.7 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
496912	2/25/2019 - 3/25/2019	Cs-137	<4.68E+00	0.00E+00	4.68E+00
		BaLa-140	<6.50E+00	0.00E+00	6.50E+00
		Be-7	<4.19E+01	0.00E+00	4.19E+01
		K-40	<6.18E+01	0.00E+00	6.18E+01
493738	12/31/2018 - 4/22/2019	Nuclide	Activity	2 Sigma Error	MDA
		H3DW	<-1.9E+01	0.00E+00	1.88E+02
498681	3/25/2019 - 4/22/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	<3.30E+00	0.00E+00	3.30E+00
		Mn-54	<1.82E+00	0.00E+00	1.82E+00
		Co-58	<2.18E+00	0.00E+00	2.18E+00
		Fe-59	<3.65E+00	0.00E+00	3.65E+00
		Co-60	<1.78E+00	0.00E+00	1.78E+00
		Zn-65	<3.40E+00	0.00E+00	3.40E+00
		Zr-95	<2.39E+00	0.00E+00	2.39E+00
		Nb-95	<2.15E+00	0.00E+00	2.15E+00
		I-131	<1.02E+01	0.00E+00	1.02E+01
		Cs-134	<1.91E+00	0.00E+00	1.91E+00
		Cs-137	<1.27E+00	0.00E+00	1.27E+00
		BaLa-140	<5.47E+00	0.00E+00	5.47E+00
		Be-7	<1.56E+01	0.00E+00	1.56E+01
		K-40	2.66E+01	1.49E+01	2.15E+01
		500255	4/22/2019 - 5/20/2019	Nuclide	Activity
Beta	<3.28E+00			0.00E+00	3.28E+00
Mn-54	<2.85E+00			0.00E+00	2.85E+00
Co-58	<3.16E+00			0.00E+00	3.16E+00
Fe-59	<5.93E+00			0.00E+00	5.93E+00
Co-60	<3.99E+00			0.00E+00	3.99E+00
Zn-65	<5.53E+00			0.00E+00	5.53E+00
Zr-95	<6.56E+00			0.00E+00	6.56E+00
Nb-95	<3.87E+00			0.00E+00	3.87E+00
I-131	<1.11E+01			0.00E+00	1.11E+01
Cs-134	<3.01E+00			0.00E+00	3.01E+00
Cs-137	<3.72E+00			0.00E+00	3.72E+00
BaLa-140	<4.69E+00			0.00E+00	4.69E+00
Be-7	<2.42E+01			0.00E+00	2.42E+01
K-40	4.29E+01			2.91E+01	4.08E+01
502033	5/20/2019 - 6/17/2019			Nuclide	Activity
		Beta	3.27E+00	4.42E+00	3.25E+00
		Mn-54	<1.52E+00	0.00E+00	1.52E+00
		Co-58	<1.64E+00	0.00E+00	1.64E+00
		Fe-59	<3.78E+00	0.00E+00	3.78E+00
		Co-60	<1.52E+00	0.00E+00	1.52E+00
		Zn-65	<3.30E+00	0.00E+00	3.30E+00
		Zr-95	<2.43E+00	0.00E+00	2.43E+00
		Nb-95	<2.09E+00	0.00E+00	2.09E+00
		I-131	<5.84E+00	0.00E+00	5.84E+00
		Cs-134	<1.62E+00	0.00E+00	1.62E+00
		Cs-137	<1.89E+00	0.00E+00	1.89E+00
		BaLa-140	<3.72E+00	0.00E+00	3.72E+00
		Be-7	<1.50E+01	0.00E+00	1.50E+01
		K-40	3.32E+01	1.73E+01	2.54E+01
		500032	4/22/2019 - 7/15/2019	Nuclide	Activity
H3DW	<-2.2E+01			0.00E+00	1.90E+02
504063	6/17/2019 - 7/15/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	<3.28E+00	0.00E+00	3.28E+00
		Mn-54	<3.97E+00	0.00E+00	3.97E+00
		Co-58	<4.81E+00	0.00E+00	4.81E+00
		Fe-59	<7.03E+00	0.00E+00	7.03E+00
		Co-60	<4.70E+00	0.00E+00	4.70E+00
		Zn-65	<8.05E+00	0.00E+00	8.05E+00
		Zr-95	<7.77E+00	0.00E+00	7.77E+00
		Nb-95	<4.89E+00	0.00E+00	4.89E+00



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: DRINKING WATER Concentration (Activity): pCi/l

Sample Point 136 [CONTROL - NNE @ 12.7 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504063	6/17/2019 - 7/15/2019	I-131	<1.00E+01	0.00E+00	1.00E+01
		Cs-134	<4.41E+00	0.00E+00	4.41E+00
		Cs-137	<3.19E+00	0.00E+00	3.19E+00
		BaLa-140	<8.23E+00	0.00E+00	8.23E+00
		Be-7	<4.25E+01	0.00E+00	4.25E+01
		K-40	4.93E+01	3.56E+01	4.93E+01
505033	7/15/2019 - 8/12/2019	Beta	<3.33E+00	0.00E+00	3.33E+00
		Mn-54	<2.93E+00	0.00E+00	2.93E+00
		Co-58	<3.38E+00	0.00E+00	3.38E+00
		Fe-59	<5.14E+00	0.00E+00	5.14E+00
		Co-60	<2.84E+00	0.00E+00	2.84E+00
		Zn-65	<6.64E+00	0.00E+00	6.64E+00
		Zr-95	<5.54E+00	0.00E+00	5.54E+00
		Nb-95	<3.51E+00	0.00E+00	3.51E+00
		I-131	<1.07E+01	0.00E+00	1.07E+01
		Cs-134	<2.69E+00	0.00E+00	2.69E+00
		Cs-137	<2.61E+00	0.00E+00	2.61E+00
		BaLa-140	<9.55E+00	0.00E+00	9.55E+00
		Be-7	<2.62E+01	0.00E+00	2.62E+01
		K-40	<4.57E+01	0.00E+00	4.57E+01
		506770	8/12/2019 - 9/9/2019	Beta	<3.29E+00
Mn-54	<3.86E+00			0.00E+00	3.86E+00
Co-58	<3.55E+00			0.00E+00	3.55E+00
Fe-59	<9.09E+00			0.00E+00	9.09E+00
Co-60	<3.03E+00			0.00E+00	3.03E+00
Zn-65	<5.58E+00			0.00E+00	5.58E+00
Zr-95	<6.76E+00			0.00E+00	6.76E+00
Nb-95	<5.06E+00			0.00E+00	5.06E+00
I-131	<1.15E+01			0.00E+00	1.15E+01
Cs-134	<5.43E+00			0.00E+00	5.43E+00
Cs-137	<4.28E+00			0.00E+00	4.28E+00
BaLa-140	<1.09E+01			0.00E+00	1.09E+01
Be-7	<3.58E+01			0.00E+00	3.58E+01
K-40	<3.88E+01			0.00E+00	3.88E+01
505070	7/15/2019 - 10/7/2019			H3DW	<-5.0E+01
509649	9/9/2019 - 10/7/2019	Beta	5.58E+00	4.53E+00	3.30E+00
		Mn-54	<3.12E+00	0.00E+00	3.12E+00
		Co-58	<2.89E+00	0.00E+00	2.89E+00
		Fe-59	<6.22E+00	0.00E+00	6.22E+00
		Co-60	<3.01E+00	0.00E+00	3.01E+00
		Zn-65	<5.86E+00	0.00E+00	5.86E+00
		Zr-95	<6.92E+00	0.00E+00	6.92E+00
		Nb-95	<4.35E+00	0.00E+00	4.35E+00
		I-131	<1.09E+01	0.00E+00	1.09E+01
		Cs-134	<4.01E+00	0.00E+00	4.01E+00
		Cs-137	<3.87E+00	0.00E+00	3.87E+00
		BaLa-140	<7.99E+00	0.00E+00	7.99E+00
		Be-7	<3.25E+01	0.00E+00	3.25E+01
		K-40	1.03E+02	3.99E+01	4.92E+01
		511361	10/7/2019 - 11/4/2019	Beta	3.81E+00
Mn-54	<3.15E+00			0.00E+00	3.15E+00
Co-58	<3.93E+00			0.00E+00	3.93E+00
Fe-59	<9.26E+00			0.00E+00	9.26E+00
Co-60	<2.71E+00			0.00E+00	2.71E+00
Zn-65	<6.96E+00			0.00E+00	6.96E+00
Zr-95	<5.88E+00			0.00E+00	5.88E+00
Nb-95	<3.50E+00			0.00E+00	3.50E+00
I-131	<1.12E+01			0.00E+00	1.12E+01



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: DRINKING WATER Concentration (Activity): pCi/l

Sample Point 136 [CONTROL - NNE @ 12.7 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511361	10/7/2019 - 11/4/2019	Cs-134	<3.51E+00	0.00E+00	3.51E+00
		Cs-137	<3.82E+00	0.00E+00	3.82E+00
		BaLa-140	<7.16E+00	0.00E+00	7.16E+00
		Be-7	<2.56E+01	0.00E+00	2.56E+01
		K-40	3.32E+01	2.43E+01	3.29E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512590	11/4/2019 - 12/2/2019	Beta	<3.31E+00	0.00E+00	3.31E+00
		Mn-54	<3.48E+00	0.00E+00	3.48E+00
		Co-58	<3.58E+00	0.00E+00	3.58E+00
		Fe-59	<6.11E+00	0.00E+00	6.11E+00
		Co-60	<3.58E+00	0.00E+00	3.58E+00
		Zn-65	<5.28E+00	0.00E+00	5.28E+00
		Zr-95	<4.94E+00	0.00E+00	4.94E+00
		Nb-95	<3.67E+00	0.00E+00	3.67E+00
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<4.35E+00	0.00E+00	4.35E+00
		Cs-137	<3.39E+00	0.00E+00	3.39E+00
		BaLa-140	<7.60E+00	0.00E+00	7.60E+00
		Be-7	<3.49E+01	0.00E+00	3.49E+01
		K-40	6.72E+01	4.31E+01	6.33E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511713	10/7/2019 - 12/30/2019	H3DW	<-1.4E+02	0.00E+00	2.03E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514314	12/2/2019 - 12/30/2019	Beta	<3.29E+00	0.00E+00	3.29E+00
		Mn-54	<2.66E+00	0.00E+00	2.66E+00
		Co-58	<3.10E+00	0.00E+00	3.10E+00
		Fe-59	<6.08E+00	0.00E+00	6.08E+00
		Co-60	<2.21E+00	0.00E+00	2.21E+00
		Zn-65	<7.28E+00	0.00E+00	7.28E+00
		Zr-95	<6.75E+00	0.00E+00	6.75E+00
		Nb-95	<3.46E+00	0.00E+00	3.46E+00
		I-131	<1.07E+01	0.00E+00	1.07E+01
		Cs-134	<3.43E+00	0.00E+00	3.43E+00
		Cs-137	<2.58E+00	0.00E+00	2.58E+00
		BaLa-140	<8.28E+00	0.00E+00	8.28E+00
		Be-7	<2.84E+01	0.00E+00	2.84E+01
		K-40	<4.74E+01	0.00E+00	4.74E+01

Sample Point 194 [INDICATOR - NNW @ 6.73 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493140	12/31/2018 - 1/28/2019	Mn-54	<2.91E+00	0.00E+00	2.91E+00
		Co-58	<2.78E+00	0.00E+00	2.78E+00
		Fe-59	<8.27E+00	0.00E+00	8.27E+00
		Co-60	<3.87E+00	0.00E+00	3.87E+00
		Zn-65	<6.16E+00	0.00E+00	6.16E+00
		Zr-95	<6.81E+00	0.00E+00	6.81E+00
		Nb-95	<4.05E+00	0.00E+00	4.05E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<3.84E+00	0.00E+00	3.84E+00
		Cs-137	<3.05E+00	0.00E+00	3.05E+00
		BaLa-140	<8.66E+00	0.00E+00	8.66E+00
		Be-7	<2.69E+01	0.00E+00	2.69E+01
		K-40	5.21E+01	2.96E+01	3.90E+01
		Beta	<2.46E+00	0.00E+00	2.46E+00

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494470	1/28/2019 - 2/25/2019	Beta	<3.30E+00	0.00E+00	3.30E+00
		Mn-54	<2.82E+00	0.00E+00	2.81E+00
		Co-58	<3.97E+00	0.00E+00	3.97E+00
		Fe-59	<6.61E+00	0.00E+00	6.61E+00
		Co-60	<2.95E+00	0.00E+00	2.95E+00
		Zn-65	<8.08E+00	0.00E+00	8.08E+00
		Zr-95	<7.77E+00	0.00E+00	7.77E+00
		Nb-95	<4.88E+00	0.00E+00	4.88E+00



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: DRINKING WATER Concentration (Activity): pCi/l

Sample Point 194 [INDICATOR - NNW @ 6.73 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494470	1/28/2019 - 2/25/2019	I-131	<1.09E+01	0.00E+00	1.09E+01
		Cs-134	<3.89E+00	0.00E+00	3.89E+00
		Cs-137	<3.40E+00	0.00E+00	3.40E+00
		BaLa-140	<6.42E+00	0.00E+00	6.42E+00
		Be-7	<3.50E+01	0.00E+00	3.50E+01
		K-40	9.56E+01	3.46E+01	3.39E+01
496913	2/25/2019 - 3/25/2019	Beta	<3.32E+00	0.00E+00	3.32E+00
		Mn-54	<3.73E+00	0.00E+00	3.73E+00
		Co-58	<3.39E+00	0.00E+00	3.39E+00
		Fe-59	<4.60E+00	0.00E+00	4.60E+00
		Co-60	<3.05E+00	0.00E+00	3.05E+00
		Zn-65	<7.23E+00	0.00E+00	7.23E+00
		Zr-95	<7.00E+00	0.00E+00	7.00E+00
		Nb-95	<4.19E+00	0.00E+00	4.19E+00
		I-131	<1.13E+01	0.00E+00	1.13E+01
		Cs-134	<3.73E+00	0.00E+00	3.73E+00
		Cs-137	<3.44E+00	0.00E+00	3.44E+00
		BaLa-140	<5.54E+00	0.00E+00	5.54E+00
		Be-7	<3.03E+01	0.00E+00	3.03E+01
		K-40	5.46E+01	3.15E+01	4.28E+01
493739	12/31/2018 - 4/22/2019	H3DW	<-5.0E+01	0.00E+00	1.88E+02
498682	3/25/2019 - 4/22/2019	Beta	<3.30E+00	0.00E+00	3.30E+00
		Mn-54	<1.88E+00	0.00E+00	1.88E+00
		Co-58	<2.57E+00	0.00E+00	2.57E+00
		Fe-59	<4.79E+00	0.00E+00	4.79E+00
		Co-60	<1.81E+00	0.00E+00	1.81E+00
		Zn-65	<3.49E+00	0.00E+00	3.49E+00
		Zr-95	<4.05E+00	0.00E+00	4.05E+00
		Nb-95	<2.93E+00	0.00E+00	2.93E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<2.28E+00	0.00E+00	2.28E+00
		Cs-137	<2.06E+00	0.00E+00	2.06E+00
		BaLa-140	<6.52E+00	0.00E+00	6.52E+00
		Be-7	<1.73E+01	0.00E+00	1.73E+01
		K-40	4.33E+01	1.99E+01	2.71E+01
500256	4/22/2019 - 5/20/2019	Beta	<3.28E+00	0.00E+00	3.28E+00
		Mn-54	<3.26E+00	0.00E+00	3.26E+00
		Co-58	<3.40E+00	0.00E+00	3.40E+00
		Fe-59	<7.54E+00	0.00E+00	7.54E+00
		Co-60	<2.69E+00	0.00E+00	2.69E+00
		Zn-65	<8.92E+00	0.00E+00	8.92E+00
		Zr-95	<6.79E+00	0.00E+00	6.79E+00
		Nb-95	<3.56E+00	0.00E+00	3.56E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<4.01E+00	0.00E+00	4.01E+00
		Cs-137	<3.81E+00	0.00E+00	3.81E+00
		BaLa-140	<7.51E+00	0.00E+00	7.51E+00
		Be-7	<3.30E+01	0.00E+00	3.30E+01
		K-40	<5.21E+01	0.00E+00	5.21E+01
502034	5/20/2019 - 6/17/2019	Beta	<3.25E+00	0.00E+00	3.25E+00
		Mn-54	<2.43E+00	0.00E+00	2.43E+00
		Co-58	<2.72E+00	0.00E+00	2.72E+00
		Fe-59	<6.74E+00	0.00E+00	6.74E+00
		Co-60	<2.50E+00	0.00E+00	2.50E+00
		Zn-65	<4.31E+00	0.00E+00	4.31E+00
		Zr-95	<5.37E+00	0.00E+00	5.37E+00
		Nb-95	<3.44E+00	0.00E+00	3.44E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: DRINKING WATER Concentration (Activity): pCi/l

Sample Point 194 [INDICATOR - NNW @ 6.73 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
502034	5/20/2019 - 6/17/2019	Cs-134	<2.36E+00	0.00E+00	2.36E+00
		Cs-137	<2.69E+00	0.00E+00	2.69E+00
		BaLa-140	<9.14E+00	0.00E+00	9.14E+00
		Be-7	<2.21E+01	0.00E+00	2.21E+01
		K-40	2.10E+01	2.07E+01	3.21E+01
500033	4/22/2019 - 7/15/2019	H3DW	<1.93E+01	0.00E+00	1.89E+02
504064	6/17/2019 - 7/15/2019	Beta	<3.28E+00	0.00E+00	3.28E+00
		Mn-54	<3.40E+00	0.00E+00	3.40E+00
		Co-58	<2.69E+00	0.00E+00	2.69E+00
		Fe-59	<8.89E+00	0.00E+00	8.89E+00
		Co-60	<3.65E+00	0.00E+00	3.65E+00
		Zn-65	<9.72E+00	0.00E+00	9.72E+00
		Zr-95	<7.02E+00	0.00E+00	7.02E+00
		Nb-95	<5.24E+00	0.00E+00	5.24E+00
		I-131	<1.11E+01	0.00E+00	1.11E+01
		Cs-134	<4.73E+00	0.00E+00	4.73E+00
		Cs-137	<3.83E+00	0.00E+00	3.83E+00
		BaLa-140	<1.05E+01	0.00E+00	1.05E+01
		Be-7	<3.41E+01	0.00E+00	3.41E+01
		K-40	<5.47E+01	0.00E+00	5.47E+01
505034	7/15/2019 - 8/12/2019	Beta	5.74E+00	4.58E+00	3.33E+00
		Mn-54	<3.07E+00	0.00E+00	3.07E+00
		Co-58	<3.32E+00	0.00E+00	3.32E+00
		Fe-59	<6.81E+00	0.00E+00	6.81E+00
		Co-60	<3.85E+00	0.00E+00	3.85E+00
		Zn-65	<7.33E+00	0.00E+00	7.33E+00
		Zr-95	<6.40E+00	0.00E+00	6.40E+00
		Nb-95	<3.95E+00	0.00E+00	3.95E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<3.31E+00	0.00E+00	3.31E+00
		Cs-137	<2.39E+00	0.00E+00	2.39E+00
		BaLa-140	<8.72E+00	0.00E+00	8.72E+00
		Be-7	<3.05E+01	0.00E+00	3.05E+01
		K-40	9.40E+01	3.63E+01	4.33E+01
506771	8/12/2019 - 9/9/2019	Beta	3.70E+00	4.49E+00	3.29E+00
		Mn-54	<3.11E+00	0.00E+00	3.11E+00
		Co-58	<3.09E+00	0.00E+00	3.09E+00
		Fe-59	<4.53E+00	0.00E+00	4.53E+00
		Co-60	<3.85E+00	0.00E+00	3.85E+00
		Zn-65	<6.53E+00	0.00E+00	6.53E+00
		Zr-95	<7.23E+00	0.00E+00	7.23E+00
		Nb-95	<3.61E+00	0.00E+00	3.61E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<3.45E+00	0.00E+00	3.45E+00
		Cs-137	<3.11E+00	0.00E+00	3.11E+00
		BaLa-140	<7.73E+00	0.00E+00	7.73E+00
		Be-7	<3.04E+01	0.00E+00	3.04E+01
		K-40	9.14E+01	3.75E+01	4.56E+01
505071	7/15/2019 - 10/7/2019	H3DW	<4.3E+01	0.00E+00	1.92E+02
509650	9/9/2019 - 10/7/2019	Beta	<3.30E+00	0.00E+00	3.30E+00
		Mn-54	<3.76E+00	0.00E+00	3.76E+00
		Co-58	<3.01E+00	0.00E+00	3.01E+00
		Fe-59	<6.77E+00	0.00E+00	6.77E+00
		Co-60	<3.08E+00	0.00E+00	3.08E+00
		Zn-65	<6.38E+00	0.00E+00	6.38E+00
		Zr-95	<6.45E+00	0.00E+00	6.45E+00



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: DRINKING WATER Concentration (Activity): pCi/l

Sample Point 194 [INDICATOR - NNW @ 6.73 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
509650	9/9/2019 - 10/7/2019	Nb-95	<4.52E+00	0.00E+00	4.52E+00
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<3.88E+00	0.00E+00	3.88E+00
		Cs-137	<2.53E+00	0.00E+00	2.53E+00
		BaLa-140	<5.37E+00	0.00E+00	5.37E+00
		Be-7	<3.19E+01	0.00E+00	3.19E+01
		K-40	9.90E+01	4.07E+01	5.06E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511362	10/7/2019 - 11/4/2019	Beta	4.09E+00	4.46E+00	3.27E+00
		Mn-54	<2.57E+00	0.00E+00	2.57E+00
		Co-58	<1.58E+00	0.00E+00	1.58E+00
		Fe-59	<6.03E+00	0.00E+00	6.03E+00
		Co-60	<2.22E+00	0.00E+00	2.22E+00
		Zn-65	<6.32E+00	0.00E+00	6.32E+00
		Zr-95	<5.47E+00	0.00E+00	5.47E+00
		Nb-95	<3.57E+00	0.00E+00	3.57E+00
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<3.55E+00	0.00E+00	3.55E+00
		Cs-137	<2.38E+00	0.00E+00	2.38E+00
		BaLa-140	<8.13E+00	0.00E+00	8.13E+00
		Be-7	<2.68E+01	0.00E+00	2.68E+01
		K-40	<4.23E+01	0.00E+00	4.23E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512591	11/4/2019 - 12/2/2019	Beta	<3.31E+00	0.00E+00	3.31E+00
		Mn-54	<3.78E+00	0.00E+00	3.78E+00
		Co-58	<3.26E+00	0.00E+00	3.26E+00
		Fe-59	<8.05E+00	0.00E+00	8.05E+00
		Co-60	<2.55E+00	0.00E+00	2.55E+00
		Zn-65	<4.69E+00	0.00E+00	4.69E+00
		Zr-95	<7.19E+00	0.00E+00	7.19E+00
		Nb-95	<3.63E+00	0.00E+00	3.63E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<3.34E+00	0.00E+00	3.34E+00
		Cs-137	<3.36E+00	0.00E+00	3.36E+00
		BaLa-140	<8.20E+00	0.00E+00	8.20E+00
		Be-7	<3.55E+01	0.00E+00	3.55E+01
		K-40	7.88E+01	3.76E+01	4.79E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511714	10/7/2019 - 12/30/2019	H3DW	<-4.9E+01	0.00E+00	2.02E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514315	12/2/2019 - 12/30/2019	Beta	<3.29E+00	0.00E+00	3.29E+00
		Mn-54	<3.79E+00	0.00E+00	3.79E+00
		Co-58	<4.42E+00	0.00E+00	4.42E+00
		Fe-59	<1.77E+00	0.00E+00	1.77E+00
		Co-60	<3.11E+00	0.00E+00	3.11E+00
		Zn-65	<1.16E+01	0.00E+00	1.16E+01
		Zr-95	<8.23E+00	0.00E+00	8.23E+00
		Nb-95	<5.84E+00	0.00E+00	5.84E+00
		I-131	<9.51E+00	0.00E+00	9.51E+00
		Cs-134	<3.67E+00	0.00E+00	3.67E+00
		Cs-137	<4.09E+00	0.00E+00	4.09E+00
		BaLa-140	<1.16E+01	0.00E+00	1.16E+01
		Be-7	<2.57E+01	0.00E+00	2.57E+01
		K-40	<4.35E+01	0.00E+00	4.35E+01

Media Type: FISH Concentration (Activity): pCi/kg

Sample Point 129 [INDICATOR - ENE @ 0.51 miles]

Sample ID:	Sample Dates:	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
498056	4/1/2019 - 4/1/2019		Mn-54	<6.83E+01	0.00E+00	6.83E+01
			Co-58	<7.35E+01	0.00E+00	7.35E+01
			Fe-59	<1.43E+02	0.00E+00	1.43E+02
			Co-60	<4.89E+01	0.00E+00	4.89E+01
			Zn-65	<1.13E+02	0.00E+00	1.13E+02



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: FISH Concentration (Activity): pCi/kg

Sample Point 129 [INDICATOR - ENE @ 0.51 miles]

Sample ID:	Sample Dates:	Location:	Nuclide	Activity	2 Sigma Error	MDA
498056	4/1/2019 - 4/1/2019	FREESWIM	Nb-95	<6.01E+01	0.00E+00	6.01E+01
			I-131	<7.68E+01	0.00E+00	7.68E+01
			Cs-134	<5.52E+01	0.00E+00	5.52E+01
			Cs-137	<5.16E+01	0.00E+00	5.16E+01
			Be-7	<4.68E+02	0.00E+00	4.68E+02
			K-40	4.97E+03	1.13E+03	6.07E+02
			Ag-110M	<5.76E+01	0.00E+00	5.76E+01
			Sb-122	<4.52E+02	0.00E+00	4.52E+02
			Sb-125	<1.55E+02	0.00E+00	1.55E+02
			498057	4/1/2019 - 4/2/2019	FREESWIM	Mn-54
Co-58	<6.23E+01	0.00E+00				6.23E+01
Fe-59	<1.09E+02	0.00E+00				1.09E+02
Co-60	<6.34E+01	0.00E+00				6.34E+01
Zn-65	<1.42E+02	0.00E+00				1.42E+02
Nb-95	<7.04E+01	0.00E+00				7.04E+01
I-131	<7.22E+01	0.00E+00				7.22E+01
Cs-134	<6.70E+01	0.00E+00				6.70E+01
Cs-137	<7.16E+01	0.00E+00				7.16E+01
Be-7	<5.10E+02	0.00E+00				5.10E+02
K-40	3.05E+03	9.14E+02				7.43E+02
Ag-110M	<5.27E+01	0.00E+00				5.27E+01
Sb-122	<5.44E+02	0.00E+00				5.44E+02
Sb-125	<1.10E+02	0.00E+00				1.10E+02
498058	4/4/2019 - 4/4/2019	BOTMFEDER	Mn-54	<3.76E+01	0.00E+00	3.76E+01
			Co-58	<4.93E+01	0.00E+00	4.93E+01
			Fe-59	<7.00E+01	0.00E+00	7.00E+01
			Co-60	<3.51E+01	0.00E+00	3.51E+01
			Zn-65	<1.08E+02	0.00E+00	1.08E+02
			Nb-95	<4.54E+01	0.00E+00	4.54E+01
			I-131	<7.54E+01	0.00E+00	7.54E+01
			Cs-134	<6.43E+01	0.00E+00	6.43E+01
			Cs-137	<5.41E+01	0.00E+00	5.41E+01
			Be-7	<2.76E+02	0.00E+00	2.76E+02
			K-40	3.64E+03	7.82E+02	5.94E+02
			Ag-110M	<4.80E+01	0.00E+00	4.80E+01
			Sb-122	<2.41E+02	0.00E+00	2.41E+02
			Sb-125	<9.32E+01	0.00E+00	9.32E+01
510060	10/7/2019 - 10/7/2019	FREESWIM	Mn-54	<7.13E+01	0.00E+00	7.13E+01
			Co-58	<6.22E+01	0.00E+00	6.22E+01
			Fe-59	<1.28E+02	0.00E+00	1.28E+02
			Co-60	<8.10E+01	0.00E+00	8.10E+01
			Zn-65	<1.55E+02	0.00E+00	1.55E+02
			Nb-95	<7.70E+01	0.00E+00	7.70E+01
			I-131	<7.93E+01	0.00E+00	7.93E+01
			Cs-134	<8.90E+01	0.00E+00	8.90E+01
			Cs-137	<6.58E+01	0.00E+00	6.58E+01
			Be-7	<4.90E+02	0.00E+00	4.90E+02
			K-40	4.63E+03	1.23E+03	7.79E+02
			Ag-110M	<5.86E+01	0.00E+00	5.86E+01
			Sb-122	<1.11E+02	0.00E+00	1.11E+02
			Sb-125	<1.39E+02	0.00E+00	1.39E+02
510061	10/7/2019 - 10/7/2019	FREESWIM	Mn-54	<7.42E+01	0.00E+00	7.42E+01
			Co-58	<7.41E+01	0.00E+00	7.41E+01
			Fe-59	<1.75E+02	0.00E+00	1.75E+02
			Co-60	<6.43E+01	0.00E+00	6.43E+01
			Zn-65	<1.47E+02	0.00E+00	1.47E+02
			Nb-95	<6.31E+01	0.00E+00	6.31E+01
			I-131	<7.07E+01	0.00E+00	7.07E+01
			Cs-134	<5.99E+01	0.00E+00	5.99E+01
			Cs-137	<6.36E+01	0.00E+00	6.36E+01



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: FISH Concentration (Activity): pCi/kg

Sample Point 129 [INDICATOR - ENE @ 0.51 miles]

Sample ID:	Sample Dates:	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
510061	10/7/2019 - 10/7/2019		Be-7	<4.78E+02	0.00E+00	4.78E+02
			K-40	3.26E+03	1.03E+03	7.03E+02
			Ag-110M	<6.86E+01	0.00E+00	6.86E+01
			Sb-122	<1.47E+02	0.00E+00	1.47E+02
			Sb-125	<1.60E+02	0.00E+00	1.60E+02

Sample ID:	Sample Dates:	BOTMFEDER	Nuclide	Activity	2 Sigma Error	MDA
510062	10/7/2019 - 10/8/2019		Mn-54	<5.79E+01	0.00E+00	5.79E+01
			Co-58	<5.00E+01	0.00E+00	5.00E+01
			Fe-59	<1.30E+02	0.00E+00	1.30E+02
			Co-60	<5.58E+01	0.00E+00	5.58E+01
			Zn-65	<1.44E+02	0.00E+00	1.44E+02
			Nb-95	<6.90E+01	0.00E+00	6.90E+01
			I-131	<7.00E+01	0.00E+00	7.00E+01
			Cs-134	<8.54E+01	0.00E+00	8.54E+01
			Cs-137	<7.94E+01	0.00E+00	7.94E+01
			Be-7	<5.26E+02	0.00E+00	5.26E+02
			K-40	5.00E+03	1.30E+03	2.05E+02
			Ag-110M	<8.88E+01	0.00E+00	8.88E+01
			Sb-122	<1.87E+02	0.00E+00	1.87E+02
			Sb-125	<1.57E+02	0.00E+00	1.57E+02

Sample Point 137 [CONTROL - N @ 12 miles]

Sample ID:	Sample Dates:	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
498059	4/2/2019 - 4/2/2019		Mn-54	<7.10E+01	0.00E+00	7.10E+01
			Co-58	<6.05E+01	0.00E+00	6.05E+01
			Fe-59	<1.13E+02	0.00E+00	1.13E+02
			Co-60	<6.70E+01	0.00E+00	6.70E+01
			Zn-65	<1.94E+02	0.00E+00	1.94E+02
			Nb-95	<1.03E+02	0.00E+00	1.03E+02
			I-131	<8.65E+01	0.00E+00	8.65E+01
			Cs-134	<7.96E+01	0.00E+00	7.96E+01
			Cs-137	<7.27E+01	0.00E+00	7.27E+01
			Be-7	<3.95E+02	0.00E+00	3.95E+02
			K-40	3.32E+03	1.02E+03	7.76E+02
			Ag-110M	<6.23E+01	0.00E+00	6.23E+01
			Sb-122	<4.31E+02	0.00E+00	4.31E+02
			Sb-125	<1.71E+02	0.00E+00	1.71E+02

Sample ID:	Sample Dates:	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
498060	4/2/2019 - 4/2/2019		Mn-54	<7.23E+01	0.00E+00	7.23E+01
			Co-58	<8.70E+01	0.00E+00	8.70E+01
			Fe-59	<1.71E+02	0.00E+00	1.71E+02
			Co-60	<4.50E+01	0.00E+00	4.50E+01
			Zn-65	<1.53E+02	0.00E+00	1.53E+02
			Nb-95	<8.83E+01	0.00E+00	8.83E+01
			I-131	<9.88E+01	0.00E+00	9.88E+01
			Cs-134	<9.14E+01	0.00E+00	9.14E+01
			Cs-137	<8.23E+01	0.00E+00	8.23E+01
			Be-7	<4.42E+02	0.00E+00	4.42E+02
			K-40	4.28E+03	1.12E+03	6.44E+02
			Ag-110M	<6.34E+01	0.00E+00	6.34E+01
			Sb-122	<4.19E+02	0.00E+00	4.19E+02
			Sb-125	<1.79E+02	0.00E+00	1.79E+02

Sample ID:	Sample Dates:	BOTMFEDER	Nuclide	Activity	2 Sigma Error	MDA
498061	4/2/2019 - 4/2/2019		Mn-54	<7.48E+01	0.00E+00	7.48E+01
			Co-58	<6.52E+01	0.00E+00	6.52E+01
			Fe-59	<1.39E+02	0.00E+00	1.39E+02
			Co-60	<8.88E+01	0.00E+00	8.88E+01
			Zn-65	<1.68E+02	0.00E+00	1.68E+02
			Nb-95	<5.06E+01	0.00E+00	5.06E+01
			I-131	<9.96E+01	0.00E+00	9.96E+01
			Cs-134	<6.59E+01	0.00E+00	6.59E+01
			Cs-137	<5.75E+01	0.00E+00	5.75E+01
			Be-7	<4.86E+02	0.00E+00	4.86E+02
			K-40	2.40E+03	1.00E+03	1.17E+03



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: FISH Concentration (Activity): pCi/kg

Sample Point 137 [CONTROL - N @ 12 miles]

Sample ID:	Sample Dates:	BOTMFEDER	Nuclide	Activity	2 Sigma Error	MDA
498061	4/2/2019 - 4/2/2019		Ag-110M	<4.25E+01	0.00E+00	4.25E+01
			Sb-122	<3.15E+02	0.00E+00	3.15E+02
			Sb-125	<1.62E+02	0.00E+00	1.62E+02

Sample ID:	Sample Dates:	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
510063	10/7/2019 - 10/7/2019		Mn-54	<1.01E+02	0.00E+00	1.01E+02
			Co-58	<6.08E+01	0.00E+00	6.08E+01
			Fe-59	<1.49E+02	0.00E+00	1.49E+02
			Co-60	<6.60E+01	0.00E+00	6.60E+01
			Zn-65	<9.23E+01	0.00E+00	9.23E+01
			Nb-95	<7.47E+01	0.00E+00	7.47E+01
			I-131	<6.55E+01	0.00E+00	6.55E+01
			Cs-134	<8.51E+01	0.00E+00	8.51E+01
			Cs-137	<8.25E+01	0.00E+00	8.25E+01
			Be-7	<4.68E+02	0.00E+00	4.68E+02
			K-40	4.19E+03	1.19E+03	7.45E+02
			Ag-110M	<8.32E+01	0.00E+00	8.32E+01
			Sb-122	<1.92E+02	0.00E+00	1.92E+02
Sb-125	<1.48E+02	0.00E+00	1.48E+02			

Sample ID:	Sample Dates:	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
510064	10/7/2019 - 10/7/2019		Mn-54	<7.27E+01	0.00E+00	7.27E+01
			Co-58	<4.49E+01	0.00E+00	4.49E+01
			Fe-59	<8.01E+01	0.00E+00	8.01E+01
			Co-60	<9.70E+01	0.00E+00	9.70E+01
			Zn-65	<1.45E+02	0.00E+00	1.45E+02
			Nb-95	<7.86E+01	0.00E+00	7.86E+01
			I-131	<8.57E+01	0.00E+00	8.57E+01
			Cs-134	<8.64E+01	0.00E+00	8.64E+01
			Cs-137	<7.55E+01	0.00E+00	7.55E+01
			Be-7	<4.73E+02	0.00E+00	4.73E+02
			K-40	3.37E+03	1.00E+03	1.86E+02
			Ag-110M	<6.73E+01	0.00E+00	6.73E+01
			Sb-122	<1.23E+02	0.00E+00	1.23E+02
Sb-125	<2.08E+02	0.00E+00	2.08E+02			

Sample ID:	Sample Dates:	BOTMFEDER	Nuclide	Activity	2 Sigma Error	MDA
510065	10/7/2019 - 10/7/2019		Mn-54	<7.82E+01	0.00E+00	7.82E+01
			Co-58	<8.25E+01	0.00E+00	8.25E+01
			Fe-59	<1.20E+02	0.00E+00	1.20E+02
			Co-60	<7.53E+01	0.00E+00	7.53E+01
			Zn-65	<1.74E+02	0.00E+00	1.74E+02
			Nb-95	<7.71E+01	0.00E+00	7.71E+01
			I-131	<8.79E+01	0.00E+00	8.79E+01
			Cs-134	<9.23E+01	0.00E+00	9.23E+01
			Cs-137	<1.14E+02	0.00E+00	1.14E+02
			Be-7	<6.50E+02	0.00E+00	6.50E+02
			K-40	5.24E+03	1.41E+03	1.15E+03
			Ag-110M	<6.84E+01	0.00E+00	6.84E+01
			Sb-122	<1.79E+02	0.00E+00	1.79E+02
Sb-125	<1.10E+02	0.00E+00	1.10E+02			

Media Type: SEDIMENT_SHORE Concentration (Activity): pCi/kg

Sample Point 129 [INDICATOR - ENE @ 0.51 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
496139	4/22/2019 - 4/22/2019	Mn-54	<3.69E+01	0.00E+00	3.69E+01
		Co-58	<5.57E+01	0.00E+00	5.57E+01
		Fe-59	<1.30E+02	0.00E+00	1.30E+02
		Co-60	<4.37E+01	0.00E+00	4.37E+01
		Zn-65	<9.33E+01	0.00E+00	9.33E+01
		Zr-95	<8.42E+01	0.00E+00	8.42E+01
		Nb-95	<6.56E+01	0.00E+00	6.56E+01
		I-131	<2.15E+02	0.00E+00	2.15E+02
		Cs-134	<4.05E+01	0.00E+00	4.05E+01
		Cs-137	<5.13E+01	0.00E+00	5.13E+01
		Be-7	<4.96E+02	0.00E+00	4.96E+02
		K-40	1.35E+03	5.66E+02	5.15E+02



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SEDIMENT_SHORE Concentration (Activity): pCi/kg

Sample Point 129 [INDICATOR - ENE @ 0.51 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
496139	4/22/2019 - 4/22/2019	Co-57	<2.81E+01	0.00E+00	2.81E+01
		Mo-99	<4.48E+04	0.00E+00	4.48E+04
		Ag-110M	<2.81E+01	0.00E+00	2.81E+01
		Sb-122	<8.65E+03	0.00E+00	8.65E+03
		Sb-125	<9.04E+01	0.00E+00	9.04E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
507315	10/10/2019 - 10/10/2019	Mn-54	<5.73E+01	0.00E+00	5.73E+01
		Co-58	<6.68E+01	0.00E+00	6.68E+01
		Fe-59	<1.11E+02	0.00E+00	1.11E+02
		Co-60	<6.10E+01	0.00E+00	6.10E+01
		Zn-65	<2.07E+02	0.00E+00	2.07E+02
		Zr-95	<9.64E+01	0.00E+00	9.64E+01
		Nb-95	<7.12E+01	0.00E+00	7.12E+01
		I-131	<1.39E+02	0.00E+00	1.39E+02
		Cs-134	<6.37E+01	0.00E+00	6.37E+01
		Cs-137	<6.02E+01	0.00E+00	6.02E+01
		Be-7	<6.59E+02	0.00E+00	6.59E+02
		K-40	5.47E+03	1.29E+03	5.59E+02
		Co-57	<4.75E+01	0.00E+00	4.75E+01
		Mo-99	<9.21E+03	0.00E+00	9.21E+03
		Ag-110M	<6.99E+01	0.00E+00	6.99E+01
		Sb-122	<1.05E+03	0.00E+00	1.05E+03
		Sb-125	<1.74E+02	0.00E+00	1.74E+02

Sample Point 130 [INDICATOR - SW @ 0.52 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
496140	4/22/2019 - 4/22/2019	Mn-54	<6.40E+01	0.00E+00	6.40E+01
		Co-58	<6.65E+01	0.00E+00	6.65E+01
		Fe-59	<2.08E+02	0.00E+00	2.08E+02
		Co-60	<5.64E+01	0.00E+00	5.64E+01
		Zn-65	<1.82E+02	0.00E+00	1.82E+02
		Zr-95	<1.31E+02	0.00E+00	1.31E+02
		Nb-95	<8.70E+01	0.00E+00	8.70E+01
		I-131	<2.78E+02	0.00E+00	2.78E+02
		Cs-134	<1.04E+02	0.00E+00	1.04E+02
		Cs-137	<6.05E+01	0.00E+00	6.05E+01
		Be-7	<4.63E+02	0.00E+00	4.63E+02
		K-40	1.52E+04	2.25E+03	1.15E+03
		Co-57	<4.62E+01	0.00E+00	4.62E+01
		Mo-99	<8.21E+04	0.00E+00	8.21E+04
		Ag-110M	<5.68E+01	0.00E+00	5.68E+01
		Sb-122	<1.15E+04	0.00E+00	1.15E+04
		Sb-125	<1.56E+02	0.00E+00	1.56E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
507316	10/10/2019 - 10/10/2019	Mn-54	<8.73E+01	0.00E+00	8.73E+01
		Co-58	<7.41E+01	0.00E+00	7.41E+01
		Fe-59	<1.49E+02	0.00E+00	1.49E+02
		Co-60	<6.43E+01	0.00E+00	6.43E+01
		Zn-65	<3.30E+02	0.00E+00	3.30E+02
		Zr-95	<1.30E+02	0.00E+00	1.30E+02
		Nb-95	<9.96E+01	0.00E+00	9.96E+01
		I-131	<1.61E+02	0.00E+00	1.61E+02
		Cs-134	<1.01E+02	0.00E+00	1.01E+02
		Cs-137	<8.74E+01	0.00E+00	8.74E+01
		Be-7	<6.07E+02	0.00E+00	6.07E+02
		K-40	1.38E+04	2.01E+03	7.67E+02
		Co-57	<5.86E+01	0.00E+00	5.86E+01
		Mo-99	<1.03E+04	0.00E+00	1.03E+04
		Ag-110M	<4.41E+01	0.00E+00	4.41E+01
		Sb-122	<1.37E+03	0.00E+00	1.37E+03
		Sb-125	<1.79E+02	0.00E+00	1.79E+02



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SEDIMENT_SHORE Concentration (Activity): pCi/kg

Sample Point 137 [CONTROL - N @ 12 miles]

Sample ID:	496141	Sample Dates:	4/8/2019 - 4/8/2019	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<7.52E+01	0.00E+00	7.52E+01
				Co-58	<6.80E+01	0.00E+00	6.80E+01
				Fe-59	<1.84E+02	0.00E+00	1.84E+02
				Co-60	<6.10E+01	0.00E+00	6.10E+01
				Zn-65	<1.42E+02	0.00E+00	1.42E+02
				Zr-95	<1.42E+02	0.00E+00	1.42E+02
				Nb-95	<1.03E+02	0.00E+00	1.03E+02
				I-131	<8.50E+02	0.00E+00	8.50E+02
				Cs-134	<6.34E+01	0.00E+00	6.34E+01
				Cs-137	<4.55E+01	0.00E+00	4.55E+01
				Be-7	<5.16E+02	0.00E+00	5.16E+02
				K-40	1.80E+04	2.36E+03	8.77E+02
				Co-57	<4.34E+01	0.00E+00	4.34E+01
				Mo-99	<2.60E+06	0.00E+00	2.60E+06
				Ag-110M	<4.13E+01	0.00E+00	4.13E+01
				Sb-122	<3.20E+05	0.00E+00	3.20E+05
				Sb-125	<1.54E+02	0.00E+00	1.54E+02

Sample ID:	507317	Sample Dates:	10/14/2019 - 10/14/2019	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<6.76E+01	0.00E+00	6.76E+01
				Co-58	<7.93E+01	0.00E+00	7.93E+01
				Fe-59	<1.54E+02	0.00E+00	1.54E+02
				Co-60	<9.00E+01	0.00E+00	9.00E+01
				Zn-65	<1.84E+02	0.00E+00	1.84E+02
				Zr-95	<1.73E+02	0.00E+00	1.73E+02
				Nb-95	<7.53E+01	0.00E+00	7.53E+01
				I-131	<9.72E+01	0.00E+00	9.72E+01
				Cs-134	<9.12E+01	0.00E+00	9.12E+01
				Cs-137	<6.87E+01	0.00E+00	6.87E+01
				Be-7	<4.42E+02	0.00E+00	4.42E+02
				K-40	2.30E+04	2.99E+03	9.77E+02
				Co-57	<4.97E+01	0.00E+00	4.97E+01
				Mo-99	<2.72E+03	0.00E+00	2.72E+03
				Ag-110M	<7.60E+01	0.00E+00	7.60E+01
				Sb-122	<3.93E+02	0.00E+00	3.93E+02
				Sb-125	<1.77E+02	0.00E+00	1.77E+02

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 128 [INDICATOR - NE @ 0.45 miles]

Sample ID:	493594	Sample Dates:	12/31/2018 - 1/28/2019	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<2.85E+00	0.00E+00	2.85E+00
				Co-58	<3.15E+00	0.00E+00	3.15E+00
				Fe-59	<5.98E+00	0.00E+00	5.98E+00
				Co-60	<2.41E+00	0.00E+00	2.41E+00
				Zn-65	<5.63E+00	0.00E+00	5.63E+00
				Zr-95	<6.19E+00	0.00E+00	6.19E+00
				Nb-95	<4.15E+00	0.00E+00	4.15E+00
				I-131	<1.11E+01	0.00E+00	1.11E+01
				Cs-134	<3.75E+00	0.00E+00	3.75E+00
				Cs-137	<2.51E+00	0.00E+00	2.51E+00
				BaLa-140	<6.38E+00	0.00E+00	6.38E+00
				Be-7	<2.90E+01	0.00E+00	2.90E+01
				K-40	7.88E+01	2.77E+01	2.55E+01

Sample ID:	495293	Sample Dates:	1/28/2019 - 2/25/2019	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<3.65E+00	0.00E+00	3.65E+00
				Co-58	<3.16E+00	0.00E+00	3.16E+00
				Fe-59	<9.96E+00	0.00E+00	9.96E+00
				Co-60	<3.53E+00	0.00E+00	3.53E+00
				Zn-65	<8.11E+00	0.00E+00	8.11E+00
				Zr-95	<4.60E+00	0.00E+00	4.60E+00
				Nb-95	<3.78E+00	0.00E+00	3.78E+00
				I-131	<1.15E+01	0.00E+00	1.15E+01
				Cs-134	<3.65E+00	0.00E+00	3.65E+00
				Cs-137	<3.86E+00	0.00E+00	3.86E+00
				BaLa-140	<7.16E+00	0.00E+00	7.16E+00



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 128 [INDICATOR - NE @ 0.45 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
495293	1/28/2019 - 2/25/2019	Be-7	<3.30E+01	0.00E+00	3.30E+01
		K-40	<5.87E+01	0.00E+00	5.87E+01
497590	2/25/2019 - 3/25/2019	Mn-54	<3.38E+00	0.00E+00	3.38E+00
		Co-58	<3.56E+00	0.00E+00	3.56E+00
		Fe-59	<6.36E+00	0.00E+00	6.36E+00
		Co-60	<3.82E+00	0.00E+00	3.82E+00
		Zn-65	<7.91E+00	0.00E+00	7.91E+00
		Zr-95	<5.60E+00	0.00E+00	5.60E+00
		Nb-95	<3.96E+00	0.00E+00	3.96E+00
		I-131	<1.12E+01	0.00E+00	1.12E+01
		Cs-134	<3.93E+00	0.00E+00	3.93E+00
		Cs-137	<3.58E+00	0.00E+00	3.58E+00
		BaLa-140	<1.19E+01	0.00E+00	1.19E+01
		Be-7	<3.53E+01	0.00E+00	3.53E+01
		K-40	6.16E+01	2.61E+01	7.25E+00
493740	12/31/2018 - 4/22/2019	H3SW	5.07E+02	1.25E+02	1.88E+02
499474	3/25/2019 - 4/22/2019	Mn-54	<2.05E+00	0.00E+00	2.05E+00
		Co-58	<2.13E+00	0.00E+00	2.13E+00
		Fe-59	<4.66E+00	0.00E+00	4.66E+00
		Co-60	<1.75E+00	0.00E+00	1.75E+00
		Zn-65	<3.48E+00	0.00E+00	3.48E+00
		Zr-95	<3.50E+00	0.00E+00	3.50E+00
		Nb-95	<2.34E+00	0.00E+00	2.34E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<2.05E+00	0.00E+00	2.05E+00
		Cs-137	<2.07E+00	0.00E+00	2.07E+00
		BaLa-140	<5.37E+00	0.00E+00	5.37E+00
		Be-7	<1.81E+01	0.00E+00	1.81E+01
		K-40	<2.83E+01	0.00E+00	2.83E+01
500759	4/22/2019 - 5/20/2019	Mn-54	<3.28E+00	0.00E+00	3.28E+00
		Co-58	<3.52E+00	0.00E+00	3.52E+00
		Fe-59	<6.49E+00	0.00E+00	6.49E+00
		Co-60	<3.67E+00	0.00E+00	3.67E+00
		Zn-65	<6.03E+00	0.00E+00	6.03E+00
		Zr-95	<5.75E+00	0.00E+00	5.75E+00
		Nb-95	<3.47E+00	0.00E+00	3.47E+00
		I-131	<1.13E+01	0.00E+00	1.13E+01
		Cs-134	<3.51E+00	0.00E+00	3.51E+00
		Cs-137	<2.22E+00	0.00E+00	2.22E+00
		BaLa-140	<8.52E+00	0.00E+00	8.52E+00
		Be-7	<2.58E+01	0.00E+00	2.58E+01
		K-40	<5.84E+01	0.00E+00	5.84E+01
502430	5/20/2019 - 6/17/2019	Mn-54	<2.65E+00	0.00E+00	2.65E+00
		Co-58	<2.87E+00	0.00E+00	2.87E+00
		Fe-59	<6.33E+00	0.00E+00	6.33E+00
		Co-60	<2.86E+00	0.00E+00	2.86E+00
		Zn-65	<5.57E+00	0.00E+00	5.57E+00
		Zr-95	<4.29E+00	0.00E+00	4.29E+00
		Nb-95	<3.48E+00	0.00E+00	3.48E+00
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<2.83E+00	0.00E+00	2.83E+00
		Cs-137	<2.29E+00	0.00E+00	2.29E+00
		BaLa-140	<5.71E+00	0.00E+00	5.71E+00
		Be-7	<2.69E+01	0.00E+00	2.69E+01
		K-40	3.19E+01	1.53E+01	4.83E+00
500034	4/22/2019 - 7/15/2019	H3SW	5.00E+02	1.27E+02	1.91E+02



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 128 [INDICATOR - NE @ 0.45 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA		
504459	6/17/2019 - 7/15/2019	Mn-54	<3.15E+00	0.00E+00	3.15E+00		
		Co-58	<3.04E+00	0.00E+00	3.04E+00		
		Fe-59	<6.19E+00	0.00E+00	6.19E+00		
		Co-60	<2.19E+00	0.00E+00	2.19E+00		
		Zn-65	<6.53E+00	0.00E+00	6.53E+00		
		Zr-95	<5.71E+00	0.00E+00	5.71E+00		
		Nb-95	<3.59E+00	0.00E+00	3.59E+00		
		I-131	<1.08E+01	0.00E+00	1.08E+01		
		Cs-134	<3.42E+00	0.00E+00	3.42E+00		
		Cs-137	<2.68E+00	0.00E+00	2.68E+00		
		BaLa-140	<6.28E+00	0.00E+00	6.28E+00		
		Be-7	<2.86E+01	0.00E+00	2.86E+01		
		K-40	<3.85E+01	0.00E+00	3.85E+01		
		505549	7/15/2019 - 8/12/2019	Mn-54	<4.40E+00	0.00E+00	4.40E+00
				Co-58	<3.96E+00	0.00E+00	3.96E+00
Fe-59	<7.97E+00			0.00E+00	7.97E+00		
Co-60	<4.39E+00			0.00E+00	4.39E+00		
Zn-65	<1.28E+01			0.00E+00	1.28E+01		
Zr-95	<7.48E+00			0.00E+00	7.48E+00		
Nb-95	<4.13E+00			0.00E+00	4.13E+00		
I-131	<1.13E+01			0.00E+00	1.13E+01		
Cs-134	<4.45E+00			0.00E+00	4.45E+00		
Cs-137	<4.09E+00			0.00E+00	4.09E+00		
BaLa-140	<2.51E+00			0.00E+00	2.51E+00		
Be-7	<3.14E+01			0.00E+00	3.14E+01		
K-40	<3.57E+01			0.00E+00	3.57E+01		
507839	8/12/2019 - 9/9/2019			Mn-54	<3.79E+00	0.00E+00	3.79E+00
				Co-58	<4.34E+00	0.00E+00	4.34E+00
		Fe-59	<7.72E+00	0.00E+00	7.72E+00		
		Co-60	<3.36E+00	0.00E+00	3.36E+00		
		Zn-65	<8.17E+00	0.00E+00	8.17E+00		
		Zr-95	<3.86E+00	0.00E+00	3.86E+00		
		Nb-95	<5.01E+00	0.00E+00	5.01E+00		
		I-131	<1.18E+01	0.00E+00	1.18E+01		
		Cs-134	<4.37E+00	0.00E+00	4.37E+00		
		Cs-137	<2.66E+00	0.00E+00	2.66E+00		
		BaLa-140	<8.00E+00	0.00E+00	8.00E+00		
		Be-7	<2.81E+01	0.00E+00	2.81E+01		
		K-40	<5.57E+01	0.00E+00	5.57E+01		
		505072	7/15/2019 - 10/7/2019	H3SW	5.31E+02	1.28E+02	1.93E+02
510553	9/9/2019 - 10/7/2019	Mn-54	<4.34E+00	0.00E+00	4.34E+00		
		Co-58	<4.61E+00	0.00E+00	4.61E+00		
		Fe-59	<1.09E+01	0.00E+00	1.09E+01		
		Co-60	<4.98E+00	0.00E+00	4.98E+00		
		Zn-65	<9.19E+00	0.00E+00	9.19E+00		
		Zr-95	<7.80E+00	0.00E+00	7.80E+00		
		Nb-95	<5.19E+00	0.00E+00	5.19E+00		
		I-131	<1.18E+01	0.00E+00	1.18E+01		
		Cs-134	<4.39E+00	0.00E+00	4.39E+00		
		Cs-137	<4.56E+00	0.00E+00	4.56E+00		
		BaLa-140	<9.93E+00	0.00E+00	9.93E+00		
		Be-7	<3.82E+01	0.00E+00	3.82E+01		
		K-40	<8.99E+01	0.00E+00	8.99E+01		
		511894	10/7/2019 - 11/4/2019	Mn-54	<4.01E+00	0.00E+00	4.01E+00
				Co-58	<5.54E+00	0.00E+00	5.54E+00
Fe-59	<6.47E+00			0.00E+00	6.47E+00		
Co-60	<4.30E+00			0.00E+00	4.30E+00		
Zn-65	<6.11E+00			0.00E+00	6.11E+00		



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 128 [INDICATOR - NE @ 0.45 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511894	10/7/2019 - 11/4/2019	Zr-95	<7.82E+00	0.00E+00	7.82E+00
		Nb-95	<5.19E+00	0.00E+00	5.19E+00
		I-131	<1.10E+01	0.00E+00	1.10E+01
		Cs-134	<4.45E+00	0.00E+00	4.45E+00
		Cs-137	<5.37E+00	0.00E+00	5.37E+00
		BaLa-140	<8.74E+00	0.00E+00	8.74E+00
		Be-7	<3.59E+01	0.00E+00	3.59E+01
		K-40	<8.53E+01	0.00E+00	8.53E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
513644	11/4/2019 - 12/2/2019	Mn-54	<2.72E+00	0.00E+00	2.72E+00
		Co-58	<3.60E+00	0.00E+00	3.60E+00
		Fe-59	<7.61E+00	0.00E+00	7.61E+00
		Co-60	<3.15E+00	0.00E+00	3.15E+00
		Zn-65	<4.94E+00	0.00E+00	4.94E+00
		Zr-95	<5.95E+00	0.00E+00	5.95E+00
		Nb-95	<4.02E+00	0.00E+00	4.02E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<3.74E+00	0.00E+00	3.74E+00
		Cs-137	<2.84E+00	0.00E+00	2.84E+00
		BaLa-140	<5.53E+00	0.00E+00	5.53E+00
		Be-7	<2.27E+01	0.00E+00	2.27E+01
		K-40	5.17E+01	3.60E+01	5.32E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511715	10/7/2019 - 12/30/2019	H3SW	4.90E+02	1.32E+02	2.01E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514531	12/2/2019 - 12/30/2019	Mn-54	<2.46E+00	0.00E+00	2.46E+00
		Co-58	<3.45E+00	0.00E+00	3.45E+00
		Fe-59	<6.56E+00	0.00E+00	6.56E+00
		Co-60	<3.26E+00	0.00E+00	3.26E+00
		Zn-65	<3.73E+00	0.00E+00	3.73E+00
		Zr-95	<4.26E+00	0.00E+00	4.26E+00
		Nb-95	<3.62E+00	0.00E+00	3.62E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<3.53E+00	0.00E+00	3.53E+00
		Cs-137	<2.87E+00	0.00E+00	2.87E+00
		BaLa-140	<8.34E+00	0.00E+00	8.34E+00
		Be-7	<3.11E+01	0.00E+00	3.11E+01
		K-40	<4.94E+01	0.00E+00	4.94E+01

Sample Point 131 [INDICATOR - WNW @ 0.64 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493595	12/31/2018 - 1/28/2019	Mn-54	<2.77E+00	0.00E+00	2.77E+00
		Co-58	<3.93E+00	0.00E+00	3.93E+00
		Fe-59	<9.33E+00	0.00E+00	9.33E+00
		Co-60	<3.03E+00	0.00E+00	3.03E+00
		Zn-65	<9.06E+00	0.00E+00	9.06E+00
		Zr-95	<5.90E+00	0.00E+00	5.90E+00
		Nb-95	<4.21E+00	0.00E+00	4.21E+00
		I-131	<1.10E+01	0.00E+00	1.10E+01
		Cs-134	<4.42E+00	0.00E+00	4.42E+00
		Cs-137	<2.69E+00	0.00E+00	2.69E+00
		BaLa-140	<8.53E+00	0.00E+00	8.53E+00
		Be-7	<3.24E+01	0.00E+00	3.24E+01
		K-40	<6.10E+01	0.00E+00	6.10E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
495294	1/28/2019 - 2/25/2019	Mn-54	<3.68E+00	0.00E+00	3.68E+00
		Co-58	<4.34E+00	0.00E+00	4.34E+00
		Fe-59	<9.93E+00	0.00E+00	9.93E+00
		Co-60	<2.42E+00	0.00E+00	2.42E+00
		Zn-65	<4.46E+00	0.00E+00	4.46E+00
		Zr-95	<5.74E+00	0.00E+00	5.74E+00
		Nb-95	<3.82E+00	0.00E+00	3.82E+00
		I-131	<1.15E+01	0.00E+00	1.15E+01



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 131 [INDICATOR - WNW @ 0.64 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
495294	1/28/2019 - 2/25/2019	Cs-134	<4.62E+00	0.00E+00	4.62E+00
		Cs-137	<3.93E+00	0.00E+00	3.93E+00
		BaLa-140	<9.79E+00	0.00E+00	9.79E+00
		Be-7	<2.84E+01	0.00E+00	2.84E+01
		K-40	8.11E+01	3.84E+01	4.73E+01
497591	2/25/2019 - 3/25/2019	Mn-54	<2.31E+00	0.00E+00	2.31E+00
		Co-58	<2.92E+00	0.00E+00	2.92E+00
		Fe-59	<9.30E+00	0.00E+00	9.30E+00
		Co-60	<2.20E+00	0.00E+00	2.20E+00
		Zn-65	<6.89E+00	0.00E+00	6.89E+00
		Zr-95	<5.48E+00	0.00E+00	5.48E+00
		Nb-95	<3.45E+00	0.00E+00	3.45E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<3.93E+00	0.00E+00	3.93E+00
		Cs-137	<3.33E+00	0.00E+00	3.33E+00
		BaLa-140	<7.61E+00	0.00E+00	7.61E+00
		Be-7	<2.05E+01	0.00E+00	2.05E+01
		K-40	<5.00E+01	0.00E+00	5.00E+01
493741	12/31/2018 - 4/22/2019	H3SW	<4.28E+01	0.00E+00	1.89E+02
499475	3/25/2019 - 4/22/2019	Mn-54	<1.69E+00	0.00E+00	1.69E+00
		Co-58	<2.07E+00	0.00E+00	2.07E+00
		Fe-59	<3.04E+00	0.00E+00	3.04E+00
		Co-60	<1.96E+00	0.00E+00	1.96E+00
		Zn-65	<4.41E+00	0.00E+00	4.41E+00
		Zr-95	<4.45E+00	0.00E+00	4.45E+00
		Nb-95	<3.16E+00	0.00E+00	3.16E+00
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<2.24E+00	0.00E+00	2.24E+00
		Cs-137	<2.20E+00	0.00E+00	2.20E+00
		BaLa-140	<6.04E+00	0.00E+00	6.04E+00
		Be-7	<2.09E+01	0.00E+00	2.09E+01
		K-40	3.60E+01	1.80E+01	2.39E+01
500760	4/22/2019 - 5/20/2019	Mn-54	<3.90E+00	0.00E+00	3.90E+00
		Co-58	<2.90E+00	0.00E+00	2.90E+00
		Fe-59	<7.84E+00	0.00E+00	7.84E+00
		Co-60	<4.22E+00	0.00E+00	4.22E+00
		Zn-65	<5.89E+00	0.00E+00	5.89E+00
		Zr-95	<5.90E+00	0.00E+00	5.90E+00
		Nb-95	<4.66E+00	0.00E+00	4.66E+00
		I-131	<1.13E+01	0.00E+00	1.13E+01
		Cs-134	<3.70E+00	0.00E+00	3.70E+00
		Cs-137	<2.75E+00	0.00E+00	2.75E+00
		BaLa-140	<6.64E+00	0.00E+00	6.64E+00
		Be-7	<2.72E+01	0.00E+00	2.72E+01
		K-40	<6.05E+01	0.00E+00	6.05E+01
502431	5/20/2019 - 6/17/2019	Mn-54	<2.32E+00	0.00E+00	2.32E+00
		Co-58	<2.89E+00	0.00E+00	2.89E+00
		Fe-59	<5.16E+00	0.00E+00	5.16E+00
		Co-60	<2.04E+00	0.00E+00	2.04E+00
		Zn-65	<4.99E+00	0.00E+00	4.99E+00
		Zr-95	<4.97E+00	0.00E+00	4.97E+00
		Nb-95	<2.97E+00	0.00E+00	2.97E+00
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<3.10E+00	0.00E+00	3.10E+00
		Cs-137	<2.16E+00	0.00E+00	2.16E+00
		BaLa-140	<8.02E+00	0.00E+00	8.02E+00
		Be-7	<2.68E+01	0.00E+00	2.68E+01
		K-40	2.53E+01	2.43E+01	3.83E+01



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 131 [INDICATOR - WNW @ 0.64 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500035	4/22/2019 - 7/15/2019	H3SW	<1.60E+02	0.00E+00	1.92E+02
504460	6/17/2019 - 7/15/2019	Mn-54	<3.76E+00	0.00E+00	3.76E+00
		Co-58	<3.63E+00	0.00E+00	3.63E+00
		Fe-59	<6.07E+00	0.00E+00	6.07E+00
		Co-60	<4.37E+00	0.00E+00	4.37E+00
		Zn-65	<7.38E+00	0.00E+00	7.38E+00
		Zr-95	<7.36E+00	0.00E+00	7.36E+00
		Nb-95	<5.14E+00	0.00E+00	5.14E+00
		I-131	<1.15E+01	0.00E+00	1.15E+01
		Cs-134	<5.23E+00	0.00E+00	5.23E+00
		Cs-137	<4.24E+00	0.00E+00	4.24E+00
		BaLa-140	<8.26E+00	0.00E+00	8.26E+00
		Be-7	<2.55E+01	0.00E+00	2.55E+01
		K-40	<5.75E+01	0.00E+00	5.75E+01
505550	7/15/2019 - 8/12/2019	Mn-54	<4.21E+00	0.00E+00	4.21E+00
		Co-58	<4.10E+00	0.00E+00	4.10E+00
		Fe-59	<8.04E+00	0.00E+00	8.04E+00
		Co-60	<4.05E+00	0.00E+00	4.05E+00
		Zn-65	<7.48E+00	0.00E+00	7.48E+00
		Zr-95	<8.31E+00	0.00E+00	8.31E+00
		Nb-95	<4.84E+00	0.00E+00	4.84E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<3.37E+00	0.00E+00	3.37E+00
		Cs-137	<3.17E+00	0.00E+00	3.17E+00
		BaLa-140	<8.02E+00	0.00E+00	8.02E+00
		Be-7	<3.03E+01	0.00E+00	3.03E+01
		K-40	4.25E+01	2.49E+01	2.38E+01
507840	8/12/2019 - 9/9/2019	Mn-54	<3.55E+00	0.00E+00	3.55E+00
		Co-58	<3.24E+00	0.00E+00	3.24E+00
		Fe-59	<7.68E+00	0.00E+00	7.68E+00
		Co-60	<3.21E+00	0.00E+00	3.21E+00
		Zn-65	<5.10E+00	0.00E+00	5.10E+00
		Zr-95	<5.75E+00	0.00E+00	5.75E+00
		Nb-95	<2.57E+00	0.00E+00	2.57E+00
		I-131	<1.09E+01	0.00E+00	1.09E+01
		Cs-134	<3.94E+00	0.00E+00	3.94E+00
		Cs-137	<3.62E+00	0.00E+00	3.62E+00
		BaLa-140	<1.13E+01	0.00E+00	1.13E+01
		Be-7	<3.28E+01	0.00E+00	3.28E+01
		K-40	2.49E+01	2.29E+01	3.28E+01
505073	7/15/2019 - 10/7/2019	H3SW	<1.74E+02	0.00E+00	1.94E+02
510554	9/9/2019 - 10/7/2019	Mn-54	<3.74E+00	0.00E+00	3.74E+00
		Co-58	<3.69E+00	0.00E+00	3.69E+00
		Fe-59	<7.42E+00	0.00E+00	7.42E+00
		Co-60	<3.47E+00	0.00E+00	3.47E+00
		Zn-65	<7.75E+00	0.00E+00	7.75E+00
		Zr-95	<8.15E+00	0.00E+00	8.15E+00
		Nb-95	<4.70E+00	0.00E+00	4.70E+00
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<4.44E+00	0.00E+00	4.44E+00
		Cs-137	<3.88E+00	0.00E+00	3.88E+00
		BaLa-140	<6.93E+00	0.00E+00	6.93E+00
		Be-7	<2.95E+01	0.00E+00	2.95E+01
		K-40	1.16E+02	4.40E+01	4.85E+01
511895	10/7/2019 - 11/4/2019	Mn-54	<3.67E+00	0.00E+00	3.67E+00
		Co-58	<2.55E+00	0.00E+00	2.55E+00



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 131 [INDICATOR - WNW @ 0.64 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511895	10/7/2019 - 11/4/2019	Fe-59	<6.77E+00	0.00E+00	6.77E+00
		Co-60	<2.86E+00	0.00E+00	2.86E+00
		Zn-65	<5.66E+00	0.00E+00	5.66E+00
		Zr-95	<7.36E+00	0.00E+00	7.36E+00
		Nb-95	<4.41E+00	0.00E+00	4.41E+00
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<3.42E+00	0.00E+00	3.42E+00
		Cs-137	<3.56E+00	0.00E+00	3.56E+00
		BaLa-140	<6.27E+00	0.00E+00	6.27E+00
		Be-7	<2.83E+01	0.00E+00	2.83E+01
		K-40	8.99E+01	3.50E+01	3.89E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
513645	11/4/2019 - 12/2/2019	Mn-54	<2.75E+00	0.00E+00	2.75E+00
		Co-58	<3.68E+00	0.00E+00	3.68E+00
		Fe-59	<7.53E+00	0.00E+00	7.53E+00
		Co-60	<2.88E+00	0.00E+00	2.88E+00
		Zn-65	<8.64E+00	0.00E+00	8.64E+00
		Zr-95	<6.72E+00	0.00E+00	6.72E+00
		Nb-95	<3.98E+00	0.00E+00	3.98E+00
		I-131	<1.10E+01	0.00E+00	1.10E+01
		Cs-134	<3.19E+00	0.00E+00	3.19E+00
		Cs-137	<3.51E+00	0.00E+00	3.51E+00
		BaLa-140	<4.38E+00	0.00E+00	4.38E+00
		Be-7	<2.80E+01	0.00E+00	2.80E+01
		K-40	5.43E+01	3.48E+01	5.01E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511716	10/7/2019 - 12/30/2019	H3SW	3.42E+02	1.27E+02	2.00E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514532	12/2/2019 - 12/30/2019	Mn-54	<2.53E+00	0.00E+00	2.53E+00
		Co-58	<2.11E+00	0.00E+00	2.11E+00
		Fe-59	<5.03E+00	0.00E+00	5.03E+00
		Co-60	<1.79E+00	0.00E+00	1.79E+00
		Zn-65	<4.15E+00	0.00E+00	4.15E+00
		Zr-95	<3.92E+00	0.00E+00	3.92E+00
		Nb-95	<2.71E+00	0.00E+00	2.71E+00
		I-131	<1.04E+01	0.00E+00	1.04E+01
		Cs-134	<2.08E+00	0.00E+00	2.08E+00
		Cs-137	<2.20E+00	0.00E+00	2.20E+00
		BaLa-140	<6.68E+00	0.00E+00	6.68E+00
		Be-7	<2.29E+01	0.00E+00	2.29E+01
		K-40	<2.68E+01	0.00E+00	2.68E+01

Sample Point 135 [CONTROL - N @ 11.9 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493596	12/31/2018 - 1/28/2019	Mn-54	<3.42E+00	0.00E+00	3.42E+00
		Co-58	<3.56E+00	0.00E+00	3.56E+00
		Fe-59	<7.51E+00	0.00E+00	7.51E+00
		Co-60	<2.99E+00	0.00E+00	2.99E+00
		Zn-65	<5.50E+00	0.00E+00	5.50E+00
		Zr-95	<6.95E+00	0.00E+00	6.95E+00
		Nb-95	<4.53E+00	0.00E+00	4.53E+00
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<3.29E+00	0.00E+00	3.29E+00
		Cs-137	<2.75E+00	0.00E+00	2.75E+00
		BaLa-140	<6.84E+00	0.00E+00	6.84E+00
		Be-7	<2.68E+01	0.00E+00	2.68E+01
		K-40	<4.82E+01	0.00E+00	4.82E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
495295	1/28/2019 - 2/25/2019	Mn-54	<2.74E+00	0.00E+00	2.74E+00
		Co-58	<3.66E+00	0.00E+00	3.66E+00
		Fe-59	<7.70E+00	0.00E+00	7.70E+00
		Co-60	<3.95E+00	0.00E+00	3.95E+00
		Zn-65	<8.17E+00	0.00E+00	8.17E+00



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 135 [CONTROL - N @ 11.9 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
495295	1/28/2019 - 2/25/2019	Zr-95	<6.80E+00	0.00E+00	6.80E+00
		Nb-95	<4.83E+00	0.00E+00	4.83E+00
		I-131	<1.10E+01	0.00E+00	1.10E+01
		Cs-134	<3.87E+00	0.00E+00	3.87E+00
		Cs-137	<2.86E+00	0.00E+00	2.86E+00
		BaLa-140	<1.04E+01	0.00E+00	1.04E+01
		Be-7	<2.92E+01	0.00E+00	2.92E+01
		K-40	3.40E+01	3.16E+01	4.83E+01
497592	2/25/2019 - 3/25/2019	Mn-54	<3.00E+00	0.00E+00	3.00E+00
		Co-58	<4.38E+00	0.00E+00	4.38E+00
		Fe-59	<1.31E+01	0.00E+00	1.31E+01
		Co-60	<2.45E+00	0.00E+00	2.45E+00
		Zn-65	<5.70E+00	0.00E+00	5.70E+00
		Zr-95	<5.27E+00	0.00E+00	5.27E+00
		Nb-95	<2.86E+00	0.00E+00	2.86E+00
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<4.17E+00	0.00E+00	4.17E+00
		Cs-137	<3.43E+00	0.00E+00	3.43E+00
		BaLa-140	<6.49E+00	0.00E+00	6.49E+00
		Be-7	<3.65E+01	0.00E+00	3.65E+01
		K-40	<7.42E+01	0.00E+00	7.42E+01
493742	12/31/2018 - 4/22/2019	Nuclide	Activity	2 Sigma Error	MDA
		H3SW	<-4.3E+01	0.00E+00	1.88E+02
499476	3/25/2019 - 4/22/2019	Nuclide	Activity	2 Sigma Error	MDA
		Mn-54	<1.86E+00	0.00E+00	1.86E+00
		Co-58	<2.13E+00	0.00E+00	2.13E+00
		Fe-59	<5.00E+00	0.00E+00	5.00E+00
		Co-60	<1.69E+00	0.00E+00	1.69E+00
		Zn-65	<3.74E+00	0.00E+00	3.74E+00
		Zr-95	<3.98E+00	0.00E+00	3.98E+00
		Nb-95	<3.02E+00	0.00E+00	3.02E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<2.07E+00	0.00E+00	2.07E+00
		Cs-137	<2.00E+00	0.00E+00	2.00E+00
		BaLa-140	<7.62E+00	0.00E+00	7.62E+00
		Be-7	<2.01E+01	0.00E+00	2.01E+01
K-40	7.11E+01	2.35E+01	2.98E+01		
500761	4/22/2019 - 5/20/2019	Nuclide	Activity	2 Sigma Error	MDA
		Mn-54	<2.53E+00	0.00E+00	2.53E+00
		Co-58	<3.06E+00	0.00E+00	3.06E+00
		Fe-59	<6.26E+00	0.00E+00	6.26E+00
		Co-60	<3.55E+00	0.00E+00	3.55E+00
		Zn-65	<5.53E+00	0.00E+00	5.53E+00
		Zr-95	<7.16E+00	0.00E+00	7.16E+00
		Nb-95	<4.50E+00	0.00E+00	4.50E+00
		I-131	<1.15E+01	0.00E+00	1.15E+01
		Cs-134	<1.93E+00	0.00E+00	1.93E+00
		Cs-137	<2.69E+00	0.00E+00	2.69E+00
		BaLa-140	<7.42E+00	0.00E+00	7.42E+00
		Be-7	<3.07E+01	0.00E+00	3.07E+01
		K-40	3.36E+01	2.31E+01	3.14E+01
502432	5/20/2019 - 6/17/2019	Nuclide	Activity	2 Sigma Error	MDA
		Mn-54	<3.29E+00	0.00E+00	3.29E+00
		Co-58	<3.05E+00	0.00E+00	3.05E+00
		Fe-59	<5.23E+00	0.00E+00	5.23E+00
		Co-60	<3.44E+00	0.00E+00	3.44E+00
		Zn-65	<5.65E+00	0.00E+00	5.65E+00
		Zr-95	<6.12E+00	0.00E+00	6.12E+00
		Nb-95	<4.78E+00	0.00E+00	4.78E+00
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<3.02E+00	0.00E+00	3.02E+00
		Cs-137	<2.99E+00	0.00E+00	2.99E+00



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 135 [CONTROL - N @ 11.9 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
502432	5/20/2019 - 6/17/2019	BaLa-140	<5.88E+00	0.00E+00	5.88E+00
		Be-7	<2.26E+01	0.00E+00	2.26E+01
		K-40	<4.69E+01	0.00E+00	4.69E+01
500036	4/22/2019 - 7/15/2019	H3SW	<4.85E+00	0.00E+00	1.90E+02
504461	6/17/2019 - 7/15/2019	Mn-54	<3.95E+00	0.00E+00	3.95E+00
		Co-58	<4.84E+00	0.00E+00	4.84E+00
		Fe-59	<8.26E+00	0.00E+00	8.26E+00
		Co-60	<3.28E+00	0.00E+00	3.28E+00
		Zn-65	<1.08E+01	0.00E+00	1.08E+01
		Zr-95	<8.16E+00	0.00E+00	8.16E+00
		Nb-95	<5.86E+00	0.00E+00	5.86E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<2.15E+00	0.00E+00	2.15E+00
		Cs-137	<4.05E+00	0.00E+00	4.05E+00
		BaLa-140	<8.66E+00	0.00E+00	8.66E+00
		Be-7	1.10E+01	1.87E+01	3.20E+01
		K-40	<8.42E+01	0.00E+00	8.42E+01
505551	7/15/2019 - 8/12/2019	Mn-54	<3.26E+00	0.00E+00	3.26E+00
		Co-58	<3.05E+00	0.00E+00	3.05E+00
		Fe-59	<6.86E+00	0.00E+00	6.86E+00
		Co-60	<3.46E+00	0.00E+00	3.46E+00
		Zn-65	<7.09E+00	0.00E+00	7.09E+00
		Zr-95	<6.43E+00	0.00E+00	6.43E+00
		Nb-95	<4.21E+00	0.00E+00	4.21E+00
		I-131	<1.13E+01	0.00E+00	1.13E+01
		Cs-134	<3.74E+00	0.00E+00	3.74E+00
		Cs-137	<2.80E+00	0.00E+00	2.80E+00
		BaLa-140	<7.68E+00	0.00E+00	7.68E+00
		Be-7	<2.89E+01	0.00E+00	2.89E+01
		K-40	<5.93E+01	0.00E+00	5.93E+01
507841	8/12/2019 - 9/9/2019	Mn-54	<3.24E+00	0.00E+00	3.24E+00
		Co-58	<3.58E+00	0.00E+00	3.58E+00
		Fe-59	<1.00E+01	0.00E+00	1.00E+01
		Co-60	<2.92E+00	0.00E+00	2.92E+00
		Zn-65	<9.06E+00	0.00E+00	9.06E+00
		Zr-95	<6.35E+00	0.00E+00	6.35E+00
		Nb-95	<4.00E+00	0.00E+00	4.00E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<3.60E+00	0.00E+00	3.60E+00
		Cs-137	<3.46E+00	0.00E+00	3.46E+00
		BaLa-140	<5.33E+00	0.00E+00	5.33E+00
		Be-7	<2.65E+01	0.00E+00	2.65E+01
		K-40	<3.52E+01	0.00E+00	3.52E+01
505074	7/15/2019 - 10/7/2019	H3SW	<4.3E+01	0.00E+00	1.93E+02
510555	9/9/2019 - 10/7/2019	Mn-54	<2.85E+00	0.00E+00	2.85E+00
		Co-58	<5.46E+00	0.00E+00	5.46E+00
		Fe-59	<9.91E+00	0.00E+00	9.91E+00
		Co-60	<4.45E+00	0.00E+00	4.45E+00
		Zn-65	<9.24E+00	0.00E+00	9.24E+00
		Zr-95	<9.40E+00	0.00E+00	9.40E+00
		Nb-95	<5.37E+00	0.00E+00	5.37E+00
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<4.38E+00	0.00E+00	4.38E+00
		Cs-137	<4.63E+00	0.00E+00	4.63E+00
		BaLa-140	<8.14E+00	0.00E+00	8.14E+00
		Be-7	<5.01E+01	0.00E+00	5.01E+01



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 135 [CONTROL - N @ 11.9 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
510555	9/9/2019 - 10/7/2019	K-40	9.48E+01	4.06E+01	4.18E+01
511896	10/7/2019 - 11/4/2019	Mn-54	<4.54E+00	0.00E+00	4.54E+00
		Co-58	<2.57E+00	0.00E+00	2.57E+00
		Fe-59	<8.56E+00	0.00E+00	8.56E+00
		Co-60	<4.01E+00	0.00E+00	4.01E+00
		Zn-65	<8.05E+00	0.00E+00	8.05E+00
		Zr-95	<4.55E+00	0.00E+00	4.55E+00
		Nb-95	<4.63E+00	0.00E+00	4.63E+00
		I-131	<1.01E+01	0.00E+00	1.01E+01
		Cs-134	<5.04E+00	0.00E+00	5.04E+00
		Cs-137	<4.58E+00	0.00E+00	4.58E+00
		BaLa-140	<2.40E+00	0.00E+00	2.40E+00
		Be-7	<3.91E+01	0.00E+00	3.91E+01
		K-40	<6.85E+01	0.00E+00	6.85E+01
513646	11/4/2019 - 12/2/2019	Mn-54	<3.04E+00	0.00E+00	3.04E+00
		Co-58	<3.36E+00	0.00E+00	3.36E+00
		Fe-59	<6.17E+00	0.00E+00	6.17E+00
		Co-60	<3.01E+00	0.00E+00	3.01E+00
		Zn-65	<7.10E+00	0.00E+00	7.10E+00
		Zr-95	<5.34E+00	0.00E+00	5.34E+00
		Nb-95	<3.75E+00	0.00E+00	3.75E+00
		I-131	<1.07E+01	0.00E+00	1.07E+01
		Cs-134	<3.46E+00	0.00E+00	3.46E+00
		Cs-137	<3.30E+00	0.00E+00	3.30E+00
		BaLa-140	<8.05E+00	0.00E+00	8.05E+00
		Be-7	<2.54E+01	0.00E+00	2.54E+01
		K-40	7.07E+01	3.32E+01	4.40E+01
511717	10/7/2019 - 12/30/2019	H3SW	<-1.9E+02	0.00E+00	2.02E+02
514533	12/2/2019 - 12/30/2019	Mn-54	<3.72E+00	0.00E+00	3.72E+00
		Co-58	<3.75E+00	0.00E+00	3.75E+00
		Fe-59	<6.89E+00	0.00E+00	6.89E+00
		Co-60	<3.25E+00	0.00E+00	3.25E+00
		Zn-65	<4.79E+00	0.00E+00	4.79E+00
		Zr-95	<6.66E+00	0.00E+00	6.66E+00
		Nb-95	<4.01E+00	0.00E+00	4.01E+00
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<3.12E+00	0.00E+00	3.12E+00
		Cs-137	<2.94E+00	0.00E+00	2.94E+00
		BaLa-140	<5.91E+00	0.00E+00	5.91E+00
		Be-7	<3.26E+01	0.00E+00	3.26E+01
		K-40	<4.31E+01	0.00E+00	4.31E+01

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 143 [INDICATOR - NW @ 0.27 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
495915	12/12/2018 - 3/13/2019	mR/Std Qtr	17.39
501737	3/13/2019 - 6/12/2019	mR/Std Qtr	14.53
507077	6/12/2019 - 9/11/2019	mR/Std Qtr	15.54
513416	9/11/2019 - 12/11/2019	mR/Std Qtr	18.33

Sample Point 144 [INDICATOR - NNE @ 0.46 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
495916	12/12/2018 - 3/13/2019	mR/Std Qtr	17.25



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 144 [INDICATOR - NNE @ 0.46 miles]

TLD RING TLD_INNER

Sample ID:	501738	Sample Dates:	3/13/2019 - 6/12/2019	Nuclide	Activity
				mR/Std Qtr	13.52
Sample ID:	507078	Sample Dates:	6/12/2019 - 9/11/2019	Nuclide	Activity
				mR/Std Qtr	13.14
Sample ID:	513417	Sample Dates:	9/11/2019 - 12/11/2019	Nuclide	Activity
				mR/Std Qtr	15.24

Sample Point 145 [INDICATOR - NE @ 0.47 miles]

TLD RING TLD_INNER

Sample ID:	495917	Sample Dates:	12/12/2018 - 3/13/2019	Nuclide	Activity
				mR/Std Qtr	15.29
Sample ID:	501739	Sample Dates:	3/13/2019 - 6/12/2019	Nuclide	Activity
				mR/Std Qtr	13.32
Sample ID:	507079	Sample Dates:	6/12/2019 - 9/11/2019	Nuclide	Activity
				mR/Std Qtr	14.47
Sample ID:	513418	Sample Dates:	9/11/2019 - 12/11/2019	Nuclide	Activity
				mR/Std Qtr	15.15

Sample Point 146 [INDICATOR - ENE @ 0.42 miles]

TLD RING TLD_INNER

Sample ID:	495918	Sample Dates:	12/12/2018 - 3/13/2019	Nuclide	Activity
				mR/Std Qtr	15.22
Sample ID:	501740	Sample Dates:	3/13/2019 - 6/12/2019	Nuclide	Activity
				mR/Std Qtr	13.49
Sample ID:	507080	Sample Dates:	6/12/2019 - 9/11/2019	Nuclide	Activity
				mR/Std Qtr	13.05
Sample ID:	513419	Sample Dates:	9/11/2019 - 12/11/2019	Nuclide	Activity
				mR/Std Qtr	14.94

Sample Point 147 [INDICATOR - E @ 0.44 miles]

TLD RING TLD_INNER

Sample ID:	495919	Sample Dates:	12/12/2018 - 3/13/2019	Nuclide	Activity
				mR/Std Qtr	15.49
Sample ID:	501741	Sample Dates:	3/13/2019 - 6/12/2019	Nuclide	Activity
				mR/Std Qtr	12.88
Sample ID:	507081	Sample Dates:	6/12/2019 - 9/11/2019	Nuclide	Activity
				mR/Std Qtr	13.16
Sample ID:	513420	Sample Dates:	9/11/2019 - 12/11/2019	Nuclide	Activity
				mR/Std Qtr	15.65

Sample Point 148 [INDICATOR - ESE @ 0.46 miles]

TLD RING TLD_INNER

Sample ID:	495920	Sample Dates:	12/12/2018 - 3/13/2019	Nuclide	Activity
				mR/Std Qtr	13.27
Sample ID:	501742	Sample Dates:	3/13/2019 - 6/12/2019	Nuclide	Activity
				mR/Std Qtr	12.73
Sample ID:	507082	Sample Dates:	6/12/2019 - 9/11/2019	Nuclide	Activity
				mR/Std Qtr	10.96
Sample ID:	513421	Sample Dates:	9/11/2019 - 12/11/2019	Nuclide	Activity
				mR/Std Qtr	13.21

Sample Point 149 [INDICATOR - SE @ 0.5 miles]

TLD RING TLD_INNER

Sample ID:	495921	Sample Dates:	12/12/2018 - 3/13/2019	Nuclide	Activity
				mR/Std Qtr	13.85
Sample ID:	501743	Sample Dates:	3/13/2019 - 6/12/2019	Nuclide	Activity
				mR/Std Qtr	12.78
Sample ID:	507083	Sample Dates:	6/12/2019 - 9/11/2019	Nuclide	Activity
				mR/Std Qtr	10.84



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 149 [INDICATOR - SE @ 0.5 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
513422	9/11/2019 - 12/11/2019	mR/Std Qtr	12.58

Sample Point 151 [INDICATOR - S @ 0.37 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
495922	12/12/2018 - 3/13/2019	mR/Std Qtr	15.73
501744	3/13/2019 - 6/12/2019	mR/Std Qtr	13.42
507084	6/12/2019 - 9/11/2019	mR/Std Qtr	12.76
513423	9/11/2019 - 12/11/2019	mR/Std Qtr	15.26

Sample Point 152 [INDICATOR - SSW @ 0.44 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
495923	12/12/2018 - 3/13/2019	mR/Std Qtr	14.08
501745	3/13/2019 - 6/12/2019	mR/Std Qtr	12.58
507085	6/12/2019 - 9/11/2019	mR/Std Qtr	13.11
513424	9/11/2019 - 12/11/2019	mR/Std Qtr	14.93

Sample Point 153 [INDICATOR - SW @ 0.47 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
495924	12/12/2018 - 3/13/2019	mR/Std Qtr	18.05
501746	3/13/2019 - 6/12/2019	mR/Std Qtr	17.73
507086	6/12/2019 - 9/11/2019	mR/Std Qtr	16.77
513425	9/11/2019 - 12/11/2019	mR/Std Qtr	17.77

Sample Point 154 [INDICATOR - W @ 0.45 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
495925	12/12/2018 - 3/13/2019	mR/Std Qtr	20.30
513426	9/11/2019 - 12/11/2019	mR/Std Qtr	19.19

Sample Point 156 [INDICATOR - WNW @ 0.44 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
495926	12/12/2018 - 3/13/2019	mR/Std Qtr	18.51
501748	3/13/2019 - 6/12/2019	mR/Std Qtr	14.50
507088	6/12/2019 - 9/11/2019	mR/Std Qtr	15.71
513427	9/11/2019 - 12/11/2019	mR/Std Qtr	18.69

Sample Point 157 [INDICATOR - N @ 4.69 miles]

TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
495927	12/12/2018 - 3/13/2019	mR/Std Qtr	16.83
501749	3/13/2019 - 6/12/2019	mR/Std Qtr	14.75
507089	6/12/2019 - 9/11/2019	mR/Std Qtr	14.02



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 157 [INDICATOR - N @ 4.69 miles]

TLD RING TLD_OUTER

Sample ID:	513428	Sample Dates:	9/11/2019 - 12/11/2019	Nuclide	Activity
				mR/Std Qtr	16.15

Sample Point 158 [INDICATOR - NNE @ 4.33 miles]

TLD RING TLD_OUTER

Sample ID:	495928	Sample Dates:	12/12/2018 - 3/13/2019	Nuclide	Activity
				mR/Std Qtr	16.27
Sample ID:	501750	Sample Dates:	3/13/2019 - 6/12/2019	Nuclide	Activity
				mR/Std Qtr	13.33
Sample ID:	507090	Sample Dates:	6/12/2019 - 9/11/2019	Nuclide	Activity
				mR/Std Qtr	13.16
Sample ID:	513429	Sample Dates:	9/11/2019 - 12/11/2019	Nuclide	Activity
				mR/Std Qtr	15.23

Sample Point 159 [INDICATOR - NE @ 4.77 miles]

TLD RING TLD_OUTER

Sample ID:	495929	Sample Dates:	12/12/2018 - 3/13/2019	Nuclide	Activity
				mR/Std Qtr	17.72
Sample ID:	501751	Sample Dates:	3/13/2019 - 6/12/2019	Nuclide	Activity
				mR/Std Qtr	17.51
Sample ID:	507091	Sample Dates:	6/12/2019 - 9/11/2019	Nuclide	Activity
				mR/Std Qtr	13.86
Sample ID:	513430	Sample Dates:	9/11/2019 - 12/11/2019	Nuclide	Activity
				mR/Std Qtr	16.39

Sample Point 160 [INDICATOR - ENE @ 4.89 miles]

TLD RING TLD_OUTER

Sample ID:	495930	Sample Dates:	12/12/2018 - 3/13/2019	Nuclide	Activity
				mR/Std Qtr	15.76
Sample ID:	501752	Sample Dates:	3/13/2019 - 6/12/2019	Nuclide	Activity
				mR/Std Qtr	13.98
Sample ID:	507092	Sample Dates:	6/12/2019 - 9/11/2019	Nuclide	Activity
				mR/Std Qtr	13.66
Sample ID:	513431	Sample Dates:	9/11/2019 - 12/11/2019	Nuclide	Activity
				mR/Std Qtr	14.48

Sample Point 161 [INDICATOR - E @ 4.7 miles]

TLD RING TLD_OUTER

Sample ID:	495931	Sample Dates:	12/12/2018 - 3/13/2019	Nuclide	Activity
				mR/Std Qtr	17.16
Sample ID:	501753	Sample Dates:	3/13/2019 - 6/12/2019	Nuclide	Activity
				mR/Std Qtr	14.39
Sample ID:	507093	Sample Dates:	6/12/2019 - 9/11/2019	Nuclide	Activity
				mR/Std Qtr	13.43
Sample ID:	513432	Sample Dates:	9/11/2019 - 12/11/2019	Nuclide	Activity
				mR/Std Qtr	17.28

Sample Point 162 [INDICATOR - ESE @ 4.53 miles]

TLD RING TLD_OUTER

Sample ID:	495932	Sample Dates:	12/12/2018 - 3/13/2019	Nuclide	Activity
				mR/Std Qtr	12.51
Sample ID:	501754	Sample Dates:	3/13/2019 - 6/12/2019	Nuclide	Activity
				mR/Std Qtr	11.29
Sample ID:	507094	Sample Dates:	6/12/2019 - 9/11/2019	Nuclide	Activity
				mR/Std Qtr	11.16
Sample ID:	513433	Sample Dates:	9/11/2019 - 12/11/2019	Nuclide	Activity
				mR/Std Qtr	12.68

Sample Point 163 [INDICATOR - SE @ 4.94 miles]

TLD RING TLD_OUTER

Sample ID:	495933	Sample Dates:	12/12/2018 - 3/13/2019	Nuclide	Activity
				mR/Std Qtr	12.94



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 163 [INDICATOR - SE @ 4.94 miles]

TLD RING TLD_OUTER

Sample ID	Sample Dates	Nuclide	Activity
501755	3/13/2019 - 6/12/2019	mR/Std Qtr	11.14
507095	6/12/2019 - 9/11/2019	mR/Std Qtr	10.20
513434	9/11/2019 - 12/11/2019	mR/Std Qtr	10.44

Sample Point 164 [INDICATOR - SSE @ 4.64 miles]

TLD RING TLD_OUTER

Sample ID	Sample Dates	Nuclide	Activity
495934	12/12/2018 - 3/13/2019	mR/Std Qtr	11.41
501756	3/13/2019 - 6/12/2019	mR/Std Qtr	11.15
507096	6/12/2019 - 9/11/2019	mR/Std Qtr	10.35
513435	9/11/2019 - 12/11/2019	mR/Std Qtr	11.76

Sample Point 165 [INDICATOR - S @ 4.57 miles]

TLD RING TLD_OUTER

Sample ID	Sample Dates	Nuclide	Activity
495935	12/12/2018 - 3/13/2019	mR/Std Qtr	19.89
501757	3/13/2019 - 6/12/2019	mR/Std Qtr	17.91
507097	6/12/2019 - 9/11/2019	mR/Std Qtr	18.38
513436	9/11/2019 - 12/11/2019	mR/Std Qtr	21.13

Sample Point 166 [INDICATOR - SSW @ 4.44 miles]

TLD RING TLD_OUTER

Sample ID	Sample Dates	Nuclide	Activity
495936	12/12/2018 - 3/13/2019	mR/Std Qtr	18.59
501758	3/13/2019 - 6/12/2019	mR/Std Qtr	18.00
507098	6/12/2019 - 9/11/2019	mR/Std Qtr	17.83
513437	9/11/2019 - 12/11/2019	mR/Std Qtr	18.93

Sample Point 167 [INDICATOR - SW @ 4.87 miles]

TLD RING TLD_OUTER

Sample ID	Sample Dates	Nuclide	Activity
495937	12/12/2018 - 3/13/2019	mR/Std Qtr	20.52
501759	3/13/2019 - 6/12/2019	mR/Std Qtr	19.06
507099	6/12/2019 - 9/11/2019	mR/Std Qtr	17.86
513438	9/11/2019 - 12/11/2019	mR/Std Qtr	19.62

Sample Point 168 [INDICATOR - WSW @ 4.6 miles]

TLD RING TLD_OUTER

Sample ID	Sample Dates	Nuclide	Activity
495938	12/12/2018 - 3/13/2019	mR/Std Qtr	19.58
501760	3/13/2019 - 6/12/2019	mR/Std Qtr	17.71
507100	6/12/2019 - 9/11/2019	mR/Std Qtr	15.49



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 168 [INDICATOR - WSW @ 4.6 miles]

TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
513439	9/11/2019 - 12/11/2019	mR/Std Qtr	18.21

Sample Point 169 [INDICATOR - W @ 4.03 miles]

TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
495939	12/12/2018 - 3/13/2019	mR/Std Qtr	16.42
501761	3/13/2019 - 6/12/2019	mR/Std Qtr	14.21
507101	6/12/2019 - 9/11/2019	mR/Std Qtr	12.65
513440	9/11/2019 - 12/11/2019	mR/Std Qtr	14.27

Sample Point 170 [INDICATOR - WNW @ 4.32 miles]

TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
495940	12/12/2018 - 3/13/2019	mR/Std Qtr	26.15
501762	3/13/2019 - 6/12/2019	mR/Std Qtr	23.70
507102	6/12/2019 - 9/11/2019	mR/Std Qtr	23.39
513441	9/11/2019 - 12/11/2019	mR/Std Qtr	26.27

Sample Point 171 [INDICATOR - NW @ 3.95 miles]

TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
495941	12/12/2018 - 3/13/2019	mR/Std Qtr	21.73
501763	3/13/2019 - 6/12/2019	mR/Std Qtr	20.01
507103	6/12/2019 - 9/11/2019	mR/Std Qtr	17.31
513442	9/11/2019 - 12/11/2019	mR/Std Qtr	20.88

Sample Point 172 [INDICATOR - NNW @ 4.69 miles]

TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
495942	12/12/2018 - 3/13/2019	mR/Std Qtr	16.30
501764	3/13/2019 - 6/12/2019	mR/Std Qtr	14.45
507104	6/12/2019 - 9/11/2019	mR/Std Qtr	13.78
513443	9/11/2019 - 12/11/2019	mR/Std Qtr	14.85

Sample Point 173 [INDICATOR - NNW @ 8.39 miles]

TLD RING TLD_SPEC

Sample ID:	Sample Dates:	Nuclide	Activity
495943	12/12/2018 - 3/13/2019	mR/Std Qtr	26.00
501765	3/13/2019 - 6/12/2019	mR/Std Qtr	22.96
507105	6/12/2019 - 9/11/2019	mR/Std Qtr	23.17
513444	9/11/2019 - 12/11/2019	mR/Std Qtr	24.43

Sample Point 174 [INDICATOR - WNW @ 8.85 miles]

TLD RING TLD_SPEC

Sample ID:	Sample Dates:	Nuclide	Activity
495944	12/12/2018 - 3/13/2019	mR/Std Qtr	24.35



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 174 [INDICATOR - WNW @ 8.85 miles]

TLD RING TLD_SPEC

Sample ID:	501766	Sample Dates:	3/13/2019 - 6/12/2019	Nuclide	Activity
				mR/Std Qtr	22.44
Sample ID:	507106	Sample Dates:	6/12/2019 - 9/11/2019	Nuclide	Activity
				mR/Std Qtr	22.41
Sample ID:	513445	Sample Dates:	9/11/2019 - 12/11/2019	Nuclide	Activity
				mR/Std Qtr	24.44

Sample Point 175 [CONTROL - WNW @ 15.5 miles]

TLD RING TLD_CTRL

Sample ID:	495945	Sample Dates:	12/12/2018 - 3/13/2019	Nuclide	Activity
				mR/Std Qtr	25.14
Sample ID:	501767	Sample Dates:	3/13/2019 - 6/12/2019	Nuclide	Activity
				mR/Std Qtr	22.00
Sample ID:	507107	Sample Dates:	6/12/2019 - 9/11/2019	Nuclide	Activity
				mR/Std Qtr	20.91
Sample ID:	513446	Sample Dates:	9/11/2019 - 12/11/2019	Nuclide	Activity
				mR/Std Qtr	24.74

Sample Point 177 [INDICATOR - S @ 8.77 miles]

TLD RING TLD_SPEC

Sample ID:	495946	Sample Dates:	12/12/2018 - 3/13/2019	Nuclide	Activity
				mR/Std Qtr	15.86
Sample ID:	501768	Sample Dates:	3/13/2019 - 6/12/2019	Nuclide	Activity
				mR/Std Qtr	13.14
Sample ID:	507108	Sample Dates:	6/12/2019 - 9/11/2019	Nuclide	Activity
				mR/Std Qtr	12.89
Sample ID:	513447	Sample Dates:	9/11/2019 - 12/11/2019	Nuclide	Activity
				mR/Std Qtr	14.44

Sample Point 178 [INDICATOR - SE @ 9.36 miles]

TLD RING TLD_SPEC

Sample ID:	495947	Sample Dates:	12/12/2018 - 3/13/2019	Nuclide	Activity
				mR/Std Qtr	16.44
Sample ID:	501769	Sample Dates:	3/13/2019 - 6/12/2019	Nuclide	Activity
				mR/Std Qtr	15.99
Sample ID:	507109	Sample Dates:	6/12/2019 - 9/11/2019	Nuclide	Activity
				mR/Std Qtr	13.60
Sample ID:	513448	Sample Dates:	9/11/2019 - 12/11/2019	Nuclide	Activity
				mR/Std Qtr	14.71

Sample Point 180 [INDICATOR - NNE @ 12.7 miles]

TLD RING TLD_SPEC

Sample ID:	495948	Sample Dates:	12/12/2018 - 3/13/2019	Nuclide	Activity
				mR/Std Qtr	28.53
Sample ID:	501770	Sample Dates:	3/13/2019 - 6/12/2019	Nuclide	Activity
				mR/Std Qtr	25.37
Sample ID:	507110	Sample Dates:	6/12/2019 - 9/11/2019	Nuclide	Activity
				mR/Std Qtr	21.73
Sample ID:	513449	Sample Dates:	9/11/2019 - 12/11/2019	Nuclide	Activity
				mR/Std Qtr	25.25

Sample Point 181 [INDICATOR - NE @ 7.02 miles]

TLD RING TLD_SPEC

Sample ID:	495949	Sample Dates:	12/12/2018 - 3/13/2019	Nuclide	Activity
				mR/Std Qtr	17.86
Sample ID:	501771	Sample Dates:	3/13/2019 - 6/12/2019	Nuclide	Activity
				mR/Std Qtr	14.96
Sample ID:	507111	Sample Dates:	6/12/2019 - 9/11/2019	Nuclide	Activity
				mR/Std Qtr	15.38



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 181 [INDICATOR - NE @ 7.02 miles]

TLD RING TLD_SPEC

Sample ID:	Sample Dates:	Nuclide	Activity
513450	9/11/2019 - 12/11/2019	mR/Std Qtr	17.43

Sample Point 182 [INDICATOR - ENE @ 6.23 miles]

TLD RING TLD_SPEC

Sample ID:	Sample Dates:	Nuclide	Activity
495950	12/12/2018 - 3/13/2019	mR/Std Qtr	20.11
501772	3/13/2019 - 6/12/2019	mR/Std Qtr	17.49
507112	6/12/2019 - 9/11/2019	mR/Std Qtr	15.68
513451	9/11/2019 - 12/11/2019	mR/Std Qtr	18.74

Sample Point 186 [INDICATOR - NNW @ 0.24 miles]

TLD RING TLD_SPEC

Sample ID:	Sample Dates:	Nuclide	Activity
495951	12/12/2018 - 3/13/2019	mR/Std Qtr	18.47
501773	3/13/2019 - 6/12/2019	mR/Std Qtr	14.87
507113	6/12/2019 - 9/11/2019	mR/Std Qtr	15.43
513452	9/11/2019 - 12/11/2019	mR/Std Qtr	17.35

Sample Point 187 [INDICATOR - N @ 0.19 miles]

TLD RING TLD_SPEC

Sample ID:	Sample Dates:	Nuclide	Activity
495952	12/12/2018 - 3/13/2019	mR/Std Qtr	19.47
501774	3/13/2019 - 6/12/2019	mR/Std Qtr	16.96
507114	6/12/2019 - 9/11/2019	mR/Std Qtr	15.73
513453	9/11/2019 - 12/11/2019	mR/Std Qtr	16.57

Sample Point 189 [INDICATOR - SSE @ 0.43 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
495953	12/12/2018 - 3/13/2019	mR/Std Qtr	16.05
501775	3/13/2019 - 6/12/2019	mR/Std Qtr	15.16
507115	6/12/2019 - 9/11/2019	mR/Std Qtr	13.96
513454	9/11/2019 - 12/11/2019	mR/Std Qtr	16.66

Sample Point 190 [INDICATOR - WSW @ 0.37 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
495954	12/12/2018 - 3/13/2019	mR/Std Qtr	18.63
501776	3/13/2019 - 6/12/2019	mR/Std Qtr	19.93
507116	6/12/2019 - 9/11/2019	mR/Std Qtr	19.16
513455	9/11/2019 - 12/11/2019	mR/Std Qtr	19.55

Sample Point 191 [INDICATOR - NNE @ 2.84 miles]

TLD RING TLD_SPEC

Sample ID:	Sample Dates:	Nuclide	Activity
495955	12/12/2018 - 3/13/2019	mR/Std Qtr	16.33



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 191 [INDICATOR - NNE @ 2.84 miles]

TLD RING TLD_SPEC

Sample ID:	Sample Dates:	Nuclide	Activity
501777	3/13/2019 - 6/12/2019	mR/Std Qtr	13.56
507117	6/12/2019 - 9/11/2019	mR/Std Qtr	16.15
513456	9/11/2019 - 12/11/2019	mR/Std Qtr	16.91

Media Type: VEGETATION Concentration (Activity): pCi/kg

Sample Point 102 [CONTROL - WNW @ 9.89 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
492478	1/7/2019 - 1/7/2019	MIXEDBLV	Mn-54	<2.66E+01	0.00E+00	2.66E+01
			Co-58	<1.99E+01	0.00E+00	1.99E+01
			Fe-59	<4.89E+01	0.00E+00	4.89E+01
			Co-60	<2.67E+01	0.00E+00	2.67E+01
			Zn-65	<5.70E+01	0.00E+00	5.70E+01
			Zr-95	<5.05E+01	0.00E+00	5.05E+01
			Nb-95	<2.47E+01	0.00E+00	2.47E+01
			I-131	<2.10E+01	0.00E+00	2.10E+01
			Cs-134	<3.77E+01	0.00E+00	3.77E+01
			Cs-137	<2.97E+01	0.00E+00	2.97E+01
			BaLa-140	<1.58E+01	0.00E+00	1.58E+01
			Be-7	4.30E+02	2.35E+02	3.54E+02
			K-40	3.73E+03	6.37E+02	4.63E+02
			493820	2/4/2019 - 2/4/2019	MIXEDBLV	Mn-54
Co-58	<2.18E+01	0.00E+00				2.18E+01
Fe-59	<4.82E+01	0.00E+00				4.82E+01
Co-60	<2.14E+01	0.00E+00				2.14E+01
Zn-65	<4.74E+01	0.00E+00				4.74E+01
Zr-95	<4.95E+01	0.00E+00				4.95E+01
Nb-95	<2.51E+01	0.00E+00				2.51E+01
I-131	<2.69E+01	0.00E+00				2.69E+01
Cs-134	<4.14E+01	0.00E+00				4.14E+01
Cs-137	<2.83E+01	0.00E+00				2.83E+01
BaLa-140	<1.62E+01	0.00E+00				1.62E+01
Be-7	1.62E+03	3.05E+02				2.88E+02
K-40	4.23E+03	6.36E+02				2.32E+02
496133	3/4/2019 - 3/4/2019	MIXEDBLV				Mn-54
			Co-58	<1.97E+01	0.00E+00	1.97E+01
			Fe-59	<3.97E+01	0.00E+00	3.97E+01
			Co-60	<1.69E+01	0.00E+00	1.69E+01
			Zn-65	<4.46E+01	0.00E+00	4.46E+01
			Zr-95	<3.27E+01	0.00E+00	3.27E+01
			Nb-95	<1.59E+01	0.00E+00	1.59E+01
			I-131	<1.73E+01	0.00E+00	1.73E+01
			Cs-134	<3.35E+01	0.00E+00	3.35E+01
			Cs-137	<1.68E+01	0.00E+00	1.68E+01
			BaLa-140	<1.75E+01	0.00E+00	1.75E+01
			Be-7	1.04E+03	2.02E+02	2.15E+02
			K-40	4.46E+03	5.79E+02	2.85E+02
			498051	4/1/2019 - 4/1/2019	MIXEDBLV	Mn-54
Co-58	<2.59E+01	0.00E+00				2.59E+01
Fe-59	<5.76E+01	0.00E+00				5.76E+01
Co-60	<2.71E+01	0.00E+00				2.71E+01
Zn-65	<6.64E+01	0.00E+00				6.64E+01
Zr-95	<5.07E+01	0.00E+00				5.07E+01
Nb-95	<2.68E+01	0.00E+00				2.68E+01
I-131	<2.48E+01	0.00E+00				2.48E+01
Cs-134	<4.26E+01	0.00E+00				4.26E+01
Cs-137	<2.83E+01	0.00E+00				2.83E+01
BaLa-140	<2.96E+01	0.00E+00				2.96E+01
Be-7	8.64E+02	2.71E+02				3.69E+02



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg

Sample Point 102 [CONTROL - WNW @ 9.89 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
498051	4/1/2019 - 4/1/2019		K-40	4.53E+03	7.35E+02	6.13E+02
500141	5/6/2019 - 5/6/2019		Mn-54	<1.45E+01	0.00E+00	1.45E+01
			Co-58	<1.64E+01	0.00E+00	1.64E+01
			Fe-59	<2.18E+01	0.00E+00	2.18E+01
			Co-60	<1.27E+01	0.00E+00	1.27E+01
			Zn-65	<2.87E+01	0.00E+00	2.87E+01
			Zr-95	<2.39E+01	0.00E+00	2.39E+01
			Nb-95	<1.41E+01	0.00E+00	1.41E+01
			I-131	<1.54E+01	0.00E+00	1.54E+01
			Cs-134	<1.91E+01	0.00E+00	1.91E+01
			Cs-137	<1.44E+01	0.00E+00	1.44E+01
			BaLa-140	<1.42E+01	0.00E+00	1.42E+01
			Be-7	2.43E+02	1.15E+02	1.68E+02
			K-40	3.21E+03	4.51E+02	2.85E+02
501963	6/3/2019 - 6/3/2019		Mn-54	<2.76E+01	0.00E+00	2.76E+01
			Co-58	<2.58E+01	0.00E+00	2.58E+01
			Fe-59	<5.00E+01	0.00E+00	5.00E+01
			Co-60	<3.19E+01	0.00E+00	3.19E+01
			Zn-65	<6.09E+01	0.00E+00	6.09E+01
			Zr-95	<5.04E+01	0.00E+00	5.04E+01
			Nb-95	<2.88E+01	0.00E+00	2.88E+01
			I-131	<2.91E+01	0.00E+00	2.91E+01
			Cs-134	<3.71E+01	0.00E+00	3.71E+01
			Cs-137	<2.62E+01	0.00E+00	2.62E+01
			BaLa-140	<3.10E+01	0.00E+00	3.10E+01
			Be-7	7.33E+02	2.43E+02	3.24E+02
			K-40	4.24E+03	6.68E+02	4.03E+02
503853	7/1/2019 - 7/1/2019		Mn-54	<3.04E+01	0.00E+00	3.04E+01
			Co-58	<1.73E+01	0.00E+00	1.73E+01
			Fe-59	<4.77E+01	0.00E+00	4.77E+01
			Co-60	<2.40E+01	0.00E+00	2.40E+01
			Zn-65	<6.15E+01	0.00E+00	6.15E+01
			Zr-95	<5.35E+01	0.00E+00	5.35E+01
			Nb-95	<2.56E+01	0.00E+00	2.56E+01
			I-131	<3.30E+01	0.00E+00	3.30E+01
			Cs-134	<3.72E+01	0.00E+00	3.72E+01
			Cs-137	<2.60E+01	0.00E+00	2.60E+01
			BaLa-140	<9.52E+00	0.00E+00	9.52E+00
			Be-7	1.39E+03	3.16E+02	3.25E+02
			K-40	2.86E+03	5.70E+02	3.96E+02
505161	8/5/2019 - 8/5/2019		Mn-54	<3.05E+01	0.00E+00	3.05E+01
			Co-58	<3.35E+01	0.00E+00	3.35E+01
			Fe-59	<6.83E+01	0.00E+00	6.83E+01
			Co-60	<3.87E+01	0.00E+00	3.87E+01
			Zn-65	<1.06E+02	0.00E+00	1.06E+02
			Zr-95	<6.18E+01	0.00E+00	6.18E+01
			Nb-95	<2.63E+01	0.00E+00	2.63E+01
			I-131	<2.84E+01	0.00E+00	2.84E+01
			Cs-134	<3.71E+01	0.00E+00	3.71E+01
			Cs-137	<2.79E+01	0.00E+00	2.79E+01
			BaLa-140	<3.79E+01	0.00E+00	3.79E+01
			Be-7	1.38E+03	3.15E+02	3.30E+02
			K-40	6.93E+03	9.65E+02	3.50E+02
507309	9/3/2019 - 9/3/2019		Mn-54	<3.66E+01	0.00E+00	3.66E+01
			Co-58	<2.63E+01	0.00E+00	2.63E+01
			Fe-59	<7.06E+01	0.00E+00	7.06E+01
			Co-60	<4.18E+01	0.00E+00	4.18E+01
			Zn-65	<6.69E+01	0.00E+00	6.69E+01



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg

Sample Point 102 [CONTROL - WNW @ 9.89 miles]

Sample ID:	507309	Sample Dates:	9/3/2019 - 9/3/2019	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Zr-95	<4.56E+01	0.00E+00	4.56E+01
					Nb-95	<3.37E+01	0.00E+00	3.37E+01
					I-131	<3.18E+01	0.00E+00	3.18E+01
					Cs-134	<4.88E+01	0.00E+00	4.88E+01
					Cs-137	<4.00E+01	0.00E+00	4.00E+01
					BaLa-140	<1.16E+01	0.00E+00	1.16E+01
					Be-7	1.53E+03	3.91E+02	4.08E+02
					K-40	4.78E+03	9.63E+02	7.45E+02

Sample ID:	510547	Sample Dates:	10/7/2019 - 10/7/2019	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<3.30E+01	0.00E+00	3.30E+01
					Co-58	<2.63E+01	0.00E+00	2.63E+01
					Fe-59	<4.95E+01	0.00E+00	4.95E+01
					Co-60	<3.20E+01	0.00E+00	3.20E+01
					Zn-65	<5.64E+01	0.00E+00	5.64E+01
					Zr-95	<5.95E+01	0.00E+00	5.95E+01
					Nb-95	<2.99E+01	0.00E+00	2.99E+01
					I-131	<4.04E+01	0.00E+00	4.04E+01
					Cs-134	<3.44E+01	0.00E+00	3.44E+01
					Cs-137	<2.83E+01	0.00E+00	2.83E+01
					BaLa-140	<6.45E+01	0.00E+00	6.45E+01
					Be-7	<3.42E+02	0.00E+00	3.42E+02
					K-40	3.27E+03	6.59E+02	4.23E+02

Sample ID:	511888	Sample Dates:	11/4/2019 - 11/4/2019	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<1.84E+01	0.00E+00	1.84E+01
					Co-58	<1.63E+01	0.00E+00	1.63E+01
					Fe-59	<3.03E+01	0.00E+00	3.03E+01
					Co-60	<1.97E+01	0.00E+00	1.97E+01
					Zn-65	<3.79E+01	0.00E+00	3.79E+01
					Zr-95	<2.89E+01	0.00E+00	2.89E+01
					Nb-95	<1.98E+01	0.00E+00	1.98E+01
					I-131	<2.00E+01	0.00E+00	2.00E+01
					Cs-134	<2.14E+01	0.00E+00	2.14E+01
					Cs-137	<1.44E+01	0.00E+00	1.44E+01
					BaLa-140	<1.95E+01	0.00E+00	1.95E+01
					Be-7	9.90E+02	1.96E+02	1.98E+02
					K-40	3.19E+03	4.80E+02	2.97E+02

Sample ID:	513638	Sample Dates:	12/2/2019 - 12/2/2019	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<1.95E+01	0.00E+00	1.95E+01
					Co-58	<2.08E+01	0.00E+00	2.08E+01
					Fe-59	<3.83E+01	0.00E+00	3.83E+01
					Co-60	<2.14E+01	0.00E+00	2.14E+01
					Zn-65	<4.11E+01	0.00E+00	4.11E+01
					Zr-95	<4.12E+01	0.00E+00	4.12E+01
					Nb-95	<2.25E+01	0.00E+00	2.25E+01
					I-131	<3.84E+01	0.00E+00	3.84E+01
					Cs-134	<3.14E+01	0.00E+00	3.14E+01
					Cs-137	<1.91E+01	0.00E+00	1.91E+01
					BaLa-140	<3.55E+01	0.00E+00	3.55E+01
					Be-7	1.25E+03	3.59E+02	5.03E+02
					K-40	5.17E+03	6.79E+02	2.50E+02

Sample Point 120 [INDICATOR - NNE @ 0.46 miles]

Sample ID:	492479	Sample Dates:	1/7/2019 - 1/7/2019	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<2.85E+01	0.00E+00	2.85E+01
					Co-58	<2.76E+01	0.00E+00	2.76E+01
					Fe-59	<5.49E+01	0.00E+00	5.49E+01
					Co-60	<2.49E+01	0.00E+00	2.49E+01
					Zn-65	<5.58E+01	0.00E+00	5.58E+01
					Zr-95	<4.78E+01	0.00E+00	4.78E+01
					Nb-95	<2.89E+01	0.00E+00	2.89E+01
					I-131	<2.16E+01	0.00E+00	2.16E+01
					Cs-134	<3.34E+01	0.00E+00	3.34E+01
					Cs-137	<2.71E+01	0.00E+00	2.71E+01
					BaLa-140	<2.41E+01	0.00E+00	2.41E+01



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg

Sample Point 120 [INDICATOR - NNE @ 0.46 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
492479	1/7/2019 - 1/7/2019	MIXEDBLV	Be-7	1.01E+03	2.54E+02	2.88E+02
			K-40	4.75E+03	7.13E+02	3.32E+02
493821	2/4/2019 - 2/4/2019	MIXEDBLV	Mn-54	<2.53E+01	0.00E+00	2.53E+01
			Co-58	<1.80E+01	0.00E+00	1.80E+01
			Fe-59	<4.90E+01	0.00E+00	4.90E+01
			Co-60	<2.42E+01	0.00E+00	2.42E+01
			Zn-65	<5.02E+01	0.00E+00	5.02E+01
			Zr-95	<3.32E+01	0.00E+00	3.32E+01
			Nb-95	<2.13E+01	0.00E+00	2.13E+01
			I-131	<2.03E+01	0.00E+00	2.03E+01
			Cs-134	<2.73E+01	0.00E+00	2.73E+01
			Cs-137	<1.61E+01	0.00E+00	1.61E+01
			BaLa-140	<2.64E+01	0.00E+00	2.64E+01
			Be-7	1.15E+03	2.44E+02	2.58E+02
			K-40	5.10E+03	6.99E+02	3.05E+02
496134	3/4/2019 - 3/4/2019	MIXEDBLV	Mn-54	<2.63E+01	0.00E+00	2.63E+01
			Co-58	<2.09E+01	0.00E+00	2.09E+01
			Fe-59	<4.15E+01	0.00E+00	4.15E+01
			Co-60	<2.66E+01	0.00E+00	2.66E+01
			Zn-65	<4.77E+01	0.00E+00	4.77E+01
			Zr-95	<3.97E+01	0.00E+00	3.97E+01
			Nb-95	<2.47E+01	0.00E+00	2.47E+01
			I-131	<2.21E+01	0.00E+00	2.21E+01
			Cs-134	<2.77E+01	0.00E+00	2.77E+01
			Cs-137	<1.70E+01	0.00E+00	1.70E+01
			BaLa-140	<1.95E+01	0.00E+00	1.95E+01
			Be-7	1.07E+03	2.38E+02	2.68E+02
			K-40	4.38E+03	6.41E+02	3.77E+02
498052	4/1/2019 - 4/1/2019	MIXEDBLV	Mn-54	<2.37E+01	0.00E+00	2.37E+01
			Co-58	<2.01E+01	0.00E+00	2.01E+01
			Fe-59	<4.69E+01	0.00E+00	4.69E+01
			Co-60	<2.44E+01	0.00E+00	2.44E+01
			Zn-65	<6.51E+01	0.00E+00	6.51E+01
			Zr-95	<4.48E+01	0.00E+00	4.48E+01
			Nb-95	<2.30E+01	0.00E+00	2.30E+01
			I-131	<1.95E+01	0.00E+00	1.95E+01
			Cs-134	<2.83E+01	0.00E+00	2.83E+01
			Cs-137	<2.72E+01	0.00E+00	2.72E+01
			BaLa-140	<2.62E+01	0.00E+00	2.62E+01
			Be-7	6.72E+02	2.34E+02	3.23E+02
			K-40	4.45E+03	6.61E+02	4.04E+02
500142	5/6/2019 - 5/6/2019	MIXEDBLV	Mn-54	<2.88E+01	0.00E+00	2.88E+01
			Co-58	<2.44E+01	0.00E+00	2.44E+01
			Fe-59	<5.19E+01	0.00E+00	5.19E+01
			Co-60	<2.52E+01	0.00E+00	2.52E+01
			Zn-65	<5.85E+01	0.00E+00	5.85E+01
			Zr-95	<3.82E+01	0.00E+00	3.82E+01
			Nb-95	<2.20E+01	0.00E+00	2.20E+01
			I-131	<2.20E+01	0.00E+00	2.20E+01
			Cs-134	<3.58E+01	0.00E+00	3.58E+01
			Cs-137	<2.61E+01	0.00E+00	2.61E+01
			BaLa-140	<3.21E+01	0.00E+00	3.21E+01
			Be-7	3.58E+02	2.09E+02	3.14E+02
			K-40	3.89E+03	6.69E+02	4.90E+02
501964	6/3/2019 - 6/3/2019	MIXEDBLV	Mn-54	<3.02E+01	0.00E+00	3.02E+01
			Co-58	<2.93E+01	0.00E+00	2.93E+01
			Fe-59	<5.76E+01	0.00E+00	5.76E+01
			Co-60	<3.67E+01	0.00E+00	3.67E+01



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg

Sample Point 120 [INDICATOR - NNE @ 0.46 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA			
501964	6/3/2019 - 6/3/2019	MIXEDBLV	Zn-65	<7.26E+01	0.00E+00	7.26E+01			
			Zr-95	<4.52E+01	0.00E+00	4.52E+01			
			Nb-95	<3.25E+01	0.00E+00	3.25E+01			
			I-131	<2.91E+01	0.00E+00	2.91E+01			
			Cs-134	<3.84E+01	0.00E+00	3.84E+01			
			Cs-137	<3.06E+01	0.00E+00	3.06E+01			
			BaLa-140	<2.80E+01	0.00E+00	2.80E+01			
			Be-7	7.77E+02	2.51E+02	3.19E+02			
			K-40	4.22E+03	7.03E+02	4.23E+02			
			503854	7/1/2019 - 7/1/2019	MIXEDBLV	Mn-54	<3.08E+01	0.00E+00	3.08E+01
Co-58	<3.29E+01	0.00E+00				3.29E+01			
Fe-59	<6.12E+01	0.00E+00				6.12E+01			
Co-60	<3.00E+01	0.00E+00				3.00E+01			
Zn-65	<5.75E+01	0.00E+00				5.75E+01			
Zr-95	<4.75E+01	0.00E+00				4.75E+01			
Nb-95	<3.56E+01	0.00E+00				3.56E+01			
I-131	<4.52E+01	0.00E+00				4.52E+01			
Cs-134	<3.86E+01	0.00E+00				3.86E+01			
Cs-137	<3.15E+01	0.00E+00				3.15E+01			
BaLa-140	<3.70E+01	0.00E+00				3.70E+01			
Be-7	9.62E+02	3.14E+02				4.02E+02			
K-40	4.67E+03	8.15E+02				5.58E+02			
505162	8/5/2019 - 8/5/2019	MIXEDBLV				Mn-54	<3.45E+01	0.00E+00	3.45E+01
						Co-58	<3.01E+01	0.00E+00	3.01E+01
			Fe-59	<4.64E+01	0.00E+00	4.64E+01			
			Co-60	<4.02E+01	0.00E+00	4.02E+01			
			Zn-65	<7.69E+01	0.00E+00	7.69E+01			
			Zr-95	<5.05E+01	0.00E+00	5.05E+01			
			Nb-95	<3.49E+01	0.00E+00	3.49E+01			
			I-131	<2.93E+01	0.00E+00	2.93E+01			
			Cs-134	<3.51E+01	0.00E+00	3.51E+01			
			Cs-137	<3.50E+01	0.00E+00	3.50E+01			
			BaLa-140	<3.55E+01	0.00E+00	3.55E+01			
			Be-7	1.81E+03	3.68E+02	3.67E+02			
			K-40	3.81E+03	7.05E+02	5.15E+02			
			507310	9/3/2019 - 9/3/2019	MIXEDBLV	Mn-54	<4.80E+01	0.00E+00	4.80E+01
						Co-58	<4.29E+01	0.00E+00	4.29E+01
Fe-59	<6.04E+01	0.00E+00				6.04E+01			
Co-60	<4.28E+01	0.00E+00				4.28E+01			
Zn-65	<1.29E+02	0.00E+00				1.29E+02			
Zr-95	<6.77E+01	0.00E+00				6.77E+01			
Nb-95	<5.24E+01	0.00E+00				5.24E+01			
I-131	<3.62E+01	0.00E+00				3.62E+01			
Cs-134	<3.90E+01	0.00E+00				3.90E+01			
Cs-137	<3.59E+01	0.00E+00				3.59E+01			
BaLa-140	<3.52E+01	0.00E+00				3.52E+01			
Be-7	1.50E+03	4.11E+02				4.39E+02			
K-40	3.96E+03	8.36E+02				3.91E+02			
510548	10/7/2019 - 10/7/2019	MIXEDBLV				Mn-54	<3.82E+01	0.00E+00	3.82E+01
						Co-58	<2.57E+01	0.00E+00	2.57E+01
			Fe-59	<6.22E+01	0.00E+00	6.22E+01			
			Co-60	<2.97E+01	0.00E+00	2.97E+01			
			Zn-65	<6.85E+01	0.00E+00	6.85E+01			
			Zr-95	<5.78E+01	0.00E+00	5.78E+01			
			Nb-95	<3.15E+01	0.00E+00	3.15E+01			
			I-131	<3.26E+01	0.00E+00	3.26E+01			
			Cs-134	<4.59E+01	0.00E+00	4.59E+01			
			Cs-137	<3.88E+01	0.00E+00	3.88E+01			
			BaLa-140	<4.90E+01	0.00E+00	4.90E+01			
			Be-7	1.62E+03	3.75E+02	3.94E+02			



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg

Sample Point 120 [INDICATOR - NNE @ 0.46 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
510548	10/7/2019 - 10/7/2019		K-40	3.39E+03	6.89E+02	4.83E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
511889	11/4/2019 - 11/4/2019		Mn-54	<1.19E+01	0.00E+00	1.19E+01
			Co-58	<1.11E+01	0.00E+00	1.11E+01
			Fe-59	<2.16E+01	0.00E+00	2.16E+01
			Co-60	<8.64E+00	0.00E+00	8.64E+00
			Zn-65	<2.28E+01	0.00E+00	2.28E+01
			Zr-95	<1.98E+01	0.00E+00	1.98E+01
			Nb-95	<1.30E+01	0.00E+00	1.30E+01
			I-131	<1.97E+01	0.00E+00	1.97E+01
			Cs-134	<1.43E+01	0.00E+00	1.43E+01
			Cs-137	<1.17E+01	0.00E+00	1.17E+01
			BaLa-140	<1.62E+01	0.00E+00	1.62E+01
			Be-7	2.47E+03	2.70E+02	1.61E+02
			K-40	3.06E+03	3.40E+02	2.01E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
513639	12/2/2019 - 12/2/2019		Mn-54	<2.31E+01	0.00E+00	2.31E+01
			Co-58	<2.30E+01	0.00E+00	2.30E+01
			Fe-59	<5.56E+01	0.00E+00	5.56E+01
			Co-60	<3.15E+01	0.00E+00	3.15E+01
			Zn-65	<7.07E+01	0.00E+00	7.07E+01
			Zr-95	<4.42E+01	0.00E+00	4.42E+01
			Nb-95	<2.90E+01	0.00E+00	2.90E+01
			I-131	<2.51E+01	0.00E+00	2.51E+01
			Cs-134	<3.36E+01	0.00E+00	3.36E+01
			Cs-137	<2.10E+01	0.00E+00	2.10E+01
			BaLa-140	<3.22E+01	0.00E+00	3.22E+01
			Be-7	4.65E+02	2.26E+02	3.19E+02
			K-40	4.20E+03	7.43E+02	4.48E+02

Sample Point 125 [INDICATOR - SW @ 0.38 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
492480	1/7/2019 - 1/7/2019		Mn-54	<4.12E+01	0.00E+00	4.12E+01
			Co-58	<5.03E+01	0.00E+00	5.03E+01
			Fe-59	<7.85E+01	0.00E+00	7.85E+01
			Co-60	<4.55E+01	0.00E+00	4.55E+01
			Zn-65	<1.04E+02	0.00E+00	1.04E+02
			Zr-95	<9.41E+01	0.00E+00	9.41E+01
			Nb-95	<5.04E+01	0.00E+00	5.04E+01
			I-131	<3.45E+01	0.00E+00	3.45E+01
			Cs-134	<4.30E+01	0.00E+00	4.30E+01
			Cs-137	<5.71E+01	0.00E+00	5.71E+01
			BaLa-140	<6.41E+01	0.00E+00	6.41E+01
			Be-7	7.92E+02	4.08E+02	5.80E+02
			K-40	4.70E+03	9.94E+02	4.85E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
493822	2/4/2019 - 2/4/2019		Mn-54	<2.75E+01	0.00E+00	2.75E+01
			Co-58	<3.16E+01	0.00E+00	3.16E+01
			Fe-59	<5.71E+01	0.00E+00	5.71E+01
			Co-60	<2.80E+01	0.00E+00	2.80E+01
			Zn-65	<6.75E+01	0.00E+00	6.75E+01
			Zr-95	<4.05E+01	0.00E+00	4.05E+01
			Nb-95	<2.74E+01	0.00E+00	2.74E+01
			I-131	<2.63E+01	0.00E+00	2.63E+01
			Cs-134	<2.52E+01	0.00E+00	2.52E+01
			Cs-137	<2.44E+01	0.00E+00	2.44E+01
			BaLa-140	<2.70E+01	0.00E+00	2.70E+01
			Be-7	4.02E+02	2.26E+02	3.37E+02
			K-40	3.65E+03	6.48E+02	4.59E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
496135	3/4/2019 - 3/4/2019		Mn-54	<2.43E+01	0.00E+00	2.43E+01
			Co-58	<2.37E+01	0.00E+00	2.37E+01
			Fe-59	<5.60E+01	0.00E+00	5.60E+01



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg

Sample Point 125 [INDICATOR - SW @ 0.38 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
496135	3/4/2019 - 3/4/2019	MIXEDBLV	Co-60	<2.36E+01	0.00E+00	2.36E+01
			Zn-65	<5.40E+01	0.00E+00	5.40E+01
			Zr-95	<4.85E+01	0.00E+00	4.85E+01
			Nb-95	<2.58E+01	0.00E+00	2.58E+01
			I-131	<2.02E+01	0.00E+00	2.02E+01
			Cs-134	<2.73E+01	0.00E+00	2.73E+01
			Cs-137	<2.85E+01	0.00E+00	2.85E+01
			BaLa-140	<2.88E+01	0.00E+00	2.88E+01
			Be-7	6.90E+02	2.21E+02	2.96E+02
			K-40	4.45E+03	6.71E+02	4.80E+02
			498053	4/1/2019 - 4/1/2019	MIXEDBLV	Mn-54
Co-58	<3.47E+01	0.00E+00				3.47E+01
Fe-59	<6.09E+01	0.00E+00				6.09E+01
Co-60	<3.79E+01	0.00E+00				3.79E+01
Zn-65	<6.31E+01	0.00E+00				6.31E+01
Zr-95	<4.98E+01	0.00E+00				4.98E+01
Nb-95	<3.11E+01	0.00E+00				3.11E+01
I-131	<3.27E+01	0.00E+00				3.27E+01
Cs-134	<3.76E+01	0.00E+00				3.76E+01
Cs-137	<3.40E+01	0.00E+00				3.40E+01
BaLa-140	<4.38E+01	0.00E+00				4.38E+01
Be-7	6.06E+02	2.70E+02				3.85E+02
K-40	3.71E+03	6.87E+02				4.41E+02
500143	5/6/2019 - 5/6/2019	MIXEDBLV				Mn-54
			Co-58	<1.95E+01	0.00E+00	1.95E+01
			Fe-59	<5.15E+01	0.00E+00	5.15E+01
			Co-60	<2.86E+01	0.00E+00	2.86E+01
			Zn-65	<5.16E+01	0.00E+00	5.16E+01
			Zr-95	<4.12E+01	0.00E+00	4.12E+01
			Nb-95	<2.44E+01	0.00E+00	2.44E+01
			I-131	<2.03E+01	0.00E+00	2.03E+01
			Cs-134	<3.21E+01	0.00E+00	3.21E+01
			Cs-137	<2.16E+01	0.00E+00	2.16E+01
			BaLa-140	<3.07E+01	0.00E+00	3.07E+01
			Be-7	3.69E+02	1.74E+02	2.48E+02
			K-40	4.78E+03	6.81E+02	3.12E+02
			501965	6/3/2019 - 6/3/2019	MIXEDBLV	Mn-54
Co-58	<1.62E+01	0.00E+00				1.62E+01
Fe-59	<8.78E+01	0.00E+00				8.78E+01
Co-60	<3.45E+01	0.00E+00				3.45E+01
Zn-65	<7.89E+01	0.00E+00				7.89E+01
Zr-95	<7.92E+01	0.00E+00				7.92E+01
Nb-95	<2.81E+01	0.00E+00				2.81E+01
I-131	<3.58E+01	0.00E+00				3.58E+01
Cs-134	<3.93E+01	0.00E+00				3.93E+01
Cs-137	<4.17E+01	0.00E+00				4.17E+01
BaLa-140	<4.65E+01	0.00E+00				4.65E+01
Be-7	7.49E+02	2.84E+02				3.46E+02
K-40	3.45E+03	7.64E+02				5.05E+02
503855	7/1/2019 - 7/1/2019	MIXEDBLV				Mn-54
			Co-58	<1.93E+01	0.00E+00	1.93E+01
			Fe-59	<4.72E+01	0.00E+00	4.72E+01
			Co-60	<1.98E+01	0.00E+00	1.98E+01
			Zn-65	<4.47E+01	0.00E+00	4.47E+01
			Zr-95	<3.36E+01	0.00E+00	3.36E+01
			Nb-95	<2.25E+01	0.00E+00	2.25E+01
			I-131	<2.99E+01	0.00E+00	2.99E+01
			Cs-134	<2.59E+01	0.00E+00	2.59E+01
			Cs-137	<1.72E+01	0.00E+00	1.72E+01
			BaLa-140	<2.62E+01	0.00E+00	2.62E+01



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg

Sample Point 125 [INDICATOR - SW @ 0.38 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
503855	7/1/2019 - 7/1/2019	MIXEDBLV	Be-7	1.38E+03	2.51E+02	2.56E+02
			K-40	5.15E+03	6.48E+02	2.71E+02
505163	8/5/2019 - 8/5/2019	MIXEDBLV	Mn-54	<3.92E+01	0.00E+00	3.92E+01
			Co-58	<3.48E+01	0.00E+00	3.48E+01
			Fe-59	<6.37E+01	0.00E+00	6.37E+01
			Co-60	<3.20E+01	0.00E+00	3.20E+01
			Zn-65	<9.09E+01	0.00E+00	9.09E+01
			Zr-95	<5.88E+01	0.00E+00	5.88E+01
			Nb-95	<3.43E+01	0.00E+00	3.43E+01
			I-131	<3.60E+01	0.00E+00	3.60E+01
			Cs-134	<3.75E+01	0.00E+00	3.75E+01
			Cs-137	<3.16E+01	0.00E+00	3.16E+01
			BaLa-140	<2.67E+01	0.00E+00	2.67E+01
			Be-7	2.00E+03	3.75E+02	3.19E+02
			K-40	4.32E+03	7.89E+02	6.08E+02
			507311	9/3/2019 - 9/3/2019	MIXEDBLV	Mn-54
Co-58	<2.71E+01	0.00E+00				2.71E+01
Fe-59	<6.75E+01	0.00E+00				6.75E+01
Co-60	<2.42E+01	0.00E+00				2.42E+01
Zn-65	<6.16E+01	0.00E+00				6.16E+01
Zr-95	<6.20E+01	0.00E+00				6.20E+01
Nb-95	<3.48E+01	0.00E+00				3.48E+01
I-131	<3.44E+01	0.00E+00				3.44E+01
Cs-134	<4.60E+01	0.00E+00				4.60E+01
Cs-137	<4.41E+01	0.00E+00				4.41E+01
BaLa-140	<4.11E+01	0.00E+00				4.11E+01
Be-7	1.80E+03	3.61E+02				3.46E+02
K-40	3.33E+03	7.14E+02				8.94E+01
510549	10/7/2019 - 10/7/2019	MIXEDBLV				Mn-54
			Co-58	<2.63E+01	0.00E+00	2.63E+01
			Fe-59	<4.61E+01	0.00E+00	4.61E+01
			Co-60	<2.90E+01	0.00E+00	2.90E+01
			Zn-65	<6.66E+01	0.00E+00	6.66E+01
			Zr-95	<5.46E+01	0.00E+00	5.46E+01
			Nb-95	<3.11E+01	0.00E+00	3.11E+01
			I-131	<4.79E+01	0.00E+00	4.79E+01
			Cs-134	<3.12E+01	0.00E+00	3.12E+01
			Cs-137	<2.35E+01	0.00E+00	2.35E+01
			BaLa-140	<9.05E+00	0.00E+00	9.05E+00
			Be-7	1.26E+03	3.16E+02	3.64E+02
			K-40	3.73E+03	6.38E+02	3.32E+02
			511890	11/4/2019 - 11/4/2019	MIXEDBLV	Mn-54
Co-58	<3.31E+01	0.00E+00				3.31E+01
Fe-59	<6.00E+01	0.00E+00				6.00E+01
Co-60	<2.82E+01	0.00E+00				2.82E+01
Zn-65	<6.60E+01	0.00E+00				6.60E+01
Zr-95	<5.06E+01	0.00E+00				5.06E+01
Nb-95	<4.41E+01	0.00E+00				4.41E+01
I-131	<3.65E+01	0.00E+00				3.65E+01
Cs-134	<3.09E+01	0.00E+00				3.09E+01
Cs-137	<3.25E+01	0.00E+00				3.25E+01
BaLa-140	<3.17E+01	0.00E+00				3.17E+01
Be-7	2.19E+03	3.81E+02				3.44E+02
K-40	3.35E+03	6.11E+02				4.20E+02
513640	12/2/2019 - 12/2/2019	MIXEDBLV				Mn-54
			Co-58	<3.02E+01	0.00E+00	3.02E+01
			Fe-59	<6.88E+01	0.00E+00	6.88E+01
			Co-60	<4.17E+01	0.00E+00	4.17E+01



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg

Sample Point 125 [INDICATOR - SW @ 0.38 miles]

Sample ID:	513640	Sample Dates:	12/2/2019 - 12/2/2019	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Zn-65	<1.37E+02	0.00E+00	1.37E+02
					Zr-95	<5.24E+01	0.00E+00	5.24E+01
					Nb-95	<4.23E+01	0.00E+00	4.23E+01
					I-131	<3.24E+01	0.00E+00	3.24E+01
					Cs-134	<4.10E+01	0.00E+00	4.10E+01
					Cs-137	<3.86E+01	0.00E+00	3.86E+01
					BaLa-140	<4.22E+01	0.00E+00	4.22E+01
					Be-7	1.86E+03	3.94E+02	3.74E+02
					K-40	3.62E+03	7.22E+02	4.58E+02

Sample Point 193 [INDICATOR - N @ 0.19 miles]

Sample ID:	492481	Sample Dates:	1/7/2019 - 1/7/2019	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<4.19E+01	0.00E+00	4.19E+01
					Co-58	<3.22E+01	0.00E+00	3.22E+01
					Fe-59	<7.32E+01	0.00E+00	7.32E+01
					Co-60	<4.04E+01	0.00E+00	4.04E+01
					Zn-65	<8.26E+01	0.00E+00	8.26E+01
					Zr-95	<6.59E+01	0.00E+00	6.59E+01
					Nb-95	<3.82E+01	0.00E+00	3.82E+01
					I-131	<3.89E+01	0.00E+00	3.89E+01
					Cs-134	<4.32E+01	0.00E+00	4.32E+01
					Cs-137	<3.73E+01	0.00E+00	3.73E+01
					BaLa-140	<4.58E+01	0.00E+00	4.58E+01
					Be-7	1.88E+03	4.36E+02	4.27E+02
					K-40	4.81E+03	9.24E+02	4.44E+02

Sample ID:	493823	Sample Dates:	2/4/2019 - 2/4/2019	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<2.29E+01	0.00E+00	2.29E+01
					Co-58	<2.46E+01	0.00E+00	2.46E+01
					Fe-59	<4.67E+01	0.00E+00	4.67E+01
					Co-60	<2.65E+01	0.00E+00	2.65E+01
					Zn-65	<5.18E+01	0.00E+00	5.18E+01
					Zr-95	<3.29E+01	0.00E+00	3.29E+01
					Nb-95	<2.39E+01	0.00E+00	2.40E+01
					I-131	<2.58E+01	0.00E+00	2.58E+01
					Cs-134	<2.77E+01	0.00E+00	2.77E+01
					Cs-137	<2.44E+01	0.00E+00	2.44E+01
					BaLa-140	<2.90E+01	0.00E+00	2.90E+01
					Be-7	1.04E+03	2.37E+02	2.57E+02
					K-40	4.96E+03	7.10E+02	3.93E+02

Sample ID:	496136	Sample Dates:	3/4/2019 - 3/4/2019	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<1.81E+01	0.00E+00	1.81E+01
					Co-58	<1.66E+01	0.00E+00	1.66E+01
					Fe-59	<3.69E+01	0.00E+00	3.69E+01
					Co-60	<2.33E+01	0.00E+00	2.33E+01
					Zn-65	<4.51E+01	0.00E+00	4.51E+01
					Zr-95	<3.23E+01	0.00E+00	3.23E+01
					Nb-95	<1.95E+01	0.00E+00	1.95E+01
					I-131	<1.81E+01	0.00E+00	1.81E+01
					Cs-134	<2.45E+01	0.00E+00	2.45E+01
					Cs-137	<1.86E+01	0.00E+00	1.86E+01
					BaLa-140	<2.00E+01	0.00E+00	2.00E+01
					Be-7	2.61E+03	3.38E+02	2.09E+02
					K-40	4.48E+03	5.87E+02	3.05E+02

Sample ID:	498054	Sample Dates:	4/1/2019 - 4/1/2019	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<2.20E+01	0.00E+00	2.20E+01
					Co-58	<2.38E+01	0.00E+00	2.38E+01
					Fe-59	<4.22E+01	0.00E+00	4.22E+01
					Co-60	<2.47E+01	0.00E+00	2.47E+01
					Zn-65	<5.74E+01	0.00E+00	5.74E+01
					Zr-95	<4.23E+01	0.00E+00	4.23E+01
					Nb-95	<2.74E+01	0.00E+00	2.74E+01
					I-131	<2.33E+01	0.00E+00	2.33E+01
					Cs-134	<2.47E+01	0.00E+00	2.47E+01
					Cs-137	<2.58E+01	0.00E+00	2.58E+01



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg

Sample Point 193 [INDICATOR - N @ 0.19 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
498054	4/1/2019 - 4/1/2019	MIXEDBLV	BaLa-140	<2.94E+01	0.00E+00	2.94E+01
			Be-7	1.05E+03	2.52E+02	2.80E+02
			K-40	5.20E+03	7.34E+02	2.85E+02
500144	5/6/2019 - 5/6/2019	MIXEDBLV	Mn-54	<2.72E+01	0.00E+00	2.72E+01
			Co-58	<2.95E+01	0.00E+00	2.95E+01
			Fe-59	<5.47E+01	0.00E+00	5.47E+01
			Co-60	<3.06E+01	0.00E+00	3.06E+01
			Zn-65	<7.20E+01	0.00E+00	7.20E+01
			Zr-95	<4.05E+01	0.00E+00	4.05E+01
			Nb-95	<2.46E+01	0.00E+00	2.46E+01
			I-131	<1.90E+01	0.00E+00	1.90E+01
			Cs-134	<2.74E+01	0.00E+00	2.74E+01
			Cs-137	<1.66E+01	0.00E+00	1.66E+01
			BaLa-140	<2.40E+01	0.00E+00	2.40E+01
			Be-7	5.15E+02	2.20E+02	3.09E+02
			K-40	5.80E+03	8.25E+02	4.32E+02
501966	6/3/2019 - 6/3/2019	MIXEDBLV	Mn-54	<2.87E+01	0.00E+00	2.87E+01
			Co-58	<4.21E+01	0.00E+00	4.21E+01
			Fe-59	<8.44E+01	0.00E+00	8.44E+01
			Co-60	<4.19E+01	0.00E+00	4.19E+01
			Zn-65	<8.21E+01	0.00E+00	8.21E+01
			Zr-95	<7.08E+01	0.00E+00	7.08E+01
			Nb-95	<3.44E+01	0.00E+00	3.44E+01
			I-131	<3.57E+01	0.00E+00	3.57E+01
			Cs-134	<4.45E+01	0.00E+00	4.45E+01
			Cs-137	<3.13E+01	0.00E+00	3.13E+01
			BaLa-140	<3.72E+01	0.00E+00	3.72E+01
			Be-7	6.94E+02	2.73E+02	3.45E+02
			K-40	8.07E+03	1.23E+03	6.36E+02
503856	7/1/2019 - 7/1/2019	MIXEDBLV	Mn-54	<2.46E+01	0.00E+00	2.46E+01
			Co-58	<3.18E+01	0.00E+00	3.18E+01
			Fe-59	<7.22E+01	0.00E+00	7.22E+01
			Co-60	<3.93E+01	0.00E+00	3.93E+01
			Zn-65	<7.83E+01	0.00E+00	7.83E+01
			Zr-95	<4.42E+01	0.00E+00	4.42E+01
			Nb-95	<3.47E+01	0.00E+00	3.47E+01
			I-131	<4.64E+01	0.00E+00	4.64E+01
			Cs-134	<3.04E+01	0.00E+00	3.04E+01
			Cs-137	<2.73E+01	0.00E+00	2.73E+01
			BaLa-140	<4.42E+01	0.00E+00	4.42E+01
			Be-7	9.06E+02	2.91E+02	3.56E+02
			K-40	7.22E+03	1.04E+03	4.37E+02
505164	8/5/2019 - 8/5/2019	MIXEDBLV	Mn-54	<2.18E+01	0.00E+00	2.18E+01
			Co-58	<2.24E+01	0.00E+00	2.24E+01
			Fe-59	<5.40E+01	0.00E+00	5.40E+01
			Co-60	<2.61E+01	0.00E+00	2.61E+01
			Zn-65	<5.18E+01	0.00E+00	5.18E+01
			Zr-95	<3.64E+01	0.00E+00	3.64E+01
			Nb-95	<2.89E+01	0.00E+00	2.89E+01
			I-131	<2.30E+01	0.00E+00	2.30E+01
			Cs-134	<3.11E+01	0.00E+00	3.11E+01
			Cs-137	<2.21E+01	0.00E+00	2.21E+01
			BaLa-140	<2.95E+01	0.00E+00	2.95E+01
			Be-7	1.25E+03	2.86E+02	3.25E+02
			K-40	6.18E+03	8.20E+02	2.80E+02
507312	9/3/2019 - 9/3/2019	MIXEDBLV	Mn-54	<3.72E+01	0.00E+00	3.72E+01
			Co-58	<3.08E+01	0.00E+00	3.08E+01
			Fe-59	<8.24E+01	0.00E+00	8.24E+01



MCGUIRE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg

Sample Point 193 [INDICATOR - N @ 0.19 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA			
507312	9/3/2019 - 9/3/2019	MIXEDBLV	Co-60	<3.54E+01	0.00E+00	3.54E+01			
			Zn-65	<7.83E+01	0.00E+00	7.83E+01			
			Zr-95	<5.80E+01	0.00E+00	5.80E+01			
			Nb-95	<3.13E+01	0.00E+00	3.13E+01			
			I-131	<3.61E+01	0.00E+00	3.61E+01			
			Cs-134	<4.17E+01	0.00E+00	4.17E+01			
			Cs-137	<3.12E+01	0.00E+00	3.12E+01			
			BaLa-140	<3.38E+01	0.00E+00	3.38E+01			
			Be-7	9.01E+02	2.96E+02	3.59E+02			
			K-40	7.42E+03	1.09E+03	3.46E+02			
			510550	10/7/2019 - 10/7/2019	MIXEDBLV	Mn-54	<4.10E+01	0.00E+00	4.10E+01
Co-58	<3.89E+01	0.00E+00				3.89E+01			
Fe-59	<7.74E+01	0.00E+00				7.74E+01			
Co-60	<4.27E+01	0.00E+00				4.27E+01			
Zn-65	<8.63E+01	0.00E+00				8.63E+01			
Zr-95	<7.38E+01	0.00E+00				7.38E+01			
Nb-95	<4.14E+01	0.00E+00				4.14E+01			
I-131	<4.12E+01	0.00E+00				4.12E+01			
Cs-134	<4.39E+01	0.00E+00				4.39E+01			
Cs-137	<3.26E+01	0.00E+00				3.26E+01			
BaLa-140	<4.14E+01	0.00E+00				4.14E+01			
Be-7	7.51E+02	3.34E+02				4.53E+02			
K-40	6.13E+03	1.05E+03				5.13E+02			
511891	11/4/2019 - 11/4/2019	MIXEDBLV				Mn-54	<2.48E+01	0.00E+00	2.48E+01
						Co-58	<2.94E+01	0.00E+00	2.94E+01
			Fe-59	<5.53E+01	0.00E+00	5.53E+01			
			Co-60	<3.36E+01	0.00E+00	3.36E+01			
			Zn-65	<7.08E+01	0.00E+00	7.08E+01			
			Zr-95	<4.18E+01	0.00E+00	4.18E+01			
			Nb-95	<3.20E+01	0.00E+00	3.20E+01			
			I-131	<2.55E+01	0.00E+00	2.55E+01			
			Cs-134	<3.78E+01	0.00E+00	3.78E+01			
			Cs-137	<3.38E+01	0.00E+00	3.38E+01			
			BaLa-140	<3.41E+01	0.00E+00	3.41E+01			
			Be-7	1.22E+03	3.00E+02	3.44E+02			
			K-40	5.38E+03	7.89E+02	3.68E+02			
			513641	12/2/2019 - 12/2/2019	MIXEDBLV	Mn-54	<3.10E+01	0.00E+00	3.10E+01
						Co-58	<4.48E+01	0.00E+00	4.48E+01
Fe-59	<5.46E+01	0.00E+00				5.46E+01			
Co-60	<3.49E+01	0.00E+00				3.49E+01			
Zn-65	<1.04E+02	0.00E+00				1.04E+02			
Zr-95	<5.36E+01	0.00E+00				5.36E+01			
Nb-95	<4.71E+01	0.00E+00				4.71E+01			
I-131	<4.15E+01	0.00E+00				4.15E+01			
Cs-134	<4.09E+01	0.00E+00				4.09E+01			
Cs-137	<3.29E+01	0.00E+00				3.29E+01			
BaLa-140	<4.67E+01	0.00E+00				4.67E+01			
Be-7	1.78E+03	4.55E+02				4.69E+02			
K-40	4.47E+03	9.59E+02				6.70E+02			



APPENDIX F

**ERRATA TO
PREVIOUS REPORTS**

There are no errata to be
appended to the 2019 AREOR

Enclosure 5
RA-20-0079

ENCLOSURE 5: [ONS Annual Radiological Environmental Operating Report](#)



ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT

**DUKE ENERGY CORPORATION
OCONEE NUCLEAR STATION
Units 1, 2, and 3**

2019



1.0 EXECUTIVE SUMMARY

This Annual Radiological Environmental Operating Report describes the Oconee Nuclear Station Radiological Environmental Monitoring Program (REMP), and the program results for the calendar year 2019.

Included in the report are the identification of sampling locations, descriptions of environmental sampling and analysis procedures, comparisons of present environmental radioactivity levels and pre-operational environmental data, analysis of trends in environmental radiological data as potentially affected by station operations, and a summary of environmental radiological sampling results. Quality assurance practices and program changes are also discussed.

Sampling activities were conducted as prescribed by Offsite Dose Calculations Manual (ODCM) and Selected Licensee Commitments (SLCs). Required analyses were performed and detection capabilities were met for all collected samples as required by SLCs. One-thousand twenty-three samples were analyzed comprising 1,088 test results in order to compile data for the 2019 report. Based on the annual land use census, the current number of sampling sites for Oconee Nuclear Station is sufficient.

Concentrations observed in the environment in 2019 for station related radionuclides were within the ranges of concentrations observed in the past. Inspection of data showed that radioactivity concentrations in drinking water, surface water, fish, and shoreline sediment are higher than the activities reported for samples collected at control locations. All positively identified measurements attributable to station operation were within limits as specified in SLC's.

The continued operation of ONS has not contributed measurable radiation or the presence of gamma radioactivity in the environmental media monitored. The surface water samples revealed tritium concentrations that are well within the applicable regulatory limits. The radiological environmental data for 2019 indicates that radioactivity concentrations were not higher than expected and all positively identified measurements attributable to ONS operations in 2019 were within limits as specified in the ONS ODCM, thus presenting no significant impact on the environment or public safety.

2.0 INTRODUCTION

2.1 SITE DESCRIPTION AND SAMPLE LOCATIONS

Oconee Nuclear Station (ONS) is located in Oconee County, South Carolina, approximately 8 miles northeast of Seneca, South Carolina, on the shore of Lake Keowee. This lake was formed by damming the Keowee and Little Rivers in that location. Immediately to the south is the U.S. Government Hartwell Project. The Keowee Hydroelectric Plant near the station joins Lake Keowee and the upper reaches of Lake Hartwell. To the north, the Jocassee Hydroelectric Plant joins Lake Jocassee and Lake Keowee. Jocassee is a pumped storage plant.

ONS consists of three pressurized water reactors. Each unit has an output of 846 megawatts net. Unit 1 license for operation was issued 2/6/1973. Unit 2 license for operation was issued 10/6/1973. Unit 3 license for operation was issued 7/19/1974. An independent spent fuel storage installation is also located at the site.

Figures 2.1-1 and 2.1-2 are maps depicting the Thermoluminescent Dosimeter (TLD) monitoring locations and the sampling locations. The location numbers shown on these maps correspond to those listed in Tables 2.1-A and 2.1-B. Figure 2.1-1 comprises all sample locations within a one mile radius of ONS. Figure 2.1-2 comprises all sample locations within a ten mile radius of ONS.

2.2 SCOPE AND REQUIREMENTS OF THE REMP

A Radiological Environmental Monitoring Program (REMP) has been in effect at Oconee Nuclear Station since 1969, four years prior to operation of Unit 1 in 1973. The preoperational program provides data on the existing environmental radioactivity levels for the site and vicinity which may be used to determine whether increases in environmental levels are attributable to the station. The operational program provides surveillance and backup support of detailed effluent monitoring which is necessary to evaluate the significance, if any, of the contributions to the existing environmental radioactivity levels that result from station operation.

This monitoring program is based on NRC guidance as reflected in the Selected Licensee Commitments Manual, with regard to sample media, sampling locations, sampling frequency, and analytical sensitivity requirements. Indicator and control locations were established for comparison purposes to distinguish radioactivity of station origin from natural or other “man-made” environmental radioactivity. The environmental monitoring program also verifies projected and anticipated radionuclide concentrations in the environment and related exposures from releases of radionuclides from Oconee Nuclear Station. This program satisfies the requirements of Section IV.B.2 of Appendix I to 10CFR50 and 10CFR72.44(d)(2) and provides surveillance of all appropriate critical exposure pathways to man and protects vital interests of the company, public, and state and federal agencies concerned with the environment. Reporting levels for radioactivity found in environmental samples are listed in Table 2.2-A. Table 2.2-B lists the REMP analysis and frequency schedule.

The Annual Land Use Census, required by Selected Licensee Commitments, is performed to ensure that changes in the use of areas at or beyond the site boundary are identified and that modifications to the Radiological Environmental Monitoring Program are made if required by changes in land use. This census satisfies the requirements of Section IV.B.3 of Appendix I to 10CFR50. Results are shown in Table 3.9.

Participation in an interlaboratory comparison program as required by Selected Licensee Commitments provides for independent checks on the precision and accuracy of measurements of radioactive material in REMP sample matrices. Such checks are performed as part of the quality assurance program for environmental monitoring in order to demonstrate that the results are valid for the purposes of Section IV.B.2 of Appendix I to 10CFR50. A summary of the results obtained as part of this comparison program are in Section 4 of this annual report.

2.3 STATISTICAL AND CALCULATIONAL METHODOLOGY

2.3.1 ESTIMATION OF THE MEAN VALUE

There was one (1) basic statistical calculation performed on the raw data resulting from the environmental sample analysis program. The calculation involved the determination of the mean value for the indicator and the control samples for each sample medium. The mean is a widely used statistic. This value was used in the reduction of the data generated by the sampling and analysis of the various media in the Radiological Environmental Monitoring Program. "Net activity (or concentration)" is the activity (or concentration) determined to be present in the sample. No "Minimum Detectable Activity", "Lower Limit of Detection", "Less Than Level", or negative activities or concentrations are included in the calculation of the mean. The following equation was used to estimate the mean:

$$\bar{x} = \frac{\sum_{i=1}^N x_i}{N}$$

Where:

\bar{x} = estimate of the mean,

i = individual sample,

N = total number of samples with a net activity (or concentration),

x_i = net activity (or concentration) for sample i.

2.3.2 LOWER LIMIT OF DETECTION AND MINIMUM DETECTABLE ACTIVITY

The Lower Limit of Detection (LLD) and Minimum Detectable Activity (MDA) are used throughout the Environmental Monitoring Program.

LLD - The LLD, as defined in the Selected Licensee Commitments Manual is the smallest concentration of radioactive material in a sample that will yield a net count, above the system background, that will be detected with 95% probability with only 5% probability of falsely concluding that a blank observation represents a "real" signal. The LLD is an *a priori* (before the fact) lower limit of detection. The actual LLD is dependent upon the standard deviation of the background counting rate, the counting efficiency, the sample size (mass or volume), the radiochemical yield, and the radioactive decay of the sample between sample collection and counting. The "required" LLDs for each sample medium and selected radionuclides are given in the Selected Licensee Commitments and are listed in Table 2.2-C.

MDA - The MDA is the net counting rate (sample after subtraction of background) that must be surpassed before a sample is considered to contain a scientifically measurable amount of a radioactive material exceeding background amounts. The MDA is calculated using a sample background and may be thought of as an "actual" LLD for a particular sample measurement. Certain gross counting measurements display a calculated negative value, indicating background is greater than sample activity.

2.3.3 TREND IDENTIFICATION

One of the purposes of an environmental monitoring program is to determine if there is a buildup of radionuclides in the environment due to the operation of the nuclear station. Visual inspection of tabular or graphical presentations of data (including preoperational) is used to determine if a trend exists. A decrease in a particular radionuclide's concentration in an environmental medium does not indicate that reactor operations are removing radioactivity from the environment but that reactor operations are not adding that radionuclide to the environment in quantities exceeding the preoperational level and that the normal removal processes (radioactive decay, deposition, resuspension, etc.) are influencing the concentration.

Substantial increases or decreases in the amount of a particular radionuclide's release from the nuclear plant will greatly affect the resulting environmental levels; therefore, a knowledge of the release of a radionuclide from the nuclear plant is necessary to completely interpret the trends, or lack of trends, determined from the environmental data. Some factors that may affect environmental levels of radionuclides include prevailing weather conditions (periods of drought, solar cycles or heavier than normal precipitation), construction in or around either the nuclear plant or the sampling location, and addition or deletion of other sources of radioactive materials (such as the 1986 Chernobyl accident and the 2011 Japan earthquake and tsunami, which triggered the Fukushima Dai-ichi nuclear power plant incident). Some of these factors may be obvious while others are sometimes unknown. Therefore, how trends are identified will include some judgment by plant personnel.

Figure 2.1-1

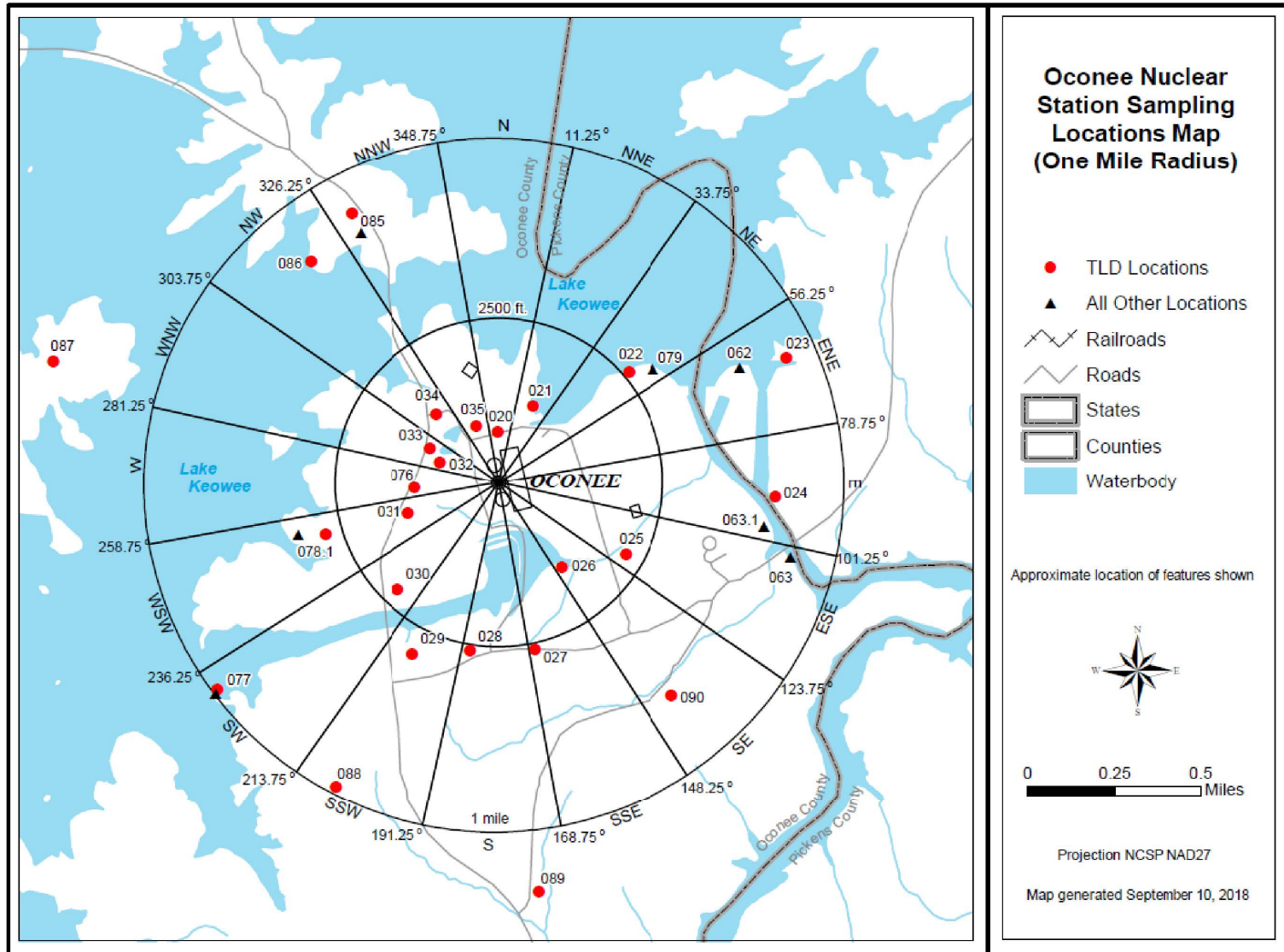


Figure 2.1-2

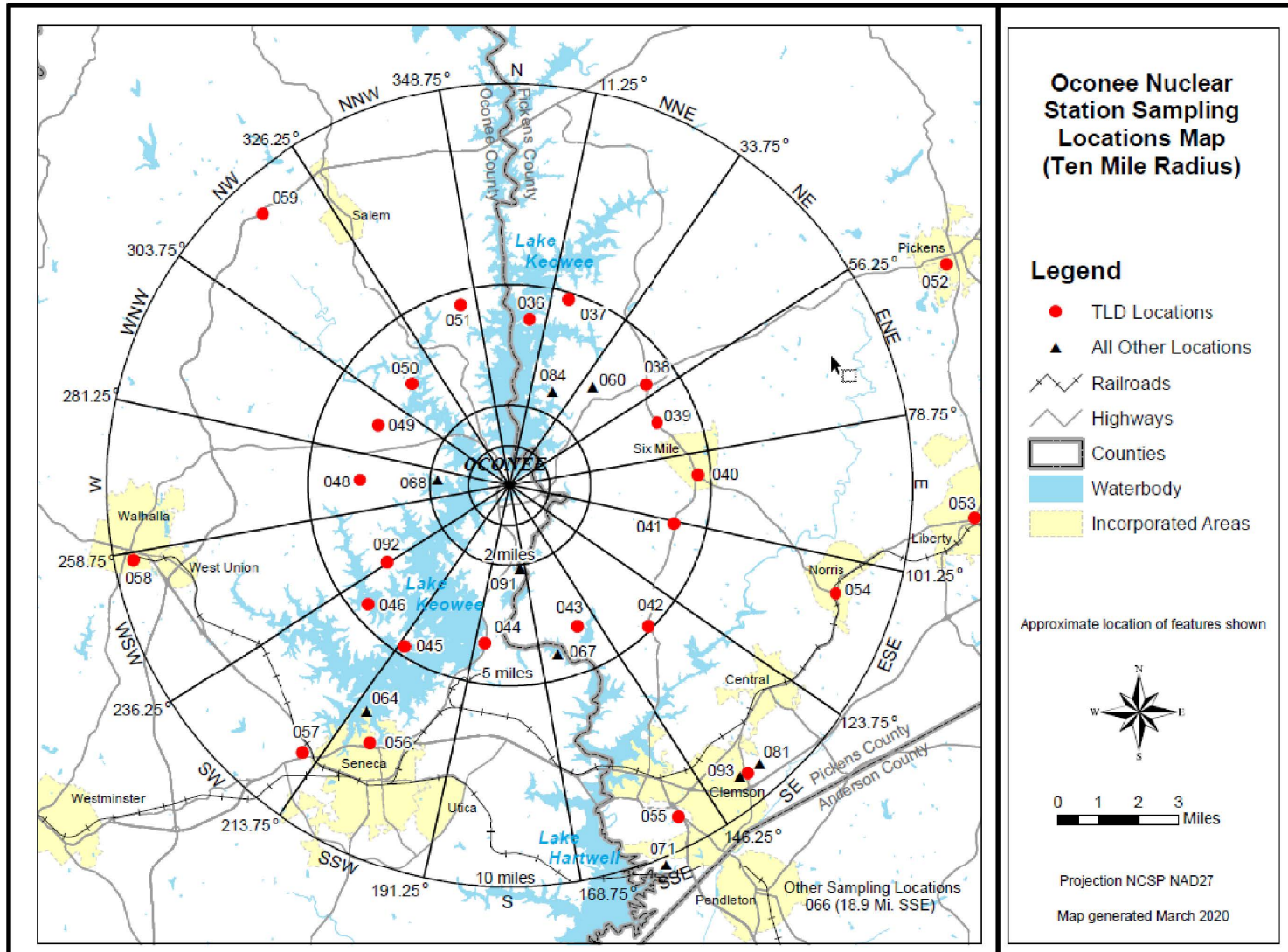


TABLE 2.1-A

**OCONEE RADIOLOGICAL MONITORING PROGRAM
SAMPLING LOCATIONS**

Table 2.1-A Codes			
W	Weekly	SM	Semimonthly
BW	BiWeekly	Q	Quarterly
M	Monthly	SA	Semiannually
C	Control	I	Indicator

Site #	Measure Type	Location Description*	Air Rad. & Particulate	Surface Water	Drinking Water	Shoreline Sediment	Fish	Milk	Broadleaf Vegetation
060	I	Greenville Water Intake Road (3.23 NE)			M				
060	C**	Greenville Water Intake Road (2.28 NE)					SA		
062	C	Lake Keowee Hydro Intake (0.85 mi ENE)		M					
063	I	Lake Hartwell Hwy 183 Bridge (0.80 mi ESE) [000.7]					SA		
063.1	I	Lake Hartwell Hwy 183 (0.79 mi E)		M					
064	C	Seneca Municipal Water Supply (6.67 mi SSW) [004.1]			M				
066	I	Anderson Municipal Water Supply (18.9 mi SSE) [012]			M				
067	I	Lawrence Ramsey Bridge Hwy 27 (4.34 mi SSE) [005.2]				SA	SA		
068	C	High Falls County Park (1.82 mi W)				SA			
071	C	Clemson Dairy (10.2 mi SSE) [006.3]						SM	
077	I	Skimmer Wall (1.00 mi SW)	W						M
078.1	I	Recreation Site (0.53 mi WSW)	W						
079	I	Keowee Dam (0.56 mi NE)	W						M
081***	C	Clemson Operations Center (9.33 mi SE)	W						M
084	I	Sue Craig Road (2.58 mi NNE)	W						M
085	I	Lake Services / Building B9125 (0.88 mi NNW)	W						
091	I	Holders Landing Road (2.09 miles S)				SA			
093****	C	Clemson Operations Center (9.33 mi SE)	W						M

* GPS data reflect approximate accuracy to within 2-5 meters. GPS field measurements were taken as close as possible to the item of interest.

** Control for Fish Only

*** Location was removed from Oconee REMP, ODCM Revision 60 (NCR# 02305408)

**** Location was added to Oconee REMP, ODCM Revision 60 (NCR# 02305408)

[] Location Numbers prior to 1984

TABLE 2.1-B

**OCONEE RADIOLOGICAL MONITORING PROGRAM
SAMPLING LOCATIONS (TLD SITES)**

Table 2.1-B Codes			
IR	Inner Ring	OR	Outer Ring
C	Control	SI	Special Interest

Site #	Measure Type	Location*	Distance (miles)	Sector	Site #	Measure Type	Location*	Distance (miles)	Sector
020	IR	Site Boundary	0.16	N	045	OR	Terminus of HWY 588 at Crooked Creek	4.78	SSW
021	IR	Site Boundary	0.25	NNE	046	OR	HWY 188 at Crooked Creek	4.61	SW
022	IR	Site Boundary	0.53	NE	047	OR	New Hope Church, HWY 188	3.58	WSW
023	IR	Site Boundary	0.93	ENE	048	OR	JCT HWY 175 & 188	3.64	W
024	IR	Site Boundary	0.81	E	049	OR	JCT HWY 201 & 92	3.60	WNW
025	IR	Site Boundary	0.42	ESE	050	OR	Stamp Creek Landing, End of HWY 92	3.53	NW
026	IR	Site Boundary	0.34	SE	051	OR	HWY 128, 1 mile N OF HWY 130	4.64	NNW
027	IR	Site Boundary	0.49	SSE	052	SI	DPC Branch Office Site, Pickens	12.4	ENE
028	IR	Site Boundary	0.46	S	053	SI	DPC Branch Office Site, Liberty	11.7	E
029	IR	Site Boundary	0.56	SSW	054	SI	Post Office - HWY 93 Norris	8.60	ESE
030	IR	Site Boundary	0.42	SW	055	SI	Clemson Meteorology Plot	9.27	SSE
031	IR	Site Boundary	0.27	WSW	056	SI	Water Tower - Seneca	7.30	SSW
076	IR	Site Boundary	0.19	W	057	SI	Oconee Memorial Hospital	8.42	SW
032	IR	Site Boundary	0.19	WNW	058	C	Branch Rd Substation, Walhalla	9.39	WSW
033	IR	Site Boundary	0.21	WNW	059	SI	Tamassee Dar School	9.20	NW
034	IR	Site Boundary	0.22	NW	077	IR	Skimmer wall shared with air monitoring station	1.00	SW
035	IR	Site Boundary	0.17	NNW	078.1	IR	ONS Recreation Site shared with air monitoring station	0.53	WSW
036	OR	Mile Creek Landing	4.18	N	081**	C	Clemson Operations Center	9.33	SE
037	OR	Keowee Church, HWY 327	4.85	NNE	085	IR	Lake Services Bldg 9125 shared with air monitoring location	0.88	NNW
038	OR	Convenience Mart, JCT HWY 183 & 133	4.24	NE	086	IR	Lake Keowee Service Rd at Boat Landing	0.83	NW
039	OR	HWY 133, 1 mile East of JCT HWY 183 & 133	4.02	ENE	087	IR	End of Waterfall Rd	1.33	WNW
040	OR	Microwave Tower, Six Mile	4.74	E	088	IR	Doug Hollow Rd / Transmission Tower	1.00	SSW
041	OR	JCT HWY 101 & 133	4.25	ESE	089	IR	Intersection Hwy 130 & Keowee River Rd	1.19	S
042	OR	Lawrence Chapel Church, HWY 133	4.93	SE	090	IR	Crescent Resources, Keowee River Rd at Beaver Dam	0.79	SE
043	OR	HWY 291 at Issaqueena Park	4.09	SSE	092	OR	Hilton Circle stop sign HWY 188	3.62	WSW
044	OR	HWY 130 at Little River Dam	3.96	S	093***	C	Clemson Operations Center	9.34	SE

* GPS data reflect accuracy to within 2-5 meters. GPS field measurements were taken as close as possible to the item of interest.

** TLD location removed from Oconee REMP, ODCM Revision 60 (NCR # 02305408).

*** TLD location added to Oconee REMP, ODCM Revision 60 (NCR # 02305408).

TABLE 2.2-A

**REPORTING LEVELS FOR RADIOACTIVITY
CONCENTRATIONS IN ENVIRONMENTAL SAMPLES**

Analysis	Water (pCi/liter)	Air Particulates or Gases (pCi/m ³)	Fish (pCi/kg-wet)	Milk (pCi/liter)	Broadleaf Vegetation (pCi/kg-wet)
H-3	20,000 ^(a)	---	---	---	---
Mn-54	1,000	---	30,000	---	---
Fe-59	400	---	10,000	---	---
Co-58	1,000	---	30,000	---	---
Co-60	300	---	10,000	---	---
Zn-65	300	---	20,000	---	---
Zr-Nb-95	400	---	---	---	---
I-131	2 ^(b)	0.9	---	3	100
Cs-134	30	10	1,000	60	1,000
Cs-137	50	20	2,000	70	2,000
Ba-La-140	200	---	---	300	---

(a) For drinking water samples only. This is 40CFR Part 141 value.

(b) If low-level I-131 analyses are performed.

TABLE 2.2-B

REMP ANALYSIS FREQUENCY

Sample Medium	Analysis Schedule	Gamma Isotopic	Tritium	Low Level I-131	Gross Beta	TLD
Air Radioiodine	Weekly	X	---	---	---	---
Air Particulate	Weekly	---	---	---	X	---
	Quarterly Composite	X	---	---	---	---
Direct Radiation	Quarterly	---	---	---	---	X
Surface Water	Monthly	X	---	---	---	---
	Quarterly Composite	---	X	---	---	---
Drinking Water	Monthly	X	---	(a)	X	---
	Quarterly Composite	---	X	---	---	---
Shoreline Sediment	Semiannually	X	---	---	---	---
Milk	Semimonthly	X	---	X	---	---
Fish	Semiannually	X	---	---	---	---
Broadleaf Vegetation	Monthly	X	---	---	---	---

(a) Low level I-131 analysis will be performed if abnormal releases occur which could reasonably result in > 1 pCi/liter of I-131 in drinking water. An LLD of 1 pCi/liter will be required for this analysis.

TABLE 2.2-C

MAXIMUM VALUES FOR THE *A PRIORI* LOWER LIMITS OF DETECTION

Analysis	Water (pCi/liter)	Air Particulates or Gases (pCi/m ³)	Fish (pCi/kg-wet)	Milk (pCi/liter)	Broadleaf Vegetation (pCi/kg-wet)	Sediment (pCi/kg-dry)
Gross Beta	4	0.01	---	---	---	---
H-3	2000	---	---	---	---	---
Mn-54	15	---	130	---	---	---
Fe-59	30	---	260	---	---	---
Co-58, 60	15	---	130	---	---	---
Zn-65	30	---	260	---	---	---
Zr-95	15	---	---	---	---	---
Nb-95	15	---	---	---	---	---
I-131	15 ^(a)	0.07	---	1	60	---
Cs-134	15	0.05	130	15	60	150
Cs-137	18	0.06	150	18	80	180
Ba-La-140	15	---	---	15	---	---

(a) LLD for low-level I-131 analyses is 1 pCi/liter if performed

3.0 INTERPRETATION OF RESULTS

Review of 2019 REMP analysis results was performed to identify changes in environmental levels as a result of station operations. The review is summarized in this section. Data from 2019 was compared to preoperational and historical data. Sample data for some media is not directly comparable to preoperational and earlier operational sample results because of either significant changes in the analysis methods or changes in the reporting of the results. Summary tables containing 2019 information required by Technical Specification Administrative Control 5.6.2 are located in Appendix B. REMP results for 2019 are located in Appendix E.

Evaluation for significant trends was performed for the radionuclides that have required LLDs listed in Selected Licensee Commitment 16.11.6. These radionuclides are collectively referred to as "Selected Licensee Commitments radionuclides" and include H-3, Mn-54, Fe-59, Co-58, Co-60, Zn-65, Zr-95, Nb-95, I-131, Cs-134, Cs-137, Ba-140, and La-140. Drinking water gross beta results are routinely trended. Trending of air particulate gross beta results was initiated in 1996 when the analysis was resumed. Trending is also performed for other radionuclides that are detected and could have been the result of station effluents. Only Selected Licensee Commitment radionuclides were detected in 2019.

Trending was performed by comparing annual mean concentrations of any effluent related detected radionuclide to historical results. Factors evaluated include the frequency of detection and the concentration in terms of the percent of the radionuclide's SLC reporting level (Table 2.2-A). All maximum percent of reporting level values were well below the 100% action level. The highest value reached during 2019 due to ONS operation was 0.96 % for H-3 in a drinking water sample collected at location 066.

Changes in sample location, analytical technique, and presentation of results must be considered when reviewing for trends. Calculation of the annual mean concentrations has been performed differently over the history of the REMP. During 1979-1986, all net results (sample minus background), positive and negative, were included in the calculation of the mean. Only positive net activity results were used to calculate the mean for the other years. A change in gamma spectroscopy analysis systems in 1987 ended a period when many measurements yielded detectable low-level activity for both indicator and control location samples. It is thought that the method the previous system used to estimate net activity may have been vulnerable to false-positive results.

Review of the 2019 data presented in this section supports the conclusion that there were no significant changes in environmental sample radionuclide concentrations of samples collected and analyzed from ONS and surrounding areas that were attributable to plant operations. The radiological environmental data for 2019 indicates that radioactivity concentrations were not higher than expected and all positively identified measurements attributable to ONS operations in 2019 were within limits as specified in the ONS SLC, thus presenting no significant impact on the environment or public safety.

Data presented in Sections 3.1 - 3.8 support the conclusion that there was no significant increase in radioactivity in the environment around ONS due to station operations in 2019. Similarly,

there was no significant increase in ambient background radiation levels in the surrounding areas. The 2019 land use census data, shown in Section 3.9, indicates that no program changes are required as a result of the census.

3.1 AIRBORNE RADIOIODINE AND PARTICULATES

In 2019, 312 radioiodine and particulate samples were analyzed, 260 from five indicator locations and 52 from the control location. Particulate samples were analyzed weekly for gross beta. A quarterly gamma analysis was performed on the quarterly filter composite (by location). Radioiodine samples received a weekly gamma analysis.

There was no detectable I-131 in air samples in 2019. Table 3.1-A and Table 3.1-B give the highest indicator location annual mean and control location annual mean for I-131 since the preoperational period. The tables show similar historical concentrations for both the indicator and control locations and the activities decreasing from early in the operational history of the plant. No I-131 activity due to ONS plant operations has been detected since 1994.

There were no detectable gamma emitting radionuclides detected in air particulate samples in 2019 due to ONS plant operations. No gamma emitting particulates due to ONS operations have been detected in indicator location samples since the change in gamma spectroscopy analysis systems in 1987.

Beta analysis of particulate filters was initiated in March of 1996 and became required by Selected Licensee Commitments in 1998. Gross beta analysis was performed on particulate filters during the preoperational and early operational history of the plant but had not been required since 1984. Figure 3.1 summarizes gross beta results for the indicator location with the highest annual mean and the control location samples. Table 3.1-C gives the Gross Beta concentration in air particulate filters since 1996. Both the indicator and control location results are similar in concentration and are near the lower range of preoperational gross beta results which ranged from 0.04 to 1.46 pCi/m³.

K-40 and Be-7 observed in air samples are naturally occurring radionuclides.

Table 3.1-A Mean Concentration of Air Radioiodine (I-131) (Preoperational-1995)

Year	Indicator Location (pCi/m ³)	Control Location (pCi/m ³)
Preoperational 1969-1972	0.00E0	0.00E0
Feb. 1973 - June 1973	0.00E0	0.00E0
July 1973 - Dec. 1973	0.00E0	0.00E0
Jan. 1974 - June 1974	0.00E0	0.00E0
July 1974 - Dec. 1974	2.60E-2	8.00E-3
Jan. 1975 - June 1975	8.65E-2	3.12E-2
July 1975 - Dec. 1975	1.13E-2	9.52E-3
1976	2.76E-2	2.18E-2
1977	3.60E-2	3.60E-2
1978	2.19E-1	1.15E-1
1979	7.54E-3	4.75E-4
1980	3.07E-3	9.67E-4
1981	6.31E-3	5.39E-4
1982	2.87E-3	8.10E-4
1983	1.48E-3	3.05E-4
1984	8.11E-4	-2.30E-5
1985	7.71E-4	4.54E-4
1986	5.02E-3	7.86E-3
1987 ⁽¹⁾	4.29E-3	5.19E-3
1988	0.00E0	0.00E0
1989	4.99E-4	0.00E0
1990	0.00E0	0.00E0
1991	0.00E0	0.00E0
1992	0.00E0	0.00E0
1993	0.00E0	0.00E0
1994	1.03E-2	0.00E0
1995	0.00E0	0.00E0

0.00E0 indicates no detectable measurements

1979 - 1986 mean based on all net activity

(1) 1987 – Gamma spectroscopy system change

Table 3.1-B Mean Concentration of Air Radioiodine (I-131) (1996-2019)

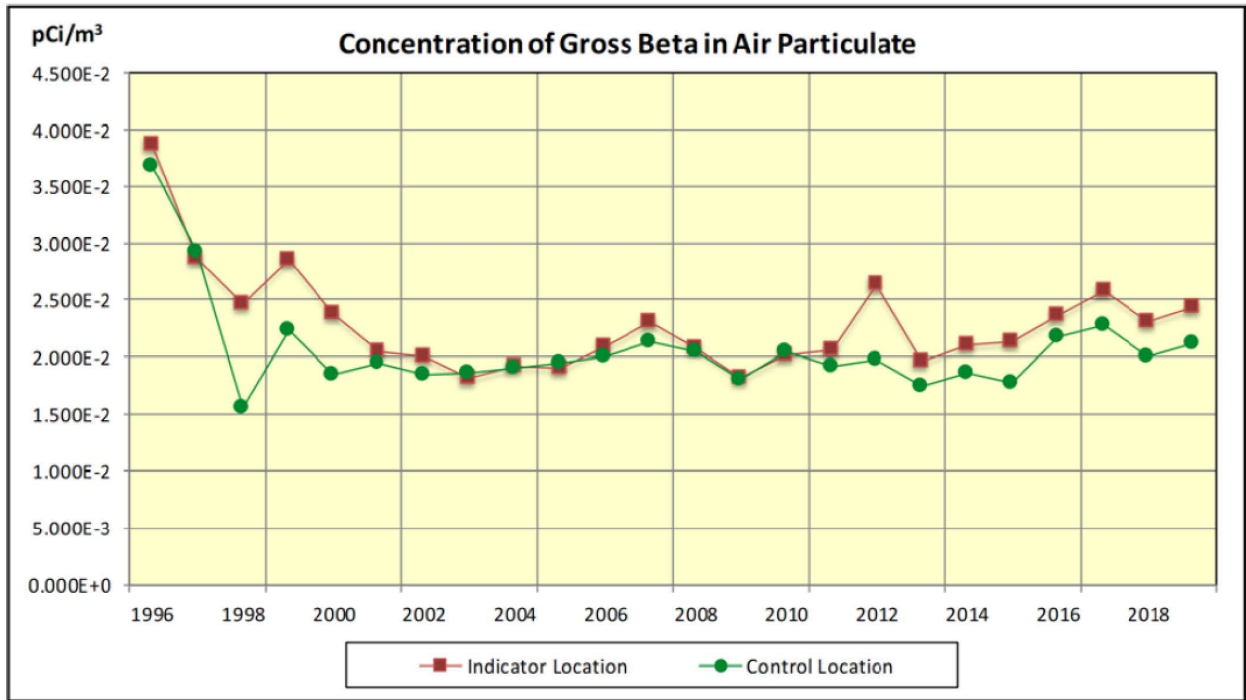
Year	Indicator Location (pCi/m³)	Control Location (pCi/m³)
1996	0.00E0	0.00E0
1997	0.00E0	0.00E0
1998	0.00E0	0.00E0
1999	0.00E0	0.00E0
2000	0.00E0	0.00E0
2001	0.00E0	0.00E0
2002	0.00E0	0.00E0
2003	0.00E0	0.00E0
2004	0.00E0	0.00E0
2005	0.00E0	0.00E0
2006	0.00E0	0.00E0
2007	0.00E0	0.00E0
2008	0.00E0	0.00E0
2009	0.00E0	0.00E0
2010	0.00E0	0.00E0
2011 ⁽¹⁾	5.05E-2	4.13E-2
2012	0.00E0	0.00E0
2013	0.00E0	0.00E0
2014 ⁽²⁾	0.00E0	0.00E0
2015	0.00E0	0.00E0
2016	0.00E0	0.00E0
2017	0.00E0	0.00E0
2018	0.00E0	0.00E0
2019	0.00E0	0.00E0

0.00E0 indicates no detectable measurements

(1) 2011 concentration affected by Fukushima Daiichi

(2) 2014 Gamma spectroscopy system was replaced 10JUL2014. Gamma spectroscopy system hardware, detector cooling apparatus, software, electronics, nuclide identification libraries, and analytical test matrix components for test matrices were modified (NCR # 0739995). No analytical changes were noted due to the 2014 gamma spectroscopy system change.

Figure 3.1



There is no reporting level for gross beta in air particulate

Table 3.1-C Mean Concentration of Gross Beta in Air Particulate

Monitoring Period	Indicator Location (pCi/m³)	Control Location (pCi/m³)
1996	3.87E-2	3.69E-2
1997	2.87E-2	2.92E-2
1998	2.47E-2	1.56E-2
1999	2.85E-2	2.23E-2
2000	2.38E-2	1.85E-2
2001	2.05E-2	1.94E-2
2002	2.01E-2	1.84E-2
2003	1.86E-2	1.82E-2
2004	1.92E-2	1.90E-2
2005	1.95E-2	1.91E-2
2006	2.09E-2	2.00E-2
2007	2.31E-2	2.13E-2
2008	2.08E-2	2.04E-2
2009	1.82E-2	1.80E-2
2010	2.02E-2	2.04E-2
2011	2.06E-2	1.92E-2
2012	2.63E-2	1.97E-2
2013	1.96E-2	1.74E-2
2014	2.11E-2	1.86E-2
2015	2.13E-2	1.78E-2
2016	2.37E-2	2.17E-2
2017	2.58E-2	2.28E-2
2018	2.30E-2	2.01E-2
2019	2.44E-2	2.12E-2

3.2 DRINKING WATER

Gross beta analysis and gamma spectroscopy were performed on 39 monthly drinking water samples. These samples were composited to form 12 quarterly composite period samples for Tritium analysis. Two indicator locations and a control location were sampled; however, only one of the indicator locations is downstream of the effluent release point.

Table 3.2-A lists the highest indicator location annual mean and control location annual mean for gross beta results since the preoperational period through 1995. Table 3.2-B lists the highest indicator location annual mean and control location annual mean for gross beta results from 1996 through 2019. The highest indicator location had an average concentration of 5.38 pCi/liter in 2019, and the control location had a concentration of 4.75 pCi/liter. The gross beta mean indicator activity and mean control activity increased in 2019 due to an analytical method change affecting analytical sensitivities (Appendix A, III). The difference between the mean indicator and the mean control activities for 2019 are in trend with the previous year's differences. Figure 3.2-1 shows the highest indicator and control location annual means for gross beta. The tables show that 2019 gross beta levels in drinking water are lower than preoperational concentrations.

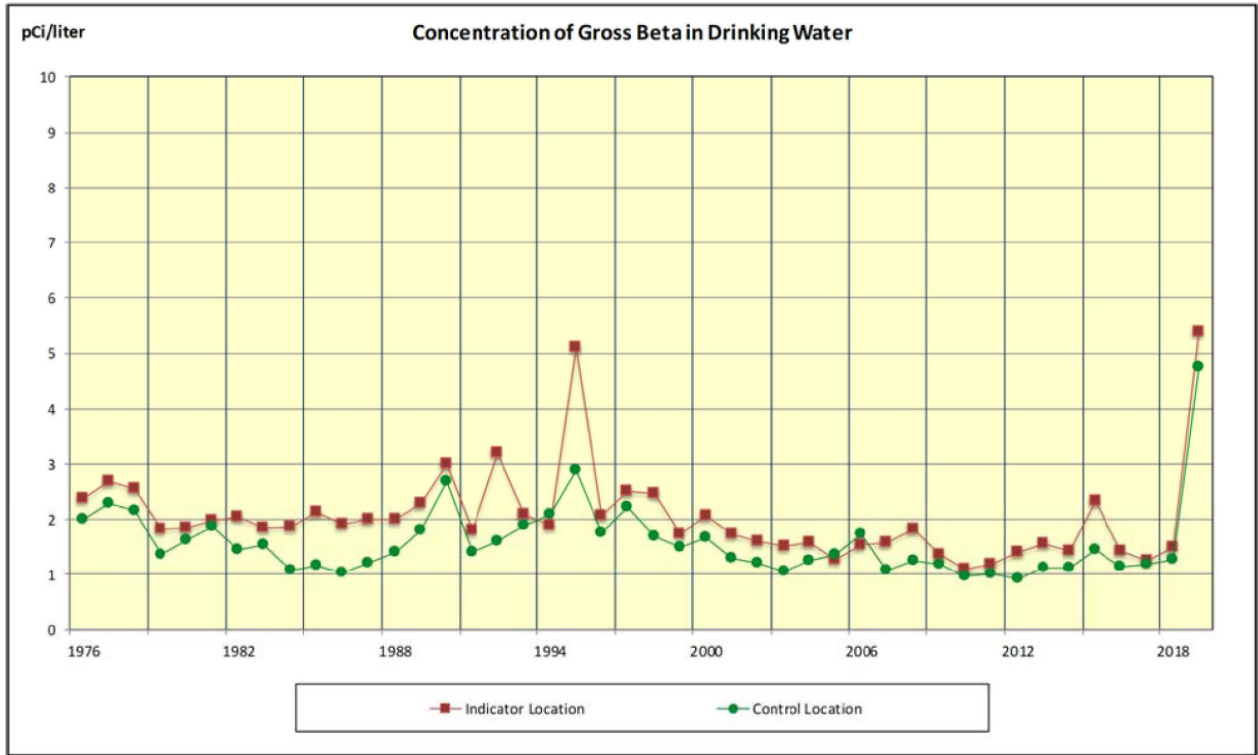
Tritium was detected in one of the twelve composite samples during 2019. The 2019 mean indicator location 066 concentration was 192 pCi/liter, which is 0.96% of the 20,000 pCi/l Tritium reporting level. Table 3.2-A, Table 3.2-B and Figure 3.2-2 show the highest indicator and control location annual means for Tritium since analysis was initiated early in the operational period. Tritium concentrations have decreased at both the indicator and control locations. The closure of the Clemson water plant in 1989 is one reason for the decrease shown in the table and graph. The Clemson site was typically the high mean location when the plant was in operation.

There were no gamma emitting radionuclides attributable to plant operations identified in drinking water samples in 2019. Gamma spectroscopy analysis has not detected any gamma activity in the water supplies since 1988.

The dose for consumption of water was less than one mrem per year based on effluent calculations and there were no abnormal releases exceeding 1 pCi/liter I-131 in 2019; therefore, low-level iodine analysis is not required.

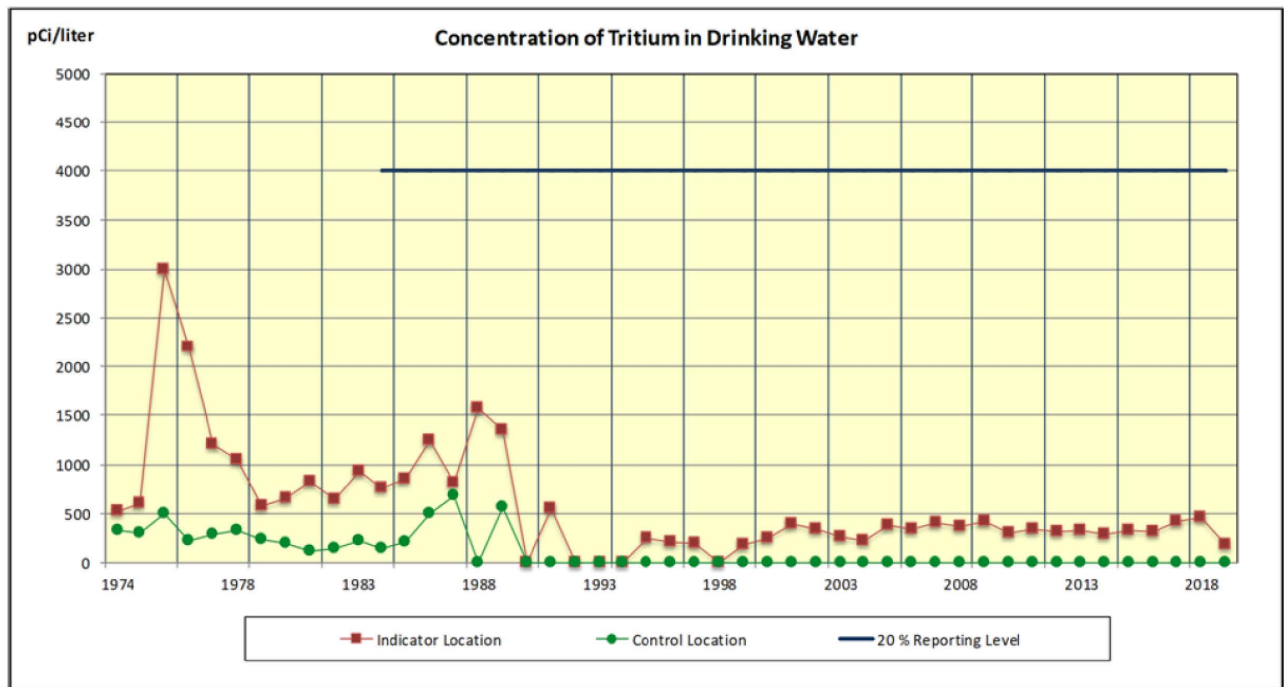
K-40 and Be-7 observed in drinking water samples are naturally occurring radionuclides.

Figure 3.2-1



Analytical method changes implemented in 2019

Figure 3.2-2



Current reporting level implemented 1984

Table 3.2-A Mean Concentrations of Radionuclides in Drinking Water (1971-1995)

Year	Gross Beta (pCi/l)		Tritium (pCi/l)	
	Indicator Location	Control Location	Indicator Location	Control Location
Preoperational ending Jan. 1971	3.03	5.90	Analysis not required	
Preoperational ending Jan. 1973	3.58	4.94	Analysis not required	
Feb. 1973 - June 1973	Qualitative results reported		Analysis not required	
June 1973 - Dec. 1973	7.15	21.78	Analysis not required	
Jan. 1974 - June 1974	3.13	6.98	Analysis not required	
July 1974 - Dec. 1974	2.24	2.02	525	330
Jan. 1975 - June 1975	1.98	1.59	600	300
July 1975 - Dec. 1975	2.01	1.22	2990	505
1976	2.38	2.00	2196	224
1977	2.70	2.30	1200	290
1978	2.56	2.17	1050	333
1979	1.83	1.36	576	235
1980	1.86	1.63	660	200
1981	1.98	1.88	830	127
1982	2.04	1.45	643	153
1983	1.85	1.54	937	220
1984	1.87	1.08	765	145
1985	2.14	1.16	856	210
1986	1.91	1.04	1240	503
1987	2.00	1.20	815	680
1988	2.00	1.40	1570	0.00
1989	2.30	1.80	1350	559
1990	3.00	2.70	0.00	0.00
1991	1.80	1.40	558	0.00
1992	3.20	1.60	0.00	0.00
1993	2.10	1.90	0.00	0.00
1994	1.90	2.10	0.00	0.00
1995	5.10	2.90	248	0.00

0.00 indicates no detectable measurements

1989 - Clemson water plant closes; nearest downstream plant is Anderson.

1979 - 1986 mean based on all net activity results

Table 3.2-B Mean Concentrations of Radionuclides in Drinking Water (1996-2019)

Year	Gross Beta (pCi/l)		Tritium (pCi/l)	
	Indicator Location	Control Location	Indicator Location	Control Location
1996	2.07	1.77	214	0.00
1997	2.52	2.23	194	0.00
1998	2.48	1.70	0.00	0.00
1999	1.73	1.49	185	0.00
2000	2.07	1.68	251	0.00
2001	1.75	1.29	390	0.00
2002	1.61	1.21	338	0.00
2003	1.51	1.05	266	0.00
2004	1.58	1.25	225	0.00
2005	1.28	1.37	377	0.00
2006	1.54	1.75	340	0.00
2007	1.58	1.08	402	0.00
2008	1.82	1.25	372	0.00
2009	1.37	1.19	415	0.00
2010	1.10	0.97	308	0.00
2011	1.18	1.00	339	0.00
2012	1.40	0.92	322	0.00
2013	1.57	1.11	325	0.00
2014	1.43	1.12	292	0.00
2015	2.34	1.46	325	0.00
2016	1.44	1.15	325	0.00
2017	1.25	1.19	419	0.00
2018	1.50	1.27	356	0.00
2019 ⁽¹⁾	5.38	4.75	192	0.00

0.00 indicates no detectable measurements

(1) Analytical method changes were implemented in 2019 for Gross Beta analysis.

3.3 SURFACE WATER

Gamma spectroscopy was performed on 26 monthly surface water samples. These samples were composited to form eight quarterly composite period samples for Tritium analysis. One indicator and one control location were sampled. The indicator location is near the liquid effluent release point.

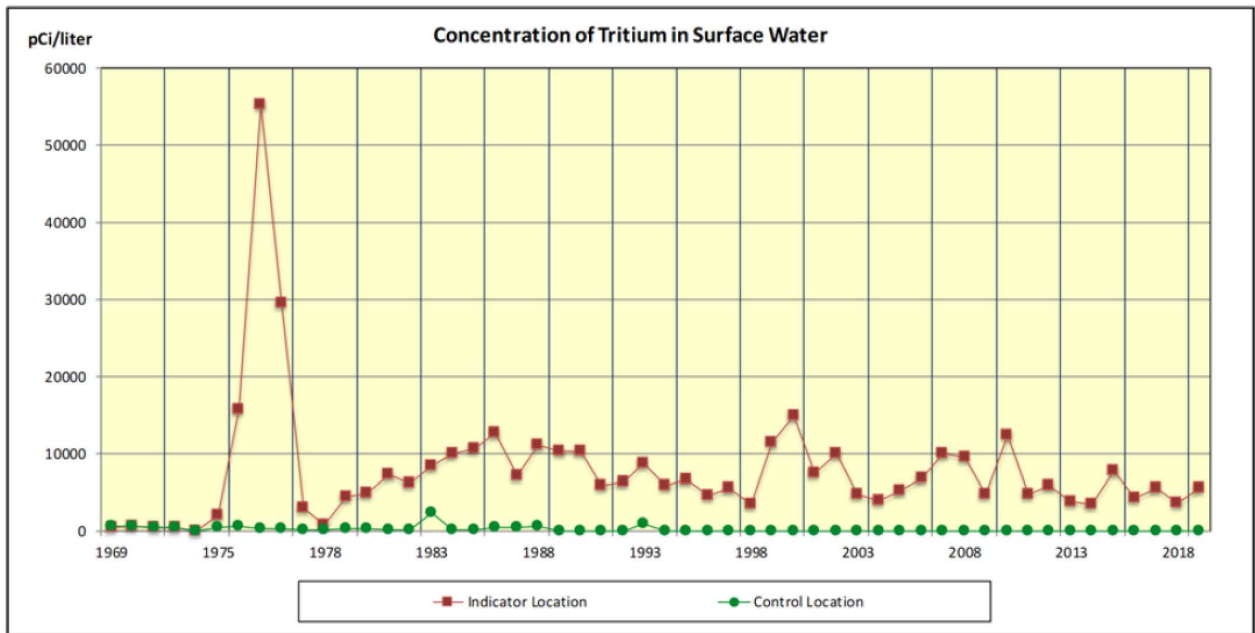
Tritium was detected in the four indicator location samples. The 2019 average concentration was 5,560 pCi/liter. The individual samples ranged from 1,440 to 12,500 pCi/liter. For comparison purposes, the 2018 mean concentration was 3,515 pCi/liter. Tritium was not detected in any control surface water samples.

Figure 3.3 shows the indicator and control annual means for Tritium since the preoperational period. Table 3.3-A lists the indicator annual means since preoperational through 1995. Table 3.3-B lists the indicator annual means from 1996 through 2019.

Gamma spectroscopy analysis did not detect any station related gamma activity during 2019. No gamma emitting radionuclides attributable to station operation have been detected in surface water samples since 1999. Table 3.3-A and Table 3.3-B summarize the indicator annual means of radionuclides detected since the change in the gamma spectroscopy analysis system in 1987. Visual inspection of the gamma spectroscopy tabular data covering the early operational period through 2019 did not reveal any increasing trends.

K-40 and Be-7 observed in surface water samples are naturally occurring radionuclides.

Figure 3.3



There is no reporting level for Tritium in surface water

Table 3.3-A Mean Concentrations of Radionuclides in Surface Water (1969-1995)

Year	Co-58 (pCi/l)	Co-60 (pCi/l)	Nb-95 (pCi/l)	Cs-137 (pCi/l)	H-3 pCi/l)
Preoperational 1969		Qualitative results reported			4.86E2
Preoperational 1970		Qualitative results reported			5.94E2
Preoperational 1971		Qualitative results reported			4.01E2
Preoperational 1972		Qualitative results reported			3.62E2
1973		Qualitative results reported			0.00E0
1974	0.00E0	1.32E1	0.00E0	1.60E1	1.99E3
Jan. 1975 – June 1975	0.00E0	0.00E0	0.00E0	0.00E0	1.56E4
July 1975 – Dec. 1975	0.00E0	1.34E1	0.00E0	0.00E0	5.52E4
1976	1.08E2	3.30E1	0.00E0	3.50E1	2.95E4
1977	2.60E1	1.80E1	0.00E0	3.10E1	2.90E3
1978	2.96E2	0.00E0	0.00E0	2.22E1	8.00E2
1979	1.33E0	2.60E0	1.78E0	2.82E0	4.37E3
1980	1.56E0	2.30E0	1.22E0	5.40E0	4.93E3
1981	1.10E0	6.10E-1	1.70E0	3.90E0	7.21E3
1982	6.14E-1	1.99E0	2.29E0	4.85E0	6.13E3
1983	6.99E-1	3.02E0	3.91E-1	6.83E-1	8.40E3
1984	9.40E-1	6.30E-1	7.90E-1	4.83E-1	9.90E3
1985	2.15E-1	6.27E-1	4.95E-1	9.90E-1	1.05E4
1986	3.28E0	1.23E0	1.14E0	3.07E-1	1.26E4
1987 ⁽¹⁾	5.10E1	3.40E0	4.00E0	0.00E0	7.08E3
1988	6.20E0	5.00E0	2.50E0	3.50E0	1.10E4
1989	5.30E0	3.00E0	0.00E0	3.40E0	1.02E4
1990	1.70E0	1.60E0	0.00E0	0.00E0	1.03E4
1991	5.40E0	0.00E0	0.00E0	0.00E0	5.76E3
1992	2.50E0	0.00E0	0.00E0	0.00E0	6.22E3
1993	0.00E0	0.00E0	0.00E0	0.00E0	8.62E3
1994	0.00E0	0.00E0	0.00E0	0.00E0	5.75E3
1995	0.00E0	0.00E0	0.00E0	0.00E0	6.65E3

0.00E0 indicates no detectable measurements
 1979-1986 mean based on all net activity results
 (1) 1987 – Gamma spectroscopy system change

Table 3.3-B Mean Concentrations of Radionuclides in Surface Water (1996-2019)

Year	Co-58 (pCi/l)	Co-60 (pCi/l)	Nb-95 (pCi/l)	Cs-137 (pCi/l)	H-3 pCi/l)
1996	0.00E0	0.00E0	0.00E0	0.00E0	4.54E3
1997	0.00E0	0.00E0	0.00E0	0.00E0	5.50E3
1998	0.00E0	0.00E0	0.00E0	0.00E0	3.35E3
1999	2.73E1	0.00E0	0.00E0	0.00E0	1.13E4
2000	0.00E0	0.00E0	0.00E0	0.00E0	1.48E4
2001	0.00E0	0.00E0	0.00E0	0.00E0	7.43E3
2002	0.00E0	0.00E0	0.00E0	0.00E0	1.00E4
2003	0.00E0	0.00E0	0.00E0	0.00E0	4.77E3
2004	0.00E0	0.00E0	0.00E0	0.00E0	3.86E3
2005	0.00E0	0.00E0	0.00E0	0.00E0	5.15E3
2006	0.00E0	0.00E0	0.00E0	0.00E0	6.72E3
2007	0.00E0	0.00E0	0.00E0	0.00E0	9.91E3
2008	0.00E0	0.00E0	0.00E0	0.00E0	9.43E3
2009	0.00E0	0.00E0	0.00E0	0.00E0	4.68E3
2010	0.00E0	0.00E0	0.00E0	0.00E0	1.23E4
2011	0.00E0	0.00E0	0.00E0	0.00E0	4.75E3
2012	0.00E0	0.00E0	0.00E0	0.00E0	5.76E3
2013	0.00E0	0.00E0	0.00E0	0.00E0	3.68E3
2014 ⁽¹⁾	0.00E0	0.00E0	0.00E0	0.00E0	3.49E3
2015	0.00E0	0.00E0	0.00E0	0.00E0	7.73E3
2016	0.00E0	0.00E0	0.00E0	0.00E0	4.29E3
2017	0.00E0	0.00E0	0.00E0	0.00E0	5.56E3
2018	0.00E0	0.00E0	0.00E0	0.00E0	3.52E3
2019	0.00E0	0.00E0	0.00E0	0.00E0	5.56E3

0.00E0 indicates no detectable measurements

(1) 2014 Gamma spectroscopy system was replaced 10JUL2014. Gamma spectroscopy system hardware, detector cooling apparatus, software, electronics, nuclide identification libraries, and analytical test matrix components for test matrices were modified (NCR # 0739995). No analytical changes were noted due to the 2014 gamma spectroscopy system change.

3.4 MILK

Gamma spectroscopy and low level iodine analysis was performed on 26 milk samples collected from the control location in 2019. No indicator dairies were sampled during 2019 and none were identified by the 2019 land use census.

There were no gamma emitting radionuclides due to ONS plant operations identified in milk samples in 2019. Cs-137 is the only radionuclide, other than naturally occurring, reported in milk samples since 1988 (excluding Fukushima Daiichi). Cs-137 in milk is not unusual. It is a constituent of nuclear weapons test fallout and nuclear plant accidents and has been observed periodically in samples from indicator and control locations since the preoperational period.

Table 3.4-A lists the highest indicator location annual mean and control location annual mean for Cs-137 since the preoperational period through 1995. Table 3.4-B lists the highest indicator location annual mean and control location annual mean for Cs-137 from 1996 through 2019. The tables show similar concentrations for both indicator and control locations through 2005, and Cs-137 was not detected in the control location since 1996.

K-40 observed in milk samples is a naturally occurring radionuclide.

Table 3.4-A Mean Concentration of Radionuclides in Milk (Preoperational-1995)

Year	Cs-137 Indicator (pCi/l)	Cs-137 Control (pCi/l)
Preoperational	1.57E1	1.46E1
Feb. 1973 – June 1973	Qualitative results reported	Qualitative results reported
July 1973 – Dec. 1973	5.80E0	Qualitative results reported
Jan. 1974 – June 1974	5.30E0	0.00E0
July 1974 – Dec. 1974	1.11E1	0.00E0
Jan. 1975 – June 1975	1.51E1	9.45E0
July 1975 – Dec. 1975	0.00E0	0.00E0
1976	1.80E1	7.47E0
1977	0.00E0	0.00E0
1978	1.33E1	1.33E1
1979	7.25E0	2.52E0
1980	3.58E0	2.63E0
1981	5.52E0	5.51E0
1982	2.71E0	3.25E0
1983	5.04E0	-4.27E-1
1984	2.30E0	2.58E0
1985	2.38E0	1.31E0
1986	2.92E0	2.97E0
1987 ⁽¹⁾	4.90E0	4.90E0
1988	3.90E0	3.20E0
1989	4.70E0	2.90E0
1990	6.40E0	0.00E0
1991	5.00E0	0.00E0
1992	6.60E0	0.00E0
1993	0.00E0	0.00E0
1994	0.00E0	1.80E0
1995	2.30E0	2.00E0

0.00E0 indicates no detectable measurements

1979 - 1986 mean based on all net activity results

(1) 1987 – Gamma spectroscopy system change

Table 3.4-B Mean Concentration of Radionuclides in Milk (1996-2019)

Year	Cs-137 Indicator (pCi/l)	Cs-137 Control (pCi/l)
1996	0.00E0	4.10E0
1997	0.00E0	0.00E0
1998	0.00E0	0.00E0
1999	0.00E0	0.00E0
2000	0.00E0	0.00E0
2001	0.00E0	0.00E0
2002	0.00E0	0.00E0
2003	0.00E0	0.00E0
2004	0.00E0	0.00E0
2005 ⁽¹⁾	0.00E0	0.00E0
2006	No Indicator Location	0.00E0
2007	No Indicator Location	0.00E0
2008	No Indicator Location	0.00E0
2009	No Indicator Location	0.00E0
2010	No Indicator Location	0.00E0
2011	No Indicator Location	0.00E0
2012	No Indicator Location	0.00E0
2013	No Indicator Location	0.00E0
2014 ⁽²⁾	No Indicator Location	0.00E0
2015	No Indicator Location	0.00E0
2016	No Indicator Location	0.00E0
2017	No Indicator Location	0.00E0
2018	No Indicator Location	0.00E0
2019	No Indicator Location	0.00E0

0.00E0 indicates no detectable measurements

- (1) The Oconee milk program was updated to align with NUREG-1301 during 2005 (NCR # 01753418). Location 071 was designated as the new control site effective with the 7/12/2005 sampling.
- (2) 2014 Gamma spectroscopy system was replaced 10JUL2014. Gamma spectroscopy system hardware, detector cooling apparatus, software, electronics, nuclide identification libraries, and analytical test matrix components for test matrices were modified (NCR # 0739995). No analytical changes were noted due to the 2014 gamma spectroscopy system change.

3.5 BROADLEAF VEGETATION

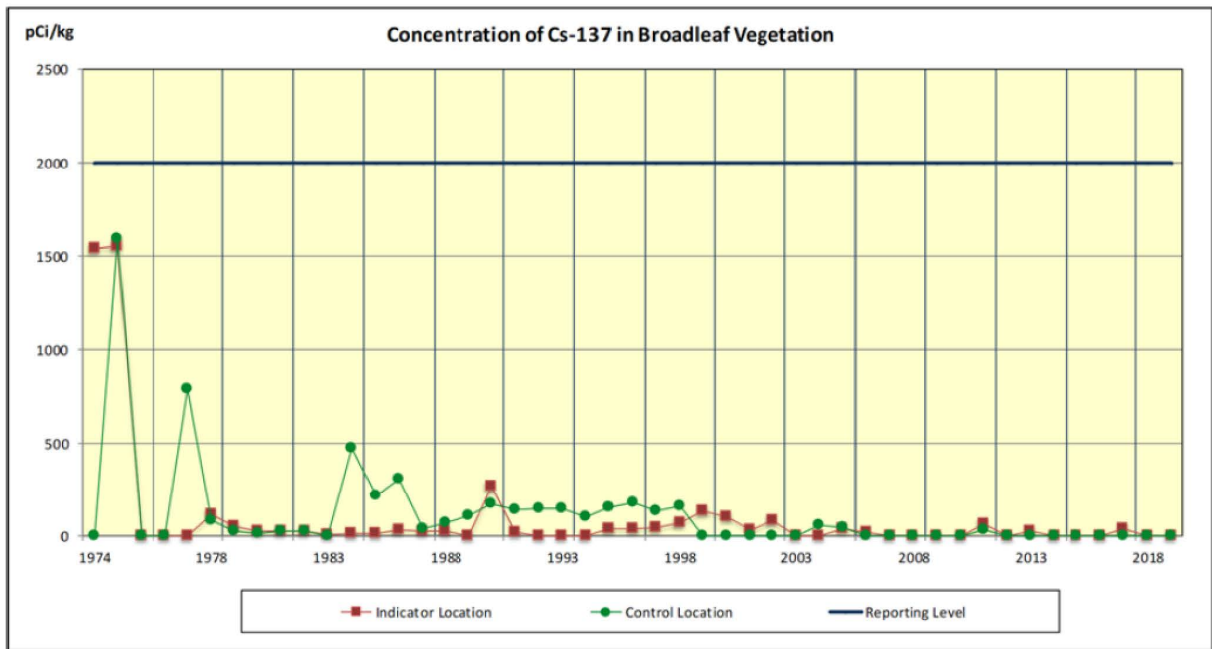
Gamma spectroscopy was performed on 48 broadleaf vegetation samples during 2019. Three indicator locations and one control location were sampled. There were no gamma emitting radionuclides due to ONS plant operations identified in vegetation samples in 2019.

Cs-137 is the only radionuclide, other than naturally occurring, reported in vegetation samples since the change in gamma spectroscopy analysis systems in 1987. Figure 3.5 shows the indicator and control annual means for Cs-137 since the early operational period of the plant. Table 3.5 shows historical concentrations of Cs-137.

It is not unusual for Cs-137 to be present in vegetation. It is a constituent of nuclear weapons test fallout and nuclear plant accidents and has been observed in samples from indicator and control locations since the preoperational period. Table 3.5 lists the highest indicator location annual mean and control location annual mean for Cs-137 since early in the station’s operational history. Visual inspection of the tabular data did not reveal any increasing trends.

K-40 and Be-7 observed in broadleaf vegetation samples are naturally occurring radionuclides.

Figure 3.5



2011 concentration affected by Fukushima Daiichi

Table 3.5 Mean Concentration of Radionuclides in Vegetation

Year	Cs-137 Indicator (pCi/kg)	Cs-137 Control (pCi/kg)
July 1974 - Dec. 1974	1.54E3	0.00E0
Jan. 1975 - June 1975	1.55E3	1.59E3
July 1975 - Dec. 1975	0.00E0	0.00E0
1976	0.00E0	0.00E0
1977	0.00E0	7.90E2
1978	1.19E2	8.19E1
1979	5.04E1	2.96E1
1980	2.80E1	1.55E1
1981	2.99E1	2.60E1
1982	2.42E1	2.62E1
1983	7.44E0	5.35E-1
1984	1.37E1	4.74E2 [†]
1985	1.62E1	2.20E2
1986	3.28E1	3.12E2
1987 ⁽¹⁾	2.70E1	4.20E1
1988	2.40E1	7.50E1
1989	0.00E0	1.08E2
1990	2.73E2	1.74E2
1991	2.20E1	1.45E2
1992	0.00E0	1.46E2
1993	0.00E0	1.49E2
1994	0.00E0	1.06E2
1995	4.30E1	1.58E2
1996	3.79E1	1.83E2
1997	4.73E1	1.35E2
1998	7.28E1	1.61E2 ^{††}
1999	1.34E2	0.00E0 ^{†††}
2000	1.06E2	0.00E0
2001	3.19E1	0.00E0
2002	8.44E1	0.00E0
2003	0.00E0	0.00E0
2004	0.00E0	5.96E1
2005	4.51E1	4.11E1
2006	1.77E1	0.00E0
2007	0.00E0	0.00E0
2008	0.00E0	0.00E0
2009	0.00E0	0.00E0
2010	0.00E0	0.00E0
2011	6.68E1 ^{††††}	3.35E1 ^{††††}
2012	0.00E0	0.00E0
2013	2.57E1	0.00E0
2014 ⁽²⁾	0.00E0	0.00E0
2015	0.00E0	0.00E0
2016	0.00E0	0.00E0
2017	3.94E1	0.00E0
2018	0.00E0	0.00E0
2019	0.00E0	0.00E0

0.00E0 indicates no detectable measurements

Qualitative results reported prior to 1974

1979 - 1986 mean based on all net activity

(1) 1987 – Gamma spectroscopy system change

(2) 2014 Gamma spectroscopy system was replaced 10JUL2014. Gamma spectroscopy system hardware, detector cooling apparatus, software, electronics, nuclide identification libraries, and analytical test matrix components for test matrices were modified (NCR # 0739995). No analytical changes were noted due to the 2014 gamma spectroscopy system change.

† Control location changed to 073 in 1984

†† Control location 081 added in 1998

††† Control location 073 removed in 1999

†††† 2011 concentration affected by Fukushima Daiichi

3.6 FISH

In 2019, gamma spectroscopy was performed on 12 fish samples. Two downstream indicator locations and one control location were sampled. There were no gamma emitting radionuclides due to ONS plant operations identified in fish samples in 2019.

Figures 3.6-1 and 3.6-2 are graphs displaying the annual means for Cs-137 and Cs-134. Historically, both are contributors to the calculated dose from liquid effluents from ingestion of fish. Radioactivity concentrations in downstream fish samples are higher than those reported in preoperational fish samples, however, concentrations in fish have decreased over time with decreases in radioactive material releases from the plant.

One factor affecting the trend analysis is a change in sampling locations. In 1984, a second downstream fish location was added. Location 063 is closer to the liquid effluent discharge point and has been the highest mean indicator since it was added.

Table 3.6 lists the highest indicator location annual means since the preoperational period for radionuclides detected in 2019. Also included in the table are radionuclides that have been identified in this media since the change in analysis systems in 1987. Comparison of data to previous years does not indicate any increases in concentrations.

K-40 observed in fish samples is a naturally occurring radionuclide.

Figure 3.6-1

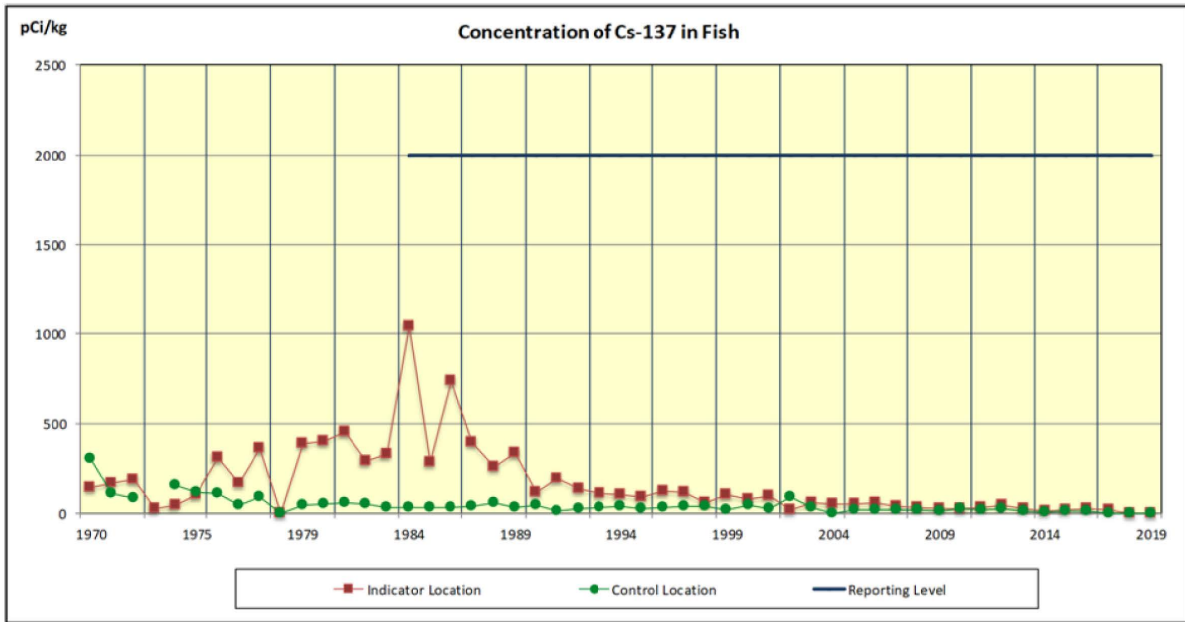
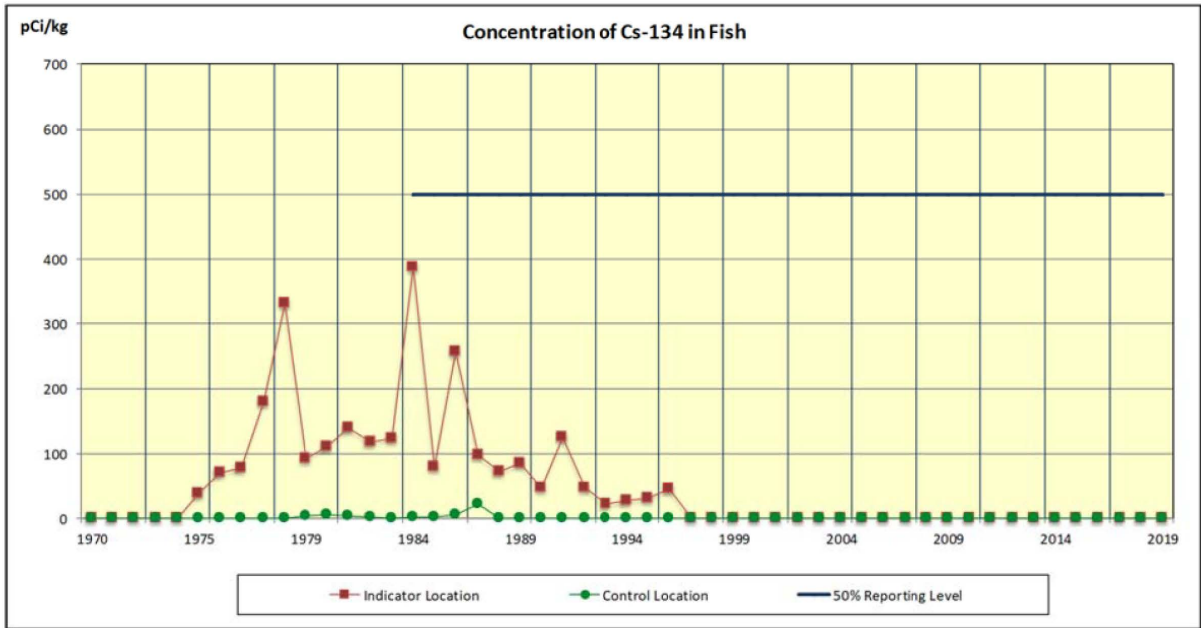


Figure 3.6-2



Current reporting levels implemented 1984

Table 3.6 Mean Concentrations of Radionuclides in Fish

Year	Co-58 (pCi/kg)	Co-60 (pCi/kg)	Cs-134 (pCi/kg)	Cs-137 (pCi/kg)
Preop ending Jan.1971	0.00E0	0.00E0	0.00E0	1.46E2
Preop ending Jan.1973	0.00E0	0.00E0	0.00E0	1.66E2
Feb. 1973 - June 1973	Qualitative results reported-no significant measurements above background			
July 1973 - Dec. 1973	0.00E0	0.00E0	0.00E0	1.89E2
Jan. 1974 - June 1974	0.00E0	0.00E0	0.00E0	2.47E1
July 1974 - Dec. 1974	0.00E0	0.00E0	0.00E0	4.85E1
Jan. 1975 - June 1975	0.00E0	0.00E0	3.81E1	1.05E2
July 1975 - Dec. 1975	8.50E1	0.00E0	7.00E1	3.13E2
1976	5.70E1	1.14E2	7.73E1	1.66E2
1977	0.00E0	0.00E0	1.80E2	3.60E2
1978	3.27E2	0.00E0	3.31E2	0.00E0
1979	1.91E0	1.56E1	9.26E1	3.88E2
1980	1.45E1	1.90E1	1.10E2	3.99E2
1981	2.25E1	1.49E1	1.40E2	4.51E2
1982	9.83E-1	8.03E0	1.17E2	2.94E2
1983	3.35E1	4.53E0	1.24E2	3.32E2
1984	1.21E2	6.23E1	3.87E2	1.04E3
1985	1.62E1	1.10E1	7.93E1	2.85E2
1986	9.56E1	2.59E1	2.57E2	7.36E2
1987 ⁽¹⁾	1.63E2	6.30E1	9.80E1	3.93E2
1988	9.60E1	0.00E0	7.20E1	2.60E2
1989	4.30E1	1.50E1	8.60E1	3.36E2
1990	1.50E1	0.00E0	4.80E1	1.19E2
1991	4.59E1	0.00E0	1.25E2	1.94E2
1992	6.10E1	0.00E0	4.80E1	1.36E2
1993	0.00E0	0.00E0	2.10E1	1.10E2
1994	0.00E0	0.00E0	2.80E1	1.05E2
1995	0.00E0	0.00E0	3.10E1	9.20E1
1996	0.00E0	0.00E0	4.49E1	1.25E2
1997	0.00E0	0.00E0	0.00E0	1.18E2
1998	0.00E0	0.00E0	0.00E0	5.79E1
1999	0.00E0	0.00E0	0.00E0	1.04E2
2000	0.00E0	0.00E0	0.00E0	7.54E1
2001	1.72E1	0.00E0	0.00E0	9.92E1
2002	0.00E0	0.00E0	0.00E0	9.37E1
2003	5.02E1	0.00E0	0.00E0	6.04E1
2004	0.00E0	0.00E0	0.00E0	5.29E1
2005	0.00E0	0.00E0	0.00E0	5.14E1
2006	0.00E0	0.00E0	0.00E0	5.58E1
2007	0.00E0	0.00E0	0.00E0	4.10E1
2008	0.00E0	0.00E0	0.00E0	3.13E1
2009	9.01E0	0.00E0	0.00E0	2.68E1
2010	0.00E0	0.00E0	0.00E0	2.69E1
2011	0.00E0	0.00E0	0.00E0	3.53E1
2012	1.23E2	3.61E1	0.00E0	4.32E1
2013	0.00E0	0.00E0	0.00E0	2.44E1
2014 ⁽²⁾	0.00E0	0.00E0	0.00E0	1.40E1
2015	0.00E0	0.00E0	0.00E0	1.94E1
2016	0.00E0	0.00E0	0.00E0	2.74E1
2017	0.00E0	0.00E0	0.00E0	1.73E1
2018	0.00E0	0.00E0	0.00E0	0.00E0
2019	0.00E0	0.00E0	0.00E0	0.00E0

0.00E0 indicates no detectable measurements

1979 - 1986 mean based on all net activity

(1) 1987 – Gamma spectroscopy system change

(2) 2014 Gamma spectroscopy system was replaced 10JUL2014. Gamma spectroscopy system hardware, detector cooling apparatus, software, electronics, nuclide identification libraries, and analytical test matrix components for test matrices were modified (NCR # 0739995). No analytical changes were noted due to the 2014 gamma spectroscopy system change.

3.7 SHORELINE SEDIMENT

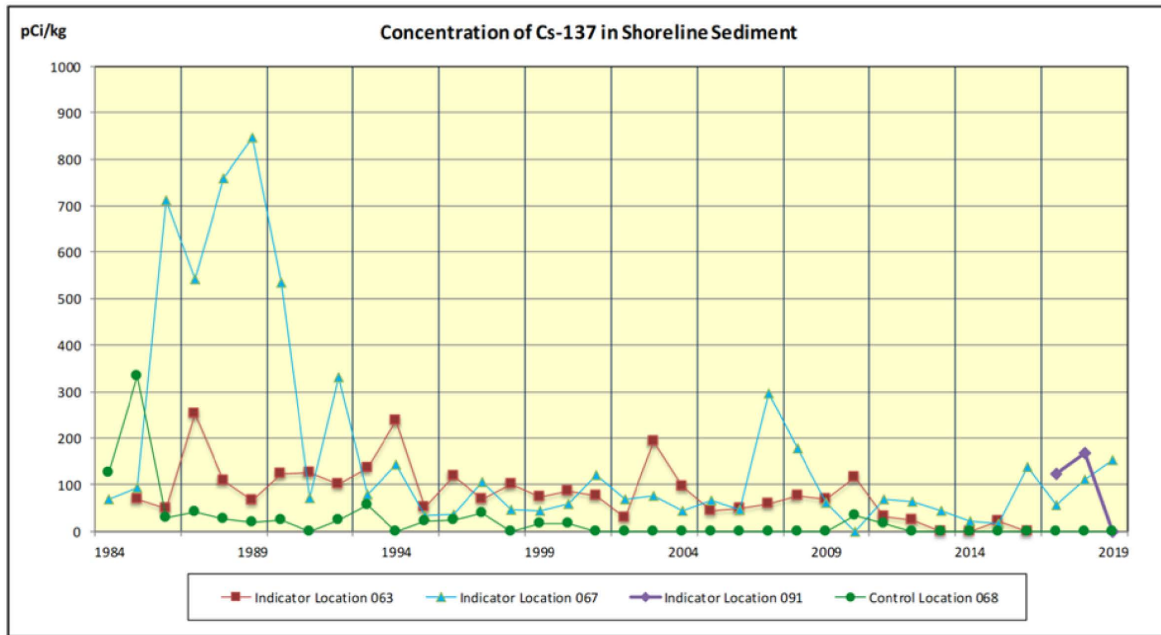
Gamma spectroscopy was performed on six sediment samples. Two downstream indicator locations and one control location were sampled. Four samples were taken from indicator locations and two from the control location.

Cs-137 was identified in one of the four indicator location samples. Cs-137 was not identified in the control location samples. The highest 2019 individual sample Cs-137 concentration was 152 pCi/kg. Table 3.7 lists the highest indicator location annual means since shoreline sediment was initiated in 1984. Included in the table are radionuclides that have been identified in this media since the change in analysis systems in 1987.

Visual inspection of the tabular data did not reveal any trends. Figure 3.7 is a graph of the Cs-137 annual means. Historically, Cs-137 is a contributor to the calculated dose from liquid effluents from shoreline sediment. No trends are apparent.

K-40 and Be-7 observed in shoreline samples are naturally occurring radionuclides.

Figure 3.7



There are no reporting levels for shoreline sediment

Table 3.7 Mean Concentrations of Radionuclides in Shoreline Sediment (pCi/kg)

Year	Mn-54	Co-58	Co-60	Zn-65	Cs-134	Cs-137	Ag-110m	Sb-125
1984	1.10E1	1.09E1	1.19E1	0.00E0	7.77E1	5.16E1	0.00E0	0.00E0
1985	9.39E0	1.27E0	4.79E0	0.00E0	7.63E1	9.47E1	0.00E0	0.00E0
1986	2.24E1	1.62E1	2.50E1	0.00E0	1.41E2	7.12E2	0.00E0	0.00E0
1987 ⁽¹⁾	5.40E1	4.70E2	5.07E2	0.00E0	1.01E2	6.22E2	3.46E2	0.00E0
1988	3.30E1	1.20E2	1.87E2	6.70E1	6.60E1	7.59E2	1.62E2	3.67E2
1989	2.30E1	1.24E2	1.96E2	0.00E0	5.40E1	8.48E2	5.50E1	1.86E2
1990	3.40E1	8.00E1	2.59E2	0.00E0	4.50E1	5.36E2	1.71E2	9.00E1
1991	3.26E1	5.60E1	8.57E1	0.00E0	6.91E1	1.24E2	1.10E2	1.78E2
1992	8.79E1	1.79E2	1.12E2	0.00E0	5.60E1	3.31E2	1.69E2	2.08E2
1993	8.20E1	8.20E1	6.50E1	0.00E0	3.20E1	1.36E2	5.63E1	1.11E2
1994	5.30E1	7.00E1	1.49E2	0.00E0	6.70E1	2.38E2	1.04E2	1.29E2
1995	1.43E2	3.90E1	2.40E1	0.00E0	1.10E1	5.20E1	0.00E0	0.00E0
1996	0.00E0	5.10E1	0.00E0	0.00E0	1.98E1	1.19E2	0.00E0	0.00E0
1997	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	1.06E2	0.00E0	0.00E0
1998	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	1.01E2	0.00E0	0.00E0
1999	6.96E1	0.00E0	0.00E0	0.00E0	0.00E0	7.38E1	0.00E0	0.00E0
2000	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	8.54E1	0.00E0	0.00E0
2001	0.00E0	2.10E1	0.00E0	0.00E0	0.00E0	1.20E2	0.00E0	0.00E0
2002	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	6.96E1	0.00E0	0.00E0
2003	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	1.93E2	0.00E0	0.00E0
2004	8.54E1	0.00E0	0.00E0	0.00E0	0.00E0	9.56E1	0.00E0	0.00E0
2005	2.00E2	0.00E0	0.00E0	0.00E0	0.00E0	6.53E1	0.00E0	0.00E0
2006	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	5.01E1	0.00E0	0.00E0
2007	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	2.97E2	0.00E0	0.00E0
2008	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	1.78E2	0.00E0	0.00E0
2009	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	6.97E1	0.00E0	0.00E0
2010	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	1.15E2	0.00E0	0.00E0
2011	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	6.83E1	0.00E0	0.00E0
2012	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	6.35E1	0.00E0	0.00E0
2013	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	4.37E1	0.00E0	0.00E0
2014 ⁽²⁾	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	2.11E1	0.00E0	0.00E0
2015	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	2.24E1	0.00E0	0.00E0
2016	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	1.36E2	0.00E0	0.00E0
2017	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	1.22E2	0.00E0	0.00E0
2018	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	1.68E2	0.00E0	0.00E0
2019	0.00E0	0.00E0	0.00E0	0.00E0	0.00E0	1.52E2	0.00E0	0.00E0

0.00E0 indicates no detectable measurements

1984 - 1986 mean based on all net activity

(1) 1987 – Gamma spectroscopy system change

(2) 2014 Gamma spectroscopy system was replaced 10JUL2014. Gamma spectroscopy system hardware, detector cooling apparatus, software, electronics, nuclide identification libraries, and analytical test matrix components for test matrices were modified (NCR # 0739995). No analytical changes were noted due to the 2014 gamma spectroscopy system change.

3.8 DIRECT GAMMA RADIATION

3.8.1 ENVIRONMENTAL TLD

Oconee is licensed with an exclusion area boundary defined by UFSAR Section 2.1.1.2 as a 1 mile radius from station center. This is the same boundary established for determining radioactive effluent release limits. No permanent public access is permitted within the exclusion area. TLD locations designated as "inner ring" were placed within exclusion area upon inception of the REMP and all are used as indicators. Due to close proximity with Oconee, inner ring TLD locations are not good indicators of radiation exposure to a member of the public, but are good at determining nearby environmental effects due to plant operation. Based on their placement, inner ring TLD locations are expected to occasionally be influenced by normal plant operation. TLD locations designated as "outer ring" are outside the 1 mile exclusion area but within a 5 mile radius of station center. All outer ring TLD locations are used as indicators. A subset of TLD locations within a 7 to 13 mile radius from station center are designated as "special interest." The two "control" locations are greater than 9 miles from station center. These locations were chosen to reduce the probability of influence from Oconee operation on data. The control locations are not used as background subtraction in the TLD analysis. Their purpose is to provide a comparison to indicator locations.

In 2019, 197 total TLDs were analyzed, 189 at indicator locations and 8 at control locations. TLDs are collected and analyzed quarterly. Transit and laboratory background dose is determined and subtracted from gross field readings as required by ANSI N545-1975. Based on Appendix B TLD data, the highest annual total dose was 120 mrem at indicator location 024, 0.81 miles E of station center. Figure 3.8 and Table 3.8 show TLD inner ring, outer ring, and control location annual averages in mrem per year. Data is provided from 1984 when TLD locations were added and arranged in an inner ring and outer ring configuration. Preoperational data is also provided in the table. As shown in the graph, historical inner and outer ring averages compare similarly, while control data is somewhat higher. This is most likely an artifact of the underlying geologic structures at the control locations.

Quarterly, environmental ODCM TLD results are compared by location to its historical data to evaluate any significant changes. The comparison utilizes the location's average exposure history to determine if quarterly results fall within expected low and high ranges and provides a reliable indication of potential changes occurring at a specific TLD location. The low and high ranges are determined by the historical average \pm two standard deviations. The quarterly TLD evaluation implements portions of American National Standard ANSI/HPS N13.37-2014, "Environmental Dosimetry – Criteria for System Design and Implementation, for environmental Thermoluminescent Dosimeters (TLD)". The CSD-RP-ALL-0030 – Updated Radiological Environmental Monitoring Program TLD Analytical Method, describes the process implemented in late 2018 for the 2019 fleet TLD programs. TLD values identified as < Low Range or > High Range are evaluated in consideration of factors including possible TLD damage, sampling deviations, glow

curve irregularities, and any known environmental location changes which may affect results. TLD results are found in Appendix E.

The fourth quarter 2019 TLD from location 093 (Control, Clemson Operations Center) result of 28.2 mR/Std Qtr exceeded the location's acceptance range due to there being no historical data at this location. This was a new location and data was being gathered to calculate an average exposure.

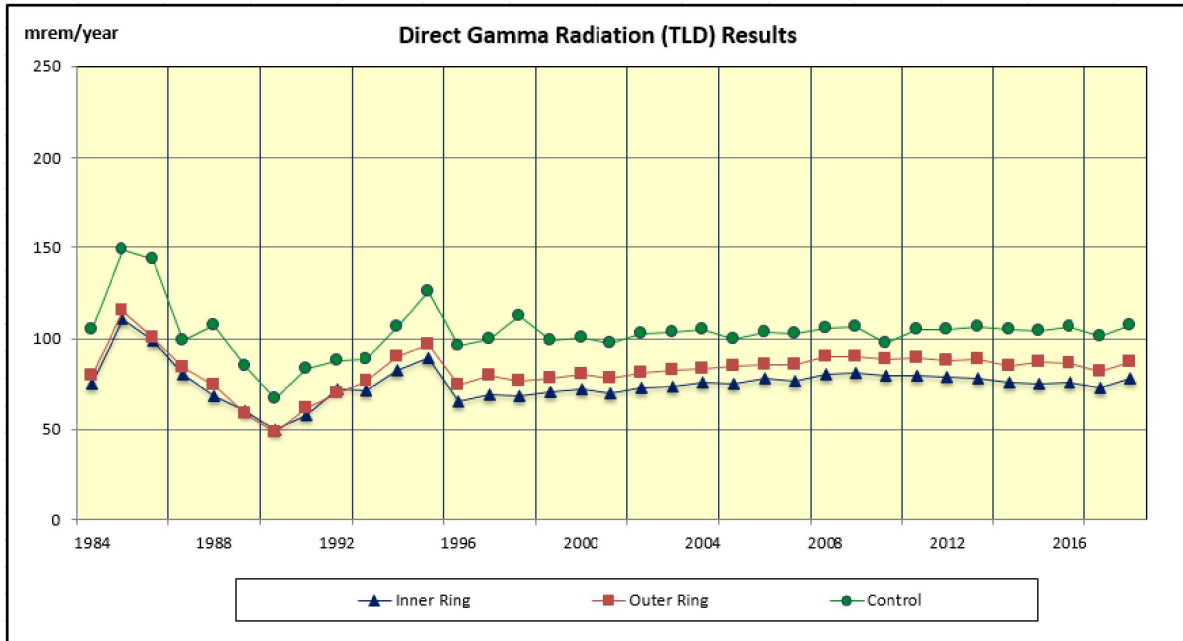
A TLD intercomparison program is conducted as part of the quality assurance program. Results of this program are included in section 4.7.

3.8.2 ISFSI

The Oconee ISFSI began operation in 1990. It is located 0.25 miles southwest of station center in a secured area specifically constructed to provide dry storage for spent nuclear fuel. The ISFSI employs the NUHOMS® horizontal storage module design. Irradiated fuel assemblies are confined, protected, and shielded by a reinforced concrete module. The system is completely passive and designed to provide shielding and safe confinement of spent fuel for a range of postulated accident conditions and natural phenomena. Decay heat is removed from the module by a passive ventilation system. No radiological liquid or gaseous effluents are expected from the passive storage provided by the ISFSI. Therefore, any dose to offsite locations would be from direct and scattered gamma radiation.

The Oconee REMP serves as the operational program for the ISFSI. Several environmental TLD locations are presently located at the Oconee site boundary fence near the ISFSI. The closest of these is 0.3 miles from the ISFSI, well within the 1 mile exclusion boundary. In addition, dose rates at the ISFSI restricted area fence are monitored with TLDs as part of the routine REMP. These are used, in part, to control occupational exposure and augment the REMP according to the Oconee ISFSI UFSAR. The maximum TLD dose at the ISFSI fence, which is not accessible to the public, was 512 mrem per standard quarter. This is consistent with previous measurements.

Figure 3.8



There is no reporting level for Direct Radiation (TLD)

Table 3.8 Direct Gamma Radiation (TLD) Results⁽¹⁾

Year	Inner Ring Average (mrem/yr)	Outer Ring Average (mrem/yr)	Control Average (mrem/yr)
Preoperational	1.07E2	1.18E2	1.42E2
1984	7.54E1	7.96E1	1.05E2
1985	1.11E2	1.15E2	1.49E2
1986	9.90E1	1.01E2	1.43E2
1987	8.01E1	8.44E1	9.91E1
1988	6.87E1	7.47E1	1.07E2
1989	6.05E1	5.86E1	8.49E1
1990	4.96E1	4.82E1	6.66E1
1991	5.81E1	6.18E1	8.36E1
1992	7.24E1	6.95E1	8.74E1
1993	7.11E1	7.66E1	8.84E1
1994	8.25E1	9.00E1	1.06E2
1995	8.89E1	9.66E1	1.25E2
1996	6.51E1	7.44E1	9.60E1
1997	6.92E1	7.96E1	9.93E1
1998	6.81E1	7.68E1	1.12E2
1999	7.08E1	7.84E1	9.88E1
2000	7.24E1	8.03E1	1.00E2
2001	6.99E1	7.83E1	9.71E1
2002	7.28E1	8.11E1	1.03E2
2003	7.36E1	8.23E1	1.03E2
2004	7.61E1	8.31E1	1.05E2
2005	7.54E1	8.46E1	9.95E1
2006	7.79E1	8.57E1	1.04E2
2007	7.70E1	8.55E1	1.03E2
2008	8.04E1	9.03E1	1.05E2
2009	8.08E1	8.98E1	1.06E2
2010	7.94E1	8.85E1	9.77E1
2011	7.96E1	8.91E1	1.05E2
2012	7.89E1	8.79E1	1.05E2
2013	7.83E1	8.84E1	1.06E2
2014	7.58E1	8.46E1	1.05E2
2015	7.48E1	8.67E1	1.04E2
2016	7.59E1	8.65E1	1.06E2
2017	7.32E1	8.17E1	1.01E2
2018	7.95E1	8.68E1	1.07E2
2019	8.07E1	8.90E1	1.11E2

(1) In the 2014 AREOR, tabular results were converted from mR/yr to mrem/yr (n * 0.95).

3.9 LAND USE CENSUS

The Land Use Census was conducted during the growing season (5/22 – 5/23/2019) as required by SLC 16.11.6. Table 3.9 summarizes census results. A map indicating identified locations is shown in Figure 3.9. The nearest residence is located in the NNW sector at 1.03 miles, and there were no milk locations identified during the performance of the land use census. No program changes were required based on the results of the census.

Table 3.9 Oconee 2019 Land Use Census Results*

Nearest Pathways (Miles)

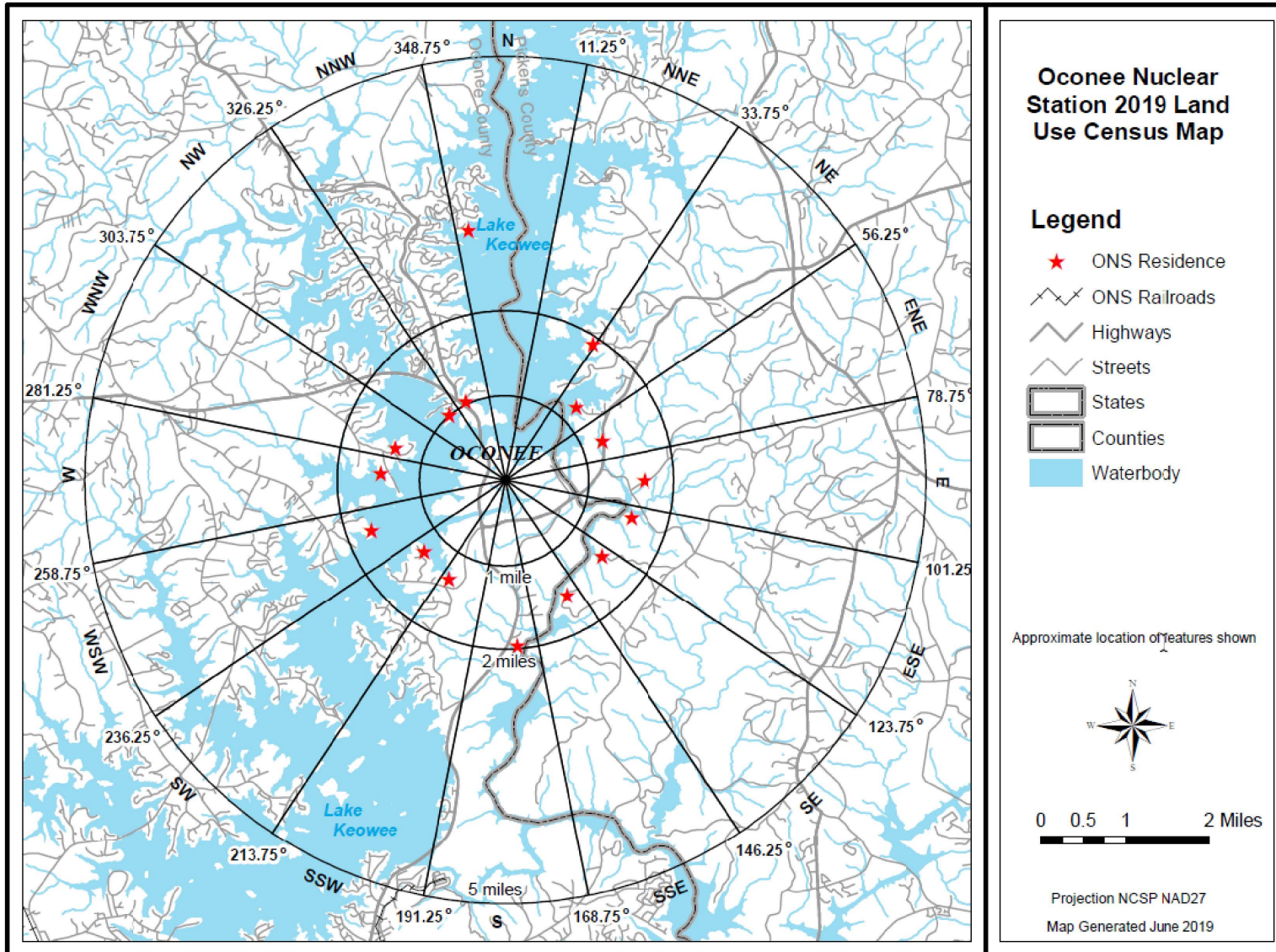
SECTOR	RESIDENCE		MILK ANIMAL	
	2018	2019	2018	2019
North	2.98	2.98	---	---
North-Northeast	1.84	1.84	---	---
Northeast	1.20	1.20	---	---
East-Northeast	1.34	1.24*	---	---
East	1.64	1.64	---	---
East-Southeast	1.57	1.57	---	---
Southeast	1.46	1.46	---	---
South-Southeast	1.54	1.54	---	---
South	1.96	1.96	---	---
South-Southwest	1.34	1.34	---	---
Southwest	1.27	1.27	---	---
West-Southwest	1.73	1.73	---	---
West	1.58	1.49*	---	---
West-Northwest	1.35	1.35	---	---
Northwest	1.04	1.04	---	---
North-Northwest	1.03	1.03	---	---

NOTE: Sector and distances were determined by Global Positioning System

* Represents a change from the previous year

--- Indicates no occurrences within the 5 mile radius

Figure 3.9



4.0 QUALITY ASSURANCE

4.1 SAMPLE COLLECTION

EnRad Laboratories and the Environmental Service performed the environmental sample collections as specified by approved sample collection procedures.

4.2 SAMPLE ANALYSIS

EnRad Laboratories performed the environmental sample analyses as specified by approved analysis procedures. EnRad Laboratories is located in Huntersville, North Carolina, at Duke Energy's Environmental Center. During 2019, a vendor laboratory, General Engineering Laboratory, LLC (GEL), performed some environmental sample analyses as specified by approved analysis procedures.

4.3 DOSIMETRY ANALYSIS

The Dosimetry and Records group performed the environmental dosimetry measurements as specified by approved dosimetry analysis procedures. The Dosimetry and Records Laboratory is located in Huntersville, North Carolina, at Duke Energy's Environmental Center.

4.4 LABORATORY EQUIPMENT QUALITY ASSURANCE

4.4.1 DAILY QUALITY CONTROL

EnRad Laboratories has an internal quality assurance program which monitors each type of instrumentation for reliability and accuracy. Daily quality control checks ensure that instruments are in proper working order and these checks are used to monitor instrument performance.

4.4.2 CALIBRATION VERIFICATION

National Institute of Standards and Technology (NIST) standards that represent counting geometries are analyzed as unknowns at various frequencies ranging from weekly to annually to verify that efficiency calibrations are valid. The frequency is dependent upon instrument use and performance. Investigations are performed and documented should calibration verification data fall outside of the acceptable limits.

4.4.3 BATCH PROCESSING

Method quality control samples are analyzed with sample analyses that are processed in batches. These include tritium analyses in drinking water and surface water samples.

4.5 DUKE ENERGY INTERLABORATORY COMPARISON PROGRAM

In 2019, Duke Energy Environmental Laboratory (EnRad) participated in an interlaboratory program to satisfy Radiological Environmental Monitoring Program requirements in Duke Energy nuclear plant Offsite Dose Calculation Manuals and Selected Licensee Commitments Manuals, as applicable.

EnRad Laboratory participated in an interlaboratory program with Eckert & Ziegler Analytics (EZA) in 2019. EZA results were evaluated against the NRC Inspection Manual Procedure 84750 (IP 84750) acceptance criteria stated in EnRad Procedure 515, Cross Check Program Administration. All regulatory requirements continue to be met by the EZA Cross Check Program.

Low-level Iodine-131 analysis of drinking water was not required during 2019 since the dose calculated for the consumption of the water was not greater than 1 mrem per year and there were no abnormal releases exceeding 1 pCi/liter I-131 in 2019 in the ONS program. This dose was calculated monthly during 2019 to ensure that low-level Iodine-131 analysis of drinking water samples was not required.

4.5.1 ECKERT & ZIEGLER ANALYTICS CROSS CHECK PROGRAM

EZA mixed gamma in liquid, mixed gamma in vegetation, low-level I-131 in liquid, mixed gamma air filter composites, I-131 air cartridges, gross beta in water, gross beta in filters, and tritium in water were analyzed at various times of the year at EnRad Laboratories. A summary of the applicable REMP EnRad Laboratory program results for 2019 is documented in Table 4.0-A.

Interlaboratory cross check samples from EZA were received and analyzed in three of the four quarters of 2019. Table 4.0-A lists the performance for specific samples. Forty-six nuclide results were reported to EZA of which forty-six (100 %) met the acceptance criteria based on IP 84750.

4.6 SPLIT COMPARISON PROGRAM

Oconee Nuclear Station routinely participates in an environmental sample intercomparison program. Program elements include sampling frequency and analysis for drinking water, surface water, milk, fish, broadleaf vegetation, and shoreline sediment samples that have been collected. Samples are routinely split with a vendor laboratory for intercomparison.

4.7 TLD INTERCOMPARISON PROGRAM

4.7.1 NUCLEAR TECHNOLOGY SERVICES INTERCOMPARISON PROGRAM

Radiation Dosimetry and Records participates in a quarterly TLD intercomparison program administered by Nuclear Technology Services, Inc. of Roswell, GA. Nuclear Technology Services irradiates environmental dosimeters quarterly and sends them to the Radiation Dosimetry and Records group for analysis of the unknown estimated delivered exposure. A summary of the 2019 Nuclear Technology Services Intercomparison Report is documented in Table 4.0-B.

The individual measurements were evaluated and results falling outside the acceptable ratio criteria had an evaluation performed to identify any recommended remedial actions and to reduce anomalous errors.

4.7.2 INTERNAL CROSS CHECK (DUKE ENERGY)

Radiation Dosimetry and Records participates in a quarterly TLD internal comparison program administered internally by the Dosimetry Lab. The Dosimetry Lab Staff irradiates environmental dosimeters quarterly and submits them for analysis of the unknown estimated delivered exposure. A summary of the 2019 Internal Cross Check (Duke Energy) Program is documented in Table 4.0-B.

4.8 GENERAL ENGINEERING LABORATORY, LLC (GEL)

General Engineering Laboratory, LLC (GEL) participated in various Quality Assurance Programs for Inter-laboratory, Intra-laboratory, Third Party Cross Check programs, and a number of proficiency testing programs during 2019. A summary of the GEL quality assurance program results for the sample media types sent to GEL during 2019 is documented in Table 4.0-C. Table 4.0-C may not be applicable to all plants or stations.

TABLE 4.0-A

ECKERT & ZIEGLER ANALYTICS CROSS CHECK PROGRAM

2019 Cross Check Results for EnRad Laboratories

Interlaboratory cross check samples from EZA were received and analyzed in three of the four quarters of 2019. Results are reported directly to Eckert & Ziegler Analytics. Environmental cross check samples were analyzed in replicate, and the result closest to the mean is reported to Eckert & Ziegler Analytics. The acceptance criteria for the program was based on the NRC Inspection Manual Procedure 84750 (IP 84750). Table 4.0-A lists the performance for specific samples. Forty-six nuclide results were reported to EZA of which forty-six (100 %) met the acceptance criteria based on IP 84750.

Sample	Sample ID	Nuclide	Quarter	Units	EnRad Value	EZA Value	EnRad/EZA Ratio	Evaluation
Beta Filter in Planchet	E12500	Cs-137	1	pCi	170	164	1.04	Agreement
	E12505	Cs-137	2	pCi	231	224	1.03	Agreement
I-131 in Charcoal in Cartridge	E12499	I-131	1	pCi	79.5	75.8	1.05	Agreement
	E12506	I-131	3	pCi	99.9	95.5	1.05	Agreement
Gamma in Composite Filter	E12498	Ce-141	1	pCi	83.8	78.0	1.07	Agreement
		Co-58	1	pCi	100	95.5	1.05	Agreement
		Co-60	1	pCi	212	199	1.06	Agreement
		Cr-51	1	pCi	208	195	1.07	Agreement
		Cs-134	1	pCi	110	107	1.03	Agreement
		Cs-137	1	pCi	141	131	1.08	Agreement
		Fe-59	1	pCi	116	106	1.09	Agreement
		Mn-54	1	pCi	105	95.3	1.10	Agreement
Zn-65	1	pCi	158	147	1.08	Agreement		
Gamma in Simulated Vegetation	E12509	Ce-141	3	pCi/g	0.279	0.273	1.02	Agreement
		Co-58	3	pCi/g	0.281	0.286	0.98	Agreement
		Co-60	3	pCi/g	0.343	0.345	1.00	Agreement
		Cr-51	3	pCi/g	0.612	0.542	1.13	Agreement
		Cs-134	3	pCi/g	0.312	0.339	0.92	Agreement
		Cs-137	3	pCi/g	0.252	0.247	1.02	Agreement
		Fe-59	3	pCi/g	0.278	0.243	1.14	Agreement
		Mn-54	3	pCi/g	0.265	0.252	1.05	Agreement
Zn-65	3	pCi/g	0.519	0.480	1.08	Agreement		

TABLE 4.0-A (Cont.)

Sample	Sample ID	Nuclide	Quarter	Units	EnRad Value	EZA Value	EnRad/EZA Ratio	Evaluation
Gamma in Water	E12510	Ce-141	3	pCi/L	138	130	1.06	Agreement
		Co-58	3	pCi/L	143	136	1.05	Agreement
		Co-60	3	pCi/L	170	164	1.04	Agreement
		Cr-51	3	pCi/L	265	257	1.03	Agreement
		Cs-134	3	pCi/L	150	161	0.93	Agreement
		Cs-137	3	pCi/L	123	117	1.05	Agreement
		Fe-59	3	pCi/L	127	115	1.10	Agreement
		I-131	3	pCi/L	93.6	90.8	1.03	Agreement
		Mn-54	3	pCi/L	129	120	1.07	Agreement
		Zn-65	3	pCi/L	259	228	1.14	Agreement
Gamma in Milk	E12501A	Ce-141	1	pCi/L	120	117	1.03	Agreement
		Co-58	1	pCi/L	141	143	0.98	Agreement
		Co-60	1	pCi/L	303	299	1.01	Agreement
		Cr-51	1	pCi/L	303	293	1.03	Agreement
		Cs-134	1	pCi/L	146	160	0.91	Agreement
		Cs-137	1	pCi/L	202	196	1.03	Agreement
		Fe-59	1	pCi/L	170	159	1.07	Agreement
		Mn-54	1	pCi/L	149	143	1.04	Agreement
		Zn-65	1	pCi/L	227	220	1.03	Agreement
Milk LLI-131	E12501A	I-131	1	pCi/L	96.8	89.5	1.08	Agreement
Gross Beta in Water	E12503	Cs-137	2	pCi/L	240	245	0.98	Agreement
	E12508	Cs-137	3	pCi/L	243	252	0.96	Agreement
Tritium in Water	E12504	H-3	2	pCi/L	14100	13900	1.01	Agreement
	E12507	H-3	3	pCi/L	14000	14000	1.00	Agreement

TABLE 4.0-B

2019 ENVIRONMENTAL DOSIMETER CROSS-CHECK RESULTS

Nuclear Technology Services

Radiation Dosimetry and Records participates in a quarterly TLD intercomparison program administered by Nuclear Technology Services, Inc. of Roswell, GA. Nuclear Technology Services irradiates environmental dosimeters quarterly and sends them to Radiation Dosimetry and Records group for analysis of the unknown estimated delivered exposure. The individual measurements were evaluated and results falling outside the acceptable ratio criteria had an evaluation performed to identify any recommended remedial actions and to reduce anomalous errors.

1st Quarter 2019						2nd Quarter 2019					
TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail	TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail
102973	77.70	79.96	-2.83	<+/-15%	Pass	101136	17.08	18.36	-6.97	<+/-15%	Pass
103309	80.41	79.96	0.56	<+/-15%	Pass	101219	16.52	18.36	-10.02	<+/-15%	Pass
103305	80.21	79.96	0.31	<+/-15%	Pass	100078	16.78	18.36	-8.61	<+/-15%	Pass
103090	80.10	79.96	0.18	<+/-15%	Pass	101364	17.45	18.36	-4.96	<+/-15%	Pass
103102	79.93	79.96	-0.04	<+/-15%	Pass	100239	17.01	18.36	-7.35	<+/-15%	Pass
Average Bias (B)			-0.36			Average Bias (B)			-7.58		
Standard Deviation (S)			1.39			Standard Deviation (S)			1.89		
Measure Performance B +S			1.76	<15%	Pass	Measure Performance B +S			9.47	<15%	Pass
3rd Quarter 2019						4th Quarter 2019					
TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail	TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail
101305	62.24	61.34	1.47	<+/-15%	Pass	104285	49.10	49.31	-0.43	<+/-15%	Pass
101297	61.64	61.34	0.49	<+/-15%	Pass	104300	47.94	49.31	-2.78	<+/-15%	Pass
101333	57.74	61.34	-5.87	<+/-15%	Pass	104288	49.20	49.31	-0.22	<+/-15%	Pass
101350	60.01	61.34	-2.17	<+/-15%	Pass	104298	47.73	49.31	-3.20	<+/-15%	Pass
100417	60.73	61.34	-0.99	<+/-15%	Pass	104314	48.91	49.31	-0.81	<+/-15%	Pass
Average Bias (B)			-1.42			Average Bias (B)			-1.49		
Standard Deviation (S)			2.85			Standard Deviation (S)			1.40		
Measure Performance B +S			4.27	<15%	Pass	Measure Performance B +S			2.88	<15%	Pass

TABLE 4.0-B (Cont.)

2019 ENVIRONMENTAL DOSIMETER CROSS CHECK RESULTS

Internal Crosscheck (Duke Energy)

Radiation Dosimetry and Records participates in a quarterly TLD internal comparison program administered internally by the Dosimetry Lab. The Dosimetry Lab Staff irradiates environmental dosimetry quarterly and submits them for analysis of the unknown estimated delivered exposure.

1st Quarter 2019						2nd Quarter 2019					
TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail	TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail
103690	39.63	36.00	10.08	<+/-15%	Pass	102290	51.51	48.00	7.31	<+/-15%	Pass
103101	39.48	36.00	9.67	<+/-15%	Pass	102029	51.48	48.00	7.25	<+/-15%	Pass
102869	38.28	36.00	6.33	<+/-15%	Pass	103742	52.75	48.00	9.90	<+/-15%	Pass
102239	37.20	36.00	3.33	<+/-15%	Pass	102931	50.63	48.00	5.48	<+/-15%	Pass
103433	38.17	36.00	6.03	<+/-15%	Pass	103194	51.38	48.00	7.04	<+/-15%	Pass
103586	38.81	36.00	7.81	<+/-15%	Pass	102738	52.11	48.00	8.56	<+/-15%	Pass
102881	39.45	36.00	9.58	<+/-15%	Pass	103721	52.96	48.00	10.33	<+/-15%	Pass
102189	36.77	36.00	2.14	<+/-15%	Pass	102336	50.92	48.00	6.08	<+/-15%	Pass
100358	35.33	36.00	-1.86	<+/-15%	Pass	102442	49.03	48.00	2.15	<+/-15%	Pass
103381	38.37	36.00	6.58	<+/-15%	Pass	102089	51.36	48.00	7.00	<+/-15%	Pass
Average Bias (B)			5.97			Average Bias (B)			7.11		
Standard Deviation (S)			3.81			Standard Deviation (S)			2.33		
Measure Performance B +S			9.78	<15%	Pass	Measure Performance B +S			9.44	<15%	Pass
3rd Quarter 2019						4th Quarter 2019					
TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail	TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail
104054	17.49	18.0	-2.83	<+/-15%	Pass	100958	26.21	27.00	-2.93	<+/-15%	Pass
104051	17.77	18.0	-1.28	<+/-15%	Pass	101322	26.76	27.00	-0.89	<+/-15%	Pass
104148	17.41	18.0	-3.28	<+/-15%	Pass	101180	26.95	27.00	-0.19	<+/-15%	Pass
101165	18.16	18.0	0.89	<+/-15%	Pass	101275	26.52	27.00	-1.78	<+/-15%	Pass
101170	18.10	18.0	0.56	<+/-15%	Pass	101104	25.70	27.00	-4.81	<+/-15%	Pass
101278	18.45	18.0	2.50	<+/-15%	Pass	104038	26.30	27.00	-2.59	<+/-15%	Pass
100570	17.93	18.0	-0.39	<+/-15%	Pass	101215	27.33	27.00	1.22	<+/-15%	Pass
100062	18.50	18.0	2.78	<+/-15%	Pass	101252	26.57	27.00	-1.59	<+/-15%	Pass
104129	17.79	18.0	-1.17	<+/-15%	Pass	101249	26.74	27.00	-0.96	<+/-15%	Pass
104128	17.75	18.0	-1.39	<+/-15%	Pass	101251	25.91	27.00	-4.04	<+/-15%	Pass
Average Bias (B)			-0.36			Average Bias (B)			-1.86		
Standard Deviation (S)			2.04			Standard Deviation (S)			1.80		
Measure Performance B +S			2.41	<15%	Pass	Measure Performance B +S			3.66	<15%	Pass

TABLE 4.0-C

2019 GEL Laboratories, LLC QA Results

Interlaboratory cross check samples from Eckert & Ziegler Analytics (EZA) and Proficiency Tests from the Department of Energy Mixed Analyte Performance Evaluation Program (MAPEP) were received and analyzed by GEL in all four quarters of 2019 from EZA and in two quarters from MAPEP. Table 4.0-C lists the performance for specific samples. Table 4.0-C may not be applicable to all plants/stations.

Sample	Sample ID	Nuclide	Quarter	Units	GEL Value	Known Value	Acceptance Range/Ratio	Evaluation
Hard To Detect in Soil	MAPEP -19- MaS40	Fe-55	2	Bq/kg	486	344	241 - 447	Non-Agreement ⁽¹⁾
		Ni-63	2	Bq/kg	524	519	363 - 675	Agreement
		Sr-90	2	Bq/kg	3.44	N/A	False Pos Test	Agreement
	MAPEP-19- MaS41	Fe-55	4	Bq/kg	-48	N/A	False Pos Test	Agreement
		Ni-63	4	Bq/kg	552	629	440 - 818	Agreement
		Sr-90	4	Bq/kg	609	572	400 - 744	Agreement
I-131 in Milk with EZA	E12362	I-131	2	pCi/L	85.1	81.4	1.05	Agreement
	E12370	I-131	3	pCi/L	92.8	92.1	1.01	Agreement
	E12374	I-131	4	pCi/L	93.4	94.5	0.99	Agreement
Gross Beta in Water with EZA	E12550	Cs-137	2	pCi/L	251	244	1.03	Agreement ⁽²⁾

(1) GEL CARR (Corrective Active Request and Report) 190603-1212

(2) Several sets of first quarter 2019 Gross Beta in Water analyses were analyzed at GEL.

APPENDIX A

ENVIRONMENTAL SAMPLING
&
ANALYSIS PROCEDURES

APPENDIX A

ENVIRONMENTAL SAMPLING AND ANALYSIS PROCEDURES

Adherence to established procedures for sampling and analysis of all environmental media at Oconee Nuclear Station is required to ensure compliance with Station Selected Licensee Commitments. Analytical procedures were employed to ensure that Selected Licensee Commitments detection capabilities were achieved.

Environmental sampling and analyses were performed by EnRad Laboratories, Dosimetry and Records, Environmental Services, and General Engineering Laboratories, LLC.

This appendix describes the environmental sampling frequencies and analysis procedures by media type.

I. CHANGE OF SAMPLING PROCEDURES

Location 081 Air Particulate/Air Radioiodine (Clemson Operations Center, 9.33 mi. SE, Control) was moved to Location 093 (Clemson Operations Center, 9.34 mi. SE, Control) due to Location 081 being too close to adjacent property tree line (NCR# 02305408 and AR# 01961671).

Location 081 TLD (Clemson Operations Center, 9.33 mi. SE, Control) was moved to Location 093 (Clemson Operations Center, 9.34 mi. SE, Control) due to Location 081 fence being removed (AR# 01961671).

II. DESCRIPTION OF ANALYSIS PROCEDURES

Gamma spectroscopy analyses are performed using high purity germanium gamma detectors and Canberra analytical software. Designated sample volumes are transferred to appropriate counting geometries and analyzed by gamma spectroscopy. Perishable samples such as fish and broadleaf vegetation are ground to achieve a homogeneous mixture. Soils and sediments are dried, sifted to remove foreign objects (rocks, clams, glass, etc.) then transferred to appropriate counting geometry.

Low-level iodine analyses are performed by passing a designated sample aliquot through a pre-weighed amount of ion exchange resin to remove and concentrate any iodine in the aqueous sample (milk). The resin is then dried, mixed thoroughly, and a net resin weight determined before being transferred to appropriate counting geometry and analyzed by gamma spectroscopy.

Tritium analyses are performed by using low-level environmental liquid scintillation analysis technique on a Perkin-Elmer 4910TR liquid scintillation system or a Perkin-Elmer 3110TR liquid scintillation system. Tritium samples are distilled and batch

processed with a laboratory fortified blank, matrix spike, matrix spike duplicate, and blank to verify instrument performance and sample preparation technique are acceptable.

Gross beta analysis of air filters is performed by analyzing filters on Tennelec XLB Series 5 gas-flow proportional counters. Samples are batch processed with a blank to ensure sample contamination has not occurred.

Gross beta analysis of liquid samples is performed by concentrating a designated aliquot of sample and analyzing by Perkin-Elmer 4910TR liquid scintillation system or a Perkin-Elmer 3110TR liquid scintillation system. Samples are batch processed with a blank to ensure sample contamination has not occurred.

III. CHANGE OF ANALYSIS PROCEDURES

Beginning in January 2019 the analysis procedure for Gross Beta in Drinking Water was changed. The samples are prepared similar to ASTM Method D7283-17, Alpha and Beta Activity in Water by Liquid Scintillation Counting, by concentrating an aliquot of sample and analyzing on a Perkin-Elmer 4910TR liquid scintillation system or a Perkin-Elmer 3110TR liquid scintillation system. The results are reported as activities, which are calculated to be above the MDA or less than the calculated MDA (NCR# 02303032).

IV. SAMPLING AND ANALYSIS PROCEDURES

A.1 AIRBORNE PARTICULATE AND RADIOIODINE

Airborne particulate and radioiodine samples at each of six locations were composited continuously by means of continuous air samplers. Air particulates were collected on a particulate filter and radioiodines were collected in a charcoal cartridge positioned behind the filter in the sampler. The samplers are designed to operate at a constant flow rate (in order to compensate for any filter loading) and are set to sample approximately 2 cubic feet per minute. Filters and cartridges were collected weekly. A separate weekly gamma analysis was performed on each charcoal cartridge. A weekly gross beta analysis was performed on each filter. A quarterly gamma analysis was performed on the quarterly filter composite (by location). The continuous composite samples were collected from the locations listed below.

Location 077 = Skimmer Wall (1.00 mi. SW)
Location 078.1 = Recreation Site (0.53 mi. WSW)
Location 079 = Keowee Dam (0.56 mi. NE)
Location 081 = Clemson Operations Center (9.33 mi. SE)(Control)
Final sample taken 25NOV2019, NCR# 02305408
Location 084 = Sue Craig Road (2.58 mi. NNE)
Location 085 = Lake Services / Building B9125 (0.88 mi. NNW)
Location 093 = Clemson Operations Center (9.34 mi. SE)(Control)
Sampling initiated 25NOV2019, NCR# 02305408

A.2 DRINKING WATER

Monthly composite samplers were operated to collect an aliquot at least every two hours. Gross beta and gamma analysis was performed on the monthly composites. Tritium analysis was performed on the quarterly composites. The composites were collected monthly from the locations listed below.

Location 060 = Greenville Water Intake Rd. (3.23 mi. NE)
Location 064 = Seneca (6.67 mi. SSW)(Control)
Location 066 = Anderson (18.9 mi SSE)

A.3 SURFACE WATER

Monthly composite samplers were operated to collect an aliquot at least every two hours. Gamma analysis was performed on the monthly composites. Tritium analysis was performed on the quarterly composites sample. The composites were collected monthly from the locations listed below.

Location 062 = Lake Keowee Hydro Intake (0.85 mi. ENE)(Control)
Location 063.1 = Lake Hartwell Hwy 183 Bridge (0.79 mi. E)

A.4 MILK

Biweekly grab samples were collected at one location although the Oconee ODCM requires semimonthly samples. Biweekly grab samples are taken to meet the required sample frequency for scheduling purposes. A gamma and low-level Iodine-131 analysis was performed on each sample. The biweekly grab samples were collected from the location listed below.

Location 071 = Clemson Dairy (10.2 mi. SSE)(Control)

A.5 BROADLEAF VEGETATION

Monthly samples were collected and a gamma analysis was performed on each sample. The samples were collected from the locations listed below.

Location 077 = Skimmer Wall (1.00 mi. SW)
Location 079 = Keowee Dam (0.56 mi. NE)
Location 081 = Clemson Operations Center (9.33 mi. SE)(Control)
Location 084 = Sue Craig Road (2.58 mi. NNE)

A.6 FISH

Semiannual samples were collected and a gamma analysis was performed on the edible portions of each sample. The samples were collected from the locations listed below.

Location 060 = Greenville Water Intake Rd. (2.28 mi. NE)(Control)
Location 063 = Lake Hartwell Hwy 183 Bridge (0.80 mi. ESE)
Location 067 = Lawrence Ramsey Bridge Hwy 27 (4.34 mi. SSE)

A.7 SHORELINE SEDIMENT

Semiannual samples were collected and a gamma analysis was performed on each sample following the drying and removal of rocks and clams. The samples were collected from the locations listed below.

Location 067 = Lawrence Ramsey Bridge Hwy 27 (4.34 mi. SSE)
Location 068 = High Falls County Park (1.82 mi. W)(Control)
Location 091 = Holders Landing Road (2.09 mi. S)

A.8 DIRECT GAMMA RADIATION (TLD)

Thermoluminescent dosimeters (TLD) were collected quarterly at fifty locations. A gamma exposure rate was determined for each TLD. The TLDs were placed as indicated below.

- * An inner ring of 25 TLDs, one in each meteorological sector in the general area of the site boundary.
- * An outer ring of 16 TLDs, one in each meteorological sector in the 6 to 8 kilometer range.
- * The remaining TLDs were placed in special interest areas such as population centers, residential areas, schools, and control locations.

Location 081 = Clemson Operations Center (9.33 mi. SE)(Control)
Final sample taken 10SEP2019, AR# 01961671
Location 093 = Clemson Operations Center (9.34 mi. SE)(Control)
Sampling initiated 10SEP2019, AR# 01961671

TLD Locations are listed in Table 2.1-B.

A.9 ANNUAL LAND USE CENSUS

An annual Land Use Census was conducted to identify within a distance of 8 kilometers (5.0 miles) from the station, the following locations in each of the sixteen meteorological sectors:

- * The Nearest Residence
- * The Nearest Milk-giving Animal (cow, goat, etc.) where milk is used for human consumption

The census was conducted during the growing season 5/22 – 5/23/2019. Results are shown in Table 3.9. No changes were made to the sampling procedures during 2019 as a result of the 2019 census.

V. GLOBAL POSITIONING SYSTEM (GPS) ANALYSIS

The Oconee site centerline used for GPS measurements was referenced from the Oconee Nuclear Station Updated Final Safety Analysis Report (UFSAR), section 2.1.1.1, Specification of Location. Waypoint coordinates used for ONS GPS measurements were latitude 34°-47'-38.2"N and longitude 82°-53'-55.4"W. Maps and tables were generated using North American Datum (NAD) 27. Data normally reflect accuracy to within 2 to 5 meters from point of measurement. GPS field measurements were taken as close as possible to the item of interest. Distances for the locations are displayed using three significant figures.

APPENDIX B

**RADIOLOGICAL
ENVIRONMENTAL MONITORING
PROGRAM**

SUMMARY OF RESULTS

2019

**OCONEE NUCLEAR STATION
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM DATA SUMMARY**

Oconee Nuclear Station
Oconee County, South Carolina

Docket Numbers 50-269, 270, 287
Calendar Year 2019

Medium or Pathway Sampled or Measured (Unit of Measurement)	Type and Total No. of Measurements Performed	Lower Limit of Detection (LLD) ⁽¹⁾	All Indicator Locations ^{(2) (3)} Mean Range	Location w/Highest Annual Mean		Control Locations Mean Range ^{(2) (3)}	No. of Non-Routine Report Meas.
				Name, Distance, and Direction	Mean Range ^{(2) (3)}		
Air Particulate (pCi/m ³)	Gross Beta 312 ⁽⁴⁾	See Table 2.2-C	2.27E-02 (260/260) 3.30E-03 – 5.18E-02	078.1 (0.53 mi WSW)	2.44E-02 (52/52) 9.66E-03 – 5.06E-02	081 (9.33 mi SE) 2.12E-02 (52/52) 8.12E-03 – 4.45E-02	0
	Gamma 25 ⁽⁴⁾	See Table 2.2-C	All less than LLD	-----	-----	All less than LLD	0
Air Radioiodine (pCi/m ³)	Gamma 312 ⁽⁴⁾	See Table 2.2-C	All less than LLD	-----	-----	All less than LLD	0
Drinking Water (pCi/l)	Gross Beta 39 ⁽⁴⁾	4	5.22E+00 (7/26) 3.34E+00 – 7.06E+00	066 (18.9 mi SSE)	5.38E+00 (4/13) 3.40E+00 – 7.06E+00	064 (6.67 mi SSW) 4.75E+00 (2/13) 3.45E+00 – 6.05E+00	0
	Gamma 39 ⁽⁴⁾	See Table 2.2-C	All less than LLD	-----	-----	All less than LLD	0
	Tritium 12 ⁽⁴⁾⁽⁶⁾	2000	1.92E+02 (1/8) 1.92E+02 – 1.92E+02	066 (18.9 mi SSE)	1.92E+02 (1/4) 1.92E+02 – 1.92E+02	All less than LLD	0
Surface Water (pCi/l)	Gamma 26 ⁽⁴⁾	See Table 2.2-C	All less than LLD	-----	-----	All less than LLD	0
	Tritium 8 ⁽⁴⁾⁽⁶⁾	2000	5.56E+03 (4/4) 1.44E+03 – 1.25E+04	063.1 (0.79 mi E)	5.56E+03 (4/4) 1.44E+03 – 1.25E+04	All less than LLD	0
Milk (pCi/l)	Gamma 26	See Table 2.2-C	No Indicator Location	-----	-----	All less than LLD	0
	I-131 26	See Table 2.2-C	No Indicator Location	-----	-----	All less than LLD	0

**OCONEE NUCLEAR STATION
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM DATA SUMMARY**

Oconee Nuclear Station
Oconee County, South Carolina

Docket Numbers 50-269, 270, 287
Calendar Year 2019

Medium or Pathway Sampled or Measured (Unit of Measurement)	Type and Total No. of Measurements Performed	Lower Limit of Detection (LLD) ⁽¹⁾	All Indicator Locations ^{(2) (3)} Mean Range	Location w/Highest Annual Mean		Control Locations Mean Range ^{(2) (3)}	No. of Non-Routine Report Meas.
				Name, Distance, and Direction	Mean Range ^{(2) (3)}		
Broadleaf Vegetation (pCi/kg, wet)	Gamma 48	See Table 2.2-C	All less than LLD	-----	-----	All less than LLD	0
Fish (pCi/kg, wet)	Gamma 12	See Table 2.2-C	All less than LLD	-----	-----	All less than LLD	0
Sediments--Shoreline (pCi/kg, dry)	Gamma 6 Cs-137	See Table 2.2-C 180	1.52E+02 (1/4) 1.52E+02 – 1.52E+02	067 (4.34 mi SSE)	1.52E+02 (1/2) 1.52E+02 – 1.52E+02	All less than LLD	0
TLD (mR per quarter) ⁽⁵⁾	TLD Readout 197	-----	2.21E+01 (189/189) 1.40E+01 – 3.46E+01	024 (0.81 mi E)	3.00E+01 (4/4) 2.73E+01 – 3.46E+01	058 (9.39 mi WSW) 081 (9.33 mi SE) 093 (9.34 mi SE) 2.93E+01 (8/8) 2.19E+01 – 3.77E+01	0

Footnotes to Appendix B

1. The Lower Limit of Detection (LLD) is the smallest concentration of radioactive material in a sample that will yield a net count above system background which will be detected with 95 percent probability and with only 5 percent probability of falsely concluding that a blank observation represents a "real" signal. Due to counting statistics and varying volumes, occasionally lower LLDs are achieved. Refer to Section 2.3.2 for an explanation of how LLD values were derived.
2. Mean and range are based on detectable measurements only.
3. The fractions of all samples with detectable activities at specific locations are indicated in parentheses.
4. Missing samples or surveillances are discussed in Appendix C or Appendix D.
5. TLD exposure is reported in milliroentgen (mR) per standard quarter (91 days). TLD data indicated in section 3.8 (Direct Gamma Radiation) are reported in mrem /yr ($n * 0.95 \text{ ergs/g-Roentgen}$)².
6. Quarterly tritium composites determined using quarter days (92 days +/- 25% (23 days)).

² Cember, H. (2009). Introduction to Health Physics, 4th Edition. United States: McGraw-Hill Companies, Inc.

APPENDIX C

**SAMPLING DEVIATIONS
&
UNAVAILABLE ANALYSES**

APPENDIX C

OCONEE NUCLEAR STATION SAMPLING DEVIATIONS & UNAVAILABLE ANALYSES

DEVIATION & UNAVAILABLE REASON CODES			
BF	Blown Fuse	PM	Preventive Maintenance
CN	Construction	PO	Power Outage
FZ	Sample Frozen	PS	Pump out of service / Undergoing repair
IV	Insufficient Volume	SL	Sample Loss/Lost due to Lab Accident
IW	Inclement Weather	SM	Motor / Rotor Seized
LC	Line Clog to Sampler	SU	Seasonally Unavailable
OT	Other	TF	Torn Filter
PI	Power Interrupt	VN	Vandalism

C.1 SAMPLING DEVIATIONS

Air Particulate and Air Radioiodine

REMP weekly air samples (Air Particulate (AP) or Air Radioiodine (AR)) that experience any downtime during a surveillance period are reported as a Deviation and classified as a “Sampling Deviation.” However, the sample is counted and the data reported, whereas a Deviation with no available sample is classified as an “Unavailable Analyses” and does not have any data reported. The air samplers operated for a total of 99.97% availability in 2019.

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
081	4/29-5/6/2019	PI	1.16 hours downtime, undetermined cause.	NCR # 02271579
084	5/28-6/15/2019	OT	Foreign material found in rotameter.	NCR # 02285526
079	8/19-8/26/2019	PI	4.48 hours downtime due to severe weather.	NCR # 02289001
077	9/23-9/30/2019	PI	1.33 hours downtime, undetermined cause.	NCR # 02295034
078.1	9/23-9/30/2019	PI	1.32 hours downtime, undetermined cause.	NCR # 02295035
093	11/25-12/2/2019	OT	3.67 hours downtime due to sampling location being moved from location 081 to location 093.	NCR # 02305408

Drinking Water and Surface Water

REMP monthly drinking water samples (Drinking Water (DW)) or surface water samples (Surface Water (SW)) that experience any downtime during a surveillance period are reported as a Deviation and classified as a “Sampling Deviation.” However, the sample is counted and the data reported, whereas a Deviation with no available sample is classified as an “Unavailable Analyses” and does not have any data reported. The drinking and surface water samplers operated for a total of 97.90% availability in 2019.

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
063.1	3/25-4/22/2019	IW	672 hours downtime due to flood damage.	NCR # 02269362
063.1	4/22-5/20/2019	OT	218 hours downtime, flood damage.	NCR # 02274040
063.1	7/15-8/12/2019	OT	23.82 hours downtime due to submersible pump failure.	NCR # 02286948

C.2 UNAVAILABLE ANALYSES

Direct Gamma Radiation (TLD)

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
027	12/11/2018-3/12/2019	VN	Alpha TLD was missing and Bravo TLD was found on the ground due to vandalism.	NCR # 02263442
038	6/11-9/10/2019	VN	Alpha and Bravo TLDs were missing due to vandalism.	NCR # 02291485
059	9/10-12/10/2019	VN	Alpha and Bravo TLDs were missing due to vandalism.	NCR # 02307128

APPENDIX D

ANALYTICAL DEVIATIONS

APPENDIX D

OCONEE NUCLEAR STATION ANALYTICAL DEVIATIONS

DEVIATION & UNAVAILABLE REASON CODES			
BF	Blown Fuse	PM	Preventive Maintenance
CN	Construction	PO	Power Outage
FZ	Sample Frozen	PS	Pump out of service / Undergoing repair
IV	Insufficient Volume	SL	Sample Loss/Lost due to Lab Accident
IW	Inclement Weather	SM	Motor / Rotor Seized
LC	Line Clog to Sampler	SU	Seasonally Unavailable
OT	Other	TF	Torn Filter
PI	Power Interrupt	VN	Vandalism

D.1 ANALYTICAL DEVIATIONS

Oconee environmental Alpha (A) and Bravo (B) TLDs are co-located TLDs placed next to each other to comply with ANSI/HPS N13.37-2014 Section 7.1 Paragraph 7. The TLD collections indicated incurred tampering/vandalism with one of the two co-located TLDs. One TLD for each collection was available and did not appear to have experienced any tampering/vandalism during the quarter.

Direct Gamma Radiation (TLD)

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
048	12/11/2018-3/12/2019	VN	Alpha TLD was collected and Bravo was missing due to vandalism.	NCR # 02263416
059	12/11/2018-3/12/2019	OT	Bravo TLD was collected and Alpha TLD was found on the ground due to undetermined cause.	NCR # 02263427

APPENDIX E

**RADIOLOGICAL
ENVIRONMENTAL MONITORING
PROGRAM RESULTS**

2019

This appendix includes sample analysis report summaries and supportive data generated from each sample medium for 2019

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 077 [INDICATOR - SW @ 1 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
491766	12/31/2018 - 1/7/2019	Beta	1.37E-02	2.74E-03	3.25E-03
492233	1/7/2019 - 1/14/2019	Beta	2.04E-02	3.01E-03	3.11E-03
492538	1/14/2019 - 1/21/2019	Beta	1.66E-02	2.84E-03	3.11E-03
492908	1/21/2019 - 1/28/2019	Beta	1.91E-02	3.01E-03	3.21E-03
493336	1/28/2019 - 2/4/2019	Beta	2.78E-02	3.46E-03	3.31E-03
493597	2/4/2019 - 2/11/2019	Beta	2.33E-02	2.84E-03	2.70E-03
493825	2/11/2019 - 2/18/2019	Beta	1.16E-02	2.42E-03	3.06E-03
494362	2/18/2019 - 2/25/2019	Beta	9.32E-03	2.46E-03	3.23E-03
494986	2/25/2019 - 3/4/2019	Beta	2.01E-02	2.73E-03	2.83E-03
496322	3/4/2019 - 3/11/2019	Beta	1.97E-02	2.72E-03	2.78E-03
496144	3/11/2019 - 3/18/2019	Beta	2.25E-02	3.15E-03	3.24E-03
496663	3/18/2019 - 3/25/2019	Beta	2.24E-02	3.36E-03	3.72E-03
497163	3/25/2019 - 4/1/2019	Beta	2.02E-02	2.67E-03	2.58E-03
497599	12/31/2018 - 4/1/2019	Cs-134	<1.69E-03	0.00E+00	1.69E-03
		Cs-137	<1.06E-03	0.00E+00	1.06E-03
		Be-7	1.40E-01	3.99E-02	3.76E-02
		K-40	<2.85E-02	0.00E+00	2.85E-02
497593	4/1/2019 - 4/8/2019	Beta	1.91E-02	3.04E-03	3.31E-03
498063	4/8/2019 - 4/15/2019	Beta	1.38E-02	2.71E-03	3.17E-03
498621	4/15/2019 - 4/22/2019	Beta	1.04E-02	2.59E-03	3.40E-03
498802	4/22/2019 - 4/29/2019	Beta	2.13E-02	3.25E-03	3.51E-03
499477	4/29/2019 - 5/6/2019	Beta	2.08E-02	2.70E-03	2.63E-03
499896	5/6/2019 - 5/13/2019	Beta	1.37E-02	2.82E-03	3.47E-03
500146	5/13/2019 - 5/20/2019	Beta	2.89E-02	3.41E-03	3.21E-03
500478	5/20/2019 - 5/28/2019	Beta	3.01E-02	3.26E-03	2.88E-03
500762	5/28/2019 - 6/3/2019	Beta	2.72E-02	3.91E-03	4.08E-03
501149	6/3/2019 - 6/10/2019	Beta	1.86E-02	2.68E-03	2.83E-03

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 077 [INDICATOR - SW @ 1 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
501968	6/10/2019 - 6/17/2019	Beta	2.60E-02	3.14E-03	2.58E-03
502223	6/17/2019 - 6/24/2019	Beta	1.56E-02	2.91E-03	3.42E-03
502433	6/24/2019 - 7/1/2019	Beta	3.04E-02	3.55E-03	3.28E-03
503430	4/1/2019 - 7/1/2019	Cs-134	<3.65E-04	0.00E+00	3.65E-04
		Cs-137	<1.33E-03	0.00E+00	1.33E-03
		Be-7	1.84E-01	4.30E-02	4.02E-02
		K-40	<2.66E-02	0.00E+00	2.66E-02
503424	7/1/2019 - 7/8/2019	Beta	2.77E-02	3.43E-03	3.18E-03
503858	7/8/2019 - 7/15/2019	Beta	1.56E-02	2.86E-03	3.39E-03
504217	7/15/2019 - 7/22/2019	Beta	1.80E-02	3.00E-03	3.37E-03
504462	7/22/2019 - 7/29/2019	Beta	2.46E-02	3.25E-03	3.28E-03
504674	7/29/2019 - 8/5/2019	Beta	2.75E-02	3.50E-03	3.59E-03
504941	8/5/2019 - 8/12/2019	Beta	3.82E-02	3.90E-03	3.34E-03
505167	8/12/2019 - 8/19/2019	Beta	3.76E-02	3.43E-03	2.79E-03
505552	8/19/2019 - 8/26/2019	Beta	1.83E-02	3.14E-03	3.72E-03
505875	8/26/2019 - 9/3/2019	Beta	2.48E-02	3.12E-03	3.24E-03
506382	9/3/2019 - 9/9/2019	Beta	4.42E-02	4.46E-03	3.79E-03
507320	9/9/2019 - 9/16/2019	Beta	4.79E-02	3.83E-03	2.97E-03
507842	9/16/2019 - 9/23/2019	Beta	3.43E-02	3.85E-03	3.65E-03
508373	9/23/2019 - 9/30/2019	Beta	3.67E-02	3.84E-03	3.32E-03
509257	7/1/2019 - 9/30/2019	Cs-134	<1.59E-03	0.00E+00	1.59E-03
		Cs-137	<1.45E-03	0.00E+00	1.45E-03
		Be-7	2.27E-01	4.98E-02	4.40E-02
		K-40	<2.74E-02	0.00E+00	2.74E-02
509251	9/30/2019 - 10/7/2019	Beta	4.02E-02	3.95E-03	3.43E-03
509847	10/7/2019 - 10/14/2019	Beta	1.88E-02	3.02E-03	3.37E-03
510556	10/14/2019 - 10/21/2019	Beta	2.21E-02	3.28E-03	3.57E-03
510842	10/21/2019 - 10/28/2019	Beta	2.01E-02	2.96E-03	3.00E-03
511243	10/28/2019 - 11/4/2019	Beta	2.27E-02	3.21E-03	3.33E-03

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 077 [INDICATOR - SW @ 1 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511483	11/4/2019 - 11/11/2019	Beta	3.67E-02	3.80E-03	3.38E-03
511897	11/11/2019 - 11/18/2019	Beta	2.39E-02	2.89E-03	2.76E-03
512194	11/18/2019 - 11/25/2019	Beta	2.04E-02	2.81E-03	3.00E-03
512494	11/25/2019 - 12/2/2019	Beta	2.45E-02	3.31E-03	3.31E-03
512678	12/2/2019 - 12/9/2019	Beta	1.84E-02	2.96E-03	3.21E-03
513647	12/9/2019 - 12/16/2019	Beta	1.66E-02	2.91E-03	3.32E-03
513954	12/16/2019 - 12/23/2019	Beta	2.43E-02	2.89E-03	2.83E-03
514174	12/23/2019 - 12/30/2019	Beta	2.31E-02	3.25E-03	3.37E-03
514504	9/30/2019 - 12/30/2019	Cs-134	<1.75E-03	0.00E+00	1.75E-03
		Cs-137	<1.63E-03	0.00E+00	1.63E-03
		Be-7	1.30E-01	3.38E-02	3.03E-02
		K-40	<2.18E-02	0.00E+00	2.18E-02

Sample Point 078.1 [INDICATOR - WSW @ 0.53 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
491767	12/31/2018 - 1/7/2019	Beta	1.99E-02	3.05E-03	3.22E-03
492234	1/7/2019 - 1/14/2019	Beta	2.29E-02	3.14E-03	3.14E-03
492539	1/14/2019 - 1/21/2019	Beta	1.94E-02	2.99E-03	3.11E-03
492909	1/21/2019 - 1/28/2019	Beta	2.43E-02	3.26E-03	3.21E-03
493337	1/28/2019 - 2/4/2019	Beta	2.96E-02	3.54E-03	3.31E-03
493598	2/4/2019 - 2/11/2019	Beta	2.72E-02	3.00E-03	2.70E-03
493826	2/11/2019 - 2/18/2019	Beta	1.55E-02	2.61E-03	3.06E-03
494363	2/18/2019 - 2/25/2019	Beta	9.66E-03	2.48E-03	3.23E-03
494987	2/25/2019 - 3/4/2019	Beta	2.11E-02	2.77E-03	2.83E-03
496323	3/4/2019 - 3/11/2019	Beta	2.29E-02	2.86E-03	2.77E-03
496145	3/11/2019 - 3/18/2019	Beta	2.64E-02	3.33E-03	3.24E-03
496664	3/18/2019 - 3/25/2019	Beta	2.05E-02	3.27E-03	3.72E-03
497164	3/25/2019 - 4/1/2019	Beta	2.15E-02	2.73E-03	2.58E-03
497600	12/31/2018 - 4/1/2019	Cs-134	<1.39E-03	0.00E+00	1.39E-03
		Cs-137	<1.13E-03	0.00E+00	1.13E-03
		Be-7	1.94E-01	4.63E-02	3.50E-02

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 078.1 [INDICATOR - WSW @ 0.53 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
497600	12/31/2018 - 4/1/2019	K-40	<3.04E-02	0.00E+00	3.04E-02
497594	4/1/2019 - 4/8/2019	Beta	1.92E-02	3.05E-03	3.31E-03
498064	4/8/2019 - 4/15/2019	Beta	1.61E-02	2.84E-03	3.17E-03
498622	4/15/2019 - 4/22/2019	Beta	1.07E-02	2.60E-03	3.39E-03
498803	4/22/2019 - 4/29/2019	Beta	2.27E-02	3.31E-03	3.50E-03
499478	4/29/2019 - 5/6/2019	Beta	2.04E-02	2.69E-03	2.63E-03
499897	5/6/2019 - 5/13/2019	Beta	1.71E-02	3.03E-03	3.53E-03
500147	5/13/2019 - 5/20/2019	Beta	2.88E-02	3.44E-03	3.25E-03
500479	5/20/2019 - 5/28/2019	Beta	2.97E-02	3.27E-03	2.90E-03
500763	5/28/2019 - 6/3/2019	Beta	2.94E-02	3.90E-03	3.91E-03
501150	6/3/2019 - 6/10/2019	Beta	2.12E-02	2.80E-03	2.83E-03
501969	6/10/2019 - 6/17/2019	Beta	2.43E-02	3.06E-03	2.58E-03
502224	6/17/2019 - 6/24/2019	Beta	1.43E-02	2.84E-03	3.43E-03
502434	6/24/2019 - 7/1/2019	Beta	3.22E-02	3.63E-03	3.28E-03
503431	4/1/2019 - 7/1/2019	Cs-134	<1.49E-03	0.00E+00	1.49E-03
		Cs-137	<1.49E-03	0.00E+00	1.49E-03
		Be-7	2.00E-01	4.16E-02	2.63E-02
		K-40	<3.22E-02	0.00E+00	3.22E-02
503425	7/1/2019 - 7/8/2019	Beta	2.53E-02	3.31E-03	3.18E-03
503859	7/8/2019 - 7/15/2019	Beta	1.47E-02	2.81E-03	3.39E-03
504218	7/15/2019 - 7/22/2019	Beta	1.89E-02	3.05E-03	3.38E-03
504463	7/22/2019 - 7/29/2019	Beta	2.16E-02	3.12E-03	3.28E-03
504675	7/29/2019 - 8/5/2019	Beta	2.50E-02	3.39E-03	3.59E-03
504942	8/5/2019 - 8/12/2019	Beta	3.96E-02	3.95E-03	3.34E-03
505168	8/12/2019 - 8/19/2019	Beta	3.68E-02	3.40E-03	2.79E-03
505553	8/19/2019 - 8/26/2019	Beta	1.76E-02	3.11E-03	3.72E-03
505876	8/26/2019 - 9/3/2019	Beta	2.47E-02	3.12E-03	3.25E-03

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 078.1 [INDICATOR - WSW @ 0.53 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
506383	9/3/2019 - 9/9/2019	Beta	4.51E-02	4.49E-03	3.79E-03
507321	9/9/2019 - 9/16/2019	Beta	5.06E-02	3.91E-03	2.97E-03
507843	9/16/2019 - 9/23/2019	Beta	3.15E-02	3.73E-03	3.64E-03
508374	9/23/2019 - 9/30/2019	Beta	3.18E-02	3.63E-03	3.32E-03
509258	7/1/2019 - 9/30/2019	Cs-134	<1.24E-03	0.00E+00	1.24E-03
		Cs-137	<1.43E-03	0.00E+00	1.43E-03
		Be-7	1.84E-01	4.02E-02	2.99E-02
		K-40	1.41E-02	1.18E-02	1.54E-02
509252	9/30/2019 - 10/7/2019	Beta	3.88E-02	3.90E-03	3.42E-03
509848	10/7/2019 - 10/14/2019	Beta	2.04E-02	3.10E-03	3.37E-03
510557	10/14/2019 - 10/21/2019	Beta	1.82E-02	3.10E-03	3.57E-03
510843	10/21/2019 - 10/28/2019	Beta	1.87E-02	2.88E-03	3.00E-03
511244	10/28/2019 - 11/4/2019	Beta	2.23E-02	3.18E-03	3.33E-03
511484	11/4/2019 - 11/11/2019	Beta	3.96E-02	3.91E-03	3.38E-03
511898	11/11/2019 - 11/18/2019	Beta	2.63E-02	3.00E-03	2.76E-03
512195	11/18/2019 - 11/25/2019	Beta	2.38E-02	2.96E-03	3.00E-03
512495	11/25/2019 - 12/2/2019	Beta	2.26E-02	3.22E-03	3.31E-03
512679	12/2/2019 - 12/9/2019	Beta	2.14E-02	3.11E-03	3.21E-03
513648	12/9/2019 - 12/16/2019	Beta	1.67E-02	2.91E-03	3.32E-03
513955	12/16/2019 - 12/23/2019	Beta	2.48E-02	2.92E-03	2.83E-03
514175	12/23/2019 - 12/30/2019	Beta	2.28E-02	3.24E-03	3.36E-03
514505	9/30/2019 - 12/30/2019	Cs-134	<2.64E-03	0.00E+00	2.64E-03
		Cs-137	<1.67E-03	0.00E+00	1.67E-03
		Be-7	1.37E-01	3.64E-02	3.55E-02
		K-40	1.85E-02	1.12E-02	4.55E-03

Sample Point 079 [INDICATOR - NE @ 0.56 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
491768	12/31/2018 - 1/7/2019	Beta	1.36E-02	2.73E-03	3.25E-03
492235	1/7/2019 - 1/14/2019	Beta	2.01E-02	3.01E-03	3.14E-03
492540	1/14/2019 - 1/21/2019	Beta	1.43E-02	2.71E-03	3.10E-03

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 079 [INDICATOR - NE @ 0.56 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
492910	1/21/2019 - 1/28/2019	Beta	1.89E-02	2.99E-03	3.20E-03
493338	1/28/2019 - 2/4/2019	Beta	2.55E-02	3.36E-03	3.33E-03
493599	2/4/2019 - 2/11/2019	Beta	1.62E-02	2.50E-03	2.69E-03
493827	2/11/2019 - 2/18/2019	Beta	1.13E-02	2.41E-03	3.06E-03
494364	2/18/2019 - 2/25/2019	Beta	7.38E-03	2.34E-03	3.23E-03
494988	2/25/2019 - 3/4/2019	Beta	2.00E-02	2.73E-03	2.84E-03
496324	3/4/2019 - 3/11/2019	Beta	1.87E-02	2.66E-03	2.77E-03
496146	3/11/2019 - 3/18/2019	Beta	2.25E-02	3.15E-03	3.24E-03
496665	3/18/2019 - 3/25/2019	Beta	1.99E-02	3.24E-03	3.72E-03
497165	3/25/2019 - 4/1/2019	Beta	1.63E-02	2.48E-03	2.59E-03
497601	12/31/2018 - 4/1/2019	Cs-134	<1.29E-03	0.00E+00	1.29E-03
		Cs-137	<1.21E-03	0.00E+00	1.21E-03
		Be-7	1.31E-01	4.08E-02	4.43E-02
		K-40	3.44E-02	1.74E-02	1.76E-02
497595	4/1/2019 - 4/8/2019	Beta	1.62E-02	2.88E-03	3.29E-03
498065	4/8/2019 - 4/15/2019	Beta	1.40E-02	2.73E-03	3.18E-03
498623	4/15/2019 - 4/22/2019	Beta	1.24E-02	2.74E-03	3.45E-03
498804	4/22/2019 - 4/29/2019	Beta	2.21E-02	3.23E-03	3.43E-03
499479	4/29/2019 - 5/6/2019	Beta	1.84E-02	2.59E-03	2.64E-03
499898	5/6/2019 - 5/13/2019	Beta	1.26E-02	2.79E-03	3.52E-03
500148	5/13/2019 - 5/20/2019	Beta	2.65E-02	3.34E-03	3.25E-03
500480	5/20/2019 - 5/28/2019	Beta	2.64E-02	3.12E-03	2.90E-03
500764	5/28/2019 - 6/3/2019	Beta	2.71E-02	3.81E-03	3.93E-03
501151	6/3/2019 - 6/10/2019	Beta	1.81E-02	2.65E-03	2.83E-03
501970	6/10/2019 - 6/17/2019	Beta	2.23E-02	2.96E-03	2.58E-03
502225	6/17/2019 - 6/24/2019	Beta	1.45E-02	2.85E-03	3.42E-03
502435	6/24/2019 - 7/1/2019	Beta	2.62E-02	3.38E-03	3.29E-03

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 079 [INDICATOR - NE @ 0.56 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
503432	4/1/2019 - 7/1/2019	Cs-134	<1.59E-03	0.00E+00	1.59E-03
		Cs-137	<1.45E-03	0.00E+00	1.45E-03
		Be-7	1.68E-01	4.09E-02	3.51E-02
		K-40	1.20E-02	1.17E-02	1.65E-02
503426	7/1/2019 - 7/8/2019	Beta	2.37E-02	3.24E-03	3.18E-03
503860	7/8/2019 - 7/15/2019	Beta	1.48E-02	2.80E-03	3.36E-03
504219	7/15/2019 - 7/22/2019	Beta	1.71E-02	2.98E-03	3.40E-03
504464	7/22/2019 - 7/29/2019	Beta	1.99E-02	3.04E-03	3.28E-03
504676	7/29/2019 - 8/5/2019	Beta	2.46E-02	3.36E-03	3.58E-03
504943	8/5/2019 - 8/12/2019	Beta	3.67E-02	3.84E-03	3.34E-03
505169	8/12/2019 - 8/19/2019	Beta	3.26E-02	3.25E-03	2.80E-03
505554	8/19/2019 - 8/26/2019	Beta	1.58E-02	3.08E-03	3.82E-03
505877	8/26/2019 - 9/3/2019	Beta	2.25E-02	3.03E-03	3.25E-03
506384	9/3/2019 - 9/9/2019	Beta	3.84E-02	4.21E-03	3.77E-03
507322	9/9/2019 - 9/16/2019	Beta	4.23E-02	3.65E-03	2.98E-03
507844	9/16/2019 - 9/23/2019	Beta	3.19E-02	3.75E-03	3.65E-03
508375	9/23/2019 - 9/30/2019	Beta	3.50E-02	3.75E-03	3.29E-03
509259	7/1/2019 - 9/30/2019	Cs-134	<1.26E-03	0.00E+00	1.26E-03
		Cs-137	<1.33E-03	0.00E+00	1.33E-03
		Be-7	1.79E-01	4.25E-02	3.96E-02
		K-40	<2.02E-02	0.00E+00	2.02E-02
509253	9/30/2019 - 10/7/2019	Beta	3.49E-02	3.75E-03	3.42E-03
509849	10/7/2019 - 10/14/2019	Beta	2.03E-02	3.10E-03	3.39E-03
510558	10/14/2019 - 10/21/2019	Beta	2.37E-02	3.35E-03	3.57E-03
510844	10/21/2019 - 10/28/2019	Beta	1.86E-02	2.88E-03	3.01E-03
511245	10/28/2019 - 11/4/2019	Beta	1.90E-02	3.02E-03	3.33E-03
511485	11/4/2019 - 11/11/2019	Beta	3.42E-02	3.70E-03	3.39E-03
511899	11/11/2019 - 11/18/2019	Beta	2.33E-02	2.87E-03	2.76E-03
512196	11/18/2019 - 11/25/2019	Beta	2.36E-02	2.95E-03	3.01E-03

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 079 [INDICATOR - NE @ 0.56 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512496	11/25/2019 - 12/2/2019	Beta	2.33E-02	3.26E-03	3.30E-03
512680	12/2/2019 - 12/9/2019	Beta	1.47E-02	2.76E-03	3.21E-03
513649	12/9/2019 - 12/16/2019	Beta	1.55E-02	2.86E-03	3.33E-03
513956	12/16/2019 - 12/23/2019	Beta	2.28E-02	2.83E-03	2.83E-03
514176	12/23/2019 - 12/30/2019	Beta	1.78E-02	2.99E-03	3.36E-03
514506	9/30/2019 - 12/30/2019	Cs-134	<1.90E-03	0.00E+00	1.90E-03
		Cs-137	<1.45E-03	0.00E+00	1.45E-03
		Be-7	1.34E-01	3.33E-02	2.65E-02
		K-40	<1.23E-02	0.00E+00	1.23E-02

Sample Point 081 [CONTROL - SE @ 9.33 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
491769	12/31/2018 - 1/7/2019	Beta	1.31E-02	2.70E-03	3.24E-03
492236	1/7/2019 - 1/14/2019	Beta	1.67E-02	2.81E-03	3.10E-03
492541	1/14/2019 - 1/21/2019	Beta	1.64E-02	2.83E-03	3.11E-03
492911	1/21/2019 - 1/28/2019	Beta	1.87E-02	2.99E-03	3.21E-03
493339	1/28/2019 - 2/4/2019	Beta	2.21E-02	3.20E-03	3.32E-03
493600	2/4/2019 - 2/11/2019	Beta	1.95E-02	2.66E-03	2.69E-03
493828	2/11/2019 - 2/18/2019	Beta	1.26E-02	2.47E-03	3.05E-03
494365	2/18/2019 - 2/25/2019	Beta	8.12E-03	2.39E-03	3.24E-03
494989	2/25/2019 - 3/4/2019	Beta	1.75E-02	2.61E-03	2.83E-03
496325	3/4/2019 - 3/11/2019	Beta	2.00E-02	2.74E-03	2.78E-03
496147	3/11/2019 - 3/18/2019	Beta	2.20E-02	3.15E-03	3.27E-03
496666	3/18/2019 - 3/25/2019	Beta	2.37E-02	3.40E-03	3.69E-03
497166	3/25/2019 - 4/1/2019	Beta	1.90E-02	2.61E-03	2.58E-03
497602	12/31/2018 - 4/1/2019	Cs-134	<1.25E-03	0.00E+00	1.25E-03
		Cs-137	<1.64E-03	0.00E+00	1.64E-03
		Be-7	1.79E-01	4.23E-02	3.17E-02
		K-40	<2.77E-02	0.00E+00	2.77E-02
497596	4/1/2019 - 4/8/2019	Beta	1.14E-02	2.62E-03	3.30E-03
498066	4/8/2019 - 4/15/2019	Beta	1.35E-02	2.69E-03	3.18E-03

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 081 [CONTROL - SE @ 9.33 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
498624	4/15/2019 - 4/22/2019	Beta	1.24E-02	2.70E-03	3.39E-03
498805	4/22/2019 - 4/29/2019	Beta	2.10E-02	3.24E-03	3.52E-03
499480	4/29/2019 - 5/6/2019	Beta	1.85E-02	2.61E-03	2.65E-03
499899	5/6/2019 - 5/13/2019	Beta	1.10E-02	2.70E-03	3.52E-03
500149	5/13/2019 - 5/20/2019	Beta	2.51E-02	3.27E-03	3.25E-03
500481	5/20/2019 - 5/28/2019	Beta	2.98E-02	3.26E-03	2.89E-03
500765	5/28/2019 - 6/3/2019	Beta	2.84E-02	3.85E-03	3.91E-03
501152	6/3/2019 - 6/10/2019	Beta	1.71E-02	2.61E-03	2.83E-03
501971	6/10/2019 - 6/17/2019	Beta	2.11E-02	2.90E-03	2.59E-03
502226	6/17/2019 - 6/24/2019	Beta	1.47E-02	2.86E-03	3.42E-03
502436	6/24/2019 - 7/1/2019	Beta	2.69E-02	3.41E-03	3.30E-03
503433	4/1/2019 - 7/1/2019	Nuclide	Activity	2 Sigma Error	MDA
		Cs-134	<1.47E-03	0.00E+00	1.47E-03
		Cs-137	<1.20E-03	0.00E+00	1.20E-03
		Be-7	1.39E-01	3.87E-02	4.13E-02
		K-40	<3.21E-02	0.00E+00	3.21E-02
503427	7/1/2019 - 7/8/2019	Beta	2.29E-02	3.19E-03	3.17E-03
503861	7/8/2019 - 7/15/2019	Beta	1.66E-02	2.93E-03	3.42E-03
504220	7/15/2019 - 7/22/2019	Beta	1.62E-02	2.90E-03	3.35E-03
504465	7/22/2019 - 7/29/2019	Beta	2.00E-02	3.05E-03	3.29E-03
504677	7/29/2019 - 8/5/2019	Beta	2.44E-02	3.37E-03	3.61E-03
504944	8/5/2019 - 8/12/2019	Beta	3.29E-02	3.69E-03	3.34E-03
505170	8/12/2019 - 8/19/2019	Beta	3.00E-02	3.13E-03	2.78E-03
505555	8/19/2019 - 8/26/2019	Beta	1.56E-02	3.01E-03	3.73E-03
505878	8/26/2019 - 9/3/2019	Beta	2.15E-02	2.98E-03	3.23E-03
506385	9/3/2019 - 9/9/2019	Beta	3.46E-02	4.08E-03	3.82E-03
507323	9/9/2019 - 9/16/2019	Beta	4.45E-02	3.72E-03	2.98E-03
507845	9/16/2019 - 9/23/2019	Beta	3.70E-02	3.93E-03	3.62E-03

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 081 [CONTROL - SE @ 9.33 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
508376	9/23/2019 - 9/30/2019	Beta	2.49E-02	3.31E-03	3.29E-03
509260	7/1/2019 - 9/30/2019	Cs-134	<1.82E-03	0.00E+00	1.82E-03
		Cs-137	<1.06E-03	0.00E+00	1.06E-03
		Be-7	1.52E-01	3.89E-02	3.60E-02
		K-40	<1.59E-02	0.00E+00	1.59E-02
509254	9/30/2019 - 10/7/2019	Beta	3.55E-02	3.79E-03	3.44E-03
509850	10/7/2019 - 10/14/2019	Beta	1.72E-02	2.93E-03	3.36E-03
510559	10/14/2019 - 10/21/2019	Beta	2.32E-02	3.34E-03	3.58E-03
510845	10/21/2019 - 10/28/2019	Beta	1.90E-02	2.90E-03	3.01E-03
511246	10/28/2019 - 11/4/2019	Beta	1.43E-02	2.79E-03	3.34E-03
511486	11/4/2019 - 11/11/2019	Beta	2.81E-02	3.44E-03	3.39E-03
511900	11/11/2019 - 11/18/2019	Beta	2.27E-02	2.83E-03	2.75E-03
512197	11/18/2019 - 11/25/2019	Beta	2.18E-02	2.87E-03	3.01E-03
514507	9/30/2019 - 11/25/2019	Cs-134	<1.86E-03	0.00E+00	1.86E-03
		Cs-137	<1.30E-03	0.00E+00	1.30E-03
		Be-7	1.62E-01	4.82E-02	4.66E-02
		K-40	2.25E-02	1.72E-02	2.24E-02

Sample Point 084 [INDICATOR - NNE @ 2.58 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
491770	12/31/2018 - 1/7/2019	Beta	1.46E-02	2.79E-03	3.25E-03
492237	1/7/2019 - 1/14/2019	Beta	1.84E-02	2.91E-03	3.11E-03
492542	1/14/2019 - 1/21/2019	Beta	2.16E-02	3.11E-03	3.11E-03
492912	1/21/2019 - 1/28/2019	Beta	2.23E-02	3.16E-03	3.21E-03
493340	1/28/2019 - 2/4/2019	Beta	2.80E-02	3.48E-03	3.32E-03
493601	2/4/2019 - 2/11/2019	Beta	2.66E-02	2.98E-03	2.70E-03
493829	2/11/2019 - 2/18/2019	Beta	1.27E-02	2.48E-03	3.06E-03
494366	2/18/2019 - 2/25/2019	Beta	9.40E-03	2.47E-03	3.23E-03
494990	2/25/2019 - 3/4/2019	Beta	1.90E-02	2.68E-03	2.83E-03
496326	3/4/2019 - 3/11/2019	Beta	2.09E-02	2.78E-03	2.78E-03
496148	3/11/2019 - 3/18/2019	Beta	2.35E-02	3.21E-03	3.26E-03

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 084 [INDICATOR - NNE @ 2.58 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
496667	3/18/2019 - 3/25/2019	Beta	2.29E-02	3.37E-03	3.70E-03
497167	3/25/2019 - 4/1/2019	Beta	1.98E-02	2.64E-03	2.58E-03
497603	12/31/2018 - 4/1/2019	Cs-134	<1.79E-03	0.00E+00	1.79E-03
		Cs-137	<1.03E-03	0.00E+00	1.03E-03
		Be-7	1.79E-01	4.40E-02	3.69E-02
		K-40	<2.20E-02	0.00E+00	2.20E-02
497597	4/1/2019 - 4/8/2019	Beta	1.80E-02	2.98E-03	3.31E-03
498067	4/8/2019 - 4/15/2019	Beta	1.59E-02	2.83E-03	3.17E-03
498625	4/15/2019 - 4/22/2019	Beta	1.21E-02	2.68E-03	3.40E-03
498806	4/22/2019 - 4/29/2019	Beta	1.94E-02	3.15E-03	3.51E-03
499481	4/29/2019 - 5/6/2019	Beta	2.10E-02	2.71E-03	2.63E-03
499900	5/6/2019 - 5/13/2019	Beta	1.41E-02	2.87E-03	3.52E-03
500150	5/13/2019 - 5/20/2019	Beta	2.95E-02	3.47E-03	3.25E-03
500482	5/20/2019 - 5/28/2019	Beta	2.97E-02	3.26E-03	2.90E-03
500766	5/28/2019 - 6/3/2019	Beta	9.85E-03	2.87E-03	3.91E-03
501153	6/3/2019 - 6/10/2019	Beta	5.57E-03	1.98E-03	2.83E-03
501972	6/10/2019 - 6/17/2019	Beta	7.31E-03	2.05E-03	2.57E-03
502227	6/17/2019 - 6/24/2019	Beta	3.30E-03	2.17E-03	3.44E-03
502437	6/24/2019 - 7/1/2019	Beta	8.26E-03	2.42E-03	3.28E-03
503434	4/1/2019 - 7/1/2019	Cs-134	<1.60E-03	0.00E+00	1.60E-03
		Cs-137	<1.17E-03	0.00E+00	1.17E-03
		Be-7	1.27E-01	3.43E-02	3.22E-02
		K-40	<3.12E-02	0.00E+00	3.12E-02
503428	7/1/2019 - 7/8/2019	Beta	7.55E-03	2.34E-03	3.18E-03
503862	7/8/2019 - 7/15/2019	Beta	9.79E-03	2.55E-03	3.39E-03
504221	7/15/2019 - 7/22/2019	Beta	1.43E-02	2.82E-03	3.37E-03
504466	7/22/2019 - 7/29/2019	Beta	1.94E-02	3.01E-03	3.28E-03
504678	7/29/2019 - 8/5/2019	Beta	2.22E-02	3.26E-03	3.59E-03
504945	8/5/2019 - 8/12/2019	Beta	3.21E-02	3.66E-03	3.34E-03

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 084 [INDICATOR - NNE @ 2.58 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
505171	8/12/2019 - 8/19/2019	Beta	2.90E-02	3.11E-03	2.79E-03
505556	8/19/2019 - 8/26/2019	Beta	1.45E-02	2.96E-03	3.72E-03
505879	8/26/2019 - 9/3/2019	Beta	2.18E-02	3.00E-03	3.24E-03
506386	9/3/2019 - 9/9/2019	Beta	2.90E-02	3.81E-03	3.79E-03
507324	9/9/2019 - 9/16/2019	Beta	4.16E-02	3.63E-03	2.99E-03
507846	9/16/2019 - 9/23/2019	Beta	2.91E-02	3.62E-03	3.62E-03
508377	9/23/2019 - 9/30/2019	Beta	2.41E-02	3.28E-03	3.30E-03
509261	7/1/2019 - 9/30/2019	Cs-134	<4.00E-04	0.00E+00	4.00E-04
		Cs-137	<1.30E-03	0.00E+00	1.30E-03
		Be-7	1.52E-01	3.95E-02	3.60E-02
		K-40	<2.57E-02	0.00E+00	2.57E-02
509255	9/30/2019 - 10/7/2019	Beta	3.18E-02	3.63E-03	3.43E-03
509851	10/7/2019 - 10/14/2019	Beta	1.29E-02	2.72E-03	3.38E-03
510560	10/14/2019 - 10/21/2019	Beta	2.21E-02	3.28E-03	3.57E-03
510846	10/21/2019 - 10/28/2019	Beta	1.50E-02	2.70E-03	3.01E-03
511247	10/28/2019 - 11/4/2019	Beta	1.82E-02	2.98E-03	3.32E-03
511487	11/4/2019 - 11/11/2019	Beta	2.91E-02	3.49E-03	3.39E-03
511901	11/11/2019 - 11/18/2019	Beta	2.30E-02	2.85E-03	2.76E-03
512198	11/18/2019 - 11/25/2019	Beta	1.86E-02	2.73E-03	3.01E-03
512498	11/25/2019 - 12/2/2019	Beta	1.84E-02	3.01E-03	3.32E-03
512682	12/2/2019 - 12/9/2019	Beta	1.54E-02	2.81E-03	3.22E-03
513650	12/9/2019 - 12/16/2019	Beta	1.38E-02	2.75E-03	3.31E-03
513957	12/16/2019 - 12/23/2019	Beta	1.97E-02	2.70E-03	2.83E-03
514177	12/23/2019 - 12/30/2019	Beta	1.79E-02	3.01E-03	3.37E-03
514508	9/30/2019 - 12/30/2019	Cs-134	<1.77E-03	0.00E+00	1.77E-03
		Cs-137	<1.12E-03	0.00E+00	1.12E-03
		Be-7	1.02E-01	3.09E-02	2.84E-02
		K-40	<2.39E-02	0.00E+00	2.39E-02

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 085 [INDICATOR - NNW @ 0.88 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
491771	12/31/2018 - 1/7/2019	Beta	1.43E-02	2.76E-03	3.22E-03
492238	1/7/2019 - 1/14/2019	Beta	1.86E-02	2.94E-03	3.14E-03
492543	1/14/2019 - 1/21/2019	Beta	1.87E-02	2.95E-03	3.11E-03
492913	1/21/2019 - 1/28/2019	Beta	2.27E-02	3.19E-03	3.22E-03
493341	1/28/2019 - 2/4/2019	Beta	2.79E-02	3.46E-03	3.31E-03
493602	2/4/2019 - 2/11/2019	Beta	2.11E-02	2.74E-03	2.70E-03
493830	2/11/2019 - 2/18/2019	Beta	1.43E-02	2.56E-03	3.06E-03
494367	2/18/2019 - 2/25/2019	Beta	9.30E-03	2.46E-03	3.23E-03
494991	2/25/2019 - 3/4/2019	Beta	1.89E-02	2.67E-03	2.83E-03
496327	3/4/2019 - 3/11/2019	Beta	2.43E-02	2.93E-03	2.77E-03
496149	3/11/2019 - 3/18/2019	Beta	2.31E-02	3.18E-03	3.24E-03
496668	3/18/2019 - 3/25/2019	Beta	2.94E-02	3.67E-03	3.72E-03
497168	3/25/2019 - 4/1/2019	Beta	2.19E-02	2.74E-03	2.58E-03
497604	12/31/2018 - 4/1/2019	Cs-134	<1.84E-03	0.00E+00	1.84E-03
		Cs-137	<1.71E-03	0.00E+00	1.71E-03
		Be-7	1.61E-01	4.25E-02	3.79E-02
		K-40	<3.11E-02	0.00E+00	3.11E-02
497598	4/1/2019 - 4/8/2019	Beta	1.85E-02	3.01E-03	3.31E-03
498068	4/8/2019 - 4/15/2019	Beta	1.67E-02	2.88E-03	3.17E-03
498626	4/15/2019 - 4/22/2019	Beta	1.20E-02	2.68E-03	3.39E-03
498807	4/22/2019 - 4/29/2019	Beta	2.16E-02	3.27E-03	3.51E-03
499482	4/29/2019 - 5/6/2019	Beta	2.26E-02	2.79E-03	2.62E-03
499901	5/6/2019 - 5/13/2019	Beta	1.81E-02	3.09E-03	3.53E-03
500151	5/13/2019 - 5/20/2019	Beta	2.99E-02	3.48E-03	3.25E-03
500483	5/20/2019 - 5/28/2019	Beta	3.58E-02	3.51E-03	2.90E-03
500767	5/28/2019 - 6/3/2019	Beta	3.20E-02	4.02E-03	3.91E-03
501154	6/3/2019 - 6/10/2019	Beta	1.81E-02	2.66E-03	2.83E-03

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 085 [INDICATOR - NNW @ 0.88 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
501973	6/10/2019 - 6/17/2019	Beta	2.53E-02	3.12E-03	2.58E-03
502228	6/17/2019 - 6/24/2019	Beta	1.48E-02	2.87E-03	3.43E-03
502438	6/24/2019 - 7/1/2019	Beta	3.07E-02	3.57E-03	3.28E-03
503435	4/1/2019 - 7/1/2019	Cs-134	<1.25E-03	0.00E+00	1.25E-03
		Cs-137	<1.33E-03	0.00E+00	1.33E-03
		Be-7	2.08E-01	4.33E-02	3.19E-02
		K-40	<3.37E-02	0.00E+00	3.37E-02
503429	7/1/2019 - 7/8/2019	Beta	2.63E-02	3.36E-03	3.18E-03
503863	7/8/2019 - 7/15/2019	Beta	1.48E-02	2.81E-03	3.39E-03
504222	7/15/2019 - 7/22/2019	Beta	1.78E-02	3.00E-03	3.38E-03
504467	7/22/2019 - 7/29/2019	Beta	2.50E-02	3.28E-03	3.28E-03
504679	7/29/2019 - 8/5/2019	Beta	2.62E-02	3.44E-03	3.59E-03
504946	8/5/2019 - 8/12/2019	Beta	3.68E-02	3.85E-03	3.34E-03
505172	8/12/2019 - 8/19/2019	Beta	4.17E-02	3.58E-03	2.79E-03
505557	8/19/2019 - 8/26/2019	Beta	1.65E-02	3.06E-03	3.72E-03
505880	8/26/2019 - 9/3/2019	Beta	2.57E-02	3.16E-03	3.25E-03
506387	9/3/2019 - 9/9/2019	Beta	4.89E-02	4.64E-03	3.79E-03
507325	9/9/2019 - 9/16/2019	Beta	5.18E-02	3.95E-03	2.97E-03
507847	9/16/2019 - 9/23/2019	Beta	3.94E-02	4.04E-03	3.64E-03
508378	9/23/2019 - 9/30/2019	Beta	3.02E-02	3.55E-03	3.29E-03
509262	7/1/2019 - 9/30/2019	Cs-134	<1.60E-03	0.00E+00	1.60E-03
		Cs-137	<1.01E-03	0.00E+00	1.01E-03
		Be-7	1.70E-01	4.02E-02	3.58E-02
		K-40	<2.34E-02	0.00E+00	2.34E-02
509256	9/30/2019 - 10/7/2019	Beta	3.59E-02	3.79E-03	3.43E-03
509852	10/7/2019 - 10/14/2019	Beta	2.00E-02	3.08E-03	3.37E-03
510561	10/14/2019 - 10/21/2019	Beta	2.52E-02	3.43E-03	3.57E-03
510847	10/21/2019 - 10/28/2019	Beta	1.64E-02	2.76E-03	3.00E-03
511248	10/28/2019 - 11/4/2019	Beta	2.02E-02	3.09E-03	3.33E-03

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 085 [INDICATOR - NNW @ 0.88 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511488	11/4/2019 - 11/11/2019	Beta	3.24E-02	3.63E-03	3.38E-03
511902	11/11/2019 - 11/18/2019	Beta	2.65E-02	3.00E-03	2.76E-03
512199	11/18/2019 - 11/25/2019	Beta	2.33E-02	2.94E-03	3.00E-03
512499	11/25/2019 - 12/2/2019	Beta	2.18E-02	3.18E-03	3.31E-03
512683	12/2/2019 - 12/9/2019	Beta	1.94E-02	3.01E-03	3.21E-03
513651	12/9/2019 - 12/16/2019	Beta	1.66E-02	2.91E-03	3.32E-03
513958	12/16/2019 - 12/23/2019	Beta	2.34E-02	2.86E-03	2.83E-03
514178	12/23/2019 - 12/30/2019	Beta	1.94E-02	3.07E-03	3.36E-03
514509	9/30/2019 - 12/30/2019	Cs-134	<1.60E-03	0.00E+00	1.60E-03
		Cs-137	<1.31E-03	0.00E+00	1.31E-03
		Be-7	1.24E-01	3.53E-02	3.72E-02
		K-40	<2.63E-02	0.00E+00	2.63E-02

Sample Point 093 [CONTROL - SE @ 9.34 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512937	11/25/2019 - 12/2/2019	Beta	2.51E-02	3.39E-03	3.40E-03
513058	12/2/2019 - 12/9/2019	Beta	1.89E-02	2.99E-03	3.21E-03
513652	12/9/2019 - 12/16/2019	Beta	1.58E-02	2.85E-03	3.30E-03
513959	12/16/2019 - 12/23/2019	Beta	2.21E-02	2.85E-03	2.90E-03
512930	11/25/2019 - 12/30/2019	Cs-134	<2.21E-03	0.00E+00	2.21E-03
		Cs-137	<2.29E-03	0.00E+00	2.29E-03
		Be-7	1.18E-01	3.60E-02	4.44E-02
		K-40	6.94E-02	3.18E-02	3.93E-02
514179	12/23/2019 - 12/30/2019	Beta	2.00E-02	3.06E-03	3.30E-03

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 077 [INDICATOR - SW @ 1 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
491778	12/31/2018 - 1/7/2019	I-131	<2.31E-02	0.00E+00	2.31E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<1.80E-02	0.00E+00	1.80E-02
		Be-7	<9.58E-02	0.00E+00	9.58E-02
		K-40	3.85E-01	1.76E-01	1.99E-01
492239	1/7/2019 - 1/14/2019	I-131	<1.90E-02	0.00E+00	1.90E-02
		Cs-134	<1.43E-02	0.00E+00	1.43E-02
		Cs-137	<1.73E-02	0.00E+00	1.73E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	4.43E-01	1.94E-01	2.28E-01
492544	1/14/2019 - 1/21/2019	I-131	<2.24E-02	0.00E+00	2.24E-02
		Cs-134	<2.15E-02	0.00E+00	2.15E-02
		Cs-137	<1.97E-02	0.00E+00	1.97E-02

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 077 [INDICATOR - SW @ 1 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492544	1/14/2019 - 1/21/2019	Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	4.63E-01	1.82E-01	1.83E-01
492914	1/21/2019 - 1/28/2019	I-131	<2.07E-02	0.00E+00	2.07E-02
		Cs-134	<1.92E-02	0.00E+00	1.92E-02
		Cs-137	<1.96E-02	0.00E+00	1.96E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	4.75E-01	1.72E-01	1.36E-01
493342	1/28/2019 - 2/4/2019	I-131	<2.37E-02	0.00E+00	2.37E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-02
		Cs-137	<1.48E-02	0.00E+00	1.48E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	5.66E-01	1.76E-01	3.48E-02
493603	2/4/2019 - 2/11/2019	I-131	<2.30E-02	0.00E+00	2.30E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02
		Cs-137	<1.87E-02	0.00E+00	1.87E-02
		Be-7	<9.55E-02	0.00E+00	9.55E-02
		K-40	7.21E-01	2.16E-01	1.66E-01
493831	2/11/2019 - 2/18/2019	I-131	<2.13E-02	0.00E+00	2.13E-02
		Cs-134	<1.41E-02	0.00E+00	1.41E-02
		Cs-137	<1.70E-02	0.00E+00	1.70E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	5.07E-01	2.06E-01	2.33E-01
494368	2/18/2019 - 2/25/2019	I-131	<2.39E-02	0.00E+00	2.39E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<1.41E-02	0.00E+00	1.41E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	4.02E-01	2.04E-01	2.69E-01
494992	2/25/2019 - 3/4/2019	I-131	<2.41E-02	0.00E+00	2.41E-02
		Cs-134	<1.50E-02	0.00E+00	1.50E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<1.30E-01	0.00E+00	1.30E-01
		K-40	6.06E-01	2.02E-01	1.81E-01
496328	3/4/2019 - 3/11/2019	I-131	<2.83E-02	0.00E+00	2.83E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-02
		Cs-137	<1.50E-02	0.00E+00	1.50E-02
		Be-7	<1.33E-01	0.00E+00	1.33E-01
		K-40	5.09E-01	1.99E-01	2.13E-01
496150	3/11/2019 - 3/18/2019	I-131	<1.86E-02	0.00E+00	1.86E-02
		Cs-134	<1.66E-02	0.00E+00	1.66E-02
		Cs-137	<1.47E-02	0.00E+00	1.47E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	4.59E-01	1.57E-01	3.45E-02
496669	3/18/2019 - 3/25/2019	I-131	<2.39E-02	0.00E+00	2.39E-02
		Cs-134	<1.88E-02	0.00E+00	1.88E-02
		Cs-137	<1.70E-02	0.00E+00	1.70E-02
		Be-7	<1.43E-01	0.00E+00	1.43E-01
		K-40	4.90E-01	2.31E-01	3.05E-01
497169	3/25/2019 - 4/1/2019	I-131	<2.58E-02	0.00E+00	2.58E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.89E-02	0.00E+00	1.89E-02

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 077 [INDICATOR - SW @ 1 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
497169	3/25/2019 - 4/1/2019	Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	4.67E-01	1.71E-01	1.38E-01
497605	4/1/2019 - 4/8/2019	I-131	<2.06E-02	0.00E+00	2.06E-02
		Cs-134	<1.25E-02	0.00E+00	1.25E-02
		Cs-137	<1.91E-02	0.00E+00	1.91E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	5.08E-01	1.90E-01	1.86E-01
498069	4/8/2019 - 4/15/2019	I-131	<2.08E-02	0.00E+00	2.08E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	4.17E-01	1.61E-01	1.28E-01
498627	4/15/2019 - 4/22/2019	I-131	<2.49E-02	0.00E+00	2.49E-02
		Cs-134	<1.93E-02	0.00E+00	1.93E-02
		Cs-137	<1.86E-02	0.00E+00	1.86E-02
		Be-7	<9.41E-02	0.00E+00	9.41E-02
		K-40	4.77E-01	1.78E-01	1.66E-01
498808	4/22/2019 - 4/29/2019	I-131	<2.27E-02	0.00E+00	2.27E-02
		Cs-134	<1.98E-02	0.00E+00	1.98E-02
		Cs-137	<1.93E-02	0.00E+00	1.93E-02
		Be-7	<1.36E-01	0.00E+00	1.36E-01
		K-40	5.29E-01	1.95E-01	1.85E-01
499483	4/29/2019 - 5/6/2019	I-131	<2.30E-02	0.00E+00	2.30E-02
		Cs-134	<1.92E-02	0.00E+00	1.92E-02
		Cs-137	<2.00E-02	0.00E+00	2.00E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	5.63E-01	1.87E-01	1.40E-01
499902	5/6/2019 - 5/13/2019	I-131	<2.21E-02	0.00E+00	2.21E-02
		Cs-134	<2.02E-02	0.00E+00	2.02E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<7.08E-02	0.00E+00	7.08E-02
		K-40	3.54E-01	1.64E-01	1.82E-01
500152	5/13/2019 - 5/20/2019	I-131	<4.95E-02	0.00E+00	4.95E-02
		Cs-134	<1.42E-02	0.00E+00	1.42E-02
		Cs-137	<1.80E-02	0.00E+00	1.80E-02
		Be-7	<1.44E-01	0.00E+00	1.44E-01
		K-40	5.45E-01	1.79E-01	1.21E-01
500484	5/20/2019 - 5/28/2019	I-131	<3.09E-02	0.00E+00	3.09E-02
		Cs-134	<1.10E-02	0.00E+00	1.10E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	<3.22E-01	0.00E+00	3.22E-01
500768	5/28/2019 - 6/3/2019	I-131	<3.05E-02	0.00E+00	3.05E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<2.05E-02	0.00E+00	2.05E-02
		Be-7	<1.41E-01	0.00E+00	1.41E-01
		K-40	6.83E-01	2.13E-01	4.21E-02
501155	6/3/2019 - 6/10/2019	I-131	<2.44E-02	0.00E+00	2.44E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 077 [INDICATOR - SW @ 1 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
501155	6/3/2019 - 6/10/2019	Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	5.30E-01	1.93E-01	1.83E-01
501974	6/10/2019 - 6/17/2019	I-131	<3.90E-02	0.00E+00	3.90E-02
		Cs-134	<1.66E-02	0.00E+00	1.66E-02
		Cs-137	<1.68E-02	0.00E+00	1.68E-02
		Be-7	<1.29E-01	0.00E+00	1.29E-01
		K-40	2.99E-01	1.49E-01	1.67E-01
502229	6/17/2019 - 6/24/2019	I-131	<1.71E-02	0.00E+00	1.71E-02
		Cs-134	<7.22E-03	0.00E+00	7.22E-03
		Cs-137	<1.02E-02	0.00E+00	1.02E-02
		Be-7	<1.00E-01	0.00E+00	1.00E-01
		K-40	2.15E-01	1.25E-01	1.43E-01
502439	6/24/2019 - 7/1/2019	I-131	<1.99E-02	0.00E+00	1.99E-02
		Cs-134	<1.72E-02	0.00E+00	1.72E-02
		Cs-137	<2.07E-02	0.00E+00	2.07E-02
		Be-7	<1.32E-01	0.00E+00	1.32E-01
		K-40	5.07E-01	1.99E-01	2.18E-01
503436	7/1/2019 - 7/8/2019	I-131	<1.90E-02	0.00E+00	1.90E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.31E-02	0.00E+00	1.31E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	4.38E-01	1.83E-01	1.97E-01
503864	7/8/2019 - 7/15/2019	I-131	<3.51E-02	0.00E+00	3.51E-02
		Cs-134	<1.83E-02	0.00E+00	1.83E-02
		Cs-137	<1.75E-02	0.00E+00	1.75E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	5.88E-01	2.17E-01	2.38E-01
504223	7/15/2019 - 7/22/2019	I-131	<2.32E-02	0.00E+00	2.32E-02
		Cs-134	<1.84E-02	0.00E+00	1.84E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	4.85E-01	2.08E-01	2.48E-01
504468	7/22/2019 - 7/29/2019	I-131	<2.35E-02	0.00E+00	2.35E-02
		Cs-134	<1.34E-02	0.00E+00	1.34E-02
		Cs-137	<1.43E-02	0.00E+00	1.43E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	<2.92E-01	0.00E+00	2.92E-01
504680	7/29/2019 - 8/5/2019	I-131	<1.93E-02	0.00E+00	1.93E-02
		Cs-134	<1.27E-02	0.00E+00	1.27E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	<9.22E-02	0.00E+00	9.22E-02
504947	8/5/2019 - 8/12/2019	I-131	<1.90E-02	0.00E+00	1.90E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<1.09E-02	0.00E+00	1.09E-02
		Be-7	<9.48E-02	0.00E+00	9.48E-02
		K-40	2.81E-01	1.52E-01	1.89E-01
505173	8/12/2019 - 8/19/2019	I-131	<2.21E-02	0.00E+00	2.21E-02
		Cs-134	<2.07E-02	0.00E+00	2.07E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 077 [INDICATOR - SW @ 1 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
505173	8/12/2019 - 8/19/2019	Be-7	<1.57E-01	0.00E+00	1.57E-01
		K-40	5.14E-01	2.00E-01	2.14E-01
505558	8/19/2019 - 8/26/2019	I-131	<2.65E-02	0.00E+00	2.65E-02
		Cs-134	<2.08E-02	0.00E+00	2.08E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<1.46E-01	0.00E+00	1.46E-01
		K-40	5.10E-01	1.96E-01	2.03E-01
505881	8/26/2019 - 9/3/2019	I-131	<1.39E-02	0.00E+00	1.39E-02
		Cs-134	<1.26E-02	0.00E+00	1.26E-02
		Cs-137	<1.15E-02	0.00E+00	1.15E-02
		Be-7	<9.86E-02	0.00E+00	9.86E-02
		K-40	3.60E-01	1.37E-01	1.08E-01
506388	9/3/2019 - 9/9/2019	I-131	<1.99E-02	0.00E+00	1.99E-02
		Cs-134	<2.01E-02	0.00E+00	2.01E-02
		Cs-137	<2.02E-02	0.00E+00	2.02E-02
		Be-7	<9.93E-02	0.00E+00	9.93E-02
		K-40	<3.51E-01	0.00E+00	3.51E-01
507326	9/9/2019 - 9/16/2019	I-131	<1.52E-02	0.00E+00	1.52E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.25E-02	0.00E+00	1.25E-02
		Be-7	<6.00E-02	0.00E+00	6.00E-02
		K-40	<1.51E-01	0.00E+00	1.51E-01
507848	9/16/2019 - 9/23/2019	I-131	<1.52E-02	0.00E+00	1.52E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<1.43E-02	0.00E+00	1.43E-02
		Be-7	<8.62E-02	0.00E+00	8.62E-02
		K-40	<2.14E-01	0.00E+00	2.14E-01
508379	9/23/2019 - 9/30/2019	I-131	<2.72E-02	0.00E+00	2.72E-02
		Cs-134	<1.77E-02	0.00E+00	1.77E-02
		Cs-137	<1.84E-02	0.00E+00	1.84E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	4.01E-01	1.56E-01	1.29E-01
509263	9/30/2019 - 10/7/2019	I-131	<2.00E-02	0.00E+00	2.00E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<2.00E-02	0.00E+00	2.00E-02
		Be-7	<1.52E-01	0.00E+00	1.52E-01
		K-40	3.09E-01	1.71E-01	2.20E-01
509853	10/7/2019 - 10/14/2019	I-131	<2.15E-02	0.00E+00	2.15E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02
		Cs-137	<1.31E-02	0.00E+00	1.31E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	6.54E-01	2.02E-01	1.62E-01
510562	10/14/2019 - 10/21/2019	I-131	<2.15E-02	0.00E+00	2.15E-02
		Cs-134	<1.90E-02	0.00E+00	1.90E-02
		Cs-137	<1.87E-02	0.00E+00	1.87E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	6.97E-01	2.16E-01	1.81E-01
510848	10/21/2019 - 10/28/2019	I-131	<2.05E-02	0.00E+00	2.05E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 077 [INDICATOR - SW @ 1 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
510848	10/21/2019 - 10/28/2019	Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	6.21E-01	2.18E-01	2.23E-01
511249	10/28/2019 - 11/4/2019	I-131	<2.24E-02	0.00E+00	2.24E-02
		Cs-134	<1.77E-02	0.00E+00	1.77E-02
		Cs-137	<1.63E-02	0.00E+00	1.63E-02
		Be-7	<1.68E-01	0.00E+00	1.68E-01
		K-40	5.16E-01	2.11E-01	2.45E-01
511489	11/4/2019 - 11/11/2019	I-131	<2.14E-02	0.00E+00	2.14E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-02
		Cs-137	<1.60E-02	0.00E+00	1.60E-02
		Be-7	<1.43E-01	0.00E+00	1.43E-01
		K-40	6.06E-01	2.05E-01	1.91E-01
511903	11/11/2019 - 11/18/2019	I-131	<2.22E-02	0.00E+00	2.22E-02
		Cs-134	<2.08E-02	0.00E+00	2.08E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	7.61E-01	2.32E-01	2.14E-01
512200	11/18/2019 - 11/25/2019	I-131	<2.03E-02	0.00E+00	2.03E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<1.44E-01	0.00E+00	1.44E-01
		K-40	5.35E-01	2.14E-01	2.48E-01
512500	11/25/2019 - 12/2/2019	I-131	<1.82E-02	0.00E+00	1.82E-02
		Cs-134	<1.70E-02	0.00E+00	1.70E-02
		Cs-137	<1.59E-02	0.00E+00	1.59E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	4.99E-01	2.15E-01	2.64E-01
512684	12/2/2019 - 12/9/2019	I-131	<1.94E-02	0.00E+00	1.94E-02
		Cs-134	<1.81E-02	0.00E+00	1.81E-02
		Cs-137	<1.24E-02	0.00E+00	1.24E-02
		Be-7	<9.66E-02	0.00E+00	9.66E-02
		K-40	2.98E-01	1.53E-01	1.81E-01
513653	12/9/2019 - 12/16/2019	I-131	<1.72E-02	0.00E+00	1.72E-02
		Cs-134	<1.25E-02	0.00E+00	1.25E-02
		Cs-137	<1.30E-02	0.00E+00	1.30E-02
		Be-7	<8.27E-02	0.00E+00	8.27E-02
		K-40	3.57E-01	1.46E-01	1.24E-01
513960	12/16/2019 - 12/23/2019	I-131	<3.69E-02	0.00E+00	3.69E-02
		Cs-134	<1.50E-02	0.00E+00	1.50E-02
		Cs-137	<1.77E-02	0.00E+00	1.77E-02
		Be-7	<1.54E-01	0.00E+00	1.54E-01
		K-40	4.28E-01	1.99E-01	2.50E-01
514180	12/23/2019 - 12/30/2019	I-131	<2.51E-02	0.00E+00	2.51E-02
		Cs-134	<1.77E-02	0.00E+00	1.77E-02
		Cs-137	<1.58E-02	0.00E+00	1.58E-02
		Be-7	<1.50E-01	0.00E+00	1.50E-01
		K-40	4.12E-01	1.67E-01	1.44E-01

Sample Point 078.1 [INDICATOR - WSW @ 0.53 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
491779	12/31/2018 - 1/7/2019	I-131	<2.68E-02	0.00E+00	2.68E-02

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 078.1 [INDICATOR - WSW @ 0.53 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
491779	12/31/2018 - 1/7/2019	Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.79E-02	0.00E+00	1.79E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	3.25E-01	1.48E-01	1.46E-01
492240	1/7/2019 - 1/14/2019	I-131	<2.27E-02	0.00E+00	2.27E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.36E-02	0.00E+00	1.36E-02
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	5.27E-01	1.70E-01	3.49E-02
492545	1/14/2019 - 1/21/2019	I-131	<2.18E-02	0.00E+00	2.18E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.84E-02	0.00E+00	1.84E-02
		Be-7	<1.32E-01	0.00E+00	1.32E-01
		K-40	5.54E-01	1.85E-01	1.36E-01
492915	1/21/2019 - 1/28/2019	I-131	<2.23E-02	0.00E+00	2.23E-02
		Cs-134	<1.80E-02	0.00E+00	1.80E-02
		Cs-137	<1.74E-02	0.00E+00	1.74E-02
		Be-7	<1.43E-01	0.00E+00	1.43E-01
		K-40	4.55E-01	1.77E-01	1.69E-01
493343	1/28/2019 - 2/4/2019	I-131	<2.38E-02	0.00E+00	2.38E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.59E-02	0.00E+00	1.59E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	4.82E-01	1.91E-01	2.03E-01
493604	2/4/2019 - 2/11/2019	I-131	<2.55E-02	0.00E+00	2.55E-02
		Cs-134	<1.92E-02	0.00E+00	1.92E-02
		Cs-137	<1.42E-02	0.00E+00	1.42E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	4.06E-01	1.64E-01	1.52E-01
493832	2/11/2019 - 2/18/2019	I-131	<2.25E-02	0.00E+00	2.25E-02
		Cs-134	<1.94E-02	0.00E+00	1.94E-02
		Cs-137	<2.09E-02	0.00E+00	2.09E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	4.42E-01	1.65E-01	1.27E-01
494369	2/18/2019 - 2/25/2019	I-131	<2.43E-02	0.00E+00	2.43E-02
		Cs-134	<1.24E-02	0.00E+00	1.24E-02
		Cs-137	<1.58E-02	0.00E+00	1.58E-02
		Be-7	<1.37E-01	0.00E+00	1.37E-01
		K-40	4.32E-01	1.79E-01	1.88E-01
494993	2/25/2019 - 3/4/2019	I-131	<2.57E-02	0.00E+00	2.57E-02
		Cs-134	<1.42E-02	0.00E+00	1.42E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	3.48E-01	1.89E-01	2.52E-01
496329	3/4/2019 - 3/11/2019	I-131	<2.47E-02	0.00E+00	2.47E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<1.36E-01	0.00E+00	1.36E-01
		K-40	4.81E-01	1.87E-01	1.86E-01
496151	3/11/2019 - 3/18/2019	Nuclide	Activity	2 Sigma Error	MDA
		I-131	<2.25E-02	0.00E+00	2.25E-02

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 078.1 [INDICATOR - WSW @ 0.53 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
496151	3/11/2019 - 3/18/2019	Cs-134	<1.85E-02	0.00E+00	1.85E-02
		Cs-137	<1.68E-02	0.00E+00	1.68E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	5.65E-01	2.21E-01	2.55E-01
496670	3/18/2019 - 3/25/2019	I-131	<2.51E-02	0.00E+00	2.51E-02
		Cs-134	<2.05E-02	0.00E+00	2.05E-02
		Cs-137	<1.75E-02	0.00E+00	1.75E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	3.51E-01	1.74E-01	2.12E-01
497170	3/25/2019 - 4/1/2019	I-131	<2.55E-02	0.00E+00	2.55E-02
		Cs-134	<2.17E-02	0.00E+00	2.17E-02
		Cs-137	<1.49E-02	0.00E+00	1.49E-02
		Be-7	<1.00E-01	0.00E+00	1.00E-01
		K-40	6.34E-01	1.88E-01	3.51E-02
497606	4/1/2019 - 4/8/2019	I-131	<2.29E-02	0.00E+00	2.29E-02
		Cs-134	<1.43E-02	0.00E+00	1.43E-02
		Cs-137	<1.63E-02	0.00E+00	1.63E-02
		Be-7	<9.77E-02	0.00E+00	9.77E-02
		K-40	<4.24E-01	0.00E+00	4.24E-01
498070	4/8/2019 - 4/15/2019	I-131	<2.24E-02	0.00E+00	2.24E-02
		Cs-134	<2.11E-02	0.00E+00	2.11E-02
		Cs-137	<1.80E-02	0.00E+00	1.80E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	4.50E-01	1.95E-01	2.27E-01
498628	4/15/2019 - 4/22/2019	I-131	<2.54E-02	0.00E+00	2.54E-02
		Cs-134	<1.98E-02	0.00E+00	1.98E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<1.40E-01	0.00E+00	1.40E-01
		K-40	2.53E-01	2.03E-01	3.10E-01
498809	4/22/2019 - 4/29/2019	I-131	<2.07E-02	0.00E+00	2.07E-02
		Cs-134	<1.39E-02	0.00E+00	1.39E-02
		Cs-137	<1.68E-02	0.00E+00	1.68E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	5.47E-01	2.23E-01	2.63E-01
499484	4/29/2019 - 5/6/2019	I-131	<2.19E-02	0.00E+00	2.19E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.88E-02	0.00E+00	1.88E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	3.53E-01	1.94E-01	2.61E-01
499903	5/6/2019 - 5/13/2019	I-131	<2.46E-02	0.00E+00	2.46E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.70E-02	0.00E+00	1.70E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	4.85E-01	1.88E-01	1.92E-01
500153	5/13/2019 - 5/20/2019	I-131	<4.69E-02	0.00E+00	4.69E-02
		Cs-134	<1.25E-02	0.00E+00	1.25E-02
		Cs-137	<2.21E-02	0.00E+00	2.21E-02
		Be-7	<1.46E-01	0.00E+00	1.46E-01
		K-40	5.61E-01	2.04E-01	2.09E-01
500485	5/20/2019 - 5/28/2019	Nuclide	Activity	2 Sigma Error	MDA
		I-131	<3.19E-02	0.00E+00	3.19E-02

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 078.1 [INDICATOR - WSW @ 0.53 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500485	5/20/2019 - 5/28/2019	Cs-134	<1.35E-02	0.00E+00	1.35E-02
		Cs-137	<1.73E-02	0.00E+00	1.73E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	4.54E-01	1.76E-01	1.88E-01
500769	5/28/2019 - 6/3/2019	I-131	<2.74E-02	0.00E+00	2.74E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.90E-02	0.00E+00	1.90E-02
		Be-7	<1.32E-01	0.00E+00	1.32E-01
		K-40	5.23E-01	2.20E-01	2.45E-01
501156	6/3/2019 - 6/10/2019	I-131	<2.29E-02	0.00E+00	2.29E-02
		Cs-134	<1.81E-02	0.00E+00	1.81E-02
		Cs-137	<1.93E-02	0.00E+00	1.93E-02
		Be-7	<1.35E-01	0.00E+00	1.35E-01
		K-40	4.04E-01	1.80E-01	2.03E-01
501975	6/10/2019 - 6/17/2019	I-131	<3.63E-02	0.00E+00	3.63E-02
		Cs-134	<2.38E-02	0.00E+00	2.38E-02
		Cs-137	<1.77E-02	0.00E+00	1.77E-02
		Be-7	<1.38E-01	0.00E+00	1.38E-01
		K-40	3.06E-01	1.82E-01	2.50E-01
502230	6/17/2019 - 6/24/2019	I-131	<2.80E-02	0.00E+00	2.80E-02
		Cs-134	<2.06E-02	0.00E+00	2.06E-02
		Cs-137	<1.66E-02	0.00E+00	1.66E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	4.14E-01	1.50E-01	3.51E-01
502440	6/24/2019 - 7/1/2019	I-131	<1.96E-02	0.00E+00	1.96E-02
		Cs-134	<2.23E-02	0.00E+00	2.23E-02
		Cs-137	<1.53E-02	0.00E+00	1.53E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	3.96E-01	1.81E-01	2.11E-01
503437	7/1/2019 - 7/8/2019	I-131	<2.08E-02	0.00E+00	2.08E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.44E-02	0.00E+00	1.44E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	4.11E-01	1.83E-01	2.09E-01
503865	7/8/2019 - 7/15/2019	I-131	<3.47E-02	0.00E+00	3.47E-02
		Cs-134	<1.77E-02	0.00E+00	1.77E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	5.26E-01	1.99E-01	2.11E-01
504224	7/15/2019 - 7/22/2019	I-131	<2.49E-02	0.00E+00	2.49E-02
		Cs-134	<2.20E-02	0.00E+00	2.20E-02
		Cs-137	<1.88E-02	0.00E+00	1.88E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	5.38E-01	2.16E-01	2.47E-01
504469	7/22/2019 - 7/29/2019	I-131	<3.21E-02	0.00E+00	3.21E-02
		Cs-134	<1.37E-02	0.00E+00	1.37E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<9.77E-02	0.00E+00	9.77E-02
		K-40	<1.16E-01	0.00E+00	1.16E-01
504681	7/29/2019 - 8/5/2019	Nuclide	Activity	2 Sigma Error	MDA
		I-131	<3.57E-02	0.00E+00	3.57E-02

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 078.1 [INDICATOR - WSW @ 0.53 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504681	7/29/2019 - 8/5/2019	Cs-134	<1.46E-02	0.00E+00	1.46E-02
		Cs-137	<1.66E-02	0.00E+00	1.66E-02
		Be-7	<1.51E-01	0.00E+00	1.51E-01
		K-40	5.62E-01	2.15E-01	2.41E-01
504948	8/5/2019 - 8/12/2019	I-131	<1.53E-02	0.00E+00	1.53E-02
		Cs-134	<1.47E-02	0.00E+00	1.47E-02
		Cs-137	<1.27E-02	0.00E+00	1.27E-02
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	<9.32E-02	0.00E+00	9.32E-02
505174	8/12/2019 - 8/19/2019	I-131	<1.71E-02	0.00E+00	1.71E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-02
		Cs-137	<1.09E-02	0.00E+00	1.09E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	5.44E-01	1.84E-01	1.50E-01
505559	8/19/2019 - 8/26/2019	I-131	<2.36E-02	0.00E+00	2.36E-02
		Cs-134	<1.47E-02	0.00E+00	1.47E-02
		Cs-137	<1.19E-02	0.00E+00	1.19E-02
		Be-7	<6.93E-02	0.00E+00	6.93E-02
		K-40	2.57E-01	1.28E-01	1.24E-01
505882	8/26/2019 - 9/3/2019	I-131	<1.56E-02	0.00E+00	1.56E-02
		Cs-134	<1.09E-02	0.00E+00	1.09E-02
		Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<6.44E-02	0.00E+00	6.44E-02
		K-40	2.94E-01	1.22E-01	9.86E-02
506389	9/3/2019 - 9/9/2019	I-131	<3.01E-02	0.00E+00	3.01E-02
		Cs-134	<1.90E-02	0.00E+00	1.90E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<1.90E-01	0.00E+00	1.90E-01
		K-40	6.99E-01	2.33E-01	1.98E-01
507327	9/9/2019 - 9/16/2019	I-131	<1.34E-02	0.00E+00	1.34E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02
		Be-7	<7.67E-02	0.00E+00	7.67E-02
		K-40	3.01E-01	1.59E-01	1.89E-01
507849	9/16/2019 - 9/23/2019	I-131	<1.44E-02	0.00E+00	1.44E-02
		Cs-134	<1.37E-02	0.00E+00	1.37E-02
		Cs-137	<1.59E-02	0.00E+00	1.59E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	2.15E-01	1.06E-01	3.43E-02
508380	9/23/2019 - 9/30/2019	I-131	<2.00E-02	0.00E+00	2.00E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	<2.48E-01	0.00E+00	2.48E-01
509264	9/30/2019 - 10/7/2019	I-131	<1.03E-02	0.00E+00	1.03E-02
		Cs-134	<7.51E-03	0.00E+00	7.51E-03
		Cs-137	<7.91E-03	0.00E+00	7.91E-03
		Be-7	<4.72E-02	0.00E+00	4.72E-02
		K-40	5.24E-01	1.04E-01	9.30E-02
509854	10/7/2019 - 10/14/2019	Nuclide	Activity	2 Sigma Error	MDA
		I-131	<1.36E-02	0.00E+00	1.36E-02

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 078.1 [INDICATOR - WSW @ 0.53 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
509854	10/7/2019 - 10/14/2019	Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.66E-02	0.00E+00	1.66E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	<2.84E-01	0.00E+00	2.84E-01
510563	10/14/2019 - 10/21/2019	I-131	<2.07E-02	0.00E+00	2.07E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<2.07E-02	0.00E+00	2.07E-02
		Be-7	<9.18E-02	0.00E+00	9.18E-02
		K-40	7.35E-01	2.51E-01	2.84E-01
510849	10/21/2019 - 10/28/2019	I-131	<1.79E-02	0.00E+00	1.79E-02
		Cs-134	<1.79E-02	0.00E+00	1.79E-02
		Cs-137	<1.16E-02	0.00E+00	1.16E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	6.36E-01	1.83E-01	3.32E-02
511250	10/28/2019 - 11/4/2019	I-131	<1.81E-02	0.00E+00	1.81E-02
		Cs-134	<1.95E-02	0.00E+00	1.95E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	<3.82E-01	0.00E+00	3.82E-01
511490	11/4/2019 - 11/11/2019	I-131	<1.94E-02	0.00E+00	1.94E-02
		Cs-134	<1.66E-02	0.00E+00	1.66E-02
		Cs-137	<1.37E-02	0.00E+00	1.37E-02
		Be-7	<8.76E-02	0.00E+00	8.76E-02
		K-40	3.99E-01	1.75E-01	1.97E-01
511904	11/11/2019 - 11/18/2019	I-131	<1.66E-02	0.00E+00	1.66E-02
		Cs-134	<1.14E-02	0.00E+00	1.14E-02
		Cs-137	<9.81E-03	0.00E+00	9.81E-03
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	3.21E-01	1.51E-01	1.67E-01
512201	11/18/2019 - 11/25/2019	I-131	<1.97E-02	0.00E+00	1.97E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<2.12E-02	0.00E+00	2.12E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	6.09E-01	2.06E-01	2.00E-01
512501	11/25/2019 - 12/2/2019	I-131	<2.11E-02	0.00E+00	2.11E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<1.74E-02	0.00E+00	1.74E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	4.67E-01	1.80E-01	1.77E-01
512685	12/2/2019 - 12/9/2019	I-131	<1.74E-02	0.00E+00	1.74E-02
		Cs-134	<1.43E-02	0.00E+00	1.43E-02
		Cs-137	<1.38E-02	0.00E+00	1.38E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	2.95E-01	1.65E-01	2.13E-01
513654	12/9/2019 - 12/16/2019	I-131	<1.77E-02	0.00E+00	1.77E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-02
		Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<9.00E-02	0.00E+00	9.00E-02
		K-40	3.22E-01	1.59E-01	1.87E-01
513961	12/16/2019 - 12/23/2019	Nuclide	Activity	2 Sigma Error	MDA
		I-131	<3.32E-02	0.00E+00	3.32E-02

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 078.1 [INDICATOR - WSW @ 0.53 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
513961	12/16/2019 - 12/23/2019	Cs-134	<1.85E-02	0.00E+00	1.85E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<1.55E-01	0.00E+00	1.55E-01
		K-40	6.78E-01	2.08E-01	1.67E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514181	12/23/2019 - 12/30/2019	I-131	<3.92E-02	0.00E+00	3.92E-02
		Cs-134	<1.88E-02	0.00E+00	1.88E-02
		Cs-137	<1.77E-02	0.00E+00	1.77E-02
		Be-7	<1.78E-01	0.00E+00	1.78E-01
		K-40	4.99E-01	2.13E-01	2.53E-01

Sample Point 079 [INDICATOR - NE @ 0.56 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
491780	12/31/2018 - 1/7/2019	I-131	<2.63E-02	0.00E+00	2.63E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<1.49E-02	0.00E+00	1.49E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	4.04E-01	1.96E-01	2.48E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492241	1/7/2019 - 1/14/2019	I-131	<2.24E-02	0.00E+00	2.24E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.60E-02	0.00E+00	1.60E-02
		Be-7	<1.43E-01	0.00E+00	1.43E-01
		K-40	5.42E-01	1.83E-01	1.36E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492546	1/14/2019 - 1/21/2019	I-131	<2.21E-02	0.00E+00	2.21E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.59E-02	0.00E+00	1.59E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	4.23E-01	1.64E-01	1.40E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492916	1/21/2019 - 1/28/2019	I-131	<2.53E-02	0.00E+00	2.53E-02
		Cs-134	<1.80E-02	0.00E+00	1.80E-02
		Cs-137	<2.00E-02	0.00E+00	2.00E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	3.53E-01	1.80E-01	2.27E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493344	1/28/2019 - 2/4/2019	I-131	<2.39E-02	0.00E+00	2.39E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-02
		Cs-137	<1.70E-02	0.00E+00	1.70E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	4.26E-01	1.77E-01	1.83E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493605	2/4/2019 - 2/11/2019	I-131	<1.98E-02	0.00E+00	1.98E-02
		Cs-134	<2.09E-02	0.00E+00	2.09E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	4.34E-01	1.78E-01	1.85E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493833	2/11/2019 - 2/18/2019	I-131	<2.40E-02	0.00E+00	2.40E-02
		Cs-134	<2.11E-02	0.00E+00	2.11E-02
		Cs-137	<1.60E-02	0.00E+00	1.60E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	5.72E-01	1.86E-01	1.27E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494370	2/18/2019 - 2/25/2019	I-131	<2.10E-02	0.00E+00	2.10E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<1.35E-02	0.00E+00	1.35E-02
		Be-7	<9.36E-02	0.00E+00	9.36E-02
		K-40	5.05E-01	1.99E-01	2.19E-01

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 079 [INDICATOR - NE @ 0.56 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494994	2/25/2019 - 3/4/2019	I-131	<2.72E-02	0.00E+00	2.72E-02
		Cs-134	<1.71E-02	0.00E+00	1.71E-02
		Cs-137	<1.52E-02	0.00E+00	1.52E-02
		Be-7	<9.82E-02	0.00E+00	9.82E-02
		K-40	5.03E-01	2.08E-01	2.45E-01
496330	3/4/2019 - 3/11/2019	I-131	<2.55E-02	0.00E+00	2.55E-02
		Cs-134	<2.06E-02	0.00E+00	2.06E-02
		Cs-137	<1.81E-02	0.00E+00	1.81E-02
		Be-7	7.61E-03	7.60E-02	1.38E-01
		K-40	3.76E-01	1.91E-01	2.45E-01
496152	3/11/2019 - 3/18/2019	I-131	<2.09E-02	0.00E+00	2.09E-02
		Cs-134	<1.79E-02	0.00E+00	1.79E-02
		Cs-137	<1.78E-02	0.00E+00	1.78E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	4.49E-01	1.75E-01	1.65E-01
496671	3/18/2019 - 3/25/2019	I-131	<2.40E-02	0.00E+00	2.40E-02
		Cs-134	<2.05E-02	0.00E+00	2.05E-02
		Cs-137	<1.65E-02	0.00E+00	1.65E-02
		Be-7	<1.29E-01	0.00E+00	1.29E-01
		K-40	4.20E-01	2.03E-01	2.60E-01
497171	3/25/2019 - 4/1/2019	I-131	<2.60E-02	0.00E+00	2.60E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	4.38E-01	1.70E-01	1.51E-01
497607	4/1/2019 - 4/8/2019	I-131	<2.45E-02	0.00E+00	2.45E-02
		Cs-134	<1.58E-02	0.00E+00	1.58E-02
		Cs-137	<1.90E-02	0.00E+00	1.90E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	<3.74E-01	0.00E+00	3.74E-01
498071	4/8/2019 - 4/15/2019	I-131	<2.39E-02	0.00E+00	2.39E-02
		Cs-134	<2.23E-02	0.00E+00	2.23E-02
		Cs-137	<1.66E-02	0.00E+00	1.66E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	4.37E-01	1.73E-01	1.63E-01
498629	4/15/2019 - 4/22/2019	I-131	<2.56E-02	0.00E+00	2.56E-02
		Cs-134	<1.96E-02	0.00E+00	1.96E-02
		Cs-137	<1.52E-02	0.00E+00	1.52E-02
		Be-7	<1.27E-01	0.00E+00	1.27E-01
		K-40	4.97E-01	1.94E-01	2.07E-01
498810	4/22/2019 - 4/29/2019	I-131	<2.54E-02	0.00E+00	2.54E-02
		Cs-134	<1.81E-02	0.00E+00	1.81E-02
		Cs-137	<1.23E-02	0.00E+00	1.23E-02
		Be-7	<1.30E-01	0.00E+00	1.30E-01
		K-40	5.89E-01	1.94E-01	1.54E-01
499485	4/29/2019 - 5/6/2019	I-131	<2.12E-02	0.00E+00	2.12E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.65E-02	0.00E+00	1.65E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	5.10E-01	1.93E-01	1.95E-01

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 079 [INDICATOR - NE @ 0.56 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
499904	5/6/2019 - 5/13/2019	I-131	<2.71E-02	0.00E+00	2.71E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	<4.18E-01	0.00E+00	4.18E-01
500154	5/13/2019 - 5/20/2019	I-131	<4.62E-02	0.00E+00	4.62E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02
		Cs-137	<1.72E-02	0.00E+00	1.72E-02
		Be-7	<1.52E-01	0.00E+00	1.52E-01
		K-40	4.60E-01	1.92E-01	2.17E-01
500486	5/20/2019 - 5/28/2019	I-131	<2.94E-02	0.00E+00	2.94E-02
		Cs-134	<1.41E-02	0.00E+00	1.41E-02
		Cs-137	<1.49E-02	0.00E+00	1.49E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	4.02E-01	1.84E-01	2.31E-01
500770	5/28/2019 - 6/3/2019	I-131	<2.89E-02	0.00E+00	2.89E-02
		Cs-134	<1.86E-02	0.00E+00	1.86E-02
		Cs-137	<1.97E-02	0.00E+00	1.97E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	7.35E-01	2.69E-01	3.02E-01
501157	6/3/2019 - 6/10/2019	I-131	<2.22E-02	0.00E+00	2.22E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.65E-02	0.00E+00	1.65E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	5.55E-01	1.75E-01	3.50E-02
501976	6/10/2019 - 6/17/2019	I-131	<4.16E-02	0.00E+00	4.16E-02
		Cs-134	<1.58E-02	0.00E+00	1.58E-02
		Cs-137	<1.72E-02	0.00E+00	1.72E-02
		Be-7	<1.60E-01	0.00E+00	1.60E-01
		K-40	4.81E-01	1.61E-01	3.43E-02
502231	6/17/2019 - 6/24/2019	I-131	<2.43E-02	0.00E+00	2.43E-02
		Cs-134	<1.27E-02	0.00E+00	1.27E-02
		Cs-137	<2.10E-02	0.00E+00	2.10E-02
		Be-7	<1.39E-01	0.00E+00	1.39E-01
		K-40	4.49E-01	1.87E-01	2.04E-01
502441	6/24/2019 - 7/1/2019	I-131	<2.44E-02	0.00E+00	2.44E-02
		Cs-134	<1.98E-02	0.00E+00	1.98E-02
		Cs-137	<1.48E-02	0.00E+00	1.48E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	3.85E-01	1.68E-01	1.80E-01
503438	7/1/2019 - 7/8/2019	I-131	<2.27E-02	0.00E+00	2.27E-02
		Cs-134	<2.12E-02	0.00E+00	2.12E-02
		Cs-137	<1.81E-02	0.00E+00	1.81E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	4.84E-01	1.92E-01	2.04E-01
503866	7/8/2019 - 7/15/2019	I-131	<3.76E-02	0.00E+00	3.76E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.78E-02	0.00E+00	1.78E-02
		Be-7	<1.33E-01	0.00E+00	1.33E-01
		K-40	5.21E-01	1.86E-01	1.72E-01

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 079 [INDICATOR - NE @ 0.56 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504225	7/15/2019 - 7/22/2019	I-131	<2.51E-02	0.00E+00	2.51E-02
		Cs-134	<1.93E-02	0.00E+00	1.93E-02
		Cs-137	<2.02E-02	0.00E+00	2.02E-02
		Be-7	<1.42E-01	0.00E+00	1.42E-01
		K-40	4.15E-01	1.95E-01	2.37E-01
504470	7/22/2019 - 7/29/2019	I-131	<3.59E-02	0.00E+00	3.59E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.60E-02	0.00E+00	1.60E-02
		Be-7	<9.59E-02	0.00E+00	9.59E-02
		K-40	<3.48E-01	0.00E+00	3.48E-01
504682	7/29/2019 - 8/5/2019	I-131	<3.84E-02	0.00E+00	3.84E-02
		Cs-134	<1.94E-02	0.00E+00	1.94E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02
		Be-7	<1.84E-01	0.00E+00	1.84E-01
		K-40	4.98E-01	1.74E-01	1.29E-01
504949	8/5/2019 - 8/12/2019	I-131	<2.25E-02	0.00E+00	2.25E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.48E-02	0.00E+00	1.48E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	<3.21E-01	0.00E+00	3.21E-01
505175	8/12/2019 - 8/19/2019	I-131	<1.63E-02	0.00E+00	1.63E-02
		Cs-134	<1.33E-02	0.00E+00	1.33E-02
		Cs-137	<1.58E-02	0.00E+00	1.58E-02
		Be-7	<7.62E-02	0.00E+00	7.62E-02
		K-40	<2.03E-01	0.00E+00	2.03E-01
505560	8/19/2019 - 8/26/2019	I-131	<1.72E-02	0.00E+00	1.72E-02
		Cs-134	<1.39E-02	0.00E+00	1.39E-02
		Cs-137	<1.37E-02	0.00E+00	1.37E-02
		Be-7	<9.86E-02	0.00E+00	9.86E-02
		K-40	<3.01E-01	0.00E+00	3.01E-01
505883	8/26/2019 - 9/3/2019	I-131	<1.42E-02	0.00E+00	1.42E-02
		Cs-134	<1.02E-02	0.00E+00	1.02E-02
		Cs-137	<1.03E-02	0.00E+00	1.03E-02
		Be-7	<8.34E-02	0.00E+00	8.34E-02
		K-40	6.51E-02	1.01E-01	1.71E-01
506390	9/3/2019 - 9/9/2019	I-131	<2.86E-02	0.00E+00	2.86E-02
		Cs-134	<2.05E-02	0.00E+00	2.05E-02
		Cs-137	<1.95E-02	0.00E+00	1.95E-02
		Be-7	<1.66E-01	0.00E+00	1.66E-01
		K-40	4.71E-01	1.96E-01	1.95E-01
507328	9/9/2019 - 9/16/2019	I-131	<2.14E-02	0.00E+00	2.14E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.81E-02	0.00E+00	1.81E-02
		Be-7	<1.44E-01	0.00E+00	1.44E-01
		K-40	3.27E-01	1.66E-01	2.00E-01
507850	9/16/2019 - 9/23/2019	I-131	<1.80E-02	0.00E+00	1.80E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<9.32E-02	0.00E+00	9.32E-02
		K-40	<2.73E-01	0.00E+00	2.73E-01

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 079 [INDICATOR - NE @ 0.56 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
508381	9/23/2019 - 9/30/2019	I-131	<2.78E-02	0.00E+00	2.78E-02
		Cs-134	<1.95E-02	0.00E+00	1.95E-02
		Cs-137	<1.77E-02	0.00E+00	1.77E-02
		Be-7	<1.00E-01	0.00E+00	1.00E-01
		K-40	4.78E-01	1.85E-01	1.90E-01
509265	9/30/2019 - 10/7/2019	I-131	<1.93E-02	0.00E+00	1.93E-02
		Cs-134	<1.98E-02	0.00E+00	1.98E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	2.64E-01	1.47E-01	1.82E-01
509855	10/7/2019 - 10/14/2019	I-131	<1.65E-02	0.00E+00	1.65E-02
		Cs-134	<1.77E-02	0.00E+00	1.77E-02
		Cs-137	<1.33E-02	0.00E+00	1.33E-02
		Be-7	<8.45E-02	0.00E+00	8.45E-02
		K-40	1.10E-01	1.12E-01	1.70E-01
510564	10/14/2019 - 10/21/2019	I-131	<1.12E-02	0.00E+00	1.12E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.99E-02	0.00E+00	1.99E-02
		Be-7	<7.09E-02	0.00E+00	7.09E-02
		K-40	<2.85E-01	0.00E+00	2.85E-01
510850	10/21/2019 - 10/28/2019	I-131	<1.57E-02	0.00E+00	1.57E-02
		Cs-134	<1.12E-02	0.00E+00	1.12E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<8.06E-02	0.00E+00	8.06E-02
		K-40	3.51E-01	1.67E-01	1.99E-01
511251	10/28/2019 - 11/4/2019	I-131	<2.18E-02	0.00E+00	2.18E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	5.60E-01	2.18E-01	2.54E-01
511491	11/4/2019 - 11/11/2019	I-131	<1.94E-02	0.00E+00	1.94E-02
		Cs-134	<1.78E-02	0.00E+00	1.78E-02
		Cs-137	<1.29E-02	0.00E+00	1.29E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	6.09E-01	2.14E-01	2.28E-01
511905	11/11/2019 - 11/18/2019	I-131	<1.46E-02	0.00E+00	1.46E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.26E-02	0.00E+00	1.26E-02
		Be-7	<9.41E-02	0.00E+00	9.41E-02
		K-40	2.56E-01	1.63E-01	2.25E-01
512202	11/18/2019 - 11/25/2019	I-131	<2.01E-02	0.00E+00	2.01E-02
		Cs-134	<1.16E-02	0.00E+00	1.16E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<1.31E-01	0.00E+00	1.31E-01
		K-40	5.58E-01	2.02E-01	2.02E-01
512502	11/25/2019 - 12/2/2019	I-131	<1.82E-02	0.00E+00	1.82E-02
		Cs-134	<1.24E-02	0.00E+00	1.24E-02
		Cs-137	<1.48E-02	0.00E+00	1.48E-02
		Be-7	<9.90E-02	0.00E+00	9.90E-02
		K-40	<1.72E-01	0.00E+00	1.72E-01

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 079 [INDICATOR - NE @ 0.56 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512686	12/2/2019 - 12/9/2019	I-131	<1.57E-02	0.00E+00	1.57E-02
		Cs-134	<1.34E-02	0.00E+00	1.34E-02
		Cs-137	<1.23E-02	0.00E+00	1.23E-02
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	<2.67E-01	0.00E+00	2.67E-01
513655	12/9/2019 - 12/16/2019	I-131	<1.50E-02	0.00E+00	1.50E-02
		Cs-134	<1.47E-02	0.00E+00	1.47E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	4.29E-01	1.99E-01	2.41E-01
513962	12/16/2019 - 12/23/2019	I-131	<1.82E-02	0.00E+00	1.82E-02
		Cs-134	<8.49E-03	0.00E+00	8.49E-03
		Cs-137	<6.71E-03	0.00E+00	6.71E-03
		Be-7	<7.49E-02	0.00E+00	7.49E-02
		K-40	1.95E-01	8.85E-02	1.06E-01
514182	12/23/2019 - 12/30/2019	I-131	<2.99E-02	0.00E+00	2.99E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02
		Cs-137	<2.06E-02	0.00E+00	2.06E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	5.57E-01	1.99E-01	1.94E-01
Sample Point 081 [CONTROL - SE @ 9.33 miles]					
491781	12/31/2018 - 1/7/2019	I-131	<2.35E-02	0.00E+00	2.35E-02
		Cs-134	<1.94E-02	0.00E+00	1.94E-02
		Cs-137	<1.94E-02	0.00E+00	1.94E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	5.24E-01	2.07E-01	2.29E-01
492242	1/7/2019 - 1/14/2019	I-131	<2.28E-02	0.00E+00	2.28E-02
		Cs-134	<1.58E-02	0.00E+00	1.58E-02
		Cs-137	<1.41E-02	0.00E+00	1.41E-02
		Be-7	<1.34E-01	0.00E+00	1.34E-01
		K-40	4.72E-01	1.70E-01	1.34E-01
492547	1/14/2019 - 1/21/2019	I-131	<2.60E-02	0.00E+00	2.60E-02
		Cs-134	<1.87E-02	0.00E+00	1.87E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<1.38E-01	0.00E+00	1.38E-01
		K-40	4.64E-01	1.59E-01	3.49E-02
492917	1/21/2019 - 1/28/2019	I-131	<2.44E-02	0.00E+00	2.44E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.74E-02	0.00E+00	1.74E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	5.82E-01	1.86E-01	1.21E-01
493345	1/28/2019 - 2/4/2019	I-131	<2.67E-02	0.00E+00	2.67E-02
		Cs-134	<1.81E-02	0.00E+00	1.81E-02
		Cs-137	<2.09E-02	0.00E+00	2.09E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	5.00E-01	2.01E-01	2.22E-01
493606	2/4/2019 - 2/11/2019	I-131	<2.57E-02	0.00E+00	2.57E-02
		Cs-134	<1.51E-02	0.00E+00	1.51E-02
		Cs-137	<1.58E-02	0.00E+00	1.58E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	<3.07E-01	0.00E+00	3.07E-01

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 081 [CONTROL - SE @ 9.33 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493834	2/11/2019 - 2/18/2019	I-131	<2.38E-02	0.00E+00	2.38E-02
		Cs-134	<1.81E-02	0.00E+00	1.81E-02
		Cs-137	<1.84E-02	0.00E+00	1.84E-02
		Be-7	<1.52E-01	0.00E+00	1.52E-01
		K-40	3.88E-01	1.57E-01	1.36E-01
494371	2/18/2019 - 2/25/2019	I-131	<2.28E-02	0.00E+00	2.28E-02
		Cs-134	<1.91E-02	0.00E+00	1.91E-02
		Cs-137	<1.68E-02	0.00E+00	1.68E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	5.47E-01	1.84E-01	1.39E-01
494995	2/25/2019 - 3/4/2019	I-131	<2.32E-02	0.00E+00	2.32E-02
		Cs-134	<1.71E-02	0.00E+00	1.71E-02
		Cs-137	<1.93E-02	0.00E+00	1.93E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	5.04E-01	1.87E-01	1.81E-01
496331	3/4/2019 - 3/11/2019	I-131	<2.25E-02	0.00E+00	2.25E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-02
		Cs-137	<1.50E-02	0.00E+00	1.50E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	5.23E-01	1.80E-01	1.34E-01
496153	3/11/2019 - 3/18/2019	I-131	<1.99E-02	0.00E+00	1.99E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.75E-02	0.00E+00	1.75E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	4.22E-01	2.00E-01	2.51E-01
496672	3/18/2019 - 3/25/2019	I-131	<2.42E-02	0.00E+00	2.42E-02
		Cs-134	<1.66E-02	0.00E+00	1.66E-02
		Cs-137	<1.64E-02	0.00E+00	1.64E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	4.95E-01	1.90E-01	1.91E-01
497172	3/25/2019 - 4/1/2019	I-131	<2.34E-02	0.00E+00	2.34E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	<4.20E-01	0.00E+00	4.20E-01
497608	4/1/2019 - 4/8/2019	I-131	<2.31E-02	0.00E+00	2.31E-02
		Cs-134	<1.72E-02	0.00E+00	1.72E-02
		Cs-137	<1.63E-02	0.00E+00	1.63E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	5.39E-01	1.90E-01	1.70E-01
498072	4/8/2019 - 4/15/2019	I-131	<2.31E-02	0.00E+00	2.31E-02
		Cs-134	<1.88E-02	0.00E+00	1.88E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	4.28E-01	1.48E-01	1.82E-01
498630	4/15/2019 - 4/22/2019	I-131	<2.34E-02	0.00E+00	2.34E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<2.02E-02	0.00E+00	2.02E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	3.31E-01	1.79E-01	2.35E-01

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 081 [CONTROL - SE @ 9.33 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
498811	4/22/2019 - 4/29/2019	I-131	<2.75E-02	0.00E+00	2.75E-02
		Cs-134	<2.10E-02	0.00E+00	2.10E-02
		Cs-137	<1.84E-02	0.00E+00	1.84E-02
		Be-7	<1.55E-01	0.00E+00	1.55E-01
		K-40	3.84E-01	1.98E-01	2.56E-01
499486	4/29/2019 - 5/6/2019	I-131	<2.57E-02	0.00E+00	2.57E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<2.06E-02	0.00E+00	2.06E-02
		Be-7	<1.40E-01	0.00E+00	1.40E-01
		K-40	4.28E-01	1.95E-01	2.36E-01
499905	5/6/2019 - 5/13/2019	I-131	<2.49E-02	0.00E+00	2.49E-02
		Cs-134	<1.93E-02	0.00E+00	1.93E-02
		Cs-137	<1.79E-02	0.00E+00	1.79E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	5.27E-01	2.15E-01	2.51E-01
500155	5/13/2019 - 5/20/2019	I-131	<4.90E-02	0.00E+00	4.90E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02
		Cs-137	<1.77E-02	0.00E+00	1.77E-02
		Be-7	<1.47E-01	0.00E+00	1.47E-01
		K-40	5.30E-01	1.86E-01	1.62E-01
500487	5/20/2019 - 5/28/2019	I-131	<2.87E-02	0.00E+00	2.87E-02
		Cs-134	<1.48E-02	0.00E+00	1.48E-02
		Cs-137	<1.20E-02	0.00E+00	1.20E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	4.38E-01	1.87E-01	2.25E-01
500771	5/28/2019 - 6/3/2019	I-131	<2.82E-02	0.00E+00	2.82E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.96E-02	0.00E+00	1.96E-02
		Be-7	<1.50E-01	0.00E+00	1.50E-01
		K-40	<4.20E-01	0.00E+00	4.20E-01
501158	6/3/2019 - 6/10/2019	I-131	<2.20E-02	0.00E+00	2.20E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-02
		Cs-137	<1.60E-02	0.00E+00	1.60E-02
		Be-7	<1.29E-01	0.00E+00	1.29E-01
		K-40	5.24E-01	1.95E-01	1.93E-01
501977	6/10/2019 - 6/17/2019	I-131	<3.51E-02	0.00E+00	3.51E-02
		Cs-134	<1.51E-02	0.00E+00	1.51E-02
		Cs-137	<1.82E-02	0.00E+00	1.82E-02
		Be-7	<1.39E-01	0.00E+00	1.39E-01
		K-40	5.71E-01	1.88E-01	1.42E-01
502232	6/17/2019 - 6/24/2019	I-131	<2.67E-02	0.00E+00	2.67E-02
		Cs-134	<1.88E-02	0.00E+00	1.88E-02
		Cs-137	<1.98E-02	0.00E+00	1.98E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	<3.91E-01	0.00E+00	3.91E-01
502442	6/24/2019 - 7/1/2019	I-131	<2.07E-02	0.00E+00	2.07E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-02
		Cs-137	<2.19E-02	0.00E+00	2.19E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	5.50E-01	1.73E-01	3.47E-02

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 081 [CONTROL - SE @ 9.33 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
503439	7/1/2019 - 7/8/2019	I-131	<2.30E-02	0.00E+00	2.30E-02
		Cs-134	<2.22E-02	0.00E+00	2.22E-02
		Cs-137	<1.80E-02	0.00E+00	1.80E-02
		Be-7	<1.63E-01	0.00E+00	1.63E-01
		K-40	5.65E-01	2.02E-01	1.95E-01
503867	7/8/2019 - 7/15/2019	I-131	<3.49E-02	0.00E+00	3.49E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	6.13E-01	1.98E-01	1.59E-01
504226	7/15/2019 - 7/22/2019	I-131	<2.47E-02	0.00E+00	2.47E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.76E-02	0.00E+00	1.76E-02
		Be-7	<1.37E-01	0.00E+00	1.37E-01
		K-40	3.74E-01	1.88E-01	2.36E-01
504471	7/22/2019 - 7/29/2019	I-131	<2.68E-02	0.00E+00	2.68E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	3.86E-01	1.71E-01	1.95E-01
504683	7/29/2019 - 8/5/2019	I-131	<3.94E-02	0.00E+00	3.94E-02
		Cs-134	<1.77E-02	0.00E+00	1.77E-02
		Cs-137	<1.82E-02	0.00E+00	1.82E-02
		Be-7	<1.64E-01	0.00E+00	1.64E-01
		K-40	5.35E-01	1.96E-01	1.91E-01
504950	8/5/2019 - 8/12/2019	I-131	<2.34E-02	0.00E+00	2.34E-02
		Cs-134	<1.90E-02	0.00E+00	1.90E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<1.32E-01	0.00E+00	1.32E-01
		K-40	5.23E-01	1.94E-01	1.92E-01
505176	8/12/2019 - 8/19/2019	I-131	<1.72E-02	0.00E+00	1.72E-02
		Cs-134	<1.51E-02	0.00E+00	1.51E-02
		Cs-137	<1.37E-02	0.00E+00	1.37E-02
		Be-7	<9.18E-02	0.00E+00	9.18E-02
		K-40	<2.74E-01	0.00E+00	2.74E-01
505561	8/19/2019 - 8/26/2019	I-131	<2.16E-02	0.00E+00	2.16E-02
		Cs-134	<2.03E-02	0.00E+00	2.03E-02
		Cs-137	<2.01E-02	0.00E+00	2.01E-02
		Be-7	<1.62E-01	0.00E+00	1.62E-01
		K-40	<3.96E-01	0.00E+00	3.96E-01
505884	8/26/2019 - 9/3/2019	I-131	<1.21E-02	0.00E+00	1.21E-02
		Cs-134	<1.07E-02	0.00E+00	1.07E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<7.37E-02	0.00E+00	7.37E-02
		K-40	1.44E-01	1.08E-01	1.46E-01
506391	9/3/2019 - 9/9/2019	I-131	<2.18E-02	0.00E+00	2.18E-02
		Cs-134	<2.07E-02	0.00E+00	2.07E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	5.44E-01	1.84E-01	3.99E-02

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 081 [CONTROL - SE @ 9.33 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
507329	9/9/2019 - 9/16/2019	I-131	<1.64E-02	0.00E+00	1.64E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-02
		Cs-137	<1.51E-02	0.00E+00	1.51E-02
		Be-7	<9.29E-02	0.00E+00	9.29E-02
		K-40	2.88E-01	1.47E-01	1.70E-01
507851	9/16/2019 - 9/23/2019	I-131	<1.79E-02	0.00E+00	1.79E-02
		Cs-134	<1.28E-02	0.00E+00	1.28E-02
		Cs-137	<1.34E-02	0.00E+00	1.34E-02
		Be-7	<7.95E-02	0.00E+00	7.95E-02
		K-40	3.19E-01	1.42E-01	1.30E-01
508382	9/23/2019 - 9/30/2019	I-131	<2.58E-02	0.00E+00	2.58E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-02
		Cs-137	<1.24E-02	0.00E+00	1.24E-02
		Be-7	<9.42E-02	0.00E+00	9.42E-02
		K-40	3.55E-01	1.56E-01	1.60E-01
509266	9/30/2019 - 10/7/2019	I-131	<2.16E-02	0.00E+00	2.16E-02
		Cs-134	<1.77E-02	0.00E+00	1.77E-02
		Cs-137	<1.73E-02	0.00E+00	1.73E-02
		Be-7	<1.36E-01	0.00E+00	1.36E-01
		K-40	5.84E-01	2.17E-01	2.35E-01
509856	10/7/2019 - 10/14/2019	I-131	<1.79E-02	0.00E+00	1.79E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-02
		Cs-137	<1.85E-02	0.00E+00	1.85E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	4.39E-01	1.97E-01	2.39E-01
510565	10/14/2019 - 10/21/2019	I-131	<2.04E-02	0.00E+00	2.04E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.73E-02	0.00E+00	1.73E-02
		Be-7	<1.38E-01	0.00E+00	1.38E-01
		K-40	4.85E-01	1.91E-01	1.99E-01
510851	10/21/2019 - 10/28/2019	I-131	<1.58E-02	0.00E+00	1.58E-02
		Cs-134	<1.43E-02	0.00E+00	1.43E-02
		Cs-137	<1.44E-02	0.00E+00	1.44E-02
		Be-7	<9.22E-02	0.00E+00	9.22E-02
		K-40	2.71E-01	1.41E-01	1.62E-01
511252	10/28/2019 - 11/4/2019	I-131	<1.75E-02	0.00E+00	1.75E-02
		Cs-134	<1.33E-02	0.00E+00	1.33E-02
		Cs-137	<1.47E-02	0.00E+00	1.47E-02
		Be-7	<9.52E-02	0.00E+00	9.52E-02
		K-40	4.13E-01	1.46E-01	3.29E-02
511492	11/4/2019 - 11/11/2019	I-131	<1.71E-02	0.00E+00	1.71E-02
		Cs-134	<1.22E-02	0.00E+00	1.22E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02
		Be-7	<6.49E-02	0.00E+00	6.49E-02
		K-40	4.56E-01	1.62E-01	1.25E-01
511906	11/11/2019 - 11/18/2019	I-131	<1.69E-02	0.00E+00	1.69E-02
		Cs-134	<1.28E-02	0.00E+00	1.28E-02
		Cs-137	<1.11E-02	0.00E+00	1.11E-02
		Be-7	<9.95E-02	0.00E+00	9.95E-02
		K-40	3.20E-01	1.65E-01	2.03E-01

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 081 [CONTROL - SE @ 9.33 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512203	11/18/2019 - 11/25/2019	I-131	<1.60E-02	0.00E+00	1.60E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	7.77E-01	2.15E-01	1.38E-01
Sample Point 084 [INDICATOR - NNE @ 2.58 miles]					
491782	12/31/2018 - 1/7/2019	I-131	<1.96E-02	0.00E+00	1.96E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	<3.61E-01	0.00E+00	3.61E-01
492243	1/7/2019 - 1/14/2019	I-131	<2.08E-02	0.00E+00	2.08E-02
		Cs-134	<1.85E-02	0.00E+00	1.85E-02
		Cs-137	<1.78E-02	0.00E+00	1.78E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	6.82E-01	2.35E-01	2.54E-01
492548	1/14/2019 - 1/21/2019	I-131	<2.31E-02	0.00E+00	2.31E-02
		Cs-134	<2.05E-02	0.00E+00	2.05E-02
		Cs-137	<1.49E-02	0.00E+00	1.49E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	5.49E-01	1.88E-01	1.54E-01
492918	1/21/2019 - 1/28/2019	I-131	<2.25E-02	0.00E+00	2.25E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02
		Cs-137	<2.08E-02	0.00E+00	2.08E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	5.12E-01	1.81E-01	1.51E-01
493346	1/28/2019 - 2/4/2019	I-131	<2.97E-02	0.00E+00	2.97E-02
		Cs-134	<2.05E-02	0.00E+00	2.05E-02
		Cs-137	<1.65E-02	0.00E+00	1.65E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	<4.14E-01	0.00E+00	4.14E-01
493607	2/4/2019 - 2/11/2019	I-131	<2.69E-02	0.00E+00	2.69E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.74E-02	0.00E+00	1.74E-02
		Be-7	<1.29E-01	0.00E+00	1.29E-01
		K-40	4.65E-01	1.92E-01	2.13E-01
493835	2/11/2019 - 2/18/2019	I-131	<2.35E-02	0.00E+00	2.35E-02
		Cs-134	<1.88E-02	0.00E+00	1.88E-02
		Cs-137	<1.89E-02	0.00E+00	1.89E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	5.33E-01	1.91E-01	1.75E-01
494372	2/18/2019 - 2/25/2019	I-131	<2.28E-02	0.00E+00	2.28E-02
		Cs-134	<1.85E-02	0.00E+00	1.85E-02
		Cs-137	<1.21E-02	0.00E+00	1.21E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	5.19E-01	1.80E-01	1.43E-01
494996	2/25/2019 - 3/4/2019	I-131	<2.16E-02	0.00E+00	2.16E-02
		Cs-134	<1.90E-02	0.00E+00	1.90E-02
		Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	4.68E-01	1.69E-01	1.34E-01

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 084 [INDICATOR - NNE @ 2.58 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
496332	3/4/2019 - 3/11/2019	I-131	<2.55E-02	0.00E+00	2.55E-02
		Cs-134	<1.95E-02	0.00E+00	1.95E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	5.49E-01	2.05E-01	2.13E-01
496154	3/11/2019 - 3/18/2019	I-131	<2.30E-02	0.00E+00	2.30E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	4.12E-01	1.93E-01	2.37E-01
496673	3/18/2019 - 3/25/2019	I-131	<2.38E-02	0.00E+00	2.38E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.42E-02	0.00E+00	1.42E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	6.15E-01	2.04E-01	1.81E-01
497173	3/25/2019 - 4/1/2019	I-131	<2.70E-02	0.00E+00	2.70E-02
		Cs-134	<1.95E-02	0.00E+00	1.95E-02
		Cs-137	<2.10E-02	0.00E+00	2.10E-02
		Be-7	<1.39E-01	0.00E+00	1.39E-01
		K-40	3.32E-01	1.80E-01	2.32E-01
497609	4/1/2019 - 4/8/2019	I-131	<2.39E-02	0.00E+00	2.39E-02
		Cs-134	<1.91E-02	0.00E+00	1.91E-02
		Cs-137	<1.82E-02	0.00E+00	1.82E-02
		Be-7	<1.32E-01	0.00E+00	1.32E-01
		K-40	4.66E-01	1.87E-01	1.98E-01
498073	4/8/2019 - 4/15/2019	I-131	<2.48E-02	0.00E+00	2.48E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.24E-02	0.00E+00	1.24E-02
		Be-7	<1.40E-01	0.00E+00	1.40E-01
		K-40	4.09E-01	1.90E-01	2.30E-01
498631	4/15/2019 - 4/22/2019	I-131	<2.83E-02	0.00E+00	2.83E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	5.44E-01	2.03E-01	2.17E-01
498812	4/22/2019 - 4/29/2019	I-131	<3.05E-02	0.00E+00	3.05E-02
		Cs-134	<1.85E-02	0.00E+00	1.85E-02
		Cs-137	<1.33E-02	0.00E+00	1.33E-02
		Be-7	<1.47E-01	0.00E+00	1.47E-01
		K-40	6.05E-01	2.11E-01	2.04E-01
499487	4/29/2019 - 5/6/2019	I-131	<2.44E-02	0.00E+00	2.44E-02
		Cs-134	<1.86E-02	0.00E+00	1.86E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	4.23E-01	1.86E-01	2.14E-01
499906	5/6/2019 - 5/13/2019	I-131	<2.06E-02	0.00E+00	2.06E-02
		Cs-134	<2.04E-02	0.00E+00	2.04E-02
		Cs-137	<1.74E-02	0.00E+00	1.74E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	4.98E-01	1.99E-01	2.20E-01

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 084 [INDICATOR - NNE @ 2.58 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500156	5/13/2019 - 5/20/2019	I-131	<4.16E-02	0.00E+00	4.16E-02
		Cs-134	<1.86E-02	0.00E+00	1.86E-02
		Cs-137	<1.73E-02	0.00E+00	1.73E-02
		Be-7	<1.50E-01	0.00E+00	1.50E-01
		K-40	4.37E-01	1.74E-01	1.71E-01
500488	5/20/2019 - 5/28/2019	I-131	<3.37E-02	0.00E+00	3.37E-02
		Cs-134	<1.28E-02	0.00E+00	1.28E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<9.96E-02	0.00E+00	9.96E-02
		K-40	4.63E-01	1.67E-01	1.54E-01
500772	5/28/2019 - 6/3/2019	I-131	<3.00E-02	0.00E+00	3.00E-02
		Cs-134	<2.23E-02	0.00E+00	2.23E-02
		Cs-137	<1.50E-02	0.00E+00	1.50E-02
		Be-7	<1.32E-01	0.00E+00	1.32E-01
		K-40	6.64E-01	2.33E-01	2.22E-01
501159	6/3/2019 - 6/10/2019	I-131	<1.93E-02	0.00E+00	1.93E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<1.70E-02	0.00E+00	1.70E-02
		Be-7	<1.35E-01	0.00E+00	1.35E-01
		K-40	4.65E-01	2.03E-01	2.44E-01
501978	6/10/2019 - 6/17/2019	I-131	<3.73E-02	0.00E+00	3.73E-02
		Cs-134	<1.58E-02	0.00E+00	1.58E-02
		Cs-137	<1.62E-02	0.00E+00	1.62E-02
		Be-7	<1.47E-01	0.00E+00	1.47E-01
		K-40	3.00E-01	1.68E-01	2.19E-01
502233	6/17/2019 - 6/24/2019	I-131	<2.52E-02	0.00E+00	2.52E-02
		Cs-134	<2.07E-02	0.00E+00	2.07E-02
		Cs-137	<1.66E-02	0.00E+00	1.66E-02
		Be-7	<8.88E-02	0.00E+00	8.88E-02
		K-40	5.30E-01	1.84E-01	1.47E-01
502443	6/24/2019 - 7/1/2019	I-131	<2.18E-02	0.00E+00	2.18E-02
		Cs-134	<1.25E-02	0.00E+00	1.25E-02
		Cs-137	<1.73E-02	0.00E+00	1.73E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	4.24E-01	1.84E-01	2.07E-01
503440	7/1/2019 - 7/8/2019	I-131	<2.61E-02	0.00E+00	2.61E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<1.44E-02	0.00E+00	1.44E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	5.52E-01	1.90E-01	1.57E-01
503868	7/8/2019 - 7/15/2019	I-131	<3.22E-02	0.00E+00	3.22E-02
		Cs-134	<1.77E-02	0.00E+00	1.77E-02
		Cs-137	<1.66E-02	0.00E+00	1.66E-02
		Be-7	<1.37E-01	0.00E+00	1.37E-01
		K-40	6.02E-01	2.18E-01	2.37E-01
504227	7/15/2019 - 7/22/2019	I-131	<2.40E-02	0.00E+00	2.40E-02
		Cs-134	<1.97E-02	0.00E+00	1.97E-02
		Cs-137	<1.87E-02	0.00E+00	1.87E-02
		Be-7	<9.78E-02	0.00E+00	9.78E-02
		K-40	2.86E-01	1.98E-01	2.89E-01

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 084 [INDICATOR - NNE @ 2.58 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504472	7/22/2019 - 7/29/2019	I-131	<3.45E-02	0.00E+00	3.45E-02
		Cs-134	<1.66E-02	0.00E+00	1.66E-02
		Cs-137	<1.07E-02	0.00E+00	1.07E-02
		Be-7	<1.33E-01	0.00E+00	1.33E-01
		K-40	1.44E-01	1.34E-01	2.03E-01
504684	7/29/2019 - 8/5/2019	I-131	<4.10E-02	0.00E+00	4.10E-02
		Cs-134	<1.89E-02	0.00E+00	1.89E-02
		Cs-137	<1.50E-02	0.00E+00	1.50E-02
		Be-7	<1.55E-01	0.00E+00	1.55E-01
		K-40	4.39E-01	2.04E-01	2.56E-01
504951	8/5/2019 - 8/12/2019	I-131	<2.82E-02	0.00E+00	2.82E-02
		Cs-134	<1.96E-02	0.00E+00	1.96E-02
		Cs-137	<1.87E-02	0.00E+00	1.87E-02
		Be-7	<1.54E-01	0.00E+00	1.54E-01
		K-40	6.11E-01	1.91E-01	1.22E-01
505177	8/12/2019 - 8/19/2019	I-131	<1.44E-02	0.00E+00	1.44E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<8.45E-02	0.00E+00	8.45E-02
		K-40	1.34E-01	1.50E-01	2.40E-01
505562	8/19/2019 - 8/26/2019	I-131	<1.69E-02	0.00E+00	1.69E-02
		Cs-134	<1.47E-02	0.00E+00	1.47E-02
		Cs-137	<1.01E-02	0.00E+00	1.01E-02
		Be-7	<9.63E-02	0.00E+00	9.63E-02
		K-40	1.85E-01	1.09E-01	1.12E-01
505885	8/26/2019 - 9/3/2019	I-131	<2.39E-02	0.00E+00	2.39E-02
		Cs-134	<1.47E-02	0.00E+00	1.47E-02
		Cs-137	<1.50E-02	0.00E+00	1.50E-02
		Be-7	<1.31E-01	0.00E+00	1.31E-01
		K-40	<3.15E-01	0.00E+00	3.15E-01
506392	9/3/2019 - 9/9/2019	I-131	<2.10E-02	0.00E+00	2.10E-02
		Cs-134	<1.32E-02	0.00E+00	1.32E-02
		Cs-137	<1.24E-02	0.00E+00	1.24E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	<2.67E-01	0.00E+00	2.67E-01
507330	9/9/2019 - 9/16/2019	I-131	<1.84E-02	0.00E+00	1.84E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.38E-02	0.00E+00	1.38E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	2.96E-01	1.56E-01	1.89E-01
507852	9/16/2019 - 9/23/2019	I-131	<1.92E-02	0.00E+00	1.92E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<1.48E-02	0.00E+00	1.48E-02
		Be-7	<8.36E-02	0.00E+00	8.36E-02
		K-40	<3.29E-01	0.00E+00	3.29E-01
508383	9/23/2019 - 9/30/2019	I-131	<3.31E-02	0.00E+00	3.31E-02
		Cs-134	<1.25E-02	0.00E+00	1.25E-02
		Cs-137	<1.70E-02	0.00E+00	1.70E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	3.89E-01	1.69E-01	1.87E-01

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 084 [INDICATOR - NNE @ 2.58 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
509267	9/30/2019 - 10/7/2019	I-131	<2.20E-02	0.00E+00	2.20E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-02
		Cs-137	<1.73E-02	0.00E+00	1.73E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	4.81E-01	2.21E-01	2.86E-01
509857	10/7/2019 - 10/14/2019	I-131	<1.70E-02	0.00E+00	1.70E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<1.63E-02	0.00E+00	1.63E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	5.87E-01	1.84E-01	1.19E-01
510566	10/14/2019 - 10/21/2019	I-131	<1.88E-02	0.00E+00	1.88E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<1.78E-02	0.00E+00	1.78E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	5.97E-01	1.99E-01	1.78E-01
510852	10/21/2019 - 10/28/2019	I-131	<1.31E-02	0.00E+00	1.31E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.01E-02	0.00E+00	1.01E-02
		Be-7	<7.37E-02	0.00E+00	7.37E-02
		K-40	<9.27E-02	0.00E+00	9.27E-02
511253	10/28/2019 - 11/4/2019	I-131	<1.93E-02	0.00E+00	1.93E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-02
		Cs-137	<1.26E-02	0.00E+00	1.26E-02
		Be-7	<9.91E-02	0.00E+00	9.91E-02
		K-40	3.37E-01	1.40E-01	1.06E-01
511493	11/4/2019 - 11/11/2019	I-131	<1.58E-02	0.00E+00	1.58E-02
		Cs-134	<1.24E-02	0.00E+00	1.24E-02
		Cs-137	<1.07E-02	0.00E+00	1.07E-02
		Be-7	<9.25E-02	0.00E+00	9.25E-02
		K-40	3.47E-01	1.72E-01	2.13E-01
511907	11/11/2019 - 11/18/2019	I-131	<1.33E-02	0.00E+00	1.33E-02
		Cs-134	<1.12E-02	0.00E+00	1.12E-02
		Cs-137	<7.88E-03	0.00E+00	7.88E-03
		Be-7	<7.64E-02	0.00E+00	7.64E-02
		K-40	5.01E-01	1.31E-01	1.07E-01
512204	11/18/2019 - 11/25/2019	I-131	<2.54E-02	0.00E+00	2.54E-02
		Cs-134	<1.94E-02	0.00E+00	1.94E-02
		Cs-137	<1.50E-02	0.00E+00	1.50E-02
		Be-7	<1.58E-01	0.00E+00	1.58E-01
		K-40	7.24E-01	2.22E-01	1.91E-01
512504	11/25/2019 - 12/2/2019	I-131	<2.16E-02	0.00E+00	2.16E-02
		Cs-134	<2.03E-02	0.00E+00	2.03E-02
		Cs-137	<1.58E-02	0.00E+00	1.58E-02
		Be-7	<1.46E-01	0.00E+00	1.46E-01
		K-40	4.54E-01	1.74E-01	1.55E-01
512688	12/2/2019 - 12/9/2019	I-131	<1.62E-02	0.00E+00	1.62E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	2.70E-01	1.39E-01	1.48E-01

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 084 [INDICATOR - NNE @ 2.58 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
513656	12/9/2019 - 12/16/2019	I-131	<2.42E-02	0.00E+00	2.42E-02
		Cs-134	<1.78E-02	0.00E+00	1.78E-02
		Cs-137	<1.74E-02	0.00E+00	1.74E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	4.50E-01	1.84E-01	1.94E-01
513963	12/16/2019 - 12/23/2019	I-131	<2.93E-02	0.00E+00	2.93E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.03E-02	0.00E+00	1.03E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	3.04E-01	1.53E-01	1.73E-01
514183	12/23/2019 - 12/30/2019	I-131	<3.03E-02	0.00E+00	3.03E-02
		Cs-134	<1.50E-02	0.00E+00	1.50E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<1.30E-01	0.00E+00	1.30E-01
		K-40	4.58E-01	1.72E-01	1.49E-01
Sample Point 085 [INDICATOR - NNW @ 0.88 miles]					
491783	12/31/2018 - 1/7/2019	I-131	<2.61E-02	0.00E+00	2.61E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<2.27E-02	0.00E+00	2.27E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	3.97E-01	1.73E-01	1.87E-01
492244	1/7/2019 - 1/14/2019	I-131	<2.37E-02	0.00E+00	2.37E-02
		Cs-134	<1.26E-02	0.00E+00	1.26E-02
		Cs-137	<1.84E-02	0.00E+00	1.84E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	3.92E-01	1.80E-01	2.09E-01
492549	1/14/2019 - 1/21/2019	I-131	<2.24E-02	0.00E+00	2.24E-02
		Cs-134	<1.87E-02	0.00E+00	1.87E-02
		Cs-137	<1.48E-02	0.00E+00	1.48E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	4.54E-01	1.98E-01	2.32E-01
492919	1/21/2019 - 1/28/2019	I-131	<2.22E-02	0.00E+00	2.22E-02
		Cs-134	<2.09E-02	0.00E+00	2.09E-02
		Cs-137	<1.64E-02	0.00E+00	1.64E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	6.15E-01	1.84E-01	3.47E-02
493347	1/28/2019 - 2/4/2019	I-131	<2.27E-02	0.00E+00	2.27E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-02
		Cs-137	<1.79E-02	0.00E+00	1.79E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	5.30E-01	2.11E-01	2.39E-01
493608	2/4/2019 - 2/11/2019	I-131	<2.15E-02	0.00E+00	2.15E-02
		Cs-134	<1.86E-02	0.00E+00	1.86E-02
		Cs-137	<1.96E-02	0.00E+00	1.96E-02
		Be-7	<1.50E-01	0.00E+00	1.50E-01
		K-40	6.14E-01	1.84E-01	3.47E-02
493836	2/11/2019 - 2/18/2019	I-131	<2.12E-02	0.00E+00	2.12E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.60E-02	0.00E+00	1.60E-02
		Be-7	<1.31E-01	0.00E+00	1.31E-01
		K-40	4.00E-01	1.94E-01	2.43E-01

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 085 [INDICATOR - NNW @ 0.88 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494373	2/18/2019 - 2/25/2019	I-131	<2.09E-02	0.00E+00	2.09E-02
		Cs-134	<2.08E-02	0.00E+00	2.08E-02
		Cs-137	<1.82E-02	0.00E+00	1.82E-02
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	<4.18E-01	0.00E+00	4.18E-01
494997	2/25/2019 - 3/4/2019	I-131	<2.16E-02	0.00E+00	2.16E-02
		Cs-134	<1.57E-02	0.00E+00	1.57E-02
		Cs-137	<1.85E-02	0.00E+00	1.85E-02
		Be-7	<1.27E-01	0.00E+00	1.27E-01
		K-40	4.03E-01	1.74E-01	1.89E-01
496333	3/4/2019 - 3/11/2019	I-131	<2.46E-02	0.00E+00	2.46E-02
		Cs-134	<2.12E-02	0.00E+00	2.12E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	<3.82E-01	0.00E+00	3.82E-01
496155	3/11/2019 - 3/18/2019	I-131	<2.15E-02	0.00E+00	2.15E-02
		Cs-134	<1.66E-02	0.00E+00	1.66E-02
		Cs-137	<1.68E-02	0.00E+00	1.68E-02
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	5.42E-01	2.44E-01	3.19E-01
496674	3/18/2019 - 3/25/2019	I-131	<2.43E-02	0.00E+00	2.43E-02
		Cs-134	<1.94E-02	0.00E+00	1.94E-02
		Cs-137	<1.60E-02	0.00E+00	1.60E-02
		Be-7	<1.30E-01	0.00E+00	1.30E-01
		K-40	4.66E-01	1.92E-01	2.12E-01
497174	3/25/2019 - 4/1/2019	I-131	<2.39E-02	0.00E+00	2.39E-02
		Cs-134	<2.00E-02	0.00E+00	2.00E-02
		Cs-137	<1.85E-02	0.00E+00	1.85E-02
		Be-7	<1.30E-01	0.00E+00	1.30E-01
		K-40	3.84E-01	1.67E-01	1.74E-01
497610	4/1/2019 - 4/8/2019	I-131	<2.39E-02	0.00E+00	2.39E-02
		Cs-134	<2.08E-02	0.00E+00	2.08E-02
		Cs-137	<1.86E-02	0.00E+00	1.86E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	5.06E-01	1.91E-01	1.92E-01
498074	4/8/2019 - 4/15/2019	I-131	<1.85E-02	0.00E+00	1.85E-02
		Cs-134	<2.00E-02	0.00E+00	2.00E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	3.47E-01	1.77E-01	2.21E-01
498632	4/15/2019 - 4/22/2019	I-131	<3.20E-02	0.00E+00	3.20E-02
		Cs-134	<1.98E-02	0.00E+00	1.98E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<1.27E-01	0.00E+00	1.27E-01
		K-40	4.23E-01	1.77E-01	1.91E-01
498813	4/22/2019 - 4/29/2019	I-131	<2.45E-02	0.00E+00	2.45E-02
		Cs-134	<2.04E-02	0.00E+00	2.04E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<1.42E-01	0.00E+00	1.42E-01
		K-40	6.21E-01	1.98E-01	1.38E-01

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 085 [INDICATOR - NNW @ 0.88 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
499488	4/29/2019 - 5/6/2019	I-131	<2.47E-02	0.00E+00	2.47E-02
		Cs-134	<1.92E-02	0.00E+00	1.92E-02
		Cs-137	<1.48E-02	0.00E+00	1.48E-02
		Be-7	<1.41E-01	0.00E+00	1.41E-01
		K-40	4.97E-01	1.81E-01	1.59E-01
499907	5/6/2019 - 5/13/2019	I-131	<2.61E-02	0.00E+00	2.61E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.79E-02	0.00E+00	1.79E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	3.99E-01	1.78E-01	2.01E-01
500157	5/13/2019 - 5/20/2019	I-131	<4.62E-02	0.00E+00	4.62E-02
		Cs-134	<2.44E-02	0.00E+00	2.44E-02
		Cs-137	<1.41E-02	0.00E+00	1.41E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	4.10E-01	1.58E-01	1.27E-01
500489	5/20/2019 - 5/28/2019	I-131	<3.28E-02	0.00E+00	3.28E-02
		Cs-134	<1.42E-02	0.00E+00	1.42E-02
		Cs-137	<1.58E-02	0.00E+00	1.58E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	4.95E-01	1.67E-01	1.35E-01
500773	5/28/2019 - 6/3/2019	I-131	<3.05E-02	0.00E+00	3.05E-02
		Cs-134	<2.37E-02	0.00E+00	2.37E-02
		Cs-137	<1.65E-02	0.00E+00	1.65E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	1.11E+00	2.83E-01	1.68E-01
501160	6/3/2019 - 6/10/2019	I-131	<2.41E-02	0.00E+00	2.41E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.60E-02	0.00E+00	1.60E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	4.87E-01	1.81E-01	1.64E-01
501979	6/10/2019 - 6/17/2019	I-131	<4.16E-02	0.00E+00	4.16E-02
		Cs-134	<1.97E-02	0.00E+00	1.97E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<1.36E-01	0.00E+00	1.36E-01
		K-40	3.37E-01	1.88E-01	2.54E-01
502234	6/17/2019 - 6/24/2019	I-131	<2.84E-02	0.00E+00	2.84E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.37E-02	0.00E+00	1.37E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	3.24E-01	1.67E-01	2.02E-01
502444	6/24/2019 - 7/1/2019	I-131	<2.36E-02	0.00E+00	2.36E-02
		Cs-134	<1.43E-02	0.00E+00	1.43E-02
		Cs-137	<1.82E-02	0.00E+00	1.82E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	3.82E-01	1.68E-01	1.80E-01
503441	7/1/2019 - 7/8/2019	I-131	<2.11E-02	0.00E+00	2.11E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	6.18E-01	2.01E-01	1.64E-01

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 085 [INDICATOR - NNW @ 0.88 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
503869	7/8/2019 - 7/15/2019	I-131	<3.15E-02	0.00E+00	3.15E-02
		Cs-134	<1.41E-02	0.00E+00	1.41E-02
		Cs-137	<1.92E-02	0.00E+00	1.92E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	6.82E-01	2.19E-01	2.05E-01
504228	7/15/2019 - 7/22/2019	I-131	<1.86E-02	0.00E+00	1.86E-02
		Cs-134	<1.57E-02	0.00E+00	1.57E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	<3.60E-01	0.00E+00	3.60E-01
504473	7/22/2019 - 7/29/2019	I-131	<2.54E-02	0.00E+00	2.54E-02
		Cs-134	<1.04E-02	0.00E+00	1.04E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	<3.37E-02	0.00E+00	3.37E-02
504685	7/29/2019 - 8/5/2019	I-131	<3.14E-02	0.00E+00	3.14E-02
		Cs-134	<2.12E-02	0.00E+00	2.12E-02
		Cs-137	<1.38E-02	0.00E+00	1.38E-02
		Be-7	<1.49E-01	0.00E+00	1.49E-01
		K-40	5.36E-01	1.92E-01	1.80E-01
504952	8/5/2019 - 8/12/2019	I-131	<2.06E-02	0.00E+00	2.06E-02
		Cs-134	<1.95E-02	0.00E+00	1.95E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02
		Be-7	<1.27E-01	0.00E+00	1.27E-01
		K-40	4.14E-01	1.79E-01	2.02E-01
505178	8/12/2019 - 8/19/2019	I-131	<1.24E-02	0.00E+00	1.24E-02
		Cs-134	<8.41E-03	0.00E+00	8.41E-03
		Cs-137	<9.78E-03	0.00E+00	9.78E-03
		Be-7	<8.48E-02	0.00E+00	8.48E-02
		K-40	4.92E-01	1.27E-01	1.42E-01
505563	8/19/2019 - 8/26/2019	I-131	<2.03E-02	0.00E+00	2.03E-02
		Cs-134	<1.80E-02	0.00E+00	1.80E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<8.55E-02	0.00E+00	8.55E-02
		K-40	1.83E-01	1.30E-01	1.73E-01
505886	8/26/2019 - 9/3/2019	I-131	<1.75E-02	0.00E+00	1.75E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.41E-02	0.00E+00	1.41E-02
		Be-7	<8.62E-02	0.00E+00	8.62E-02
		K-40	<3.02E-01	0.00E+00	3.02E-01
506393	9/3/2019 - 9/9/2019	I-131	<2.09E-02	0.00E+00	2.09E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	<3.46E-01	0.00E+00	3.46E-01
507331	9/9/2019 - 9/16/2019	I-131	<1.90E-02	0.00E+00	1.90E-02
		Cs-134	<1.42E-02	0.00E+00	1.42E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<9.91E-02	0.00E+00	9.91E-02
		K-40	3.26E-01	1.80E-01	2.41E-01

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 085 [INDICATOR - NNW @ 0.88 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
507853	9/16/2019 - 9/23/2019	I-131	<1.74E-02	0.00E+00	1.74E-02
		Cs-134	<1.56E-02	0.00E+00	1.56E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	4.56E-01	1.74E-01	1.54E-01
508384	9/23/2019 - 9/30/2019	I-131	<2.33E-02	0.00E+00	2.33E-02
		Cs-134	<1.64E-02	0.00E+00	1.64E-02
		Cs-137	<1.34E-02	0.00E+00	1.34E-02
		Be-7	<9.17E-02	0.00E+00	9.17E-02
		K-40	2.15E-01	1.37E-01	1.81E-01
509268	9/30/2019 - 10/7/2019	I-131	<1.77E-02	0.00E+00	1.77E-02
		Cs-134	<1.87E-02	0.00E+00	1.87E-02
		Cs-137	<1.85E-02	0.00E+00	1.85E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	4.49E-01	1.60E-01	1.13E-01
509858	10/7/2019 - 10/14/2019	I-131	<1.27E-02	0.00E+00	1.27E-02
		Cs-134	<1.51E-02	0.00E+00	1.51E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<9.15E-02	0.00E+00	9.15E-02
		K-40	3.30E-01	1.60E-01	1.86E-01
510567	10/14/2019 - 10/21/2019	I-131	<1.97E-02	0.00E+00	1.97E-02
		Cs-134	<1.80E-02	0.00E+00	1.80E-02
		Cs-137	<1.31E-02	0.00E+00	1.31E-02
		Be-7	<8.75E-02	0.00E+00	8.75E-02
		K-40	5.94E-01	2.05E-01	2.02E-01
510853	10/21/2019 - 10/28/2019	I-131	<1.78E-02	0.00E+00	1.78E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.24E-02	0.00E+00	1.24E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	3.65E-01	1.52E-01	1.24E-01
511254	10/28/2019 - 11/4/2019	I-131	<8.55E-03	0.00E+00	8.55E-03
		Cs-134	<1.64E-02	0.00E+00	1.64E-02
		Cs-137	<1.41E-02	0.00E+00	1.41E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	4.82E-01	1.65E-01	3.63E-02
511494	11/4/2019 - 11/11/2019	I-131	<1.73E-02	0.00E+00	1.73E-02
		Cs-134	<1.81E-02	0.00E+00	1.81E-02
		Cs-137	<9.98E-03	0.00E+00	9.98E-03
		Be-7	<9.39E-02	0.00E+00	9.39E-02
		K-40	3.66E-01	1.48E-01	1.20E-01
511908	11/11/2019 - 11/18/2019	I-131	<2.29E-02	0.00E+00	2.29E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<1.79E-02	0.00E+00	1.79E-02
		Be-7	<1.48E-01	0.00E+00	1.48E-01
		K-40	6.10E-01	1.94E-01	1.35E-01
512205	11/18/2019 - 11/25/2019	I-131	<1.74E-02	0.00E+00	1.74E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02
		Be-7	<9.78E-02	0.00E+00	9.78E-02
		K-40	6.66E-01	1.89E-01	3.34E-02

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 085 [INDICATOR - NNW @ 0.88 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512505	11/25/2019 - 12/2/2019	I-131	<1.81E-02	0.00E+00	1.81E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<9.46E-02	0.00E+00	9.46E-02
		K-40	2.85E-01	1.59E-01	1.95E-01
512689	12/2/2019 - 12/9/2019	I-131	<1.93E-02	0.00E+00	1.93E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.09E-02	0.00E+00	1.09E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	5.40E-01	1.80E-01	1.38E-01
513657	12/9/2019 - 12/16/2019	I-131	<1.80E-02	0.00E+00	1.80E-02
		Cs-134	<2.20E-02	0.00E+00	2.20E-02
		Cs-137	<1.34E-02	0.00E+00	1.34E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	4.38E-01	1.78E-01	1.86E-01
513964	12/16/2019 - 12/23/2019	I-131	<3.71E-02	0.00E+00	3.71E-02
		Cs-134	<1.79E-02	0.00E+00	1.79E-02
		Cs-137	<1.52E-02	0.00E+00	1.52E-02
		Be-7	<1.59E-01	0.00E+00	1.59E-01
		K-40	4.34E-01	1.80E-01	1.95E-01
514184	12/23/2019 - 12/30/2019	I-131	<2.64E-02	0.00E+00	2.64E-02
		Cs-134	<1.27E-02	0.00E+00	1.27E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	3.68E-01	1.58E-01	1.59E-01

Sample Point 093 [CONTROL - SE @ 9.34 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512938	11/25/2019 - 12/2/2019	I-131	<1.42E-02	0.00E+00	1.42E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<1.14E-02	0.00E+00	1.14E-02
		Be-7	<9.23E-02	0.00E+00	9.23E-02
		K-40	2.61E-01	1.71E-01	2.39E-01
513059	12/2/2019 - 12/9/2019	I-131	<2.19E-02	0.00E+00	2.19E-02
		Cs-134	<1.94E-02	0.00E+00	1.94E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02
		Be-7	<1.29E-01	0.00E+00	1.29E-01
		K-40	<3.64E-01	0.00E+00	3.64E-01
513658	12/9/2019 - 12/16/2019	I-131	<2.07E-02	0.00E+00	2.07E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.10E-02	0.00E+00	1.10E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	6.07E-01	2.06E-01	1.97E-01
513965	12/16/2019 - 12/23/2019	I-131	<3.15E-02	0.00E+00	3.15E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	5.07E-01	1.64E-01	3.35E-02
514185	12/23/2019 - 12/30/2019	I-131	<2.96E-02	0.00E+00	2.96E-02
		Cs-134	<1.05E-02	0.00E+00	1.05E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<1.27E-01	0.00E+00	1.27E-01
		K-40	4.10E-01	1.55E-01	1.12E-01

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: DRINKING WATER Concentration (Activity): pCi/l

Sample Point 060 [INDICATOR - NE @ 3.23 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493141	12/31/2018 - 1/28/2019	Mn-54	<2.03E+00	0.00E+00	2.03E+00
		Co-58	<2.15E+00	0.00E+00	2.15E+00
		Fe-59	<4.30E+00	0.00E+00	4.30E+00
		Co-60	<1.51E+00	0.00E+00	1.51E+00
		Zn-65	<3.23E+00	0.00E+00	3.23E+00
		Zr-95	<4.56E+00	0.00E+00	4.56E+00
		Nb-95	<2.81E+00	0.00E+00	2.81E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<1.91E+00	0.00E+00	1.91E+00
		Cs-137	<1.93E+00	0.00E+00	1.93E+00
		BaLa-140	<6.71E+00	0.00E+00	6.71E+00
		Be-7	<1.85E+01	0.00E+00	1.85E+01
		K-40	7.67E+01	2.14E+01	2.35E+01
		Beta	<3.17E+00	0.00E+00	3.17E+00

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494471	1/28/2019 - 2/25/2019	Beta	<3.33E+00	0.00E+00	3.33E+00
		Mn-54	<2.60E+00	0.00E+00	2.60E+00
		Co-58	<2.89E+00	0.00E+00	2.89E+00
		Fe-59	<8.28E+00	0.00E+00	8.28E+00
		Co-60	<3.23E+00	0.00E+00	3.23E+00
		Zn-65	<5.56E+00	0.00E+00	5.56E+00
		Zr-95	<4.82E+00	0.00E+00	4.82E+00
		Nb-95	<3.78E+00	0.00E+00	3.78E+00
		I-131	<1.10E+01	0.00E+00	1.10E+01
		Cs-134	<3.34E+00	0.00E+00	3.34E+00
		Cs-137	<2.52E+00	0.00E+00	2.52E+00
		BaLa-140	<8.47E+00	0.00E+00	8.47E+00
		Be-7	<2.98E+01	0.00E+00	2.98E+01
		K-40	2.80E+01	2.21E+01	3.12E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
496914	2/25/2019 - 3/25/2019	Beta	<3.29E+00	0.00E+00	3.29E+00
		Mn-54	<3.91E+00	0.00E+00	3.91E+00
		Co-58	<3.38E+00	0.00E+00	3.38E+00
		Fe-59	<4.99E+00	0.00E+00	4.99E+00
		Co-60	<2.51E+00	0.00E+00	2.51E+00
		Zn-65	<6.82E+00	0.00E+00	6.82E+00
		Zr-95	<7.13E+00	0.00E+00	7.13E+00
		Nb-95	<5.00E+00	0.00E+00	5.00E+00
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<2.90E+00	0.00E+00	2.90E+00
		Cs-137	<3.69E+00	0.00E+00	3.69E+00
		BaLa-140	<8.67E+00	0.00E+00	8.67E+00
		Be-7	<3.28E+01	0.00E+00	3.28E+01
		K-40	2.94E+01	2.88E+01	4.49E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493743	12/31/2018 - 4/22/2019	H3DW	<2.40E+01	0.00E+00	1.90E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
498683	3/25/2019 - 4/22/2019	Beta	<3.28E+00	0.00E+00	3.28E+00
		Mn-54	<1.54E+00	0.00E+00	1.54E+00
		Co-58	<1.82E+00	0.00E+00	1.82E+00
		Fe-59	<4.17E+00	0.00E+00	4.17E+00
		Co-60	<1.61E+00	0.00E+00	1.61E+00
		Zn-65	<3.17E+00	0.00E+00	3.17E+00
		Zr-95	<3.59E+00	0.00E+00	3.59E+00
		Nb-95	<2.53E+00	0.00E+00	2.53E+00
		I-131	<1.04E+01	0.00E+00	1.04E+01
		Cs-134	<1.70E+00	0.00E+00	1.70E+00
		Cs-137	<1.42E+00	0.00E+00	1.42E+00
		BaLa-140	<5.39E+00	0.00E+00	5.39E+00
		Be-7	<1.62E+01	0.00E+00	1.62E+01
		K-40	8.04E+01	1.86E+01	2.07E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500257	4/22/2019 - 5/20/2019	Beta	<3.28E+00	0.00E+00	3.28E+00

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: DRINKING WATER Concentration (Activity): pCi/l

Sample Point 060 [INDICATOR - NE @ 3.23 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500257	4/22/2019 - 5/20/2019	Mn-54	<1.02E+00	0.00E+00	1.02E+00
		Co-58	<1.24E+00	0.00E+00	1.24E+00
		Fe-59	<2.85E+00	0.00E+00	2.85E+00
		Co-60	<8.38E-01	0.00E+00	8.38E-01
		Zn-65	<1.86E+00	0.00E+00	1.86E+00
		Zr-95	<1.85E+00	0.00E+00	1.85E+00
		Nb-95	<1.62E+00	0.00E+00	1.62E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<1.06E+00	0.00E+00	1.06E+00
		Cs-137	<9.81E-01	0.00E+00	9.81E-01
		BaLa-140	<5.45E+00	0.00E+00	5.45E+00
		Be-7	<1.06E+01	0.00E+00	1.06E+01
		K-40	2.79E+01	2.97E+00	1.19E+01
		502035	5/20/2019 - 6/17/2019	Beta	3.34E+00
Mn-54	<2.70E+00			0.00E+00	2.70E+00
Co-58	<5.49E+00			0.00E+00	5.49E+00
Fe-59	<8.82E+00			0.00E+00	8.82E+00
Co-60	<4.01E+00			0.00E+00	4.01E+00
Zn-65	<8.71E+00			0.00E+00	8.71E+00
Zr-95	<5.38E+00			0.00E+00	5.38E+00
Nb-95	<4.20E+00			0.00E+00	4.20E+00
I-131	<1.12E+01			0.00E+00	1.12E+01
Cs-134	<4.85E+00			0.00E+00	4.85E+00
Cs-137	<3.65E+00			0.00E+00	3.65E+00
BaLa-140	<9.13E+00			0.00E+00	9.13E+00
Be-7	<2.81E+01			0.00E+00	2.81E+01
K-40	<6.65E+01			0.00E+00	6.65E+01
500037	4/22/2019 - 7/15/2019	H3DW	<0.00E+00	0.00E+00	1.90E+02
504065	6/17/2019 - 7/15/2019	Beta	6.22E+00	4.49E+00	3.25E+00
		Mn-54	<1.50E+00	0.00E+00	1.50E+00
		Co-58	<1.92E+00	0.00E+00	1.92E+00
		Fe-59	<3.81E+00	0.00E+00	3.81E+00
		Co-60	<1.56E+00	0.00E+00	1.56E+00
		Zn-65	<2.82E+00	0.00E+00	2.82E+00
		Zr-95	<2.92E+00	0.00E+00	2.92E+00
		Nb-95	<2.95E+00	0.00E+00	2.95E+00
		I-131	<9.84E+00	0.00E+00	9.84E+00
		Cs-134	<1.80E+00	0.00E+00	1.80E+00
		Cs-137	<1.50E+00	0.00E+00	1.50E+00
		BaLa-140	<4.26E+00	0.00E+00	4.26E+00
		Be-7	<1.48E+01	0.00E+00	1.48E+01
		K-40	<2.40E+01	0.00E+00	2.40E+01
505035	7/15/2019 - 8/12/2019	Beta	<3.41E+00	0.00E+00	3.41E+00
		Mn-54	<3.33E+00	0.00E+00	3.33E+00
		Co-58	<2.93E+00	0.00E+00	2.93E+00
		Fe-59	<5.92E+00	0.00E+00	5.92E+00
		Co-60	<1.93E+00	0.00E+00	1.93E+00
		Zn-65	<5.77E+00	0.00E+00	5.77E+00
		Zr-95	<4.09E+00	0.00E+00	4.09E+00
		Nb-95	<3.90E+00	0.00E+00	3.90E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<2.89E+00	0.00E+00	2.89E+00
		Cs-137	<3.48E+00	0.00E+00	3.48E+00
		BaLa-140	<6.68E+00	0.00E+00	6.68E+00
		Be-7	<3.05E+01	0.00E+00	3.05E+01
		K-40	<3.73E+01	0.00E+00	3.73E+01
506772	8/12/2019 - 9/9/2019	Beta	5.47E+00	4.62E+00	3.36E+00
		Mn-54	<1.99E+00	0.00E+00	1.99E+00

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: DRINKING WATER Concentration (Activity): pCi/l

Sample Point 060 [INDICATOR - NE @ 3.23 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
506772	8/12/2019 - 9/9/2019	Co-58	<2.47E+00	0.00E+00	2.47E+00
		Fe-59	<4.31E+00	0.00E+00	4.31E+00
		Co-60	<1.84E+00	0.00E+00	1.84E+00
		Zn-65	<3.55E+00	0.00E+00	3.55E+00
		Zr-95	<3.57E+00	0.00E+00	3.57E+00
		Nb-95	<2.35E+00	0.00E+00	2.35E+00
		I-131	<1.04E+01	0.00E+00	1.04E+01
		Cs-134	<2.22E+00	0.00E+00	2.22E+00
		Cs-137	<1.99E+00	0.00E+00	1.99E+00
		BaLa-140	<5.21E+00	0.00E+00	5.21E+00
		Be-7	<1.74E+01	0.00E+00	1.74E+01
		K-40	4.19E+01	1.94E+01	2.64E+01
		505075	7/15/2019 - 10/7/2019	H3DW	<-1.1E+02
509651	9/9/2019 - 10/7/2019	Beta	<3.36E+00	0.00E+00	3.36E+00
		Mn-54	<2.13E+00	0.00E+00	2.13E+00
		Co-58	<2.01E+00	0.00E+00	2.01E+00
		Fe-59	<4.35E+00	0.00E+00	4.35E+00
		Co-60	<2.12E+00	0.00E+00	2.12E+00
		Zn-65	<4.44E+00	0.00E+00	4.44E+00
		Zr-95	<4.29E+00	0.00E+00	4.29E+00
		Nb-95	<2.70E+00	0.00E+00	2.70E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<2.29E+00	0.00E+00	2.29E+00
		Cs-137	<1.95E+00	0.00E+00	1.95E+00
		BaLa-140	<4.13E+00	0.00E+00	4.13E+00
		Be-7	<2.26E+01	0.00E+00	2.26E+01
		K-40	<2.10E+01	0.00E+00	2.10E+01
		511363	10/7/2019 - 11/4/2019	Beta	<3.31E+00
Mn-54	<2.51E+00			0.00E+00	2.51E+00
Co-58	<3.02E+00			0.00E+00	3.02E+00
Fe-59	<7.66E+00			0.00E+00	7.66E+00
Co-60	<2.70E+00			0.00E+00	2.70E+00
Zn-65	<5.61E+00			0.00E+00	5.61E+00
Zr-95	<6.38E+00			0.00E+00	6.38E+00
Nb-95	<4.61E+00			0.00E+00	4.61E+00
I-131	<1.13E+01			0.00E+00	1.13E+01
Cs-134	<4.07E+00			0.00E+00	4.07E+00
Cs-137	<3.42E+00			0.00E+00	3.42E+00
BaLa-140	<8.12E+00			0.00E+00	8.12E+00
Be-7	<2.70E+01			0.00E+00	2.70E+01
K-40	8.16E+01			3.72E+01	4.95E+01
512592	11/4/2019 - 12/2/2019			Beta	<3.43E+00
		Mn-54	<2.65E+00	0.00E+00	2.65E+00
		Co-58	<2.44E+00	0.00E+00	2.44E+00
		Fe-59	<7.03E+00	0.00E+00	7.03E+00
		Co-60	<3.90E+00	0.00E+00	3.90E+00
		Zn-65	<6.19E+00	0.00E+00	6.19E+00
		Zr-95	<5.49E+00	0.00E+00	5.49E+00
		Nb-95	<3.79E+00	0.00E+00	3.79E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<3.36E+00	0.00E+00	3.36E+00
		Cs-137	<3.25E+00	0.00E+00	3.25E+00
		BaLa-140	<8.22E+00	0.00E+00	8.22E+00
		Be-7	<2.55E+01	0.00E+00	2.55E+01
		K-40	2.82E+01	2.15E+01	2.98E+01
		511718	10/7/2019 - 12/30/2019	H3DW	<-1.5E+02
514316	12/2/2019 - 12/30/2019	Beta	<3.37E+00	0.00E+00	3.37E+00

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: DRINKING WATER Concentration (Activity): pCi/l

Sample Point 060 [INDICATOR - NE @ 3.23 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514316	12/2/2019 - 12/30/2019	Mn-54	<2.35E+00	0.00E+00	2.35E+00
		Co-58	<2.42E+00	0.00E+00	2.42E+00
		Fe-59	<4.88E+00	0.00E+00	4.88E+00
		Co-60	<2.24E+00	0.00E+00	2.24E+00
		Zn-65	<6.18E+00	0.00E+00	6.18E+00
		Zr-95	<3.88E+00	0.00E+00	3.88E+00
		Nb-95	<3.33E+00	0.00E+00	3.33E+00
		I-131	<1.14E+01	0.00E+00	1.14E+01
		Cs-134	<2.39E+00	0.00E+00	2.39E+00
		Cs-137	<2.18E+00	0.00E+00	2.18E+00
		BaLa-140	<6.70E+00	0.00E+00	6.70E+00
		Be-7	<2.37E+01	0.00E+00	2.37E+01
		K-40	<2.69E+01	0.00E+00	2.69E+01

Sample Point 064 [CONTROL - SSW @ 6.67 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493142	12/31/2018 - 1/28/2019	Mn-54	<3.09E+00	0.00E+00	3.09E+00
		Co-58	<2.43E+00	0.00E+00	2.43E+00
		Fe-59	<6.91E+00	0.00E+00	6.91E+00
		Co-60	<3.25E+00	0.00E+00	3.25E+00
		Zn-65	<5.34E+00	0.00E+00	5.34E+00
		Zr-95	<5.97E+00	0.00E+00	5.97E+00
		Nb-95	<3.96E+00	0.00E+00	3.96E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<2.70E+00	0.00E+00	2.70E+00
		Cs-137	<3.16E+00	0.00E+00	3.16E+00
		BaLa-140	<8.07E+00	0.00E+00	8.07E+00
		Be-7	<2.37E+01	0.00E+00	2.37E+01
		K-40	<5.54E+01	0.00E+00	5.54E+01
		Beta	<3.40E+00	0.00E+00	3.40E+00

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494472	1/28/2019 - 2/25/2019	Beta	<3.33E+00	0.00E+00	3.33E+00
		Mn-54	<3.05E+00	0.00E+00	3.05E+00
		Co-58	<3.25E+00	0.00E+00	3.25E+00
		Fe-59	<5.60E+00	0.00E+00	5.60E+00
		Co-60	<4.41E+00	0.00E+00	4.41E+00
		Zn-65	<6.09E+00	0.00E+00	6.09E+00
		Zr-95	<6.75E+00	0.00E+00	6.75E+00
		Nb-95	<4.82E+00	0.00E+00	4.82E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<4.36E+00	0.00E+00	4.36E+00
		Cs-137	<2.39E+00	0.00E+00	2.39E+00
		BaLa-140	<7.13E+00	0.00E+00	7.13E+00
		Be-7	<2.39E+01	0.00E+00	2.39E+01
		K-40	<5.20E+01	0.00E+00	5.20E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
496915	2/25/2019 - 3/25/2019	Beta	<3.29E+00	0.00E+00	3.29E+00
		Mn-54	<2.70E+00	0.00E+00	2.70E+00
		Co-58	<3.63E+00	0.00E+00	3.63E+00
		Fe-59	<6.02E+00	0.00E+00	6.02E+00
		Co-60	<2.60E+00	0.00E+00	2.60E+00
		Zn-65	<6.02E+00	0.00E+00	6.02E+00
		Zr-95	<6.44E+00	0.00E+00	6.44E+00
		Nb-95	<4.48E+00	0.00E+00	4.48E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<2.99E+00	0.00E+00	2.99E+00
		Cs-137	<3.02E+00	0.00E+00	3.02E+00
		BaLa-140	<9.96E+00	0.00E+00	9.96E+00
		Be-7	<2.82E+01	0.00E+00	2.82E+01
		K-40	5.49E+01	3.81E+01	5.81E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493744	12/31/2018 - 4/22/2019	H3DW	<-7.1E+00	0.00E+00	1.88E+02

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: DRINKING WATER Concentration (Activity): pCi/l

Sample Point 064 [CONTROL - SSW @ 6.67 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
498684	3/25/2019 - 4/22/2019	Beta	<3.28E+00	0.00E+00	3.28E+00
		Mn-54	<1.76E+00	0.00E+00	1.76E+00
		Co-58	<2.04E+00	0.00E+00	2.04E+00
		Fe-59	<4.57E+00	0.00E+00	4.57E+00
		Co-60	<1.46E+00	0.00E+00	1.46E+00
		Zn-65	<3.05E+00	0.00E+00	3.05E+00
		Zr-95	<2.60E+00	0.00E+00	2.60E+00
		Nb-95	<2.35E+00	0.00E+00	2.35E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<1.65E+00	0.00E+00	1.65E+00
		Cs-137	<1.70E+00	0.00E+00	1.70E+00
		BaLa-140	<7.17E+00	0.00E+00	7.17E+00
		Be-7	<1.69E+01	0.00E+00	1.69E+01
		K-40	2.66E+01	4.38E+00	2.02E+01
500258	4/22/2019 - 5/20/2019	Beta	<3.28E+00	0.00E+00	3.28E+00
		Mn-54	<8.03E-01	0.00E+00	8.03E-01
		Co-58	<9.31E-01	0.00E+00	9.31E-01
		Fe-59	<2.43E+00	0.00E+00	2.43E+00
		Co-60	<8.01E-01	0.00E+00	8.01E-01
		Zn-65	<1.72E+00	0.00E+00	1.72E+00
		Zr-95	<1.82E+00	0.00E+00	1.82E+00
		Nb-95	<1.58E+00	0.00E+00	1.58E+00
		I-131	<9.83E+00	0.00E+00	9.83E+00
		Cs-134	<8.63E-01	0.00E+00	8.63E-01
		Cs-137	<8.87E-01	0.00E+00	8.87E-01
		BaLa-140	<3.41E+00	0.00E+00	3.41E+00
		Be-7	<9.57E+00	0.00E+00	9.57E+00
		K-40	4.03E+01	1.13E+01	1.56E+01
502036	5/20/2019 - 6/17/2019	Beta	<3.25E+00	0.00E+00	3.25E+00
		Mn-54	<3.22E+00	0.00E+00	3.22E+00
		Co-58	<3.59E+00	0.00E+00	3.59E+00
		Fe-59	<8.94E+00	0.00E+00	8.94E+00
		Co-60	<2.50E+00	0.00E+00	2.50E+00
		Zn-65	<7.46E+00	0.00E+00	7.46E+00
		Zr-95	<5.66E+00	0.00E+00	5.66E+00
		Nb-95	<4.81E+00	0.00E+00	4.81E+00
		I-131	<1.15E+01	0.00E+00	1.15E+01
		Cs-134	<4.23E+00	0.00E+00	4.23E+00
		Cs-137	<2.58E+00	0.00E+00	2.58E+00
		BaLa-140	<1.15E+01	0.00E+00	1.15E+01
		Be-7	<3.31E+01	0.00E+00	3.31E+01
		K-40	<4.83E+01	0.00E+00	4.83E+01
500038	4/22/2019 - 7/15/2019	Nuclide	Activity	2 Sigma Error	MDA
		H3DW	<4.69E+01	0.00E+00	1.93E+02
504066	6/17/2019 - 7/15/2019	Beta	6.05E+00	4.48E+00	3.25E+00
		Mn-54	<1.91E+00	0.00E+00	1.91E+00
		Co-58	<1.77E+00	0.00E+00	1.77E+00
		Fe-59	<4.76E+00	0.00E+00	4.76E+00
		Co-60	<1.67E+00	0.00E+00	1.67E+00
		Zn-65	<3.87E+00	0.00E+00	3.87E+00
		Zr-95	<3.40E+00	0.00E+00	3.40E+00
		Nb-95	<2.40E+00	0.00E+00	2.40E+00
		I-131	<1.15E+01	0.00E+00	1.15E+01
		Cs-134	<2.21E+00	0.00E+00	2.21E+00
		Cs-137	<1.43E+00	0.00E+00	1.43E+00
		BaLa-140	<6.64E+00	0.00E+00	6.64E+00
		Be-7	<1.84E+01	0.00E+00	1.84E+01
		K-40	3.05E+01	1.77E+01	2.56E+01
505036	7/15/2019 - 8/12/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	3.45E+00	4.64E+00	3.41E+00

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: DRINKING WATER Concentration (Activity): pCi/l

Sample Point 064 [CONTROL - SSW @ 6.67 miles]

Sample ID:	505036	Sample Dates:	7/15/2019 - 8/12/2019	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<3.87E+00	0.00E+00	3.87E+00
				Co-58	<4.63E+00	0.00E+00	4.63E+00
				Fe-59	<8.46E+00	0.00E+00	8.46E+00
				Co-60	<3.15E+00	0.00E+00	3.15E+00
				Zn-65	<8.48E+00	0.00E+00	8.48E+00
				Zr-95	<6.30E+00	0.00E+00	6.30E+00
				Nb-95	<6.00E+00	0.00E+00	6.00E+00
				I-131	<1.15E+01	0.00E+00	1.15E+01
				Cs-134	<3.83E+00	0.00E+00	3.83E+00
				Cs-137	<2.89E+00	0.00E+00	2.89E+00
				BaLa-140	<7.36E+00	0.00E+00	7.36E+00
				Be-7	<2.87E+01	0.00E+00	2.87E+01
				K-40	<1.91E+01	0.00E+00	1.91E+01

Sample ID:	506773	Sample Dates:	8/12/2019 - 9/9/2019	Nuclide	Activity	2 Sigma Error	MDA
				Beta	<3.36E+00	0.00E+00	3.36E+00
				Mn-54	<1.40E+00	0.00E+00	1.40E+00
				Co-58	<1.52E+00	0.00E+00	1.52E+00
				Fe-59	<3.28E+00	0.00E+00	3.28E+00
				Co-60	<1.38E+00	0.00E+00	1.38E+00
				Zn-65	<5.45E+00	0.00E+00	5.45E+00
				Zr-95	<2.94E+00	0.00E+00	2.94E+00
				Nb-95	<2.95E+00	0.00E+00	2.95E+00
				I-131	<7.67E+00	0.00E+00	7.67E+00
				Cs-134	<1.45E+00	0.00E+00	1.45E+00
				Cs-137	<1.23E+00	0.00E+00	1.23E+00
				BaLa-140	<3.94E+00	0.00E+00	3.94E+00
				Be-7	<1.29E+01	0.00E+00	1.29E+01
				K-40	2.80E+01	1.29E+01	1.86E+01

Sample ID:	505076	Sample Dates:	7/15/2019 - 10/7/2019	Nuclide	Activity	2 Sigma Error	MDA
				H3DW	<-3.7E+01	0.00E+00	1.93E+02

Sample ID:	509652	Sample Dates:	9/9/2019 - 10/7/2019	Nuclide	Activity	2 Sigma Error	MDA
				Beta	<3.36E+00	0.00E+00	3.36E+00
				Mn-54	<1.65E+00	0.00E+00	1.65E+00
				Co-58	<2.38E+00	0.00E+00	2.38E+00
				Fe-59	<4.31E+00	0.00E+00	4.31E+00
				Co-60	<1.59E+00	0.00E+00	1.59E+00
				Zn-65	<3.98E+00	0.00E+00	3.98E+00
				Zr-95	<4.04E+00	0.00E+00	4.04E+00
				Nb-95	<2.53E+00	0.00E+00	2.53E+00
				I-131	<1.19E+01	0.00E+00	1.19E+01
				Cs-134	<2.34E+00	0.00E+00	2.34E+00
				Cs-137	<1.74E+00	0.00E+00	1.74E+00
				BaLa-140	<7.41E+00	0.00E+00	7.41E+00
				Be-7	<1.76E+01	0.00E+00	1.76E+01
				K-40	2.23E+01	1.21E+01	2.15E+01

Sample ID:	511364	Sample Dates:	10/7/2019 - 11/4/2019	Nuclide	Activity	2 Sigma Error	MDA
				Beta	<3.31E+00	0.00E+00	3.31E+00
				Mn-54	<3.42E+00	0.00E+00	3.42E+00
				Co-58	<2.43E+00	0.00E+00	2.43E+00
				Fe-59	<5.76E+00	0.00E+00	5.76E+00
				Co-60	<2.59E+00	0.00E+00	2.59E+00
				Zn-65	<7.75E+00	0.00E+00	7.75E+00
				Zr-95	<6.76E+00	0.00E+00	6.76E+00
				Nb-95	<3.43E+00	0.00E+00	3.43E+00
				I-131	<1.17E+01	0.00E+00	1.17E+01
				Cs-134	<3.92E+00	0.00E+00	3.92E+00
				Cs-137	<2.31E+00	0.00E+00	2.31E+00
				BaLa-140	<1.03E+01	0.00E+00	1.03E+01
				Be-7	<2.96E+01	0.00E+00	2.96E+01
				K-40	<3.58E+01	0.00E+00	3.58E+01

Sample ID:	512593	Sample Dates:	11/4/2019 - 12/2/2019	Nuclide	Activity	2 Sigma Error	MDA
				Beta	<3.43E+00	0.00E+00	3.43E+00
				Mn-54	<3.87E+00	0.00E+00	3.87E+00

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: DRINKING WATER Concentration (Activity): pCi/l

Sample Point 064 [CONTROL - SSW @ 6.67 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512593	11/4/2019 - 12/2/2019	Co-58	<1.93E+00	0.00E+00	1.93E+00
		Fe-59	<8.59E+00	0.00E+00	8.59E+00
		Co-60	<3.72E+00	0.00E+00	3.72E+00
		Zn-65	<1.03E+01	0.00E+00	1.03E+01
		Zr-95	<6.16E+00	0.00E+00	6.16E+00
		Nb-95	<3.52E+00	0.00E+00	3.52E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<3.45E+00	0.00E+00	3.45E+00
		Cs-137	<3.53E+00	0.00E+00	3.53E+00
		BaLa-140	<7.52E+00	0.00E+00	7.52E+00
		Be-7	<2.77E+01	0.00E+00	2.77E+01
		K-40	<3.68E+01	0.00E+00	3.68E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511719	10/7/2019 - 12/30/2019	H3DW	<-1.6E+02	0.00E+00	2.03E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514317	12/2/2019 - 12/30/2019	Beta	<3.37E+00	0.00E+00	3.37E+00
		Mn-54	<1.82E+00	0.00E+00	1.82E+00
		Co-58	<2.74E+00	0.00E+00	2.75E+00
		Fe-59	<6.03E+00	0.00E+00	6.03E+00
		Co-60	<2.67E+00	0.00E+00	2.67E+00
		Zn-65	<5.33E+00	0.00E+00	5.33E+00
		Zr-95	<5.01E+00	0.00E+00	5.01E+00
		Nb-95	<3.21E+00	0.00E+00	3.21E+00
		I-131	<1.05E+01	0.00E+00	1.05E+01
		Cs-134	<3.17E+00	0.00E+00	3.17E+00
		Cs-137	<2.54E+00	0.00E+00	2.54E+00
		BaLa-140	<6.04E+00	0.00E+00	6.04E+00
		Be-7	<2.09E+01	0.00E+00	2.09E+01
		K-40	1.53E+01	2.52E+01	4.25E+01

Sample Point 066 [INDICATOR - SSE @ 18.9 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493143	12/31/2018 - 1/28/2019	Mn-54	<2.47E+00	0.00E+00	2.47E+00
		Co-58	<2.63E+00	0.00E+00	2.63E+00
		Fe-59	<5.50E+00	0.00E+00	5.50E+00
		Co-60	<2.11E+00	0.00E+00	2.11E+00
		Zn-65	<6.07E+00	0.00E+00	6.07E+00
		Zr-95	<5.17E+00	0.00E+00	5.17E+00
		Nb-95	<3.47E+00	0.00E+00	3.47E+00
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<2.73E+00	0.00E+00	2.73E+00
		Cs-137	<3.02E+00	0.00E+00	3.02E+00
		BaLa-140	<7.15E+00	0.00E+00	7.15E+00
		Be-7	<2.43E+01	0.00E+00	2.43E+01
		K-40	5.98E+01	2.62E+01	3.30E+01
		Beta	<3.51E+00	0.00E+00	3.51E+00

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494473	1/28/2019 - 2/25/2019	Beta	<3.33E+00	0.00E+00	3.33E+00
		Mn-54	<3.02E+00	0.00E+00	3.02E+00
		Co-58	<3.03E+00	0.00E+00	3.03E+00
		Fe-59	<6.31E+00	0.00E+00	6.31E+00
		Co-60	<2.91E+00	0.00E+00	2.91E+00
		Zn-65	<5.85E+00	0.00E+00	5.85E+00
		Zr-95	<6.10E+00	0.00E+00	6.10E+00
		Nb-95	<3.88E+00	0.00E+00	3.88E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<3.01E+00	0.00E+00	3.01E+00
		Cs-137	<2.71E+00	0.00E+00	2.71E+00
		BaLa-140	<7.46E+00	0.00E+00	7.46E+00
		Be-7	<2.89E+01	0.00E+00	2.89E+01
		K-40	8.09E+01	3.25E+01	3.99E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
496916	2/25/2019 - 3/25/2019	Beta	<3.29E+00	0.00E+00	3.29E+00

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: DRINKING WATER Concentration (Activity): pCi/l

Sample Point 066 [INDICATOR - SSE @ 18.9 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
496916	2/25/2019 - 3/25/2019	Mn-54	<3.93E+00	0.00E+00	3.93E+00
		Co-58	<4.12E+00	0.00E+00	4.12E+00
		Fe-59	<1.01E+01	0.00E+00	1.01E+01
		Co-60	<2.34E+00	0.00E+00	2.34E+00
		Zn-65	<5.59E+00	0.00E+00	5.59E+00
		Zr-95	<6.27E+00	0.00E+00	6.27E+00
		Nb-95	<3.79E+00	0.00E+00	3.79E+00
		I-131	<1.14E+01	0.00E+00	1.14E+01
		Cs-134	<3.67E+00	0.00E+00	3.67E+00
		Cs-137	<2.92E+00	0.00E+00	2.92E+00
		BaLa-140	<9.38E+00	0.00E+00	9.38E+00
		Be-7	<2.25E+01	0.00E+00	2.25E+01
		K-40	<5.86E+01	0.00E+00	5.86E+01
		493745	12/31/2018 - 4/22/2019	H3DW	1.92E+02
498685	3/25/2019 - 4/22/2019	Beta	<3.28E+00	0.00E+00	3.28E+00
		Mn-54	<1.43E+00	0.00E+00	1.43E+00
		Co-58	<1.64E+00	0.00E+00	1.64E+00
		Fe-59	<3.56E+00	0.00E+00	3.56E+00
		Co-60	<1.50E+00	0.00E+00	1.50E+00
		Zn-65	<2.72E+00	0.00E+00	2.72E+00
		Zr-95	<2.97E+00	0.00E+00	2.97E+00
		Nb-95	<2.16E+00	0.00E+00	2.16E+00
		I-131	<1.02E+01	0.00E+00	1.02E+01
		Cs-134	<1.55E+00	0.00E+00	1.55E+00
		Cs-137	<1.27E+00	0.00E+00	1.27E+00
		BaLa-140	<4.12E+00	0.00E+00	4.12E+00
		Be-7	<1.25E+01	0.00E+00	1.25E+01
		K-40	3.95E+01	1.42E+01	1.83E+01
500259	4/22/2019 - 5/20/2019	Beta	<3.30E+00	0.00E+00	3.30E+00
		Mn-54	<1.24E+00	0.00E+00	1.24E+00
		Co-58	<1.48E+00	0.00E+00	1.48E+00
		Fe-59	<3.30E+00	0.00E+00	3.30E+00
		Co-60	<1.23E+00	0.00E+00	1.23E+00
		Zn-65	<2.58E+00	0.00E+00	2.58E+00
		Zr-95	<2.68E+00	0.00E+00	2.68E+00
		Nb-95	<2.28E+00	0.00E+00	2.28E+00
		I-131	<1.00E+01	0.00E+00	1.00E+01
		Cs-134	<1.58E+00	0.00E+00	1.58E+00
		Cs-137	<1.19E+00	0.00E+00	1.19E+00
		BaLa-140	<4.90E+00	0.00E+00	4.90E+00
		Be-7	<1.37E+01	0.00E+00	1.37E+01
		K-40	2.66E+01	1.55E+01	2.36E+01
502037	5/20/2019 - 6/17/2019	Beta	3.40E+00	4.43E+00	3.25E+00
		Mn-54	<2.07E+00	0.00E+00	2.07E+00
		Co-58	<2.74E+00	0.00E+00	2.74E+00
		Fe-59	<5.52E+00	0.00E+00	5.52E+00
		Co-60	<2.10E+00	0.00E+00	2.10E+00
		Zn-65	<6.48E+00	0.00E+00	6.48E+00
		Zr-95	<5.80E+00	0.00E+00	5.80E+00
		Nb-95	<2.86E+00	0.00E+00	2.86E+00
		I-131	<1.09E+01	0.00E+00	1.09E+01
		Cs-134	<2.82E+00	0.00E+00	2.82E+00
		Cs-137	<2.70E+00	0.00E+00	2.70E+00
		BaLa-140	<5.97E+00	0.00E+00	5.97E+00
		Be-7	<2.19E+01	0.00E+00	2.19E+01
		K-40	<4.25E+01	0.00E+00	4.25E+01
500039	4/22/2019 - 7/15/2019	H3DW	<1.15E+02	0.00E+00	1.88E+02

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: DRINKING WATER Concentration (Activity): pCi/l

Sample Point 066 [INDICATOR - SSE @ 18.9 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504067	6/17/2019 - 7/15/2019	Beta	7.00E+00	4.50E+00	3.25E+00
		Mn-54	<2.12E+00	0.00E+00	2.12E+00
		Co-58	<2.82E+00	0.00E+00	2.82E+00
		Fe-59	<5.81E+00	0.00E+00	5.81E+00
		Co-60	<2.16E+00	0.00E+00	2.16E+00
		Zn-65	<5.24E+00	0.00E+00	5.24E+00
		Zr-95	<3.90E+00	0.00E+00	3.90E+00
		Nb-95	<4.26E+00	0.00E+00	4.26E+00
		I-131	<1.07E+01	0.00E+00	1.07E+01
		Cs-134	<2.26E+00	0.00E+00	2.26E+00
		Cs-137	<2.34E+00	0.00E+00	2.34E+00
		BaLa-140	<8.40E+00	0.00E+00	8.40E+00
		Be-7	<2.29E+01	0.00E+00	2.29E+01
		K-40	<3.76E+01	0.00E+00	3.76E+01
505037	7/15/2019 - 8/12/2019	Beta	<3.41E+00	0.00E+00	3.41E+00
		Mn-54	<3.62E+00	0.00E+00	3.62E+00
		Co-58	<3.29E+00	0.00E+00	3.29E+00
		Fe-59	<6.91E+00	0.00E+00	6.91E+00
		Co-60	<2.83E+00	0.00E+00	2.83E+00
		Zn-65	<5.62E+00	0.00E+00	5.62E+00
		Zr-95	<6.06E+00	0.00E+00	6.06E+00
		Nb-95	<3.89E+00	0.00E+00	3.89E+00
		I-131	<1.11E+01	0.00E+00	1.11E+01
		Cs-134	<3.24E+00	0.00E+00	3.24E+00
		Cs-137	<3.13E+00	0.00E+00	3.13E+00
		BaLa-140	<8.51E+00	0.00E+00	8.51E+00
		Be-7	<2.65E+01	0.00E+00	2.65E+01
		K-40	<5.54E+01	0.00E+00	5.54E+01
506774	8/12/2019 - 9/9/2019	Beta	7.06E+00	4.66E+00	3.36E+00
		Mn-54	<1.78E+00	0.00E+00	1.78E+00
		Co-58	<2.15E+00	0.00E+00	2.15E+00
		Fe-59	<4.11E+00	0.00E+00	4.11E+00
		Co-60	<2.42E+00	0.00E+00	2.42E+00
		Zn-65	<3.81E+00	0.00E+00	3.81E+00
		Zr-95	<4.25E+00	0.00E+00	4.25E+00
		Nb-95	<2.50E+00	0.00E+00	2.50E+00
		I-131	<1.05E+01	0.00E+00	1.05E+01
		Cs-134	<1.88E+00	0.00E+00	1.88E+00
		Cs-137	<2.06E+00	0.00E+00	2.06E+00
		BaLa-140	<6.35E+00	0.00E+00	6.35E+00
		Be-7	<2.13E+01	0.00E+00	2.13E+01
		K-40	<3.44E+01	0.00E+00	3.44E+01
505077	7/15/2019 - 10/7/2019	H3DW	<2.27E+01	0.00E+00	1.92E+02
509653	9/9/2019 - 10/7/2019	Beta	<3.36E+00	0.00E+00	3.36E+00
		Mn-54	<2.17E+00	0.00E+00	2.17E+00
		Co-58	<2.32E+00	0.00E+00	2.32E+00
		Fe-59	<4.28E+00	0.00E+00	4.28E+00
		Co-60	<2.23E+00	0.00E+00	2.23E+00
		Zn-65	<3.63E+00	0.00E+00	3.63E+00
		Zr-95	<4.63E+00	0.00E+00	4.63E+00
		Nb-95	<3.28E+00	0.00E+00	3.28E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<2.05E+00	0.00E+00	2.05E+00
		Cs-137	<1.95E+00	0.00E+00	1.95E+00
		BaLa-140	<5.63E+00	0.00E+00	5.63E+00
		Be-7	<1.85E+01	0.00E+00	1.85E+01
		K-40	7.22E+01	1.23E+01	2.15E+01
511365	10/7/2019 - 11/4/2019	Beta	4.05E+00	4.51E+00	3.31E+00

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: DRINKING WATER Concentration (Activity): pCi/l

Sample Point 066 [INDICATOR - SSE @ 18.9 miles]

Sample ID:	511365	Sample Dates:	10/7/2019 - 11/4/2019	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<2.59E+00	0.00E+00	2.59E+00
				Co-58	<2.88E+00	0.00E+00	2.88E+00
				Fe-59	<5.54E+00	0.00E+00	5.54E+00
				Co-60	<2.30E+00	0.00E+00	2.30E+00
				Zn-65	<5.70E+00	0.00E+00	5.70E+00
				Zr-95	<4.29E+00	0.00E+00	4.29E+00
				Nb-95	<3.33E+00	0.00E+00	3.33E+00
				I-131	<1.19E+01	0.00E+00	1.19E+01
				Cs-134	<3.32E+00	0.00E+00	3.32E+00
				Cs-137	<3.38E+00	0.00E+00	3.38E+00
				BaLa-140	<6.91E+00	0.00E+00	6.91E+00
				Be-7	<2.57E+01	0.00E+00	2.57E+01
				K-40	8.35E+01	3.31E+01	4.27E+01

Sample ID:	512594	Sample Dates:	11/4/2019 - 12/2/2019	Nuclide	Activity	2 Sigma Error	MDA
				Beta	<3.43E+00	0.00E+00	3.43E+00
				Mn-54	<4.18E+00	0.00E+00	4.18E+00
				Co-58	<3.35E+00	0.00E+00	3.35E+00
				Fe-59	<7.14E+00	0.00E+00	7.14E+00
				Co-60	<4.37E+00	0.00E+00	4.37E+00
				Zn-65	<8.08E+00	0.00E+00	8.08E+00
				Zr-95	<3.65E+00	0.00E+00	3.65E+00
				Nb-95	<5.24E+00	0.00E+00	5.24E+00
				I-131	<1.15E+01	0.00E+00	1.15E+01
				Cs-134	<4.41E+00	0.00E+00	4.41E+00
				Cs-137	<4.41E+00	0.00E+00	4.41E+00
				BaLa-140	<6.90E+00	0.00E+00	6.90E+00
				Be-7	<3.57E+01	0.00E+00	3.57E+01
				K-40	<6.65E+01	0.00E+00	6.65E+01

Sample ID:	511720	Sample Dates:	10/7/2019 - 12/30/2019	Nuclide	Activity	2 Sigma Error	MDA
				H3DW	<9.42E+01	0.00E+00	2.01E+02

Sample ID:	514318	Sample Dates:	12/2/2019 - 12/30/2019	Nuclide	Activity	2 Sigma Error	MDA
				Beta	<3.37E+00	0.00E+00	3.37E+00
				Mn-54	<2.05E+00	0.00E+00	2.05E+00
				Co-58	<2.21E+00	0.00E+00	2.21E+00
				Fe-59	<5.29E+00	0.00E+00	5.29E+00
				Co-60	<2.37E+00	0.00E+00	2.37E+00
				Zn-65	<4.14E+00	0.00E+00	4.14E+00
				Zr-95	<4.26E+00	0.00E+00	4.26E+00
				Nb-95	<2.52E+00	0.00E+00	2.52E+00
				I-131	<1.02E+01	0.00E+00	1.02E+01
				Cs-134	<2.45E+00	0.00E+00	2.45E+00
				Cs-137	<2.02E+00	0.00E+00	2.02E+00
				BaLa-140	<5.83E+00	0.00E+00	5.83E+00
				Be-7	<2.07E+01	0.00E+00	2.07E+01
				K-40	8.41E+01	2.51E+01	2.73E+01

Media Type: FISH Concentration (Activity): pCi/kg wet

Sample Point 060 [CONTROL FISH / INDICATOR - NE @ 3.23 miles]

Sample ID:	497901	Sample Dates:	4/8/2019 - 4/8/2019	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<9.18E+01	0.00E+00	9.18E+01
					Co-58	<7.76E+01	0.00E+00	7.76E+01
					Fe-59	<1.70E+02	0.00E+00	1.70E+02
					Co-60	<7.70E+01	0.00E+00	7.70E+01
					Zn-65	<1.43E+02	0.00E+00	1.43E+02
					Nb-95	<9.41E+01	0.00E+00	9.41E+01
					I-131	<4.08E+02	0.00E+00	4.08E+02
					Cs-134	<9.43E+01	0.00E+00	9.43E+01
					Cs-137	<1.00E+02	0.00E+00	1.00E+02
					Be-7	<7.60E+02	0.00E+00	7.60E+02
					K-40	4.83E+03	1.39E+03	9.45E+02
					Ag-110M	<8.16E+01	0.00E+00	8.16E+01
					Sb-122	<4.28E+04	0.00E+00	4.28E+04
					Sb-125	<2.14E+02	0.00E+00	2.14E+02

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: FISH Concentration (Activity): pCi/kg wet

Sample Point 060 [CONTROL FISH / INDICATOR - NE @ 3.23 miles]

Sample ID:	497902	Sample Dates:	4/8/2019 - 4/8/2019	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<6.44E+01	0.00E+00	6.44E+01
					Co-58	<6.43E+01	0.00E+00	6.43E+01
					Fe-59	<1.45E+02	0.00E+00	1.45E+02
					Co-60	<9.76E+01	0.00E+00	9.76E+01
					Zn-65	<1.72E+02	0.00E+00	1.72E+02
					Nb-95	<1.21E+02	0.00E+00	1.21E+02
					I-131	<4.38E+02	0.00E+00	4.38E+02
					Cs-134	<7.51E+01	0.00E+00	7.51E+01
					Cs-137	<6.80E+01	0.00E+00	6.80E+01
					Be-7	<6.15E+02	0.00E+00	6.15E+02
					K-40	3.95E+03	1.17E+03	1.08E+03
					Ag-110M	<5.30E+01	0.00E+00	5.30E+01
					Sb-122	<2.59E+04	0.00E+00	2.59E+04
					Sb-125	<1.64E+02	0.00E+00	1.64E+02

Sample ID:	509983	Sample Dates:	10/15/2019 - 10/15/2019	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<7.53E+01	0.00E+00	7.53E+01
					Co-58	<6.02E+01	0.00E+00	6.02E+01
					Fe-59	<1.34E+02	0.00E+00	1.34E+02
					Co-60	<1.90E+01	0.00E+00	1.90E+01
					Zn-65	<1.75E+02	0.00E+00	1.75E+02
					Nb-95	<6.88E+01	0.00E+00	6.88E+01
					I-131	<6.87E+01	0.00E+00	6.87E+01
					Cs-134	<6.08E+01	0.00E+00	6.08E+01
					Cs-137	<7.82E+01	0.00E+00	7.82E+01
					Be-7	<5.12E+02	0.00E+00	5.12E+02
					K-40	3.77E+03	1.19E+03	1.03E+03
					Ag-110M	<6.19E+01	0.00E+00	6.19E+01
					Sb-122	<1.72E+02	0.00E+00	1.72E+02
					Sb-125	<1.23E+02	0.00E+00	1.23E+02

Sample ID:	509984	Sample Dates:	10/15/2019 - 10/15/2019	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<8.43E+01	0.00E+00	8.43E+01
					Co-58	<8.42E+01	0.00E+00	8.42E+01
					Fe-59	<1.77E+02	0.00E+00	1.77E+02
					Co-60	<1.04E+02	0.00E+00	1.04E+02
					Zn-65	<1.97E+02	0.00E+00	1.97E+02
					Nb-95	<9.52E+01	0.00E+00	9.52E+01
					I-131	<1.02E+02	0.00E+00	1.02E+02
					Cs-134	<9.49E+01	0.00E+00	9.49E+01
					Cs-137	<8.30E+01	0.00E+00	8.30E+01
					Be-7	<6.11E+02	0.00E+00	6.11E+02
					K-40	4.70E+03	1.38E+03	1.06E+03
					Ag-110M	<8.21E+01	0.00E+00	8.21E+01
					Sb-122	<1.81E+02	0.00E+00	1.81E+02
					Sb-125	<1.85E+02	0.00E+00	1.85E+02

Sample Point 063 [INDICATOR - ESE @ 0.8 miles]

Sample ID:	497903	Sample Dates:	4/8/2019 - 4/8/2019	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<4.99E+01	0.00E+00	4.99E+01
					Co-58	<8.61E+01	0.00E+00	8.61E+01
					Fe-59	<1.48E+02	0.00E+00	1.48E+02
					Co-60	<6.78E+01	0.00E+00	6.78E+01
					Zn-65	<1.53E+02	0.00E+00	1.53E+02
					Nb-95	<9.81E+01	0.00E+00	9.81E+01
					I-131	<4.56E+02	0.00E+00	4.56E+02
					Cs-134	<7.62E+01	0.00E+00	7.62E+01
					Cs-137	<7.91E+01	0.00E+00	7.91E+01
					Be-7	<6.62E+02	0.00E+00	6.62E+02
					K-40	4.12E+03	1.11E+03	6.66E+02
					Ag-110M	<5.80E+01	0.00E+00	5.80E+01
					Sb-122	<2.01E+04	0.00E+00	2.01E+04
					Sb-125	<1.76E+02	0.00E+00	1.76E+02

Sample ID:	497904	Sample Dates:	4/8/2019 - 4/9/2019	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<3.95E+01	0.00E+00	3.95E+01
					Co-58	<5.12E+01	0.00E+00	5.12E+01

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: FISH Concentration (Activity): pCi/kg wet

Sample Point 063 [INDICATOR - ESE @ 0.8 miles]

Sample ID:	Sample Dates:	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
497904	4/8/2019 - 4/9/2019		Fe-59	<1.08E+02	0.00E+00	1.08E+02
			Co-60	<4.02E+01	0.00E+00	4.02E+01
			Zn-65	<8.17E+01	0.00E+00	8.17E+01
			Nb-95	<7.19E+01	0.00E+00	7.19E+01
			I-131	<3.23E+02	0.00E+00	3.23E+02
			Cs-134	<4.97E+01	0.00E+00	4.97E+01
			Cs-137	<5.89E+01	0.00E+00	5.89E+01
			Be-7	<4.15E+02	0.00E+00	4.15E+02
			K-40	4.62E+03	8.86E+02	7.61E+02
			Ag-110M	<3.25E+01	0.00E+00	3.25E+01
			Sb-122	<1.85E+04	0.00E+00	1.85E+04
			Sb-125	<1.06E+02	0.00E+00	1.06E+02

Sample ID:	Sample Dates:	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
509985	10/14/2019 - 10/14/2019		Mn-54	<5.22E+01	0.00E+00	5.22E+01
			Co-58	<5.66E+01	0.00E+00	5.66E+01
			Fe-59	<1.10E+02	0.00E+00	1.10E+02
			Co-60	<5.37E+01	0.00E+00	5.37E+01
			Zn-65	<1.15E+02	0.00E+00	1.15E+02
			Nb-95	<4.98E+01	0.00E+00	4.98E+01
			I-131	<6.69E+01	0.00E+00	6.69E+01
			Cs-134	<5.15E+01	0.00E+00	5.15E+01
			Cs-137	<5.13E+01	0.00E+00	5.13E+01
			Be-7	<3.44E+02	0.00E+00	3.44E+02
			K-40	4.39E+03	1.02E+03	8.35E+02
			Ag-110M	<5.67E+01	0.00E+00	5.67E+01
			Sb-122	<1.49E+02	0.00E+00	1.49E+02
			Sb-125	<1.31E+02	0.00E+00	1.31E+02

Sample ID:	Sample Dates:	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
509986	10/14/2019 - 10/15/2019		Mn-54	<5.27E+01	0.00E+00	5.27E+01
			Co-58	<6.91E+01	0.00E+00	6.91E+01
			Fe-59	<9.82E+01	0.00E+00	9.82E+01
			Co-60	<6.15E+01	0.00E+00	6.15E+01
			Zn-65	<8.90E+01	0.00E+00	8.90E+01
			Nb-95	<4.61E+01	0.00E+00	4.61E+01
			I-131	<6.75E+01	0.00E+00	6.75E+01
			Cs-134	<5.27E+01	0.00E+00	5.27E+01
			Cs-137	<6.15E+01	0.00E+00	6.15E+01
			Be-7	<4.53E+02	0.00E+00	4.53E+02
			K-40	4.61E+03	1.04E+03	5.86E+02
			Ag-110M	<5.08E+01	0.00E+00	5.08E+01
			Sb-122	<1.08E+02	0.00E+00	1.08E+02
			Sb-125	<1.55E+02	0.00E+00	1.55E+02

Sample Point 067 [INDICATOR - SSE @ 4.34 miles]

Sample ID:	Sample Dates:	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
497905	4/9/2019 - 4/9/2019		Mn-54	<4.65E+01	0.00E+00	4.65E+01
			Co-58	<4.76E+01	0.00E+00	4.76E+01
			Fe-59	<1.20E+02	0.00E+00	1.20E+02
			Co-60	<6.08E+01	0.00E+00	6.08E+01
			Zn-65	<9.38E+01	0.00E+00	9.38E+01
			Nb-95	<5.94E+01	0.00E+00	5.94E+01
			I-131	<2.75E+02	0.00E+00	2.75E+02
			Cs-134	<3.69E+01	0.00E+00	3.69E+01
			Cs-137	<5.06E+01	0.00E+00	5.06E+01
			Be-7	<4.26E+02	0.00E+00	4.26E+02
			K-40	3.94E+03	8.75E+02	8.08E+02
			Ag-110M	<3.60E+01	0.00E+00	3.60E+01
			Sb-122	<1.68E+04	0.00E+00	1.68E+04
			Sb-125	<1.15E+02	0.00E+00	1.15E+02

Sample ID:	Sample Dates:	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
497906	4/9/2019 - 4/9/2019		Mn-54	<6.52E+01	0.00E+00	6.52E+01
			Co-58	<7.10E+01	0.00E+00	7.10E+01
			Fe-59	<1.80E+02	0.00E+00	1.80E+02
			Co-60	<6.87E+01	0.00E+00	6.87E+01

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: FISH Concentration (Activity): pCi/kg wet

Sample Point 067 [INDICATOR - SSE @ 4.34 miles]

Sample ID:	Sample Dates:	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
497906	4/9/2019 - 4/9/2019		Zn-65	<1.48E+02	0.00E+00	1.48E+02
			Nb-95	<9.75E+01	0.00E+00	9.75E+01
			I-131	<3.90E+02	0.00E+00	3.90E+02
			Cs-134	<6.65E+01	0.00E+00	6.65E+01
			Cs-137	<8.45E+01	0.00E+00	8.45E+01
			Be-7	<7.21E+02	0.00E+00	7.21E+02
			K-40	4.83E+03	1.25E+03	1.32E+03
			Ag-110M	<5.17E+01	0.00E+00	5.17E+01
			Sb-122	<2.16E+04	0.00E+00	2.16E+04
			Sb-125	<1.65E+02	0.00E+00	1.65E+02

Sample ID:	Sample Dates:	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
509987	10/14/2019 - 10/14/2019		Mn-54	<5.73E+01	0.00E+00	5.73E+01
			Co-58	<5.77E+01	0.00E+00	5.77E+01
			Fe-59	<1.21E+02	0.00E+00	1.21E+02
			Co-60	<4.65E+01	0.00E+00	4.65E+01
			Zn-65	<1.21E+02	0.00E+00	1.21E+02
			Nb-95	<6.07E+01	0.00E+00	6.07E+01
			I-131	<8.59E+01	0.00E+00	8.59E+01
			Cs-134	<6.44E+01	0.00E+00	6.44E+01
			Cs-137	<7.02E+01	0.00E+00	7.02E+01
			Be-7	<5.01E+02	0.00E+00	5.01E+02
			K-40	5.06E+03	1.12E+03	8.68E+02
			Ag-110M	<4.84E+01	0.00E+00	4.84E+01
			Sb-122	<1.54E+02	0.00E+00	1.54E+02
			Sb-125	<1.55E+02	0.00E+00	1.55E+02

Sample ID:	Sample Dates:	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
509988	10/14/2019 - 10/15/2019		Mn-54	<5.37E+01	0.00E+00	5.37E+01
			Co-58	<7.06E+01	0.00E+00	7.06E+01
			Fe-59	<1.04E+02	0.00E+00	1.04E+02
			Co-60	<6.54E+01	0.00E+00	6.54E+01
			Zn-65	<1.34E+02	0.00E+00	1.34E+02
			Nb-95	<6.91E+01	0.00E+00	6.91E+01
			I-131	<7.24E+01	0.00E+00	7.24E+01
			Cs-134	<9.36E+01	0.00E+00	9.36E+01
			Cs-137	<8.54E+01	0.00E+00	8.54E+01
			Be-7	<5.17E+02	0.00E+00	5.17E+02
			K-40	2.86E+03	1.07E+03	1.09E+03
			Ag-110M	<6.57E+01	0.00E+00	6.57E+01
			Sb-122	<1.41E+02	0.00E+00	1.41E+02
			Sb-125	<2.01E+02	0.00E+00	2.01E+02

Media Type: MILK Concentration (Activity): pCi/l

Sample Point 071 [CONTROL - SSE @ 10.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492489	1/7/2019 - 1/7/2019	LLI-131	<6.40E-01	0.00E+00	6.40E-01
		I-131	<7.15E+00	0.00E+00	7.15E+00
		Cs-134	<8.15E+00	0.00E+00	8.15E+00
		Cs-137	<7.99E+00	0.00E+00	7.99E+00
		BaLa-140	<2.26E+00	0.00E+00	2.26E+00
		Be-7	<4.51E+01	0.00E+00	4.51E+01
		K-40	1.44E+03	2.37E+02	1.37E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493348	1/21/2019 - 1/21/2019	LLI-131	<6.42E-01	0.00E+00	6.42E-01
		I-131	<6.46E+00	0.00E+00	6.46E+00
		Cs-134	<6.52E+00	0.00E+00	6.52E+00
		Cs-137	<6.76E+00	0.00E+00	6.76E+00
		BaLa-140	<9.37E+00	0.00E+00	9.37E+00
		Be-7	<4.55E+01	0.00E+00	4.55E+01
		K-40	1.30E+03	2.15E+02	7.38E+01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493841	2/4/2019 - 2/4/2019	LLI-131	<6.48E-01	0.00E+00	6.48E-01
		I-131	<1.02E+01	0.00E+00	1.02E+01
		Cs-134	<8.16E+00	0.00E+00	8.16E+00

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: MILK Concentration (Activity): pCi/l

Sample Point 071 [CONTROL - SSE @ 10.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493841	2/4/2019 - 2/4/2019	Cs-137	<6.76E+00	0.00E+00	6.76E+00
		BaLa-140	<6.48E+00	0.00E+00	6.48E+00
		Be-7	<5.87E+01	0.00E+00	5.87E+01
		K-40	1.27E+03	2.12E+02	7.86E+01
494998	2/18/2019 - 2/18/2019	LLI-131	<6.49E-01	0.00E+00	6.49E-01
		I-131	<6.66E+00	0.00E+00	6.66E+00
		Cs-134	<6.63E+00	0.00E+00	6.63E+00
		Cs-137	<7.75E+00	0.00E+00	7.75E+00
		BaLa-140	<9.09E+00	0.00E+00	9.09E+00
		Be-7	<5.88E+01	0.00E+00	5.88E+01
		K-40	1.39E+03	2.29E+02	1.21E+02
496160	3/4/2019 - 3/4/2019	LLI-131	<6.49E-01	0.00E+00	6.49E-01
		I-131	<8.77E+00	0.00E+00	8.77E+00
		Cs-134	<8.78E+00	0.00E+00	8.78E+00
		Cs-137	<7.33E+00	0.00E+00	7.33E+00
		BaLa-140	<1.12E+01	0.00E+00	1.12E+01
		Be-7	<5.79E+01	0.00E+00	5.79E+01
		K-40	1.41E+03	2.40E+02	1.65E+02
497175	3/18/2019 - 3/18/2019	LLI-131	<6.45E-01	0.00E+00	6.45E-01
		I-131	<4.89E+00	0.00E+00	4.89E+00
		Cs-134	<7.65E+00	0.00E+00	7.65E+00
		Cs-137	<9.34E+00	0.00E+00	9.34E+00
		BaLa-140	<6.06E+00	0.00E+00	6.06E+00
		Be-7	<5.06E+01	0.00E+00	5.06E+01
		K-40	1.45E+03	2.32E+02	1.03E+02
498079	4/1/2019 - 4/1/2019	LLI-131	<5.84E-01	0.00E+00	5.84E-01
		I-131	<7.89E+00	0.00E+00	7.89E+00
		Cs-134	<8.62E+00	0.00E+00	8.62E+00
		Cs-137	<8.35E+00	0.00E+00	8.35E+00
		BaLa-140	<8.06E+00	0.00E+00	8.06E+00
		Be-7	<3.00E+01	0.00E+00	3.00E+01
		K-40	1.27E+03	2.19E+02	1.32E+02
498814	4/15/2019 - 4/15/2019	LLI-131	<6.17E-01	0.00E+00	6.17E-01
		I-131	<7.63E+00	0.00E+00	7.63E+00
		Cs-134	<5.13E+00	0.00E+00	5.13E+00
		Cs-137	<8.14E+00	0.00E+00	8.14E+00
		BaLa-140	<2.27E+00	0.00E+00	2.27E+00
		Be-7	<4.87E+01	0.00E+00	4.87E+01
		K-40	1.46E+03	2.34E+02	1.04E+02
499908	4/29/2019 - 4/29/2019	LLI-131	<6.38E-01	0.00E+00	6.38E-01
		I-131	<8.34E+00	0.00E+00	8.34E+00
		Cs-134	<6.53E+00	0.00E+00	6.53E+00
		Cs-137	<7.99E+00	0.00E+00	7.99E+00
		BaLa-140	<9.88E+00	0.00E+00	9.88E+00
		Be-7	<4.61E+01	0.00E+00	4.61E+01
		K-40	1.42E+03	2.24E+02	1.78E+01
500490	5/13/2019 - 5/13/2019	LLI-131	<6.39E-01	0.00E+00	6.39E-01
		I-131	<7.96E+00	0.00E+00	7.96E+00
		Cs-134	<8.29E+00	0.00E+00	8.29E+00
		Cs-137	<9.19E+00	0.00E+00	9.19E+00
		BaLa-140	<7.87E+00	0.00E+00	7.87E+00
		Be-7	<4.88E+01	0.00E+00	4.88E+01
		K-40	1.30E+03	2.15E+02	7.47E+01

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: MILK Concentration (Activity): pCi/l

Sample Point 071 [CONTROL - SSE @ 10.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
501161	5/28/2019 - 5/28/2019	LLI-131	<4.40E-01	0.00E+00	4.40E-01
		I-131	<7.09E+00	0.00E+00	7.09E+00
		Cs-134	<4.07E+00	0.00E+00	4.07E+00
		Cs-137	<6.43E+00	0.00E+00	6.43E+00
		BaLa-140	<8.28E+00	0.00E+00	8.28E+00
		Be-7	<5.27E+01	0.00E+00	5.27E+01
		K-40	1.72E+03	2.58E+02	1.05E+02
502235	6/10/2019 - 6/10/2019	LLI-131	<6.47E-01	0.00E+00	6.47E-01
		I-131	<5.93E+00	0.00E+00	5.93E+00
		Cs-134	<7.20E+00	0.00E+00	7.20E+00
		Cs-137	<7.71E+00	0.00E+00	7.71E+00
		BaLa-140	<8.22E+00	0.00E+00	8.22E+00
		Be-7	<5.48E+01	0.00E+00	5.48E+01
		K-40	1.48E+03	2.30E+02	1.79E+01
503442	6/24/2019 - 6/24/2019	LLI-131	<6.21E-01	0.00E+00	6.21E-01
		I-131	<7.74E+00	0.00E+00	7.74E+00
		Cs-134	<1.04E+01	0.00E+00	1.04E+01
		Cs-137	<7.75E+00	0.00E+00	7.75E+00
		BaLa-140	<9.52E+00	0.00E+00	9.52E+00
		Be-7	<6.39E+01	0.00E+00	6.39E+01
		K-40	1.44E+03	2.35E+02	1.21E+02
504229	7/8/2019 - 7/8/2019	LLI-131	<6.43E-01	0.00E+00	6.43E-01
		I-131	<5.82E+00	0.00E+00	5.82E+00
		Cs-134	<8.24E+00	0.00E+00	8.24E+00
		Cs-137	<3.58E+00	0.00E+00	3.58E+00
		BaLa-140	<7.82E+00	0.00E+00	7.82E+00
		Be-7	<6.11E+01	0.00E+00	6.11E+01
		K-40	1.40E+03	2.29E+02	1.15E+02
504686	7/22/2019 - 7/22/2019	LLI-131	<6.08E-01	0.00E+00	6.08E-01
		I-131	<6.57E+00	0.00E+00	6.57E+00
		Cs-134	<6.30E+00	0.00E+00	6.30E+00
		Cs-137	<8.63E+00	0.00E+00	8.63E+00
		BaLa-140	<2.54E+00	0.00E+00	2.54E+00
		Be-7	<5.54E+01	0.00E+00	5.54E+01
		K-40	1.91E+03	2.80E+02	7.91E+01
505183	8/5/2019 - 8/5/2019	LLI-131	<6.16E-01	0.00E+00	6.16E-01
		I-131	<9.14E+00	0.00E+00	9.14E+00
		Cs-134	<6.60E+00	0.00E+00	6.60E+00
		Cs-137	<7.71E+00	0.00E+00	7.71E+00
		BaLa-140	<6.49E+00	0.00E+00	6.49E+00
		Be-7	<4.63E+01	0.00E+00	4.63E+01
		K-40	1.40E+03	2.22E+02	1.79E+01
505887	8/19/2019 - 8/19/2019	LLI-131	<6.31E-01	0.00E+00	6.31E-01
		I-131	<4.55E+00	0.00E+00	4.55E+00
		Cs-134	<7.65E+00	0.00E+00	7.65E+00
		Cs-137	<7.99E+00	0.00E+00	7.99E+00
		BaLa-140	<8.95E+00	0.00E+00	8.95E+00
		Be-7	<4.19E+01	0.00E+00	4.19E+01
		K-40	1.63E+03	2.43E+02	1.78E+01
507336	9/3/2019 - 9/3/2019	LLI-131	<6.27E-01	0.00E+00	6.27E-01
		I-131	<8.29E+00	0.00E+00	8.29E+00
		Cs-134	<9.63E+00	0.00E+00	9.63E+00
		Cs-137	<5.87E+00	0.00E+00	5.87E+00
		BaLa-140	<1.06E+01	0.00E+00	1.06E+01
		Be-7	<4.63E+01	0.00E+00	4.63E+01

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: MILK Concentration (Activity): pCi/l

Sample Point 071 [CONTROL - SSE @ 10.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
507336	9/3/2019 - 9/3/2019	K-40	1.63E+03	2.52E+02	1.15E+02
508388	9/16/2019 - 9/16/2019	LLI-131	<6.46E-01	0.00E+00	6.46E-01
		I-131	<6.12E+00	0.00E+00	6.12E+00
		Cs-134	<7.69E+00	0.00E+00	7.69E+00
		Cs-137	<7.67E+00	0.00E+00	7.67E+00
		BaLa-140	<7.75E+00	0.00E+00	7.75E+00
		Be-7	<4.57E+01	0.00E+00	4.57E+01
		K-40	1.44E+03	2.35E+02	1.29E+02
509859	9/30/2019 - 9/30/2019	I-131	<8.68E+00	0.00E+00	8.68E+00
		Cs-134	<8.66E+00	0.00E+00	8.66E+00
		Cs-137	<7.26E+00	0.00E+00	7.26E+00
		BaLa-140	<9.47E+00	0.00E+00	9.47E+00
		Be-7	<4.93E+01	0.00E+00	4.93E+01
		K-40	1.28E+03	2.12E+02	7.64E+01
		LLI-131	<7.98E-01	0.00E+00	7.98E-01
510854	10/14/2019 - 10/14/2019	LLI-131	<6.07E-01	0.00E+00	6.07E-01
		I-131	<5.98E+00	0.00E+00	5.98E+00
		Cs-134	<5.04E+00	0.00E+00	5.04E+00
		Cs-137	<7.20E+00	0.00E+00	7.20E+00
		BaLa-140	<6.10E+00	0.00E+00	6.10E+00
		Be-7	<4.18E+01	0.00E+00	4.18E+01
		K-40	1.37E+03	2.26E+02	1.12E+02
511495	10/28/2019 - 10/28/2019	LLI-131	<6.44E-01	0.00E+00	6.44E-01
		I-131	<5.78E+00	0.00E+00	5.78E+00
		Cs-134	<7.69E+00	0.00E+00	7.69E+00
		Cs-137	<6.82E+00	0.00E+00	6.82E+00
		BaLa-140	<2.26E+00	0.00E+00	2.26E+00
		Be-7	<5.14E+01	0.00E+00	5.14E+01
		K-40	1.45E+03	2.30E+02	8.52E+01
512206	11/11/2019 - 11/11/2019	LLI-131	<4.50E-01	0.00E+00	4.50E-01
		I-131	<6.31E+00	0.00E+00	6.31E+00
		Cs-134	<9.10E+00	0.00E+00	9.10E+00
		Cs-137	<6.82E+00	0.00E+00	6.82E+00
		BaLa-140	<9.48E+00	0.00E+00	9.48E+00
		Be-7	<4.63E+01	0.00E+00	4.63E+01
		K-40	1.58E+03	2.38E+02	1.78E+01
512690	11/25/2019 - 11/25/2019	LLI-131	<6.44E-01	0.00E+00	6.44E-01
		I-131	<5.70E+00	0.00E+00	5.70E+00
		Cs-134	<5.91E+00	0.00E+00	5.91E+00
		Cs-137	<6.85E+00	0.00E+00	6.85E+00
		BaLa-140	<2.25E+00	0.00E+00	2.25E+00
		Be-7	<4.24E+01	0.00E+00	4.24E+01
		K-40	1.30E+03	2.17E+02	9.71E+01
513966	12/9/2019 - 12/9/2019	LLI-131	<6.49E-01	0.00E+00	6.49E-01
		I-131	<6.98E+00	0.00E+00	6.98E+00
		Cs-134	<9.24E+00	0.00E+00	9.24E+00
		Cs-137	<7.38E+00	0.00E+00	7.38E+00
		BaLa-140	<7.83E+00	0.00E+00	7.83E+00
		Be-7	<3.94E+01	0.00E+00	3.94E+01
		K-40	1.32E+03	2.15E+02	1.81E+01
514517	12/23/2019 - 12/23/2019	I-131	<6.35E+00	0.00E+00	6.35E+00
		Cs-134	<6.63E+00	0.00E+00	6.63E+00
		Cs-137	<6.89E+00	0.00E+00	6.89E+00

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: MILK Concentration (Activity): pCi/l

Sample Point 071 [CONTROL - SSE @ 10.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514517	12/23/2019 - 12/23/2019	BaLa-140	<2.16E+00	0.00E+00	2.16E+00
		Be-7	<5.81E+01	0.00E+00	5.81E+01
		K-40	1.51E+03	2.36E+02	7.71E+01
		LLI-131	<8.36E-01	0.00E+00	8.36E-01

Media Type: SEDIMENT_SHORE Concentration (Activity): pCi/kg

Sample Point 067 [INDICATOR - SSE @ 4.34 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
496161	3/18/2019 - 3/18/2019	Mn-54	<9.32E+01	0.00E+00	9.32E+01
		Co-58	<7.88E+01	0.00E+00	7.88E+01
		Fe-59	<1.28E+02	0.00E+00	1.28E+02
		Co-60	<6.93E+01	0.00E+00	6.93E+01
		Zn-65	<1.49E+02	0.00E+00	1.49E+02
		Zr-95	<1.82E+02	0.00E+00	1.82E+02
		Nb-95	<8.86E+01	0.00E+00	8.86E+01
		I-131	<1.51E+02	0.00E+00	1.51E+02
		Cs-134	<1.06E+02	0.00E+00	1.06E+02
		Cs-137	<8.28E+01	0.00E+00	8.28E+01
		Be-7	<7.01E+02	0.00E+00	7.01E+02
		K-40	1.57E+04	2.01E+03	1.12E+03
		Co-57	<7.33E+01	0.00E+00	7.33E+01
		Mo-99	<4.40E+03	0.00E+00	4.40E+03
		Ag-110M	<7.58E+01	0.00E+00	7.58E+01
		Sb-122	<9.08E+02	0.00E+00	9.08E+02
		Sb-125	<2.12E+02	0.00E+00	2.12E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
507337	9/16/2019 - 9/16/2019	Mn-54	<1.17E+02	0.00E+00	1.17E+02
		Co-58	<5.47E+01	0.00E+00	5.47E+01
		Fe-59	<1.44E+02	0.00E+00	1.44E+02
		Co-60	<9.45E+01	0.00E+00	9.45E+01
		Zn-65	<2.18E+02	0.00E+00	2.18E+02
		Zr-95	<1.62E+02	0.00E+00	1.62E+02
		Nb-95	<1.21E+02	0.00E+00	1.21E+02
		I-131	<1.49E+02	0.00E+00	1.49E+02
		Cs-134	<1.00E+02	0.00E+00	1.00E+02
		Cs-137	1.52E+02	8.69E+01	1.24E+02
		Be-7	<8.66E+02	0.00E+00	8.66E+02
		K-40	1.56E+04	2.41E+03	1.81E+02
		Co-57	<6.83E+01	0.00E+00	6.83E+01
		Mo-99	<8.61E+03	0.00E+00	8.61E+03
		Ag-110M	<9.89E+01	0.00E+00	9.89E+01
		Sb-122	<1.00E+03	0.00E+00	1.00E+03
		Sb-125	<2.20E+02	0.00E+00	2.20E+02

Sample Point 068 [CONTROL - W @ 1.82 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
496162	3/18/2019 - 3/18/2019	Mn-54	<5.73E+01	0.00E+00	5.73E+01
		Co-58	<4.50E+01	0.00E+00	4.50E+01
		Fe-59	<1.29E+02	0.00E+00	1.29E+02
		Co-60	<4.65E+01	0.00E+00	4.65E+01
		Zn-65	<1.18E+02	0.00E+00	1.18E+02
		Zr-95	<1.04E+02	0.00E+00	1.04E+02
		Nb-95	<6.68E+01	0.00E+00	6.68E+01
		I-131	<6.85E+01	0.00E+00	6.85E+01
		Cs-134	<8.12E+01	0.00E+00	8.12E+01
		Cs-137	<5.85E+01	0.00E+00	5.85E+01
		Be-7	5.63E+02	3.88E+02	5.68E+02
		K-40	7.63E+03	1.40E+03	5.72E+02
		Co-57	<3.79E+01	0.00E+00	3.79E+01
		Mo-99	<2.19E+03	0.00E+00	2.19E+03
		Ag-110M	<3.81E+01	0.00E+00	3.81E+01
		Sb-122	<3.55E+02	0.00E+00	3.55E+02
		Sb-125	<1.22E+02	0.00E+00	1.22E+02

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: **SEDIMENT_SHORE** Concentration (Activity): **pCi/kg**

Sample Point 068 [CONTROL - W @ 1.82 miles]

Sample ID:	507338	Sample Dates:	9/16/2019 - 9/16/2019	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<3.53E+01	0.00E+00	3.53E+01
				Co-58	<4.56E+01	0.00E+00	4.56E+01
				Fe-59	<1.23E+02	0.00E+00	1.23E+02
				Co-60	<5.48E+01	0.00E+00	5.48E+01
				Zn-65	<9.85E+01	0.00E+00	9.85E+01
				Zr-95	<9.17E+01	0.00E+00	9.17E+01
				Nb-95	<4.82E+01	0.00E+00	4.82E+01
				I-131	<7.36E+01	0.00E+00	7.36E+01
				Cs-134	<7.57E+01	0.00E+00	7.57E+01
				Cs-137	<3.81E+01	0.00E+00	3.81E+01
				Be-7	<4.70E+02	0.00E+00	4.70E+02
				K-40	7.36E+03	1.30E+03	1.23E+02
				Co-57	<3.78E+01	0.00E+00	3.78E+01
				Mo-99	<4.58E+03	0.00E+00	4.58E+03
				Ag-110M	<4.08E+01	0.00E+00	4.08E+01
				Sb-122	<6.68E+02	0.00E+00	6.68E+02
				Sb-125	<1.27E+02	0.00E+00	1.27E+02

Sample Point 091 [INDICATOR - S @ 2.09 miles]

Sample ID:	496163	Sample Dates:	3/18/2019 - 3/18/2019	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<8.55E+01	0.00E+00	8.55E+01
				Co-58	<7.45E+01	0.00E+00	7.45E+01
				Fe-59	<1.62E+02	0.00E+00	1.62E+02
				Co-60	<8.45E+01	0.00E+00	8.45E+01
				Zn-65	<1.51E+02	0.00E+00	1.51E+02
				Zr-95	<1.47E+02	0.00E+00	1.47E+02
				Nb-95	<7.51E+01	0.00E+00	7.51E+01
				I-131	<1.41E+02	0.00E+00	1.41E+02
				Cs-134	<8.09E+01	0.00E+00	8.09E+01
				Cs-137	<9.32E+01	0.00E+00	9.32E+01
				Be-7	<6.60E+02	0.00E+00	6.60E+02
				K-40	7.85E+03	1.56E+03	1.25E+03
				Co-57	<6.18E+01	0.00E+00	6.18E+01
				Mo-99	<5.54E+03	0.00E+00	5.54E+03
				Ag-110M	<7.69E+01	0.00E+00	7.69E+01
				Sb-122	<8.03E+02	0.00E+00	8.03E+02
				Sb-125	<1.86E+02	0.00E+00	1.86E+02

Sample ID:	507339	Sample Dates:	9/16/2019 - 9/16/2019	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<5.41E+01	0.00E+00	5.41E+01
				Co-58	<7.28E+01	0.00E+00	7.28E+01
				Fe-59	<1.42E+02	0.00E+00	1.42E+02
				Co-60	<5.13E+01	0.00E+00	5.13E+01
				Zn-65	<1.49E+02	0.00E+00	1.49E+02
				Zr-95	<1.20E+02	0.00E+00	1.20E+02
				Nb-95	<7.20E+01	0.00E+00	7.20E+01
				I-131	<1.33E+02	0.00E+00	1.33E+02
				Cs-134	<7.63E+01	0.00E+00	7.63E+01
				Cs-137	<7.02E+01	0.00E+00	7.02E+01
				Be-7	<6.82E+02	0.00E+00	6.82E+02
				K-40	1.87E+04	2.45E+03	5.88E+02
				Co-57	<4.25E+01	0.00E+00	4.25E+01
				Mo-99	<4.53E+03	0.00E+00	4.53E+03
				Ag-110M	<2.21E+01	0.00E+00	2.21E+01
				Sb-122	<9.12E+02	0.00E+00	9.12E+02
				Sb-125	<1.36E+02	0.00E+00	1.36E+02

Media Type: **SURFACE WATER** Concentration (Activity): **pCi/l**

Sample Point 062 [CONTROL - ENE @ 0.85 miles]

Sample ID:	493609	Sample Dates:	12/31/2018 - 1/28/2019	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<1.99E+00	0.00E+00	1.99E+00
				Co-58	<2.20E+00	0.00E+00	2.20E+00
				Fe-59	<4.23E+00	0.00E+00	4.23E+00
				Co-60	<1.71E+00	0.00E+00	1.71E+00
				Zn-65	<3.51E+00	0.00E+00	3.51E+00

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 062 [CONTROL - ENE @ 0.85 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493609	12/31/2018 - 1/28/2019	Zr-95	<3.01E+00	0.00E+00	3.01E+00
		Nb-95	<2.57E+00	0.00E+00	2.57E+00
		I-131	<1.14E+01	0.00E+00	1.14E+01
		Cs-134	<2.14E+00	0.00E+00	2.14E+00
		Cs-137	<1.54E+00	0.00E+00	1.54E+00
		BaLa-140	<6.03E+00	0.00E+00	6.03E+00
		Be-7	<1.73E+01	0.00E+00	1.73E+01
		K-40	<3.04E+01	0.00E+00	3.04E+01
		495308	1/28/2019 - 2/25/2019	Mn-54	<2.70E+00
Co-58	<3.71E+00			0.00E+00	3.71E+00
Fe-59	<6.64E+00			0.00E+00	6.64E+00
Co-60	<3.06E+00			0.00E+00	3.06E+00
Zn-65	<6.64E+00			0.00E+00	6.64E+00
Zr-95	<5.68E+00			0.00E+00	5.68E+00
Nb-95	<4.97E+00			0.00E+00	4.97E+00
I-131	<1.17E+01			0.00E+00	1.17E+01
Cs-134	<4.40E+00			0.00E+00	4.40E+00
Cs-137	<3.23E+00			0.00E+00	3.23E+00
BaLa-140	<8.60E+00			0.00E+00	8.60E+00
Be-7	<4.08E+01			0.00E+00	4.08E+01
K-40	5.50E+01			3.52E+01	4.94E+01
497611	2/25/2019 - 3/25/2019			Mn-54	<3.04E+00
		Co-58	<2.96E+00	0.00E+00	2.96E+00
		Fe-59	<4.18E+00	0.00E+00	4.18E+00
		Co-60	<2.41E+00	0.00E+00	2.41E+00
		Zn-65	<6.87E+00	0.00E+00	6.87E+00
		Zr-95	<6.44E+00	0.00E+00	6.44E+00
		Nb-95	<3.95E+00	0.00E+00	3.95E+00
		I-131	<1.09E+01	0.00E+00	1.09E+01
		Cs-134	<3.49E+00	0.00E+00	3.49E+00
		Cs-137	<3.35E+00	0.00E+00	3.35E+00
		BaLa-140	<1.00E+01	0.00E+00	1.00E+01
		Be-7	<2.37E+01	0.00E+00	2.37E+01
		K-40	<5.20E+01	0.00E+00	5.20E+01
		493746	12/31/2018 - 4/22/2019	H3SW	<-7.2E+00
499489	3/25/2019 - 4/22/2019	Mn-54	<1.75E+00	0.00E+00	1.75E+00
		Co-58	<1.86E+00	0.00E+00	1.86E+00
		Fe-59	<4.39E+00	0.00E+00	4.39E+00
		Co-60	<1.61E+00	0.00E+00	1.61E+00
		Zn-65	<4.01E+00	0.00E+00	4.01E+00
		Zr-95	<3.89E+00	0.00E+00	3.89E+00
		Nb-95	<2.68E+00	0.00E+00	2.68E+00
		I-131	<1.13E+01	0.00E+00	1.13E+01
		Cs-134	<1.89E+00	0.00E+00	1.89E+00
		Cs-137	<1.44E+00	0.00E+00	1.44E+00
		BaLa-140	<6.31E+00	0.00E+00	6.31E+00
		Be-7	<1.50E+01	0.00E+00	1.50E+01
		K-40	<2.86E+01	0.00E+00	2.86E+01
		500774	4/22/2019 - 5/20/2019	Mn-54	<7.13E-01
Co-58	<9.09E-01			0.00E+00	9.09E-01
Fe-59	<1.94E+00			0.00E+00	1.94E+00
Co-60	<7.04E-01			0.00E+00	7.04E-01
Zn-65	<1.42E+00			0.00E+00	1.42E+00
Zr-95	<1.68E+00			0.00E+00	1.68E+00
Nb-95	<1.13E+00			0.00E+00	1.13E+00
I-131	<8.36E+00			0.00E+00	8.36E+00
Cs-134	<7.38E-01			0.00E+00	7.38E-01
Cs-137	<6.95E-01			0.00E+00	6.95E-01

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 062 [CONTROL - ENE @ 0.85 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500774	4/22/2019 - 5/20/2019	BaLa-140	<4.04E+00	0.00E+00	4.04E+00
		Be-7	<7.81E+00	0.00E+00	7.81E+00
		K-40	2.21E+01	7.79E+00	1.13E+01
502445	5/20/2019 - 6/17/2019	Mn-54	<3.22E+00	0.00E+00	3.22E+00
		Co-58	<2.81E+00	0.00E+00	2.81E+00
		Fe-59	<5.19E+00	0.00E+00	5.19E+00
		Co-60	<2.73E+00	0.00E+00	2.73E+00
		Zn-65	<6.19E+00	0.00E+00	6.19E+00
		Zr-95	<5.30E+00	0.00E+00	5.30E+00
		Nb-95	<3.39E+00	0.00E+00	3.39E+00
		I-131	<1.10E+01	0.00E+00	1.10E+01
		Cs-134	<3.57E+00	0.00E+00	3.57E+00
		Cs-137	<2.86E+00	0.00E+00	2.86E+00
		BaLa-140	<4.70E+00	0.00E+00	4.70E+00
		Be-7	<2.34E+01	0.00E+00	2.34E+01
		K-40	<3.83E+01	0.00E+00	3.83E+01
500040	4/22/2019 - 7/15/2019	H3SW	<-3.4E+01	0.00E+00	1.91E+02
504474	6/17/2019 - 7/15/2019	Mn-54	<1.87E+00	0.00E+00	1.87E+00
		Co-58	<2.53E+00	0.00E+00	2.53E+00
		Fe-59	<5.19E+00	0.00E+00	5.19E+00
		Co-60	<1.79E+00	0.00E+00	1.79E+00
		Zn-65	<4.53E+00	0.00E+00	4.53E+00
		Zr-95	<4.30E+00	0.00E+00	4.30E+00
		Nb-95	<3.05E+00	0.00E+00	3.05E+00
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<2.38E+00	0.00E+00	2.38E+00
		Cs-137	<2.07E+00	0.00E+00	2.07E+00
		BaLa-140	<6.92E+00	0.00E+00	6.92E+00
		Be-7	<1.86E+01	0.00E+00	1.86E+01
		K-40	8.81E+01	2.73E+01	3.49E+01
505564	7/15/2019 - 8/12/2019	Mn-54	<2.89E+00	0.00E+00	2.89E+00
		Co-58	<2.75E+00	0.00E+00	2.75E+00
		Fe-59	<8.12E+00	0.00E+00	8.12E+00
		Co-60	<2.79E+00	0.00E+00	2.79E+00
		Zn-65	<5.83E+00	0.00E+00	5.83E+00
		Zr-95	<4.72E+00	0.00E+00	4.72E+00
		Nb-95	<4.10E+00	0.00E+00	4.10E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<3.42E+00	0.00E+00	3.42E+00
		Cs-137	<1.72E+00	0.00E+00	1.72E+00
		BaLa-140	<6.00E+00	0.00E+00	6.00E+00
		Be-7	<2.17E+01	0.00E+00	2.17E+01
		K-40	1.08E+02	3.39E+01	3.57E+01
507854	8/12/2019 - 9/9/2019	Mn-54	<1.54E+00	0.00E+00	1.54E+00
		Co-58	<1.82E+00	0.00E+00	1.82E+00
		Fe-59	<3.85E+00	0.00E+00	3.85E+00
		Co-60	<1.45E+00	0.00E+00	1.45E+00
		Zn-65	<3.41E+00	0.00E+00	3.41E+00
		Zr-95	<3.67E+00	0.00E+00	3.67E+00
		Nb-95	<2.68E+00	0.00E+00	2.68E+00
		I-131	<1.12E+01	0.00E+00	1.12E+01
		Cs-134	<1.94E+00	0.00E+00	1.94E+00
		Cs-137	<1.53E+00	0.00E+00	1.53E+00
		BaLa-140	<5.32E+00	0.00E+00	5.32E+00
		Be-7	<1.60E+01	0.00E+00	1.60E+01
		K-40	7.38E+01	2.06E+01	2.48E+01

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 062 [CONTROL - ENE @ 0.85 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
505078	7/15/2019 - 10/7/2019	H3SW	<-1.2E+02	0.00E+00	1.92E+02
510572	9/9/2019 - 10/7/2019	Mn-54	<2.13E+00	0.00E+00	2.13E+00
		Co-58	<2.81E+00	0.00E+00	2.81E+00
		Fe-59	<4.82E+00	0.00E+00	4.82E+00
		Co-60	<2.17E+00	0.00E+00	2.17E+00
		Zn-65	<4.06E+00	0.00E+00	4.06E+00
		Zr-95	<5.32E+00	0.00E+00	5.32E+00
		Nb-95	<3.14E+00	0.00E+00	3.14E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<2.12E+00	0.00E+00	2.12E+00
		Cs-137	<1.99E+00	0.00E+00	1.99E+00
		BaLa-140	<6.90E+00	0.00E+00	6.90E+00
		Be-7	1.86E+00	2.24E+01	3.88E+01
		K-40	3.61E+01	2.16E+01	3.11E+01
511913	10/7/2019 - 11/4/2019	Mn-54	<3.47E+00	0.00E+00	3.47E+00
		Co-58	<3.00E+00	0.00E+00	3.00E+00
		Fe-59	<6.09E+00	0.00E+00	6.09E+00
		Co-60	<3.35E+00	0.00E+00	3.35E+00
		Zn-65	<8.87E+00	0.00E+00	8.87E+00
		Zr-95	<5.66E+00	0.00E+00	5.66E+00
		Nb-95	<5.10E+00	0.00E+00	5.10E+00
		I-131	<1.05E+01	0.00E+00	1.05E+01
		Cs-134	<2.78E+00	0.00E+00	2.78E+00
		Cs-137	<3.08E+00	0.00E+00	3.08E+00
		BaLa-140	<5.27E+00	0.00E+00	5.27E+00
		Be-7	<2.60E+01	0.00E+00	2.60E+01
		K-40	<4.59E+01	0.00E+00	4.59E+01
512946	11/4/2019 - 12/2/2019	Mn-54	<3.53E+00	0.00E+00	3.53E+00
		Co-58	<4.33E+00	0.00E+00	4.33E+00
		Fe-59	<6.50E+00	0.00E+00	6.50E+00
		Co-60	<3.00E+00	0.00E+00	3.00E+00
		Zn-65	<8.36E+00	0.00E+00	8.36E+00
		Zr-95	<6.45E+00	0.00E+00	6.45E+00
		Nb-95	<5.01E+00	0.00E+00	5.01E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<3.77E+00	0.00E+00	3.77E+00
		Cs-137	<3.43E+00	0.00E+00	3.43E+00
		BaLa-140	<6.51E+00	0.00E+00	6.51E+00
		Be-7	<3.63E+01	0.00E+00	3.63E+01
		K-40	7.20E+01	3.83E+01	5.10E+01
511721	10/7/2019 - 12/30/2019	H3SW	<-1.6E+02	0.00E+00	2.01E+02
514534	12/2/2019 - 12/30/2019	Mn-54	<2.54E+00	0.00E+00	2.54E+00
		Co-58	<2.55E+00	0.00E+00	2.55E+00
		Fe-59	<4.31E+00	0.00E+00	4.31E+00
		Co-60	<2.71E+00	0.00E+00	2.71E+00
		Zn-65	<5.31E+00	0.00E+00	5.31E+00
		Zr-95	<4.42E+00	0.00E+00	4.42E+00
		Nb-95	<3.24E+00	0.00E+00	3.24E+00
		I-131	<1.06E+01	0.00E+00	1.06E+01
		Cs-134	<2.04E+00	0.00E+00	2.04E+00
		Cs-137	<3.01E+00	0.00E+00	3.01E+00
		BaLa-140	<6.97E+00	0.00E+00	6.97E+00
		Be-7	<2.41E+01	0.00E+00	2.41E+01
		K-40	9.37E+01	2.92E+01	3.20E+01
Sample Point 063.1 [INDICATOR - E @ 0.79 miles]					
493610	12/31/2018 - 1/28/2019	Mn-54	<2.65E+00	0.00E+00	2.65E+00

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 063.1 [INDICATOR - E @ 0.79 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493610	12/31/2018 - 1/28/2019	Co-58	<3.11E+00	0.00E+00	3.11E+00
		Fe-59	<4.66E+00	0.00E+00	4.66E+00
		Co-60	<1.80E+00	0.00E+00	1.80E+00
		Zn-65	<4.66E+00	0.00E+00	4.66E+00
		Zr-95	<4.67E+00	0.00E+00	4.67E+00
		Nb-95	<3.74E+00	0.00E+00	3.74E+00
		I-131	<1.15E+01	0.00E+00	1.15E+01
		Cs-134	<2.44E+00	0.00E+00	2.44E+00
		Cs-137	<2.18E+00	0.00E+00	2.18E+00
		BaLa-140	<9.74E+00	0.00E+00	9.74E+00
		Be-7	<2.26E+01	0.00E+00	2.26E+01
		K-40	5.90E+01	2.50E+01	3.14E+01
		495309	1/28/2019 - 2/25/2019	Mn-54	<3.39E+00
Co-58	<3.18E+00			0.00E+00	3.18E+00
Fe-59	<7.25E+00			0.00E+00	7.25E+00
Co-60	<3.81E+00			0.00E+00	3.81E+00
Zn-65	<6.73E+00			0.00E+00	6.73E+00
Zr-95	<6.30E+00			0.00E+00	6.30E+00
Nb-95	<4.00E+00			0.00E+00	4.00E+00
I-131	<1.20E+01			0.00E+00	1.20E+01
Cs-134	<3.16E+00			0.00E+00	3.16E+00
Cs-137	<4.40E+00			0.00E+00	4.40E+00
BaLa-140	<8.71E+00			0.00E+00	8.71E+00
Be-7	<3.14E+01			0.00E+00	3.14E+01
K-40	<5.82E+01			0.00E+00	5.82E+01
497612	2/25/2019 - 3/25/2019	Mn-54	<3.45E+00	0.00E+00	3.45E+00
		Co-58	<2.88E+00	0.00E+00	2.88E+00
		Fe-59	<7.54E+00	0.00E+00	7.54E+00
		Co-60	<3.41E+00	0.00E+00	3.41E+00
		Zn-65	<7.49E+00	0.00E+00	7.49E+00
		Zr-95	<6.67E+00	0.00E+00	6.67E+00
		Nb-95	<4.27E+00	0.00E+00	4.27E+00
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<3.61E+00	0.00E+00	3.61E+00
		Cs-137	<2.73E+00	0.00E+00	2.73E+00
		BaLa-140	<5.87E+00	0.00E+00	5.87E+00
		Be-7	<3.25E+01	0.00E+00	3.25E+01
		K-40	5.49E+01	3.72E+01	5.51E+01
493747	12/31/2018 - 4/22/2019	H3SW	1.44E+03	1.52E+02	1.89E+02
499490	4/22/2019 - 4/22/2019	Mn-54	<3.72E+00	0.00E+00	3.72E+00
		Co-58	<4.18E+00	0.00E+00	4.18E+00
		Fe-59	<7.67E+00	0.00E+00	7.67E+00
		Co-60	<4.29E+00	0.00E+00	4.29E+00
		Zn-65	<6.97E+00	0.00E+00	6.97E+00
		Zr-95	<9.55E+00	0.00E+00	9.55E+00
		Nb-95	<4.64E+00	0.00E+00	4.64E+00
		I-131	<1.06E+01	0.00E+00	1.06E+01
		Cs-134	<5.55E+00	0.00E+00	5.55E+00
		Cs-137	<4.51E+00	0.00E+00	4.51E+00
		BaLa-140	<6.44E+00	0.00E+00	6.44E+00
		Be-7	<3.04E+01	0.00E+00	3.04E+01
		K-40	<5.92E+01	0.00E+00	5.92E+01
500775	4/22/2019 - 5/20/2019	Mn-54	<1.06E+00	0.00E+00	1.06E+00
		Co-58	<1.21E+00	0.00E+00	1.21E+00
		Fe-59	<2.52E+00	0.00E+00	2.52E+00
		Co-60	<8.37E-01	0.00E+00	8.37E-01
		Zn-65	<1.87E+00	0.00E+00	1.87E+00
		Zr-95	<2.06E+00	0.00E+00	2.06E+00

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 063.1 [INDICATOR - E @ 0.79 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500775	4/22/2019 - 5/20/2019	Nb-95	<1.60E+00	0.00E+00	1.60E+00
		I-131	<8.85E+00	0.00E+00	8.85E+00
		Cs-134	<1.09E+00	0.00E+00	1.09E+00
		Cs-137	<7.76E-01	0.00E+00	7.76E-01
		BaLa-140	<4.16E+00	0.00E+00	4.16E+00
		Be-7	4.53E+00	7.92E+00	1.32E+01
		K-40	2.09E+01	8.49E+00	1.20E+01
502446	5/20/2019 - 6/17/2019	Mn-54	<2.28E+00	0.00E+00	2.28E+00
		Co-58	<3.15E+00	0.00E+00	3.15E+00
		Fe-59	<6.29E+00	0.00E+00	6.29E+00
		Co-60	<2.18E+00	0.00E+00	2.18E+00
		Zn-65	<6.96E+00	0.00E+00	6.96E+00
		Zr-95	<4.05E+00	0.00E+00	4.05E+00
		Nb-95	<3.34E+00	0.00E+00	3.34E+00
		I-131	<1.14E+01	0.00E+00	1.14E+01
		Cs-134	<2.85E+00	0.00E+00	2.85E+00
		Cs-137	<2.58E+00	0.00E+00	2.58E+00
		BaLa-140	<7.20E+00	0.00E+00	7.20E+00
		Be-7	<2.58E+01	0.00E+00	2.58E+01
		K-40	2.86E+01	2.03E+01	2.84E+01
		500041	4/22/2019 - 7/15/2019	H3SW	1.67E+03
504475	6/17/2019 - 7/15/2019	Mn-54	<1.47E+00	0.00E+00	1.47E+00
		Co-58	<1.64E+00	0.00E+00	1.64E+00
		Fe-59	<3.42E+00	0.00E+00	3.42E+00
		Co-60	<1.67E+00	0.00E+00	1.67E+00
		Zn-65	<3.11E+00	0.00E+00	3.11E+00
		Zr-95	<2.93E+00	0.00E+00	2.93E+00
		Nb-95	<2.33E+00	0.00E+00	2.33E+00
		I-131	<9.51E+00	0.00E+00	9.51E+00
		Cs-134	<1.66E+00	0.00E+00	1.66E+00
		Cs-137	<1.71E+00	0.00E+00	1.71E+00
		BaLa-140	<3.28E+00	0.00E+00	3.28E+00
		Be-7	<1.44E+01	0.00E+00	1.44E+01
		K-40	3.60E+01	1.58E+01	2.17E+01
		505565	7/15/2019 - 8/12/2019	Mn-54	<2.94E+00
Co-58	<2.99E+00			0.00E+00	2.99E+00
Fe-59	<3.54E+00			0.00E+00	3.54E+00
Co-60	<3.00E+00			0.00E+00	3.00E+00
Zn-65	<5.54E+00			0.00E+00	5.54E+00
Zr-95	<5.12E+00			0.00E+00	5.12E+00
Nb-95	<3.64E+00			0.00E+00	3.64E+00
I-131	<1.14E+01			0.00E+00	1.14E+01
Cs-134	<3.05E+00			0.00E+00	3.05E+00
Cs-137	<3.07E+00			0.00E+00	3.07E+00
BaLa-140	<7.36E+00			0.00E+00	7.36E+00
Be-7	<2.63E+01			0.00E+00	2.63E+01
K-40	4.60E+01			2.54E+01	3.31E+01
507855	8/12/2019 - 9/9/2019			Mn-54	<2.29E+00
		Co-58	<2.44E+00	0.00E+00	2.44E+00
		Fe-59	<4.79E+00	0.00E+00	4.79E+00
		Co-60	<1.98E+00	0.00E+00	1.98E+00
		Zn-65	<4.03E+00	0.00E+00	4.03E+00
		Zr-95	<4.97E+00	0.00E+00	4.97E+00
		Nb-95	<3.56E+00	0.00E+00	3.56E+00
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<2.52E+00	0.00E+00	2.52E+00
		Cs-137	<2.31E+00	0.00E+00	2.31E+00
		BaLa-140	<6.90E+00	0.00E+00	6.90E+00

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 063.1 [INDICATOR - E @ 0.79 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
507855	8/12/2019 - 9/9/2019	Be-7	<1.99E+01	0.00E+00	1.99E+01
		K-40	<2.82E+01	0.00E+00	2.82E+01
505079	7/15/2019 - 10/7/2019	H3SW	6.62E+03	2.46E+02	1.92E+02
510573	9/9/2019 - 10/7/2019	Mn-54	<2.30E+00	0.00E+00	2.30E+00
		Co-58	<2.20E+00	0.00E+00	2.20E+00
		Fe-59	<4.98E+00	0.00E+00	4.98E+00
		Co-60	<2.20E+00	0.00E+00	2.20E+00
		Zn-65	<4.80E+00	0.00E+00	4.80E+00
		Zr-95	<3.74E+00	0.00E+00	3.74E+00
		Nb-95	<2.48E+00	0.00E+00	2.48E+00
		I-131	<1.14E+01	0.00E+00	1.14E+01
		Cs-134	<2.15E+00	0.00E+00	2.15E+00
		Cs-137	<1.83E+00	0.00E+00	1.83E+00
		BaLa-140	<7.49E+00	0.00E+00	7.49E+00
		Be-7	<2.15E+01	0.00E+00	2.15E+01
		K-40	3.31E+01	1.83E+01	2.54E+01
511914	10/7/2019 - 11/4/2019	Mn-54	<4.38E+00	0.00E+00	4.38E+00
		Co-58	<4.40E+00	0.00E+00	4.40E+00
		Fe-59	<7.52E+00	0.00E+00	7.52E+00
		Co-60	<4.23E+00	0.00E+00	4.23E+00
		Zn-65	<6.99E+00	0.00E+00	6.99E+00
		Zr-95	<6.24E+00	0.00E+00	6.24E+00
		Nb-95	<5.23E+00	0.00E+00	5.23E+00
		I-131	<1.15E+01	0.00E+00	1.15E+01
		Cs-134	<3.50E+00	0.00E+00	3.50E+00
		Cs-137	<4.62E+00	0.00E+00	4.62E+00
		BaLa-140	<1.19E+01	0.00E+00	1.19E+01
		Be-7	<3.43E+01	0.00E+00	3.43E+01
		K-40	<5.54E+01	0.00E+00	5.54E+01
512947	11/4/2019 - 12/2/2019	Mn-54	<1.86E+00	0.00E+00	1.86E+00
		Co-58	<1.84E+00	0.00E+00	1.84E+00
		Fe-59	<4.22E+00	0.00E+00	4.22E+00
		Co-60	<1.77E+00	0.00E+00	1.77E+00
		Zn-65	<4.32E+00	0.00E+00	4.32E+00
		Zr-95	<3.68E+00	0.00E+00	3.68E+00
		Nb-95	<2.69E+00	0.00E+00	2.69E+00
		I-131	<7.67E+00	0.00E+00	7.67E+00
		Cs-134	<1.92E+00	0.00E+00	1.92E+00
		Cs-137	<2.05E+00	0.00E+00	2.05E+00
		BaLa-140	<4.11E+00	0.00E+00	4.11E+00
		Be-7	<1.74E+01	0.00E+00	1.74E+01
		K-40	1.06E+02	2.51E+01	2.62E+01
511722	10/7/2019 - 12/30/2019	H3SW	1.25E+04	3.32E+02	2.00E+02
514535	12/2/2019 - 12/30/2019	Mn-54	<2.14E+00	0.00E+00	2.14E+00
		Co-58	<3.04E+00	0.00E+00	3.04E+00
		Fe-59	<6.35E+00	0.00E+00	6.35E+00
		Co-60	<2.73E+00	0.00E+00	2.73E+00
		Zn-65	<5.64E+00	0.00E+00	5.64E+00
		Zr-95	<5.14E+00	0.00E+00	5.14E+00
		Nb-95	<3.46E+00	0.00E+00	3.46E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<3.33E+00	0.00E+00	3.33E+00
		Cs-137	<2.68E+00	0.00E+00	2.68E+00
		BaLa-140	<5.59E+00	0.00E+00	5.59E+00
		Be-7	<2.37E+01	0.00E+00	2.37E+01
		K-40	7.28E+01	2.89E+01	3.51E+01

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 020 [INDICATOR - N @ 0.16 miles]

TLD RING TLD_INNER

Sample ID	Sample Dates	Nuclide	Activity
495969	12/11/2018 - 3/12/2019	mR/Std Qtr	24.90
501791	3/12/2019 - 6/11/2019	mR/Std Qtr	19.24
507131	6/11/2019 - 9/10/2019	mR/Std Qtr	18.30
513470	9/10/2019 - 12/10/2019	mR/Std Qtr	19.20

Sample Point 021 [INDICATOR - NNE @ 0.25 miles]

TLD RING TLD_INNER

Sample ID	Sample Dates	Nuclide	Activity
495970	12/11/2018 - 3/12/2019	mR/Std Qtr	18.86
501792	3/12/2019 - 6/11/2019	mR/Std Qtr	15.63
507132	6/11/2019 - 9/10/2019	mR/Std Qtr	13.99
513471	9/10/2019 - 12/10/2019	mR/Std Qtr	15.07

Sample Point 022 [INDICATOR - NE @ 0.53 miles]

TLD RING TLD_INNER

Sample ID	Sample Dates	Nuclide	Activity
495971	12/11/2018 - 3/12/2019	mR/Std Qtr	28.10
501793	3/12/2019 - 6/11/2019	mR/Std Qtr	23.50
507133	6/11/2019 - 9/10/2019	mR/Std Qtr	22.74
513472	9/10/2019 - 12/10/2019	mR/Std Qtr	23.80

Sample Point 023 [INDICATOR - ENE @ 0.93 miles]

TLD RING TLD_INNER

Sample ID	Sample Dates	Nuclide	Activity
495972	12/11/2018 - 3/12/2019	mR/Std Qtr	27.84
501794	3/12/2019 - 6/11/2019	mR/Std Qtr	23.68
507134	6/11/2019 - 9/10/2019	mR/Std Qtr	22.21
513473	9/10/2019 - 12/10/2019	mR/Std Qtr	23.90

Sample Point 024 [INDICATOR - E @ 0.81 miles]

TLD RING TLD_INNER

Sample ID	Sample Dates	Nuclide	Activity
495973	12/11/2018 - 3/12/2019	mR/Std Qtr	34.60
501795	3/12/2019 - 6/11/2019	mR/Std Qtr	29.00
507135	6/11/2019 - 9/10/2019	mR/Std Qtr	27.31
513474	9/10/2019 - 12/10/2019	mR/Std Qtr	29.13

Sample Point 025 [INDICATOR - ESE @ 0.42 miles]

TLD RING TLD_INNER

Sample ID	Sample Dates	Nuclide	Activity
495974	12/11/2018 - 3/12/2019	mR/Std Qtr	22.84
501796	3/12/2019 - 6/11/2019	mR/Std Qtr	19.30

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 025 [INDICATOR - ESE @ 0.42 miles]

TLD RING TLD_INNER

Sample ID: 507136	Sample Dates: 6/11/2019 - 9/10/2019	Nuclide mR/Std Qtr	Activity 17.69
-------------------	-------------------------------------	-----------------------	-------------------

Sample ID: 513475	Sample Dates: 9/10/2019 - 12/10/2019	Nuclide mR/Std Qtr	Activity 19.70
-------------------	--------------------------------------	-----------------------	-------------------

Sample Point 026 [INDICATOR - SE @ 0.34 miles] TLD RING TLD_INNER

Sample ID: 495975	Sample Dates: 12/11/2018 - 3/12/2019	Nuclide mR/Std Qtr	Activity 20.83
-------------------	--------------------------------------	-----------------------	-------------------

Sample ID: 501797	Sample Dates: 3/12/2019 - 6/11/2019	Nuclide mR/Std Qtr	Activity 16.69
-------------------	-------------------------------------	-----------------------	-------------------

Sample ID: 507137	Sample Dates: 6/11/2019 - 9/10/2019	Nuclide mR/Std Qtr	Activity 16.69
-------------------	-------------------------------------	-----------------------	-------------------

Sample ID: 513476	Sample Dates: 9/10/2019 - 12/10/2019	Nuclide mR/Std Qtr	Activity 19.13
-------------------	--------------------------------------	-----------------------	-------------------

Sample Point 027 [INDICATOR - SSE @ 0.49 miles] TLD RING TLD_INNER

Sample ID: 501798	Sample Dates: 3/12/2019 - 6/11/2019	Nuclide mR/Std Qtr	Activity 19.47
-------------------	-------------------------------------	-----------------------	-------------------

Sample ID: 507138	Sample Dates: 6/11/2019 - 9/10/2019	Nuclide mR/Std Qtr	Activity 18.51
-------------------	-------------------------------------	-----------------------	-------------------

Sample ID: 513477	Sample Dates: 9/10/2019 - 12/10/2019	Nuclide mR/Std Qtr	Activity 18.26
-------------------	--------------------------------------	-----------------------	-------------------

Sample Point 028 [INDICATOR - S @ 0.46 miles] TLD RING TLD_INNER

Sample ID: 495977	Sample Dates: 12/11/2018 - 3/12/2019	Nuclide mR/Std Qtr	Activity 19.41
-------------------	--------------------------------------	-----------------------	-------------------

Sample ID: 501799	Sample Dates: 3/12/2019 - 6/11/2019	Nuclide mR/Std Qtr	Activity 18.47
-------------------	-------------------------------------	-----------------------	-------------------

Sample ID: 507139	Sample Dates: 6/11/2019 - 9/10/2019	Nuclide mR/Std Qtr	Activity 16.73
-------------------	-------------------------------------	-----------------------	-------------------

Sample ID: 513478	Sample Dates: 9/10/2019 - 12/10/2019	Nuclide mR/Std Qtr	Activity 18.81
-------------------	--------------------------------------	-----------------------	-------------------

Sample Point 029 [INDICATOR - SSW @ 0.56 miles] TLD RING TLD_INNER

Sample ID: 495978	Sample Dates: 12/11/2018 - 3/12/2019	Nuclide mR/Std Qtr	Activity 18.97
-------------------	--------------------------------------	-----------------------	-------------------

Sample ID: 501800	Sample Dates: 3/12/2019 - 6/11/2019	Nuclide mR/Std Qtr	Activity 17.74
-------------------	-------------------------------------	-----------------------	-------------------

Sample ID: 507140	Sample Dates: 6/11/2019 - 9/10/2019	Nuclide mR/Std Qtr	Activity 15.65
-------------------	-------------------------------------	-----------------------	-------------------

Sample ID: 513479	Sample Dates: 9/10/2019 - 12/10/2019	Nuclide mR/Std Qtr	Activity 15.67
-------------------	--------------------------------------	-----------------------	-------------------

Sample Point 030 [INDICATOR - SW @ 0.42 miles] TLD RING TLD_INNER

Sample ID: 495979	Sample Dates: 12/11/2018 - 3/12/2019	Nuclide mR/Std Qtr	Activity 21.61
-------------------	--------------------------------------	-----------------------	-------------------

Sample ID: 501801	Sample Dates: 3/12/2019 - 6/11/2019	Nuclide mR/Std Qtr	Activity 18.46
-------------------	-------------------------------------	-----------------------	-------------------

Sample ID: 507141	Sample Dates: 6/11/2019 - 9/10/2019	Nuclide mR/Std Qtr	Activity 17.84
-------------------	-------------------------------------	-----------------------	-------------------

Sample ID: 513480	Sample Dates: 9/10/2019 - 12/10/2019	Nuclide mR/Std Qtr	Activity 19.05
-------------------	--------------------------------------	-----------------------	-------------------

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 031 [INDICATOR - WSW @ 0.27 miles]

TLD RING TLD_INNER

Sample ID	Sample Dates	Nuclide	Activity
495980	12/11/2018 - 3/12/2019	mR/Std Qtr	21.24
501802	3/12/2019 - 6/11/2019	mR/Std Qtr	16.93
507142	6/11/2019 - 9/10/2019	mR/Std Qtr	16.53
513481	9/10/2019 - 12/10/2019	mR/Std Qtr	16.87

Sample Point 032 [INDICATOR - WNW @ 0.19 miles]

TLD RING TLD_INNER

Sample ID	Sample Dates	Nuclide	Activity
495981	12/11/2018 - 3/12/2019	mR/Std Qtr	24.98
501803	3/12/2019 - 6/11/2019	mR/Std Qtr	19.24
507143	6/11/2019 - 9/10/2019	mR/Std Qtr	18.63
513482	9/10/2019 - 12/10/2019	mR/Std Qtr	19.64

Sample Point 033 [INDICATOR - WNW @ 0.21 miles]

TLD RING TLD_INNER

Sample ID	Sample Dates	Nuclide	Activity
495982	12/11/2018 - 3/12/2019	mR/Std Qtr	22.36
501804	3/12/2019 - 6/11/2019	mR/Std Qtr	17.63
507144	6/11/2019 - 9/10/2019	mR/Std Qtr	17.38
513483	9/10/2019 - 12/10/2019	mR/Std Qtr	18.79

Sample Point 034 [INDICATOR - NW @ 0.22 miles]

TLD RING TLD_INNER

Sample ID	Sample Dates	Nuclide	Activity
495983	12/11/2018 - 3/12/2019	mR/Std Qtr	21.28
501805	3/12/2019 - 6/11/2019	mR/Std Qtr	19.40
507145	6/11/2019 - 9/10/2019	mR/Std Qtr	18.07
513484	9/10/2019 - 12/10/2019	mR/Std Qtr	19.24

Sample Point 035 [INDICATOR - NNW @ 0.17 miles]

TLD RING TLD_INNER

Sample ID	Sample Dates	Nuclide	Activity
495984	12/11/2018 - 3/12/2019	mR/Std Qtr	30.17
501806	3/12/2019 - 6/11/2019	mR/Std Qtr	25.80
507146	6/11/2019 - 9/10/2019	mR/Std Qtr	21.68
513485	9/10/2019 - 12/10/2019	mR/Std Qtr	23.82

Sample Point 036 [INDICATOR - N @ 4.18 miles]

TLD RING TLD_OUTER

Sample ID	Sample Dates	Nuclide	Activity
495985	12/11/2018 - 3/12/2019	mR/Std Qtr	32.03
501807	3/12/2019 - 6/11/2019	mR/Std Qtr	28.29

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 036 [INDICATOR - N @ 4.18 miles]

TLD RING TLD_OUTER

Sample ID:	507147	Sample Dates:	6/11/2019 - 9/10/2019	Nuclide	Activity
				mR/Std Qtr	26.41

Sample ID:	513486	Sample Dates:	9/10/2019 - 12/10/2019	Nuclide	Activity
				mR/Std Qtr	25.71

Sample Point 037 [INDICATOR - NNE @ 4.85 miles]

TLD RING TLD_OUTER

Sample ID:	495986	Sample Dates:	12/11/2018 - 3/12/2019	Nuclide	Activity
				mR/Std Qtr	22.15

Sample ID:	501808	Sample Dates:	3/12/2019 - 6/11/2019	Nuclide	Activity
				mR/Std Qtr	19.29

Sample ID:	507148	Sample Dates:	6/11/2019 - 9/10/2019	Nuclide	Activity
				mR/Std Qtr	17.57

Sample ID:	513487	Sample Dates:	9/10/2019 - 12/10/2019	Nuclide	Activity
				mR/Std Qtr	20.01

Sample Point 038 [INDICATOR - NE @ 4.24 miles]

TLD RING TLD_OUTER

Sample ID:	495987	Sample Dates:	12/11/2018 - 3/12/2019	Nuclide	Activity
				mR/Std Qtr	25.79

Sample ID:	501809	Sample Dates:	3/12/2019 - 6/11/2019	Nuclide	Activity
				mR/Std Qtr	23.24

Sample ID:	513488	Sample Dates:	9/10/2019 - 12/10/2019	Nuclide	Activity
				mR/Std Qtr	23.42

Sample Point 039 [INDICATOR - ENE @ 4.02 miles]

TLD RING TLD_OUTER

Sample ID:	495988	Sample Dates:	12/11/2018 - 3/12/2019	Nuclide	Activity
				mR/Std Qtr	29.85

Sample ID:	501810	Sample Dates:	3/12/2019 - 6/11/2019	Nuclide	Activity
				mR/Std Qtr	25.44

Sample ID:	507150	Sample Dates:	6/11/2019 - 9/10/2019	Nuclide	Activity
				mR/Std Qtr	23.81

Sample ID:	513489	Sample Dates:	9/10/2019 - 12/10/2019	Nuclide	Activity
				mR/Std Qtr	25.95

Sample Point 040 [INDICATOR - E @ 4.74 miles]

TLD RING TLD_OUTER

Sample ID:	495989	Sample Dates:	12/11/2018 - 3/12/2019	Nuclide	Activity
				mR/Std Qtr	32.40

Sample ID:	501811	Sample Dates:	3/12/2019 - 6/11/2019	Nuclide	Activity
				mR/Std Qtr	26.81

Sample ID:	507151	Sample Dates:	6/11/2019 - 9/10/2019	Nuclide	Activity
				mR/Std Qtr	24.92

Sample ID:	513490	Sample Dates:	9/10/2019 - 12/10/2019	Nuclide	Activity
				mR/Std Qtr	27.59

Sample Point 041 [INDICATOR - ESE @ 4.25 miles]

TLD RING TLD_OUTER

Sample ID:	495990	Sample Dates:	12/11/2018 - 3/12/2019	Nuclide	Activity
				mR/Std Qtr	20.07

Sample ID:	501812	Sample Dates:	3/12/2019 - 6/11/2019	Nuclide	Activity
				mR/Std Qtr	17.38

Sample ID:	507152	Sample Dates:	6/11/2019 - 9/10/2019	Nuclide	Activity
				mR/Std Qtr	17.24

Sample ID:	513491	Sample Dates:	9/10/2019 - 12/10/2019	Nuclide	Activity
				mR/Std Qtr	17.45

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 042 [INDICATOR - SE @ 4.93 miles]

TLD RING TLD_OUTER

Sample ID	Sample Dates	Nuclide	Activity
495991	12/11/2018 - 3/12/2019	mR/Std Qtr	31.97
501813	3/12/2019 - 6/11/2019	mR/Std Qtr	26.52
507153	6/11/2019 - 9/10/2019	mR/Std Qtr	26.18
513492	9/10/2019 - 12/10/2019	mR/Std Qtr	28.10

Sample Point 043 [INDICATOR - SSE @ 4.09 miles]

TLD RING TLD_OUTER

Sample ID	Sample Dates	Nuclide	Activity
495992	12/11/2018 - 3/12/2019	mR/Std Qtr	28.43
501814	3/12/2019 - 6/11/2019	mR/Std Qtr	28.31
507154	6/11/2019 - 9/10/2019	mR/Std Qtr	24.15
513493	9/10/2019 - 12/10/2019	mR/Std Qtr	26.55

Sample Point 044 [INDICATOR - S @ 3.96 miles]

TLD RING TLD_OUTER

Sample ID	Sample Dates	Nuclide	Activity
495993	12/11/2018 - 3/12/2019	mR/Std Qtr	22.89
501815	3/12/2019 - 6/11/2019	mR/Std Qtr	19.21
507155	6/11/2019 - 9/10/2019	mR/Std Qtr	17.99
513494	9/10/2019 - 12/10/2019	mR/Std Qtr	20.11

Sample Point 045 [INDICATOR - SSW @ 4.78 miles]

TLD RING TLD_OUTER

Sample ID	Sample Dates	Nuclide	Activity
495994	12/11/2018 - 3/12/2019	mR/Std Qtr	18.89
501816	3/12/2019 - 6/11/2019	mR/Std Qtr	17.73
507156	6/11/2019 - 9/10/2019	mR/Std Qtr	16.10
513495	9/10/2019 - 12/10/2019	mR/Std Qtr	18.84

Sample Point 046 [INDICATOR - SW @ 4.61 miles]

TLD RING TLD_OUTER

Sample ID	Sample Dates	Nuclide	Activity
495995	12/11/2018 - 3/12/2019	mR/Std Qtr	27.94
501817	3/12/2019 - 6/11/2019	mR/Std Qtr	25.00
507157	6/11/2019 - 9/10/2019	mR/Std Qtr	22.37
513496	9/10/2019 - 12/10/2019	mR/Std Qtr	24.03

Sample Point 048 [INDICATOR - W @ 3.64 miles]

TLD RING TLD_OUTER

Sample ID	Sample Dates	Nuclide	Activity
495996	12/11/2018 - 3/12/2019	mR/Std Qtr	29.97
501818	3/12/2019 - 6/11/2019	mR/Std Qtr	28.00

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 048 [INDICATOR - W @ 3.64 miles]

TLD RING TLD_OUTER

Sample ID: 507158	Sample Dates: 6/11/2019 - 9/10/2019	Nuclide mR/Std Qtr	Activity 25.09
-------------------	-------------------------------------	-----------------------	-------------------

Sample ID: 513497	Sample Dates: 9/10/2019 - 12/10/2019	Nuclide mR/Std Qtr	Activity 27.30
-------------------	--------------------------------------	-----------------------	-------------------

Sample Point 049 [INDICATOR - WNW @ 3.6 miles] TLD RING TLD_OUTER

Sample ID: 495997	Sample Dates: 12/11/2018 - 3/12/2019	Nuclide mR/Std Qtr	Activity 25.04
-------------------	--------------------------------------	-----------------------	-------------------

Sample ID: 501819	Sample Dates: 3/12/2019 - 6/11/2019	Nuclide mR/Std Qtr	Activity 22.90
-------------------	-------------------------------------	-----------------------	-------------------

Sample ID: 507159	Sample Dates: 6/11/2019 - 9/10/2019	Nuclide mR/Std Qtr	Activity 20.48
-------------------	-------------------------------------	-----------------------	-------------------

Sample ID: 513498	Sample Dates: 9/10/2019 - 12/10/2019	Nuclide mR/Std Qtr	Activity 23.08
-------------------	--------------------------------------	-----------------------	-------------------

Sample Point 050 [INDICATOR - NW @ 3.53 miles] TLD RING TLD_OUTER

Sample ID: 495998	Sample Dates: 12/11/2018 - 3/12/2019	Nuclide mR/Std Qtr	Activity 21.22
-------------------	--------------------------------------	-----------------------	-------------------

Sample ID: 501820	Sample Dates: 3/12/2019 - 6/11/2019	Nuclide mR/Std Qtr	Activity 18.69
-------------------	-------------------------------------	-----------------------	-------------------

Sample ID: 507160	Sample Dates: 6/11/2019 - 9/10/2019	Nuclide mR/Std Qtr	Activity 17.37
-------------------	-------------------------------------	-----------------------	-------------------

Sample ID: 513499	Sample Dates: 9/10/2019 - 12/10/2019	Nuclide mR/Std Qtr	Activity 18.46
-------------------	--------------------------------------	-----------------------	-------------------

Sample Point 051 [INDICATOR - NNW @ 4.64 miles] TLD RING TLD_OUTER

Sample ID: 495999	Sample Dates: 12/11/2018 - 3/12/2019	Nuclide mR/Std Qtr	Activity 23.43
-------------------	--------------------------------------	-----------------------	-------------------

Sample ID: 501821	Sample Dates: 3/12/2019 - 6/11/2019	Nuclide mR/Std Qtr	Activity 19.15
-------------------	-------------------------------------	-----------------------	-------------------

Sample ID: 507161	Sample Dates: 6/11/2019 - 9/10/2019	Nuclide mR/Std Qtr	Activity 19.80
-------------------	-------------------------------------	-----------------------	-------------------

Sample ID: 513500	Sample Dates: 9/10/2019 - 12/10/2019	Nuclide mR/Std Qtr	Activity 21.25
-------------------	--------------------------------------	-----------------------	-------------------

Sample Point 052 [INDICATOR - ENE @ 12.4 miles] TLD RING TLD_SPEC

Sample ID: 496000	Sample Dates: 12/11/2018 - 3/12/2019	Nuclide mR/Std Qtr	Activity 29.89
-------------------	--------------------------------------	-----------------------	-------------------

Sample ID: 501822	Sample Dates: 3/12/2019 - 6/11/2019	Nuclide mR/Std Qtr	Activity 22.83
-------------------	-------------------------------------	-----------------------	-------------------

Sample ID: 507162	Sample Dates: 6/11/2019 - 9/10/2019	Nuclide mR/Std Qtr	Activity 22.95
-------------------	-------------------------------------	-----------------------	-------------------

Sample ID: 513501	Sample Dates: 9/10/2019 - 12/10/2019	Nuclide mR/Std Qtr	Activity 24.67
-------------------	--------------------------------------	-----------------------	-------------------

Sample Point 053 [INDICATOR - E @ 11.7 miles] TLD RING TLD_SPEC

Sample ID: 496001	Sample Dates: 12/11/2018 - 3/12/2019	Nuclide mR/Std Qtr	Activity 31.18
-------------------	--------------------------------------	-----------------------	-------------------

Sample ID: 501823	Sample Dates: 3/12/2019 - 6/11/2019	Nuclide mR/Std Qtr	Activity 23.45
-------------------	-------------------------------------	-----------------------	-------------------

Sample ID: 507163	Sample Dates: 6/11/2019 - 9/10/2019	Nuclide mR/Std Qtr	Activity 23.84
-------------------	-------------------------------------	-----------------------	-------------------

Sample ID: 513502	Sample Dates: 9/10/2019 - 12/10/2019	Nuclide mR/Std Qtr	Activity 27.14
-------------------	--------------------------------------	-----------------------	-------------------

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 054 [INDICATOR - ESE @ 8.6 miles]

TLD RING TLD_SPEC

Sample ID	Sample Dates	Nuclide	Activity
496002	12/11/2018 - 3/12/2019	mR/Std Qtr	24.21
501824	3/12/2019 - 6/11/2019	mR/Std Qtr	17.99
507164	6/11/2019 - 9/10/2019	mR/Std Qtr	18.32
513503	9/10/2019 - 12/10/2019	mR/Std Qtr	20.42

Sample Point 055 [INDICATOR - SSE @ 9.27 miles]

TLD RING TLD_SPEC

Sample ID	Sample Dates	Nuclide	Activity
496003	12/11/2018 - 3/12/2019	mR/Std Qtr	19.12
501825	3/12/2019 - 6/11/2019	mR/Std Qtr	14.57
507165	6/11/2019 - 9/10/2019	mR/Std Qtr	16.07
513504	9/10/2019 - 12/10/2019	mR/Std Qtr	14.98

Sample Point 056 [INDICATOR - SSW @ 7.3 miles]

TLD RING TLD_SPEC

Sample ID	Sample Dates	Nuclide	Activity
496004	12/11/2018 - 3/12/2019	mR/Std Qtr	28.85
501826	3/12/2019 - 6/11/2019	mR/Std Qtr	23.14
507166	6/11/2019 - 9/10/2019	mR/Std Qtr	22.63
513505	9/10/2019 - 12/10/2019	mR/Std Qtr	23.13

Sample Point 057 [INDICATOR - SW @ 8.42 miles]

TLD RING TLD_SPEC

Sample ID	Sample Dates	Nuclide	Activity
496005	12/11/2018 - 3/12/2019	mR/Std Qtr	24.56
501827	3/12/2019 - 6/11/2019	mR/Std Qtr	20.00
507167	6/11/2019 - 9/10/2019	mR/Std Qtr	17.67
513506	9/10/2019 - 12/10/2019	mR/Std Qtr	18.60

Sample Point 058 [CONTROL - WSW @ 9.39 miles]

TLD RING TLD_CTRL

Sample ID	Sample Dates	Nuclide	Activity
496006	12/11/2018 - 3/12/2019	mR/Std Qtr	37.69
501828	3/12/2019 - 6/11/2019	mR/Std Qtr	34.57
507168	6/11/2019 - 9/10/2019	mR/Std Qtr	30.92
513507	9/10/2019 - 12/10/2019	mR/Std Qtr	29.70

Sample Point 059 [INDICATOR - NW @ 9.2 miles]

TLD RING TLD_SPEC

Sample ID	Sample Dates	Nuclide	Activity
496007	12/11/2018 - 3/12/2019	mR/Std Qtr	29.86
501829	3/12/2019 - 6/11/2019	mR/Std Qtr	22.68

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 059 [INDICATOR - NW @ 9.2 miles]

TLD RING TLD_SPEC

Sample ID: 507169	Sample Dates: 6/11/2019 - 9/10/2019	Nuclide mR/Std Qtr	Activity 22.75
-------------------	-------------------------------------	-----------------------	-------------------

Sample Point 076 [INDICATOR - W @ 0.19 miles]

TLD RING TLD_INNER

Sample ID: 496008	Sample Dates: 12/11/2018 - 3/12/2019	Nuclide mR/Std Qtr	Activity 30.83
-------------------	--------------------------------------	-----------------------	-------------------

Sample ID: 501830	Sample Dates: 3/12/2019 - 6/11/2019	Nuclide mR/Std Qtr	Activity 23.45
-------------------	-------------------------------------	-----------------------	-------------------

Sample ID: 507170	Sample Dates: 6/11/2019 - 9/10/2019	Nuclide mR/Std Qtr	Activity 24.27
-------------------	-------------------------------------	-----------------------	-------------------

Sample ID: 513509	Sample Dates: 9/10/2019 - 12/10/2019	Nuclide mR/Std Qtr	Activity 25.79
-------------------	--------------------------------------	-----------------------	-------------------

Sample Point 077 [INDICATOR - SW @ 1 miles]

TLD RING TLD_INNER

Sample ID: 496009	Sample Dates: 12/11/2018 - 3/12/2019	Nuclide mR/Std Qtr	Activity 22.99
-------------------	--------------------------------------	-----------------------	-------------------

Sample ID: 501831	Sample Dates: 3/12/2019 - 6/11/2019	Nuclide mR/Std Qtr	Activity 16.82
-------------------	-------------------------------------	-----------------------	-------------------

Sample ID: 507171	Sample Dates: 6/11/2019 - 9/10/2019	Nuclide mR/Std Qtr	Activity 16.27
-------------------	-------------------------------------	-----------------------	-------------------

Sample ID: 513510	Sample Dates: 9/10/2019 - 12/10/2019	Nuclide mR/Std Qtr	Activity 19.17
-------------------	--------------------------------------	-----------------------	-------------------

Sample Point 078.1 [INDICATOR - WSW @ 0.53 miles]

TLD RING TLD_INNER

Sample ID: 496010	Sample Dates: 12/11/2018 - 3/12/2019	Nuclide mR/Std Qtr	Activity 31.79
-------------------	--------------------------------------	-----------------------	-------------------

Sample ID: 501832	Sample Dates: 3/12/2019 - 6/11/2019	Nuclide mR/Std Qtr	Activity 25.98
-------------------	-------------------------------------	-----------------------	-------------------

Sample ID: 507172	Sample Dates: 6/11/2019 - 9/10/2019	Nuclide mR/Std Qtr	Activity 25.21
-------------------	-------------------------------------	-----------------------	-------------------

Sample ID: 513511	Sample Dates: 9/10/2019 - 12/10/2019	Nuclide mR/Std Qtr	Activity 24.56
-------------------	--------------------------------------	-----------------------	-------------------

Sample Point 081 [CONTROL - SE @ 9.33 miles]

TLD RING TLD_CTRL

Sample ID: 496011	Sample Dates: 12/11/2018 - 3/12/2019	Nuclide mR/Std Qtr	Activity 28.99
-------------------	--------------------------------------	-----------------------	-------------------

Sample ID: 501833	Sample Dates: 3/12/2019 - 6/11/2019	Nuclide mR/Std Qtr	Activity 21.91
-------------------	-------------------------------------	-----------------------	-------------------

Sample ID: 507173	Sample Dates: 6/11/2019 - 9/10/2019	Nuclide mR/Std Qtr	Activity 22.36
-------------------	-------------------------------------	-----------------------	-------------------

Sample Point 085 [INDICATOR - NNW @ 0.88 miles]

TLD RING TLD_INNER

Sample ID: 496012	Sample Dates: 12/11/2018 - 3/12/2019	Nuclide mR/Std Qtr	Activity 23.53
-------------------	--------------------------------------	-----------------------	-------------------

Sample ID: 501834	Sample Dates: 3/12/2019 - 6/11/2019	Nuclide mR/Std Qtr	Activity 19.46
-------------------	-------------------------------------	-----------------------	-------------------

Sample ID: 507174	Sample Dates: 6/11/2019 - 9/10/2019	Nuclide mR/Std Qtr	Activity 18.61
-------------------	-------------------------------------	-----------------------	-------------------

Sample ID: 513512	Sample Dates: 9/10/2019 - 12/10/2019	Nuclide mR/Std Qtr	Activity 18.73
-------------------	--------------------------------------	-----------------------	-------------------

Sample Point 086 [INDICATOR - NW @ 0.83 miles]

TLD RING TLD_INNER

Sample ID: 496013	Sample Dates: 12/11/2018 - 3/12/2019	Nuclide mR/Std Qtr	Activity 21.42
-------------------	--------------------------------------	-----------------------	-------------------

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 086 [INDICATOR - NW @ 0.83 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
501835	3/12/2019 - 6/11/2019	mR/Std Qtr	18.08
507175	6/11/2019 - 9/10/2019	mR/Std Qtr	16.54
513513	9/10/2019 - 12/10/2019	mR/Std Qtr	15.83

Sample Point 087 [INDICATOR - WNW @ 1.33 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
496014	12/11/2018 - 3/12/2019	mR/Std Qtr	19.65
501836	3/12/2019 - 6/11/2019	mR/Std Qtr	19.15
507176	6/11/2019 - 9/10/2019	mR/Std Qtr	17.01
513514	9/10/2019 - 12/10/2019	mR/Std Qtr	16.27

Sample Point 088 [INDICATOR - SSW @ 1 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
496015	12/11/2018 - 3/12/2019	mR/Std Qtr	23.97
501837	3/12/2019 - 6/11/2019	mR/Std Qtr	25.36
507177	6/11/2019 - 9/10/2019	mR/Std Qtr	20.40
513515	9/10/2019 - 12/10/2019	mR/Std Qtr	20.19

Sample Point 089 [INDICATOR - S @ 1.19 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
496016	12/11/2018 - 3/12/2019	mR/Std Qtr	28.76
501838	3/12/2019 - 6/11/2019	mR/Std Qtr	24.35
507178	6/11/2019 - 9/10/2019	mR/Std Qtr	23.29
513516	9/10/2019 - 12/10/2019	mR/Std Qtr	24.98

Sample Point 090 [INDICATOR - SE @ 0.79 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
496017	12/11/2018 - 3/12/2019	mR/Std Qtr	28.25
501839	3/12/2019 - 6/11/2019	mR/Std Qtr	25.00
507179	6/11/2019 - 9/10/2019	mR/Std Qtr	22.48
513517	9/10/2019 - 12/10/2019	mR/Std Qtr	26.10

Sample Point 092 [INDICATOR - WSW @ 3.62 miles]

TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
496018	12/11/2018 - 3/12/2019	mR/Std Qtr	26.22
501840	3/12/2019 - 6/11/2019	mR/Std Qtr	23.91
507180	6/11/2019 - 9/10/2019	mR/Std Qtr	19.08

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 092 [INDICATOR - WSW @ 3.62 miles]

TLD RING TLD_OUTER

Sample ID: 513518	Sample Dates: 9/10/2019 - 12/10/2019	Nuclide	Activity
		mR/Std Qtr	21.66

Sample Point 093 [CONTROL - SE @ 9.34 miles]

TLD RING TLD_CTRL

Sample ID: 513519	Sample Dates: 9/10/2019 - 12/10/2019	Nuclide	Activity
		mR/Std Qtr	28.15

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 077 [INDICATOR - SW @ 1 miles]

Sample ID: 492483	Sample Dates: 1/7/2019 - 1/7/2019	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
			Mn-54	<2.39E+01	0.00E+00	2.39E+01
			Co-58	<2.42E+01	0.00E+00	2.42E+01
			Fe-59	<4.73E+01	0.00E+00	4.73E+01
			Co-60	<2.59E+01	0.00E+00	2.59E+01
			Zn-65	<5.43E+01	0.00E+00	5.43E+01
			Zr-95	<4.79E+01	0.00E+00	4.79E+01
			Nb-95	<2.75E+01	0.00E+00	2.75E+01
			I-131	<2.69E+01	0.00E+00	2.69E+01
			Cs-134	<3.10E+01	0.00E+00	3.10E+01
			Cs-137	<2.74E+01	0.00E+00	2.74E+01
			BaLa-140	<2.73E+01	0.00E+00	2.73E+01
			Be-7	2.65E+03	3.71E+02	2.97E+02
			K-40	2.40E+03	4.25E+02	3.28E+02

Sample ID: 493837	Sample Dates: 2/4/2019 - 2/4/2019	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
			Mn-54	<2.80E+01	0.00E+00	2.80E+01
			Co-58	<2.11E+01	0.00E+00	2.11E+01
			Fe-59	<4.67E+01	0.00E+00	4.67E+01
			Co-60	<3.08E+01	0.00E+00	3.08E+01
			Zn-65	<5.53E+01	0.00E+00	5.53E+01
			Zr-95	<4.21E+01	0.00E+00	4.21E+01
			Nb-95	<2.66E+01	0.00E+00	2.66E+01
			I-131	<4.74E+01	0.00E+00	4.73E+01
			Cs-134	<2.91E+01	0.00E+00	2.91E+01
			Cs-137	<2.50E+01	0.00E+00	2.50E+01
			BaLa-140	<3.89E+01	0.00E+00	3.89E+01
			Be-7	1.28E+03	2.73E+02	3.32E+02
			K-40	2.50E+03	4.42E+02	4.00E+02

Sample ID: 496156	Sample Dates: 3/4/2019 - 3/4/2019	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
			Mn-54	<4.25E+01	0.00E+00	4.25E+01
			Co-58	<4.40E+01	0.00E+00	4.40E+01
			Fe-59	<8.11E+01	0.00E+00	8.11E+01
			Co-60	<4.18E+01	0.00E+00	4.18E+01
			Zn-65	<8.28E+01	0.00E+00	8.28E+01
			Zr-95	<7.95E+01	0.00E+00	7.95E+01
			Nb-95	<3.38E+01	0.00E+00	3.38E+01
			I-131	<4.74E+01	0.00E+00	4.74E+01
			Cs-134	<4.53E+01	0.00E+00	4.53E+01
			Cs-137	<3.98E+01	0.00E+00	3.98E+01
			BaLa-140	<5.87E+01	0.00E+00	5.87E+01
			Be-7	2.50E+03	4.69E+02	4.82E+02
			K-40	2.74E+03	6.08E+02	5.20E+02

Sample ID: 498075	Sample Dates: 4/1/2019 - 4/1/2019	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
			Mn-54	<3.15E+01	0.00E+00	3.15E+01
			Co-58	<2.73E+01	0.00E+00	2.73E+01
			Fe-59	<6.61E+01	0.00E+00	6.61E+01
			Co-60	<3.71E+01	0.00E+00	3.71E+01
			Zn-65	<7.47E+01	0.00E+00	7.47E+01
			Zr-95	<4.90E+01	0.00E+00	4.90E+01
			Nb-95	<2.63E+01	0.00E+00	2.63E+01
			I-131	<3.23E+01	0.00E+00	3.23E+01
			Cs-134	<3.67E+01	0.00E+00	3.67E+01
			Cs-137	<3.08E+01	0.00E+00	3.08E+01
			BaLa-140	<4.99E+01	0.00E+00	4.99E+01
			Be-7	2.01E+03	3.59E+02	3.67E+02

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 077 [INDICATOR - SW @ 1 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
498075	4/1/2019 - 4/1/2019		K-40	2.75E+03	5.40E+02	4.83E+02
500158	5/6/2019 - 5/6/2019		Mn-54	<2.10E+01	0.00E+00	2.10E+01
			Co-58	<2.42E+01	0.00E+00	2.42E+01
			Fe-59	<5.87E+01	0.00E+00	5.87E+01
			Co-60	<3.06E+01	0.00E+00	3.06E+01
			Zn-65	<6.16E+01	0.00E+00	6.16E+01
			Zr-95	<5.32E+01	0.00E+00	5.32E+01
			Nb-95	<3.04E+01	0.00E+00	3.04E+01
			I-131	<2.67E+01	0.00E+00	2.67E+01
			Cs-134	<2.15E+01	0.00E+00	2.15E+01
			Cs-137	<3.67E+01	0.00E+00	3.67E+01
			BaLa-140	<2.82E+01	0.00E+00	2.82E+01
			Be-7	7.45E+02	2.10E+02	2.39E+02
			K-40	3.52E+03	5.96E+02	3.33E+02
501980	6/3/2019 - 6/3/2019		Mn-54	<2.48E+01	0.00E+00	2.48E+01
			Co-58	<3.48E+01	0.00E+00	3.48E+01
			Fe-59	<6.03E+01	0.00E+00	6.03E+01
			Co-60	<3.58E+01	0.00E+00	3.58E+01
			Zn-65	<5.91E+01	0.00E+00	5.91E+01
			Zr-95	<6.16E+01	0.00E+00	6.16E+01
			Nb-95	<2.91E+01	0.00E+00	2.91E+01
			I-131	<4.71E+01	0.00E+00	4.71E+01
			Cs-134	<3.30E+01	0.00E+00	3.30E+01
			Cs-137	<2.52E+01	0.00E+00	2.52E+01
			BaLa-140	<3.72E+01	0.00E+00	3.72E+01
			Be-7	1.76E+03	3.54E+02	3.71E+02
			K-40	4.78E+03	7.33E+02	3.96E+02
503870	7/1/2019 - 7/1/2019		Mn-54	<4.08E+01	0.00E+00	4.08E+01
			Co-58	<3.65E+01	0.00E+00	3.65E+01
			Fe-59	<7.81E+01	0.00E+00	7.81E+01
			Co-60	<3.65E+01	0.00E+00	3.65E+01
			Zn-65	<7.51E+01	0.00E+00	7.51E+01
			Zr-95	<4.30E+01	0.00E+00	4.30E+01
			Nb-95	<3.41E+01	0.00E+00	3.41E+01
			I-131	<3.43E+01	0.00E+00	3.43E+01
			Cs-134	<3.62E+01	0.00E+00	3.62E+01
			Cs-137	<3.46E+01	0.00E+00	3.46E+01
			BaLa-140	<4.98E+01	0.00E+00	4.98E+01
			Be-7	1.83E+03	4.05E+02	4.25E+02
			K-40	3.21E+03	7.02E+02	5.61E+02
505179	8/5/2019 - 8/5/2019		Mn-54	<2.20E+01	0.00E+00	2.20E+01
			Co-58	<1.79E+01	0.00E+00	1.79E+01
			Fe-59	<4.61E+01	0.00E+00	4.61E+01
			Co-60	<2.23E+01	0.00E+00	2.23E+01
			Zn-65	<6.00E+01	0.00E+00	6.00E+01
			Zr-95	<3.26E+01	0.00E+00	3.26E+01
			Nb-95	<2.58E+01	0.00E+00	2.58E+01
			I-131	<4.68E+01	0.00E+00	4.68E+01
			Cs-134	<2.12E+01	0.00E+00	2.12E+01
			Cs-137	<2.34E+01	0.00E+00	2.34E+01
			BaLa-140	<3.29E+01	0.00E+00	3.29E+01
			Be-7	6.32E+03	7.08E+02	3.01E+02
			K-40	3.62E+03	6.02E+02	4.72E+02
507332	9/3/2019 - 9/3/2019		Mn-54	<2.47E+01	0.00E+00	2.47E+01
			Co-58	<2.69E+01	0.00E+00	2.69E+01
			Fe-59	<6.49E+01	0.00E+00	6.49E+01
			Co-60	<3.66E+01	0.00E+00	3.66E+01
			Zn-65	<5.89E+01	0.00E+00	5.89E+01

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 077 [INDICATOR - SW @ 1 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
507332	9/3/2019 - 9/3/2019	MIXEDBLV	Zr-95	<5.57E+01	0.00E+00	5.57E+01
			Nb-95	<3.37E+01	0.00E+00	3.37E+01
			I-131	<4.65E+01	0.00E+00	4.65E+01
			Cs-134	<3.57E+01	0.00E+00	3.57E+01
			Cs-137	<3.32E+01	0.00E+00	3.32E+01
			BaLa-140	<3.92E+01	0.00E+00	3.92E+01
			Be-7	4.08E+03	5.49E+02	3.56E+02
			K-40	3.28E+03	6.03E+02	4.80E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
510568	10/7/2019 - 10/7/2019	MIXEDBLV	Mn-54	<4.37E+01	0.00E+00	4.37E+01
			Co-58	<4.08E+01	0.00E+00	4.08E+01
			Fe-59	<6.20E+01	0.00E+00	6.20E+01
			Co-60	<4.14E+01	0.00E+00	4.14E+01
			Zn-65	<8.04E+01	0.00E+00	8.04E+01
			Zr-95	<6.02E+01	0.00E+00	6.02E+01
			Nb-95	<4.11E+01	0.00E+00	4.11E+01
			I-131	<4.19E+01	0.00E+00	4.19E+01
			Cs-134	<3.55E+01	0.00E+00	3.55E+01
			Cs-137	<4.86E+01	0.00E+00	4.86E+01
			BaLa-140	<5.89E+01	0.00E+00	5.89E+01
			Be-7	3.97E+03	6.29E+02	5.22E+02
			K-40	4.08E+03	7.60E+02	3.13E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
511909	11/4/2019 - 11/4/2019	MIXEDBLV	Mn-54	<2.89E+01	0.00E+00	2.89E+01
			Co-58	<3.24E+01	0.00E+00	3.24E+01
			Fe-59	<6.16E+01	0.00E+00	6.16E+01
			Co-60	<2.83E+01	0.00E+00	2.83E+01
			Zn-65	<7.58E+01	0.00E+00	7.58E+01
			Zr-95	<5.00E+01	0.00E+00	5.00E+01
			Nb-95	<3.54E+01	0.00E+00	3.54E+01
			I-131	<3.19E+01	0.00E+00	3.19E+01
			Cs-134	<3.45E+01	0.00E+00	3.45E+01
			Cs-137	<3.14E+01	0.00E+00	3.14E+01
			BaLa-140	<4.40E+01	0.00E+00	4.40E+01
			Be-7	2.56E+03	4.50E+02	4.25E+02
			K-40	5.53E+03	8.70E+02	5.02E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
512941	12/2/2019 - 12/2/2019	MIXEDBLV	Mn-54	<2.08E+01	0.00E+00	2.08E+01
			Co-58	<2.13E+01	0.00E+00	2.13E+01
			Fe-59	<4.42E+01	0.00E+00	4.42E+01
			Co-60	<1.91E+01	0.00E+00	1.91E+01
			Zn-65	<4.95E+01	0.00E+00	4.95E+01
			Zr-95	<3.47E+01	0.00E+00	3.47E+01
			Nb-95	<2.45E+01	0.00E+00	2.45E+01
			I-131	<2.93E+01	0.00E+00	2.93E+01
			Cs-134	<2.20E+01	0.00E+00	2.20E+01
			Cs-137	<2.40E+01	0.00E+00	2.40E+01
			BaLa-140	<3.30E+01	0.00E+00	3.29E+01
			Be-7	1.84E+03	2.82E+02	2.59E+02
			K-40	3.11E+03	4.49E+02	2.72E+02

Sample Point 079 [INDICATOR - NE @ 0.56 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
492484	1/7/2019 - 1/7/2019	MIXEDBLV	Mn-54	<2.92E+01	0.00E+00	2.92E+01
			Co-58	<2.06E+01	0.00E+00	2.06E+01
			Fe-59	<5.44E+01	0.00E+00	5.44E+01
			Co-60	<2.88E+01	0.00E+00	2.88E+01
			Zn-65	<5.67E+01	0.00E+00	5.67E+01
			Zr-95	<4.26E+01	0.00E+00	4.26E+01
			Nb-95	<2.52E+01	0.00E+00	2.52E+01
			I-131	<2.29E+01	0.00E+00	2.29E+01
			Cs-134	<2.62E+01	0.00E+00	2.62E+01
			Cs-137	<3.15E+01	0.00E+00	3.15E+01
			BaLa-140	<2.15E+01	0.00E+00	2.15E+01

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 079 [INDICATOR - NE @ 0.56 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
492484	1/7/2019 - 1/7/2019	MIXEDBLV	Be-7	4.26E+03	5.45E+02	2.89E+02
			K-40	4.10E+03	6.26E+02	4.70E+01
493838	2/4/2019 - 2/4/2019	MIXEDBLV	Mn-54	<3.00E+01	0.00E+00	3.00E+01
			Co-58	<2.56E+01	0.00E+00	2.56E+01
			Fe-59	<6.07E+01	0.00E+00	6.07E+01
			Co-60	<1.89E+01	0.00E+00	1.89E+01
			Zn-65	<6.26E+01	0.00E+00	6.26E+01
			Zr-95	<4.03E+01	0.00E+00	4.03E+01
			Nb-95	<1.97E+01	0.00E+00	1.97E+01
			I-131	<4.66E+01	0.00E+00	4.66E+01
			Cs-134	<2.65E+01	0.00E+00	2.65E+01
			Cs-137	<2.87E+01	0.00E+00	2.87E+01
			BaLa-140	<3.01E+01	0.00E+00	3.01E+01
			Be-7	2.91E+03	4.31E+02	2.88E+02
			K-40	3.44E+03	6.04E+02	3.83E+02
496157	3/4/2019 - 3/4/2019	MIXEDBLV	Mn-54	<3.81E+01	0.00E+00	3.81E+01
			Co-58	<3.23E+01	0.00E+00	3.23E+01
			Fe-59	<8.60E+01	0.00E+00	8.60E+01
			Co-60	<3.92E+01	0.00E+00	3.92E+01
			Zn-65	<8.16E+01	0.00E+00	8.16E+01
			Zr-95	<5.43E+01	0.00E+00	5.43E+01
			Nb-95	<3.96E+01	0.00E+00	3.96E+01
			I-131	<4.34E+01	0.00E+00	4.34E+01
			Cs-134	<3.90E+01	0.00E+00	3.90E+01
			Cs-137	<3.28E+01	0.00E+00	3.28E+01
			BaLa-140	<4.14E+01	0.00E+00	4.14E+01
			Be-7	1.37E+03	3.58E+02	4.31E+02
			K-40	3.45E+03	7.18E+02	6.37E+02
498076	4/1/2019 - 4/1/2019	MIXEDBLV	Mn-54	<3.53E+01	0.00E+00	3.53E+01
			Co-58	<3.52E+01	0.00E+00	3.52E+01
			Fe-59	<7.83E+01	0.00E+00	7.83E+01
			Co-60	<3.81E+01	0.00E+00	3.81E+01
			Zn-65	<8.25E+01	0.00E+00	8.25E+01
			Zr-95	<5.11E+01	0.00E+00	5.11E+01
			Nb-95	<3.58E+01	0.00E+00	3.58E+01
			I-131	<3.48E+01	0.00E+00	3.48E+01
			Cs-134	<3.96E+01	0.00E+00	3.96E+01
			Cs-137	<3.34E+01	0.00E+00	3.34E+01
			BaLa-140	<3.68E+01	0.00E+00	3.68E+01
			Be-7	2.21E+03	4.31E+02	4.28E+02
			K-40	4.05E+03	7.28E+02	4.39E+02
500159	5/6/2019 - 5/6/2019	MIXEDBLV	Mn-54	<2.87E+01	0.00E+00	2.87E+01
			Co-58	<2.10E+01	0.00E+00	2.10E+01
			Fe-59	<4.50E+01	0.00E+00	4.50E+01
			Co-60	<2.77E+01	0.00E+00	2.77E+01
			Zn-65	<4.64E+01	0.00E+00	4.64E+01
			Zr-95	<4.79E+01	0.00E+00	4.79E+01
			Nb-95	<2.90E+01	0.00E+00	2.90E+01
			I-131	<2.50E+01	0.00E+00	2.50E+01
			Cs-134	<3.27E+01	0.00E+00	3.27E+01
			Cs-137	<1.84E+01	0.00E+00	1.84E+01
			BaLa-140	<2.46E+01	0.00E+00	2.46E+01
			Be-7	2.01E+03	3.27E+02	2.76E+02
			K-40	5.08E+03	7.50E+02	5.02E+02
501981	6/3/2019 - 6/3/2019	MIXEDBLV	Mn-54	<2.57E+01	0.00E+00	2.57E+01
			Co-58	<3.02E+01	0.00E+00	3.02E+01
			Fe-59	<6.57E+01	0.00E+00	6.57E+01
			Co-60	<3.33E+01	0.00E+00	3.33E+01

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 079 [INDICATOR - NE @ 0.56 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
501981	6/3/2019 - 6/3/2019	MIXEDBLV	Zn-65	<5.49E+01	0.00E+00	5.49E+01
			Zr-95	<4.96E+01	0.00E+00	4.96E+01
			Nb-95	<2.97E+01	0.00E+00	2.97E+01
			I-131	<3.92E+01	0.00E+00	3.92E+01
			Cs-134	<2.93E+01	0.00E+00	2.93E+01
			Cs-137	<2.52E+01	0.00E+00	2.52E+01
			BaLa-140	<3.49E+01	0.00E+00	3.49E+01
			Be-7	5.25E+02	2.27E+02	3.22E+02
			K-40	7.10E+03	9.13E+02	3.13E+02
			503871	7/1/2019 - 7/1/2019	MIXEDBLV	Mn-54
Co-58	<2.24E+01	0.00E+00				2.24E+01
Fe-59	<4.39E+01	0.00E+00				4.39E+01
Co-60	<2.42E+01	0.00E+00				2.42E+01
Zn-65	<5.25E+01	0.00E+00				5.25E+01
Zr-95	<4.58E+01	0.00E+00				4.58E+01
Nb-95	<2.41E+01	0.00E+00				2.41E+01
I-131	<3.22E+01	0.00E+00				3.22E+01
Cs-134	<2.65E+01	0.00E+00				2.65E+01
Cs-137	<2.26E+01	0.00E+00				2.26E+01
BaLa-140	<2.96E+01	0.00E+00				2.96E+01
Be-7	1.89E+03	2.91E+02				2.56E+02
K-40	4.81E+03	7.03E+02				6.55E+02
505180	8/5/2019 - 8/5/2019	MIXEDBLV	Mn-54	<2.36E+01	0.00E+00	2.36E+01
			Co-58	<2.54E+01	0.00E+00	2.54E+01
			Fe-59	<4.35E+01	0.00E+00	4.35E+01
			Co-60	<2.94E+01	0.00E+00	2.94E+01
			Zn-65	<4.21E+01	0.00E+00	4.21E+01
			Zr-95	<4.15E+01	0.00E+00	4.15E+01
			Nb-95	<2.29E+01	0.00E+00	2.29E+01
			I-131	<4.24E+01	0.00E+00	4.24E+01
			Cs-134	<2.63E+01	0.00E+00	2.63E+01
			Cs-137	<2.18E+01	0.00E+00	2.18E+01
			BaLa-140	<3.35E+01	0.00E+00	3.35E+01
			Be-7	1.82E+03	3.30E+02	2.90E+02
			K-40	3.46E+03	5.76E+02	2.54E+02
			507333	9/3/2019 - 9/3/2019	MIXEDBLV	Mn-54
Co-58	<2.94E+01	0.00E+00				2.94E+01
Fe-59	<5.07E+01	0.00E+00				5.07E+01
Co-60	<2.37E+01	0.00E+00				2.37E+01
Zn-65	<5.88E+01	0.00E+00				5.88E+01
Zr-95	<5.12E+01	0.00E+00				5.12E+01
Nb-95	<3.65E+01	0.00E+00				3.65E+01
I-131	<4.28E+01	0.00E+00				4.28E+01
Cs-134	<4.08E+01	0.00E+00				4.08E+01
Cs-137	<2.08E+01	0.00E+00				2.08E+01
BaLa-140	<4.15E+01	0.00E+00				4.15E+01
Be-7	1.05E+03	2.78E+02				3.62E+02
K-40	5.52E+03	7.35E+02				3.77E+02
510569	10/7/2019 - 10/7/2019	MIXEDBLV				Mn-54
			Co-58	<2.88E+01	0.00E+00	2.88E+01
			Fe-59	<5.65E+01	0.00E+00	5.65E+01
			Co-60	<3.24E+01	0.00E+00	3.24E+01
			Zn-65	<5.88E+01	0.00E+00	5.88E+01
			Zr-95	<5.58E+01	0.00E+00	5.58E+01
			Nb-95	<3.08E+01	0.00E+00	3.08E+01
			I-131	<4.50E+01	0.00E+00	4.50E+01
			Cs-134	<3.18E+01	0.00E+00	3.18E+01
			Cs-137	<2.30E+01	0.00E+00	2.30E+01
			BaLa-140	<4.23E+01	0.00E+00	4.23E+01
			Be-7	8.04E+02	2.76E+02	4.00E+02

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 079 [INDICATOR - NE @ 0.56 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
510569	10/7/2019 - 10/7/2019		K-40	5.59E+03	7.36E+02	5.05E+02
511910	11/4/2019 - 11/4/2019		Mn-54	<2.63E+01	0.00E+00	2.63E+01
			Co-58	<2.06E+01	0.00E+00	2.06E+01
			Fe-59	<3.93E+01	0.00E+00	3.93E+01
			Co-60	<2.46E+01	0.00E+00	2.46E+01
			Zn-65	<5.49E+01	0.00E+00	5.49E+01
			Zr-95	<3.53E+01	0.00E+00	3.53E+01
			Nb-95	<2.11E+01	0.00E+00	2.11E+01
			I-131	<2.74E+01	0.00E+00	2.74E+01
			Cs-134	<2.79E+01	0.00E+00	2.79E+01
			Cs-137	<2.19E+01	0.00E+00	2.19E+01
			BaLa-140	<3.21E+01	0.00E+00	3.21E+01
			Be-7	1.58E+03	2.63E+02	2.57E+02
			K-40	3.84E+03	5.54E+02	3.90E+02
512942	12/2/2019 - 12/2/2019		Mn-54	<2.48E+01	0.00E+00	2.48E+01
			Co-58	<2.73E+01	0.00E+00	2.73E+01
			Fe-59	<6.11E+01	0.00E+00	6.11E+01
			Co-60	<3.04E+01	0.00E+00	3.04E+01
			Zn-65	<5.16E+01	0.00E+00	5.16E+01
			Zr-95	<5.20E+01	0.00E+00	5.20E+01
			Nb-95	<3.73E+01	0.00E+00	3.73E+01
			I-131	<4.40E+01	0.00E+00	4.40E+01
			Cs-134	<2.77E+01	0.00E+00	2.77E+01
			Cs-137	<3.00E+01	0.00E+00	3.00E+01
			BaLa-140	<4.34E+01	0.00E+00	4.34E+01
			Be-7	2.18E+03	3.79E+02	3.44E+02
			K-40	3.91E+03	6.38E+02	4.02E+02

Sample Point 081 [CONTROL - SE @ 9.33 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
492485	1/7/2019 - 1/7/2019		Mn-54	<3.06E+01	0.00E+00	3.06E+01
			Co-58	<2.54E+01	0.00E+00	2.54E+01
			Fe-59	<5.82E+01	0.00E+00	5.82E+01
			Co-60	<2.37E+01	0.00E+00	2.37E+01
			Zn-65	<4.36E+01	0.00E+00	4.36E+01
			Zr-95	<3.77E+01	0.00E+00	3.77E+01
			Nb-95	<2.58E+01	0.00E+00	2.58E+01
			I-131	<2.87E+01	0.00E+00	2.87E+01
			Cs-134	<3.58E+01	0.00E+00	3.58E+01
			Cs-137	<2.24E+01	0.00E+00	2.24E+01
			BaLa-140	<2.54E+01	0.00E+00	2.54E+01
			Be-7	2.62E+03	3.80E+02	2.57E+02
			K-40	3.84E+03	6.20E+02	3.77E+02
493839	2/4/2019 - 2/4/2019		Mn-54	<2.67E+01	0.00E+00	2.67E+01
			Co-58	<2.48E+01	0.00E+00	2.48E+01
			Fe-59	<5.35E+01	0.00E+00	5.35E+01
			Co-60	<2.67E+01	0.00E+00	2.67E+01
			Zn-65	<6.03E+01	0.00E+00	6.03E+01
			Zr-95	<4.32E+01	0.00E+00	4.32E+01
			Nb-95	<2.62E+01	0.00E+00	2.62E+01
			I-131	<4.75E+01	0.00E+00	4.75E+01
			Cs-134	<3.22E+01	0.00E+00	3.22E+01
			Cs-137	<2.67E+01	0.00E+00	2.67E+01
			BaLa-140	<2.76E+01	0.00E+00	2.76E+01
			Be-7	2.57E+03	4.09E+02	3.40E+02
			K-40	3.77E+03	6.02E+02	3.24E+02
496158	3/4/2019 - 3/4/2019		Mn-54	<2.64E+01	0.00E+00	2.64E+01
			Co-58	<3.02E+01	0.00E+00	3.02E+01
			Fe-59	<3.95E+01	0.00E+00	3.95E+01

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 081 [CONTROL - SE @ 9.33 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
496158	3/4/2019 - 3/4/2019	MIXEDBLV	Co-60	<2.84E+01	0.00E+00	2.84E+01
			Zn-65	<6.67E+01	0.00E+00	6.67E+01
			Zr-95	<5.25E+01	0.00E+00	5.25E+01
			Nb-95	<2.51E+01	0.00E+00	2.51E+01
			I-131	<3.27E+01	0.00E+00	3.27E+01
			Cs-134	<3.53E+01	0.00E+00	3.53E+01
			Cs-137	<2.98E+01	0.00E+00	2.98E+01
			BaLa-140	<3.19E+01	0.00E+00	3.19E+01
			Be-7	2.84E+03	4.34E+02	3.17E+02
			K-40	3.38E+03	6.09E+02	3.86E+02
			498077	4/1/2019 - 4/1/2019	MIXEDBLV	Mn-54
Co-58	<2.22E+01	0.00E+00				2.22E+01
Fe-59	<4.89E+01	0.00E+00				4.89E+01
Co-60	<3.66E+01	0.00E+00				3.66E+01
Zn-65	<7.50E+01	0.00E+00				7.50E+01
Zr-95	<4.35E+01	0.00E+00				4.35E+01
Nb-95	<2.63E+01	0.00E+00				2.63E+01
I-131	<2.77E+01	0.00E+00				2.77E+01
Cs-134	<3.50E+01	0.00E+00				3.50E+01
Cs-137	<3.18E+01	0.00E+00				3.18E+01
BaLa-140	<2.76E+01	0.00E+00				2.76E+01
Be-7	2.00E+03	3.51E+02				3.25E+02
K-40	4.04E+03	6.52E+02				3.91E+02
500160	5/6/2019 - 5/6/2019	MIXEDBLV				Mn-54
			Co-58	<2.93E+01	0.00E+00	2.93E+01
			Fe-59	<5.80E+01	0.00E+00	5.80E+01
			Co-60	<2.99E+01	0.00E+00	2.99E+01
			Zn-65	<7.44E+01	0.00E+00	7.44E+01
			Zr-95	<5.52E+01	0.00E+00	5.52E+01
			Nb-95	<3.10E+01	0.00E+00	3.10E+01
			I-131	<3.10E+01	0.00E+00	3.10E+01
			Cs-134	<3.49E+01	0.00E+00	3.49E+01
			Cs-137	<3.09E+01	0.00E+00	3.09E+01
			BaLa-140	<3.44E+01	0.00E+00	3.44E+01
			Be-7	5.12E+02	2.33E+02	3.27E+02
			K-40	4.58E+03	7.76E+02	4.90E+02
			501982	6/3/2019 - 6/3/2019	MIXEDBLV	Mn-54
Co-58	<3.03E+01	0.00E+00				3.03E+01
Fe-59	<7.67E+01	0.00E+00				7.67E+01
Co-60	<2.37E+01	0.00E+00				2.37E+01
Zn-65	<6.12E+01	0.00E+00				6.12E+01
Zr-95	<4.33E+01	0.00E+00				4.33E+01
Nb-95	<2.83E+01	0.00E+00				2.83E+01
I-131	<3.65E+01	0.00E+00				3.65E+01
Cs-134	<3.95E+01	0.00E+00				3.95E+01
Cs-137	<3.21E+01	0.00E+00				3.21E+01
BaLa-140	<5.21E+01	0.00E+00				5.21E+01
Be-7	4.88E+02	2.56E+02				3.47E+02
K-40	3.90E+03	8.23E+02				5.20E+02
503872	7/1/2019 - 7/1/2019	MIXEDBLV				Mn-54
			Co-58	<3.21E+01	0.00E+00	3.21E+01
			Fe-59	<5.80E+01	0.00E+00	5.80E+01
			Co-60	<2.31E+01	0.00E+00	2.31E+01
			Zn-65	<5.31E+01	0.00E+00	5.31E+01
			Zr-95	<4.83E+01	0.00E+00	4.83E+01
			Nb-95	<2.54E+01	0.00E+00	2.54E+01
			I-131	<2.78E+01	0.00E+00	2.78E+01
			Cs-134	<3.16E+01	0.00E+00	3.16E+01
			Cs-137	<3.21E+01	0.00E+00	3.21E+01
			BaLa-140	<3.24E+01	0.00E+00	3.24E+01

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 081 [CONTROL - SE @ 9.33 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
503872	7/1/2019 - 7/1/2019		Be-7	1.56E+03	3.24E+02	3.34E+02
			K-40	4.10E+03	6.70E+02	3.18E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
505181	8/5/2019 - 8/5/2019		Mn-54	<2.77E+01	0.00E+00	2.77E+01
			Co-58	<2.51E+01	0.00E+00	2.51E+01
			Fe-59	<6.41E+01	0.00E+00	6.41E+01
			Co-60	<2.38E+01	0.00E+00	2.38E+01
			Zn-65	<4.21E+01	0.00E+00	4.21E+01
			Zr-95	<5.20E+01	0.00E+00	5.20E+01
			Nb-95	<3.08E+01	0.00E+00	3.08E+01
			I-131	<4.62E+01	0.00E+00	4.62E+01
			Cs-134	<2.89E+01	0.00E+00	2.89E+01
			Cs-137	<2.81E+01	0.00E+00	2.81E+01
			BaLa-140	<4.42E+01	0.00E+00	4.42E+01
			Be-7	1.68E+03	3.38E+02	3.16E+02
			K-40	3.50E+03	6.25E+02	3.65E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
507334	9/3/2019 - 9/3/2019		Mn-54	<3.85E+01	0.00E+00	3.85E+01
			Co-58	<3.27E+01	0.00E+00	3.27E+01
			Fe-59	<5.85E+01	0.00E+00	5.85E+01
			Co-60	<3.39E+01	0.00E+00	3.39E+01
			Zn-65	<7.34E+01	0.00E+00	7.34E+01
			Zr-95	<5.04E+01	0.00E+00	5.04E+01
			Nb-95	<4.00E+01	0.00E+00	4.00E+01
			I-131	<4.78E+01	0.00E+00	4.78E+01
			Cs-134	<4.29E+01	0.00E+00	4.29E+01
			Cs-137	<3.63E+01	0.00E+00	3.63E+01
			BaLa-140	<5.64E+01	0.00E+00	5.64E+01
			Be-7	1.23E+03	3.11E+02	3.40E+02
			K-40	3.60E+03	7.05E+02	5.91E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
510570	10/7/2019 - 10/7/2019		Mn-54	<3.78E+01	0.00E+00	3.78E+01
			Co-58	<3.04E+01	0.00E+00	3.04E+01
			Fe-59	<8.21E+01	0.00E+00	8.21E+01
			Co-60	<5.15E+01	0.00E+00	5.15E+01
			Zn-65	<7.67E+01	0.00E+00	7.67E+01
			Zr-95	<6.60E+01	0.00E+00	6.60E+01
			Nb-95	<3.95E+01	0.00E+00	3.95E+01
			I-131	<3.92E+01	0.00E+00	3.92E+01
			Cs-134	<4.23E+01	0.00E+00	4.23E+01
			Cs-137	<4.06E+01	0.00E+00	4.06E+01
			BaLa-140	<6.28E+01	0.00E+00	6.28E+01
			Be-7	1.37E+03	4.05E+02	4.52E+02
			K-40	4.52E+03	9.21E+02	4.87E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
511911	11/4/2019 - 11/4/2019		Mn-54	<3.97E+01	0.00E+00	3.97E+01
			Co-58	<2.21E+01	0.00E+00	2.21E+01
			Fe-59	<5.84E+01	0.00E+00	5.84E+01
			Co-60	<3.01E+01	0.00E+00	3.01E+01
			Zn-65	<7.95E+01	0.00E+00	7.95E+01
			Zr-95	<5.73E+01	0.00E+00	5.73E+01
			Nb-95	<3.44E+01	0.00E+00	3.44E+01
			I-131	<2.93E+01	0.00E+00	2.93E+01
			Cs-134	<3.62E+01	0.00E+00	3.62E+01
			Cs-137	<3.29E+01	0.00E+00	3.29E+01
			BaLa-140	<3.07E+01	0.00E+00	3.07E+01
			Be-7	1.66E+03	3.56E+02	3.71E+02
			K-40	2.73E+03	5.71E+02	4.03E+02

Sample Point 084 [INDICATOR - NNE @ 2.58 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
492486	1/7/2019 - 1/7/2019		Mn-54	<2.20E+01	0.00E+00	2.20E+01
			Co-58	<2.20E+01	0.00E+00	2.20E+01

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 084 [INDICATOR - NNE @ 2.58 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA			
492486	1/7/2019 - 1/7/2019	MIXEDBLV	Fe-59	<3.73E+01	0.00E+00	3.73E+01			
			Co-60	<2.58E+01	0.00E+00	2.58E+01			
			Zn-65	<5.58E+01	0.00E+00	5.58E+01			
			Zr-95	<4.40E+01	0.00E+00	4.40E+01			
			Nb-95	<1.97E+01	0.00E+00	1.97E+01			
			I-131	<2.15E+01	0.00E+00	2.15E+01			
			Cs-134	<2.80E+01	0.00E+00	2.80E+01			
			Cs-137	<2.42E+01	0.00E+00	2.42E+01			
			BaLa-140	<2.51E+01	0.00E+00	2.51E+01			
			Be-7	4.27E+03	5.17E+02	2.94E+02			
			K-40	3.26E+03	5.17E+02	2.31E+02			
			493840	2/4/2019 - 2/4/2019	MIXEDBLV	Mn-54	<2.98E+01	0.00E+00	2.98E+01
						Co-58	<2.10E+01	0.00E+00	2.10E+01
Fe-59	<4.95E+01	0.00E+00				4.95E+01			
Co-60	<2.88E+01	0.00E+00				2.88E+01			
Zn-65	<3.46E+01	0.00E+00				3.46E+01			
Zr-95	<5.18E+01	0.00E+00				5.18E+01			
Nb-95	<2.66E+01	0.00E+00				2.66E+01			
I-131	<4.77E+01	0.00E+00				4.77E+01			
Cs-134	<2.93E+01	0.00E+00				2.93E+01			
Cs-137	<2.44E+01	0.00E+00				2.44E+01			
BaLa-140	<4.71E+01	0.00E+00				4.71E+01			
Be-7	3.07E+03	4.56E+02				3.09E+02			
K-40	3.54E+03	6.12E+02				3.71E+02			
496159	3/4/2019 - 3/4/2019	MIXEDBLV	Mn-54	<4.16E+01	0.00E+00	4.16E+01			
			Co-58	<3.65E+01	0.00E+00	3.65E+01			
			Fe-59	<6.38E+01	0.00E+00	6.38E+01			
			Co-60	<3.62E+01	0.00E+00	3.62E+01			
			Zn-65	<7.34E+01	0.00E+00	7.34E+01			
			Zr-95	<5.45E+01	0.00E+00	5.45E+01			
			Nb-95	<3.76E+01	0.00E+00	3.76E+01			
			I-131	<3.67E+01	0.00E+00	3.67E+01			
			Cs-134	<2.63E+01	0.00E+00	2.63E+01			
			Cs-137	<3.43E+01	0.00E+00	3.43E+01			
			BaLa-140	<4.79E+01	0.00E+00	4.79E+01			
			Be-7	7.21E+03	8.80E+02	4.38E+02			
			K-40	4.73E+03	8.16E+02	4.87E+02			
498078	4/1/2019 - 4/1/2019	MIXEDBLV	Mn-54	<2.64E+01	0.00E+00	2.64E+01			
			Co-58	<2.83E+01	0.00E+00	2.83E+01			
			Fe-59	<5.87E+01	0.00E+00	5.87E+01			
			Co-60	<2.93E+01	0.00E+00	2.93E+01			
			Zn-65	<5.56E+01	0.00E+00	5.56E+01			
			Zr-95	<4.20E+01	0.00E+00	4.20E+01			
			Nb-95	<2.75E+01	0.00E+00	2.75E+01			
			I-131	<2.45E+01	0.00E+00	2.45E+01			
			Cs-134	<2.72E+01	0.00E+00	2.72E+01			
			Cs-137	<2.12E+01	0.00E+00	2.12E+01			
			BaLa-140	<2.53E+01	0.00E+00	2.53E+01			
			Be-7	5.80E+03	6.79E+02	3.04E+02			
			K-40	5.18E+03	7.65E+02	3.60E+02			
500161	5/6/2019 - 5/6/2019	MIXEDBLV	Mn-54	<2.71E+01	0.00E+00	2.71E+01			
			Co-58	<1.72E+01	0.00E+00	1.72E+01			
			Fe-59	<4.76E+01	0.00E+00	4.76E+01			
			Co-60	<3.37E+01	0.00E+00	3.37E+01			
			Zn-65	<5.49E+01	0.00E+00	5.49E+01			
			Zr-95	<4.68E+01	0.00E+00	4.68E+01			
			Nb-95	<2.24E+01	0.00E+00	2.24E+01			
			I-131	<2.45E+01	0.00E+00	2.45E+01			
			Cs-134	<2.60E+01	0.00E+00	2.60E+01			
			Cs-137	<2.74E+01	0.00E+00	2.74E+01			

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 084 [INDICATOR - NNE @ 2.58 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
500161	5/6/2019 - 5/6/2019	MIXEDBLV	BaLa-140	<3.57E+01	0.00E+00	3.57E+01
			Be-7	4.65E+02	2.32E+02	3.43E+02
			K-40	3.34E+03	7.08E+02	2.85E+02
501983	6/3/2019 - 6/3/2019	MIXEDBLV	Mn-54	<2.53E+01	0.00E+00	2.53E+01
			Co-58	<2.99E+01	0.00E+00	2.99E+01
			Fe-59	<6.59E+01	0.00E+00	6.59E+01
			Co-60	<7.48E+00	0.00E+00	7.48E+00
			Zn-65	<6.41E+01	0.00E+00	6.41E+01
			Zr-95	<5.79E+01	0.00E+00	5.79E+01
			Nb-95	<3.05E+01	0.00E+00	3.05E+01
			I-131	<4.38E+01	0.00E+00	4.38E+01
			Cs-134	<4.46E+01	0.00E+00	4.46E+01
			Cs-137	<2.43E+01	0.00E+00	2.43E+01
			BaLa-140	<4.45E+01	0.00E+00	4.45E+01
			Be-7	2.58E+02	2.42E+02	3.83E+02
			K-40	2.46E+03	5.57E+02	7.48E+01
503873	7/1/2019 - 7/1/2019	MIXEDBLV	Mn-54	<2.52E+01	0.00E+00	2.52E+01
			Co-58	<1.95E+01	0.00E+00	1.95E+01
			Fe-59	<4.56E+01	0.00E+00	4.56E+01
			Co-60	<2.32E+01	0.00E+00	2.32E+01
			Zn-65	<4.04E+01	0.00E+00	4.04E+01
			Zr-95	<2.88E+01	0.00E+00	2.88E+01
			Nb-95	<2.31E+01	0.00E+00	2.31E+01
			I-131	<2.15E+01	0.00E+00	2.15E+01
			Cs-134	<2.41E+01	0.00E+00	2.41E+01
			Cs-137	<1.78E+01	0.00E+00	1.78E+01
			BaLa-140	<2.81E+01	0.00E+00	2.81E+01
			Be-7	7.90E+02	2.10E+02	2.47E+02
			K-40	3.74E+03	5.62E+02	1.80E+02
505182	8/5/2019 - 8/5/2019	MIXEDBLV	Mn-54	<2.39E+01	0.00E+00	2.39E+01
			Co-58	<2.18E+01	0.00E+00	2.18E+01
			Fe-59	<3.65E+01	0.00E+00	3.65E+01
			Co-60	<2.13E+01	0.00E+00	2.13E+01
			Zn-65	<5.31E+01	0.00E+00	5.31E+01
			Zr-95	<3.12E+01	0.00E+00	3.12E+01
			Nb-95	<3.23E+01	0.00E+00	3.23E+01
			I-131	<4.33E+01	0.00E+00	4.33E+01
			Cs-134	<2.32E+01	0.00E+00	2.32E+01
			Cs-137	<3.34E+01	0.00E+00	3.34E+01
			BaLa-140	<4.55E+01	0.00E+00	4.55E+01
			Be-7	1.82E+03	3.53E+02	2.76E+02
			K-40	2.31E+03	5.10E+02	2.61E+02
507335	9/3/2019 - 9/3/2019	MIXEDBLV	Mn-54	<3.06E+01	0.00E+00	3.06E+01
			Co-58	<2.74E+01	0.00E+00	2.74E+01
			Fe-59	<6.15E+01	0.00E+00	6.15E+01
			Co-60	<3.07E+01	0.00E+00	3.07E+01
			Zn-65	<8.44E+01	0.00E+00	8.44E+01
			Zr-95	<4.57E+01	0.00E+00	4.57E+01
			Nb-95	<3.43E+01	0.00E+00	3.43E+01
			I-131	<4.40E+01	0.00E+00	4.40E+01
			Cs-134	<3.45E+01	0.00E+00	3.45E+01
			Cs-137	<2.65E+01	0.00E+00	2.65E+01
			BaLa-140	<3.53E+01	0.00E+00	3.53E+01
			Be-7	2.33E+03	4.28E+02	3.84E+02
			K-40	2.49E+03	5.24E+02	2.80E+02
510571	10/7/2019 - 10/7/2019	MIXEDBLV	Mn-54	<3.62E+01	0.00E+00	3.62E+01
			Co-58	<2.39E+01	0.00E+00	2.39E+01
			Fe-59	<6.26E+01	0.00E+00	6.26E+01

OCONEE Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 084 [INDICATOR - NNE @ 2.58 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA			
510571	10/7/2019 - 10/7/2019	MIXEDBLV	Co-60	<2.91E+01	0.00E+00	2.91E+01			
			Zn-65	<7.88E+01	0.00E+00	7.88E+01			
			Zr-95	<4.84E+01	0.00E+00	4.84E+01			
			Nb-95	<2.84E+01	0.00E+00	2.84E+01			
			I-131	<4.76E+01	0.00E+00	4.76E+01			
			Cs-134	<2.86E+01	0.00E+00	2.86E+01			
			Cs-137	<2.57E+01	0.00E+00	2.57E+01			
			BaLa-140	<4.67E+01	0.00E+00	4.67E+01			
			Be-7	2.61E+03	4.31E+02	3.03E+02			
			K-40	3.40E+03	6.17E+02	6.02E+01			
			511912	11/4/2019 - 11/4/2019	MIXEDBLV	Mn-54	<1.97E+01	0.00E+00	1.97E+01
						Co-58	<2.44E+01	0.00E+00	2.44E+01
						Fe-59	<4.88E+01	0.00E+00	4.88E+01
Co-60	<2.06E+01	0.00E+00				2.06E+01			
Zn-65	<3.92E+01	0.00E+00				3.92E+01			
Zr-95	<4.69E+01	0.00E+00				4.69E+01			
Nb-95	<2.50E+01	0.00E+00				2.50E+01			
I-131	<2.90E+01	0.00E+00				2.90E+01			
Cs-134	<3.19E+01	0.00E+00				3.19E+01			
Cs-137	<2.64E+01	0.00E+00				2.64E+01			
BaLa-140	<2.14E+01	0.00E+00				2.14E+01			
Be-7	3.78E+03	5.13E+02				3.42E+02			
K-40	3.65E+03	6.02E+02				3.12E+02			
512943	12/2/2019 - 12/2/2019	MIXEDBLV	Mn-54	<2.79E+01	0.00E+00	2.79E+01			
			Co-58	<2.65E+01	0.00E+00	2.65E+01			
			Fe-59	<5.31E+01	0.00E+00	5.31E+01			
			Co-60	<3.06E+01	0.00E+00	3.06E+01			
			Zn-65	<7.43E+01	0.00E+00	7.43E+01			
			Zr-95	<4.86E+01	0.00E+00	4.86E+01			
			Nb-95	<2.74E+01	0.00E+00	2.74E+01			
			I-131	<2.99E+01	0.00E+00	2.99E+01			
			Cs-134	<3.29E+01	0.00E+00	3.29E+01			
			Cs-137	<3.08E+01	0.00E+00	3.08E+01			
			BaLa-140	<3.31E+01	0.00E+00	3.31E+01			
			Be-7	5.62E+03	7.41E+02	4.00E+02			
			K-40	4.10E+03	7.51E+02	3.81E+02			

APPENDIX F

**ERRATA TO
PREVIOUS REPORTS**

There are no errata to be appended to the
2019 Oconee Nuclear Station AREOR.

Enclosure 6
RA-20-0079

ENCLOSURE 6: [RNP Annual Radiological Environmental Operating Report](#)



ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT

DUKE ENERGY PROGRESS, LLC
H. B. ROBINSON STEAM ELECTRIC PLANT
Unit No. 2

2019



1.0 EXECUTIVE SUMMARY

This Annual Radiological Environmental Operating Report describes the H. B. Robinson Steam Electric Plant, Unit No. 2 (HBRSEP or Robinson Nuclear Plant) Radiological Environmental Monitoring Program (REMP), and the program results for the calendar year 2019.

Included in the report are the identification of sampling locations, descriptions of environmental sampling and analysis procedures, comparisons of present environmental radioactivity levels and pre-operational environmental data, analysis of trends in environmental radiological data as potentially affected by plant operations, and a summary of environmental radiological sampling results. Quality assurance practices and program changes are also discussed.

Sampling activities were conducted as prescribed by the HBRSEP ODCM. Required analyses were performed and detection capabilities were met for the collected samples required by the ODCM. One-thousand-three-hundred-fifty-nine samples were analyzed comprising 1,359 test results in order to compile data for the 2019 HBRSEP Annual Radiological Environmental Operating Report (AREOR). A new sampling location was added to the HBRSEP REMP as a result of the 2019 land use census.

Concentrations observed in the environment in 2019 for plant related radionuclides were within the ranges of concentrations observed in the past. Inspection of data showed that radioactivity concentrations in surface water are higher than the activities reported for samples collected at control locations. The radioactivity concentrations of the control location samples of broadleaf vegetation were higher than those samples collected at the indicator locations. All positively identified measurements attributable to plant operation were within limits as specified in ODCM.

The continued operation of HBRSEP has not contributed measurable radiation or the presence of gamma radioactivity in the environmental media monitored. The Lake Robinson surface water samples revealed tritium concentrations that are well within the applicable regulatory limits. The radiological environmental data for 2019 indicates that radioactivity concentrations were not higher than expected and all positively identified measurements attributable to HBRSEP operations in 2019 were within limits as specified in the HBRSEP ODCM, thus presenting no significant impact on the environment or public safety.

2.0 INTRODUCTION

2.1 SITE DESCRIPTION AND SAMPLE LOCATIONS

The H. B. Robinson Steam Electric Plant, Unit No. 2 (HBRSEP) is located in Darlington County, South Carolina, approximately five (5) miles northwest of Hartsville, and approximately twenty five (25) miles northwest of Florence, South Carolina. Lake Robinson is adjacent to the plant and is the source of cooling water. The lake was impounded during the construction of Robinson Unit No.1 (coal fired). The lake is fed by Black Creek and is approximately 2,250 acres in area. The plant intake is at the southern portion of the lake near the dam. The discharge is to a canal which conveys the cooling water to a point 4.2 miles north of the plant, where it returns to Lake Robinson.

HBRSEP consists of a pressurized water reactor (Unit No. 2) that is designed to produce 2339 Megawatts thermal (MWt). The site was shared with a pulverized coal unit (Unit No.1), which established commercial operation in 1960. Unit 1 is now offline and has been decommissioned. Commercial production was initiated by Unit No. 2 on March 7, 1971.

Figures 2.1-1 and 2.1-2 are maps depicting the Thermoluminescent Dosimeter (TLD) monitoring locations and the sampling locations. The location numbers shown on these maps correspond to those listed in Tables 2.1-A and 2.1-B. Figure 2.1-1 comprises all sample locations within a one mile radius of RNP. Figure 2.1-2 comprises all sample locations with a ten mile radius of RNP.

2.2 SCOPE AND REQUIREMENTS OF THE REMP

The Radiological Environmental Monitoring Program (REMP) has been in effect at HBRSEP since 1973. The preoperational program provides data on the existing environmental radioactivity levels for the site and vicinity which may be used to determine whether increases in environmental levels are attributable to the plant. The operational program provides surveillance and backup support of detailed effluent monitoring, which is necessary to evaluate the significance, if any, of the contributions to the existing environmental radioactivity levels that result from station operation.

This monitoring program is based on NRC guidance as reflected in the HBRSEP Off-Site Dose Calculation Manual (ODCM), with regards to sample media, sampling locations, sampling frequency and analytical sensitivity requirements. Indicator and control locations were established for comparison purposes to distinguish radioactivity of plant origin from natural or other “man-made” environmental radioactivity. The environmental monitoring program also verifies projected and anticipated radionuclide concentrations in the environment and related exposures from releases of radionuclides from HBRSEP. This program satisfies the requirements of Section IV.B.2 of Appendix I to 10 CFR 50 and provides surveillance of all appropriate critical exposure pathways to man and protects vital interests of the company, public and state and federal agencies concerned with the environment. Reporting levels for

activity found in environmental samples are listed in Table 2.2-A. Table 2.2-B lists the REMP analysis and frequency schedule.

The Annual Land Use Census, required by the HBRSEP Off-Site Dose Calculation Manual (ODCM), is performed to ensure that changes in the use of areas at or beyond the site boundary are identified and that modifications to the REMP are made if required by changes in land use. This census satisfies the requirements of Section IV.B.3 of Appendix I to 10 CFR 50. Results are shown in Table 3.10.

Participation in an interlaboratory comparison program as required by HBRSEP ODCM Operational Requirements provides for independent checks on the precision and accuracy of measurements of radioactive material in REMP sample matrices. Such checks are performed as part of the quality assurance program for environmental monitoring in order to demonstrate that the results are valid for the purposes of Section IV.B.2 of Appendix I to 10 CFR 50. A summary of the results obtained as part of this comparison program are in Section 4 of this annual report.

2.3 STATISTICAL AND CALCULATIONAL METHODOLOGY

2.3.1 ESTIMATION OF THE MEAN VALUE

There was one (1) basic statistical calculation performed on the raw data resulting from the environmental sample analysis program. The calculation involved the determination of the mean value for the indicator and the control samples for each sample medium. The mean is a widely used statistic. This value was used in the reduction of the data generated by the sampling and analysis of the various media in the Radiological Environmental Monitoring Program. "Net activity (or concentration)" is the activity (or concentration) determined to be present in the sample. No "Minimum Detectable Activity", "Lower Limit of Detection", "Less Than Level", or negative activities or concentrations are included in the calculation of the mean. The following equation was used to estimate the mean:

$$\bar{x} = \frac{\sum_{i=1}^N x_i}{N}$$

Where:

\bar{x} = estimate of the mean,

i = individual sample,

N = total number of samples with a net activity (or concentration),

x_i = net activity (or concentration) for sample i .

2.3.2 LOWER LIMIT OF DETECTION AND MINIMUM DETECTABLE ACTIVITY

The Lower Limit of Detection (LLD) and Minimum Detectable Activity (MDA) are used throughout the REMP.

LLD - The LLD, as defined in the ODCM as the smallest concentration of radioactive material in a sample that will yield a net count, above the system background, that will be detected with 95% probability with only 5% probability of falsely concluding that a blank observation represents a "real" signal. The LLD is an *a priori* (before the fact) lower limit of detection. The actual LLD is dependent upon the standard deviation of the background counting rate, the counting efficiency, the sample size (mass or volume), the radiochemical yield and the radioactive decay of the sample between sample collection and counting. The "required" LLD's for each sample medium and selected radionuclides are given in the ODCM and are listed in Table 2.2-C.

MDA - The MDA is the net counting rate (sample after subtraction of background) that must be surpassed before a sample is considered to contain a scientifically measurable amount of a radioactive material exceeding background amounts. The MDA is calculated using a sample background and may be thought of as an "actual" LLD for a particular sample measurement. Certain gross counting measurements display a calculated negative value, indicating background is greater than sample activity.

2.3.3 TREND IDENTIFICATION

One of the purposes of an environmental monitoring program is to determine if there is a buildup of radionuclides in the environment due to the operation of the nuclear station. Visual inspection of tabular or graphical presentations of data (including preoperational) is used to determine if a trend exists. A decrease in a particular radionuclide's concentration in an environmental medium does not indicate that reactor operations are removing radioactivity from the environment but that reactor operations are not adding that radionuclide to the environment in quantities exceeding the preoperational level and that the normal removal processes (radioactive decay, deposition, resuspension, etc.) are influencing the concentration.

Substantial increases or decreases in the amount of a particular radionuclide's release from the nuclear plant will greatly affect the resulting environmental levels; therefore, a knowledge of the release of a radionuclide from the nuclear plant is necessary to completely interpret the trends, or lack of trends, determined from the environmental data. Factors that may affect environmental levels of radionuclides include prevailing weather conditions (periods of drought, solar cycles or heavier than normal precipitation), construction in or around either the nuclear plant or the sampling location, and addition or deletion of other sources of radioactive materials (such as the 1986 Chernobyl accident and the 2011 Japan earthquake and tsunami, which triggered the Fukushima Dai-ichi nuclear power plant incident). Some of these factors may be obvious while others are sometimes unknown. Therefore, how trends are identified will include some judgment by plant personnel.

Figure 2.1-1

Radiological Environmental Sampling Locations
(Near Plant)

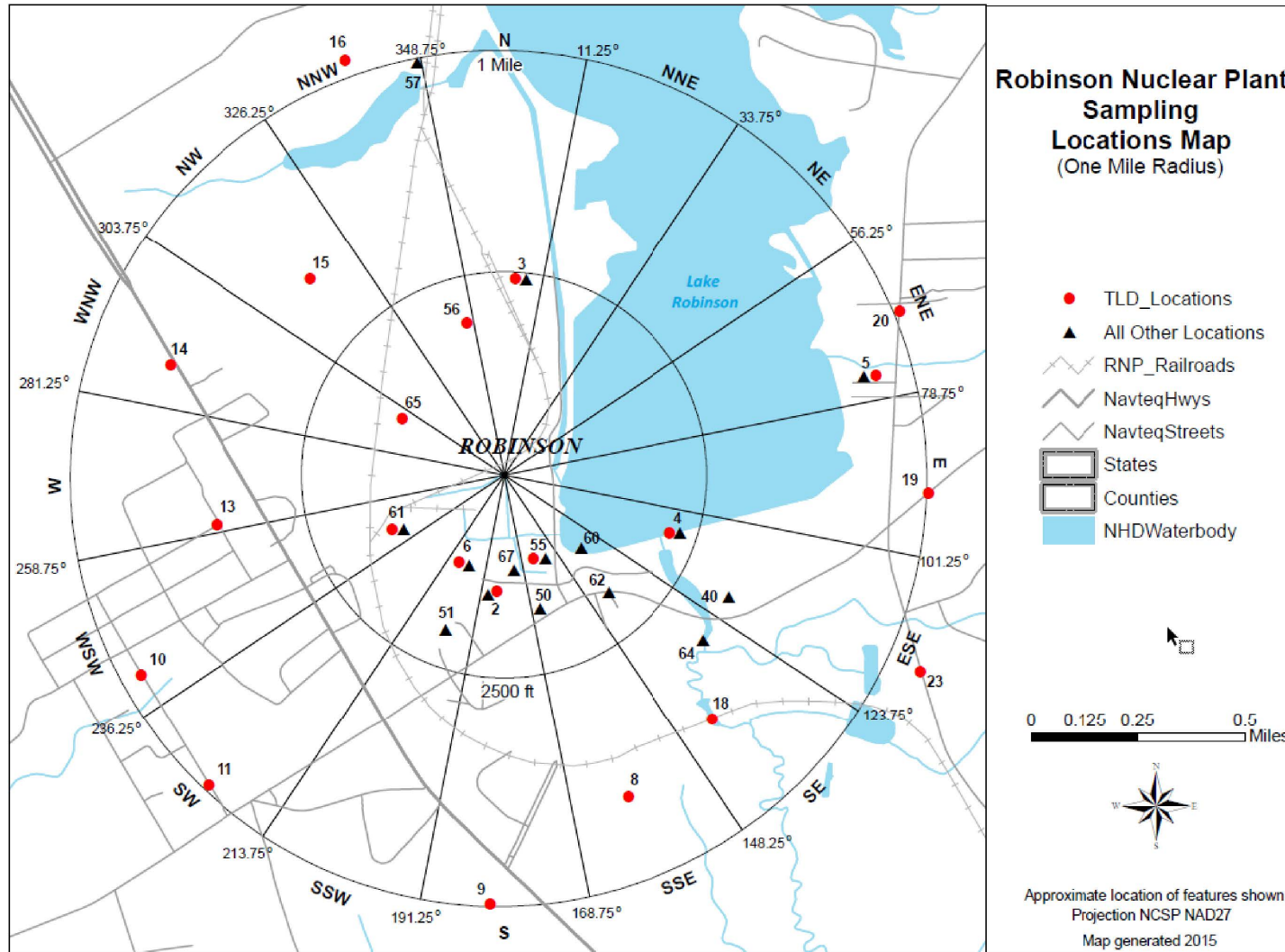


Figure 2.1-2

**Radiological Environmental Sampling Locations
(Distant from Plant)**

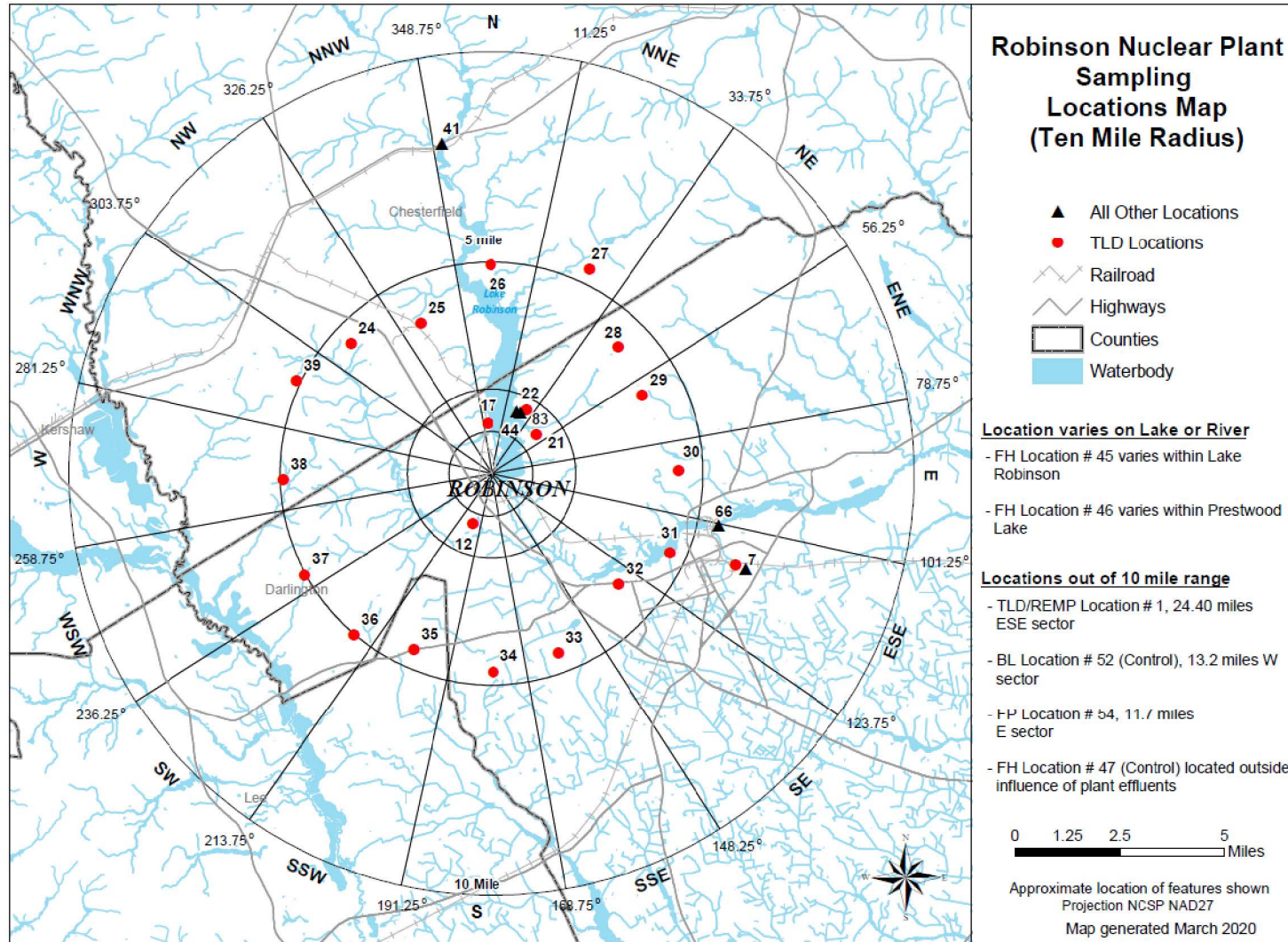


TABLE 2.1-A

**H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2 (HBRSEP)
RADIOLOGICAL MONITORING PROGRAM SAMPLING LOCATIONS**

Site#	Type*	Location Description**	AR* & AP*	SW*	SS*	FP(a)*	Fish (FI)*	BLV(b)*	GW*
1	C	24.4 miles ESE Florence, S.C.	W/Q						
2	I	0.2 miles S Information Center	W/Q						
3	I	0.5 miles N Microwave Tower	W/Q						
4	I	0.4 miles ESE Spillway	W/Q						
5	I	0.9 miles ENE East shore of lake near Johnson's Landing	W/Q						
6	I	0.2 miles SSW Information Center	W/Q						
7	I	6.4 miles ESE CP&L facility on RR Avenue, Hartsville	W/Q						
40	I	0.6 miles ESE Black Creek at Old Camden Road (S-16-23) – Lake Robinson		M					
41	C	8.0 miles N Black Creek at US Hwy 1		M					
44	I	1.6 miles NNE East Shore of Lake, Shady Rest Club			SA				
45	I	Site varies within Lake Robinson					SA		
46	I	Site varies within Prestwood Lake					SA		
47	C	Control station, Any lake not influenced by plant discharge					SA		
50	I	SSE Close to Site Boundary						M ^(b)	
51	I	SSW Close to Site Boundary						M ^(b)	
52	C	10 miles W near Bethune						M ^(b)	
54	I	10.1 miles E Auburndale Plantation (if irrigating from Black Creek)				A ^(a)			
55	I	0.2 miles SSE South of West Settling Pond	W/Q						
60	I	0.2 miles SE Robinson Picnic Area	W/Q						
61	I	0.3 miles WSW West Parking lot near RR tracks	W/Q						
62	I	SE Close to Site Boundary						M ^(b)	
64	I	0.6 miles SE Artesian Well							Q
67	I	S Close to Site Boundary						M ^(b)	
83	I	1.60 miles NNE						M ^(b)	

(a) During Harvest/Growing Season

(b) When Available

* Refer to List of Acronyms Used in this Text in Table of Contents

**GPS data reflect approximate accuracy to within 2-5 meters. GPS field measurements were taken as close as possible to the item of interest.

TABLE 2.1-B

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2 (HBRSEP)

RADIOLOGICAL MONITORING PROGRAM SAMPLING LOCATIONS (TLD SITES)

Table 2.1-B Codes	
C	Control
IR	Inner Ring
OR	Outer Ring
SI	Special Interest

Site #	Measure Type	Location*	Distance (miles)*	Sector	Site #	Measure Type	Location*	Distance (miles)*	Sector
1	C	Florence, SC	24.4	ESE	23	IR	New Market Road (#S-16-39)	1.0	ESE
2	IR	Information Center ^{1,2}	0.2	S	24	OR	Sowell Road (#S-13-711)	4.6	NW
3	IR	Microwave Tower	0.5	N	25	OR	Lake Robinson Road (#S-13-346)	4.0	NNW
4	IR	Spillway	0.4	ESE	26	OR	Lake Robinson Road (#S-13-346)	5.0	N
5	IR	East shore of lake near Johnson's Landing	0.9	ENE	27	OR	Prospect Church Road (#S-13-763)	5.4	NNE
6	IR	Information Center ^{1,2}	0.2	SSW	28	OR	New Market Road (#S-13-39)	4.3	NE
7	OR	CP&L Facility on RR Avenue, Hartsville	6.4	ESE	29	OR	Ruby Road (#S-16-20)	4.0	ENE
8	IR	Transmission right-of-way	0.8	SSE	30	OR	Ruby Road (#S-16-20)	4.4	E
9	IR	Transmission right-of-way	1.0	S	31	OR	Lakeshore Drive	4.6	ESE
10	IR	Clyde Church of God	1.0	WSW	32	OR	Transmission right-of-way	4.0	SE
11	IR	Old Camden Road	1.0	SW	33	OR	Bay Road (#S-16-493)	4.5	SSE
12	IR	Off of Old Camden Road	1.2	SSW	34	OR	Kellybell Road (#S-16-772)	4.7	S
13	IR	Corner of Saluda and Sandpit Roads	0.7	W	35	OR	Kelly Bridge Road (#S-31-51)	4.5	SSW
14	IR	First Baptist Church of Pine Ridge	0.8	WNW	36	OR	Kingston Drive	5.0	SW
15	IR	Transmission right-of-way	0.7	NW	37	OR	Pine Cone Road	5.0	WSW
16	IR	South side of Darlington Co. I.C. Turbine Plant	1.0	NNW	38	OR	Union Church Road	4.9	W
17	IR	Darlington Co. Plant emergency fire pump	1.2	N	39	OR	King's Pond Road	5.1	WNW
18	IR	Old Black Creek RR trestle	0.7	SE	55	IR	South of the West Settling Pond	0.2	SSE
19	IR	Old Camden Road (#S-16-23)	1.0	E	56	IR	North of the center of the 7P-ISFSI ^{1,2}	0.4	NNW
20	IR	New Market Road (#S-16-39)	1.0	ENE	61	IR	West Parking lot near RR tracks ²	0.3	WSW
21	IR	New Market Road (#S-16-39)	1.4	NE	65	IR	Northwest of the 24P-ISFSI ²	0.3	WNW
22	IR	Shady Rest entrance off of Cloverdale Drive	1.7	NNE					

1 Required for monitoring of the 7P-ISFSI

2 Required for monitoring of the 24P-ISFSI

* GPS data reflect approximate accuracy to within 2-5 meters. GPS field measurements were taken as close as possible to the item of interest.

TABLE 2.2-A**REPORTING LEVELS FOR RADIOACTIVITY
CONCENTRATIONS IN ENVIRONMENTAL SAMPLES**

Analysis	Water (pCi/liter)	Airborne (pCi/m ³)	Fish (pCi/kg-wet)	Milk (pCi/liter)	Food Products (pCi/kg-wet)
H-3	20,000 ^(a)	----	----	----	----
Mn-54	1,000	----	30,000	----	----
Fe-59	400	----	10,000	----	----
Co-58	1,000	----	30,000	----	----
Co-60	300	----	10,000	----	----
Zn-65	300	----	20,000	----	----
Zr-Nb-95	400	----	----	----	----
I-131	2 ^(b)	0.9	----	3	100
Cs-134	30	10	1,000	60	1,000
Cs-137	50	20	2,000	70	2,000
Ba-La-140	200	----	----	300	----

(a) For drinking water samples. This is 40 CFR Part 141 value. If no drinking water pathway exists, a value of 30,000 pCi/liter may be used.

(b) If no drinking water pathway exists, a value of 20 pCi/liter may be used.

“----” represents no specified limits

TABLE 2.2-B**REMP ANALYSIS FREQUENCY**

Sample Medium	Analysis Schedule	Gamma Isotopic	Tritium	Low Level I-131	Gross Beta	TLD
Air Radioiodine	Weekly	X				
Air Particulate	Weekly				X	
	Quarterly	X				
Direct Radiation	Quarterly					X
Surface Water	Monthly Composite	X	X			
Ground Water	Quarterly	X	X			
Shoreline Sediment	Semiannually	X				
Fish	Semiannually	X				
Broadleaf Vegetation	Monthly ^(a)	X				
Food Products	Annually ^(b)	X				

(a) When Available

(b) At harvest

TABLE 2.2-C***A PRIORI LOWER LIMITS OF DETECTION (LLD)^(a)***

Analysis	Water (pCi/liter)	Airborne (pCi/m ³)	Fish (pCi/kg-wet)	Milk (pCi/liter)	Food Products (pCi/kg-wet)	Sediment (pCi/kg-dry)
Gross Beta	----	0.01	----	----	----	----
H-3	2000 ^(c)	----	----	----	----	----
Mn-54	15	----	130	----	----	----
Fe-59	30	----	260	----	----	----
Co-58, 60	15	----	130	----	----	----
Zn-65	30	----	260	----	----	----
Zr-Nb-95 ^(b)	15	----	----	----	----	----
I-131	1 ^(d)	0.07	----	1	60	----
Cs-134	15	0.05	130	15	60	150
Cs-137	18	0.06	150	18	80	180
Ba-La-140 ^(b)	15	----	----	15	----	----

(a) The LLD is defined in Section 2.3.2.

(b) The specified LLD applies to the daughter nuclide of an equilibrium mixture of the parent and daughter nuclides.

(c) If no drinking water pathway exists, a value of 3000 pCi/liter may be used.

(d) If no drinking water pathway exists, a value of 15 pCi/liter may be used.

“----” represents no specified limits

3.0 INTERPRETATION OF RESULTS

Review of the 2019 analysis results was performed to identify changes in environmental levels as a results of plant operations. The review is summarized in this section. Data from 2019 was compared to preoperational and historical data. Sample data for some media is not directly comparable to preoperational and earlier operational sample results because of either significant changes in the analysis methods or changes in the reporting of the results. Summary tables containing 2019 information required by Technical Specifications Administrative Control 5.6.2 are located in Appendix B. REMP results for 2019 are located in Appendix E.

Evaluation for significant trends was performed for the radionuclides listed as required LLDs within the HBRSEP ODCM. The radionuclides include: H-3, Mn-54, Fe-59, Co-58, Co-60, Zn-65, Zr-95, Nb-95, I-131, Cs-134, Cs-137, Ba-140 and La-140. Trending of air particulate gross beta results is being performed. Trending is also performed for other radionuclides that are detected and could have been the result of station effluents. Only ODCM required radionuclides were detected in 2019.

Trending was performed by comparing annual mean concentrations of any effluent related detected radionuclide to historical results. Factors evaluated include the frequency of detection and the concentration terms of the percent of the radionuclide's ODCM reporting level (Table 2.2-A). All maximum percent of reporting level values were well below the 100% action level. The highest value reached during 2019 due to HBRSEP operation was 16.0% for H-3 in surface water sample collected at location 40.

Review of the 2019 data presented in this section supports the conclusion that there were no significant changes in environmental sample radionuclide concentrations of samples collected and analyzed from HBRSEP and surrounding areas that were attributable to plant operations. The radiological environmental data for 2019 indicates that radioactivity concentrations were not higher than expected and all positively identified measurements attributable to HBRSEP operations in 2019 were within limits as specified in the HBRSEP ODCM, thus presenting no significant impact on the environment or public safety.

Data presented in Sections 3.1 – 3.9 support the conclusion that there were no significant increases in radionuclides in the environment around HBRSEP due to plant operations in 2019. Similarly, there was no significant increase in ambient background radiation levels in the surrounding areas. The 2019 land use census data, shown in Section 3.10, indicates that program changes were required as a result of the census.

3.1 AIRBORNE RADIOIODINE AND PARTICULATES

In 2019, 519 air radioiodine and particulate samples were analyzed, 467 from nine indicator locations and 52 from one control location. The air samplers operated for a total of 99.56% availability for the 2019 year. Particulate samples were analyzed weekly for gross beta. A quarterly gamma analysis was performed on the quarterly filter composite (by location). Radioiodine samples received a weekly gamma analysis. During the collection period of 9APR2019-16APR2019, the air sampler was found with the timer stuck (NCR# 02268794). There was no effect on the analysis results due to the stuck timer.

Gross beta analyses indicated $2.09\text{E-}2$ pCi/m³ at the location with the highest annual mean and $1.99\text{E-}2$ pCi/m³ at the control location. Figure 3.1 and Table 3.1-A provide individual sample gross beta results for the highest annual mean indicator location and the control location concentrations since 1999 to 2019. The two sample locations' results are similar in concentration and have negligible variance.

There was no detectable I-131 in air samples in 2019. Table 3.1-B gives the highest indicator location annual mean and control location annual mean for I-131 since 1999. The tables show similar historical concentrations for both the indicator and control locations and the activities decreasing from early in the operational history of the plant.

There were no detectable gamma emitting radionuclides detected in air particulate samples in 2019 due to HBRSEP operations. No gamma emitting particulate due to HBRSEP operations have been detected in indicator location samples from 1999-2019.

K-40 and Be-7 observed in air samples are naturally occurring radionuclides.

Figure 3.1

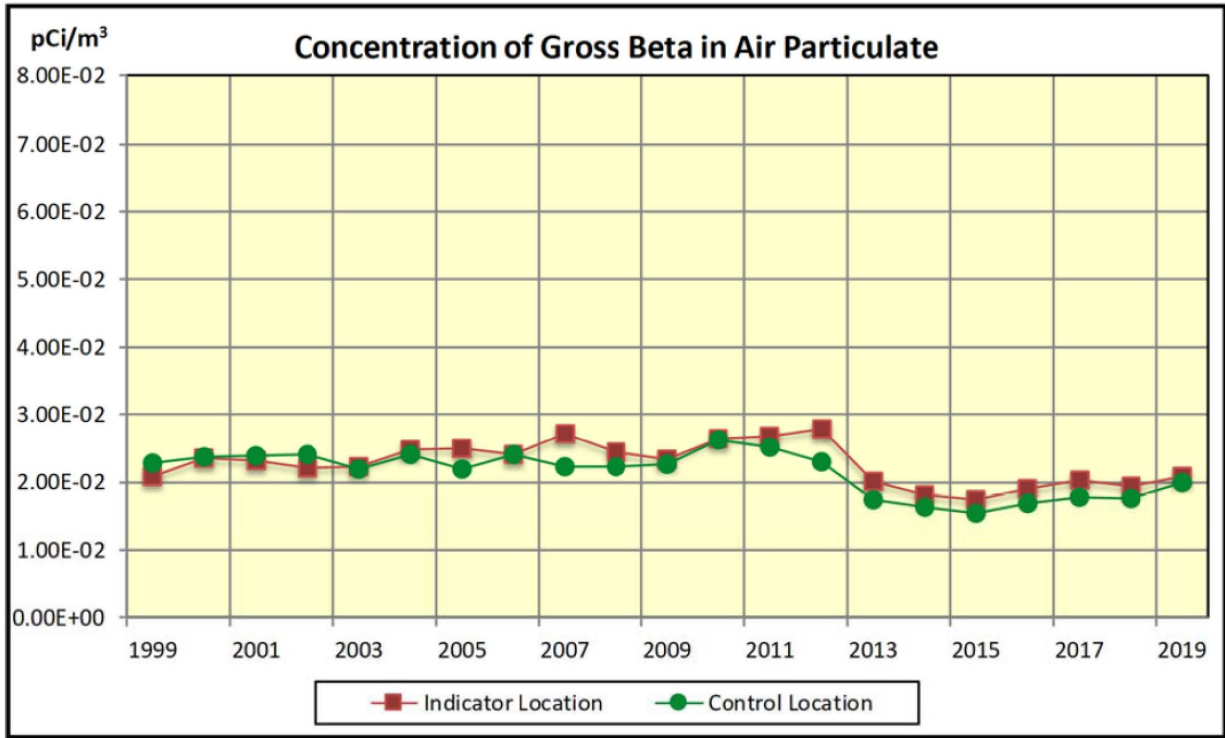


Table 3.1-A Mean Concentration of Gross Beta in Air Particulate

Year	Indicator Location (pCi/m³)	Control Location (pCi/m³)
1999	2.09E-2	2.29E-2
2000	2.35E-2	2.37E-2
2001	2.31E-2	2.39E-2
2002	2.21E-2	2.41E-2
2003	2.22E-2	2.19E-2
2004	2.48E-2	2.41E-2
2005	2.50E-2	2.19E-2
2006	2.40E-2	2.40E-2
2007	2.71E-2	2.23E-2
2008	2.44E-2	2.23E-2
2009	2.34E-2	2.27E-2
2010	2.65E-2	2.62E-2
2011	2.68E-2	2.51E-2
2012	2.78E-2	2.30E-2
2013	2.01E-2	1.74E-2
2014	1.82E-2	1.63E-2
2015	1.74E-2	1.54E-2
2016	1.90E-2	1.68E-2
2017	2.03E-2	1.78E-2
2018	1.94E-2	1.75E-2
2019	2.09E-2	1.99E-2

Table 3.1-B Mean Concentration of Air Radioiodine (I-131)

Year	Indicator Location (pCi/m ³)	Control Location (pCi/m ³)
1999	0.00E+0	0.00E+0
2000	0.00E+0	0.00E+0
2001	0.00E+0	0.00E+0
2002	0.00E+0	0.00E+0
2003	0.00E+0	0.00E+0
2004	0.00E+0	0.00E+0
2005	0.00E+0	0.00E+0
2006	0.00E+0	0.00E+0
2007	0.00E+0	0.00E+0
2008	0.00E+0	0.00E+0
2009	0.00E+0	0.00E+0
2010	0.00E+0	0.00E+0
2011 ⁽¹⁾	8.23E-2	8.10E-2
2012	0.00E+0	0.00E+0
2013	0.00E+0	0.00E+0
2014 ⁽²⁾	0.00E+0	0.00E+0
2015	0.00E+0	0.00E+0
2016	0.00E+0	0.00E+0
2017	0.00E+0	0.00E+0
2018	0.00E+0	0.00E+0
2019	0.00E+0	0.00E+0

0.00E+0 indicates no detectable measurements

(1) 2011 concentrations affected by Fukushima Dai-ichi

(2) 2014 Gamma spectroscopy system was replaced 10JUL2014. Gamma spectroscopy system hardware, detector cooling apparatus, software, electronics, nuclide identification libraries, and analytical test matrix components for test matrices were modified (NCR # 0739995). No analytical changes were observed due to the 2014 gamma spectroscopy system change.

3.2 SURFACE WATER

Gamma spectroscopy and Tritium analyses were performed on 24 monthly surface water samples. One indicator and one control location were sampled. The indicator is downstream of the liquid effluent release point.

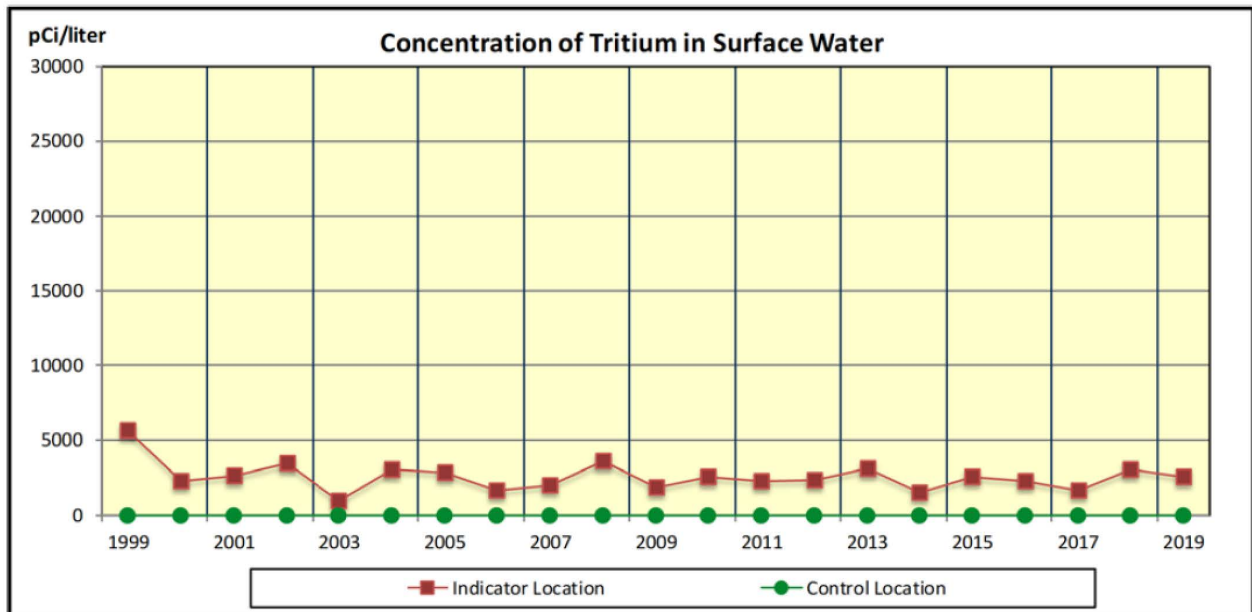
Tritium was detected in the 7 of the 12 indicator samples. The 2019 surface water highest annual mean tritium concentration was 2,560 pCi/liter. The individual samples ranged from 224 to 4,810 pCi/liter. For comparison purposes, the 2018 mean concentration was 3,030 pCi/liter. Tritium was not detected in any of the control surface water samples.

Figure 3.2 shows the indicator and control annual means for Tritium since 1999. Table 3.2 lists the indicator and control annual means since 1999.

Gamma spectroscopy analysis did not detect any station related gamma activity during 2019. No gamma emitting radionuclides attributable to plant operations have been detected in surface water samples since 1999.

K-40 and Be-7 observed in surface water samples are naturally occurring radionuclides.

Figure 3.2



There is no reporting level for tritium in surface water; however, if no drinking water pathway exists, a value of 30,000 pCi/l may be used.

Table 3.2 Mean Concentration of Tritium in Surface Water

Year	Indicator Location (pCi/l)	Control Location (pCi/l)
1999	5.64E+3	0.00E+0
2000	2.30E+3	0.00E+0
2001	2.64E+3	0.00E+0
2002	3.47E+3	0.00E+0
2003	9.53E+2	0.00E+0
2004	3.03E+3	0.00E+0
2005	2.83E+3	0.00E+0
2006	1.65E+3	0.00E+0
2007	2.03E+3	0.00E+0
2008	3.59E+3	0.00E+0
2009	1.86E+3	0.00E+0
2010	2.55E+3	0.00E+0
2011	2.29E+3	0.00E+0
2012	2.38E+3	0.00E+0
2013	3.14E+3	0.00E+0
2014	1.50E+3	0.00E+0
2015	2.56E+3	0.00E+0
2016	2.28E+3	0.00E+0
2017	1.62E+3	0.00E+0
2018	3.03E+3	0.00E+0
2019	2.56E+3	0.00E+0

0.00E+0 indicates no detectable measurements

3.3 GROUND WATER

Gamma spectroscopy and tritium analyses were performed on 4 quarterly ground water samples collected at one indicator location during 2019. There is no control ground water location.

Tritium analysis did not detect Tritium in any of the indicator samples in 2019.

Gamma spectroscopy analyses did not detect any gamma emitting radionuclides attributable to plant operations during 2019.

K-40 observed in ground water samples is a naturally occurring radionuclide.

3.4 MILK

Milk monitoring has not been conducted due to the unavailability of milk samples in the area since July 17, 1998, when the dairy ceased operation. Milk sampling will resume if a new sample location is identified. Broadleaf sampling is conducted since no milk animals are located within a radius of approximately five miles of the plant in any sector and is used to calculate dose to an individual via the vegetation-milk-man pathway.

3.5 BROADLEAF VEGETATION

Gamma spectroscopy was performed on 37 broadleaf vegetation samples during 2019. Five indicator locations and one control location were sampled. A new sampling location 83 was added as a result of the 2019 land use census.

During 2019, 9 of the 30 samples taken from the indicator locations identified Cs-137 activity with the highest annual mean concentration of 46.0 pCi/kg. Cs-137 was detected in 4 of the 7 samples taken from the control location with an annual mean concentration of 69.8 pCi/kg.

It is not unusual for Cs-137 to be present in vegetation. It is a constituent of nuclear weapons test fallout, nuclear plant accidents and has been observed in samples from indicator and control locations since 1999. Figure 3.5 displays the highest annual mean indicator and control location concentrations for Cs-137 in broadleaf vegetation from 1999 to 2019 and Table 3.5 lists these values.

K-40 and Be-7 observed in broadleaf vegetation sample are naturally occurring radionuclides.

Figure 3.5

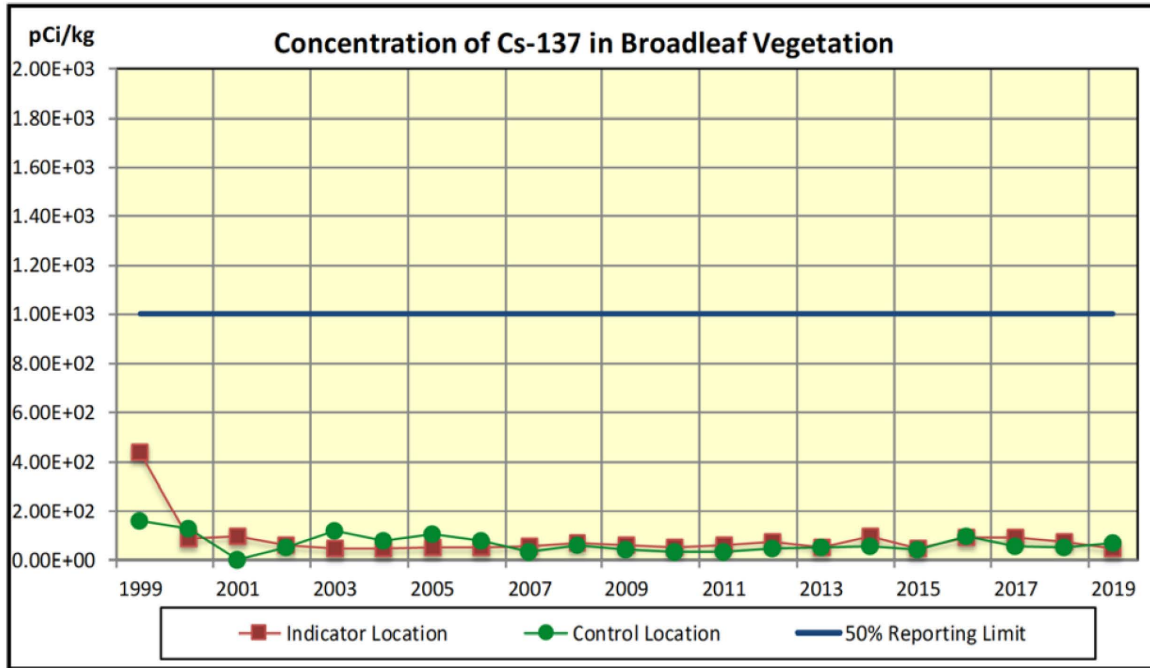


Table 3.5 Mean Concentrations of Radionuclides in Broadleaf Vegetation (pCi/kg)

Year	Cs-137 Indicator Location	Cs-137 Control Location
1999	4.39E+2	2.58E+2
2000	8.86E+1	1.29E+2
2001	9.72E+1	1.53E+0
2002	6.15E+1	4.96E+1
2003	4.66E+1	1.19E+2
2004	4.66E+1	7.64E+1
2005	5.27E+1	1.07E+2
2006	5.11E+1	7.76E+1
2007	5.38E+1	3.25E+1
2008	6.76E+1	6.06E+1
2009	5.84E+1	4.22E+1
2010	8.02E+1	3.38E+1
2011	5.84E+1	3.41E+1
2012	7.32E+1	4.83E+1
2013	5.27E+1	5.31E+1
2014 ⁽¹⁾	9.62E+1	5.51E+1
2015	4.68E+1	4.21E+1
2016	9.23E+1	9.72E+1
2017	9.12E+1	5.40E+1
2018	7.29E+1	5.34E+1
2019	4.60E+1	6.98E+1

(1) 2014 Gamma spectroscopy system was replaced 10JUL2014. Gamma spectroscopy system hardware, detector cooling apparatus, software, electronics, nuclide identification libraries, and analytical test matrix components for test matrices were modified (NCR # 0739995). No analytical changes were observed due to the 2014 gamma spectroscopy system change.

3.6 FOOD PRODUCTS

Gamma spectroscopy was performed on 2 food product samples during 2019. One indicator location was sampled. There were no gamma emitting radionuclides due to RNP plant operations identified in food product samples in 2019.

K-40 and Be-7 observed in broadleaf vegetation sample are naturally occurring radionuclides.

3.7 FISH

Gamma spectroscopy was performed on 12 fish samples during 2019. Two indicator locations and one control location were sampled. There were no gamma emitting radionuclides due to RNP plant operations identified in fish samples in 2019.

Figure 3.7 is a graph displaying the high annual means for Cs-137 from 1999 to 2019. Table 3.7 displays the highest annual mean indicator and control location concentrations for Cs-137 in fish from 1999 to 2019.

K-40 and Be-7 observed in broadleaf vegetation sample are naturally occurring radionuclides.

Figure 3.7

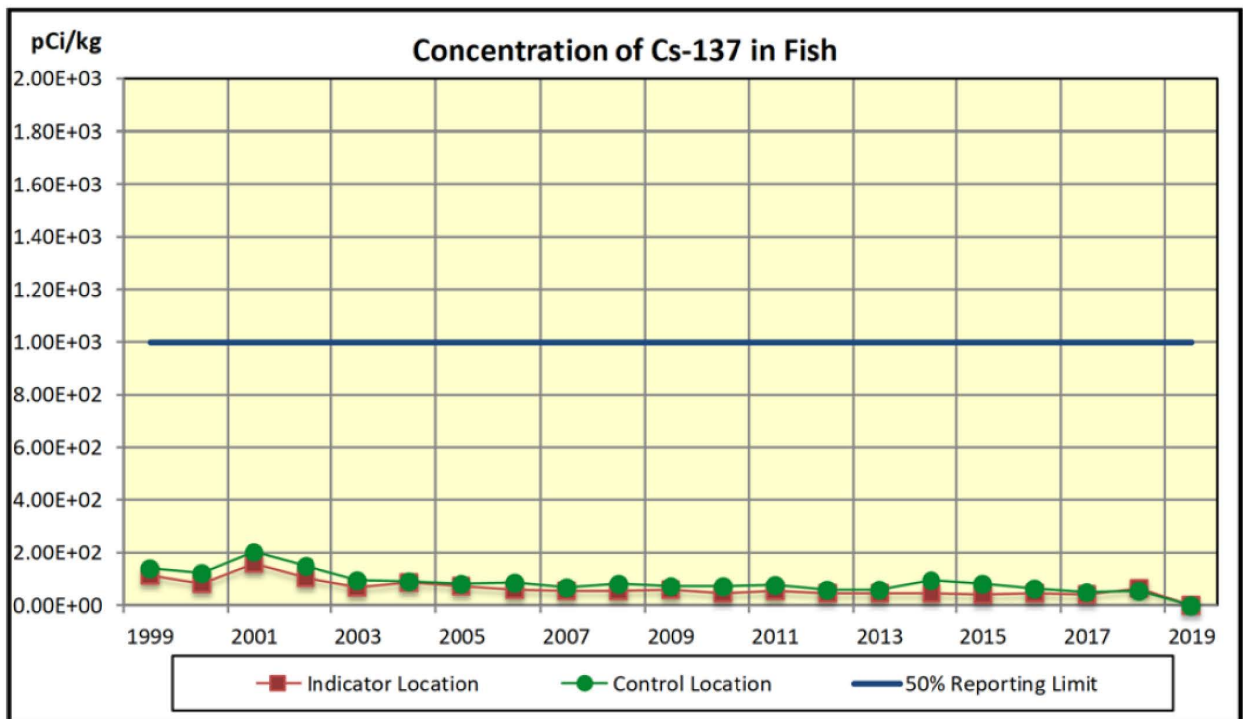


Table 3.7 Mean Concentrations of Radionuclides in Fish (pCi/kg)

Year	Cs-137 Indicator Location	Cs-137 Control Location
1999	1.13E+2	1.38E+2
2000	8.14E+1	1.20E+2
2001	1.58E+2	2.02E+2
2002	1.02E+2	1.48E+2
2003	6.87E+1	9.40E+1
2004	8.35E+1	9.16E+1
2005	7.00E+1	8.21E+1
2006	5.74E+1	8.56E+1
2007	5.15E+1	6.74E+1
2008	5.47E+1	8.04E+1
2009	5.59E+1	7.26E+1
2010	4.47E+1	7.28E+1
2011	5.52E+1	7.48E+1
2012	4.36E+1	5.97E+1
2013	4.47E+1	5.97E+1
2014 ⁽¹⁾	4.24E+1	9.32E+1
2015	4.16E+1	8.04E+1
2016	4.24E+1	6.06E+1
2017	4.09E+1	4.70E+1
2018	6.07E+1	5.53E+1
2019	0.00E+0	0.00E+0

0.00E+0 indicates no detectable measurements

(1) 2014 Gamma spectroscopy system was replaced 10JUL2014. Gamma spectroscopy system hardware, detector cooling apparatus, software, electronics, nuclide identification libraries, and analytical test matrix components for test matrices were modified (NCR # 0739995). No analytical changes were observed due to the 2014 gamma spectroscopy system change.

3.8 SHORELINE SEDIMENT

Gamma spectroscopy was performed on 2 sediment samples from the one indicator location during 2019. There were no gamma emitting radionuclides due to RNP plant operations identified in the sediment samples in 2019. There is no control shoreline sediment location.

Be-7 observed in the sediment samples is a naturally occurring radionuclide.

3.9 DIRECT GAMMA RADIATION

3.9.1 ENVIRONMENTAL TLD

In 2019, 172 TLDs were analyzed, 168 at indicator locations and 4 at the control location. TLDs are collected and analyzed quarterly. Transit TLDs and laboratory background TLDs were used for determining transit and laboratory background dose and were subtracted from gross field readings as required by ANSI N545-1975.

TLD locations designated as "inner ring" are placed in each meteorological sector in the general area of the site boundary as is reasonably accessible and practical and all are used as indicators. Due to close proximity with HBRSEP, and most being within the exclusion area boundary, inner ring TLD locations are not good indicators of radiation exposure to a member of the public, but are good at determining nearby environmental effects due to plant operation. Based on their placement, inner ring TLD locations are expected to occasionally be influenced by normal plant operation. TLD locations designated as "outer ring" are placed in each meteorological sector at distances of 6 to 8 kilometers from the site as is reasonably accessible and practical. All outer ring TLD locations are used as indicators. The one "control" location is 24.4 miles ESE from station center. This location was chosen to reduce the probability of influence from HBRSEP operation on data. The control location is not used as background subtraction in the TLD analysis. Its purpose is to provide a comparison to indicator locations.

The environmental data on external radiation exposure for 2019 was essentially unchanged from 1999-2019, with an average exposure for all of 2019 indicator locations of 16.6 mR per std. quarter. The TLD location with the highest annual mean of 23.4 mR per std. quarter was location 37, located 5.00 miles WSW of the plant. Control TLD location 1 had an annual mean of 18.0 mR per std. quarter.

Figure 3.9 and Table 3.9 show TLD inner ring, outer ring, and control location annual averages in mR per std. qtr. since 1999. The differences among these locations are attributed to variations in soils, local geology, and are not the result of plant operations.

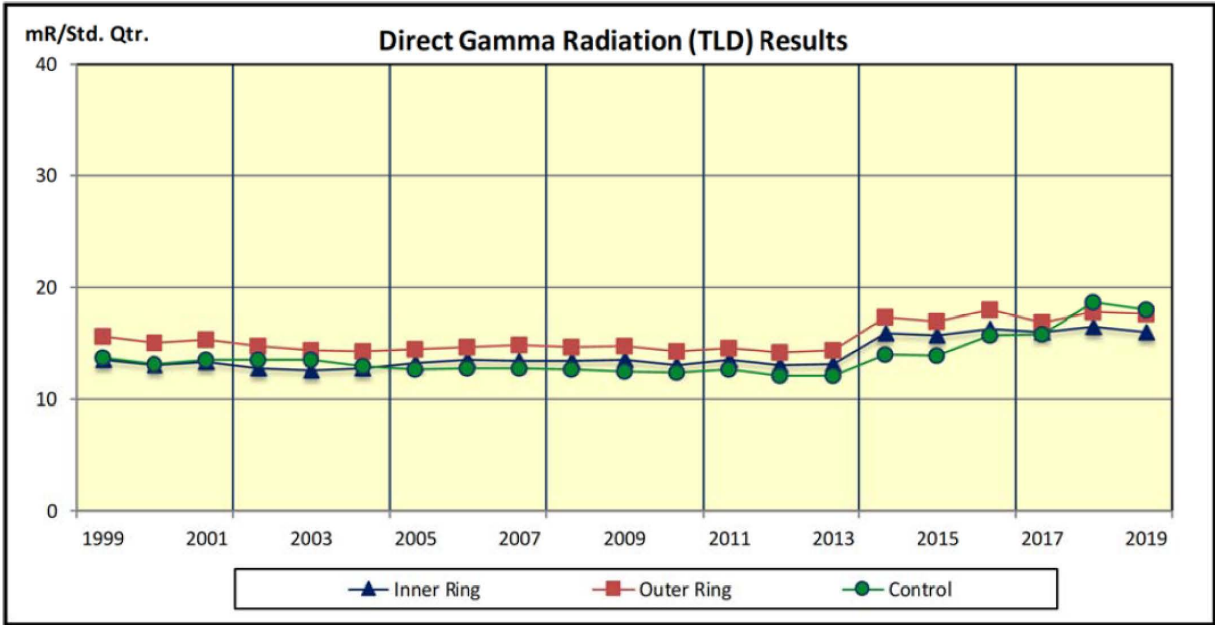
Comparison of the average annual TLD exposure within approximately 1 mile (inner ring) of the plant with that at approximately 5 miles (outer ring) and the control for 1999 to 2019 is presented in Figure 3.9 and Table 3.9.

Quarterly, environmental ODCM TLD results are compared by location to its historical data to evaluate any significant changes. The comparison utilizes the location's average exposure history to determine if quarterly results fall within expected low and high ranges and provides a reliable indication of potential changes occurring at a specific TLD location. The low and high ranges are determined by the historical average \pm two standard deviations. The quarterly TLD evaluation implements portions of American National Standard ANSI/HPS N13.37-2014, "Environmental Dosimetry – Criteria for System Design and Implementation, for environmental Thermoluminescent Dosimeters (TLD)". The CSD-RP-ALL-0030 – Updated Radiological Environmental Monitoring Program TLD Analytical Method, describes the process implemented in late 2018 for the 2019 fleet

TLD programs. TLD values identified as < Low Range or > High Range are evaluated in consideration of factors including possible TLD damage, sampling deviations, glow curve irregularities, and any known environmental location changes which may affect results. TLD results are found in Appendix E.

A TLD Intercomparison Program is conducted as part of the quality assurance program. Results of this program are included in Section 4.7.

Figure 3.9



There is no reporting level for Direct Radiation (TLD)

Table 3.9 Direct Gamma Radiation (TLD) Results

Year	Inner Ring Average (mR/Std. Qtr.)	Outer Ring Average (mR/Std. Qtr.)	Control Average (mR/Std. Qtr.)
1999	1.35E+1	1.57E+1	1.37E+1
2000	1.30E+1	1.51E+1	1.32E+1
2001	1.34E+1	1.53E+1	1.36E+1
2002	1.27E+1	1.47E+1	1.35E+1
2003	1.26E+1	1.44E+1	1.36E+1
2004	1.28E+1	1.43E+1	1.30E+1
2005	1.32E+1	1.45E+1	1.27E+1
2006	1.35E+1	1.47E+1	1.28E+1
2007	1.35E+1	1.48E+1	1.27E+1
2008	1.35E+1	1.47E+1	1.27E+1
2009	1.36E+1	1.47E+1	1.25E+1
2010	1.31E+1	1.43E+1	1.24E+1
2011	1.35E+1	1.46E+1	1.27E+1
2012	1.30E+1	1.42E+1	1.21E+1
2013	1.32E+1	1.44E+1	1.21E+1
2014 ⁽¹⁾	1.59E+1	1.74E+1	1.40E+1
2015	1.57E+1	1.70E+1	1.39E+1
2016	1.63E+1	1.80E+1	1.57E+1
2017	1.60E+1	1.69E+1	1.58E+1
2018	1.65E+1	1.78E+1	1.87E+1
2019	1.60E+1	1.76E+1	1.80E+1

(1) As of first quarter 2014, the environmental TLDs utilized for the HBRSEP REMP were Harshaw TLDs, replacing Panasonic TLDs which were utilized prior to 2014 (NCR # 01982479).

3.10 LAND USE CENSUS

The 2019 HBRSEP Annual Land Use Census was conducted 7/17-7/18/2019 to meet the requirements of the HBRSEP ODCM 4.4.1. Table 3.10 summarizes the HBRSEP 2019 census results. A map indicating identified locations is shown in Figure 3.10.

During the 2019 census no milk locations were identified within five miles (8 kilometers) of HBRSEP and meat animals were only identified at the nearest garden or closer in each sector. The new broadleaf vegetation location 83 was added to the environmental program as a result of the 2019 Land Use Census.

Table 3.10 HBRSEP Land Use Census Comparison (2018 – 2019)

Nearest Pathway (Miles)

SECTOR	RESIDENCE		GARDEN		MEAT ANIMAL ⁽¹⁾		MILK ANIMAL	
	2018	2019	2018	2019	2018	2019	2018	2019
North	2.83	2.83	---	---	---	---	----	----
North-Northeast	1.53	1.53	2.75	2.13*	---	---	----	----
Northeast	1.03	1.11*	2.57	2.57	2.57	2.57	----	----
East-Northeast	0.85	0.85	1.08	1.08	---	---	----	----
East	0.90	0.90	4.19	3.94*	---	3.02*	----	----
East-Southeast	0.62	0.62	1.28	1.28	---	---	----	----
Southeast	0.38	0.38	3.74	3.74	1.96	---*	----	----
South-Southeast	0.33	0.33	2.61	2.56*	---	---	----	----
South	0.44	0.44	0.74	0.74	---	---	----	----
South-Southwest	0.42	0.42	4.61	3.66*	---	---	----	----
Southwest	0.44	0.44	2.78	2.35*	---	---	----	----
West-Southwest	0.46	0.46	0.86	0.86	---	---	----	----
West	0.56	0.56	0.70	0.70	---	---	----	----
West-Northwest	0.57	0.57	0.81	0.81	---	---	----	----
Northwest	1.56	1.56	2.36	2.58*	---	---	----	----
North-Northwest	2.00	2.00	---	2.85*	---	---	----	----

* Represents a change from the previous year.

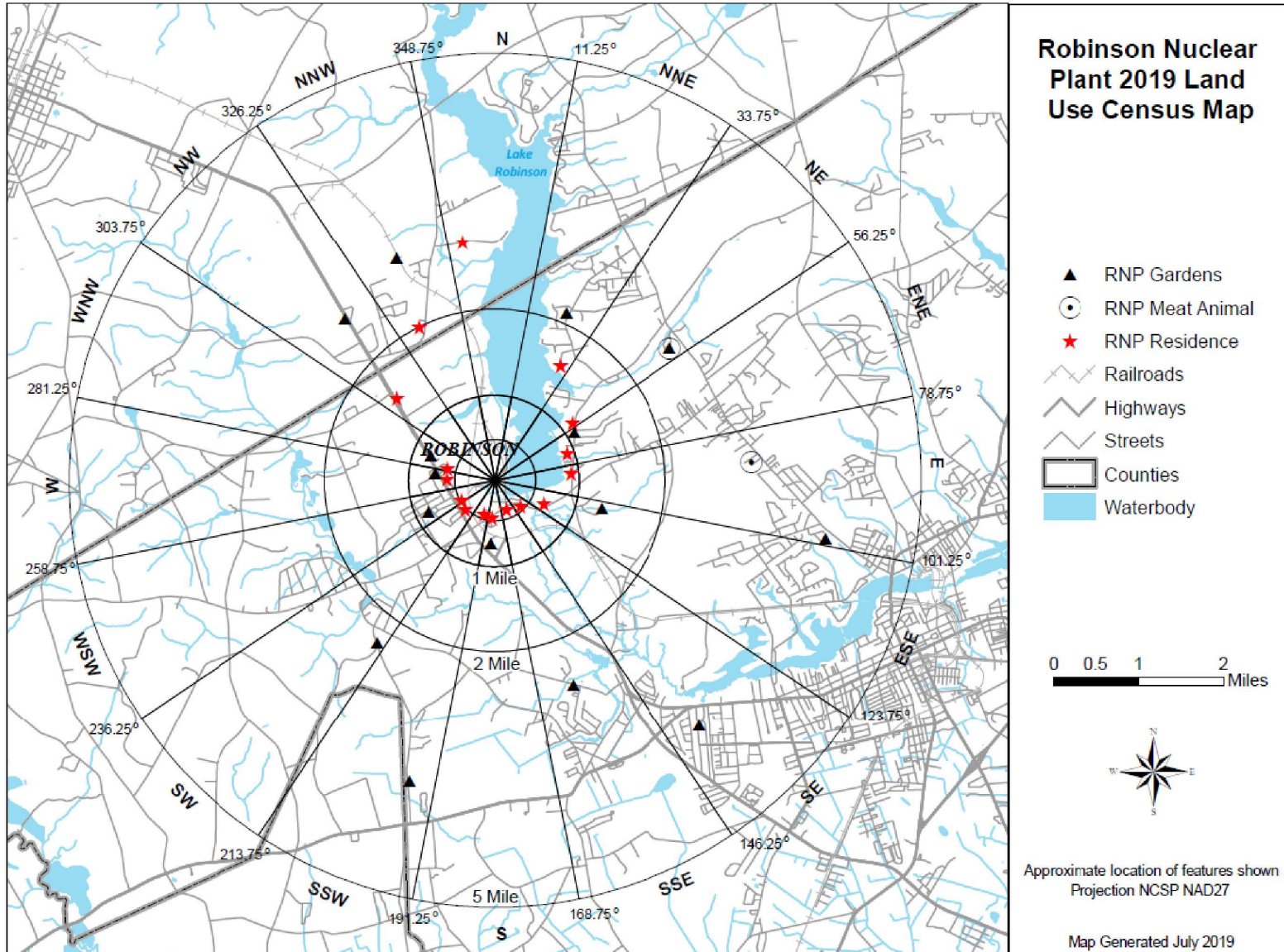
** Represents a change from the previous year – different address, same mileage

“----” indicates no occurrences within the 5 mile radius

(1) Meat animal was only identified at the nearest garden or closer in each sector.

NOTE: Sector and distance determined by Global Positioning System.

Figure 3.10



4.0 QUALITY ASSURANCE

4.1 SAMPLE COLLECTION

HBRSEP Chemistry and the Environmental Services performed the environmental sample collections as specified by approved sample collection procedures.

4.2 SAMPLE ANALYSIS

EnRad Laboratories performed the environmental sample analyses as specified by approved analysis procedures. EnRad Laboratories is located in Huntersville, North Carolina, at Duke Energy's Environmental Center. During 2019, a vendor laboratory, General Engineering Laboratory, LLC (GEL), performed some environmental sample analyses as specified by approved analysis procedures.

4.3 DOSIMETRY ANALYSIS

The Dosimetry and Records group performed the environmental dosimetry measurements as specified by approved dosimetry analysis procedures. The Dosimetry and Records Laboratory is located in Huntersville, North Carolina, at Duke Energy's Environmental Center.

4.4 LABORATORY EQUIPMENT QUALITY ASSURANCE

4.4.1 DAILY QUALITY CONTROL

EnRad Laboratories has an internal quality assurance program which monitors each type of instrumentation for reliability and accuracy. Daily quality control checks ensure that instruments are in proper working order and these checks are used to monitor instrument performance.

4.4.2 CALIBRATION VERIFICATION

National Institute of Standards and Technology (NIST) standards that represent counting geometries are analyzed as unknowns at various frequencies ranging from weekly to annually to verify that efficiency calibrations are valid. The frequency is dependent upon instrument use and performance. Investigations are performed and documented should calibration verification data fall outside of the acceptable limits.

4.4.3 BATCH PROCESSING

Method quality control samples are analyzed with sample analyses that are processed in batches. These include tritium analyses in drinking water, surface water and ground water samples.

4.5 DUKE ENERGY INTERLABORATORY COMPARISON PROGRAM

In 2019 Duke Energy Environmental Laboratory (EnRad) participated in an interlaboratory program to satisfy Radiological Environmental Monitoring Program requirements in Duke Energy nuclear plant Offsite Dose Calculation Manuals and Selected Licensee Commitments Manuals, as applicable.

EnRad Laboratory participated in an interlaboratory program with Eckert & Ziegler Analytics (EZA) in 2019. EZA results were evaluated against the NRC Inspection Manual Procedure 84750 (IP 84750) acceptance criteria stated in EnRad Procedure 515, Cross Check Program Administration. All regulatory requirements continue to be met by the EZA Cross Check Program.

4.5.1 ECKERT & ZIEGLER ANALYTICS CROSS CHECK PROGRAM

EZA mixed gamma in liquid, mixed gamma in vegetation, low-level I-131 in liquid, mixed gamma air filter composites, I-131 air cartridges, strontium in water, gross beta in water, gross beta in filters, and tritium in water were analyzed at various times of the year at EnRad Laboratories. A summary of the applicable REMP EnRad Laboratory program results for 2019 is documented in Table 4.0-A.

Interlaboratory cross check samples from EZA were received and analyzed in three of the four quarters of 2019. Table 4.0-A lists the performance for specific samples. Forty-six nuclide results were reported to EZA of which forty-six (100%) met the acceptance criteria based on IP 84750.

4.6 SPLIT COMPARISON PROGRAM

HBRSEP routinely participates in an environmental sample intercomparison program. Program elements include sampling frequency and analysis for food products, shoreline sediments, surface water, and fish collected by HBRSEP Chemistry and Environmental Services. Samples are routinely split with a vendor laboratory for intercomparison.

4.7 TLD INTERCOMPARISON PROGRAM

4.7.1 NUCLEAR TECHNOLOGY SERVICES INTERCOMPARISON PROGRAM

Radiation Dosimetry and Records participates in a quarterly TLD intercomparison program administered by Nuclear Technology Services, Inc. of Roswell, GA. Nuclear Technology Services irradiates environmental dosimeters quarterly and sends them to the Radiation Dosimetry and Records group for analysis of the unknown estimated delivered exposure. A summary of the 2019 Nuclear Technology Services Intercomparison Report is documented in Table 4.0-B.

The individual measurements were evaluated and results falling outside the acceptable ratio criteria had an evaluation performed to identify any recommended remedial actions and to reduce anomalous errors.

4.7.2 INTERNAL CROSS CHECK (DUKE ENERGY)

Radiation Dosimetry and Records participates in a quarterly TLD internal comparison program administered internally by the Dosimetry Lab. The Dosimetry Lab Staff irradiates environmental dosimeters quarterly and submits them for analysis of the unknown estimated delivered exposure. A summary of the 2019 Internal Cross Check (Duke Energy) Program is documented in Table 4.0-B.

4.8 GENERAL ENGINEERING LABORATORY, LLC (GEL)

General Engineering Laboratory, LLC (GEL) participated in various Quality Assurance Programs for Inter-laboratory, Intra-laboratory, Third Party Cross Check programs, and a number of proficiency testing programs during 2019. A summary of the GEL quality assurance program results for the sample media types sent to GEL during 2019 is documented in Table 4.0-C. Table 4.0-C may not be applicable to all plants or stations.

TABLE 4.0-A

ECKERT & ZIEGLER ANALYTICS CROSS CHECK PROGRAM

2019 Cross Check Results for EnRad Laboratories

Interlaboratory cross check samples from EZA were received and analyzed in three of the four quarters of 2019. Results are reported directly to Eckert & Ziegler Analytics. Environmental cross check samples were analyzed in replicate, and the result closest to the mean is reported to Eckert & Ziegler Analytics. The acceptance criteria for the program was based on the NRC Inspection Manual Procedure 84750 (IP 84750). Table 4.0-A lists the performance for specific samples. Forty-six nuclide results were reported to EZA of which forty-six (100 %) met the acceptance criteria based on IP 84750.

Sample	Sample ID	Nuclide	Quarter	Units	EnRad Value	EZA Value	EnRad/EZA Ratio	Evaluation
Beta Filter in Planchet	E12500	Cs-137	1	pCi	170	164	1.04	Agreement
	E12505	Cs-137	2	pCi	231	224	1.03	Agreement
I-131 in Charcoal in Cartridge	E12499	I-131	1	pCi	79.5	75.8	1.05	Agreement
	E12506	I-131	3	pCi	99.9	95.5	1.05	Agreement
Gamma in Composite Filter	E12498	Ce-141	1	pCi	83.8	78.0	1.07	Agreement
		Co-58	1	pCi	100	95.5	1.05	Agreement
		Co-60	1	pCi	212	199	1.06	Agreement
		Cr-51	1	pCi	208	195	1.07	Agreement
		Cs-134	1	pCi	110	107	1.03	Agreement
		Cs-137	1	pCi	141	131	1.08	Agreement
		Fe-59	1	pCi	116	106	1.09	Agreement
		Mn-54	1	pCi	105	95.3	1.10	Agreement
Zn-65	1	pCi	158	147	1.08	Agreement		
Gamma in Simulated Vegetation	E12509	Ce-141	3	pCi/g	0.279	0.273	1.02	Agreement
		Co-58	3	pCi/g	0.281	0.286	0.98	Agreement
		Co-60	3	pCi/g	0.343	0.345	1.00	Agreement
		Cr-51	3	pCi/g	0.612	0.542	1.13	Agreement
		Cs-134	3	pCi/g	0.312	0.339	0.92	Agreement
		Cs-137	3	pCi/g	0.252	0.247	1.02	Agreement
		Fe-59	3	pCi/g	0.278	0.243	1.14	Agreement
		Mn-54	3	pCi/g	0.265	0.252	1.05	Agreement
Zn-65	3	pCi/g	0.519	0.480	1.08	Agreement		

TABLE 4.0-A (Cont.)

Sample	Sample ID	Nuclide	Quarter	Units	EnRad Value	EZA Value	EnRad/EZA Ratio	Evaluation
Gamma in Water	E12510	Ce-141	3	pCi/L	138	130	1.06	Agreement
		Co-58	3	pCi/L	143	136	1.05	Agreement
		Co-60	3	pCi/L	170	164	1.04	Agreement
		Cr-51	3	pCi/L	265	257	1.03	Agreement
		Cs-134	3	pCi/L	150	161	0.93	Agreement
		Cs-137	3	pCi/L	123	117	1.05	Agreement
		Fe-59	3	pCi/L	127	115	1.10	Agreement
		I-131	3	pCi/L	93.6	90.8	1.03	Agreement
		Mn-54	3	pCi/L	129	120	1.07	Agreement
		Zn-65	3	pCi/L	259	228	1.14	Agreement
Gamma in Milk	E12501A	Ce-141	1	pCi/L	120	117	1.03	Agreement
		Co-58	1	pCi/L	141	143	0.98	Agreement
		Co-60	1	pCi/L	303	299	1.01	Agreement
		Cr-51	1	pCi/L	303	293	1.03	Agreement
		Cs-134	1	pCi/L	146	160	0.91	Agreement
		Cs-137	1	pCi/L	202	196	1.03	Agreement
		Fe-59	1	pCi/L	170	159	1.07	Agreement
		Mn-54	1	pCi/L	149	143	1.04	Agreement
		Zn-65	1	pCi/L	227	220	1.03	Agreement
Milk LLI-131	E12501A	I-131	1	pCi/L	96.8	89.5	1.08	Agreement
Gross Beta in Water	E12503	Cs-137	2	pCi/L	240	245	0.98	Agreement
	E12508	Cs-137	3	pCi/L	243	252	0.96	Agreement
Tritium in Water	E12504	H-3	2	pCi/L	14100	13900	1.01	Agreement
	E12507	H-3	3	pCi/L	14000	14000	1.00	Agreement

TABLE 4.0-B

2019 ENVIRONMENTAL DOSIMETER CROSS-CHECK RESULTS

Nuclear Technology Services

Radiation Dosimetry and Records participates in a quarterly TLD intercomparison program administered by Nuclear Technology Services, Inc. of Roswell, GA. Nuclear Technology Services irradiates environmental dosimeters quarterly and sends them to Radiation Dosimetry and Records group for analysis of the unknown estimated delivered exposure. The individual measurements were evaluated and results falling outside the acceptable ratio criteria had an evaluation performed to identify any recommended remedial actions and to reduce anomalous errors.

1st Quarter 2019						2nd Quarter 2019					
TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail	TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail
102973	77.70	79.96	-2.83	<+/-15%	Pass	101136	17.08	18.36	-6.97	<+/-15%	Pass
103309	80.41	79.96	0.56	<+/-15%	Pass	101219	16.52	18.36	-10.02	<+/-15%	Pass
103305	80.21	79.96	0.31	<+/-15%	Pass	100078	16.78	18.36	-8.61	<+/-15%	Pass
103090	80.10	79.96	0.18	<+/-15%	Pass	101364	17.45	18.36	-4.96	<+/-15%	Pass
103102	79.93	79.96	-0.04	<+/-15%	Pass	100239	17.01	18.36	-7.35	<+/-15%	Pass
Average Bias (B)			-0.36			Average Bias (B)			-7.58		
Standard Deviation (S)			1.39			Standard Deviation (S)			1.89		
Measure Performance B +S			1.76	<15%	Pass	Measure Performance B +S			9.47	<15%	Pass
3rd Quarter 2019						4th Quarter 2019					
TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail	TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail
101305	62.24	61.34	1.47	<+/-15%	Pass	104285	49.10	49.31	-0.43	<+/-15%	Pass
101297	61.64	61.34	0.49	<+/-15%	Pass	104300	47.94	49.31	-2.78	<+/-15%	Pass
101333	57.74	61.34	-5.87	<+/-15%	Pass	104288	49.20	49.31	-0.22	<+/-15%	Pass
101350	60.01	61.34	-2.17	<+/-15%	Pass	104298	47.73	49.31	-3.20	<+/-15%	Pass
100417	60.73	61.34	-0.99	<+/-15%	Pass	104314	48.91	49.31	-0.81	<+/-15%	Pass
Average Bias (B)			-1.42			Average Bias (B)			-1.49		
Standard Deviation (S)			2.85			Standard Deviation (S)			1.40		
Measure Performance B +S			4.27	<15%	Pass	Measure Performance B +S			2.88	<15%	Pass

TABLE 4.0-B (Cont.)

2019 ENVIRONMENTAL DOSIMETER CROSS CHECK RESULTS

Internal Crosscheck (Duke Energy)

Radiation Dosimetry and Records participates in a quarterly TLD internal comparison program administered internally by the Dosimetry Lab. The Dosimetry Lab Staff irradiates environmental dosimetry quarterly and submits them for analysis of the unknown estimated delivered exposure.

1st Quarter 2019						2nd Quarter 2019					
TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail	TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail
103690	39.63	36.00	10.08	<+/-15%	Pass	102290	51.51	48.00	7.31	<+/-15%	Pass
103101	39.48	36.00	9.67	<+/-15%	Pass	102029	51.48	48.00	7.25	<+/-15%	Pass
102869	38.28	36.00	6.33	<+/-15%	Pass	103742	52.75	48.00	9.90	<+/-15%	Pass
102239	37.20	36.00	3.33	<+/-15%	Pass	102931	50.63	48.00	5.48	<+/-15%	Pass
103433	38.17	36.00	6.03	<+/-15%	Pass	103194	51.38	48.00	7.04	<+/-15%	Pass
103586	38.81	36.00	7.81	<+/-15%	Pass	102738	52.11	48.00	8.56	<+/-15%	Pass
102881	39.45	36.00	9.58	<+/-15%	Pass	103721	52.96	48.00	10.33	<+/-15%	Pass
102189	36.77	36.00	2.14	<+/-15%	Pass	102336	50.92	48.00	6.08	<+/-15%	Pass
100358	35.33	36.00	-1.86	<+/-15%	Pass	102442	49.03	48.00	2.15	<+/-15%	Pass
103381	38.37	36.00	6.58	<+/-15%	Pass	102089	51.36	48.00	7.00	<+/-15%	Pass
Average Bias (B)			5.97			Average Bias (B)			7.11		
Standard Deviation (S)			3.81			Standard Deviation (S)			2.33		
Measure Performance B +S			9.78	<15%	Pass	Measure Performance B +S			9.44	<15%	Pass
3rd Quarter 2019						4th Quarter 2019					
TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail	TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail
104054	17.49	18.0	-2.83	<+/-15%	Pass	100958	26.21	27.00	-2.93	<+/-15%	Pass
104051	17.77	18.0	-1.28	<+/-15%	Pass	101322	26.76	27.00	-0.89	<+/-15%	Pass
104148	17.41	18.0	-3.28	<+/-15%	Pass	101180	26.95	27.00	-0.19	<+/-15%	Pass
101165	18.16	18.0	0.89	<+/-15%	Pass	101275	26.52	27.00	-1.78	<+/-15%	Pass
101170	18.10	18.0	0.56	<+/-15%	Pass	101104	25.70	27.00	-4.81	<+/-15%	Pass
101278	18.45	18.0	2.50	<+/-15%	Pass	104038	26.30	27.00	-2.59	<+/-15%	Pass
100570	17.93	18.0	-0.39	<+/-15%	Pass	101215	27.33	27.00	1.22	<+/-15%	Pass
100062	18.50	18.0	2.78	<+/-15%	Pass	101252	26.57	27.00	-1.59	<+/-15%	Pass
104129	17.79	18.0	-1.17	<+/-15%	Pass	101249	26.74	27.00	-0.96	<+/-15%	Pass
104128	17.75	18.0	-1.39	<+/-15%	Pass	101251	25.91	27.00	-4.04	<+/-15%	Pass
Average Bias (B)			-0.36			Average Bias (B)			-1.86		
Standard Deviation (S)			2.04			Standard Deviation (S)			1.80		
Measure Performance B +S			2.41	<15%	Pass	Measure Performance B +S			3.66	<15%	Pass

TABLE 4.0-C

2019 GEL Laboratories, LLC QA Results

Interlaboratory cross check samples from Eckert & Ziegler Analytics (EZA) and Proficiency Tests from the Department of Energy Mixed Analyte Performance Evaluation Program (MAPEP) were received and analyzed by GEL in all four quarters of 2019 from EZA and in two quarters from MAPEP. Table 4.0-C lists the performance for specific samples. Table 4.0-C may not be applicable to all plants/stations.

Sample	Sample ID	Nuclide	Quarter	Units	GEL Value	Known Value	Acceptance Range/Ratio	Evaluation
Hard To Detect in Soil	MAPEP-19-MaS40	Fe-55	2	Bq/kg	486	344	241 - 447	Non-Agreement ⁽¹⁾
		Ni-63	2	Bq/kg	524	519	363 - 675	Agreement
		Sr-90	2	Bq/kg	3.44	N/A	False Pos Test	Agreement
	MAPEP-19-MaS41	Fe-55	4	Bq/kg	-48	N/A	False Pos Test	Agreement
		Ni-63	4	Bq/kg	552	629	440 - 818	Agreement
		Sr-90	4	Bq/kg	609	572	400 - 744	Agreement
I-131 in Milk with EZA	E12362	I-131	2	pCi/L	85.1	81.4	1.05	Agreement
	E12370	I-131	3	pCi/L	92.8	92.1	1.01	Agreement
	E12374	I-131	4	pCi/L	93.4	94.5	0.99	Agreement
Gross Beta in Water with EZA	E12550	Cs-137	2	pCi/L	251	244	1.03	Agreement ⁽²⁾

(1) GEL CARR (Corrective Action Request and Report) 190603-1212

(2) Several sets of first quarter 2019 Gross Beta in Water analyses were analyzed at GEL.

APPENDIX A

ENVIRONMENTAL SAMPLING
&
ANALYSIS PROCEDURES

APPENDIX A

ENVIRONMENTAL SAMPLING AND ANALYSIS PROCEDURES

Adherence to established procedures for sampling and analysis of environmental media at the H. B. Robinson Steam Electric Plant, Unit No. 2 (HBRSEP) is required to ensure compliance with the HBRSEP Off-Site Dose Calculation Manual (ODCM). Analytical procedures were employed to ensure that the ODCM detection capabilities were achieved.

Environmental sampling were performed by HBRSEP Chemistry and Environmental Services. Environmental analyses were performed by EnRad Laboratories and Dosimetry and Records.

This appendix describes the environmental sampling frequencies and analysis procedures by media type.

I. CHANGE OF SAMPLING PROCEDURES

Effective May 2019, the REMP air samplers at all Air Particulate/Air Radioiodine sampling locations were changed to Model LV-1D air samplers and the telemetry was upgraded to 3G technology.

Surface water collection frequency was changed from weekly to every 28 days effective October 17, 2019.

Broadleaf vegetation sampling location 83 was added to the REMP effective September 10, 2019 as a result of the 2019 RNP Land Use Census.

II. DESCRIPTION OF ANALYSIS PROCEDURES

Gamma spectroscopy analyses are performed using high purity germanium gamma detectors and Canberra analytical software. Designated sample volumes are transferred to appropriate counting geometries and analyzed by gamma spectroscopy. Perishable samples such as fish and broadleaf vegetation are ground to achieve a homogeneous mixture. Soils and sediments are dried, sifted to remove foreign objects (rocks, clams, glass, etc.) then transferred to appropriate counting geometry.

Tritium analyses are performed by using low-level environmental liquid scintillation analysis technique on a Perkin-Elmer 4910TR liquid scintillation system or a Perkin-Elmer 3110TR liquid scintillation system. Tritium samples are distilled and batch processed with a laboratory fortified blank, matrix spike, matrix spike duplicate, and blank to verify instrument performance and sample preparation technique are acceptable.

Gross beta analysis of air filters is performed by analyzing filters on Tennelec XLB Series 5 gas-flow proportional counters. Samples are batch processed with a blank to ensure sample contamination has not occurred.

III. CHANGE OF ANALYSIS PROCEDURES

No analysis procedures were changed in 2019.

IV. SAMPLING AND ANALYSIS PROCEDURES

A.1 AIRBORNE PARTICULATE AND RADIOIODINE

Airborne particulate and radioiodine samples at each of ten locations were composited continuously by means of continuous air samplers. Air particulates were collected on a particulate filter and radioiodines were collected in a charcoal cartridge positioned behind the filter in the sampler. The samplers are designed to operate at a constant flow rate (in order to compensate for any filter loading) and are set to sample approximately 2 cubic feet per minute. Filters and cartridges were collected weekly. A separate weekly gamma analysis was performed on each charcoal cartridge. A weekly gross beta analysis was performed on each filter. A quarterly gamma analysis was performed on the quarterly filter composite (by location). The continuous composite samples were collected from the locations listed below.

- Location 1 = 24.4 miles ESE, Florence, S.C. (Control)
- Location 2 = 0.2 miles S, Information Center
- Location 3 = 0.5 miles N, Microwave Tower
- Location 4 = 0.4 miles ESE, Spillway
- Location 5 = 0.9 miles ENE, East shore of lake near Johnson's Landing
- Location 6 = 0.2 miles SSW, Information Center
- Location 7 = 6.4 miles ESE, CP&L facility on RR Ave., Hartsville
- Location 55 = 0.2 miles SSE, South of West Settling Pond
- Location 60 = 0.2 miles SE, Robinson Picnic Area
- Location 61 = 0.3 miles WSW, West Parking lot near RR tracks

A.2 SURFACE WATER

Weekly composite surface water (SW) samples were collected from two locations, with aliquots going to monthly composite samples for January 2019 until October 2019. Starting in October 2019 monthly composite surface water (SW) samples were collected from the two locations to replace the weekly collections. Gamma and Tritium analyses were performed on the monthly composites. The composites are collected from the locations listed below.

- Location 40 = 0.6 miles ESE, Black Creek at Old Camden Road (S-16-23) – Lake Robinson
- Location 41 = 8.0 miles N, Black Creek at US Hwy 1 (Control)

A.3 GROUND WATER

Grab samples were collected quarterly from one ground water (GW) well location. A gamma analysis and tritium analysis were performed on the samples. The ground water samples were collected from the location listed below.

Location 64 = 0.6 miles, SE Artesian Well

A.4 BROADLEAF VEGETATION

Monthly samples were collected and a gamma analysis was performed on each sample. The samples were collected from the locations listed below.

Location 50 = SSE, Close to Site Boundary

Location 51 = SSW, Close to Site Boundary

Location 52 = 10 miles W, near Bethune (Control)

Location 62 = SE, Close to Site Boundary

Location 67 = S, Close to Site Boundary

Location 83 = 1.60 miles NNE

Sampling initiated 10SEP2019, NCR# 02305408

A.5 FOOD PRODUCTS

Annually samples were collected when available during harvest season at one location. A gamma analysis was performed each sample. The samples were collected from the location listed below.

Location 54 = 10.1 miles E, Auburndale Plantation (if irrigating from Black Creek)

A.6 FISH

Semiannual samples were collected and a gamma analysis was performed on the edible portions of each sample. The samples were collected from the locations listed below.

Location 45 = Site varies within Lake Robinson

Location 46 = Site varies within Prestwood Lake

Location 47 = Control station, any lake not influenced by plant discharge (Control)

A.7 SHORELINE SEDIMENT

Semiannual samples were collected and a gamma analysis was performed on each sample following the drying and removal of rocks and clams. The samples were collected from the location listed below.

Location 44 = 1.6 miles NNE, East shore of lake, Shady Rest Club

A.8 DIRECT GAMMA RADIATION (TLD)

Thermoluminescent dosimeters (TLD) were collected quarterly at forty-three locations. A gamma exposure rate was determined for each TLD. The TLDs were placed as indicated below.

- * An inner ring of 25 TLDs, one in each meteorological sector in the general area of the site boundary.
- * An outer ring of 17 TLDs, one in each meteorological sector in the 6 to 8 kilometer range.
- * The remaining TLDs were placed in special interest areas such as population centers, residential areas, schools, and at a control location.

TLD Locations are listed in Table 2.1-B

A.9 ANNUAL LAND USE CENSUS

An Annual Land Use Census was conducted to identify within a distance of 8 kilometers (5.0 miles) from the plant, the following locations in each of the sixteen meteorological sectors:

- * The Nearest Residence
- * The Nearest Garden greater than 500 square feet or 50 square meters, producing broadleaf vegetables (fresh leafy vegetables)
- * The Nearest Milk-giving Animal (cow, goat, etc.)
- * The Nearest Meat Animal (beef, hogs, etc.) was only identified at the nearest garden or closer in each sector, and poultry and egg laying animals were not classified as meat animals for the 2019 census.

The census was conducted during the growing season in 7/17-7/18/2019. Results are shown in Table 3.10. Broad leaf vegetation location 83 was added to the sampling procedure as a result of 2019 RNP Land Use Census.

V. GLOBAL POSITIONING SYSTEM (GPS) ANALYSIS

The H. B. Robinson Steam Electric Plant site centerline used for GPS measurements was referenced from the H. B. Robinson Steam Electric Plant (HBSEP) Updated Final Safety Analysis Report (UFSAR). Waypoint coordinates used for HBSEP GPS measurements were latitude 34° 24' 02" N and longitude 80° 09' 05" W. Maps and tables were generated using North American Datum (NAD) 27. Data normally reflect accuracy to within 2 to 5 meters from point of measurement. All GPS field measurements were taken as close as possible to the item of interest. Distances for the locations are displayed using two significant figures.

APPENDIX B

**RADIOLOGICAL
ENVIRONMENTAL MONITORING
PROGRAM**

SUMMARY OF RESULTS

2019

APPENDIX B

**RADIOLOGICAL
ENVIRONMENTAL MONITORING
PROGRAM**

SUMMARY OF RESULTS

2019

**H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2 (HBRSEP)
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM DATA SUMMARY**

H. B. Robinson Steam Electric Plant, Unit No. 2
Darlington County, South Carolina

Docket Numbers: 50-261
Calendar Year: 2019

Medium or Pathway Sampled or Measured (Unit of Measurement)	Type and Total No. of Measurements Performed	Lower Limit of Detection (LLD) ⁽¹⁾	All Indicator Locations ^{(2) (3)} Mean Range	Location w/Highest Annual Mean		Control Locations Mean Range ^{(2) (3)}	No. of Non-Routine Report Meas.
				Name, Distance, and Direction	Mean Range ^{(2) (3)}		
Air Particulate (pCi/m ³)	Gross Beta 519 ⁽⁴⁾	See Table 2.2-C	1.99E-02 (467/467) 7.87E-03 – 4.16E-02	2 (0.20 mi S)	2.09E-02 (52/52) 1.03E-02 – 4.16E-02	1 (24.4 mi ESE) 1.99E-02 (52/52) 8.40E-03 – 3.79E-02	0
	Gamma 40 ⁽⁴⁾	See Table 2.2-C	All less than LLD	----	----	All less than LLD	0
Air Radioiodine (pCi/m ³)	Gamma 519 ⁽⁴⁾	See Table 2.2-C	All less than LLD	----	----	All less than LLD	0
Surface Water (pCi/l)	Gamma 24 ⁽⁴⁾	See Table 2.2-C	All less than LLD	----	----	All less than LLD	0
	Tritium 24 ⁽⁴⁾	2000	2.56E+03 (7/12) 2.24E+02 – 4.81E+03	40 (0.60 mi ESE)	2.56E+03 (7/12) 2.24E+02 – 4.81E+03	All less than LLD	0
Ground Water (pCi/l)	Gamma 4 ⁽⁴⁾	See Table 2.2-C	All less than LLD	----	----	No Control	0
	Tritium 4 ⁽⁴⁾	2000	All less than LLD	----	----	No Control	0
Food Products (pCi/l)	Gamma 2	See Table 2.2-C	All less than LLD	----	----	All less than LLD	0
Broadleaf Vegetation (pCi/kg, wet)	Gamma 37	See Table 2.2-C					0
	Cs-137	80	3.87E+01 (9/30) 1.42E+01 – 6.43E+01	62 (0.0 mi SE)	4.60E+01 (2/7) 3.70E+01 – 5.50E+01	52 (10 mi W) 6.98E+01 (4/7) 2.90E+01 – 1.28E+02	

**H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2 (HBRSEP)
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM DATA SUMMARY**

H. B. Robinson Steam Electric Plant, Unit No. 2
Darlington County, South Carolina

Docket Numbers: 50-261
Calendar Year: 2019

Medium or Pathway Sampled or Measured (Unit of Measurement)	Type and Total No. of Measurements Performed	Lower Limit of Detection (LLD) ⁽¹⁾	All Indicator Locations ^{(2) (3)} Mean Range	Location w/Highest Annual Mean		Control Locations Mean Range ^{(2) (3)}	No. of Non-Routine Report Meas.
				Name, Distance, and Direction	Mean Range ^{(2) (3)}		
Fish (pCi/kg, wet)	Gamma 12	See Table 2.2-C	All less than LLD	-----	-----	All less than LLD	0
Sediments--Shoreline (pCi/kg, dry)	Gamma 2	See Table 2.2-C	All less than LLD	-----	-----	All less than LLD	0
TLD (mR per quarter) ⁽⁵⁾	TLD Readout 172	-----	1.66E+01 (168/168) 9.91E+00 – 2.63E+01	37 (5.00 mi WSW)	2.34E+01 (4/4) 2.11E+01 – 2.63E+01	1 (24.4 mi ESE) 1.80E+01 (4/4) 1.57E+01 – 2.19E+01	0

Footnotes to Appendix B

1. The Lower Limit of Detection (LLD) is the smallest concentration of radioactive material in a sample that will yield a net count above system background which will be detected with 95 percent probability and with only 5 percent probability of falsely concluding that a blank observation represents a "real" signal. Due to counting statistics and varying volumes, occasionally lower LLDs are achieved. Refer to Section 2.3.2 for an explanation of how LLD values were derived.
2. Mean and range are based on detectable measurements only.
3. The fractions of all samples with detectable activities at specific locations are indicated in parentheses.
4. Missing samples or surveillances are discussed in Appendix C or Appendix D.
5. TLD exposure is reported in milliroentgen (mR) per standard quarter (91 days).

APPENDIX C

**SAMPLING DEVIATIONS
&
UNAVAILABLE ANALYSES**

APPENDIX C

H. B. ROBINSON NUCLEAR PLANT SAMPLING DEVIATIONS & UNAVAILABLE ANALYSES

DEVIATION & UNAVAILABLE REASON CODES			
BF	Blown Fuse	PM	Preventive Maintenance
CN	Construction	PO	Power Outage
FZ	Sample Frozen	PS	Pump out of service / Undergoing repair
IV	Insufficient Volume	SL	Sample Loss/Lost due to Lab Accident
IW	Inclement Weather	SM	Motor / Rotor Seized
LC	Line Clog to Sampler	SU	Seasonally Unavailable
OT	Other	TF	Torn Filter
PI	Power Interrupt	VN	Vandalism

C.1 SAMPLING DEVIATIONS

Air Particulate and Air Radioiodine

REMP weekly air samples (Air Particulate (AP) or Air Radioiodine (AR)) that experience any downtime during a surveillance period are reported as a Deviation and classified as a “Sampling Deviation.” However, the sample is counted and the data reported, whereas a Deviation with no available sample is classified as an “Unavailable Analyses” and does not have any data reported. The air samplers operated for a total of 99.56% availability in 2019.

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
3	5/21-5/28/2019	OT	0.33 hours downtime due to air sampler upgrade project.	NCR # 02274657
7	5/21-5/28/2019	OT	0.45 hours downtime due to air sampler upgrade project.	NCR # 02274657
1	6/11-6/18/2019	OT	0.47 hours downtime due to air sampler upgrade project.	NCR # 02276889
2	6/11-6/18/2019	OT	0.17 hours downtime due to air sampler upgrade project.	NCR # 02276889
3	6/11-6/18/2019	OT	0.20 hours downtime due to air sampler upgrade project.	NCR # 02276889
4	6/11-6/18/2019	OT	0.20 hours downtime due to air sampler upgrade project.	NCR # 02276889
5	6/11-6/18/2019	OT	0.25 hours downtime due to air sampler upgrade project.	NCR # 02276889
6	6/11-6/18/2019	OT	0.15 hours downtime due to air sampler upgrade project.	NCR # 02276889
7	6/11-6/18/2019	OT	0.23 hours downtime due to air sampler upgrade project.	NCR # 02276889
55	6/11-6/18/2019	OT	0.23 hours downtime due to air sampler upgrade project.	NCR # 02276889
60	6/11-6/18/2019	OT	0.18 hours downtime due to air sampler upgrade project.	NCR # 02276889
61	6/11-6/18/2019	OT	0.43 hours downtime due to air sampler upgrade project.	NCR # 02276889
5	7/16-7/23/2019	PO	16.94 hours downtime due storms.	NCR # 02282641
5	7/29-8/6/2019	PI	181.00 hours downtime due to undetermined cause.	NCR # 02285658
5	8/6-8/13/2019	PI	23.62 hours downtime due to undetermined cause.	NCR # 02285658

Surface Water

REMP monthly surface water (SW) samples that experience any downtime during a surveillance period are reported as a Deviation and classified as a “Sampling Deviation.” The sample is counted and the data reported; whereas, a Deviation with no available sample is classified as an “Unavailable Analyses” and does not have any data reported. The Robinson REMP water samplers operated for a total of 99.37% availability in 2019.

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
40	3/26-4/29/2019	LC	84.00 hours downtime due to clogged sampling line.	NCR # 02270300
40	4/29-5/28/2019	OT	25.00 hours downtime due to clogged sampling line.	NCR # 02270300

C.2 UNAVAILABLE ANALYSES

Broadleaf Vegetation (BLV)

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
All BLV ⁽¹⁾	January 2019	SU	Broadleaf Vegetation was seasonally unavailable	NCR # 02251554
All BLV ⁽¹⁾	February 2019	SU	Broadleaf Vegetation was seasonally unavailable	NCR # 02256156
All BLV ⁽¹⁾	March 2019	SU	Broadleaf Vegetation was seasonally unavailable	NCR # 02262715
All BLV ⁽²⁾	November 2019	SU	Broadleaf Vegetation was seasonally unavailable	NCR # 02316432
All BLV ⁽²⁾	December 2019	SU	Broadleaf Vegetation was seasonally unavailable	NCR # 02316432

(1) All “BLV” represents HBRSEP Broadleaf Vegetation locations 50, 51,52,62, and 67.

(2) All “BLV” represents HBRSEP Broadleaf Vegetation locations 50, 51,52,62, 67, and 83.

Air Particulate and Air Radioiodine

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
60	11/12-11/19/2019	OT	161.43 hours downtime due work in area. Rain hood found on ground.	NCR # 02303197

APPENDIX D

ANALYTICAL DEVIATIONS

No Analytical deviations were incurred for the
2019 Radiological Environmental Monitoring Program

APPENDIX E

**RADIOLOGICAL
ENVIRONMENTAL MONITORING
PROGRAM RESULTS**

2019

This appendix includes sample analysis report summaries and supportive data generated from each sample medium for 2019

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 1 [CONTROL - ESE @ 24.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492314	1/2/2019 - 1/9/2019	Beta	1.42E-02	2.72E-03	3.16E-03
492574	1/9/2019 - 1/15/2019	Beta	1.16E-02	2.74E-03	3.35E-03
493048	1/15/2019 - 1/23/2019	Beta	1.51E-02	2.61E-03	3.01E-03
493399	1/23/2019 - 1/29/2019	Beta	1.65E-02	3.35E-03	4.10E-03
493630	1/29/2019 - 2/5/2019	Beta	2.25E-02	3.21E-03	3.40E-03
493863	2/5/2019 - 2/12/2019	Beta	2.16E-02	2.90E-03	2.87E-03
494400	2/12/2019 - 2/19/2019	Beta	1.57E-02	2.57E-03	2.73E-03
495080	2/19/2019 - 2/26/2019	Beta	1.14E-02	2.04E-03	2.32E-03
495351	2/26/2019 - 3/5/2019	Beta	1.42E-02	2.50E-03	2.82E-03
496205	3/5/2019 - 3/12/2019	Beta	1.73E-02	2.72E-03	2.97E-03
496822	3/12/2019 - 3/19/2019	Beta	1.85E-02	2.81E-03	2.97E-03
497192	3/19/2019 - 3/26/2019	Beta	1.84E-02	2.73E-03	2.89E-03
497613	1/2/2019 - 4/2/2019	Cs-134	<1.74E-03	0.00E+00	1.74E-03
		Cs-137	<7.92E-04	0.00E+00	7.92E-04
		Be-7	1.68E-01	4.08E-02	3.27E-02
		K-40	<2.28E-02	0.00E+00	2.28E-02
497664	3/26/2019 - 4/2/2019	Beta	1.31E-02	2.43E-03	2.75E-03
498195	4/2/2019 - 4/9/2019	Beta	1.45E-02	2.45E-03	2.68E-03
498633	4/9/2019 - 4/16/2019	Beta	8.40E-03	2.34E-03	3.18E-03
498834	4/16/2019 - 4/23/2019	Beta	1.27E-02	2.30E-03	2.49E-03
499657	4/23/2019 - 4/29/2019	Beta	2.34E-02	3.24E-03	3.28E-03
499956	4/29/2019 - 5/6/2019	Beta	1.51E-02	2.73E-03	3.16E-03
500210	5/6/2019 - 5/13/2019	Beta	1.15E-02	2.63E-03	3.36E-03
500518	5/13/2019 - 5/21/2019	Beta	1.95E-02	2.68E-03	2.83E-03
500789	5/21/2019 - 5/28/2019	Beta	2.09E-02	2.92E-03	3.08E-03
501296	5/28/2019 - 6/5/2019	Beta	2.12E-02	2.74E-03	2.81E-03
501984	6/5/2019 - 6/11/2019	Beta	1.31E-02	2.80E-03	3.44E-03

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 1 [CONTROL - ESE @ 24.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
502801	6/11/2019 - 6/18/2019	Beta	1.72E-02	2.76E-03	3.06E-03
502253	6/18/2019 - 6/25/2019	Beta	1.48E-02	2.89E-03	3.54E-03
503443	4/2/2019 - 7/2/2019	Cs-134	<1.68E-03	0.00E+00	1.68E-03
		Cs-137	<1.26E-03	0.00E+00	1.26E-03
		Be-7	1.97E-01	3.97E-02	2.54E-02
		K-40	<2.79E-02	0.00E+00	2.79E-02
503594	6/25/2019 - 7/2/2019	Beta	2.51E-02	2.98E-03	2.78E-03
503894	7/2/2019 - 7/9/2019	Beta	2.20E-02	3.12E-03	3.30E-03
504328	7/9/2019 - 7/16/2019	Beta	1.87E-02	2.99E-03	3.23E-03
504495	7/16/2019 - 7/23/2019	Beta	2.16E-02	3.09E-03	3.06E-03
504744	7/23/2019 - 7/29/2019	Beta	2.09E-02	3.45E-03	3.84E-03
504975	7/29/2019 - 8/6/2019	Beta	1.76E-02	2.38E-03	2.42E-03
505205	8/6/2019 - 8/13/2019	Beta	3.46E-02	3.31E-03	2.67E-03
505597	8/13/2019 - 8/20/2019	Beta	1.97E-02	3.08E-03	3.32E-03
505932	8/20/2019 - 8/27/2019	Beta	1.43E-02	2.75E-03	3.19E-03
506543	8/27/2019 - 9/3/2019	Beta	2.08E-02	2.70E-03	2.64E-03
507461	9/3/2019 - 9/10/2019	Beta	3.11E-02	3.19E-03	2.84E-03
507856	9/10/2019 - 9/17/2019	Beta	3.61E-02	3.37E-03	2.73E-03
508632	9/17/2019 - 9/24/2019	Beta	2.28E-02	2.90E-03	2.91E-03
509269	7/2/2019 - 10/1/2019	Cs-134	<1.64E-03	0.00E+00	1.64E-03
		Cs-137	<1.46E-03	0.00E+00	1.46E-03
		Be-7	1.63E-01	3.89E-02	3.42E-02
		K-40	<3.62E-02	0.00E+00	3.62E-02
509594	9/24/2019 - 10/1/2019	Beta	3.79E-02	3.78E-03	3.16E-03
510066	10/1/2019 - 10/8/2019	Beta	3.19E-02	3.24E-03	2.80E-03
510593	10/8/2019 - 10/14/2019	Beta	1.91E-02	2.94E-03	3.14E-03
510872	10/14/2019 - 10/21/2019	Beta	2.29E-02	2.85E-03	2.82E-03
511305	10/21/2019 - 10/29/2019	Beta	1.77E-02	2.43E-03	2.56E-03
511531	10/29/2019 - 11/5/2019	Beta	2.17E-02	2.83E-03	2.76E-03

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 1 [CONTROL - ESE @ 24.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511932	11/5/2019 - 11/12/2019	Beta	3.26E-02	3.56E-03	3.29E-03
512231	11/12/2019 - 11/19/2019	Beta	1.46E-02	2.84E-03	3.36E-03
512542	11/19/2019 - 11/26/2019	Beta	2.50E-02	3.31E-03	3.36E-03
512857	11/26/2019 - 12/3/2019	Beta	1.70E-02	2.60E-03	2.92E-03
513825	12/3/2019 - 12/10/2019	Beta	1.94E-02	2.95E-03	3.05E-03
513984	12/10/2019 - 12/17/2019	Beta	2.09E-02	2.74E-03	2.71E-03
514232	12/17/2019 - 12/23/2019	Beta	2.76E-02	3.34E-03	3.19E-03
514518	10/1/2019 - 12/31/2019	Cs-134	<1.29E-03	0.00E+00	1.29E-03
		Cs-137	<1.06E-03	0.00E+00	1.06E-03
		Be-7	1.36E-01	3.58E-02	3.36E-02
		K-40	1.99E-02	1.35E-02	1.56E-02
514660	12/23/2019 - 12/31/2019	Beta	2.09E-02	2.60E-03	2.58E-03

Sample Point 2 [INDICATOR - S @ 0.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492315	1/2/2019 - 1/9/2019	Beta	1.63E-02	2.98E-03	3.38E-03
492575	1/9/2019 - 1/15/2019	Beta	1.65E-02	3.22E-03	3.65E-03
493049	1/15/2019 - 1/23/2019	Beta	1.98E-02	3.01E-03	3.31E-03
493400	1/23/2019 - 1/29/2019	Beta	1.90E-02	3.64E-03	4.36E-03
493631	1/29/2019 - 2/5/2019	Beta	2.55E-02	3.54E-03	3.69E-03
493864	2/5/2019 - 2/12/2019	Beta	2.03E-02	3.03E-03	3.16E-03
494401	2/12/2019 - 2/19/2019	Beta	1.78E-02	2.88E-03	3.05E-03
495081	2/19/2019 - 2/26/2019	Beta	1.03E-02	2.17E-03	2.65E-03
495352	2/26/2019 - 3/5/2019	Beta	1.50E-02	2.79E-03	3.23E-03
496206	3/5/2019 - 3/12/2019	Beta	2.07E-02	3.11E-03	3.33E-03
496823	3/12/2019 - 3/19/2019	Beta	2.18E-02	3.15E-03	3.24E-03
497193	3/19/2019 - 3/26/2019	Beta	1.92E-02	3.11E-03	3.42E-03
497614	1/2/2019 - 4/2/2019	Cs-134	<1.68E-03	0.00E+00	1.68E-03
		Cs-137	<1.79E-03	0.00E+00	1.79E-03
		Be-7	1.61E-01	4.10E-02	2.83E-02
		K-40	<3.02E-02	0.00E+00	3.02E-02

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 2 [INDICATOR - S @ 0.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
497665	3/26/2019 - 4/2/2019	Beta	1.71E-02	2.78E-03	2.97E-03
498196	4/2/2019 - 4/9/2019	Beta	1.52E-02	2.72E-03	3.05E-03
498634	4/9/2019 - 4/16/2019	Beta	1.08E-02	2.69E-03	3.53E-03
498835	4/16/2019 - 4/23/2019	Beta	1.23E-02	2.50E-03	2.85E-03
499658	4/23/2019 - 4/29/2019	Beta	2.51E-02	3.59E-03	3.67E-03
499957	4/29/2019 - 5/6/2019	Beta	1.52E-02	2.81E-03	3.28E-03
500211	5/6/2019 - 5/13/2019	Beta	1.41E-02	2.62E-03	3.12E-03
500519	5/13/2019 - 5/21/2019	Beta	2.28E-02	3.01E-03	3.13E-03
500790	5/21/2019 - 5/28/2019	Beta	2.55E-02	3.38E-03	3.46E-03
501297	5/28/2019 - 6/5/2019	Beta	2.41E-02	3.05E-03	3.10E-03
501985	6/5/2019 - 6/11/2019	Beta	1.39E-02	3.06E-03	3.80E-03
502802	6/11/2019 - 6/18/2019	Beta	1.79E-02	2.98E-03	3.37E-03
502254	6/18/2019 - 6/25/2019	Beta	1.25E-02	2.78E-03	3.56E-03
503444	4/2/2019 - 7/2/2019	Cs-134	<1.45E-03	0.00E+00	1.45E-03
		Cs-137	<1.44E-03	0.00E+00	1.44E-03
		Be-7	1.72E-01	4.02E-02	3.58E-02
		K-40	<3.04E-02	0.00E+00	3.04E-02
503595	6/25/2019 - 7/2/2019	Beta	3.20E-02	3.20E-03	2.69E-03
503895	7/2/2019 - 7/9/2019	Beta	2.35E-02	3.27E-03	3.41E-03
504329	7/9/2019 - 7/16/2019	Beta	1.77E-02	2.88E-03	3.13E-03
504496	7/16/2019 - 7/23/2019	Beta	2.12E-02	3.06E-03	3.06E-03
504745	7/23/2019 - 7/29/2019	Beta	1.93E-02	3.49E-03	4.02E-03
504976	7/29/2019 - 8/6/2019	Beta	1.63E-02	2.32E-03	2.42E-03
505206	8/6/2019 - 8/13/2019	Beta	3.43E-02	3.20E-03	2.55E-03
505598	8/13/2019 - 8/20/2019	Beta	1.83E-02	3.08E-03	3.45E-03
505933	8/20/2019 - 8/27/2019	Beta	1.40E-02	2.72E-03	3.18E-03
506544	8/27/2019 - 9/3/2019	Beta	2.35E-02	2.84E-03	2.65E-03

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 2 [INDICATOR - S @ 0.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
507462	9/3/2019 - 9/10/2019	Beta	3.66E-02	3.34E-03	2.76E-03
507857	9/10/2019 - 9/17/2019	Beta	4.16E-02	3.64E-03	2.83E-03
508633	9/17/2019 - 9/24/2019	Beta	2.69E-02	3.06E-03	2.89E-03
509270	7/2/2019 - 10/1/2019	Cs-134	<1.43E-03	0.00E+00	1.43E-03
		Cs-137	<1.53E-03	0.00E+00	1.53E-03
		Be-7	1.72E-01	3.94E-02	3.32E-02
		K-40	<2.34E-02	0.00E+00	2.34E-02
509595	9/24/2019 - 10/1/2019	Beta	3.82E-02	3.78E-03	3.16E-03
510067	10/1/2019 - 10/8/2019	Beta	2.75E-02	3.06E-03	2.80E-03
510594	10/8/2019 - 10/14/2019	Beta	2.02E-02	2.98E-03	3.13E-03
510873	10/14/2019 - 10/21/2019	Beta	2.43E-02	2.90E-03	2.80E-03
511306	10/21/2019 - 10/29/2019	Beta	1.60E-02	2.37E-03	2.58E-03
511532	10/29/2019 - 11/5/2019	Beta	2.01E-02	2.67E-03	2.64E-03
511933	11/5/2019 - 11/12/2019	Beta	3.39E-02	3.64E-03	3.32E-03
512232	11/12/2019 - 11/19/2019	Beta	1.52E-02	2.87E-03	3.36E-03
512543	11/19/2019 - 11/26/2019	Beta	2.09E-02	3.08E-03	3.28E-03
512858	11/26/2019 - 12/3/2019	Beta	1.60E-02	2.66E-03	3.10E-03
513826	12/3/2019 - 12/10/2019	Beta	1.73E-02	2.85E-03	3.05E-03
513985	12/10/2019 - 12/17/2019	Beta	1.97E-02	2.67E-03	2.68E-03
514233	12/17/2019 - 12/23/2019	Beta	2.26E-02	3.08E-03	3.14E-03
514519	10/1/2019 - 12/31/2019	Cs-134	<1.08E-03	0.00E+00	1.08E-03
		Cs-137	<1.45E-03	0.00E+00	1.45E-03
		Be-7	1.59E-01	3.90E-02	3.36E-02
		K-40	<2.19E-02	0.00E+00	2.19E-02
514661	12/23/2019 - 12/31/2019	Beta	2.16E-02	2.62E-03	2.57E-03

Sample Point 3 [INDICATOR - N @ 0.5 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492316	1/2/2019 - 1/9/2019	Beta	1.72E-02	3.08E-03	3.46E-03
492576	1/9/2019 - 1/15/2019	Beta	1.63E-02	3.29E-03	3.79E-03
493050	1/15/2019 - 1/23/2019	Beta	1.82E-02	2.98E-03	3.38E-03

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 3 [INDICATOR - N @ 0.5 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493401	1/23/2019 - 1/29/2019	Beta	1.85E-02	3.70E-03	4.50E-03
493632	1/29/2019 - 2/5/2019	Beta	2.41E-02	3.51E-03	3.73E-03
493865	2/5/2019 - 2/12/2019	Beta	2.12E-02	3.09E-03	3.21E-03
494402	2/12/2019 - 2/19/2019	Beta	1.82E-02	2.88E-03	3.02E-03
495082	2/19/2019 - 2/26/2019	Beta	1.15E-02	2.23E-03	2.63E-03
495353	2/26/2019 - 3/5/2019	Beta	1.51E-02	2.77E-03	3.19E-03
496207	3/5/2019 - 3/12/2019	Beta	1.88E-02	3.03E-03	3.35E-03
496824	3/12/2019 - 3/19/2019	Beta	2.08E-02	3.13E-03	3.30E-03
497194	3/19/2019 - 3/26/2019	Beta	2.09E-02	3.17E-03	3.38E-03
497615	1/2/2019 - 4/2/2019	Cs-134	<2.01E-03	0.00E+00	2.01E-03
		Cs-137	<1.51E-03	0.00E+00	1.51E-03
		Be-7	1.57E-01	3.87E-02	2.54E-02
		K-40	<2.63E-02	0.00E+00	2.63E-02
497666	3/26/2019 - 4/2/2019	Beta	1.57E-02	2.74E-03	3.04E-03
498197	4/2/2019 - 4/9/2019	Beta	1.45E-02	2.68E-03	3.05E-03
498635	4/9/2019 - 4/16/2019	Beta	9.95E-03	2.59E-03	3.44E-03
498836	4/16/2019 - 4/23/2019	Beta	1.15E-02	2.46E-03	2.87E-03
499659	4/23/2019 - 4/29/2019	Beta	2.31E-02	3.41E-03	3.56E-03
499958	4/29/2019 - 5/6/2019	Beta	1.51E-02	2.87E-03	3.41E-03
500212	5/6/2019 - 5/13/2019	Beta	1.12E-02	2.48E-03	3.13E-03
500520	5/13/2019 - 5/21/2019	Beta	2.22E-02	2.97E-03	3.11E-03
500791	5/21/2019 - 5/28/2019	Beta	2.35E-02	3.27E-03	3.44E-03
501298	5/28/2019 - 6/5/2019	Beta	2.20E-02	2.96E-03	3.11E-03
501986	6/5/2019 - 6/11/2019	Beta	1.22E-02	2.97E-03	3.81E-03
502803	6/11/2019 - 6/18/2019	Beta	1.71E-02	2.56E-03	2.76E-03
502255	6/18/2019 - 6/25/2019	Beta	1.24E-02	2.80E-03	3.61E-03
503445	4/2/2019 - 7/2/2019	Cs-134	<1.61E-03	0.00E+00	1.61E-03
		Cs-137	<1.18E-03	0.00E+00	1.18E-03

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 3 [INDICATOR - N @ 0.5 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
503445	4/2/2019 - 7/2/2019	Be-7	1.67E-01	3.75E-02	2.70E-02
		K-40	<2.51E-02	0.00E+00	2.51E-02
503596	6/25/2019 - 7/2/2019	Beta	2.96E-02	3.10E-03	2.68E-03
503896	7/2/2019 - 7/9/2019	Beta	2.02E-02	3.13E-03	3.43E-03
504330	7/9/2019 - 7/16/2019	Beta	1.50E-02	2.79E-03	3.22E-03
504497	7/16/2019 - 7/23/2019	Beta	1.95E-02	2.98E-03	3.06E-03
504746	7/23/2019 - 7/29/2019	Beta	1.57E-02	3.20E-03	3.88E-03
504977	7/29/2019 - 8/6/2019	Beta	1.89E-02	2.44E-03	2.41E-03
505207	8/6/2019 - 8/13/2019	Beta	3.72E-02	3.33E-03	2.58E-03
505599	8/13/2019 - 8/20/2019	Beta	2.03E-02	3.17E-03	3.42E-03
505934	8/20/2019 - 8/27/2019	Beta	1.34E-02	2.67E-03	3.14E-03
506545	8/27/2019 - 9/3/2019	Beta	1.95E-02	2.67E-03	2.67E-03
507463	9/3/2019 - 9/10/2019	Beta	3.14E-02	3.17E-03	2.80E-03
507858	9/10/2019 - 9/17/2019	Beta	3.53E-02	3.39E-03	2.79E-03
508634	9/17/2019 - 9/24/2019	Beta	2.55E-02	3.01E-03	2.91E-03
509271	7/2/2019 - 10/1/2019	Cs-134	<1.77E-03	0.00E+00	1.77E-03
		Cs-137	<1.03E-03	0.00E+00	1.03E-03
		Be-7	1.62E-01	3.75E-02	2.93E-02
		K-40	<3.16E-02	0.00E+00	3.16E-02
509596	9/24/2019 - 10/1/2019	Beta	3.70E-02	3.76E-03	3.19E-03
510068	10/1/2019 - 10/8/2019	Beta	3.11E-02	3.13E-03	2.70E-03
510595	10/8/2019 - 10/14/2019	Beta	1.82E-02	2.94E-03	3.22E-03
510874	10/14/2019 - 10/21/2019	Beta	2.18E-02	2.80E-03	2.81E-03
511307	10/21/2019 - 10/29/2019	Beta	1.91E-02	2.50E-03	2.57E-03
511533	10/29/2019 - 11/5/2019	Beta	2.25E-02	2.79E-03	2.64E-03
511934	11/5/2019 - 11/12/2019	Beta	3.15E-02	3.54E-03	3.33E-03
512233	11/12/2019 - 11/19/2019	Beta	1.66E-02	2.93E-03	3.34E-03

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 3 [INDICATOR - N @ 0.5 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512544	11/19/2019 - 11/26/2019	Beta	2.15E-02	3.14E-03	3.33E-03
512859	11/26/2019 - 12/3/2019	Beta	1.55E-02	2.64E-03	3.10E-03
513827	12/3/2019 - 12/10/2019	Beta	1.77E-02	2.82E-03	2.98E-03
513986	12/10/2019 - 12/17/2019	Beta	1.83E-02	2.62E-03	2.71E-03
514234	12/17/2019 - 12/23/2019	Beta	2.31E-02	3.14E-03	3.19E-03
514520	10/1/2019 - 12/31/2019	Cs-134	<1.27E-03	0.00E+00	1.27E-03
		Cs-137	<1.34E-03	0.00E+00	1.34E-03
		Be-7	1.57E-01	3.64E-02	2.86E-02
		K-40	<3.43E-02	0.00E+00	3.43E-02
514662	12/23/2019 - 12/31/2019	Beta	2.02E-02	2.55E-03	2.55E-03

Sample Point 4 [INDICATOR - ESE @ 0.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492317	1/2/2019 - 1/9/2019	Beta	1.41E-02	2.92E-03	3.49E-03
492577	1/9/2019 - 1/15/2019	Beta	1.86E-02	3.46E-03	3.84E-03
493051	1/15/2019 - 1/23/2019	Beta	1.96E-02	3.10E-03	3.46E-03
493402	1/23/2019 - 1/29/2019	Beta	1.39E-02	3.47E-03	4.53E-03
493633	1/29/2019 - 2/5/2019	Beta	2.55E-02	3.64E-03	3.85E-03
493866	2/5/2019 - 2/12/2019	Beta	2.17E-02	3.23E-03	3.37E-03
494403	2/12/2019 - 2/19/2019	Beta	1.50E-02	2.74E-03	3.06E-03
495083	2/19/2019 - 2/26/2019	Beta	1.31E-02	2.29E-03	2.59E-03
495354	2/26/2019 - 3/5/2019	Beta	1.36E-02	2.75E-03	3.29E-03
496208	3/5/2019 - 3/12/2019	Beta	1.99E-02	3.07E-03	3.32E-03
496825	3/12/2019 - 3/19/2019	Beta	2.06E-02	3.07E-03	3.22E-03
497195	3/19/2019 - 3/26/2019	Beta	2.20E-02	3.23E-03	3.40E-03
497616	1/2/2019 - 4/2/2019	Cs-134	<1.90E-03	0.00E+00	1.90E-03
		Cs-137	<1.09E-03	0.00E+00	1.09E-03
		Be-7	1.93E-01	4.66E-02	3.96E-02
		K-40	<2.15E-02	0.00E+00	2.15E-02
497667	3/26/2019 - 4/2/2019	Beta	1.73E-02	2.77E-03	2.94E-03
498198	4/2/2019 - 4/9/2019	Beta	1.37E-02	2.61E-03	2.99E-03

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 4 [INDICATOR - ESE @ 0.4 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
498636	4/9/2019 - 4/16/2019	Beta	1.02E-02	2.62E-03	3.48E-03
498837	4/16/2019 - 4/23/2019	Beta	1.34E-02	2.56E-03	2.84E-03
499660	4/23/2019 - 4/29/2019	Beta	1.85E-02	3.23E-03	3.62E-03
499959	4/29/2019 - 5/6/2019	Beta	1.27E-02	2.63E-03	3.22E-03
500213	5/6/2019 - 5/13/2019	Beta	1.07E-02	2.44E-03	3.12E-03
500521	5/13/2019 - 5/21/2019	Beta	1.99E-02	2.76E-03	2.94E-03
500792	5/21/2019 - 5/28/2019	Beta	2.52E-02	3.36E-03	3.46E-03
501299	5/28/2019 - 6/5/2019	Beta	1.95E-02	2.73E-03	2.91E-03
501987	6/5/2019 - 6/11/2019	Beta	1.24E-02	2.99E-03	3.83E-03
502804	6/11/2019 - 6/18/2019	Beta	1.87E-02	2.61E-03	2.72E-03
502256	6/18/2019 - 6/25/2019	Beta	1.46E-02	2.96E-03	3.67E-03
503446	4/2/2019 - 7/2/2019	Cs-134	<1.00E-03	0.00E+00	1.00E-03
		Cs-137	<1.04E-03	0.00E+00	1.04E-03
		Be-7	1.50E-01	3.63E-02	2.97E-02
		K-40	<2.52E-02	0.00E+00	2.52E-02
503597	6/25/2019 - 7/2/2019	Beta	2.71E-02	3.00E-03	2.69E-03
503897	7/2/2019 - 7/9/2019	Beta	2.17E-02	3.18E-03	3.41E-03
504331	7/9/2019 - 7/16/2019	Beta	1.45E-02	2.71E-03	3.13E-03
504498	7/16/2019 - 7/23/2019	Beta	2.12E-02	3.06E-03	3.06E-03
504747	7/23/2019 - 7/29/2019	Beta	2.26E-02	3.65E-03	4.02E-03
504978	7/29/2019 - 8/6/2019	Beta	1.87E-02	2.43E-03	2.42E-03
505208	8/6/2019 - 8/13/2019	Beta	3.29E-02	3.16E-03	2.55E-03
505600	8/13/2019 - 8/20/2019	Beta	1.69E-02	3.01E-03	3.45E-03
505935	8/20/2019 - 8/27/2019	Beta	1.29E-02	2.67E-03	3.18E-03
506546	8/27/2019 - 9/3/2019	Beta	1.89E-02	2.62E-03	2.65E-03
507464	9/3/2019 - 9/10/2019	Beta	3.01E-02	3.09E-03	2.76E-03
507859	9/10/2019 - 9/17/2019	Beta	3.41E-02	3.37E-03	2.83E-03

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 4 [INDICATOR - ESE @ 0.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
508635	9/17/2019 - 9/24/2019	Beta	2.28E-02	2.88E-03	2.89E-03
509272	7/2/2019 - 10/1/2019	Nuclide	Activity	2 Sigma Error	MDA
		Cs-134	<1.49E-03	0.00E+00	1.49E-03
		Cs-137	<1.06E-03	0.00E+00	1.06E-03
		Be-7	1.75E-01	4.10E-02	3.57E-02
		K-40	<1.26E-02	0.00E+00	1.26E-02
509597	9/24/2019 - 10/1/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	2.96E-02	3.44E-03	3.15E-03
510069	10/1/2019 - 10/8/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	2.75E-02	3.05E-03	2.78E-03
510596	10/8/2019 - 10/14/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.77E-02	2.89E-03	3.17E-03
510875	10/14/2019 - 10/21/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	2.24E-02	2.82E-03	2.80E-03
511308	10/21/2019 - 10/29/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.75E-02	2.44E-03	2.58E-03
511534	10/29/2019 - 11/5/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.96E-02	2.62E-03	2.60E-03
511935	11/5/2019 - 11/12/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	3.03E-02	3.53E-03	3.38E-03
512234	11/12/2019 - 11/19/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.52E-02	2.87E-03	3.35E-03
512545	11/19/2019 - 11/26/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	2.07E-02	3.07E-03	3.27E-03
512860	11/26/2019 - 12/3/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.75E-02	2.77E-03	3.15E-03
513828	12/3/2019 - 12/10/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.57E-02	2.73E-03	3.00E-03
513987	12/10/2019 - 12/17/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.98E-02	2.67E-03	2.68E-03
514235	12/17/2019 - 12/23/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	2.63E-02	3.25E-03	3.14E-03
514521	10/1/2019 - 12/31/2019	Nuclide	Activity	2 Sigma Error	MDA
		Cs-134	<1.24E-03	0.00E+00	1.24E-03
		Cs-137	<1.31E-03	0.00E+00	1.31E-03
		Be-7	1.56E-01	3.58E-02	2.73E-02
		K-40	<2.18E-02	0.00E+00	2.18E-02
514663	12/23/2019 - 12/31/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	2.01E-02	2.56E-03	2.57E-03

Sample Point 5 [INDICATOR - ENE @ 0.9 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492318	1/2/2019 - 1/9/2019	Beta	1.51E-02	2.81E-03	3.21E-03
492578	1/9/2019 - 1/15/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.40E-02	3.07E-03	3.64E-03
493052	1/15/2019 - 1/23/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.31E-02	2.55E-03	3.08E-03
493403	1/23/2019 - 1/29/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.60E-02	3.37E-03	4.18E-03
493634	1/29/2019 - 2/5/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.91E-02	3.06E-03	3.41E-03

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 5 [INDICATOR - ENE @ 0.9 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493867	2/5/2019 - 2/12/2019	Beta	1.92E-02	3.00E-03	3.21E-03
494404	2/12/2019 - 2/19/2019	Beta	1.49E-02	2.76E-03	3.12E-03
495084	2/19/2019 - 2/26/2019	Beta	1.01E-02	2.14E-03	2.61E-03
495355	2/26/2019 - 3/5/2019	Beta	1.56E-02	2.80E-03	3.19E-03
496209	3/5/2019 - 3/12/2019	Beta	1.68E-02	2.92E-03	3.33E-03
496826	3/12/2019 - 3/19/2019	Beta	1.70E-02	2.91E-03	3.25E-03
497196	3/19/2019 - 3/26/2019	Beta	2.24E-02	3.21E-03	3.35E-03
497617	1/2/2019 - 4/2/2019	Cs-134	<1.33E-03	0.00E+00	1.33E-03
		Cs-137	<1.08E-03	0.00E+00	1.08E-03
		Be-7	1.97E-01	4.59E-02	3.54E-02
		K-40	<2.78E-02	0.00E+00	2.78E-02
497668	3/26/2019 - 4/2/2019	Beta	1.40E-02	2.63E-03	3.01E-03
498199	4/2/2019 - 4/9/2019	Beta	1.46E-02	2.70E-03	3.06E-03
498637	4/9/2019 - 4/16/2019	Beta	9.21E-03	2.55E-03	3.46E-03
498838	4/16/2019 - 4/23/2019	Beta	1.05E-02	2.40E-03	2.88E-03
499661	4/23/2019 - 4/29/2019	Beta	2.34E-02	3.46E-03	3.61E-03
499960	4/29/2019 - 5/6/2019	Beta	1.23E-02	2.78E-03	3.51E-03
500214	5/6/2019 - 5/13/2019	Beta	1.03E-02	2.44E-03	3.15E-03
500522	5/13/2019 - 5/21/2019	Beta	2.45E-02	3.09E-03	3.14E-03
500793	5/21/2019 - 5/28/2019	Beta	2.28E-02	3.32E-03	3.57E-03
501300	5/28/2019 - 6/5/2019	Beta	2.33E-02	3.07E-03	3.17E-03
501988	6/5/2019 - 6/11/2019	Beta	1.36E-02	3.06E-03	3.82E-03
502805	6/11/2019 - 6/18/2019	Beta	1.78E-02	2.59E-03	2.75E-03
502257	6/18/2019 - 6/25/2019	Beta	1.31E-02	2.81E-03	3.56E-03
503447	4/2/2019 - 7/2/2019	Cs-134	<1.09E-03	0.00E+00	1.09E-03
		Cs-137	<1.60E-03	0.00E+00	1.59E-03
		Be-7	2.10E-01	4.22E-02	1.83E-02
		K-40	<2.91E-02	0.00E+00	2.91E-02
503598	6/25/2019 - 7/2/2019	Beta	2.87E-02	3.08E-03	2.71E-03

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 5 [INDICATOR - ENE @ 0.9 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
503898	7/2/2019 - 7/9/2019	Beta	2.21E-02	3.20E-03	3.41E-03
504332	7/9/2019 - 7/16/2019	Beta	1.63E-02	2.87E-03	3.23E-03
504499	7/16/2019 - 7/23/2019	Beta	2.15E-02	3.31E-03	3.41E-03
504748	7/23/2019 - 7/29/2019	Beta	2.02E-02	3.44E-03	3.88E-03
504979	7/29/2019 - 7/29/2019	Beta	2.45E-02	5.12E-03	8.06E-03
505209	8/7/2019 - 8/13/2019	Beta	3.55E-02	3.58E-03	2.99E-03
505601	8/13/2019 - 8/20/2019	Beta	1.66E-02	2.96E-03	3.39E-03
505936	8/20/2019 - 8/27/2019	Beta	1.33E-02	2.65E-03	3.12E-03
506547	8/27/2019 - 9/3/2019	Beta	1.98E-02	2.71E-03	2.70E-03
507465	9/3/2019 - 9/10/2019	Beta	3.39E-02	3.26E-03	2.79E-03
507860	9/10/2019 - 9/17/2019	Beta	3.29E-02	3.27E-03	2.77E-03
508636	9/17/2019 - 9/24/2019	Beta	2.34E-02	2.92E-03	2.91E-03
509273	7/2/2019 - 10/1/2019	Cs-134	<2.31E-03	0.00E+00	2.31E-03
		Cs-137	<1.89E-03	0.00E+00	1.89E-03
		Be-7	1.83E-01	4.31E-02	3.22E-02
		K-40	3.23E-02	1.64E-02	5.47E-03
509598	9/24/2019 - 10/1/2019	Beta	3.21E-02	3.52E-03	3.12E-03
510070	10/1/2019 - 10/8/2019	Beta	2.90E-02	3.10E-03	2.77E-03
510597	10/8/2019 - 10/14/2019	Beta	1.89E-02	3.00E-03	3.26E-03
510876	10/14/2019 - 10/21/2019	Beta	2.09E-02	2.78E-03	2.83E-03
511309	10/21/2019 - 10/29/2019	Beta	1.57E-02	2.33E-03	2.53E-03
511535	10/29/2019 - 11/5/2019	Beta	2.09E-02	2.71E-03	2.64E-03
511936	11/5/2019 - 11/12/2019	Beta	3.28E-02	3.62E-03	3.36E-03
512235	11/12/2019 - 11/19/2019	Beta	1.32E-02	2.72E-03	3.30E-03
512546	11/19/2019 - 11/26/2019	Beta	1.84E-02	3.01E-03	3.37E-03
512861	11/26/2019 - 12/3/2019	Beta	1.45E-02	2.56E-03	3.06E-03
513829	12/3/2019 - 12/10/2019	Beta	1.86E-02	2.89E-03	3.02E-03

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 5 [INDICATOR - ENE @ 0.9 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
513988	12/10/2019 - 12/17/2019	Beta	1.82E-02	2.59E-03	2.66E-03
514236	12/17/2019 - 12/23/2019	Beta	2.58E-02	3.30E-03	3.25E-03
514522	10/1/2019 - 12/31/2019	Cs-134	<9.98E-04	0.00E+00	9.98E-04
		Cs-137	<1.67E-03	0.00E+00	1.67E-03
		Be-7	1.65E-01	3.73E-02	2.78E-02
		K-40	<3.49E-02	0.00E+00	3.49E-02
514664	12/23/2019 - 12/31/2019	Beta	1.93E-02	2.49E-03	2.52E-03

Sample Point 6 [INDICATOR - SSW @ 0.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492320	1/2/2019 - 1/9/2019	Beta	1.31E-02	2.40E-03	2.73E-03
492580	1/9/2019 - 1/15/2019	Beta	1.31E-02	2.57E-03	2.90E-03
493054	1/15/2019 - 1/23/2019	Beta	1.58E-02	2.32E-03	2.50E-03
493405	1/23/2019 - 1/29/2019	Beta	1.70E-02	2.99E-03	3.48E-03
493636	1/29/2019 - 2/5/2019	Beta	2.19E-02	2.90E-03	2.95E-03
493869	2/5/2019 - 2/12/2019	Beta	2.40E-02	3.12E-03	3.05E-03
494406	2/12/2019 - 2/19/2019	Beta	1.60E-02	2.71E-03	2.93E-03
495086	2/19/2019 - 2/26/2019	Beta	1.13E-02	2.17E-03	2.55E-03
495357	2/26/2019 - 3/5/2019	Beta	1.34E-02	2.65E-03	3.14E-03
496211	3/5/2019 - 3/12/2019	Beta	1.85E-02	2.93E-03	3.21E-03
496828	3/12/2019 - 3/19/2019	Beta	2.15E-02	3.06E-03	3.13E-03
497198	3/19/2019 - 3/26/2019	Beta	2.13E-02	3.14E-03	3.31E-03
497619	1/2/2019 - 4/2/2019	Cs-134	<1.68E-03	0.00E+00	1.68E-03
		Cs-137	<1.60E-03	0.00E+00	1.60E-03
		Be-7	1.62E-01	4.22E-02	3.81E-02
		K-40	<3.32E-02	0.00E+00	3.32E-02
497670	3/26/2019 - 4/2/2019	Beta	1.69E-02	2.71E-03	2.88E-03
498201	4/2/2019 - 4/9/2019	Beta	1.41E-02	2.62E-03	2.98E-03
498639	4/9/2019 - 4/16/2019	Beta	1.08E-02	2.67E-03	3.50E-03
498840	4/16/2019 - 4/23/2019	Beta	1.34E-02	2.54E-03	2.82E-03
499663	4/23/2019 - 4/29/2019	Beta	2.32E-02	3.50E-03	3.69E-03

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 6 [INDICATOR - SSW @ 0.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
499962	4/29/2019 - 5/6/2019	Beta	1.63E-02	2.87E-03	3.30E-03
500216	5/6/2019 - 5/13/2019	Beta	1.14E-02	2.59E-03	3.30E-03
500524	5/13/2019 - 5/21/2019	Beta	2.24E-02	2.97E-03	3.09E-03
500795	5/21/2019 - 5/28/2019	Beta	2.31E-02	3.27E-03	3.46E-03
501302	5/28/2019 - 6/5/2019	Beta	2.08E-02	2.91E-03	3.10E-03
501990	6/5/2019 - 6/11/2019	Beta	1.65E-02	3.19E-03	3.78E-03
502807	6/11/2019 - 6/18/2019	Beta	1.87E-02	2.74E-03	2.92E-03
502259	6/18/2019 - 6/25/2019	Beta	1.28E-02	2.81E-03	3.57E-03
503449	4/2/2019 - 7/2/2019	Cs-134	<1.24E-03	0.00E+00	1.24E-03
		Cs-137	<1.17E-03	0.00E+00	1.17E-03
		Be-7	2.16E-01	4.58E-02	3.98E-02
		K-40	<2.50E-02	0.00E+00	2.50E-02
503600	6/25/2019 - 7/2/2019	Beta	2.83E-02	3.05E-03	2.69E-03
503900	7/2/2019 - 7/9/2019	Beta	2.13E-02	3.17E-03	3.41E-03
504334	7/9/2019 - 7/16/2019	Beta	1.93E-02	2.96E-03	3.13E-03
504501	7/16/2019 - 7/23/2019	Beta	2.30E-02	3.15E-03	3.06E-03
504750	7/23/2019 - 7/29/2019	Beta	1.99E-02	3.51E-03	4.02E-03
504981	7/29/2019 - 8/6/2019	Beta	1.67E-02	2.35E-03	2.42E-03
505211	8/6/2019 - 8/13/2019	Beta	3.36E-02	3.18E-03	2.55E-03
505603	8/13/2019 - 8/20/2019	Beta	1.72E-02	3.03E-03	3.45E-03
505938	8/20/2019 - 8/27/2019	Beta	1.15E-02	2.59E-03	3.18E-03
506549	8/27/2019 - 9/3/2019	Beta	2.01E-02	2.68E-03	2.65E-03
507467	9/3/2019 - 9/10/2019	Beta	2.97E-02	3.08E-03	2.76E-03
507862	9/10/2019 - 9/17/2019	Beta	3.71E-02	3.47E-03	2.83E-03
508638	9/17/2019 - 9/24/2019	Beta	2.70E-02	3.06E-03	2.89E-03
509275	7/2/2019 - 10/1/2019	Cs-134	<1.24E-03	0.00E+00	1.24E-03
		Cs-137	<1.53E-03	0.00E+00	1.53E-03
		Be-7	1.83E-01	4.21E-02	3.83E-02
		K-40	<2.49E-02	0.00E+00	2.49E-02

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 6 [INDICATOR - SSW @ 0.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
509600	9/24/2019 - 10/1/2019	Beta	3.35E-02	3.60E-03	3.16E-03
510072	10/1/2019 - 10/8/2019	Beta	3.41E-02	3.32E-03	2.80E-03
510599	10/8/2019 - 10/14/2019	Beta	2.09E-02	3.01E-03	3.12E-03
510878	10/14/2019 - 10/21/2019	Beta	2.49E-02	2.93E-03	2.80E-03
511311	10/21/2019 - 10/29/2019	Beta	1.85E-02	2.48E-03	2.58E-03
511537	10/29/2019 - 11/5/2019	Beta	2.14E-02	2.73E-03	2.64E-03
511938	11/5/2019 - 11/12/2019	Beta	3.54E-02	3.69E-03	3.32E-03
512237	11/12/2019 - 11/19/2019	Beta	1.41E-02	2.81E-03	3.36E-03
512548	11/19/2019 - 11/26/2019	Beta	2.10E-02	3.08E-03	3.28E-03
512863	11/26/2019 - 12/3/2019	Beta	1.84E-02	2.77E-03	3.10E-03
513831	12/3/2019 - 12/10/2019	Beta	1.88E-02	2.93E-03	3.05E-03
513990	12/10/2019 - 12/17/2019	Beta	2.00E-02	2.69E-03	2.68E-03
514238	12/17/2019 - 12/23/2019	Beta	2.86E-02	3.34E-03	3.14E-03
514524	10/1/2019 - 12/31/2019	Cs-134	<3.75E-04	0.00E+00	3.75E-04
		Cs-137	<1.23E-03	0.00E+00	1.23E-03
		Be-7	1.38E-01	3.68E-02	3.61E-02
		K-40	<1.26E-02	0.00E+00	1.26E-02
514666	12/23/2019 - 12/31/2019	Beta	2.30E-02	2.68E-03	2.57E-03

Sample Point 7 [INDICATOR - ESE @ 6.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492323	1/2/2019 - 1/9/2019	Beta	1.16E-02	2.22E-03	2.57E-03
492583	1/9/2019 - 1/15/2019	Beta	1.05E-02	2.28E-03	2.70E-03
493057	1/15/2019 - 1/23/2019	Beta	1.26E-02	2.14E-03	2.45E-03
493408	1/23/2019 - 1/29/2019	Beta	1.25E-02	2.67E-03	3.33E-03
493639	1/29/2019 - 2/5/2019	Beta	1.67E-02	2.54E-03	2.76E-03
493872	2/5/2019 - 2/12/2019	Beta	1.92E-02	2.78E-03	2.87E-03
494409	2/12/2019 - 2/19/2019	Beta	1.48E-02	2.52E-03	2.73E-03
495089	2/19/2019 - 2/26/2019	Beta	1.14E-02	2.07E-03	2.37E-03

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 7 [INDICATOR - ESE @ 6.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
495360	2/26/2019 - 3/5/2019	Beta	1.34E-02	2.49E-03	2.88E-03
496214	3/5/2019 - 3/12/2019	Beta	1.82E-02	2.75E-03	2.96E-03
496831	3/12/2019 - 3/19/2019	Beta	2.01E-02	2.92E-03	3.02E-03
497201	3/19/2019 - 3/26/2019	Beta	1.64E-02	2.68E-03	2.95E-03
497622	1/2/2019 - 4/2/2019	Cs-134	<1.74E-03	0.00E+00	1.74E-03
		Cs-137	<9.32E-04	0.00E+00	9.32E-04
		Be-7	1.41E-01	3.79E-02	3.63E-02
		K-40	1.48E-02	1.07E-02	1.21E-02
497673	3/26/2019 - 4/2/2019	Beta	1.50E-02	2.57E-03	2.81E-03
498204	4/2/2019 - 4/9/2019	Beta	1.32E-02	2.43E-03	2.74E-03
498642	4/9/2019 - 4/16/2019	Beta	7.87E-03	2.30E-03	3.18E-03
498843	4/16/2019 - 4/23/2019	Beta	1.11E-02	2.27E-03	2.62E-03
499666	4/23/2019 - 4/29/2019	Beta	2.43E-02	3.36E-03	3.38E-03
499965	4/29/2019 - 5/6/2019	Beta	1.54E-02	2.69E-03	3.08E-03
500219	5/6/2019 - 5/13/2019	Beta	1.15E-02	2.67E-03	3.42E-03
500527	5/13/2019 - 5/21/2019	Beta	2.22E-02	2.80E-03	2.85E-03
500798	5/21/2019 - 5/28/2019	Beta	2.29E-02	3.15E-03	3.29E-03
501305	5/28/2019 - 6/5/2019	Beta	2.15E-02	2.78E-03	2.85E-03
501993	6/5/2019 - 6/11/2019	Beta	1.27E-02	2.79E-03	3.46E-03
502810	6/11/2019 - 6/18/2019	Beta	1.83E-02	2.79E-03	3.02E-03
502262	6/18/2019 - 6/25/2019	Beta	1.34E-02	2.83E-03	3.57E-03
503452	4/2/2019 - 7/2/2019	Cs-134	<1.68E-03	0.00E+00	1.68E-03
		Cs-137	<1.38E-03	0.00E+00	1.38E-03
		Be-7	1.81E-01	3.86E-02	2.21E-02
		K-40	<2.08E-02	0.00E+00	2.08E-02
503603	6/25/2019 - 7/2/2019	Beta	2.89E-02	3.05E-03	2.65E-03
503903	7/2/2019 - 7/9/2019	Beta	1.93E-02	3.10E-03	3.45E-03
504337	7/9/2019 - 7/16/2019	Beta	1.54E-02	2.81E-03	3.21E-03
504504	7/16/2019 - 7/23/2019	Beta	2.09E-02	3.04E-03	3.06E-03

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 7 [INDICATOR - ESE @ 6.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504753	7/23/2019 - 7/29/2019	Beta	1.96E-02	3.42E-03	3.90E-03
504984	7/29/2019 - 8/6/2019	Beta	1.85E-02	2.41E-03	2.40E-03
505214	8/6/2019 - 8/13/2019	Beta	3.66E-02	3.37E-03	2.65E-03
505606	8/13/2019 - 8/20/2019	Beta	1.85E-02	3.00E-03	3.31E-03
505941	8/20/2019 - 8/27/2019	Beta	1.49E-02	2.80E-03	3.21E-03
506552	8/27/2019 - 9/3/2019	Beta	2.17E-02	2.75E-03	2.64E-03
507470	9/3/2019 - 9/10/2019	Beta	3.37E-02	3.30E-03	2.86E-03
507865	9/10/2019 - 9/17/2019	Beta	3.56E-02	3.33E-03	2.70E-03
508641	9/17/2019 - 9/24/2019	Beta	2.50E-02	3.00E-03	2.93E-03
509278	7/2/2019 - 10/1/2019	Cs-134	<1.77E-03	0.00E+00	1.77E-03
		Cs-137	<1.12E-03	0.00E+00	1.12E-03
		Be-7	1.61E-01	4.11E-02	3.88E-02
		K-40	<2.39E-02	0.00E+00	2.39E-02
509603	9/24/2019 - 10/1/2019	Beta	2.99E-02	3.47E-03	3.19E-03
510075	10/1/2019 - 10/8/2019	Beta	2.70E-02	3.00E-03	2.74E-03
510602	10/8/2019 - 10/14/2019	Beta	2.12E-02	3.06E-03	3.16E-03
510881	10/14/2019 - 10/21/2019	Beta	2.10E-02	2.81E-03	2.86E-03
511314	10/21/2019 - 10/29/2019	Beta	1.67E-02	2.37E-03	2.52E-03
511540	10/29/2019 - 11/5/2019	Beta	2.24E-02	2.79E-03	2.64E-03
511941	11/5/2019 - 11/12/2019	Beta	3.00E-02	3.54E-03	3.40E-03
512240	11/12/2019 - 11/19/2019	Beta	1.49E-02	2.81E-03	3.29E-03
512551	11/19/2019 - 11/26/2019	Beta	1.98E-02	3.08E-03	3.36E-03
512866	11/26/2019 - 12/3/2019	Beta	1.94E-02	2.79E-03	3.04E-03
513834	12/3/2019 - 12/10/2019	Beta	1.66E-02	2.76E-03	2.99E-03
513993	12/10/2019 - 12/17/2019	Beta	1.60E-02	2.52E-03	2.72E-03
514241	12/17/2019 - 12/23/2019	Beta	2.66E-02	3.32E-03	3.23E-03
514527	10/1/2019 - 12/31/2019	Cs-134	<1.62E-03	0.00E+00	1.62E-03
		Cs-137	<1.56E-03	0.00E+00	1.56E-03

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 7 [INDICATOR - ESE @ 6.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514527	10/1/2019 - 12/31/2019	Be-7	1.47E-01	3.36E-02	2.08E-02
		K-40	<3.04E-02	0.00E+00	3.04E-02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514669	12/23/2019 - 12/31/2019	Beta	1.83E-02	2.45E-03	2.52E-03

Sample Point 55 [INDICATOR - SSE @ 0.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492319	1/2/2019 - 1/9/2019	Beta	1.41E-02	2.48E-03	2.78E-03

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492579	1/9/2019 - 1/15/2019	Beta	1.65E-02	2.78E-03	2.94E-03

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493053	1/15/2019 - 1/23/2019	Beta	1.53E-02	2.40E-03	2.68E-03

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493404	1/23/2019 - 1/29/2019	Beta	1.63E-02	3.00E-03	3.54E-03

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493635	1/29/2019 - 2/5/2019	Beta	2.47E-02	3.07E-03	3.01E-03

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493868	2/5/2019 - 2/12/2019	Beta	2.26E-02	2.93E-03	2.86E-03

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494405	2/12/2019 - 2/19/2019	Beta	1.41E-02	2.48E-03	2.74E-03

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
495085	2/19/2019 - 2/26/2019	Beta	1.04E-02	2.00E-03	2.35E-03

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
495356	2/26/2019 - 3/5/2019	Beta	1.46E-02	2.55E-03	2.88E-03

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
496210	3/5/2019 - 3/12/2019	Beta	2.14E-02	2.92E-03	2.99E-03

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
496827	3/12/2019 - 3/19/2019	Beta	2.02E-02	2.85E-03	2.89E-03

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
497197	3/19/2019 - 3/26/2019	Beta	1.72E-02	2.77E-03	3.05E-03

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
497618	1/2/2019 - 4/2/2019	Cs-134	<1.62E-03	0.00E+00	1.62E-03
		Cs-137	<7.35E-04	0.00E+00	7.35E-04
		Be-7	1.56E-01	3.93E-02	3.53E-02
		K-40	<2.75E-02	0.00E+00	2.75E-02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
497669	3/26/2019 - 4/2/2019	Beta	1.53E-02	2.48E-03	2.65E-03

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
498200	4/2/2019 - 4/9/2019	Beta	1.29E-02	2.41E-03	2.75E-03

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
498638	4/9/2019 - 4/16/2019	Beta	9.32E-03	2.43E-03	3.23E-03

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
498839	4/16/2019 - 4/23/2019	Beta	1.21E-02	2.32E-03	2.59E-03

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
499662	4/23/2019 - 4/29/2019	Beta	2.15E-02	3.21E-03	3.36E-03

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
499961	4/29/2019 - 5/6/2019	Beta	1.34E-02	2.58E-03	3.07E-03

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500215	5/6/2019 - 5/13/2019	Beta	1.07E-02	2.44E-03	3.12E-03

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500523	5/13/2019 - 5/21/2019	Beta	2.08E-02	2.75E-03	2.86E-03

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 55 [INDICATOR - SSE @ 0.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500794	5/21/2019 - 5/28/2019	Beta	2.29E-02	3.11E-03	3.23E-03
501301	5/28/2019 - 6/5/2019	Beta	2.24E-02	2.84E-03	2.88E-03
501989	6/5/2019 - 6/11/2019	Beta	1.33E-02	2.84E-03	3.50E-03
502806	6/11/2019 - 6/18/2019	Beta	1.70E-02	3.09E-03	3.60E-03
502258	6/18/2019 - 6/25/2019	Beta	9.98E-03	2.63E-03	3.55E-03
503448	4/2/2019 - 7/2/2019	Cs-134	<1.41E-03	0.00E+00	1.41E-03
		Cs-137	<9.92E-04	0.00E+00	9.92E-04
		Be-7	1.76E-01	4.09E-02	3.82E-02
		K-40	<3.07E-02	0.00E+00	3.07E-02
503599	6/25/2019 - 7/2/2019	Beta	3.17E-02	3.18E-03	2.69E-03
503899	7/2/2019 - 7/9/2019	Beta	2.06E-02	3.14E-03	3.43E-03
504333	7/9/2019 - 7/16/2019	Beta	1.62E-02	2.80E-03	3.13E-03
504500	7/16/2019 - 7/23/2019	Beta	2.04E-02	3.03E-03	3.06E-03
504749	7/23/2019 - 7/29/2019	Beta	2.33E-02	3.69E-03	4.04E-03
504980	7/29/2019 - 8/6/2019	Beta	1.94E-02	2.47E-03	2.42E-03
505210	8/6/2019 - 8/13/2019	Beta	3.27E-02	3.15E-03	2.55E-03
505602	8/13/2019 - 8/20/2019	Beta	1.84E-02	3.09E-03	3.45E-03
505937	8/20/2019 - 8/27/2019	Beta	1.40E-02	2.73E-03	3.18E-03
506548	8/27/2019 - 9/3/2019	Beta	2.36E-02	2.84E-03	2.64E-03
507466	9/3/2019 - 9/10/2019	Beta	3.46E-02	3.27E-03	2.77E-03
507861	9/10/2019 - 9/17/2019	Beta	3.95E-02	3.56E-03	2.83E-03
508637	9/17/2019 - 9/24/2019	Beta	2.58E-02	3.00E-03	2.89E-03
509274	7/2/2019 - 10/1/2019	Cs-134	<1.47E-03	0.00E+00	1.47E-03
		Cs-137	<1.58E-03	0.00E+00	1.58E-03
		Be-7	1.94E-01	4.10E-02	2.94E-02
		K-40	<2.97E-02	0.00E+00	2.97E-02
509599	9/24/2019 - 10/1/2019	Beta	3.23E-02	3.56E-03	3.17E-03
510071	10/1/2019 - 10/8/2019	Beta	3.24E-02	3.23E-03	2.76E-03
510598	10/8/2019 - 10/14/2019	Beta	2.22E-02	3.11E-03	3.18E-03

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 55 [INDICATOR - SSE @ 0.2 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
510877	10/14/2019 - 10/21/2019	Beta	2.37E-02	2.90E-03	2.84E-03
511310	10/21/2019 - 10/29/2019	Beta	1.91E-02	2.49E-03	2.53E-03
511536	10/29/2019 - 11/5/2019	Beta	2.04E-02	2.69E-03	2.64E-03
511937	11/5/2019 - 11/12/2019	Beta	3.55E-02	3.70E-03	3.33E-03
512236	11/12/2019 - 11/19/2019	Beta	1.57E-02	2.89E-03	3.34E-03
512547	11/19/2019 - 11/26/2019	Beta	2.45E-02	3.24E-03	3.28E-03
512862	11/26/2019 - 12/3/2019	Beta	1.83E-02	2.77E-03	3.11E-03
513830	12/3/2019 - 12/10/2019	Beta	1.95E-02	2.95E-03	3.05E-03
513989	12/10/2019 - 12/17/2019	Beta	1.86E-02	2.62E-03	2.68E-03
514237	12/17/2019 - 12/23/2019	Beta	2.70E-02	3.25E-03	3.10E-03
514523	10/1/2019 - 12/31/2019	Cs-134	<1.45E-03	0.00E+00	1.45E-03
		Cs-137	<1.33E-03	0.00E+00	1.33E-03
		Be-7	1.37E-01	3.47E-02	3.06E-02
		K-40	<2.52E-02	0.00E+00	2.52E-02
514665	12/23/2019 - 12/31/2019	Beta	2.18E-02	2.64E-03	2.59E-03

Sample Point 60 [INDICATOR - SE @ 0.2 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
492321	1/2/2019 - 1/9/2019	Beta	1.49E-02	2.70E-03	3.05E-03
492581	1/9/2019 - 1/15/2019	Beta	1.44E-02	2.88E-03	3.31E-03
493055	1/15/2019 - 1/23/2019	Beta	1.62E-02	2.65E-03	3.01E-03
493406	1/23/2019 - 1/29/2019	Beta	1.92E-02	3.38E-03	3.92E-03
493637	1/29/2019 - 2/5/2019	Beta	2.55E-02	3.29E-03	3.32E-03
493870	2/5/2019 - 2/12/2019	Beta	2.21E-02	3.00E-03	2.99E-03
494407	2/12/2019 - 2/19/2019	Beta	1.77E-02	2.81E-03	2.94E-03
495087	2/19/2019 - 2/26/2019	Beta	1.00E-02	2.11E-03	2.56E-03
495358	2/26/2019 - 3/5/2019	Beta	1.24E-02	2.56E-03	3.10E-03
496212	3/5/2019 - 3/12/2019	Beta	1.70E-02	2.85E-03	3.20E-03
496829	3/12/2019 - 3/19/2019	Beta	2.12E-02	3.02E-03	3.09E-03

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 60 [INDICATOR - SE @ 0.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
497199	3/19/2019 - 3/26/2019	Beta	1.95E-02	3.03E-03	3.27E-03
497620	1/2/2019 - 4/2/2019	Nuclide	Activity	2 Sigma Error	MDA
		Cs-134	<1.87E-03	0.00E+00	1.87E-03
		Cs-137	<1.51E-03	0.00E+00	1.51E-03
		Be-7	1.46E-01	3.98E-02	3.88E-02
		K-40	<1.96E-02	0.00E+00	1.96E-02
497671	3/26/2019 - 4/2/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.61E-02	2.65E-03	2.85E-03
498202	4/2/2019 - 4/9/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.44E-02	2.60E-03	2.91E-03
498640	4/9/2019 - 4/16/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	9.42E-03	2.53E-03	3.40E-03
498841	4/16/2019 - 4/23/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	9.98E-03	2.30E-03	2.77E-03
499664	4/23/2019 - 4/29/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	2.32E-02	3.41E-03	3.54E-03
499963	4/29/2019 - 5/6/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.38E-02	2.64E-03	3.14E-03
500217	5/6/2019 - 5/13/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.08E-02	2.38E-03	3.02E-03
500525	5/13/2019 - 5/21/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.83E-02	2.72E-03	3.00E-03
500796	5/21/2019 - 5/28/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	2.33E-02	3.18E-03	3.31E-03
501303	5/28/2019 - 6/5/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	2.27E-02	2.91E-03	2.97E-03
501991	6/5/2019 - 6/11/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.28E-02	2.89E-03	3.63E-03
502808	6/11/2019 - 6/18/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.69E-02	2.49E-03	2.66E-03
502260	6/18/2019 - 6/25/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.20E-02	2.75E-03	3.56E-03
503450	4/2/2019 - 7/2/2019	Nuclide	Activity	2 Sigma Error	MDA
		Cs-134	<1.56E-03	0.00E+00	1.56E-03
		Cs-137	<7.82E-04	0.00E+00	7.82E-04
		Be-7	1.84E-01	3.76E-02	1.96E-02
		K-40	<1.94E-02	0.00E+00	1.94E-02
503601	6/25/2019 - 7/2/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	3.00E-02	3.12E-03	2.69E-03
503901	7/2/2019 - 7/9/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	2.06E-02	3.13E-03	3.41E-03
504335	7/9/2019 - 7/16/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.94E-02	2.96E-03	3.13E-03
504502	7/16/2019 - 7/23/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	2.06E-02	3.04E-03	3.06E-03
504751	7/23/2019 - 7/29/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.92E-02	3.48E-03	4.04E-03
504982	7/29/2019 - 8/6/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.82E-02	2.41E-03	2.42E-03
505212	8/6/2019 - 8/13/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	3.12E-02	3.09E-03	2.55E-03

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 60 [INDICATOR - SE @ 0.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
505604	8/13/2019 - 8/20/2019	Beta	1.79E-02	3.06E-03	3.45E-03
505939	8/20/2019 - 8/27/2019	Beta	1.40E-02	2.73E-03	3.18E-03
506550	8/27/2019 - 9/3/2019	Beta	2.14E-02	2.74E-03	2.65E-03
507468	9/3/2019 - 9/10/2019	Beta	3.28E-02	3.20E-03	2.76E-03
507863	9/10/2019 - 9/17/2019	Beta	3.37E-02	3.35E-03	2.83E-03
508639	9/17/2019 - 9/24/2019	Beta	2.41E-02	2.94E-03	2.89E-03
509276	7/2/2019 - 10/1/2019	Cs-134	<1.62E-03	0.00E+00	1.62E-03
		Cs-137	<1.75E-03	0.00E+00	1.75E-03
		Be-7	1.53E-01	3.61E-02	2.75E-02
		K-40	<3.04E-02	0.00E+00	3.04E-02
509601	9/24/2019 - 10/1/2019	Beta	2.99E-02	3.46E-03	3.16E-03
510073	10/1/2019 - 10/8/2019	Beta	2.81E-02	3.07E-03	2.77E-03
510600	10/8/2019 - 10/14/2019	Beta	1.49E-02	2.74E-03	3.17E-03
510879	10/14/2019 - 10/21/2019	Beta	1.81E-02	2.62E-03	2.80E-03
511312	10/21/2019 - 10/29/2019	Beta	1.39E-02	2.27E-03	2.57E-03
511538	10/29/2019 - 11/5/2019	Beta	1.54E-02	2.44E-03	2.63E-03
511939	11/5/2019 - 11/12/2019	Beta	3.03E-02	3.49E-03	3.33E-03
512549	11/19/2019 - 11/26/2019	Beta	2.23E-02	3.14E-03	3.28E-03
512864	11/26/2019 - 12/3/2019	Beta	1.70E-02	2.71E-03	3.09E-03
513832	12/3/2019 - 12/10/2019	Beta	1.95E-02	2.97E-03	3.06E-03
513991	12/10/2019 - 12/17/2019	Beta	1.77E-02	2.58E-03	2.68E-03
514239	12/17/2019 - 12/23/2019	Beta	2.59E-02	3.23E-03	3.13E-03
514525	10/1/2019 - 12/31/2019	Cs-134	<2.09E-03	0.00E+00	2.09E-03
		Cs-137	<1.57E-03	0.00E+00	1.57E-03
		Be-7	1.23E-01	3.89E-02	4.33E-02
		K-40	<2.78E-02	0.00E+00	2.78E-02
514667	12/23/2019 - 12/31/2019	Beta	2.38E-02	2.71E-03	2.57E-03

Sample Point 61 [INDICATOR - WSW @ 0.3 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492322	1/2/2019 - 1/9/2019	Beta	1.24E-02	2.57E-03	3.07E-03

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 61 [INDICATOR - WSW @ 0.3 miles]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
492582	1/9/2019 - 1/15/2019	Beta	1.40E-02	2.90E-03	3.37E-03
493056	1/15/2019 - 1/23/2019	Beta	1.69E-02	2.71E-03	3.04E-03
493407	1/23/2019 - 1/29/2019	Beta	1.79E-02	3.36E-03	3.98E-03
493638	1/29/2019 - 2/5/2019	Beta	2.27E-02	3.21E-03	3.38E-03
493871	2/5/2019 - 2/12/2019	Beta	2.25E-02	3.15E-03	3.19E-03
494408	2/12/2019 - 2/19/2019	Beta	1.73E-02	2.80E-03	2.97E-03
495088	2/19/2019 - 2/26/2019	Beta	9.97E-03	2.12E-03	2.59E-03
495359	2/26/2019 - 3/5/2019	Beta	1.38E-02	2.65E-03	3.11E-03
496213	3/5/2019 - 3/12/2019	Beta	1.68E-02	2.85E-03	3.22E-03
496830	3/12/2019 - 3/19/2019	Beta	1.97E-02	2.96E-03	3.11E-03
497200	3/19/2019 - 3/26/2019	Beta	1.73E-02	2.93E-03	3.29E-03
497621	1/2/2019 - 4/2/2019	Cs-134	<1.26E-03	0.00E+00	1.26E-03
		Cs-137	<1.32E-03	0.00E+00	1.32E-03
		Be-7	1.39E-01	3.79E-02	3.37E-02
		K-40	<2.78E-02	0.00E+00	2.78E-02
497672	3/26/2019 - 4/2/2019	Beta	1.59E-02	2.65E-03	2.87E-03
498203	4/2/2019 - 4/9/2019	Beta	1.40E-02	2.58E-03	2.92E-03
498641	4/9/2019 - 4/16/2019	Beta	1.17E-02	2.64E-03	3.38E-03
498842	4/16/2019 - 4/23/2019	Beta	1.42E-02	2.55E-03	2.74E-03
499665	4/23/2019 - 4/29/2019	Beta	1.95E-02	3.23E-03	3.53E-03
499964	4/29/2019 - 5/6/2019	Beta	1.34E-02	2.62E-03	3.14E-03
500218	5/6/2019 - 5/13/2019	Beta	9.56E-03	2.37E-03	3.10E-03
500526	5/13/2019 - 5/21/2019	Beta	2.04E-02	2.79E-03	2.95E-03
500797	5/21/2019 - 5/28/2019	Beta	2.14E-02	3.06E-03	3.25E-03
501304	5/28/2019 - 6/5/2019	Beta	2.14E-02	2.83E-03	2.94E-03
501992	6/5/2019 - 6/11/2019	Beta	1.36E-02	2.93E-03	3.61E-03
502809	6/11/2019 - 6/18/2019	Beta	1.57E-02	2.51E-03	2.77E-03

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 61 [INDICATOR - WSW @ 0.3 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
502261	6/18/2019 - 6/25/2019	Beta	1.31E-02	2.83E-03	3.57E-03
503451	4/2/2019 - 7/2/2019	Nuclide	Activity	2 Sigma Error	MDA
		Cs-134	<3.61E-04	0.00E+00	3.61E-04
		Cs-137	<1.02E-03	0.00E+00	1.02E-03
		Be-7	1.76E-01	4.07E-02	3.60E-02
		K-40	<2.16E-02	0.00E+00	2.16E-02
503602	6/25/2019 - 7/2/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	2.66E-02	2.98E-03	2.69E-03
503902	7/2/2019 - 7/9/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	2.19E-02	3.19E-03	3.41E-03
504336	7/9/2019 - 7/16/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.59E-02	2.83E-03	3.21E-03
504503	7/16/2019 - 7/23/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	2.23E-02	3.06E-03	2.97E-03
504752	7/23/2019 - 7/29/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	2.13E-02	3.51E-03	3.90E-03
504983	7/29/2019 - 8/6/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.74E-02	2.38E-03	2.43E-03
505213	8/6/2019 - 8/13/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	3.34E-02	3.24E-03	2.63E-03
505605	8/13/2019 - 8/20/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.62E-02	2.89E-03	3.32E-03
505940	8/20/2019 - 8/27/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.27E-02	2.66E-03	3.18E-03
506551	8/27/2019 - 9/3/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	2.10E-02	2.73E-03	2.65E-03
507469	9/3/2019 - 9/10/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	3.22E-02	3.17E-03	2.75E-03
507864	9/10/2019 - 9/17/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	3.78E-02	3.51E-03	2.84E-03
508640	9/17/2019 - 9/24/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	2.37E-02	2.92E-03	2.89E-03
509277	7/2/2019 - 10/1/2019	Nuclide	Activity	2 Sigma Error	MDA
		Cs-134	<1.02E-03	0.00E+00	1.02E-03
		Cs-137	<1.22E-03	0.00E+00	1.22E-03
		Be-7	1.60E-01	3.57E-02	1.98E-02
		K-40	<4.62E-03	0.00E+00	4.62E-03
509602	9/24/2019 - 10/1/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	3.04E-02	3.47E-03	3.16E-03
510074	10/1/2019 - 10/8/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	3.26E-02	3.26E-03	2.80E-03
510601	10/8/2019 - 10/14/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.85E-02	2.89E-03	3.12E-03
510880	10/14/2019 - 10/21/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	2.04E-02	2.74E-03	2.81E-03
511313	10/21/2019 - 10/29/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	1.51E-02	2.33E-03	2.58E-03
511539	10/29/2019 - 11/5/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	2.02E-02	2.68E-03	2.64E-03
511940	11/5/2019 - 11/12/2019	Nuclide	Activity	2 Sigma Error	MDA
		Beta	2.81E-02	3.39E-03	3.30E-03

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 61 [INDICATOR - WSW @ 0.3 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512239	11/12/2019 - 11/19/2019	Beta	1.54E-02	2.89E-03	3.37E-03
512550	11/19/2019 - 11/26/2019	Beta	2.29E-02	3.16E-03	3.28E-03
512865	11/26/2019 - 12/3/2019	Beta	1.73E-02	2.66E-03	3.01E-03
513833	12/3/2019 - 12/10/2019	Beta	1.69E-02	2.82E-03	3.05E-03
513992	12/10/2019 - 12/17/2019	Beta	1.89E-02	2.63E-03	2.68E-03
514240	12/17/2019 - 12/23/2019	Beta	2.43E-02	3.16E-03	3.14E-03
514526	10/1/2019 - 12/31/2019	Cs-134	<1.45E-03	0.00E+00	1.45E-03
		Cs-137	<1.45E-03	0.00E+00	1.45E-03
		Be-7	1.16E-01	3.10E-02	2.61E-02
		K-40	<3.48E-02	0.00E+00	3.48E-02
514668	12/23/2019 - 12/31/2019	Beta	1.81E-02	2.47E-03	2.57E-03

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 1 [CONTROL - ESE @ 24.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492324	1/2/2019 - 1/9/2019	I-131	<2.13E-02	0.00E+00	2.13E-02
		Cs-134	<1.97E-02	0.00E+00	1.97E-02
		Cs-137	<1.63E-02	0.00E+00	1.63E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	4.00E-01	1.58E-01	1.24E-01
492584	1/9/2019 - 1/15/2019	I-131	<2.81E-02	0.00E+00	2.81E-02
		Cs-134	<1.79E-02	0.00E+00	1.79E-02
		Cs-137	<2.10E-02	0.00E+00	2.10E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	6.45E-01	2.20E-01	1.77E-01
493058	1/15/2019 - 1/23/2019	I-131	<2.57E-02	0.00E+00	2.57E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-02
		Cs-137	<1.18E-02	0.00E+00	1.18E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	3.92E-01	1.68E-01	1.92E-01
493409	1/23/2019 - 1/29/2019	I-131	<1.64E-02	0.00E+00	1.64E-02
		Cs-134	<1.30E-02	0.00E+00	1.30E-02
		Cs-137	<1.17E-02	0.00E+00	1.17E-02
		Be-7	<8.45E-02	0.00E+00	8.45E-02
		K-40	2.59E-01	1.18E-01	1.44E-01
493640	1/29/2019 - 2/5/2019	I-131	<2.36E-02	0.00E+00	2.36E-02
		Cs-134	<1.81E-02	0.00E+00	1.81E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	5.99E-01	2.08E-01	2.02E-01
493873	2/5/2019 - 2/12/2019	I-131	<2.98E-02	0.00E+00	2.98E-02
		Cs-134	<1.51E-02	0.00E+00	1.51E-02
		Cs-137	<1.48E-02	0.00E+00	1.48E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 1 [CONTROL - ESE @ 24.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493873	2/5/2019 - 2/12/2019	K-40	4.94E-01	1.70E-01	1.42E-01
494410	2/12/2019 - 2/19/2019	I-131	<1.99E-02	0.00E+00	1.99E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<1.64E-02	0.00E+00	1.64E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	3.63E-01	1.49E-01	1.46E-01
495090	2/19/2019 - 2/26/2019	I-131	<2.98E-02	0.00E+00	2.98E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	3.80E-01	1.83E-01	2.36E-01
495361	2/26/2019 - 3/5/2019	I-131	<2.95E-02	0.00E+00	2.95E-02
		Cs-134	<1.77E-02	0.00E+00	1.77E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	4.01E-01	1.49E-01	1.18E-01
496215	3/5/2019 - 3/12/2019	I-131	<1.83E-02	0.00E+00	1.83E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02
		Cs-137	<1.48E-02	0.00E+00	1.48E-02
		Be-7	<9.82E-02	0.00E+00	9.82E-02
		K-40	5.08E-01	1.58E-01	3.13E-02
496832	3/12/2019 - 3/19/2019	I-131	<2.98E-02	0.00E+00	2.98E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.59E-02	0.00E+00	1.59E-02
		Be-7	<9.83E-02	0.00E+00	9.83E-02
		K-40	3.92E-01	1.68E-01	1.88E-01
497202	3/19/2019 - 3/26/2019	I-131	<2.73E-02	0.00E+00	2.73E-02
		Cs-134	<1.25E-02	0.00E+00	1.25E-02
		Cs-137	<1.50E-02	0.00E+00	1.50E-02
		Be-7	4.31E-03	7.11E-02	1.30E-01
		K-40	3.98E-01	1.74E-01	2.08E-01
497674	3/26/2019 - 4/2/2019	I-131	<2.13E-02	0.00E+00	2.13E-02
		Cs-134	<1.22E-02	0.00E+00	1.22E-02
		Cs-137	<1.33E-02	0.00E+00	1.33E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	3.53E-01	1.68E-01	2.04E-01
498205	4/2/2019 - 4/9/2019	I-131	<1.95E-02	0.00E+00	1.95E-02
		Cs-134	<1.28E-02	0.00E+00	1.28E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	5.71E-01	1.76E-01	1.18E-01
498643	4/9/2019 - 4/16/2019	I-131	<1.89E-02	0.00E+00	1.89E-02
		Cs-134	<1.79E-02	0.00E+00	1.79E-02
		Cs-137	<1.82E-02	0.00E+00	1.82E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	5.96E-01	1.94E-01	1.72E-01
498844	4/16/2019 - 4/23/2019	I-131	<2.56E-02	0.00E+00	2.56E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 1 [CONTROL - ESE @ 24.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
498844	4/16/2019 - 4/23/2019	Be-7	<1.29E-01	0.00E+00	1.29E-01
		K-40	4.48E-01	1.46E-01	3.03E-02
499667	4/23/2019 - 4/29/2019	I-131	<2.63E-02	0.00E+00	2.63E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<1.80E-02	0.00E+00	1.80E-02
		Be-7	<1.43E-01	0.00E+00	1.43E-01
		K-40	5.40E-01	1.92E-01	1.67E-01
499966	4/29/2019 - 5/6/2019	I-131	<1.86E-02	0.00E+00	1.86E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02
		Cs-137	<1.10E-02	0.00E+00	1.10E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	4.30E-01	1.72E-01	1.75E-01
500220	5/6/2019 - 5/13/2019	I-131	<3.71E-02	0.00E+00	3.71E-02
		Cs-134	<1.84E-02	0.00E+00	1.84E-02
		Cs-137	<1.76E-02	0.00E+00	1.76E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	7.06E-01	1.97E-01	3.42E-02
500528	5/13/2019 - 5/21/2019	I-131	<4.01E-02	0.00E+00	4.01E-02
		Cs-134	<1.28E-02	0.00E+00	1.28E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<8.36E-02	0.00E+00	8.36E-02
		K-40	4.54E-01	1.65E-01	1.67E-01
500799	5/21/2019 - 5/28/2019	I-131	<3.21E-02	0.00E+00	3.21E-02
		Cs-134	<1.78E-02	0.00E+00	1.78E-02
		Cs-137	<1.37E-02	0.00E+00	1.37E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	3.35E-01	1.37E-01	1.16E-01
501306	5/28/2019 - 6/5/2019	I-131	<2.39E-02	0.00E+00	2.39E-02
		Cs-134	<1.15E-02	0.00E+00	1.15E-02
		Cs-137	<1.31E-02	0.00E+00	1.31E-02
		Be-7	<9.61E-02	0.00E+00	9.61E-02
		K-40	4.06E-01	1.60E-01	1.74E-01
501994	6/5/2019 - 6/11/2019	I-131	<4.24E-02	0.00E+00	4.24E-02
		Cs-134	<2.06E-02	0.00E+00	2.06E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02
		Be-7	<1.29E-01	0.00E+00	1.29E-01
		K-40	5.33E-01	2.01E-01	1.97E-01
502811	6/11/2019 - 6/18/2019	I-131	<3.18E-02	0.00E+00	3.18E-02
		Cs-134	<1.48E-02	0.00E+00	1.48E-02
		Cs-137	<1.79E-02	0.00E+00	1.79E-02
		Be-7	<1.34E-01	0.00E+00	1.34E-01
		K-40	8.46E-01	2.68E-01	2.72E-01
502263	6/18/2019 - 6/25/2019	I-131	<2.74E-02	0.00E+00	2.74E-02
		Cs-134	<1.88E-02	0.00E+00	1.88E-02
		Cs-137	<1.65E-02	0.00E+00	1.65E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	5.55E-01	1.86E-01	1.38E-01
503604	6/25/2019 - 7/2/2019	I-131	<3.17E-02	0.00E+00	3.17E-02
		Cs-134	<1.50E-02	0.00E+00	1.50E-02

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 1 [CONTROL - ESE @ 24.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
503604	6/25/2019 - 7/2/2019	Cs-137	<1.75E-02	0.00E+00	1.75E-02
		Be-7	<1.36E-01	0.00E+00	1.36E-01
		K-40	3.89E-01	2.32E-01	3.32E-01
503904	7/2/2019 - 7/9/2019	I-131	<2.19E-02	0.00E+00	2.19E-02
		Cs-134	<2.08E-02	0.00E+00	2.08E-02
		Cs-137	<1.64E-02	0.00E+00	1.64E-02
		Be-7	<9.93E-02	0.00E+00	9.93E-02
		K-40	4.83E-01	2.01E-01	2.34E-01
504338	7/9/2019 - 7/16/2019	I-131	<3.26E-02	0.00E+00	3.26E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.80E-02	0.00E+00	1.80E-02
		Be-7	<1.36E-01	0.00E+00	1.36E-01
		K-40	7.36E-01	2.29E-01	2.10E-01
504505	7/16/2019 - 7/23/2019	I-131	<1.66E-02	0.00E+00	1.66E-02
		Cs-134	<9.00E-03	0.00E+00	9.00E-03
		Cs-137	<1.09E-02	0.00E+00	1.09E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	2.71E-01	1.53E-01	1.94E-01
504754	7/23/2019 - 7/29/2019	I-131	<4.33E-02	0.00E+00	4.33E-02
		Cs-134	<1.87E-02	0.00E+00	1.87E-02
		Cs-137	<1.21E-02	0.00E+00	1.21E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	3.46E-01	1.82E-01	2.28E-01
504985	7/29/2019 - 8/6/2019	I-131	<1.86E-02	0.00E+00	1.86E-02
		Cs-134	<1.20E-02	0.00E+00	1.20E-02
		Cs-137	<7.93E-03	0.00E+00	7.93E-03
		Be-7	<9.45E-02	0.00E+00	9.45E-02
		K-40	1.36E-01	1.08E-01	1.52E-01
505215	8/6/2019 - 8/13/2019	I-131	<1.62E-02	0.00E+00	1.62E-02
		Cs-134	<1.66E-02	0.00E+00	1.66E-02
		Cs-137	<1.65E-02	0.00E+00	1.65E-02
		Be-7	<8.77E-02	0.00E+00	8.77E-02
		K-40	1.84E-01	1.17E-01	1.44E-01
505607	8/13/2019 - 8/20/2019	I-131	<1.74E-02	0.00E+00	1.74E-02
		Cs-134	<1.79E-02	0.00E+00	1.79E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<9.93E-02	0.00E+00	9.93E-02
		K-40	3.15E-01	1.54E-01	1.68E-01
505942	8/20/2019 - 8/27/2019	I-131	<1.72E-02	0.00E+00	1.72E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02
		Be-7	<9.41E-02	0.00E+00	9.41E-02
		K-40	<2.49E-01	0.00E+00	2.49E-01
506553	8/27/2019 - 9/3/2019	I-131	<2.25E-02	0.00E+00	2.25E-02
		Cs-134	<1.66E-02	0.00E+00	1.66E-02
		Cs-137	<1.37E-02	0.00E+00	1.37E-02
		Be-7	<8.95E-02	0.00E+00	8.95E-02
		K-40	<3.12E-01	0.00E+00	3.12E-01
507471	9/3/2019 - 9/10/2019	I-131	<2.34E-02	0.00E+00	2.34E-02

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 1 [CONTROL - ESE @ 24.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
507471	9/3/2019 - 9/10/2019	Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	5.83E-01	1.78E-01	3.44E-02
507866	9/10/2019 - 9/17/2019	I-131	<2.05E-02	0.00E+00	2.05E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.91E-02	0.00E+00	1.91E-02
		Be-7	<1.35E-01	0.00E+00	1.35E-01
		K-40	4.22E-01	2.23E-01	3.05E-01
508642	9/17/2019 - 9/24/2019	I-131	<1.96E-02	0.00E+00	1.96E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-02
		Cs-137	<1.34E-02	0.00E+00	1.34E-02
		Be-7	<7.38E-02	0.00E+00	7.38E-02
		K-40	3.22E-01	1.46E-01	1.45E-01
509604	9/24/2019 - 10/1/2019	I-131	<2.78E-02	0.00E+00	2.78E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.49E-02	0.00E+00	1.49E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	4.95E-01	1.71E-01	1.28E-01
510076	10/1/2019 - 10/8/2019	I-131	<2.76E-02	0.00E+00	2.76E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	5.58E-01	1.72E-01	3.36E-02
510603	10/8/2019 - 10/14/2019	I-131	<2.22E-02	0.00E+00	2.22E-02
		Cs-134	<2.10E-02	0.00E+00	2.10E-02
		Cs-137	<1.81E-02	0.00E+00	1.81E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	4.85E-01	2.13E-01	2.48E-01
510882	10/14/2019 - 10/21/2019	I-131	<1.68E-02	0.00E+00	1.68E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.37E-02	0.00E+00	1.37E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	5.10E-01	1.82E-01	1.66E-01
511315	10/21/2019 - 10/29/2019	I-131	<2.04E-02	0.00E+00	2.04E-02
		Cs-134	<1.66E-02	0.00E+00	1.66E-02
		Cs-137	<1.42E-02	0.00E+00	1.42E-02
		Be-7	<1.32E-01	0.00E+00	1.32E-01
		K-40	5.87E-01	2.02E-01	2.13E-01
511541	10/29/2019 - 11/5/2019	I-131	<1.93E-02	0.00E+00	1.93E-02
		Cs-134	<1.51E-02	0.00E+00	1.51E-02
		Cs-137	<1.37E-02	0.00E+00	1.37E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	3.77E-01	1.80E-01	2.15E-01
511942	11/5/2019 - 11/12/2019	I-131	<1.82E-02	0.00E+00	1.82E-02
		Cs-134	<1.93E-02	0.00E+00	1.93E-02
		Cs-137	<1.50E-02	0.00E+00	1.50E-02
		Be-7	<1.33E-01	0.00E+00	1.33E-01
		K-40	6.39E-01	2.03E-01	1.74E-01

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 1 [CONTROL - ESE @ 24.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512241	11/12/2019 - 11/19/2019	I-131	<1.98E-02	0.00E+00	1.98E-02
		Cs-134	<1.51E-02	0.00E+00	1.51E-02
		Cs-137	<1.51E-02	0.00E+00	1.51E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	5.01E-01	1.95E-01	2.05E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512552	11/19/2019 - 11/26/2019	I-131	<3.34E-02	0.00E+00	3.34E-02
		Cs-134	<1.70E-02	0.00E+00	1.70E-02
		Cs-137	<1.77E-02	0.00E+00	1.77E-02
		Be-7	<1.70E-01	0.00E+00	1.70E-01
		K-40	5.24E-01	2.03E-01	2.19E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512867	11/26/2019 - 12/3/2019	I-131	<1.67E-02	0.00E+00	1.67E-02
		Cs-134	<1.39E-02	0.00E+00	1.39E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	7.13E-01	1.93E-01	3.22E-02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
513835	12/3/2019 - 12/10/2019	I-131	<3.22E-02	0.00E+00	3.22E-02
		Cs-134	<1.85E-02	0.00E+00	1.85E-02
		Cs-137	<1.79E-02	0.00E+00	1.79E-02
		Be-7	<1.56E-01	0.00E+00	1.56E-01
		K-40	<3.98E-01	0.00E+00	3.98E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
513994	12/10/2019 - 12/17/2019	I-131	<1.98E-02	0.00E+00	1.98E-02
		Cs-134	<1.37E-02	0.00E+00	1.37E-02
		Cs-137	<1.64E-02	0.00E+00	1.64E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	<3.98E-01	0.00E+00	3.98E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514242	12/17/2019 - 12/23/2019	I-131	<3.72E-02	0.00E+00	3.72E-02
		Cs-134	<2.13E-02	0.00E+00	2.13E-02
		Cs-137	<1.36E-02	0.00E+00	1.36E-02
		Be-7	<1.76E-01	0.00E+00	1.76E-01
		K-40	6.90E-01	2.51E-01	2.68E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514670	12/23/2019 - 12/31/2019	I-131	<2.54E-02	0.00E+00	2.54E-02
		Cs-134	<1.04E-02	0.00E+00	1.04E-02
		Cs-137	<1.19E-02	0.00E+00	1.19E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	3.71E-01	1.32E-01	3.04E-02

Sample Point 2 [INDICATOR - S @ 0.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492325	1/2/2019 - 1/9/2019	I-131	<2.19E-02	0.00E+00	2.19E-02
		Cs-134	<1.98E-02	0.00E+00	1.98E-02
		Cs-137	<1.86E-02	0.00E+00	1.86E-02
		Be-7	<1.48E-01	0.00E+00	1.48E-01
		K-40	5.30E-01	2.06E-01	2.10E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492585	1/9/2019 - 1/15/2019	I-131	<2.81E-02	0.00E+00	2.81E-02
		Cs-134	<2.22E-02	0.00E+00	2.22E-02
		Cs-137	<2.29E-02	0.00E+00	2.29E-02
		Be-7	<1.51E-01	0.00E+00	1.51E-01
		K-40	5.47E-01	2.07E-01	1.63E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493059	1/15/2019 - 1/23/2019	I-131	<2.72E-02	0.00E+00	2.72E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 2 [INDICATOR - S @ 0.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493059	1/15/2019 - 1/23/2019	K-40	4.07E-01	1.78E-01	2.05E-01
493410	1/23/2019 - 1/29/2019	I-131	<3.26E-02	0.00E+00	3.26E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<2.42E-02	0.00E+00	2.42E-02
		Be-7	<1.70E-01	0.00E+00	1.70E-01
		K-40	6.47E-01	2.46E-01	2.48E-01
493641	1/29/2019 - 2/5/2019	I-131	<2.29E-02	0.00E+00	2.29E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<2.14E-02	0.00E+00	2.14E-02
		Be-7	<1.46E-01	0.00E+00	1.46E-01
		K-40	3.92E-01	2.07E-01	2.70E-01
493874	2/5/2019 - 2/12/2019	I-131	<3.10E-02	0.00E+00	3.10E-02
		Cs-134	<1.80E-02	0.00E+00	1.80E-02
		Cs-137	<1.83E-02	0.00E+00	1.83E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	<3.97E-01	0.00E+00	3.97E-01
494411	2/12/2019 - 2/19/2019	I-131	<2.37E-02	0.00E+00	2.37E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.96E-02	0.00E+00	1.96E-02
		Be-7	<1.31E-01	0.00E+00	1.31E-01
		K-40	<4.39E-01	0.00E+00	4.39E-01
495091	2/19/2019 - 2/26/2019	I-131	<2.98E-02	0.00E+00	2.98E-02
		Cs-134	<1.51E-02	0.00E+00	1.51E-02
		Cs-137	<1.86E-02	0.00E+00	1.86E-02
		Be-7	<1.33E-01	0.00E+00	1.33E-01
		K-40	5.90E-01	1.88E-01	1.25E-01
495362	2/26/2019 - 3/5/2019	I-131	<4.64E-02	0.00E+00	4.64E-02
		Cs-134	<1.71E-02	0.00E+00	1.71E-02
		Cs-137	<1.72E-02	0.00E+00	1.72E-02
		Be-7	<1.32E-01	0.00E+00	1.32E-01
		K-40	3.44E-01	1.73E-01	2.10E-01
496216	3/5/2019 - 3/12/2019	I-131	<2.41E-02	0.00E+00	2.41E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<1.85E-02	0.00E+00	1.85E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	6.47E-01	1.90E-01	3.51E-02
496833	3/12/2019 - 3/19/2019	I-131	<3.05E-02	0.00E+00	3.05E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-02
		Cs-137	<1.53E-02	0.00E+00	1.53E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	3.19E-01	1.91E-01	2.66E-01
497203	3/19/2019 - 3/26/2019	I-131	<3.63E-02	0.00E+00	3.63E-02
		Cs-134	<1.71E-02	0.00E+00	1.71E-02
		Cs-137	<1.83E-02	0.00E+00	1.83E-02
		Be-7	<1.35E-01	0.00E+00	1.35E-01
		K-40	4.55E-01	1.74E-01	1.55E-01
497675	3/26/2019 - 4/2/2019	I-131	<2.37E-02	0.00E+00	2.37E-02
		Cs-134	<1.94E-02	0.00E+00	1.94E-02
		Cs-137	<1.70E-02	0.00E+00	1.70E-02

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 2 [INDICATOR - S @ 0.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
497675	3/26/2019 - 4/2/2019	Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	3.87E-01	1.69E-01	1.84E-01
498206	4/2/2019 - 4/9/2019	I-131	<2.50E-02	0.00E+00	2.50E-02
		Cs-134	<2.22E-02	0.00E+00	2.22E-02
		Cs-137	<1.66E-02	0.00E+00	1.66E-02
		Be-7	<1.43E-01	0.00E+00	1.43E-01
		K-40	4.57E-01	1.68E-01	1.29E-01
498644	4/9/2019 - 4/16/2019	I-131	<2.37E-02	0.00E+00	2.37E-02
		Cs-134	<1.86E-02	0.00E+00	1.86E-02
		Cs-137	<1.80E-02	0.00E+00	1.80E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	5.50E-01	1.99E-01	1.88E-01
498845	4/16/2019 - 4/23/2019	I-131	<2.68E-02	0.00E+00	2.68E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.53E-02	0.00E+00	1.53E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	<3.72E-01	0.00E+00	3.72E-01
499668	4/23/2019 - 4/29/2019	I-131	<2.77E-02	0.00E+00	2.77E-02
		Cs-134	<1.85E-02	0.00E+00	1.85E-02
		Cs-137	<1.90E-02	0.00E+00	1.90E-02
		Be-7	<1.27E-01	0.00E+00	1.27E-01
		K-40	4.65E-01	1.96E-01	1.99E-01
499967	4/29/2019 - 5/6/2019	I-131	<2.77E-02	0.00E+00	2.77E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02
		Cs-137	<1.87E-02	0.00E+00	1.87E-02
		Be-7	<1.39E-01	0.00E+00	1.39E-01
		K-40	4.11E-01	1.96E-01	2.45E-01
500221	5/6/2019 - 5/13/2019	I-131	<3.72E-02	0.00E+00	3.72E-02
		Cs-134	<1.39E-02	0.00E+00	1.39E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02
		Be-7	<1.33E-01	0.00E+00	1.33E-01
		K-40	2.57E-01	1.59E-01	2.18E-01
500529	5/13/2019 - 5/21/2019	I-131	<3.60E-02	0.00E+00	3.60E-02
		Cs-134	<1.20E-02	0.00E+00	1.20E-02
		Cs-137	<1.15E-02	0.00E+00	1.15E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	5.89E-01	1.70E-01	3.07E-02
500800	5/21/2019 - 5/28/2019	I-131	<3.17E-02	0.00E+00	3.17E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.65E-02	0.00E+00	1.65E-02
		Be-7	<1.48E-01	0.00E+00	1.48E-01
		K-40	5.07E-01	1.75E-01	1.24E-01
501307	5/28/2019 - 6/5/2019	I-131	<2.70E-02	0.00E+00	2.70E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.30E-02	0.00E+00	1.30E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	4.27E-01	1.70E-01	1.84E-01
501995	6/5/2019 - 6/11/2019	I-131	<3.81E-02	0.00E+00	3.81E-02
		Cs-134	<2.05E-02	0.00E+00	2.05E-02

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 2 [INDICATOR - S @ 0.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
501995	6/5/2019 - 6/11/2019	Cs-137	<2.04E-02	0.00E+00	2.04E-02
		Be-7	<1.34E-01	0.00E+00	1.34E-01
		K-40	6.75E-01	2.23E-01	1.73E-01
502812	6/11/2019 - 6/18/2019	I-131	<4.09E-02	0.00E+00	4.09E-02
		Cs-134	<1.92E-02	0.00E+00	1.92E-02
		Cs-137	<2.15E-02	0.00E+00	2.15E-02
		Be-7	<1.31E-01	0.00E+00	1.31E-01
		K-40	6.87E-01	2.95E-01	3.78E-01
502264	6/18/2019 - 6/25/2019	I-131	<2.16E-02	0.00E+00	2.16E-02
		Cs-134	<1.83E-02	0.00E+00	1.83E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	5.49E-01	2.03E-01	2.08E-01
503605	6/25/2019 - 7/2/2019	I-131	<3.67E-02	0.00E+00	3.67E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	4.62E-01	2.11E-01	2.65E-01
503905	7/2/2019 - 7/9/2019	I-131	<2.31E-02	0.00E+00	2.31E-02
		Cs-134	<1.15E-02	0.00E+00	1.15E-02
		Cs-137	<1.74E-02	0.00E+00	1.74E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	5.97E-01	1.97E-01	1.62E-01
504339	7/9/2019 - 7/16/2019	I-131	<3.70E-02	0.00E+00	3.70E-02
		Cs-134	<1.22E-02	0.00E+00	1.22E-02
		Cs-137	<1.78E-02	0.00E+00	1.78E-02
		Be-7	<1.37E-01	0.00E+00	1.37E-01
		K-40	5.37E-01	1.99E-01	2.06E-01
504506	7/16/2019 - 7/23/2019	I-131	<1.75E-02	0.00E+00	1.75E-02
		Cs-134	<1.41E-02	0.00E+00	1.41E-02
		Cs-137	<1.14E-02	0.00E+00	1.14E-02
		Be-7	<7.67E-02	0.00E+00	7.67E-02
		K-40	2.71E-01	1.57E-01	2.06E-01
504755	7/23/2019 - 7/29/2019	I-131	<3.33E-02	0.00E+00	3.33E-02
		Cs-134	<1.83E-02	0.00E+00	1.83E-02
		Cs-137	<1.72E-02	0.00E+00	1.72E-02
		Be-7	<9.55E-02	0.00E+00	9.55E-02
		K-40	3.49E-01	1.65E-01	1.69E-01
504986	7/29/2019 - 8/6/2019	I-131	<2.42E-02	0.00E+00	2.42E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<1.10E-02	0.00E+00	1.10E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	3.94E-01	1.46E-01	1.21E-01
505216	8/6/2019 - 8/13/2019	I-131	<1.59E-02	0.00E+00	1.59E-02
		Cs-134	<1.39E-02	0.00E+00	1.39E-02
		Cs-137	<1.34E-02	0.00E+00	1.34E-02
		Be-7	<9.84E-02	0.00E+00	9.84E-02
		K-40	1.88E-01	1.04E-01	9.69E-02
505608	8/13/2019 - 8/20/2019	I-131	<1.81E-02	0.00E+00	1.81E-02

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 2 [INDICATOR - S @ 0.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
505608	8/13/2019 - 8/20/2019	Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.29E-02	0.00E+00	1.29E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	3.69E-01	1.87E-01	2.38E-01
505943	8/20/2019 - 8/27/2019	I-131	<1.28E-02	0.00E+00	1.28E-02
		Cs-134	<1.47E-02	0.00E+00	1.47E-02
		Cs-137	<1.41E-02	0.00E+00	1.41E-02
		Be-7	<9.54E-02	0.00E+00	9.54E-02
		K-40	<1.36E-01	0.00E+00	1.36E-01
506554	8/27/2019 - 9/3/2019	I-131	<2.01E-02	0.00E+00	2.01E-02
		Cs-134	<1.77E-02	0.00E+00	1.77E-02
		Cs-137	<1.53E-02	0.00E+00	1.53E-02
		Be-7	<1.00E-01	0.00E+00	1.00E-01
		K-40	<3.42E-02	0.00E+00	3.42E-02
507472	9/3/2019 - 9/10/2019	I-131	<1.83E-02	0.00E+00	1.83E-02
		Cs-134	<1.08E-02	0.00E+00	1.08E-02
		Cs-137	<1.51E-02	0.00E+00	1.51E-02
		Be-7	<9.08E-02	0.00E+00	9.08E-02
		K-40	4.18E-01	1.43E-01	3.14E-02
507867	9/10/2019 - 9/17/2019	I-131	<1.95E-02	0.00E+00	1.95E-02
		Cs-134	<2.02E-02	0.00E+00	2.02E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	3.95E-01	1.80E-01	2.07E-01
508643	9/17/2019 - 9/24/2019	I-131	<1.67E-02	0.00E+00	1.67E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<1.72E-02	0.00E+00	1.72E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	2.88E-01	1.64E-01	2.15E-01
509605	9/24/2019 - 10/1/2019	I-131	<2.54E-02	0.00E+00	2.54E-02
		Cs-134	<1.97E-02	0.00E+00	1.97E-02
		Cs-137	<1.29E-02	0.00E+00	1.29E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	3.64E-01	1.49E-01	1.34E-01
510077	10/1/2019 - 10/8/2019	I-131	<3.49E-02	0.00E+00	3.49E-02
		Cs-134	<1.39E-02	0.00E+00	1.39E-02
		Cs-137	<1.89E-02	0.00E+00	1.89E-02
		Be-7	<1.62E-01	0.00E+00	1.62E-01
		K-40	5.89E-01	2.00E-01	1.75E-01
510604	10/8/2019 - 10/14/2019	I-131	<2.50E-02	0.00E+00	2.50E-02
		Cs-134	<1.79E-02	0.00E+00	1.79E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<1.51E-01	0.00E+00	1.51E-01
		K-40	4.48E-01	1.97E-01	2.11E-01
510883	10/14/2019 - 10/21/2019	I-131	<1.40E-02	0.00E+00	1.40E-02
		Cs-134	<1.11E-02	0.00E+00	1.11E-02
		Cs-137	<1.33E-02	0.00E+00	1.33E-02
		Be-7	<7.48E-02	0.00E+00	7.48E-02
		K-40	5.33E-02	1.32E-01	2.33E-01

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 2 [INDICATOR - S @ 0.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511316	10/21/2019 - 10/29/2019	I-131	<2.31E-02	0.00E+00	2.31E-02
		Cs-134	<1.08E-02	0.00E+00	1.08E-02
		Cs-137	<1.14E-02	0.00E+00	1.14E-02
		Be-7	<9.46E-02	0.00E+00	9.46E-02
		K-40	5.56E-01	1.42E-01	1.38E-01
511542	10/29/2019 - 11/5/2019	I-131	<1.79E-02	0.00E+00	1.79E-02
		Cs-134	<1.43E-02	0.00E+00	1.43E-02
		Cs-137	<1.49E-02	0.00E+00	1.49E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	4.97E-01	1.76E-01	1.53E-01
511943	11/5/2019 - 11/12/2019	I-131	<1.86E-02	0.00E+00	1.86E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	4.78E-01	1.98E-01	2.33E-01
512242	11/12/2019 - 11/19/2019	I-131	<1.77E-02	0.00E+00	1.77E-02
		Cs-134	<1.43E-02	0.00E+00	1.43E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	3.44E-01	1.64E-01	1.85E-01
512553	11/19/2019 - 11/26/2019	I-131	<2.69E-02	0.00E+00	2.69E-02
		Cs-134	<1.78E-02	0.00E+00	1.78E-02
		Cs-137	<1.36E-02	0.00E+00	1.36E-02
		Be-7	<9.70E-02	0.00E+00	9.70E-02
		K-40	4.90E-01	1.93E-01	2.14E-01
512868	11/26/2019 - 12/3/2019	I-131	<2.31E-02	0.00E+00	2.31E-02
		Cs-134	<1.86E-02	0.00E+00	1.86E-02
		Cs-137	<1.64E-02	0.00E+00	1.64E-02
		Be-7	<1.41E-01	0.00E+00	1.41E-01
		K-40	6.76E-01	2.25E-01	2.21E-01
513836	12/3/2019 - 12/10/2019	I-131	<2.98E-02	0.00E+00	2.98E-02
		Cs-134	<1.98E-02	0.00E+00	1.98E-02
		Cs-137	<1.75E-02	0.00E+00	1.75E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	3.44E-01	1.80E-01	2.32E-01
513995	12/10/2019 - 12/17/2019	I-131	<1.90E-02	0.00E+00	1.90E-02
		Cs-134	<1.94E-02	0.00E+00	1.94E-02
		Cs-137	<1.09E-02	0.00E+00	1.09E-02
		Be-7	<6.63E-02	0.00E+00	6.63E-02
		K-40	<3.46E-01	0.00E+00	3.46E-01
514243	12/17/2019 - 12/23/2019	I-131	<3.23E-02	0.00E+00	3.23E-02
		Cs-134	<1.56E-02	0.00E+00	1.56E-02
		Cs-137	<1.85E-02	0.00E+00	1.85E-02
		Be-7	<1.30E-01	0.00E+00	1.30E-01
		K-40	7.15E-01	2.25E-01	1.75E-01
514671	12/23/2019 - 12/31/2019	I-131	<2.37E-02	0.00E+00	2.37E-02
		Cs-134	<1.50E-02	0.00E+00	1.50E-02
		Cs-137	<9.70E-03	0.00E+00	9.70E-03
		Be-7	<8.83E-02	0.00E+00	8.83E-02
		K-40	2.01E-01	1.06E-01	1.06E-01

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 3 [INDICATOR - N @ 0.5 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492326	1/2/2019 - 1/9/2019	I-131	<2.91E-02	0.00E+00	2.91E-02
		Cs-134	<1.70E-02	0.00E+00	1.70E-02
		Cs-137	<1.84E-02	0.00E+00	1.84E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	6.57E-01	2.28E-01	2.15E-01
492586	1/9/2019 - 1/15/2019	I-131	<2.67E-02	0.00E+00	2.67E-02
		Cs-134	<2.64E-02	0.00E+00	2.64E-02
		Cs-137	<2.49E-02	0.00E+00	2.49E-02
		Be-7	<1.53E-01	0.00E+00	1.53E-01
		K-40	7.60E-01	2.69E-01	2.60E-01
493060	1/15/2019 - 1/23/2019	I-131	<3.54E-02	0.00E+00	3.54E-02
		Cs-134	<1.94E-02	0.00E+00	1.94E-02
		Cs-137	<1.70E-02	0.00E+00	1.70E-02
		Be-7	<1.27E-01	0.00E+00	1.27E-01
		K-40	4.25E-01	1.73E-01	1.77E-01
493411	1/23/2019 - 1/29/2019	I-131	<3.06E-02	0.00E+00	3.06E-02
		Cs-134	<2.48E-02	0.00E+00	2.48E-02
		Cs-137	<2.05E-02	0.00E+00	2.05E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	6.32E-01	2.72E-01	3.23E-01
493642	1/29/2019 - 2/5/2019	I-131	<2.50E-02	0.00E+00	2.50E-02
		Cs-134	<1.27E-02	0.00E+00	1.27E-02
		Cs-137	<2.07E-02	0.00E+00	2.07E-02
		Be-7	<1.39E-01	0.00E+00	1.39E-01
		K-40	3.86E-01	1.81E-01	2.02E-01
493875	2/5/2019 - 2/12/2019	I-131	<3.48E-02	0.00E+00	3.48E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-02
		Cs-137	<1.44E-02	0.00E+00	1.44E-02
		Be-7	<1.36E-01	0.00E+00	1.36E-01
		K-40	4.87E-01	1.80E-01	1.58E-01
494412	2/12/2019 - 2/19/2019	I-131	<2.42E-02	0.00E+00	2.42E-02
		Cs-134	<1.85E-02	0.00E+00	1.85E-02
		Cs-137	<2.02E-02	0.00E+00	2.02E-02
		Be-7	<1.37E-01	0.00E+00	1.37E-01
		K-40	4.27E-01	1.90E-01	2.25E-01
495092	2/19/2019 - 2/26/2019	I-131	<2.73E-02	0.00E+00	2.73E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<1.62E-02	0.00E+00	1.62E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	4.82E-01	2.14E-01	2.67E-01
495363	2/26/2019 - 3/5/2019	I-131	<3.39E-02	0.00E+00	3.39E-02
		Cs-134	<1.95E-02	0.00E+00	1.95E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	<3.96E-01	0.00E+00	3.96E-01
496217	3/5/2019 - 3/12/2019	I-131	<2.57E-02	0.00E+00	2.57E-02
		Cs-134	<1.77E-02	0.00E+00	1.77E-02
		Cs-137	<1.77E-02	0.00E+00	1.77E-02
		Be-7	<1.46E-01	0.00E+00	1.46E-01
		K-40	3.23E-01	1.95E-01	2.72E-01

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 3 [INDICATOR - N @ 0.5 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
496834	3/12/2019 - 3/19/2019	I-131	<3.06E-02	0.00E+00	3.06E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02
		Be-7	<1.42E-01	0.00E+00	1.42E-01
		K-40	4.13E-01	1.95E-01	2.41E-01
497204	3/19/2019 - 3/26/2019	I-131	<3.49E-02	0.00E+00	3.49E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	4.40E-01	2.00E-01	2.44E-01
497676	3/26/2019 - 4/2/2019	I-131	<2.37E-02	0.00E+00	2.37E-02
		Cs-134	<1.86E-02	0.00E+00	1.86E-02
		Cs-137	<1.48E-02	0.00E+00	1.48E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	5.27E-01	1.91E-01	1.81E-01
498207	4/2/2019 - 4/9/2019	I-131	<2.54E-02	0.00E+00	2.54E-02
		Cs-134	<1.37E-02	0.00E+00	1.37E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02
		Be-7	<1.46E-01	0.00E+00	1.46E-01
		K-40	5.33E-01	1.97E-01	1.96E-01
498645	4/9/2019 - 4/16/2019	I-131	<2.23E-02	0.00E+00	2.23E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<1.70E-02	0.00E+00	1.70E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	4.02E-01	1.77E-01	1.95E-01
498846	4/16/2019 - 4/23/2019	I-131	<2.62E-02	0.00E+00	2.62E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.84E-02	0.00E+00	1.84E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	4.88E-01	2.17E-01	2.71E-01
499669	4/23/2019 - 4/29/2019	I-131	<2.57E-02	0.00E+00	2.57E-02
		Cs-134	<2.02E-02	0.00E+00	2.02E-02
		Cs-137	<2.25E-02	0.00E+00	2.25E-02
		Be-7	<1.30E-01	0.00E+00	1.30E-01
		K-40	<4.13E-01	0.00E+00	4.13E-01
499968	4/29/2019 - 5/6/2019	I-131	<2.77E-02	0.00E+00	2.77E-02
		Cs-134	<2.11E-02	0.00E+00	2.11E-02
		Cs-137	<1.47E-02	0.00E+00	1.47E-02
		Be-7	<1.35E-01	0.00E+00	1.35E-01
		K-40	4.26E-01	2.13E-01	2.77E-01
500222	5/6/2019 - 5/13/2019	I-131	<2.67E-02	0.00E+00	2.67E-02
		Cs-134	<1.40E-02	0.00E+00	1.40E-02
		Cs-137	<8.05E-03	0.00E+00	8.05E-03
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	5.15E-01	1.72E-01	1.33E-01
500530	5/13/2019 - 5/21/2019	I-131	<4.20E-02	0.00E+00	4.20E-02
		Cs-134	<1.34E-02	0.00E+00	1.34E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	4.32E-01	1.81E-01	2.12E-01

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 3 [INDICATOR - N @ 0.5 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500801	5/21/2019 - 5/28/2019	I-131	<3.41E-02	0.00E+00	3.41E-02
		Cs-134	<2.05E-02	0.00E+00	2.05E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<1.38E-01	0.00E+00	1.38E-01
		K-40	5.74E-01	2.11E-01	2.23E-01
501308	5/28/2019 - 6/5/2019	I-131	<2.87E-02	0.00E+00	2.87E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	3.50E-01	1.52E-01	1.64E-01
501996	6/5/2019 - 6/11/2019	I-131	<4.78E-02	0.00E+00	4.78E-02
		Cs-134	<2.54E-02	0.00E+00	2.54E-02
		Cs-137	<1.81E-02	0.00E+00	1.81E-02
		Be-7	<1.73E-01	0.00E+00	1.73E-01
		K-40	4.48E-01	2.05E-01	2.33E-01
502813	6/11/2019 - 6/18/2019	I-131	<3.44E-02	0.00E+00	3.44E-02
		Cs-134	<1.64E-02	0.00E+00	1.64E-02
		Cs-137	<1.80E-02	0.00E+00	1.80E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	4.70E-01	1.98E-01	2.30E-01
502265	6/18/2019 - 6/25/2019	I-131	<2.04E-02	0.00E+00	2.04E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<1.52E-02	0.00E+00	1.52E-02
		Be-7	<1.34E-01	0.00E+00	1.34E-01
		K-40	6.92E-01	2.11E-01	1.54E-01
503606	6/25/2019 - 7/2/2019	I-131	<3.26E-02	0.00E+00	3.26E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.59E-02	0.00E+00	1.59E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	3.88E-01	1.78E-01	2.06E-01
503906	7/2/2019 - 7/9/2019	I-131	<2.44E-02	0.00E+00	2.44E-02
		Cs-134	<2.12E-02	0.00E+00	2.12E-02
		Cs-137	<1.80E-02	0.00E+00	1.80E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	5.02E-01	1.93E-01	1.97E-01
504340	7/9/2019 - 7/16/2019	I-131	<3.55E-02	0.00E+00	3.55E-02
		Cs-134	<2.21E-02	0.00E+00	2.21E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	5.77E-01	1.99E-01	1.81E-01
504507	7/16/2019 - 7/23/2019	I-131	<1.44E-02	0.00E+00	1.44E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-02
		Cs-137	<8.94E-03	0.00E+00	8.94E-03
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	<2.83E-01	0.00E+00	2.83E-01
504756	7/23/2019 - 7/29/2019	I-131	<3.99E-02	0.00E+00	3.99E-02
		Cs-134	<1.79E-02	0.00E+00	1.79E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<1.35E-01	0.00E+00	1.35E-01
		K-40	2.47E-01	1.66E-01	2.26E-01

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 3 [INDICATOR - N @ 0.5 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504987	7/29/2019 - 8/6/2019	I-131	<2.35E-02	0.00E+00	2.35E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<1.18E-02	0.00E+00	1.18E-02
		Be-7	<6.61E-02	0.00E+00	6.61E-02
		K-40	<2.13E-01	0.00E+00	2.13E-01
505217	8/6/2019 - 8/13/2019	I-131	<1.75E-02	0.00E+00	1.75E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.37E-02	0.00E+00	1.37E-02
		Be-7	<7.30E-02	0.00E+00	7.30E-02
		K-40	<1.48E-01	0.00E+00	1.48E-01
505609	8/13/2019 - 8/20/2019	I-131	<1.38E-02	0.00E+00	1.38E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<1.62E-02	0.00E+00	1.62E-02
		Be-7	<7.34E-02	0.00E+00	7.34E-02
		K-40	<1.87E-01	0.00E+00	1.87E-01
505944	8/20/2019 - 8/27/2019	I-131	<1.47E-02	0.00E+00	1.47E-02
		Cs-134	<9.45E-03	0.00E+00	9.45E-03
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	3.06E-01	1.48E-01	1.54E-01
506555	8/27/2019 - 9/3/2019	I-131	<1.97E-02	0.00E+00	1.97E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-02
		Cs-137	<1.34E-02	0.00E+00	1.34E-02
		Be-7	<8.57E-02	0.00E+00	8.57E-02
		K-40	2.50E-01	1.43E-01	1.70E-01
507473	9/3/2019 - 9/10/2019	I-131	<1.45E-02	0.00E+00	1.45E-02
		Cs-134	<1.22E-02	0.00E+00	1.22E-02
		Cs-137	<1.34E-02	0.00E+00	1.34E-02
		Be-7	<9.86E-02	0.00E+00	9.86E-02
		K-40	<3.00E-01	0.00E+00	3.00E-01
507868	9/10/2019 - 9/17/2019	I-131	<1.49E-02	0.00E+00	1.49E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02
		Cs-137	<1.96E-02	0.00E+00	1.96E-02
		Be-7	<9.87E-02	0.00E+00	9.87E-02
		K-40	5.84E-01	1.85E-01	1.11E-01
508644	9/17/2019 - 9/24/2019	I-131	<2.06E-02	0.00E+00	2.06E-02
		Cs-134	<1.87E-02	0.00E+00	1.87E-02
		Cs-137	<1.72E-02	0.00E+00	1.72E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	4.84E-01	1.92E-01	2.09E-01
509606	9/24/2019 - 10/1/2019	I-131	<1.87E-02	0.00E+00	1.87E-02
		Cs-134	<1.49E-02	0.00E+00	1.49E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	2.01E-01	1.10E-01	1.08E-01
510078	10/1/2019 - 10/8/2019	I-131	<2.61E-02	0.00E+00	2.61E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<1.66E-02	0.00E+00	1.66E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	4.18E-01	1.60E-01	1.45E-01

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 3 [INDICATOR - N @ 0.5 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
510605	10/8/2019 - 10/14/2019	I-131	<2.03E-02	0.00E+00	2.03E-02
		Cs-134	<1.93E-02	0.00E+00	1.93E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	4.87E-01	1.96E-01	1.88E-01
510884	10/14/2019 - 10/21/2019	I-131	<1.44E-02	0.00E+00	1.44E-02
		Cs-134	<1.42E-02	0.00E+00	1.42E-02
		Cs-137	<1.23E-02	0.00E+00	1.23E-02
		Be-7	<9.53E-02	0.00E+00	9.53E-02
		K-40	<2.37E-01	0.00E+00	2.37E-01
511317	10/21/2019 - 10/29/2019	I-131	<1.51E-02	0.00E+00	1.51E-02
		Cs-134	<1.49E-02	0.00E+00	1.49E-02
		Cs-137	<1.10E-02	0.00E+00	1.10E-02
		Be-7	<7.47E-02	0.00E+00	7.47E-02
		K-40	4.08E-01	1.66E-01	1.83E-01
511543	10/29/2019 - 11/5/2019	I-131	<1.41E-02	0.00E+00	1.41E-02
		Cs-134	<1.56E-02	0.00E+00	1.56E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<9.35E-02	0.00E+00	9.35E-02
		K-40	4.69E-01	1.67E-01	1.35E-01
511944	11/5/2019 - 11/12/2019	I-131	<1.88E-02	0.00E+00	1.88E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<7.61E-02	0.00E+00	7.61E-02
		K-40	2.85E-01	1.53E-01	1.91E-01
512243	11/12/2019 - 11/19/2019	I-131	<1.55E-02	0.00E+00	1.55E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	2.14E-01	1.49E-01	2.02E-01
512554	11/19/2019 - 11/26/2019	I-131	<1.80E-02	0.00E+00	1.80E-02
		Cs-134	<1.48E-02	0.00E+00	1.48E-02
		Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	2.50E-01	1.52E-01	2.02E-01
512869	11/26/2019 - 12/3/2019	I-131	<2.70E-02	0.00E+00	2.70E-02
		Cs-134	<1.29E-02	0.00E+00	1.29E-02
		Cs-137	<1.70E-02	0.00E+00	1.70E-02
		Be-7	<1.32E-01	0.00E+00	1.32E-01
		K-40	5.31E-01	1.98E-01	2.06E-01
513837	12/3/2019 - 12/10/2019	I-131	<2.59E-02	0.00E+00	2.59E-02
		Cs-134	<1.87E-02	0.00E+00	1.87E-02
		Cs-137	<1.37E-02	0.00E+00	1.37E-02
		Be-7	<9.71E-02	0.00E+00	9.71E-02
		K-40	4.81E-01	1.81E-01	1.77E-01
513996	12/10/2019 - 12/17/2019	I-131	<1.74E-02	0.00E+00	1.74E-02
		Cs-134	<1.24E-02	0.00E+00	1.24E-02
		Cs-137	<1.74E-02	0.00E+00	1.74E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	2.56E-01	1.48E-01	1.89E-01

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 3 [INDICATOR - N @ 0.5 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514244	12/17/2019 - 12/23/2019	I-131	<3.52E-02	0.00E+00	3.52E-02
		Cs-134	<1.79E-02	0.00E+00	1.79E-02
		Cs-137	<1.26E-02	0.00E+00	1.26E-02
		Be-7	<1.35E-01	0.00E+00	1.35E-01
		K-40	6.50E-01	2.00E-01	3.91E-02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514672	12/23/2019 - 12/31/2019	I-131	<2.41E-02	0.00E+00	2.41E-02
		Cs-134	<1.22E-02	0.00E+00	1.22E-02
		Cs-137	<1.05E-02	0.00E+00	1.05E-02
		Be-7	<8.49E-02	0.00E+00	8.49E-02
		K-40	1.00E-01	1.16E-01	1.87E-01

Sample Point 4 [INDICATOR - ESE @ 0.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492327	1/2/2019 - 1/9/2019	I-131	<2.41E-02	0.00E+00	2.41E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-02
		Cs-137	<1.91E-02	0.00E+00	1.91E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	4.62E-01	1.88E-01	1.81E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492587	1/9/2019 - 1/15/2019	I-131	<3.21E-02	0.00E+00	3.21E-02
		Cs-134	<2.43E-02	0.00E+00	2.43E-02
		Cs-137	<2.53E-02	0.00E+00	2.53E-02
		Be-7	<1.75E-01	0.00E+00	1.75E-01
		K-40	5.39E-01	2.45E-01	2.84E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493061	1/15/2019 - 1/23/2019	I-131	<3.17E-02	0.00E+00	3.17E-02
		Cs-134	<1.80E-02	0.00E+00	1.80E-02
		Cs-137	<2.00E-02	0.00E+00	2.00E-02
		Be-7	<9.90E-02	0.00E+00	9.90E-02
		K-40	4.19E-01	1.92E-01	2.31E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493412	1/23/2019 - 1/29/2019	I-131	<3.20E-02	0.00E+00	3.20E-02
		Cs-134	<2.41E-02	0.00E+00	2.41E-02
		Cs-137	<2.06E-02	0.00E+00	2.06E-02
		Be-7	<1.91E-01	0.00E+00	1.91E-01
		K-40	6.59E-01	2.46E-01	2.29E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493643	1/29/2019 - 2/5/2019	I-131	<3.14E-02	0.00E+00	3.14E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-02
		Cs-137	<1.68E-02	0.00E+00	1.68E-02
		Be-7	<1.29E-01	0.00E+00	1.29E-01
		K-40	4.03E-01	2.31E-01	3.20E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493876	2/5/2019 - 2/12/2019	I-131	<3.21E-02	0.00E+00	3.21E-02
		Cs-134	<1.34E-02	0.00E+00	1.34E-02
		Cs-137	<1.85E-02	0.00E+00	1.85E-02
		Be-7	<1.30E-01	0.00E+00	1.30E-01
		K-40	4.04E-01	2.09E-01	2.73E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494413	2/12/2019 - 2/19/2019	I-131	<2.32E-02	0.00E+00	2.32E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.88E-02	0.00E+00	1.88E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	4.38E-01	1.66E-01	1.37E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
495093	2/19/2019 - 2/26/2019	I-131	<3.22E-02	0.00E+00	3.22E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.94E-02	0.00E+00	1.94E-02
		Be-7	<1.44E-01	0.00E+00	1.44E-01

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 4 [INDICATOR - ESE @ 0.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
495093	2/19/2019 - 2/26/2019	K-40	<3.62E-01	0.00E+00	3.62E-01
495364	2/26/2019 - 3/5/2019	I-131	<3.51E-02	0.00E+00	3.51E-02
		Cs-134	<1.66E-02	0.00E+00	1.66E-02
		Cs-137	<1.81E-02	0.00E+00	1.81E-02
		Be-7	<1.35E-01	0.00E+00	1.35E-01
		K-40	4.97E-01	1.77E-01	1.32E-01
496218	3/5/2019 - 3/12/2019	I-131	<2.35E-02	0.00E+00	2.35E-02
		Cs-134	<1.94E-02	0.00E+00	1.94E-02
		Cs-137	<1.70E-02	0.00E+00	1.70E-02
		Be-7	<1.43E-01	0.00E+00	1.43E-01
		K-40	4.57E-01	1.79E-01	1.73E-01
496835	3/12/2019 - 3/19/2019	I-131	<3.62E-02	0.00E+00	3.62E-02
		Cs-134	<2.02E-02	0.00E+00	2.02E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	3.50E-01	1.79E-01	2.27E-01
497205	3/19/2019 - 3/26/2019	I-131	<2.83E-02	0.00E+00	2.83E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<1.62E-02	0.00E+00	1.62E-02
		Be-7	<1.54E-01	0.00E+00	1.54E-01
		K-40	3.82E-01	1.79E-01	2.10E-01
497677	3/26/2019 - 4/2/2019	I-131	<2.23E-02	0.00E+00	2.23E-02
		Cs-134	<2.08E-02	0.00E+00	2.08E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<8.80E-02	0.00E+00	8.80E-02
		K-40	<3.76E-01	0.00E+00	3.76E-01
498208	4/2/2019 - 4/9/2019	I-131	<2.14E-02	0.00E+00	2.14E-02
		Cs-134	<1.58E-02	0.00E+00	1.58E-02
		Cs-137	<1.47E-02	0.00E+00	1.47E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	4.16E-01	1.79E-01	1.97E-01
498646	4/9/2019 - 4/16/2019	I-131	<2.32E-02	0.00E+00	2.32E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	6.57E-02	1.06E-01	1.77E-01
		K-40	5.33E-01	1.85E-01	1.47E-01
498847	4/16/2019 - 4/23/2019	I-131	<2.26E-02	0.00E+00	2.26E-02
		Cs-134	<1.43E-02	0.00E+00	1.43E-02
		Cs-137	<1.63E-02	0.00E+00	1.63E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	4.41E-01	1.82E-01	1.94E-01
499670	4/23/2019 - 4/29/2019	I-131	<2.87E-02	0.00E+00	2.87E-02
		Cs-134	<1.98E-02	0.00E+00	1.98E-02
		Cs-137	<1.75E-02	0.00E+00	1.75E-02
		Be-7	<1.43E-01	0.00E+00	1.43E-01
		K-40	5.86E-01	1.91E-01	3.97E-02
499969	4/29/2019 - 5/6/2019	I-131	<2.15E-02	0.00E+00	2.15E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<1.65E-02	0.00E+00	1.65E-02

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 4 [INDICATOR - ESE @ 0.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
499969	4/29/2019 - 5/6/2019	Be-7	<1.44E-01	0.00E+00	1.44E-01
		K-40	4.63E-01	1.99E-01	2.36E-01
500223	5/6/2019 - 5/13/2019	I-131	<4.05E-02	0.00E+00	4.05E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	<3.54E-01	0.00E+00	3.54E-01
500531	5/13/2019 - 5/21/2019	I-131	<4.37E-02	0.00E+00	4.37E-02
		Cs-134	<1.33E-02	0.00E+00	1.33E-02
		Cs-137	<1.52E-02	0.00E+00	1.52E-02
		Be-7	<1.00E-01	0.00E+00	1.00E-01
		K-40	4.28E-01	1.47E-01	1.09E-01
500802	5/21/2019 - 5/28/2019	I-131	<3.49E-02	0.00E+00	3.49E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<1.75E-02	0.00E+00	1.75E-02
		Be-7	<1.48E-01	0.00E+00	1.48E-01
		K-40	2.66E-01	1.60E-01	2.11E-01
501309	5/28/2019 - 6/5/2019	I-131	<2.28E-02	0.00E+00	2.28E-02
		Cs-134	<1.49E-02	0.00E+00	1.49E-02
		Cs-137	<1.35E-02	0.00E+00	1.35E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	4.11E-01	1.46E-01	1.16E-01
501997	6/5/2019 - 6/11/2019	I-131	<4.07E-02	0.00E+00	4.07E-02
		Cs-134	<1.71E-02	0.00E+00	1.71E-02
		Cs-137	<1.75E-02	0.00E+00	1.75E-02
		Be-7	<1.39E-01	0.00E+00	1.39E-01
		K-40	8.28E-01	2.64E-01	2.45E-01
502814	6/11/2019 - 6/18/2019	I-131	<3.06E-02	0.00E+00	3.06E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-02
		Cs-137	<1.19E-02	0.00E+00	1.19E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	4.22E-01	1.96E-01	2.45E-01
502266	6/18/2019 - 6/25/2019	I-131	<2.51E-02	0.00E+00	2.51E-02
		Cs-134	<2.07E-02	0.00E+00	2.07E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<1.48E-01	0.00E+00	1.48E-01
		K-40	4.06E-01	1.61E-01	1.27E-01
503607	6/25/2019 - 7/2/2019	I-131	<3.78E-02	0.00E+00	3.78E-02
		Cs-134	<2.26E-02	0.00E+00	2.26E-02
		Cs-137	<2.05E-02	0.00E+00	2.05E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	5.21E-01	1.84E-01	1.58E-01
503907	7/2/2019 - 7/9/2019	I-131	<2.37E-02	0.00E+00	2.37E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.79E-02	0.00E+00	1.79E-02
		Be-7	<1.31E-01	0.00E+00	1.31E-01
		K-40	5.25E-01	2.30E-01	2.91E-01
504341	7/9/2019 - 7/16/2019	I-131	<3.02E-02	0.00E+00	3.02E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 4 [INDICATOR - ESE @ 0.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504341	7/9/2019 - 7/16/2019	Cs-137	<1.78E-02	0.00E+00	1.78E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	4.25E-01	1.85E-01	2.15E-01
504508	7/16/2019 - 7/23/2019	I-131	<1.89E-02	0.00E+00	1.89E-02
		Cs-134	<1.28E-02	0.00E+00	1.28E-02
		Cs-137	<1.27E-02	0.00E+00	1.27E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	1.86E-01	1.38E-01	1.95E-01
504757	7/23/2019 - 7/29/2019	I-131	<4.45E-02	0.00E+00	4.45E-02
		Cs-134	<1.84E-02	0.00E+00	1.84E-02
		Cs-137	<1.58E-02	0.00E+00	1.58E-02
		Be-7	<1.68E-01	0.00E+00	1.68E-01
		K-40	4.85E-01	1.97E-01	1.91E-01
504988	7/29/2019 - 8/6/2019	I-131	<1.34E-02	0.00E+00	1.34E-02
		Cs-134	<1.02E-02	0.00E+00	1.02E-02
		Cs-137	<8.75E-03	0.00E+00	8.75E-03
		Be-7	<8.27E-02	0.00E+00	8.27E-02
		K-40	<2.70E-01	0.00E+00	2.70E-01
505218	8/6/2019 - 8/13/2019	I-131	<1.76E-02	0.00E+00	1.76E-02
		Cs-134	<1.40E-02	0.00E+00	1.40E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<9.64E-02	0.00E+00	9.64E-02
		K-40	2.42E-01	1.37E-01	1.63E-01
505610	8/13/2019 - 8/20/2019	I-131	<1.58E-02	0.00E+00	1.58E-02
		Cs-134	<1.49E-02	0.00E+00	1.49E-02
		Cs-137	<1.03E-02	0.00E+00	1.03E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	1.24E-01	9.15E-02	1.08E-01
505945	8/20/2019 - 8/27/2019	I-131	<1.96E-02	0.00E+00	1.96E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<1.42E-01	0.00E+00	1.42E-01
		K-40	4.38E-01	1.90E-01	2.17E-01
506556	8/27/2019 - 9/3/2019	I-131	<2.17E-02	0.00E+00	2.17E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	3.23E-01	1.61E-01	1.92E-01
507474	9/3/2019 - 9/10/2019	I-131	<1.63E-02	0.00E+00	1.63E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<7.48E-03	0.00E+00	7.48E-03
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	1.52E-01	1.05E-01	1.30E-01
507869	9/10/2019 - 9/17/2019	I-131	<1.87E-02	0.00E+00	1.87E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02
		Cs-137	<1.62E-02	0.00E+00	1.62E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	4.41E-01	1.75E-01	1.69E-01
508645	9/17/2019 - 9/24/2019	I-131	<1.31E-02	0.00E+00	1.31E-02

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 4 [INDICATOR - ESE @ 0.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
508645	9/17/2019 - 9/24/2019	Cs-134	<1.13E-02	0.00E+00	1.13E-02
		Cs-137	<1.63E-02	0.00E+00	1.63E-02
		Be-7	<8.97E-02	0.00E+00	8.97E-02
		K-40	<2.20E-01	0.00E+00	2.20E-01
509607	9/24/2019 - 10/1/2019	I-131	<1.44E-02	0.00E+00	1.44E-02
		Cs-134	<1.72E-02	0.00E+00	1.72E-02
		Cs-137	<1.48E-02	0.00E+00	1.48E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	2.75E-01	1.38E-01	1.52E-01
510079	10/1/2019 - 10/8/2019	I-131	<3.61E-02	0.00E+00	3.61E-02
		Cs-134	<1.90E-02	0.00E+00	1.90E-02
		Cs-137	<1.96E-02	0.00E+00	1.96E-02
		Be-7	<1.65E-01	0.00E+00	1.65E-01
		K-40	3.85E-01	1.44E-01	3.48E-02
510606	10/8/2019 - 10/14/2019	I-131	<2.47E-02	0.00E+00	2.47E-02
		Cs-134	<1.88E-02	0.00E+00	1.88E-02
		Cs-137	<2.08E-02	0.00E+00	2.08E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	5.08E-01	2.03E-01	2.05E-01
510885	10/14/2019 - 10/21/2019	I-131	<1.67E-02	0.00E+00	1.67E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<9.93E-03	0.00E+00	9.93E-03
		Be-7	<5.96E-02	0.00E+00	5.96E-02
		K-40	2.59E-01	1.60E-01	2.17E-01
511318	10/21/2019 - 10/29/2019	I-131	<1.81E-02	0.00E+00	1.81E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02
		Be-7	<7.01E-02	0.00E+00	7.01E-02
		K-40	5.36E-01	1.66E-01	1.10E-01
511544	10/29/2019 - 11/5/2019	I-131	<1.59E-02	0.00E+00	1.59E-02
		Cs-134	<1.41E-02	0.00E+00	1.41E-02
		Cs-137	<1.06E-02	0.00E+00	1.06E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	3.74E-01	1.49E-01	1.28E-01
511945	11/5/2019 - 11/12/2019	I-131	<1.65E-02	0.00E+00	1.65E-02
		Cs-134	<1.49E-02	0.00E+00	1.49E-02
		Cs-137	<1.47E-02	0.00E+00	1.47E-02
		Be-7	<9.52E-02	0.00E+00	9.52E-02
		K-40	5.86E-01	2.07E-01	2.17E-01
512244	11/12/2019 - 11/19/2019	I-131	<2.77E-02	0.00E+00	2.77E-02
		Cs-134	<2.15E-02	0.00E+00	2.15E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<1.49E-01	0.00E+00	1.49E-01
		K-40	<4.05E-01	0.00E+00	4.05E-01
512555	11/19/2019 - 11/26/2019	I-131	<2.65E-02	0.00E+00	2.65E-02
		Cs-134	<1.23E-02	0.00E+00	1.23E-02
		Cs-137	<1.28E-02	0.00E+00	1.28E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	2.98E-01	1.64E-01	2.14E-01

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 4 [INDICATOR - ESE @ 0.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512870	11/26/2019 - 12/3/2019	I-131	<3.41E-02	0.00E+00	3.41E-02
		Cs-134	<2.09E-02	0.00E+00	2.09E-02
		Cs-137	<1.78E-02	0.00E+00	1.78E-02
		Be-7	<1.68E-01	0.00E+00	1.68E-01
		K-40	4.94E-01	2.27E-01	2.91E-01
513838	12/3/2019 - 12/10/2019	I-131	<2.63E-02	0.00E+00	2.63E-02
		Cs-134	<1.49E-02	0.00E+00	1.49E-02
		Cs-137	<1.52E-02	0.00E+00	1.52E-02
		Be-7	<9.54E-02	0.00E+00	9.54E-02
		K-40	2.10E-01	1.13E-01	1.14E-01
513997	12/10/2019 - 12/17/2019	I-131	<1.46E-02	0.00E+00	1.46E-02
		Cs-134	<1.81E-02	0.00E+00	1.81E-02
		Cs-137	<1.72E-02	0.00E+00	1.72E-02
		Be-7	<8.46E-02	0.00E+00	8.46E-02
		K-40	4.74E-01	1.91E-01	2.10E-01
514245	12/17/2019 - 12/23/2019	I-131	<3.10E-02	0.00E+00	3.10E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.38E-02	0.00E+00	1.38E-02
		Be-7	<1.00E-01	0.00E+00	1.00E-01
		K-40	4.78E-01	1.83E-01	1.62E-01
514673	12/23/2019 - 12/31/2019	I-131	<2.38E-02	0.00E+00	2.38E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.43E-02	0.00E+00	1.43E-02
		Be-7	<9.85E-02	0.00E+00	9.85E-02
		K-40	3.37E-01	1.39E-01	1.17E-01

Sample Point 5 [INDICATOR - ENE @ 0.9 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492328	1/2/2019 - 1/9/2019	I-131	<2.78E-02	0.00E+00	2.78E-02
		Cs-134	<1.83E-02	0.00E+00	1.83E-02
		Cs-137	<1.60E-02	0.00E+00	1.60E-02
		Be-7	<1.41E-01	0.00E+00	1.41E-01
		K-40	4.45E-01	1.82E-01	1.84E-01
492588	1/9/2019 - 1/15/2019	I-131	<2.72E-02	0.00E+00	2.72E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<2.24E-02	0.00E+00	2.24E-02
		Be-7	<1.58E-01	0.00E+00	1.58E-01
		K-40	4.97E-01	2.62E-01	3.57E-01
493062	1/15/2019 - 1/23/2019	I-131	<2.67E-02	0.00E+00	2.67E-02
		Cs-134	<1.66E-02	0.00E+00	1.66E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	6.72E-01	1.92E-01	1.27E-01
493413	1/23/2019 - 1/29/2019	I-131	<2.85E-02	0.00E+00	2.85E-02
		Cs-134	<1.88E-02	0.00E+00	1.88E-02
		Cs-137	<2.09E-02	0.00E+00	2.09E-02
		Be-7	<1.42E-01	0.00E+00	1.42E-01
		K-40	6.33E-01	2.25E-01	1.92E-01
493644	1/29/2019 - 2/5/2019	I-131	<2.36E-02	0.00E+00	2.36E-02
		Cs-134	<1.94E-02	0.00E+00	1.94E-02
		Cs-137	<1.60E-02	0.00E+00	1.60E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 5 [INDICATOR - ENE @ 0.9 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493644	1/29/2019 - 2/5/2019	K-40	5.60E-01	2.24E-01	2.64E-01
493877	2/5/2019 - 2/12/2019	I-131	<3.47E-02	0.00E+00	3.47E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.66E-02	0.00E+00	1.66E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	5.14E-01	1.86E-01	1.67E-01
494414	2/12/2019 - 2/19/2019	I-131	<2.46E-02	0.00E+00	2.46E-02
		Cs-134	<2.08E-02	0.00E+00	2.08E-02
		Cs-137	<1.51E-02	0.00E+00	1.51E-02
		Be-7	<1.42E-01	0.00E+00	1.42E-01
		K-40	5.00E-01	1.77E-01	1.34E-01
495094	2/19/2019 - 2/26/2019	I-131	<3.41E-02	0.00E+00	3.41E-02
		Cs-134	<1.13E-02	0.00E+00	1.13E-02
		Cs-137	<1.70E-02	0.00E+00	1.70E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	6.53E-01	1.88E-01	3.40E-02
495365	2/26/2019 - 3/5/2019	I-131	<3.69E-02	0.00E+00	3.69E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.89E-02	0.00E+00	1.89E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	4.48E-01	1.72E-01	1.52E-01
496219	3/5/2019 - 3/12/2019	I-131	<2.14E-02	0.00E+00	2.14E-02
		Cs-134	<2.06E-02	0.00E+00	2.06E-02
		Cs-137	<1.66E-02	0.00E+00	1.66E-02
		Be-7	<9.56E-02	0.00E+00	9.56E-02
		K-40	5.30E-01	1.71E-01	3.50E-02
496836	3/12/2019 - 3/19/2019	I-131	<3.20E-02	0.00E+00	3.20E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.91E-02	0.00E+00	1.91E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	4.28E-01	1.86E-01	2.11E-01
497206	3/19/2019 - 3/26/2019	I-131	<2.45E-02	0.00E+00	2.45E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<1.59E-02	0.00E+00	1.59E-02
		Be-7	<1.35E-01	0.00E+00	1.35E-01
		K-40	4.26E-01	1.75E-01	1.80E-01
497678	3/26/2019 - 4/2/2019	I-131	<2.13E-02	0.00E+00	2.13E-02
		Cs-134	<1.72E-02	0.00E+00	1.72E-02
		Cs-137	<1.86E-02	0.00E+00	1.86E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	6.00E-01	1.90E-01	1.29E-01
498209	4/2/2019 - 4/9/2019	I-131	<2.45E-02	0.00E+00	2.45E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<1.41E-01	0.00E+00	1.41E-01
		K-40	4.22E-01	1.84E-01	2.07E-01
498647	4/9/2019 - 4/16/2019	I-131	<2.15E-02	0.00E+00	2.15E-02
		Cs-134	<1.95E-02	0.00E+00	1.95E-02
		Cs-137	<1.81E-02	0.00E+00	1.81E-02

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 5 [INDICATOR - ENE @ 0.9 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
498647	4/9/2019 - 4/16/2019	Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	3.96E-01	1.79E-01	2.04E-01
498848	4/16/2019 - 4/23/2019	I-131	<2.39E-02	0.00E+00	2.39E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.49E-02	0.00E+00	1.49E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	5.96E-01	1.82E-01	3.51E-02
499671	4/23/2019 - 4/29/2019	I-131	<2.71E-02	0.00E+00	2.71E-02
		Cs-134	<2.05E-02	0.00E+00	2.05E-02
		Cs-137	<1.87E-02	0.00E+00	1.87E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	4.18E-01	1.84E-01	1.89E-01
499970	4/29/2019 - 5/6/2019	I-131	<2.57E-02	0.00E+00	2.57E-02
		Cs-134	<2.05E-02	0.00E+00	2.05E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	5.65E-01	2.53E-01	3.29E-01
500224	5/6/2019 - 5/13/2019	I-131	<2.89E-02	0.00E+00	2.89E-02
		Cs-134	<1.48E-02	0.00E+00	1.48E-02
		Cs-137	<1.41E-02	0.00E+00	1.41E-02
		Be-7	<1.37E-01	0.00E+00	1.37E-01
		K-40	5.03E-01	1.84E-01	1.83E-01
500532	5/13/2019 - 5/21/2019	I-131	<4.15E-02	0.00E+00	4.15E-02
		Cs-134	<1.72E-02	0.00E+00	1.72E-02
		Cs-137	<1.50E-02	0.00E+00	1.50E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	3.77E-01	1.65E-01	1.89E-01
500803	5/21/2019 - 5/28/2019	I-131	<3.34E-02	0.00E+00	3.34E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<2.12E-02	0.00E+00	2.12E-02
		Be-7	<1.37E-01	0.00E+00	1.37E-01
		K-40	4.37E-01	1.94E-01	2.26E-01
501310	5/28/2019 - 6/5/2019	I-131	<2.79E-02	0.00E+00	2.79E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-02
		Cs-137	<1.42E-02	0.00E+00	1.42E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	4.94E-01	1.65E-01	1.22E-01
501998	6/5/2019 - 6/11/2019	I-131	<4.26E-02	0.00E+00	4.26E-02
		Cs-134	<1.90E-02	0.00E+00	1.90E-02
		Cs-137	<1.75E-02	0.00E+00	1.75E-02
		Be-7	<1.39E-01	0.00E+00	1.39E-01
		K-40	5.11E-01	2.31E-01	2.78E-01
502815	6/11/2019 - 6/18/2019	I-131	<3.39E-02	0.00E+00	3.39E-02
		Cs-134	<1.57E-02	0.00E+00	1.57E-02
		Cs-137	<1.84E-02	0.00E+00	1.84E-02
		Be-7	<1.36E-01	0.00E+00	1.36E-01
		K-40	6.61E-01	2.03E-01	1.52E-01
502267	6/18/2019 - 6/25/2019	I-131	<2.46E-02	0.00E+00	2.46E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 5 [INDICATOR - ENE @ 0.9 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
502267	6/18/2019 - 6/25/2019	Cs-137	<1.31E-02	0.00E+00	1.31E-02
		Be-7	<1.46E-01	0.00E+00	1.46E-01
		K-40	6.00E-01	1.91E-01	1.25E-01
503608	6/25/2019 - 7/2/2019	I-131	<3.15E-02	0.00E+00	3.15E-02
		Cs-134	<1.83E-02	0.00E+00	1.83E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	2.54E-01	1.66E-01	2.29E-01
503908	7/2/2019 - 7/9/2019	I-131	<2.59E-02	0.00E+00	2.59E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.98E-02	0.00E+00	1.98E-02
		Be-7	<1.35E-01	0.00E+00	1.35E-01
		K-40	4.65E-01	1.59E-01	3.50E-02
504342	7/9/2019 - 7/16/2019	I-131	<3.67E-02	0.00E+00	3.67E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.70E-02	0.00E+00	1.70E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	6.63E-01	2.08E-01	1.66E-01
504509	7/16/2019 - 7/23/2019	I-131	<1.92E-02	0.00E+00	1.92E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	<3.65E-01	0.00E+00	3.65E-01
504758	7/23/2019 - 7/29/2019	I-131	<4.00E-02	0.00E+00	4.00E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<1.75E-02	0.00E+00	1.75E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	3.07E-01	1.65E-01	1.99E-01
504989	7/29/2019 - 7/29/2019	I-131	<5.58E-02	0.00E+00	5.58E-02
		Cs-134	<2.75E-02	0.00E+00	2.75E-02
		Cs-137	<3.02E-02	0.00E+00	3.02E-02
		Be-7	<2.01E-01	0.00E+00	2.01E-01
		K-40	5.93E+00	6.05E-01	4.40E-01
505219	8/7/2019 - 8/13/2019	I-131	<2.77E-02	0.00E+00	2.77E-02
		Cs-134	<2.00E-02	0.00E+00	2.00E-02
		Cs-137	<2.41E-02	0.00E+00	2.41E-02
		Be-7	<1.41E-01	0.00E+00	1.41E-01
		K-40	3.75E-01	2.14E-01	2.89E-01
505611	8/13/2019 - 8/20/2019	I-131	<1.77E-02	0.00E+00	1.77E-02
		Cs-134	<1.30E-02	0.00E+00	1.30E-02
		Cs-137	<1.21E-02	0.00E+00	1.21E-02
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	<1.54E-01	0.00E+00	1.54E-01
505946	8/20/2019 - 8/27/2019	I-131	<2.15E-02	0.00E+00	2.15E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.23E-02	0.00E+00	1.23E-02
		Be-7	<8.27E-02	0.00E+00	8.27E-02
		K-40	4.02E-01	1.90E-01	2.38E-01
506557	8/27/2019 - 9/3/2019	Nuclide	Activity	2 Sigma Error	MDA
		I-131	<1.67E-02	0.00E+00	1.67E-02

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 5 [INDICATOR - ENE @ 0.9 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
506557	8/27/2019 - 9/3/2019	Cs-134	<1.70E-02	0.00E+00	1.70E-02
		Cs-137	<1.11E-02	0.00E+00	1.11E-02
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	<2.88E-01	0.00E+00	2.88E-01
507475	9/3/2019 - 9/10/2019	I-131	<1.41E-02	0.00E+00	1.41E-02
		Cs-134	<9.26E-03	0.00E+00	9.26E-03
		Cs-137	<1.43E-02	0.00E+00	1.43E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	2.92E-01	1.57E-01	1.92E-01
507870	9/10/2019 - 9/17/2019	I-131	<1.12E-02	0.00E+00	1.12E-02
		Cs-134	<1.43E-02	0.00E+00	1.43E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<9.12E-02	0.00E+00	9.12E-02
		K-40	3.47E-01	1.45E-01	1.25E-01
508646	9/17/2019 - 9/24/2019	I-131	<1.62E-02	0.00E+00	1.62E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<1.33E-02	0.00E+00	1.33E-02
		Be-7	<9.86E-02	0.00E+00	9.86E-02
		K-40	<3.39E-01	0.00E+00	3.39E-01
509608	9/24/2019 - 10/1/2019	I-131	<1.69E-02	0.00E+00	1.69E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02
		Cs-137	<1.16E-02	0.00E+00	1.16E-02
		Be-7	<9.25E-02	0.00E+00	9.25E-02
		K-40	<9.06E-02	0.00E+00	9.06E-02
510080	10/1/2019 - 10/8/2019	I-131	<2.92E-02	0.00E+00	2.92E-02
		Cs-134	<8.89E-03	0.00E+00	8.89E-03
		Cs-137	<1.75E-02	0.00E+00	1.75E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	4.43E-01	1.83E-01	2.03E-01
510607	10/8/2019 - 10/14/2019	I-131	<2.69E-02	0.00E+00	2.69E-02
		Cs-134	<2.14E-02	0.00E+00	2.14E-02
		Cs-137	<2.57E-02	0.00E+00	2.57E-02
		Be-7	<2.00E-01	0.00E+00	2.00E-01
		K-40	4.55E-01	2.16E-01	2.57E-01
510886	10/14/2019 - 10/21/2019	I-131	<1.62E-02	0.00E+00	1.62E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.47E-02	0.00E+00	1.47E-02
		Be-7	<9.81E-02	0.00E+00	9.81E-02
		K-40	1.37E-01	1.09E-01	1.46E-01
511319	10/21/2019 - 10/29/2019	I-131	<1.56E-02	0.00E+00	1.56E-02
		Cs-134	<1.30E-02	0.00E+00	1.30E-02
		Cs-137	<1.12E-02	0.00E+00	1.12E-02
		Be-7	<6.25E-02	0.00E+00	6.25E-02
		K-40	4.20E-01	1.55E-01	1.48E-01
511545	10/29/2019 - 11/5/2019	I-131	<1.15E-02	0.00E+00	1.15E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-02
		Cs-137	<1.33E-02	0.00E+00	1.33E-02
		Be-7	<7.91E-02	0.00E+00	7.91E-02
		K-40	2.58E-01	1.32E-01	1.37E-01

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 5 [INDICATOR - ENE @ 0.9 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511946	11/5/2019 - 11/12/2019	I-131	<1.37E-02	0.00E+00	1.37E-02
		Cs-134	<1.79E-02	0.00E+00	1.79E-02
		Cs-137	<1.25E-02	0.00E+00	1.25E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	3.64E-01	1.61E-01	1.77E-01
512245	11/12/2019 - 11/19/2019	I-131	<1.60E-02	0.00E+00	1.60E-02
		Cs-134	<1.57E-02	0.00E+00	1.57E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	6.17E-01	2.05E-01	1.82E-01
512556	11/19/2019 - 11/26/2019	I-131	<2.48E-02	0.00E+00	2.48E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<1.10E-02	0.00E+00	1.10E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	2.06E-01	1.17E-01	1.26E-01
512871	11/26/2019 - 12/3/2019	I-131	<1.74E-02	0.00E+00	1.74E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02
		Be-7	<1.37E-01	0.00E+00	1.37E-01
		K-40	4.52E-01	1.64E-01	1.26E-01
513839	12/3/2019 - 12/10/2019	I-131	<2.79E-02	0.00E+00	2.79E-02
		Cs-134	<1.37E-02	0.00E+00	1.37E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<1.35E-01	0.00E+00	1.35E-01
		K-40	3.26E-01	1.30E-01	3.40E-02
513998	12/10/2019 - 12/17/2019	I-131	<1.66E-02	0.00E+00	1.66E-02
		Cs-134	<1.24E-02	0.00E+00	1.24E-02
		Cs-137	<9.86E-03	0.00E+00	9.86E-03
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	3.04E-01	1.50E-01	1.72E-01
514246	12/17/2019 - 12/23/2019	I-131	<3.29E-02	0.00E+00	3.29E-02
		Cs-134	<1.71E-02	0.00E+00	1.71E-02
		Cs-137	<2.04E-02	0.00E+00	2.04E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	5.80E-01	2.13E-01	1.97E-01
514674	12/23/2019 - 12/31/2019	I-131	<3.24E-02	0.00E+00	3.24E-02
		Cs-134	<1.72E-02	0.00E+00	1.72E-02
		Cs-137	<1.51E-02	0.00E+00	1.51E-02
		Be-7	<1.27E-01	0.00E+00	1.27E-01
		K-40	<3.08E-01	0.00E+00	3.08E-01

Sample Point 6 [INDICATOR - SSW @ 0.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492330	1/2/2019 - 1/9/2019	I-131	<1.87E-02	0.00E+00	1.87E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<1.50E-02	0.00E+00	1.50E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	4.18E-01	1.54E-01	1.31E-01
492590	1/9/2019 - 1/15/2019	I-131	<2.20E-02	0.00E+00	2.20E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<1.91E-02	0.00E+00	1.91E-02
		Be-7	<1.41E-01	0.00E+00	1.41E-01

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 6 [INDICATOR - SSW @ 0.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492590	1/9/2019 - 1/15/2019	K-40	4.76E-01	2.02E-01	2.34E-01
493064	1/15/2019 - 1/23/2019	I-131	<2.60E-02	0.00E+00	2.60E-02
		Cs-134	<9.10E-03	0.00E+00	9.10E-03
		Cs-137	<1.22E-02	0.00E+00	1.22E-02
		Be-7	<7.76E-02	0.00E+00	7.76E-02
		K-40	3.91E-01	1.31E-01	9.53E-02
493415	1/23/2019 - 1/29/2019	I-131	<2.09E-02	0.00E+00	2.09E-02
		Cs-134	<1.64E-02	0.00E+00	1.64E-02
		Cs-137	<1.79E-02	0.00E+00	1.79E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	4.22E-01	1.79E-01	1.88E-01
493646	1/29/2019 - 2/5/2019	I-131	<2.15E-02	0.00E+00	2.15E-02
		Cs-134	<1.57E-02	0.00E+00	1.57E-02
		Cs-137	<1.52E-02	0.00E+00	1.52E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	2.11E-01	1.50E-01	2.17E-01
493879	2/5/2019 - 2/12/2019	I-131	<2.89E-02	0.00E+00	2.89E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<1.76E-02	0.00E+00	1.76E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	3.41E-01	1.84E-01	2.43E-01
494416	2/12/2019 - 2/19/2019	I-131	<2.10E-02	0.00E+00	2.10E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.62E-02	0.00E+00	1.62E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	5.07E-01	1.93E-01	2.03E-01
495096	2/19/2019 - 2/26/2019	I-131	<2.92E-02	0.00E+00	2.92E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02
		Cs-137	<1.62E-02	0.00E+00	1.62E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	3.12E-01	1.55E-01	1.83E-01
495367	2/26/2019 - 3/5/2019	I-131	<3.63E-02	0.00E+00	3.63E-02
		Cs-134	<1.91E-02	0.00E+00	1.91E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	5.16E-01	1.93E-01	1.95E-01
496221	3/5/2019 - 3/12/2019	I-131	<2.10E-02	0.00E+00	2.10E-02
		Cs-134	<2.14E-02	0.00E+00	2.14E-02
		Cs-137	<1.19E-02	0.00E+00	1.19E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	2.93E-01	1.71E-01	2.30E-01
496838	3/12/2019 - 3/19/2019	I-131	<3.32E-02	0.00E+00	3.32E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.42E-02	0.00E+00	1.42E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	4.81E-01	1.69E-01	1.30E-01
497208	3/19/2019 - 3/26/2019	I-131	<3.03E-02	0.00E+00	3.03E-02
		Cs-134	<2.13E-02	0.00E+00	2.13E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 6 [INDICATOR - SSW @ 0.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
497208	3/19/2019 - 3/26/2019	Be-7	<1.39E-01	0.00E+00	1.39E-01
		K-40	4.32E-01	1.88E-01	2.16E-01
497680	3/26/2019 - 4/2/2019	I-131	<1.97E-02	0.00E+00	1.97E-02
		Cs-134	<1.19E-02	0.00E+00	1.19E-02
		Cs-137	<1.65E-02	0.00E+00	1.65E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	3.08E-01	1.83E-01	2.54E-01
498211	4/2/2019 - 4/9/2019	I-131	<1.80E-02	0.00E+00	1.80E-02
		Cs-134	<2.13E-02	0.00E+00	2.13E-02
		Cs-137	<1.77E-02	0.00E+00	1.77E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	2.32E-01	1.73E-01	2.54E-01
498649	4/9/2019 - 4/16/2019	I-131	<3.99E-02	0.00E+00	3.99E-02
		Cs-134	<2.04E-02	0.00E+00	2.04E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<1.37E-01	0.00E+00	1.37E-01
		K-40	6.56E-01	2.17E-01	1.99E-01
498850	4/16/2019 - 4/23/2019	I-131	<2.63E-02	0.00E+00	2.63E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<1.72E-02	0.00E+00	1.72E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	5.94E-01	1.92E-01	1.47E-01
499673	4/23/2019 - 4/29/2019	I-131	<2.92E-02	0.00E+00	2.92E-02
		Cs-134	<1.94E-02	0.00E+00	1.94E-02
		Cs-137	<1.58E-02	0.00E+00	1.58E-02
		Be-7	<1.46E-01	0.00E+00	1.46E-01
		K-40	5.82E-01	2.20E-01	2.16E-01
499972	4/29/2019 - 5/6/2019	I-131	<2.31E-02	0.00E+00	2.31E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<2.04E-02	0.00E+00	2.04E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	4.95E-01	1.93E-01	2.03E-01
500226	5/6/2019 - 5/13/2019	I-131	<4.15E-02	0.00E+00	4.15E-02
		Cs-134	<2.03E-02	0.00E+00	2.03E-02
		Cs-137	<1.58E-02	0.00E+00	1.58E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	4.55E-01	1.81E-01	1.89E-01
500534	5/13/2019 - 5/21/2019	I-131	<4.21E-02	0.00E+00	4.21E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.34E-02	0.00E+00	1.34E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	3.21E-01	1.60E-01	2.00E-01
500805	5/21/2019 - 5/28/2019	I-131	<3.93E-02	0.00E+00	3.93E-02
		Cs-134	<2.06E-02	0.00E+00	2.06E-02
		Cs-137	<1.60E-02	0.00E+00	1.60E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	2.64E-01	1.85E-01	2.68E-01
501312	5/28/2019 - 6/5/2019	I-131	<2.03E-02	0.00E+00	2.03E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-02

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 6 [INDICATOR - SSW @ 0.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
501312	5/28/2019 - 6/5/2019	Cs-137	<1.19E-02	0.00E+00	1.19E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	3.51E-01	1.61E-01	1.90E-01
502000	6/5/2019 - 6/11/2019	I-131	<4.56E-02	0.00E+00	4.56E-02
		Cs-134	<1.34E-02	0.00E+00	1.34E-02
		Cs-137	<1.98E-02	0.00E+00	1.98E-02
		Be-7	<1.51E-01	0.00E+00	1.51E-01
		K-40	5.53E-01	1.87E-01	4.05E-02
502817	6/11/2019 - 6/18/2019	I-131	<3.67E-02	0.00E+00	3.67E-02
		Cs-134	<1.81E-02	0.00E+00	1.81E-02
		Cs-137	<1.48E-02	0.00E+00	1.48E-02
		Be-7	<1.45E-01	0.00E+00	1.45E-01
		K-40	3.89E-01	1.97E-01	2.51E-01
502269	6/18/2019 - 6/25/2019	I-131	<2.53E-02	0.00E+00	2.53E-02
		Cs-134	<2.01E-02	0.00E+00	2.01E-02
		Cs-137	<1.50E-02	0.00E+00	1.50E-02
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	4.66E-01	2.06E-01	2.49E-01
503610	6/25/2019 - 7/2/2019	I-131	<3.07E-02	0.00E+00	3.07E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.74E-02	0.00E+00	1.74E-02
		Be-7	<1.32E-01	0.00E+00	1.32E-01
		K-40	4.85E-01	1.90E-01	1.96E-01
503910	7/2/2019 - 7/9/2019	I-131	<2.47E-02	0.00E+00	2.47E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.88E-02	0.00E+00	1.88E-02
		Be-7	<1.29E-01	0.00E+00	1.29E-01
		K-40	4.42E-01	1.68E-01	1.43E-01
504344	7/9/2019 - 7/16/2019	I-131	<3.53E-02	0.00E+00	3.53E-02
		Cs-134	<1.40E-02	0.00E+00	1.40E-02
		Cs-137	<1.44E-02	0.00E+00	1.44E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	4.03E-01	1.67E-01	1.69E-01
504511	7/16/2019 - 7/23/2019	I-131	<1.55E-02	0.00E+00	1.55E-02
		Cs-134	<1.13E-02	0.00E+00	1.13E-02
		Cs-137	<1.29E-02	0.00E+00	1.29E-02
		Be-7	<8.16E-02	0.00E+00	8.16E-02
		K-40	3.63E-01	1.49E-01	1.33E-01
504760	7/23/2019 - 7/29/2019	I-131	<4.35E-02	0.00E+00	4.35E-02
		Cs-134	<1.86E-02	0.00E+00	1.86E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	1.90E-01	1.47E-01	2.05E-01
504991	7/29/2019 - 8/6/2019	I-131	<2.50E-02	0.00E+00	2.50E-02
		Cs-134	<1.28E-02	0.00E+00	1.28E-02
		Cs-137	<1.27E-02	0.00E+00	1.27E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	<3.00E-01	0.00E+00	3.00E-01
505221	8/6/2019 - 8/13/2019	I-131	<1.60E-02	0.00E+00	1.60E-02

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 6 [INDICATOR - SSW @ 0.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
505221	8/6/2019 - 8/13/2019	Cs-134	<1.37E-02	0.00E+00	1.37E-02
		Cs-137	<1.18E-02	0.00E+00	1.18E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	2.93E-01	1.45E-01	1.68E-01
505613	8/13/2019 - 8/20/2019	I-131	<3.36E-02	0.00E+00	3.36E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.43E-02	0.00E+00	1.43E-02
		Be-7	2.50E-02	6.51E-02	1.16E-01
		K-40	5.26E-01	2.03E-01	2.12E-01
505948	8/20/2019 - 8/27/2019	I-131	<1.62E-02	0.00E+00	1.62E-02
		Cs-134	<1.81E-02	0.00E+00	1.81E-02
		Cs-137	<9.98E-03	0.00E+00	9.98E-03
		Be-7	<8.94E-02	0.00E+00	8.94E-02
		K-40	<2.06E-01	0.00E+00	2.06E-01
506559	8/27/2019 - 9/3/2019	I-131	<1.98E-02	0.00E+00	1.98E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.72E-02	0.00E+00	1.72E-02
		Be-7	<9.61E-02	0.00E+00	9.61E-02
		K-40	<3.07E-01	0.00E+00	3.07E-01
507477	9/3/2019 - 9/10/2019	I-131	<1.56E-02	0.00E+00	1.56E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.12E-02	0.00E+00	1.12E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	<3.06E-01	0.00E+00	3.06E-01
507872	9/10/2019 - 9/17/2019	I-131	<1.97E-02	0.00E+00	1.97E-02
		Cs-134	<1.66E-02	0.00E+00	1.66E-02
		Cs-137	<1.50E-02	0.00E+00	1.50E-02
		Be-7	<9.60E-02	0.00E+00	9.60E-02
		K-40	2.01E-01	1.34E-01	1.77E-01
508648	9/17/2019 - 9/24/2019	I-131	<1.44E-02	0.00E+00	1.44E-02
		Cs-134	<1.17E-02	0.00E+00	1.17E-02
		Cs-137	<1.01E-02	0.00E+00	1.01E-02
		Be-7	<8.93E-02	0.00E+00	8.93E-02
		K-40	2.72E-01	1.28E-01	1.11E-01
509610	9/24/2019 - 10/1/2019	I-131	<2.73E-02	0.00E+00	2.73E-02
		Cs-134	<1.15E-02	0.00E+00	1.15E-02
		Cs-137	<1.76E-02	0.00E+00	1.76E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	4.41E-01	1.63E-01	1.35E-01
510082	10/1/2019 - 10/8/2019	I-131	<3.10E-02	0.00E+00	3.10E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<1.62E-02	0.00E+00	1.62E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	<2.79E-01	0.00E+00	2.79E-01
510609	10/8/2019 - 10/14/2019	I-131	<1.84E-02	0.00E+00	1.84E-02
		Cs-134	<2.37E-02	0.00E+00	2.37E-02
		Cs-137	<2.04E-02	0.00E+00	2.04E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	5.13E-01	1.91E-01	1.60E-01

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 6 [INDICATOR - SSW @ 0.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
510888	10/14/2019 - 10/21/2019	I-131	<2.14E-02	0.00E+00	2.14E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.44E-02	0.00E+00	1.44E-02
		Be-7	<9.20E-02	0.00E+00	9.20E-02
		K-40	6.61E-01	1.87E-01	3.32E-02
511321	10/21/2019 - 10/29/2019	I-131	<1.56E-02	0.00E+00	1.56E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<9.76E-03	0.00E+00	9.76E-03
		Be-7	<7.63E-02	0.00E+00	7.63E-02
		K-40	1.31E-01	1.47E-01	2.37E-01
511547	10/29/2019 - 11/5/2019	I-131	<2.27E-02	0.00E+00	2.27E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.38E-02	0.00E+00	1.38E-02
		Be-7	<1.58E-01	0.00E+00	1.58E-01
		K-40	5.88E-01	1.79E-01	3.46E-02
511948	11/5/2019 - 11/12/2019	I-131	<1.43E-02	0.00E+00	1.43E-02
		Cs-134	<1.23E-02	0.00E+00	1.23E-02
		Cs-137	<1.35E-02	0.00E+00	1.35E-02
		Be-7	<7.74E-02	0.00E+00	7.74E-02
		K-40	2.14E-01	1.31E-01	1.66E-01
512247	11/12/2019 - 11/19/2019	I-131	<1.68E-02	0.00E+00	1.68E-02
		Cs-134	<1.91E-02	0.00E+00	1.91E-02
		Cs-137	<1.75E-02	0.00E+00	1.75E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	4.28E-01	1.86E-01	2.13E-01
512558	11/19/2019 - 11/26/2019	I-131	<2.92E-02	0.00E+00	2.92E-02
		Cs-134	<1.34E-02	0.00E+00	1.34E-02
		Cs-137	<1.83E-02	0.00E+00	1.83E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	3.97E-01	1.88E-01	2.36E-01
512873	11/26/2019 - 12/3/2019	I-131	<2.27E-02	0.00E+00	2.27E-02
		Cs-134	<1.90E-02	0.00E+00	1.90E-02
		Cs-137	<1.47E-02	0.00E+00	1.47E-02
		Be-7	<6.94E-02	0.00E+00	6.94E-02
		K-40	2.60E-01	1.79E-01	2.57E-01
513841	12/3/2019 - 12/10/2019	I-131	<3.20E-02	0.00E+00	3.20E-02
		Cs-134	<1.49E-02	0.00E+00	1.49E-02
		Cs-137	<1.35E-02	0.00E+00	1.35E-02
		Be-7	<9.64E-02	0.00E+00	9.64E-02
		K-40	<1.53E-01	0.00E+00	1.53E-01
514000	12/10/2019 - 12/17/2019	I-131	<1.45E-02	0.00E+00	1.45E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<1.72E-02	0.00E+00	1.72E-02
		Be-7	<8.33E-02	0.00E+00	8.33E-02
		K-40	<3.13E-01	0.00E+00	3.13E-01
514248	12/17/2019 - 12/23/2019	I-131	<4.49E-02	0.00E+00	4.49E-02
		Cs-134	<2.09E-02	0.00E+00	2.09E-02
		Cs-137	<2.23E-02	0.00E+00	2.23E-02
		Be-7	<1.91E-01	0.00E+00	1.91E-01
		K-40	6.44E-01	2.13E-01	1.57E-01

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 6 [INDICATOR - SSW @ 0.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514676	12/23/2019 - 12/31/2019	I-131	<2.87E-02	0.00E+00	2.87E-02
		Cs-134	<1.38E-02	0.00E+00	1.38E-02
		Cs-137	<8.92E-03	0.00E+00	8.92E-03
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	3.17E-01	1.62E-01	2.07E-01

Sample Point 7 [INDICATOR - ESE @ 6.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492333	1/2/2019 - 1/9/2019	I-131	<2.06E-02	0.00E+00	2.06E-02
		Cs-134	<1.50E-02	0.00E+00	1.50E-02
		Cs-137	<1.41E-02	0.00E+00	1.41E-02
		Be-7	<8.50E-02	0.00E+00	8.50E-02
		K-40	3.21E-01	1.78E-01	2.46E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492593	1/9/2019 - 1/15/2019	I-131	<2.29E-02	0.00E+00	2.29E-02
		Cs-134	<1.71E-02	0.00E+00	1.71E-02
		Cs-137	<1.41E-02	0.00E+00	1.41E-02
		Be-7	<1.31E-01	0.00E+00	1.31E-01
		K-40	4.06E-01	1.64E-01	1.63E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493067	1/15/2019 - 1/23/2019	I-131	<2.38E-02	0.00E+00	2.38E-02
		Cs-134	<1.33E-02	0.00E+00	1.33E-02
		Cs-137	<1.23E-02	0.00E+00	1.23E-02
		Be-7	<9.07E-02	0.00E+00	9.07E-02
		K-40	2.51E-01	1.13E-01	1.19E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493418	1/23/2019 - 1/29/2019	I-131	<2.20E-02	0.00E+00	2.20E-02
		Cs-134	<1.77E-02	0.00E+00	1.77E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	<3.87E-01	0.00E+00	3.87E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493649	1/29/2019 - 2/5/2019	I-131	<2.10E-02	0.00E+00	2.10E-02
		Cs-134	<1.47E-02	0.00E+00	1.47E-02
		Cs-137	<1.50E-02	0.00E+00	1.50E-02
		Be-7	<9.27E-02	0.00E+00	9.27E-02
		K-40	4.50E-01	1.60E-01	1.50E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493882	2/5/2019 - 2/12/2019	I-131	<3.26E-02	0.00E+00	3.26E-02
		Cs-134	<1.31E-02	0.00E+00	1.31E-02
		Cs-137	<1.49E-02	0.00E+00	1.49E-02
		Be-7	<1.39E-01	0.00E+00	1.39E-01
		K-40	5.43E-01	1.76E-01	1.33E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494419	2/12/2019 - 2/19/2019	I-131	<1.95E-02	0.00E+00	1.95E-02
		Cs-134	<1.49E-02	0.00E+00	1.49E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02
		Be-7	<8.14E-02	0.00E+00	8.14E-02
		K-40	4.59E-01	1.70E-01	1.62E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
495099	2/19/2019 - 2/26/2019	I-131	<2.61E-02	0.00E+00	2.61E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<9.59E-02	0.00E+00	9.59E-02
		K-40	3.06E-01	1.52E-01	1.82E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
495370	2/26/2019 - 3/5/2019	I-131	<3.23E-02	0.00E+00	3.23E-02
		Cs-134	<1.23E-02	0.00E+00	1.23E-02
		Cs-137	<1.78E-02	0.00E+00	1.78E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 7 [INDICATOR - ESE @ 6.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
495370	2/26/2019 - 3/5/2019	K-40	3.22E-01	1.43E-01	1.46E-01
496224	3/5/2019 - 3/12/2019	I-131	<2.17E-02	0.00E+00	2.17E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.16E-02	0.00E+00	1.16E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	4.31E-01	1.79E-01	2.03E-01
496841	3/12/2019 - 3/19/2019	I-131	<3.17E-02	0.00E+00	3.17E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<1.26E-02	0.00E+00	1.26E-02
		Be-7	<8.47E-02	0.00E+00	8.47E-02
		K-40	5.42E-01	2.21E-01	2.73E-01
497211	3/19/2019 - 3/26/2019	I-131	<2.83E-02	0.00E+00	2.83E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.62E-02	0.00E+00	1.62E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	4.79E-01	1.59E-01	1.10E-01
497683	3/26/2019 - 4/2/2019	I-131	<2.02E-02	0.00E+00	2.02E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<1.52E-02	0.00E+00	1.52E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	3.07E-01	1.73E-01	2.32E-01
498214	4/2/2019 - 4/9/2019	I-131	<1.91E-02	0.00E+00	1.91E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<1.99E-02	0.00E+00	1.99E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	3.85E-01	1.89E-01	2.45E-01
498652	4/9/2019 - 4/16/2019	I-131	<3.55E-02	0.00E+00	3.55E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-02
		Cs-137	<1.52E-02	0.00E+00	1.52E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	3.17E-01	1.67E-01	2.15E-01
498853	4/16/2019 - 4/23/2019	I-131	<2.83E-02	0.00E+00	2.83E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<1.41E-02	0.00E+00	1.41E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	4.27E-01	1.74E-01	1.89E-01
499676	4/23/2019 - 4/29/2019	I-131	<2.59E-02	0.00E+00	2.59E-02
		Cs-134	<2.11E-02	0.00E+00	2.11E-02
		Cs-137	<1.75E-02	0.00E+00	1.75E-02
		Be-7	<1.37E-01	0.00E+00	1.37E-01
		K-40	4.85E-01	1.86E-01	1.71E-01
499975	4/29/2019 - 5/6/2019	I-131	<2.54E-02	0.00E+00	2.54E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.75E-02	0.00E+00	1.75E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	3.04E-01	1.70E-01	2.26E-01
500229	5/6/2019 - 5/13/2019	I-131	<3.19E-02	0.00E+00	3.19E-02
		Cs-134	<2.05E-02	0.00E+00	2.05E-02
		Cs-137	<1.36E-02	0.00E+00	1.36E-02

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 7 [INDICATOR - ESE @ 6.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500229	5/6/2019 - 5/13/2019	Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	4.72E-01	1.86E-01	1.90E-01
500537	5/13/2019 - 5/21/2019	I-131	<3.40E-02	0.00E+00	3.40E-02
		Cs-134	<1.23E-02	0.00E+00	1.23E-02
		Cs-137	<1.19E-02	0.00E+00	1.19E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	3.22E-01	1.46E-01	1.70E-01
500808	5/21/2019 - 5/28/2019	I-131	<3.29E-02	0.00E+00	3.29E-02
		Cs-134	<1.29E-02	0.00E+00	1.29E-02
		Cs-137	<1.52E-02	0.00E+00	1.52E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	<3.80E-01	0.00E+00	3.80E-01
501315	5/28/2019 - 6/5/2019	I-131	<2.38E-02	0.00E+00	2.38E-02
		Cs-134	<1.16E-02	0.00E+00	1.16E-02
		Cs-137	<1.19E-02	0.00E+00	1.19E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	4.13E-01	1.43E-01	1.10E-01
502003	6/5/2019 - 6/11/2019	I-131	<4.25E-02	0.00E+00	4.25E-02
		Cs-134	<1.79E-02	0.00E+00	1.79E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02
		Be-7	<1.27E-01	0.00E+00	1.27E-01
		K-40	3.90E-01	1.85E-01	2.16E-01
502820	6/11/2019 - 6/18/2019	I-131	<4.10E-02	0.00E+00	4.10E-02
		Cs-134	<1.56E-02	0.00E+00	1.56E-02
		Cs-137	<1.87E-02	0.00E+00	1.87E-02
		Be-7	<1.33E-01	0.00E+00	1.33E-01
		K-40	5.02E-01	1.93E-01	1.85E-01
502272	6/18/2019 - 6/25/2019	I-131	<2.41E-02	0.00E+00	2.41E-02
		Cs-134	<2.07E-02	0.00E+00	2.07E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<1.36E-01	0.00E+00	1.36E-01
		K-40	4.76E-01	1.88E-01	1.94E-01
503613	6/25/2019 - 7/2/2019	I-131	<3.19E-02	0.00E+00	3.19E-02
		Cs-134	<1.91E-02	0.00E+00	1.91E-02
		Cs-137	<1.94E-02	0.00E+00	1.94E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	5.57E-01	1.74E-01	3.43E-02
503913	7/2/2019 - 7/9/2019	I-131	<2.97E-02	0.00E+00	2.97E-02
		Cs-134	<1.89E-02	0.00E+00	1.89E-02
		Cs-137	<1.86E-02	0.00E+00	1.86E-02
		Be-7	<1.33E-01	0.00E+00	1.33E-01
		K-40	4.42E-01	1.56E-01	3.53E-02
504347	7/9/2019 - 7/16/2019	I-131	<3.45E-02	0.00E+00	3.45E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.53E-02	0.00E+00	1.53E-02
		Be-7	<1.60E-01	0.00E+00	1.60E-01
		K-40	4.90E-01	1.83E-01	1.71E-01
504514	7/16/2019 - 7/23/2019	I-131	<1.79E-02	0.00E+00	1.79E-02
		Cs-134	<1.64E-02	0.00E+00	1.64E-02

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 7 [INDICATOR - ESE @ 6.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504514	7/16/2019 - 7/23/2019	Cs-137	<1.16E-02	0.00E+00	1.16E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	5.21E-01	1.72E-01	3.62E-02
504763	7/23/2019 - 7/29/2019	I-131	<4.16E-02	0.00E+00	4.16E-02
		Cs-134	<2.12E-02	0.00E+00	2.12E-02
		Cs-137	<1.60E-02	0.00E+00	1.60E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	4.90E-01	1.72E-01	3.90E-02
504994	7/29/2019 - 8/6/2019	I-131	<1.95E-02	0.00E+00	1.95E-02
		Cs-134	<1.28E-02	0.00E+00	1.28E-02
		Cs-137	<6.80E-03	0.00E+00	6.80E-03
		Be-7	<9.87E-02	0.00E+00	9.87E-02
		K-40	1.61E-01	1.14E-01	1.54E-01
505224	8/6/2019 - 8/13/2019	I-131	<2.12E-02	0.00E+00	2.12E-02
		Cs-134	<1.64E-02	0.00E+00	1.64E-02
		Cs-137	<1.26E-02	0.00E+00	1.26E-02
		Be-7	<8.50E-02	0.00E+00	8.50E-02
		K-40	3.27E-01	1.60E-01	1.79E-01
505616	8/13/2019 - 8/20/2019	I-131	<3.19E-02	0.00E+00	3.19E-02
		Cs-134	<1.13E-02	0.00E+00	1.13E-02
		Cs-137	<1.51E-02	0.00E+00	1.51E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	3.13E-01	1.38E-01	1.30E-01
505951	8/20/2019 - 8/27/2019	I-131	<2.42E-02	0.00E+00	2.42E-02
		Cs-134	<1.92E-02	0.00E+00	1.92E-02
		Cs-137	<1.79E-02	0.00E+00	1.79E-02
		Be-7	<1.35E-01	0.00E+00	1.35E-01
		K-40	3.20E-01	1.66E-01	2.02E-01
506562	8/27/2019 - 9/3/2019	I-131	<1.74E-02	0.00E+00	1.74E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.26E-02	0.00E+00	1.26E-02
		Be-7	<8.61E-02	0.00E+00	8.61E-02
		K-40	<1.51E-01	0.00E+00	1.51E-01
507480	9/3/2019 - 9/10/2019	I-131	<2.15E-02	0.00E+00	2.15E-02
		Cs-134	<1.95E-02	0.00E+00	1.95E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02
		Be-7	<1.35E-01	0.00E+00	1.35E-01
		K-40	4.70E-01	1.74E-01	1.48E-01
507875	9/10/2019 - 9/17/2019	I-131	<2.02E-02	0.00E+00	2.02E-02
		Cs-134	<1.85E-02	0.00E+00	1.85E-02
		Cs-137	<1.65E-02	0.00E+00	1.65E-02
		Be-7	<9.99E-02	0.00E+00	9.99E-02
		K-40	3.87E-01	1.62E-01	1.64E-01
508651	9/17/2019 - 9/24/2019	I-131	<1.68E-02	0.00E+00	1.68E-02
		Cs-134	<1.32E-02	0.00E+00	1.32E-02
		Cs-137	<1.22E-02	0.00E+00	1.22E-02
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	4.48E-01	1.35E-01	1.38E-01
509613	9/24/2019 - 10/1/2019	I-131	<2.29E-02	0.00E+00	2.29E-02

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 7 [INDICATOR - ESE @ 6.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
509613	9/24/2019 - 10/1/2019	Cs-134	<1.49E-02	0.00E+00	1.49E-02
		Cs-137	<1.52E-02	0.00E+00	1.52E-02
		Be-7	<9.06E-02	0.00E+00	9.06E-02
		K-40	3.02E-01	1.60E-01	2.00E-01
510085	10/1/2019 - 10/8/2019	I-131	<2.06E-02	0.00E+00	2.06E-02
		Cs-134	<1.25E-02	0.00E+00	1.25E-02
		Cs-137	<1.16E-02	0.00E+00	1.16E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	2.55E-01	1.13E-01	3.29E-02
510612	10/8/2019 - 10/14/2019	I-131	<2.09E-02	0.00E+00	2.09E-02
		Cs-134	<2.12E-02	0.00E+00	2.12E-02
		Cs-137	<1.62E-02	0.00E+00	1.62E-02
		Be-7	<1.31E-01	0.00E+00	1.31E-01
		K-40	4.92E-01	2.01E-01	2.08E-01
510891	10/14/2019 - 10/21/2019	I-131	<1.73E-02	0.00E+00	1.73E-02
		Cs-134	<1.33E-02	0.00E+00	1.33E-02
		Cs-137	<1.29E-02	0.00E+00	1.29E-02
		Be-7	<6.52E-02	0.00E+00	6.52E-02
		K-40	<1.72E-01	0.00E+00	1.72E-01
511324	10/21/2019 - 10/29/2019	I-131	<1.82E-02	0.00E+00	1.82E-02
		Cs-134	<9.95E-03	0.00E+00	9.95E-03
		Cs-137	<1.44E-02	0.00E+00	1.44E-02
		Be-7	<8.09E-02	0.00E+00	8.09E-02
		K-40	5.14E-01	1.60E-01	1.05E-01
511550	10/29/2019 - 11/5/2019	I-131	<1.76E-02	0.00E+00	1.76E-02
		Cs-134	<1.48E-02	0.00E+00	1.48E-02
		Cs-137	<1.28E-02	0.00E+00	1.28E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	3.97E-01	1.58E-01	1.46E-01
511951	11/5/2019 - 11/12/2019	I-131	<2.79E-02	0.00E+00	2.79E-02
		Cs-134	<1.72E-02	0.00E+00	1.72E-02
		Cs-137	<1.59E-02	0.00E+00	1.59E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	5.22E-01	1.89E-01	1.85E-01
512250	11/12/2019 - 11/19/2019	I-131	<1.33E-02	0.00E+00	1.33E-02
		Cs-134	<1.31E-02	0.00E+00	1.31E-02
		Cs-137	<1.36E-02	0.00E+00	1.36E-02
		Be-7	<7.60E-02	0.00E+00	7.60E-02
		K-40	3.35E-01	1.77E-01	2.25E-01
512561	11/19/2019 - 11/26/2019	I-131	<2.97E-02	0.00E+00	2.97E-02
		Cs-134	<1.95E-02	0.00E+00	1.95E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02
		Be-7	<1.29E-01	0.00E+00	1.29E-01
		K-40	3.16E-01	1.53E-01	1.72E-01
512876	11/26/2019 - 12/3/2019	I-131	<1.68E-02	0.00E+00	1.68E-02
		Cs-134	<1.51E-02	0.00E+00	1.51E-02
		Cs-137	<1.16E-02	0.00E+00	1.16E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	<3.06E-01	0.00E+00	3.06E-01

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 7 [INDICATOR - ESE @ 6.4 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
513844	12/3/2019 - 12/10/2019	I-131	<2.63E-02	0.00E+00	2.63E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-02
		Cs-137	<1.76E-02	0.00E+00	1.76E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	3.81E-01	1.64E-01	1.74E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514003	12/10/2019 - 12/17/2019	I-131	<1.73E-02	0.00E+00	1.73E-02
		Cs-134	<1.85E-02	0.00E+00	1.85E-02
		Cs-137	<1.23E-02	0.00E+00	1.23E-02
		Be-7	<7.20E-02	0.00E+00	7.20E-02
		K-40	4.71E-01	1.64E-01	1.12E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514251	12/17/2019 - 12/23/2019	I-131	<3.75E-02	0.00E+00	3.75E-02
		Cs-134	<1.99E-02	0.00E+00	1.99E-02
		Cs-137	<1.63E-02	0.00E+00	1.63E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	4.97E-01	2.02E-01	2.07E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514679	12/23/2019 - 12/31/2019	I-131	<2.47E-02	0.00E+00	2.47E-02
		Cs-134	<1.47E-02	0.00E+00	1.47E-02
		Cs-137	<1.02E-02	0.00E+00	1.02E-02
		Be-7	<9.79E-02	0.00E+00	9.79E-02
		K-40	2.18E-01	1.20E-01	1.43E-01

Sample Point 55 [INDICATOR - SSE @ 0.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492329	1/2/2019 - 1/9/2019	I-131	<2.35E-02	0.00E+00	2.35E-02
		Cs-134	<1.50E-02	0.00E+00	1.50E-02
		Cs-137	<1.34E-02	0.00E+00	1.34E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	4.66E-01	1.77E-01	1.83E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492589	1/9/2019 - 1/15/2019	I-131	<2.06E-02	0.00E+00	2.06E-02
		Cs-134	<1.93E-02	0.00E+00	1.93E-02
		Cs-137	<1.98E-02	0.00E+00	1.98E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	5.47E-01	2.06E-01	2.12E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493063	1/15/2019 - 1/23/2019	I-131	<2.63E-02	0.00E+00	2.63E-02
		Cs-134	<1.18E-02	0.00E+00	1.18E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	4.12E-01	1.53E-01	1.53E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493414	1/23/2019 - 1/29/2019	I-131	<2.07E-02	0.00E+00	2.07E-02
		Cs-134	<1.71E-02	0.00E+00	1.71E-02
		Cs-137	<1.68E-02	0.00E+00	1.68E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	<2.63E-01	0.00E+00	2.63E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493645	1/29/2019 - 2/5/2019	I-131	<2.26E-02	0.00E+00	2.26E-02
		Cs-134	<1.42E-02	0.00E+00	1.42E-02
		Cs-137	<1.59E-02	0.00E+00	1.59E-02
		Be-7	<9.51E-02	0.00E+00	9.51E-02
		K-40	3.77E-01	1.66E-01	1.91E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493878	2/5/2019 - 2/12/2019	I-131	<3.33E-02	0.00E+00	3.33E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<9.72E-02	0.00E+00	9.72E-02

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 55 [INDICATOR - SSE @ 0.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493878	2/5/2019 - 2/12/2019	K-40	<3.45E-01	0.00E+00	3.45E-01
494415	2/12/2019 - 2/19/2019	I-131	<2.59E-02	0.00E+00	2.59E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-02
		Cs-137	<1.60E-02	0.00E+00	1.60E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	<3.39E-01	0.00E+00	3.39E-01
495095	2/19/2019 - 2/26/2019	I-131	<2.92E-02	0.00E+00	2.92E-02
		Cs-134	<1.34E-02	0.00E+00	1.34E-02
		Cs-137	<1.77E-02	0.00E+00	1.77E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	2.71E-01	1.60E-01	2.17E-01
495366	2/26/2019 - 3/5/2019	I-131	<3.21E-02	0.00E+00	3.21E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	3.87E-01	1.87E-01	2.39E-01
496220	3/5/2019 - 3/12/2019	I-131	<2.09E-02	0.00E+00	2.09E-02
		Cs-134	<2.17E-02	0.00E+00	2.17E-02
		Cs-137	<1.58E-02	0.00E+00	1.58E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	4.33E-01	1.74E-01	1.87E-01
496837	3/12/2019 - 3/19/2019	I-131	<2.76E-02	0.00E+00	2.76E-02
		Cs-134	<1.66E-02	0.00E+00	1.66E-02
		Cs-137	<1.50E-02	0.00E+00	1.50E-02
		Be-7	<8.08E-02	0.00E+00	8.08E-02
		K-40	5.80E-01	2.02E-01	2.15E-01
497207	3/19/2019 - 3/26/2019	I-131	<2.99E-02	0.00E+00	2.99E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	<3.03E-01	0.00E+00	3.03E-01
497679	3/26/2019 - 4/2/2019	I-131	<2.22E-02	0.00E+00	2.22E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.85E-02	0.00E+00	1.85E-02
		Be-7	<9.87E-02	0.00E+00	9.87E-02
		K-40	3.64E-01	1.68E-01	2.05E-01
498210	4/2/2019 - 4/9/2019	I-131	<1.94E-02	0.00E+00	1.94E-02
		Cs-134	<1.64E-02	0.00E+00	1.64E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	3.74E-01	1.58E-01	1.65E-01
498648	4/9/2019 - 4/16/2019	I-131	<3.51E-02	0.00E+00	3.51E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.34E-02	0.00E+00	1.34E-02
		Be-7	<1.29E-01	0.00E+00	1.29E-01
		K-40	5.12E-01	1.71E-01	1.19E-01
498849	4/16/2019 - 4/23/2019	I-131	<2.44E-02	0.00E+00	2.44E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.44E-02	0.00E+00	1.44E-02

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 55 [INDICATOR - SSE @ 0.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
498849	4/16/2019 - 4/23/2019	Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	4.79E-01	1.90E-01	2.14E-01
499672	4/23/2019 - 4/29/2019	I-131	<2.67E-02	0.00E+00	2.67E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.47E-02	0.00E+00	1.47E-02
		Be-7	<1.39E-01	0.00E+00	1.39E-01
		K-40	5.71E-01	1.82E-01	3.68E-02
499971	4/29/2019 - 5/6/2019	I-131	<2.46E-02	0.00E+00	2.46E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<1.86E-02	0.00E+00	1.86E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	4.97E-01	1.82E-01	1.78E-01
500225	5/6/2019 - 5/13/2019	I-131	<3.47E-02	0.00E+00	3.47E-02
		Cs-134	<1.24E-02	0.00E+00	1.24E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	4.79E-01	1.74E-01	1.65E-01
500533	5/13/2019 - 5/21/2019	I-131	<3.74E-02	0.00E+00	3.74E-02
		Cs-134	<1.51E-02	0.00E+00	1.51E-02
		Cs-137	<1.28E-02	0.00E+00	1.28E-02
		Be-7	<9.75E-02	0.00E+00	9.75E-02
		K-40	3.91E-01	1.44E-01	1.28E-01
500804	5/21/2019 - 5/28/2019	I-131	<2.64E-02	0.00E+00	2.64E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-02
		Cs-137	<1.72E-02	0.00E+00	1.72E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	3.83E-01	1.75E-01	2.08E-01
501311	5/28/2019 - 6/5/2019	I-131	<2.63E-02	0.00E+00	2.63E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<9.88E-02	0.00E+00	9.88E-02
		K-40	3.84E-01	1.62E-01	1.87E-01
501999	6/5/2019 - 6/11/2019	I-131	<4.48E-02	0.00E+00	4.48E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<1.25E-02	0.00E+00	1.25E-02
		Be-7	<1.56E-01	0.00E+00	1.56E-01
		K-40	<4.25E-01	0.00E+00	4.25E-01
502816	6/11/2019 - 6/18/2019	I-131	<4.28E-02	0.00E+00	4.28E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-02
		Cs-137	<1.83E-02	0.00E+00	1.83E-02
		Be-7	<1.67E-01	0.00E+00	1.67E-01
		K-40	6.50E-01	2.64E-01	3.01E-01
502268	6/18/2019 - 6/25/2019	I-131	<2.43E-02	0.00E+00	2.43E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.75E-02	0.00E+00	1.75E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	4.79E-01	1.77E-01	1.53E-01
503609	6/25/2019 - 7/2/2019	I-131	<3.52E-02	0.00E+00	3.52E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-02

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 55 [INDICATOR - SSE @ 0.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
503609	6/25/2019 - 7/2/2019	Cs-137	<1.42E-02	0.00E+00	1.42E-02
		Be-7	<1.38E-01	0.00E+00	1.38E-01
		K-40	2.31E-01	1.68E-01	2.43E-01
503909	7/2/2019 - 7/9/2019	I-131	<2.31E-02	0.00E+00	2.31E-02
		Cs-134	<1.99E-02	0.00E+00	1.99E-02
		Cs-137	<1.79E-02	0.00E+00	1.79E-02
		Be-7	<1.37E-01	0.00E+00	1.37E-01
		K-40	6.73E-01	2.19E-01	2.02E-01
504343	7/9/2019 - 7/16/2019	I-131	<3.26E-02	0.00E+00	3.26E-02
		Cs-134	<1.94E-02	0.00E+00	1.94E-02
		Cs-137	<1.60E-02	0.00E+00	1.60E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	4.98E-01	1.74E-01	1.36E-01
504510	7/16/2019 - 7/23/2019	I-131	<2.16E-02	0.00E+00	2.16E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<7.75E-03	0.00E+00	7.75E-03
		Be-7	<9.30E-02	0.00E+00	9.30E-02
		K-40	4.02E-01	1.56E-01	1.28E-01
504759	7/23/2019 - 7/29/2019	I-131	<3.67E-02	0.00E+00	3.67E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<1.30E-02	0.00E+00	1.30E-02
		Be-7	<1.34E-01	0.00E+00	1.34E-01
		K-40	<3.82E-01	0.00E+00	3.82E-01
504990	7/29/2019 - 8/6/2019	I-131	<2.28E-02	0.00E+00	2.28E-02
		Cs-134	<1.13E-02	0.00E+00	1.13E-02
		Cs-137	<1.11E-02	0.00E+00	1.11E-02
		Be-7	<7.47E-02	0.00E+00	7.47E-02
		K-40	2.48E-01	1.39E-01	1.77E-01
505220	8/6/2019 - 8/13/2019	I-131	<2.07E-02	0.00E+00	2.07E-02
		Cs-134	<1.56E-02	0.00E+00	1.56E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<8.13E-02	0.00E+00	8.13E-02
		K-40	3.97E-01	1.55E-01	1.33E-01
505612	8/13/2019 - 8/20/2019	I-131	<1.68E-02	0.00E+00	1.68E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.66E-02	0.00E+00	1.66E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	1.71E-01	1.37E-01	1.94E-01
505947	8/20/2019 - 8/27/2019	I-131	<1.99E-02	0.00E+00	1.99E-02
		Cs-134	<1.50E-02	0.00E+00	1.50E-02
		Cs-137	<1.47E-02	0.00E+00	1.47E-02
		Be-7	<9.13E-02	0.00E+00	9.13E-02
		K-40	2.68E-01	1.30E-01	1.27E-01
506558	8/27/2019 - 9/3/2019	I-131	<1.61E-02	0.00E+00	1.61E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-02
		Cs-137	<1.58E-02	0.00E+00	1.58E-02
		Be-7	<1.29E-01	0.00E+00	1.29E-01
		K-40	2.74E-01	1.44E-01	1.68E-01
507476	9/3/2019 - 9/10/2019	I-131	<2.08E-02	0.00E+00	2.08E-02

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 55 [INDICATOR - SSE @ 0.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
507476	9/3/2019 - 9/10/2019	Cs-134	<1.70E-02	0.00E+00	1.70E-02
		Cs-137	<1.75E-02	0.00E+00	1.75E-02
		Be-7	<1.50E-01	0.00E+00	1.50E-01
		K-40	5.02E-01	1.78E-01	1.51E-01
507871	9/10/2019 - 9/17/2019	I-131	<2.12E-02	0.00E+00	2.12E-02
		Cs-134	<1.88E-02	0.00E+00	1.88E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	5.72E-01	1.78E-01	3.52E-02
508647	9/17/2019 - 9/24/2019	I-131	<1.47E-02	0.00E+00	1.47E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.31E-02	0.00E+00	1.31E-02
		Be-7	<7.81E-02	0.00E+00	7.81E-02
		K-40	<2.14E-01	0.00E+00	2.14E-01
509609	9/24/2019 - 10/1/2019	I-131	<2.34E-02	0.00E+00	2.34E-02
		Cs-134	<1.86E-02	0.00E+00	1.86E-02
		Cs-137	<1.24E-02	0.00E+00	1.24E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	3.02E-01	1.62E-01	1.98E-01
510081	10/1/2019 - 10/8/2019	I-131	<2.11E-02	0.00E+00	2.11E-02
		Cs-134	<1.37E-02	0.00E+00	1.37E-02
		Cs-137	<1.18E-02	0.00E+00	1.18E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	<1.35E-01	0.00E+00	1.35E-01
510608	10/8/2019 - 10/14/2019	I-131	<2.48E-02	0.00E+00	2.48E-02
		Cs-134	<2.51E-02	0.00E+00	2.51E-02
		Cs-137	<2.17E-02	0.00E+00	2.17E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	5.17E-01	1.91E-01	1.52E-01
510887	10/14/2019 - 10/21/2019	I-131	<2.08E-02	0.00E+00	2.08E-02
		Cs-134	<1.95E-02	0.00E+00	1.95E-02
		Cs-137	<1.77E-02	0.00E+00	1.77E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	4.28E-01	2.03E-01	2.56E-01
511320	10/21/2019 - 10/29/2019	I-131	<1.57E-02	0.00E+00	1.57E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02
		Cs-137	<1.02E-02	0.00E+00	1.02E-02
		Be-7	<9.59E-02	0.00E+00	9.59E-02
		K-40	2.56E-01	1.52E-01	2.07E-01
511546	10/29/2019 - 11/5/2019	I-131	<1.73E-02	0.00E+00	1.73E-02
		Cs-134	<1.10E-02	0.00E+00	1.10E-02
		Cs-137	<1.24E-02	0.00E+00	1.24E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	3.46E-01	1.94E-01	2.59E-01
511947	11/5/2019 - 11/12/2019	I-131	<1.47E-02	0.00E+00	1.47E-02
		Cs-134	<1.80E-02	0.00E+00	1.80E-02
		Cs-137	<1.13E-02	0.00E+00	1.13E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	4.64E-01	1.63E-01	1.25E-01

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 55 [INDICATOR - SSE @ 0.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512246	11/12/2019 - 11/19/2019	I-131	<2.16E-02	0.00E+00	2.16E-02
		Cs-134	<2.02E-02	0.00E+00	2.02E-02
		Cs-137	<1.30E-02	0.00E+00	1.30E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	4.27E-01	1.80E-01	1.92E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512557	11/19/2019 - 11/26/2019	I-131	<2.60E-02	0.00E+00	2.60E-02
		Cs-134	<1.32E-02	0.00E+00	1.32E-02
		Cs-137	<1.68E-02	0.00E+00	1.68E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	3.74E-01	1.83E-01	2.24E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512872	11/26/2019 - 12/3/2019	I-131	<1.55E-02	0.00E+00	1.55E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-02
		Cs-137	<1.66E-02	0.00E+00	1.66E-02
		Be-7	<1.00E-01	0.00E+00	1.00E-01
		K-40	5.17E-01	1.76E-01	1.33E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
513840	12/3/2019 - 12/10/2019	I-131	<2.35E-02	0.00E+00	2.35E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.01E-02	0.00E+00	1.01E-02
		Be-7	<9.47E-02	0.00E+00	9.47E-02
		K-40	<2.34E-01	0.00E+00	2.34E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
513999	12/10/2019 - 12/17/2019	I-131	<1.25E-02	0.00E+00	1.25E-02
		Cs-134	<1.17E-02	0.00E+00	1.17E-02
		Cs-137	<1.10E-02	0.00E+00	1.10E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	3.52E-01	1.36E-01	3.41E-02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514247	12/17/2019 - 12/23/2019	I-131	<3.55E-02	0.00E+00	3.55E-02
		Cs-134	<1.64E-02	0.00E+00	1.64E-02
		Cs-137	<1.80E-02	0.00E+00	1.80E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	2.75E-01	1.82E-01	2.49E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
514675	12/23/2019 - 12/31/2019	I-131	<2.36E-02	0.00E+00	2.36E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	3.19E-01	1.60E-01	2.01E-01

Sample Point 60 [INDICATOR - SE @ 0.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492331	1/2/2019 - 1/9/2019	I-131	<2.02E-02	0.00E+00	2.02E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<2.14E-02	0.00E+00	2.14E-02
		Be-7	<1.29E-01	0.00E+00	1.29E-01
		K-40	3.88E-01	1.74E-01	1.96E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492591	1/9/2019 - 1/15/2019	I-131	<2.52E-02	0.00E+00	2.52E-02
		Cs-134	<1.30E-02	0.00E+00	1.30E-02
		Cs-137	<1.97E-02	0.00E+00	1.97E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	4.87E-01	2.08E-01	2.26E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493065	1/15/2019 - 1/23/2019	I-131	<2.67E-02	0.00E+00	2.67E-02
		Cs-134	<1.09E-02	0.00E+00	1.09E-02
		Cs-137	<1.74E-02	0.00E+00	1.74E-02
		Be-7	<8.63E-02	0.00E+00	8.63E-02

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 60 [INDICATOR - SE @ 0.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
493065	1/15/2019 - 1/23/2019	K-40	4.09E-01	1.52E-01	1.31E-01
493416	1/23/2019 - 1/29/2019	I-131	<3.03E-02	0.00E+00	3.03E-02
		Cs-134	<2.49E-02	0.00E+00	2.49E-02
		Cs-137	<1.90E-02	0.00E+00	1.90E-02
		Be-7	<1.37E-01	0.00E+00	1.37E-01
		K-40	4.14E-01	1.78E-01	1.69E-01
493647	1/29/2019 - 2/5/2019	I-131	<2.61E-02	0.00E+00	2.61E-02
		Cs-134	<1.89E-02	0.00E+00	1.89E-02
		Cs-137	<1.88E-02	0.00E+00	1.88E-02
		Be-7	<1.29E-01	0.00E+00	1.29E-01
		K-40	5.68E-01	2.04E-01	2.06E-01
493880	2/5/2019 - 2/12/2019	I-131	<2.66E-02	0.00E+00	2.66E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.60E-02	0.00E+00	1.60E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	3.27E-01	1.75E-01	2.28E-01
494417	2/12/2019 - 2/19/2019	I-131	<2.19E-02	0.00E+00	2.19E-02
		Cs-134	<1.80E-02	0.00E+00	1.80E-02
		Cs-137	<1.77E-02	0.00E+00	1.77E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	3.67E-01	1.98E-01	2.68E-01
495097	2/19/2019 - 2/26/2019	I-131	<3.00E-02	0.00E+00	3.00E-02
		Cs-134	<1.86E-02	0.00E+00	1.86E-02
		Cs-137	<1.72E-02	0.00E+00	1.72E-02
		Be-7	<1.35E-01	0.00E+00	1.35E-01
		K-40	3.77E-01	2.12E-01	2.96E-01
495368	2/26/2019 - 3/5/2019	I-131	<3.71E-02	0.00E+00	3.71E-02
		Cs-134	<1.77E-02	0.00E+00	1.77E-02
		Cs-137	<1.66E-02	0.00E+00	1.66E-02
		Be-7	<1.55E-01	0.00E+00	1.55E-01
		K-40	4.61E-01	1.86E-01	1.99E-01
496222	3/5/2019 - 3/12/2019	I-131	<2.14E-02	0.00E+00	2.14E-02
		Cs-134	<1.92E-02	0.00E+00	1.92E-02
		Cs-137	<1.44E-02	0.00E+00	1.44E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	5.44E-01	2.20E-01	2.64E-01
496839	3/12/2019 - 3/19/2019	I-131	<3.08E-02	0.00E+00	3.08E-02
		Cs-134	<1.94E-02	0.00E+00	1.94E-02
		Cs-137	<1.78E-02	0.00E+00	1.78E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	7.02E-01	2.04E-01	1.42E-01
497209	3/19/2019 - 3/26/2019	I-131	<2.70E-02	0.00E+00	2.70E-02
		Cs-134	<1.32E-02	0.00E+00	1.32E-02
		Cs-137	<1.70E-02	0.00E+00	1.70E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	5.39E-01	1.91E-01	1.79E-01
497681	3/26/2019 - 4/2/2019	I-131	<2.26E-02	0.00E+00	2.26E-02
		Cs-134	<1.08E-02	0.00E+00	1.08E-02
		Cs-137	<1.88E-02	0.00E+00	1.88E-02

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 60 [INDICATOR - SE @ 0.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
497681	3/26/2019 - 4/2/2019	Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	4.41E-01	1.65E-01	1.46E-01
498212	4/2/2019 - 4/9/2019	I-131	<2.30E-02	0.00E+00	2.30E-02
		Cs-134	<1.86E-02	0.00E+00	1.86E-02
		Cs-137	<1.68E-02	0.00E+00	1.68E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	3.09E-01	1.78E-01	2.40E-01
498650	4/9/2019 - 4/16/2019	I-131	<3.56E-02	0.00E+00	3.56E-02
		Cs-134	<1.98E-02	0.00E+00	1.98E-02
		Cs-137	<1.87E-02	0.00E+00	1.87E-02
		Be-7	<1.36E-01	0.00E+00	1.36E-01
		K-40	5.19E-01	2.13E-01	2.49E-01
498851	4/16/2019 - 4/23/2019	I-131	<2.50E-02	0.00E+00	2.50E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<1.38E-02	0.00E+00	1.38E-02
		Be-7	<1.37E-01	0.00E+00	1.37E-01
		K-40	4.85E-01	1.72E-01	1.36E-01
499674	4/23/2019 - 4/29/2019	I-131	<2.32E-02	0.00E+00	2.32E-02
		Cs-134	<1.86E-02	0.00E+00	1.86E-02
		Cs-137	<2.05E-02	0.00E+00	2.05E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	4.29E-01	2.19E-01	2.85E-01
499973	4/29/2019 - 5/6/2019	I-131	<2.17E-02	0.00E+00	2.17E-02
		Cs-134	<1.72E-02	0.00E+00	1.72E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<1.31E-01	0.00E+00	1.31E-01
		K-40	4.97E-01	1.77E-01	1.56E-01
500227	5/6/2019 - 5/13/2019	I-131	<3.38E-02	0.00E+00	3.38E-02
		Cs-134	<1.81E-02	0.00E+00	1.81E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	4.75E-01	1.89E-01	2.17E-01
500535	5/13/2019 - 5/21/2019	I-131	<3.91E-02	0.00E+00	3.91E-02
		Cs-134	<1.23E-02	0.00E+00	1.23E-02
		Cs-137	<1.35E-02	0.00E+00	1.35E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	4.34E-01	1.55E-01	1.31E-01
500806	5/21/2019 - 5/28/2019	I-131	<3.04E-02	0.00E+00	3.04E-02
		Cs-134	<1.39E-02	0.00E+00	1.39E-02
		Cs-137	<1.48E-02	0.00E+00	1.48E-02
		Be-7	<1.36E-01	0.00E+00	1.36E-01
		K-40	3.58E-01	1.84E-01	2.37E-01
501313	5/28/2019 - 6/5/2019	I-131	<2.43E-02	0.00E+00	2.43E-02
		Cs-134	<1.34E-02	0.00E+00	1.34E-02
		Cs-137	<1.38E-02	0.00E+00	1.38E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	3.61E-01	1.52E-01	1.66E-01
502001	6/5/2019 - 6/11/2019	I-131	<4.67E-02	0.00E+00	4.67E-02
		Cs-134	<2.17E-02	0.00E+00	2.17E-02

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 60 [INDICATOR - SE @ 0.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
502001	6/5/2019 - 6/11/2019	Cs-137	<2.15E-02	0.00E+00	2.15E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	5.82E-01	2.19E-01	2.23E-01
502818	6/11/2019 - 6/18/2019	I-131	<3.91E-02	0.00E+00	3.91E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<1.32E-01	0.00E+00	1.32E-01
		K-40	3.38E-01	1.82E-01	2.40E-01
502270	6/18/2019 - 6/25/2019	I-131	<2.41E-02	0.00E+00	2.41E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.90E-02	0.00E+00	1.90E-02
		Be-7	<1.36E-01	0.00E+00	1.36E-01
		K-40	5.70E-01	1.78E-01	3.51E-02
503611	6/25/2019 - 7/2/2019	I-131	<3.51E-02	0.00E+00	3.51E-02
		Cs-134	<2.00E-02	0.00E+00	2.00E-02
		Cs-137	<2.05E-02	0.00E+00	2.05E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	5.74E-01	2.28E-01	2.72E-01
503911	7/2/2019 - 7/9/2019	I-131	<1.97E-02	0.00E+00	1.97E-02
		Cs-134	<1.99E-02	0.00E+00	1.99E-02
		Cs-137	<1.88E-02	0.00E+00	1.88E-02
		Be-7	<1.29E-01	0.00E+00	1.29E-01
		K-40	4.91E-01	1.74E-01	1.31E-01
504345	7/9/2019 - 7/16/2019	I-131	<3.23E-02	0.00E+00	3.23E-02
		Cs-134	<1.40E-02	0.00E+00	1.40E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<1.43E-01	0.00E+00	1.43E-01
		K-40	5.22E-01	1.98E-01	2.11E-01
504512	7/16/2019 - 7/23/2019	I-131	<1.54E-02	0.00E+00	1.54E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02
		Be-7	<8.40E-02	0.00E+00	8.40E-02
		K-40	3.34E-01	1.56E-01	1.73E-01
504761	7/23/2019 - 7/29/2019	I-131	<4.58E-02	0.00E+00	4.58E-02
		Cs-134	<2.11E-02	0.00E+00	2.11E-02
		Cs-137	<1.20E-02	0.00E+00	1.20E-02
		Be-7	<1.52E-01	0.00E+00	1.52E-01
		K-40	<4.02E-01	0.00E+00	4.02E-01
504992	7/29/2019 - 8/6/2019	I-131	<2.18E-02	0.00E+00	2.18E-02
		Cs-134	<1.50E-02	0.00E+00	1.50E-02
		Cs-137	<1.07E-02	0.00E+00	1.07E-02
		Be-7	<7.61E-02	0.00E+00	7.61E-02
		K-40	<2.21E-01	0.00E+00	2.21E-01
505222	8/6/2019 - 8/13/2019	I-131	<1.41E-02	0.00E+00	1.41E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<1.27E-02	0.00E+00	1.27E-02
		Be-7	<6.52E-02	0.00E+00	6.52E-02
		K-40	<2.40E-01	0.00E+00	2.40E-01
505614	8/13/2019 - 8/20/2019	I-131	<3.58E-02	0.00E+00	3.58E-02

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 60 [INDICATOR - SE @ 0.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
505614	8/13/2019 - 8/20/2019	Cs-134	<2.09E-02	0.00E+00	2.09E-02
		Cs-137	<1.88E-02	0.00E+00	1.88E-02
		Be-7	<1.73E-01	0.00E+00	1.73E-01
		K-40	4.33E-01	1.63E-01	1.19E-01
505949	8/20/2019 - 8/27/2019	I-131	<1.51E-02	0.00E+00	1.51E-02
		Cs-134	<9.08E-03	0.00E+00	9.08E-03
		Cs-137	<1.27E-02	0.00E+00	1.27E-02
		Be-7	<7.51E-02	0.00E+00	7.51E-02
		K-40	1.46E-01	1.24E-01	1.80E-01
506560	8/27/2019 - 9/3/2019	I-131	<1.85E-02	0.00E+00	1.85E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<8.99E-02	0.00E+00	8.99E-02
		K-40	4.48E-01	1.70E-01	1.52E-01
507478	9/3/2019 - 9/10/2019	I-131	<1.65E-02	0.00E+00	1.65E-02
		Cs-134	<1.23E-02	0.00E+00	1.23E-02
		Cs-137	<1.14E-02	0.00E+00	1.14E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	<1.12E-01	0.00E+00	1.12E-01
507873	9/10/2019 - 9/17/2019	I-131	<1.49E-02	0.00E+00	1.49E-02
		Cs-134	<1.09E-02	0.00E+00	1.09E-02
		Cs-137	<1.52E-02	0.00E+00	1.52E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	2.51E-01	1.31E-01	1.35E-01
508649	9/17/2019 - 9/24/2019	I-131	<1.69E-02	0.00E+00	1.69E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.40E-02	0.00E+00	1.40E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	<2.99E-01	0.00E+00	2.99E-01
509611	9/24/2019 - 10/1/2019	I-131	<2.88E-02	0.00E+00	2.88E-02
		Cs-134	<1.26E-02	0.00E+00	1.26E-02
		Cs-137	<1.66E-02	0.00E+00	1.66E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	4.67E-01	1.80E-01	1.81E-01
510083	10/1/2019 - 10/8/2019	I-131	<4.07E-02	0.00E+00	4.07E-02
		Cs-134	<2.24E-02	0.00E+00	2.24E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02
		Be-7	<1.53E-01	0.00E+00	1.53E-01
		K-40	4.18E-01	1.75E-01	1.81E-01
510610	10/8/2019 - 10/14/2019	I-131	<2.60E-02	0.00E+00	2.60E-02
		Cs-134	<2.31E-02	0.00E+00	2.31E-02
		Cs-137	<2.20E-02	0.00E+00	2.20E-02
		Be-7	<1.78E-01	0.00E+00	1.78E-01
		K-40	4.25E-01	1.80E-01	1.63E-01
510889	10/14/2019 - 10/21/2019	I-131	<1.44E-02	0.00E+00	1.44E-02
		Cs-134	<1.66E-02	0.00E+00	1.66E-02
		Cs-137	<1.30E-02	0.00E+00	1.30E-02
		Be-7	<9.06E-02	0.00E+00	9.06E-02
		K-40	3.68E-01	1.50E-01	1.33E-01

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 60 [INDICATOR - SE @ 0.2 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
511322	10/21/2019 - 10/29/2019	I-131	<1.63E-02	0.00E+00	1.63E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.10E-02	0.00E+00	1.10E-02
		Be-7	<8.88E-02	0.00E+00	8.88E-02
		K-40	<2.65E-01	0.00E+00	2.65E-01
511548	10/29/2019 - 11/5/2019	I-131	<1.96E-02	0.00E+00	1.96E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.44E-02	0.00E+00	1.44E-02
		Be-7	<1.08E-01	0.00E+00	1.08E-01
		K-40	7.66E-01	2.14E-01	1.41E-01
511949	11/5/2019 - 11/12/2019	I-131	<1.43E-02	0.00E+00	1.43E-02
		Cs-134	<1.40E-02	0.00E+00	1.40E-02
		Cs-137	<1.29E-02	0.00E+00	1.29E-02
		Be-7	1.88E-02	4.19E-02	7.54E-02
		K-40	3.23E-01	1.32E-01	3.50E-02
512559	11/19/2019 - 11/26/2019	I-131	<3.26E-02	0.00E+00	3.26E-02
		Cs-134	<1.34E-02	0.00E+00	1.34E-02
		Cs-137	<1.22E-02	0.00E+00	1.22E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	4.41E-01	1.88E-01	2.19E-01
512874	11/26/2019 - 12/3/2019	I-131	<1.99E-02	0.00E+00	1.99E-02
		Cs-134	<1.84E-02	0.00E+00	1.84E-02
		Cs-137	<1.53E-02	0.00E+00	1.53E-02
		Be-7	<1.35E-01	0.00E+00	1.35E-01
		K-40	5.90E-01	1.99E-01	1.78E-01
513842	12/3/2019 - 12/10/2019	I-131	<2.43E-02	0.00E+00	2.43E-02
		Cs-134	<1.90E-02	0.00E+00	1.90E-02
		Cs-137	<1.63E-02	0.00E+00	1.63E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	2.93E-01	1.51E-01	1.70E-01
514001	12/10/2019 - 12/17/2019	I-131	<2.12E-02	0.00E+00	2.12E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.51E-02	0.00E+00	1.51E-02
		Be-7	<1.80E-01	0.00E+00	1.80E-01
		K-40	5.56E-01	2.11E-01	2.30E-01
514249	12/17/2019 - 12/23/2019	I-131	<2.62E-02	0.00E+00	2.62E-02
		Cs-134	<9.36E-03	0.00E+00	9.36E-03
		Cs-137	<7.86E-03	0.00E+00	7.86E-03
		Be-7	<7.07E-02	0.00E+00	7.07E-02
		K-40	4.15E-01	2.32E-01	6.67E-02
514677	12/23/2019 - 12/31/2019	I-131	<2.18E-02	0.00E+00	2.18E-02
		Cs-134	<1.19E-02	0.00E+00	1.19E-02
		Cs-137	<9.49E-03	0.00E+00	9.49E-03
		Be-7	<6.77E-02	0.00E+00	6.77E-02
		K-40	<2.04E-01	0.00E+00	2.04E-01

Sample Point 61 [INDICATOR - WSW @ 0.3 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492332	1/2/2019 - 1/9/2019	I-131	<2.55E-02	0.00E+00	2.55E-02
		Cs-134	<1.88E-02	0.00E+00	1.88E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<9.63E-02	0.00E+00	9.63E-02

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 61 [INDICATOR - WSW @ 0.3 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492332	1/2/2019 - 1/9/2019	K-40	<2.99E-01	0.00E+00	2.99E-01
492592	1/9/2019 - 1/15/2019	I-131	<2.99E-02	0.00E+00	2.99E-02
		Cs-134	<2.35E-02	0.00E+00	2.35E-02
		Cs-137	<2.11E-02	0.00E+00	2.11E-02
		Be-7	<1.66E-01	0.00E+00	1.66E-01
		K-40	5.73E-01	2.36E-01	2.67E-01
493066	1/15/2019 - 1/23/2019	I-131	<2.75E-02	0.00E+00	2.75E-02
		Cs-134	<9.07E-03	0.00E+00	9.07E-03
		Cs-137	<1.44E-02	0.00E+00	1.44E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	2.75E-01	1.77E-01	2.54E-01
493417	1/23/2019 - 1/29/2019	I-131	<2.36E-02	0.00E+00	2.36E-02
		Cs-134	<2.20E-02	0.00E+00	2.20E-02
		Cs-137	<2.05E-02	0.00E+00	2.05E-02
		Be-7	<1.68E-01	0.00E+00	1.68E-01
		K-40	6.68E-01	2.31E-01	2.09E-01
493648	1/29/2019 - 2/5/2019	I-131	<2.57E-02	0.00E+00	2.57E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.83E-02	0.00E+00	1.83E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	2.26E-01	1.83E-01	2.76E-01
493881	2/5/2019 - 2/12/2019	I-131	<3.58E-02	0.00E+00	3.58E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<1.70E-02	0.00E+00	1.70E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	4.64E-01	1.72E-01	1.42E-01
494418	2/12/2019 - 2/19/2019	I-131	<2.01E-02	0.00E+00	2.01E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<1.00E-01	0.00E+00	1.00E-01
		K-40	4.24E-01	1.97E-01	2.46E-01
495098	2/19/2019 - 2/26/2019	I-131	<3.51E-02	0.00E+00	3.51E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-02
		Cs-137	<1.38E-02	0.00E+00	1.38E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	5.54E-01	1.89E-01	1.63E-01
495369	2/26/2019 - 3/5/2019	I-131	<3.22E-02	0.00E+00	3.22E-02
		Cs-134	<1.64E-02	0.00E+00	1.64E-02
		Cs-137	<1.66E-02	0.00E+00	1.66E-02
		Be-7	<1.31E-01	0.00E+00	1.31E-01
		K-40	5.89E-01	1.89E-01	1.40E-01
496223	3/5/2019 - 3/12/2019	I-131	<2.13E-02	0.00E+00	2.13E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.50E-02	0.00E+00	1.50E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	6.28E-01	1.93E-01	1.31E-01
496840	3/12/2019 - 3/19/2019	I-131	<2.83E-02	0.00E+00	2.83E-02
		Cs-134	<2.01E-02	0.00E+00	2.01E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 61 [INDICATOR - WSW @ 0.3 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
496840	3/12/2019 - 3/19/2019	Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	6.85E-01	2.25E-01	2.31E-01
497210	3/19/2019 - 3/26/2019	I-131	<3.77E-02	0.00E+00	3.77E-02
		Cs-134	<1.84E-02	0.00E+00	1.84E-02
		Cs-137	<1.66E-02	0.00E+00	1.66E-02
		Be-7	<1.42E-01	0.00E+00	1.42E-01
		K-40	4.87E-01	1.78E-01	1.59E-01
497682	3/26/2019 - 4/2/2019	I-131	<2.52E-02	0.00E+00	2.52E-02
		Cs-134	<1.70E-02	0.00E+00	1.70E-02
		Cs-137	<1.81E-02	0.00E+00	1.81E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	3.76E-01	1.62E-01	1.71E-01
498213	4/2/2019 - 4/9/2019	I-131	<2.35E-02	0.00E+00	2.35E-02
		Cs-134	<1.39E-02	0.00E+00	1.39E-02
		Cs-137	<1.49E-02	0.00E+00	1.49E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	5.41E-01	1.85E-01	1.56E-01
498651	4/9/2019 - 4/16/2019	I-131	<4.02E-02	0.00E+00	4.02E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<1.62E-02	0.00E+00	1.62E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	4.09E-01	1.69E-01	1.70E-01
498852	4/16/2019 - 4/23/2019	I-131	<2.87E-02	0.00E+00	2.87E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<1.37E-02	0.00E+00	1.37E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	5.04E-01	1.78E-01	1.53E-01
499675	4/23/2019 - 4/29/2019	I-131	<3.19E-02	0.00E+00	3.19E-02
		Cs-134	<2.08E-02	0.00E+00	2.08E-02
		Cs-137	<1.65E-02	0.00E+00	1.65E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	5.88E-01	2.35E-01	2.67E-01
499974	4/29/2019 - 5/6/2019	I-131	<2.22E-02	0.00E+00	2.22E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<1.10E-02	0.00E+00	1.10E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	3.91E-01	1.65E-01	1.73E-01
500228	5/6/2019 - 5/13/2019	I-131	<3.54E-02	0.00E+00	3.54E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.49E-02	0.00E+00	1.49E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	4.61E-01	1.66E-01	1.46E-01
500536	5/13/2019 - 5/21/2019	I-131	<3.86E-02	0.00E+00	3.86E-02
		Cs-134	<1.27E-02	0.00E+00	1.27E-02
		Cs-137	<1.23E-02	0.00E+00	1.23E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	4.27E-01	1.94E-01	2.51E-01
500807	5/21/2019 - 5/28/2019	I-131	<3.58E-02	0.00E+00	3.58E-02
		Cs-134	<1.51E-02	0.00E+00	1.51E-02

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 61 [INDICATOR - WSW @ 0.3 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500807	5/21/2019 - 5/28/2019	Cs-137	<1.65E-02	0.00E+00	1.65E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	4.44E-01	1.66E-01	1.46E-01
501314	5/28/2019 - 6/5/2019	I-131	<2.36E-02	0.00E+00	2.36E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	3.71E-01	1.91E-01	2.60E-01
502002	6/5/2019 - 6/11/2019	I-131	<4.75E-02	0.00E+00	4.75E-02
		Cs-134	<1.87E-02	0.00E+00	1.87E-02
		Cs-137	<1.99E-02	0.00E+00	1.99E-02
		Be-7	<1.55E-01	0.00E+00	1.55E-01
		K-40	5.87E-01	2.01E-01	1.50E-01
502819	6/11/2019 - 6/18/2019	I-131	<3.14E-02	0.00E+00	3.14E-02
		Cs-134	<1.14E-02	0.00E+00	1.14E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<9.99E-02	0.00E+00	9.99E-02
		K-40	3.48E-01	1.80E-01	2.29E-01
502271	6/18/2019 - 6/25/2019	I-131	<2.63E-02	0.00E+00	2.63E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.86E-02	0.00E+00	1.86E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	4.10E-01	1.83E-01	2.09E-01
503612	6/25/2019 - 7/2/2019	I-131	<3.21E-02	0.00E+00	3.21E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.88E-02	0.00E+00	1.88E-02
		Be-7	<1.44E-01	0.00E+00	1.44E-01
		K-40	5.21E-01	2.04E-01	2.24E-01
503912	7/2/2019 - 7/9/2019	I-131	<2.45E-02	0.00E+00	2.45E-02
		Cs-134	<1.93E-02	0.00E+00	1.93E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	7.34E-01	2.11E-01	1.31E-01
504346	7/9/2019 - 7/16/2019	I-131	<3.19E-02	0.00E+00	3.19E-02
		Cs-134	<1.93E-02	0.00E+00	1.93E-02
		Cs-137	<1.74E-02	0.00E+00	1.74E-02
		Be-7	<1.29E-01	0.00E+00	1.29E-01
		K-40	6.35E-01	2.10E-01	1.91E-01
504513	7/16/2019 - 7/23/2019	I-131	<1.66E-02	0.00E+00	1.66E-02
		Cs-134	<1.85E-02	0.00E+00	1.85E-02
		Cs-137	<8.81E-03	0.00E+00	8.81E-03
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	1.98E-01	1.36E-01	1.86E-01
504762	7/23/2019 - 7/29/2019	I-131	<4.06E-02	0.00E+00	4.06E-02
		Cs-134	<1.18E-02	0.00E+00	1.18E-02
		Cs-137	<1.82E-02	0.00E+00	1.82E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	<3.15E-01	0.00E+00	3.15E-01
504993	7/29/2019 - 8/6/2019	Nuclide	Activity	2 Sigma Error	MDA
		I-131	<2.45E-02	0.00E+00	2.45E-02

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 61 [INDICATOR - WSW @ 0.3 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504993	7/29/2019 - 8/6/2019	Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<1.03E-02	0.00E+00	1.03E-02
		Be-7	<7.36E-02	0.00E+00	7.36E-02
		K-40	<2.43E-01	0.00E+00	2.43E-01
505223	8/6/2019 - 8/13/2019	I-131	<1.71E-02	0.00E+00	1.71E-02
		Cs-134	<1.38E-02	0.00E+00	1.38E-02
		Cs-137	<1.26E-02	0.00E+00	1.26E-02
		Be-7	<9.52E-02	0.00E+00	9.52E-02
		K-40	<1.36E-01	0.00E+00	1.36E-01
505615	8/13/2019 - 8/20/2019	I-131	<3.26E-02	0.00E+00	3.26E-02
		Cs-134	<1.89E-02	0.00E+00	1.89E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	5.40E-01	1.97E-01	2.00E-01
505950	8/20/2019 - 8/27/2019	I-131	<2.24E-02	0.00E+00	2.24E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<8.48E-02	0.00E+00	8.48E-02
		K-40	<3.01E-01	0.00E+00	3.01E-01
506561	8/27/2019 - 9/3/2019	I-131	<1.80E-02	0.00E+00	1.80E-02
		Cs-134	<1.25E-02	0.00E+00	1.25E-02
		Cs-137	<1.38E-02	0.00E+00	1.38E-02
		Be-7	<8.54E-02	0.00E+00	8.54E-02
		K-40	2.70E-01	1.17E-01	3.33E-02
507479	9/3/2019 - 9/10/2019	I-131	<1.24E-02	0.00E+00	1.24E-02
		Cs-134	<7.23E-03	0.00E+00	7.23E-03
		Cs-137	<1.41E-02	0.00E+00	1.41E-02
		Be-7	<9.05E-02	0.00E+00	9.05E-02
		K-40	<2.65E-01	0.00E+00	2.65E-01
507874	9/10/2019 - 9/17/2019	I-131	<1.92E-02	0.00E+00	1.92E-02
		Cs-134	<2.09E-02	0.00E+00	2.09E-02
		Cs-137	<1.64E-02	0.00E+00	1.64E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	3.57E-01	1.85E-01	2.36E-01
508650	9/17/2019 - 9/24/2019	I-131	<1.98E-02	0.00E+00	1.98E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	4.77E-01	1.75E-01	1.58E-01
509612	9/24/2019 - 10/1/2019	I-131	<2.82E-02	0.00E+00	2.82E-02
		Cs-134	<1.72E-02	0.00E+00	1.72E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	5.44E-01	2.00E-01	2.10E-01
510084	10/1/2019 - 10/8/2019	I-131	<2.99E-02	0.00E+00	2.99E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-02
		Cs-137	<1.32E-02	0.00E+00	1.32E-02
		Be-7	<1.38E-01	0.00E+00	1.38E-01
		K-40	4.86E-01	1.70E-01	1.28E-01

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 61 [INDICATOR - WSW @ 0.3 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
510611	10/8/2019 - 10/14/2019	I-131	<2.30E-02	0.00E+00	2.30E-02
		Cs-134	<2.26E-02	0.00E+00	2.26E-02
		Cs-137	<2.01E-02	0.00E+00	2.01E-02
		Be-7	<1.32E-01	0.00E+00	1.32E-01
		K-40	3.44E-01	1.51E-01	1.15E-01
510890	10/14/2019 - 10/21/2019	I-131	<2.06E-02	0.00E+00	2.06E-02
		Cs-134	<1.71E-02	0.00E+00	1.71E-02
		Cs-137	<1.53E-02	0.00E+00	1.53E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	3.69E-01	1.58E-01	1.61E-01
511323	10/21/2019 - 10/29/2019	I-131	<2.05E-02	0.00E+00	2.05E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.28E-02	0.00E+00	1.28E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	4.59E-01	1.57E-01	1.12E-01
511549	10/29/2019 - 11/5/2019	I-131	<2.27E-02	0.00E+00	2.27E-02
		Cs-134	<1.51E-02	0.00E+00	1.51E-02
		Cs-137	<1.43E-02	0.00E+00	1.43E-02
		Be-7	<8.80E-02	0.00E+00	8.80E-02
		K-40	5.38E-01	2.09E-01	2.39E-01
511950	11/5/2019 - 11/12/2019	I-131	<3.62E-02	0.00E+00	3.62E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.83E-02	0.00E+00	1.83E-02
		Be-7	<1.37E-01	0.00E+00	1.37E-01
		K-40	6.28E-01	2.02E-01	1.74E-01
512249	11/12/2019 - 11/19/2019	I-131	<1.74E-02	0.00E+00	1.74E-02
		Cs-134	<1.32E-02	0.00E+00	1.32E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02
		Be-7	<9.75E-02	0.00E+00	9.75E-02
		K-40	5.15E-01	2.09E-01	2.39E-01
512560	11/19/2019 - 11/26/2019	I-131	<2.51E-02	0.00E+00	2.51E-02
		Cs-134	<1.21E-02	0.00E+00	1.21E-02
		Cs-137	<1.37E-02	0.00E+00	1.37E-02
		Be-7	<8.48E-02	0.00E+00	8.48E-02
		K-40	3.97E-01	1.66E-01	1.76E-01
512875	11/26/2019 - 12/3/2019	I-131	<2.32E-02	0.00E+00	2.32E-02
		Cs-134	<1.98E-02	0.00E+00	1.98E-02
		Cs-137	<1.36E-02	0.00E+00	1.36E-02
		Be-7	<1.31E-01	0.00E+00	1.31E-01
		K-40	6.83E-01	1.94E-01	3.43E-02
513843	12/3/2019 - 12/10/2019	I-131	<3.55E-02	0.00E+00	3.55E-02
		Cs-134	<1.64E-02	0.00E+00	1.64E-02
		Cs-137	<2.06E-02	0.00E+00	2.06E-02
		Be-7	<1.77E-01	0.00E+00	1.77E-01
		K-40	<4.13E-01	0.00E+00	4.13E-01
514002	12/10/2019 - 12/17/2019	I-131	<4.56E-02	0.00E+00	4.56E-02
		Cs-134	<2.02E-02	0.00E+00	2.02E-02
		Cs-137	<1.38E-02	0.00E+00	1.38E-02
		Be-7	<1.38E-01	0.00E+00	1.38E-01
		K-40	4.01E-01	1.55E-01	1.24E-01

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 61 [INDICATOR - WSW @ 0.3 miles]

Sample ID:	Sample Dates:		Nuclide	Activity	2 Sigma Error	MDA
514250	12/17/2019 - 12/23/2019		I-131	<4.07E-02	0.00E+00	4.07E-02
			Cs-134	<1.56E-02	0.00E+00	1.56E-02
			Cs-137	<1.85E-02	0.00E+00	1.85E-02
			Be-7	<1.38E-01	0.00E+00	1.38E-01
			K-40	5.65E-01	2.10E-01	2.04E-01

Sample ID:	Sample Dates:		Nuclide	Activity	2 Sigma Error	MDA
514678	12/23/2019 - 12/31/2019		I-131	<2.73E-02	0.00E+00	2.73E-02
			Cs-134	<1.22E-02	0.00E+00	1.22E-02
			Cs-137	<1.24E-02	0.00E+00	1.24E-02
			Be-7	<1.12E-01	0.00E+00	1.12E-01
			K-40	<2.80E-01	0.00E+00	2.80E-01

Media Type: CROPS Concentration (Activity): pCi/kg wet

Sample Point 54 [INDICATOR - E @ 10.1 miles]

Sample ID:	Sample Dates:		Nuclide	Activity	2 Sigma Error	MDA
504593	7/10/2019 - 7/10/2019	CORN	I-131	<2.43E+01	0.00E+00	2.43E+01
			Cs-134	<1.49E+01	0.00E+00	1.49E+01
			Cs-137	<1.13E+01	0.00E+00	1.13E+01
			Be-7	<1.06E+02	0.00E+00	1.06E+02
			K-40	3.00E+03	3.43E+02	2.14E+02

Sample ID:	Sample Dates:		Nuclide	Activity	2 Sigma Error	MDA
512534	11/5/2019 - 11/5/2019	CORN	I-131	<2.79E+01	0.00E+00	2.79E+01
			Cs-134	<2.07E+01	0.00E+00	2.07E+01
			Cs-137	<1.66E+01	0.00E+00	1.66E+01
			Be-7	<1.20E+02	0.00E+00	1.20E+02
			K-40	3.41E+03	5.20E+02	1.88E+02

Media Type: FISH Concentration (Activity): pCi/kg wet

Sample Point 45 [INDICATOR - @ 0 miles]

Sample ID:	Sample Dates:		Nuclide	Activity	2 Sigma Error	MDA
500009	5/15/2019 - 5/15/2019	BOTMFEEDER	Mn-54	<5.33E+01	0.00E+00	5.33E+01
			Co-58	<8.61E+01	0.00E+00	8.61E+01
			Fe-59	<1.96E+02	0.00E+00	1.96E+02
			Co-60	<7.28E+01	0.00E+00	7.28E+01
			Zn-65	<1.55E+02	0.00E+00	1.55E+02
			Nb-95	<1.08E+02	0.00E+00	1.08E+02
			I-131	<4.90E+02	0.00E+00	4.90E+02
			Cs-134	<5.86E+01	0.00E+00	5.86E+01
			Cs-137	<9.05E+01	0.00E+00	9.05E+01
			Be-7	<6.79E+02	0.00E+00	6.79E+02
			K-40	4.05E+03	1.17E+03	2.11E+02
			Ag-110M	<6.10E+01	0.00E+00	6.10E+01
			Sb-122	<1.39E+04	0.00E+00	1.39E+04
			Sb-125	<1.73E+02	0.00E+00	1.73E+02

Sample ID:	Sample Dates:		Nuclide	Activity	2 Sigma Error	MDA
500010	5/15/2019 - 5/15/2019	FREESWIM	Mn-54	<7.92E+01	0.00E+00	7.92E+01
			Co-58	<8.50E+01	0.00E+00	8.50E+01
			Fe-59	<1.79E+02	0.00E+00	1.79E+02
			Co-60	<5.26E+01	0.00E+00	5.26E+01
			Zn-65	<1.59E+02	0.00E+00	1.59E+02
			Nb-95	<9.21E+01	0.00E+00	9.21E+01
			I-131	<3.11E+02	0.00E+00	3.11E+02
			Cs-134	<7.60E+01	0.00E+00	7.60E+01
			Cs-137	<7.91E+01	0.00E+00	7.91E+01
			Be-7	<6.53E+02	0.00E+00	6.53E+02
			K-40	3.37E+03	1.11E+03	9.19E+02
			Ag-110M	<5.60E+01	0.00E+00	5.60E+01
			Sb-122	<1.19E+04	0.00E+00	1.19E+04
			Sb-125	<1.37E+02	0.00E+00	1.37E+02

Sample ID:	Sample Dates:		Nuclide	Activity	2 Sigma Error	MDA
511691	11/19/2019 - 11/19/2019	BOTMFEEDER	Mn-54	<5.05E+01	0.00E+00	5.05E+01

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: FISH Concentration (Activity): pCi/kg wet

Sample Point 45 [INDICATOR - @ 0 miles]

Sample ID:	Sample Dates:	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
511691	11/19/2019 - 11/19/2019		Co-58	<4.05E+01	0.00E+00	4.05E+01
			Fe-59	<1.34E+02	0.00E+00	1.34E+02
			Co-60	<6.81E+01	0.00E+00	6.81E+01
			Zn-65	<1.32E+02	0.00E+00	1.32E+02
			Nb-95	<8.32E+01	0.00E+00	8.32E+01
			I-131	<2.56E+02	0.00E+00	2.56E+02
			Cs-134	<5.30E+01	0.00E+00	5.30E+01
			Cs-137	<4.54E+01	0.00E+00	4.54E+01
			Be-7	<4.04E+02	0.00E+00	4.04E+02
			K-40	3.65E+03	9.30E+02	8.66E+02
			Ag-110M	<5.00E+01	0.00E+00	5.00E+01
			Sb-122	<1.67E+04	0.00E+00	1.67E+04
			Sb-125	<1.29E+02	0.00E+00	1.29E+02

Sample ID:	Sample Dates:	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
511692	11/19/2019 - 11/19/2019		Mn-54	<4.64E+01	0.00E+00	4.64E+01
			Co-58	<5.87E+01	0.00E+00	5.87E+01
			Fe-59	<9.82E+01	0.00E+00	9.82E+01
			Co-60	<4.10E+01	0.00E+00	4.10E+01
			Zn-65	<6.54E+01	0.00E+00	6.54E+01
			Nb-95	<7.75E+01	0.00E+00	7.75E+01
			I-131	<3.14E+02	0.00E+00	3.14E+02
			Cs-134	<5.53E+01	0.00E+00	5.53E+01
			Cs-137	<6.55E+01	0.00E+00	6.55E+01
			Be-7	<3.91E+02	0.00E+00	3.91E+02
			K-40	4.13E+03	9.14E+02	6.12E+02
			Ag-110M	<4.10E+01	0.00E+00	4.10E+01
			Sb-122	<1.46E+04	0.00E+00	1.46E+04
			Sb-125	<1.40E+02	0.00E+00	1.40E+02

Sample Point 46 [INDICATOR - @ 0 miles]

Sample ID:	Sample Dates:	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
500011	5/16/2019 - 5/16/2019		Mn-54	<7.37E+01	0.00E+00	7.37E+01
			Co-58	<6.68E+01	0.00E+00	6.68E+01
			Fe-59	<1.28E+02	0.00E+00	1.28E+02
			Co-60	<6.27E+01	0.00E+00	6.27E+01
			Zn-65	<1.49E+02	0.00E+00	1.49E+02
			Nb-95	<9.64E+01	0.00E+00	9.64E+01
			I-131	<2.59E+02	0.00E+00	2.59E+02
			Cs-134	<7.61E+01	0.00E+00	7.61E+01
			Cs-137	<9.05E+01	0.00E+00	9.05E+01
			Be-7	<5.01E+02	0.00E+00	5.01E+02
			K-40	5.43E+03	1.29E+03	1.82E+02
			Ag-110M	<5.68E+01	0.00E+00	5.68E+01
			Sb-122	<7.41E+03	0.00E+00	7.41E+03
			Sb-125	<1.79E+02	0.00E+00	1.79E+02

Sample ID:	Sample Dates:	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
500012	5/16/2019 - 5/16/2019		Mn-54	<9.85E+01	0.00E+00	9.85E+01
			Co-58	<9.56E+01	0.00E+00	9.56E+01
			Fe-59	<1.53E+02	0.00E+00	1.53E+02
			Co-60	<7.45E+01	0.00E+00	7.45E+01
			Zn-65	<1.79E+02	0.00E+00	1.79E+02
			Nb-95	<8.69E+01	0.00E+00	8.69E+01
			I-131	<2.95E+02	0.00E+00	2.95E+02
			Cs-134	<7.85E+01	0.00E+00	7.85E+01
			Cs-137	<9.95E+01	0.00E+00	9.95E+01
			Be-7	<5.59E+02	0.00E+00	5.59E+02
			K-40	4.12E+03	1.11E+03	1.86E+02
			Ag-110M	<4.82E+01	0.00E+00	4.82E+01
			Sb-122	<1.11E+04	0.00E+00	1.11E+04
			Sb-125	<2.06E+02	0.00E+00	2.06E+02

Sample ID:	Sample Dates:	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
511693	11/21/2019 - 11/21/2019		Mn-54	<8.58E+01	0.00E+00	8.58E+01
			Co-58	<9.82E+01	0.00E+00	9.82E+01

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: FISH Concentration (Activity): pCi/kg wet

Sample Point 46 [INDICATOR - @ 0 miles]

Sample ID:	511693	Sample Dates:	11/21/2019 - 11/21/2019	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
					Fe-59	<1.58E+02	0.00E+00	1.58E+02
					Co-60	<7.58E+01	0.00E+00	7.58E+01
					Zn-65	<1.70E+02	0.00E+00	1.70E+02
					Nb-95	<1.09E+02	0.00E+00	1.09E+02
					I-131	<3.28E+02	0.00E+00	3.28E+02
					Cs-134	<7.42E+01	0.00E+00	7.42E+01
					Cs-137	<1.12E+02	0.00E+00	1.12E+02
					Be-7	<6.79E+02	0.00E+00	6.79E+02
					K-40	4.06E+03	1.16E+03	7.39E+02
					Ag-110M	<7.23E+01	0.00E+00	7.23E+01
					Sb-122	<1.21E+04	0.00E+00	1.21E+04
					Sb-125	<1.36E+02	0.00E+00	1.36E+02

Sample ID:	511694	Sample Dates:	11/21/2019 - 11/21/2019	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<9.54E+01	0.00E+00	9.54E+01
					Co-58	<6.75E+01	0.00E+00	6.75E+01
					Fe-59	<1.68E+02	0.00E+00	1.68E+02
					Co-60	<8.06E+01	0.00E+00	8.06E+01
					Zn-65	<1.72E+02	0.00E+00	1.72E+02
					Nb-95	<1.20E+02	0.00E+00	1.20E+02
					I-131	<2.49E+02	0.00E+00	2.49E+02
					Cs-134	<9.16E+01	0.00E+00	9.16E+01
					Cs-137	<1.05E+02	0.00E+00	1.05E+02
					Be-7	<6.57E+02	0.00E+00	6.57E+02
					K-40	5.13E+03	1.48E+03	1.04E+03
					Ag-110M	<6.06E+01	0.00E+00	6.06E+01
					Sb-122	<1.68E+04	0.00E+00	1.68E+04
					Sb-125	<1.19E+02	0.00E+00	1.19E+02

Sample Point 47 [CONTROL - @ 0 miles]

Sample ID:	500013	Sample Dates:	5/14/2019 - 5/14/2019	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<5.80E+01	0.00E+00	5.80E+01
					Co-58	<1.03E+02	0.00E+00	1.03E+02
					Fe-59	<4.18E+01	0.00E+00	4.18E+01
					Co-60	<1.97E+01	0.00E+00	1.97E+01
					Zn-65	<1.77E+02	0.00E+00	1.77E+02
					Nb-95	<7.86E+01	0.00E+00	7.86E+01
					I-131	<3.44E+02	0.00E+00	3.44E+02
					Cs-134	<9.86E+01	0.00E+00	9.86E+01
					Cs-137	<6.66E+01	0.00E+00	6.66E+01
					Be-7	<6.74E+02	0.00E+00	6.74E+02
					K-40	3.54E+03	1.05E+03	1.96E+02
					Ag-110M	<6.72E+01	0.00E+00	6.72E+01
					Sb-122	<1.74E+04	0.00E+00	1.74E+04
					Sb-125	<1.15E+02	0.00E+00	1.15E+02

Sample ID:	500014	Sample Dates:	5/14/2019 - 5/14/2019	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<6.83E+01	0.00E+00	6.83E+01
					Co-58	<7.38E+01	0.00E+00	7.38E+01
					Fe-59	<1.84E+02	0.00E+00	1.84E+02
					Co-60	<5.75E+01	0.00E+00	5.75E+01
					Zn-65	<1.50E+02	0.00E+00	1.50E+02
					Nb-95	<7.40E+01	0.00E+00	7.40E+01
					I-131	<3.08E+02	0.00E+00	3.08E+02
					Cs-134	<8.32E+01	0.00E+00	8.32E+01
					Cs-137	<1.03E+02	0.00E+00	1.03E+02
					Be-7	<7.28E+02	0.00E+00	7.28E+02
					K-40	3.66E+03	1.06E+03	7.63E+02
					Ag-110M	<6.39E+01	0.00E+00	6.39E+01
					Sb-122	<1.87E+04	0.00E+00	1.87E+04
					Sb-125	<1.37E+02	0.00E+00	1.37E+02

Sample ID:	511695	Sample Dates:	11/20/2019 - 11/20/2019	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<5.53E+01	0.00E+00	5.53E+01
					Co-58	<9.08E+01	0.00E+00	9.08E+01
					Fe-59	<1.97E+02	0.00E+00	1.97E+02

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: FISH Concentration (Activity): pCi/kg wet

Sample Point 47 [CONTROL - @ 0 miles]

Sample ID:	511695	Sample Dates:	11/20/2019 - 11/20/2019	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
					Co-60	<8.53E+01	0.00E+00	8.53E+01
					Zn-65	<1.86E+02	0.00E+00	1.86E+02
					Nb-95	<7.50E+01	0.00E+00	7.50E+01
					I-131	<3.64E+02	0.00E+00	3.64E+02
					Cs-134	<6.07E+01	0.00E+00	6.07E+01
					Cs-137	<8.50E+01	0.00E+00	8.50E+01
					Be-7	<6.85E+02	0.00E+00	6.85E+02
					K-40	5.58E+03	1.22E+03	6.37E+02
					Ag-110M	<6.29E+01	0.00E+00	6.29E+01
					Sb-122	<1.60E+04	0.00E+00	1.60E+04
					Sb-125	<1.63E+02	0.00E+00	1.63E+02

Sample ID:	511696	Sample Dates:	11/20/2019 - 11/20/2019	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<7.55E+01	0.00E+00	7.55E+01
					Co-58	<8.71E+01	0.00E+00	8.71E+01
					Fe-59	<2.02E+02	0.00E+00	2.02E+02
					Co-60	<9.58E+01	0.00E+00	9.58E+01
					Zn-65	<1.25E+02	0.00E+00	1.25E+02
					Nb-95	<1.03E+02	0.00E+00	1.03E+02
					I-131	<3.86E+02	0.00E+00	3.86E+02
					Cs-134	<8.30E+01	0.00E+00	8.30E+01
					Cs-137	<1.05E+02	0.00E+00	1.05E+02
					Be-7	<8.08E+02	0.00E+00	8.08E+02
					K-40	4.42E+03	1.29E+03	1.02E+03
					Ag-110M	<5.71E+01	0.00E+00	5.71E+01
					Sb-122	<1.48E+04	0.00E+00	1.48E+04
					Sb-125	<1.81E+02	0.00E+00	1.81E+02

Media Type: GROUND WATER Concentration (Activity): pCi/l

Sample Point 64 [INDICATOR - SE @ 0.6 miles]

Sample ID:	491852	Sample Dates:	1/22/2019 - 1/22/2019		Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<6.02E+00	0.00E+00	6.02E+00
					Co-58	<4.61E+00	0.00E+00	4.61E+00
					Fe-59	<9.80E+00	0.00E+00	9.80E+00
					Co-60	<6.20E+00	0.00E+00	6.20E+00
					Zn-65	<1.15E+01	0.00E+00	1.15E+01
					Zr-95	<9.50E+00	0.00E+00	9.50E+00
					Nb-95	<5.69E+00	0.00E+00	5.69E+00
					I-131	<6.89E+00	0.00E+00	6.89E+00
					Cs-134	<6.57E+00	0.00E+00	6.57E+00
					Cs-137	<5.90E+00	0.00E+00	5.90E+00
					BaLa-140	<8.30E+00	0.00E+00	8.30E+00
					Be-7	<4.68E+01	0.00E+00	4.68E+01
					K-40	4.48E+01	7.16E+01	5.31E+01
					H3GW	<6.90E+00	0.00E+00	1.89E+02

Sample ID:	497490	Sample Dates:	4/22/2019 - 4/22/2019		Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<6.93E+00	0.00E+00	6.93E+00
					Co-58	<5.80E+00	0.00E+00	5.80E+00
					Fe-59	<9.96E+00	0.00E+00	9.96E+00
					Co-60	<6.42E+00	0.00E+00	6.42E+00
					Zn-65	<1.20E+01	0.00E+00	1.20E+01
					Zr-95	<1.08E+01	0.00E+00	1.08E+01
					Nb-95	<6.01E+00	0.00E+00	6.01E+00
					I-131	<9.21E+00	0.00E+00	9.21E+00
					Cs-134	<6.58E+00	0.00E+00	6.58E+00
					Cs-137	<4.65E+00	0.00E+00	4.65E+00
					BaLa-140	<8.76E+00	0.00E+00	8.76E+00
					Be-7	<4.59E+01	0.00E+00	4.59E+01
					K-40	1.19E+02	7.04E+01	9.92E+01
					H3GW	<-1.8E+01	0.00E+00	1.80E+02

Sample ID:	503326	Sample Dates:	7/16/2019 - 7/16/2019		Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<4.39E+00	0.00E+00	4.39E+00
					Co-58	<6.05E+00	0.00E+00	6.05E+00
					Fe-59	<1.10E+01	0.00E+00	1.10E+01

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: GROUND WATER Concentration (Activity): pCi/l

Sample Point 64 [INDICATOR - SE @ 0.6 miles]

Sample ID:	503326	Sample Dates:	7/16/2019 - 7/16/2019	Nuclide	Activity	2 Sigma Error	MDA
				Co-60	<7.21E+00	0.00E+00	7.21E+00
				Zn-65	<1.10E+01	0.00E+00	1.10E+01
				Zr-95	<1.15E+01	0.00E+00	1.15E+01
				Nb-95	<7.00E+00	0.00E+00	7.00E+00
				I-131	<8.22E+00	0.00E+00	8.22E+00
				Cs-134	<6.78E+00	0.00E+00	6.78E+00
				Cs-137	<6.36E+00	0.00E+00	6.36E+00
				BaLa-140	<8.20E+00	0.00E+00	8.20E+00
				Be-7	<4.50E+01	0.00E+00	4.50E+01
				K-40	1.16E+02	4.94E+01	4.60E+01
				H3GW	<-1.9E+01	0.00E+00	1.94E+02

Sample ID:	509587	Sample Dates:	10/21/2019 - 10/21/2019	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<5.49E+00	0.00E+00	5.49E+00
				Co-58	<6.86E+00	0.00E+00	6.86E+00
				Fe-59	<1.21E+01	0.00E+00	1.21E+01
				Co-60	<6.04E+00	0.00E+00	6.04E+00
				Zn-65	<1.21E+01	0.00E+00	1.21E+01
				Zr-95	<1.07E+01	0.00E+00	1.07E+01
				Nb-95	<7.19E+00	0.00E+00	7.19E+00
				I-131	<1.16E+01	0.00E+00	1.16E+01
				Cs-134	<7.60E+00	0.00E+00	7.60E+00
				Cs-137	<5.11E+00	0.00E+00	5.11E+00
				BaLa-140	<8.88E+00	0.00E+00	8.88E+00
				Be-7	<4.81E+01	0.00E+00	4.81E+01
				K-40	1.54E+02	7.97E+01	1.10E+02
				H3GW	<-1.9E+01	0.00E+00	1.88E+02

Media Type: SEDIMENT_SHORE Concentration (Activity): pCi/kg dry

Sample Point 44 [INDICATOR - NNE @ 1.6 miles]

Sample ID:	488905	Sample Dates:	2/12/2019 - 2/12/2019	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<4.04E+01	0.00E+00	4.04E+01
				Co-58	<3.41E+01	0.00E+00	3.41E+01
				Fe-59	<6.77E+01	0.00E+00	6.77E+01
				Co-60	<4.03E+01	0.00E+00	4.03E+01
				Zn-65	<7.16E+01	0.00E+00	7.16E+01
				Zr-95	<5.96E+01	0.00E+00	5.96E+01
				Nb-95	<3.86E+01	0.00E+00	3.86E+01
				I-131	<5.48E+01	0.00E+00	5.48E+01
				Cs-134	<4.86E+01	0.00E+00	4.86E+01
				Cs-137	<2.79E+01	0.00E+00	2.79E+01
				Be-7	<2.74E+02	0.00E+00	2.74E+02
				K-40	<7.56E+02	0.00E+00	7.56E+02
				Co-57	<2.68E+01	0.00E+00	2.68E+01
				Mo-99	<1.23E+03	0.00E+00	1.23E+03
				Ag-110M	<3.81E+01	0.00E+00	3.81E+01
				Sb-122	<2.22E+02	0.00E+00	2.22E+02
				Sb-125	<1.01E+02	0.00E+00	1.01E+02

Sample ID:	500162	Sample Dates:	8/13/2019 - 8/13/2019	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<4.24E+01	0.00E+00	4.24E+01
				Co-58	<4.28E+01	0.00E+00	4.28E+01
				Fe-59	<1.29E+02	0.00E+00	1.29E+02
				Co-60	<4.13E+01	0.00E+00	4.13E+01
				Zn-65	<7.53E+01	0.00E+00	7.53E+01
				Zr-95	<9.44E+01	0.00E+00	9.44E+01
				Nb-95	<3.68E+01	0.00E+00	3.68E+01
				I-131	<1.23E+02	0.00E+00	1.23E+02
				Cs-134	<5.04E+01	0.00E+00	5.04E+01
				Cs-137	<4.36E+01	0.00E+00	4.36E+01
				Be-7	<3.83E+02	0.00E+00	3.83E+02
				K-40	<7.03E+02	0.00E+00	7.03E+02
				Co-57	<3.18E+01	0.00E+00	3.18E+01
				Mo-99	<1.13E+04	0.00E+00	1.13E+04
				Ag-110M	<4.02E+01	0.00E+00	4.02E+01

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SEDIMENT_SHORE Concentration (Activity): pCi/kg dry

Sample Point 44 [INDICATOR - NNE @ 1.6 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500162	8/13/2019 - 8/13/2019	Sb-122	<2.90E+03	0.00E+00	2.90E+03
		Sb-125	<1.04E+02	0.00E+00	1.04E+02

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 40 [INDICATOR - ESE @ 0.6 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492830	12/26/2018 - 1/29/2019	Mn-54	<1.67E+00	0.00E+00	1.67E+00
		Co-58	<1.75E+00	0.00E+00	1.75E+00
		Fe-59	<3.49E+00	0.00E+00	3.49E+00
		Co-60	<1.35E+00	0.00E+00	1.35E+00
		Zn-65	<3.44E+00	0.00E+00	3.44E+00
		Zr-95	<3.57E+00	0.00E+00	3.57E+00
		Nb-95	<2.34E+00	0.00E+00	2.34E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<1.81E+00	0.00E+00	1.81E+00
		Cs-137	<1.36E+00	0.00E+00	1.36E+00
		BaLa-140	<4.67E+00	0.00E+00	4.67E+00
		Be-7	<1.72E+01	0.00E+00	1.72E+01
		K-40	8.02E+01	2.10E+01	2.58E+01
		H3SW	2.74E+02	1.22E+02	1.95E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494420	1/29/2019 - 2/26/2019	Mn-54	<2.54E+00	0.00E+00	2.54E+00
		Co-58	<3.04E+00	0.00E+00	3.04E+00
		Fe-59	<4.69E+00	0.00E+00	4.69E+00
		Co-60	<2.22E+00	0.00E+00	2.22E+00
		Zn-65	<3.91E+00	0.00E+00	3.91E+00
		Zr-95	<4.08E+00	0.00E+00	4.08E+00
		Nb-95	<3.12E+00	0.00E+00	3.12E+00
		I-131	<1.15E+01	0.00E+00	1.15E+01
		Cs-134	<2.62E+00	0.00E+00	2.62E+00
		Cs-137	<2.11E+00	0.00E+00	2.11E+00
		BaLa-140	<6.43E+00	0.00E+00	6.43E+00
		Be-7	<2.29E+01	0.00E+00	2.30E+01
		K-40	8.68E+00	2.44E+01	4.22E+01
		H3SW	2.24E+02	1.15E+02	1.86E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
497066	2/26/2019 - 3/26/2019	Mn-54	<1.96E+00	0.00E+00	1.96E+00
		Co-58	<2.10E+00	0.00E+00	2.10E+00
		Fe-59	<3.83E+00	0.00E+00	3.83E+00
		Co-60	<1.68E+00	0.00E+00	1.68E+00
		Zn-65	<3.13E+00	0.00E+00	3.13E+00
		Zr-95	<4.69E+00	0.00E+00	4.69E+00
		Nb-95	<2.64E+00	0.00E+00	2.64E+00
		I-131	<1.14E+01	0.00E+00	1.14E+01
		Cs-134	<2.63E+00	0.00E+00	2.63E+00
		Cs-137	<2.20E+00	0.00E+00	2.20E+00
		BaLa-140	<4.85E+00	0.00E+00	4.85E+00
		Be-7	<2.00E+01	0.00E+00	2.00E+01
		K-40	2.82E+01	2.16E+01	3.30E+01
		H3SW	<5.49E+01	0.00E+00	1.96E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
498730	3/26/2019 - 4/29/2019	Mn-54	<2.55E+00	0.00E+00	2.55E+00
		Co-58	<2.39E+00	0.00E+00	2.39E+00
		Fe-59	<5.22E+00	0.00E+00	5.22E+00
		Co-60	<2.05E+00	0.00E+00	2.05E+00
		Zn-65	<4.44E+00	0.00E+00	4.44E+00
		Zr-95	<4.76E+00	0.00E+00	4.76E+00
		Nb-95	<2.97E+00	0.00E+00	2.97E+00
		I-131	<1.14E+01	0.00E+00	1.14E+01
		Cs-134	<2.37E+00	0.00E+00	2.37E+00
		Cs-137	<1.59E+00	0.00E+00	1.59E+00
		BaLa-140	<7.08E+00	0.00E+00	7.08E+00
		Be-7	1.16E+01	1.37E+01	2.23E+01

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 40 [INDICATOR - ESE @ 0.6 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
498730	3/26/2019 - 4/29/2019	K-40	1.94E+01	2.03E+01	3.24E+01
		H3SW	<7.53E+01	0.00E+00	1.81E+02
500491	4/29/2019 - 5/28/2019	Mn-54	<1.50E+00	0.00E+00	1.50E+00
		Co-58	<1.69E+00	0.00E+00	1.69E+00
		Fe-59	<3.28E+00	0.00E+00	3.28E+00
		Co-60	<1.64E+00	0.00E+00	1.64E+00
		Zn-65	<2.56E+00	0.00E+00	2.56E+00
		Zr-95	<2.86E+00	0.00E+00	2.86E+00
		Nb-95	<2.15E+00	0.00E+00	2.15E+00
		I-131	<1.00E+01	0.00E+00	1.00E+01
		Cs-134	<1.40E+00	0.00E+00	1.40E+00
		Cs-137	<1.55E+00	0.00E+00	1.55E+00
		BaLa-140	<5.03E+00	0.00E+00	5.03E+00
		Be-7	<1.49E+01	0.00E+00	1.49E+01
		K-40	4.21E+01	1.12E+01	1.19E+01
H3SW	<7.60E+01	0.00E+00	1.94E+02		
502305	5/28/2019 - 6/25/2019	Mn-54	<2.39E+00	0.00E+00	2.39E+00
		Co-58	<2.49E+00	0.00E+00	2.49E+00
		Fe-59	<4.83E+00	0.00E+00	4.83E+00
		Co-60	<1.55E+00	0.00E+00	1.55E+00
		Zn-65	<4.73E+00	0.00E+00	4.73E+00
		Zr-95	<3.83E+00	0.00E+00	3.83E+00
		Nb-95	<3.12E+00	0.00E+00	3.12E+00
		I-131	<1.01E+01	0.00E+00	1.01E+01
		Cs-134	<2.39E+00	0.00E+00	2.39E+00
		Cs-137	<1.93E+00	0.00E+00	1.93E+00
		BaLa-140	<7.00E+00	0.00E+00	7.00E+00
		Be-7	<1.81E+01	0.00E+00	1.81E+01
		K-40	5.46E+01	2.18E+01	2.73E+01
H3SW	<0.00E+00	0.00E+00	2.06E+02		
504385	6/25/2019 - 7/29/2019	Mn-54	<2.40E+00	0.00E+00	2.40E+00
		Co-58	<2.40E+00	0.00E+00	2.40E+00
		Fe-59	<4.22E+00	0.00E+00	4.22E+00
		Co-60	<2.69E+00	0.00E+00	2.69E+00
		Zn-65	<7.39E+00	0.00E+00	7.39E+00
		Zr-95	<4.29E+00	0.00E+00	4.29E+00
		Nb-95	<3.22E+00	0.00E+00	3.22E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<2.60E+00	0.00E+00	2.60E+00
		Cs-137	<1.74E+00	0.00E+00	1.74E+00
		BaLa-140	<6.92E+00	0.00E+00	6.92E+00
		Be-7	<2.04E+01	0.00E+00	2.04E+01
		K-40	2.28E+01	2.03E+01	3.16E+01
H3SW	<1.93E+02	0.00E+00	1.94E+02		
505486	7/29/2019 - 8/27/2019	Mn-54	<2.69E+00	0.00E+00	2.69E+00
		Co-58	<3.40E+00	0.00E+00	3.40E+00
		Fe-59	<6.78E+00	0.00E+00	6.78E+00
		Co-60	<2.24E+00	0.00E+00	2.24E+00
		Zn-65	<6.27E+00	0.00E+00	6.27E+00
		Zr-95	<6.31E+00	0.00E+00	6.31E+00
		Nb-95	<4.44E+00	0.00E+00	4.44E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<2.83E+00	0.00E+00	2.83E+00
		Cs-137	<3.35E+00	0.00E+00	3.35E+00
		BaLa-140	<6.76E+00	0.00E+00	6.76E+00
		Be-7	<2.70E+01	0.00E+00	2.70E+01
		K-40	1.06E+02	3.08E+01	2.33E+01
H3SW	1.19E+03	1.48E+02	1.94E+02		

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 40 [INDICATOR - ESE @ 0.6 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
510731	8/27/2019 - 10/1/2019	Mn-54	<1.88E+00	0.00E+00	1.88E+00
		Co-58	<1.81E+00	0.00E+00	1.81E+00
		Fe-59	<4.49E+00	0.00E+00	4.49E+00
		Co-60	<1.56E+00	0.00E+00	1.56E+00
		Zn-65	<4.41E+00	0.00E+00	4.41E+00
		Zr-95	<3.06E+00	0.00E+00	3.06E+00
		Nb-95	<2.43E+00	0.00E+00	2.43E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<1.46E+00	0.00E+00	1.46E+00
		Cs-137	<1.47E+00	0.00E+00	1.47E+00
		BaLa-140	<6.96E+00	0.00E+00	6.96E+00
		Be-7	<1.64E+01	0.00E+00	1.64E+01
		K-40	1.90E+01	1.94E+01	3.14E+01
		H3SW	3.35E+03	1.93E+02	1.90E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
507876	10/1/2019 - 10/29/2019	Mn-54	<3.07E+00	0.00E+00	3.07E+00
		Co-58	<3.05E+00	0.00E+00	3.05E+00
		Fe-59	<8.11E+00	0.00E+00	8.11E+00
		Co-60	<2.74E+00	0.00E+00	2.74E+00
		Zn-65	<6.44E+00	0.00E+00	6.44E+00
		Zr-95	<6.06E+00	0.00E+00	6.06E+00
		Nb-95	<5.48E+00	0.00E+00	5.48E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<3.28E+00	0.00E+00	3.28E+00
		Cs-137	<2.42E+00	0.00E+00	2.42E+00
		BaLa-140	<7.10E+00	0.00E+00	7.10E+00
		Be-7	<2.89E+01	0.00E+00	2.89E+01
		K-40	2.95E+01	3.55E+01	5.80E+01
		H3SW	4.60E+03	2.19E+02	1.96E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512116	10/29/2019 - 11/26/2019	Mn-54	<1.08E+00	0.00E+00	1.08E+00
		Co-58	<1.14E+00	0.00E+00	1.14E+00
		Fe-59	<2.89E+00	0.00E+00	2.89E+00
		Co-60	<9.89E-01	0.00E+00	9.89E-01
		Zn-65	<2.15E+00	0.00E+00	2.15E+00
		Zr-95	<2.04E+00	0.00E+00	2.04E+00
		Nb-95	<1.40E+00	0.00E+00	1.40E+00
		I-131	<1.02E+01	0.00E+00	1.02E+01
		Cs-134	<1.07E+00	0.00E+00	1.07E+00
		Cs-137	<8.58E-01	0.00E+00	8.58E-01
		BaLa-140	<5.20E+00	0.00E+00	5.20E+00
		Be-7	<1.08E+01	0.00E+00	1.08E+01
		K-40	3.15E+01	1.08E+01	1.50E+01
		H3SW	4.81E+03	2.17E+02	1.81E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
513967	11/26/2019 - 12/23/2019	Mn-54	<1.14E+00	0.00E+00	1.14E+00
		Co-58	<1.39E+00	0.00E+00	1.39E+00
		Fe-59	<2.85E+00	0.00E+00	2.85E+00
		Co-60	<1.19E+00	0.00E+00	1.19E+00
		Zn-65	<2.51E+00	0.00E+00	2.51E+00
		Zr-95	<2.54E+00	0.00E+00	2.54E+00
		Nb-95	<1.97E+00	0.00E+00	1.97E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<1.35E+00	0.00E+00	1.35E+00
		Cs-137	<1.23E+00	0.00E+00	1.23E+00
		BaLa-140	<5.65E+00	0.00E+00	5.65E+00
		Be-7	<1.24E+01	0.00E+00	1.24E+01
		K-40	3.54E+01	5.22E+00	1.35E+01
		H3SW	3.45E+03	1.97E+02	1.90E+02

Sample Point 41 [CONTROL - N @ 8 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492831	12/26/2018 - 1/29/2019	Mn-54	<1.55E+00	0.00E+00	1.55E+00

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 41 [CONTROL - N @ 8 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
492831	12/26/2018 - 1/29/2019	Co-58	<2.04E+00	0.00E+00	2.04E+00
		Fe-59	<4.54E+00	0.00E+00	4.54E+00
		Co-60	<1.48E+00	0.00E+00	1.48E+00
		Zn-65	<2.85E+00	0.00E+00	2.85E+00
		Zr-95	<3.05E+00	0.00E+00	3.05E+00
		Nb-95	<2.31E+00	0.00E+00	2.31E+00
		I-131	<1.09E+01	0.00E+00	1.09E+01
		Cs-134	<1.77E+00	0.00E+00	1.77E+00
		Cs-137	<1.57E+00	0.00E+00	1.57E+00
		BaLa-140	<6.72E+00	0.00E+00	6.72E+00
		Be-7	<1.31E+01	0.00E+00	1.31E+01
		K-40	4.04E+01	1.74E+01	2.42E+01
		H3SW	<-9.9E+01	0.00E+00	1.95E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
494421	1/29/2019 - 2/26/2019	Mn-54	<2.41E+00	0.00E+00	2.41E+00
		Co-58	<1.94E+00	0.00E+00	1.94E+00
		Fe-59	<4.19E+00	0.00E+00	4.19E+00
		Co-60	<2.24E+00	0.00E+00	2.24E+00
		Zn-65	<4.32E+00	0.00E+00	4.32E+00
		Zr-95	<4.11E+00	0.00E+00	4.11E+00
		Nb-95	<2.71E+00	0.00E+00	2.71E+00
		I-131	<1.12E+01	0.00E+00	1.12E+01
		Cs-134	<2.38E+00	0.00E+00	2.38E+00
		Cs-137	<2.53E+00	0.00E+00	2.53E+00
		BaLa-140	<6.25E+00	0.00E+00	6.25E+00
		Be-7	<2.12E+01	0.00E+00	2.12E+01
		K-40	6.22E+01	2.33E+01	2.80E+01
		H3SW	<2.22E+01	0.00E+00	1.85E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
497067	2/26/2019 - 3/26/2019	Mn-54	<1.79E+00	0.00E+00	1.79E+00
		Co-58	<1.66E+00	0.00E+00	1.66E+00
		Fe-59	<4.04E+00	0.00E+00	4.04E+00
		Co-60	<1.53E+00	0.00E+00	1.53E+00
		Zn-65	<3.34E+00	0.00E+00	3.34E+00
		Zr-95	<3.02E+00	0.00E+00	3.02E+00
		Nb-95	<2.02E+00	0.00E+00	2.02E+00
		I-131	<8.96E+00	0.00E+00	8.96E+00
		Cs-134	<2.07E+00	0.00E+00	2.07E+00
		Cs-137	<1.78E+00	0.00E+00	1.78E+00
		BaLa-140	<4.86E+00	0.00E+00	4.86E+00
		Be-7	<1.49E+01	0.00E+00	1.49E+01
		K-40	2.45E+01	1.72E+01	2.64E+01
		H3SW	<-8.3E+01	0.00E+00	1.93E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
498731	3/26/2019 - 4/29/2019	Mn-54	<2.47E+00	0.00E+00	2.47E+00
		Co-58	<2.52E+00	0.00E+00	2.52E+00
		Fe-59	<4.73E+00	0.00E+00	4.73E+00
		Co-60	<1.63E+00	0.00E+00	1.63E+00
		Zn-65	<3.67E+00	0.00E+00	3.67E+00
		Zr-95	<3.46E+00	0.00E+00	3.46E+00
		Nb-95	<2.67E+00	0.00E+00	2.67E+00
		I-131	<1.11E+01	0.00E+00	1.11E+01
		Cs-134	<2.63E+00	0.00E+00	2.63E+00
		Cs-137	<2.33E+00	0.00E+00	2.33E+00
		BaLa-140	<5.14E+00	0.00E+00	5.14E+00
		Be-7	<2.05E+01	0.00E+00	2.05E+01
		K-40	<3.47E+01	0.00E+00	3.47E+01
		H3SW	<-1.7E+01	0.00E+00	1.81E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500492	4/29/2019 - 5/28/2019	Mn-54	<1.38E+00	0.00E+00	1.38E+00
		Co-58	<1.57E+00	0.00E+00	1.57E+00
		Fe-59	<3.61E+00	0.00E+00	3.61E+00
		Co-60	<1.55E+00	0.00E+00	1.55E+00

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 41 [CONTROL - N @ 8 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
500492	4/29/2019 - 5/28/2019	Zn-65	<3.13E+00	0.00E+00	3.13E+00
		Zr-95	<2.84E+00	0.00E+00	2.84E+00
		Nb-95	<2.32E+00	0.00E+00	2.32E+00
		I-131	<1.08E+01	0.00E+00	1.08E+01
		Cs-134	<1.54E+00	0.00E+00	1.54E+00
		Cs-137	<1.59E+00	0.00E+00	1.59E+00
		BaLa-140	<5.73E+00	0.00E+00	5.73E+00
		Be-7	5.05E+00	9.13E+00	1.53E+01
		K-40	2.58E+01	1.36E+01	1.97E+01
		H3SW	<-6.9E+01	0.00E+00	1.94E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
502306	5/28/2019 - 6/25/2019	Mn-54	<1.60E+00	0.00E+00	1.60E+00
		Co-58	<1.99E+00	0.00E+00	1.99E+00
		Fe-59	<3.77E+00	0.00E+00	3.77E+00
		Co-60	<1.36E+00	0.00E+00	1.36E+00
		Zn-65	<3.90E+00	0.00E+00	3.90E+00
		Zr-95	<3.51E+00	0.00E+00	3.51E+00
		Nb-95	<2.62E+00	0.00E+00	2.62E+00
		I-131	<9.99E+00	0.00E+00	9.99E+00
		Cs-134	<2.15E+00	0.00E+00	2.15E+00
		Cs-137	<1.56E+00	0.00E+00	1.56E+00
		BaLa-140	<5.04E+00	0.00E+00	5.04E+00
		Be-7	<1.70E+01	0.00E+00	1.70E+01
		K-40	7.60E+01	2.14E+01	2.62E+01
		H3SW	<-1.3E+02	0.00E+00	2.06E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
504386	6/25/2019 - 7/29/2019	Mn-54	<2.51E+00	0.00E+00	2.51E+00
		Co-58	<2.48E+00	0.00E+00	2.48E+00
		Fe-59	<5.08E+00	0.00E+00	5.08E+00
		Co-60	<1.99E+00	0.00E+00	1.99E+00
		Zn-65	<4.92E+00	0.00E+00	4.92E+00
		Zr-95	<4.09E+00	0.00E+00	4.09E+00
		Nb-95	<3.20E+00	0.00E+00	3.20E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<2.29E+00	0.00E+00	2.29E+00
		Cs-137	<2.28E+00	0.00E+00	2.28E+00
		BaLa-140	<8.39E+00	0.00E+00	8.39E+00
		Be-7	<2.40E+01	0.00E+00	2.40E+01
		K-40	<3.67E+01	0.00E+00	3.67E+01
		H3SW	<-5.1E+01	0.00E+00	1.91E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
505487	7/29/2019 - 8/27/2019	Mn-54	<2.79E+00	0.00E+00	2.79E+00
		Co-58	<3.56E+00	0.00E+00	3.56E+00
		Fe-59	<6.44E+00	0.00E+00	6.44E+00
		Co-60	<3.09E+00	0.00E+00	3.09E+00
		Zn-65	<6.21E+00	0.00E+00	6.21E+00
		Zr-95	<4.36E+00	0.00E+00	4.36E+00
		Nb-95	<4.02E+00	0.00E+00	4.02E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<2.31E+00	0.00E+00	2.31E+00
		Cs-137	<2.70E+00	0.00E+00	2.70E+00
		BaLa-140	<7.46E+00	0.00E+00	7.46E+00
		Be-7	<2.05E+01	0.00E+00	2.05E+01
		K-40	<3.91E+01	0.00E+00	3.91E+01
		H3SW	<-6.7E+01	0.00E+00	1.91E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
510732	8/27/2019 - 10/1/2019	Mn-54	<1.11E+00	0.00E+00	1.11E+00
		Co-58	<1.37E+00	0.00E+00	1.37E+00
		Fe-59	<2.61E+00	0.00E+00	2.61E+00
		Co-60	<1.13E+00	0.00E+00	1.13E+00
		Zn-65	<2.78E+00	0.00E+00	2.78E+00
		Zr-95	<2.47E+00	0.00E+00	2.47E+00
		Nb-95	<1.67E+00	0.00E+00	1.67E+00

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 41 [CONTROL - N @ 8 miles]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
510732	8/27/2019 - 10/1/2019	I-131	<8.81E+00	0.00E+00	8.81E+00
		Cs-134	<1.47E+00	0.00E+00	1.47E+00
		Cs-137	<1.31E+00	0.00E+00	1.31E+00
		BaLa-140	<4.10E+00	0.00E+00	4.10E+00
		Be-7	<1.25E+01	0.00E+00	1.25E+01
		K-40	4.36E+01	1.42E+01	1.90E+01
		H3SW	<-3.3E+01	0.00E+00	1.90E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
507877	10/1/2019 - 10/29/2019	Mn-54	<3.64E+00	0.00E+00	3.64E+00
		Co-58	<4.16E+00	0.00E+00	4.16E+00
		Fe-59	<5.91E+00	0.00E+00	5.91E+00
		Co-60	<4.43E+00	0.00E+00	4.43E+00
		Zn-65	<6.66E+00	0.00E+00	6.66E+00
		Zr-95	<7.19E+00	0.00E+00	7.19E+00
		Nb-95	<4.16E+00	0.00E+00	4.16E+00
		I-131	<1.20E+01	0.00E+00	1.20E+01
		Cs-134	<3.44E+00	0.00E+00	3.44E+00
		Cs-137	<3.44E+00	0.00E+00	3.44E+00
		BaLa-140	<6.84E+00	0.00E+00	6.84E+00
		Be-7	<3.23E+01	0.00E+00	3.23E+01
		K-40	8.24E+01	4.23E+01	5.83E+01
		H3SW	<-3.8E+01	0.00E+00	1.95E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
512117	10/29/2019 - 11/26/2019	Mn-54	<1.40E+00	0.00E+00	1.40E+00
		Co-58	<1.54E+00	0.00E+00	1.54E+00
		Fe-59	<3.30E+00	0.00E+00	3.30E+00
		Co-60	<1.20E+00	0.00E+00	1.20E+00
		Zn-65	<2.45E+00	0.00E+00	2.45E+00
		Zr-95	<2.98E+00	0.00E+00	2.98E+00
		Nb-95	<2.30E+00	0.00E+00	2.30E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<1.34E+00	0.00E+00	1.34E+00
		Cs-137	<1.50E+00	0.00E+00	1.50E+00
		BaLa-140	<5.54E+00	0.00E+00	5.54E+00
		Be-7	<1.38E+01	0.00E+00	1.38E+01
		K-40	5.62E+01	1.45E+01	1.78E+01
		H3SW	<1.65E+01	0.00E+00	1.81E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
513968	11/26/2019 - 12/23/2019	Mn-54	<9.87E-01	0.00E+00	9.87E-01
		Co-58	<1.17E+00	0.00E+00	1.17E+00
		Fe-59	<2.53E+00	0.00E+00	2.53E+00
		Co-60	<8.92E-01	0.00E+00	8.92E-01
		Zn-65	<2.25E+00	0.00E+00	2.25E+00
		Zr-95	<2.32E+00	0.00E+00	2.32E+00
		Nb-95	<1.63E+00	0.00E+00	1.63E+00
		I-131	<1.09E+01	0.00E+00	1.09E+01
		Cs-134	<1.19E+00	0.00E+00	1.19E+00
		Cs-137	<9.07E-01	0.00E+00	9.07E-01
		BaLa-140	<4.46E+00	0.00E+00	4.46E+00
		Be-7	<1.18E+01	0.00E+00	1.18E+01
		K-40	9.30E+01	1.58E+01	1.76E+01
		H3SW	<-5.6E+01	0.00E+00	1.92E+02

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 1 [CONTROL - ESE @ 24.4 miles]

TLD RING TLD_CTRL

Sample ID:	Sample Dates:	Nuclide	Activity
492247	1/17/2019 - 4/17/2019	mR/Std Qtr	16.87
497907	4/17/2019 - 7/17/2019	mR/Std Qtr	17.62
503726	7/17/2019 - 10/17/2019	mR/Std Qtr	15.67

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 1 [CONTROL - ESE @ 24.4 miles]

TLD RING TLD_CTRL

Sample ID:	Sample Dates:	Nuclide	Activity
509989	10/17/2019 - 1/13/2020	mR/Std Qtr	21.88

Sample Point 2 [INDICATOR - S @ 0.2 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
492258	1/17/2019 - 4/17/2019	mR/Std Qtr	14.41

Sample ID:	Sample Dates:	Nuclide	Activity
497918	4/17/2019 - 7/17/2019	mR/Std Qtr	13.83

Sample ID:	Sample Dates:	Nuclide	Activity
503737	7/17/2019 - 10/17/2019	mR/Std Qtr	14.94

Sample ID:	Sample Dates:	Nuclide	Activity
510000	10/17/2019 - 1/13/2020	mR/Std Qtr	17.37

Sample Point 3 [INDICATOR - N @ 0.5 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
492269	1/17/2019 - 4/17/2019	mR/Std Qtr	16.69

Sample ID:	Sample Dates:	Nuclide	Activity
497929	4/17/2019 - 7/17/2019	mR/Std Qtr	16.07

Sample ID:	Sample Dates:	Nuclide	Activity
503748	7/17/2019 - 10/17/2019	mR/Std Qtr	13.95

Sample ID:	Sample Dates:	Nuclide	Activity
510011	10/17/2019 - 1/13/2020	mR/Std Qtr	17.83

Sample Point 4 [INDICATOR - ESE @ 0.4 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
492280	1/17/2019 - 4/17/2019	mR/Std Qtr	12.04

Sample ID:	Sample Dates:	Nuclide	Activity
497940	4/17/2019 - 7/17/2019	mR/Std Qtr	10.90

Sample ID:	Sample Dates:	Nuclide	Activity
503759	7/17/2019 - 10/17/2019	mR/Std Qtr	11.46

Sample ID:	Sample Dates:	Nuclide	Activity
510022	10/17/2019 - 1/13/2020	mR/Std Qtr	12.85

Sample Point 5 [INDICATOR - ENE @ 0.9 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
492281	1/17/2019 - 4/17/2019	mR/Std Qtr	14.58

Sample ID:	Sample Dates:	Nuclide	Activity
497941	4/17/2019 - 7/17/2019	mR/Std Qtr	15.37

Sample ID:	Sample Dates:	Nuclide	Activity
503760	7/17/2019 - 10/17/2019	mR/Std Qtr	12.12

Sample ID:	Sample Dates:	Nuclide	Activity
510023	10/17/2019 - 1/13/2020	mR/Std Qtr	16.08

Sample Point 6 [INDICATOR - SSW @ 0.2 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
492284	1/17/2019 - 4/17/2019	mR/Std Qtr	15.66

Sample ID:	Sample Dates:	Nuclide	Activity
497944	4/17/2019 - 7/17/2019	mR/Std Qtr	15.10

Sample ID:	Sample Dates:	Nuclide	Activity
503763	7/17/2019 - 10/17/2019	mR/Std Qtr	15.14

Sample ID:	Sample Dates:	Nuclide	Activity
510026	10/17/2019 - 1/13/2020	mR/Std Qtr	18.14

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 7 [INDICATOR - ESE @ 6.4 miles]

TLD RING TLD_OUTER

Sample ID	Sample Dates	Nuclide	Activity
492287	1/17/2019 - 4/17/2019	mR/Std Qtr	15.84
497947	4/17/2019 - 7/17/2019	mR/Std Qtr	13.13
503766	7/17/2019 - 10/17/2019	mR/Std Qtr	15.75
510029	10/17/2019 - 1/13/2020	mR/Std Qtr	17.23

Sample Point 8 [INDICATOR - SSE @ 0.8 miles]

TLD RING TLD_INNER

Sample ID	Sample Dates	Nuclide	Activity
492288	1/17/2019 - 4/17/2019	mR/Std Qtr	17.99
497948	4/17/2019 - 7/17/2019	mR/Std Qtr	13.56
503767	7/17/2019 - 10/17/2019	mR/Std Qtr	13.44
510030	10/17/2019 - 1/13/2020	mR/Std Qtr	17.36

Sample Point 9 [INDICATOR - S @ 1 miles]

TLD RING TLD_INNER

Sample ID	Sample Dates	Nuclide	Activity
492289	1/17/2019 - 4/17/2019	mR/Std Qtr	12.12
497949	4/17/2019 - 7/17/2019	mR/Std Qtr	11.49
503768	7/17/2019 - 10/17/2019	mR/Std Qtr	11.38
510031	10/17/2019 - 1/13/2020	mR/Std Qtr	13.39

Sample Point 10 [INDICATOR - WSW @ 1 miles]

TLD RING TLD_INNER

Sample ID	Sample Dates	Nuclide	Activity
492248	1/17/2019 - 4/17/2019	mR/Std Qtr	13.29
497908	4/17/2019 - 7/17/2019	mR/Std Qtr	11.66
503727	7/17/2019 - 10/17/2019	mR/Std Qtr	11.26
509990	10/17/2019 - 1/13/2020	mR/Std Qtr	15.11

Sample Point 11 [INDICATOR - SW @ 1 miles]

TLD RING TLD_INNER

Sample ID	Sample Dates	Nuclide	Activity
492249	1/17/2019 - 4/17/2019	mR/Std Qtr	12.75
497909	4/17/2019 - 7/17/2019	mR/Std Qtr	13.50
503728	7/17/2019 - 10/17/2019	mR/Std Qtr	10.92
509991	10/17/2019 - 1/13/2020	mR/Std Qtr	15.68

Sample Point 12 [INDICATOR - SSW @ 1.2 miles]

TLD RING TLD_INNER

Sample ID	Sample Dates	Nuclide	Activity
492250	1/17/2019 - 4/17/2019	mR/Std Qtr	19.38
497910	4/17/2019 - 7/17/2019	mR/Std Qtr	17.82

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 12 [INDICATOR - SSW @ 1.2 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
503729	7/17/2019 - 10/17/2019	mR/Std Qtr	15.42
509992	10/17/2019 - 1/13/2020	mR/Std Qtr	20.52

Sample Point 13 [INDICATOR - W @ 0.7 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
492251	1/17/2019 - 4/17/2019	mR/Std Qtr	14.81
497911	4/17/2019 - 7/17/2019	mR/Std Qtr	15.15
503730	7/17/2019 - 10/17/2019	mR/Std Qtr	13.56
509993	10/17/2019 - 1/13/2020	mR/Std Qtr	16.49

Sample Point 14 [INDICATOR - WNW @ 0.8 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
492252	1/17/2019 - 4/17/2019	mR/Std Qtr	17.99
497912	4/17/2019 - 7/17/2019	mR/Std Qtr	16.19
503731	7/17/2019 - 10/17/2019	mR/Std Qtr	17.16
509994	10/17/2019 - 1/13/2020	mR/Std Qtr	20.89

Sample Point 15 [INDICATOR - NW @ 0.7 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
492253	1/17/2019 - 4/17/2019	mR/Std Qtr	16.41
497913	4/17/2019 - 7/17/2019	mR/Std Qtr	14.38
503732	7/17/2019 - 10/17/2019	mR/Std Qtr	11.36
509995	10/17/2019 - 1/13/2020	mR/Std Qtr	15.51

Sample Point 16 [INDICATOR - NNW @ 1 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
492254	1/17/2019 - 4/17/2019	mR/Std Qtr	17.95
497914	4/17/2019 - 7/17/2019	mR/Std Qtr	13.38
503733	7/17/2019 - 10/17/2019	mR/Std Qtr	13.09
509996	10/17/2019 - 1/13/2020	mR/Std Qtr	20.93

Sample Point 17 [INDICATOR - N @ 1.2 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
492255	1/17/2019 - 4/17/2019	mR/Std Qtr	19.81
497915	4/17/2019 - 7/17/2019	mR/Std Qtr	16.69
503734	7/17/2019 - 10/17/2019	mR/Std Qtr	17.82
509997	10/17/2019 - 1/13/2020	mR/Std Qtr	20.04

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 18 [INDICATOR - SE @ 0.7 miles]

TLD RING TLD_INNER

Sample ID	Sample Dates	Nuclide	Activity
492256	1/17/2019 - 4/17/2019	mR/Std Qtr	17.14
497916	4/17/2019 - 7/17/2019	mR/Std Qtr	14.67
503735	7/17/2019 - 10/17/2019	mR/Std Qtr	16.13
509998	10/17/2019 - 1/13/2020	mR/Std Qtr	20.44

Sample Point 19 [INDICATOR - E @ 1 miles]

TLD RING TLD_INNER

Sample ID	Sample Dates	Nuclide	Activity
492257	1/17/2019 - 4/17/2019	mR/Std Qtr	16.03
497917	4/17/2019 - 7/17/2019	mR/Std Qtr	14.09
503736	7/17/2019 - 10/17/2019	mR/Std Qtr	13.51
509999	10/17/2019 - 1/13/2020	mR/Std Qtr	18.75

Sample Point 20 [INDICATOR - ENE @ 1 miles]

TLD RING TLD_INNER

Sample ID	Sample Dates	Nuclide	Activity
492259	1/17/2019 - 4/17/2019	mR/Std Qtr	16.03
497919	4/17/2019 - 7/17/2019	mR/Std Qtr	13.38
503738	7/17/2019 - 10/17/2019	mR/Std Qtr	14.66
510001	10/17/2019 - 1/13/2020	mR/Std Qtr	17.66

Sample Point 21 [INDICATOR - NE @ 1.4 miles]

TLD RING TLD_INNER

Sample ID	Sample Dates	Nuclide	Activity
492260	1/17/2019 - 4/17/2019	mR/Std Qtr	17.73
497920	4/17/2019 - 7/17/2019	mR/Std Qtr	14.64
503739	7/17/2019 - 10/17/2019	mR/Std Qtr	15.41
510002	10/17/2019 - 1/13/2020	mR/Std Qtr	17.15

Sample Point 22 [INDICATOR - NNE @ 1.7 miles]

TLD RING TLD_INNER

Sample ID	Sample Dates	Nuclide	Activity
492261	1/17/2019 - 4/17/2019	mR/Std Qtr	15.85
497921	4/17/2019 - 7/17/2019	mR/Std Qtr	15.35
503740	7/17/2019 - 10/17/2019	mR/Std Qtr	16.24
510003	10/17/2019 - 1/13/2020	mR/Std Qtr	18.01

Sample Point 23 [INDICATOR - ESE @ 1 miles]

TLD RING TLD_INNER

Sample ID	Sample Dates	Nuclide	Activity
492262	1/17/2019 - 4/17/2019	mR/Std Qtr	20.06
497922	4/17/2019 - 7/17/2019	mR/Std Qtr	16.31

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 23 [INDICATOR - ESE @ 1 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
503741	7/17/2019 - 10/17/2019	mR/Std Qtr	15.12

Sample ID:	Sample Dates:	Nuclide	Activity
510004	10/17/2019 - 1/13/2020	mR/Std Qtr	19.85

Sample Point 24 [INDICATOR - NW @ 4.6 miles] TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
492263	1/17/2019 - 4/17/2019	mR/Std Qtr	21.59

Sample ID:	Sample Dates:	Nuclide	Activity
497923	4/17/2019 - 7/17/2019	mR/Std Qtr	16.67

Sample ID:	Sample Dates:	Nuclide	Activity
503742	7/17/2019 - 10/17/2019	mR/Std Qtr	17.22

Sample ID:	Sample Dates:	Nuclide	Activity
510005	10/17/2019 - 1/13/2020	mR/Std Qtr	22.09

Sample Point 25 [INDICATOR - NNW @ 4 miles] TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
492264	1/17/2019 - 4/17/2019	mR/Std Qtr	18.89

Sample ID:	Sample Dates:	Nuclide	Activity
497924	4/17/2019 - 7/17/2019	mR/Std Qtr	13.99

Sample ID:	Sample Dates:	Nuclide	Activity
503743	7/17/2019 - 10/17/2019	mR/Std Qtr	17.70

Sample ID:	Sample Dates:	Nuclide	Activity
510006	10/17/2019 - 1/13/2020	mR/Std Qtr	15.83

Sample Point 26 [INDICATOR - N @ 5 miles] TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
492265	1/17/2019 - 4/17/2019	mR/Std Qtr	17.31

Sample ID:	Sample Dates:	Nuclide	Activity
497925	4/17/2019 - 7/17/2019	mR/Std Qtr	13.73

Sample ID:	Sample Dates:	Nuclide	Activity
503744	7/17/2019 - 10/17/2019	mR/Std Qtr	13.98

Sample ID:	Sample Dates:	Nuclide	Activity
510007	10/17/2019 - 1/13/2020	mR/Std Qtr	18.32

Sample Point 27 [INDICATOR - NNE @ 5.4 miles] TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
492266	1/17/2019 - 4/17/2019	mR/Std Qtr	14.50

Sample ID:	Sample Dates:	Nuclide	Activity
497926	4/17/2019 - 7/17/2019	mR/Std Qtr	12.57

Sample ID:	Sample Dates:	Nuclide	Activity
503745	7/17/2019 - 10/17/2019	mR/Std Qtr	18.04

Sample ID:	Sample Dates:	Nuclide	Activity
510008	10/17/2019 - 1/13/2020	mR/Std Qtr	15.18

Sample Point 28 [INDICATOR - NE @ 4.3 miles] TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
492267	1/17/2019 - 4/17/2019	mR/Std Qtr	22.58

Sample ID:	Sample Dates:	Nuclide	Activity
497927	4/17/2019 - 7/17/2019	mR/Std Qtr	15.75

Sample ID:	Sample Dates:	Nuclide	Activity
503746	7/17/2019 - 10/17/2019	mR/Std Qtr	16.49

Sample ID:	Sample Dates:	Nuclide	Activity
510009	10/17/2019 - 1/13/2020	mR/Std Qtr	20.22

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 29 [INDICATOR - ENE @ 4 miles]

TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
492268	1/17/2019 - 4/17/2019	mR/Std Qtr	14.82
497928	4/17/2019 - 7/17/2019	mR/Std Qtr	11.36
503747	7/17/2019 - 10/17/2019	mR/Std Qtr	11.23
510010	10/17/2019 - 1/13/2020	mR/Std Qtr	16.12

Sample Point 30 [INDICATOR - E @ 4.4 miles]

TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
492270	1/17/2019 - 4/17/2019	mR/Std Qtr	19.52
497930	4/17/2019 - 7/17/2019	mR/Std Qtr	15.22
503749	7/17/2019 - 10/17/2019	mR/Std Qtr	16.28
510012	10/17/2019 - 1/13/2020	mR/Std Qtr	18.50

Sample Point 31 [INDICATOR - ESE @ 4.6 miles]

TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
492271	1/17/2019 - 4/17/2019	mR/Std Qtr	18.83
497931	4/17/2019 - 7/17/2019	mR/Std Qtr	18.10
503750	7/17/2019 - 10/17/2019	mR/Std Qtr	18.74
510013	10/17/2019 - 1/13/2020	mR/Std Qtr	17.66

Sample Point 32 [INDICATOR - SE @ 4 miles]

TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
492272	1/17/2019 - 4/17/2019	mR/Std Qtr	15.90
497932	4/17/2019 - 7/17/2019	mR/Std Qtr	16.28
503751	7/17/2019 - 10/17/2019	mR/Std Qtr	16.53
510014	10/17/2019 - 1/13/2020	mR/Std Qtr	15.84

Sample Point 33 [INDICATOR - SSE @ 4.5 miles]

TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
492273	1/17/2019 - 4/17/2019	mR/Std Qtr	17.99
497933	4/17/2019 - 7/17/2019	mR/Std Qtr	15.46
503752	7/17/2019 - 10/17/2019	mR/Std Qtr	13.91
510015	10/17/2019 - 1/13/2020	mR/Std Qtr	21.31

Sample Point 34 [INDICATOR - S @ 4.7 miles]

TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
492274	1/17/2019 - 4/17/2019	mR/Std Qtr	12.63
497934	4/17/2019 - 7/17/2019	mR/Std Qtr	9.91

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 34 [INDICATOR - S @ 4.7 miles]

TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
503753	7/17/2019 - 10/17/2019	mR/Std Qtr	10.19
510016	10/17/2019 - 1/13/2020	mR/Std Qtr	14.87

Sample Point 35 [INDICATOR - SSW @ 4.5 miles]

TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
492275	1/17/2019 - 4/17/2019	mR/Std Qtr	24.52
497935	4/17/2019 - 7/17/2019	mR/Std Qtr	20.71
503754	7/17/2019 - 10/17/2019	mR/Std Qtr	19.00
510017	10/17/2019 - 1/13/2020	mR/Std Qtr	25.59

Sample Point 36 [INDICATOR - SW @ 5 miles]

TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
492276	1/17/2019 - 4/17/2019	mR/Std Qtr	24.19
497936	4/17/2019 - 7/17/2019	mR/Std Qtr	19.16
503755	7/17/2019 - 10/17/2019	mR/Std Qtr	18.46
510018	10/17/2019 - 1/13/2020	mR/Std Qtr	25.30

Sample Point 37 [INDICATOR - WSW @ 5 miles]

TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
492277	1/17/2019 - 4/17/2019	mR/Std Qtr	24.33
497937	4/17/2019 - 7/17/2019	mR/Std Qtr	21.73
503756	7/17/2019 - 10/17/2019	mR/Std Qtr	21.14
510019	10/17/2019 - 1/13/2020	mR/Std Qtr	26.30

Sample Point 38 [INDICATOR - W @ 4.9 miles]

TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
492278	1/17/2019 - 4/17/2019	mR/Std Qtr	20.91
497938	4/17/2019 - 7/17/2019	mR/Std Qtr	17.13
503757	7/17/2019 - 10/17/2019	mR/Std Qtr	14.47
510020	10/17/2019 - 1/13/2020	mR/Std Qtr	20.85

Sample Point 39 [INDICATOR - WNW @ 5.1 miles]

TLD RING TLD_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
492279	1/17/2019 - 4/17/2019	mR/Std Qtr	20.02
497939	4/17/2019 - 7/17/2019	mR/Std Qtr	13.36
503758	7/17/2019 - 10/17/2019	mR/Std Qtr	16.40
510021	10/17/2019 - 1/13/2020	mR/Std Qtr	20.85

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 55 [INDICATOR - SSE @ 0.2 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
492282	1/17/2019 - 4/17/2019	mR/Std Qtr	17.85
497942	4/17/2019 - 7/17/2019	mR/Std Qtr	12.83
503761	7/17/2019 - 10/17/2019	mR/Std Qtr	15.21
510024	10/17/2019 - 1/13/2020	mR/Std Qtr	17.82

Sample Point 56 [INDICATOR - NNW @ 0.4 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
492283	1/17/2019 - 4/17/2019	mR/Std Qtr	15.99
497943	4/17/2019 - 7/17/2019	mR/Std Qtr	12.97
503762	7/17/2019 - 10/17/2019	mR/Std Qtr	16.31
510025	10/17/2019 - 1/13/2020	mR/Std Qtr	18.77

Sample Point 61 [INDICATOR - WSW @ 0.3 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
492285	1/17/2019 - 4/17/2019	mR/Std Qtr	22.20
497945	4/17/2019 - 7/17/2019	mR/Std Qtr	18.87
503764	7/17/2019 - 10/17/2019	mR/Std Qtr	18.17
510027	10/17/2019 - 1/13/2020	mR/Std Qtr	22.09

Sample Point 65 [INDICATOR - WNW @ 0.3 miles]

TLD RING TLD_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
492286	1/17/2019 - 4/17/2019	mR/Std Qtr	24.63
497946	4/17/2019 - 7/17/2019	mR/Std Qtr	21.14
503765	7/17/2019 - 10/17/2019	mR/Std Qtr	18.14
510028	10/17/2019 - 1/13/2020	mR/Std Qtr	20.85

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 50 [INDICATOR - SSE @ 0 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
498686	4/11/2019 - 4/11/2019		Mn-54	<2.44E+01	0.00E+00	2.44E+01
			Co-58	<2.10E+01	0.00E+00	2.10E+01
			Fe-59	<5.08E+01	0.00E+00	5.08E+01
			Co-60	<2.22E+01	0.00E+00	2.22E+01
			Zn-65	<4.61E+01	0.00E+00	4.61E+01
			Zr-95	<5.07E+01	0.00E+00	5.07E+01
			Nb-95	<2.55E+01	0.00E+00	2.55E+01
			I-131	<4.56E+01	0.00E+00	4.56E+01
			Cs-134	<2.24E+01	0.00E+00	2.24E+01
			Cs-137	<2.65E+01	0.00E+00	2.65E+01
			BaLa-140	<3.16E+01	0.00E+00	3.16E+01
			Be-7	3.03E+02	1.86E+02	2.80E+02
			K-40	4.04E+03	6.01E+02	2.56E+02

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 50 [INDICATOR - SSE @ 0 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
500260	5/9/2019 - 5/9/2019	MIXEDBLV	Mn-54	<1.85E+01	0.00E+00	1.85E+01
			Co-58	<1.78E+01	0.00E+00	1.78E+01
			Fe-59	<4.50E+01	0.00E+00	4.50E+01
			Co-60	<2.22E+01	0.00E+00	2.22E+01
			Zn-65	<4.32E+01	0.00E+00	4.32E+01
			Zr-95	<3.36E+01	0.00E+00	3.36E+01
			Nb-95	<1.93E+01	0.00E+00	1.93E+01
			I-131	<2.40E+01	0.00E+00	2.40E+01
			Cs-134	<1.99E+01	0.00E+00	1.99E+01
			Cs-137	<2.26E+01	0.00E+00	2.26E+01
			BaLa-140	<3.21E+01	0.00E+00	3.21E+01
			Be-7	6.31E+02	2.04E+02	2.74E+02
			K-40	4.63E+03	6.15E+02	1.72E+02
502300	6/12/2019 - 6/12/2019	MIXEDBLV	Mn-54	<1.20E+01	0.00E+00	1.20E+01
			Co-58	<1.31E+01	0.00E+00	1.31E+01
			Fe-59	<2.14E+01	0.00E+00	2.14E+01
			Co-60	<1.10E+01	0.00E+00	1.10E+01
			Zn-65	<2.54E+01	0.00E+00	2.54E+01
			Zr-95	<2.43E+01	0.00E+00	2.43E+01
			Nb-95	<1.27E+01	0.00E+00	1.27E+01
			I-131	<2.07E+01	0.00E+00	2.07E+01
			Cs-134	<1.58E+01	0.00E+00	1.58E+01
			Cs-137	<1.20E+01	0.00E+00	1.20E+01
			BaLa-140	<1.88E+01	0.00E+00	1.88E+01
			Be-7	3.90E+02	1.23E+02	1.74E+02
			K-40	2.89E+03	3.46E+02	1.57E+02
504376	7/9/2019 - 7/9/2019	MIXEDBLV	Mn-54	<3.05E+01	0.00E+00	3.05E+01
			Co-58	<2.58E+01	0.00E+00	2.58E+01
			Fe-59	<6.02E+01	0.00E+00	6.02E+01
			Co-60	<2.57E+01	0.00E+00	2.57E+01
			Zn-65	<7.33E+01	0.00E+00	7.33E+01
			Zr-95	<4.11E+01	0.00E+00	4.11E+01
			Nb-95	<3.46E+01	0.00E+00	3.46E+01
			I-131	<4.42E+01	0.00E+00	4.42E+01
			Cs-134	<4.04E+01	0.00E+00	4.04E+01
			Cs-137	<3.21E+01	0.00E+00	3.21E+01
			BaLa-140	<4.87E+01	0.00E+00	4.87E+01
			Be-7	1.08E+03	3.42E+02	4.18E+02
			K-40	3.97E+03	7.82E+02	5.16E+02
505655	8/7/2019 - 8/7/2019	MIXEDBLV	Mn-54	<2.23E+01	0.00E+00	2.23E+01
			Co-58	<1.96E+01	0.00E+00	1.96E+01
			Fe-59	<5.80E+01	0.00E+00	5.80E+01
			Co-60	<1.85E+01	0.00E+00	1.85E+01
			Zn-65	<7.35E+01	0.00E+00	7.35E+01
			Zr-95	<3.82E+01	0.00E+00	3.82E+01
			Nb-95	<2.60E+01	0.00E+00	2.60E+01
			I-131	<2.94E+01	0.00E+00	2.94E+01
			Cs-134	<2.56E+01	0.00E+00	2.56E+01
			Cs-137	<2.14E+01	0.00E+00	2.14E+01
			BaLa-140	<3.72E+01	0.00E+00	3.72E+01
			Be-7	1.35E+03	2.64E+02	2.31E+02
			K-40	2.18E+03	4.71E+02	4.36E+02
508100	9/9/2019 - 9/9/2019	MIXEDBLV	Mn-54	<2.69E+01	0.00E+00	2.69E+01
			Co-58	<2.92E+01	0.00E+00	2.92E+01
			Fe-59	<4.27E+01	0.00E+00	4.27E+01
			Co-60	<2.94E+01	0.00E+00	2.94E+01
			Zn-65	<6.22E+01	0.00E+00	6.22E+01
			Zr-95	<4.68E+01	0.00E+00	4.68E+01
			Nb-95	<2.53E+01	0.00E+00	2.53E+01

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 50 [INDICATOR - SSE @ 0 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
508100	9/9/2019 - 9/9/2019		I-131	<2.93E+01	0.00E+00	2.93E+01
			Cs-134	<3.69E+01	0.00E+00	3.69E+01
			Cs-137	<2.91E+01	0.00E+00	2.91E+01
			BaLa-140	<4.41E+01	0.00E+00	4.41E+01
			Be-7	7.56E+02	2.74E+02	3.62E+02
			K-40	3.64E+03	6.52E+02	2.59E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
510720	10/9/2019 - 10/9/2019		Mn-54	<1.84E+01	0.00E+00	1.84E+01
			Co-58	<1.92E+01	0.00E+00	1.92E+01
			Fe-59	<4.65E+01	0.00E+00	4.65E+01
			Co-60	<1.82E+01	0.00E+00	1.82E+01
			Zn-65	<4.22E+01	0.00E+00	4.22E+01
			Zr-95	<2.90E+01	0.00E+00	2.90E+01
			Nb-95	<2.29E+01	0.00E+00	2.29E+01
			I-131	<3.98E+01	0.00E+00	3.98E+01
			Cs-134	<3.11E+01	0.00E+00	3.11E+01
			Cs-137	<1.84E+01	0.00E+00	1.84E+01
			BaLa-140	<3.37E+01	0.00E+00	3.37E+01
			Be-7	9.57E+02	2.16E+02	2.60E+02
			K-40	6.03E+03	6.81E+02	2.46E+02

Sample Point 51 [INDICATOR - SSW @ 0 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
498687	4/11/2019 - 4/11/2019		Mn-54	<1.64E+01	0.00E+00	1.64E+01
			Co-58	<2.16E+01	0.00E+00	2.16E+01
			Fe-59	<3.78E+01	0.00E+00	3.78E+01
			Co-60	<2.20E+01	0.00E+00	2.20E+01
			Zn-65	<4.76E+01	0.00E+00	4.76E+01
			Zr-95	<3.79E+01	0.00E+00	3.79E+01
			Nb-95	<2.16E+01	0.00E+00	2.16E+01
			I-131	<4.43E+01	0.00E+00	4.43E+01
			Cs-134	<2.30E+01	0.00E+00	2.30E+01
			Cs-137	6.02E+01	2.27E+01	2.84E+01
			BaLa-140	<4.02E+01	0.00E+00	4.02E+01
			Be-7	5.13E+02	1.65E+02	1.87E+02
			K-40	3.37E+03	5.27E+02	1.84E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
500261	5/9/2019 - 5/9/2019		Mn-54	<1.08E+01	0.00E+00	1.08E+01
			Co-58	<7.51E+00	0.00E+00	7.51E+00
			Fe-59	<1.60E+01	0.00E+00	1.60E+01
			Co-60	<8.15E+00	0.00E+00	8.15E+00
			Zn-65	<1.60E+01	0.00E+00	1.60E+01
			Zr-95	<1.77E+01	0.00E+00	1.77E+01
			Nb-95	<8.49E+00	0.00E+00	8.49E+00
			I-131	<1.21E+01	0.00E+00	1.21E+01
			Cs-134	<1.15E+01	0.00E+00	1.15E+01
			Cs-137	1.42E+01	7.64E+00	1.19E+01
			BaLa-140	<8.87E+00	0.00E+00	8.87E+00
			Be-7	5.61E+02	8.55E+01	9.21E+01
			K-40	4.45E+03	4.15E+02	1.20E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
502301	6/13/2019 - 6/13/2019		Mn-54	<2.99E+01	0.00E+00	2.99E+01
			Co-58	<2.65E+01	0.00E+00	2.65E+01
			Fe-59	<4.40E+01	0.00E+00	4.40E+01
			Co-60	<2.60E+01	0.00E+00	2.60E+01
			Zn-65	<5.25E+01	0.00E+00	5.25E+01
			Zr-95	<4.83E+01	0.00E+00	4.83E+01
			Nb-95	<2.89E+01	0.00E+00	2.89E+01
			I-131	<3.60E+01	0.00E+00	3.60E+01
			Cs-134	<3.24E+01	0.00E+00	3.24E+01
			Cs-137	<4.48E+01	0.00E+00	4.48E+01
			BaLa-140	<4.32E+01	0.00E+00	4.32E+01
			Be-7	7.75E+02	2.75E+02	3.82E+02

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 51 [INDICATOR - SSW @ 0 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
502301	6/13/2019 - 6/13/2019		K-40	3.56E+03	5.94E+02	3.72E+02
504377	7/10/2019 - 7/10/2019		Mn-54	<2.57E+01	0.00E+00	2.57E+01
			Co-58	<2.32E+01	0.00E+00	2.32E+01
			Fe-59	<4.43E+01	0.00E+00	4.43E+01
			Co-60	<2.62E+01	0.00E+00	2.62E+01
			Zn-65	<3.87E+01	0.00E+00	3.87E+01
			Zr-95	<3.96E+01	0.00E+00	3.96E+01
			Nb-95	<2.45E+01	0.00E+00	2.45E+01
			I-131	<2.80E+01	0.00E+00	2.80E+01
			Cs-134	<2.83E+01	0.00E+00	2.83E+01
			Cs-137	2.77E+01	2.36E+01	3.75E+01
			BaLa-140	<2.83E+01	0.00E+00	2.83E+01
			Be-7	2.01E+03	3.15E+02	2.69E+02
			K-40	3.44E+03	5.59E+02	4.51E+02
505656	8/7/2019 - 8/7/2019		Mn-54	<2.13E+01	0.00E+00	2.13E+01
			Co-58	<2.09E+01	0.00E+00	2.09E+01
			Fe-59	<2.72E+01	0.00E+00	2.72E+01
			Co-60	<1.93E+01	0.00E+00	1.93E+01
			Zn-65	<4.91E+01	0.00E+00	4.91E+01
			Zr-95	<3.39E+01	0.00E+00	3.39E+01
			Nb-95	<2.54E+01	0.00E+00	2.54E+01
			I-131	<3.45E+01	0.00E+00	3.45E+01
			Cs-134	<2.22E+01	0.00E+00	2.22E+01
			Cs-137	4.24E+01	2.29E+01	3.30E+01
			BaLa-140	<2.96E+01	0.00E+00	2.96E+01
			Be-7	1.25E+03	2.45E+02	2.10E+02
			K-40	3.28E+03	5.48E+02	3.61E+02
508101	9/9/2019 - 9/9/2019		Mn-54	<1.97E+01	0.00E+00	1.97E+01
			Co-58	<1.89E+01	0.00E+00	1.89E+01
			Fe-59	<1.92E+01	0.00E+00	1.92E+01
			Co-60	<2.32E+01	0.00E+00	2.32E+01
			Zn-65	<3.76E+01	0.00E+00	3.76E+01
			Zr-95	<3.43E+01	0.00E+00	3.43E+01
			Nb-95	<2.23E+01	0.00E+00	2.23E+01
			I-131	<2.03E+01	0.00E+00	2.03E+01
			Cs-134	<2.21E+01	0.00E+00	2.21E+01
			Cs-137	<2.33E+01	0.00E+00	2.33E+01
			BaLa-140	<2.46E+01	0.00E+00	2.46E+01
			Be-7	6.31E+02	1.69E+02	1.61E+02
			K-40	2.36E+03	4.47E+02	2.03E+02
510721	10/9/2019 - 10/9/2019		Mn-54	<2.96E+01	0.00E+00	2.96E+01
			Co-58	<2.72E+01	0.00E+00	2.72E+01
			Fe-59	<5.35E+01	0.00E+00	5.35E+01
			Co-60	<3.23E+01	0.00E+00	3.23E+01
			Zn-65	<5.91E+01	0.00E+00	5.91E+01
			Zr-95	<5.18E+01	0.00E+00	5.18E+01
			Nb-95	<2.76E+01	0.00E+00	2.76E+01
			I-131	<4.79E+01	0.00E+00	4.79E+01
			Cs-134	<3.05E+01	0.00E+00	3.05E+01
			Cs-137	6.43E+01	2.40E+01	3.29E+01
			BaLa-140	<4.22E+01	0.00E+00	4.22E+01
			Be-7	1.72E+03	3.28E+02	3.84E+02
			K-40	4.40E+03	5.98E+02	3.22E+02

Sample Point 52 [CONTROL - W @ 10 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
498688	4/11/2019 - 4/11/2019		Mn-54	<2.11E+01	0.00E+00	2.11E+01
			Co-58	<2.04E+01	0.00E+00	2.04E+01

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 52 [CONTROL - W @ 10 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
498688	4/11/2019 - 4/11/2019	MIXEDBLV	Fe-59	<3.89E+01	0.00E+00	3.89E+01
			Co-60	<1.76E+01	0.00E+00	1.76E+01
			Zn-65	<6.24E+01	0.00E+00	6.24E+01
			Zr-95	<3.21E+01	0.00E+00	3.21E+01
			Nb-95	<2.50E+01	0.00E+00	2.50E+01
			I-131	<4.74E+01	0.00E+00	4.74E+01
			Cs-134	<2.50E+01	0.00E+00	2.50E+01
			Cs-137	<2.62E+01	0.00E+00	2.62E+01
			BaLa-140	<4.05E+01	0.00E+00	4.05E+01
			Be-7	1.81E+03	3.00E+02	2.37E+02
			K-40	2.01E+03	4.08E+02	3.26E+02
500262	5/9/2019 - 5/9/2019	MIXEDBLV	Mn-54	<1.70E+01	0.00E+00	1.70E+01
			Co-58	<1.68E+01	0.00E+00	1.68E+01
			Fe-59	<3.22E+01	0.00E+00	3.22E+01
			Co-60	<1.66E+01	0.00E+00	1.66E+01
			Zn-65	<4.04E+01	0.00E+00	4.04E+01
			Zr-95	<3.18E+01	0.00E+00	3.18E+01
			Nb-95	<1.73E+01	0.00E+00	1.73E+01
			I-131	<2.38E+01	0.00E+00	2.38E+01
			Cs-134	<1.95E+01	0.00E+00	1.95E+01
			Cs-137	2.90E+01	1.79E+01	2.67E+01
			BaLa-140	<2.59E+01	0.00E+00	2.59E+01
Be-7	3.98E+02	1.39E+02	1.77E+02			
K-40	3.92E+03	5.50E+02	2.62E+02			
502302	6/12/2019 - 6/12/2019	MIXEDBLV	Mn-54	<2.27E+01	0.00E+00	2.27E+01
			Co-58	<2.01E+01	0.00E+00	2.01E+01
			Fe-59	<5.27E+01	0.00E+00	5.27E+01
			Co-60	<3.08E+01	0.00E+00	3.08E+01
			Zn-65	<5.10E+01	0.00E+00	5.10E+01
			Zr-95	<2.91E+01	0.00E+00	2.91E+01
			Nb-95	<2.63E+01	0.00E+00	2.63E+01
			I-131	<3.86E+01	0.00E+00	3.86E+01
			Cs-134	<1.98E+01	0.00E+00	1.98E+01
			Cs-137	8.59E+01	2.85E+01	3.51E+01
			BaLa-140	<4.47E+01	0.00E+00	4.47E+01
Be-7	1.53E+03	2.92E+02	2.69E+02			
K-40	3.74E+03	5.85E+02	2.90E+02			
504378	7/10/2019 - 7/10/2019	MIXEDBLV	Mn-54	<3.06E+01	0.00E+00	3.06E+01
			Co-58	<2.25E+01	0.00E+00	2.25E+01
			Fe-59	<4.30E+01	0.00E+00	4.30E+01
			Co-60	<1.79E+01	0.00E+00	1.79E+01
			Zn-65	<5.14E+01	0.00E+00	5.14E+01
			Zr-95	<4.74E+01	0.00E+00	4.74E+01
			Nb-95	<2.73E+01	0.00E+00	2.73E+01
			I-131	<3.34E+01	0.00E+00	3.34E+01
			Cs-134	<3.90E+01	0.00E+00	3.90E+01
			Cs-137	<3.97E+01	0.00E+00	3.97E+01
			BaLa-140	<5.02E+01	0.00E+00	5.02E+01
Be-7	1.13E+03	2.90E+02	2.90E+02			
K-40	1.93E+03	5.59E+02	5.84E+02			
505657	8/7/2019 - 8/7/2019	MIXEDBLV	Mn-54	<2.16E+01	0.00E+00	2.16E+01
			Co-58	<1.93E+01	0.00E+00	1.93E+01
			Fe-59	<4.12E+01	0.00E+00	4.12E+01
			Co-60	<2.79E+01	0.00E+00	2.79E+01
			Zn-65	<5.32E+01	0.00E+00	5.32E+01
			Zr-95	<4.41E+01	0.00E+00	4.41E+01
			Nb-95	<2.54E+01	0.00E+00	2.54E+01
			I-131	<3.79E+01	0.00E+00	3.79E+01
			Cs-134	<2.06E+01	0.00E+00	2.06E+01

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 52 [CONTROL - W @ 10 miles]

Sample ID:	505657	Sample Dates:	8/7/2019 - 8/7/2019	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Cs-137	1.28E+02	3.29E+01	3.56E+01
					BaLa-140	<3.18E+01	0.00E+00	3.18E+01
					Be-7	3.04E+03	4.27E+02	2.81E+02
					K-40	2.41E+03	4.83E+02	3.75E+02

Sample ID:	508102	Sample Dates:	9/9/2019 - 9/9/2019	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<2.50E+01	0.00E+00	2.50E+01
					Co-58	<2.26E+01	0.00E+00	2.26E+01
					Fe-59	<4.15E+01	0.00E+00	4.15E+01
					Co-60	<2.34E+01	0.00E+00	2.34E+01
					Zn-65	<5.37E+01	0.00E+00	5.37E+01
					Zr-95	<3.92E+01	0.00E+00	3.92E+01
					Nb-95	<2.57E+01	0.00E+00	2.57E+01
					I-131	<2.70E+01	0.00E+00	2.70E+01
					Cs-134	<3.38E+01	0.00E+00	3.38E+01
					Cs-137	<3.25E+01	0.00E+00	3.25E+01
					BaLa-140	<8.25E+00	0.00E+00	8.25E+00
					Be-7	1.24E+03	2.79E+02	2.53E+02
					K-40	2.23E+03	5.04E+02	3.25E+02

Sample ID:	510722	Sample Dates:	10/9/2019 - 10/9/2019	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<1.85E+01	0.00E+00	1.85E+01
					Co-58	<1.82E+01	0.00E+00	1.82E+01
					Fe-59	<4.07E+01	0.00E+00	4.07E+01
					Co-60	<2.21E+01	0.00E+00	2.21E+01
					Zn-65	<4.34E+01	0.00E+00	4.34E+01
					Zr-95	<3.01E+01	0.00E+00	3.01E+01
					Nb-95	<2.24E+01	0.00E+00	2.24E+01
					I-131	<3.16E+01	0.00E+00	3.16E+01
					Cs-134	<1.77E+01	0.00E+00	1.77E+01
					Cs-137	3.63E+01	1.97E+01	2.95E+01
					BaLa-140	<2.25E+01	0.00E+00	2.25E+01
					Be-7	1.53E+03	2.54E+02	2.42E+02
					K-40	2.38E+03	3.78E+02	2.48E+02

Sample Point 62 [INDICATOR - SE @ 0 miles]

Sample ID:	498689	Sample Dates:	4/11/2019 - 4/11/2019	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<1.75E+01	0.00E+00	1.75E+01
					Co-58	<1.88E+01	0.00E+00	1.88E+01
					Fe-59	<4.11E+01	0.00E+00	4.11E+01
					Co-60	<1.97E+01	0.00E+00	1.97E+01
					Zn-65	<4.02E+01	0.00E+00	4.02E+01
					Zr-95	<3.23E+01	0.00E+00	3.23E+01
					Nb-95	<2.79E+01	0.00E+00	2.79E+01
					I-131	<4.76E+01	0.00E+00	4.76E+01
					Cs-134	<2.30E+01	0.00E+00	2.30E+01
					Cs-137	<2.27E+01	0.00E+00	2.27E+01
					BaLa-140	<3.37E+01	0.00E+00	3.37E+01
					Be-7	2.50E+03	3.46E+02	2.76E+02
					K-40	1.53E+03	3.27E+02	3.23E+02

Sample ID:	500263	Sample Dates:	5/9/2019 - 5/9/2019	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<2.35E+01	0.00E+00	2.35E+01
					Co-58	<1.76E+01	0.00E+00	1.76E+01
					Fe-59	<5.05E+01	0.00E+00	5.05E+01
					Co-60	<1.54E+01	0.00E+00	1.54E+01
					Zn-65	<4.81E+01	0.00E+00	4.81E+01
					Zr-95	<3.94E+01	0.00E+00	3.94E+01
					Nb-95	<2.55E+01	0.00E+00	2.55E+01
					I-131	<2.40E+01	0.00E+00	2.40E+01
					Cs-134	<2.23E+01	0.00E+00	2.23E+01
					Cs-137	<2.62E+01	0.00E+00	2.62E+01
					BaLa-140	<3.02E+01	0.00E+00	3.02E+01
					Be-7	6.32E+02	1.91E+02	2.43E+02
					K-40	4.20E+03	5.98E+02	3.21E+02

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 62 [INDICATOR - SE @ 0 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
502303	6/13/2019 - 6/13/2019	MIXEDBLV	Mn-54	<2.39E+01	0.00E+00	2.39E+01
			Co-58	<2.24E+01	0.00E+00	2.24E+01
			Fe-59	<4.16E+01	0.00E+00	4.16E+01
			Co-60	<2.27E+01	0.00E+00	2.27E+01
			Zn-65	<5.52E+01	0.00E+00	5.52E+01
			Zr-95	<4.63E+01	0.00E+00	4.63E+01
			Nb-95	<2.69E+01	0.00E+00	2.69E+01
			I-131	<3.53E+01	0.00E+00	3.53E+01
			Cs-134	<3.45E+01	0.00E+00	3.45E+01
			Cs-137	3.70E+01	2.42E+01	3.68E+01
			BaLa-140	<4.31E+01	0.00E+00	4.31E+01
			Be-7	6.11E+02	2.35E+02	3.31E+02
			K-40	3.09E+03	5.43E+02	4.31E+02
504379	7/10/2019 - 7/10/2019	MIXEDBLV	Mn-54	<3.77E+01	0.00E+00	3.77E+01
			Co-58	<4.87E+01	0.00E+00	4.87E+01
			Fe-59	<6.08E+01	0.00E+00	6.08E+01
			Co-60	<3.71E+01	0.00E+00	3.71E+01
			Zn-65	<1.01E+02	0.00E+00	1.01E+02
			Zr-95	<1.09E+02	0.00E+00	1.09E+02
			Nb-95	<5.70E+01	0.00E+00	5.70E+01
			I-131	<4.75E+01	0.00E+00	4.75E+01
			Cs-134	<4.42E+01	0.00E+00	4.42E+01
			Cs-137	<4.60E+01	0.00E+00	4.60E+01
			BaLa-140	<5.84E+01	0.00E+00	5.84E+01
			Be-7	2.26E+03	5.01E+02	4.91E+02
			K-40	4.65E+03	9.24E+02	5.23E+02
505658	8/7/2019 - 8/7/2019	MIXEDBLV	Mn-54	<1.46E+01	0.00E+00	1.46E+01
			Co-58	<1.80E+01	0.00E+00	1.80E+01
			Fe-59	<2.78E+01	0.00E+00	2.78E+01
			Co-60	<1.80E+01	0.00E+00	1.80E+01
			Zn-65	<3.47E+01	0.00E+00	3.47E+01
			Zr-95	<2.66E+01	0.00E+00	2.66E+01
			Nb-95	<2.10E+01	0.00E+00	2.10E+01
			I-131	<2.58E+01	0.00E+00	2.58E+01
			Cs-134	<1.88E+01	0.00E+00	1.88E+01
			Cs-137	<1.99E+01	0.00E+00	1.99E+01
			BaLa-140	<2.15E+01	0.00E+00	2.15E+01
			Be-7	1.34E+03	2.27E+02	1.91E+02
			K-40	4.60E+03	5.93E+02	2.53E+02
508103	9/9/2019 - 9/9/2019	MIXEDBLV	Mn-54	<2.69E+01	0.00E+00	2.69E+01
			Co-58	<2.15E+01	0.00E+00	2.15E+01
			Fe-59	<4.63E+01	0.00E+00	4.63E+01
			Co-60	<2.22E+01	0.00E+00	2.22E+01
			Zn-65	<6.30E+01	0.00E+00	6.30E+01
			Zr-95	<4.33E+01	0.00E+00	4.33E+01
			Nb-95	<2.55E+01	0.00E+00	2.55E+01
			I-131	<2.23E+01	0.00E+00	2.23E+01
			Cs-134	<2.67E+01	0.00E+00	2.67E+01
			Cs-137	<2.20E+01	0.00E+00	2.20E+01
			BaLa-140	<2.12E+01	0.00E+00	2.12E+01
			Be-7	5.38E+02	2.06E+02	2.60E+02
			K-40	2.47E+03	5.64E+02	5.04E+02
510723	10/9/2019 - 10/9/2019	MIXEDBLV	Mn-54	<2.37E+01	0.00E+00	2.37E+01
			Co-58	<2.44E+01	0.00E+00	2.44E+01
			Fe-59	<4.87E+01	0.00E+00	4.87E+01
			Co-60	<2.59E+01	0.00E+00	2.59E+01
			Zn-65	<5.02E+01	0.00E+00	5.02E+01
			Zr-95	<4.00E+01	0.00E+00	4.00E+01
			Nb-95	<2.94E+01	0.00E+00	2.94E+01

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 62 [INDICATOR - SE @ 0 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
510723	10/9/2019 - 10/9/2019		I-131	<4.18E+01	0.00E+00	4.18E+01
			Cs-134	<2.37E+01	0.00E+00	2.37E+01
			Cs-137	5.50E+01	2.18E+01	2.96E+01
			BaLa-140	<4.56E+01	0.00E+00	4.56E+01
			Be-7	1.23E+03	2.59E+02	2.98E+02
			K-40	3.77E+03	5.52E+02	3.63E+02

Sample Point 67 [INDICATOR - S @ 0 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
498690	4/11/2019 - 4/11/2019		Mn-54	<2.10E+01	0.00E+00	2.10E+01
			Co-58	<2.03E+01	0.00E+00	2.03E+01
			Fe-59	<3.45E+01	0.00E+00	3.45E+01
			Co-60	<1.96E+01	0.00E+00	1.96E+01
			Zn-65	<4.40E+01	0.00E+00	4.40E+01
			Zr-95	<3.67E+01	0.00E+00	3.67E+01
			Nb-95	<2.14E+01	0.00E+00	2.14E+01
			I-131	<4.56E+01	0.00E+00	4.56E+01
			Cs-134	<2.06E+01	0.00E+00	2.06E+01
			Cs-137	<2.92E+01	0.00E+00	2.92E+01
			BaLa-140	<3.66E+01	0.00E+00	3.66E+01
			Be-7	1.05E+03	2.33E+02	2.78E+02
			K-40	2.56E+03	4.19E+02	3.05E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
500264	5/9/2019 - 5/9/2019		Mn-54	<2.07E+01	0.00E+00	2.07E+01
			Co-58	<2.11E+01	0.00E+00	2.11E+01
			Fe-59	<4.06E+01	0.00E+00	4.06E+01
			Co-60	<1.91E+01	0.00E+00	1.91E+01
			Zn-65	<5.25E+01	0.00E+00	5.25E+01
			Zr-95	<3.23E+01	0.00E+00	3.23E+01
			Nb-95	<1.86E+01	0.00E+00	1.86E+01
			I-131	<2.40E+01	0.00E+00	2.40E+01
			Cs-134	<1.98E+01	0.00E+00	1.98E+01
			Cs-137	<2.28E+01	0.00E+00	2.28E+01
			BaLa-140	<2.16E+01	0.00E+00	2.16E+01
			Be-7	5.96E+02	1.82E+02	2.28E+02
			K-40	4.34E+03	5.90E+02	1.64E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
502304	6/13/2019 - 6/13/2019		Mn-54	<2.81E+01	0.00E+00	2.81E+01
			Co-58	<2.13E+01	0.00E+00	2.13E+01
			Fe-59	<4.59E+01	0.00E+00	4.59E+01
			Co-60	<2.62E+01	0.00E+00	2.62E+01
			Zn-65	<6.03E+01	0.00E+00	6.03E+01
			Zr-95	<4.59E+01	0.00E+00	4.59E+01
			Nb-95	<2.54E+01	0.00E+00	2.54E+01
			I-131	<3.61E+01	0.00E+00	3.61E+01
			Cs-134	<3.13E+01	0.00E+00	3.13E+01
			Cs-137	<2.47E+01	0.00E+00	2.47E+01
			BaLa-140	<2.96E+01	0.00E+00	2.96E+01
			Be-7	1.91E+03	4.60E+02	6.08E+02
			K-40	3.47E+03	5.97E+02	4.17E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
504380	7/9/2019 - 7/9/2019		Mn-54	<3.22E+01	0.00E+00	3.22E+01
			Co-58	<3.67E+01	0.00E+00	3.67E+01
			Fe-59	<6.75E+01	0.00E+00	6.75E+01
			Co-60	<3.72E+01	0.00E+00	3.72E+01
			Zn-65	<4.01E+01	0.00E+00	4.01E+01
			Zr-95	<6.94E+01	0.00E+00	6.94E+01
			Nb-95	<3.13E+01	0.00E+00	3.13E+01
			I-131	<4.27E+01	0.00E+00	4.27E+01
			Cs-134	<4.17E+01	0.00E+00	4.17E+01
			Cs-137	<3.43E+01	0.00E+00	3.43E+01
			BaLa-140	<3.75E+01	0.00E+00	3.75E+01
			Be-7	1.79E+03	4.32E+02	4.48E+02

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 67 [INDICATOR - S @ 0 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
504380	7/9/2019 - 7/9/2019		K-40	3.30E+03	7.83E+02	6.78E+02

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
505659	8/7/2019 - 8/7/2019		Mn-54	<1.94E+01	0.00E+00	1.94E+01
			Co-58	<1.92E+01	0.00E+00	1.92E+01
			Fe-59	<3.98E+01	0.00E+00	3.98E+01
			Co-60	<2.31E+01	0.00E+00	2.31E+01
			Zn-65	<3.77E+01	0.00E+00	3.77E+01
			Zr-95	<3.04E+01	0.00E+00	3.04E+01
			Nb-95	<1.86E+01	0.00E+00	1.86E+01
			I-131	<2.41E+01	0.00E+00	2.41E+01
			Cs-134	<1.99E+01	0.00E+00	1.99E+01
			Cs-137	<1.76E+01	0.00E+00	1.76E+01
			BaLa-140	<2.55E+01	0.00E+00	2.55E+01
			Be-7	2.48E+03	3.46E+02	2.08E+02
K-40	3.44E+03	5.18E+02	2.11E+02			

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
508104	9/9/2019 - 9/9/2019		Mn-54	<2.53E+01	0.00E+00	2.53E+01
			Co-58	<1.33E+01	0.00E+00	1.33E+01
			Fe-59	<2.36E+01	0.00E+00	2.36E+01
			Co-60	<1.93E+01	0.00E+00	1.93E+01
			Zn-65	<4.87E+01	0.00E+00	4.87E+01
			Zr-95	<3.73E+01	0.00E+00	3.73E+01
			Nb-95	<1.88E+01	0.00E+00	1.88E+01
			I-131	<2.47E+01	0.00E+00	2.47E+01
			Cs-134	<2.63E+01	0.00E+00	2.63E+01
			Cs-137	2.17E+01	1.46E+01	2.07E+01
			BaLa-140	<1.64E+01	0.00E+00	1.64E+01
			Be-7	2.46E+03	3.62E+02	2.43E+02
K-40	3.54E+03	5.74E+02	2.65E+02			

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
510724	10/9/2019 - 10/9/2019		Mn-54	<1.71E+01	0.00E+00	1.71E+01
			Co-58	<1.61E+01	0.00E+00	1.61E+01
			Fe-59	<3.80E+01	0.00E+00	3.80E+01
			Co-60	<1.71E+01	0.00E+00	1.71E+01
			Zn-65	<4.04E+01	0.00E+00	4.04E+01
			Zr-95	<3.35E+01	0.00E+00	3.35E+01
			Nb-95	<2.12E+01	0.00E+00	2.12E+01
			I-131	<2.49E+01	0.00E+00	2.49E+01
			Cs-134	<1.93E+01	0.00E+00	1.93E+01
			Cs-137	<1.66E+01	0.00E+00	1.66E+01
			BaLa-140	<2.01E+01	0.00E+00	2.01E+01
			Be-7	1.68E+03	2.52E+02	2.15E+02
K-40	3.48E+03	4.60E+02	2.53E+02			

Sample Point 83 [INDICATOR - NNE @ 1.6 miles]

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
509098	9/10/2019 - 9/10/2019		Mn-54	<3.22E+01	0.00E+00	3.22E+01
			Co-58	<2.62E+01	0.00E+00	2.62E+01
			Fe-59	<6.58E+01	0.00E+00	6.58E+01
			Co-60	<2.54E+01	0.00E+00	2.54E+01
			Zn-65	<6.67E+01	0.00E+00	6.67E+01
			Zr-95	<4.98E+01	0.00E+00	4.98E+01
			Nb-95	<2.67E+01	0.00E+00	2.67E+01
			I-131	<3.38E+01	0.00E+00	3.38E+01
			Cs-134	<3.85E+01	0.00E+00	3.85E+01
			Cs-137	<4.01E+01	0.00E+00	4.01E+01
			BaLa-140	<3.48E+01	0.00E+00	3.48E+01
			Be-7	1.12E+03	3.26E+02	3.98E+02
K-40	3.98E+03	7.42E+02	4.68E+02			

Sample ID:	Sample Dates:	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
511072	10/9/2019 - 10/9/2019		Mn-54	<1.05E+01	0.00E+00	1.05E+01
			Co-58	<9.93E+00	0.00E+00	9.93E+00

ROBINSON Radiological Environmental Monitoring Analysis Report - 2019 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 83 [INDICATOR - NNE @ 1.6 miles]

Sample ID:	511072	Sample Dates:	10/9/2019 - 10/9/2019	MIXEDBLV	Nuclide	Activity	2 Sigma Error	MDA
					Fe-59	<2.08E+01	0.00E+00	2.08E+01
					Co-60	<9.94E+00	0.00E+00	9.94E+00
					Zn-65	<2.70E+01	0.00E+00	2.70E+01
					Zr-95	<1.82E+01	0.00E+00	1.82E+01
					Nb-95	<1.20E+01	0.00E+00	1.20E+01
					I-131	<2.44E+01	0.00E+00	2.44E+01
					Cs-134	<1.83E+01	0.00E+00	1.83E+01
					Cs-137	2.54E+01	9.47E+00	1.36E+01
					BaLa-140	<1.90E+01	0.00E+00	1.90E+01
					Be-7	2.75E+03	2.83E+02	1.24E+02
					K-40	2.17E+03	2.49E+02	1.37E+02

APPENDIX F

ERRATA TO PREVIOUS REPORTS

There are no errata to be appended to the
2019 H.B. Robinson Steam Electric Plant AREOR.